AUTOMATIONBOOK

Your ifm customer no.

ifm – the company matching your requirements

close to you:

Our worldwide sales and service team is here to help you at any time.

Engineering „Made in Germany“:

German engineering available worldwide.

Flexible:

Not only our service but our broad product portfolio perfectly suit the most varying requirements.

Innovative:

More than 750 patents and in 2016 about 60 patent applications.

Reliable:

5-year warranty on ifm products.

System instead of just components

ifm provides you with a broad portfolio for flexible automation of your production.

Our range of more than 7,800 articles guarantees flexibility and compatibility.

Quality as part of our philosophy

Quality is an inherent part of our philosophy.

We use our customers' feedback to continuously improve the quality of our products.

Our sensors are tested with values far beyond the indicated limits using special procedures.

We are there for you

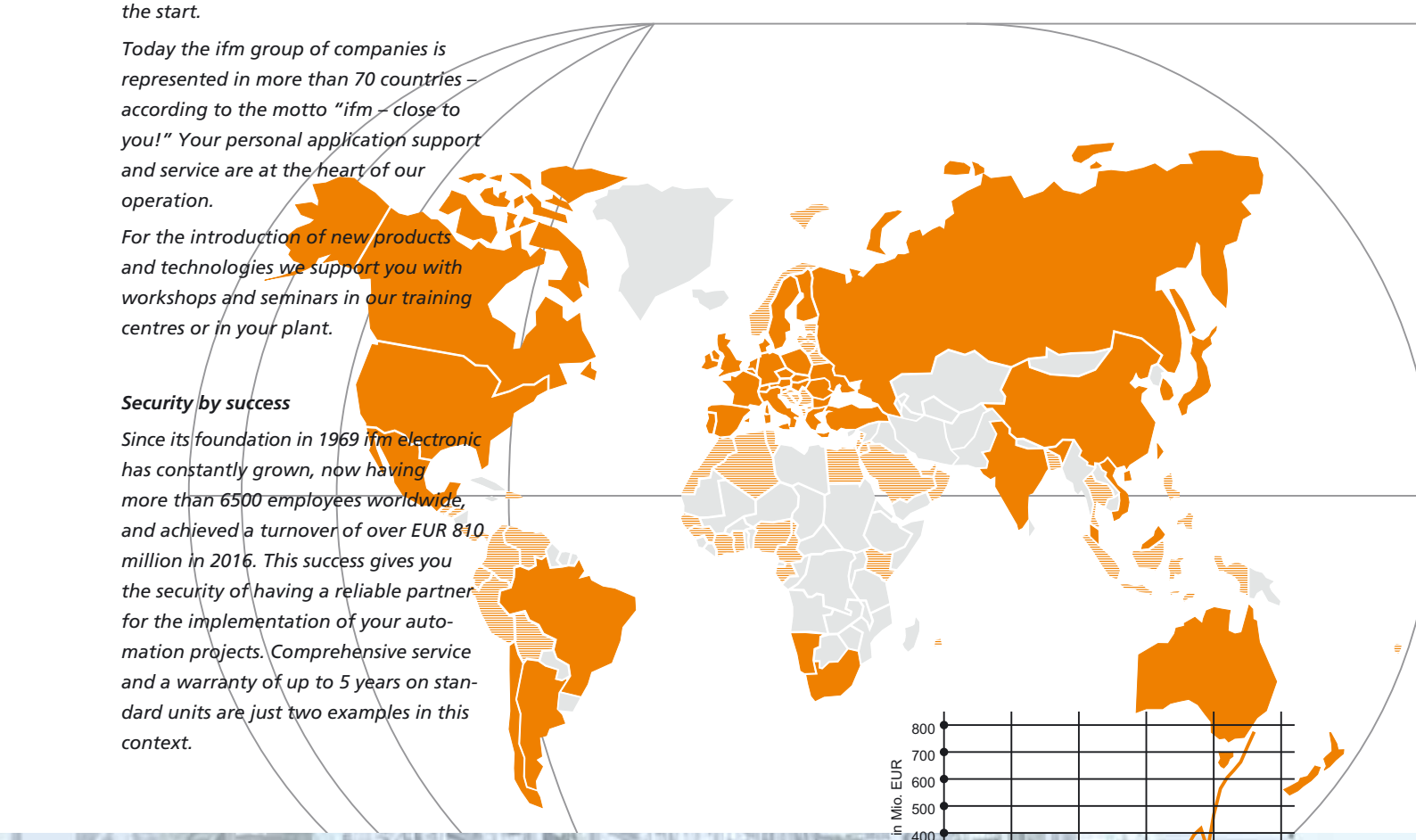
Close contact with our customers is part of our success. We have consistently developed our sales network right from the start.

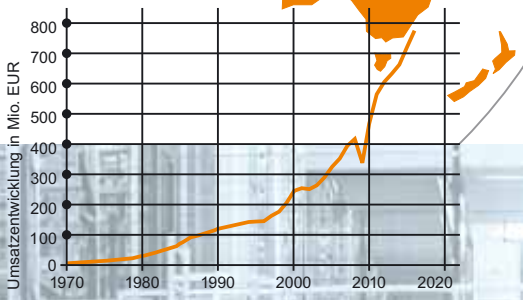
Today the ifm group of companies is represented in more than 70 countries – according to the motto "ifm – close to you!" Your personal application support and service are at the heart of our operation.

For the introduction of new products and technologies we support you with workshops and seminars in our training centres or in your plant.

Security by success

Since its foundation in 1969 ifm electronic has constantly grown, now having more than 6500 employees worldwide, and achieved a turnover of over EUR 810 million in 2016. This success gives you the security of having a reliable partner for the implementation of your automation projects. Comprehensive service and a warranty of up to 5 years on standard units are just two examples in this context.





Product availability

Your deadlines matter to us.

That is why we are constantly optimising our production processes.

In order to be able to quickly and flexibly produce large quantities at a constantly high quality – and to continue to shorten delivery times.

See the current ifm company film to get to know us better:

www.ifm.com/gb/close-to-you

The ifm sales platform

Overview:

The ifm product range is clearly structured and the individual product platforms ensure quick orientation.

Selectors:

Choose between the most important technical data and you will get the product selection suitable for your requirements.

Compare:

You can compare the technical data of up to 3 products. Differences are marked in colour.

Search and find:

Enter the search term in the full text search and get suggestions for products, topics and product groups.

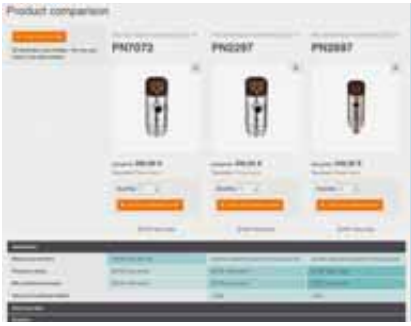
Order:

We provide a quick-order and csv import function for the shopping basket on the product pages.

More clarity

For each product group you can make a first selection via the platforms.

A clear visual language and explanatory texts give you a first impression of the products.

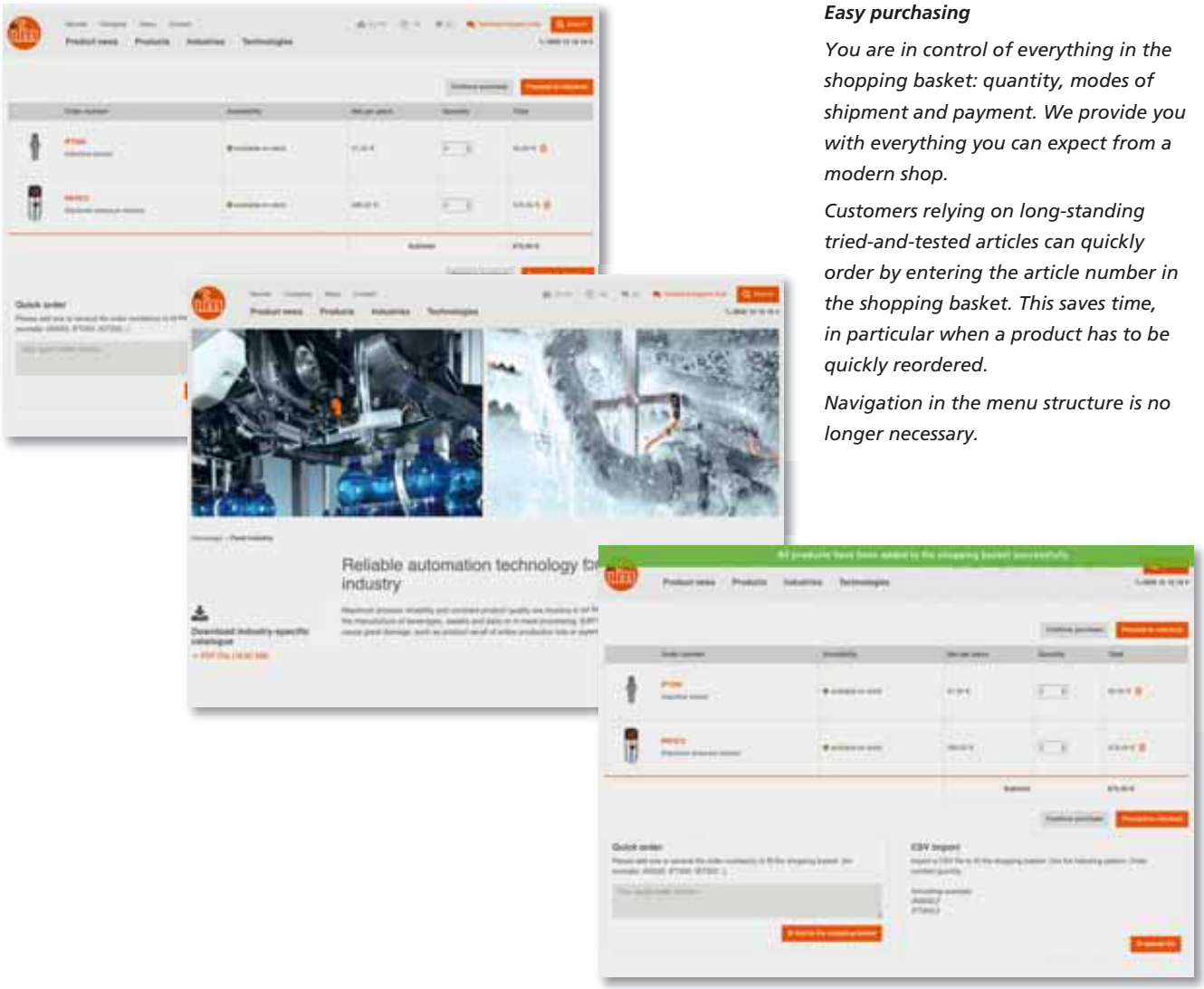


Compare products with each other

The selectors are the heart of the product search.

The displayed selection criteria are adapted to each product range and the technical features of the products.

The results can be displayed as tiles or lists.



Easy purchasing

You are in control of everything in the shopping basket: quantity, modes of shipment and payment. We provide you with everything you can expect from a modern shop.

Customers relying on long-standing tried-and-tested articles can quickly order by entering the article number in the shopping basket. This saves time, in particular when a product has to be quickly reordered.

Navigation in the menu structure is no longer necessary.

For all types of display

Whether PC, laptop, tablet or smartphone – the design of the sales platform adapts to any screen size thus increasing user-friendliness. This also makes it possible to buy products using mobile equipment such as a smartphone.

Try us. Click here to directly get to our homepage:

www.ifm.com

Your start into the industrial revolution. IO-Link solutions from ifm.

Simple:

The sensor parameters can be set from the controller or the master. No crawling or climbing required to set the sensor.

Transparent:

Many sensors supply measured values to the switching signals via IO-Link. The goal is a constant product quality with less energy and raw material consumption.

Reliable:

Transmission that is prone to errors and conversion of analogue signals is replaced with digital measured value transmission.

Low-cost:

Process information, switching status, diagnostic functions are transmitted without loss via a single port to the controller. Expensive analogue signal processing is no longer needed.

Fascination **IO**-Link

In the past binary switches usually provided simple switching signals or analogue values. Today the data from intelligent sensors is the basis for the next industrial revolution.

Sensors that extract all the information from your machines and equipment using the key technology IO-Link.

Leading manufacturers from the fields of sensors, actuators and control technology have developed IO-Link.

Together they developed a standardised and field-bus independent interface for automation providing the user with a point-to-point connection without complex addressing.

Benefit from the appeal of IO-Link, talk to us and stay as productive and competitive for your manufacturing processes of tomorrow.

Head start with **IO-Link**

Use the advantages! Today IO-Link sensors from ifm give the user completely new options.

Additional sensor data, for example, is generated to achieve maximum efficiency and cost saving.

This allows process transparency from the machine to ERP to optimise your existing automation. Furthermore IO-Link has a lot more to offer:

No external influence of the signal

Data transfer is based on a 24 V signal. Screened cables and associated grounding are no longer necessary.

Tamper free

No wrong settings by operators.

No measured value losses

The entire measured value transmission is digital. Transmission that is prone to errors and conversion of analogue signals is replaced.

Identification

Only like for like replacement.

No wrong sensors accepted.

Easy sensor replacement

All sensor parameters are stored in the master and transferred to the replaced unit.

Wire-break detection / diagnostics

Wire-break or short-circuit is immediately detected.

Point-to-point communication: more details in our IO-Link video:

www.io-link.ifm

3A

3A Sanitary Standards, Inc. (3-A SSI) is an independent, not-for-profit corporation dedicated to advancing hygienic equipment design for the food, beverage, and pharmaceutical industries.

AS-i

Actuator-Sensor Interface. Bus system for the first binary field level.

ATEX

Atmosphère Explosible. ATEX comprises the directives of the European Union in the field of explosion protection. On the one hand there is the 94/9/EC ATEX product directive and on the other hand the 1999/92/EC ATEX operation directive.

CCC

CCC (China Compulsory Certification) is a compulsory Chinese certification for certain products put on the market in China. Which products are concerned is specified in a catalogue created by the Chinese authorities.

cCSAus

Testing of a product by CSA according to the safety standards applicable in Canada and the USA.

CE

Conformité Européenne. By affixing the CE marking to a product, the manufacturer declares that it meets EU safety, health and environmental requirements.

cRUus

Testing of components by UL according to the safety standards applicable in Canada and the USA. Components can be used when the "condition of acceptability" is complied with for the final product.

CSA

Canadian Standards Association. A non-governmental Canadian organisation that sets standards and tests and certifies products for their reliability. By now it is active worldwide.

cULus

Testing of components by UL according to the safety standards applicable in Canada and the USA.

DIBt (WHG)

Deutsches Institut für Bautechnik (Federal Water Act). The Federal Water Act (WHG) is the essential part of the German law relating to water. It contains provisions for the protection and use of surface water and ground water and also regulations about the expansion of waters, water planning and flood protection.

DKD

The Deutscher Kalibrierdienst (DKD) is an association of calibration laboratories of industrial firms, research institutes, technical authorities, inspection and testing institutes. The DKD calibration certificates prove traceability to national standards as required in ISO 9000 and ISO / IEC 17025. They also serve as a metrological basis for the control of measurement and test equipment within the framework of quality management.

E1

Approval by the Kraftfahrt-Bundesamt (German Federal Motor Transport Authority). The E1 type approval by the German Federal Motor Transport Authority certifies that the units comply with the automotive standards. Units with this marking are allowed to be mounted on vehicles without expiry of their operating permit.

EG 1935/2004

The Regulation EC 1935/2004 has been taken into account for process sensors from ifm which are intended for use in contact with food. You can obtain a list of the corresponding products and detailed information on request.

EHEDG

European Hygienic Engineering & Design Group. European supervisory authority for food and drugs. This authority grants approvals for products and materials used in the food and pharmaceutical industries.

FDA

Food and Drug Administration. US-American supervisory authority for food and drugs. This authority grants approvals for products and materials used in the food and pharmaceutical industries.

FM

Factory Mutual Research. A US-based insurance company that specializes in loss prevention services in the property insurance market sector.
They provide material research, material testing and certifications in the field of fire and explosion protection.

PROFIBUS

Process Field Bus. Fieldbus system for important data quantities. It is available in several versions such as Profibus FMS, DP or PA. Profibus DP can be used over longer distances, e.g. as fieldbus for AS-i.

TÜV

Technischer Überwachungs Verein (technical inspection association). The German TÜV is a private-sector body carrying out technical safety tests that are stipulated by government laws or instructions.

UL

Underwriters Laboratories. An organisation founded in the USA for testing and certifying products and their safety.

Order no.	Approvals	Catalogue page
AC0017	CE	330, 591
AC0019	CE	330, 591
AC001S	CE, CUL	440, 644
AC0020	CE	330, 591
AC0021	CE	330, 592
AC0022	CE	330, 592
AC0023	CE	330, 592
AC002S	CE, CUL	440, 644
AC003S	CE, CUL	440, 644
AC004S	CE, CUL	440, 644
AC009S	CE, CRUUS	440, 644
AC010S	CE, CUL	441, 645
AC0115		442, 604
AC0116		442, 604
AC011S	CE, CUL	441, 645
AC012S	CE, CUL	441, 645
AC015S	CE, CRUUS	441, 645
AC030S	CE, CUL	440, 644
AC032S	CE, CUL	440, 644
AC041S	CE, CUL, TÜV Nord	440, 644
AC1145	CE	642
AC1146	CE, CUL	642
AC1147	CE, CUL	642
AC1154	CE	622
AC1221	CE, CRUUS, CUL	870
AC1250	CE, CRUUS, EAC	603
AC1253	CE, CRUUS, CUL	608, 871
AC1254	CE, CRUUS, CUL	608, 870
AC1256	CE, CRUUS, CUL	608, 870
AC1257	CE, CUL	608, 871
AC1258	CE, CRUUS, CUL	608, 870
AC1318	CE, CUL, EAC	602
AC1324	CE, CUL, EAC	602
AC1331	CE, CUL, EAC	602
AC1332	CE, CUL, EAC	602
AC1355	CE, CUL, EAC	602
AC1356	CE, CUL, EAC	602
AC1357	CE, CUL, EAC	602
AC1358	CE, CUL, EAC	603
AC1365	CE, CUL, EAC	602
AC1366	CE, CUL, EAC	602
AC1375	CE, CUL, EAC	603
AC1376	CE, CUL, EAC	603
AC1401	CE, CUL, Profinet, EAC	603
AC1402	CE, CUL, Profinet, EAC	603
AC1403	CE, CUL, Profinet	604
AC1404	CE, CUL, Profinet	604
AC1411	CE, CUL, EAC, PI	603
AC1412	CE, CUL, EAC, PI	603
AC1421	CE, CUL, EAC	603

Order no.	Approvals	Catalogue page
AC1422	CE, CUL, EAC	603
AC1423	CE, CUL	604
AC1424	CE, CUL	604
AC1433	CE, CUL	604
AC1434	CE, CUL	604
AC2032	CE	618
AC2035	CE, CUL, EAC	618
AC2055	CE, CUL	632
AC2057	CE	632
AC2086	CE	614
AC2088	CE	614
AC2211	CE	608
AC2212	CE	608
AC2250	CE, CRUUS, EAC	610
AC2251	CE, CRUUS, EAC	611
AC2252	CE, CRUUS, EAC	610
AC2254	CE, CRUUS, EAC	610
AC2255	CE, CRUUS, EAC	610
AC2256	CE, CRUUS, EAC	610
AC2257	CE, CRUUS, EAC	611
AC2258	CE, CRUUS, EAC	611
AC2259	CE, CRUUS, EAC	611
AC2264	CE, CRUUS, EAC	611
AC2267	CE, CRUUS, EAC	611
AC2310	CE, CUL	638
AC2315	CE, CUL	327, 589
AC2316	CE, CUL	327, 589
AC2317	CE, CUL	327, 589
AC2402	CE, CUL	616
AC2403	CE, CUL	616
AC2410	CE, CUL	616
AC2411	CE, CUL	616
AC2412	CE, CUL	616
AC2413	CE, CUL	616
AC2417	CE, CUL	616
AC2451	CE, CUL	616
AC2452	CE, CUL	617
AC2453	CE, CUL	617
AC2454	CE, CUL	617
AC2455	CE, CUL	617
AC2456	CE, CUL	617
AC2457	CE, CUL	616
AC2458	CE, CUL	616
AC2459	CE, CUL	616
AC2464	CE, CUL	617
AC2465	CE, CUL	617
AC2466	CE, CUL	617
AC246A	CE	631
AC2471	CE, CUL	617
AC2482	CE, CUL	617

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AC2484	CE, CUL	617
AC2485	CE, CUL	618
AC2486	CE, CUL	618
AC2487	CE, CUL	618
AC2488	CE, CUL	617
AC2516	CE, CUL	614
AC2517	CE, CUL	614
AC2616	CE	618
AC2617	CE	618
AC2618	CE	618
AC2619	CE	618
AC2620	CE	618
AC2709	CE, CRUUS, EAC	611
AC2729	CE, CRUUS, EAC	611
AC2731	CE	611
AC2739	CE, CRUUS	611
AC2750	CE, CRUUS, EAC	611
AC2751	CE, CRUUS, EAC	611
AC2752	CE, CRUUS, EAC	611
AC2753	CE, CRUUS, EAC	611
AC2900	CE, CUL, EAC	619
AC2904	CE, CUL, EAC	618
AC2910	CE, CUL, EAC	619
AC2916	CE, CUL, EAC	619
AC2923	CE, CUL	619
AC3000		623
AC3200	CE, CUL, EAC	611
AC3201	CE, CUL, EAC	611
AC3202	CE, CUL, EAC	611
AC3203	CE, CUL, EAC	612
AC3204	CE, CUL, EAC	612
AC3216	CE	612
AC3217	CE	612
AC3218	CE	612
AC3219	CE	612
AC3220	CE, CUL, EAC	612
AC3221	CE, CUL, EAC	612
AC3222	CE	612
AC3225	CE	642
AC326A	CE, (CCC)	329, 590
AC327A	CE	328, 638
AC336A	CE	328, 638
AC402S	CE, CUL, EAC, Profinet	645
AC412S	CE, CUL, EAC, PI	645
AC422S	CE, CUL	645
AC5000	CUL	619
AC5003	CUL	619
AC5005	CUL	621
AC5007		623
AC5010	CUL	619

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AC5011	CUL	619
AC5014	CUL	619
AC5015		619
AC505A	CE	615
AC505S	CE, CUL, EAC	440, 644
AC506S	CE, CUL, EAC	441, 645
AC507A	CE	615
AC507S	CE, CUL, EAC	441, 645
AC508A	CE	615
AC509S	CE, CUL, EAC	441, 645
AC514A	CE	615
AC515A	CE	615
AC5200	CE, CUL, EAC	612
AC5203	CE, CUL, EAC	613
AC5204	CE, CUL, EAC	613
AC5205	CE, CUL, EAC	612
AC5208	CE, CUL, EAC	613
AC5209	CE, CUL, EAC	613
AC5210	CE, CUL, EAC	613
AC5211	CE, CUL, EAC	613
AC5212	CE, CUL, EAC	613
AC5213	CE, CUL, EAC	613
AC5214	CE, CUL, EAC	613
AC5215	CE, CUL, EAC	612
AC5216	CE, CUL, EAC	612
AC5218	CE, CUL, EAC	614
AC5222	CE, CUL, EAC	614
AC5223	CE, CUL, EAC	614
AC5224	CE, CUL, EAC	613
AC5225	CE, CUL, EAC	615
AC5226	CE, CUL, EAC	615
AC5227	CE, CUL, EAC	630
AC5228	CE, CUL, EAC	630
AC522A	CE	615
AC5230	CE, CUL, EAC	615
AC5234	CE, CUL, EAC	614
AC5235	CE, CUL, EAC	613
AC5236	CE, CUL, EAC	614
AC5243	CE, CUL, EAC	630
AC5245	CE, CUL, EAC	614
AC5246	CE, CUL, EAC	630
AC5249	CE, CUL, EAC	630
AC5251	CE, CUL, EAC	630
AC5253	CE, CUL, EAC	631
AC5270	CE, CUL, EAC	631
AC5271	CE, CUL, EAC	631
AC5275	CE, CUL, EAC	614
AC528A	CE	631
AC5292	CE, CUL, EAC	613
AC5293	CE, CUL, EAC	614

(CCC) = CCC approval is not required

Order no.	Approvals	Catalogue page
AC535A	CE	615
AC542A	CE	631
AC546A	CE	631
AC551A	CE	631
AC570A	CE	631
AC901S	CE, CUL	441, 645
AC902S	CE, CUL	441, 646
AC903S	CE, CUL	441, 646
AC904S	CE, CUL	441, 646
AL1000	CE, CUL	653
AL1010	CE, CUL, PI	653
AL1020	CE, CUL	653
AL1030	CE, CUL	653
AL1100	CE, CUL, Profinet	652
AL1101	CE, Profinet	652
AL1102	CE, Profinet	653
AL1103	CE, Profinet	652
AL1120	CE	652
AL1121	CE	652
AL1122	CE	653
AL1123	CE	652
AL1200	CE, Profinet	652
AL1202	CE, Profinet	653
AL1220	CE	652
AL1222	CE	653
AL2230	CE	652
AL2330	CE	653
AL2400	CE, CUL	653
AL2401	CE, CUL	653
ANT410	CE, CUL	667
ANT411	CE, CUL	668
ANT420	CE, CUL	668
ANT421	CE, CUL	668
ANT430	CE, CUL	668
ANT431	CE, CUL	668
ANT512	CE, CUL	663
ANT513	CE, CUL	668
ANT515	CE, CUL, (CCC)	668
ANT516	CE, CUL, (CCC)	668
ANT805		675
ANT810		675
ANT815		675
ANT820		675
ANT830		675
ANT910		675
ANT930		675
AP3002		653
AP3022		654
AP3032		654
AP3042		654

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AP3052		654
AP3062		654
AY1000	CE, CUL, Profinet	653
AY1020	CE, CUL	653
CP9006		438, 702
CP9008		438, 702
CP9030		707
CP9031		707
CP9200		707
CP9201		707
CR0032	CE, E1R	705
CR0033	CE, E1R, EAC	705
CR0053	E1R	705
CR0063		706
CR0133	CE, E1R, EAC	705
CR0153	E1R	705
CR0163		706
CR0234	CE, E1R	705
CR0235	CE, E1R	705
CR0253	E1R	706
CR0263		706
CR0303	CE, E1R, EAC	706
CR0401	CE, E1R, EAC	698
CR0403	CE, CUL, E1R, EAC	698
CR0411	CE, E1R, EAC	698
CR0421	CE, EAC	699
CR0431	CE, E1R, EAC	698
CR0451	CE, E1R, EAC	693, 699
CR0452	CE, E1R, EAC	671, 699
CR711S	CE	704
CR1080	CE, E1R	718
CR1081	CE, E1R	718
CR1082	CE, E1R	718
CR1083	CE, E1R	718
CR1084	CE, E1R	719
CR1085	CE, E1R	719
CR1087	CE, E1R	718
CR1200	CE, E1R	719
CR1201	CE, E1R	720
CR2012	CE, E1R, EAC	713
CR2014	CE, E1R, EAC	713
CR2016	CE, E1R, EAC	713
CR2031	CE, E1R, EAC	713
CR2032	CE, E1R, EAC	713
CR2033	CE, E1R, EAC	713
CR2050	CE	712
CR2051	CE	712
CR2052	CE	712
CR2520	CE, E1R, EAC	713
CR2530	CE, E1R, EAC	704

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CR2532	CE, E1R, EAC	705
CR3001	CE	732
CR3002	CE	732
CR3003	CE	732
CR3004	CE	732
CR3008	CE	732
CR3020	CE	728
CR3114	CE	728
CR3130	CE	728
CR3131	CE	729
CR7032	CE, E1R, EAC	438
CR7132	CE, E1R, EAC	438
CR9221	CE, E1R	699
CR9222	CE, E1R	699
CR9223	CE, E1R	719
CR9224	CE, E1R	719
CR9225	CE, E1R	719
CR9226	CE, E1R	719
CR9227	CE, E1R	719
DA102S	CE, CUL	375
DD0203	CE, CUL, EAC	373
DD0296	CE, CUL, EAC	373
DD110S	CE, CUL	375
DD111S	CE, CUL	375
DD2503	CE, CUL, EAC	372
DD2505	CE, CUL, EAC	372
DD2603	CE, CUL, EAC	372
DD2605	CE, CUL, EAC	372
DF1100	CE, CUL	866
DF1208	CE, CUL	866
DF1210	CE, CUL	866
DF1212	CE, CUL	866
DF1214	CE, CUL	866
DF1216	CE, CUL	866
DF2100	CE, CUL	866
DF2208	CE, CUL	867
DF2210	CE, CUL	867
DF2212	CE, CUL	866
DF2214	CE, CUL	866
DF2216	CE, CUL	867
DI0101	CE	360
DI0104	CE	360
DI103A	CE	361
DI5009	CE, EAC	360
DI5020	CE	360
DI5021	CE	360
DI5022	CE	360
DI5026	CE	360
DI505A	CE	361
DI506A	CE	361

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DI520A	CE	360
DI523A	CE	360
DI6001	CE, CUL, EAC	360
DI602A	CE	361
DL0201	CE, CUL	373
DL0203	CE, CUL	373
DL2503	CE, CUL, EAC	375
DN0210	CE, CUL, EAC	362, 864
DN0220	CE, CUL, EAC	864
DN1022	CE, CUL	865
DN1030	CE, CRUUS, CUL	865
DN1031	CE, CRUUS, CUL	865
DN2036	CE, CUL	866
DN4011	CE, CRUUS, CUL	865
DN4012	CE, CRUUS, CUL	865
DN4013	CE, CRUUS, CUL	865
DN4014	CE, CRUUS, CUL	865
DN4032	CE, CRUUS, CUL	865
DN4033	CE, CRUUS, CUL	866
DN4034	CE, CRUUS, CUL	866
DP2200	CE	376
DR2503	CE, CUL, EAC	374
DR2505	CE, CUL, EAC	374
DS2503	CE, CUL, EAC	373
DS2505	CE, CUL, EAC	374
DS2506	CE, CUL, EAC	374
DS2603	CE, CUL, EAC	374
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DTE100	CE, CUL, PI	662, 666
DTE101	CE, CUL, PI	663, 667
DTE102	CE, CUL	663, 667
DTE103	CE, CUL	663, 667
DTE104	CE, CUL	663, 667
DTE810	CE	674
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DTM424	CE, CUL, E1R	668, 735
DTM425	CE, CUL, E1R	668, 735
DTM426	CE, CUL, E1R	668, 735
DTM427	CE, CUL, E1R	668, 735
DTM434	CE, CUL, E1R	669, 735
DTM435	CE, CUL, E1R	669, 735
DTM436	CE, CUL, E1R	669, 735

(CCC) = CCC approval is not required

Order no.	Approvals	Catalogue page
DTM437	CE, CUL, E1R	669, 735
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IFS249	CE, CUL, EAC	100
IFS250	CE, CUL, EAC	101
IFS251	CE, CUL, EAC	100
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IFS253	CE, CUL, EAC	98
IFS254	CE, UL, EAC	96
IFS255	CE, UL, EAC	96
IFS256	CE, UL, EAC	98
IFS257	CE, UL, EAC	98
IFS258	CE, UL, EAC	96
IFS259	CE, UL, EAC	96
IFS260	CE, CUL, EAC	101
IFS261	CE, CUL, EAC	101
IFS262	CE, CUL, EAC	100
IFS263	CE, CUL, EAC	100
IFS280	CE, UL, EAC, (CCC)	96
IFS281	CE, UL, EAC, (CCC)	96
IFS282	CE, UL, EAC, (CCC)	96
IFS283	CE, UL, EAC, (CCC)	96
IFS285	CE, CUL	110
IFS286	CE, CUL	110
IFS289	CE, CUL	109
IFS290	CE, CUL, EAC	109
IFS297	CE, CUL, EC19352004, (CCC)	110
IFS298	CE, CUL, EC19352004, EAC, (CCC)	110
IFS299	CE, CUL, EC19352004, EAC, (CCC)	110
IFS304	CE, CUL, EC19352004, (CCC)	110
IFS305	CE, CUL, EC19352004, EAC, (CCC)	110
IFS306	CE, CUL, EC19352004, EAC, (CCC)	110
IFT200	CE, CUL, EC19352004, FDA, (CCC)	120
IFT201	CE, CUL, EC19352004, FDA, (CCC)	121
IFT202	CE, CUL, EC19352004, FDA, (CCC)	120
IFT203	CE, CUL, EAC, EC19352004, FDA, (CCC)	120
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IFT205	CE, CUL, EAC, EC19352004, FDA, (CCC)	120
IFT206	CE, CUL, EC19352004, FDA, (CCC)	119
IFT207	CE, CUL, EC19352004, FDA, (CCC)	119
IFT208	CE, CUL, EC19352004, FDA, (CCC)	119
IFT209	CE, CUL, EC19352004, FDA, (CCC)	119
IFT210	CE, CUL, EC19352004, FDA, (CCC)	120
IFT216	CE, CUL, EAC, EC19352004, FDA, (CCC)	120
IFT217	CE, CUL, EC19352004, FDA, (CCC)	120
IFT240	CE, CUL, EAC, EC19352004, FDA, (CCC)	118
IFT243	CE, EC19352004, FDA, (CCC)	118
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IFT245	CE, CUL, EAC, EC19352004, FDA, (CCC)	118
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IFW200	CE, CUL, EAC, (CCC)	111

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IFW204	CE, CUL, (CCC)	112
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IG0006	CCC, CE, CUL, EAC	90
IG0011	CCC, CE, CUL, EAC	90
IG0012	CCC, CE, EAC	90
IG001A	CE, EAC	126
IG510A	CE	125
IG511A	CE	125
IG512A	CE	126
IG513A	CE, EAC	126
IG514A	CE	126
IG515A	CE, EAC	126
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IG5285	CE, EAC, (CCC)	78
IG5397	CE, EAC, (CCC)	78
IG5398	CE, EAC, (CCC)	78
IG5399	CE, EAC, (CCC)	78
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IG5593	CCC, CE, EAC	80
IG5594	CCC, CE, EAC	80
IG5595	CCC, CE, CUL, EAC	81
IG5596	CCC, CE, EAC	80
IG5597	CCC, CE	81
IG5602	CE, (CCC)	122
IG5647	CE, CUL, (CCC)	113
IG5667	CE, CUL, (CCC)	113
IG5682	CCC, CE, EAC	106
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IG5772	CCC, CE, CUL	122
IG5806	CCC, CE	123
IG5813	CE, (CCC)	122
IG5846	CE, (CCC)	123
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IG6084	CE, (CCC)	93
IG6086	CE, (CCC)	92
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IGC224	CE, CUL, EAC, (CCC)	104
IGC225	CE, CUL, EAC, (CCC)	104
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IGC234	CE, CUL, (CCC)	109, 634
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IGC249	CE, CUL, (CCC)	115
IGC250	CE, CUL, (CCC)	115
IGC252	CE, CUL, (CCC)	114
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IGS235	CE, CUL, EAC, (CCC)	99
IGS236	CE, CUL	100
IGS237	CE, CUL, EAC	100
IGS238	CE, CUL, EAC	99
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IGS241	CE, CUL, EAC	101
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IGS254	CE, CUL, EAC	101
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IGS269	CE, UL, EAC, (CCC)	97
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IGS271	CE, UL, EAC, (CCC)	97
IGS272	CE, UL, EAC, (CCC)	97
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IGS289	CE, CUL, EC19352004, EAC, (CCC)	111
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II5369	CE, EAC, (CCC)	79
II5436	CCC, CE, EAC	80
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IIC221	CE, CUL, (CCC)	109, 634
IIC224	CE, CUL, (CCC)	114
IIC226	CE, CUL, (CCC)	114
IIC233	CE, CUL	114
IIM200	CE, CUL, E1, E1R, (CCC)	738
IIM201	CE, CUL, E1, E1R, (CCC)	738
IIM202	CE, CUL, E1, E1R, (CCC)	737
IIM203	CE, CUL, E1, E1R, (CCC)	737
IIM208	CE, CUL, E1, E1R, CCC	737
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IIM210	CE, CUL, E1, E1R, CCC	737
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IIR205	CE, CUL, (CCC)	116
IIR206	CE, (CCC)	116
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IIS205	CE, CUL, EAC, (CCC)	75
IIS206	CE, CUL, (CCC)	74
IIS207	CE, CUL, (CCC)	74
IIS208	CE, CUL, EAC, (CCC)	75
IIS209	CE, CUL, EAC, (CCC)	75
IIS210	CE, CUL, (CCC)	75
IIS211	CE, CUL, (CCC)	75
IIS226	CE, CUL, (CCC)	100
IIS227	CE, CUL, EAC, (CCC)	100
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IIS229	CE, CUL, EAC, (CCC)	99
IIS230	CE, CUL, EAC	100
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IIS281	CE, CUL, EC19352004, EAC, (CCC)	111
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(CCC) = CCC approval is not required

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(CCC) = CCC approval is not required

AS-Interface	AS-Interface (actuator sensor interface) is a worldwide manufacturer-independent standard for the connection of actuators and sensors of the first field level. Data and power supply are jointly transmitted via a two-wire cable. Wiring complexity, documentation and set-up times are reduced.
ATEX	ATEX (Atmosphère explosible) is a brief description of the uniform EU directives 94/9/EC (for manufactures of units for hazardous areas) and 1999/92/EC (for operators of plants for hazardous areas) governing the safety requirements for explosion-hazardous areas. Since 30 June 2003, units for hazardous areas have to be approved to 94/9/EU regulations. For further information about international directives see the "Approvals" chapter.
e1 type approval	The e1 type approval by the German Federal Motor Transport Authority certifies that the units comply with the automotive standards.
IO-Link	IO-Link is a field-bus independent and open point-to-point communication interface. It is a low-cost possibility to transmit parameter, diagnosis and process data from a sensor or an actuator via an I/O module.
Safety	The EC Machinery Directive stipulates machinery should not present a risk. If safety is dependent on control systems, these must be designed so as to minimise malfunction. The IEC 62061 und ISO 13849-1 standards apply. Classification is made either in the Safety Integrity Level (SIL 1-3 in IEC 62061) or in the Performance Level (PL a-e in ISO 13849-1).

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 AS-i sensors	*634 - 635*
 Valve sensors	*327 - 327* *329 - 329* *589 - 589* *591 - 591* *638 - 639*

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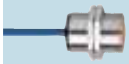 Inductive sensors	*123 - 128*
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Short-range and long-range object detection

Different measurement techniques

ifm offers a wide range of position sensors. Inductive, capacitive and magnetic sensors detect targets or objects in the range of a few millimetres up to several centimetres. For greater distances there are photoelectric sensors with ranges up to tens of metres.

Moreover, special types such as optical fork and angle sensors, fibre optics, colour and contrast sensors or cylinder sensors are used for position detection in special applications. ifm also offers suitable solutions for the detection of valve positions.

All sensors are fully electronic, i.e. they work without mechanical components. Advantage: they are wear-free and provide high switching frequencies.

Microprocessor technology makes it possible

The applied microprocessor technology allows fast and easy switch point setting via pushbuttons and potentiometer. Clearly visible LEDs indicate the switching status. In addition to the 3-wire output stage, many position sensors can also be supplied in a 2-wire version. ifm also offers sensors with a built-in AS-Interface (AS-i).

Special applications

Sensors are used in many different areas. These include machine and plant construction as well as applications in factory automation and process technology. Special solutions are, for example, provided for food applications or mobile machines.

Besides constructional measures such as high-quality housing materials and coatings, the sensors also comply with applicable approvals (e.g. ATEX or e1).

Regular and thorough testing in production to the highest standards combined with equally high standards at the development stage ensure a consistently high quality.

Inductive sensors for all application areas

Inductive sensors

- **Sensors for all application areas**
- **Wide choice of housing types and operating voltages**
- **High-quality housing materials**
- **Vast selection of assembly and connection technology**

IO-Link

Kplus same sensing range for all metals

IP 67 IP 68 IP 69 K

Temperature range –40...+85°C

High-grade stainless steel

c UL us LISTED

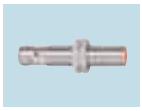
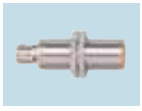
Inductive sensors

Inductive sensors offer ideal characteristics compared to mechanical switches: non-contact operation free from any wear and tear, high switching frequencies and accuracy. In addition, they are insensitive to vibration, dust and moisture. Inductive sensors detect all metals without contact.

Application sensors

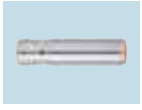
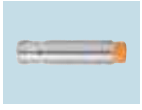
Temperature shocks, mechanical influences or aggressive cleaning agents are just a few of the possible environmental influences to which sensors are subjected. ifm therefore offers inductive sensors which have been developed for special applications. The use of selected housing materials such as stainless steel, LCP, PEEK, PBT or Duroplast and an innovative, consistent sealing concept from the sensor to the connector ensure ideal protection against penetrating media.

Sensors with IO-Link

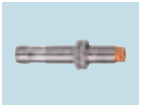
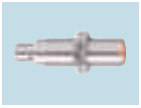
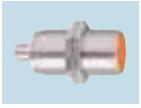
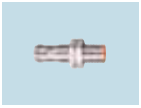
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎓ / ⎓ · 3-wire · DC PNP/NPN · Wiring diagram no. 36 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 60	0.375...3.75 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	600	100	1	**IF6123**
	M12 / L = 60	0.7...7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	600	100	2	**IF6124**
	M18 / L = 60	0.75...7.5 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	3	**IG6615**
	M18 / L = 60	1.3...13 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	4	**IG6616**
	M30 / L = 65	1.3...13 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	5	**II5973**
	M30 / L = 65	2.3...23 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	6	**II5974**
M12 connector · Output function ⎓ / ⎓ · 3-wire · DC PNP/NPN · Wiring diagram no. 37 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	40 x 40 x 54	2.1...21 f	PA (polyamide)	10...30	IP 67	100	100	7	**IM5172**
	40 x 40 x 54	2.6...26 nf	PA (polyamide)	10...30	IP 67	100	100	7	**IM5173**

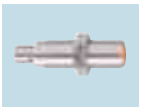
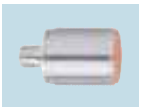
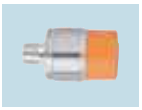
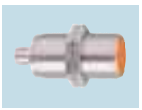
f = flush / nf = non flush / qf = quasi-flush

Sensors for industrial applications with increased sensing range

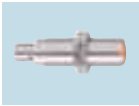
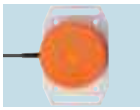
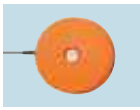
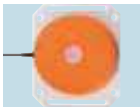
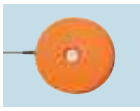
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎓ · 2-wire · DC PNP/NPN · Wiring diagram no. 1 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...30	IP 67	700	100	8	**IFS200**
	M12 / L = 50	7 nf	Brass	10...30	IP 67	700	100	9	**IFS201**
M12 connector · Output function ⎓ · 2-wire · DC PNP/NPN · Wiring diagram no. 38 · Connector groups 8, 10, 19, 21, 23									
	M18 / L = 46	8 f	Brass	10...30	IP 67	300	100	10	**IGS200**

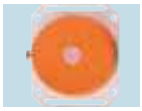
You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 38 · Connector groups 8, 10, 19, 21, 23									
	M18 / L = 51	12 nf	Brass	10...30	IP 67	250	100	11	**IGS201**
M12 connector · Output function ⎍ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 39 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M12 / L = 70	4 f	Brass	10...30	IP 67	500	100	12	**IFS208**
	M12 / L = 70	7 nf	Brass	10...30	IP 67	500	100	13	**IFS209**
	M18 / L = 70	8 f	Brass	10...30	IP 67	400	100	14	**IGS208**
	M18 / L = 70	12 nf	Brass	10...30	IP 67	300	100	15	**IGS209**
	M30 / L = 70	15 f	Brass	10...36	IP 67	100	100	16	**IIS206**
	M30 / L = 70	22 nf	Brass	10...36	IP 67	100	100	17	**IIS207**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...30	IP 67	700	100	18	**IFS204**
	M12 / L = 50	7 nf	Brass	10...30	IP 67	700	100	19	**IFS205**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 70	4 f	Brass	10...30	IP 67	700	100	20	**IFS212**
	M12 / L = 70	7 nf	Brass	10...30	IP 67	700	100	21	**IFS213**
	M18 / L = 45	8 f	Brass	10...30	IP 67	400	100	22	**IGS204**
	M18 / L = 50	12 nf	Brass	10...30	IP 67	300	100	23	**IGS205**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M18 / L = 70	8 f	Brass	10...36	IP 67	400	100	14	**IGS212**
	M18 / L = 70	12 nf	Brass	10...36	IP 67	300	100	15	**IGS213**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 202									
	M30 / L = 50	15 f	Brass	10...30	IP 67	100	100	24	**IIS204**
	M30 / L = 50	22 nf	Brass	10...30	IP 67	100	100	25	**IIS205**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M30 / L = 70	15 f	High-grade st. steel	10...36	IP 67	100	100	16	**IIS210**
	M30 / L = 70	22 nf	High-grade st. steel	10...36	IP 67	100	100	17	**IIS211**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...30	IP 67	700	100	18	**IFS206**
	M12 / L = 50	7 nf	Brass	10...30	IP 67	700	100	19	**IFS207**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 3									
	M18 / L = 45	8 f	Brass	10...30	IP 67	400	100	22	**IGS206**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M18 / L = 50	12 nf	Brass	10...30	IP 67	300	100	23	**IGS207**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23, 202									
	M30 / L = 50	15 f	Brass	10...30	IP 67	100	100	24	**IIS208**
	M30 / L = 50	22 nf	Brass	10...30	IP 67	100	100	25	**IIS209**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍⎽/⎍⎽ · 2-wire · DC PNP/NPN · Wiring diagram no. 40 · Connector groups 8, 10, 19, 21, 23									
	M18 / L = 70	8 f	Brass	10...36	IP 68	400	100	26	**IG5953**
	M18 / L = 72	12 nf	Brass	10...36	IP 68	250	100	27	**IG5954**
M8 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 1, 2, 3									
	M12 / L = 46	4 f	Brass	10...36	IP 67	700	100	28	**IFS210**
	M12 / L = 51	7 nf	Brass	10...36	IP 67	700	100	29	**IFS211**
	M18 / L = 46	8 f	Brass	10...36	IP 67	400	100	30	**IGS210**
Cable 2 m · Output function ⎍⎽ · 2-wire · AC · Wiring diagram no. 4									
	Ø 100	70 nf	PBT	90...250	IP 65	5	200	31	**I12001***
	Ø 100	70 nf	PBT	90...250	IP 65	5	200	32	**I12003***
	Ø 164	120 nf	PBT	90...250	IP 65	3	200	33	**I22001***
	Ø 164	120 nf	PBT	90...250	IP 65	3	200	34	**I22003***
Cable 2 m · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 5									
	Ø 100	70 nf	PBT	10...36	IP 65	5	250	31	**I17001**
	Ø 100	70 nf	PBT	10...36	IP 65	5	250	32	**I17003**
	Ø 164	120 nf	PBT	10...36	IP 65	3	250	33	**I27001**

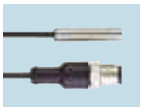
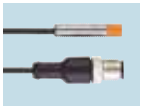
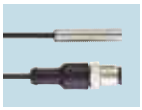
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
7/8" connector · Output function ⎓ · 2-wire · AC · Wiring diagram no. 6 · Connector groups 35, 36									
	Ø 164	120 nf	PBT	90...250	IP 65	3	200	35	**I22006***

f = flush / nf = non flush / qf = quasi-flush

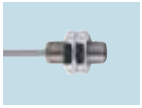
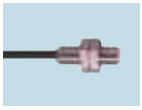
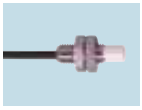
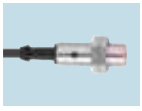
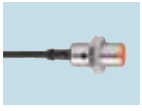
*** Note on use of miniature fuses for electrical connection**

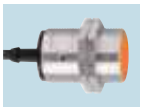
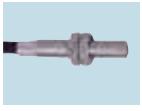
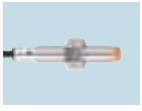
Miniature fuse to IEC60127-2 sheet 1, ≤ 2 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

Sensors for industrial applications, threaded housings

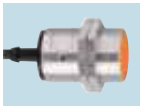
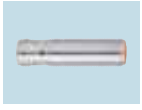
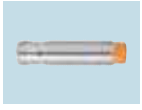
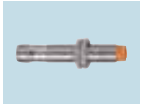
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 0.3 m · with M12 connector · Output function ⎓ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 39 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M8 / L = 37	3 f	Brass	10...30	IP 67	1000	100	36	**IE5351**
	M8 / L = 37	5 nf	Brass	10...30	IP 67	700	100	37	**IE5352**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎓ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 39 · Connector groups 1, 2, 3									
	M8 / L = 37	3 f	Brass	10...30	IP 67	1000	100	38	**IE5344**
	M8 / L = 37	5 nf	Brass	10...30	IP 67	700	100	39	**IE5346**
Cable 2 m · Output function ⎓ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 41									
	M8 / L = 37	3 f	Brass	10...30	IP 67	1000	100	40	**IE5343**
	M8 / L = 37	5 nf	Brass	10...30	IP 67	700	100	39	**IE5345**
Cable 2 m · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 5									
	M8 / L = 35	1 f	Brass	10...36	IP 67	750	200	41	**IE5072**
	M8 / L = 35	2 nf	PBT	10...36	IP 67	800	200	41	**IE5099**
	M8 / L = 50	1 f	Brass	10...36	IP 67	750	200	42	**IE5121**

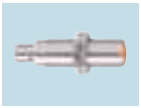
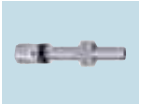
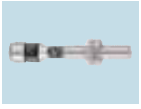
You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 5									
	M8 / L = 50	1 f	PBT	10...36	IP 67	1000	200	42	**IE5129**
	M8 / L = 20	1.5 f	stainless steel	10...30	IP 67	4000	200	43	**IE5348**
	M8 / L = 27	2 f	High-grade st. steel	10...30	IP 67	1500	100	44	**IE5368**
	M8 / L = 27	4 nf	High-grade st. steel	10...30	IP 67	500	100	45	**IE5369**
	M12 / L = 35	2 f	Brass	10...36	IP 67	1500	150	46	**IF5188**
	M12 / L = 35	4 nf	Brass	10...36	IP 67	1500	150	47	**IF5249**
	M12 / L = 71	2 f	Brass	10...55	IP 67	800	250	48	**IF5297**
	M12 / L = 71	2 f	PBT	10...55	IP 67	800	250	48	**IF5313**
	M12 / L = 71	4 nf	Brass	10...36	IP 67	1500	250	49	**IF5329**
	M12 / L = 71	4 nf	PBT	10...36	IP 67	400	250	48	**IF5345**
	M18 / L = 38	5 f	Brass	18...36	IP 67	500	125	50	**IG5221**
	M18 / L = 38	8 nf	Brass	18...36	IP 67	200	125	51	**IG5285**
	M18 / L = 80	5 f	Brass	10...36	IP 67	500	250	52	**IG5397**
	M18 / L = 80	8 nf	Brass	10...36	IP 67	300	250	53	**IG5398**
	M18 / L = 80	5 f	PBT	10...36	IP 67	500	250	52	**IG5399**
	M18 / L = 80	8 nf	PBT	10...36	IP 67	300	250	52	**IG5401**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 5									
	M30 / L = 45	10 f	Brass	18...36	IP 67	300	125	54	**II5166**
	M30 / L = 81	10 f	Brass	10...36	IP 67	250	250	55	**II5256**
	M30 / L = 81	15 nf	Brass	10...36	IP 67	250	250	56	**II5284**
	M30 / L = 81	15 nf	PBT	10...36	IP 67	250	250	55	**II5300**
	M30 / L = 45	15 nf	Brass	18...36	IP 67	250	125	57	**II5346**
	M30 / L = 81	10 f	PBT	10...36	IP 67	250	250	55	**II5369**
	M5 / L = 30	0.8 f	stainless steel	10...36	IP 65	2000	100	58	**IY5029**
	M5 / L = 27	1.5 nf	stainless steel	10...30	IP 67	1800	100	59	**IY5049**
	M5 / L = 23	0.8 f	stainless steel	10...30	IP 65	2000	100	60	**IY5051**
	M5 / L = 23	1.2 f	stainless steel	10...30	IP 65	2000	100	60	**IY5052**
Cable 2 m · Output function ⎍ / ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 42									
	M8 / L = 50	2 nf	PBT (Pocan)	5...36	IP 67	2000	200	42	**IE5202**
	M8 / L = 50	1 f	Brass	5...36	IP 67	2000	200	42	**IE5222**
	M8 / L = 50	2 nf	Brass	5...36	IP 67	2700	200	61	**IE5238**
	M12 / L = 71	4 nf	PBT	10...55	IP 67	1500	400	48	**IF5597**
	M12 / L = 71	2 f	PBT	10...55	IP 67	1100	400	48	**IF5644**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ / ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 42									
	M12 / L = 71	2 f	Brass	10...55	IP 67	1100	400	48	**IF5645**
	M12 / L = 71	4 nf	Brass	10...55	IP 67	1500	400	49	**IF5646**
	M18 / L = 80	8 nf	PBT	10...55	IP 67	300	400	52	**IG5533**
	M18 / L = 80	5 f	PBT	10...55	IP 67	700	400	52	**IG5593**
	M18 / L = 80	5 f	Brass	10...55	IP 67	700	400	52	**IG5594**
	M18 / L = 80	8 nf	Brass	10...55	IP 67	300	400	53	**IG5596**
	M30 / L = 81	15 nf	PBT	10...55	IP 67	200	400	55	**II5436**
	M30 / L = 81	10 f	PBT	10...55	IP 67	450	400	55	**II5488**
	M30 / L = 81	10 f	Brass	10...55	IP 67	450	400	55	**II5489**
	M30 / L = 81	15 nf	Brass	10...55	IP 67	200	400	56	**II5491**
	M30 / L = 45	10 f	Brass	10...55	IP 67	450	400	54	**II5493**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 45	2 f	Brass	10...30	IP 67	700	100	18	**IFS214**
	M12 / L = 50	4 nf	Brass	10...30	IP 67	700	100	19	**IFS215**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M12 / L = 70	2 f	Brass	10...36	IP 67	700	100	12	**IFS216**
	M12 / L = 70	4 nf	Brass	10...36	IP 67	700	100	13	**IFS217**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M18 / L = 45	5 f	Brass	10...30	IP 67	400	100	22	**IGS214**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M18 / L = 70	5 f	Brass	10...36	IP 67	400	100	14	**IGS216**
	M18 / L = 70	8 nf	Brass	10...36	IP 67	300	100	15	**IGS217**
	M8 / L = 53	1 f	Brass	10...36	IP 67	750	200	62	**IE5090**
	M8 / L = 62	4 nf	Brass	10...36	IP 67	300	200	63	**IE5288**
	M8 / L = 62	2 f	Brass	10...36	IP 67	1000	250	64	**IE5312**
	M8 / L = 50	2 f	High-grade st. steel	10...36	IP 68 / IP 69K	1000	100	65	**IE5379**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23									
	M8 / L = 62	2 f	Brass	10...36	IP 67	800	250	66	**IE5327**
M12 connector · Output function ⎍ / ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 40 · Connector groups 8, 10, 19, 21, 23									
	M8 / L = 69	1 f	Brass	5...36	IP 67	2700	200	67	**IE5203**
	M12 / L = 83	2 f	Brass	10...55	IP 67	1100	300	68	**IF5598**
	M12 / L = 83	4 nf	Brass	10...55	IP 67	1500	300	69	**IF5647**
	M18 / L = 70	5 f	Brass	10...55	IP 67	700	400	70	**IG5595**
	M18 / L = 76	8 nf	Brass	10...55	IP 67	300	400	71	**IG5597**
	M30 / L = 78	10 f	Brass	10...55	IP 67	450	400	72	**II5490**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ / ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 40 · Connector groups 8, 10, 19, 21, 23									
	M30 / L = 78	15 nf	Brass	10...55	IP 67	200	400	73	**II5492**
M8 connector · Output function ⎍ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 39 · Connector groups 1, 2, 3									
	M8 / L = 40	3 f	Brass	10...30	IP 65 / IP 67	800	100	74	**IE5338**
	M8 / L = 40	5 nf	High-grade st. steel	10...30	IP 65 / IP 67	600	100	75	**IE5340**
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 1, 2, 3									
	M8 / L = 50	2 f	Brass	10...36	IP 65 / IP 67	1300	200	76	**IE5287**
	M8 / L = 30.5	2 f	High-grade st. steel	10...30	IP 65 / IP 67	800	100	77	**IE5366**
	M8 / L = 30.5	4 nf	High-grade st. steel	10...30	IP 65 / IP 67	800	100	78	**IE5367**
	M5 / L = 45	0.8 f	stainless steel	10...36	IP 65	2000	100	79	**IY5036**
	M5 / L = 41	1.5 nf	stainless steel	10...30	IP 67	1800	100	80	**IY5048**
M8 connector · Output function ⎍ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 43 · Connector groups 1, 2, 3									
	M8 / L = 40	3 f	Brass	10...30	IP 65 / IP 67	800	100	74	**IE5349**
	M8 / L = 40	5 nf	High-grade st. steel	10...30	IP 65 / IP 67	600	100	75	**IE5350**
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 7 · Connector groups 1, 2, 3									
	M8 / L = 50	1 f	Brass	10...36	IP 65 / IP 67	2000	200	76	**IE5258**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Terminals · Output function ⎓ / ⎓ · 2-wire · DC PNP/NPN · Wiring diagram no. 44									
	M18 / L = 110	5 f	PBT	10...55	IP 65	800	400	81	**IG5718**
	M18 / L = 110	8 nf	PBT	10...55	IP 65	300	400	81	**IG5719**

f = flush / nf = non flush / qf = quasi-flush

Sensors for industrial applications with smooth sleeve

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 5									
	Ø 20 / L = 77	10 nf	PBT	10...36	IP 67	300	250	82	**IA5082**
	Ø 34 / L = 82	20 nf	PBT	10...36	IP 67	60	250	83	**IB5096**
	Ø 6.5 / L = 35	1 f	Brass	10...36	IP 67	900	200	84	**IT5001**
	Ø 6.5 / L = 19	2 f	stainless steel	10...30	IP 67	1000	200	85	**IT5039**
	Ø 6.5 / L = 27	2 f	High-grade st. steel	10...30	IP 67	1500	100	86	**IT5042**
	Ø 4 / L = 30	0.8 f	stainless steel	10...36	IP 65	2000	100	87	**IZ5026**
	Ø 4 / L = 27	1.5 nf	stainless steel	10...30	IP 67	1800	100	88	**IZ5047**
	Ø 3 / L = 27	1 nf	stainless steel	10...30	IP 67	5000	100	89	**IZ5048**
	Ø 4 / L = 23	0.8 f	stainless steel	10...30	IP 65	2000	100	90	**IZ5051**
	Ø 4 / L = 23	1.2 f	stainless steel	10...30	IP 65	2000	100	90	**IZ5052**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍⎽ / ⎍⏊ · 2-wire · DC PNP/NPN · Wiring diagram no. 42									
	Ø 20 / L = 77	10 nf	PBT	10...55	IP 67	300	400	82	**IA5108**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	Ø 20 / L = 93	10 nf	PBT	10...36	IP 67	300	250	91	**IA5127**
M8 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 1, 2, 3									
	Ø 4 / L = 41	1.5 nf	stainless steel	10...30	IP 67	1800	100	92	**IZ5046**
	Ø 6.5 / L = 50	1 f	Brass	10...36	IP 65 / IP 67	2000	200	93	**IT5021**
	Ø 6.5 / L = 50	1.5 f	Brass	10...36	IP 65 / IP 67	1700	200	93	**IT5034**
	Ø 6.5 / L = 30.5	2 f	High-grade st. steel	10...30	IP 65 / IP 67	800	100	94	**IT5040**
	Ø 6.5 / L = 50	4 nf	High-grade st. steel	10...30	IP 67	300	100	95	**IT5044**
	Ø 4 / L = 45	0.8 f	stainless steel	10...36	IP 65	2000	100	96	**IZ5035**
Terminals · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 8									
	Ø 20 / L = 92	10 nf	PBT	10...36	IP 65	300	250	97	**IA5062**
Terminals · Output function ⎍⏊ · 3-wire · DC PNP · Wiring diagram no. 8									
	Ø 20 / L = 92	10 nf	PBT	10...36	IP 65	300	250	97	**IA5063**
Terminals · Output function ⎍⎽ / ⎍⏊ · 2-wire · DC PNP/NPN · Wiring diagram no. 44									
	Ø 20 / L = 92	10 nf	PBT	10...55	IP 65	300	300	97	**IA5122**
	Ø 34 / L = 98	20 nf	PBT	10...55	IP 65	300	300	98	**IB5124**

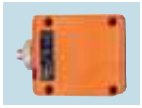
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Terminals · Output function ⎓ / ⎓ · 3-wire · DC PNP · Wiring diagram no. 8									
	Ø 34 / L = 98	20 nf	PBT	10...36	IP 65	350	250	98	**IB5063**
	Ø 34 / L = 98	30 nf	PBT	10...36	IP 65	350	200	98	**IB5133**

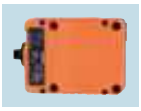
f = flush / nf = non flush / qf = quasi-flush

Sensors for industrial applications, rectangular housings

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 5									
	120 x 80 x 30	50 nf	PPE	10...36	IP 67	100	250	99	**ID5026**
	40 x 8 x 8	2 f	Brass	10...36	IP 65	2000	250	100	**IL5002**
	40 x 8 x 8	2 f	Brass	10...36	IP 65	2000	250	101	**IL5003**
	40 x 8 x 8	2.5 f	Brass	10...36	IP 65	2000	250	100	**IL5020**
	25 x 5 x 5	0.8 f	aluminium	10...30	IP 67	1000	100	102	**IL5022**
	40 x 12 x 26	2 f	PBT	10...36	IP 67	1400	250	103	**IN5121**
	40 x 12 x 26	4 nf	PBT	10...36	IP 67	1300	250	103	**IN5129**
	28 x 10 x 16	2 f	PBT	10...30	IP 67	800	200	104	**IS5001**
	28 x 10 x 16	3 nf	PBT	10...30	IP 67	100	200	104	**IS5031**
	28 x 10 x 16	4 nf	PBT	10...36	IP 67	2000	250	105	**IS5070**
	60 x 36 x 10	5 f	PBT	10...36	IP 67	400	250	106	**IW5051**

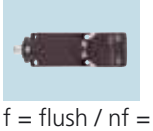
You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 5									
	60 x 36 x 10	8 nf	PBT	10...36	IP 67	300	250	106	**IW5058**
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 9									
	40 x 12 x 26	2 f	PBT	10...36	IP 67	1400	250	103	**IN5186**
	40 x 12 x 26	4 nf	PBT	10...36	IP 67	1300	250	103	**IN5188**
	60 x 36 x 10	8 nf	PBT	10...36	IP 67	300	250	107	**IW5053**
Cable 2 m · Output function ⎍ / ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 42									
	40 x 12 x 26	2 f	PBT	10...55	IP 67	1300	400	103	**IN5207**
	40 x 12 x 26	4 nf	PBT	10...55	IP 67	1200	300	103	**IN5208**
	28 x 10 x 16	2 f	PBT	5...36	IP 67	2000	200	104	**IS5026**
M12 connector · 2-wire · AS-i · Wiring diagram no. 10 · Connector groups 8, 10, 19, 21, 23									
	40 x 40 x 54	15 f	PBT	26.5...31.6	IP 67	100	–	7	**IM5118**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	92 x 80 x 40	50 f	PPE	10...36	IP 67	70	250	108	**ID5055**
	40 x 40 x 54	20 f	PA (polyamide)	10...36	IP 67	100	200	7	**IM5115**
	40 x 40 x 54	35 nf	PA (polyamide)	10...36	IP 67	80	200	7	**IM5116**
	40 x 40 x 54	40 nf	PA (polyamide)	10...36	IP 67	60	200	7	**IM5117**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 138, 139, 140, 141									
	40 x 40 x 54	20 f	PA (polyamide)	10...36	IP 67	200	200	109	**IM5119**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 138, 139, 140, 141									
	40 x 40 x 54	35 nf	PA (polyamide)	10...36	IP 67	200	200	109	**IM5120**
M12 connector · Output function ⎍⎽ · 2-wire · DC PNP/NPN · Wiring diagram no. 48 · Connector groups 8, 10, 19, 21, 23									
	40 x 40 x 54	15 f	PA (polyamide)	10...36	IP 67	200	100	174	**IM5127**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	40 x 40 x 54	20 f	PA (polyamide)	10...36	IP 67	200	200	7	**IM5128**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 138, 139, 140, 141									
	40 x 40 x 54	40 nf	PA (polyamide)	10...36	IP 67	200	200	109	**IM5129**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	40 x 40 x 54	35 nf	PA (polyamide)	10...36	IP 67	200	200	7	**IM5130**
	40 x 40 x 54	40 nf	PA (polyamide)	10...36	IP 67	200	200	7	**IM5131**
M12 connector · Output function ⎍⎽ / ⎍⏚ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	105 x 80 x 40	60 nf	PPE	10...36	IP 67	100	250	110	**ID5046**
M12 connector · Output function ⎍⎽+⎍⏚ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 137, 138, 139, 140, 141									
	40 x 40 x 54	20 f	PA (polyamide)	10...36	IP 67	200	200	109	**IM5124**
	40 x 40 x 54	35 nf	PA (polyamide)	10...36	IP 67	200	200	109	**IM5125**
	40 x 40 x 54	40 nf	PA (polyamide)	10...36	IP 67	200	200	109	**IM5126**
M12 connector · Output function ⎍⎽+⎍⏚ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	92 x 80 x 40	50 f	PPE	10...36	IP 67	70	250	108	**ID5058**

You can find wiring diagrams and scale drawings from page 134

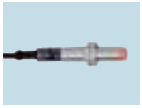
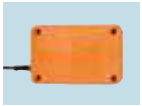
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍⎍+⎍⎍ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 137, 138, 139, 140, 141									
	40 x 40 x 54	20 f	PA (polyamide)	10...36	IP 67	200	200	7	**IM5132**
M12 connector · Output function ⎍⎍+⎍⎍ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 8, 9, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 151, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	40 x 40 x 54	35 nf	PA (polyamide)	10...36	IP 67	200	200	7	**IM5133**
M12 connector · Output function ⎍⎍+⎍⎍ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	40 x 40 x 54	35 nf	PA (polyamide)	10...36	IP 67	80	200	7	**IM5134**
M12 connector · Output function ⎍⎍+⎍⎍ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 8, 9, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 151, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	40 x 40 x 54	40 nf	PA (polyamide)	10...36	IP 67 / IP 69K	200	200	7	**IM5135**
M12 connector · Output function ⎍⎍+⎍⎍ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	40 x 40 x 54	40 nf	PA (polyamide)	10...36	IP 67	60	200	7	**IM5136**
M12 connector · Output function ⎍⎍+⎍⎍ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 8, 10, 19, 21, 23									
	40 x 40 x 54	20 f	PA (polyamide)	10...36	IP 67	100	200	7	**IM5123**
M8 connector · Output function ⎍⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 1, 2, 3									
	40 x 8 x 8	2 f	Brass	10...36	IP 65	2000	250	111	**IL5004**
	40 x 8 x 8	2 f	Brass	10...36	IP 65	2000	250	112	**IL5005**
	40 x 12 x 26	4 nf	PBT	10...36	IP 65	1300	250	113	**IN5212**
	40 x 12 x 26	2 f	PBT	10...36	IP 67	1400	250	113	**IN5230**
	28 x 10 x 16	2 f	PBT	10...36	IP 67	800	200	114	**IS5035**
	28 x 10 x 16	4 nf	PBT	10...36	IP 67	2000	250	114	**IS5071**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 1, 2, 3									
	60 x 36 x 10	8 nf	PBT	10...36	IP 65	300	250	115	**IW5064**
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 7 · Connector groups 1, 2, 3									
	60 x 36 x 10	8 nf	PBT	10...36	IP 67	300	250	115	**IW5062**
Terminals · Output function ⎍ / ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 44									
	40 x 40 x 120	15 f	PPE	10...55	IP 65	350	400	116	**IM5037**
	40 x 40 x 120	20 nf	PPE	10...55	IP 65	300	400	116	**IM5038**
Terminals · Output function ⎍ / ⎍ · 3-wire · DC PNP · Wiring diagram no. 8									
	40 x 40 x 120	20 nf	PPE	10...36	IP 65	350	250	116	**IM5019**
	40 x 40 x 120	15 f	PPE	10...36	IP 65	350	250	116	**IM5020**
	40 x 40 x 120	30 nf	PPE	10...36	IP 65	100	250	116	**IM5046**
Terminals · Output function ⎍ / ⎍ · 3-wire · DC PNP · Wiring diagram no. 45									
	90 x 60 x 40	40 nf	PPE	10...36	IP 65	15	250	117	**IC5005**
	105 x 80 x 40	60 nf	PPE	10...36	IP 65	100	250	118	**ID5005**
Terminals · Output function ⎍+⎍ · 3-wire · DC PNP · Wiring diagram no. 12									
	40 x 40 x 118	20 f	PA 6.6	10...30	IP 68 / IP 69K	400	200	119	**IV5004**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	40 x 40 x 118	20 f	PA 6.6	10...30	IP 68 / IP 69K	5	200	120	**IV5060**

f = flush / nf = non flush / qf = quasi-flush

You can find wiring diagrams and scale drawings from page 134

Sensors for industrial applications, AC and AC/DC

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f AC / DC [Hz]	I_{load} AC / DC [mA]	Drawing no.	Order no.
1/2" connector · Output function ⎍ · 2-wire · AC/DC · Wiring diagram no. 13 · Connector group 33									
	40 x 40 x 66	35 nf	PPE	20...250	IP 67	20 / 50	250 / 100	121	**IM0049***
Cable 2 m · Output function ⎍ · 2-wire · AC · Wiring diagram no. 4									
	M12 / L = 71.5	2 f	PBT	20...250	IP 67	25	200	122	**IF0001***
	M12 / L = 71.5	4 nf	PBT	20...250	IP 67	25	200	122	**IF0003***
	M12 / L = 71.5	2 f	Brass	20...250	IP 67	25	200	122	**IF0005***
	M12 / L = 71	4 nf	Brass	20...250	IP 67	25	200	123	**IF0007***
Cable 2 m · Output function ⎍ · 2-wire · AC/DC · Wiring diagram no. 14									
	Ø 20 / L = 77	10 nf	PBT	20...250	IP 67	25 / 70	250 / 100	82	**IA0004***
	Ø 34 / L = 82	20 nf	PBT	20...250	IP 67	25 / 50	250 / 100	83	**IB0004***
	Ø 34 / L = 82	30 nf	PBT	20...250	IP 67	25 / 50	250 / 100	83	**IB0026***
	120 x 80 x 30	50 nf	modified PPE	20...250	IP 65	25 / 35	250 / 100	99	**ID0014***
	M18 / L = 80	5 f	PBT	20...250	IP 67	25 / 50	250 / 100	52	**IG0005***
	M18 / L = 80	8 nf	PBT	20...250	IP 67	25 / 50	250 / 100	52	**IG0006***
	M18 / L = 80	5 f	Brass	20...250	IP 67	25 / 50	250 / 100	52	**IG0011***
	M18 / L = 80	8 nf	Brass	20...250	IP 67	25 / 50	250 / 100	53	**IG0012***
	M30 / L = 81	10 f	PBT	20...250	IP 67	25 / 50	250 / 100	55	**II0005***

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f AC / DC [Hz]	I_{load} AC / DC [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎓ · 2-wire · AC/DC · Wiring diagram no. 14									
	M30 / L = 81	15 nf	PBT	20...250	IP 67	25 / 50	250 / 100	55	**II0006***
	M30 / L = 81	10 f	Brass	20...250	IP 67	25 / 50	250 / 100	55	**II0011***
	M30 / L = 81	15 nf	Brass	20...250	IP 67	25 / 50	250 / 100	56	**II0012***
	40 x 12 x 26	2 f	PBT	20...250	IP 67	25 / 50	250 / 100	103	**IN0073***
	40 x 12 x 26	4 nf	PBT	20...250	IP 67	25 / 50	250 / 100	103	**IN0081***
Cable 2 m · Output function ⎓ · 2-wire · AC/DC · Wiring diagram no. 15									
	Ø 20 / L = 77	10 nf	PBT	20...250	IP 67	25 / 70	250 / 100	82	**IA0027***
	Ø 34 / L = 82	20 nf	PBT	20...250	IP 67	25 / 50	250 / 100	83	**IB0017***
	Ø 34 / L = 82	30 nf	PBT	20...250	IP 67	25 / 50	250 / 100	83	**IB0027***
	40 x 12 x 26	2 f	PBT	20...250	IP 67	25 / 50	250 / 100	103	**IN0077***
	40 x 12 x 26	4 nf	PBT	20...250	IP 67	25 / 50	250 / 100	103	**IN0085***
M12 connector · Output function ⎓ · 2-wire · AC/DC · Wiring diagram no. 13 · Connector group 7									
	40 x 40 x 66	35 nf	PPE	20...250	IP 67	20 / 50	250 / 100	124	**IM0053***
	92 x 80 x 40	50 f	modified PPE	20...250	IP 67	25	250 / 100	108	**ID0049***
	40 x 40 x 66	20 f	PPE	20...250	IP 67	25 / 140	250 / 100	124	**IM0054***
Terminals · Output function ⎓ / ⎓ · 2-wire · AC/DC · Wiring diagram no. 46									
	90 x 60 x 40	40 nf	PPE	20...250	IP 65	10	250 / 100	117	**IC0003***

You can find wiring diagrams and scale drawings from page 134

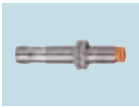
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f AC / DC [Hz]	I_{load} AC / DC [mA]	Drawing no.	Order no.
Terminals · Output function ⎓ / ⏦ · 2-wire · AC/DC · Wiring diagram no. 46									
	105 x 80 x 40	60 nf	modified PPE	20...250	IP 65	4	250 / 100	118	**ID0013***
Terminals · Output function ⎓ / ⏦ · 2-wire · AC/DC · Wiring diagram no. 16									
	Ø 20 / L = 92	10 nf	PBT	20...250	IP 65	25 / 70	250 / 100	97	**IA0032***
	Ø 34 / L = 98	20 nf	PBT	20...250	IP 65	25 / 50	250 / 100	98	**IB0016***
	40 x 40 x 120	20 nf	PPE	20...250	IP 65	20 / 55	250 / 100	116	**IM0010***
	40 x 40 x 120	15 f	PPE	20...250	IP 65	20 / 55	250 / 100	116	**IM0011***

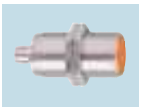
f = flush / nf = non flush / qf = quasi-flush

*** Note on use of miniature fuses for electrical connection**

Miniature fuse to IEC60127-2 sheet 1, ≤ 2 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

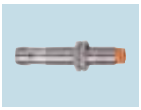
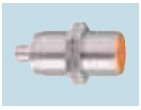
Sensors for industrial applications with analogue output 4...20 mA

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function 4...20 mA analogue · 3-wire · DC analogue · Wiring diagram no. 17 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 70	0.2...2 f	Brass	15...30	IP 67	–	–	12	**IF6028**
	M12 / L = 70	0.4...4 nf	Brass	15...30	IP 67	–	–	13	**IF6030**
	M18 / L = 60	0.8...8 nf	Brass	15...30	IP 67	–	–	125	**IG6083**
	M18 / L = 60	0.5...5 f	Brass	15...30	IP 67	–	–	126	**IG6086**
	M30 / L = 70	1.0...15 nf	Brass	15...30	IP 67	–	–	17	**II5913**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function 4...20 mA analogue · 3-wire · DC analogue · Wiring diagram no. 17 · Connector groups 8, 10, 19, 21, 23									
	M30 / L = 70	1.0...10 f	Brass	15...30	IP 67	–	–	16	**II5916**
	40 x 40 x 54	1...15 f	PA (polyamide)	15...30	IP 67	–	–	7	**IM5139**
	40 x 40 x 54	1...26 nf	PA (polyamide)	15...30	IP 67	–	–	7	**IM5141**

f = flush / nf = non flush / qf = quasi-flush

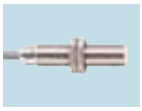
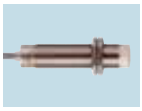
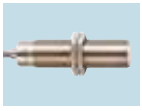
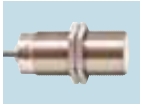
Sensors for industrial applications with analogue output 0...10 V

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function 0...10 V analogue · 3-wire · DC analogue · Wiring diagram no. 17 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 70	0.2...2 f	Brass	15...30	IP 67	–	–	12	**IF6029**
	M12 / L = 70	0.4...4 nf	Brass	15...30	IP 67	–	–	13	**IF6031**
	M18 / L = 60	0.8...8 nf	Brass	15...30	IP 67	–	–	125	**IG6084**
	M18 / L = 60	0.5...5 f	Brass	15...30	IP 67	–	–	126	**IG6087**
	M30 / L = 70	1.0...15 nf	Brass	15...30	IP 67	–	–	17	**II5914**
	M30 / L = 70	1.0...10 f	Brass	15...30	IP 67	–	–	16	**II5917**
	40 x 40 x 54	1...15 f	PA (polyamide)	15...30	IP 67	–	–	7	**IM5140**
	40 x 40 x 54	1...26 nf	PA (polyamide)	15...30	IP 67	–	–	7	**IM5142**

f = flush / nf = non flush / qf = quasi-flush

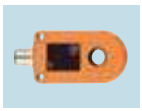
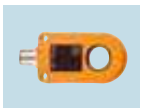
You can find wiring diagrams and scale drawings from page 134

Sensors for industrial high temperature applications

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 5 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 5									
	M12 / L = 56	3 f	stainless steel	10...35	IP 65	500	120	127	**IF6074**
	M18 / L = 77	8 nf	stainless steel	10...35	IP 65	400	150	128	**IG6119**
	M18 / L = 70	5 f	stainless steel	10...35	IP 65	400	150	129	**IG6614**
	M30 / L = 79	15 nf	stainless steel	10...35	IP 65	200	150	130	**II5930**
	M30 / L = 70	10 f	High-grade st. steel	10...35	IP 65	200	150	131	**II5961**
	M50 / L = 70	20 f	stainless steel	10...35	IP 65	100	150	132	**I95045**

f = flush / nf = non flush / qf = quasi-flush

Sensors for industrial applications on pipes and tubes

Type	Inside diameter [mm]	Operating principle	Minimum diameter of the steel ball [Ø mm]	Part speed max. [m/s]	Pulse stretching [ms]	Response time / break time [ms]	Drawing no.	Order no.
M12 connector · Output function ⎍ / ⎍⊥ · 3-wire · DC NPN · Wiring diagram no. 18 · Connector groups 8, 10, 19, 21, 23								
	10.1	static	1.5	35	10...150	0.5 / 10	133	**I7R202**
	10.1	dynamic	0.6	35	0.1...150	0.2 / 0.2	133	**I7R204**
	15.1	static	2	35	10...150	0.5 / 10	134	**I7R206**
	15.1	dynamic	0.8	35	0.1...150	0.2 / 0.2	134	**I7R208**
	20.1	static	2.5	35	10...150	0.5 / 10	135	**I7R210**
	20.1	dynamic	1.0	35	0.1...150	0.2 / 0.2	135	**I7R212**

Type	Inside diameter [mm]	Operating principle	Minimum diameter of the steel ball [Ø mm]	Part speed max. [m/s]	Pulse stretching [ms]	Response time / break time [ms]	Draw-ing no.	Order no.
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC NPN · Wiring diagram no. 18 · Connector groups 8, 10, 19, 21, 23								
	25.1	static	3.0	35	10...150	0.5 / 10	136	**I7R214**
	25.1	dynamic	1.2	35	0.1...150	0.2 / 0.2	136	**I7R216**
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC PNP · Wiring diagram no. 19 · Connector groups 8, 10, 11, 18, 19, 21, 23								
	10.1	static	1.5	35	10...150	0.5 / 10	133	**I7R201**
	10.1	dynamic	0.6	35	0.1...150	0.2 / 0.2	133	**I7R203**
	15.1	static	2	35	10...150	0.5 / 10	134	**I7R205**
	15.1	dynamic	0.8	35	0.1...150	0.2 / 0.2	134	**I7R207**
	20.1	static	2.5	35	10...150	0.5 / 10	135	**I7R209**
	20.1	dynamic	1.0	35	0.1...150	0.2 / 0.2	135	**I7R211**
	25.1	static	3.0	35	10...150	0.5 / 10	136	**I7R213**
	25.1	dynamic	1.2	35	0.1...150	0.2 / 0.2	136	**I7R215**
	51	static	6	35	10...150	0.5 / 10	137	**I7R217**

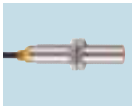
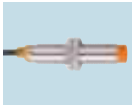
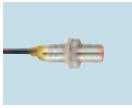
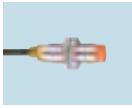
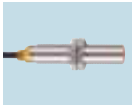
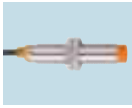
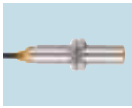
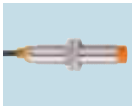
Tube sensors for industrial applications

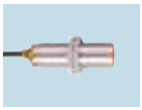
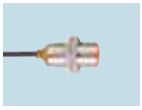
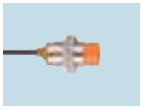
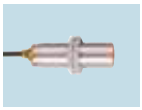
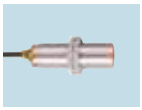
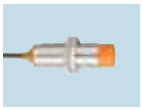
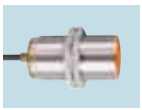
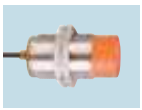
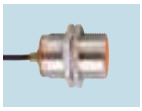
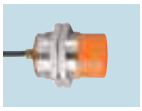
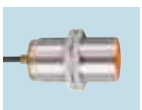
Type	Sensing range [mm]	Operating principle	Minimum diameter of the steel ball [Ø mm]	Part speed max. [m/s]	Pulse stretching [ms]	Response time / break time [ms]	Draw-ing no.	Order no.
Cable 0.09 m · with M12 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 18 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	≤ 14	static	3.0	35	100	0.5 / 100	138	**I85003**

You can find wiring diagrams and scale drawings from page 134

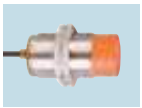
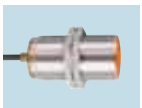
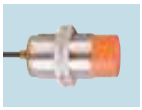
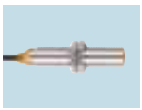
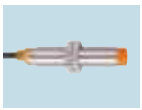
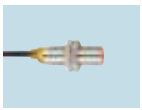
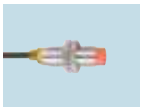
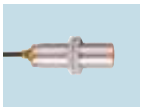
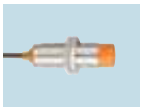
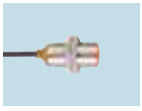
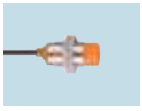
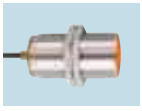
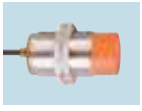
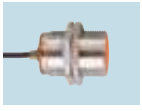
Type	Sensing range [mm]	Operating principle	Minimum diameter of the steel ball [Ø mm]	Part speed max. [m/s]	Pulse stretching [ms]	Response time / break time [ms]	Draw-ing no.	Order no.
Cable 0.09 m · with M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 19 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	≤ 14	static	3.0	35	100	0.5 / 100	138	**I85002**
M8 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 18 · Connector groups 1, 3, 78, 84, 145								
	≤ 14	static	3.0	35	100	0.5 / 100	139	**I85001**
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 19 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	≤ 14	static	3.0	35	100	0.5 / 100	139	**I85000**

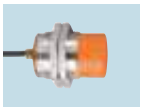
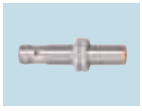
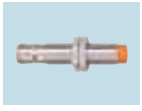
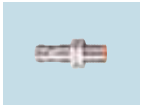
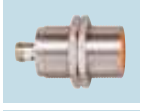
Sensors for industrial applications, oils and coolants and mobile applications with increased sensing range

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Draw-ing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 20									
	M12 / L = 60	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	140	**IFS254**
	M12 / L = 60	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	141	**IFS255**
	M12 / L = 40	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	142	**IFS258**
	M12 / L = 40	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	143	**IFS259**
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 9									
	M12 / L = 60	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	140	**IFS280**
	M12 / L = 60	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	141	**IFS282**
Cable 2 m · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 21									
	M12 / L = 60	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	140	**IFS281**
	M12 / L = 60	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	141	**IFS283**

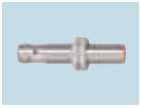
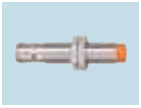
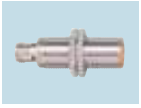
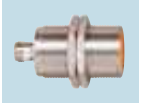
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 20									
	M18 / L = 60	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	144	**IGS246**
	M18 / L = 60	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	145	**IGS247**
	M18 / L = 40	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	146	**IGS250**
	M18 / L = 40	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	147	**IGS251**
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 9									
	M18 / L = 60	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	144	**IGS269**
	M18 / L = 60	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	145	**IGS270**
Cable 2 m · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 21									
	M18 / L = 60	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	144	**IGS271**
	M18 / L = 60	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	145	**IGS272**
Cable 2 m · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 20									
	M30 / L = 60	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	148	**IIS240**
	M30 / L = 60	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	149	**IIS241**
	M30 / L = 45	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	150	**IIS244**
	M30 / L = 45	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	151	**IIS245**
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 9									
	M30 / L = 60	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	148	**IIS264**

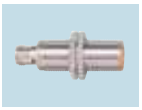
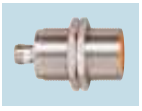
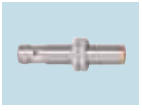
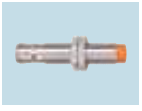
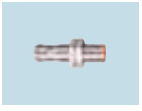
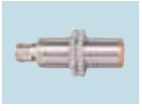
You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 9									
	M30 / L = 60	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	149	**IIS263**
Cable 2 m · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 21									
	M30 / L = 60	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	148	**IIS265**
	M30 / L = 60	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	149	**IIS266**
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 5									
	M12 / L = 60	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	140	**IFS252**
	M12 / L = 60	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	141	**IFS253**
	M12 / L = 40	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	142	**IFS256**
	M12 / L = 40	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	143	**IFS257**
	M18 / L = 60	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	144	**IGS244**
	M18 / L = 60	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	145	**IGS245**
	M18 / L = 40	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	146	**IGS248**
	M18 / L = 40	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	147	**IGS249**
	M30 / L = 60	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	148	**IIS238**
	M30 / L = 60	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	149	**IIS239**
	M30 / L = 45	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	150	**IIS242**

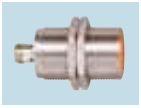
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 5									
	M30 / L = 45	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	151	**IIS243**
M12 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 22 · Connector groups 8, 10, 19, 21, 23, 202									
	M12 / L = 60	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	1	**IFS242**
	M12 / L = 60	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	2	**IFS243**
	M12 / L = 45	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	18	**IFS246**
	M12 / L = 45	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	152	**IFS247**
	M18 / L = 60	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	3	**IGS234**
	M18 / L = 60	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	4	**IGS235**
	M18 / L = 45	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	22	**IGS238**
	M18 / L = 45	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	153	**IGS239**
	M30 / L = 60	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	154	**IIS228**
	M30 / L = 60	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	155	**IIS229**
	M30 / L = 50	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	156	**IIS232**
	M30 / L = 50	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	157	**IIS233**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 202									
	M12 / L = 45	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	152	**IFS245**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 202									
	M12 / L = 60	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	1	**IFS240**
	M12 / L = 60	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	2	**IFS241**
	M18 / L = 60	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	3	**IGS232**
	M18 / L = 60	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	4	**IGS233**
	M18 / L = 45	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	22	**IGS236**
	M18 / L = 45	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	153	**IGS237**
	M30 / L = 60	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	154	**IIS226**
	M30 / L = 60	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	155	**IIS227**
	M30 / L = 50	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	156	**IIS230**
	M30 / L = 50	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	157	**IIS231**
	M12 / L = 45	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	18	**IFS244**
M12 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 23 · Connector groups 8, 10, 19, 21, 23, 202									
	M12 / L = 60	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	1	**IFS249**
	M12 / L = 60	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	2	**IFS251**
	M12 / L = 45	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	18	**IFS262**
	M12 / L = 45	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	152	**IFS263**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 23 · Connector groups 8, 10, 19, 21, 23, 202									
	M18 / L = 60	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	3	**IGS241**
	M18 / L = 60	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	4	**IGS243**
	M18 / L = 45	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	22	**IGS254**
	M18 / L = 45	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	153	**IGS255**
	M30 / L = 60	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	154	**IIS235**
	M30 / L = 60	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	155	**IIS237**
	M30 / L = 50	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	156	**IIS248**
	M30 / L = 50	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	157	**IIS249**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23, 202									
	M12 / L = 60	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	1	**IFS248**
	M12 / L = 60	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	2	**IFS250**
	M12 / L = 45	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	18	**IFS260**
	M12 / L = 45	7 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	700	100	152	**IFS261**
	M18 / L = 60	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	3	**IGS240**
	M18 / L = 60	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	4	**IGS242**
	M18 / L = 45	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	400	100	22	**IGS252**

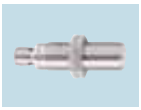
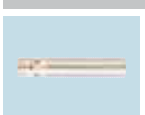
You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23, 202									
	M18 / L = 45	12 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	300	100	153	**IGS253**
	M30 / L = 60	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	154	**IIS234**
	M30 / L = 60	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	155	**IIS236**
	M30 / L = 50	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	156	**IIS246**
	M30 / L = 50	22 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	157	**IIS247**

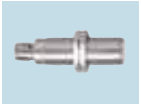
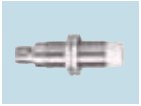
f = flush / nf = non flush / qf = quasi-flush

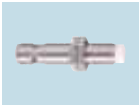
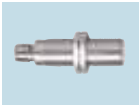
Sensors for oils and coolants with increased sensing range

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 24 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...30	IP 68	700	100	8	**IFC202**
M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 47 · Connector groups 8, 10, 19, 21, 23									
	M18 / L = 46	8 f	Brass	10...30	IP 68	300	100	10	**IGC202**
	M18 / L = 51	12 nf	Brass	10...30	IP 68	250	100	11	**IGC203**
M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 1 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...30	IP 68	700	100	8	**IFC200**
	M12 / L = 50	7 nf	Brass	10...30	IP 68	700	100	9	**IFC201**
M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 38 · Connector groups 8, 10, 19, 21, 23									
	M18 / L = 46	8 f	Brass	10...30	IP 68	400	100	10	**IGC200**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍⎽ · 2-wire · DC PNP/NPN · Wiring diagram no. 38 · Connector groups 8, 10, 19, 21, 23									
	M18 / L = 51	12 nf	Brass	10...30	IP 68	250	100	11	**IGC201**
M12 connector · Output function ⎍⎽ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 39 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M12 / L = 70	4 f	Brass	10...30	IP 68	500	100	12	**IFC210**
	M18 / L = 70	8 f	Brass	10...30	IP 68	400	100	14	**IGC210**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...30	IP 68	700	100	18	**IFC204**
	M12 / L = 50	7 nf	Brass	10...30	IP 68	700	100	158	**IFC205**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...36	IP 68	700	100	8	**IFC206**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 60	4 f	Brass	10...30	IP 68	700	200	1	**IFC229**
	M12 / L = 60	7 nf	Brass	10...30	IP 68	700	200	2	**IFC230**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 70	4 f	Brass	10...30	IP 68	700	100	20	**IFC237**
	M12 / L = 70	7 nf	Brass	10...30	IP 68	700	100	21	**IFC238**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M18 / L = 46	8 f	Brass	10...36	IP 68	400	100	10	**IGC204**
	M18 / L = 51	12 nf	Brass	10...36	IP 68	300	100	11	**IGC205**

You can find wiring diagrams and scale drawings from page 134

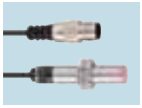
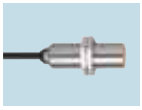
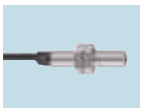
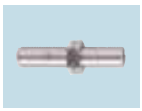
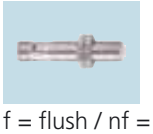
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M18 / L = 46	8 f	Brass	10...36	IP 68	400	100	10	**IGC206**
	M18 / L = 60	12 nf	Brass	10...36	IP 68	300	200	125	**IGC220**
	M18 / L = 60	8 f	Brass	10...36	IP 68	400	200	126	**IGC221**
	M18 / L = 70	8 f	Brass	10...36	IP 68	400	100	14	**IGC224**
	M18 / L = 70	12 nf	Brass	10...36	IP 68	300	100	15	**IGC225**
	M30 / L = 50	15 f	Brass	10...36	IP 68	100	100	159	**IIC200**
	M30 / L = 50	22 nf	Brass	10...36	IP 68	100	100	160	**IIC201**
	M30 / L = 60	15 f	Brass	10...36	IP 68	100	200	161	**IIC206**
	M30 / L = 60	22 nf	Brass	10...36	IP 68	100	200	162	**IIC207**
	M30 / L = 70	15 f	High-grade st. steel	10...36	IP 68	100	100	16	**IIC210**
	M30 / L = 70	22 nf	High-grade st. steel	10...36	IP 68	100	100	17	**IIC211**
	M8 / L = 50	2 f	High-grade st. steel	10...36	IP 67	1000	200	65	**IE5381**
	M8 / L = 50	4 nf	High-grade st. steel	10...36	IP 67	700	200	163	**IE5382**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 50	7 nf	Brass	10...30	IP 68	700	100	158	**IFC208**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 3									
	M12 / L = 45	4 f	Brass	10...30	IP 68	700	100	18	**IFC207**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...36	IP 68	700	100	8	**IFC209**
	M18 / L = 46	8 f	Brass	10...36	IP 68	400	100	10	**IGC207**
	M18 / L = 51	12 nf	Brass	10...36	IP 68	300	100	11	**IGC208**
	M18 / L = 46	8 f	Brass	10...36	IP 68	400	100	10	**IGC209**
M12 connector · Output function ⎍ / ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 40 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 60	4 f	Brass	10...36	IP 68	700	100	164	**IFC234**
	M12 / L = 60	7 nf	Brass	10...36	IP 68	500	100	165	**IFC235**
	M18 / L = 70	8 f	Brass	10...36	IP 68	400	100	14	**IGC222**
	M18 / L = 70	12 nf	Brass	10...36	IP 68	300	100	15	**IGC223**
	M30 / L = 70	15 f	Brass	10...30	IP 68	100	100	16	**IIC208**
	M30 / L = 70	22 nf	Brass	10...30	IP 68	100	100	17	**IIC209**

f = flush / nf = non flush / qf = quasi-flush

You can find wiring diagrams and scale drawings from page 134

Sensors for oils and coolants, threaded housings

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 0.8 m · with M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 1 · Connector groups 8, 10, 19, 21, 23									
	M8 / L = 42	2 f	Brass	10...55	IP 67	1000	100	166	**IE9902**
Cable 0.8 m · with M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 48 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 54	2 f	Brass	10...55	IP 67	800	100	167	**IF9920**
Cable 2 m · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 25									
	M18 / L = 54	5 f	Brass	10...55	IP 67	700	400	168	**IG5682**
Cable 2 m · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 49									
	M8 / L = 42	2 f	Brass	10...55	IP 67	1000	100	169	**IE9203**
	M12 / L = 54	2 f	Brass	10...55	IP 67	800	100	170	**IF9222**
M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 1 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 60	2 f	Brass	10...55	IP 67	800	100	171	**IF9924**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M12 / L = 45	2 f	Brass	10...36	IP 68	700	200	8	**IFC239**
	M12 / L = 70	2 f	Brass	10...36	IP 68	700	200	12	**IFC241**
	M12 / L = 60	2 f	Brass	10...36	IP 68	700	200	164	**IFC243**

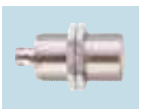
f = flush / nf = non flush / qf = quasi-flush

Sensors for oils and coolants, rectangular housings

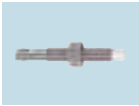
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 0.15 m · with M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 1 · Connector groups 8, 10, 19, 21, 23									
	26 x 26 x 26	10 f	polyamide	10...36	IP 67	250	100	172	**IO5018**
Cable 0.8 m · with M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 1 · Connector groups 8, 10, 19, 21, 23									
	26 x 26 x 26	10 f	polyamide	10...36	IP 67	250	100	172	**IO5017**
M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 1 · Connector groups 8, 10, 19, 21, 23									
	26 x 26 x 43	10 f	polyamide	10...36	IP 67	250	100	173	**IO5016**

f = flush / nf = non flush / qf = quasi-flush

Sensors for oils and coolants with correction factor 1

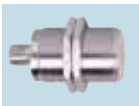
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2									
	M12 / L = 65	8 nf	High-grade st. steel	10...30	IP 68	2000	100	175	**IFC246**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23									
	M18 / L = 65	5 f	High-grade st. steel	10...30	IP 68	2000	100	176	**IGC232**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M18 / L = 65	12 nf	High-grade st. steel	10...30	IP 68	2000	200	177	**IGC233**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector group --									
	M30 / L = 65	10 f	High-grade st. steel	10...30	IP 68	2000	100	178	**IIC218**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M30 / L = 65	22 nf	High-grade st. steel	10...30	IP 68	1000	200	179	**IIC219**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2									
	M12 / L = 65	3 f	stainless steel (316L)	10...30	IP 68	2000	100	180	**IFC259**
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 1, 2, 3									
	M8 / L = 65	1.5 f	High-grade st. steel	10...30	IP 67	1000	200	181	**IE5390**
	M8 / L = 65	4 nf	High-grade st. steel	10...30	IP 67	1000	200	182	**IE5391**

f = flush / nf = non flush / qf = quasi-flush

Sensors for oils and coolants with ceramic sensing face

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 39 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M12 / L = 70	4 f	Brass	10...30	IP 68	500	100	12	**IFC210**
	M18 / L = 70	8 f	Brass	10...30	IP 68	400	100	14	**IGC210**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...36	IP 68	700	100	8	**IFC206**
	M30 / L = 60	15 f	Brass	10...36	IP 68	100	200	161	**IIC206**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 45	4 f	Brass	10...36	IP 68	700	100	8	**IFC209**
	M18 / L = 46	8 f	Brass	10...36	IP 68	400	100	10	**IGC209**

f = flush / nf = non flush / qf = quasi-flush

Sensors for oils and coolants, AS-i system

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · 2-wire · AS-i · Wiring diagram no. 10 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 60	4 f	High-grade st. steel	26.5...31.6	IP 68	100	–	164	**IFC247**
	M18 / L = 60	8 f	High-grade st. steel	26.5...31.6	IP 68	100	–	126	**IGC234**
	M18 / L = 60	12 nf	High-grade st. steel	26.5...31.6	IP 68	100	–	125	**IGC235**
	M30 / L = 60	14 f	High-grade st. steel	26.5...31.6	IP 68	100	–	161	**IIC220**
	M30 / L = 60	22 nf	High-grade st. steel	26.5...31.6	IP 68	100	–	162	**IIC221**

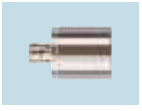
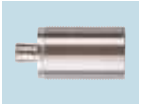
f = flush / nf = non flush / qf = quasi-flush

Electromagnetic field immune Kplus sensors with correction factor 1

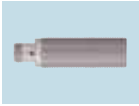
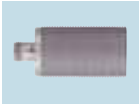
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 145, 146									
	M8 / L = 40	3 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	183	**IES200**
	M8 / L = 40	6 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	184	**IES201**
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2									
	M8 / L = 40	3 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	183	**IEW200**
	M8 / L = 40	6 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	184	**IEW201**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 202									
	M12 / L = 45	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	18	**IFS289**
	M12 / L = 45	10 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	185	**IFS290**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 202									
	M12 / L = 60	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	1	**IFS285**
	M12 / L = 60	10 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	186	**IFS286**
	M18 / L = 45	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	22	**IGS279**
	M18 / L = 45	15 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	187	**IGS280**
	M18 / L = 60	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	3	**IGS277**
	M18 / L = 60	15 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	188	**IGS278**
	M30 / L = 45	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	189	**IIS269**
	M30 / L = 60	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	154	**IIS267**
	M30 / L = 60	30 nf	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	190	**IIS268**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 148, 153, 184, 188, 193									
	M12 / L = 45	4 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	18	**IFS297**
	M12 / L = 45	8 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	185	**IFS298**
	M12 / L = 45	10 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	185	**IFS299**
	M12 / L = 60	4 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	1	**IFS304**
	M12 / L = 60	8 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	186	**IFS305**
	M12 / L = 60	10 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	186	**IFS306**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 148, 153, 184, 188, 193									
	M18 / L = 45	8 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	22	**IGS287**
	M18 / L = 45	12 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	187	**IGS288**
	M18 / L = 45	15 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	187	**IGS289**
	M18 / L = 60	8 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	3	**IGS290**
	M18 / L = 60	12 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	188	**IGS291**
	M18 / L = 60	15 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	188	**IGS292**
	M30 / L = 45	15 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	189	**IIS281**
	M30 / L = 60	15 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	154	**IIS282**
	M30 / L = 60	22 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	190	**IIS283**
	M30 / L = 60	30 nf	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	190	**IIS284**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 140, 141									
	M12 / L = 65	3 f	Brass	10...30	IP 67	2000	100	180	**IFW200**
	M12 / L = 65	8 nf	Brass	10...30	IP 67	2000	100	191	**IFW201**
	M18 / L = 65	5 f	Brass	10...30	IP 67	2000	100	176	**IGW200**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 138, 139, 140, 141									
	M18 / L = 65	12 nf	Brass	10...30	IP 67	2000	200	177	**IGW201**

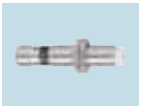
You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 140, 141									
	M30 / L = 65	10 f	Brass	10...30	IP 67	2000	100	178	**IIW200**
	M30 / L = 65	22 nf	Brass	10...30	IP 67	2000	100	192	**IIW201**
	M12 / L = 65	4 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	180	**IFW204**
	M18 / L = 65	8 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	176	**IGW202**
	M30 / L = 65	15 f	Brass	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2000	100	178	**IIW202**
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 138, 139, 140, 141									
	40 x 40 x 54	20 f	PA (polyamide)	10...36	IP 67	200	200	109	**IM5119**
	40 x 40 x 54	35 nf	PA (polyamide)	10...36	IP 67	200	200	109	**IM5120**
	40 x 40 x 54	40 nf	PA (polyamide)	10...36	IP 67	200	200	109	**IM5129**
M12 connector · Output function ⎍⎽+⎍⎽ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 137, 138, 139, 140, 141									
	40 x 40 x 54	20 f	PA (polyamide)	10...36	IP 67	200	200	109	**IM5124**
	40 x 40 x 54	35 nf	PA (polyamide)	10...36	IP 67	200	200	109	**IM5125**
	40 x 40 x 54	40 nf	PA (polyamide)	10...36	IP 67	200	200	109	**IM5126**
	40 x 40 x 54	20 f	PA (polyamide)	10...36	IP 67	200	200	7	**IM5132**
M12 connector · Output function ⎍⎽+⎍⎽ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 8, 9, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 151, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	40 x 40 x 54	35 nf	PA (polyamide)	10...36	IP 67	200	200	7	**IM5133**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍+⎍ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 8, 9, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 151, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	40 x 40 x 54	40 nf	PA (polyamide)	10...36	IP 67 / IP 69K	200	200	7	**IM5135**

f = flush / nf = non flush / qf = quasi-flush

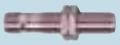
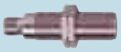
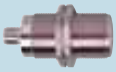
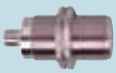
Electromagnetic field immune sensors

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 138, 139, 140, 141									
	M12 / L = 60	4 nf	Brass	10...36	IP 67	1000	250	193	**IF5675**
	M18 / L = 60	5 f	Brass	10...36	IP 67	700	250	126	**IG5647**
	M12 / L = 60	2 f	Brass	10...36	IP 67	1000	250	194	**IF5670**
	M12 / L = 60	2 f	Brass	10...36	IP 67	1000	250	194	**IF5750**
	M12 / L = 60	4 nf	Brass	10...36	IP 67	1000	250	193	**IF5751**
	M18 / L = 60	5 f	Brass	10...36	IP 67	700	250	126	**IG5667**
	M30 / L = 60	10 f	Brass	10...36	IP 67	250	250	195	**II5503**
M12 connector · Output function ⎍+⎍ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 137, 138, 139, 140, 141									
	92 x 80 x 40	50 f	PPE	10...36	IP 67	70	250	108	**ID5059**

f = flush / nf = non flush / qf = quasi-flush

You can find wiring diagrams and scale drawings from page 134

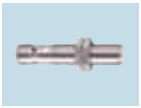
Full metal sensors for oils and coolants

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 45	4 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	18	**IFC275**
	M18 / L = 45	8 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	22	**IGC258**
	M30 / L = 50	15 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	50	100	156	**IIC233**
M12 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 22 · Connector groups 8, 10, 19, 21, 23									
	M8 / L = 60	2 f	High-grade st. steel	10...36	IP 67 / IP 68	100	100	196	**IEC203**
	M12 / L = 60	3 f	High-grade st. steel	10...36	IP 67 / IP 68	100	100	164	**IFC266**
	M18 / L = 70	5 f	High-grade st. steel	10...36	IP 67 / IP 68	100	100	70	**IGC252**
	M30 / L = 70	10 f	High-grade st. steel	10...36	IP 67 / IP 68	50	100	197	**IIC226**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M8 / L = 60	2 f	High-grade st. steel	10...36	IP 67 / IP 68 / IP 69K	100	100	196	**IEC200**
	M12 / L = 60	3 f	High-grade st. steel	10...36	IP 67 / IP 68	100	100	164	**IFC258**
	M18 / L = 70	5 f	High-grade st. steel	10...36	IP 67 / IP 68	100	100	70	**IGC248**
	M30 / L = 70	10 f	High-grade st. steel	10...36	IP 67 / IP 68	50	100	197	**IIC224**
M8 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 22 · Connector groups 1, 3									
	M8 / L = 50	2 f	High-grade st. steel	10...36	IP 67	100	100	198	**IEC202**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 1, 2, 3									
	M8 / L = 50	2 f	High-grade st. steel	10...36	IP 67	100	100	198	**IEC201**

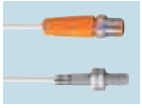
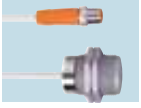
f = flush / nf = non flush / qf = quasi-flush

Full metal sensors for oils and coolants with correction factor 0

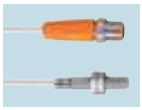
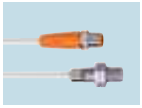
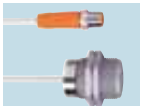
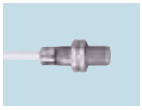
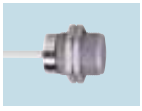
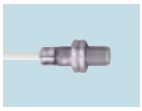
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23									
	M12 / L = 60	2.5 f	High-grade st. steel	10...36	IP 68	100	100	164	**IFC263**
	M18 / L = 70	4.5 f	High-grade st. steel	10...36	IP 68	100	100	199	**IGC249**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23									
	M12 / L = 60	2.5 f	High-grade st. steel	10...36	IP 68	100	100	164	**IFC264**
	M18 / L = 70	4.5 f	High-grade st. steel	10...36	IP 68	100	100	199	**IGC250**

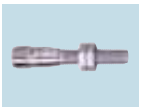
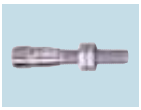
f = flush / nf = non flush / qf = quasi-flush

Full metal sensors with non-stick coating against weld spatter

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 0.3 m · with M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 1 · Connector groups 137, 140, 141									
	M8 / L = 45	2 f	High-grade st. steel	10...36	IP 67	150	100	200	**IER203**
	M12 / L = 40	4 f	High-grade st. steel	10...36	IP 67	75	100	201	**IFR203**
	M18 / L = 40	6 f	High-grade st. steel	10...36	IP 67	50	100	202	**IGR203**
	M30 / L = 40	12 f	High-grade st. steel	10...36	IP 67	25	100	203	**IIR203**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 0.3 m · with M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 26 · Connector groups 137, 140, 141									
	M8 / L = 45	2 f	High-grade st. steel	10...36	IP 67	150	100	200	**IER206**
	M12 / L = 40	4 f	High-grade st. steel	10...36	IP 67	75	100	201	**IFR206**
	M18 / L = 40	6 f	High-grade st. steel	10...36	IP 67	50	100	202	**IGR206**
	M30 / L = 40	12 f	High-grade st. steel	10...36	IP 67	25	100	203	**IIR206**
Cable 3 m · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 27									
	M8 / L = 45	2 f	High-grade st. steel	10...36	IP 67	150	100	204	**IER204**
	M12 / L = 40	4 f	High-grade st. steel	10...36	IP 67	75	100	205	**IFR204**
	M18 / L = 40	6 f	High-grade st. steel	10...36	IP 67	50	100	206	**IGR204**
	M30 / L = 40	12 f	High-grade st. steel	10...36	IP 67	25	100	207	**IIR204**
Cable 5 m · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 27									
	M12 / L = 40	4 f	High-grade st. steel	10...36	IP 67	75	100	205	**IFR205**
	M18 / L = 40	6 f	High-grade st. steel	10...36	IP 67	50	100	206	**IGR205**
	M30 / L = 40	12 f	High-grade st. steel	10...36	IP 67	25	100	207	**IIR205**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 140, 141									
	M12 / L = 45	4 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2	100	18	**IFR207**
	M18 / L = 45	8 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2	100	22	**IGR207**
	M30 / L = 50	15 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	2	100	156	**IIR207**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 22 · Connector groups 137, 140, 141									
	M8 / L = 60	2 f	High-grade st. steel	10...36	IP 67 / IP 68	100	100	196	**IER201**
	M12 / L = 60	4 f	High-grade st. steel	10...36	IP 67	2	100	164	**IFR202**
	M18 / L = 70	6 f	High-grade st. steel	10...36	IP 67	2	100	70	**IGR202**
	M30 / L = 70	12 f	High-grade st. steel	10...36	IP 67	2	100	197	**IIR202**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 137, 138, 139, 140, 141									
	M8 / L = 60	2 f	High-grade st. steel	10...36	IP 67 / IP 68	100	100	196	**IER200**
	M12 / L = 60	4 f	High-grade st. steel	10...36	IP 67	2	100	164	**IFR200**
	M18 / L = 70	6 f	High-grade st. steel	10...36	IP 67	2	100	70	**IGR200**
	M30 / L = 70	12 f	High-grade st. steel	10...36	IP 67	2	100	197	**IIR200**

f = flush / nf = non flush / qf = quasi-flush

Full metal sensors for hygienic and wet areas

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 148, 153, 184, 188, 193									
	M12 / L = 45	4 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	18	**IFT257**
	M18 / L = 45	8 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	100	100	22	**IGT258**
	M30 / L = 50	15 f	High-grade st. steel	10...30	IP 65 / IP 66 / IP 67 / IP 68 / IP 69K	50	100	156	**IIT243**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 22 · Connector groups 148, 152, 153, 155, 184, 186, 188, 192, 193									
	M12 / L = 70	6 nf	High-grade st. steel	10...36	IP 65 / IP 67 / IP 68 / IP 69K	500	100	208	**IFT246**
	M18 / L = 70	12 nf	High-grade st. steel	10...36	IP 65 / IP 67 / IP 68 / IP 69K	500	100	209	**IGT250**
	M30 / L = 70	25 nf	High-grade st. steel	10...36	IP 65 / IP 67 / IP 68 / IP 69K	250	100	210	**IIT232**
M12 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 22 · Connector groups 148, 153, 184, 188, 193									
	M18 / L = 70	5 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	70	**IGT248**
	M12 / L = 60	3 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	164	**IFT244**
	M30 / L = 70	10 f	High-grade st. steel	10...36	IP 68 / IP 69K	50	100	197	**IIT230**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 148, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193									
	M12 / L = 70	6 nf	High-grade st. steel	10...36	IP 65 / IP 67 / IP 68 / IP 69K	500	100	208	**IFT245**
	M18 / L = 70	12 nf	High-grade st. steel	10...36	IP 65 / IP 67 / IP 68 / IP 69K	500	100	209	**IGT249**
	M30 / L = 70	25 nf	High-grade st. steel	10...36	IP 65 / IP 67 / IP 68 / IP 69K	250	100	210	**IIT231**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 148, 150, 153, 154, 184, 188, 190, 193									
	M18 / L = 70	5 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	70	**IGT247**
	M30 / L = 70	10 f	High-grade st. steel	10...36	IP 68 / IP 69K	50	100	197	**IIT228**
	M12 / L = 60	3 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	164	**IFT240**
	Ø 12 / L = 60	3 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	211	**IFT243**

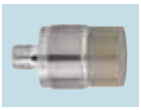
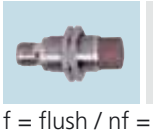
f = flush / nf = non flush / qf = quasi-flush

Sensors for hygienic and wet areas with increased sensing range

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
1/2" UNF-Connector · Output function ⎓ · 2-wire · AC/DC · Wiring diagram no. 28 · Connector group 33									
	M30 / L = 70	22 nf	High-grade st. steel	20...140	IP 68 / IP 69K	25 / 100	80	212	**IIT002**
Cable 10 m · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 5									
	M12 / L = 50	4 f	High-grade st. steel	10...36	IP 68 / IP 69K	800	100	213	**IFT207**
	M12 / L = 61	7 nf	High-grade st. steel	10...36	IP 68 / IP 69K	800	100	214	**IFT209**
	M18 / L = 57	8 f	High-grade st. steel	10...36	IP 68 / IP 69K	600	100	215	**IGT207**
	M18 / L = 62	12 nf	High-grade st. steel	10...36	IP 68 / IP 69K	300	100	216	**IGT209**
	M30 / L = 59	14 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	217	**IIT206**
	M30 / L = 59	22 nf	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	218	**IIT208**
Cable 6 m · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 5									
	M12 / L = 50	4 f	High-grade st. steel	10...36	IP 68 / IP 69K	800	100	213	**IFT206**
	M12 / L = 61	7 nf	High-grade st. steel	10...36	IP 68 / IP 69K	800	100	214	**IFT208**
	M18 / L = 57	8 f	High-grade st. steel	10...36	IP 68 / IP 69K	600	100	215	**IGT206**
	M18 / L = 62	12 nf	High-grade st. steel	10...36	IP 68 / IP 69K	300	100	216	**IGT208**
	M30 / L = 59	22 nf	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	218	**IIT207**
	M30 / L = 59	14 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	217	**IIT209**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 39 · Connector groups 148, 150, 153, 154, 184, 188, 190, 193									
	M12 / L = 70	7 nf	High-grade st. steel	10...30	IP 68 / IP 69K	700	100	219	**IFT202**
	M12 / L = 70	4 f	High-grade st. steel	10...36	IP 68 / IP 69K	500	100	12	**IFT205**
	Ø 12 / L = 70	7 nf	High-grade st. steel	10...30	IP 68 / IP 69K	700	100	220	**IFT210**
	M18 / L = 70	12 nf	High-grade st. steel	10...30	IP 68 / IP 69K	300	100	221	**IGT202**
	M18 / L = 70	8 f	High-grade st. steel	10...36	IP 68 / IP 69K	400	100	14	**IGT205**
	M30 / L = 70	22 nf	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	17	**IIT202**
	M30 / L = 70	14 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	16	**IIT204**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 148, 150, 153, 154, 184, 188, 190, 193									
	M12 / L = 50	7 nf	High-grade st. steel	10...36	IP 68 / IP 69K	800	100	222	**IFT200**
	M12 / L = 45	4 f	High-grade st. steel	10...36	IP 68 / IP 69K	800	100	8	**IFT203**
	M12 / L = 70	4 f	High-grade st. steel	10...36	IP 68 / IP 69K	700	100	12	**IFT216**
	M12 / L = 70	7 nf	High-grade st. steel	10...36	IP 68 / IP 69K	800	100	13	**IFT217**
	M18 / L = 51	12 nf	High-grade st. steel	10...36	IP 68 / IP 69K	300	100	223	**IGT200**
	M18 / L = 46	8 f	High-grade st. steel	10...36	IP 68 / IP 69K	600	100	10	**IGT203**
	M18 / L = 70	8 f	High-grade st. steel	10...36	IP 68 / IP 69K	400	100	14	**IGT219**
	M18 / L = 70	12 nf	High-grade st. steel	10...36	IP 68 / IP 69K	300	100	15	**IGT220**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 148, 150, 153, 154, 184, 188, 190, 193									
	M30 / L = 50	22 nf	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	224	**IIT200**
	M30 / L = 50	14 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	159	**IIT205**
	M30 / L = 70	15 f	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	16	**IIT212**
	M30 / L = 70	22 nf	High-grade st. steel	10...36	IP 68 / IP 69K	100	100	17	**IIT213**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 148, 153, 184, 188, 193									
	M18 / L = 46	8 f	High-grade st. steel	10...36	IP 68 / IP 69K	600	100	10	**IGT204**
	M12 / L = 50	7 nf	High-grade st. steel	10...36	IP 68 / IP 69K	800	100	222	**IFT201**
	M12 / L = 45	4 f	High-grade st. steel	10...36	IP 68 / IP 69K	800	100	8	**IFT204**
	M18 / L = 51	12 nf	High-grade st. steel	10...36	IP 68 / IP 69K	300	100	223	**IGT201**

f = flush / nf = non flush / qf = quasi-flush

Sensors for hygienic and wet areas

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍+⎍ · 4-wire · DC PNP · Wiring diagram no. 29									
	M18 / L = 80	8 nf	High-grade st. steel	10...36	IP 67	320	250	53	**IG5202**
M12 connector · Output function ⎍ · 3-wire DC PNP · 2-wire DC PNP/NPN · Wiring diagram no. 39 · Connector groups 148, 150, 153, 154, 184, 188, 190, 193									
	M18 / L = 70	8 nf	High-grade st. steel	10...36	IP 68 / IP 69K	300	100	221	**IGT240**
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 148, 150, 153, 154, 184, 188, 190, 193									
	M8 / L = 70	1 f	High-grade st. steel	10...36	IP 67	2000	200	225	**IE5215**

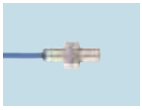
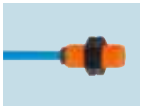
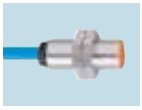
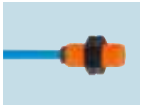
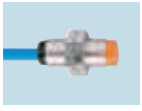
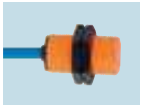
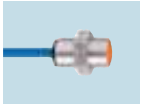
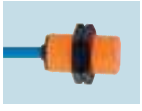
You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 148, 150, 153, 154, 184, 188, 190, 193									
	M8 / L = 55	2 nf	High-grade st. steel	10...36	IP 67	2000	200	226	**IE5295**
	M12 / L = 59	2 f	High-grade st. steel	10...36	IP 67	1100	200	227	**IF5514**
	M12 / L = 83	4 nf	High-grade st. steel	10...36	IP 67	400	250	69	**IF5594**
	M12 / L = 44	4 nf	High-grade st. steel	10...36	IP 67	1400	125	228	**IF5796**
	M12 / L = 59	4 nf	High-grade st. steel	10...36	IP 67	1400	250	229	**IF5813**
	M12 / L = 44	2 f	High-grade st. steel	10...36	IP 67	1200	250	230	**IF5815**
	M12 / L = 83	2 f	High-grade st. steel	10...36	IP 67	800	250	68	**IF5851**
	M18 / L = 90	8 nf	High-grade st. steel	10...36	IP 67	300	250	231	**IG5602**
	M18 / L = 76	5 f	High-grade st. steel	10...36	IP 67	500	250	232	**IG5813**
	M30 / L = 92	10 f	High-grade st. steel	10...36	IP 67	250	250	233	**II5689**
	M30 / L = 92	15 nf	High-grade st. steel	10...36	IP 67	200	250	234	**II5776**
M12 connector · Output function ⎍ / ⏚ · 2-wire · DC PNP/NPN · Wiring diagram no. 40 · Connector groups 148, 153, 184, 188, 193									
	M12 / L = 83	2 f	High-grade st. steel	10...55	IP 67	1100	400	68	**IF5759**
	M12 / L = 83	4 nf	High-grade st. steel	10...55	IP 67	1500	300	69	**IF5760**
	M18 / L = 77	8 nf	High-grade st. steel	10...55	IP 67	300	300	235	**IG5772**

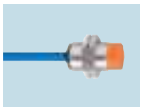
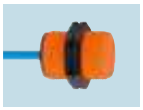
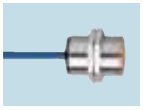
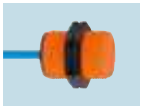
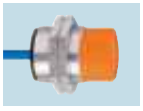
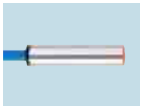
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍/⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 40 · Connector groups 148, 153, 184, 188, 193									
	M18 / L = 90	5 f	High-grade st. steel	10...55	IP 67	700	400	236	**IG5806**
	M30 / L = 78	15 nf	High-grade st. steel	10...55	IP 67	200	400	73	**II5733**
	M30 / L = 92	10 f	High-grade st. steel	10...55	IP 67	450	400	233	**II5751**
M12 connector · Output function ⎍+⎍ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 148, 150, 153, 154, 184, 188, 190, 193									
	M18 / L = 45	10 nf	High-grade st. steel	10...36	IP 67	300	250	237	**IG5846**

f = flush / nf = non flush / qf = quasi-flush

Sensors with ATEX approval 1D / 2G

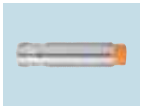
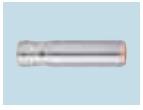
Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 2-wire · Connection to certified intrinsically safe circuits with the max. values U = 15 V / I = 50 mA / P = 120 mW · Wiring diagram no. 30										
	M8 / L = 30	1 f	Brass	8.2 DC	7.5...30	80	70	2000	238	**NE5001**
	M12 / L = 30	2 f	PBT	8.2 DC	7.5...30	140	340	1200	239	**NF5001**
	M12 / L = 30	2 f	Brass	8.2 DC	7.5...30	140	340	1200	239	**NF5002**
	M12 / L = 30	4 nf	PBT	8.2 DC	7.5...30	140	130	1500	239	**NF5003**
	M12 / L = 30	4 nf	Brass	8.2 DC	7.5...30	140	130	1500	240	**NF5004**
	M18 / L = 33	5 f	PBT	8.2 DC	7.5...30	145	45	720	241	**NG5001**
	M18 / L = 33	5 f	Brass	8.2 DC	7.5...30	145	45	720	241	**NG5002**
	M18 / L = 33	8 nf	PBT	8.2 DC	7.5...30	155	50	300	241	**NG5003**

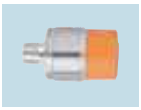
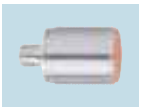
You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Draw-ing no.	Order no.
Cable 2 m · Output function ⌐ · 2-wire · Connection to certified intrinsically safe circuits with the max. values U = 15 V / I = 50 mA / P = 120 mW · Wiring diagram no. 30										
	M18 / L = 33	8 nf	Brass	8.2 DC	7.5...30	155	50	300	242	**NG5004**
	M30 / L = 41	10 f	PBT	8.2 DC	7.5...30	145	140	450	243	**NI5001**
	M30 / L = 41	10 f	Brass	8.2 DC	7.5...30	145	140	450	243	**NI5002**
	M30 / L = 41	15 nf	PBT	8.2 DC	7.5...30	145	110	200	243	**NI5003**
	M30 / L = 41	15 nf	Brass	8.2 DC	7.5...30	145	110	200	244	**NI5004**
	40 x 12 x 26	4 nf	PBT	8.2 DC	7.5...30	110	135	400	245	**NN5002**
	28 x 10 x 16	2 f	PBT	8.2 DC	7.5...30	80	110	800	246	**NS5002**
	Ø 6.5 / L = 30	1 f	Brass	8.2 DC	7.5...30	80	70	2000	247	**NT5001**

f = flush / nf = non flush / qf = quasi-flush

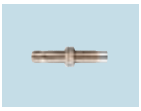
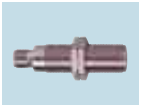
Sensors with ATEX approval 1D / 1G / 2G

Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Draw-ing no.	Order no.
M12 connector · Output function ⌐ · 2-wire · Connection to certified intrinsically safe circuits with the max. values U = 15 V / I = 50 mA / P = 120 mW · Wiring diagram no. 31 · Connector groups 195, 197										
	M12 / L = 50	7 nf	Brass	8.2 DC	7.5...30	210	145	700	9	**NF500A**
	M12 / L = 45	4 f	Brass	8.2 DC	7.5...30	210	115	700	8	**NF501A**
	M18 / L = 51	12 nf	Brass	8.2 DC	7.5...30	200	85	300	11	**NG500A**
	M18 / L = 46	8 f	Brass	8.2 DC	7.5...30	200	190	400	10	**NG501A**

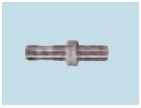
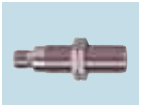
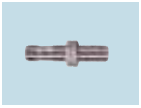
Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Draw-ing no.	Order no.
M12 connector · Output function ⏥ · 2-wire · Connection to certified intrinsically safe circuits with the max. values U = 15 V / I = 50 mA / P = 120 mW · Wiring diagram no. 31 · Connector groups 195, 197										
	M30 / L = 50	22 nf	Brass	8.2 DC	7.5...30	250	120	100	160	**NI500A**
	M30 / L = 50	15 f	Brass	8.2 DC	7.5...30	230	210	100	159	**NI501A**
M12 connector · Output function ⏥ · 2-wire · Connection to certified intrinsically safe circuits with the max. values U = 15 V / I = 50 mA / P = 120 mW · Wiring diagram no. 32 · Connector group 197										
	40 x 40 x 66	20 f	PPE	8.2 DC	7.5...30	250	450	200	124	**NM500A**
	40 x 40 x 66	35 nf	PPE	8.2 DC	7.5...30	220	710	100	124	**NM501A**

f = flush / nf = non flush / qf = quasi-flush

Sensors with ATEX approval 3D/3G

Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Draw-ing no.	Order no.
M12 connector · Output function ⏥+⏥ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 196, 198										
	40 x 40 x 54	40 nf	PC	10...30 DC	–	–	–	60	248	**IM511A**
	40 x 40 x 54	20 f	PC	10...30 DC	–	–	–	100	248	**IM512A**
	40 x 40 x 54	30 nf	PC	10...30 DC	–	–	–	100	248	**IM513A**
M12 connector · Output function ⏥ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 196, 198										
	M12 / L = 70.2	6 nf	High-grade st. steel	10...36 DC	–	–	–	500	249	**IF505A**
	M18 / L = 70	12 nf	High-grade st. steel	10...36 DC	–	–	–	500	209	**IG511A**
	M30 / L = 70	25 nf	High-grade st. steel	10...36 DC	–	–	–	250	210	**II503A**
	M18 / L = 70	5 f	High-grade st. steel	10...36 DC	–	–	–	100	70	**IG510A**

You can find wiring diagrams and scale drawings from page 134

Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Draw-ing no.	Order no.
M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 2 · Connector groups 196, 198										
	M30 / L = 70	10 f	High-grade st. steel	10...36 DC	–	–	–	50	250	**II502A**
	M12 / L = 60	3 f	High-grade st. steel	10...36 DC	–	–	–	100	251	**IF503A**
M12 connector · Output function ⎍⎿ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 196, 198										
	M18 / L = 70	5 f	High-grade st. steel	10...36 DC	–	–	–	100	70	**IG512A**
	M12 / L = 60	3 f	High-grade st. steel	10...36 DC	–	–	–	100	251	**IF504A**

f = flush / nf = non flush / qf = quasi-flush

Sensors with ATEX approval 3D

Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Draw-ing no.	Order no.
Cable 2 m · Output function ⎍⎽ · 2-wire · AC/DC · Wiring diagram no. 14										
	M18 / L = 80	8 nf	Brass	20...250 AC/DC	–	–	–	25 / 50	252	**IG001A***
Cable 2 m · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 5										
	M18 / L = 80	8 nf	Brass	10...30 DC	–	–	–	300	252	**IG513A**
Cable 2 m · Output function ⎍⎽ / ⎍⎿ · 2-wire · DC PNP/NPN · Wiring diagram no. 42										
	M18 / L = 80	8 nf	Brass	10...30 DC	–	–	–	300	252	**IG515A**
Cable 6 m · Output function ⎍⎽ · 2-wire · AC/DC · Wiring diagram no. 14										
	M30 / L = 81	15 nf	Brass	20...250 AC/DC	–	–	–	25 / 50	253	**II001A***
M12 connector · Output function ⎍⎽+⎍⎿ · 4-wire · DC PNP · Wiring diagram no. 11 · Connector groups 196, 198										
	M18 / L = 80	10 nf	High-grade st. steel	10...30 DC	–	–	–	300	254	**IG514A**

Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Draw-ing no.	Order no.
Terminals · Output function ⎓+⏚ · 4-wire · DC · Wiring diagram no. 33										
	40 x 40 x 105	20 f	PC	10...30 DC	–	–	–	100	255	**IM510A**
Terminals · Output function ⎓ · 4-wire · DC · Wiring diagram no. 34										
	40 x 40 x 105	20 f	PC	10...30 DC	–	–	–	100	255	**IM509A**
Terminals · Output function ⎓/⏚ · 2-wire · AC/DC · Wiring diagram no. 46										
	105 x 80 x 42	60 nf	PPE	20...250 AC/DC	–	–	–	4	256	**ID002A***
Terminals · Output function ⎓/⏚ · 2-wire · AC/DC · Wiring diagram no. 50										
	40 x 40 x 105	40 nf	PC	20...250 AC/DC	–	–	–	10	255	**IM002A***
Terminals · Output function ⎓/⏚ · 2-wire · DC · Wiring diagram no. 51										
	40 x 40 x 105	20 f	PC	10...55 DC	–	–	–	100	255	**IM508A**
Terminals · Output function ⎓/⏚ · 3-wire · AC/DC · Wiring diagram no. 50										
	40 x 40 x 105	20 f	PC	20...250 AC/DC	–	–	–	10	255	**IM001A***
Terminals · Output function ⎓/⏚ · 3-wire · DC PNP · Wiring diagram no. 45										
	105 x 80 x 42	60 nf	PPE	10...30 DC	–	–	–	100	256	**ID502A**
Terminals · Output function ⎓/⏚ · 4-wire · DC · Wiring diagram no. 52										
	40 x 40 x 105	20 f	PC	10...30 DC	–	–	–	100	255	**IM506A**
	40 x 40 x 105	40 nf	PC	10...30 DC	–	–	–	100	255	**IM507A**

f = flush / nf = non flush / qf = quasi-flush

*** Note on use of miniature fuses for electrical connection**

Miniature fuse to IEC60127-2 sheet 1, ≤ 2 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

You can find wiring diagrams and scale drawings from page 134

Sensors with ATEX approval 2D / 3G

Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Draw-ing no.	Order no.
M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 35 · Connector groups 196, 198										
	M30 / L = 70	10 f	High-grade st. steel	10...36 DC	–	–	–	50	250	**II504A**
Terminals · Output function ⎍ / ⎍̄ · 3-wire · DC PNP · Wiring diagram no. 53										
	105 x 80 x 42	60 nf	modified PPE	10...30 DC	–	–	–	100	256	**ID503A**

f = flush / nf = non flush / qf = quasi-flush

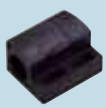
Switching amplifiers with ATEX approval

Type	Description	Order no.
	Switching amplifier for Namur sensors according to 94/9/EG (ATEX) · ATEX approval · Group II, category (1) G D · 1-channel · Relay output · Programmable output function · Short-circuit and wire monitoring	**N0031A**
	Switching amplifier for Namur sensors according to 94/9/EG (ATEX) · ATEX approval · Group II, category (1) G D · 2-channel · Relay outputs · Programmable output function · Short-circuit and wire monitoring	**N0032A**
	Switching amplifier for Namur sensors according to 94/9/EG (ATEX) · ATEX approval · Group II, category (1) G D · 2-channel · Relay outputs · Programmable output function · Short-circuit and wire monitoring	**N0033A**
	Switching amplifier for Namur sensors according to 94/9/EG (ATEX) · ATEX approval · Group II, category (1) G D · 1-channel · Relay output · Programmable output function · Short-circuit and wire monitoring	**N0530A**
	Switching amplifier for Namur sensors according to 94/9/EG (ATEX) · ATEX approval · Group II, category (1) G D · 1-channel · Transistor outputs · Programmable output function · Short-circuit and wire monitoring	**N0531A**
	Switching amplifier for Namur sensors according to 94/9/EG (ATEX) · ATEX approval · Group II, category (1) G D · 2-channel · Optocoupler output · Programmable output function · Short-circuit and wire monitoring	**N0532A**
	Switching amplifier for Namur sensors according to 94/9/EG (ATEX) · ATEX approval · Group II, category (1) G D · 2-channel · Relay outputs · Programmable output function · Short-circuit and wire monitoring	**N0533A**
	Switching amplifier for Namur sensors according to 94/9/EG (ATEX) · ATEX approval · Group II, category (1) G D · 2-channel · Transistor outputs · Programmable output function · Short-circuit and wire monitoring	**N0534A**

Accessories for sensors with smooth sleeve

Type	Description	Order no.
	Mounting clip · Ø 12 mm · for smooth body switches - Ø 12 mm · Form V · Housing materials: stainless steel	**E11530**
	Mounting clip · Ø 18 mm · for smooth body switches - Ø 18 mm · Form V · Housing materials: stainless steel	**E11531**
	Mounting clamp · Ø 4 mm · Housing materials: TPE	**E10204**
	Mounting clamp · Ø 6.5 mm · Housing materials: PPE	**E10014**
	Mounting clamp · Ø 20 mm · Housing materials: PA	**E10192**
	Mounting clamp · Ø 34 mm · Housing materials: PA	**E10193**
	Mounting clamp · Ø 20 mm · Housing materials: Mounting clamp: PBT / socket screw: steel galvanised	**E10016**
	Mounting clamp · Ø 34 mm · Housing materials: PBT	**E10017**
	Limit plungers · for type Ø 6.5 mm · with Sn = 1 mm f · Housing materials: Limit plungers: free cutting steel / plunger: C45K hardened on front / nut: Brass nickel-plated	**E10155**

Accessories for threaded M8 housings

Type	Description	Order no.
	Angle bracket · for type M8 · Housing materials: stainless steel	**E10734**
	Mounting clamp · Ø 8 mm · Housing materials: aluminium black anodised	**E10221**
	Mounting clamp · Ø 8 mm · with end stop · for type M8 · Housing materials: PC	**E11521**
	Mounting sleeve · M12 x 1 - Ø 8 mm · 32 mm · with end stop · for type M8 · Housing materials: Brass special coating	**E10848**

You can find wiring diagrams and scale drawings from page 134

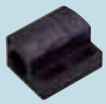
Type	Description	Order no.
	Mounting sleeve · M12 x 1 - Ø 8 mm · 42 mm · with end stop · for type M8 · Housing materials: Brass special coating	**E10849**
	Limit plungers · for types M8 x 1 · with Sn = 1 mm f, 2 mm f and 3 mm f · Housing materials: Limit plungers: free cutting steel / plunger: C45K hardened on front / nut: Brass nickel-plated	**E10154**

Accessories for threaded M12 housings

Type	Description	Order no.
	Angle bracket · for type M12 · Housing materials: stainless steel	**E10735**
	Mounting clip · O-shaped · for type M12 · Housing materials: stainless steel	**E11533**
	Mounting clamp · Ø 12 mm · Housing materials: PBT	**E10015**
	Mounting clamp · Ø 12 mm · with end stop · for type M12 · Housing materials: PC	**E11047**
	Mounting clamp · Ø 12 mm · with end stop · For sensors with 45° chamfer · for type M12 · Housing materials: PC	**E11994**
	Mounting sleeve · M16 x 1 - Ø 12 mm · 45 mm · with end stop · for type M12 · Housing materials: Brass nickel-plated	**E10741**
	Mounting sleeve · M16 x 1 - Ø 12 mm · 34 mm · with end stop · for type M12 · Housing materials: Brass nickel-plated	**E10806**
	Mounting sleeve · M16 x 1 - Ø 12 mm · with end stop · for type M12 · Housing materials: Brass nickel-plated	**E11114**
	Mounting sleeve · M16 x 1 - Ø 12 mm · 33.5 mm · with end stop · for type M12 · Housing materials: Brass anti-spatter / nut: Brass anti-spatter	**E12452**
	Lock nuts metal · M12 x 1 · Housing materials: Brass nickel-plated	**E10024**
	Lock nuts metal · M12 x 1 · Housing materials: stainless steel 316Ti / 1.4571	**E10025**

Type	Description	Order no.
	serrated washer · Ø 13 mm / Ø 18 mm · for type M12 · Housing materials: steel anti-spatter	**E12412**

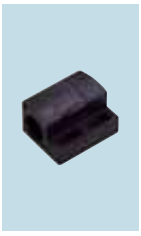
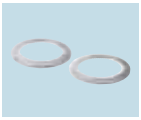
Accessories for threaded M18 housings

Type	Description	Order no.
	Angle bracket · for type M18 · Housing materials: stainless steel	**E10736**
	Mounting clip · O-shaped · for type M18 · Housing materials: stainless steel	**E11534**
	Mounting clamp · Ø 20 mm - Ø 18 mm · with reducing bush · for type M18 · Housing materials: PBT	**E10076**
	Mounting clamp · Ø 18 mm · with end stop · for type M18 · Housing materials: PC	**E11048**
	Mounting clamp · Ø 18 mm · with end stop · For sensors with 45° chamfer · for type M18 · Housing materials: PC	**E11995**
	Mounting sleeve · M24 x 1.5 - Ø 18 mm · 58 mm · with end stop · for type M18 · Housing materials: Brass nickel-plated	**E10742**
	Mounting sleeve · M24 x 1.5 - Ø 18 mm · 36 mm · with end stop · for type M18 · Housing materials: Brass nickel-plated	**E10807**
	Mounting sleeve · M22 x 1 - Ø 18 mm · with end stop · for type M18 · Housing materials: Brass white bronze coated	**E11115**
	Mounting sleeve · M22 x 1 - Ø 18 mm · 33.5 mm · with end stop · for type M18 · Housing materials: Brass anti-spatter / nut: Brass anti-spatter	**E12453**
	Plastic nut for flow plate · M18 x 1 · Housing materials: POM	**E19503**
	Lock nuts metal · M18 x 1 · Housing materials: Brass nickel-plated	**E10027**
	Lock nuts metal · M18 x 1 · Housing materials: stainless steel 316Ti / 1.4571	**E10028**

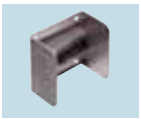
You can find wiring diagrams and scale drawings from page 134

Type	Description	Order no.
	serrated washer · Ø 19 mm / Ø 27 mm · for type M18 · Housing materials: steel anti-spatter	**E12413**

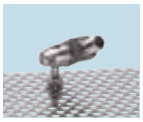
Accessories for threaded M30 housings

Type	Description	Order no.
	Angle bracket · for type M30 · Housing materials: stainless steel	**E10737**
	Mounting clamp · Ø 34 mm - Ø 30 mm · with reducing bush · for type M30 · Housing materials: PBT	**E10077**
	Mounting clamp · Ø 30 mm · with end stop · for type M30 · Housing materials: PC	**E11049**
	Mounting clamp · Ø 30 mm · with end stop · For sensors with 45° chamfer · for type M30 · Housing materials: PC	**E11996**
	Mounting sleeve · M36 x 1.5 - Ø 30 mm · 58 mm · with end stop · for type M30 · Housing materials: Brass nickel-plated	**E10743**
	Mounting sleeve · M36 x 1.5 - Ø 30 mm · 36 mm · with end stop · for type M30 · Housing materials: Brass nickel-plated	**E10808**
	Mounting sleeve · M36 x 1.5 - Ø 30 mm · 33.5 mm · with end stop · for type M30 · Housing materials: Brass anti-spatter / nut: Brass anti-spatter	**E12454**
	Lock nuts metal · M30 x 1.5 · Housing materials: Brass nickel-plated	**E10030**
	Lock nuts metal · M30 x 1.5 · Housing materials: stainless steel 316Ti / 1.4571	**E10031**
	serrated washer · Ø 31.6 mm / Ø 45 mm · for type M30 · Housing materials: steel anti-spatter	**E12414**

Accessories for rectangular housings

Type	Description	Order no.
	Mounting bracket · with integrated snap-on rail · for type IDC · Housing materials: stainless steel	**E10730**

System components

Type	Description	Order no.
	Mounting set · Ø 18.5 mm · Clamp mounting · Free-standing M10 · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20718**
	Mounting set · Ø 18.5 mm · Clamp mounting · Free-standing M10 · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20719**
	Mounting set · Ø 12.2 mm · Clamp mounting · free-standing M8 · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E20856**
	Mounting set · Ø 12.2 mm · Clamp mounting · free-standing M8 · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20857**
	Mounting set · Ø 12.2 mm · Clamp mounting · free-standing M8 · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E20860**
	Mounting set · Ø 12.2 mm · Clamp mounting · free-standing M8 · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20861**
	Mounting set · Ø 12.2 mm · Clamp mounting · aluminium profile · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc / Cube: diecast zinc	**E20864**
	Mounting set · Ø 12.2 mm · Clamp mounting · aluminium profile · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc / Cube: diecast zinc	**E20865**
	Mounting set · Ø 18.5 mm · Clamp mounting · aluminium profile · for type OG, IG, KG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc / Cube: diecast zinc	**E20866**
	Mounting set · Ø 18.5 mm · Clamp mounting · aluminium profile · for type OG, IG, KG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc / Cube: diecast zinc	**E20867**
	Mounting set · Ø 18.5 mm · Clamp mounting · Free-standing M10 · for type OG, IG, KG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20869**
	Mounting set · Ø 18.5 mm · Clamp mounting · Free-standing M10 · for type OG, IG, KG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20870**
	Mounting set · Ø 30.2 mm · Clamp mounting · free-standing M12 · for type OI, II, KI · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E20873**
	Mounting set · Ø 30.2 mm · Clamp mounting · free-standing M12 · for type OI, II, KI · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20874**

You can find wiring diagrams and scale drawings from page 134

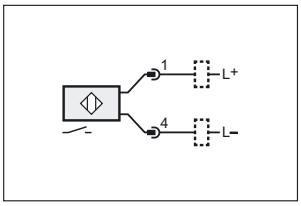
Type	Description	Order no.
	Mounting set · Ø 30.2 mm · Clamp mounting · aluminium profile · for type II, KI, OID, OI · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc / Cube: diecast zinc	E20875

Wiring diagrams

Core colours

BN	brown
BU	blue
BK	black
WH	white

1



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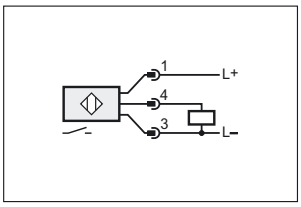

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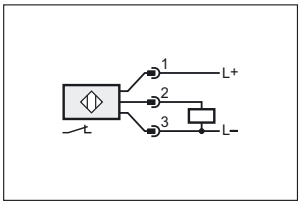

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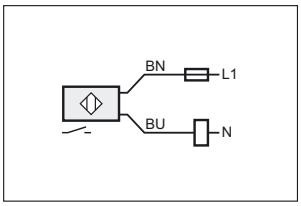

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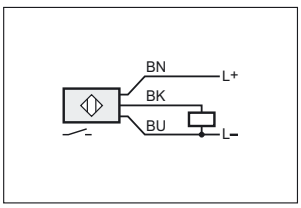

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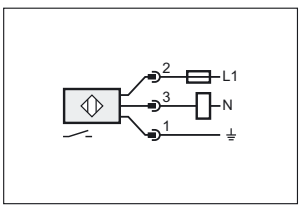

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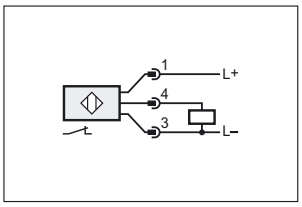

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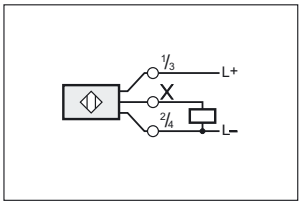

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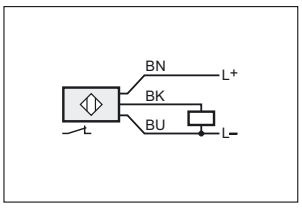

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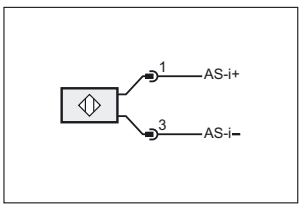

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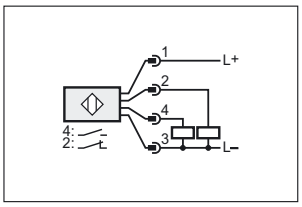

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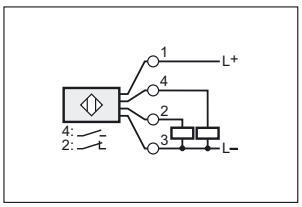

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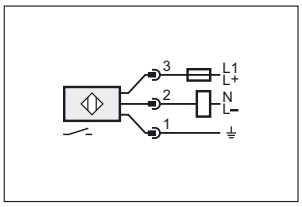

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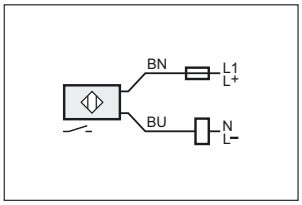

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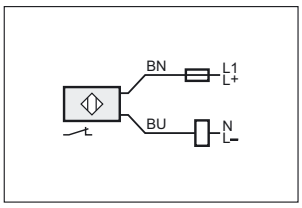

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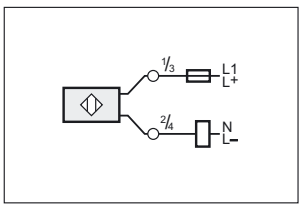

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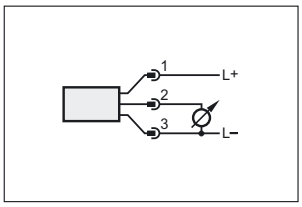

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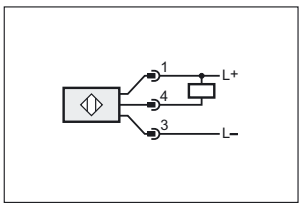

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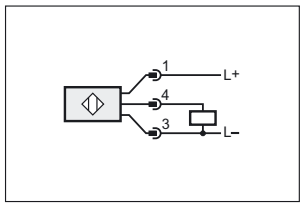

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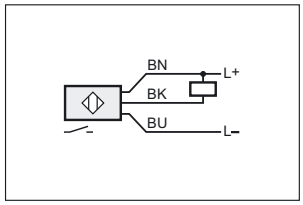

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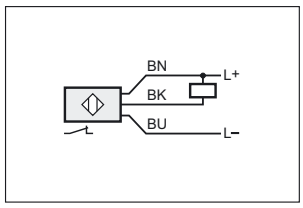

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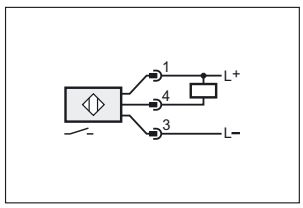

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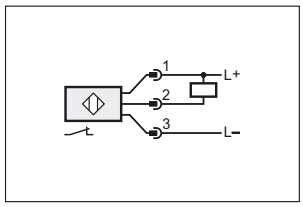

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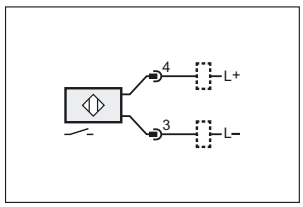
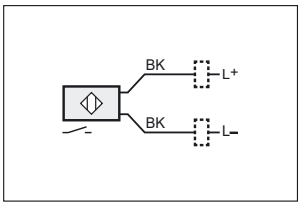


Wiring diagrams

25



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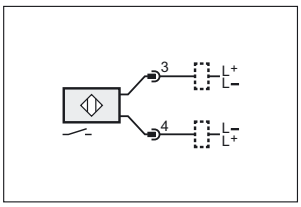

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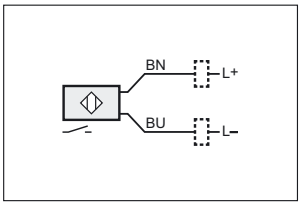

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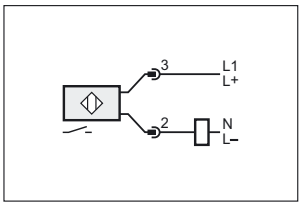

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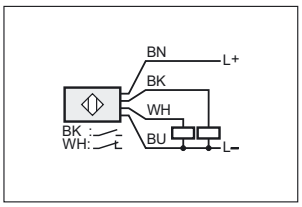

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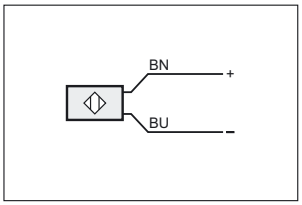

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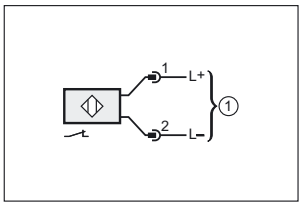

1: connection to NAMUR-amplifier

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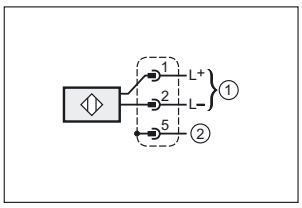

1: connection to NAMUR-amplifier, 2: Potential equalisation plug housing

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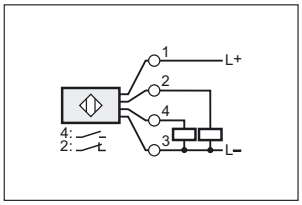

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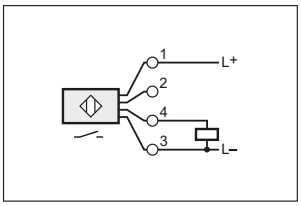

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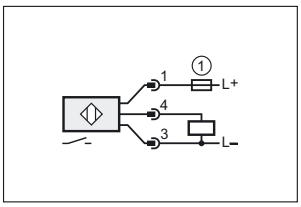

1: fuse

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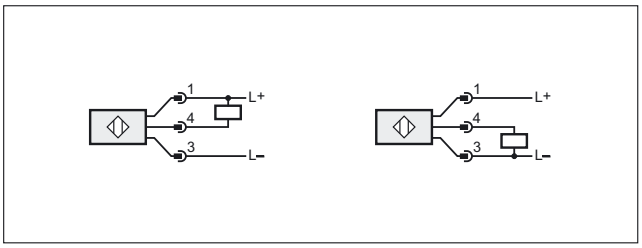

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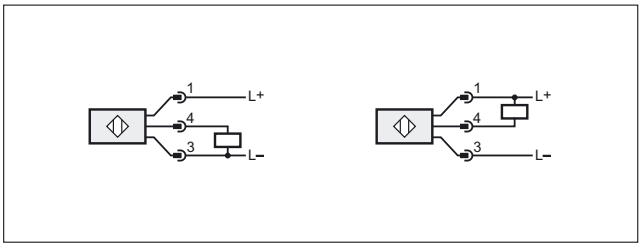

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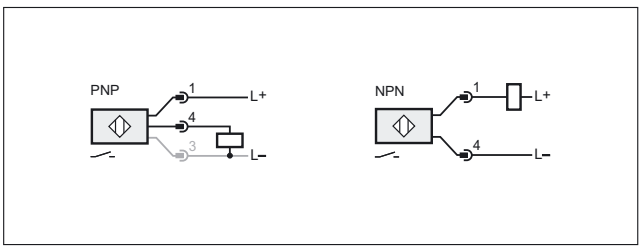

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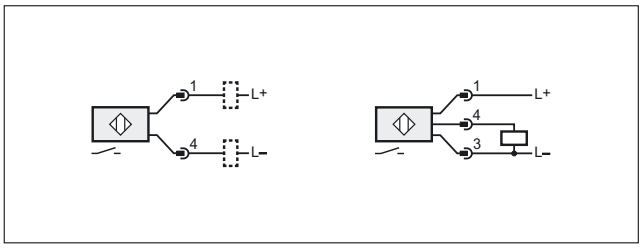

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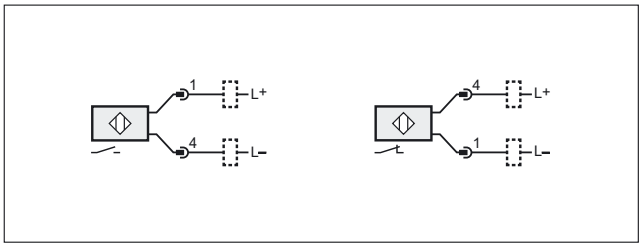

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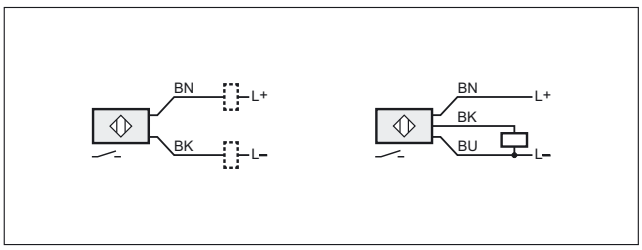

Wiring diagrams

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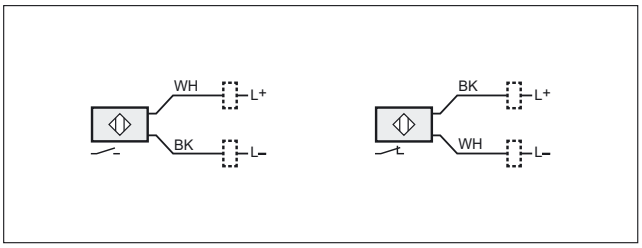

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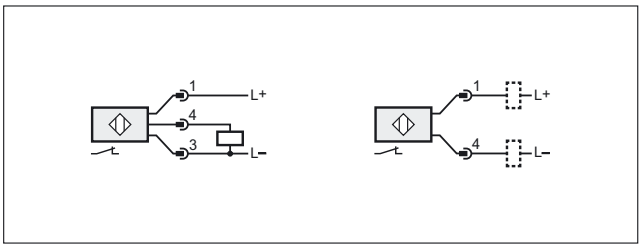

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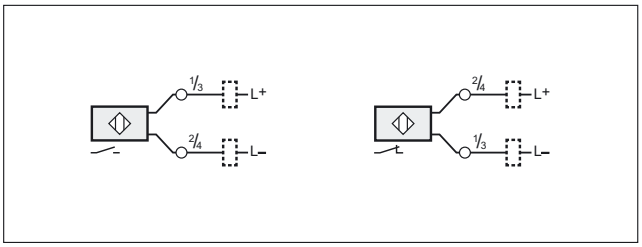

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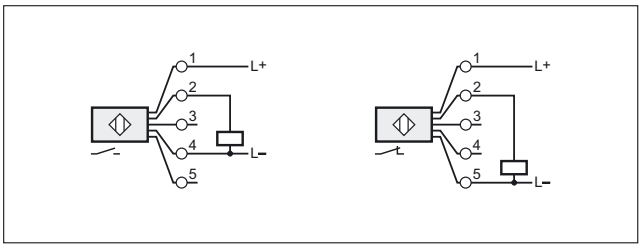

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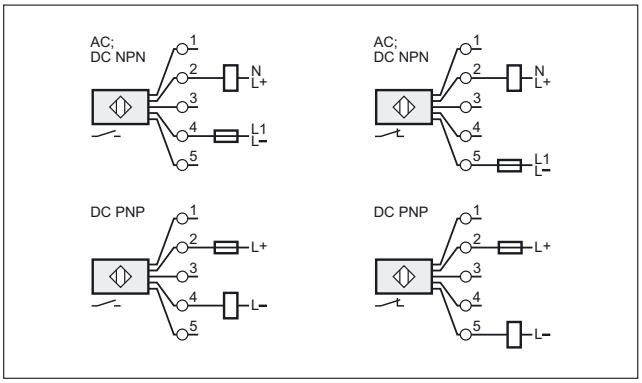

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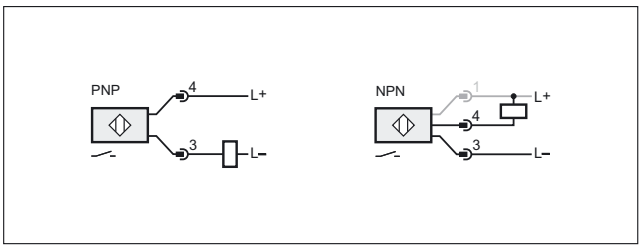

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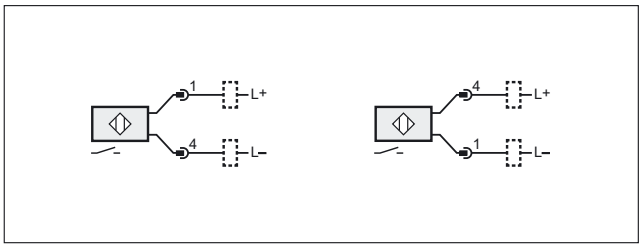

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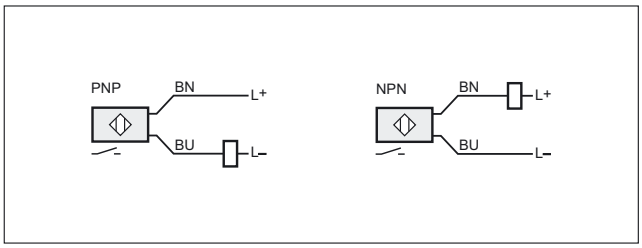

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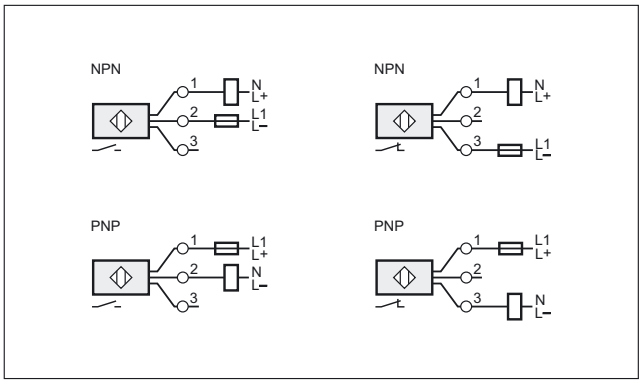

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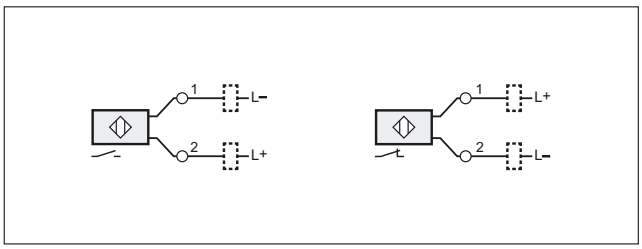

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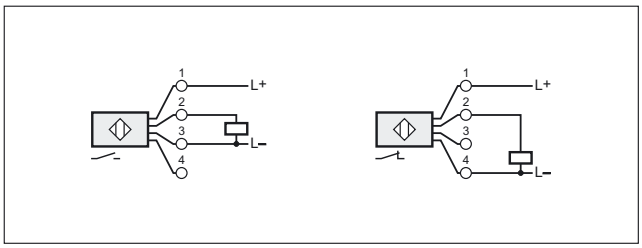

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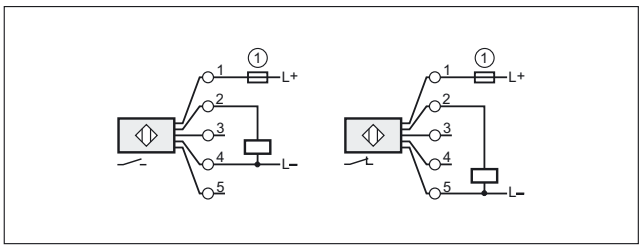

1: fuse

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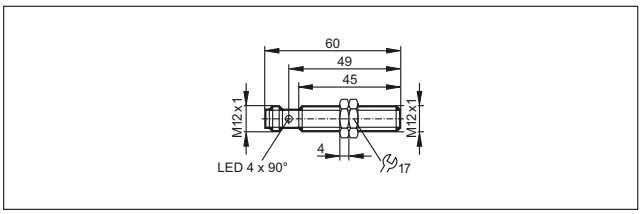

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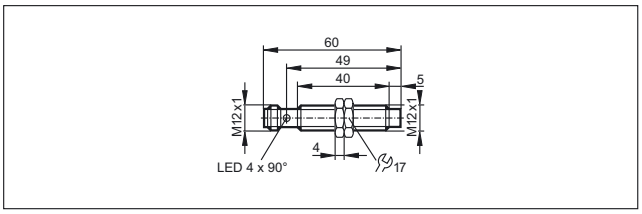

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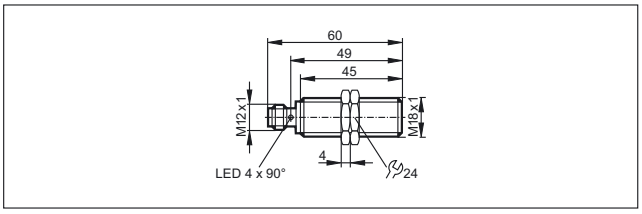

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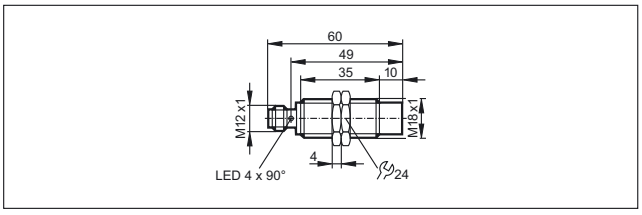

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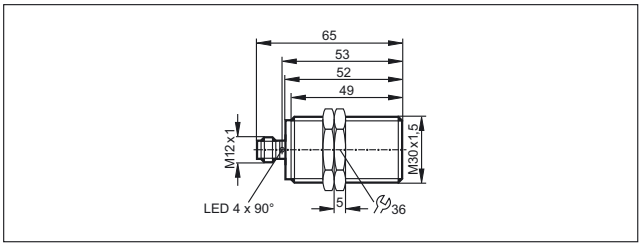

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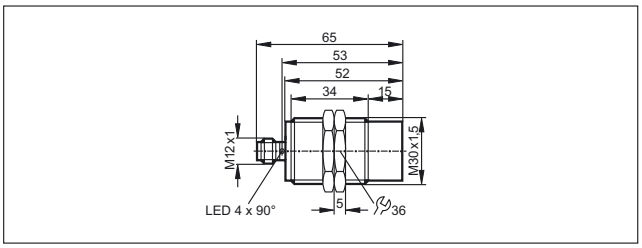

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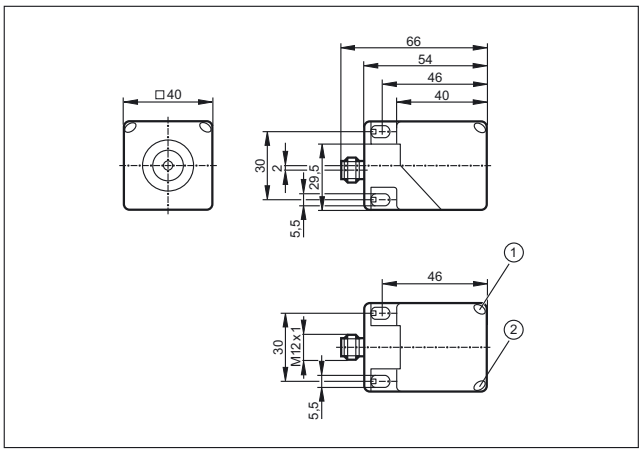

1: LED yellow, 2: LED green

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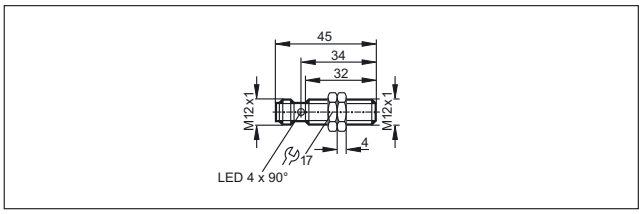

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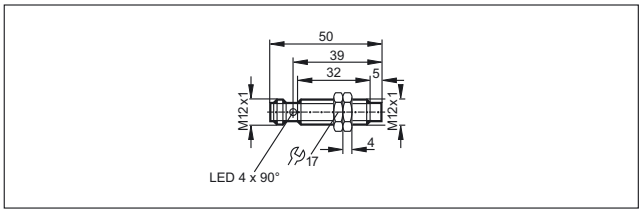

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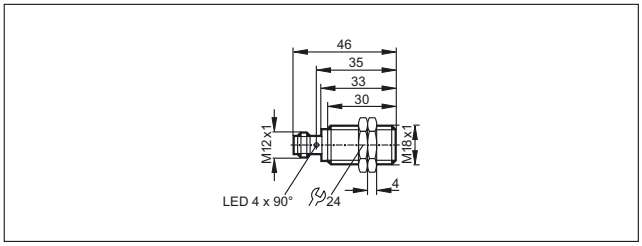

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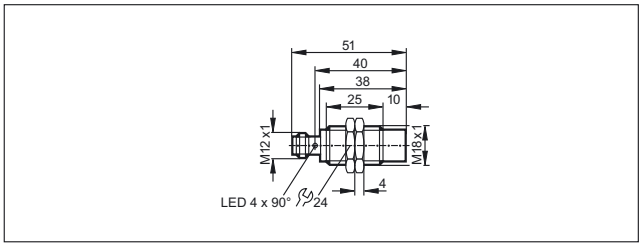

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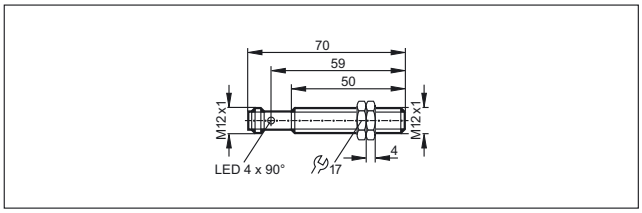

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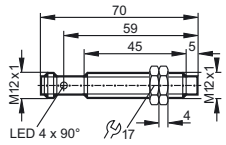

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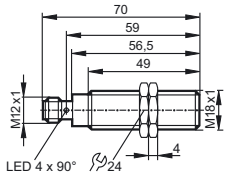

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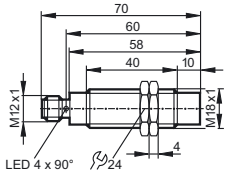

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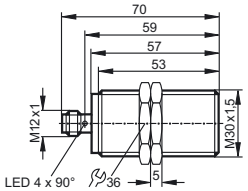

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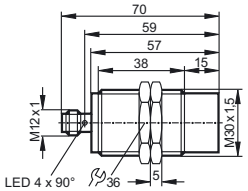

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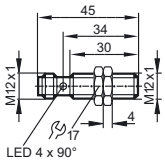

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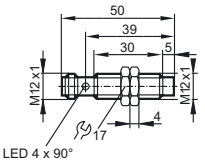

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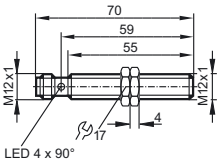

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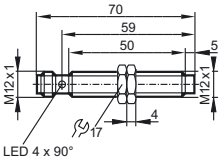

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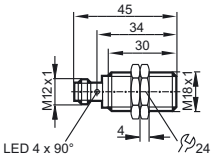

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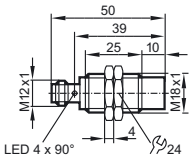

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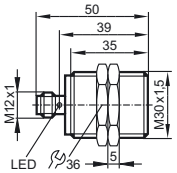

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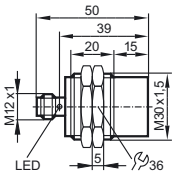

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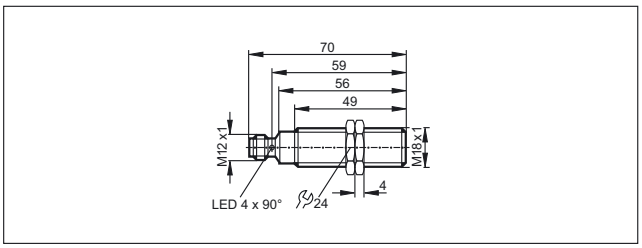

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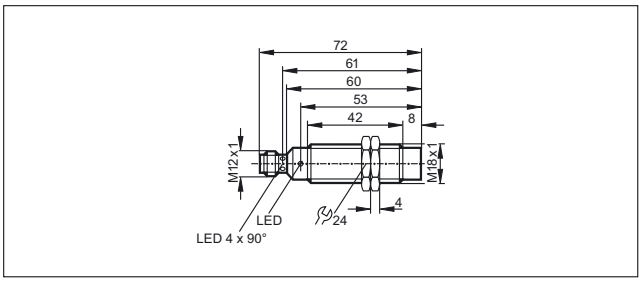

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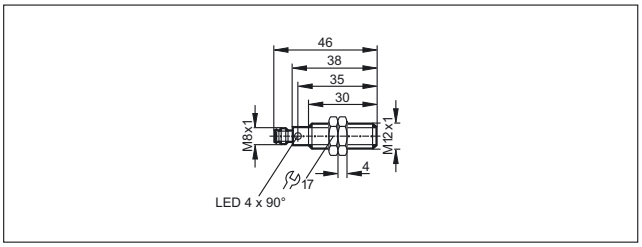

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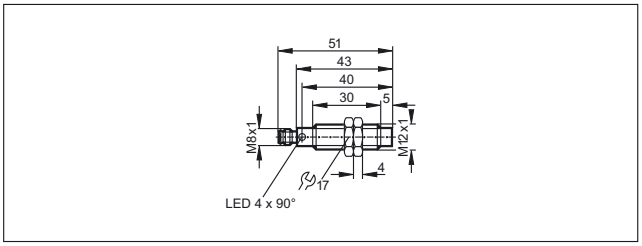

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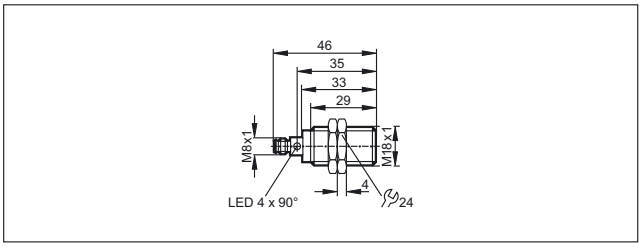

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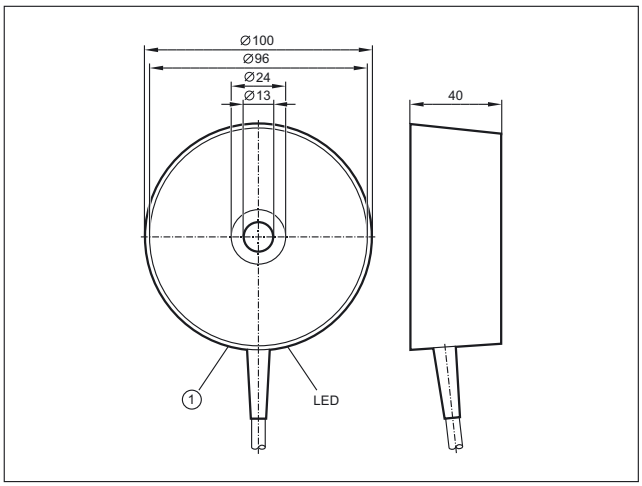

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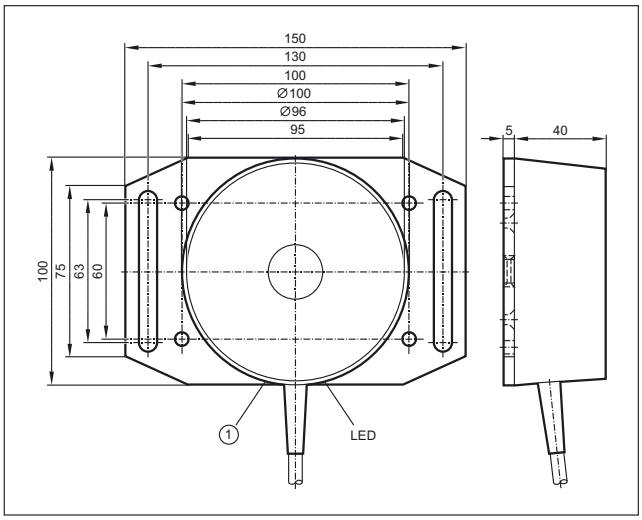

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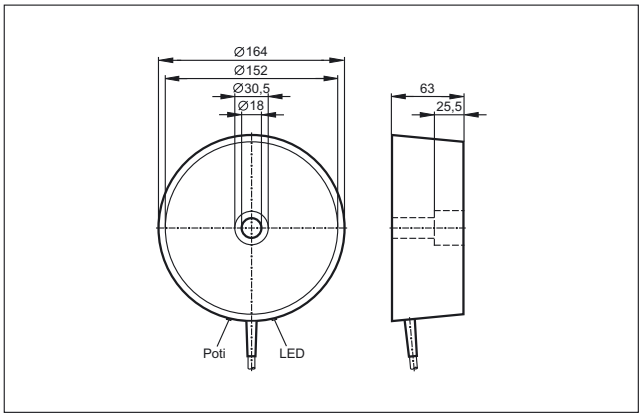

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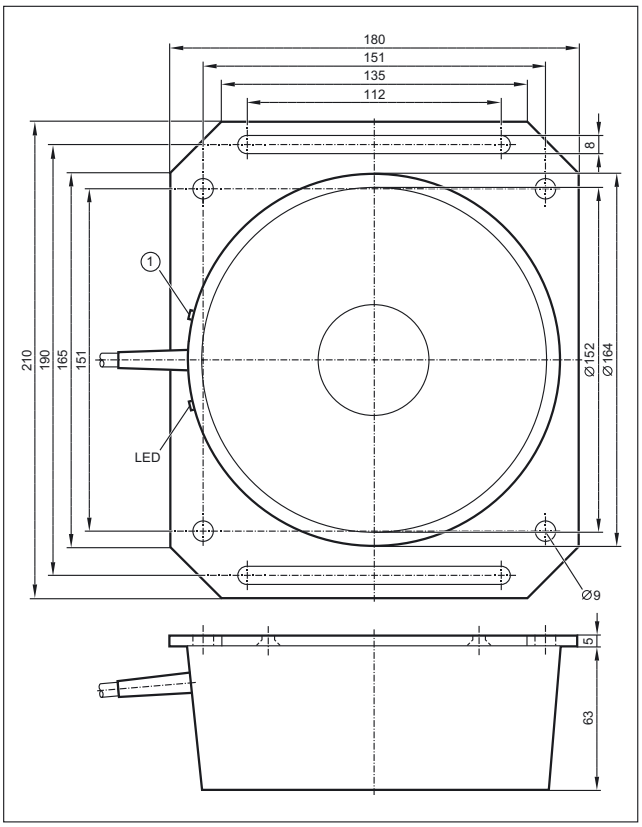

1: potentiometer

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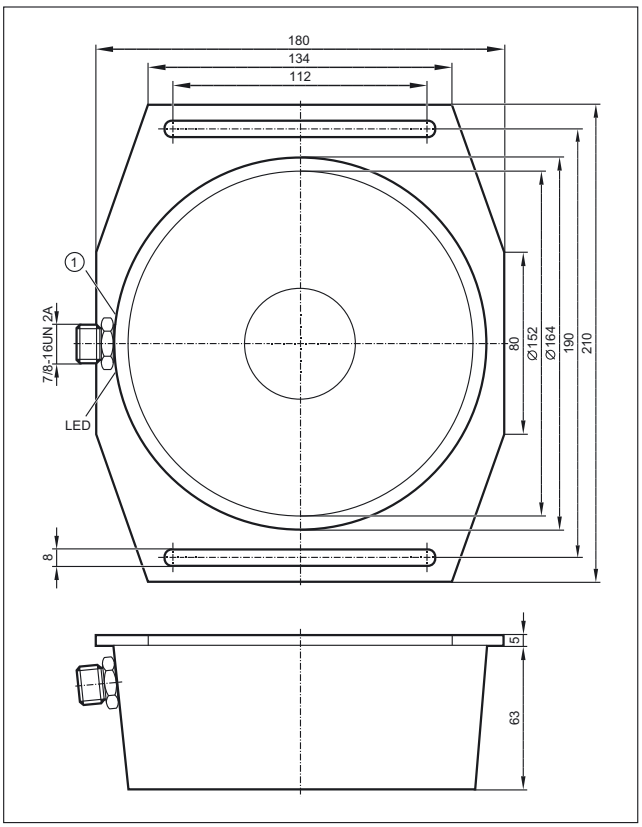

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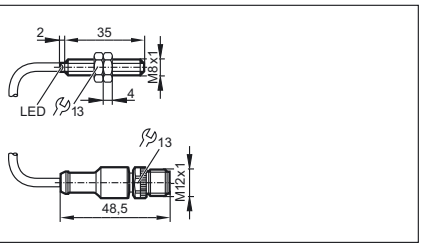

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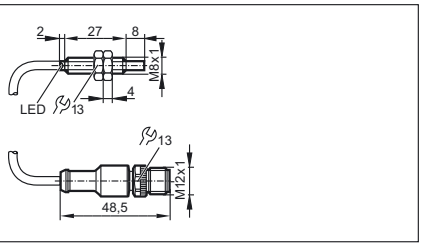

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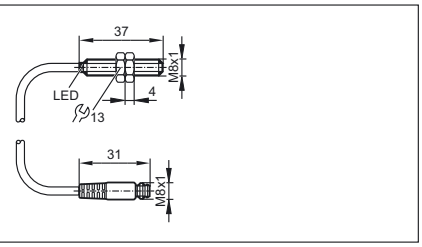

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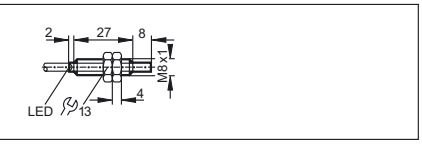

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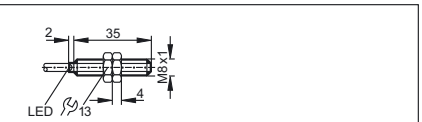

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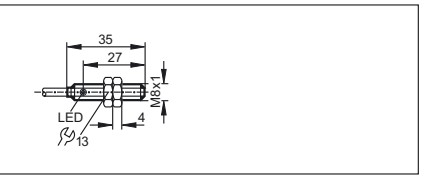

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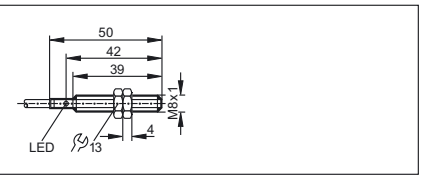

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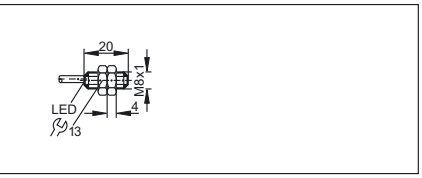

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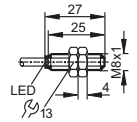

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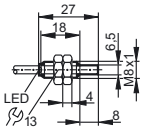

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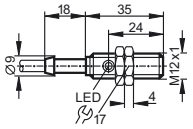

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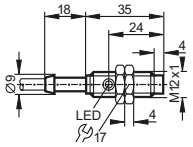

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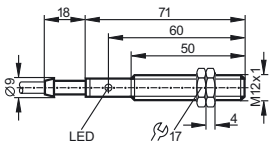

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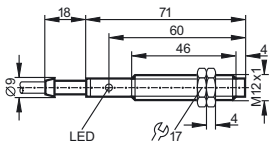

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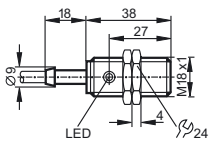

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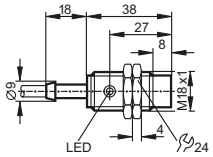

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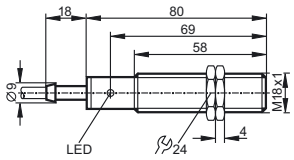

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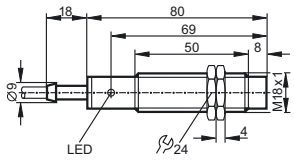

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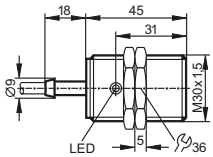

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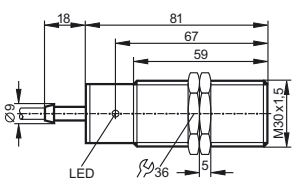

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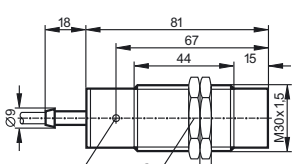

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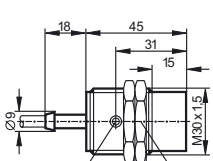

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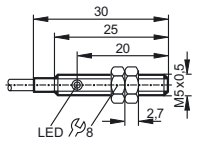

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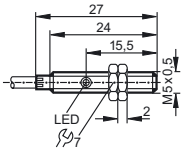

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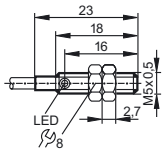

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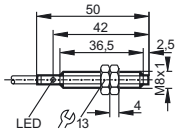

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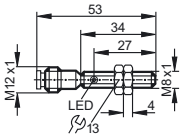

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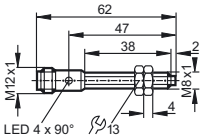

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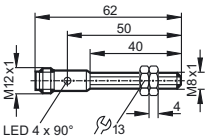

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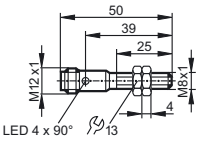

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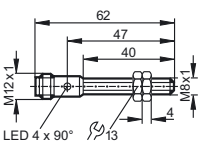

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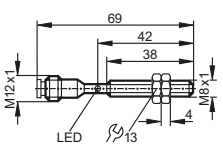

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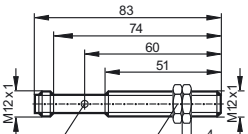

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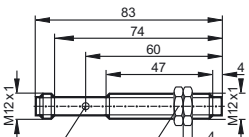

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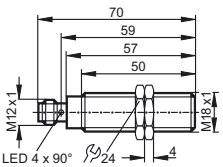

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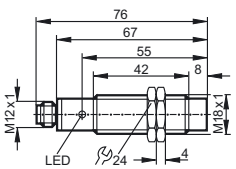

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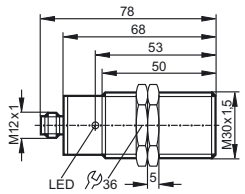

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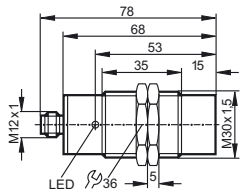

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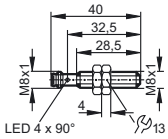

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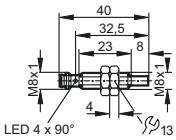

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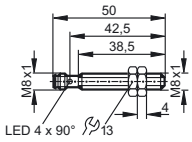

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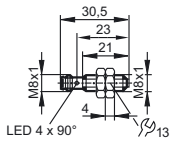

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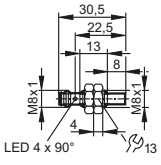

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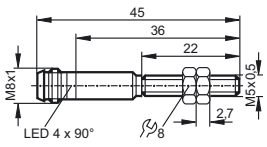

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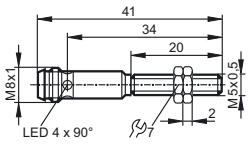

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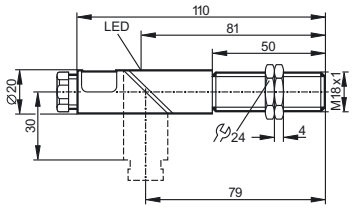

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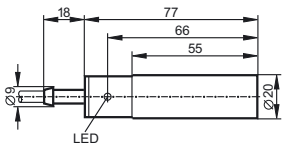

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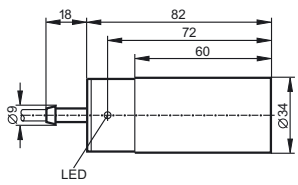

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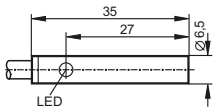

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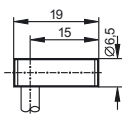

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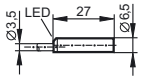

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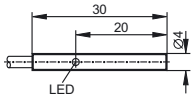

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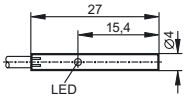

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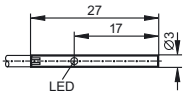

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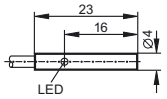

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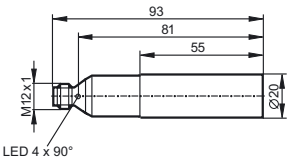

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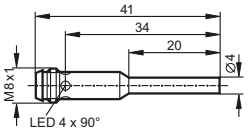

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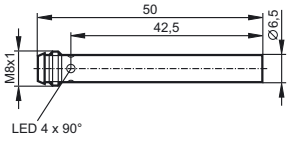

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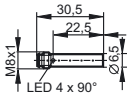

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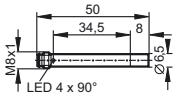

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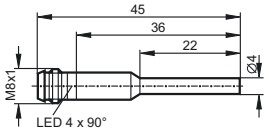

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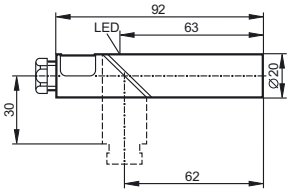

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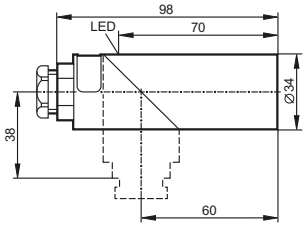

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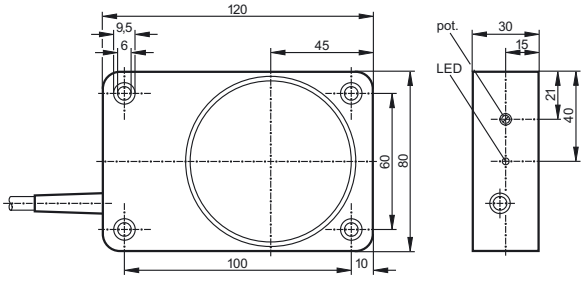

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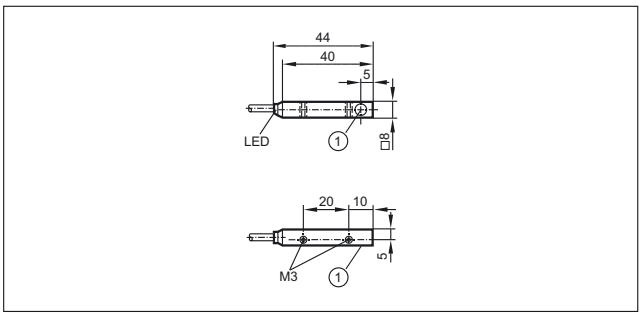
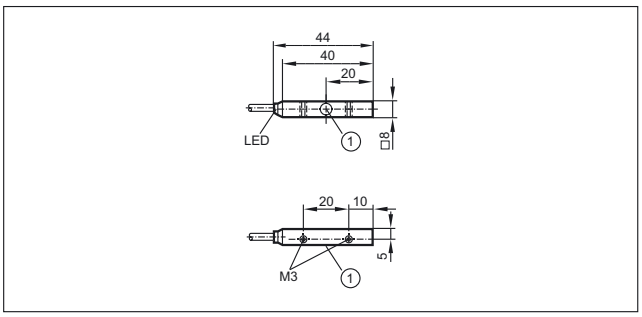
100



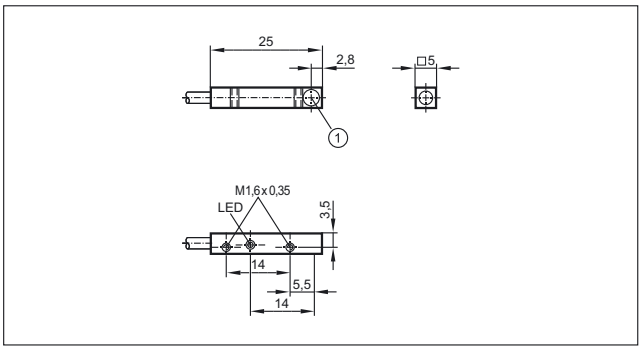
1: sensing face

101



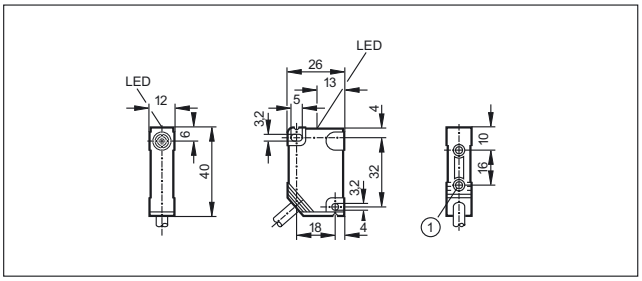
1: sensing face

102



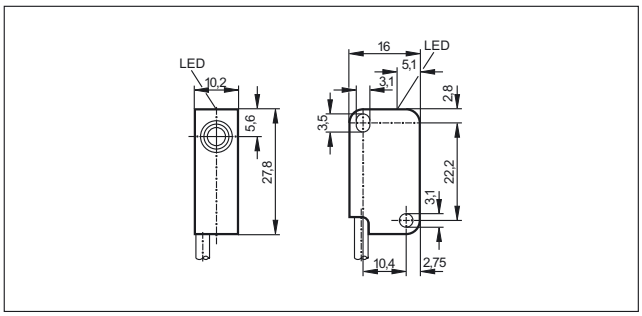
1: sensing face

103

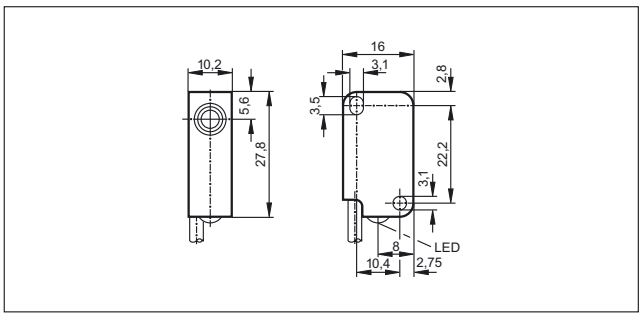


1: threaded insert M3, depth 5.8 mm, max. tightening torque 1.2 Nm (screw fixing class 8.8) when brass insert in contact with counterpart.

104



105



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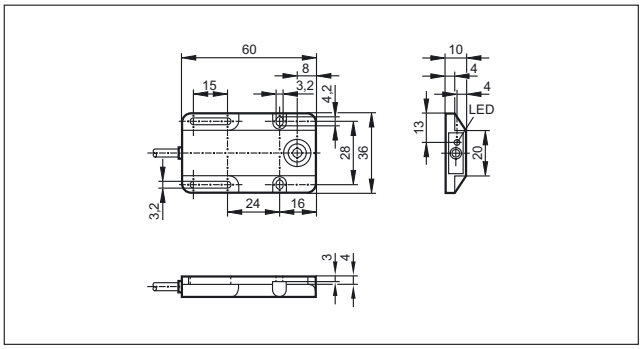

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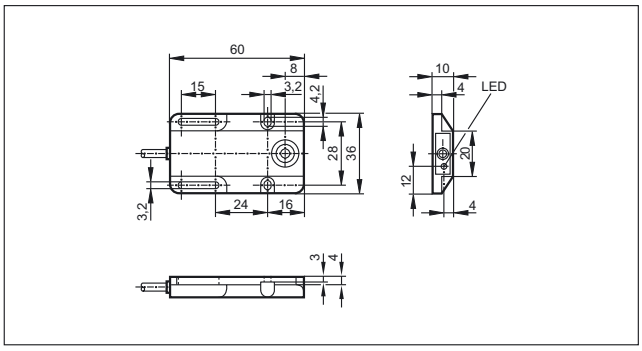

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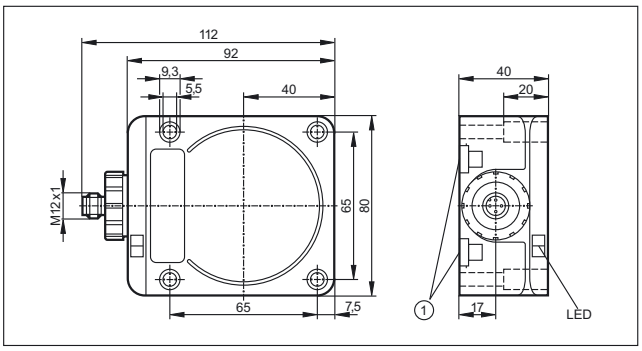
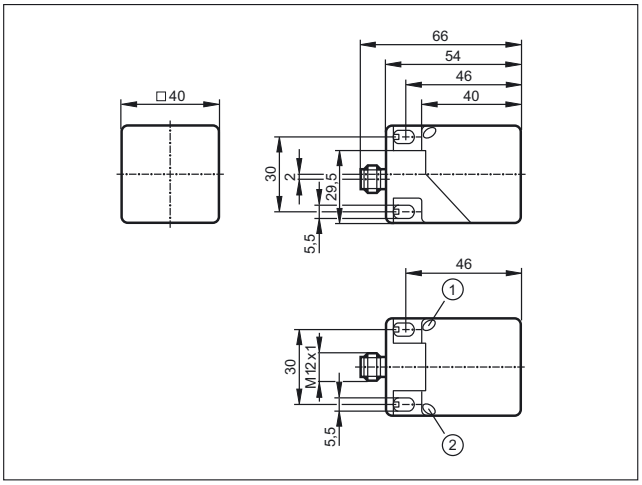
108



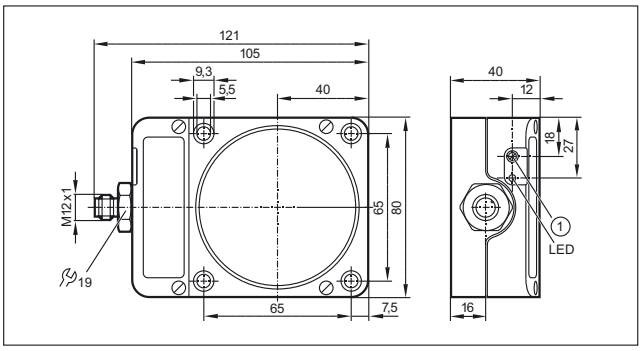
1: Mounting on DIN rail

109

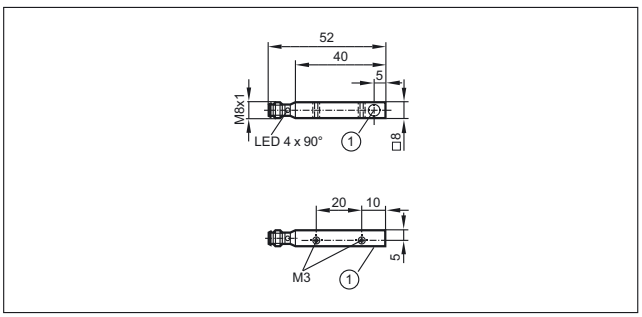


1: LED yellow, 2: LED green

110

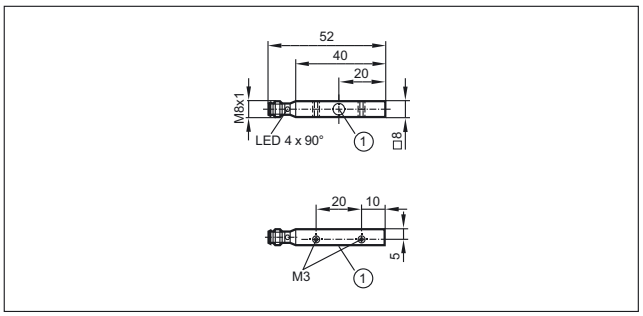


111



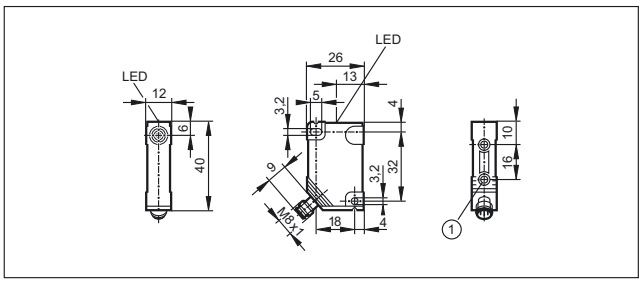
1: sensing face

112



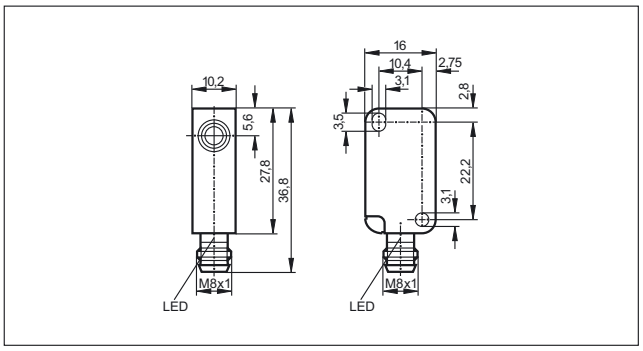
1: sensing face

113



1: threaded insert M3, depth 5.8 mm, max. tightening torque 1.2 Nm (screw fixing class 8.8) when brass insert in contact with counterpart.

114



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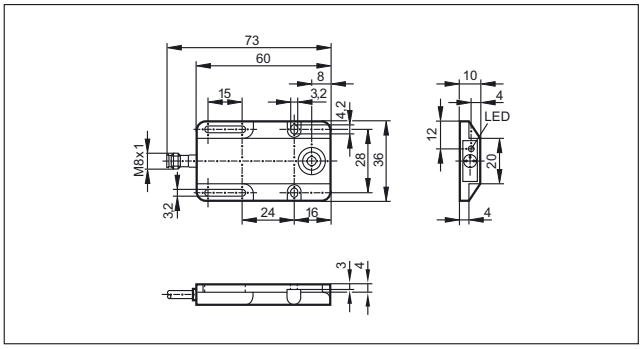

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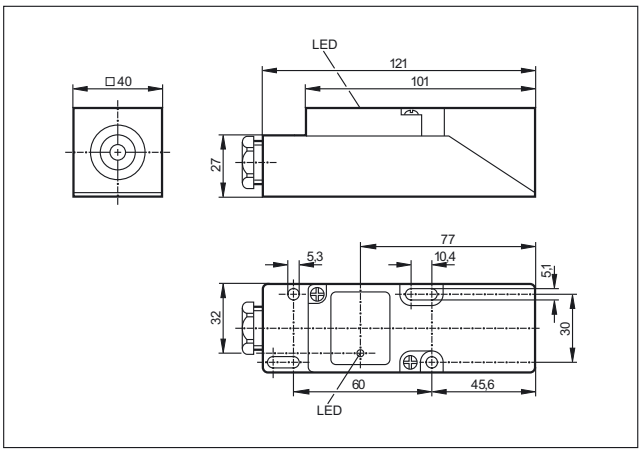

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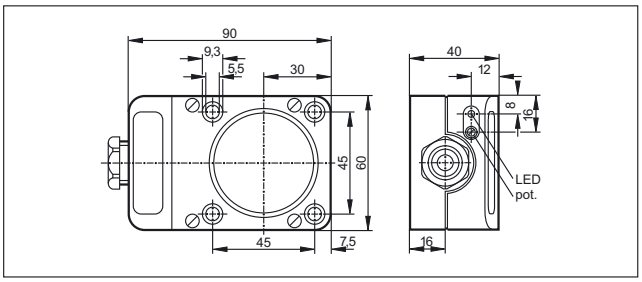

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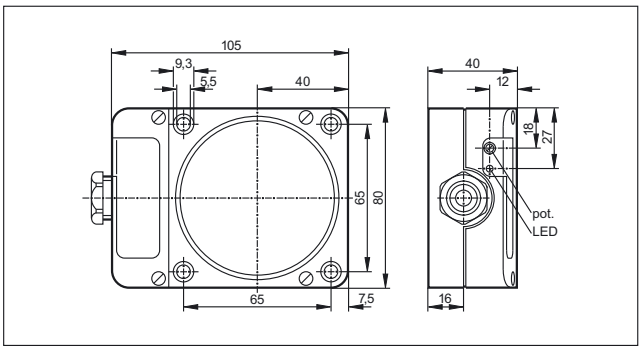

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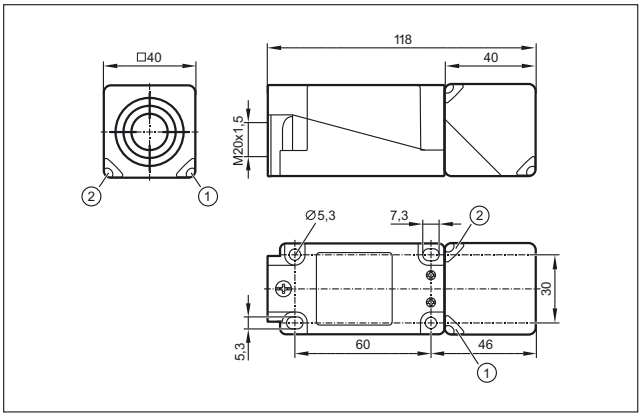
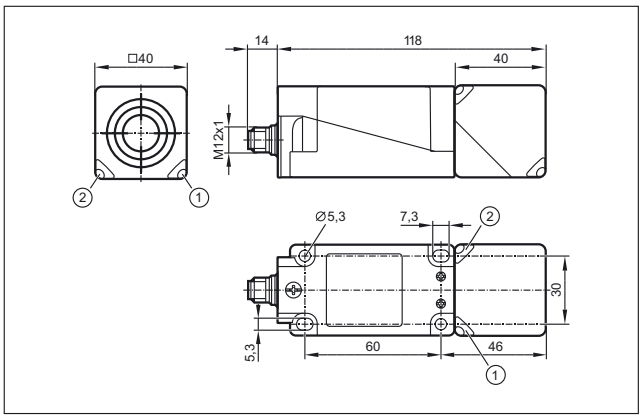


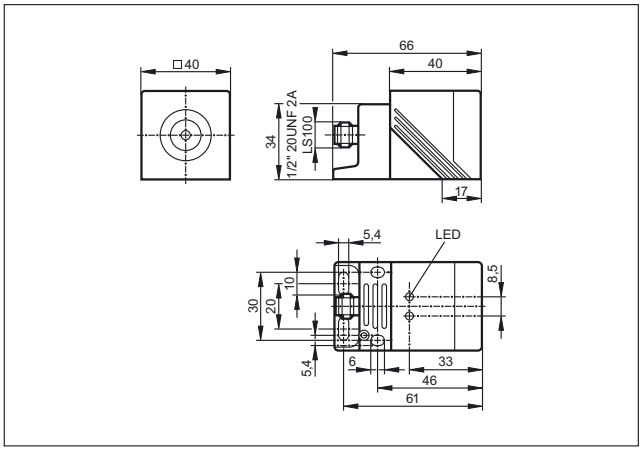
1: LED green, 2: LED yellow

120



1: LED green, 2: LED yellow

121



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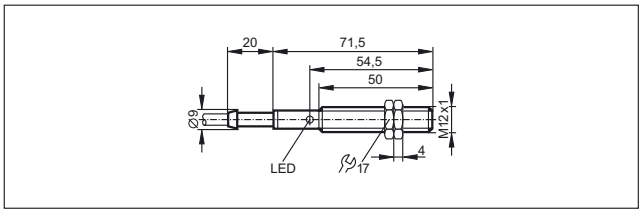

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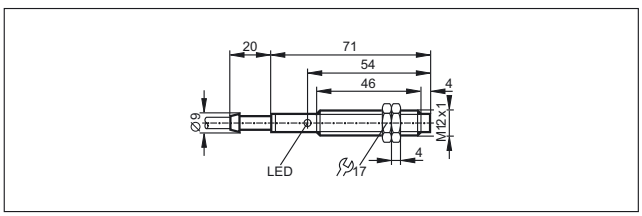

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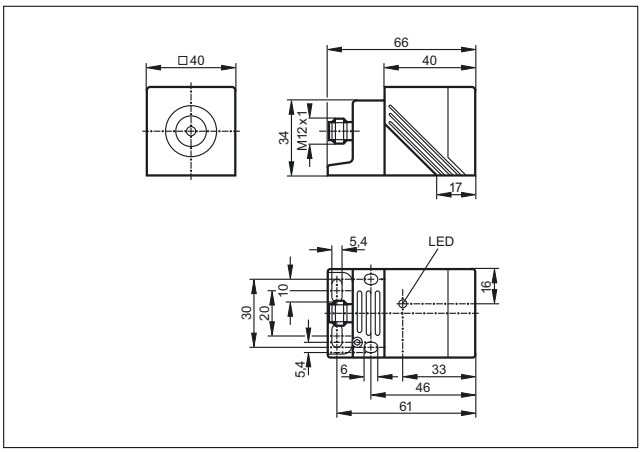

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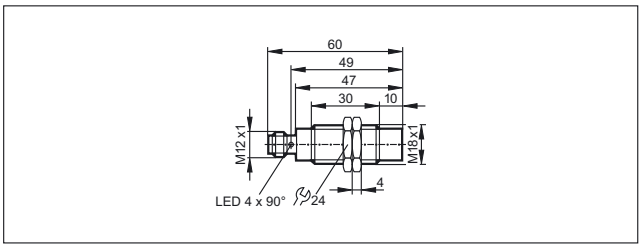

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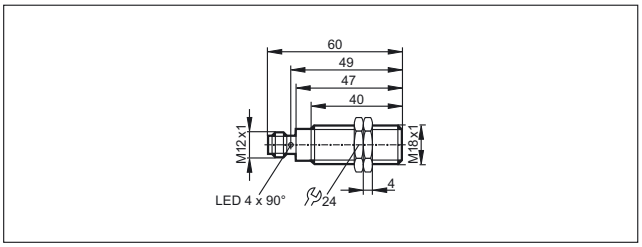

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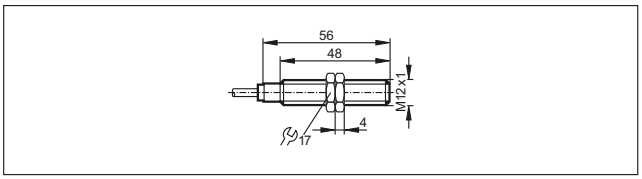

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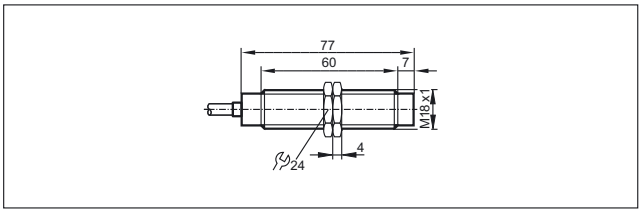

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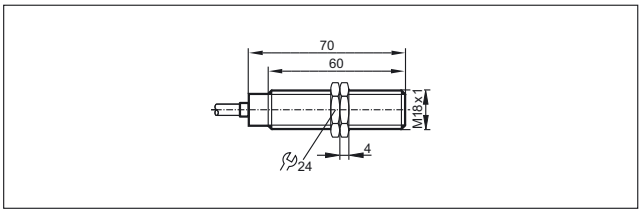

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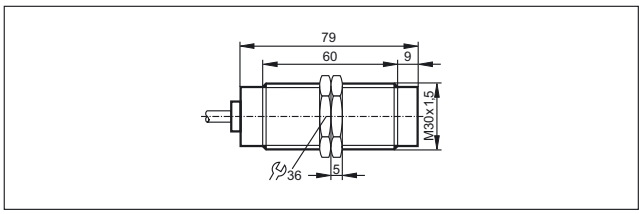

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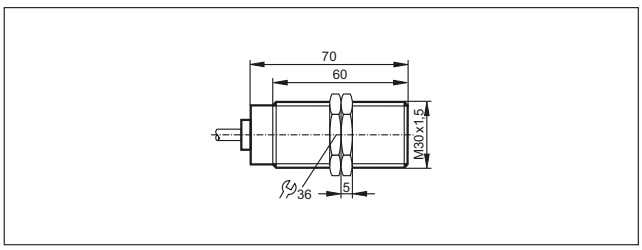

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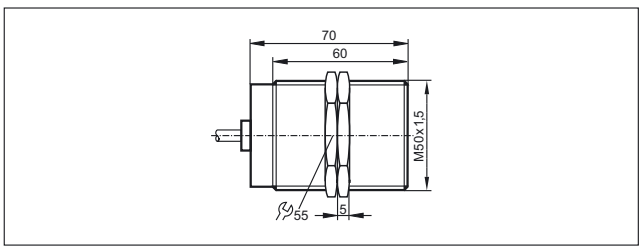

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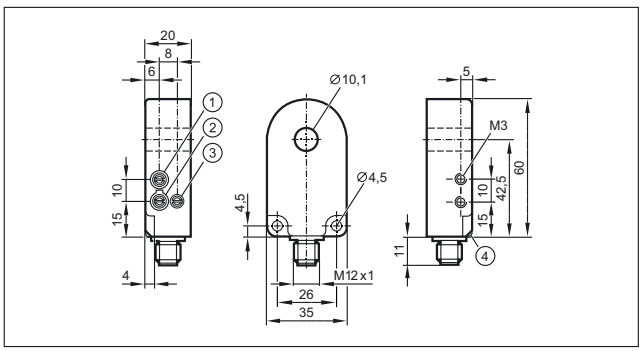

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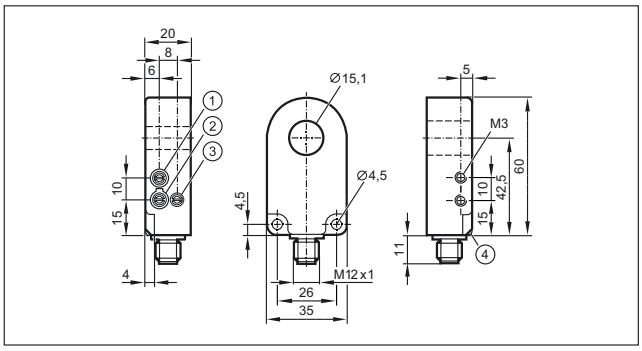

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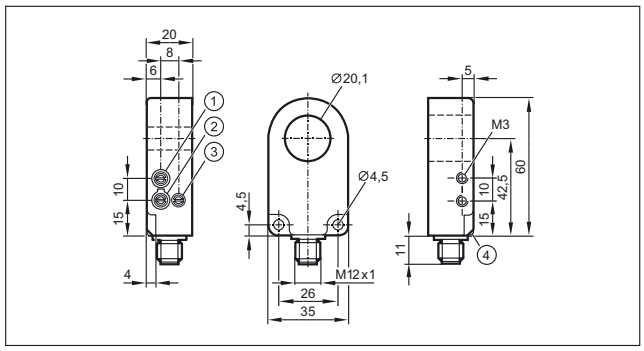

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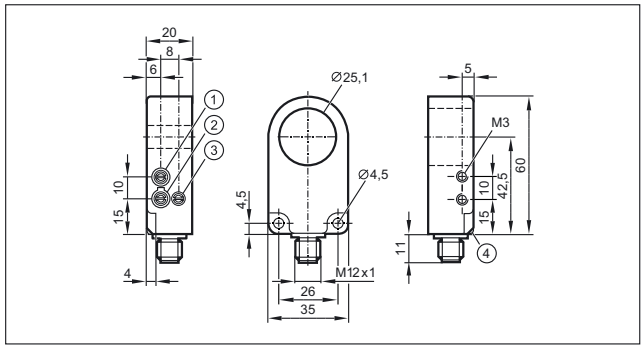

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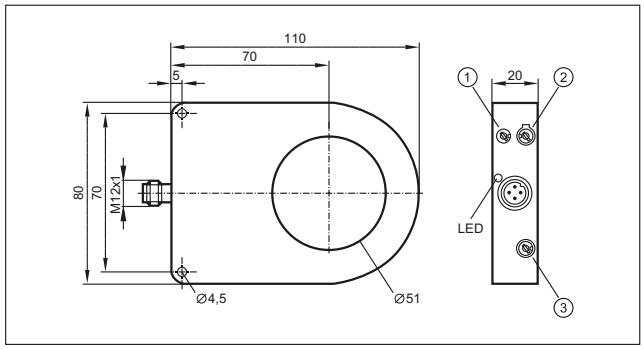

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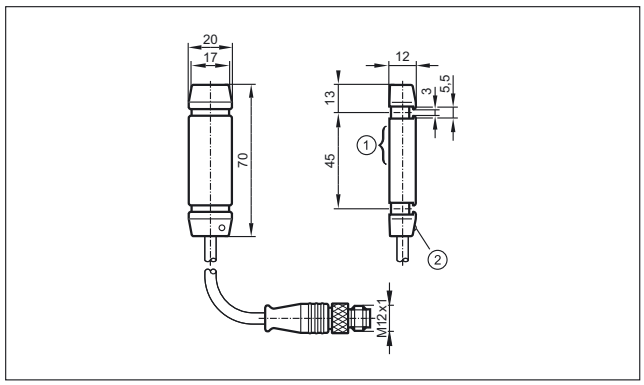
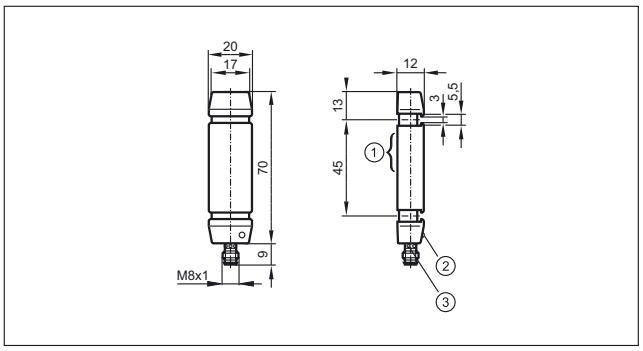


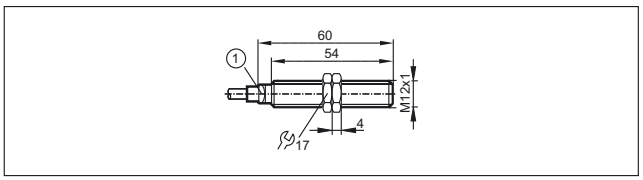
1: sensing face, 2: LED operating status

139



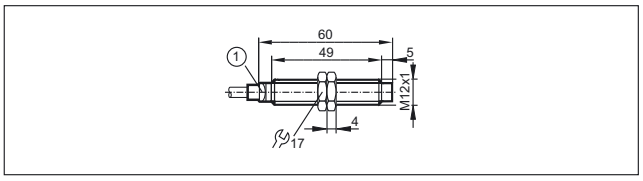
1: sensing face, 2: LED operating status, 3: LED switching status

140



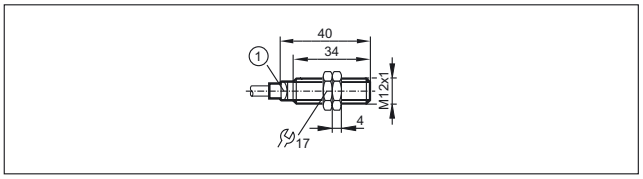
1: LED (yellow)

141



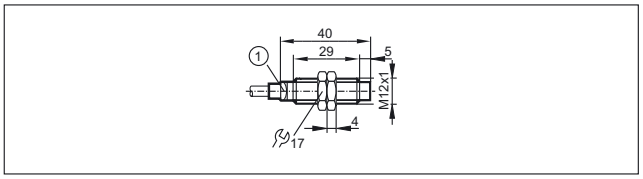
1: LED (yellow)

142



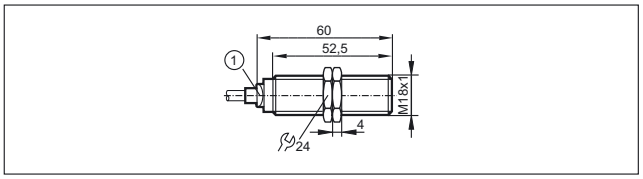
1: LED (yellow)

143



1: LED (yellow)

144



1: LED (yellow)

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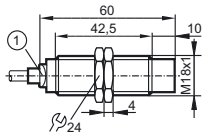
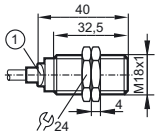


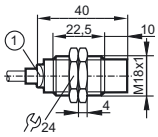
1: LED (yellow)

146



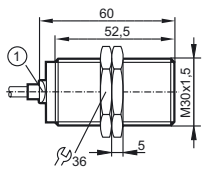
1: LED (yellow)

147



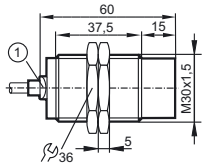
1: LED (yellow)

148



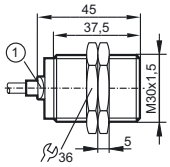
1: LED (yellow)

149



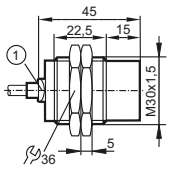
1: LED (yellow)

150



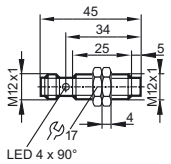
1: LED (yellow)

151



1: LED (yellow)

152



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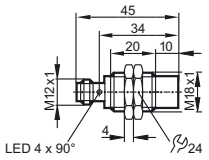

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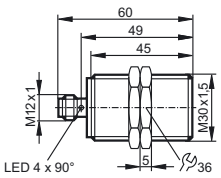

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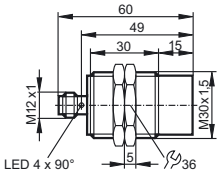

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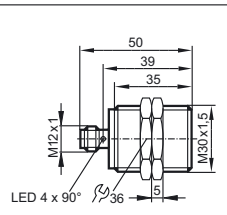

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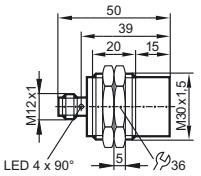

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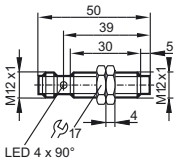

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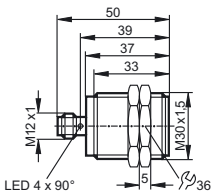

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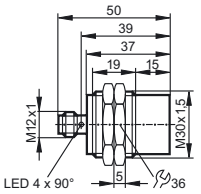

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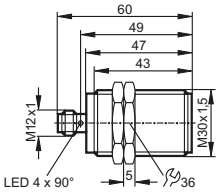

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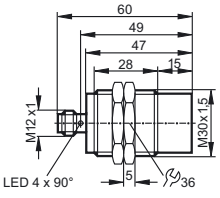

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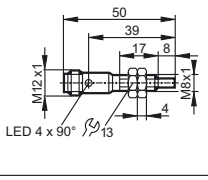

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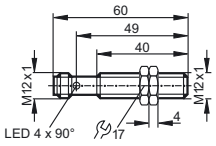

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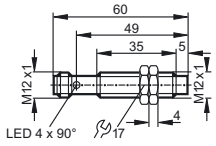

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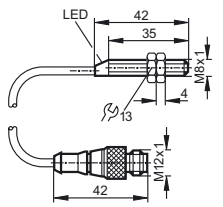

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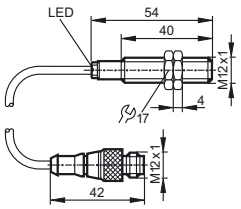

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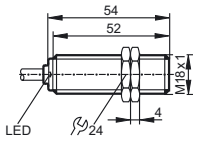

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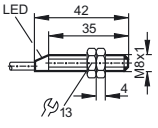

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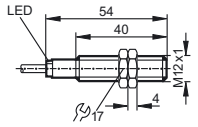

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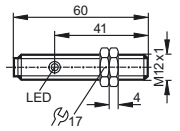

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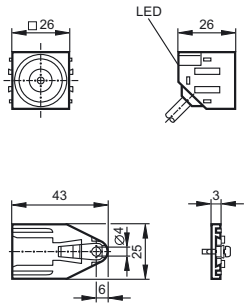

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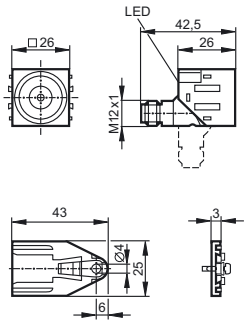

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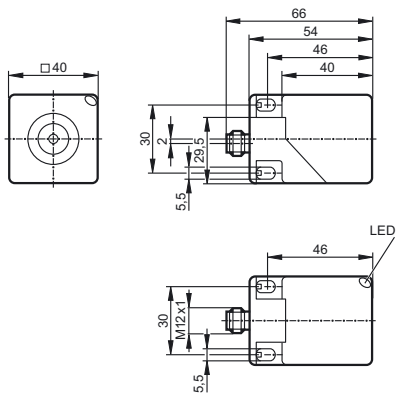

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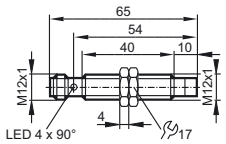

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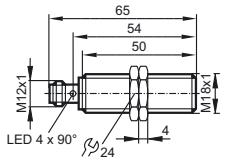

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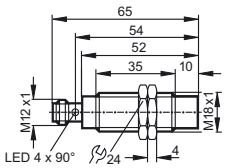

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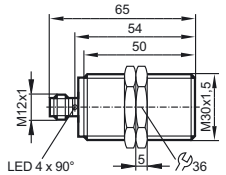

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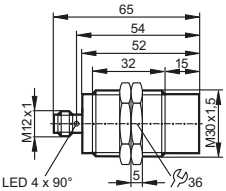

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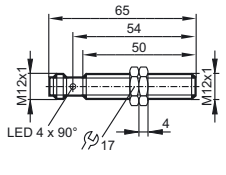

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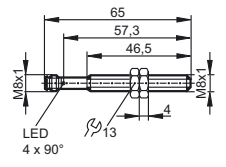

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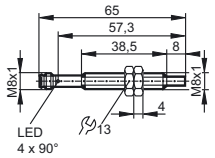

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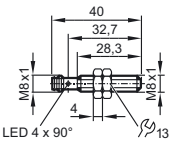

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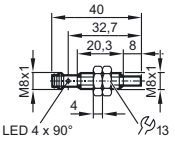

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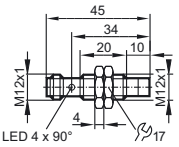

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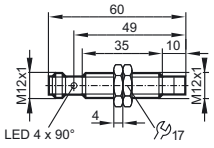

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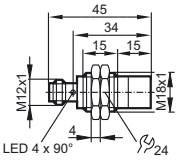

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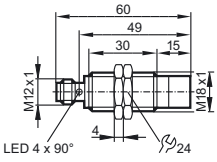

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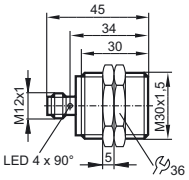

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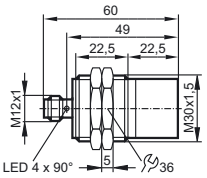

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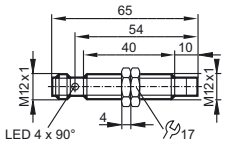

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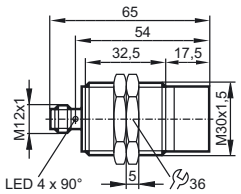

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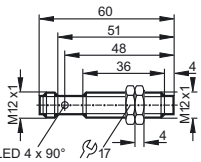

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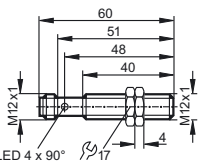

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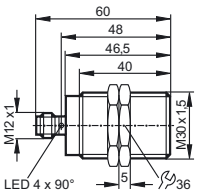

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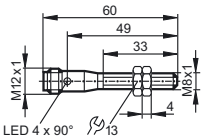

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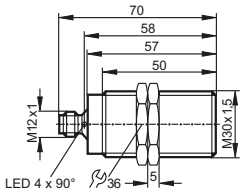

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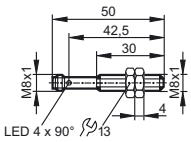

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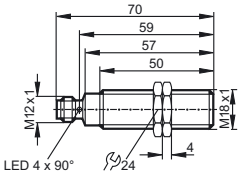

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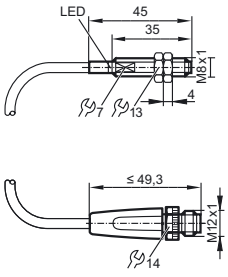

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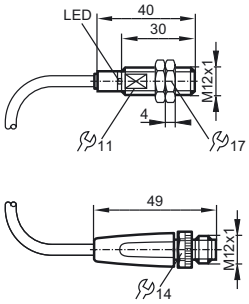

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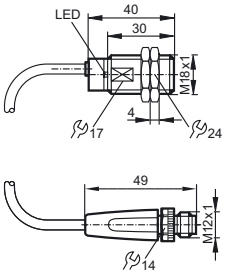

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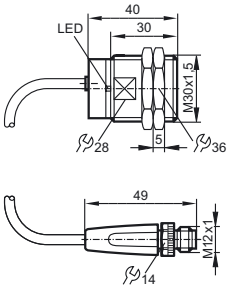

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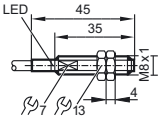

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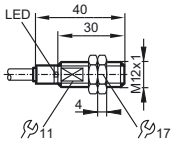

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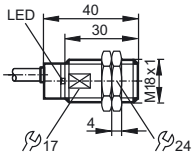

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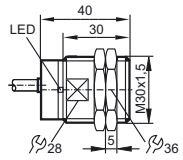

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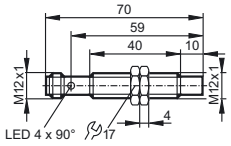

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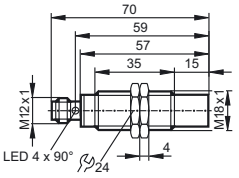

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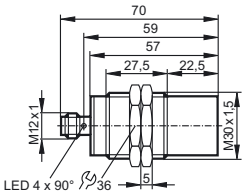

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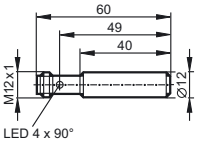

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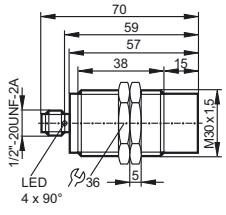

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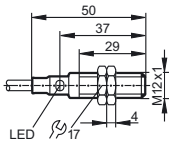

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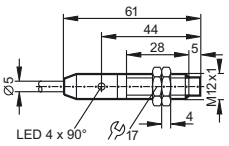

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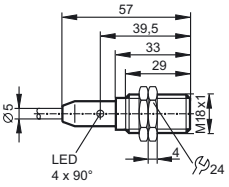

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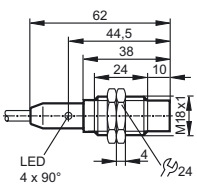

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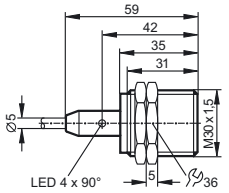

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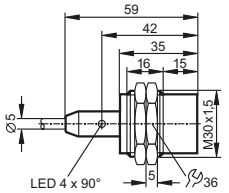

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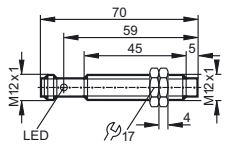

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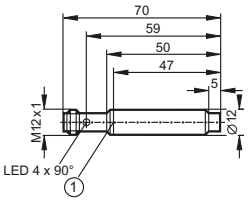
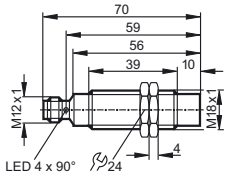


1: locating groove

221



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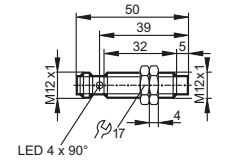

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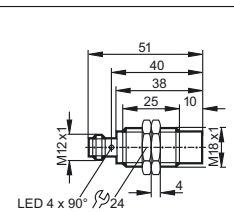

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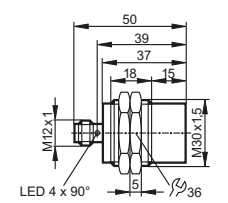

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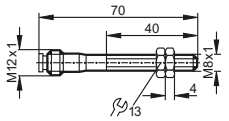

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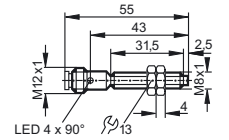

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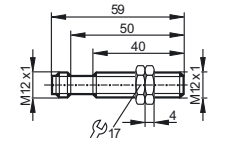

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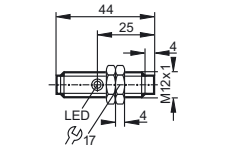

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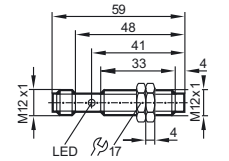

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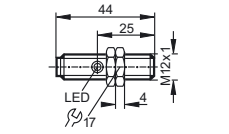

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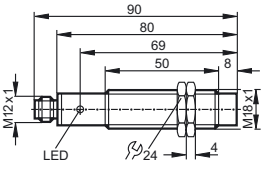
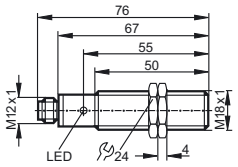


Scale drawings / drawing no. – CAD download: www.ifm.com

232



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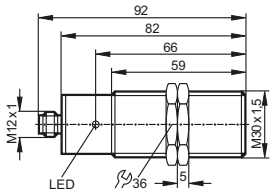

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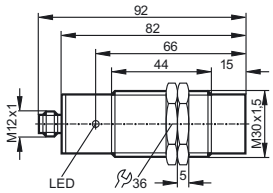

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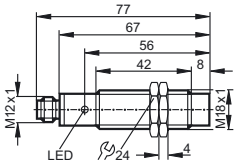

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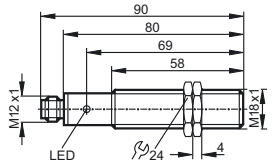

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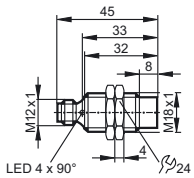

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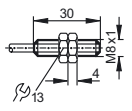

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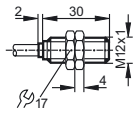

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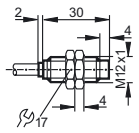

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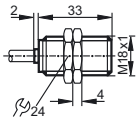

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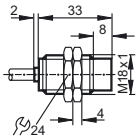

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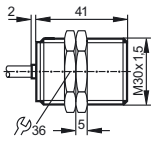

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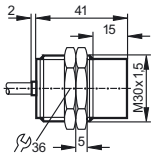

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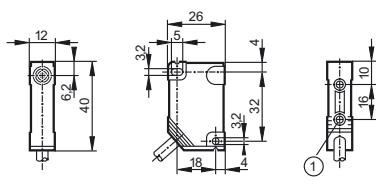
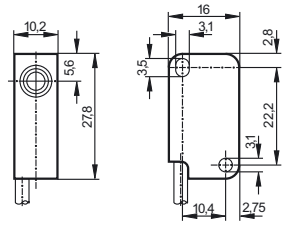


1: threaded insert M3, depth 5.8 mm, max. tightening torque 1.2 Nm (screw fixing class 8.8) when brass insert in contact with counterpart.

Scale drawings / drawing no. – CAD download: www.ifm.com

246



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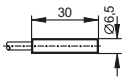

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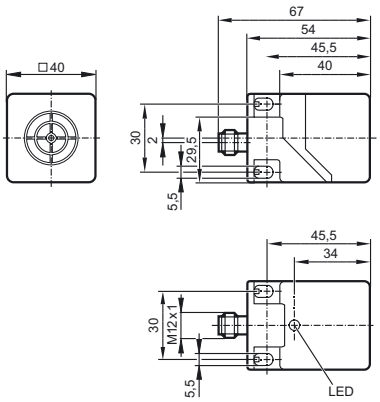

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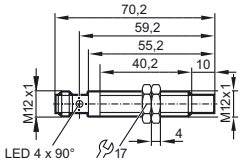

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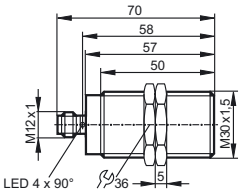

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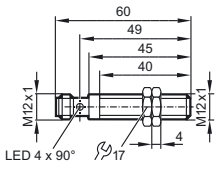

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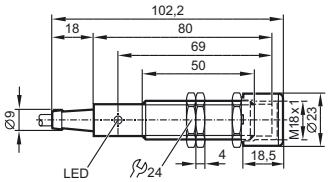

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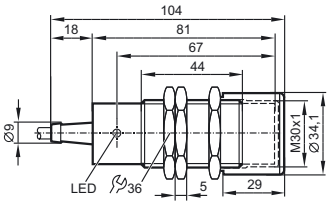
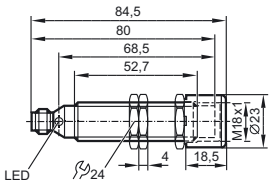


1: Sensor, 2: Sensor with protective cover

254



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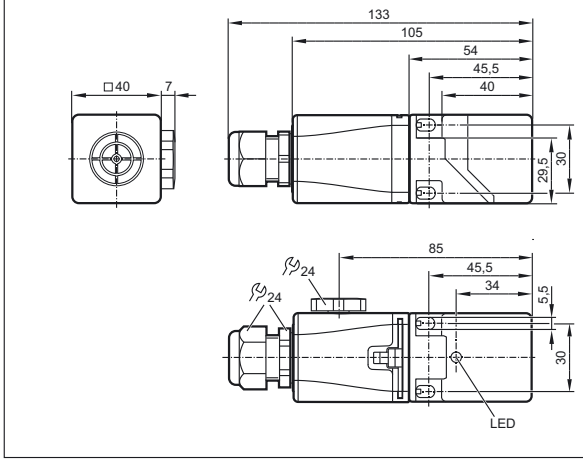

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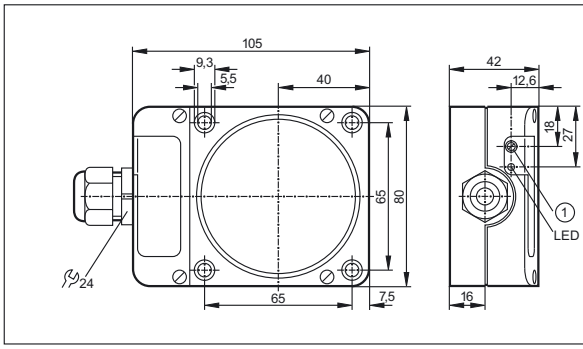


1: potentiometer

Capacitive sensors ensure accurate detection of positions and levels

Capacitive sensors

Easy parameter setting via IO-Link before installation of the sensor

Versatile data processing via IO-Link

Plastic or metal housings for different applications

Sensors for position and level detection

Mounting accessories for installation on tanks or sight glasses (bypass)

Capacitive sensors

Capacitive sensors are used for non-contact detection of any types of objects and for level monitoring. In contrast to inductive sensors, which only detect metallic objects, capacitive sensors can also detect non-metallic materials.

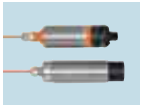
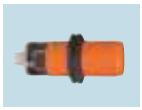
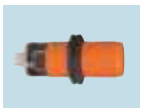
IO-Link for more convenience

IO-Link allows direct detection of the process value or switch-on/switch-off delays of the output. The parameters are set via the IO-Link interface.

Capacitive touch sensors

Capacitive touch sensors are wear and maintenance-free since switching does not require any pressure. Their operating principle is dynamic, static or latching. They are typically used as start / stop buttons or enable switches.

Sensors for level and position detection DC

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 1									
	M12 / L = 69	4 f	high-grade stainless steel	10...36	IP 65	50	100	1	**KF5014**
	M12 / L = 70	8 nf	high-grade stainless steel	10...36	IP 65	50	100	2	**KF5015**
Cable 2 m · Output function ⎍ / ⎍ · DC PNP · Wiring diagram no. 2									
	M18 / L = 77	8 nf	PP	10...36	IP 65 / IP 67	10	200	3	**KG5069**
M12 connector · Output function ⎍ / ⎍ · DC PNP · Wiring diagram no. 19 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M30 / L = 116	nf	PPS	10...30	IP 67	10	200	4	**KN5121**
M12 connector · Output function ⎍ / ⎍ · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 87	12 nf	PBT	10...36	IP 65 / IP 67	10	200	5	**KG5066**
	M18 / L = 87	8 nf	PBT	10...36	IP 65 / IP 67	10	200	5	**KG5071**
	M30 / L = 90	20 nf	PBT	10...36	IP 65 / IP 67	10	200	6	**KI5083**
M12 connector · Output function ⎍ / ⎍ · DC PNP/NPN · Wiring diagram no. 20 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M30 / L = 90	20 nf	PBT	10...36	IP 65 / IP 67	10	200	6	**KI5082**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 60	4 f	High-grade st. steel	10...36	IP 65	50	100	7	**KF5001**
	M12 / L = 61	8 nf	High-grade st. steel	10...36	IP 65	50	100	8	**KF5002**
M12 connector · Output function ⎍ · DC NPN · Wiring diagram no. 4 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 60	4 f	High-grade st. steel	10...36	IP 65	50	100	7	**KF5013**

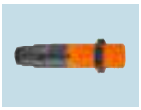
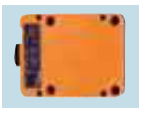
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ / ⎍ · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M30 / L = 90	8 f	High-grade st. steel	10...30	IP 65 / IP 67	10	100	9	**KI5085**
	M30 / L = 90	15 nf	High-grade st. steel	10...30	IP 65 / IP 67	10	100	10	**KI5087**
M12 connector · Output function ⎍ / ⎍ · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	11	**KG6000**

f = flush / nf = non flush / qf = quasi-flush

Sensors for level and position detection AC/DC

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f AC / DC [Hz]	I_{load} AC / DC [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · AC/DC · Wiring diagram no. 5									
	M18 / L = 84	8 nf	PBT	20...250	IP 67	25 / 50	150 / 100	12	**KG0009***
	M30 / L = 81	15 nf	PBT	20...250	IP 65	25 / 40	200	13	**KI0016***
	120 x 80 x 30	60 nf	modified PPO	20...250	IP 65	10	200	14	**KD0012***
Cable 2 m · Output function ⎍ · AC/DC · Wiring diagram no. 6									
	M18 / L = 84	8 nf	PBT	20...250	IP 67	25 / 50	150 / 100	12	**KG0010***
	M30 / L = 81	15 nf	PBT	20...250	IP 65	25 / 40	200	13	**KI0020***
1/2" UNF-Connector · Output function ⎍ / ⎍ · AC/DC · Wiring diagram no. 7 · Connector group 33									
	M18 / L = 87	12 nf	PBT	20...250	IP 65 / IP 67	10	100	15	**KG0016***
	M30 / L = 90	20 nf	PBT	20...250	IP 65 / IP 67	10	100	16	**KI0054***

You can find wiring diagrams and scale drawings from page 173

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f AC / DC [Hz]	I_{load} AC / DC [mA]	Drawing no.	Order no.
Terminals · Output function ⎍ / ⎍ · AC/DC · Wiring diagram no. 8									
	M30 / L = 125	15 nf	PBT	20...250	IP 65	25 / 40	200	17	**KI0024***
Terminals · Output function ⎍ / ⎍ · AC/DC · Wiring diagram no. 21									
	105 x 80 x 40	60 nf	modified PPO	20...250	IP 65	10	200	18	**KD0009***

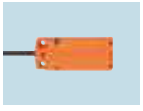
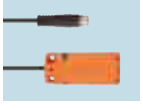
f = flush / nf = non flush / qf = quasi-flush

*** Note on use of miniature fuses for electrical connection**

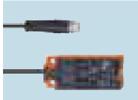
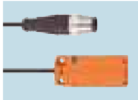
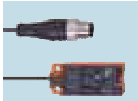
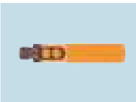
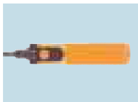
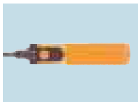
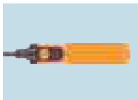
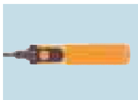
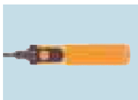
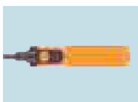
Miniature fuse to IEC60127-2 sheet 1, ≤ 2 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

Sensors with IO-Link

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ / ⎍ · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M30 / L = 92	25 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	19	**KI6000**
Cable 2 m · Output function ⎍ · DC NPN · Wiring diagram no. 9									
	M30 / L = 92	25 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	20	**KI5300**
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 10									
	M30 / L = 92	25 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	20	**KI5301**
Cable 2 m · Output function ⎍ · DC NPN · Wiring diagram no. 11									
	M30 / L = 92	25 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	20	**KI5302**
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 10									
	M30 / L = 92	15 qf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	20	**KI5304**
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 1									
	M30 / L = 92	25 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	20	**KI5303**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 12									
	M30 / L = 92	15 qf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	20	**KI5305**
M12 connector · Output function ⎍ · DC NPN · Wiring diagram no. 4 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M30 / L = 92	25 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	21	**KI5306**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 13 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M30 / L = 92	25 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	21	**KI5307**
M12 connector · Output function ⎍ · DC NPN · Wiring diagram no. 14 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M30 / L = 92	25 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	21	**KI5308**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 15 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M30 / L = 92	25 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	21	**KI5309**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 13 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M30 / L = 92	15 qf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	21	**KI5310**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 15 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M30 / L = 92	15 qf	PBT	10...30	IP 65 / IP 67 / IP 69K	40	200	21	**KI5311**
Cable 2 m · Output function ⎍ / ⎍ · DC PNP · Wiring diagram no. 2									
	20 x 7 x 48	12 nf	PBT	10...30	IP 65 / IP 67	10	100	22	**KQ5100**
	20 x 14 x 48	12 nf	PBT	10...30	IP 65 / IP 67	10	100	23	**KQ6002**
Cable with connector 0.04 m · Output function ⎍ / ⎍ · DC PNP · Wiring diagram no. 3 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	20 x 7 x 48	12 nf	PBT	10...30	IP 65 / IP 67	10	100	24	**KQ5102**

You can find wiring diagrams and scale drawings from page 173

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable with connector 0.04 m · Output function · DC PNP · Wiring diagram no. 3 · Connector groups 4, 5, 80, 86, 147									
	20 x 14 x 48	12 nf	PBT	10...30	IP 65 / IP 67	10	100	25	**KQ6004**
Cable with connector 0.1 m · Output function · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	20 x 7 x 48	12 nf	PBT	10...30	IP 65 / IP 67	10	100	26	**KQ5101**
	20 x 14 x 48	12 nf	PBT	10...30	IP 65 / IP 67	10	100	27	**KQ6005**
M12 connector · Output function · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	11	**KG6000**
Cable 2 m · Output function · DC NPN · Wiring diagram no. 9									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	28	**KG5300**
Cable 2 m · Output function · DC PNP · Wiring diagram no. 10									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	28	**KG5301**
Cable 2 m · Output function · DC NPN · Wiring diagram no. 11									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	28	**KG5302**
Cable 2 m · Output function · DC PNP · Wiring diagram no. 1									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	28	**KG5303**
Cable 2 m · Output function · DC PNP · Wiring diagram no. 10									
	M18 / L = 92.5	8 qf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	28	**KG5304**
Cable 2 m · Output function · DC NPN · Wiring diagram no. 1									
	M18 / L = 92.5	8 qf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	28	**KG5305**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · DC NPN · Wiring diagram no. 4 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	29	**KG5306**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 13 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	29	**KG5307**
M12 connector · Output function ⎍ · DC NPN · Wiring diagram no. 14 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	29	**KG5308**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 15 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 92.5	15 nf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	29	**KG5309**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 13 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 92.5	8 qf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	29	**KG5310**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 15 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 92.5	8 qf	PBT	10...30	IP 65 / IP 67 / IP 69K	30	200	29	**KG5311**

f = flush / nf = non flush / qf = quasi-flush

Sensors with ATEX approval

Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · Connection to certified intrinsically safe circuits with the max. values U = 15 V / I = 50 mA / P = 120 mW · Wiring diagram no. 16										
	M30 / L = 81	15 nf	PBT	8.2 DC	7.5...15	375	1	40	13	**KI5030**
Cable 2 m · Output function ⎍ · Connection to certified intrinsically safe circuits with the max. values U = 15 V / I = 50 mA / P = 120 mW · Wiring diagram no. 17										
	M34 / L = 92	15 nf	Brass	8.2 DC	7.5...15	375	1	40	30	**KX5001**

You can find wiring diagrams and scale drawings from page 173

Type	Dimensions [mm]	Sensing range [mm]	Material	$U_{nom.}$ at 1 KΩ [V]	U_b [V]	Internal capacit. [nF]	Internal inductance [µH]	f [Hz]	Draw-ing no.	Order no.
Terminals · Output function ⎓+⏚ · DC PNP · Wiring diagram no. 18										
	M30 / L = 150	15 nf	PBT	10...30 DC	–	–	–	10	31	**KI503A**
	M30 / L = 125	15 nf	PBT	10...30 DC	–	–	–	10	32	**KI505A**
Terminals · Output function ⎓/⏚ · AC/DC · Wiring diagram no. 22										
	M30 / L = 150	15 nf	PBT	20...250 DC / 30...250 AC	–	–	–	10	31	**KI000A***
	M30 / L = 125	15 nf	PBT	20...250 DC / 30...250 AC	–	–	–	10	32	**KI001A***
Terminals · Output function ⎓/⏚ · AC/DC · Wiring diagram no. 21										
	105 x 80 x 42	60 nf	modified PPE	20...250 AC/DC	–	–	–	4	33	**KD001A***
Terminals · Output function ⎓/⏚ · DC PNP · Wiring diagram no. 23										
	105 x 80 x 42	60 nf	modified PPO	10...36 DC	–	–	–	10	33	**KD501A**

f = flush / nf = non flush / qf = quasi-flush

*** Note on use of miniature fuses for electrical connection**

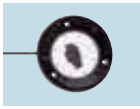
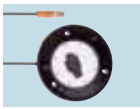
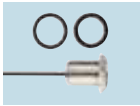
Miniature fuse to IEC60127-2 sheet 1, ≤ 2 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

Switching amplifiers with ATEX approval

Type	U_b [V]	Power / current consumption [VA] / [mA]	f [Hz]	T_a [°C]	Output	Protection	Draw-ing no.	Order no.
	115	1.0 /	10	-20...60	relay (1 changeover contact)	IP 20	34	**N0030A**
	230	1.0 /	10	-20...60	relay (1 changeover contact)	IP 20	34	**N0031A**
	115	1.3 /	10	-20...60	relay (1 changeover contact per channel)	IP 20	34	**N0032A**
	230	1.3 /	10	-20...60	relay (1 changeover contact per channel)	IP 20	34	**N0033A**
	24	/ < 23	10	-20...60	relay (1 changeover contact)	IP 20	34	**N0530A**

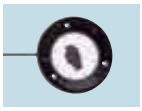
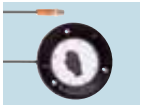
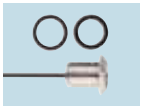
Type	U_b [V]	Power / current consumption [VA] / [mA]	f [Hz]	T_a [°C]	Output	Protection	Draw-ing no.	Order no.
	24	/ < 50	5000	-20...60	2 transistor outputs PNP (100 mA, short-circuit protection)	IP 20	34	**N0531A**
	24	/ < 50	5000	-20...60	2 outputs (optocoupler, bipolar, 100 mA, short-circuit protection)	IP 20	34	**N0532A**
	24	/ < 50	10	-20...60	relay (1 changeover contact per channel)	IP 20	34	**N0533A**
	24	/ < 50	5000	-20...60	2 transistor outputs PNP (100 mA, short-circuit protection)	IP 20	34	**N0534A**

Dynamic capacitive touch sensors

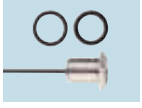
Type	U_b [V]	I_{load} [mA]	Current consumption [mA]	Ambient temperature [°C]	Protection	Draw-ing no.	Order no.
Cable 2 m · Output function ⎍ · DC PNP							
	24	200	30	-40...85	IP 67 / IP 69K	35	**KT5010**
Cable with connector 0.3 m · Output function ⎍ · DC PNP · Connector groups 4, 5, 80, 86, 147							
	24	200	30	-40...85	IP 67 / IP 69K	35	**KT5011**
Cable 2 m · Output function ⎍ · DC PNP							
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	36	**KT5309**
Cable with connector 0.3 m · Output function ⎍ · DC PNP · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204							
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	37	**KT5102**
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	37	**KT5112**
Cable 2 m · Output function ⎍ · DC PNP							
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	37	**KT5111**

You can find wiring diagrams and scale drawings from page 173

Static capacitive touch sensors

Type	U_b [V]	I_{load} [mA]	Current consumption [mA]	Ambient temperature [°C]	Protection	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · DC PNP							
	24	200	30	-40...85	IP 67 / IP 69K	35	**KT5012**
Cable with connector 0.3 m · Output function ⎍ · DC PNP · Connector groups 4, 5, 80, 86, 147							
	24	200	30	-40...85	IP 67 / IP 69K	35	**KT5013**
Cable with connector 0.3 m · Output function ⎍ · DC PNP · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204							
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	37	**KT5106**
Cable 2 m · Output function ⎍ · DC PNP							
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	37	**KT5110**
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	36	**KT5310**

Capacitive touch sensors with latching evaluation principle

Type	U_b [V]	I_{load} [mA]	Current consumption [mA]	Ambient temperature [°C]	Protection	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · DC PNP							
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	37	**KT5150**
Cable 0.3 m · Output function ⎍ · DC PNP · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204							
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	37	**KT5151**
Cable 2 m · Output function ⎍ · DC PNP							
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	36	**KT5350**
Cable 0.3 m · Output function ⎍ · DC PNP · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204							
	24	200	30	-40...85	IP 65 / IP 67 / IP 69K	36	**KT5351**

Software

Type	Description	Order no.
	LR DEVICE (USB stick) · Parameter setting of the units via the network · Software for clear online and offline parameter setting of IO-Link sensors via USB adapter · Use via USB connection cable (drivers are supplied): E30396 IO-Link interface or E30390 IO-Link master (note the respective data sheet) · IODD import and update from ifm's homepage · Reading of IODDs via storage media · Automatic sensor identification · Graphic representation of the process values and history incl. export function · Documentation and archiving · Transferable parameter sets · Full memory plug support for IO-Link 1.1	**QA0011**
	LR DEVICE (download) · Parameter setting of the units via the network · Software for clear online and offline parameter setting of IO-Link sensors via USB adapter · Use via USB connection cable (drivers are supplied): E30396 IO-Link interface or E30390 IO-Link master (note the respective data sheet) · IODD import and update from ifm's homepage · Reading of IODDs via storage media · Automatic sensor identification · Graphic representation of the process values and history incl. export function · Documentation and archiving · Transferable parameter sets · Full memory plug support for IO-Link 1.1	**QA0012**

Accessories

Type	Description	Order no.
	Memory plug · Parameter memory for IO-Link sensors · Storage capacity: 2 Kbytes · Housing materials: PA PACM 12 / PET / sealing: FPM / nut: stainless steel 316L / 1.4404 / connector: TPU	**E30398**
	Cover ring 100 mm · for type KT50 · Housing materials: polycarbonate-ABS yellow	**E80372**
	Cover ring 100 mm · for type KT50 · Housing materials: polycarbonate-ABS green	**E80373**
	Cover ring 100 mm · for type KT50 · Housing materials: polycarbonate-ABS Red	**E80374**
	Cover ring 100 mm · for type KT50 · Housing materials: polycarbonate-ABS blue	**E80375**
	Cover ring 100 mm · for type KT50 · Housing materials: polycarbonate-ABS orange	**E80376**
	Symbol disc (plastic) · Ø 20.4 mm · for type KT51 / KT53 · Start symbol · Housing materials: Polyamide	**E12377**
	Symbol disc (plastic) · Ø 20.4 mm · for type KT51 / KT53 · Symbol Stop · Housing materials: Polyamide	**E12378**
	Symbol disc (plastic) · Ø 20.4 mm · for type KT51 / KT53 · Symbol ON · Housing materials: Polyamide	**E12379**
	Symbol disc (plastic) · Ø 20.4 mm · for type KT51 / KT53 · Symbol OFF · Housing materials: Polyamide	**E12380**

You can find wiring diagrams and scale drawings from page 173

Type	Description	Order no.
	Symbol disc (plastic) · Ø 20.4 mm · for type KT51 / KT53 · Without symbol, transparent · Housing materials: Polyamide	**E12386**

Accessories mounting adapters

Type	Description	Order no.
	Mounting adapter · M18 x 1 - G ¾ · Housing materials: POM	**E43900**
	Mounting adapter · M18 x 1 - G 1 · Housing materials: POM	**E43904**
	Mounting adapter · M30 x 1.5 - G 1¼ · Housing materials: PVDF / EPDM	**E11036**
	Mounting adapter · M30 x 1.5 - G 1½ · Housing materials: PVDF / EPDM	**E11034**
	Mounting adapter · Ø 34 mm - G 1½ · Housing materials: POM	**E11027**
	Locknut · G ¾ · for mounting adapter · Housing materials: POM	**E43902**
	Locknut · G 1¼ · for mounting adapter · Housing materials: PVDF	**E11030**
	Locknut · G 1½ · for mounting adapter · Housing materials: PVDF	**E11032**
	Protective cover · G 1¼ · for mounting adapter · Housing materials: PES black transparent	**E11078**

Accessories mounting components

Type	Description	Order no.
	Mounting clamp · Ø 20 mm - Ø 18 mm · with reducing bush · for type M18 · Housing materials: PBT	**E10076**
	Mounting clamp · Ø 34 mm - Ø 30 mm · with reducing bush · for type M30 · Housing materials: PBT	**E10077**

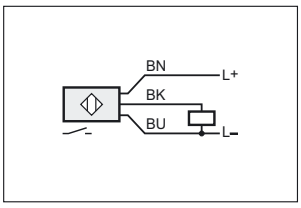
Type	Description	Order no.
	Angle bracket · for type M12 · Housing materials: stainless steel	**E10735**
	Angle bracket · for type M18 · Housing materials: stainless steel	**E10736**
	Angle bracket · for type M30 · Housing materials: stainless steel	**E10737**
	Mounting adapter for free-standing mounting · for type KQ5, KQ6 · Housing materials: adapter: PBT / inserts: Brass / screw: steel galvanised	**E12153**
	Mounting adapter · Pipe and tube installation KQ5 / KQ6 with cable ties · Fixing of the types KQ5 and KQ6 to pipes and tubes · Housing materials: Mounting adapter: PA 12 black	**E12163**
	Fixing strap · Length: 760 mm · for capacitive level sensors · for type KNQ, KQ5, KQ6 · Housing materials: PA	**E10880**
	Mounting set · M30 x 1.5 / G ¼...G 1 · for capacitive sensors on rising pipes G ¼" - 1" · Housing materials: POM	**E11037**

Wiring diagrams

Core colours

BN	brown
BU	blue
BK	black
GN/YE	green/yellow

1



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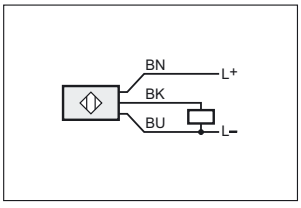

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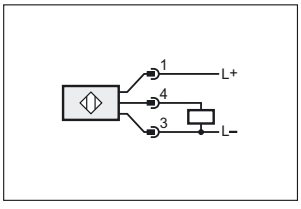

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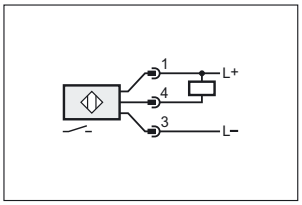

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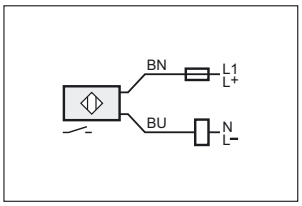

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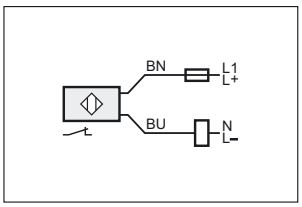

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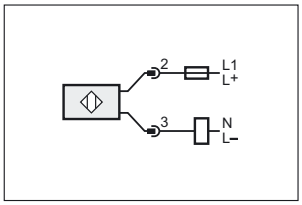

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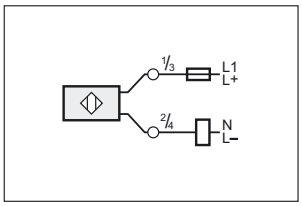

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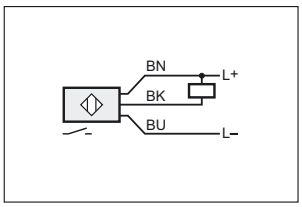

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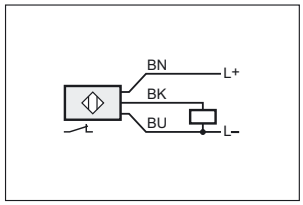

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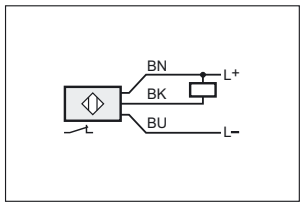

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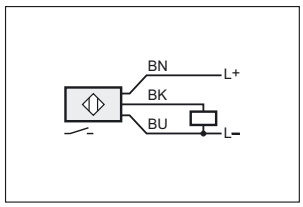

Wiring diagrams

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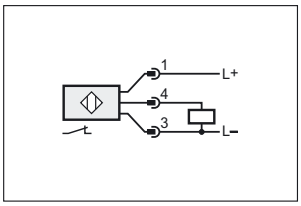

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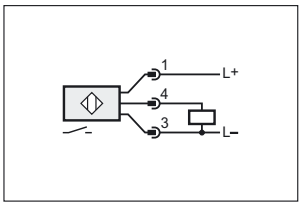

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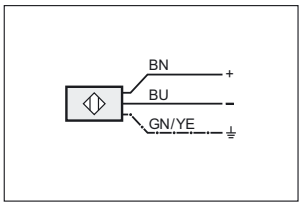

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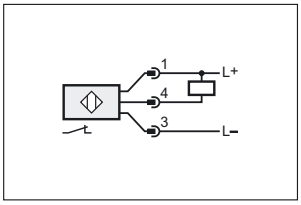

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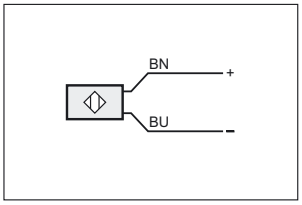

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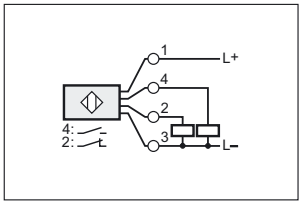

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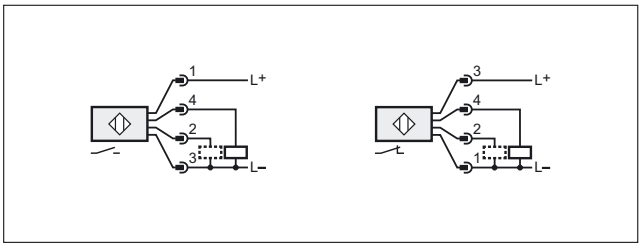

2: function check output / programming wire

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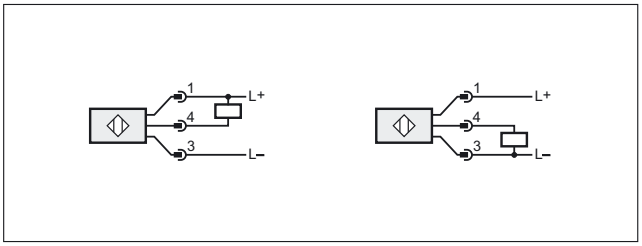

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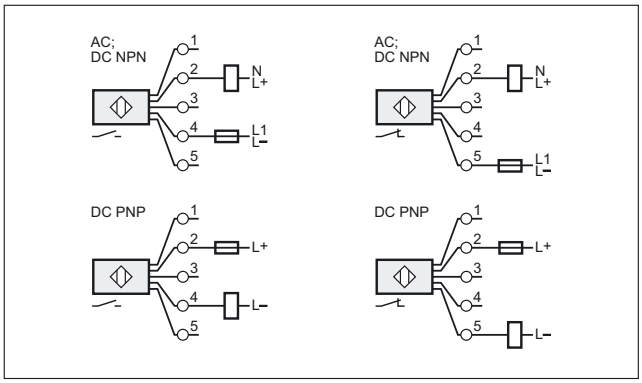

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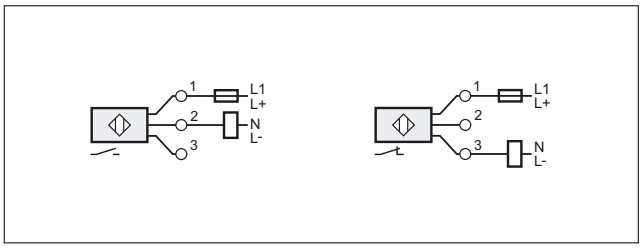

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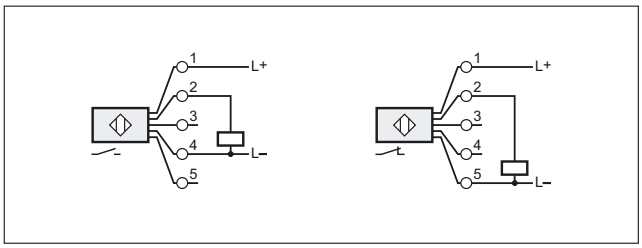

Scale drawings / drawing no. – CAD download: www.ifm.com

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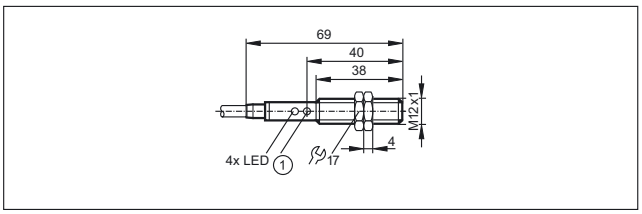

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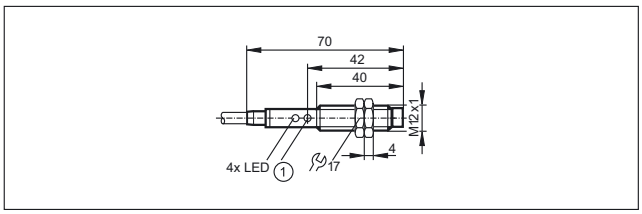

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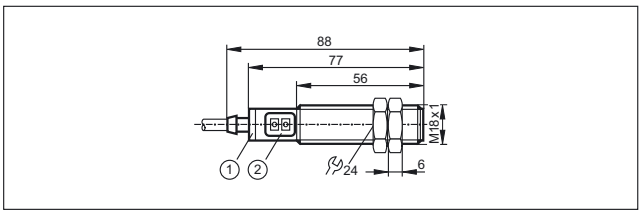
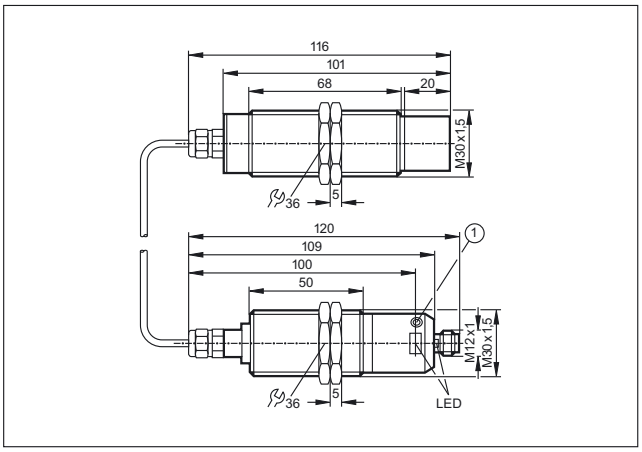


1: LED ring, 2: Programming buttons

4



1: Programming button

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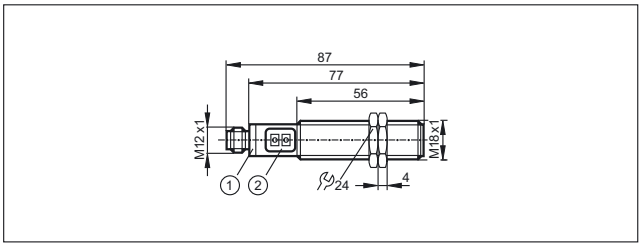

1: LED ring, 2: Programming buttons

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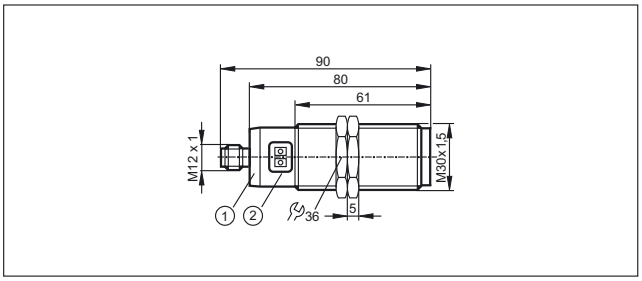

1: LED ring, 2: Programming buttons

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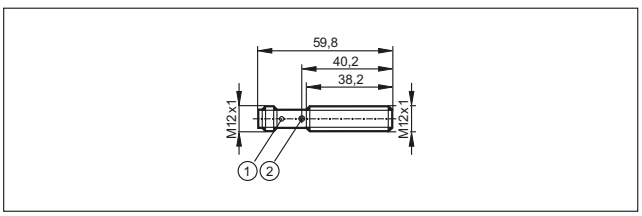

1: LED 4 x 90°, 2: potentiometer

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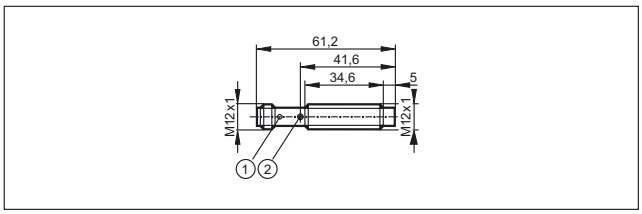

1: LED 4 x 90°, 2: potentiometer

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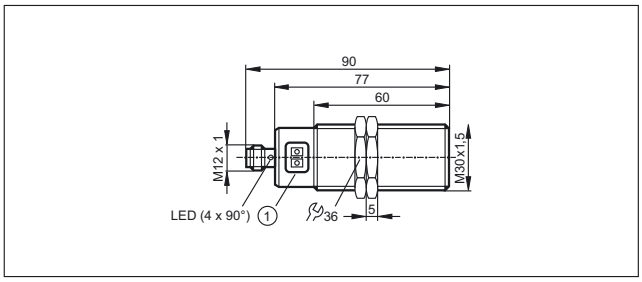

1: Programming buttons

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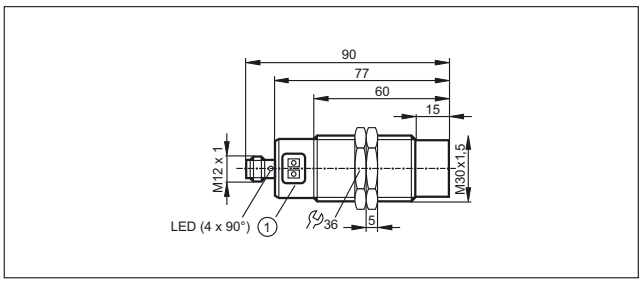

1: Programming buttons

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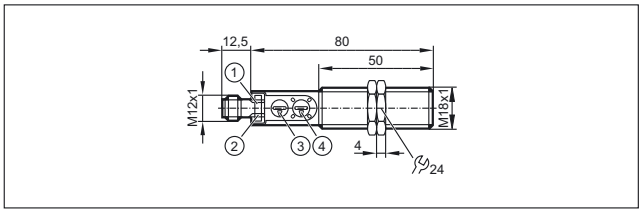
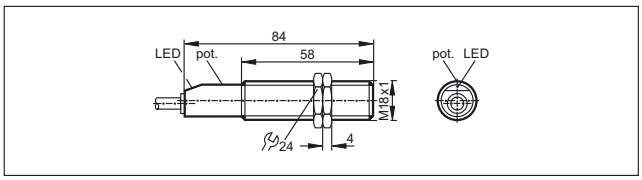


1: LED yellow (output status indication), 2: LED green (output status indication), 3: Potentiometer (sensing range), 4: Potentiometer (switching function)

12



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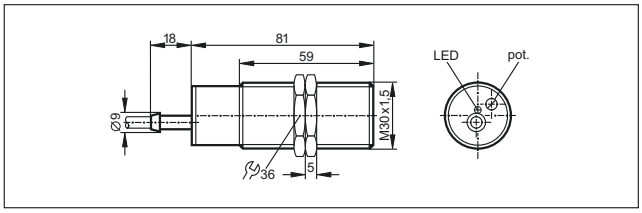

Scale drawings / drawing no. – CAD download: www.ifm.com

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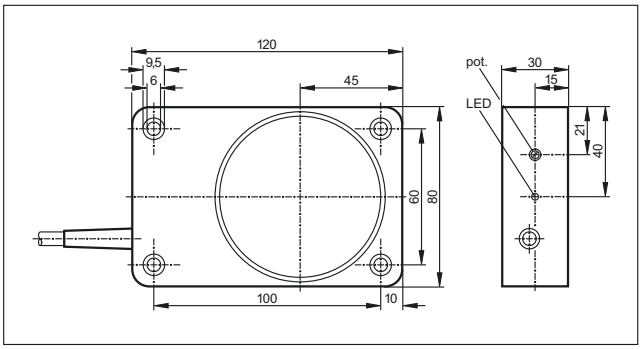

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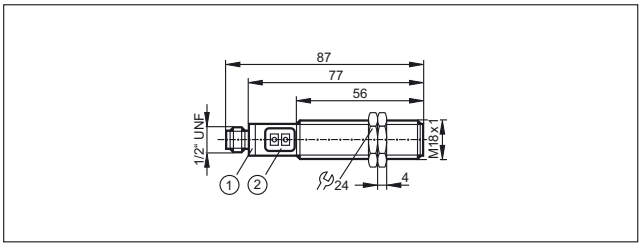

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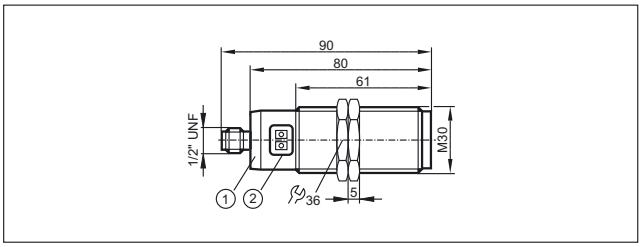

1: LED ring, 2: Programming buttons

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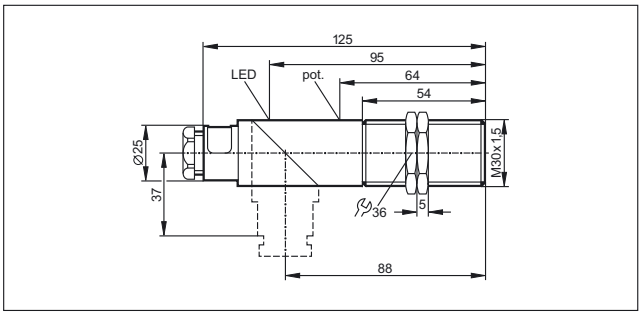

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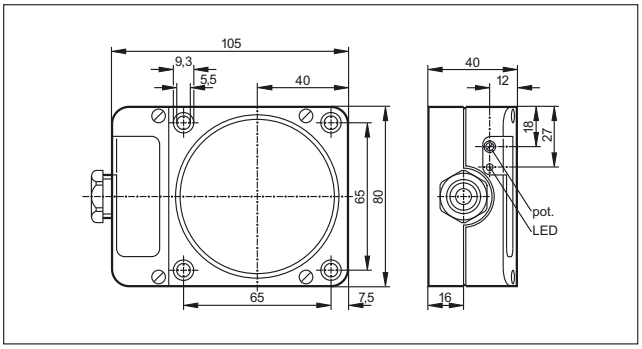

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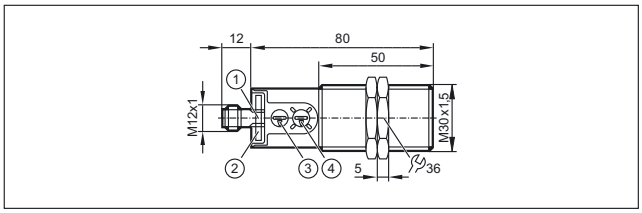

1: LED yellow (output status indication), 2: LED green (output status indication), 3: Potentiometer (sensing range), 4: Potentiometer (switching function)

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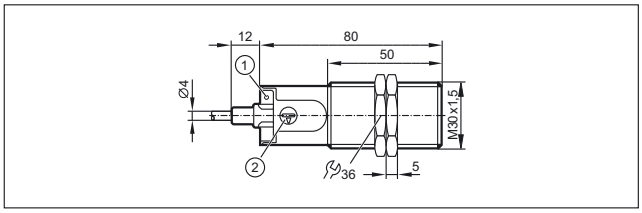

1: LED yellow (output status indication), 2: Potentiometer (sensing range)

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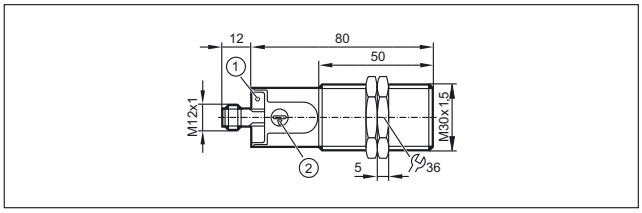

1: LED yellow (output status indication), 2: Potentiometer (sensing range)

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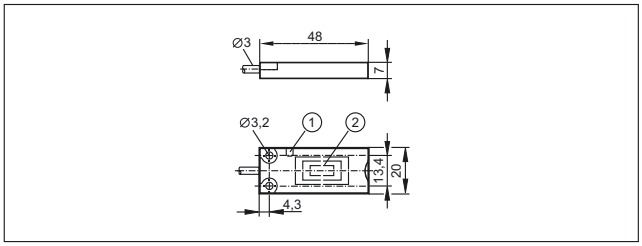

1: LED, 2: sensing face

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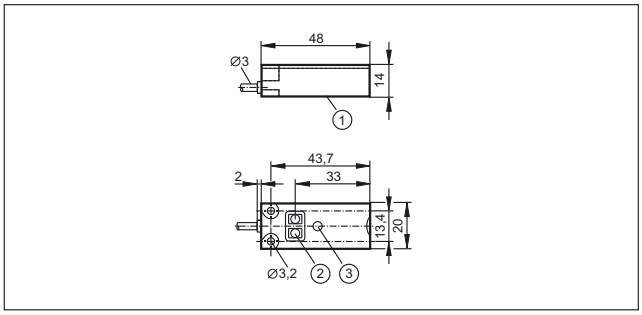

1: sensing face, 2: Programming buttons, 3: LED

Scale drawings / drawing no. – CAD download: www.ifm.com

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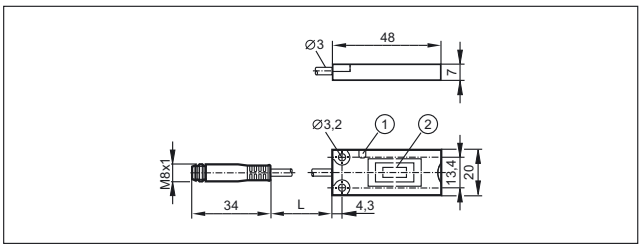

1: LED, 2: sensing face

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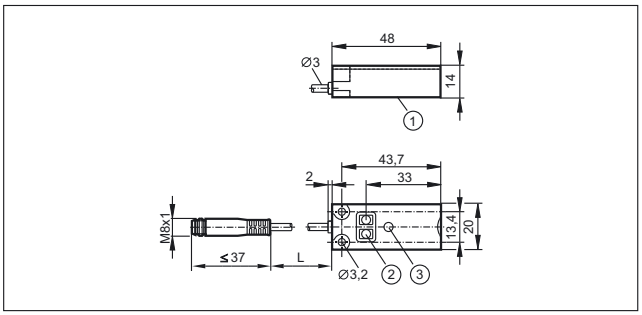

1: sensing face, 2: Programming buttons, 3: LED

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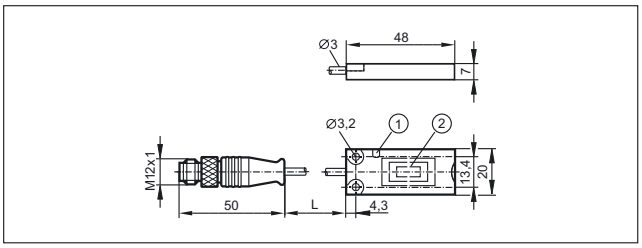

1: LED, 2: sensing face

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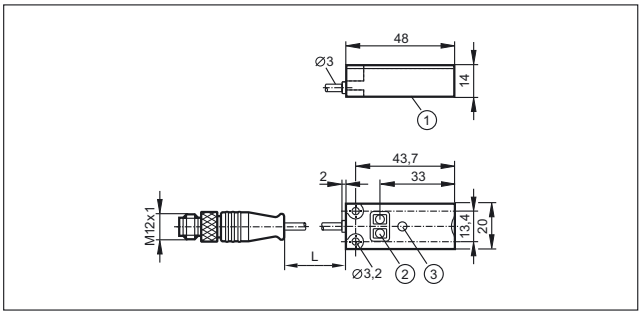
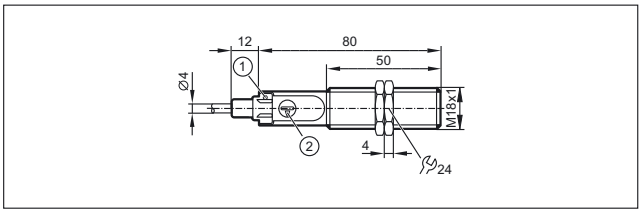


1: sensing face, 2: Programming buttons, 3: LED

28



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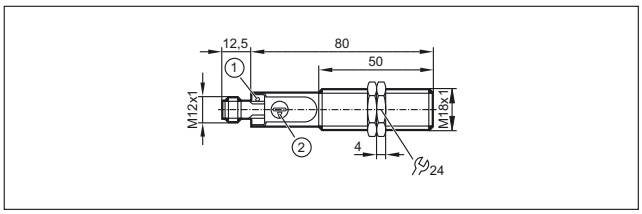

1: LED yellow (output status indication), 2: Potentiometer (sensing range)

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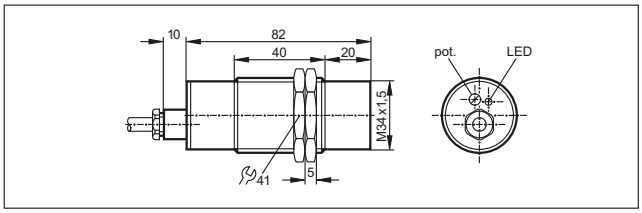

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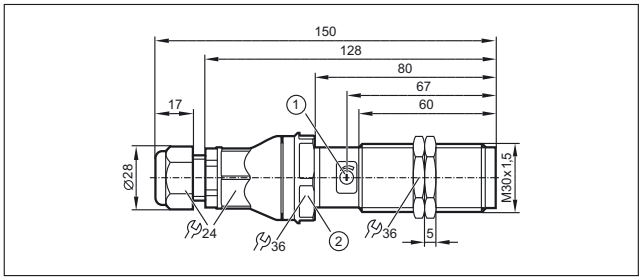
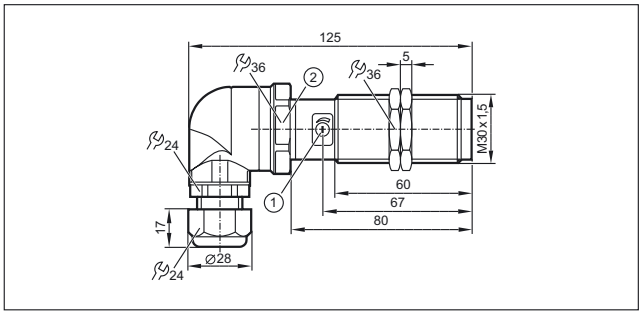


1: potentiometer, 2: tightening torque 10 Nm

32



1: potentiometer, 2: tightening torque 10 Nm

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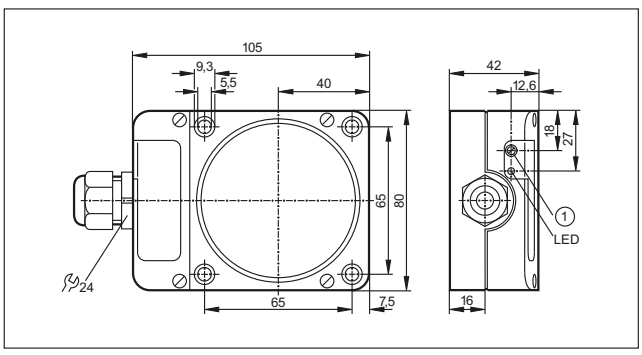

1: potentiometer

Scale drawings / drawing no. – CAD download: www.ifm.com

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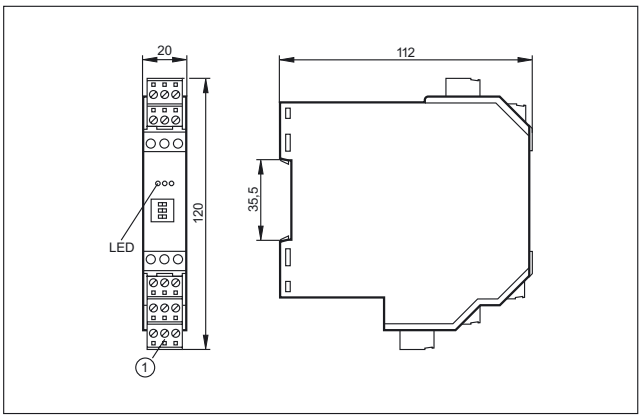

1: Combicon plug with screw terminals (optional)

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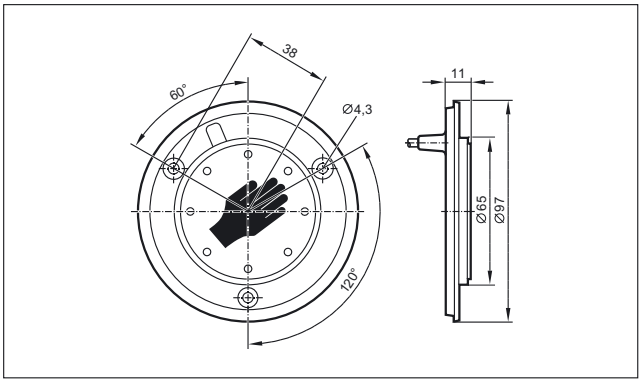

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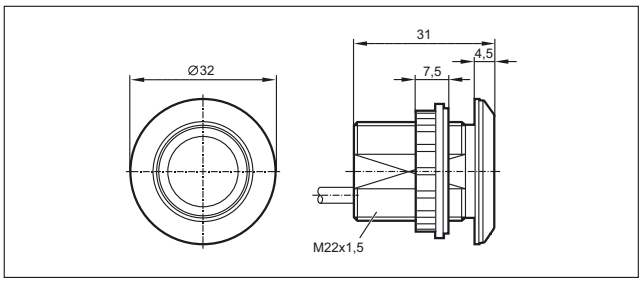

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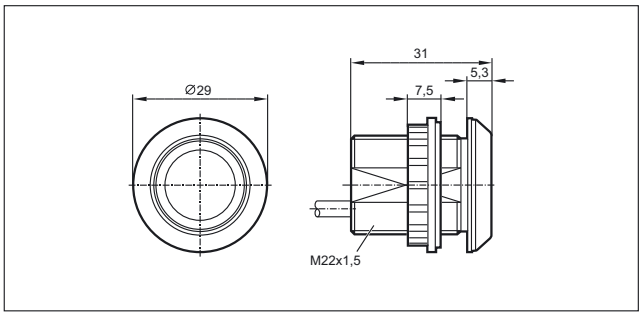


Non-contact and wear-free detection with magnetic sensors

Magnetic sensors

Detection also through non-magnetisable metals

Small designs with very long sensing ranges up to 100 mm

Cylinder and rectangular designs for demanding applications

High mechanical stability in case of shock or vibration

Flush or non-flush installation in non-magnetisable metals

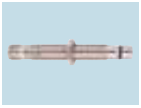
Magnetic sensors

Magnetic sensors are used in automation to detect positions without contact or wear and tear. Magnetic sensors come into their own where inductive sensors reach their limits. Advantage: Magnetic sensors offer small designs with very long sensing ranges. Depending on the orientation of the magnetic field, the sensor can be damped from the front or from the side.

Since magnetic fields penetrate all non-magnetisable materials, the sensors can detect magnets through walls made of non-ferrous metal, stainless steel, aluminium, plastic or wood.

In the food industry, for example, magnetic sensors are often used in connection with pigs (cleaning devices which pass through the inside of pipes). Magnetic sensors are used to determine their exact position from the outside through the wall of the stainless steel pipe.

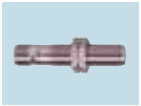
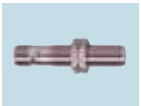
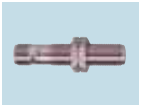
Full-metal sensors for high-pressure resistant applications on hydraulic cylinders and valves

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M12 / L = 93	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	1	**MFH200**
M12 connector · Output function ⎍ · DC NPN · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 93	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	1	**MFH201**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M12 / L = 60	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	2	**MFH202**
M12 connector · Output function ⎍ · DC NPN · Wiring diagram no. 2 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 60	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	2	**MFH203**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 60	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	2	**MFH204**
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 4									
	M12 / L = 40	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	3	**MFH205**
Cable 2 m · Output function ⎍ · DC NPN · Wiring diagram no. 5									
	M12 / L = 40	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	3	**MFH206**
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 6									
	M12 / L = 40	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	3	**MFH207**
Cable 2 m · Output function normally open / closed · DC PNP · Wiring diagram no. 7									
	M12 / L = 40	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	3	**MFH208**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function normally open / closed · DC PNP · Wiring diagram no. 8									
	M12 / L = 60	1.8 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	100	4	**MFH209**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M14 / L = 53	2 f	High-grade st. steel	10...36	IP 65 / IP 68 / IP 69K	1000	200	5	**M9H200**

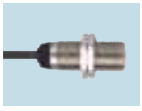
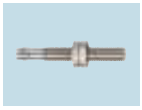
f = flush / nf = non flush / qf = quasi-flush

Full metal sensors for industrial applications

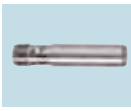
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M12 / L = 60	60	High-grade st. steel	10...30	IP 65 / IP 67	5000	200	6	**MFS211**
	M18 / L = 60	70	High-grade st. steel	10...30	IP 65 / IP 67	5000	200	7	**MGS204**
M12 connector · Output function ⎍ · DC NPN · Wiring diagram no. 2 · Connector groups 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 60	60	High-grade st. steel	10...30	IP 65 / IP 67	5000	200	6	**MFS209**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 3 · Connector groups 148, 149, 153, 184, 188, 193, 202									
	M12 / L = 60	60	High-grade st. steel	10...30	IP 65 / IP 67	5000	200	6	**MFS210**
	M18 / L = 60	70	High-grade st. steel	10...30	IP 65 / IP 67	5000	200	7	**MGS206**
M12 connector · Output function ⎍ · DC NPN · Wiring diagram no. 2 · Connector groups 148, 149, 153, 184, 188, 193, 202									
	M18 / L = 60	70	High-grade st. steel	10...30	IP 65 / IP 67	5000	200	7	**MGS205**

You can find wiring diagrams and scale drawings from page 187

Sensors for industrial applications

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 4									
	M8 / L = 50	60	stainless steel (316L)	10...30	IP 67	5000	200	8	**ME5011**
	M12 / L = 50	60	High-grade st. steel	10...30	IP 67	5000	200	9	**MFS201**
	M18 / L = 50	70	stainless steel	10...30	IP 67	5000	200	10	**MGS201**
Cable 2 m · Output function ⎍ · DC NPN · Wiring diagram no. 5									
	M8 / L = 40	60	stainless steel (316L)	10...30	IP 67	5000	200	11	**ME5015**
	M12 / L = 50	60	High-grade st. steel	10...30	IP 67	5000	200	9	**MFS202**
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 6									
	M18 / L = 50	70	stainless steel	10...30	IP 67	5000	200	10	**MGS202**
M8 connector · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	M8 / L = 60	60	stainless steel (316L)	10...30	IP 67	5000	200	12	**ME5010**
Cable 2 m · Output function ⎍ · DC PNP · Wiring diagram no. 4									
	28 x 10 x 16	60	PBT	10...30	IP 67	5000	200	13	**MS5011**
Cable with connector 0.15 m · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	40 x 12 x 26	60	PBT	10...30	IP 67	–	200	14	**MN5200**
M8 connector · Output function ⎍ · DC PNP · Wiring diagram no. 9 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	28 x 10 x 16	60	PBT	10...30	IP 67	5000	200	15	**MS5013**
M8 connector · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	28 x 10 x 16	60	PBT	10...30	IP 67	5000	200	15	**MS5010**

Full metal sensors for hygienic and wet areas

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M12 / L = 60	60	High-grade st. steel	10...30	IP 65 / IP 68 / IP 69K	5000	100	6	**MFT202**
	Ø 12 / L = 60	60	High-grade st. steel	10...30	IP 65 / IP 68 / IP 69K	5000	100	16	**MFT204**
	M18 / L = 60	70	High-grade st. steel	10...30	IP 65 / IP 68 / IP 69K	5000	100	7	**MGT203**

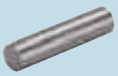
Sensors for hygienic and wet areas

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M12 / L = 60	60	High-grade st. steel	10...30	IP 65 / IP 68 / IP 69K	5000	100	6	**MFT202**
M12 connector · Output function ⎍ · DC PNP · Wiring diagram no. 1 · Connector groups 148, 150, 153, 154, 184, 188, 190, 193									
	M18 / L = 60	100	High-grade st. steel	10...30	IP 68 / IP 69K	–	200	7	**MGT201**

Accessories damping magnets

Type	Description	Order no.
	Damping magnet · M 3.2 · Housing materials: Barium ferrite	**E12537**
	Damping magnet · M 6.1 · Housing materials: Neodymium	**E12538**
	Damping magnet · M 6.1 · Housing materials: Neodymium	**E12539**
	Damping magnet · M 7.0 · Housing materials: Neodymium galvanised	**E12540**

You can find wiring diagrams and scale drawings from page 187

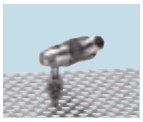
Type	Description	Order no.
	Damping magnet · M 7.1 · Housing materials: Neodymium / plastics	**E12541**
	Damping magnet · M 1.0 · Housing materials: Samarium cobalt	**E10749**
	Damping magnet · M 2.0 · Housing materials: AlNiCo	**E10750**
	Damping magnet · M 3.0 · Housing materials: Barium ferrite	**E10751**
	Damping magnet · M 3.1 · Housing materials: Barium ferrite / stainless steel	**E12291**
	Damping magnet · M 4.0 · Housing materials: Barium ferrite	**E10752**
	Damping magnet · M 4.1 · Housing materials: Barium ferrite / stainless steel	**E11803**
	Damping magnet · M 5.0 · Housing materials: Barium ferrite	**E10753**
	Damping magnet · M 5.1 · Housing materials: Barium ferrite with plastic coating / steel	**E10754**

Accessories mounting components

Type	Description	Order no.
	Angle bracket · for type M8 · Housing materials: stainless steel	**E10734**
	Angle bracket · for type M12 · Housing materials: stainless steel	**E10735**
	Angle bracket · for type M18 · Housing materials: stainless steel	**E10736**
	Mounting clamp · Ø 8 mm · Housing materials: aluminium black anodised	**E10221**

Type	Description	Order no.
	Mounting clamp · Ø 12 mm · with end stop · for type M12 · Housing materials: PC	**E11047**
	Mounting clamp · Ø 18 mm · with end stop · for type M18 · Housing materials: PC	**E11048**

Accessories mounting sets

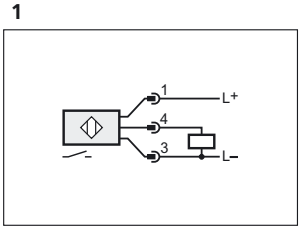
Type	Description	Order no.
	Mounting set · Ø 18.5 mm · Clamp mounting · Free-standing M10 · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20718**
	Mounting set · Ø 18.5 mm · Clamp mounting · Free-standing M10 · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20719**
	Mounting set · Ø 18.5 mm · Clamp mounting · Free-standing M10 · for type OG, IG, KG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20869**
	Mounting set · Ø 18.5 mm · Clamp mounting · Free-standing M10 · for type OG, IG, KG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20870**
	Mounting set · Ø 18.5 mm · Clamp mounting · aluminium profile · for type OG, IG, KG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc / Cube: diecast zinc	**E20866**
	Mounting set · Ø 18.5 mm · Clamp mounting · aluminium profile · for type OG, IG, KG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc / Cube: diecast zinc	**E20867**

Wiring diagrams

Core colours

BK	black
BN	brown
BU	blue
WH	white

1



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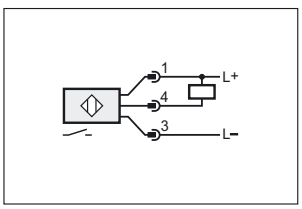

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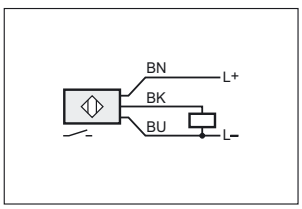

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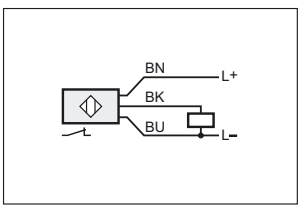

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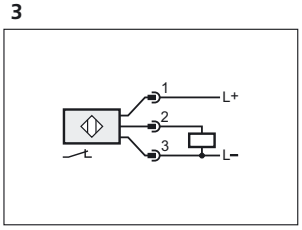

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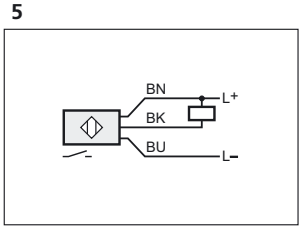

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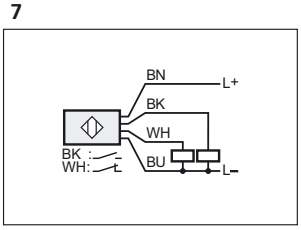
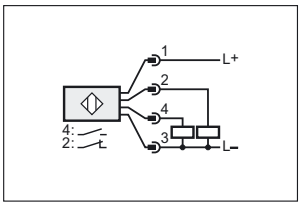


Wiring diagrams

8



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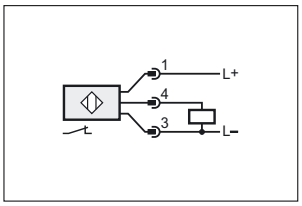
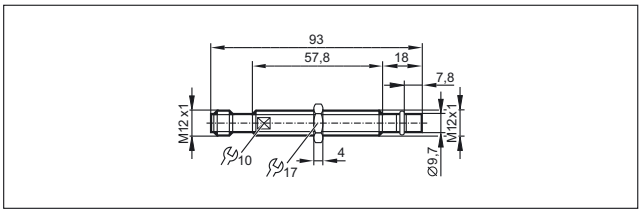


Scale drawings / drawing no. – CAD download: www.ifm.com

1



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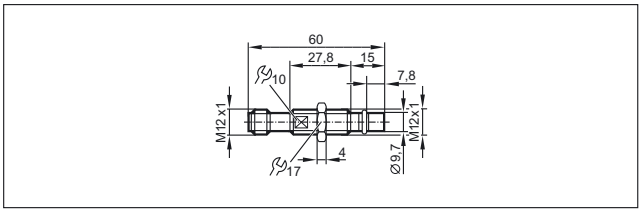

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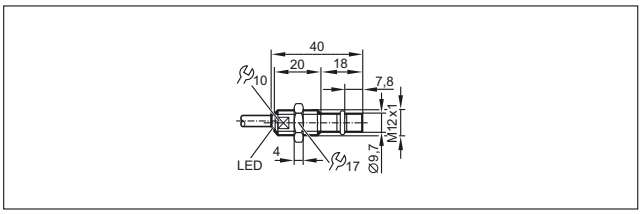

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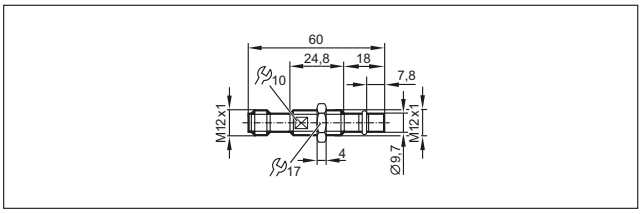

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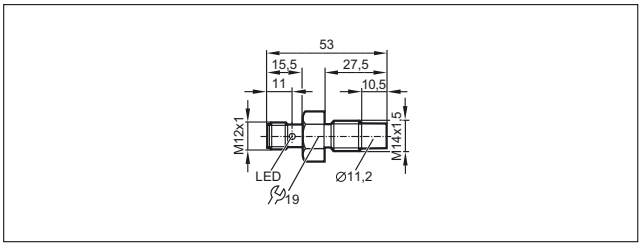

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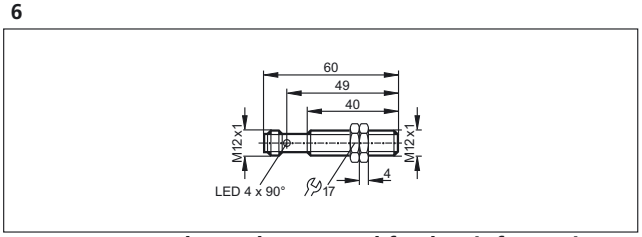

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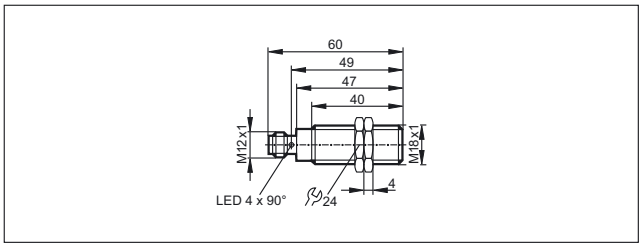

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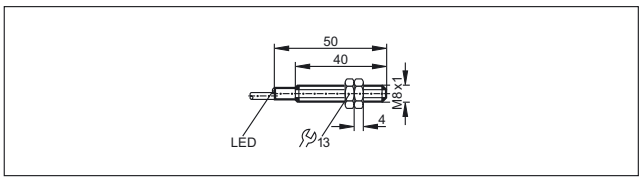

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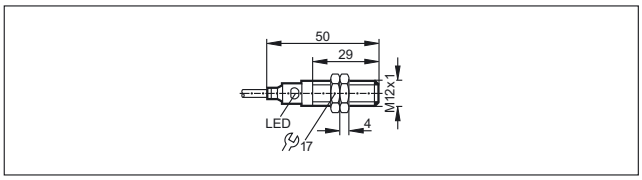

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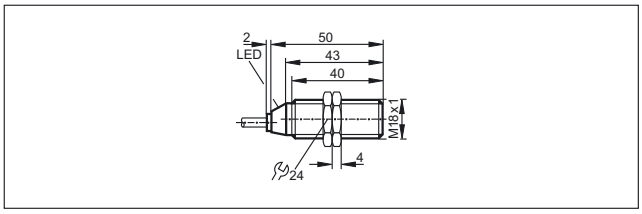

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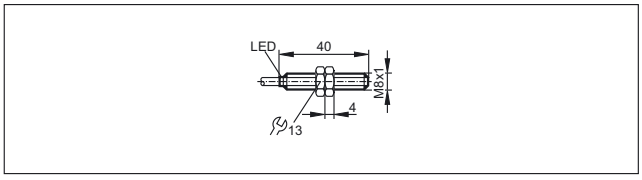
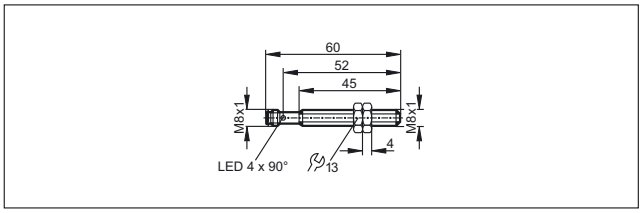
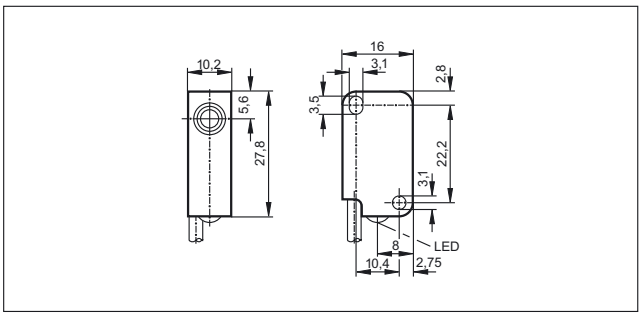


12

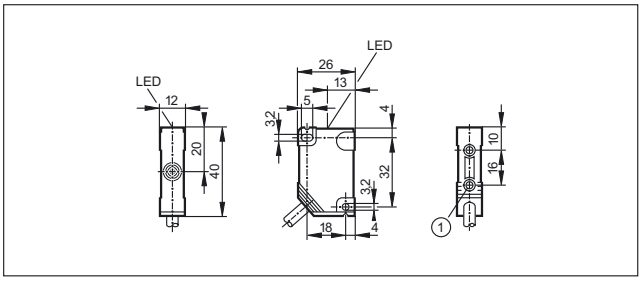


Scale drawings / drawing no. – CAD download: www.ifm.com

13

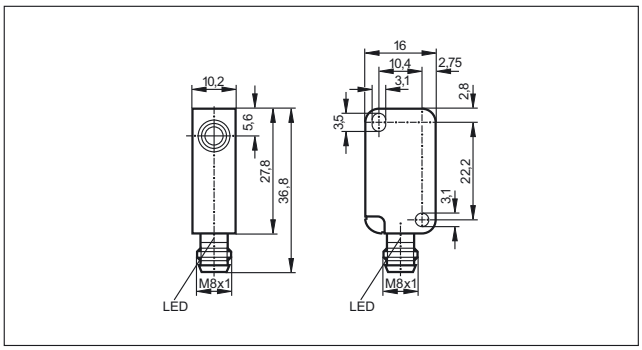


14

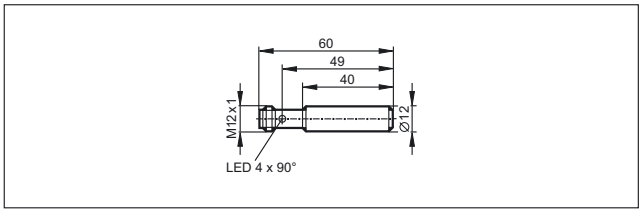


1: threaded insert M3, depth 5.8 mm, max. tightening torque 1.2 Nm (screw fixing class 8.8) when brass insert in contact with counterpart.

15



16



Accurate detection of the piston position in pneumatic cylinders

Cylinder sensors

Self-clamping fixture for easy adjustment and quick mounting

Convenient: Can be easily inserted from above into the slot

Suitable for almost all C- and T-slots

Unit versions available with connection cable and M8 or M12 cable plug

Wide selection of adapter accessories

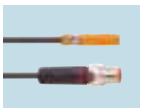
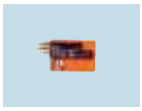
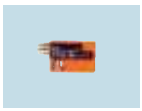
Cylinder sensors

Cylinder sensors are used for position detection of pistons in pneumatic cylinders. They are directly mounted onto the cylinder.
The ring magnet attached to the piston is detected through the housing wall of non-magnetisable material (e.g. aluminium, brass or stainless steel).

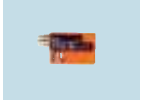
ifm offers a standard solution for different cylinder types and manufacturers. Moreover, a wide range of adapters and fixing accessories ensures fast and reliable installation.

T-slot sensors for industrial applications

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	1	**MK5100**
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	200	-25...85	1	**MK5115**
Cable 2 m · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 2									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	1	**MK5114**
Cable 2 m · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 3									
	25 x 5 x 6.5	PA (polyamide)	10...30	4000	IP 65 / IP 67	100	-25...85	1	**MK5103**
Cable 6 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	200	-25...85	1	**MK5117**
Cable 10 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	1	**MK5124**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	2	**MK5101**
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	200	-25...85	2	**MK5106**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 5 · Connector groups 1, 3, 78, 84, 145									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	2	**MK5112**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 6 · Connector groups 1, 3, 145									
	25 x 5 x 6.5	PA (polyamide)	10...30	4000	IP 65 / IP 67	100	-25...85	2	**MK5104**

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 0.3 m · with M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	3	**MK5102**
Cable 0.3 m · with M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	4	**MK5107**
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	200	-25...85	4	**MK5108**
Cable 0.3 m · with M8 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 6 · Connector groups 1, 3, 145									
	25 x 5 x 6.5	PA (polyamide)	10...30	4000	IP 65 / IP 67	100	-25...85	3	**MK5105**
Cable 0.3 m · with M12 connector · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 6 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	25 x 5 x 6.5	PA (polyamide)	10...30	4000	IP 65 / IP 67	100	-25...85	4	**MK5109**
Cable 1 m · with M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	3	**MK5122**
M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	27.5 x 18 x 15.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	5	**MK5900**
M8 connector · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 5 · Connector groups 1, 3, 78, 84, 145									
	27.5 x 18 x 15.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	5	**MK5902**

T-slot reed sensors for industrial applications, 2-wire

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
M8 connector · Output function ⎍ · 2-wire · AC/DC PNP/NPN · Wiring diagram no. 7									
	27.5 x 18 x 15.5	PA (polyamide)	5...50	1000	IP 65 / IP 67	100	-25...70	5	**MR0901***

You can find wiring diagrams and scale drawings from page 205

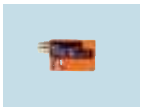
Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 2-wire · AC/DC PNP/NPN · Wiring diagram no. 8									
	30.5 x 5 x 6.5	PA (polyamide)	5...120	1000	IP 65 / IP 67	100	-25...70	6	**MR0100***
Cable 6 m · Output function ⎍ · 2-wire · AC/DC PNP/NPN · Wiring diagram no. 8									
	30.5 x 5 x 6.5	PA (polyamide)	5...120	1000	IP 65 / IP 67	100	-25...70	6	**MR0117***
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 2-wire · AC/DC PNP/NPN · Wiring diagram no. 7 · Connector groups 1, 3, 145									
	30.5 x 5 x 6.5	PA (polyamide)	5...60	1000	IP 65 / IP 67	100	-25...70	7	**MR0101***
Cable 0.3 m · with M8 connector · Output function ⎍ · 2-wire · AC/DC PNP/NPN · Wiring diagram no. 7 · Connector groups 1, 3, 145									
	30.5 x 5 x 6.5	PA (polyamide)	5...60	1000	IP 65 / IP 67	100	-25...70	8	**MR0102***
Cable 0.3 m · with M12 connector · Output function ⎍ · 2-wire · AC/DC PNP/NPN · Wiring diagram no. 7 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	30.5 x 5 x 6.5	PA (polyamide)	5...60	1000	IP 65 / IP 67	100	-25...70	9	**MR0107***

*** Note on use of miniature fuses for electrical connection**

Miniature fuse to IEC60127-2 sheet 1, ≤ 0,175 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

T-slot reed sensors for industrial applications, 3-wire

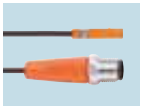
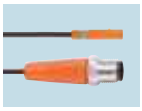
Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · AC/DC PNP · Wiring diagram no. 9 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	30.5 x 5 x 6.5	PA (polyamide)	5...50	1000	IP 65 / IP 67	350 / 500	-25...70	7	**MR0119***
Cable 0.3 m · with M8 connector · Output function ⎍ · 3-wire · AC/DC PNP · Wiring diagram no. 9 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	30.5 x 5 x 6.5	PA (polyamide)	5...50	1000	IP 65 / IP 67	350 / 500	-25...70	8	**MR0120***
Cable 2 m · Output function ⎍ · 3-wire · AC/DC PNP · Wiring diagram no. 10									
	30.5 x 5 x 6.5	PA (polyamide)	5...50	1000	IP 65 / IP 67	350 / 500	-25...70	6	**MR0122***

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 6 m · Output function ⎍⎽ · 3-wire · AC/DC PNP · Wiring diagram no. 10									
	30.5 x 5 x 6.5	PA (polyamide)	5...50	1000	IP 65 / IP 67	350 / 500	-25...70	6	**MR0123***
Cable 0.3 m · with M12 connector · Output function ⎍⎽ · 3-wire · AC/DC PNP · Wiring diagram no. 9 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	30.5 x 5 x 6.5	PA (polyamide)	5...50	1000	IP 65 / IP 67	350 / 500	-25...70	9	**MR0121***
M8 connector · Output function ⎍⎽ · 3-wire · AC/DC PNP · Wiring diagram no. 9									
	27.5 x 18 x 15.5	PA (polyamide)	5...50	1000	IP 65 / IP 67	350 / 500	-25...70	5	**MR0902***

*** Note on use of miniature fuses for electrical connection**

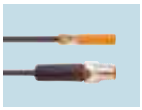
Miniature fuse to IEC60127-2 sheet 1, ≤ 0,175 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

T-slot sensors for hygienic and wet areas

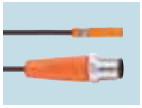
Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 2 m · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67 / IP 69K	100	-25...85	1	**MK5110**
Cable 6 m · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67 / IP 69K	100	-25...85	1	**MK5128**
Cable 0.3 m · with M12 connector · Output function ⎍⎽ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67 / IP 69K	100	-25...85	10	**MK5111**
Cable 0.3 m · with M12 connector · Output function ⎍⎽ · 3-wire · DC NPN · Wiring diagram no. 5 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67 / IP 69K	100	-25...85	11	**MK5186**

You can find wiring diagrams and scale drawings from page 205

T-slot sensors for short-stroke cylinders

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	12	**MK5140**
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 11									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	12	**MK5156**
Cable 10 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	12	**MK5161**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 5 · Connector groups 1, 3, 78, 84, 145									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	13	**MK5137**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	13	**MK5138**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 12 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	13	**MK5155**
Cable 0.3 m · with M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	14	**MK5159**
Cable 0.3 m · with M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	15	**MK5139**

T-slot sensors for short-stroke cylinders for hygienic and wet areas

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67 / IP 69K	100	-25...85	12	**MK5158**
Cable 0.3 m · with M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67 / IP 69K	100	-25...85	11	**MK5157**

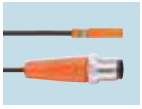
T-slot sensors with ATEX approval 1G/1D

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 6 m · Output function ⎍ · 2-wire · Connection to certified intrinsically safe circuits with the max. values U = 15 V / I = 50 mA / P = 120 mW · Wiring diagram no. 3									
	25 x 5 x 6.5	PA (polyamide)	–	2000	IP 65 / IP 67	–	-25...70	12	**MK502A**

T-slot sensors with ATEX approval 3D/3G

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 6 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-20...60	12	**MK503A**

T-slot sensors with ATEX approval 3D

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...60	1	**MK500A**
Cable 0.3 m · with M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 196, 198									
	25 x 5 x 6.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...60	10	**MK501A**

You can find wiring diagrams and scale drawings from page 205

T-slot reed sensors with ATEX approval 1G/1D

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 6 m · Output function ⎍ · 2-wire · Connection to certified intrinsically safe circuits with the max. values U = 15 V / I = 50 mA / P = 120 mW · Wiring diagram no. 3									
	30.5 x 5 x 6.5	PA (polyamide)	–	–	IP 65 / IP 67	–	-25...70	6	**MR500A**

T-slot reed sensors with ATEX approval 3D/3G

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 6 m · Output function ⎍ · 2-wire · DC PNP/NPN · Wiring diagram no. 13									
	30.5 x 5 x 6.5	PA (polyamide)	5...30	–	IP 65 / IP 67	100	-20...60	6	**MR501A***

*** Note on use of miniature fuses for electrical connection**

Miniature fuse to IEC60127-2 sheet 1, ≤ 0,175 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

T-slot sensors for welding applications, weld-field immune

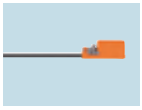
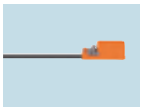
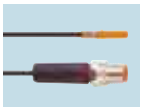
Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 0.3 m · with M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 137, 138, 139, 140, 141									
	25 x 5 x 6.5	PA (polyamide)	10...30	9	IP 65 / IP 67	100	-25...85	4	**MK5214**
Cable 0.3 m · with M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4									
	25 x 5 x 6.5	PA (polyamide)	10...30	9	IP 65 / IP 67	100	-25...85	3	**MK5215**

Two T-slot sensors on one connector

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 0.3 m · with M8 connector · Output function ⎍ · 4-wire · DC PNP · Wiring diagram no. 14 · Connector groups 4, 5, 80, 86, 147									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	16	**MK5208**

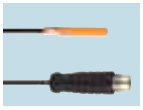
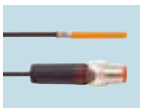
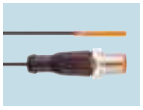
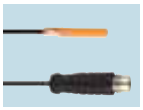
Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 0.3 m · with M12 connector · Output function ⎓ · 4-wire · DC PNP · Wiring diagram no. 14 · Connector groups 8, 9, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 151, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	25 x 5 x 6.5	PA (polyamide)	10...30	6000	IP 65 / IP 67	100	-25...85	17	**MK5209**

Non flush C-slot sensors for industrial applications

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 2 m · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 1									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	18	**MK5300**
Cable 2 m · Output function ⎓ · 3-wire · DC NPN · Wiring diagram no. 2									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	18	**MK5306**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	19	**MK5301**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎓ · 3-wire · DC NPN · Wiring diagram no. 5 · Connector groups 1, 3, 78, 84, 145									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	19	**MK5307**
Cable 0.3 m · with M8 connector · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	20	**MK5302**
Cable 0.5 m · with M8 connector · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	20	**MK5305**
Cable 0.3 m · with M12 connector · Output function ⎓ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	21	**MK5304**

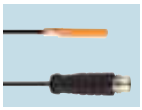
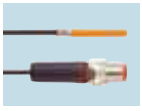
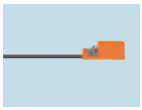
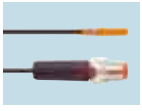
You can find wiring diagrams and scale drawings from page 205

Flush C-slot sensors for industrial applications

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	26.1 x 2.8 x 5.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	22	**MK5312**
Cable 2 m · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 2									
	26.1 x 2.8 x 5.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	22	**MK5309**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	26.1 x 2.8 x 5.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	23	**MK5310**
Cable 0.3 m · with M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	26.1 x 2.8 x 5.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	24	**MK5311**
Cable 0.3 m · with M12 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	26.1 x 2.8 x 5.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	25	**MK5314**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · DC NPN · Wiring diagram no. 5 · Connector groups 1, 3, 78, 84, 145									
	26.1 x 2.8 x 5.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	23	**MK5308**
Cable 0.5 m · with M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	26.1 x 2.8 x 5.5	PA (polyamide)	10...30	10000	IP 65 / IP 67	100	-25...85	26	**MK5315**

C-slot sensors for short-stroke cylinders

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	26.1 x 2.8 x 5.5	PA (polyamide)	10...30	5000	IP 65 / IP 67	100	-25...85	22	**MK5325**

Type	Dimensions [mm]	Material	U_b [V]	f [Hz]	Protection	I_{load} [mA]	T_a [°C]	Drawing no.	Order no.
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	26.1 x 2.8 x 5.5	PA (polyamide)	10...30	5000	IP 65 / IP 67	100	-25...85	23	**MK5326**
Cable 0.3 m · with M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	25.8 x 2.8 x 5	PA (polyamide)	10...30	5000	IP 65 / IP 67	100	-25...85	27	**MK5328**
Cable 2 m · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 1									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	5000	IP 65 / IP 67	100	-25...85	28	**MK5329**
Cable 0.3 m · with M8 connector (snap-fit) · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	5000	IP 65 / IP 67	100	-25...85	29	**MK5330**
Cable 0.3 m · with M8 connector · Output function ⎍ · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 1, 2, 3, 78, 84, 145, 146									
	17.5 x 2.8 x 7.7	PA (polyamide)	10...30	5000	IP 65 / IP 67	100	-25...85	30	**MK5331**

Fixing straps for clean line cylinders

Type	Description	Order no.
	Fixing strap for clean-line cylinders · Piston diameter 8...12 mm · for type MKT · Housing materials: adapter: PA / Fixing strap: stainless steel	**E11816**
	Fixing strap for clean-line cylinders · Piston diameter 16...20 mm · for type MKT · Housing materials: adapter: PA / Fixing strap: stainless steel	**E11817**
	Fixing strap for clean-line cylinders · Piston diameter 25...32 mm · for type MKT · Housing materials: adapter: PA / Fixing strap: stainless steel	**E11818**
	Fixing strap for clean-line cylinders · Piston diameter 40 mm · for type MKT · Housing materials: adapter: PA / Fixing strap: stainless steel	**E11819**
	Fixing strap for clean-line cylinders · Piston diameter 50 mm · for type MKT · Housing materials: adapter: PA / Fixing strap: stainless steel	**E11820**
	Fixing strap for clean-line cylinders · Piston diameter 63 mm · for type MKT · Housing materials: adapter: PA / Fixing strap: stainless steel	**E11821**

You can find wiring diagrams and scale drawings from page 205

Type	Description	Order no.
	Fixing strap for clean-line cylinders · Piston diameter 80 mm · for type MKT · Housing materials: adapter: PA / Fixing strap: stainless steel	**E11822**
	Fixing strap for clean-line cylinders · Piston diameter 100 mm · for type MKT · Housing materials: adapter: PA / Fixing strap: stainless steel	**E11823**
	Fixing strap for clean-line cylinders · Piston diameter 10...16 mm · for type MKT · Housing materials: adapter: stainless steel / Fixing strap: stainless steel	**E11975**
	Fixing strap for clean-line cylinders · Piston diameter 20...25 mm · for type MKT · Housing materials: adapter: stainless steel / Fixing strap: stainless steel	**E11976**
	Fixing strap for clean-line cylinders · Piston diameter 32 mm · for type MKT · Housing materials: adapter: stainless steel / Fixing strap: stainless steel	**E11977**
	Fixing strap for clean-line cylinders · Piston diameter 40 mm · for type MKT · Housing materials: adapter: stainless steel / Fixing strap: stainless steel	**E11978**
	Fixing strap for clean-line cylinders · Piston diameter 50 mm · for type MKT · Housing materials: adapter: stainless steel / Fixing strap: stainless steel	**E11979**
	Fixing strap for clean-line cylinders · Piston diameter 63 mm · for type MKT · Housing materials: adapter: stainless steel / Fixing strap: stainless steel	**E11980**
	Fixing strap for clean-line cylinders · Piston diameter 80 mm · for type MKT · Housing materials: adapter: stainless steel / Fixing strap: stainless steel	**E11981**
	Fixing strap for clean-line cylinders · Piston diameter 100 mm · for type MKT · Housing materials: adapter: stainless steel / Fixing strap: stainless steel	**E11982**
	Adapter for clean-line cylinders · for types MKT (T-slot cylinder sensors) · Housing materials: PA	**E11846**
	Adapter for clean-line cylinders · for types MKT (T-slot cylinder sensors) · Housing materials: stainless steel	**E11877**

Clips

Type	Description	Order no.
	Clip · for types MKT (T-slot cylinder sensors) · Piston diameter 12 mm · Housing materials: POM / fixture: aluminium / screw: stainless steel	**E11961**
	Clip · for types MKT (T-slot cylinder sensors) · Piston diameter 16 mm · Housing materials: POM / fixture: aluminium / screw: stainless steel	**E11958**

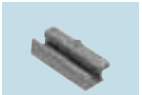
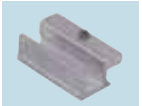
Type	Description	Order no.
	Clip · for types MKT (T-slot cylinder sensors) · Piston diameter 20 mm · Housing materials: POM / fixture: aluminium / screw: stainless steel	E11959
	Clip · for types MKT and MKI (T-slot cylinder sensors) · Piston diameter 25 mm · Housing materials: POM / fixture: aluminium / screw: stainless steel	E11960
	Clip · for types MKT (T-slot cylinder sensors) · Clamping range 44-45 mm · Piston diameter 40 mm · Housing materials: POM / fixture: aluminium / screw: stainless steel	E12015
	Clip · for types MKT (T-slot cylinder sensors) · Clamping range 35-36 mm · Piston diameter 32 mm · Housing materials: POM / fixture: aluminium / screw: stainless steel	E12017

Adapters for tie rod and integrated profile

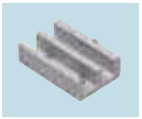
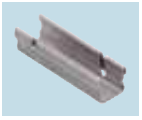
Type	Description	Order no.
	Adapter for tie rod / integrated profile cylinders · for types MKT (T-slot cylinder sensors) · Clamping range 5...11 mm · Housing materials: aluminium / screw: stainless steel	E11797
	Adapter for tie rod / integrated profile cylinders · for types MKT (T-slot cylinder sensors) · Clamping range 9...15 mm · Housing materials: aluminium / screw: stainless steel	E11799
	Adapter for tie rod / integrated profile cylinders · for types MKT (T-slot cylinder sensors) · Clamping range 14...20 mm · Housing materials: aluminium / screw: stainless steel	E11801
	Adapter for tie rod cylinders (or cylinders of the same dimensions) · for types MKT (T-slot cylinder sensors) · Clamping range 3...7 mm · Housing materials: aluminium / screw: stainless steel	E11913
	Adapter for tie rod cylinders (or cylinders of the same dimensions) · for types MKT (T-slot cylinder sensors) · Clamping range 5...7 mm · Housing materials: aluminium / screw: stainless steel	E11912
	Adapter for tie rod / integrated profile cylinders · for types MKT (T-slot cylinder sensors) · Clamping range 5...11 mm · Housing materials: aluminium / screw: stainless steel	E12231
	Adapter for tie rod / integrated profile cylinders · for types MKT (T-slot cylinder sensors) · Clamping range 9...13.5 mm · Housing materials: aluminium / screw: stainless steel	E12232
	Adapter for tie rod / integrated profile cylinders · for types MKT (T-slot cylinder sensors) · Clamping range 9...17 mm · Housing materials: aluminium / screw: stainless steel	E12233
	Adapter for tie rod / integrated profile cylinders · for types MKT (T-slot cylinder sensors) · Clamping range 13...15 mm · Housing materials: aluminium / screw: stainless steel	E12234

You can find wiring diagrams and scale drawings from page 205

Adapters for trapezoidal slot cylinders

Type	Description	Order no.
	Adapter for trapezoidal slot cylinders · for types MKT (T-slot cylinder sensors) · Housing materials: aluminium alloy / set screw: stainless steel	**E11796**
	Adapter for trapezoidal slot cylinders · for types MKT (T-slot cylinder sensors) · Housing materials: aluminium alloy / set screw: stainless steel	**E11957**
	Adapter for trapezoidal slot cylinders · for types MKT (T-slot cylinder sensors) · Housing materials: aluminium alloy / set screw: stainless steel	**E11988**
	Adapter for Pneumax cylinders 1500 series (or cylinders of the same dimensions) · for types MKT / MRT (T-slot cylinder sensors) · Housing materials: aluminium	**E12375**

Various adapters and memorisation blocks

Type	Description	Order no.
	Adapter for Bosch Rexroth cylinders ICL series and Festo cylinders type CDN · for types MKT (T-slot cylinder sensors) · Housing materials: adapter: aluminium anodised / screw: stainless steel	**E12164**
	Adapter for Bosch-Rexroth cylinders PRA / PRB series (or cylinders of the same dimensions) · for types MKT (T-slot cylinder sensors) · Housing materials: aluminium / screw: stainless steel	**E11892**
	Adapter for Bosch-Rexroth cylinders 523 series (or cylinders of the same dimensions) · for types MKT (T-slot cylinder sensors) · L-slot · Housing materials: aluminium / screw: stainless steel	**E11894**
	Adapter for SMC cylinders ECDQ2 series (or cylinders of the same dimensions) · for types MKT (T-slot cylinder sensors) · T-slot rail, flat · Housing materials: aluminium / screw: stainless steel	**E11890**
	Adapter for SMC cylinders CDQ2 series (or cylinders of the same dimensions) · for types MKT (T-slot cylinder sensors) · T-slot rail, high · Housing materials: aluminium / screw: stainless steel	**E11891**
	Adapter for SMC cylinder CP95 · for types MKT (T-slot cylinder sensors) · Housing materials: stainless steel	**E11872**
	Adapter for Festo cylinders type DZH (or cylinders of the same dimensions) · for types MKT (T-slot cylinder sensors) · Housing materials: aluminium / screw: stainless steel	**E11895**
	Adapter for Norgren cylinders of the M series · for types MKT (T-slot cylinder sensors) · Housing materials: stainless steel	**E12218**
	Protective adapter for T-slot cylinder sensors · for types MKT (T-slot cylinder sensors) · Housing materials: diecast zinc coated / screws: stainless steel	**E12259**

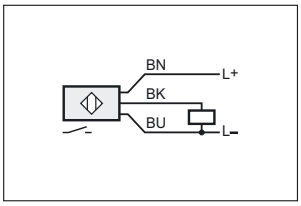
Type	Description	Order no.
	T-slot adapter for C-slot sensor · for types MKC (C-slot cylinder sensor) for installation in T-slot cylinders · (height 5 mm) · Housing materials: diecast zinc / fixing element: stainless steel	**E11928**
	T-slot adapter for C-slot sensor · for types MKC (C-slot cylinder sensor) for installation in T-slot cylinders · (height 7.7 mm) · Housing materials: diecast zinc / fixing element: stainless steel	**E11914**
	T-slot cylinder memorisation block · for types MKT (T-slot cylinder sensors) · Housing materials: PA / stainless steel	**E11798**
	C-slot cylinder memorisation block · for types MKC (C-slot cylinder sensors) · Housing materials: PA / stainless steel	**E12004**

Wiring diagrams

Core colours

BK black
BN brown
BU blue

1



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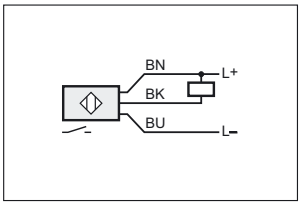

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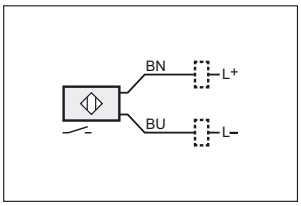

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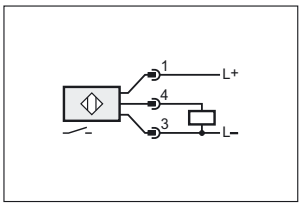

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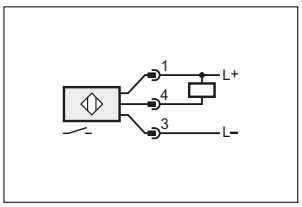

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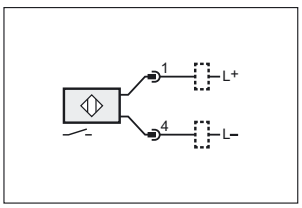

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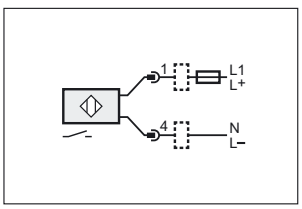

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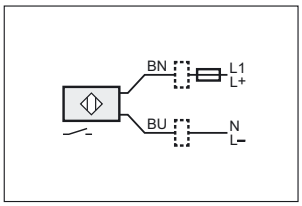

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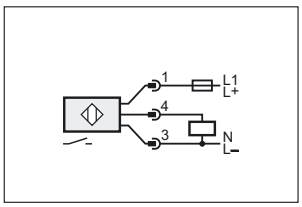

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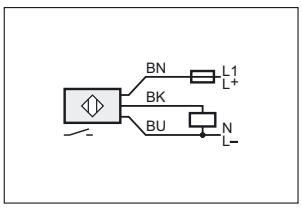

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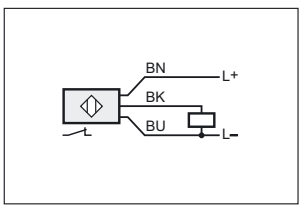

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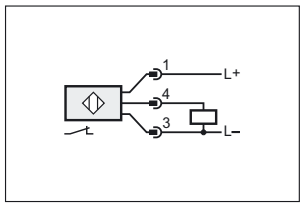
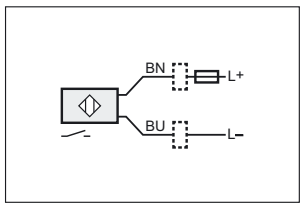


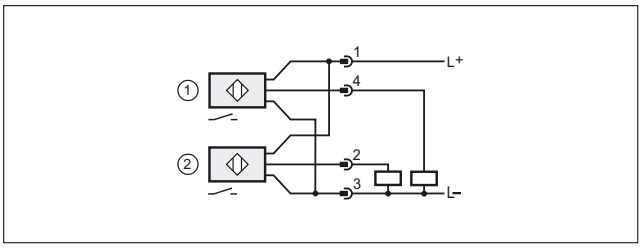
13



Note: miniature fuse to IEC60127-2 sheet 1, ≤ 0,175 A (fast acting)

Wiring diagrams

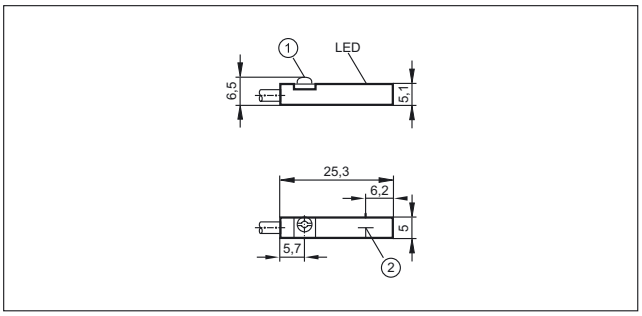
14



1: sensor 1, 2: sensor 2

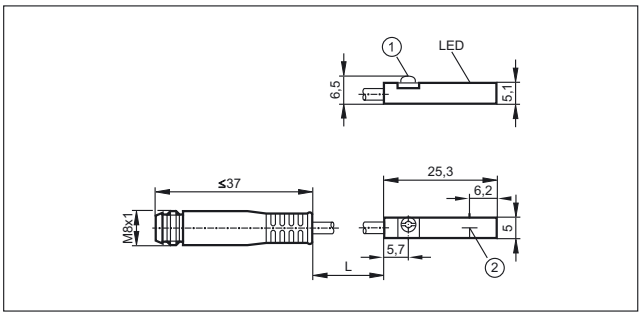
Scale drawings / drawing no. – CAD download: www.ifm.com

1



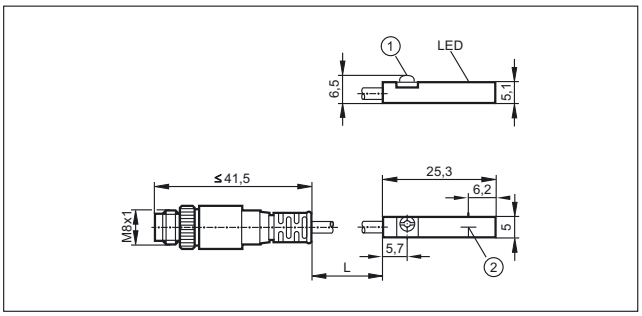
1: Fastening clamp, 2: sensing face

2



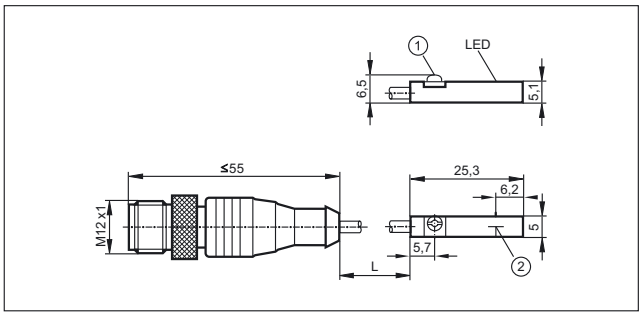
1: Fastening clamp, 2: sensing face

3



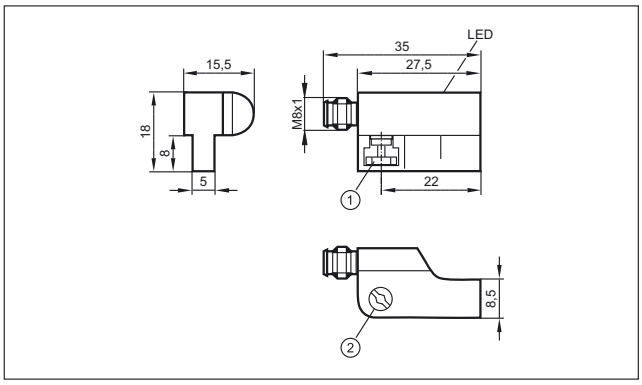
1: Fastening clamp, 2: sensing face

4



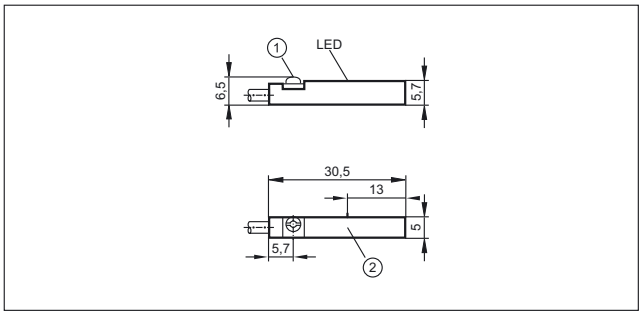
1: Fastening clamp, 2: sensing face

5



1: fixing element, 2: combined head screw for fixing element

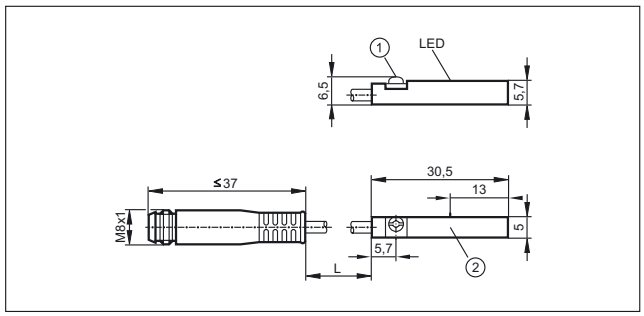
6



1: Clamping screw with combined slot/hexagon socket head AF 1.5,
2: sensing face

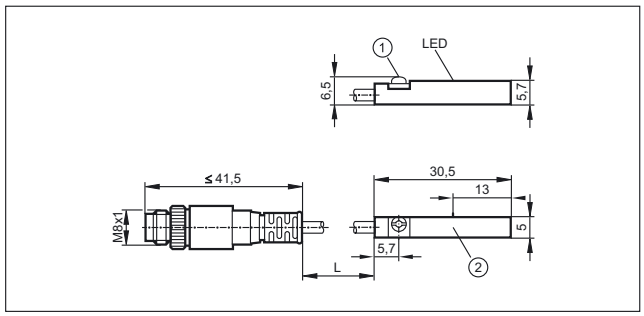
Scale drawings / drawing no. – CAD download: www.ifm.com

7



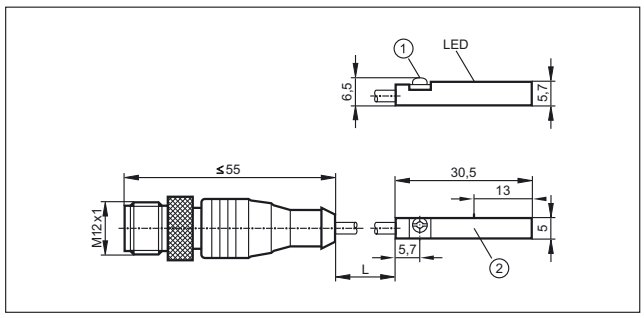
1: Clamping screw with combined slot/hexagon socket head AF 1.5, 2: sensing face

8



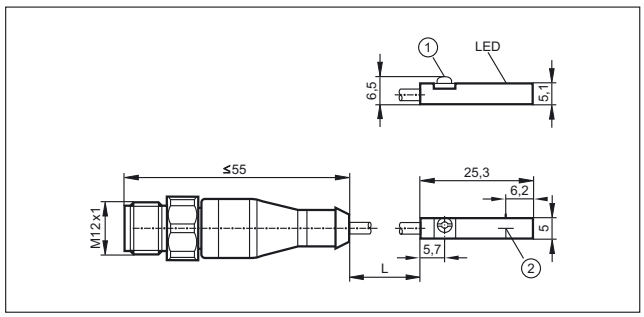
1: Clamping screw with combined slot/hexagon socket head AF 1.5, 2: sensing face

9



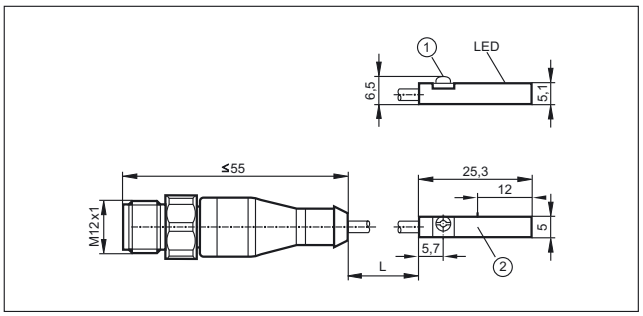
1: Clamping screw with combined slot/hexagon socket head AF 1.5, 2: sensing face

10



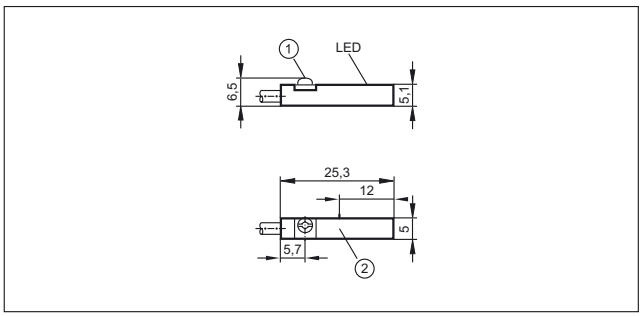
1: Fastening clamp, 2: sensing face

11



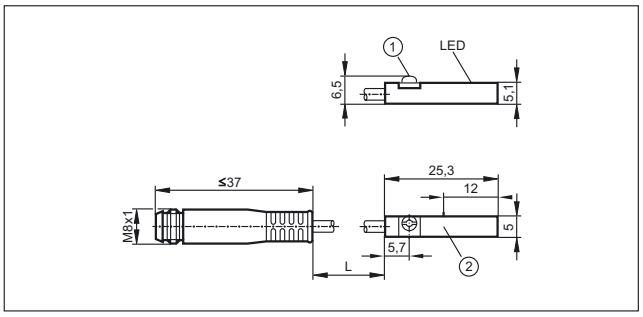
1: Fastening clamp, 2: sensing face

12



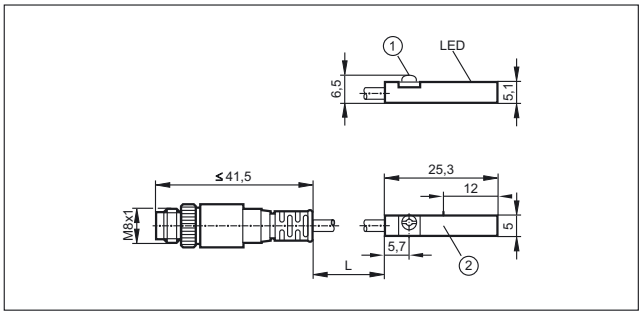
1: Fastening clamp, 2: sensing face

13



1: Fastening clamp, 2: sensing face

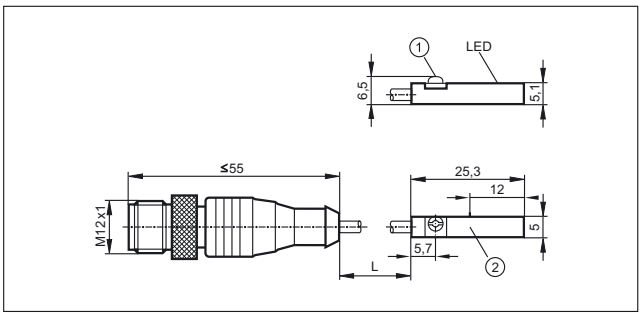
14



1: Fastening clamp, 2: sensing face

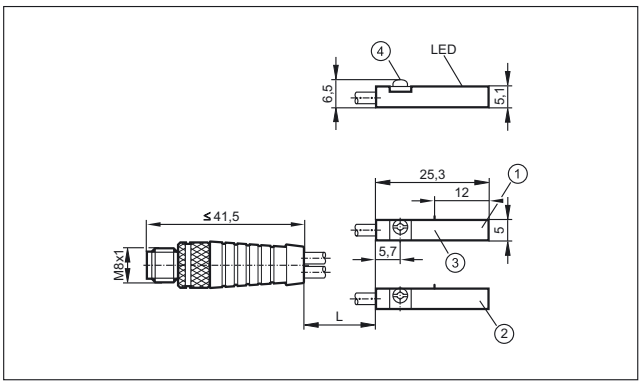
Scale drawings / drawing no. – CAD download: www.ifm.com

15



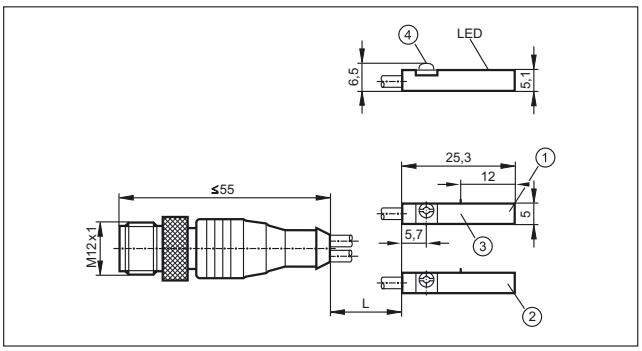
1: Fastening clamp, 2: sensing face

16



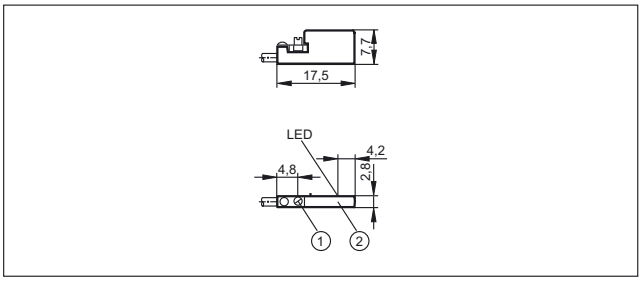
1: sensor 1, 2: sensor 2, 3: sensing face, 4: Fastening clamp

17



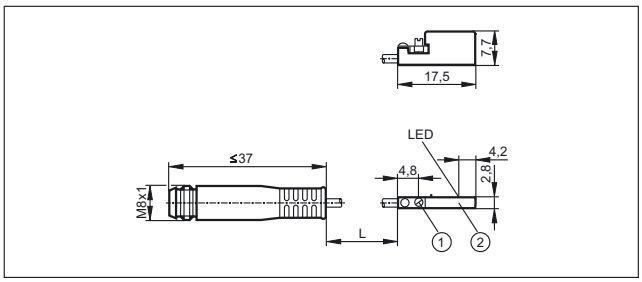
1: sensor 1, 2: sensor 2, 3: sensing face, 4: Fastening clamp

18



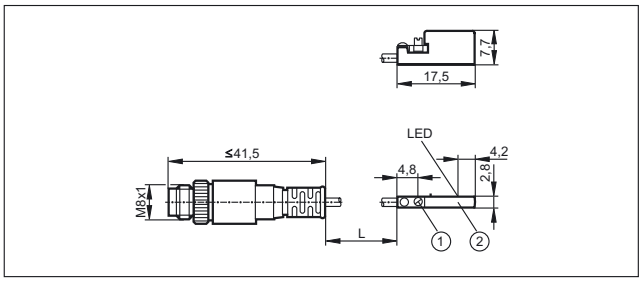
1: Fastening clamp, 2: sensing face

19



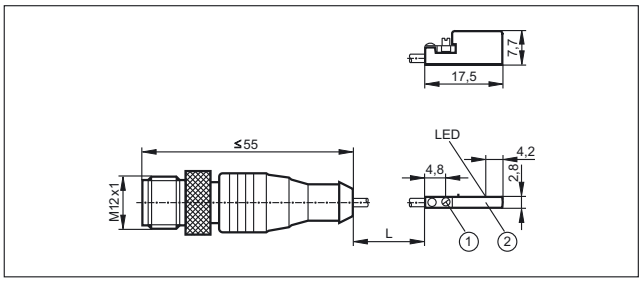
1: Fastening clamp, 2: sensing face

20



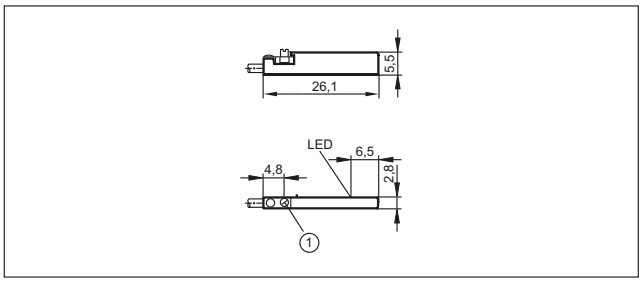
1: Fastening clamp, 2: sensing face

21



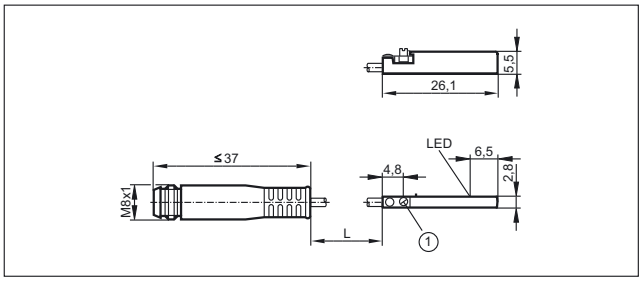
1: Fastening clamp, 2: sensing face

22



1: Fastening clamp

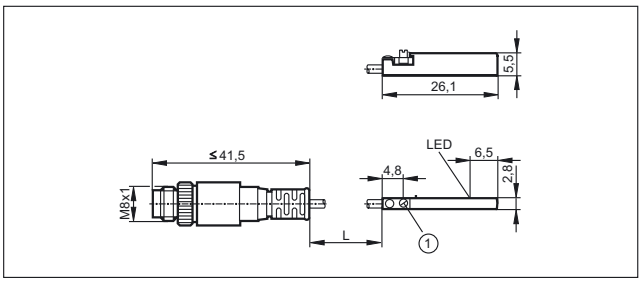
23



1: Fastening clamp

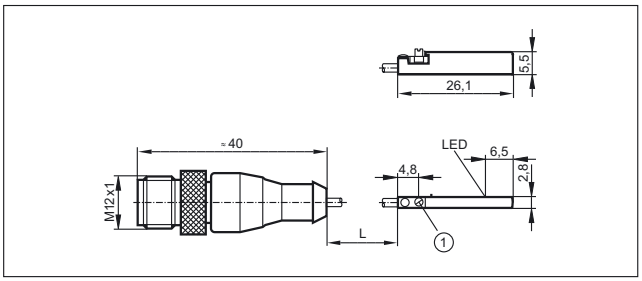
Scale drawings / drawing no. – CAD download: www.ifm.com

24



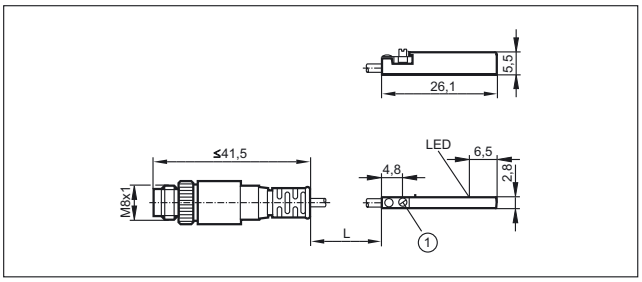
1: Fastening clamp

25



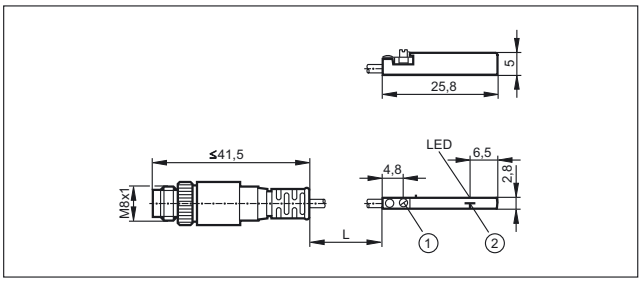
1: Fastening clamp

26



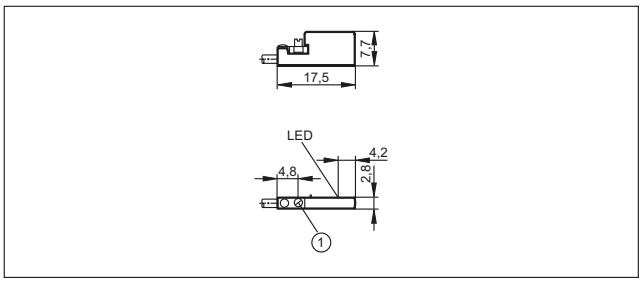
1: Fastening clamp

27



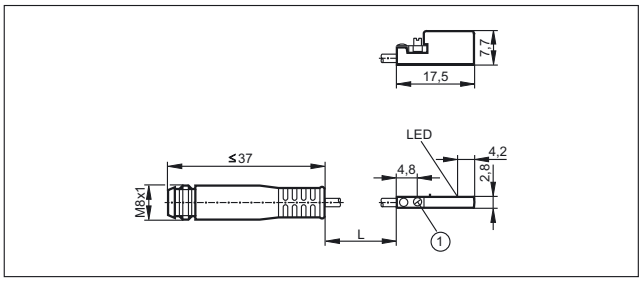
1: Fastening clamp, 2: sensing face

28



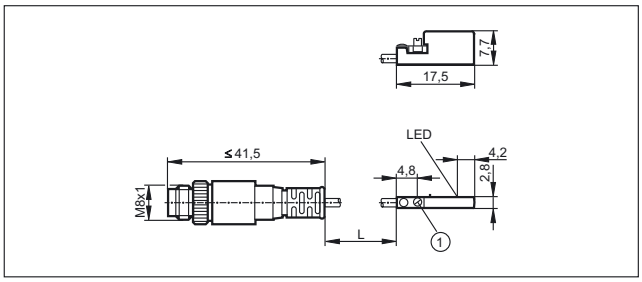
1: Fastening clamp

29



1: Fastening clamp

30



1: Fastening clamp

Ultrasonic sensors – hear what's hard to see

Ultrasonic sensors

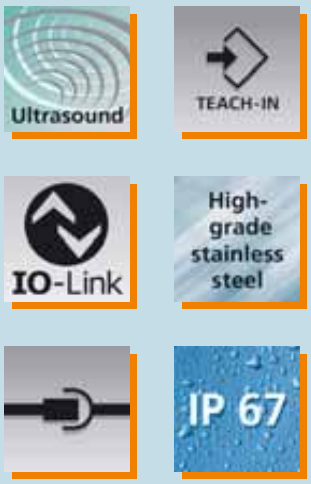
Robust high-grade stainless steel housing for demanding applications

M18 plastic housing available in the lengths 60 and 98 mm

The vibrating sound transducer reduces the deposit of dirt

Digital and analogue output for point level measurement and distance detection

Setting via teach button, wire teach or IO-Link



The alternative for difficult surfaces

Ultrasonic sensors transmit and receive sound waves in the ultrasonic range. The object to be detected reflects the sound waves and the distance information is determined via time of flight measurement. As opposed to photoelectric sensors colour, transparency or the object's surface shine do not play a role. Blister packages in packaging technology or transparent plastic bowls in the food industry, for example, can be reliably detected.

High performance

The ifm ultrasonic sensors in M18 design provide a particularly small blind zone and long sensing ranges which are usually only achieved by sensors of a considerably larger design. The sensors operate reliably with heavy soiling so that they can be used in applications in which photoelectric sensors meet their limits.

Product selectors and further information can be found at: www.ifm.com

Ultrasonic diffuse-reflection sensor with plastic housing

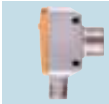
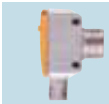
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC PNP · Wiring diagram no. 1 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 60.5	300	PBT	10...30	IP 67	8	100	1	**UGT200**
	M18 / L = 60.5	800	PBT	10...30	IP 67	5	100	1	**UGT201**
	M18 / L = 60.5	1200	PBT	10...30	IP 67	5	100	1	**UGT202**
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC NPN · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 60.5	300	PBT	10...30	IP 67	8	100	1	**UGT209**
	M18 / L = 60.5	800	PBT	10...30	IP 67	5	100	1	**UGT210**
	M18 / L = 60.5	1200	PBT	10...30	IP 67	5	100	1	**UGT211**
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 60.5	300	PBT	10...30	IP 67	8	100	1	**UGT212**
	M18 / L = 60.5	800	PBT	10...30	IP 67	5	100	1	**UGT213**
	M18 / L = 60.5	1200	PBT	10...30	IP 67	5	100	1	**UGT214**
M12 connector · Output function 2 x normally open / closed programmable · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	PBT	10...30	IP 67	3	100	2	**UGT203**
	M18 / L = 97.5	2200	PBT	10...30	IP 67	2	100	2	**UGT206**
M12 connector · Output function 1 x NO / NC programmable + 1 x current output · 3-wire · DC PNP · Wiring diagram no. 5 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	PBT	10...30	IP 67	3	100	2	**UGT204**
	M18 / L = 97.5	2200	PBT	10...30	IP 67	2	100	2	**UGT207**

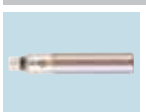
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function 1 x NO / NC programmable + 1 x voltage output · 3-wire · DC PNP · Wiring diagram no. 5 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	PBT	10...30	IP 67	3	100	2	**UGT205**
	M18 / L = 97.5	2200	PBT	10...30	IP 67	2	100	2	**UGT208**

Ultrasonic diffuse-reflection sensor with stainless steel housing

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC PNP · Wiring diagram no. 1 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 60.5	300	1.4404	10...30	IP 67	8	100	1	**UGT500**
	M18 / L = 60.5	800	1.4404	10...30	IP 67	5	100	1	**UGT503**
	M18 / L = 60.5	1200	1.4404	10...30	IP 67	5	100	1	**UGT506**
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC NPN · Wiring diagram no. 2 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 60.5	300	1.4404	10...30	IP 67	8	100	1	**UGT521**
	M18 / L = 60.5	800	1.4404	10...30	IP 67	5	100	1	**UGT522**
	M18 / L = 60.5	1200	1.4404	10...30	IP 67	5	100	1	**UGT523**
M12 connector · Output function 1x analogue 4...20 mA · 3-wire · DC analogue · Wiring diagram no. 6 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M18 / L = 60.5	300	1.4404	10...30	IP 67	–	–	1	**UGT501**
	M18 / L = 60.5	800	1.4404	10...30	IP 67	–	–	1	**UGT504**
	M18 / L = 60.5	1200	1.4404	10...30	IP 67	–	–	1	**UGT507**

You can find wiring diagrams and scale drawings from page 217

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function 0...10 V analogue · 3-wire · DC analogue · Wiring diagram no. 6 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202									
	M18 / L = 60.5	300	1.4404	10...30	IP 67	–	–	1	**UGT502**
	M18 / L = 60.5	800	1.4404	10...30	IP 67	–	–	1	**UGT505**
	M18 / L = 60.5	1200	1.4404	10...30	IP 67	–	–	1	**UGT508**
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204									
	M18 / L = 60.5	300	1.4404	10...30	IP 67	8	100	1	**UGT524**
	M18 / L = 60.5	800	1.4404	10...30	IP 67	5	100	1	**UGT525**
	M18 / L = 60.5	1200	1.4404	10...30	IP 67	5	100	1	**UGT526**
M12 connector · Output function 1 x NO / NC programmable + 1 x current output · 3-wire · DC PNP · Wiring diagram no. 5 · Connector groups 8, 10, 12, 13, 19, 21, 22, 23, 24, 25, 95, 96, 97, 98, 99, 100, 107, 108, 109, 110, 111, 112, 130, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 203, 204, 205									
	53 x 20 x 37.7	300	1.4542	10...30	IP 67	8	100	3	**UGT580**
	53 x 20 x 37.7	800	1.4542	10...30	IP 67	5	100	3	**UGT582**
	53 x 20 x 37.7	1200	1.4542	10...30	IP 67	5	100	3	**UGT584**
M12 connector · Output function 1 x NO / NC programmable + 1 x voltage output · 3-wire · DC PNP · Wiring diagram no. 5 · Connector groups 8, 10, 12, 13, 19, 21, 22, 23, 24, 25, 95, 96, 97, 98, 99, 100, 107, 108, 109, 110, 111, 112, 130, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 203, 204, 205									
	53 x 20 x 37.7	300	1.4542	10...30	IP 67	8	100	3	**UGT581**
	53 x 20 x 37.7	800	1.4542	10...30	IP 67	5	100	3	**UGT583**
	53 x 20 x 37.7	1200	1.4542	10...30	IP 67	5	100	3	**UGT585**
M12 connector · Output function 1 x NO / NC programmable + 1 x current output · 3-wire · DC NPN · Wiring diagram no. 7 · Connector groups 8, 10, 12, 13, 19, 21, 22, 23, 24, 25, 95, 96, 97, 98, 99, 100, 107, 108, 109, 110, 111, 112, 130, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 203, 204, 205									
	53 x 20 x 37.7	300	1.4542	10...30	IP 67	8	100	3	**UGT586**

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function 1 x NO / NC programmable + 1 x current output · 3-wire · DC NPN · Wiring diagram no. 7 · Connector groups 8, 10, 12, 13, 19, 21, 22, 23, 24, 25, 95, 96, 97, 98, 99, 100, 107, 108, 109, 110, 111, 112, 130, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 203, 204, 205									
	53 x 20 x 37.7	800	1.4542	10...30	IP 67	5	100	3	**UGT588**
	53 x 20 x 37.7	1200	1.4542	10...30	IP 67	5	100	3	**UGT590**
M12 connector · Output function 1 x NO / NC programmable + 1 x voltage output · 3-wire · DC NPN · Wiring diagram no. 7 · Connector groups 8, 10, 12, 13, 19, 21, 22, 23, 24, 25, 95, 96, 97, 98, 99, 100, 107, 108, 109, 110, 111, 112, 130, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 203, 204, 205									
	53 x 20 x 37.7	300	1.4542	10...30	IP 67	8	100	3	**UGT587**
	53 x 20 x 37.7	800	1.4542	10...30	IP 67	5	100	3	**UGT589**
	53 x 20 x 37.7	1200	1.4542	10...30	IP 67	5	100	3	**UGT591**
M12 connector · Output function 1 x Schließer / Öffner programmierbar · 3-wire · DC PNP · Wiring diagram no. 3 · Connector groups 8, 10, 12, 13, 19, 21, 22, 23, 24, 25, 95, 96, 97, 98, 99, 100, 107, 108, 109, 110, 111, 112, 130, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 203, 204, 205									
	53 x 20 x 37.7	300	1.4542	10...30	IP 67	8	100	3	**UGT592**
	53 x 20 x 37.7	800	1.4542	10...30	IP 67	5	100	3	**UGT593**
	53 x 20 x 37.7	1200	1.4542	10...30	IP 67	5	100	3	**UGT594**
M12 connector · Output function 2 x normally open / closed programmable · 3-wire · DC PNP · Wiring diagram no. 4 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	1.4404	10...30	IP 67	3	100	2	**UGT509**
	M18 / L = 97.5	2200	1.4404	10...30	IP 67	2	100	2	**UGT512**
M12 connector · Output function 1 x NO / NC programmable + 1 x current output · 3-wire · DC PNP · Wiring diagram no. 5 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	1.4404	10...30	IP 67	3	100	2	**UGT510**
	M18 / L = 97.5	2200	1.4404	10...30	IP 67	2	100	2	**UGT513**
M12 connector · Output function 1 x NO / NC programmable + 1 x voltage output · 3-wire · DC PNP · Wiring diagram no. 5 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	1.4404	10...30	IP 67	3	100	2	**UGT511**

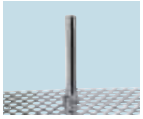
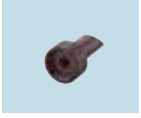
You can find wiring diagrams and scale drawings from page 217

Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function 1 x NO / NC programmable + 1 x voltage output · 3-wire · DC PNP · Wiring diagram no. 5 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	2200	1.4404	10...30	IP 67	2	100	2	**UGT514**
M12 connector · Output function 2 x normally open / closed programmable · 3-wire · DC NPN · Wiring diagram no. 8 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	1.4404	10...30	IP 67	3	100	2	**UGT515**
	M18 / L = 97.5	2200	1.4404	10...30	IP 67	2	100	2	**UGT518**
M12 connector · Output function 1 x NO / NC programmable + 1 x current output · 3-wire · DC NPN · Wiring diagram no. 7 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	1.4404	10...30	IP 67	3	100	2	**UGT516**
	M18 / L = 97.5	2200	1.4404	10...30	IP 67	2	100	2	**UGT519**
M12 connector · Output function 1 x NO / NC programmable + 1 x voltage output · 3-wire · DC NPN · Wiring diagram no. 7 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	1.4404	10...30	IP 67	3	100	2	**UGT517**
	M18 / L = 97.5	2200	1.4404	10...30	IP 67	2	100	2	**UGT520**

Ultrasonic retro-reflective sensor

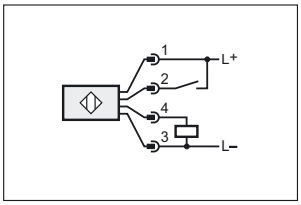
Type	Dimensions [mm]	Sensing range [mm]	Material	U_b [V]	Protection	f [Hz]	I_{load} [mA]	Drawing no.	Order no.
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC PNP · Wiring diagram no. 9 · Connector groups 10, 12, 13, 19, 21, 22, 23, 24, 25, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 205									
	M18 / L = 97.5	1600	1.4404	10...30	IP 67	2	100	2	**UGR500**
	M18 / L = 97.5	2200	1.4404	10...30	IP 67	2	100	2	**UGR501**
M12 connector · Output function ⎍ / ⎍ · 3-wire · DC NPN · Wiring diagram no. 10 · Connector groups 8, 10, 12, 13, 19, 21, 22, 23, 24, 25, 95, 96, 97, 98, 99, 100, 107, 108, 109, 110, 111, 112, 130, 148, 149, 150, 152, 153, 154, 155, 184, 186, 188, 190, 192, 193, 194, 202, 203, 204, 205									
	M18 / L = 97.5	1600	1.4404	10...30	IP 67	2	100	2	**UGR502**
	M18 / L = 97.5	2200	1.4404	10...30	IP 67	2	100	2	**UGR503**

Accessories

Type	Description	Order no.
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20720**
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: high-grade stainless steel / fixture: high-grade stainless steel	**E21206**
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20721**
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: high-grade stainless steel / fixture: high-grade stainless steel	**E21207**
	mounting rod · Ø 12 / M10 · Length: 130 mm · straight · Housing materials: stainless steel 316Ti / 1.4571	**E20938**
	mounting rod · Ø 12 / M10 · Length: 200 mm · angled · Housing materials: stainless steel 316Ti / 1.4571	**E20940**
	Cube · M10 · aluminium profile · Housing materials: diecast zinc	**E20951**
	Sound Tube · for type UG · Housing materials: POM	**E23000**

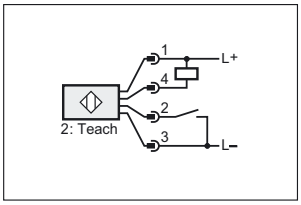
Wiring diagrams

1



2: Teach

2



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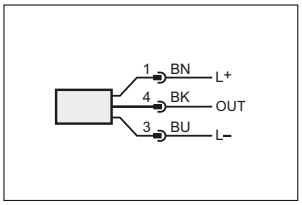

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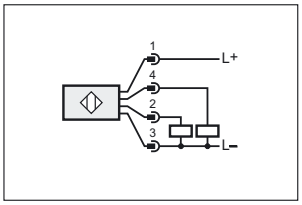

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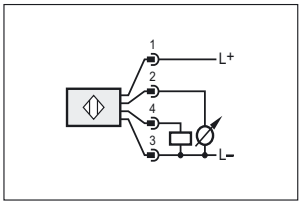

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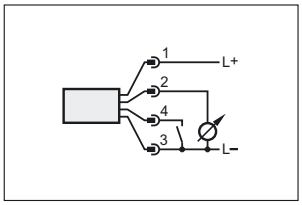

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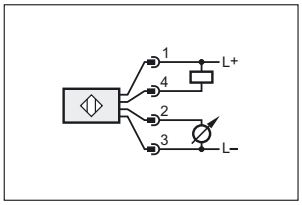

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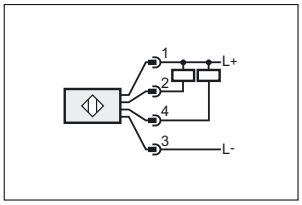

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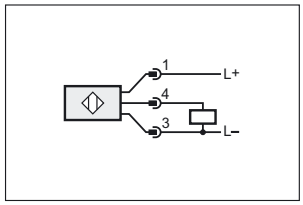

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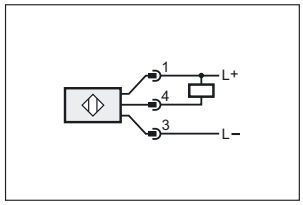
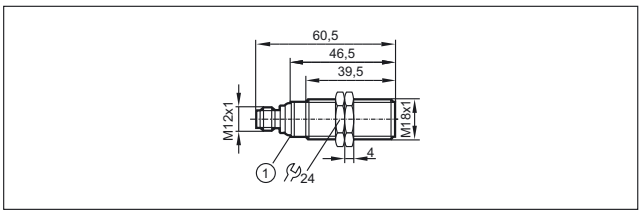


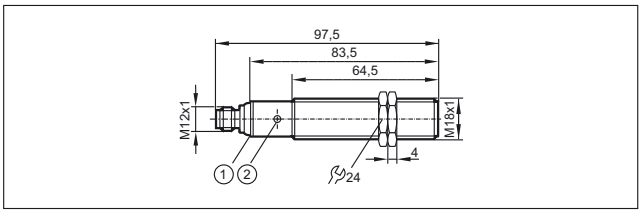
Scale drawings / drawing no. – CAD download: www.ifm.com

1



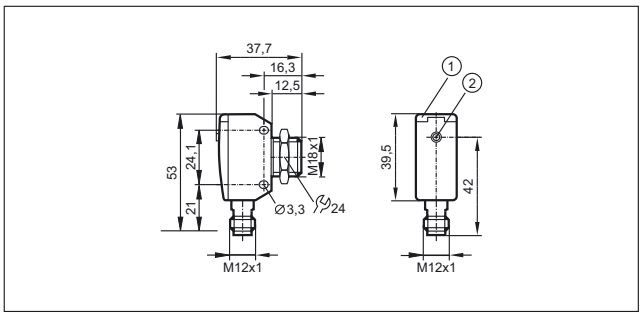
1: LEDs

2



1: LEDs, 2: teach button

3

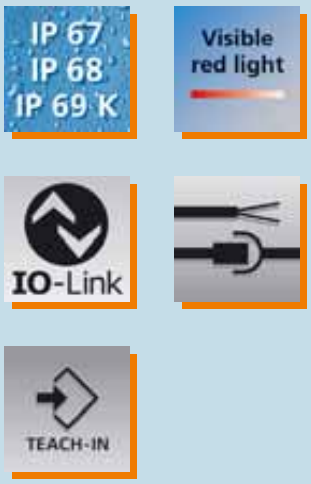


1: LEDs, 2: teach button

Infrared / red light sensors for maximum detection zones

Photoelectric sensors for general applications

- **Visible red light for easy adjustment**
- **Versions for use in hygienic and wet areas**
- **LED display to check operation, switching status and function**
- **Pushbuttons for quick and easy set-up**
- **Wide range of system components for easy and secure mounting**



Photoelectric sensors

Photoelectric sensors as „artificial eyes“ are fundamental to automation technology. They are used where a reliable and non-contact detection of the exact position of objects is required. The material of the object to be detected is of no importance. Compared to inductive sensors, photoelectric sensors have a much larger sensing zone.

They are available as through-beam, retro-reflective and diffuse reflection sensors in various designs and sizes.

For hygienic and wet areas, the products of the WetLine series offer special characteristics such as high ingress-resistance up to IP 68 / IP 69K or stainless steel housings.

Cylindrical OF housing (M12) BasicLine

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 2 m · 10...36 DC · metal · IP67								
	Transmitter	4 m	Infrared	700	–	1	1	**OF5018**
	Receiver	4 m	Infrared	–	H/D PNP	31	1	**OF5019**
Through-beam sensor · M12 connector · 10...36 DC · metal · IP65 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	4 m	Infrared	700	–	2	2	**OF5021**
	Receiver	4 m	Infrared	–	H/D PNP	32	3	**OF5022**
Retro-reflective sensor · Cable 2 m · 10...36 DC · metal · IP67								
	Retro-reflective sensor	0.05...2 m	Infrared	140	H/D PNP	31	1	**OF5014**
	Polarisation filter	0.2...0.8 m	Red	70	H/D PNP	31	1	**OF5024**
	Retro-reflective sensor	0.05...2 m	Infrared	140	H/D NPN	33	1	**OF5050**
Retro-reflective sensor · M12 connector · 10...36 DC · metal · IP65 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Retro-reflective sensor	0.05...2 m	Infrared	140	H/D PNP	32	3	**OF5016**
	Polarisation filter	0.2...0.8 m	Red	70	H/D PNP	32	3	**OF5025**
	Retro-reflective sensor	0.05...2 m	Infrared	140	H/D NPN	34	3	**OF5051**
	Polarisation filter	0.2...0.8 m	Red	70	H/D NPN	34	3	**OF5062**
Diffuse reflection sensor · Cable 2 m · 10...36 DC · metal · IP67								
	Diffuse reflection sensor	1...200 mm	Infrared	92	H/D PNP	31	1	**OF5010**
	Diffuse reflection sensor	1...200 mm	Infrared	92	H/D NPN	35	1	**OF5048**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · Cable 2 m · 10...36 DC · metal · IP67								
	Diffuse reflection sensor	1...400 mm	Infrared	185	H/D PNP	31	1	**OF5026**
Diffuse reflection sensor · Cable 6 m · 10...36 DC · high-grade stainless steel · IP67								
	Diffuse reflection sensor	1...200 mm	Infrared	92	H/D PNP	31	1	**OF5032**
Diffuse reflection sensor · M12 connector · 10...36 DC · metal · IP65 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Diffuse reflection sensor	1...200 mm	Infrared	92	H/D PNP	32	3	**OF5012**
	Diffuse reflection sensor	1...400 mm	Infrared	185	H/D PNP	32	3	**OF5027**
	Diffuse reflection sensor	1...200 mm	Infrared	92	H/D NPN	36	3	**OF5049**
	Diffuse reflection sensor	1...400 mm	Infrared	185	H/D NPN	36	3	**OF5060**

Cylindrical housing OG (M18) BasicLine

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...30 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	8 m	Red	600	–	2	4	**OGS100**
Through-beam sensor · M12 connector · 10...30 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	8 m	Red	–	D PNP	3	4	**OGE100**
	Receiver	8 m	Red	–	H PNP	4	4	**OGE101**
Through-beam sensor · M12 connector · 10...30 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Receiver	8 m	Red	–	D NPN	5	4	**OGE102**
	Receiver	8 m	Red	–	H NPN	5	4	**OGE103**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	20 m	Red	800	–	2	5	**OGS200**
Through-beam sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	20 m	Red	–	D PNP	3	5	**OGE200**
	Receiver	20 m	Red	–	H PNP	4	5	**OGE201**
Through-beam sensor · Cable 2 m · 20...250 AC/DC (47...63 Hz AC) · plastics · IP67								
	Transmitter	15 m	Infrared	2000	–	6	6	**OG0028**
	Receiver	15 m	Infrared	–	H AC/DC	7	6	**OG0029***
	Receiver	15 m	Infrared	–	D AC/DC	7	6	**OG0038***
Through-beam sensor · 1/2" connector · 20...250 AC/DC (47...63 Hz AC) · plastics · IP67 · Connector group 33								
	Transmitter	15 m	Infrared	2000	–	8	7	**OG0030**
	Receiver	15 m	Infrared	–	H AC/DC	9	7	**OG0031***
	Receiver	15 m	Infrared	–	D AC/DC	9	7	**OG0039***
Retro-reflective sensor · M12 connector · 10...30 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.05...2.5 m	Red	200	D PNP	3	4	**OGP100**
	Polarisation filter	0.05...2.5 m	Red	200	H PNP	4	4	**OGP101**
Retro-reflective sensor · M12 connector · 10...30 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Polarisation filter	0.05...2.5 m	Red	200	D NPN	5	4	**OGP102**
	Polarisation filter	0.05...2.5 m	Red	200	H NPN	5	4	**OGP103**

You can find wiring diagrams and scale drawings from page 261

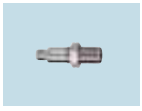
Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Retro-reflective sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.03...4 m	Red	160	D PNP	3	5	**OGP200**
	Polarisation filter	0.03...4 m	Red	160	H PNP	4	5	**OGP201**
Retro-reflective sensor · Cable 2 m · 20...250 AC/DC (47...63 Hz AC) · plastics · IP67								
	Polarisation filter	3 m	Red	262	H AC/DC	7	6	**OG0043***
	Polarisation filter	3 m	Red	262	D AC/DC	7	6	**OG0032***
Retro-reflective sensor · 1/2" connector · 20...250 AC/DC (47...63 Hz AC) · plastics · IP67 · Connector group 33								
	Polarisation filter	3 m	Red	262	H AC/DC	9	7	**OG0044***
	Polarisation filter	3 m	Red	262	D AC/DC	9	7	**OG0033***
Diffuse reflection sensor · M12 connector · 10...30 DC · plastics · IP65 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Diffuse reflection sensor	10...400 mm	Red	25	H PNP	3	8	**OGT100**
	Diffuse reflection sensor	10...400 mm	Red	25	D PNP	3	8	**OGT101**
Diffuse reflection sensor · M12 connector · 10...30 DC · plastics · IP65 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Diffuse reflection sensor	10...400 mm	Red	25	H NPN	5	8	**OGT102**
	Diffuse reflection sensor	10...400 mm	Red	25	D NPN	5	8	**OGT103**
Diffuse reflection sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP65 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Diffuse reflection sensor	2...600 mm	Red	50	H PNP	3	9	**OGT200**
	Background suppression	15...250 mm	Red	21	H PNP	3	9	**OGH200**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · Cable 2 m · 20...250 AC/DC (47...63 Hz AC) · plastics · IP67								
	Diffuse reflection sensor	1...600 mm	Infrared	< 169	H AC/DC	7	6	**OG0034***
	Diffuse reflection sensor	1...600 mm	Infrared	< 169	D AC/DC	7	6	**OG0040***
Diffuse reflection sensor · 1/2" connector · 20...250 AC/DC (47...63 Hz AC) · plastics · IP67 · Connector group 33								
	Diffuse reflection sensor	1...600 mm	Infrared	< 169	H AC/DC	9	7	**OG0035***
	Diffuse reflection sensor	1...600 mm	Infrared	< 169	D AC/DC	9	7	**OG0041***

*** Note on use of miniature fuses for electrical connection**

Miniature fuse to IEC60127-2 sheet 1, ≤ 2 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

Cylindrical housing OG (M18) PerformanceLine

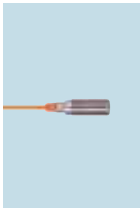
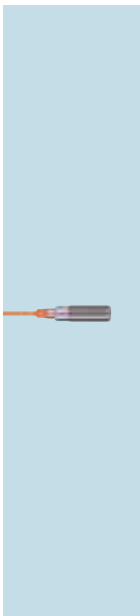
Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 2 m · 10...36 DC · high-grade stainless steel · IP67								
	Transmitter	25 m	Red	1000	–	1	10	**OGS501**
	Receiver	25 m	Red	–	H/D PNP	10	11	**OGE502**
Through-beam sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	25 m	Red	1000	–	2	12	**OGS500**
Through-beam sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	25 m	Red	–	H/D PNP	3	13	**OGE500**
Retro-reflective sensor · Cable 2 m · 10...36 DC · high-grade stainless steel · IP67								
	Polarisation filter	0.03...5 m	Red	200	H/D PNP	10	11	**OGP502**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Retro-reflective sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.03...5 m	Red	200	H/D PNP	3	13	**OGP500**
Retro-reflective sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Polarisation filter	0.03...5 m	Red	200	H/D NPN	5	13	**OGP503**
Diffuse reflection sensor · Cable 2 m · 10...36 DC · high-grade stainless steel · IP67								
	Background suppression	15...300 mm	Red	25	H/D PNP	10	11	**OGH501**
Diffuse reflection sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Diffuse reflection sensor	2...800 mm	Red	66	H/D PNP	3	13	**OGT500**
	Background suppression	15...300 mm	Red	25	H/D PNP	3	13	**OGH500**
Diffuse reflection sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	15...300 mm	Red	25	H/D NPN	5	13	**OGH504**
	Background suppression	15...300 mm	Red	25	H/D NPN	5	13	**OGH502**

Cylindrical housing OG (M18) WetLine for hygienic and wet areas

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 6 m · 10...36 DC · high-grade stainless steel · IP67 / IP68 / IP69K								
	Transmitter	20 m	Red	800	–	1	14	**OGS301**
	Receiver	20 m	Red	–	D PNP	10	14	**OGE302**
	Receiver	20 m	Red	–	H PNP	10	14	**OGE303**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 / IP68 / IP69K · Connector groups 148, 153, 184, 188, 193								
	Transmitter	20 m	Red	800	–	2	5	**OGS300**
Through-beam sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 / IP68 / IP69K · Connector groups 148, 150, 153, 154, 184, 188, 190, 193								
	Receiver	20 m	Red	–	D PNP	3	5	**OGE300**
	Receiver	20 m	Red	–	H PNP	4	5	**OGE301**
Retro-reflective sensor · Cable 6 m · 10...36 DC · high-grade stainless steel · IP67 / IP68 / IP69K								
	Polarisation filter	0.03...4 m	Red	160	D PNP	10	14	**OGP302**
	Polarisation filter	0.03...4 m	Red	160	H PNP	10	14	**OGP303**
Retro-reflective sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 / IP68 / IP69K · Connector groups 148, 150, 153, 154, 184, 188, 190, 193								
	Polarisation filter	0.03...4 m	Red	160	D PNP	3	5	**OGP300**
	Polarisation filter	0.03...4 m	Red	160	H PNP	4	5	**OGP301**
Diffuse reflection sensor · Cable 6 m · 10...36 DC · high-grade stainless steel · IP67 / IP68 / IP69K								
	Background suppression	100 mm	Red	9	H PNP	10	15	**OGH306**
	Background suppression	100 mm	Red	9	D PNP	10	15	**OGH307**
	Background suppression	200 mm	Red	17	H PNP	10	15	**OGH308**
	Background suppression	200 mm	Red	17	D PNP	10	15	**OGH309**
	Background suppression	300 mm	Red	25	H PNP	10	15	**OGH310**
	Background suppression	300 mm	Red	25	D PNP	10	15	**OGH311**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP67 / IP68 / IP69K · Connector groups 148, 150, 153, 154, 184, 188, 190, 193								
	Background suppression	100 mm	Red	9	H PNP	3	16	**OGH300**
	Background suppression	100 mm	Red	9	D PNP	3	16	**OGH301**
	Background suppression	200 mm	Red	17	H PNP	3	16	**OGH302**
	Background suppression	200 mm	Red	17	D PNP	3	16	**OGH303**
	Background suppression	300 mm	Red	25	H PNP	3	16	**OGH304**
	Background suppression	300 mm	Red	25	D PNP	3	16	**OGH305**

Cylindrical housing OG (M18) BasicLine with lateral sensing face

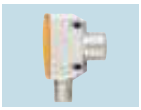
Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...30 DC · high-grade stainless steel · IP68 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	9 m	Red	< 3000	–	2	17	**OG5129**
	Receiver	9 m	Red	–	H PNP	11	17	**OG5127**
	Receiver	9 m	Red	–	D PNP	12	17	**OG5128**
Retro-reflective sensor · M12 connector · 10...30 DC · high-grade stainless steel · IP68 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Polarisation filter	3 m	Red	< 96	H PNP	11	17	**OG5125**
	Polarisation filter	3 m	Red	< 96	D PNP	12	17	**OG5126**
Diffuse reflection sensor · M12 connector · 10...30 DC · high-grade stainless steel · IP68 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	100 mm	Red	< 16	H PNP	11	18	**OG5123**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · M12 connector · 10...30 DC · high-grade stainless steel · IP68 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	200 mm	Red	< 28	H PNP	11	18	**OG5124**

Rectangular housing OG (M18)

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	20 m	Red	800	–	2	19	**OGS280**
	Receiver	20 m	Red	–	D NPN	13	19	**OGE282**
Through-beam sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	20 m	Red	–	D PNP	14	19	**OGE280**
	Receiver	20 m	Red	–	H PNP	4	19	**OGE281**
Retro-reflective sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.1...4 m	Red	160	D PNP	14	19	**OGP280**
	Polarisation filter	0.1...4 m	Red	160	H PNP	4	19	**OGP281**
Retro-reflective sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Polarisation filter	0.1...4 m	Red	160	D NPN	13	19	**OGP282**
	Polarisation filter	0.1...4 m	Red	160	H NPN	15	19	**OGP283**
Diffuse reflection sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	100 mm	Red	7	H PNP	4	19	**OGH280**
	Background suppression	200 mm	Red	13	H PNP	4	19	**OGH281**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	15...200 mm	Red	13	H/D PNP	3	20	**OGH580**
Diffuse reflection sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	100 mm	Red	7	H NPN	15	19	**OGH282**
	Background suppression	200 mm	Red	13	H NPN	15	19	**OGH283**
	Background suppression	15...200 mm	Red	13	H/D NPN	5	20	**OGH581**

OG series (M18) WetLine with rectangular housing for hygienic and wet areas

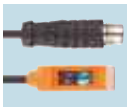
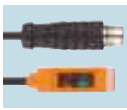
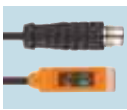
Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...30 DC · metal · IP67 / IP68 / IP69K · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	15 m	Red	800	–	2	21	**OGS380**
Through-beam sensor · M12 connector · 10...30 DC · metal · IP67 / IP68 / IP69K · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	15 m	Red	–	D PNP	14	21	**OGE380**
	Receiver	15 m	Red	–	H PNP	4	21	**OGE381**
	Receiver	15 m	Red	–	D NPN	13	21	**OGE382**
Diffuse reflection sensor · M12 connector · 10...30 DC · metal · IP67 / IP68 / IP69K · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	100 mm	Red	7	H PNP	4	21	**OGH380**
	Background suppression	200 mm	Red	13	H PNP	4	21	**OGH381**
	Background suppression	100 mm	Red	7	H NPN	15	21	**OGH382**
	Background suppression	200 mm	Red	13	H NPN	15	21	**OGH383**

Rectangular O8 design

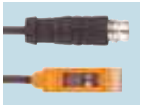
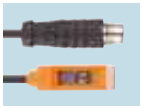
Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · Cable 2 m · 10...30 DC · metal · IP65 / IP67								
	Background suppression	3...15 mm	Red	4	H PNP	16	22	**O8H200**
	Background suppression	1...30 mm	Red	4	H PNP	16	22	**O8H206**
	Background suppression	1...50 mm	Red	4	H PNP	16	22	**O8H212**
	Background suppression	1...80 mm	Red	4.5	H PNP	16	22	**O8H218**
Diffuse reflection sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 122, 123								
	Background suppression	3...15 mm	Red	4	H PNP	4	22	**O8H202**
	Background suppression	1...30 mm	Red	4	H PNP	4	22	**O8H208**
	Background suppression	1...50 mm	Red	4	H PNP	4	23	**O8H214**
	Background suppression	1...80 mm	Red	4.5	H PNP	4	22	**O8H220**
Diffuse reflection sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Background suppression	3...15 mm	Red	4	H PNP	4	22	**O8H204**
	Background suppression	1...30 mm	Red	4	H PNP	4	22	**O8H210**
	Background suppression	1...50 mm	Red	4	H PNP	4	22	**O8H216**
	Background suppression	1...80 mm	Red	4.5	H PNP	4	22	**O8H222**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · metal · IP65 / IP67								
	Background suppression	3...15 mm	Red	4	H NPN	17	22	**O8H201**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Drawing no.	Order no.
Diffuse reflection sensor · Cable 2 m · 10...30 DC · metal · IP65 / IP67								
	Background suppression	1...30 mm	Red	4	H NPN	17	22	**O8H207**
	Background suppression	1...50 mm	Red	4	H NPN	17	22	**O8H213**
	Background suppression	1...80 mm	Red	4.5	H NPN	17	22	**O8H219**
Diffuse reflection sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 122, 123								
	Background suppression	3...15 mm	Red	4	H NPN	15	22	**O8H203**
	Background suppression	1...30 mm	Red	4	H NPN	15	22	**O8H209**
	Background suppression	1...50 mm	Red	4	H NPN	15	22	**O8H215**
	Background suppression	1...80 mm	Red	4.5	H NPN	15	22	**O8H221**
Diffuse reflection sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Background suppression	3...15 mm	Red	4	H NPN	15	22	**O8H205**
	Background suppression	1...30 mm	Red	4	H NPN	15	22	**O8H211**
	Background suppression	1...50 mm	Red	4	H NPN	15	22	**O8H217**
	Background suppression	1...80 mm	Red	4.5	H NPN	15	22	**O8H223**
Diffuse reflection sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 122, 123								
	Diffuse reflection sensor	0...180 mm	Red	18	H PNP	4	24	**O8T202**
	Diffuse reflection sensor	0...180 mm	Red	18	H NPN	15	25	**O8T203**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Diffuse reflection sensor	0...180 mm	Red	18	H PNP	4	25	**O8T204**
	Diffuse reflection sensor	0...180 mm	Red	18	H NPN	15	25	**O8T205**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · metal · IP65 / IP67								
	Diffuse reflection sensor	0...180 mm	Red	18	H PNP	16	25	**O8T200**
	Diffuse reflection sensor	0...180 mm	Red	18	H NPN	17	25	**O8T201**
Retro-reflective sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 122, 123								
	Polarisation filter	20...1800 mm	Red	120	D PNP	14	25	**O8P202**
	Polarisation filter	20...1800 mm	Red	120	D NPN	13	25	**O8P203**
Retro-reflective sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Polarisation filter	20...1800 mm	Red	120	D PNP	14	25	**O8P204**
	Polarisation filter	20...1800 mm	Red	120	D NPN	13	25	**O8P205**
Retro-reflective sensor · Cable 2 m · 10...30 DC · metal · IP65 / IP67								
	Polarisation filter	20...1800 mm	Red	120	D PNP	18	25	**O8P200**
	Polarisation filter	20...1800 mm	Red	120	D NPN	19	25	**O8P201**
Through-beam sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 122, 123								
	Receiver	3 m	Red	–	D PNP	14	26	**O8E202**
	Receiver	3 m	Red	–	D NPN	13	27	**O8E203**
	Transmitter	3 m	Red	200	–	2	28	**O8S201**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 0.3 m · with M8 connector · 10...30 DC · metal · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Receiver	3 m	Red	–	D PNP	14	27	**O8E204**
	Receiver	3 m	Red	–	D NPN	13	27	**O8E205**
	Transmitter	3 m	Red	200	–	2	29	**O8S202**
Through-beam sensor · Cable 2 m · 10...30 DC · metal · IP65 / IP67								
	Receiver	3 m	Red	–	D PNP	20	27	**O8E200**
	Receiver	3 m	Red	–	D NPN	21	27	**O8E201**
	Transmitter	3 m	Red	200	–	1	29	**O8S200**

Rectangular housing O7 BasicLine

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 0.2 m · with M8 connector · 10...30 DC · plastics · IP65 · Connector groups 1, 3, 78, 84, 145								
	Transmitter	0...1.5 m	Red	90	–	2	30	**O7S200**
Through-beam sensor · Cable 0.2 m · with M8 connector · 10...30 DC · plastics · IP65 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Receiver	0...1.5 m	Red	–	D PNP	14	31	**O7E200**
	Receiver	0...1.5 m	Red	–	H PNP	4	31	**O7E201**
	Receiver	0...1.5 m	Red	–	D NPN	13	31	**O7E202**
	Receiver	0...1.5 m	Red	–	H NPN	15	31	**O7E203**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Retro-reflective sensor · Cable 0.2 m · with M8 connector · 10...30 DC · plastics · IP65 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Polarisation filter	0.03...1 m	Red	55	D PNP	14	32	**O7P200**
	Polarisation filter	0.03...1 m	Red	55	H PNP	4	32	**O7P201**
	Polarisation filter	0.03...1 m	Red	55	D NPN	13	32	**O7P202**
	Polarisation filter	0.03...1 m	Red	55	H NPN	15	32	**O7P203**
Diffuse reflection sensor · Cable 0.2 m · with M8 connector · 10...30 DC · plastics · IP65 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Background suppression	5...30 mm	Red	2.5	H PNP	4	33	**O7H200**
	Background suppression	5...30 mm	Red	2.5	D PNP	14	33	**O7H201**
	Background suppression	5...30 mm	Red	2.5	H NPN	15	33	**O7H206**
	Background suppression	5...30 mm	Red	2.5	D NPN	13	33	**O7H207**
	Background suppression	5...50 mm	Red	2.5	H PNP	4	33	**O7H202**
	Background suppression	5...50 mm	Red	2.5	H NPN	15	33	**O7H208**
	Background suppression	5...50 mm	Red	2.5	D NPN	13	33	**O7H209**
	Background suppression	5...50 mm	Red	2.5	D PNP	14	33	**O7H203**
	Background suppression	3...100 mm	Red	7	H PNP	4	33	**O7H204**
	Background suppression	3...100 mm	Red	7	D PNP	14	33	**O7H205**
	Background suppression	3...100 mm	Red	7	H NPN	15	33	**O7H210**
	Background suppression	3...100 mm	Red	7	D NPN	13	33	**O7H211**

You can find wiring diagrams and scale drawings from page 261

Rectangular housing OJ BasicLine, lateral sensing face

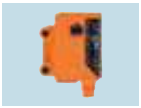
Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 1, 3, 78, 84, 145								
	Transmitter	0...10 m	Red	< 1000	–	2	34	**OJS200**
Through-beam sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Receiver	10 m	–	–	D PNP	3	34	**OJE200**
Retro-reflective sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Retro-reflective sensor	1.8 m	Red	64	D PNP	3	34	**OJR200**
	Polarisation filter	1.8 m	Red	64	D PNP	3	34	**OJP200**
Diffuse reflection sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Background suppression	100 mm	Red	< 13	H PNP	3	35	**OJH200**

Rectangular housing OJ PerformanceLine, lateral sensing face

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Transmitter	10 m	Red	1000	–	2	36	**OJ5130**
	Receiver	10 m	Red	–	H/D PNP	22	36	**OJ5131**
Retro-reflective sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Polarisation filter	0...2 m	Red	64	H/D PNP	22	36	**OJ5126**
Diffuse reflection sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Diffuse reflection sensor	1...600 mm	Red	60	H/D PNP	22	37	**OJ5122**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Background suppression	15...400 mm	Red	< 18	H/D PNP	22	38	**OJ5148**

Rectangular housing OJ PerformanceLine, front sensing face

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Transmitter	10 m	Red	1000	–	2	39	**OJ5108**
	Receiver	10 m	Red	–	H/D PNP	22	39	**OJ5109**
Retro-reflective sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Polarisation filter	0...2 m	Red	64	H/D PNP	22	39	**OJ5104**
Diffuse reflection sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Diffuse reflection sensor	1...600 mm	Red	60	H/D PNP	22	40	**OJ5100**
	Background suppression	15...400 mm	Red	< 18	H/D PNP	22	41	**OJ5144**

Rectangular plastic housing in O6 design

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 2 m · 10...30 DC · plastics · IP65 / IP67								
	Transmitter	10 m	Red	300	–	1	42	**O6S200**
	Receiver	10 m	Red	–	H/D PNP	10	43	**O6E200**
	Receiver	10 m	Red	–	H/D NPN	23	43	**O6E204**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 0.3 m · with M12 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	10 m	Red	300	–	2	42	**O6S201**
Through-beam sensor · Cable 0.3 m · with M12 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	10 m	Red	–	H/D PNP	3	43	**O6E201**
Through-beam sensor · Cable 0.3 m · with M12 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Receiver	10 m	Red	–	H/D NPN	5	43	**O6E205**
Through-beam sensor · M8 connector, 3 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 1, 3, 78, 84, 145								
	Transmitter	10 m	Red	300	–	2	44	**O6S202**
Through-beam sensor · M8 connector, 3 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Receiver	10 m	Red	–	H/D PNP	3	45	**O6E202**
Through-beam sensor · M8 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Receiver	10 m	Red	–	H/D PNP	3	45	**O6E203**
Through-beam sensor · M8 connector, 3 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 1, 3, 78, 84, 145								
	Receiver	10 m	Red	–	H/D NPN	5	45	**O6E206**
Through-beam sensor · M8 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Receiver	10 m	Red	–	H/D NPN	5	45	**O6E207**
	Receiver	15 m	Infrared	–	H/D NPN	24	45	**O6E216**
	Receiver	15 m	Infrared	–	H/D PNP	3	45	**O6E215**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · plastics · IP65 / IP67								
	Background suppression	2...200 mm	Red	8	H/D PNP	10	46	**O6H200**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · Cable 0.3 m · with M12 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	2...200 mm	Red	8	H/D PNP	3	46	**O6H201**
Diffuse reflection sensor · M8 connector, 3 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Background suppression	2...200 mm	Red	8	H/D PNP	3	47	**O6H202**
Diffuse reflection sensor · M8 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Background suppression	2...200 mm	Red	8	H/D PNP	3	47	**O6H203**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · plastics · IP65 / IP67								
	Background suppression	2...200 mm	Red	8	H/D NPN	23	46	**O6H204**
Diffuse reflection sensor · Cable 0.3 m · with M12 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	2...200 mm	Red	8	H/D NPN	5	46	**O6H205**
Diffuse reflection sensor · M8 connector, 3 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 1, 3, 78, 84, 145								
	Background suppression	2...200 mm	Red	8	H/D NPN	5	47	**O6H206**
Diffuse reflection sensor · M8 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Background suppression	2...200 mm	Red	8	H/D NPN	5	47	**O6H207**
Retro-reflective sensor · Cable 2 m · 10...30 DC · plastics · IP65 / IP67								
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	10	46	**O6P200**
Retro-reflective sensor · Cable 0.3 m · with M12 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	3	46	**O6P201**
Retro-reflective sensor · M8 connector, 3 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	3	47	**O6P202**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Retro-reflective sensor · M8 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	3	47	**O6P203**
Retro-reflective sensor · Cable 2 m · 10...30 DC · plastics · IP65 / IP67								
	Polarisation filter	0.05...5 m	Red	150	H/D NPN	23	46	**O6P204**
Retro-reflective sensor · Cable 0.3 m · with M12 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Polarisation filter	0.05...5 m	Red	150	H/D NPN	5	46	**O6P205**
Retro-reflective sensor · M8 connector, 3 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 1, 3, 78, 84, 145								
	Polarisation filter	0.05...5 m	Red	150	H/D NPN	5	47	**O6P206**
Retro-reflective sensor · M8 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Polarisation filter	0.05...5 m	Red	150	H/D NPN	5	47	**O6P207**
Through-beam sensor · M8 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Transmitter	10 m	Red	300	–	2	44	**O6S203**
	Transmitter	15 m	Infrared	460	–	2	44	**O6S215**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · plastics · IP65 / IP67								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	10	46	**O6T200**
Diffuse reflection sensor · Cable 0.3 m · with M12 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	3	46	**O6T201**
Diffuse reflection sensor · M8 connector, 3 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	3	47	**O6T202**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · M8 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	3	47	**O6T203**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · plastics · IP65 / IP67								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D NPN	23	46	**O6T204**
Diffuse reflection sensor · Cable 0.3 m · with M12 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D NPN	5	46	**O6T205**
Diffuse reflection sensor · M8 connector, 3 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 1, 3, 78, 84, 145								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D NPN	5	47	**O6T206**
Diffuse reflection sensor · M8 connector, 4 poles · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D NPN	5	47	**O6T207**
	Diffuse reflection sensor	5...600 mm	Infrared	24	H/D NPN	24	47	**O6T216**
	Diffuse reflection sensor	5...600 mm	Infrared	24	H/D PNP	3	47	**O6T215**

Rectangular housing O6 PerformanceLine, WetLine for hygienic and wet areas

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 2 m · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K								
	Transmitter	10 m	Red	300	–	1	48	**O6S300**
	Receiver	10 m	Red	–	H/D PNP	10	49	**O6E300**
Through-beam sensor · Cable 0.3 m · with M12 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 148, 150, 153, 154, 184, 188, 190, 193								
	Receiver	10 m	Red	–	H/D PNP	3	49	**O6E301**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 145								
	Transmitter	10 m	Red	300	–	2	50	**O6S302**
Through-beam sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 145, 146								
	Receiver	10 m	Red	–	H/D PNP	3	51	**O6E302**
Through-beam sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Receiver	10 m	Red	–	H/D PNP	3	51	**O6E303**
Through-beam sensor · Cable 0.3 m · with M12 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 148, 153, 184, 188, 193								
	Transmitter	10 m	Red	300	–	2	48	**O6S301**
Through-beam sensor · Cable 2 m · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K								
	Receiver	10 m	Red	–	H/D NPN	23	49	**O6E304**
Through-beam sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Transmitter	10 m	Red	300	–	25	50	**O6S305**
Through-beam sensor · Cable 0.3 m · with M12 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 148, 153, 184, 188, 193								
	Receiver	10 m	Red	–	H/D NPN	5	49	**O6E305**
Through-beam sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Transmitter	10 m	Red	300	–	2	50	**O6S303**
	Receiver	10 m	Red	–	H/D PNP	3	51	**O6E309**
Through-beam sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 145								
	Receiver	10 m	Red	–	H/D NPN	5	51	**O6E306**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Receiver	10 m	Red	–	H/D NPN	5	51	**O6E307**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K								
	Background suppression	2...200 mm	Red	8	H/D PNP	10	52	**O6H300**
Diffuse reflection sensor · Cable 0.3 m · with M12 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 148, 150, 153, 154, 184, 188, 190, 193								
	Background suppression	2...200 mm	Red	8	H/D PNP	3	52	**O6H301**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 145, 146								
	Background suppression	2...200 mm	Red	8	H/D PNP	3	53	**O6H302**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Background suppression	2...200 mm	Red	8	H/D PNP	3	53	**O6H303**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K								
	Background suppression	2...200 mm	Red	8	H/D NPN	23	52	**O6H304**
Diffuse reflection sensor · Cable 0.3 m · with M12 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 148, 153, 184, 188, 193								
	Background suppression	2...200 mm	Red	8	H/D NPN	5	52	**O6H305**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 145								
	Background suppression	2...200 mm	Red	8	H/D NPN	5	53	**O6H306**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Background suppression	2...200 mm	Red	8	H/D NPN	5	53	**O6H307**
	Background suppression	2...200 mm	Red	8	H/D PNP	3	53	**O6H309**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · M8 connector · 10...30 DC · plastics · IP65 / IP67 · Connector groups 4, 5, 80, 86, 147								
	Background suppression	2...200 mm	Red	8	H+D PNP	26	54	**O6H210**
	Background suppression	100 mm	Red	6	H PNP	3	55	**O6H211**
	Background suppression	200 mm	Red	8	H PNP	3	55	**O6H212**
	Background suppression	100 mm	Red	6	H NPN	5	55	**O6H213**
	Background suppression	200 mm	Red	8	H NPN	5	55	**O6H214**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Background suppression	2...200 mm	Red	8	H+D PNP	26	56	**O6H310**
Retro-reflective sensor · Cable 2 m · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K								
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	10	52	**O6P300**
Retro-reflective sensor · Cable 0.3 m · with M12 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 148, 150, 153, 154, 184, 188, 190, 193								
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	3	52	**O6P301**
Retro-reflective sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 145, 146								
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	3	53	**O6P302**
Retro-reflective sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	3	53	**O6P303**
Retro-reflective sensor · Cable 2 m · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K								
	Polarisation filter	0.05...5 m	Red	150	H/D NPN	23	52	**O6P304**
Retro-reflective sensor · Cable 0.3 m · with M12 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 148, 153, 184, 188, 193								
	Polarisation filter	0.05...5 m	Red	150	H/D NPN	5	52	**O6P305**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Retro-reflective sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 145								
	Polarisation filter	0.05...5 m	Red	150	H/D NPN	5	53	**O6P306**
Retro-reflective sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Polarisation filter	0.05...5 m	Red	150	H/D NPN	5	53	**O6P307**
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	3	53	**O6P309**
	Polarisation filter	0.05...5 m	Red	150	H+D PNP	27	56	**O6P310**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	10	52	**O6T300**
Diffuse reflection sensor · Cable 0.3 m · with M12 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 148, 150, 153, 154, 184, 188, 190, 193								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	3	52	**O6T301**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 145, 146								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	3	53	**O6T302**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	3	53	**O6T303**
Diffuse reflection sensor · Cable 2 m · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D NPN	23	52	**O6T304**
Diffuse reflection sensor · Cable 0.3 m · with M12 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector groups 148, 153, 184, 188, 193								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D NPN	5	52	**O6T305**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 145								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D NPN	5	53	**O6T306**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 / IP68 / IP69K · Connector group 147								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D NPN	5	53	**O6T307**
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	3	53	**O6T309**

Rectangular O6 design for oils and coolants

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 ; IP68 · Connector groups 4, 5								
	Transmitter	10 m	Red	300	–	2	50	**O6S400**
	Receiver	10 m	Red	–	H/D PNP	3	51	**O6E400**
	Receiver	10 m	Red	–	H/D NPN	5	51	**O6E401**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 ; IP68 · Connector groups 4, 5								
	Background suppression	2...200 mm	Red	8	H/D PNP	3	53	**O6H400**
	Background suppression	2...200 mm	Red	8	H/D NPN	5	53	**O6H401**
Retro-reflective sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 ; IP68 · Connector groups 4, 5								
	Polarisation filter	0.05...5 m	Red	150	H/D PNP	3	53	**O6P400**
	Polarisation filter	0.05...5 m	Red	150	H/D NPN	5	53	**O6P401**
Diffuse reflection sensor · M8 connector · 10...30 DC · high-grade stainless steel · IP65 / IP67 ; IP68 · Connector groups 4, 5								
	Diffuse reflection sensor	5...500 mm	Red	15	H/D PNP	3	53	**O6T400**
	Diffuse reflection sensor	5...500 mm	Red	15	H/D NPN	5	53	**O6T401**

Rectangular housing O5 BasicLine

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	20 m	Red	500	–	2	57	**O5S200**
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	20 m	Red	–	D PNP	14	57	**O5E200**
Retro-reflective sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.1...7 m	Red	175	D PNP	14	58	**O5P200**
Retro-reflective sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 9, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 151, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.1...7 m	Red	175	H PNP	28	58	**O5P201**
Diffuse reflection sensor · M12 connector · 10...36 DC · plastics · IP65 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	50...1400 mm	Red	50	H PNP	4	59	**O5H200**

Rectangular housing O5 PerformanceLine

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 2 m · 10...36 DC · plastics · IP67								
	Transmitter	25 m	Red	625	–	1	60	**O5S501**
	Receiver	25 m	Red	–	H/D PNP	10	61	**O5E501**
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	25 m	Red	625	–	2	57	**O5S500**
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	25 m	Red	–	H/D PNP	3	62	**O5E500**

You can find wiring diagrams and scale drawings from page 261

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Receiver	25 m	Red	–	H/D NPN	5	62	**O5E502**
Retro-reflective sensor · Cable 2 m · 10...36 DC · plastics · IP67								
	Polarisation filter	0.075...10 m	Red	250	H/D PNP	10	63	**O5P501**
Retro-reflective sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.075...10 m	Red	250	H/D PNP	3	64	**O5P500**
Retro-reflective sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Polarisation filter	0.075...10 m	Red	250	H/D NPN	5	64	**O5P502**
Diffuse reflection sensor · Cable 2 m · 10...36 DC · plastics · IP67								
	Background suppression	50...1800 mm	Red	50	H/D PNP	10	63	**O5H503**
Diffuse reflection sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	50...1800 mm	Red	50	H/D PNP	3	64	**O5H500**
	Background suppression	60...700 mm	Red	35	H/D PNP	3	64	**O5H501**
Diffuse reflection sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	50...1800 mm	Red	50	H/D NPN	5	64	**O5H504**

Rectangular housing O5 PerformanceLine with ATEX approval 3D

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...30 DC · plastics · IP65 · Connector groups 196, 198								
	Transmitter	25 m	Red	625	–	2	65	**O5S51A**
	Receiver	25 m	Red	–	H/D PNP	3	65	**O5E51A**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Retro-reflective sensor · M12 connector · 10...30 DC · plastics · IP65 · Connector groups 196, 198								
	Polarisation filter	0.075...10 m	Red	250	H/D PNP	3	65	**O5P51A**
Diffuse reflection sensor · M12 connector · 10...30 DC · plastics · IP65 · Connector groups 196, 198								
	Background suppression	50...1800 mm	Red	50	H/D PNP	3	65	**O5H51A**

Rectangular OA design with relay output

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Retro-reflective sensor · Terminals · 20...250 AC/DC (47...63 Hz AC) · plastics · IP65								
	Polarisation filter	0.2...8 m	Red	420	H/D Relay	29	66	**OA0106***
Diffuse reflection sensor · Terminals · 20...250 AC/DC (47...63 Hz AC) · plastics · IP65								
	Diffuse reflection sensor	5...1500 mm	Infrared	370	H/D Relay	29	66	**OA0108***
Through-beam sensor · Terminals · 20...250 AC/DC (47...63 Hz AC) · plastics · IP65								
	Transmitter	50 m	Infrared	1500	–	30	66	**OA0101**
	Receiver	25...50 m	Infrared	–	H/D Relay	29	66	**OA0102***

*** Note on use of miniature fuses for electrical connection**

Miniature fuse to IEC60127-2 sheet 1, ≤ 5 A (fast acting) Recommendation: check the unit for reliable function after a short circuit.

Rectangular housing O4 BasicLine

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	0...50 m	Red	1000	–	2	67	**O4S200**

You can find wiring diagrams and scale drawings from page 261

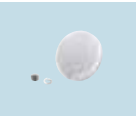
Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	0...50 m	Red	–	D PNP	14	68	**O4E200**
	Receiver	0...50 m	Red	–	H PNP	4	68	**O4E201**
Retro-reflective sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.3...18 m	Red	500	D PNP	14	69	**O4P200**
	Polarisation filter	0.3...18 m	Red	500	H PNP	4	69	**O4P201**
Diffuse reflection sensor · M12 connector · 10...36 DC · plastics · IP65 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	100...2000 mm	Red	100	H PNP	4	70	**O4H200**
	Background suppression	100...2000 mm	Red	100	D PNP	14	70	**O4H201**

Rectangular housing O4 PerformanceLine

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · Cable 2 m · 10...36 DC · plastics · IP67								
	Transmitter	0...80 m	Red	2400	–	1	71	**O4S501**
	Receiver	0...80 m	Red	–	H/D PNP	10	72	**O4E501**
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	0...80 m	Red	2400	–	2	67	**O4S500**
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	0...80 m	Red	–	H/D PNP	3	73	**O4E500**

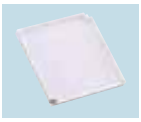
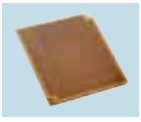
Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Retro-reflective sensor · Cable 2 m · 10...36 DC · plastics · IP67								
	Polarisation filter	0.3...22 m	Red	660	H/D PNP	10	74	**O4P501**
Retro-reflective sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.3...22 m	Red	660	H/D PNP	3	75	**O4P500**
Diffuse reflection sensor · Cable 2 m · 10...36 DC · plastics · IP67								
	Background suppression	100...2600 mm	Red	50	H/D PNP	10	76	**O4H501**
Diffuse reflection sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	100...2600 mm	Red	50	H/D PNP	3	77	**O4H500**

Prismatic reflectors, reflective tape and fixing components

Type	Description	Order no.
	Prismatic reflector · Ø 20 mm · round · For red light and infrared light retro-reflective sensors · Housing materials: plastics	**E20003**
	Prismatic reflector · Ø 25 mm · round · fixing by screw · For red light and infrared light retro-reflective sensors · Housing materials: plastics	**E20953**
	Prismatic reflector · Ø 35 mm · round · fixing by screw · For red light and infrared light retro-reflective sensors · Housing materials: plastics	**E20954**
	Prismatic reflector · Ø 42 mm · round · For red light and infrared light retro-reflective sensors · Housing materials: plastics	**E20004**
	Prismatic reflector · Ø 50 mm · round · fixing by screw · For red light and infrared light retro-reflective sensors · Housing materials: plastics	**E20956**
	Prismatic reflector · Ø 80 mm · round · For red light and infrared light retro-reflective sensors · Housing materials: plastics	**E20005**
	Prismatic reflector · 45 x 28 mm · rectangular · For red light and infrared light retro-reflective sensors · Housing materials: plastics	**E20452**

You can find wiring diagrams and scale drawings from page 261

Position sensors

Type	Description	Order no.
	Prismatic reflector · 48 x 48 mm · rectangular · For red light and infrared light retro-reflective sensors · Housing materials: front plate: PMMA / base: ABS	**E20744**
	Prismatic reflector · 93 x 45 mm · rectangular · For red light and infrared light retro-reflective sensors · Housing materials: plastics	**E20453**
	Prismatic reflector · 96 x 96 mm · rectangular · For red light and infrared light retro-reflective sensors · Housing materials: plastics	**E20454**
	Prismatic reflector · 18 x 18 mm · rectangular · For red light and infrared light retro-reflective sensors · Housing materials: Solidchem	**E21267**
	Prismatic reflector · 56 x 38 mm · rectangular · For red light and infrared light retro-reflective sensors · Housing materials: Solidchem	**E21268**
	Prismatic reflector · 48 x 48 mm · rectangular · For red light and infrared light retro-reflective sensors · Housing materials: Solidchem	**E21269**
	Prismatic reflector · 96 x 96 mm · rectangular · For red light and infrared light retro-reflective sensors · Housing materials: Solidchem	**E21270**
	Mounting set · for reflector · Ø 25 mm · Clamp mounting · free-standing M8 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20903**
	Mounting set · for reflector · Ø 35 mm · Clamp mounting · free-standing M8 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20907**
	Mounting set · for reflector · Ø 50 mm · Clamp mounting · Free-standing M10 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20911**
	Mounting set · for reflector · Ø 80 mm · Clamp mounting · free-standing M12 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E20914**
	Mounting set · for reflector · Ø 80 mm · Clamp mounting · free-standing M12 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20915**
	Angle bracket · for reflector · 50 x 50 mm · Housing materials: fixture: stainless steel 316Ti / 1.4571	**E20724**
	Reflective tape · TS-02 · 50 x 1000 mm · For red light and infrared light retro-reflective sensors · Housing materials: plastics / acrylic	**E21015**

Software

Type	Description	Order no.
	LR DEVICE (USB stick) · Parameter setting of the units via the network · Software for clear online and offline parameter setting of IO-Link sensors via USB adapter · Use via USB connection cable (drivers are supplied): E30396 IO-Link interface or E30390 IO-Link master (note the respective data sheet) · IODD import and update from ifm's homepage · Reading of IODDs via storage media · Automatic sensor identification · Graphic representation of the process values and history incl. export function · Documentation and archiving · Transferable parameter sets · Full memory plug support for IO-Link 1.1	QA0011
	LR DEVICE (download) · Parameter setting of the units via the network · Software for clear online and offline parameter setting of IO-Link sensors via USB adapter · Use via USB connection cable (drivers are supplied): E30396 IO-Link interface or E30390 IO-Link master (note the respective data sheet) · IODD import and update from ifm's homepage · Reading of IODDs via storage media · Automatic sensor identification · Graphic representation of the process values and history incl. export function · Documentation and archiving · Transferable parameter sets · Full memory plug support for IO-Link 1.1	QA0012

Accessories OA

Type	Description	Order no.
	Mounting set · Clamp mounting · free-standing M12 · for type OA · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	E20893

Accessories OF design (M12)

Type	Description	Order no.
	angle support · 90° · for type OF · Housing materials: housing: ABS / lens: PC	E20590
	Mounting set · Ø 12.2 mm · Clamp mounting · rod mounting Ø 10 mm · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	E21200
	Mounting set · Ø 12.2 mm · Clamp mounting · rod mounting Ø 10 mm · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	E21201
	Mounting set · Ø 12.2 mm · Clamp mounting · rod mounting Ø 10 mm · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	E21202
	Mounting set · Ø 12.2 mm · Clamp mounting · rod mounting Ø 10 mm · for type OF, IF · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	E21203

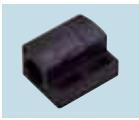
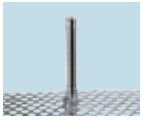
Accessories OG design (M18)

Type	Description	Order no.
	Angle bracket · for type M18 · Housing materials: stainless steel	E10736

You can find wiring diagrams and scale drawings from page 261

Type	Description	Order no.
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20720**
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20721**
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: high-grade stainless steel / fixture: high-grade stainless steel	**E21206**
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: high-grade stainless steel / fixture: high-grade stainless steel	**E21207**

Accessories OI design (M30)

Type	Description	Order no.
	Angle bracket · for type M30 · Housing materials: stainless steel	**E10737**
	Mounting clamp · Ø 30 mm · with end stop · for type M30 · Housing materials: PC	**E11049**
	Mounting clamp · Ø 34 mm - Ø 30 mm · with reducing bush · for type M30 · Housing materials: PBT	**E10077**
	Mounting set · Ø 30.2 mm · Clamp mounting · aluminium profile · for type II, KI, OID, OI · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc / Cube: diecast zinc	**E20875**
	Mounting set · Ø 30.2 mm · Clamp mounting · free-standing M12 · for type OI, II, KI · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E20873**
	Mounting set · Ø 30.2 mm · Clamp mounting · free-standing M12 · for type OI, II, KI · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20874**
	mounting rod · Ø 12 / M10 · Length: 130 mm · straight · Housing materials: stainless steel 316Ti / 1.4571	**E20938**
	Cube · M10 · aluminium profile · Housing materials: diecast zinc	**E20951**
	Memory plug · Parameter memory for IO-Link sensors · Storage capacity: 2 Kbytes · Housing materials: PA PACM 12 / PET / sealing: FPM / nut: stainless steel 316L / 1.4404 / connector: TPU	**E30398**

Accessories O7 housing

Type	Description	Order no.
	Mounting set · O7 · Clamp mounting · rod mounting Ø 10 mm · Housing materials: fixture: stainless steel / clamp: stainless steel / screw: stainless steel / nut: stainless steel	**E21237**
	Mounting set · O7 · Free-standing mounting · free-standing · Housing materials: fixture: stainless steel / screws: stainless steel	**E21238**
	Mounting set · O7 · Free-standing mounting · with fine adjustment · free-standing · Housing materials: fixture: stainless steel / Spring: spring steel / screws: stainless steel	**E21239**
	Mounting set · O7 · ball joint · free-standing · Housing materials: fixture: diecast zinc / mounting base: diecast zinc / screws: stainless steel	**E21240**

Accessories OJ housing

Type	Description	Order no.
	Angle bracket · for type OJ · Housing materials: high-grade stainless steel	**E20984**
	Basic clip · OJ · Housing materials: high-grade stainless steel	**E20965**
	Basic clip · OJ · Housing materials: diecast zinc	**E20964**
	Swivel-mount clip · for type OJ · Housing materials: diecast zinc	**E20974**
	Mounting set · OJ · for side lens · Clamp mounting · free-standing M8 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E20968**
	Mounting set · OJ · for side lens · Clamp mounting · free-standing M8 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E20969**
	Mounting set · OJ · for side lens · rod mounting Ø 10 mm · Housing materials: clamp: diecast zinc / fixture: stainless steel 316Ti / 1.4571	**E21095**
	Mounting set · OJ · for side lens · Clamp mounting · rod mounting Ø 10 mm · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21222**
	Mounting set · OJ · for front lens · Clamp mounting · free-standing M8 · Housing materials: clamp: diecast zinc / fixture: stainless steel 316Ti / 1.4571	**E20966**

You can find wiring diagrams and scale drawings from page 261

Type	Description	Order no.
	Mounting set · OJ · for front lens · Clamp mounting · rod mounting · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E21221**

Accessories for O6 design

Type	Description	Order no.
	Angle bracket · O6 · for type O6 · Housing materials: stainless steel 316Ti / 1.4571	**E21271**
	Mounting set · O6 · Clamp mounting · rod mounting Ø 10 mm · for type O6 · Housing materials: stainless steel 316Ti / 1.4571	**E21272**
	Protective cover · O6 · for type O6 · Housing materials: stainless steel 316Ti / 1.4571	**E21273**
	Pinhole mask · 0.5 mm · for type O6E / O6S plastic · Housing materials: stainless steel	**E21277**
	Slot mask · 0.5 x 8 mm · for type O6E / O6S plastic · Housing materials: stainless steel	**E21280**

Accessories O5 housing

Type	Description	Order no.
	Angle bracket · for type O5 · Housing materials: stainless steel 316Ti / 1.4571	**E21087**
	Angle bracket · for type O5 · Housing materials: stainless steel 316Ti / 1.4571	**E21085**
	Angle bracket · O5, O4 · for mounting O5, O4 sensors instead of OL sensors · Dovetail clamp · Housing materials: Dovetail clamp: AlMgSi0.5 / fixture: AlMg3	**E21122**
	Dovetail clamp · for type DTS, O4, O5 · Housing materials: AlMgSi0.5	**E21088**
	Mounting brackets Mounting on the back of the unit · for type O5 · Housing materials: stainless steel 316Ti / 1.4571	**E21086**
	Mounting sleeve · O5 · for mounting O5 sensors instead of OC sensors · Housing materials: AlZnMgCu1.5 F51/52	**E21114**

Type	Description	Order no.
	Mounting set · Clamp mounting · With protective cover · rod mounting Ø 12 mm · for type O5 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: high-grade stainless steel	**E21223**
	Mounting set · Clamp mounting · With protective cover · rod mounting Ø 12 mm · for type O5 · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21210**
	Mounting set · Clamp mounting · rod mounting Ø 12 mm · for type O5, O5D · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21211**
	Mounting set · Clamp mounting · rod mounting Ø 12 mm · for type O5, O5D · Housing materials: stainless steel 316Ti / 1.4571 / clamp: high-grade stainless steel	**E21212**
	Mounting set · Clamp mounting · With protective cover · rod mounting Ø 14 mm · for type O5 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E21142**
	Mounting set · Clamp mounting · With protective cover · Free-standing M10 · for type O5 · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21084**
	Mounting set · Clamp mounting · Free-standing M10 · for type O5 · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21083**
	Memory plug · Parameter memory for IO-Link sensors · Storage capacity: 2 Kbytes · Housing materials: PA PACM 12 / PET / sealing: FPM / nut: stainless steel 316L / 1.4404 / connector: TPU	**E30398**

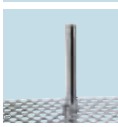
Accessories O4 housing

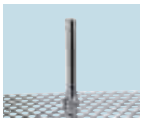
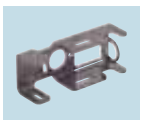
Type	Description	Order no.
	Angle bracket · O1D, O4 · for type O1D, O4 · Housing materials: stainless steel 316L / 1.4404	**E21120**
	Angle bracket · O4 · for type O4 · Housing materials: stainless steel 316L / 1.4404	**E21117**
	Angle bracket · O5, O4 · for mounting O5, O4 sensors instead of OL sensors · Dovetail clamp · Housing materials: Dovetail clamp: AlMgSi0.5 / fixture: AlMg3	**E21122**
	Dovetail clamp · for type DTS, O4, O5 · Housing materials: AlMgSi0.5	**E21088**
	Mounting set · Clamp mounting · With protective cover · rod mounting Ø 12 mm · for type O4 · Housing materials: stainless steel 316L / 1.4404 / clamp: diecast zinc	**E21215**

You can find wiring diagrams and scale drawings from page 261

Type	Description	Order no.
	Mounting set · Clamp mounting · With protective cover · rod mounting Ø 12 mm · for type O4 · Housing materials: stainless steel 316L / 1.4404 / clamp: high-grade stainless steel	**E21216**
	Mounting set · Clamp mounting · rod mounting Ø 12 mm · for type O4 · Housing materials: stainless steel 316L / 1.4404 / clamp: diecast zinc	**E21217**
	Mounting set · Clamp mounting · rod mounting Ø 12 mm · for type O4 · Housing materials: stainless steel 316L / 1.4404 / clamp: high-grade stainless steel	**E21218**
	Mounting set · O4 · Clamp mounting · for type O4 · Housing materials: stainless steel 316L / 1.4404 / clamp: diecast zinc	**E21118**
	Mounting set · O4 · Clamp mounting · With protective cover · for type O4 · Housing materials: stainless steel 316L / 1.4404 / clamp: diecast zinc	**E21119**
	Mounting set · O4 · Clamp mounting · for type O4 · Housing materials: stainless steel 316L / 1.4404 / clamp: diecast zinc	**E21118**

Accessories for system components

Type	Description	Order no.
	clamp · Ø 10 mm; M8 · free-standing M8 · Housing materials: clamp: diecast zinc	**E20843**
	clamp · Ø 10 mm; M8 · free-standing M8 · Housing materials: clamp: stainless steel 316Ti / 1.4571	**E20844**
	clamp · Ø 12 mm; M10 · Free-standing M10 · Housing materials: clamp: diecast zinc	**E20716**
	clamp · Ø 12 mm · rod mounting Ø 12 mm · Housing materials: clamp: diecast zinc	**E20717**
	clamp · Ø 12 mm · rod mounting Ø 12 mm · Housing materials: clamp: stainless steel	**E21110**
	clamp · Ø 14 mm; M12 · free-standing M12 · Housing materials: clamp: diecast zinc	**E20796**
	mounting rod · Ø 10 / M8 · Length: 150 mm · straight · Housing materials: stainless steel 316Ti / 1.4571	**E21081**

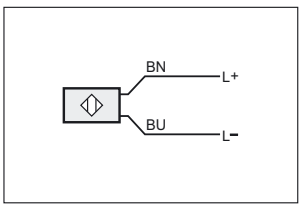
Type	Description	Order no.
	mounting rod · Ø 10 / M8 · Length: 200 mm · angled · Housing materials: stainless steel 316Ti / 1.4571	**E80310**
	mounting rod · Ø 12 / M10 · Length: 130 mm · straight · Housing materials: stainless steel 316Ti / 1.4571	**E20938**
	mounting rod · Ø 12 / M10 · Length: 200 mm · angled · Housing materials: stainless steel 316Ti / 1.4571	**E20940**
	Head cap screw · M8 x 40 mm · ISO 4762 (DIN 912) · free-standing M8 · Housing materials: screw: steel galvanised	**E21204**
	Head cap screw · M10 x 45 mm · ISO 4762 (DIN 912) · Free-standing M10 · Housing materials: screw: steel galvanised	**E21208**
	Head cap screw · M10 x 45 mm · ISO 4762 (DIN 912) · Free-standing M10 · Housing materials: screw: high-grade stainless steel	**E21209**
	Head cap screw · M10 x 120 mm · ISO 4762 (DIN 912) · Free-standing M10 · Housing materials: screw: steel galvanised	**E21213**
	Head cap screw · M10 x 120 mm · ISO 4762 (DIN 912) · Free-standing M10 · Housing materials: screw: high-grade stainless steel	**E21214**
	Cube · M8 · aluminium profile · Housing materials: diecast zinc	**E20950**
	Cube · M10 · aluminium profile · Housing materials: diecast zinc	**E20951**
	Protective bracket for free-standing and rod mounting · Ø 18 mm · Clamp mounting · Housing materials: stainless steel 316L / 1.4404	**E21125**
	Protective bracket for free-standing and rod mounting · Ø 18 mm · with end stop · Mounting clamp · Clamp mounting · Housing materials: Mounting clamp: PC black / Angle bracket: stainless steel 316L / 1.4404	**E21126**

Wiring diagrams

Core colours

BN	brown
BU	blue
BK	black

1



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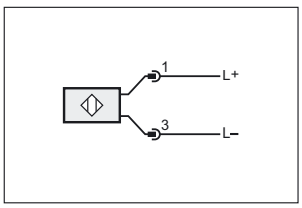

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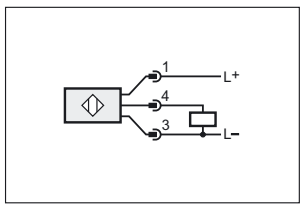
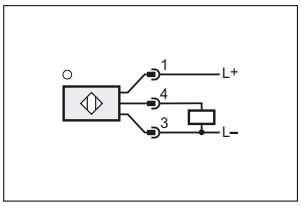


Wiring diagrams

4



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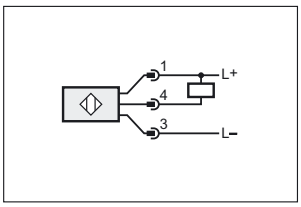

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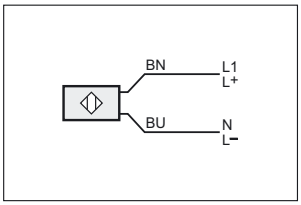

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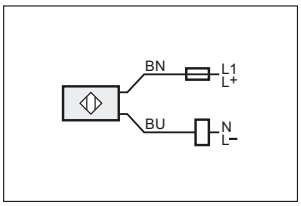

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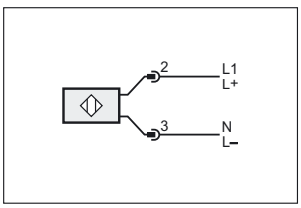

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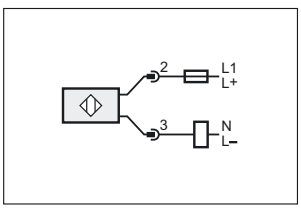

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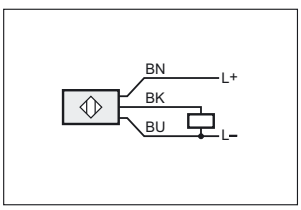

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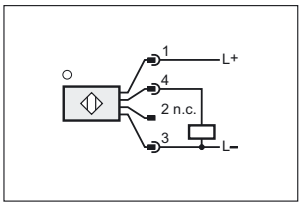

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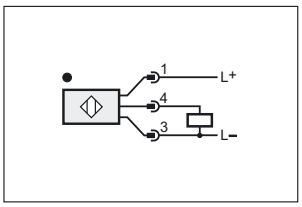

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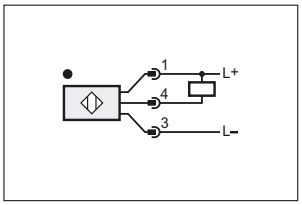

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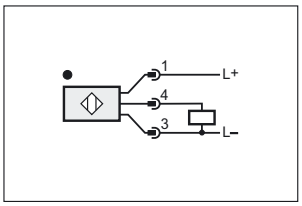

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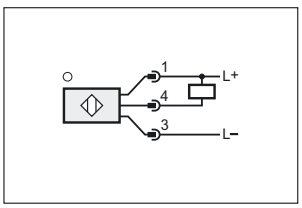

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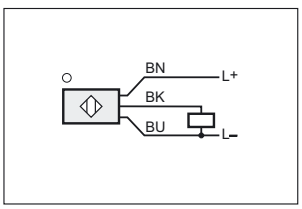

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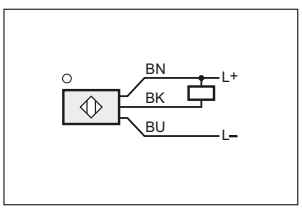

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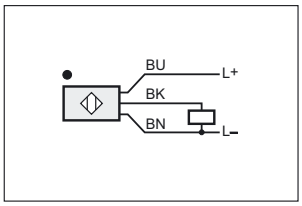

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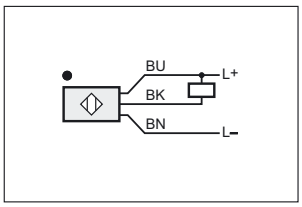

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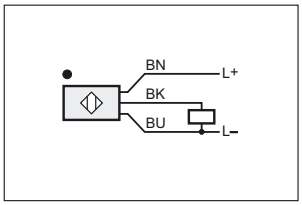

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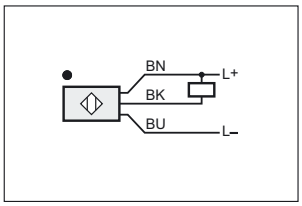

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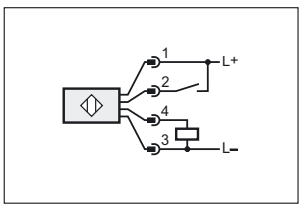
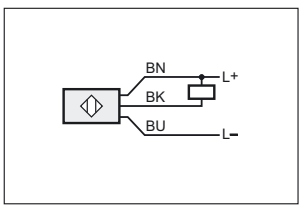


2: Teach

23



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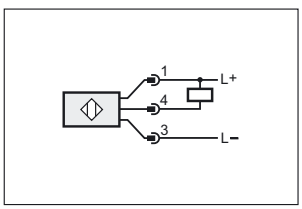

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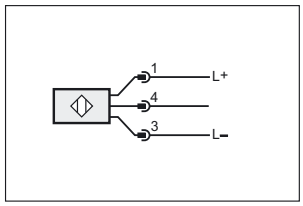

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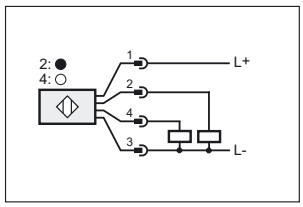

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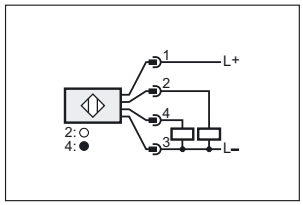

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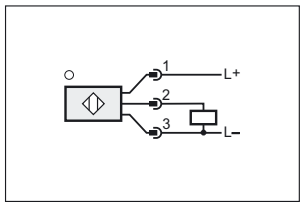

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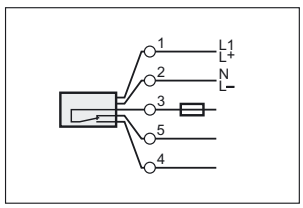

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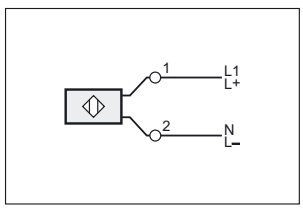
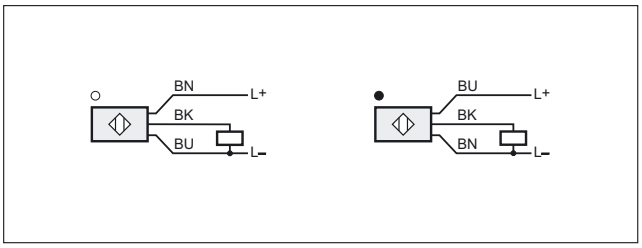


Wiring diagrams

31



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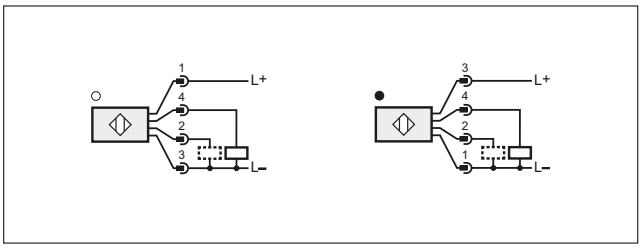
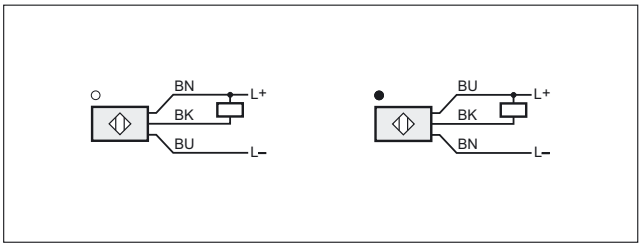


2: function check

33



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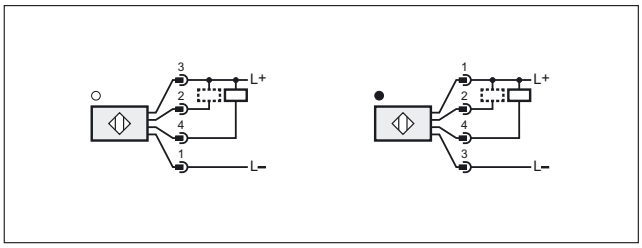

2: function check

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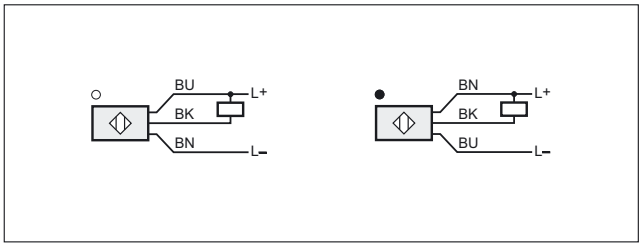

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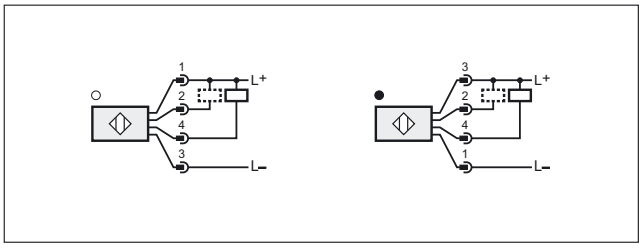

2: function check

Scale drawings / drawing no. – CAD download: www.ifm.com

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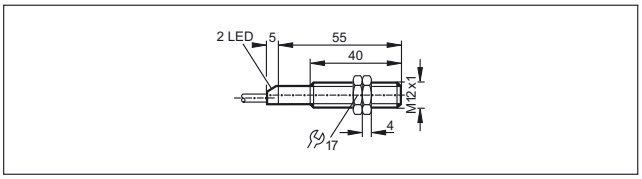

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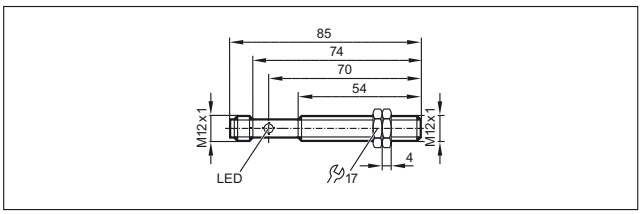

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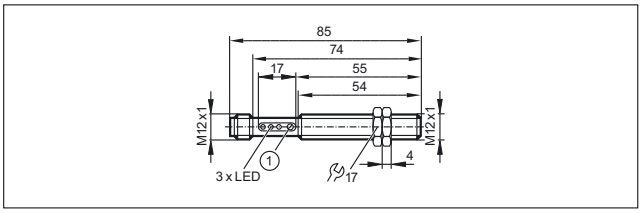
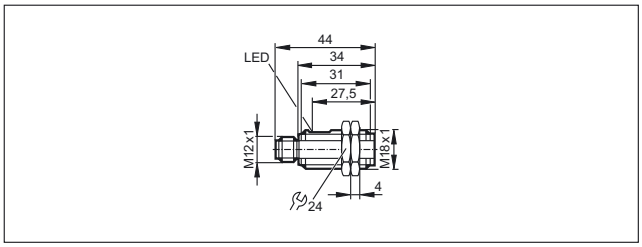


1: potentiometer

4



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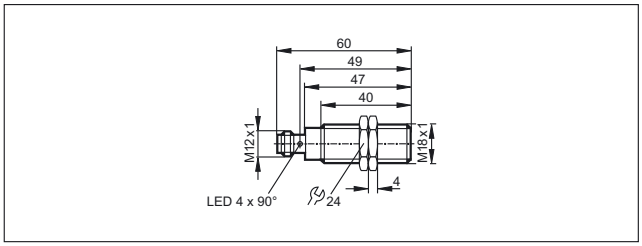
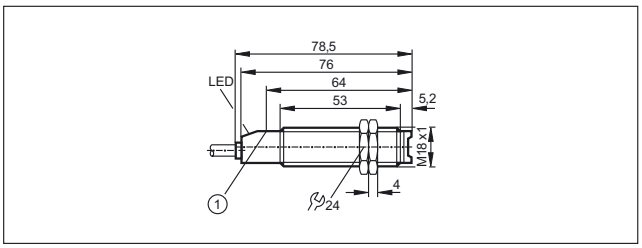


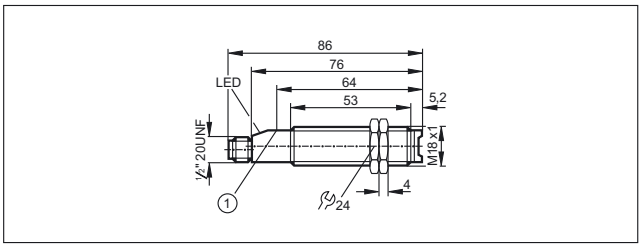
Scale drawings / drawing no. – CAD download: www.ifm.com

6



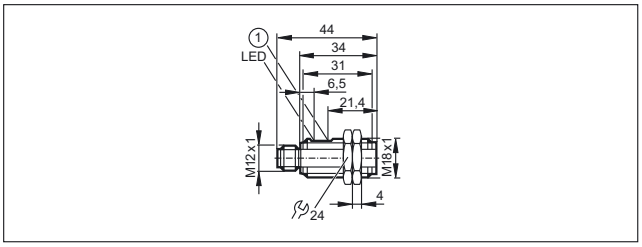
1: pushbutton

7



1: pushbutton

8



1: potentiometer

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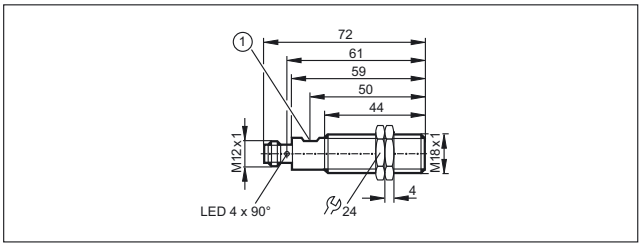

1: potentiometer

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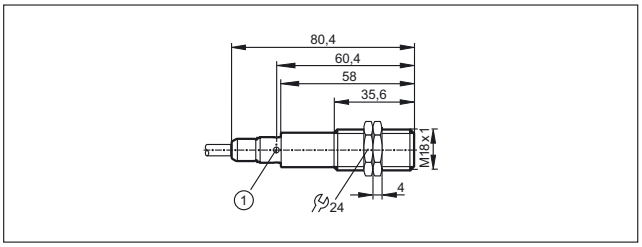
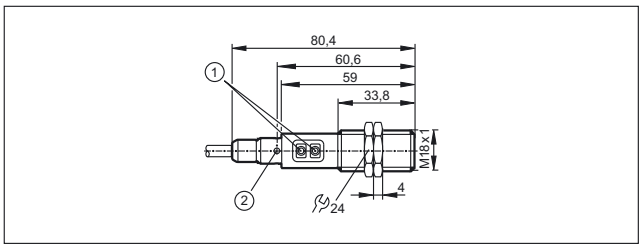


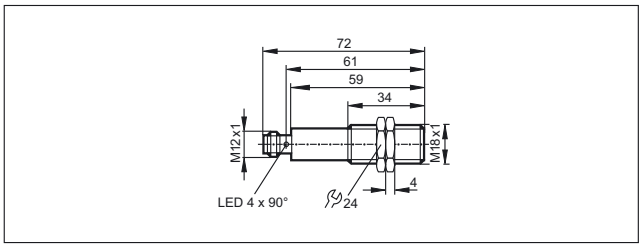
1: LED 4 x 90°

11



1: Programming buttons, 2: LED 4 x 90°

12



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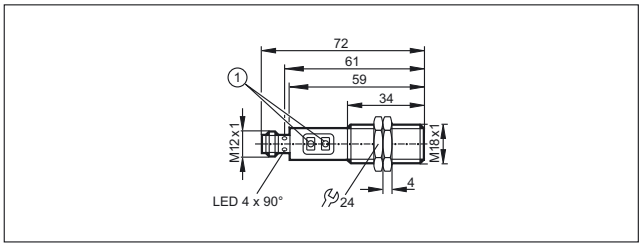
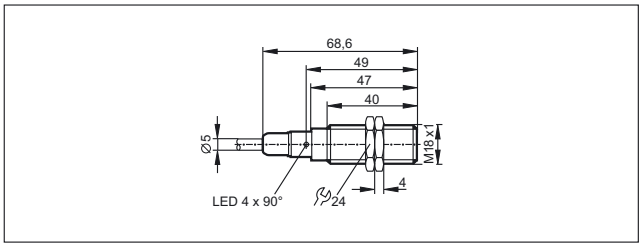


1: Programming buttons

14



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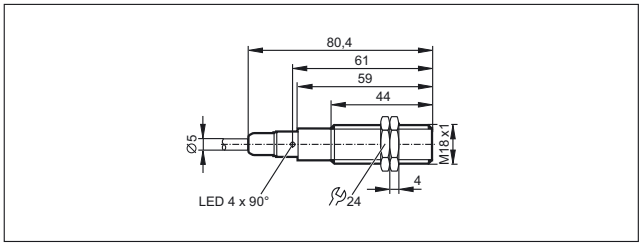

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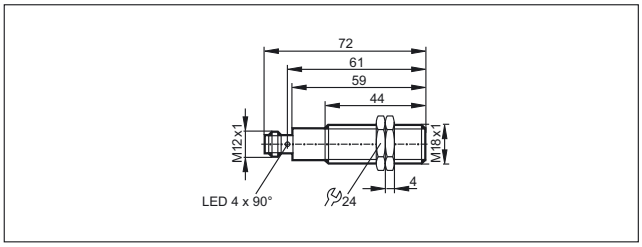

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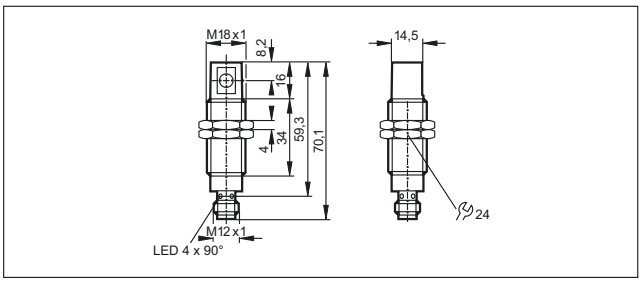

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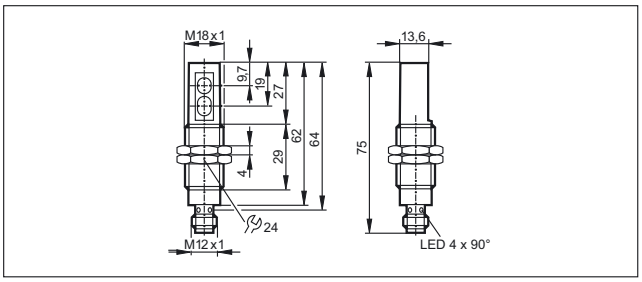

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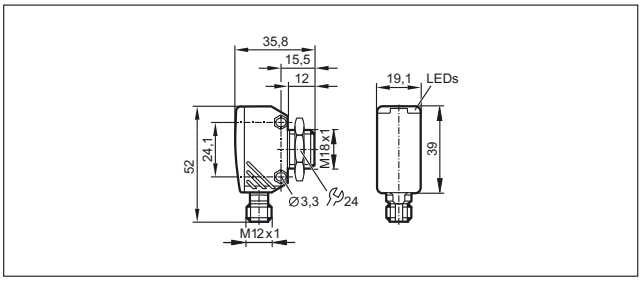

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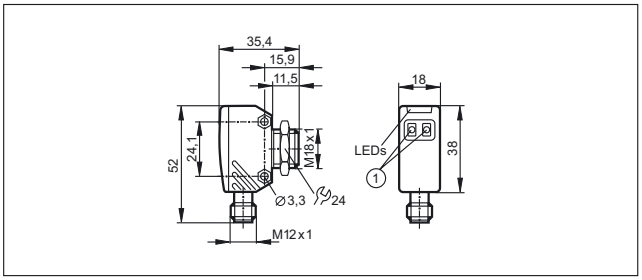

1: setting pushbuttons

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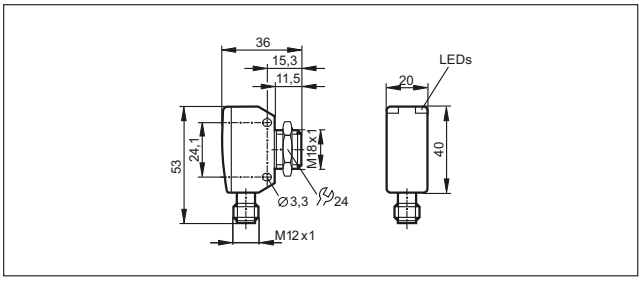

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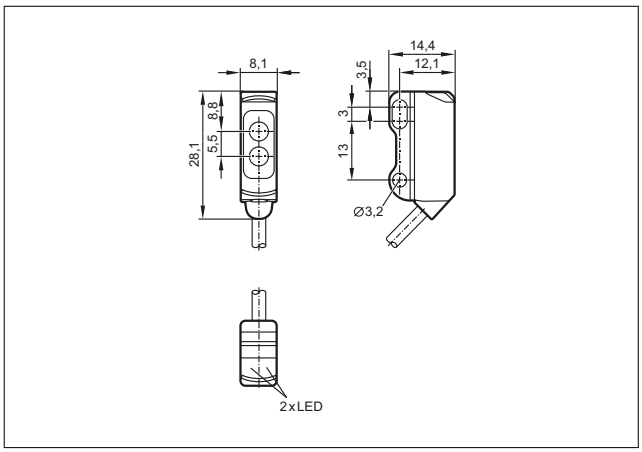

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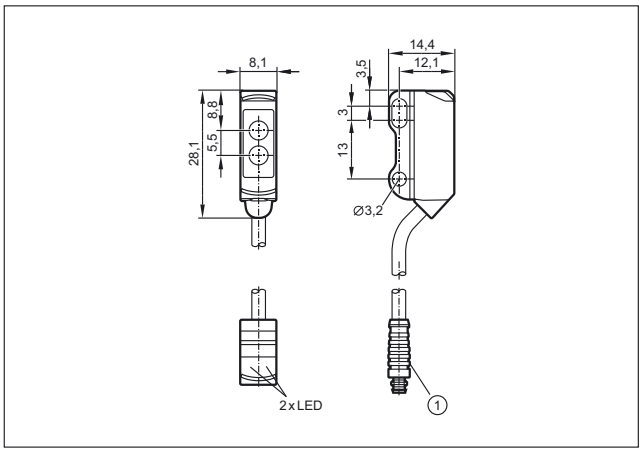

1: illustration (example)

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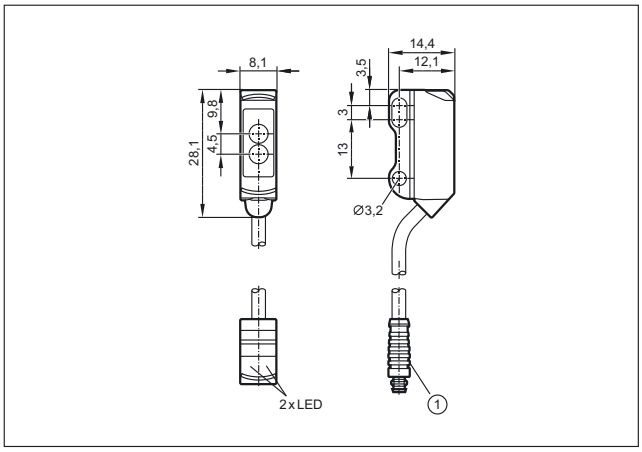

1: illustration (example)

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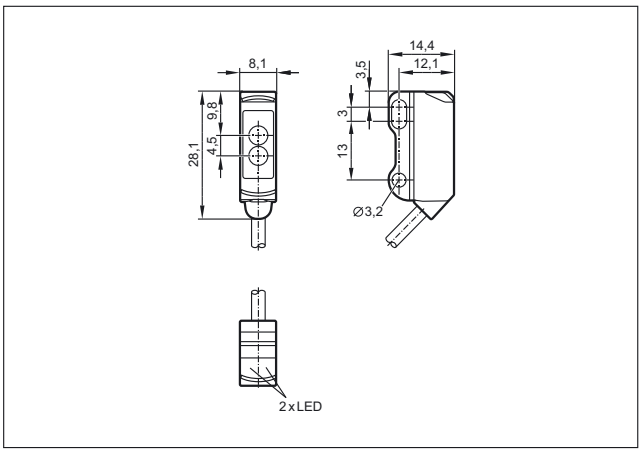

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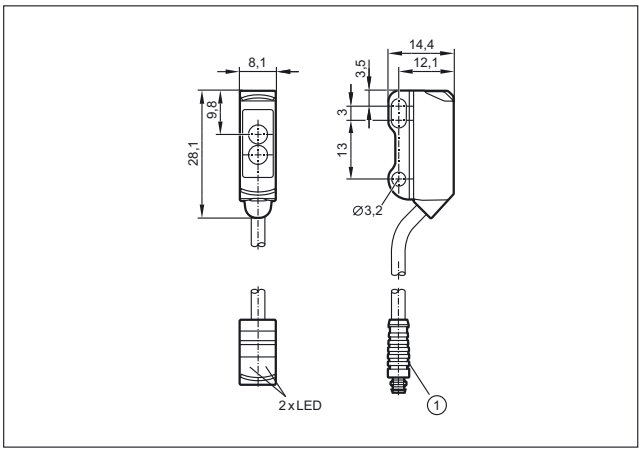

1: illustration (example)

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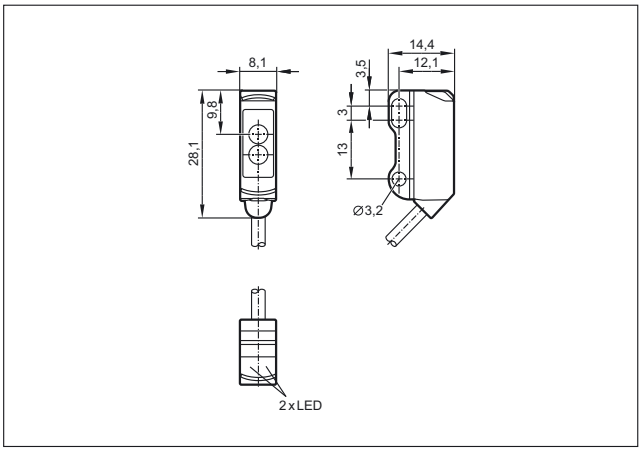

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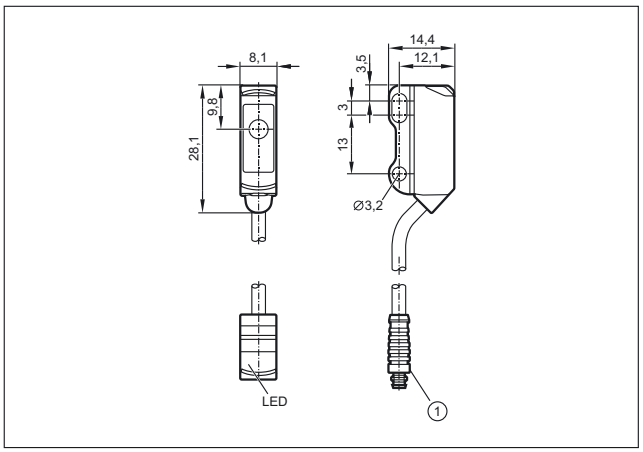

1: illustration (example)

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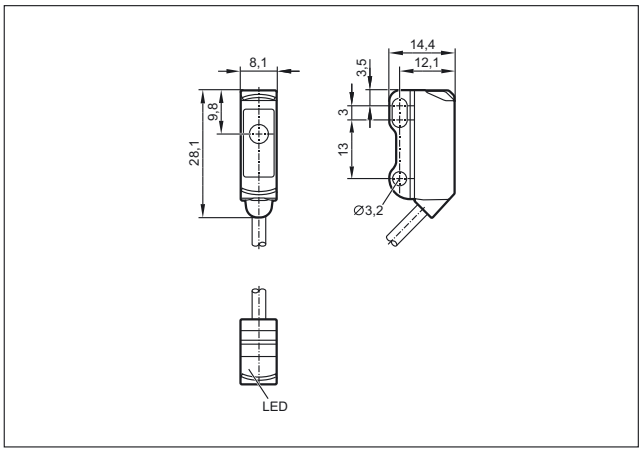

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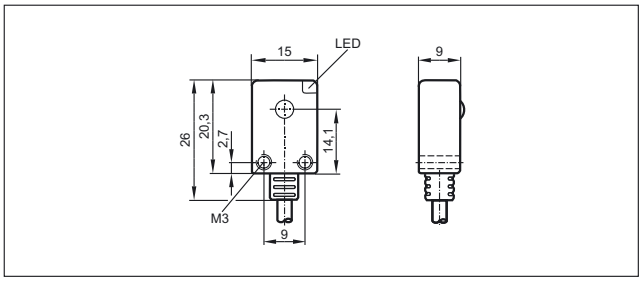

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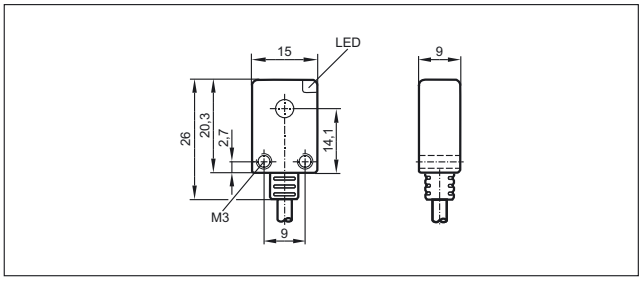

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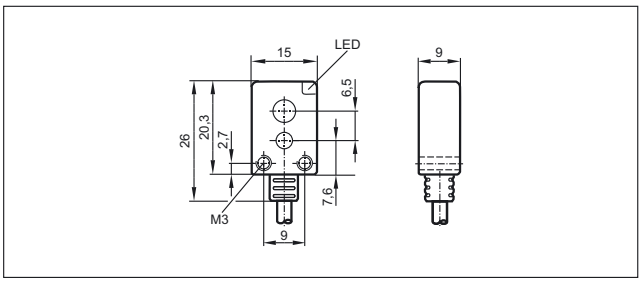

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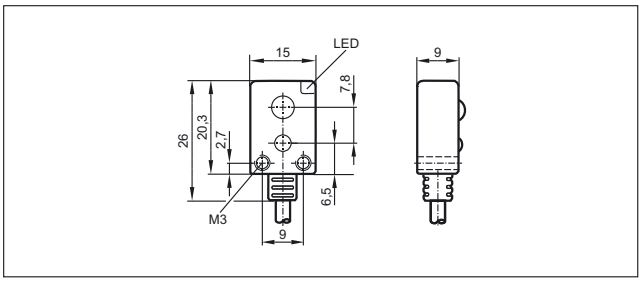

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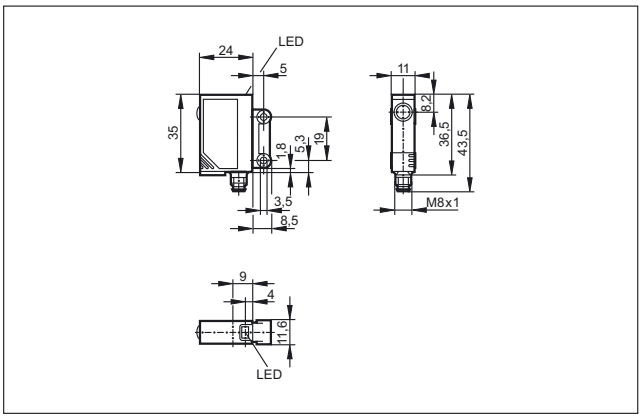

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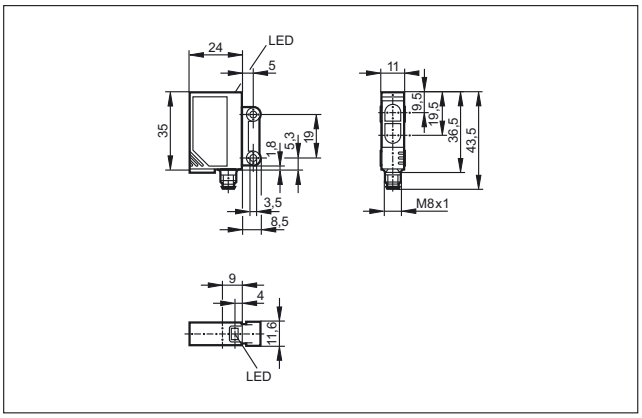

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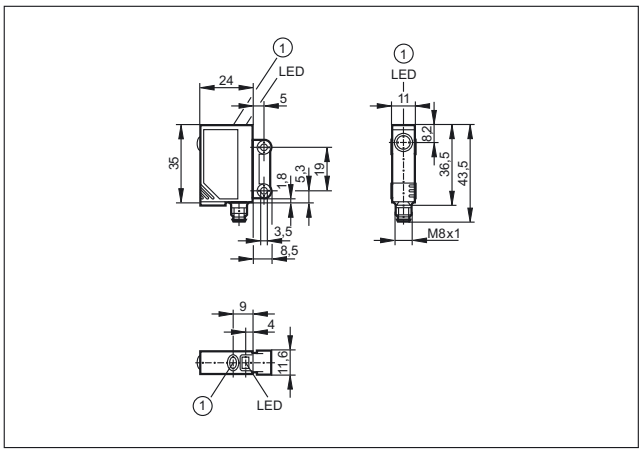

1: pushbutton

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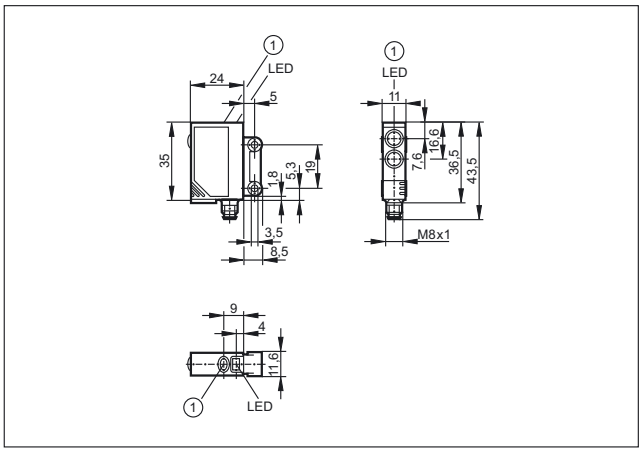

1: pushbutton

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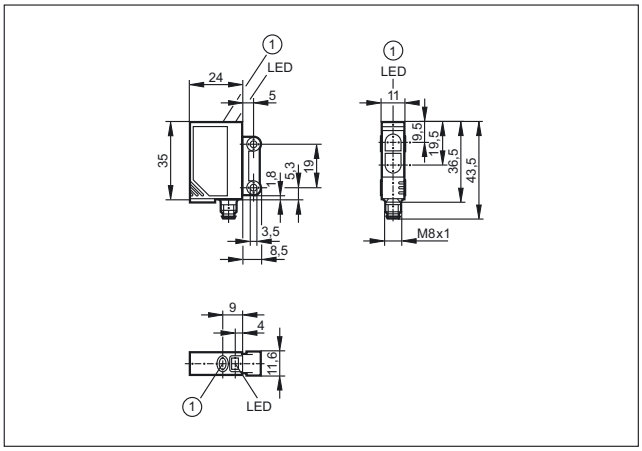

1: pushbutton

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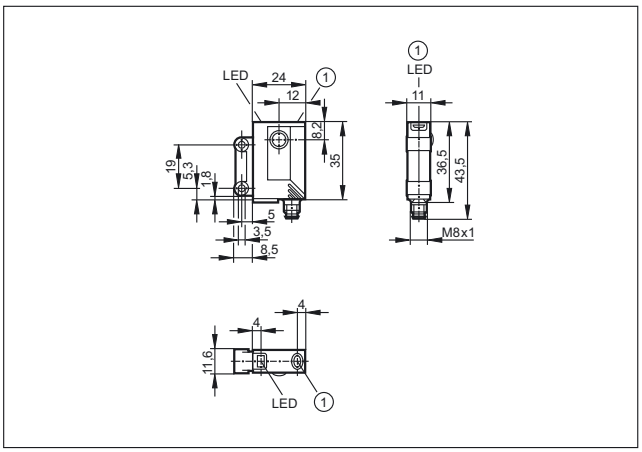

1: pushbutton

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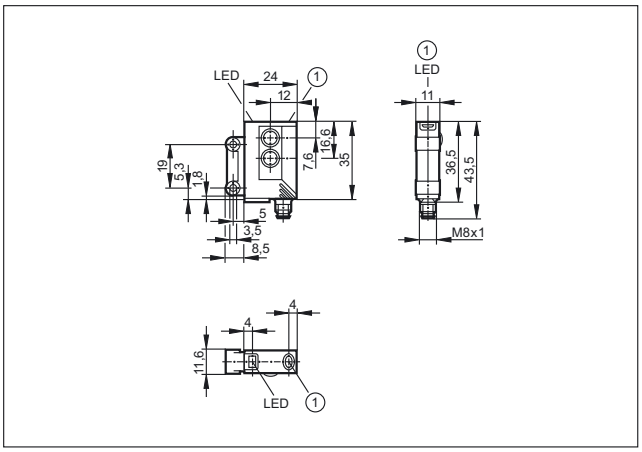

1: pushbutton

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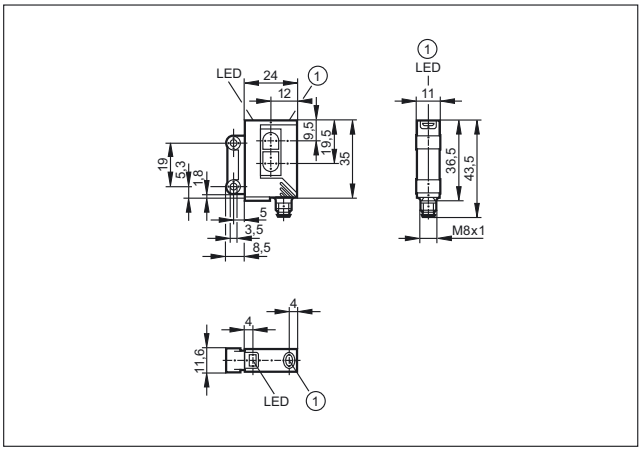

1: pushbutton

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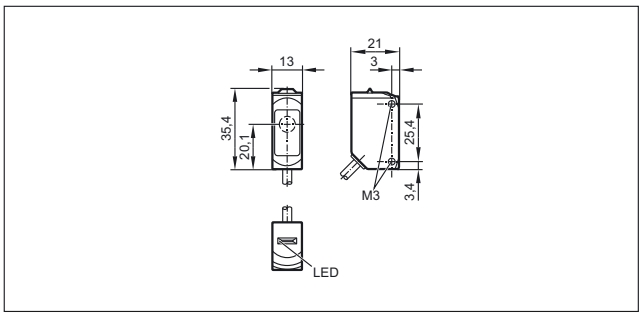

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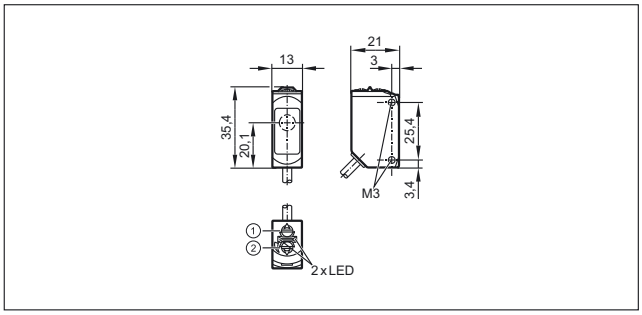

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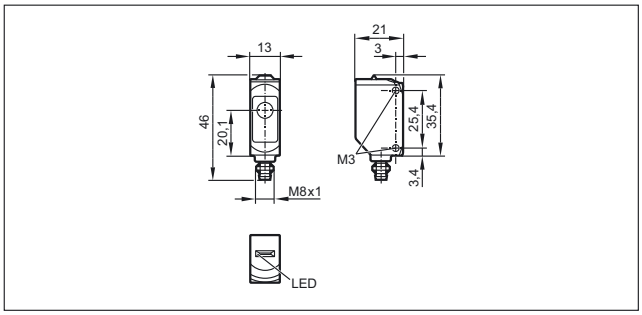

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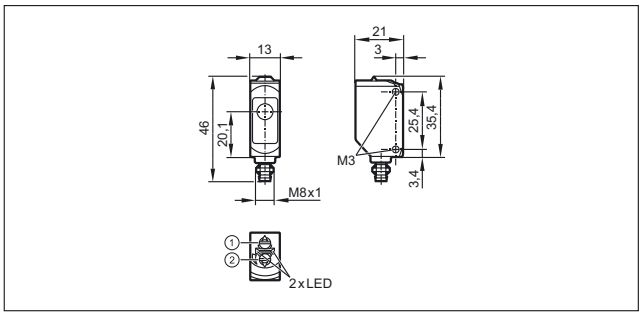

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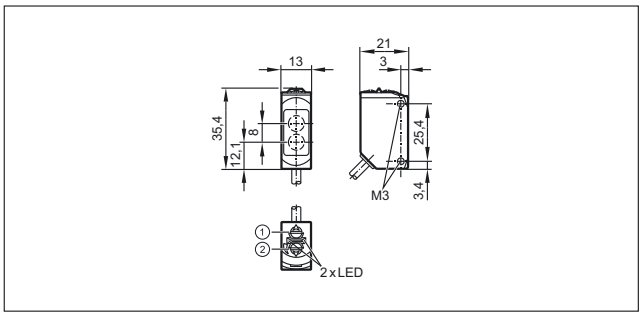

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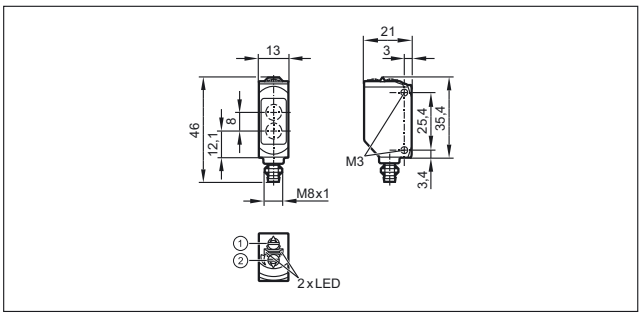

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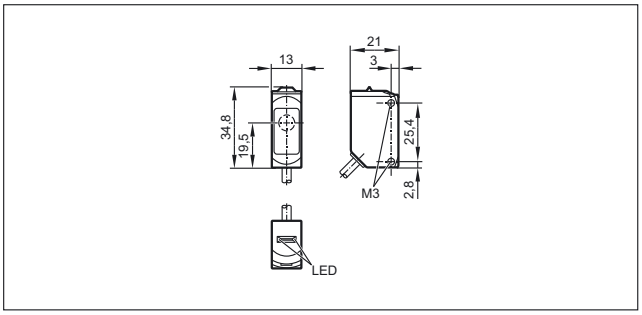

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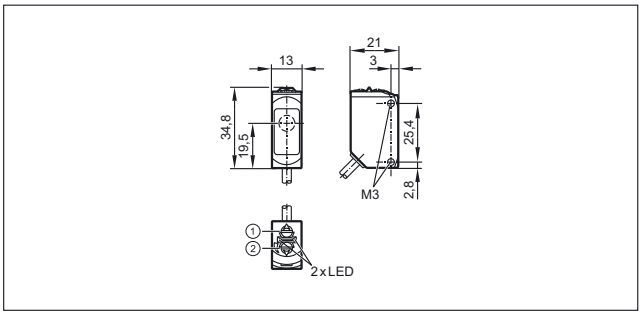
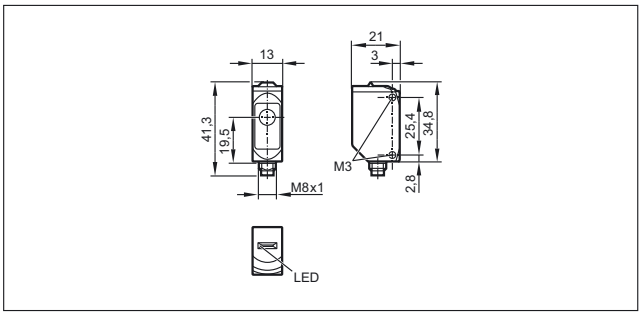


1:: output function switch, 2:: potentiometer sensitivity

50



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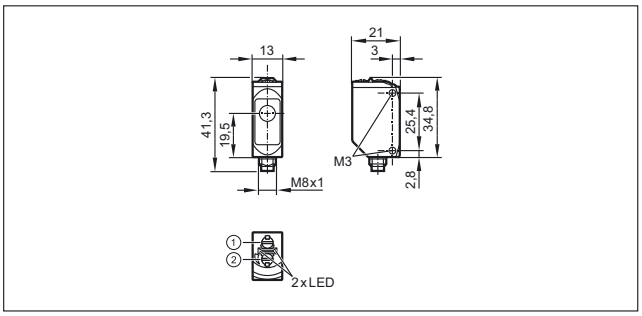

1:: output function switch, 2:: potentiometer sensitivity

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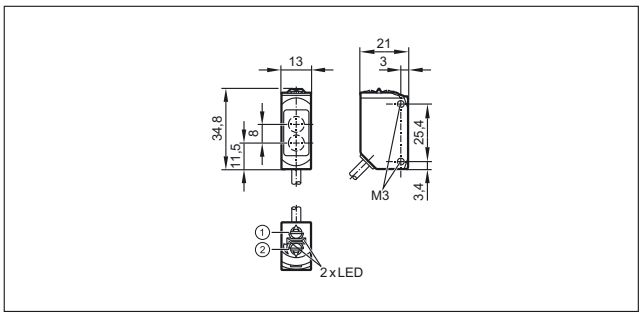

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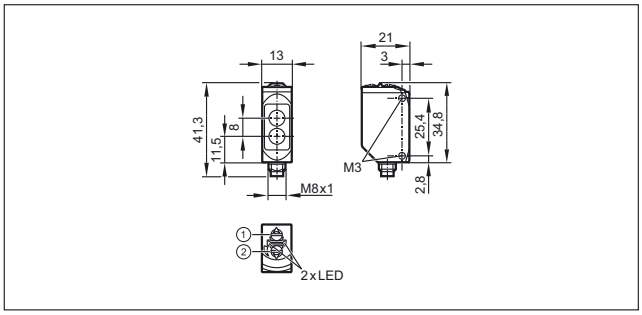

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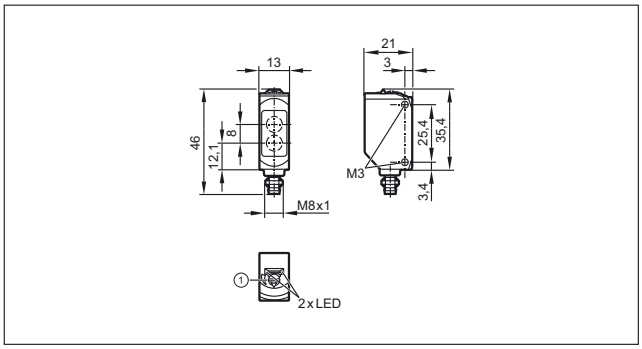

1: potentiometer sensitivity

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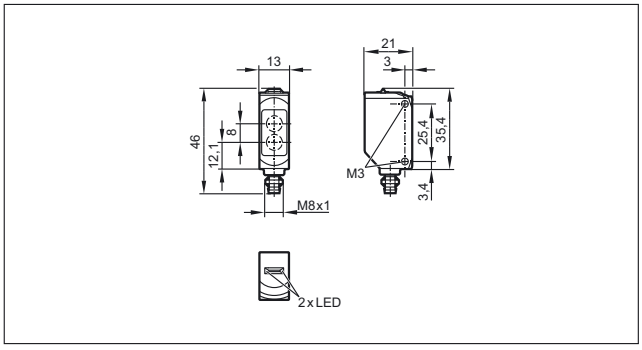

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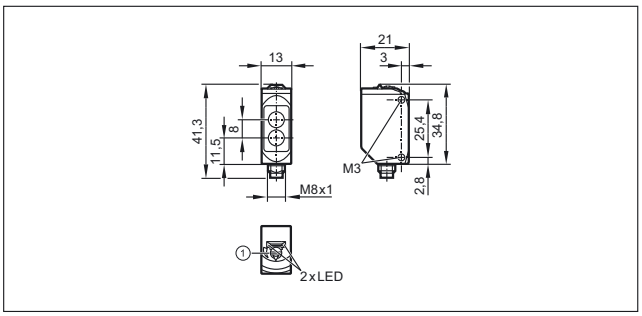

1: potentiometer sensitivity

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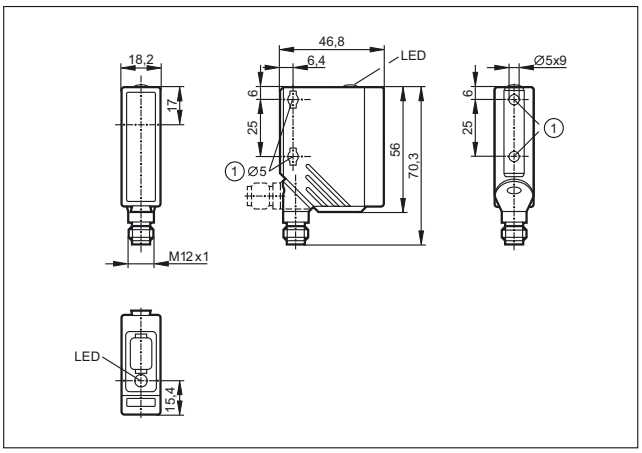
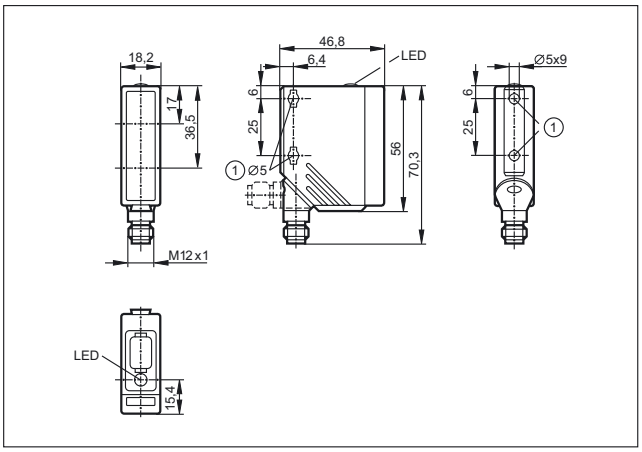


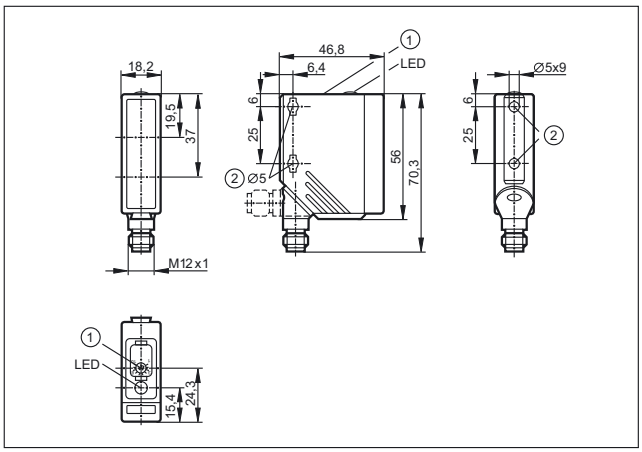
1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

58



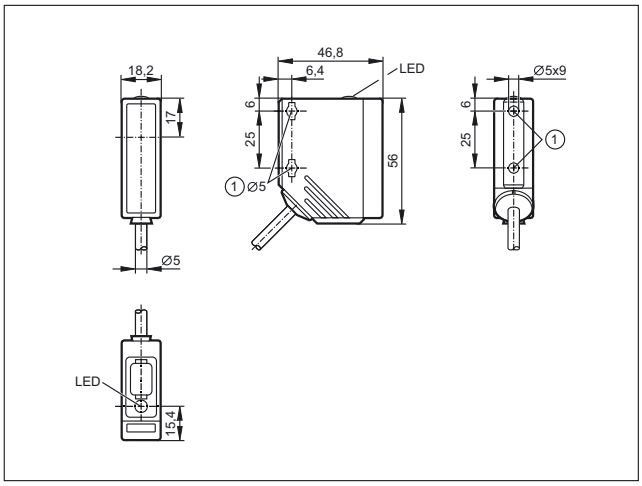
1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

59



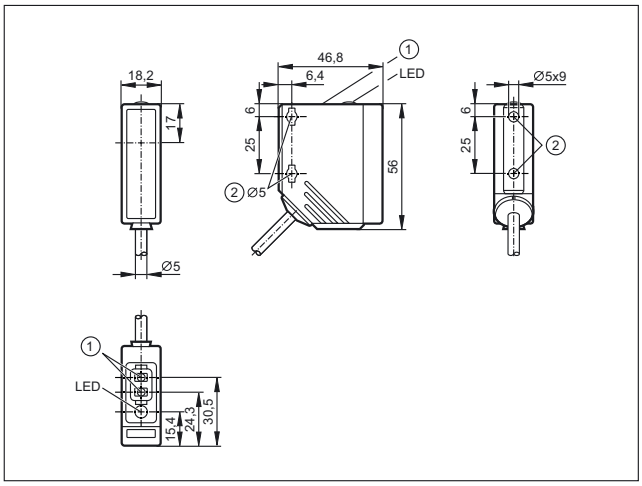
1: potentiometer, 2: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

60



1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

61



1: Programming buttons, 2: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

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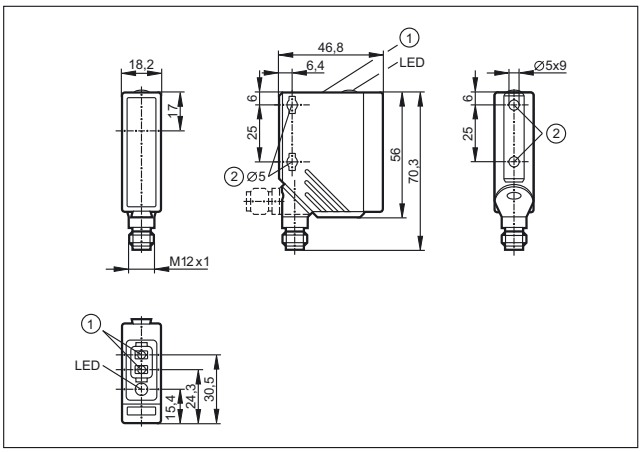
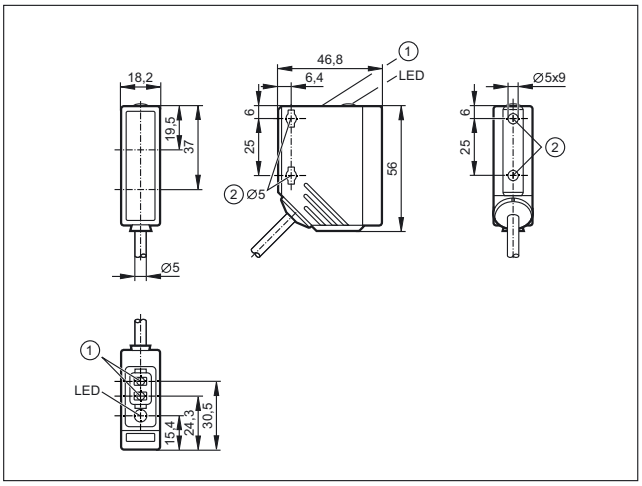
62



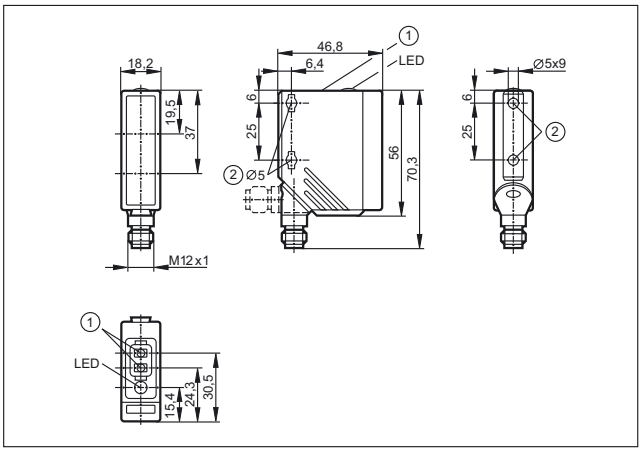
1: Programming buttons, 2: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

63



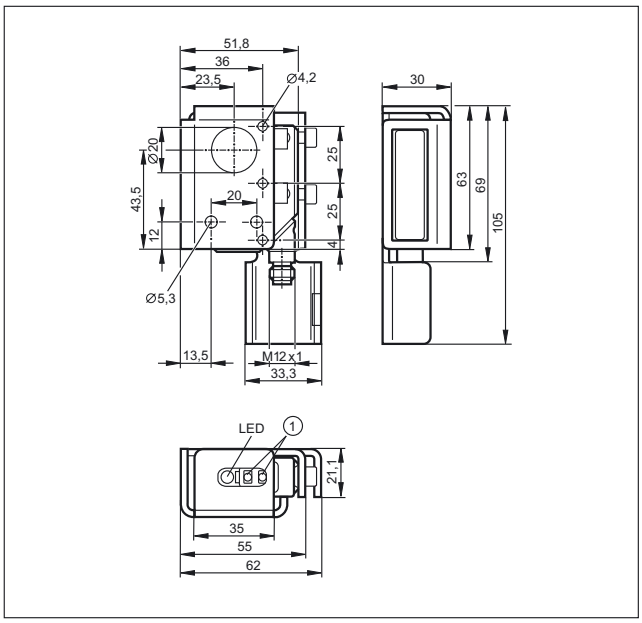
1: Programming buttons, 2: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

64



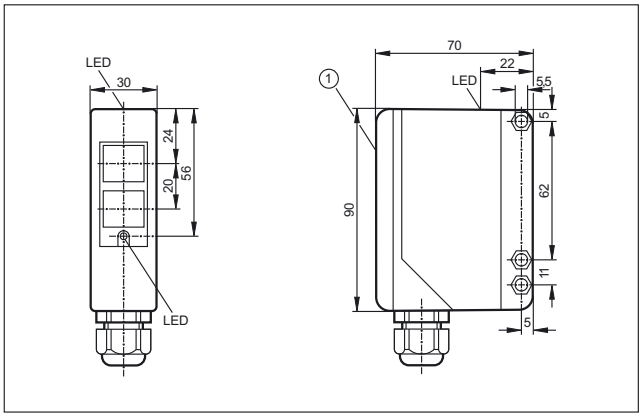
1: Programming buttons, 2: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

65



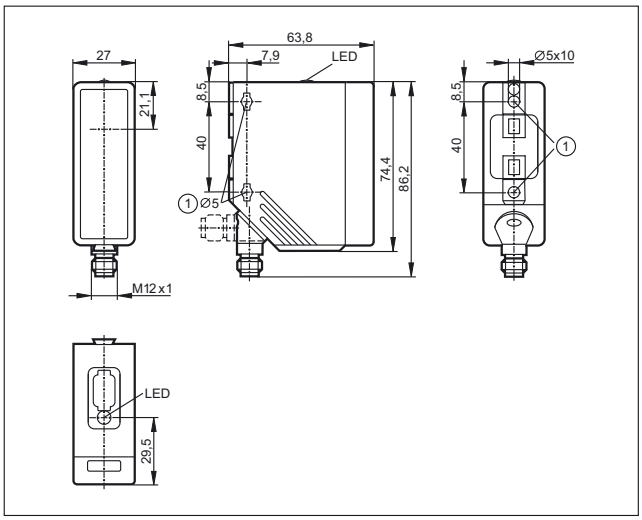
1: Programming buttons

66



1: selection switch, pot's (under cover)

67



1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

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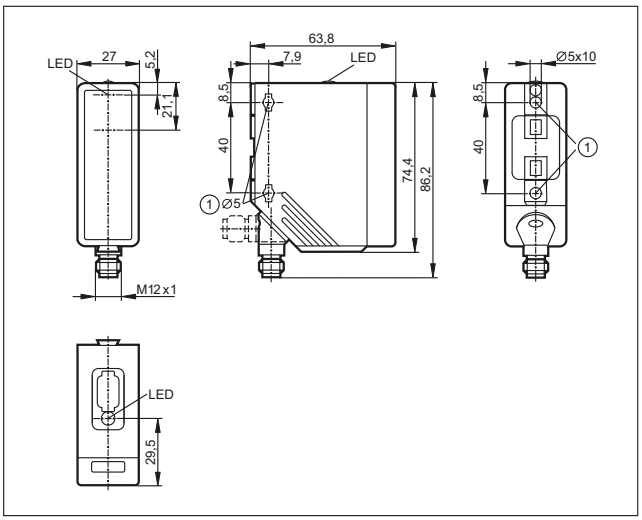
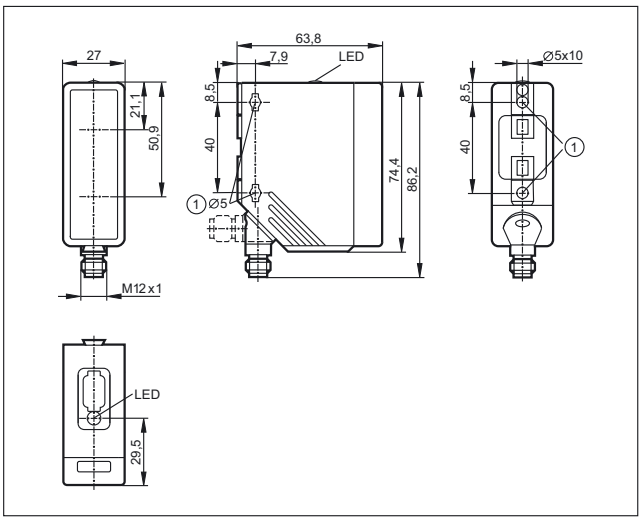
68



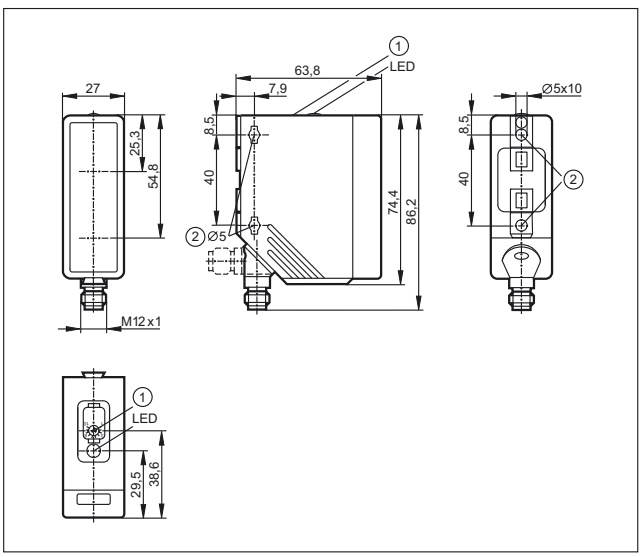
1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

69



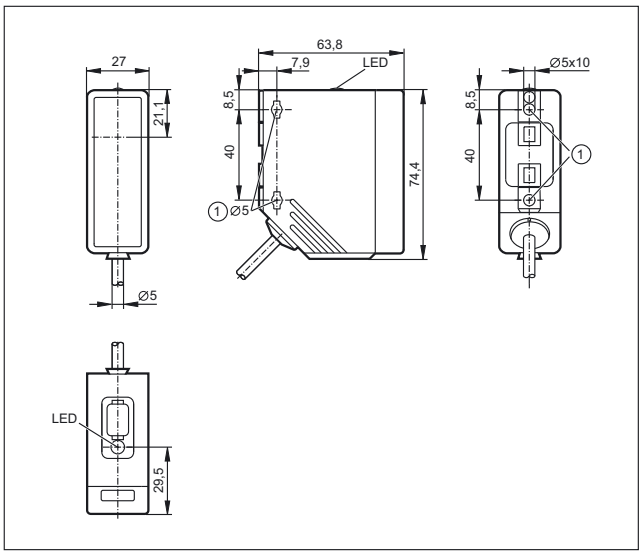
1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

70



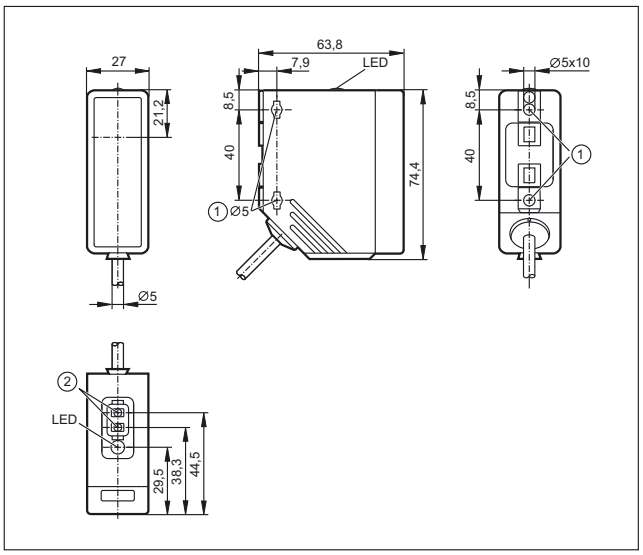
1: potentiometer, 2: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

71



1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm.

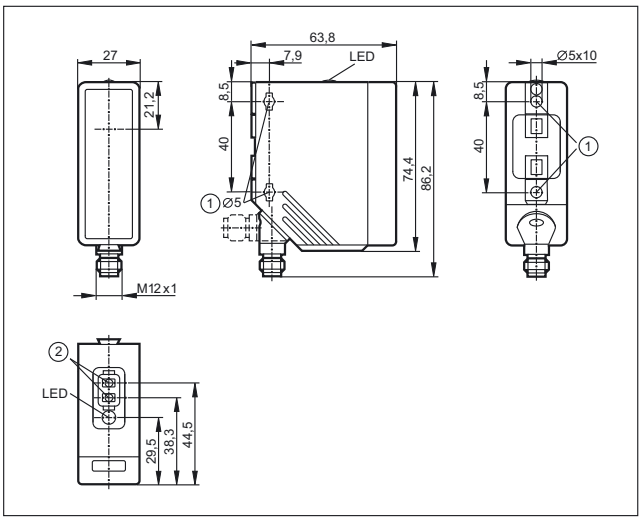
72



1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm., 2: Programming buttons

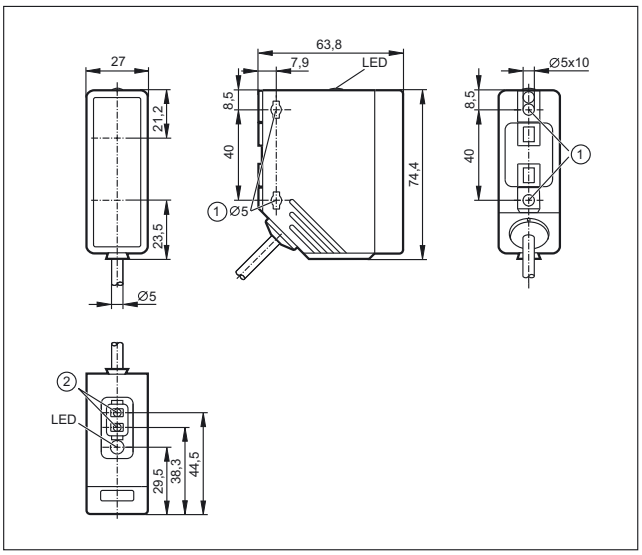
Scale drawings / drawing no. – CAD download: www.ifm.com

73



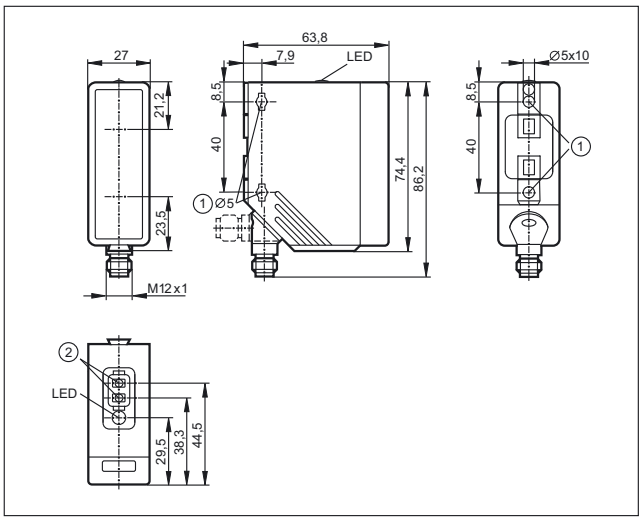
1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm., 2: Programming buttons

74



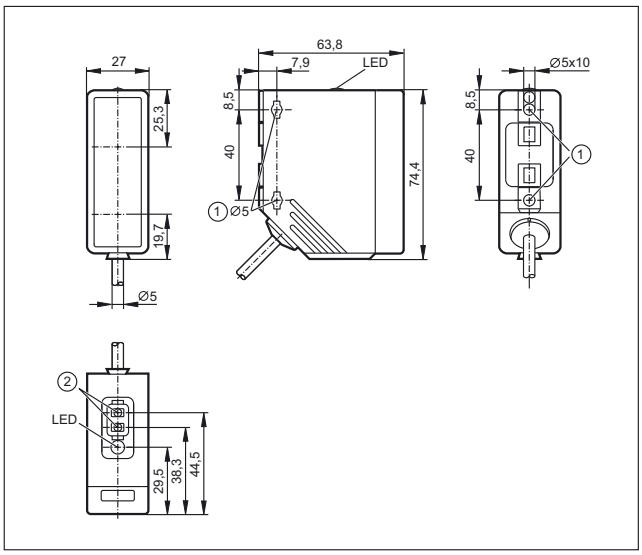
1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm., 2: Programming buttons

75



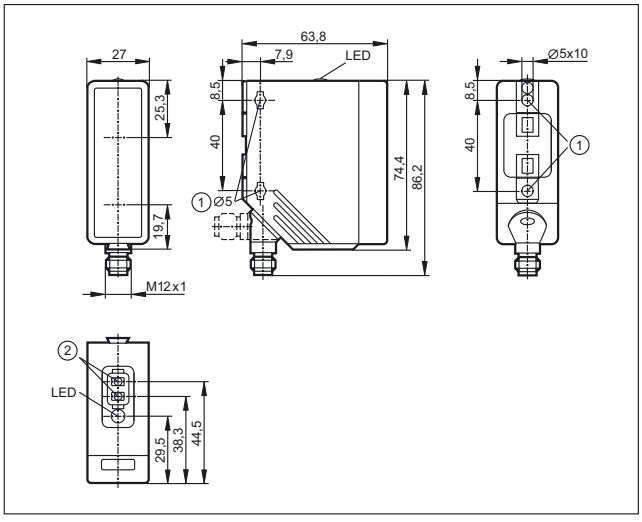
1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm., 2: Programming buttons

76



1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm., 2: Programming buttons

77

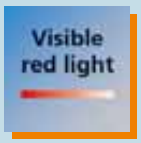


1: When a M5 mounting screw is used, the max. tightening torque is 2 Nm., 2: Programming buttons

Photoelectric fork and angle sensors for tiny objects

Photoelectric fork sensors / angle sensors

- **Quick set-up: no need to align transmitter and receiver**
- **Fine and precise light beam across the whole fork width**
- **Metal housing reduces distortion**
- **Light-on / dark-on mode selectable via rotary switch**
- **Easy sensitivity setting via potentiometer**



Optical fork and angle sensors

The photoelectric fork and angle sensors are made from distortion-resistant diecast zinc and feature a high switching frequency. Possible applications are in particular part monitoring in feeding technology and handling systems. Further application examples are belt edge and double feed monitoring.

Easy to use

Sensitivity setting using the potentiometer and setting of light-on / dark-on mode using the rotary switch are simple and time-saving. No complex adjustment is required because transmitter and receiver are already aligned towards each other. Due to the fine and precise red light beam which is constant across the entire fork width, out-of-balance monitoring of shafts can also be carried out.

Optical fork sensors

Type	Fork width (w) [mm]	Fork depth (d) [mm]	Smallest detectable object Ø [mm]	Switching frequency [Hz]	Output H = light-on D = dark-on	U_b [V]	Draw-ing no.	Order no.
Optical fork sensor · Type OPU · M8 connector · metal · DC · Wiring diagram no. 3 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	10	17	0.3	10000	H/D PNP/NPN	10...35	1	**OPU200**
Optical fork sensor · Type OPU · M8 connector · metal · DC · Wiring diagram no. 1 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	20	25	0.4	4000	H/D PNP	10...35	2	**OPU201**
	30	35	0.5	4000	H/D PNP	10...35	3	**OPU202**
	50	55	0.5	4000	H/D PNP	10...35	4	**OPU203**
	80	55	0.5	4000	H/D PNP	10...35	5	**OPU204**
	120	60	0.8	2000	H/D PNP	10...35	6	**OPU205**
Optical fork sensor · Type OPU · M8 connector · metal · DC · Wiring diagram no. 2 · Connector groups 1, 3, 78, 84, 145								
	20	25	0.4	4000	H/D NPN	10...35	2	**OPU207**
	30	35	0.5	4000	H/D NPN	10...35	3	**OPU208**
	50	55	0.5	4000	H/D NPN	10...35	4	**OPU209**
	80	55	0.5	4000	H/D NPN	10...35	5	**OPU210**
	120	60	0.8	2000	H/D NPN	10...35	6	**OPU211**

Laser fork sensors, laser class 2

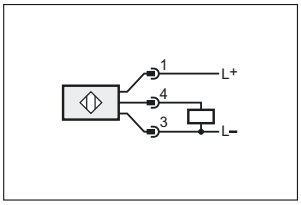
Type	Fork width (w) [mm]	Fork depth (d) [mm]	Smallest detectable object Ø [mm]	Switching frequency [Hz]	Output H = light-on D = dark-on	U_b [V]	Drawing no.	Order no.
Optical fork sensor · Type OPU · M8 connector · metal · DC · Wiring diagram no. 1 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	30	35	0.05	3000	H/D PNP	10...30	7	**OPU700**
	50	55	0.05	3000	H/D PNP	10...30	8	**OPU701**
	80	55	0.05	3000	H/D PNP	10...30	9	**OPU702**

Optical angle sensors

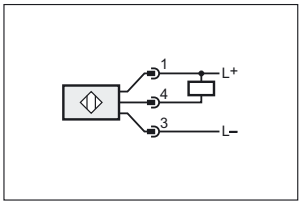
Type	Side length (x, y) [mm]	Sensor width (z) [mm]	Smallest detectable object Ø [mm]	Switching frequency [Hz]	Output H = light-on D = dark-on	U_b [V]	Drawing no.	Order no.
Optical angle sensor · Type OPL · M8 connector · metal · DC · Wiring diagram no. 1 · Connector groups 1, 2, 3, 78, 84, 145, 146								
	50	60	0.5	4000	H/D PNP	10...35	10	**OPL200**
	80	100	0.7	4000	H/D PNP	10...35	11	**OPL201**
Optical angle sensor · Type OPL · M8 connector · metal · DC · Wiring diagram no. 2 · Connector groups 1, 3, 78, 84, 145								
	50	60	0.5	4000	H/D NPN	10...35	10	**OPL202**
	80	100	0.7	4000	H/D NPN	10...35	11	**OPL203**

Wiring diagrams

1

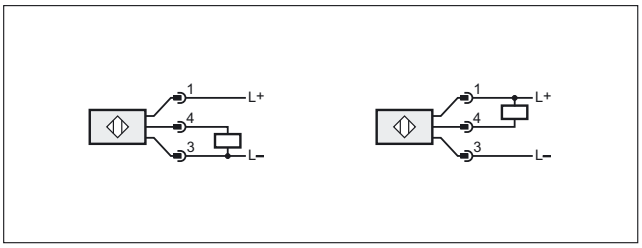


2



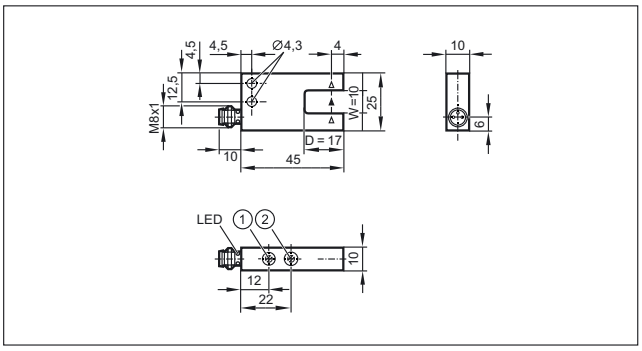
Wiring diagrams

3



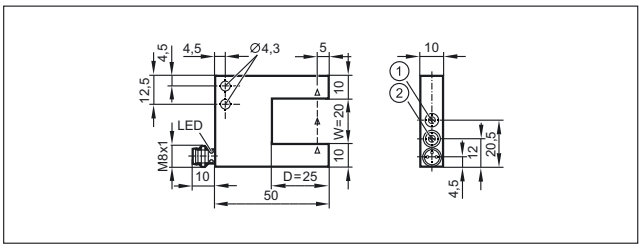
Scale drawings / drawing no. – CAD download: www.ifm.com

1



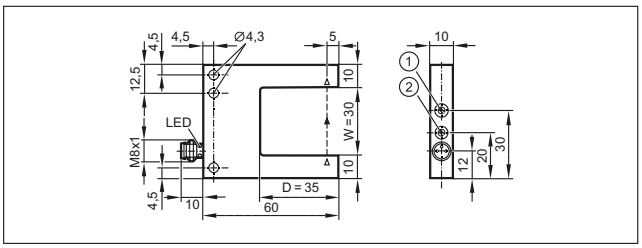
1: output function switch, 2: potentiometer sensitivity

2



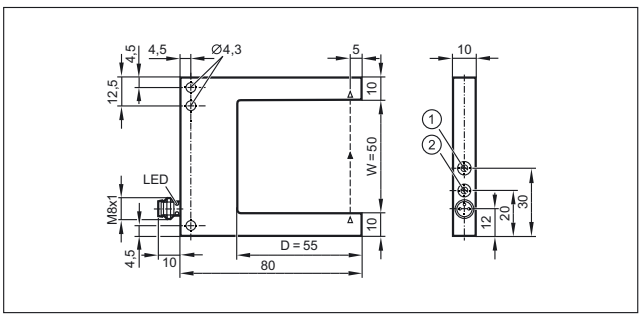
1: potentiometer sensitivity, 2: output function switch

3



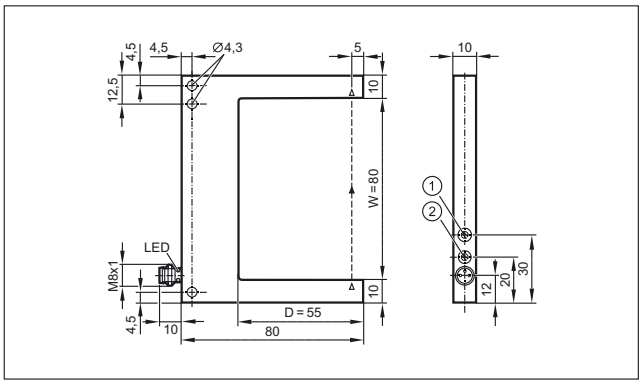
1: potentiometer sensitivity, 2: output function switch

4



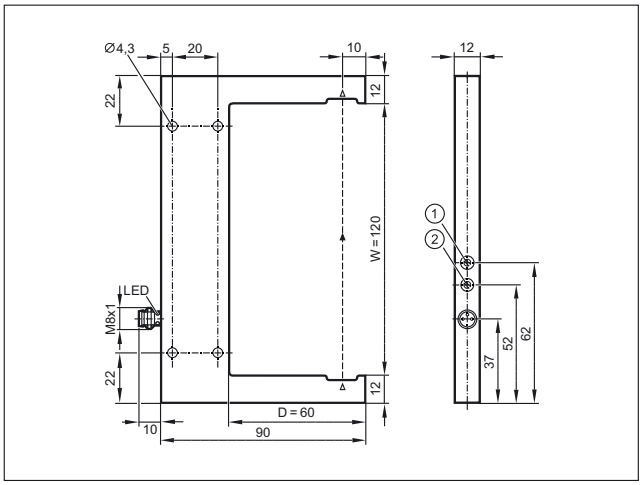
1: potentiometer sensitivity, 2: output function switch

5



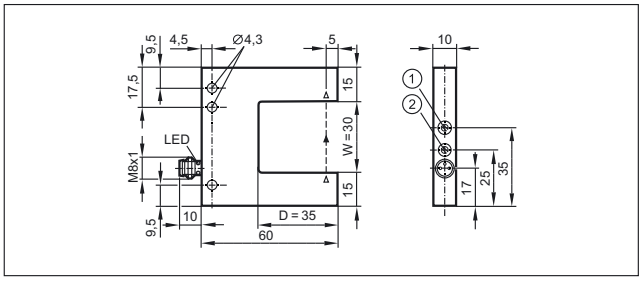
1: potentiometer sensitivity, 2: output function switch

6



1: potentiometer sensitivity, 2: output function switch

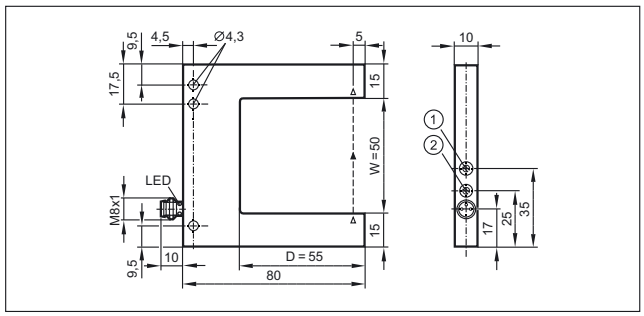
7



1: potentiometer sensitivity, 2: output function switch

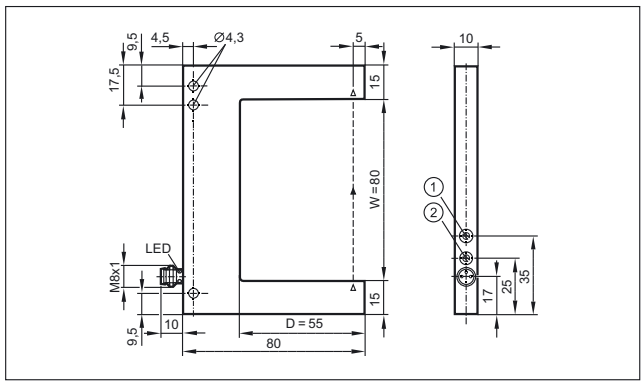
Scale drawings / drawing no. – CAD download: www.ifm.com

8



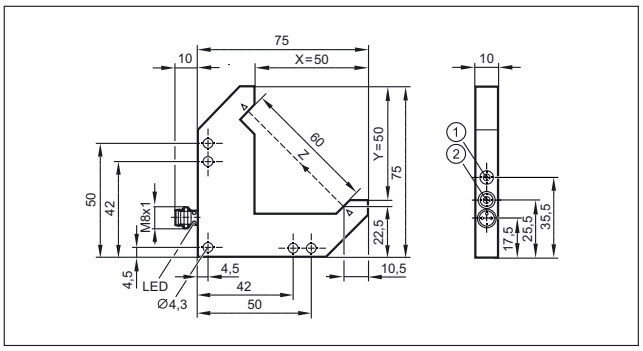
1: potentiometer sensitivity, 2: output function switch

9



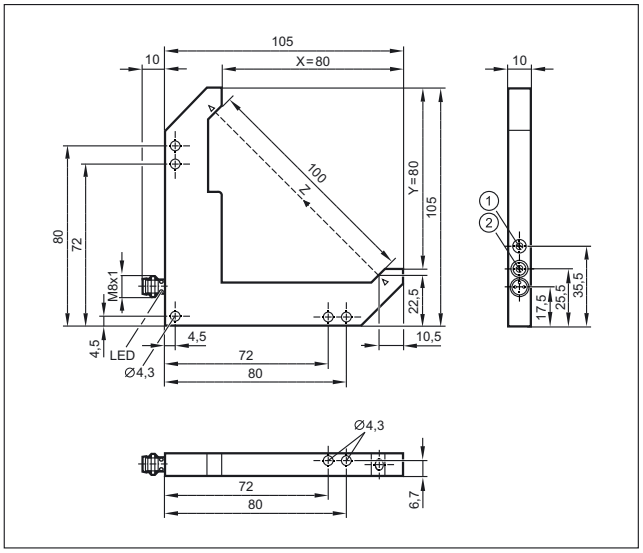
1: potentiometer sensitivity, 2: output function switch

10



1: potentiometer sensitivity, 2: output function switch

11



1: potentiometer sensitivity, 2: output function switch

Laser and distance sensors for precise object detection

Laser sensors / distance measurement sensors

Detection of tiny objects

Clearly visible red light for easy adjustment to the object.

Automatic switch point setting by pressing a pushbutton

Application sensors for special application areas

System components for fine adjustment

Laser sensors

Laser sensors are used where small objects or precise positions are to be detected. They are designed as through-beam sensors, retro-reflective sensors or diffuse reflection sensors.

Laser light consists of light waves of the same wave length with a fixed phase ratio (coherence). This this characteristic constitutes an important feature of laser sensors: their almost perfectly parallel light beam. The result: Long ranges can be achieved thanks to the small angle of divergence. The laser spot which is even in daylight clearly visible makes it easier to align the system.

Cylindrical OG housing (M18) Laser PerformanceLine, laser class 1

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP65 / IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	2 m	Red	5	–	1	1	**OGS701**
	Transmitter	60 m	Red	312	–	1	1	**OGS700**
Through-beam sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP65 / IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	2 m	Red	–	H/D PNP	2	2	**OGE701**
	Receiver	60 m	Red	–	H/D PNP	2	2	**OGE700**
Retro-reflective sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP65 / IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	0.2...2 m	Red	5	H/D PNP	2	2	**OGP701**
	Polarisation filter	0.2...15 m	Red	78	H/D PNP	2	2	**OGP700**
Diffuse reflection sensor · M12 connector · 10...36 DC · high-grade stainless steel · IP65 / IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	20...200 mm	Red	1.2	H/D PNP	2	2	**OGH700**

Rectangular housing OJ Laser PerformanceLine, lateral sensing face, laser class 1

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Transmitter	1 m	Red	< 4	–	1	3	**OJ5141**
	Receiver	1 m	Red	–	H/D PNP	3	3	**OJ5142**
	Transmitter	15 m	Red	< 24	–	1	3	**OJ5138**
	Receiver	15 m	Red	–	H/D PNP	3	3	**OJ5139**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Retro-reflective sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Polarisation filter	8 m	Red	< 12	H/D PNP	3	3	**OJ5136**
Diffuse reflection sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Background suppression	7...150 mm	Red	0.8	H/D PNP	3	4	**OJ5158**
	Background suppression	15...200 mm	Red	2 x 1	H/D PNP	3	5	**OJ5154**

Rectangular housing OJ Laser PerformanceLine, front sensing face, laser class 1

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Transmitter	15 m	Red	< 24	–	1	6	**OJ5116**
	Receiver	15 m	Red	–	H/D PNP	3	6	**OJ5117**
Retro-reflective sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Polarisation filter	8 m	Red	< 12	H/D PNP	3	7	**OJ5014**
	Polarisation filter	8 m	Red	< 12	H/D PNP	3	6	**OJ5114**
Diffuse reflection sensor · M8 connector · 10...30 DC · plastics · IP67 · Connector groups 4, 5, 80, 86, 147								
	Background suppression	15...200 mm	Red	2 x 1	H/D PNP	3	8	**OJ5152**

Rectangular housing O5 laser class 1

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Transmitter	60 m	Red	150	–	1	9	**O5S700**

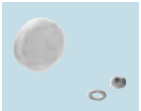
You can find wiring diagrams and scale drawings from page 293

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Through-beam sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Receiver	60 m	Red	–	H/D PNP	2	10	**O5E700**
Retro-reflective sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Polarisation filter	15 m	Red	40	H/D PNP	2	11	**O5P700**
Diffuse reflection sensor · M12 connector · 10...36 DC · plastics · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	20...200 mm	Red	1.2	H/D PNP	2	12	**O5H700**

Rectangular housing O1 Laser PerformanceLine with background suppression, laser class 2

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	0.2...10 m	–	< 15 x 15	normally open / closed programmable PNP	2	13	**O1D101**
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.2...10 m	–	< 15 x 15	normally open / closed programmable NPN	4	13	**O1D104**

Prismatic reflector

Type	Description	Order no.
	Prismatic reflector · Ø 10 mm · round · fixing by screw · M3 · for retro-reflective laser sensors · Housing materials: screw: stainless steel 316 / 1.4401 / spring washer: stainless steel 316 / 1.4401 / nut: stainless steel 316 / 1.4401 / front plate: PMMA / base: ABS	**E20990**
	Prismatic reflector · Ø 15 mm · round · fixing by screw · M3 · for retro-reflective laser sensors · Housing materials: screw: stainless steel 316 / 1.4401 / spring washer: stainless steel 316 / 1.4401 / nut: stainless steel 316 / 1.4401 / front plate: PMMA / base: ABS	**E20992**
	Prismatic reflector · Ø 19 mm · round · fixing by screw · M3 · for retro-reflective laser sensors · Housing materials: screw: stainless steel 316 / 1.4401 / spring washer: stainless steel 316 / 1.4401 / nut: stainless steel 316 / 1.4401 / front plate: PMMA / base: ABS	**E20993**
	Prismatic reflector · 11 x 11 mm · rectangular · fixing by screw · M3 · for retro-reflective laser sensors · Housing materials: screw: stainless steel 316 / 1.4401 / spring washer: stainless steel 316 / 1.4401 / nut: stainless steel 316 / 1.4401 / front plate: PMMA / base: ABS	**E20991**

Type	Description	Order no.
	Prismatic reflector · 14 x 23 mm · rectangular · for retro-reflective laser sensors · Housing materials: front plate: PMMA / base: ABS	**E20989**
	Prismatic reflector · 30 x 20 mm · rectangular · for retro-reflective laser sensors · Housing materials: front plate: PMMA / base: ABS	**E20994**
	Prismatic reflector · 50 x 10 mm · rectangular · for retro-reflective laser sensors · Housing materials: front plate: PMMA / base: ABS	**E20988**
	Prismatic reflector · 48 x 48 mm · rectangular · for retro-reflective laser sensors and glass and film detection · Housing materials: plastics	**E20722**

Software

Type	Description	Order no.
	LR DEVICE (USB stick) · Parameter setting of the units via the network · Software for clear online and offline parameter setting of IO-Link sensors via USB adapter · Use via USB connection cable (drivers are supplied): E30396 IO-Link interface or E30390 IO-Link master (note the respective data sheet) · IODD import and update from ifm's homepage · Reading of IODDs via storage media · Automatic sensor identification · Graphic representation of the process values and history incl. export function · Documentation and archiving · Transferable parameter sets · Full memory plug support for IO-Link 1.1	**QA0011**
	LR DEVICE (download) · Parameter setting of the units via the network · Software for clear online and offline parameter setting of IO-Link sensors via USB adapter · Use via USB connection cable (drivers are supplied): E30396 IO-Link interface or E30390 IO-Link master (note the respective data sheet) · IODD import and update from ifm's homepage · Reading of IODDs via storage media · Automatic sensor identification · Graphic representation of the process values and history incl. export function · Documentation and archiving · Transferable parameter sets · Full memory plug support for IO-Link 1.1	**QA0012**

Accessories OG housing

Type	Description	Order no.
	Mounting and fine adjustment bracket for laser units · Ø 18.5 mm · Clamp mounting · rod or free-standing depending on the clamp · for type OG · Housing materials: stainless steel 316Ti / 1.4571	**E20737**
	Mounting and fine adjustment bracket for laser units · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: high-grade stainless steel	**E21220**
	Mounting and fine adjustment bracket for laser units · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21219**
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20720**
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: diecast zinc / fixture: steel	**E20721**

You can find wiring diagrams and scale drawings from page 293

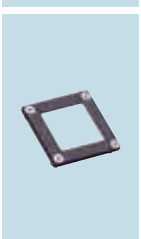
Type	Description	Order no.
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: high-grade stainless steel / fixture: high-grade stainless steel	**E21206**
	Mounting set · Ø 18.5 mm · Clamp mounting · rod mounting Ø 12 mm · for type OG, IG, KG · Housing materials: clamp: high-grade stainless steel / fixture: high-grade stainless steel	**E21207**

Accessories O5 housing

Type	Description	Order no.
	Angle bracket · for type O5 · Housing materials: stainless steel 316Ti / 1.4571	**E21087**
	Angle bracket · for type O5 · Housing materials: stainless steel 316Ti / 1.4571	**E21085**
	Angle bracket · O5, O4 · for mounting O5, O4 sensors instead of OL sensors · Dovetail clamp · Housing materials: Dovetail clamp: AlMgSi0.5 / fixture: AlMg3	**E21122**
	Dovetail clamp · for type DTS, O4, O5 · Housing materials: AlMgSi0.5	**E21088**
	Mounting brackets Mounting on the back of the unit · for type O5 · Housing materials: stainless steel 316Ti / 1.4571	**E21086**
	Mounting sleeve · O5 · for mounting O5 sensors instead of OC sensors · Housing materials: AlZnMgCu1.5 F51/52	**E21114**
	Mounting and fine adjustment bracket for laser units · Clamp mounting · rod or free-standing depending on the clamp · for type O5 · Housing materials: stainless steel 316Ti / 1.4571	**E20794**
	Mounting set · Clamp mounting · With protective cover · rod mounting Ø 12 mm · for type O5 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: high-grade stainless steel	**E21223**
	Mounting set · Clamp mounting · With protective cover · rod mounting Ø 12 mm · for type O5 · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21210**
	Mounting set · Clamp mounting · rod mounting Ø 12 mm · for type O5, O5D · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21211**
	Mounting set · Clamp mounting · rod mounting Ø 12 mm · for type O5, O5D · Housing materials: stainless steel 316Ti / 1.4571 / clamp: high-grade stainless steel	**E21212**

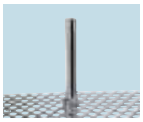
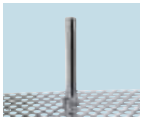
Type	Description	Order no.
	Mounting set · Clamp mounting · With protective cover · rod mounting Ø 14 mm · for type O5 · Housing materials: fixture: stainless steel 316Ti / 1.4571 / clamp: stainless steel	**E21142**
	Mounting set · Clamp mounting · With protective cover · Free-standing M10 · for type O5 · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21084**
	Mounting set · Clamp mounting · Free-standing M10 · for type O5 · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21083**
	Memory plug · Parameter memory for IO-Link sensors · Storage capacity: 2 Kbytes · Housing materials: PA PACM 12 / PET / sealing: FPM / nut: stainless steel 316L / 1.4404 / connector: TPU	**E30398**

Accessories O1 housing

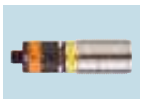
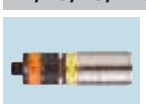
Type	Description	Order no.
	Prismatic reflector · 226 x 262 mm · rectangular · Housing materials: plastics	**E21159**
	Mounting adapter · O1D · for optical distance sensors · for type O1D · Housing materials: flange: stainless steel 316L / 1.4404 / sealing: FKM / Protective cover: PMMA transparent / screws: high-grade stainless steel / washers: high-grade stainless steel	**E21224**
	Mounting and fine adjustment bracket for laser units · O1D · Clamp mounting · rod or free-standing depending on the clamp · Housing materials: fixture: aluminium transparent anodised / plastics: POM / screws: stainless steel	**E1D100**
	Mounting set · E2D101 + E20938 + E20951	**E21079**
	Angle bracket · O1D, O4 · for type O1D, O4 · Housing materials: stainless steel 316L / 1.4404	**E21120**
	Protective bracket · O1D · for type O1D · Housing materials: Angle bracket: stainless steel 316 / 1.4401 / screws: stainless steel / housing: polyamide	**E21236**
	Protective cover · O1D · Housing materials: bezel: ZnAl4Cu1 finish black / window: PMMA transparent and colourless / sealing: FPM 75+/-5 Shore A black / screws: stainless steel	**E21133**
	Protective cover · O1D · Housing materials: bezel: ZnAl4Cu1 finish black / window: glass transparent and colourless / sealing: FPM 75+/-5 Shore A black / screws: stainless steel	**E21171**

You can find wiring diagrams and scale drawings from page 293

Accessories for system components

Type	Description	Order no.
	mounting rod · Ø 10 / M8 · Length: 150 mm · straight · Housing materials: stainless steel 316Ti / 1.4571	**E21081**
	mounting rod · Ø 10 / M8 · Length: 200 mm · angled · Housing materials: stainless steel 316Ti / 1.4571	**E80310**
	mounting rod · Ø 12 / M10 · Length: 130 mm · straight · Housing materials: stainless steel 316Ti / 1.4571	**E20938**
	mounting rod · Ø 12 / M10 · Length: 200 mm · angled · Housing materials: stainless steel 316Ti / 1.4571	**E20940**
	Head cap screw · M8 x 40 mm · ISO 4762 (DIN 912) · free-standing M8 · Housing materials: screw: steel galvanised	**E21204**
	Head cap screw · M10 x 45 mm · ISO 4762 (DIN 912) · Free-standing M10 · Housing materials: screw: steel galvanised	**E21208**
	Head cap screw · M10 x 45 mm · ISO 4762 (DIN 912) · Free-standing M10 · Housing materials: screw: high-grade stainless steel	**E21209**
	Cube · M10 · aluminium profile · Housing materials: diecast zinc	**E20951**

Cylindrical OI housing (M30) for optical distance measurement, laser class 2

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 · Display unit: cm, inch · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	5	14	**OID200**
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 · Display unit: cm · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	5	14	**OID201**
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 · Display unit: cm, inch · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary NPN	6	14	**OID202**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 / IP68 / IP69K · Display unit: cm · Connector groups 12, 13, 22, 24, 150, 152, 154, 155, 186, 190, 192, 194, 205								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	7	15	**OID204**

Cylindrical OI housing (M30) for optical distance measurement, laser class 1

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 · Display unit: cm, inch · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	5	14	**OID250**
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 · Display unit: cm · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	5	14	**OID251**
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 / IP68 / IP69K · Display unit: cm · Connector groups 12, 13, 22, 24, 150, 152, 154, 155, 186, 190, 192, 194, 205								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	7	15	**OID254**

Rectangular housing O5 for optical distance measurement, laser class 2

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 · Display unit: cm · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	5	16	**O5D100**
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 · Display unit: inch · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	5	16	**O5D101**
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 · Display unit: cm · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary NPN	6	16	**O5D102**
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	5	16	**O5D150**

You can find wiring diagrams and scale drawings from page 293

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP65 / IP67 · Display unit: inch · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.03...2 m	Red	< 5	2 switching outputs normally open / closed complementary PNP	5	16	**O5D151**

Rectangular housing O1 for optical distance measurement, laser class 1

Type	Operating principle	Range	Sampling rate [Hz]	Spot Ø at max. range [mm]	U_b [V]	Wiring diagr. no.	Draw-ing no.	Order no.
Output function OUT1: normally open / closed programmable OUT2: normally open / closed programmable or analogue (4...20 mA / 0...10 V, scalable) · Wiring diagram no. 8 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Photoelectric distance sensor	0.3...6 m	1...33	< 8 x 8	18...30	8	13	**O1D155**

Rectangular housing O1 for optical distance measurement, laser class 2

Type	Operating principle	Range	Sampling rate [Hz]	Spot Ø at max. range [mm]	U_b [V]	Wiring diagr. no.	Draw-ing no.	Order no.
Output function OUT1: normally open / closed programmable OUT2: normally open / closed programmable or analogue (4...20 mA / 0...10 V, scalable) · Wiring diagram no. 8 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Photoelectric distance sensor	1...75 m on reflector E21159	1...33	< 150 x 150	18...30	8	13	**O1D106**
	Photoelectric distance sensor	0.2...10 m	1...33	< 15 x 15	18...30	8	13	**O1D105**
Output function OUT1: normally open / closed programmable OUT2: normally open / closed programmable or analogue (4...20 mA / 0...10 V, scalable) · Wiring diagram no. 9 · Connector groups 12, 13, 22, 24, 150, 152, 154, 155, 186, 190, 192, 194, 205								
	Background suppression	0.2...10 m	1...50	< 15 x 15	18...30	9	13	**O1D100**
Output function OUT1: normally open / closed programmable OUT2: normally open / closed programmable or analogue (4...20 mA / 0...10 V, scalable) · Wiring diagram no. 10 · Connector groups 12, 13, 22, 24, 152, 155, 186, 192, 194, 205								
	Photoelectric distance sensor	0.2...10 m	1...50	< 15 x 15	18...30	10	13	**O1D103**

Rectangular housing O1 Laser PerformanceLine with background suppression, laser class 2

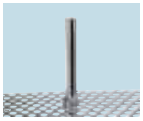
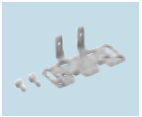
Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 11, 18, 19, 21, 23, 25, 148, 149, 150, 153, 154, 184, 188, 190, 193, 202, 203, 204								
	Background suppression	0.2...10 m	–	< 15 x 15	normally open / closed programmable PNP	2	13	**O1D101**

Type	Operating principle	Range	Type of light	Spot Ø at max. range [mm]	Output H = light-on D = dark-on	Wiring diagr. no.	Draw-ing no.	Order no.
Photoelectric distance sensor · M12 connector · 10...30 DC · metal · IP67 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Background suppression	0.2...10 m	–	< 15 x 15	normally open / closed programmable NPN	4	13	**O1D104**
Photoelectric distance sensor · M12 connector · 18...30 DC · metal · IP67 · Connector groups 12, 13, 22, 24, 150, 152, 154, 155, 186, 190, 192, 194, 205								
	Background suppression	0.2...10 m	–	< 15 x 15	OUT1: normally open/closed progr. OUT2: normally open/closed progr. or analogue (4...20 mA / 0...10 V, scalable) PNP	9	13	**O1D120**

Rectangular housing O1 for optical level measurement, laser class 2

Type	Operating principle	Range	Sampling rate [Hz]	Spot Ø at max. range [mm]	U_b [V]	Wiring diagr. no.	Draw-ing no.	Order no.
Output function OUT1: normally open / closed programmable OUT2: normally open / closed programmable or analogue (4...20 mA / 0...10 V, scalable) · Wiring diagram no. 8 · Connector groups 8, 10, 19, 21, 23, 25, 148, 149, 153, 184, 188, 193, 202								
	Optical level sensor	0.2...10 m	1...33	< 15 x 15	18...30	8	13	**O1D300**

Accessories OI design (M30)

Type	Description	Order no.
	Mounting set · Clamp mounting · Free-standing M10 · for type O5 · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21083**
	Mounting set · Clamp mounting · With protective cover · Free-standing M10 · for type O5 · Housing materials: stainless steel 316Ti / 1.4571 / clamp: diecast zinc	**E21084**
	mounting rod · Ø 12 / M10 · Length: 130 mm · straight · Housing materials: stainless steel 316Ti / 1.4571	**E20938**
	Cube · M10 · aluminium profile · Housing materials: diecast zinc	**E20951**
	Angle bracket · for type O5 · Housing materials: stainless steel 316Ti / 1.4571	**E21085**
	Angle bracket · for type O5 · Housing materials: stainless steel 316Ti / 1.4571	**E21087**
	Dovetail clamp · for type DTS, O4, O5 · Housing materials: AlMgSi0.5	**E21088**

You can find wiring diagrams and scale drawings from page 293