

/// IS 206



This miniature sensor convinces with ranges of up to 3.0 mm with completely flush mounting.

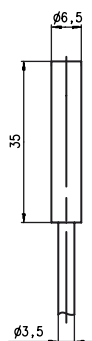
**Benefits:**

- Very small construction for integration in extremely confined spaces
- Large ranges offer broad application flexibility and sufficient function reserves for reliable detection even of different metals
- Short reaction times for reliable detection in dynamic processes

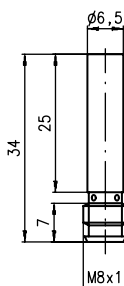
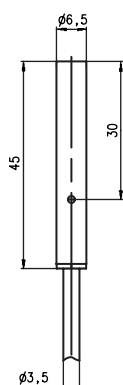


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Part no.	Part description	Operating range Sa Typ. operating range limit Sn	Switching frequency	Type of installation	Switching output 1	Description	Connection	Material
50109686	IS 206MP/4NO-3E0	0 ... 2.4 mm 3 mm	1,000 Hz	Embedded	Transistor, PNP, NO (normally open)	DC	Cable, 2,000 mm, 3-wire	Metal
50111438	ISS 206MP/4NO-2E0-S8.3	0 ... 1.6 mm 2 mm	5,000 Hz	Embedded	Transistor, PNP, NO (normally open)	DC	Connector, M8, 3-pin	Stainless steel
50121902	IS 206MP/4NO-2E0,300-S8.3W	0 ... 1.6 mm 2 mm	5,000 Hz	Embedded	Transistor, PNP, NO (normally open)	DC	Cable with connector, 300 mm, M8, 3-pin	Stainless steel
50121901	IS 206MP/4NO-2E0,150-S8.3W	0 ... 1.6 mm 2 mm	5,000 Hz	Embedded	Transistor, PNP, NO (normally open)	DC	Cable with connector, 150 mm, M8, 3-pin	Stainless steel
50111437	IS 206MP/4NO-2E0	0 ... 1.6 mm 2 mm	5,000 Hz	Embedded	Transistor, PNP, NO (normally open)	DC	Cable, 2,000 mm, 3-wire	Stainless steel

Dimensioned drawings: IS 206

IS 206 series



ISS 206 series

ACCESSORIES: MINIATURE SENSORS**Connection technology**

Connection cables

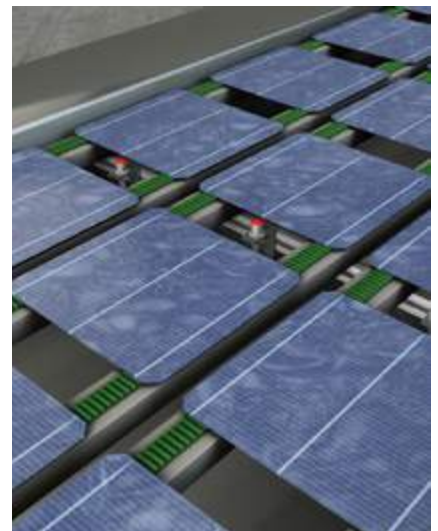
Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130865	KD U-M8-3W-P1-020	Connector, M8, angled, female	3-pin	2,000 mm	PUR
50130867	KD U-M8-3W-P1-050	Connector, M8, angled, female	3-pin	5,000 mm	PUR
50130860	KD U-M8-3W-V1-020	Connector, M8, angled, female	3-pin	2,000 mm	PVC
50130862	KD U-M8-3W-V1-050	Connector, M8, angled, female	3-pin	5,000 mm	PVC
50130842	KD U-M8-3A-P1-020	Connector, M8, axial, female	3-pin	2,000 mm	PUR
50130844	KD U-M8-3A-P1-050	Connector, M8, axial, female	3-pin	5,000 mm	PUR
50130837	KD U-M8-3A-V1-020	Connector, M8, axial, female	3-pin	2,000 mm	PVC
50130832	KD U-M8-3A-V1-050	Connector, M8, axial, female	3-pin	5,000 mm	PVC

Further connection cables can be found on our website

/ CAPACITIVE SENSORS

DETECTION OF SOLID, LIQUID OR GRANULAR OBJECTS

With these sensors highly structured and non-dimensionally stable objects e.g. the fill levels of liquids or bulk materials can also be detected in direct contact with the medium or through a non-metallic container wall and are also suitable for completeness inspections. These sensors also function reliably in an extremely dusty or dirty environment. An array of different designs and large operating ranges complement our product line to practically all areas of application in industrial automation.



/// Capacitive sensors, standard sensors, cylindrical



The compact cylindrical construction can be universally used for a wide range of detection tasks. The selection covers plastic housing, stainless steel and metal housing. PTFE (Teflon) is also available to meet higher chemical requirements. The adjustability of the detection range makes these models extremely flexible in use.



Direct access to the online product selector at www.leuze.com/en/capa-cylind

Part no.	Part description	Series	Type of installation	Switching distance Sn	Connection	Material	Output function	Dimension
50135758	LCS-1M12P-N08NNC-M12	LCS-1	Non-embedded	1 ... 8 mm	Connector, M12	Plastic	NPN, NC (normally closed)	12 mm x 75 mm
50135757	LCS-1M12P-N08NNO-M12	LCS-1	Non-embedded	1 ... 8 mm	Connector, M12	Plastic	NPN, NO (normally open)	12 mm x 75 mm
50135756	LCS-1M12P-N08PNC-M12	LCS-1	Non-embedded	1 ... 8 mm	Connector, M12	Plastic	PNP, NC (normally closed)	12 mm x 75 mm
50135755	LCS-1M12P-N08PNO-M12	LCS-1	Non-embedded	1 ... 8 mm	Connector, M12	Plastic	PNP, NO (normally open)	12 mm x 75 mm
50135778	LCS-1M18P-N15NNC-M12	LCS-1	Non-embedded	2 ... 15 mm	Connector, M12	Plastic	NPN, NC (normally closed)	18 mm x 88.5 mm
50135777	LCS-1M18P-N15NNO-M12	LCS-1	Non-embedded	2 ... 15 mm	Connector, M12	Plastic	NPN, NO (normally open)	18 mm x 88.5 mm
50135776	LCS-1M18P-N15PNC-M12	LCS-1	Non-embedded	2 ... 15 mm	Connector, M12	Plastic	PNP, NC (normally closed)	18 mm x 88.5 mm
50135775	LCS-1M18P-N15PNO-M12	LCS-1	Non-embedded	2 ... 15 mm	Connector, M12	Plastic	PNP, NO (normally open)	18 mm x 88.5 mm
50135798	LCS-1M30P-N25NNC-M12	LCS-1	Non-embedded	1 ... 25 mm	Connector, M12	Plastic	NPN, NC (normally closed)	30 mm x 78.5 mm
50135797	LCS-1M30P-N25NNO-M12	LCS-1	Non-embedded	1 ... 25 mm	Connector, M12	Plastic	NPN, NO (normally open)	30 mm x 78.5 mm
50135796	LCS-1M30P-N25PNC-M12	LCS-1	Non-embedded	1 ... 25 mm	Connector, M12	Plastic	PNP, NC (normally closed)	30 mm x 78.5 mm
50135795	LCS-1M30P-N25PNO-M12	LCS-1	Non-embedded	1 ... 25 mm	Connector, M12	Plastic	PNP, NO (normally open)	30 mm x 78.5 mm
50135750	LCS-1M12M-N08NNC-M12	LCS-1	Non-embedded	1 ... 8 mm	Connector, M12	Metal, stainless steel	NPN, NC (normally closed)	12 mm x 75 mm
50135749	LCS-1M12M-N08NNO-M12	LCS-1	Non-embedded	1 ... 8 mm	Connector, M12	Metal, stainless steel	NPN, NO (normally open)	12 mm x 75 mm
50135748	LCS-1M12M-N08PNC-M12	LCS-1	Non-embedded	1 ... 8 mm	Connector, M12	Metal, stainless steel	PNP, NC (normally closed)	12 mm x 75 mm
50135747	LCS-1M12M-N08PNO-M12	LCS-1	Non-embedded	1 ... 8 mm	Connector, M12	Metal, stainless steel	PNP, NO (normally open)	12 mm x 75 mm
50135770	LCS-1M18M-N15NNC-M12	LCS-1	Non-embedded	2 ... 15 mm	Connector, M12	Metal, stainless steel	NPN, NC (normally closed)	18 mm x 88.5 mm
50135769	LCS-1M18M-N15NNO-M12	LCS-1	Non-embedded	2 ... 15 mm	Connector, M12	Metal, stainless steel	NPN, NO (normally open)	18 mm x 88.5 mm
50135768	LCS-1M18M-N15PNC-M12	LCS-1	Non-embedded	2 ... 15 mm	Connector, M12	Metal, stainless steel	PNP, NC (normally closed)	18 mm x 88.5 mm
50135767	LCS-1M18M-N15PNO-M12	LCS-1	Non-embedded	2 ... 15 mm	Connector, M12	Metal, stainless steel	PNP, NO (normally open)	18 mm x 88.5 mm
50135790	LCS-1M30M-N25NNC-M12	LCS-1	Non-embedded	1 ... 25 mm	Connector, M12	Metal, stainless steel	NPN, NC (normally closed)	30 mm x 78.5 mm
50135789	LCS-1M30M-N25NNO-M12	LCS-1	Non-embedded	1 ... 25 mm	Connector, M12	Metal, stainless steel	NPN, NO (normally open)	30 mm x 78.5 mm
50135788	LCS-1M30M-N25PNC-M12	LCS-1	Non-embedded	1 ... 25 mm	Connector, M12	Metal, stainless steel	PNP, NC (normally closed)	30 mm x 78.5 mm
50135787	LCS-1M30M-N25PNO-M12	LCS-1	Non-embedded	1 ... 25 mm	Connector, M12	Metal, stainless steel	PNP, NO (normally open)	30 mm x 78.5 mm
50135762	LCS-1M12P-N08NNC-K020P	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	NPN, NC (normally closed)	12 mm x 61 mm
50135761	LCS-1M12P-N08NNO-K020P	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	NPN, NO (normally open)	12 mm x 61 mm
50135760	LCS-1M12P-N08PNC-K020P	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	PNP, NC (normally closed)	12 mm x 61 mm
50135759	LCS-1M12P-N08PNO-K020P	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	PNP, NO (normally open)	12 mm x 61 mm
50135766	LCS-1M12T-N08NNC-K020T	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	NPN, NC (normally closed)	12 mm x 53 mm
50135765	LCS-1M12T-N08NNO-K020T	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	NPN, NO (normally open)	12 mm x 53 mm
50135764	LCS-1M12T-N08PNC-K020T	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	PNP, NC (normally closed)	12 mm x 53 mm
50135763	LCS-1M12T-N08PNO-K020T	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	PNP, NO (normally open)	12 mm x 53 mm
50135782	LCS-1M18P-N15NNC-K020P	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	NPN, NC (normally closed)	18 mm x 75.5 mm
50135781	LCS-1M18P-N15NNO-K020P	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	NPN, NO (normally open)	18 mm x 75.5 mm
50135780	LCS-1M18P-N15PNC-K020P	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	PNP, NC (normally closed)	18 mm x 75.5 mm
50135779	LCS-1M18P-N15PNO-K020P	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	PNP, NO (normally open)	18 mm x 75.5 mm
50135786	LCS-1M18T-N15NNC-K020T	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	NPN, NC (normally closed)	18 mm x 73 mm
50135785	LCS-1M18T-N15NNO-K020T	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	NPN, NO (normally open)	18 mm x 73 mm
50135784	LCS-1M18T-N15PNC-K020T	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	PNP, NC (normally closed)	18 mm x 73 mm
50135783	LCS-1M18T-N15PNO-K020T	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	PNP, NO (normally open)	18 mm x 73 mm
50135802	LCS-1M30P-N25NNC-K020P	LCS-1	Non-embedded	1 ... 25 mm	Cable	Plastic	NPN, NC (normally closed)	30 mm x 66.5 mm
50135801	LCS-1M30P-N25NNO-K020P	LCS-1	Non-embedded	1 ... 25 mm	Cable	Plastic	NPN, NO (normally open)	30 mm x 66.5 mm
50135800	LCS-1M30P-N25PNC-K020P	LCS-1	Non-embedded	1 ... 25 mm	Cable	Plastic	PNP, NC (normally closed)	30 mm x 66.5 mm
50135799	LCS-1M30P-N25PNO-K020P	LCS-1	Non-embedded	1 ... 25 mm	Cable	Plastic	PNP, NO (normally open)	30 mm x 66.5 mm
50135806	LCS-1M30T-N30NNC-K020T	LCS-1	Non-embedded	2 ... 30 mm	Cable	Plastic	NPN, NC (normally closed)	30 mm x 72 mm
50135805	LCS-1M30T-N30NNO-K020T	LCS-1	Non-embedded	2 ... 30 mm	Cable	Plastic	NPN, NO (normally open)	30 mm x 72 mm
50135804	LCS-1M30T-N30PNC-K020T	LCS-1	Non-embedded	2 ... 30 mm	Cable	Plastic	PNP, NC (normally closed)	30 mm x 72 mm
50135803	LCS-1M30T-N30PNO-K020T	LCS-1	Non-embedded	2 ... 30 mm	Cable	Plastic	PNP, NO (normally open)	30 mm x 72 mm
50135754	LCS-1M12M-N08NNC-K020P	LCS-1	Non-embedded	1 ... 8 mm	Cable	Metal, stainless steel	NPN, NC (normally closed)	12 mm x 61 mm
50135753	LCS-1M12M-N08NNO-K020P	LCS-1	Non-embedded	1 ... 8 mm	Cable	Metal, stainless steel	NPN, NO (normally open)	12 mm x 61 mm
50135752	LCS-1M12M-N08PNC-K020P	LCS-1	Non-embedded	1 ... 8 mm	Cable	Metal, stainless steel	PNP, NC (normally closed)	12 mm x 61 mm
50135751	LCS-1M12M-N08PNO-K020P	LCS-1	Non-embedded	1 ... 8 mm	Cable	Metal, stainless steel	PNP, NO (normally open)	12 mm x 61 mm
50135774	LCS-1M18M-N15NNC-K020P	LCS-1	Non-embedded	2 ... 15 mm	Cable	Metal, stainless steel	NPN, NC (normally closed)	18 mm x 75.5 mm
50135773	LCS-1M18M-N15NNO-K020P	LCS-1	Non-embedded	2 ... 15 mm	Cable	Metal, stainless steel	NPN, NO (normally open)	18 mm x 75.5 mm

Part no.	Part description	Series	Type of installation	Switching distance Sn	Connection	Material	Output function	Dimension
50135772	LCS-1M18M-N15PNC-K020P	LCS-1	Non-embedded	2 ... 15 mm	Cable	Metal, stainless steel	PNP, NC (normally closed)	18 mm x 75.5 mm
50135771	LCS-1M18M-N15PNO-K020P	LCS-1	Non-embedded	2 ... 15 mm	Cable	Metal, stainless steel	PNP, NO (normally open)	18 mm x 75.5 mm
50135794	LCS-1M30M-N25NNC-K020P	LCS-1	Non-embedded	1 ... 25 mm	Cable	Metal, stainless steel	NPN, NC (normally closed)	30 mm x 66.5 mm
50135793	LCS-1M30M-N25NNO-K020P	LCS-1	Non-embedded	1 ... 25 mm	Cable	Metal, stainless steel	NPN, NO (normally open)	30 mm x 66.5 mm
50135792	LCS-1M30M-N25PNC-K020P	LCS-1	Non-embedded	1 ... 25 mm	Cable	Metal, stainless steel	PNP, NC (normally closed)	30 mm x 66.5 mm
50135791	LCS-1M30M-N25PNO-K020P	LCS-1	Non-embedded	1 ... 25 mm	Cable	Metal, stainless steel	PNP, NO (normally open)	30 mm x 66.5 mm
50135699	LCS-1M12P-F04NNC-M12	LCS-1	Embedded	1 ... 4 mm	Connector, M12	Plastic	NPN, NC (normally closed)	12 mm x 75 mm
50135698	LCS-1M12P-F04NNO-M12	LCS-1	Embedded	1 ... 4 mm	Connector, M12	Plastic	NPN, NO (normally open)	12 mm x 75 mm
50135697	LCS-1M12P-F04PNC-M12	LCS-1	Embedded	1 ... 4 mm	Connector, M12	Plastic	PNP, NC (normally closed)	12 mm x 75 mm
50135696	LCS-1M12P-F04PNO-M12	LCS-1	Embedded	1 ... 4 mm	Connector, M12	Plastic	PNP, NO (normally open)	12 mm x 75 mm
50135715	LCS-1M18P-F08NNC-M12	LCS-1	Embedded	1 ... 8 mm	Connector, M12	Plastic	NPN, NC (normally closed)	18 mm x 88.5 mm
50135714	LCS-1M18P-F08NNO-M12	LCS-1	Embedded	1 ... 8 mm	Connector, M12	Plastic	NPN, NO (normally open)	18 mm x 88.5 mm
50135713	LCS-1M18P-F08PNC-M12	LCS-1	Embedded	1 ... 8 mm	Connector, M12	Plastic	PNP, NC (normally closed)	18 mm x 88.5 mm
50135712	LCS-1M18P-F08PNO-M12	LCS-1	Embedded	1 ... 8 mm	Connector, M12	Plastic	PNP, NO (normally open)	18 mm x 88.5 mm
50135733	LCS-1M30P-F15NNC-M12	LCS-1	Embedded	2 ... 15 mm	Connector, M12	Plastic	NPN, NC (normally closed)	30 mm x 79 mm
50135732	LCS-1M30P-F15NNO-M12	LCS-1	Embedded	2 ... 15 mm	Connector, M12	Plastic	NPN, NO (normally open)	30 mm x 79 mm
50135731	LCS-1M30P-F15PNC-M12	LCS-1	Embedded	2 ... 15 mm	Connector, M12	Plastic	PNP, NC (normally closed)	30 mm x 79 mm
50135730	LCS-1M30P-F15PNO-M12	LCS-1	Embedded	2 ... 15 mm	Connector, M12	Plastic	PNP, NO (normally open)	30 mm x 79 mm
50135691	LCS-1M12M-F04NNC-M12	LCS-1	Embedded	1 ... 4 mm	Connector, M12	Metal, stainless steel	NPN, NC (normally closed)	12 mm x 75 mm
50135690	LCS-1M12M-F04NNO-M12	LCS-1	Embedded	1 ... 4 mm	Connector, M12	Metal, stainless steel	NPN, NO (normally open)	12 mm x 75 mm
50135689	LCS-1M12M-F04PNC-M12	LCS-1	Embedded	1 ... 4 mm	Connector, M12	Metal, stainless steel	PNP, NC (normally closed)	12 mm x 75 mm
50135688	LCS-1M12M-F04PNO-M12	LCS-1	Embedded	1 ... 4 mm	Connector, M12	Metal, stainless steel	PNP, NO (normally open)	12 mm x 75 mm
50135707	LCS-1M18M-F08NNC-M12	LCS-1	Embedded	1 ... 8 mm	Connector, M12	Metal, stainless steel	NPN, NC (normally closed)	18 mm x 88.5 mm
50135706	LCS-1M18M-F08NNO-M12	LCS-1	Embedded	1 ... 8 mm	Connector, M12	Metal, stainless steel	NPN, NO (normally open)	18 mm x 88.5 mm
50135705	LCS-1M18M-F08PNC-M12	LCS-1	Embedded	1 ... 8 mm	Connector, M12	Metal, stainless steel	PNP, NC (normally closed)	18 mm x 88.5 mm
50135704	LCS-1M18M-F08PNO-M12	LCS-1	Embedded	1 ... 8 mm	Connector, M12	Metal, stainless steel	PNP, NO (normally open)	18 mm x 88.5 mm
50135725	LCS-1M30M-F15NNC-M12	LCS-1	Embedded	2 ... 15 mm	Connector, M12	Metal, stainless steel	NPN, NC (normally closed)	30 mm x 79 mm
50135724	LCS-1M30M-F15NNO-M12	LCS-1	Embedded	2 ... 15 mm	Connector, M12	Metal, stainless steel	NPN, NO (normally open)	30 mm x 79 mm
50135723	LCS-1M30M-F15PNC-M12	LCS-1	Embedded	2 ... 15 mm	Connector, M12	Metal, stainless steel	PNP, NC (normally closed)	30 mm x 79 mm
50135722	LCS-1M30M-F15PNO-M12	LCS-1	Embedded	2 ... 15 mm	Connector, M12	Metal, stainless steel	PNP, NO (normally open)	30 mm x 79 mm
50135703	LCS-1M12P-F04NNC-K020P	LCS-1	Embedded	1 ... 4 mm	Cable	Plastic	NPN, NC (normally closed)	12 mm x 61 mm
50135702	LCS-1M12P-F04NNO-K020P	LCS-1	Embedded	1 ... 4 mm	Cable	Plastic	NPN, NO (normally open)	12 mm x 61 mm
50135701	LCS-1M12P-F04PNC-K020P	LCS-1	Embedded	1 ... 4 mm	Cable	Plastic	PNP, NC (normally closed)	12 mm x 61 mm
50135700	LCS-1M12P-F04PNO-K020P	LCS-1	Embedded	1 ... 4 mm	Cable	Plastic	PNP, NO (normally open)	12 mm x 61 mm
50135719	LCS-1M18P-F08NNC-K020P	LCS-1	Embedded	1 ... 8 mm	Cable	Plastic	NPN, NC (normally closed)	18 mm x 75 mm
50135718	LCS-1M18P-F08NNO-K020P	LCS-1	Embedded	1 ... 8 mm	Cable	Plastic	NPN, NO (normally open)	18 mm x 75 mm
50135717	LCS-1M18P-F08PNC-K020P	LCS-1	Embedded	1 ... 8 mm	Cable	Plastic	PNP, NC (normally closed)	18 mm x 75 mm
50135716	LCS-1M18P-F08PNO-K020P	LCS-1	Embedded	1 ... 8 mm	Cable	Plastic	PNP, NO (normally open)	18 mm x 75 mm
50135737	LCS-1M30P-F15NNC-K020P	LCS-1	Embedded	2 ... 15 mm	Cable	Plastic	NPN, NC (normally closed)	30 mm x 66.5 mm
50135736	LCS-1M30P-F15NNO-K020P	LCS-1	Embedded	2 ... 15 mm	Cable	Plastic	NPN, NO (normally open)	30 mm x 66.5 mm
50135735	LCS-1M30P-F15PNC-K020P	LCS-1	Embedded	2 ... 15 mm	Cable	Plastic	PNP, NC (normally closed)	30 mm x 66.5 mm
50135734	LCS-1M30P-F15PNO-K020P	LCS-1	Embedded	2 ... 15 mm	Cable	Plastic	PNP, NO (normally open)	30 mm x 66.5 mm
50135695	LCS-1M12M-F04NNC-K020P	LCS-1	Embedded	1 ... 4 mm	Cable	Metal, stainless steel	NPN, NC (normally closed)	12 mm x 61 mm
50135694	LCS-1M12M-F04NNO-K020P	LCS-1	Embedded	1 ... 4 mm	Cable	Metal, stainless steel	NPN, NO (normally open)	12 mm x 61 mm
50135693	LCS-1M12M-F04PNC-K020P	LCS-1	Embedded	1 ... 4 mm	Cable	Metal, stainless steel	PNP, NC (normally closed)	12 mm x 61 mm
50135692	LCS-1M12M-F04PNO-K020P	LCS-1	Embedded	1 ... 4 mm	Cable	Metal, stainless steel	PNP, NO (normally open)	12 mm x 61 mm
50135711	LCS-1M18M-F08NNC-K020P	LCS-1	Embedded	1 ... 8 mm	Cable	Metal, stainless steel	NPN, NC (normally closed)	18 mm x 75.5 mm
50135710	LCS-1M18M-F08NNO-K020P	LCS-1	Embedded	1 ... 8 mm	Cable	Metal, stainless steel	NPN, NO (normally open)	18 mm x 75.5 mm
50135709	LCS-1M18M-F08PNC-K020P	LCS-1	Embedded	1 ... 8 mm	Cable	Metal, stainless steel	PNP, NC (normally closed)	18 mm x 75.5 mm
50135708	LCS-1M18M-F08PNO-K020P	LCS-1	Embedded	1 ... 8 mm	Cable	Metal, stainless steel	PNP, NO (normally open)	18 mm x 75.5 mm
50135729	LCS-1M30M-F15NNC-K020P	LCS-1	Embedded	2 ... 15 mm	Cable	Metal, stainless steel	NPN, NC (normally closed)	30 mm x 66.5 mm
50135728	LCS-1M30M-F15NNO-K020P	LCS-1	Embedded	2 ... 15 mm	Cable	Metal, stainless steel	NPN, NO (normally open)	30 mm x 66.5 mm
50135727	LCS-1M30M-F15PNC-K020P	LCS-1	Embedded	2 ... 15 mm	Cable	Metal, stainless steel	PNP, NC (normally closed)	30 mm x 66.5 mm
50135726	LCS-1M30M-F15PNO-K020P	LCS-1	Embedded	2 ... 15 mm	Cable	Metal, stainless steel	PNP, NO (normally open)	30 mm x 66.5 mm
50136576	LCS-2M12B-N06NNC-M12	LCS-2	Non-embedded	1 ... 6 mm	Connector, M12	Metal	NPN, NC (normally closed)	12 mm x 68 mm
50136575	LCS-2M12B-N06NNO-M12	LCS-2	Non-embedded	1 ... 6 mm	Connector, M12	Metal	NPN, NO (normally open)	12 mm x 68 mm
50136574	LCS-2M12B-N06PNC-M12	LCS-2	Non-embedded	1 ... 6 mm	Connector, M12	Metal	PNP, NC (normally closed)	12 mm x 68 mm
50136573	LCS-2M12B-N06PNO-M12	LCS-2	Non-embedded	1 ... 6 mm	Connector, M12	Metal	PNP, NO (normally open)	12 mm x 68 mm
50136596	LCS-2M18B-N15NNC-M12	LCS-2	Non-embedded	2 ... 15 mm	Connector, M12	Metal	NPN, NC (normally closed)	18 mm x 85 mm
50136595	LCS-2M18B-N15NNO-M12	LCS-2	Non-embedded	2 ... 15 mm	Connector, M12	Metal	NPN, NO (normally open)	18 mm x 85 mm
50136594	LCS-2M18B-N15PNC-M12	LCS-2	Non-embedded	2 ... 15 mm	Connector, M12	Metal	PNP, NC (normally closed)	18 mm x 85 mm
50136593	LCS-2M18B-N15PNO-M12	LCS-2	Non-embedded	2 ... 15 mm	Connector, M12	Metal	PNP, NO (normally open)	18 mm x 85 mm
50136616	LCS-2M30B-N30NNC-M12	LCS-2	Non-embedded	2 ... 30 mm	Connector, M12	Metal	NPN, NC (normally closed)	30 mm x 98 mm
50136615	LCS-2M30B-N30NNO-M12	LCS-2	Non-embedded	2 ... 30 mm	Connector, M12	Metal	NPN, NO (normally open)	30 mm x 98 mm
50136614	LCS-2M30B-N30PNC-M12	LCS-2	Non-embedded	2 ... 30 mm	Connector, M12	Metal	PNP, NC (normally closed)	30 mm x 98 mm
50136613	LCS-2M30B-N30PNO-M12	LCS-2	Non-embedded	2 ... 30 mm	Connector, M12	Metal	PNP, NO (normally open)	30 mm x 98 mm
50136584	LCS-2M12P-N06NNC-M12	LCS-2	Non-embedded	1 ... 6 mm	Connector, M12	Plastic	NPN, NC (normally closed)	12 mm x 68 mm
50136583	LCS-2M12P-N06NNO-M12	LCS-2	Non-embedded	1 ... 6 mm	Connector, M12	Plastic	NPN, NO (normally open)	12 mm x 68 mm
50136582	LCS-2M12P-N06PNC-M12	LCS-2	Non-embedded	1 ... 6 mm	Connector, M12	Plastic	PNP, NC (normally closed)	12 mm x 68 mm
50136581	LCS-2M12P-N06PNO-M12	LCS-2	Non-embedded	1 ... 6 mm	Connector, M12	Plastic	PNP, NO (normally open)	12 mm x 68 mm
50136604	LCS-2M18P-N15NNC-M12	LCS-2	Non-embedded	2 ... 15 mm	Connector, M12	Plastic	NPN, NC (normally closed)	18 mm x 85 mm

Part no.	Part description	Series	Type of installation	Switching distance Sn	Connection	Material	Output function	Dimension
50136603	LCS-2M18P-N15NNO-M12	LCS-2	Non-embedded	2 ... 15 mm	Connector, M12	Plastic	NPN, NO (normally open)	18 mm x 85 mm
50136602	LCS-2M18P-N15PNC-M12	LCS-2	Non-embedded	2 ... 15 mm	Connector, M12	Plastic	PNP, NC (normally closed)	18 mm x 85 mm
50136601	LCS-2M18P-N15PNO-M12	LCS-2	Non-embedded	2 ... 15 mm	Connector, M12	Plastic	PNP, NO (normally open)	18 mm x 85 mm
50136624	LCS-2M30P-N30NNC-M12	LCS-2	Non-embedded	2 ... 30 mm	Connector, M12	Plastic	NPN, NC (normally closed)	30 mm x 98 mm
50136623	LCS-2M30P-N30NNO-M12	LCS-2	Non-embedded	2 ... 30 mm	Connector, M12	Plastic	NPN, NO (normally open)	30 mm x 98 mm
50136622	LCS-2M30P-N30PNC-M12	LCS-2	Non-embedded	2 ... 30 mm	Connector, M12	Plastic	PNP, NC (normally closed)	30 mm x 98 mm
50136621	LCS-2M30P-N30PNO-M12	LCS-2	Non-embedded	2 ... 30 mm	Connector, M12	Plastic	PNP, NO (normally open)	30 mm x 98 mm
50136580	LCS-2M12B-N06NNC-K020V	LCS-2	Non-embedded	1 ... 6 mm	Cable	Metal	NPN, NC (normally closed)	12 mm x 55 mm
50136579	LCS-2M12B-N06NNO-K020V	LCS-2	Non-embedded	1 ... 6 mm	Cable	Metal	NPN, NO (normally open)	12 mm x 55 mm
50136578	LCS-2M12B-N06PNC-K020V	LCS-2	Non-embedded	1 ... 6 mm	Cable	Metal	PNP, NC (normally closed)	12 mm x 55 mm
50136577	LCS-2M12B-N06PNO-K020V	LCS-2	Non-embedded	1 ... 6 mm	Cable	Metal	PNP, NO (normally open)	12 mm x 55 mm
50136600	LCS-2M18B-N15NNC-K020V	LCS-2	Non-embedded	2 ... 15 mm	Cable	Metal	NPN, NC (normally closed)	18 mm x 70 mm
50136599	LCS-2M18B-N15NNO-K020V	LCS-2	Non-embedded	2 ... 15 mm	Cable	Metal	NPN, NO (normally open)	18 mm x 70 mm
50136598	LCS-2M18B-N15PNC-K020V	LCS-2	Non-embedded	2 ... 15 mm	Cable	Metal	PNP, NC (normally closed)	18 mm x 70 mm
50136597	LCS-2M18B-N15PNO-K020V	LCS-2	Non-embedded	2 ... 15 mm	Cable	Metal	PNP, NO (normally open)	18 mm x 70 mm
50136620	LCS-2M30B-N30NNC-K020V	LCS-2	Non-embedded	2 ... 30 mm	Cable	Metal	NPN, NC (normally closed)	30 mm x 85 mm
50136619	LCS-2M30B-N30NNO-K020V	LCS-2	Non-embedded	2 ... 30 mm	Cable	Metal	NPN, NO (normally open)	30 mm x 85 mm
50136618	LCS-2M30B-N30PNC-K020V	LCS-2	Non-embedded	2 ... 30 mm	Cable	Metal	PNP, NC (normally closed)	30 mm x 85 mm
50136617	LCS-2M30B-N30PNO-K020V	LCS-2	Non-embedded	2 ... 30 mm	Cable	Metal	PNP, NO (normally open)	30 mm x 85 mm
50136588	LCS-2M12P-N06NNC-K020V	LCS-2	Non-embedded	1 ... 6 mm	Cable	Plastic	NPN, NC (normally closed)	12 mm x 55 mm
50136587	LCS-2M12P-N06NNO-K020V	LCS-2	Non-embedded	1 ... 6 mm	Cable	Plastic	NPN, NO (normally open)	12 mm x 55 mm
50136586	LCS-2M12P-N06PNC-K020V	LCS-2	Non-embedded	1 ... 6 mm	Cable	Plastic	PNP, NC (normally closed)	12 mm x 55 mm
50136585	LCS-2M12P-N06PNO-K020V	LCS-2	Non-embedded	1 ... 6 mm	Cable	Plastic	PNP, NO (normally open)	12 mm x 55 mm
50136608	LCS-2M18P-N15NNC-K020V	LCS-2	Non-embedded	2 ... 15 mm	Cable	Plastic	NPN, NC (normally closed)	18 mm x 70 mm
50136607	LCS-2M18P-N15NNO-K020V	LCS-2	Non-embedded	2 ... 15 mm	Cable	Plastic	NPN, NO (normally open)	18 mm x 70 mm
50136606	LCS-2M18P-N15PNC-K020V	LCS-2	Non-embedded	2 ... 15 mm	Cable	Plastic	PNP, NC (normally closed)	18 mm x 70 mm
50136605	LCS-2M18P-N15PNO-K020V	LCS-2	Non-embedded	2 ... 15 mm	Cable	Plastic	PNP, NO (normally open)	18 mm x 70 mm
50136628	LCS-2M30P-N30NNC-K020V	LCS-2	Non-embedded	2 ... 30 mm	Cable	Plastic	NPN, NC (normally closed)	30 mm x 85 mm
50136627	LCS-2M30P-N30NNO-K020V	LCS-2	Non-embedded	2 ... 30 mm	Cable	Plastic	NPN, NO (normally open)	30 mm x 85 mm
50136626	LCS-2M30P-N30PNC-K020V	LCS-2	Non-embedded	2 ... 30 mm	Cable	Plastic	PNP, NC (normally closed)	30 mm x 85 mm
50136625	LCS-2M30P-N30PNO-K020V	LCS-2	Non-embedded	2 ... 30 mm	Cable	Plastic	PNP, NO (normally open)	30 mm x 85 mm
50136520	LCS-2M12B-F03NNC-M12	LCS-2	Embedded	1 ... 3 mm	Connector, M12	Metal	NPN, NC (normally closed)	12 mm x 68 mm
50136519	LCS-2M12B-F03NNO-M12	LCS-2	Embedded	1 ... 3 mm	Connector, M12	Metal	NPN, NO (normally open)	12 mm x 68 mm
50136518	LCS-2M12B-F03PNC-M12	LCS-2	Embedded	1 ... 3 mm	Connector, M12	Metal	PNP, NC (normally closed)	12 mm x 68 mm
50136517	LCS-2M12B-F03PNO-M12	LCS-2	Embedded	1 ... 3 mm	Connector, M12	Metal	PNP, NO (normally open)	12 mm x 68 mm
50136536	LCS-2M18B-F08NNC-M12	LCS-2	Embedded	2 ... 8 mm	Connector, M12	Metal	NPN, NC (normally closed)	18 mm x 85 mm
50136535	LCS-2M18B-F08NNO-M12	LCS-2	Embedded	2 ... 8 mm	Connector, M12	Metal	NPN, NO (normally open)	18 mm x 85 mm
50136534	LCS-2M18B-F08PNC-M12	LCS-2	Embedded	2 ... 8 mm	Connector, M12	Metal	PNP, NC (normally closed)	18 mm x 85 mm
50136533	LCS-2M18B-F08PNO-M12	LCS-2	Embedded	2 ... 8 mm	Connector, M12	Metal	PNP, NO (normally open)	18 mm x 85 mm
50136552	LCS-2M30B-F20NNC-M12	LCS-2	Embedded	2 ... 20 mm	Connector, M12	Metal	NPN, NC (normally closed)	30 mm x 98 mm
50136551	LCS-2M30B-F20NNO-M12	LCS-2	Embedded	2 ... 20 mm	Connector, M12	Metal	NPN, NO (normally open)	30 mm x 98 mm
50136550	LCS-2M30B-F20PNC-M12	LCS-2	Embedded	2 ... 20 mm	Connector, M12	Metal	PNP, NC (normally closed)	30 mm x 98 mm
50136549	LCS-2M30B-F20PNO-M12	LCS-2	Embedded	2 ... 20 mm	Connector, M12	Metal	PNP, NO (normally open)	30 mm x 98 mm
50136528	LCS-2M12P-F03NNC-M12	LCS-2	Embedded	1 ... 3 mm	Connector, M12	Plastic	NPN, NC (normally closed)	12 mm x 68 mm
50136527	LCS-2M12P-F03NNO-M12	LCS-2	Embedded	1 ... 3 mm	Connector, M12	Plastic	NPN, NO (normally open)	12 mm x 68 mm
50136526	LCS-2M12P-F03PNC-M12	LCS-2	Embedded	1 ... 3 mm	Connector, M12	Plastic	PNP, NC (normally closed)	12 mm x 68 mm
50136525	LCS-2M12P-F03PNO-M12	LCS-2	Embedded	1 ... 3 mm	Connector, M12	Plastic	PNP, NO (normally open)	12 mm x 68 mm
50136544	LCS-2M18P-F08NNC-M12	LCS-2	Embedded	2 ... 8 mm	Connector, M12	Plastic	NPN, NC (normally closed)	18 mm x 85 mm
50136543	LCS-2M18P-F08NNO-M12	LCS-2	Embedded	2 ... 8 mm	Connector, M12	Plastic	NPN, NO (normally open)	18 mm x 85 mm
50136542	LCS-2M18P-F08PNC-M12	LCS-2	Embedded	2 ... 8 mm	Connector, M12	Plastic	PNP, NC (normally closed)	18 mm x 85 mm
50136541	LCS-2M18P-F08PNO-M12	LCS-2	Embedded	2 ... 8 mm	Connector, M12	Plastic	PNP, NO (normally open)	18 mm x 85 mm
50136560	LCS-2M30P-F20NNC-M12	LCS-2	Embedded	2 ... 20 mm	Connector, M12	Plastic	NPN, NC (normally closed)	30 mm x 98 mm
50136559	LCS-2M30P-F20NNO-M12	LCS-2	Embedded	2 ... 20 mm	Connector, M12	Plastic	NPN, NO (normally open)	30 mm x 98 mm
50136558	LCS-2M30P-F20PNC-M12	LCS-2	Embedded	2 ... 20 mm	Connector, M12	Plastic	PNP, NC (normally closed)	30 mm x 98 mm
50136557	LCS-2M30P-F20PNO-M12	LCS-2	Embedded	2 ... 20 mm	Connector, M12	Plastic	PNP, NO (normally open)	30 mm x 98 mm
50136524	LCS-2M12B-F03NNC-K020V	LCS-2	Embedded	1 ... 3 mm	Cable	Metal	NPN, NC (normally closed)	12 mm x 55 mm
50136523	LCS-2M12B-F03NNO-K020V	LCS-2	Embedded	1 ... 3 mm	Cable	Metal	NPN, NO (normally open)	12 mm x 55 mm
50136522	LCS-2M12B-F03PNC-K020V	LCS-2	Embedded	1 ... 3 mm	Cable	Metal	PNP, NC (normally closed)	12 mm x 55 mm
50136521	LCS-2M12B-F03PNO-K020V	LCS-2	Embedded	1 ... 3 mm	Cable	Metal	PNP, NO (normally open)	12 mm x 55 mm
50136540	LCS-2M18B-F08NNC-K020V	LCS-2	Embedded	2 ... 8 mm	Cable	Metal	NPN, NC (normally closed)	18 mm x 70 mm
50136539	LCS-2M18B-F08NNO-K020V	LCS-2	Embedded	2 ... 8 mm	Cable	Metal	NPN, NO (normally open)	18 mm x 70 mm
50136538	LCS-2M18B-F08PNC-K020V	LCS-2	Embedded	2 ... 8 mm	Cable	Metal	PNP, NC (normally closed)	18 mm x 70 mm
50136537	LCS-2M18B-F08PNO-K020V	LCS-2	Embedded	2 ... 8 mm	Cable	Metal	PNP, NO (normally open)	18 mm x 70 mm
50136556	LCS-2M30B-F20NNC-K020V	LCS-2	Embedded	2 ... 20 mm	Cable	Metal	NPN, NC (normally closed)	30 mm x 85 mm
50136555	LCS-2M30B-F20NNO-K020V	LCS-2	Embedded	2 ... 20 mm	Cable	Metal	NPN, NO (normally open)	30 mm x 85 mm
50136554	LCS-2M30B-F20PNC-K020V	LCS-2	Embedded	2 ... 20 mm	Cable	Metal	PNP, NC (normally closed)	30 mm x 85 mm
50136553	LCS-2M30B-F20PNO-K020V	LCS-2	Embedded	2 ... 20 mm	Cable	Metal	PNP, NO (normally open)	30 mm x 85 mm
50136532	LCS-2M12P-F03NNC-K020V	LCS-2	Embedded	1 ... 3 mm	Cable	Plastic	NPN, NC (normally closed)	12 mm x 55 mm
50136531	LCS-2M12P-F03NNO-K020V	LCS-2	Embedded	1 ... 3 mm	Cable	Plastic	NPN, NO (normally open)	12 mm x 55 mm
50136530	LCS-2M12P-F03PNC-K020V	LCS-2	Embedded	1 ... 3 mm	Cable	Plastic	PNP, NC (normally closed)	12 mm x 55 mm
50136529	LCS-2M12P-F03PNO-K020V	LCS-2	Embedded	1 ... 3 mm	Cable	Plastic	PNP, NO (normally open)	12 mm x 55 mm

Switching
sensorsMeasuring
sensorsProducts for
safety at work

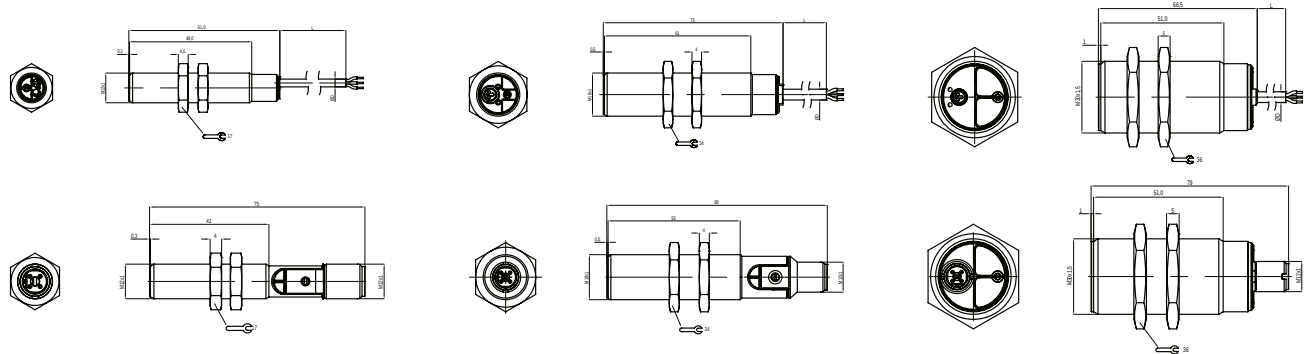
Identification

Data transmission/
Control componentsIndustrial image
processing

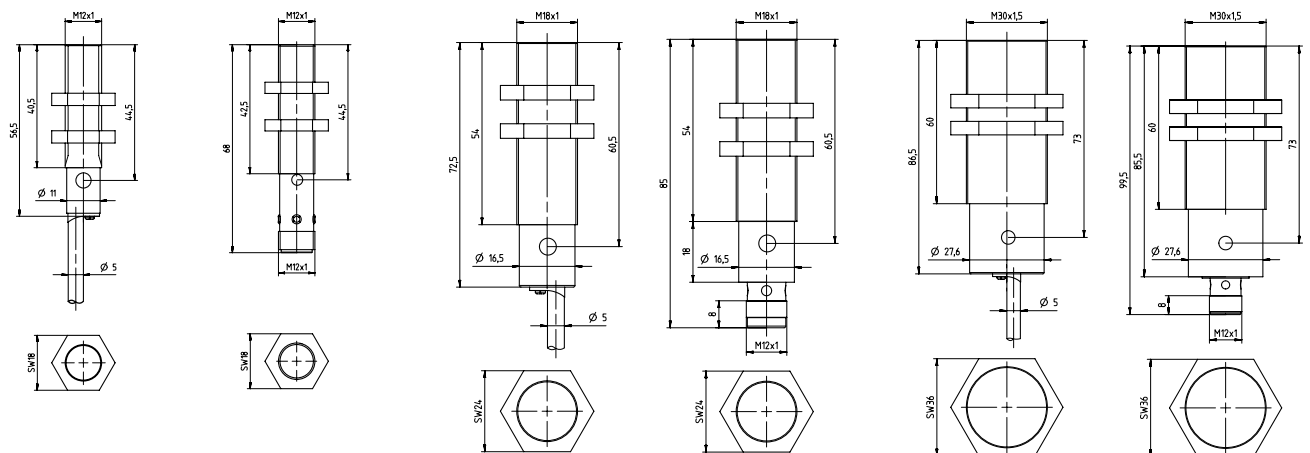
Accessories

Part no.	Part description	Series	Type of installation	Switching distance S_n	Connection	Material	Output function	Dimension
50136548	LCS-2M18P-F08NNC-K020V	LCS-2	Embedded	2 ... 8 mm	Cable	Plastic	NPN, NC (normally closed)	18 mm x 70 mm
50136547	LCS-2M18P-F08NNO-K020V	LCS-2	Embedded	2 ... 8 mm	Cable	Plastic	NPN, NO (normally open)	18 mm x 70 mm
50136546	LCS-2M18P-F08PNC-K020V	LCS-2	Embedded	2 ... 8 mm	Cable	Plastic	PNP, NC (normally closed)	18 mm x 70 mm
50136545	LCS-2M18P-F08PNO-K020V	LCS-2	Embedded	2 ... 8 mm	Cable	Plastic	PNP, NO (normally open)	18 mm x 70 mm
50136564	LCS-2M30P-F20NNC-K020V	LCS-2	Embedded	2 ... 20 mm	Cable	Plastic	NPN, NC (normally closed)	30 mm x 85 mm
50136563	LCS-2M30P-F20NNO-K020V	LCS-2	Embedded	2 ... 20 mm	Cable	Plastic	NPN, NO (normally open)	30 mm x 85 mm
50136562	LCS-2M30P-F20PNC-K020V	LCS-2	Embedded	2 ... 20 mm	Cable	Plastic	PNP, NC (normally closed)	30 mm x 85 mm
50136561	LCS-2M30P-F20PNO-K020V	LCS-2	Embedded	2 ... 20 mm	Cable	Plastic	PNP, NO (normally open)	30 mm x 85 mm

Dimensioned drawings: Capacitive sensors, standard sensors, cylindrical



LCS-1 series



LCS-2 s

SMART IS TO SHARE **EXPERIENCE**



Positioning

Sensor technology for quick positioning accurate down to the millimeter



Measurement

Reliable systems for 2D- and 3D-measurement of distances and objects



Safeguarding

Economical solutions in all areas of safety at work



Identification

Innovative code readers and RFID systems



Other applications – field-proven: www.leuze.com/en/praxis

/// Capacitive sensors, standard sensors, cubic



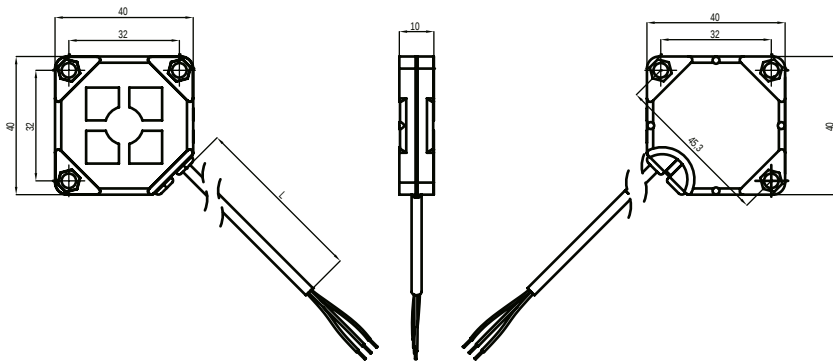
There is a selection of plastic cubic sensors in several formats with a high degree of protection e. g. for leakage or for placing on pipes. The adjustability of the sensor's operating range allows it to operate optimally despite material dependency.



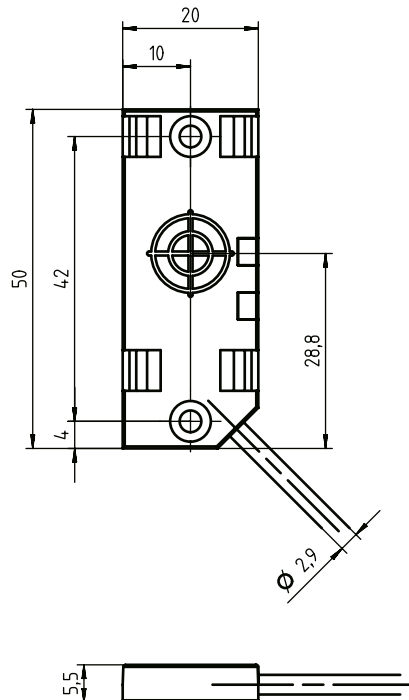
Direct access to the online product selector at www.leuze.com/en/capa-cub

Part no.	Part description	Series	Type of installation	Switching distance Sn	Connection	Material	Output function	Dimension
50135741	LCS-1Q40P-F20PNC-K003PM08	LCS-1	Embedded	1 ... 20 mm	Connector, M8	Plastic	PNP, NC (normally closed)	40 mm x 40 mm x 10 mm
50135740	LCS-1Q40P-F20PNO-K003PM08	LCS-1	Embedded	1 ... 20 mm	Connector, M8	Plastic	PNP, NO (normally open)	40 mm x 40 mm x 10 mm
50135742	LCS-1Q40P-F20BNP-K020P	LCS-1	Embedded	1 ... 20 mm	Cable	Plastic	Push-pull, NC (normally closed)/ NO (normally open)	40 mm x 40 mm x 10 mm
50135746	LCS-1Q54P-F10NNC-K020P	LCS-1	Embedded	1 ... 10 mm	Cable	Plastic	NPN, NC (normally closed)	54 mm x 20.3 mm x 5.5 mm
50135745	LCS-1Q54P-F10NNO-K020P	LCS-1	Embedded	1 ... 10 mm	Cable	Plastic	NPN, NO (normally open)	54 mm x 20.3 mm x 5.5 mm
50135744	LCS-1Q54P-F10PNC-K020P	LCS-1	Embedded	1 ... 10 mm	Cable	Plastic	PNP, NC (normally closed)	54 mm x 20.3 mm x 5.5 mm
50135743	LCS-1Q54P-F10PNO-K020P	LCS-1	Embedded	1 ... 10 mm	Cable	Plastic	PNP, NO (normally open)	54 mm x 20.3 mm x 5.5 mm

Dimensioned drawings: Capacitive sensors, standard sensors, cubic



LCS-1Q40



LCS-1Q54

Switching
sensors

Measuring
sensors

Products for
safety at work

Identification

Data transmission/
Control components

Industrial image
processing

Accessories

/// Capacitive sensors, PTFE sensors



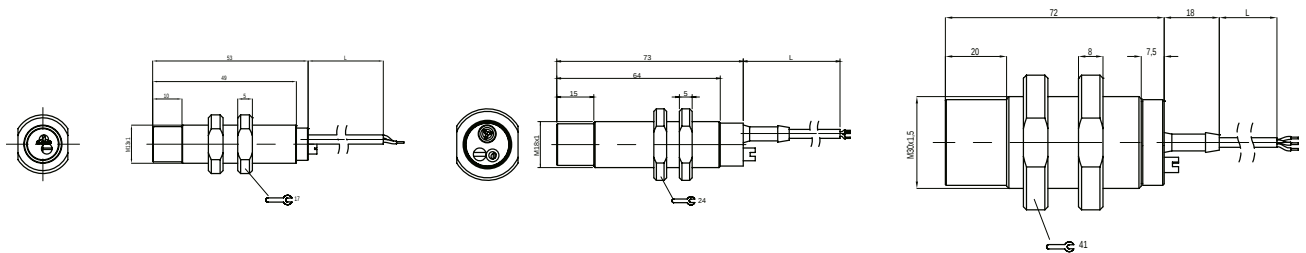
These particularly robust sensors in Teflon housing (PTFE) are suitable for high chemical stress e. g. caused by cleaning agents.



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Part no.	Part description	Series	Type of installation	Switching distance Sn	Connection	Material	Output function	Dimension
50135766	LCS-1M12T-N08NNC-K020T	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	NPN, NC (normally closed)	12 mm x 53 mm
50135765	LCS-1M12T-N08NNO-K020T	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	NPN, NO (normally open)	12 mm x 53 mm
50135764	LCS-1M12T-N08PNC-K020T	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	PNP, NC (normally closed)	12 mm x 53 mm
50135763	LCS-1M12T-N08PNO-K020T	LCS-1	Non-embedded	1 ... 8 mm	Cable	Plastic	PNP, NO (normally open)	12 mm x 53 mm
50135786	LCS-1M18T-N15NNC-K020T	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	NPN, NC (normally closed)	18 mm x 73 mm
50135785	LCS-1M18T-N15NNO-K020T	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	NPN, NO (normally open)	18 mm x 73 mm
50135784	LCS-1M18T-N15PNC-K020T	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	PNP, NC (normally closed)	18 mm x 73 mm
50135783	LCS-1M18T-N15PNO-K020T	LCS-1	Non-embedded	2 ... 15 mm	Cable	Plastic	PNP, NO (normally open)	18 mm x 73 mm
50135806	LCS-1M30T-N30NNC-K020T	LCS-1	Non-embedded	2 ... 30 mm	Cable	Plastic	NPN, NC (normally closed)	30 mm x 72 mm
50135805	LCS-1M30T-N30NNO-K020T	LCS-1	Non-embedded	2 ... 30 mm	Cable	Plastic	NPN, NO (normally open)	30 mm x 72 mm
50135804	LCS-1M30T-N30PNC-K020T	LCS-1	Non-embedded	2 ... 30 mm	Cable	Plastic	PNP, NC (normally closed)	30 mm x 72 mm
50135803	LCS-1M30T-N30PNO-K020T	LCS-1	Non-embedded	2 ... 30 mm	Cable	Plastic	PNP, NO (normally open)	30 mm x 72 mm

Dimensioned drawings: Capacitive sensors, PTFE sensors



LCS-1, PTFE

/// Capacitive sensors, IO-Link sensors



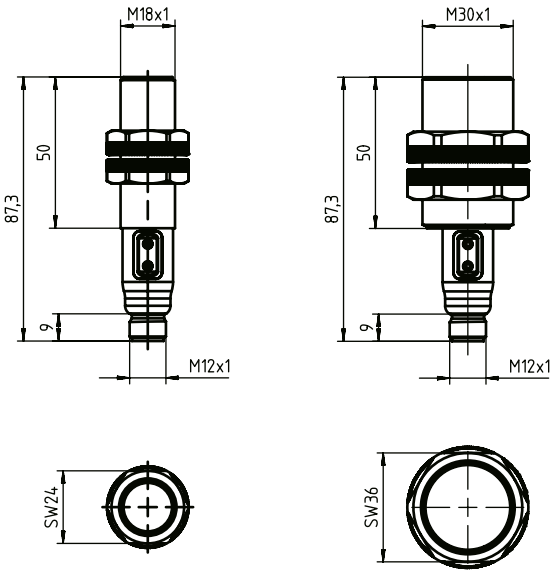
High process transparency requires more than switching state and current data from the sensor. The sensor has an IO-Link interface, which makes process optimization possible, in particular with respect to Industry 4.0.



Direct access to the online product selector at www.leuze.com/en/capa-io

Part no.	Part description	Series	Type of installation	Switching distance Sn embedded/non-embedded	Connection	Material	Output function	Dimension
50135721	LCS-1M18P-F05NNP-M12-LT	LCS-1	Embedded and non-embedded	1 ... 5 mm 1 ... 7.5 mm	Connector, M12	Plastic	NPN, NC (normally closed)/ NO (normally open) programmable	18 mm x 87.3 mm
50135720	LCS-1M18P-F05PNP-M12-LT	LCS-1	Embedded and non-embedded	1 ... 5 mm 1 ... 7.5 mm	Connector, M12	Plastic	PNP, NC (normally closed)/ NO (normally open) programmable	18 mm x 87.3 mm
50135739	LCS-1M30P-F10NNP-M12-LT	LCS-1	Embedded and non-embedded	1 ... 10 mm 1 ... 15 mm	Connector, M12	Plastic	NPN, NC (normally closed)/ NO (normally open) programmable	30 mm x 87.3 mm
50135738	LCS-1M30P-F10PNP-M12-LT	LCS-1	Embedded and non-embedded	1 ... 10 mm 1 ... 15 mm	Connector, M12	Plastic	PNP, NC (normally closed)/ NO (normally open) programmable	30 mm x 87.3 mm

Dimensioned drawings: Capacitive sensors, IO-Link sensors



LCS-1, IO-Link

Switching
sensors

Measuring
sensors

Products for
safety at work

Identification

Data transmission /
Control components

Industrial image
processing

Accessories

/ ULTRASONIC SENSORS

THE ALL-ROUNDERS AMONG THE SENSORS

Ultrasonic sensors are used whenever optical systems reach their limits. Hence, partially and fully transparent or extremely dark objects can be detected just as easily as objects with reflecting surfaces or objects in dusty, vaporous or humid environments.

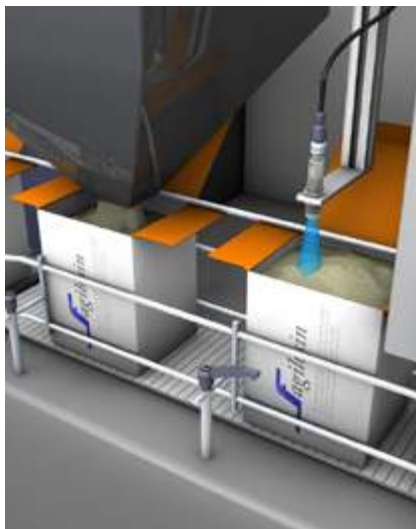


Ultrasonic sensors, cubic

Page 151

Ultrasonic sensors, cylindrical

Page 154



//ULTRASONIC SENSORS, CUBIC

SPECIALISTS FOR REFLECTIVE SURFACES

Our ultrasonic sensors in the cubic design feature a very good background suppression based on the reliable runtime measurement. Due to the largely surface-independent switching behavior, they are particularly well-suited for sound-reflecting materials.

/// 18 series



This ultrasonic sensor features a high sound pressure and is thus suitable even for air transport systems.



Benefits:

- Detection of narrow gaps
- Reliable object detection even in humid and foggy environment
- Metal housing
- Sensitivity adjustment via step switch
- Insensitive to dust



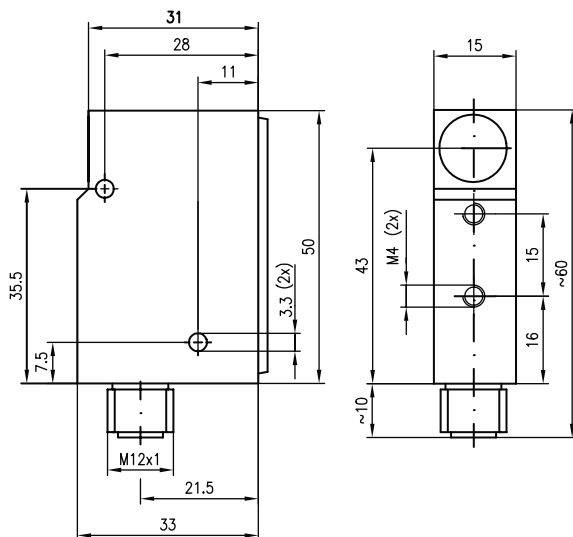
Direct access to the online product selector at www.leuze.com/en/br18u

Part no.	Part description	Operating principle	Operating range	Switching frequency	Switching output 1	Switching output 2	Sound cone Angle of radiation	Description
50103365	► LSSU 18-S12	Throughbeam principle	0 ... 0.65 m	100 Hz			Standard Front	Operational controls: step switch, connector, M12, 5-pin
50103364	◄ LSEU 18/24-S12	Throughbeam principle	0 ... 0.65 m	100 Hz	Transistor, PNP, NO (normally open)	Transistor, NPN, NO (normally open)	Standard Front	Operational controls: step switch, connector, M12, 5-pin

► transmitter / ◄ receiver

Operating range: over the whole temperature range, measured object $\geq 20 \times 20 \text{ mm}^2$

Dimensioned drawings: 18 series



18 series

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

/// 420 series



From narrow to wide, this diffuse reflection ultrasonic sensor offers 3 different opening angles and sound lobes.

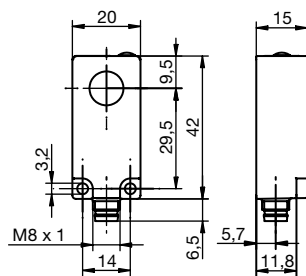
**Benefits:**

- Small ultrasonic sensor in plastic housing with degree of protection IP 67
- Various opening angles and sound cone geometries
- Switching behavior largely independent of surface properties
- Precise switching point adjustment through teach-in on the device and via a cable
- Protection against erroneous operation by automatically locking teach button



Direct access to the online product selector at www.leuze.com/en/br420u

Part no.	Part description	Operating principle	Operating range	Switching frequency	Switching output 1	Sound cone Angle of radiation	Description
50113989	HRTU 420/4NC.2-S-S8	Diffuse reflection principle with background suppression	0.01 ... 0.2 m	50 Hz	Transistor, PNP, break-contact (NC)	Narrow Front	Operational controls: teach button, connector, M8, 4-pin
50113992	HRTU 420/4NO.2-S-S8	Diffuse reflection principle with background suppression	0.01 ... 0.2 m	50 Hz	Transistor, PNP, NO (normally open)	Narrow Front	Operational controls: teach button, connector, M8, 4-pin
50113983	HRTU 420/2NC.2-S-S8	Diffuse reflection principle with background suppression	0.01 ... 0.2 m	50 Hz	Transistor, NPN, break-contact (NC)	Narrow Front	Operational controls: teach button, connector, M8, 4-pin
50113986	HRTU 420/2NO.2-S-S8	Diffuse reflection principle with background suppression	0.01 ... 0.2 m	50 Hz	Transistor, NPN, NO (normally open)	Narrow Front	Operational controls: teach button, connector, M8, 4-pin
50113988	HRTU 420/4NC.2-S8	Diffuse reflection principle with background suppression	0.04 ... 0.4 m	20 Hz	Transistor, PNP, break-contact (NC)	Standard Front	Operational controls: teach button, connector, M8, 4-pin
50113991	HRTU 420/4NO.2-S8	Diffuse reflection principle with background suppression	0.04 ... 0.4 m	20 Hz	Transistor, PNP, NO (normally open)	Standard Front	Operational controls: teach button, connector, M8, 4-pin
50113982	HRTU 420/2NC.2-S8	Diffuse reflection principle with background suppression	0.04 ... 0.4 m	20 Hz	Transistor, NPN, break-contact (NC)	Standard Front	Operational controls: teach button, connector, M8, 4-pin
50113985	HRTU 420/2NO.2-S8	Diffuse reflection principle with background suppression	0.04 ... 0.4 m	20 Hz	Transistor, NPN, NO (normally open)	Standard Front	Operational controls: teach button, connector, M8, 4-pin
50113987	HRTU 420/4NC.2-L-S8	Diffuse reflection principle with background suppression	0.1 ... 1 m	10 Hz	Transistor, PNP, break-contact (NC)	Wide Front	Operational controls: teach button, connector, M8, 4-pin
50113990	HRTU 420/4NO.2-L-S8	Diffuse reflection principle with background suppression	0.1 ... 1 m	10 Hz	Transistor, PNP, NO (normally open)	Wide Front	Operational controls: teach button, connector, M8, 4-pin
50113981	HRTU 420/2NC.2-L-S8	Diffuse reflection principle with background suppression	0.1 ... 1 m	10 Hz	Transistor, NPN, break-contact (NC)	Wide Front	Operational controls: teach button, connector, M8, 4-pin
50113984	HRTU 420/2NO.2-L-S8	Diffuse reflection principle with background suppression	0.1 ... 1 m	10 Hz	Transistor, NPN, NO (normally open)	Wide Front	Operational controls: teach button, connector, M8, 4-pin
50132082	RKU 420/2NC.2-S8	Reflection principle	0 ... 0.4 m	20 Hz	Transistor, NPN, break-contact (NC)	Standard Front	Operational controls: teach button, connector, M8, 4-pin

Dimensioned drawings: 420 series

420 series

ACCESSORIES: ULTRASONIC SENSORS, CUBIC HOUSING

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC
50130873	KD U-M8-4W-P1-020	Connector, M8, angled, female	4-pin	2,000 mm	PUR
50130875	KD U-M8-4W-P1-050	Connector, M8, angled, female	4-pin	5,000 mm	PUR
50130869	KD U-M8-4W-V1-020	Connector, M8, angled, female	4-pin	2,000 mm	PVC
50130871	KD U-M8-4W-V1-050	Connector, M8, angled, female	4-pin	5,000 mm	PVC
50130854	KD U-M8-4A-P1-020	Connector, M8, axial, female	4-pin	2,000 mm	PUR
50130856	KD U-M8-4A-P1-050	Connector, M8, axial, female	4-pin	5,000 mm	PUR
50130848	KD U-M8-4A-V1-020	Connector, M8, axial, female	4-pin	2,000 mm	PVC
50130850	KD U-M8-4A-V1-050	Connector, M8, axial, female	4-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50020833	BT 95	Angle, L-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50117255	BTU 200M-D12	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 12 mm rod, sheet-metal mounting	Metal

Further rod mounts can be found on our website

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Martina Weil,
Customer Care Center



Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

//ULTRASONIC SENSORS, CYLINDRICAL

EXPERTS IN CYLINDRICAL DESIGN

The cylindrical ultrasonic sensors with particularly thin sound cone are specially designed for the detection of small objects or objects in very small openings and for distance, height and dimension measurements of objects in many different areas of application.

/// 318 series



Standard- and short construction and with 2 independent switching outputs available. Teachable via cable or via control button on the device. Also optionally available with angled head, which enables a sound outlet at 90 ° to the longitudinal axis of the M18 sensor. The series also comprises models with temperature compensation or multi-function input.



Benefits:

- Precise switching point adjustment, teachable via cable or via control button on the device
- Models with temperature compensation
- Small dead zone at long range
- Independent indicator diodes in devices with 2 switching outputs
- An additional diode as an indicator for the detection range simplifies installation
- Sensor configuration is unnecessary due to internal synchronization and multiplex function



Direct access to the online product selector at www.leuze.com/en/br318

Part no.	Part description	Operating principle	Operating range	Switching frequency	Switching output 1	Switching output 2	Sound cone Angle of radiation	Description
50136070	HTU318-300/4T-M12	Diffuse reflection principle with background suppression	0.04 ... 0.3 m	8 Hz	Transistor, PNP, NO (normally open)		Front	Teach input, connector, M12, 4-pin
50136071	HTU318-300/2T-M12	Diffuse reflection principle with background suppression	0.04 ... 0.3 m	8 Hz	Transistor, NPN, NO (normally open)		Front	Teach input, connector, M12, 4-pin
50136082	HTU318-400.3/4PK-M12	Diffuse reflection principle with background suppression	0.05 ... 0.4 m	10 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact (NC)	Front	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50136098	HTU318-400.W3/4PK-M12	Diffuse reflection principle with background suppression	0.05 ... 0.4 m	10 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact (NC)	90 ° deflection	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50136083	HTU318-400.3/2NK-M12	Diffuse reflection principle with background suppression	0.05 ... 0.4 m	10 Hz	Transistor, NPN, NO (normally open)	Transistor, NPN, break-contact (NC)	Front	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50136099	HTU318-400.W3/2NK-M12	Diffuse reflection principle with background suppression	0.05 ... 0.4 m	10 Hz	Transistor, NPN, NO (normally open)	Transistor, NPN, break-contact (NC)	90 ° deflection	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50136074	HTU318-1200/4T-M12	Diffuse reflection principle with background suppression	0.08 ... 1.2 m	5 Hz	Transistor, PNP, NO (normally open)		Front	Teach input, connector, M12, 4-pin
50136075	HTU318-1200/2T-M12	Diffuse reflection principle with background suppression	0.08 ... 1.2 m	5 Hz	Transistor, NPN, NO (normally open)		Front	Teach input, connector, M12, 4-pin
50136088	HTU318-1600.3/4PK-M12	Diffuse reflection principle with background suppression	0.15 ... 1.6 m	2 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact (NC)	Front	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50136104	HTU318-1600.W3/4PK-M12	Diffuse reflection principle with background suppression	0.15 ... 1.6 m	2 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact (NC)	90 ° deflection	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50136089	HTU318-1600.3/2NK-M12	Diffuse reflection principle with background suppression	0.15 ... 1.6 m	2 Hz	Transistor, NPN, NO (normally open)	Transistor, NPN, break-contact (NC)	Front	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin

Part no.	Part description	Operating principle	Operating range	Switching frequency	Switching output 1	Switching output 2	Sound cone Angle of radiation	Description
50136105	HTU318-1600.W3/2NK-M12	Diffuse reflection principle with background suppression	0.15 ... 1.6 m	2 Hz	Transistor, NPN, NO (normally open)	Transistor, NPN, break-contact (NC)	90 ° deflection	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50136078	RKU318-300/4T-M12	Reflection principle	0 ... 0.3 m	8 Hz	Transistor, PNP, NO (normally open)		Front	Interface: IO-Link; Operational controls: control buttons, teach input, connector, M12, 4-pin
50136079	RKU318-300/2T-M12	Reflection principle	0 ... 0.3 m	8 Hz	Transistor, NPN, NO (normally open)		Front	Interface: IO-Link; Operational controls: control buttons, teach input, connector, M12, 4-pin
50136094	RKU318-400.3/4X-M12	Reflection principle	0 ... 0.4 m	8 Hz	Transistor, PNP, NO (normally open)		Front	Operational controls: control buttons, connector, M12, 4-pin
50136095	RKU318-400.3/2X-M12	Reflection principle	0 ... 0.4 m	8 Hz	Transistor, NPN, NO (normally open)		Front	Operational controls: control buttons, connector, M12, 4-pin
50136080	RKU318-800/4T-M12	Reflection principle	0 ... 0.8 m	5 Hz	Transistor, PNP, NO (normally open)		Front	Interface: IO-Link; Operational controls: control buttons, teach input, connector, M12, 4-pin
50136081	RKU318-800/2T-M12	Reflection principle	0 ... 0.8 m	5 Hz	Transistor, NPN, NO (normally open)		Front	Interface: IO-Link; Operational controls: control buttons, teach input, connector, M12, 4-pin
50136096	RKU318-1600.3/4X-M12	Reflection principle	0 ... 1.6 m	1 Hz	Transistor, PNP, NO (normally open)		Front	Operational controls: control buttons, connector, M12, 4-pin
50136097	RKU318-1600.3/2X-M12	Reflection principle	0 ... 1.6 m	1 Hz	Transistor, NPN, NO (normally open)		Front	Operational controls: control buttons, connector, M12, 4-pin

Switching sensors

Measuring sensors

Products for safety at work

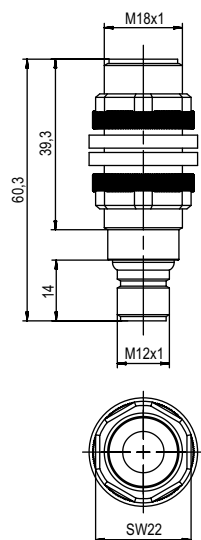
Identification

Data transmission / Control components

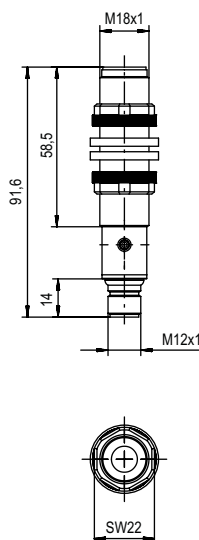
Industrial image processing

Accessories

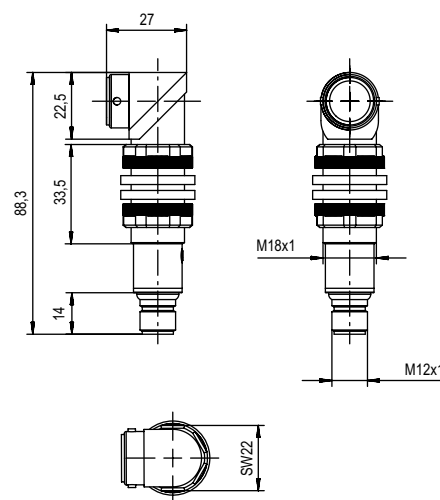
Dimensioned drawings: 318 series



318 series



318 series with control button



318...W series with control button

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/// 330 series



Whenever large ranges are needed, the robust plastic sensors from the 330 series are the right choice. 2 separate switching outputs can be set independently by means of teach button.

Any number of these sensors can be easily synchronized with a cable.

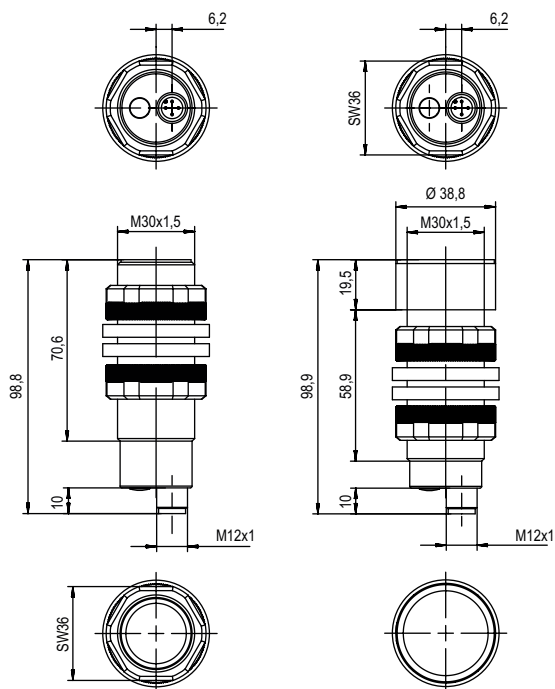
**Benefits:**

- Particularly compact design: M30
- Precise switching point adjustment per teach button on the device
- Independent indicator diodes
- An additional diode as an indicator for the detection range simplifies installation
- High accuracy through temperature compensation



Direct access to the online product selector at www.leuze.com/en/br330

Part no.	Part description	Operating principle	Operating range	Switching frequency	Switching output 1	Switching output 2	Sound cone Angle of radiation	Description
50136110	HTU330-3500.3/4PK-M12	Diffuse reflection principle with background suppression	0.25 ... 3.5 m	2 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact (NC)	Front	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50136111	HTU330-3500.3/2NK-M12	Diffuse reflection principle with background suppression	0.25 ... 3.5 m	2 Hz	Transistor, NPN, NO (normally open)	Transistor, NPN, break-contact (NC)	Front	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50136116	HTU330-6000.3/4PK-M12	Diffuse reflection principle with background suppression	0.35 ... 6 m	2 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact (NC)	Front	Inputs/outputs: 1; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin

Dimensioned drawings: 330 series

HTU 330 series

/// 412 series



The cylindrical M12 design with 2 different opening angles ensures high flexibility during installation and use.



Benefits:

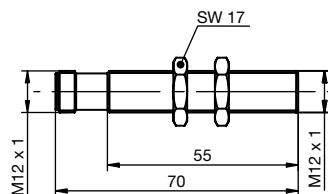
- Metal housing M12
- Precise switching point adjustment via line teach
- Especially narrow sound cone available



Direct access to the online product selector at www.leuze.com/en/br412u

Part no.	Part description	Operating principle	Operating range	Switching frequency	Switching output 1	Sound cone Angle of radiation	Description
50113995	HRTU 412/4NC.2-S-S12	Diffuse reflection principle with background suppression	0.01 ... 0.2 m	50 Hz	Transistor, PNP, break-contact (NC)	Narrow Front	Teach input, connector, M12, 4-pin
50113993	HRTU 412/4NO.2-S-S12	Diffuse reflection principle with background suppression	0.01 ... 0.2 m	50 Hz	Transistor, PNP, NO (normally open)	Narrow Front	Teach input, connector, M12, 4-pin
50113999	HRTU 412/2NC.2-S-S12	Diffuse reflection principle with background suppression	0.01 ... 0.2 m	50 Hz	Transistor, NPN, break-contact (NC)	Narrow Front	Teach input, connector, M12, 4-pin
50113997	HRTU 412/2NO.2-S-S12	Diffuse reflection principle with background suppression	0.01 ... 0.2 m	50 Hz	Transistor, NPN, NO (normally open)	Narrow Front	Teach input, connector, M12, 4-pin
50113996	HRTU 412/4NC.2-S12	Diffuse reflection principle with background suppression	0.04 ... 0.4 m	20 Hz	Transistor, PNP, break-contact (NC)	Narrow Front	Teach input, connector, M12, 4-pin
50113994	HRTU 412/4NO.2-S12	Diffuse reflection principle with background suppression	0.04 ... 0.4 m	20 Hz	Transistor, PNP, NO (normally open)	Narrow Front	Teach input, connector, M12, 4-pin
50114000	HRTU 412/2NC.2-S12	Diffuse reflection principle with background suppression	0.04 ... 0.4 m	20 Hz	Transistor, NPN, break-contact (NC)	Narrow Front	Teach input, connector, M12, 4-pin
50113998	HRTU 412/2NO.2-S12	Diffuse reflection principle with background suppression	0.04 ... 0.4 m	20 Hz	Transistor, NPN, NO (normally open)	Narrow Front	Teach input, connector, M12, 4-pin

Dimensioned drawings: 412 series



412 series

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Control components

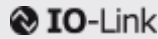
Industrial image
processing

Accessories

/// 418 series



Short design, teachable and up to 2 independent switching outputs are the key features of this series. Also optionally with angled head, which enables a sound outlet at 90 ° to the longitudinal axis of the M18 sensor. Versions available with temperature compensation and IO-Link.

**Benefits:**

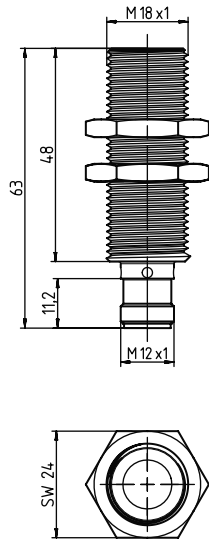
- Precise switching point adjustment through teach or via IO-Link
- One teach button per switching output
- Models with temperature compensation
- Operating mode setting and configuration via IO-Link (multiplex, parallel, throughbeam)
- Small dead zone at long range



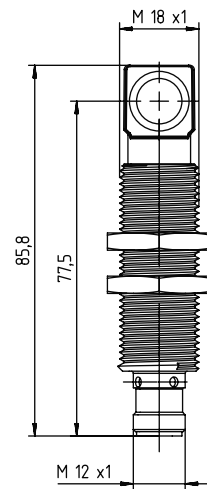
Direct access to the online product selector at www.leuze.com/en/br418u

Part no.	Part description	Operating principle	Operating range	Switching frequency	Switching output 1	Switching output 2	Sound cone Angle of radiation	Description
50127764	HTU418B-400/PTX-M12	Diffuse reflection principle with background suppression	0.025 ... 0.4 m	7 Hz	Transistor, PNP, break-contact (NC)		Standard Front	Teach input, connector, M12, 5-pin
50129826	HTU418B-400.W/4T4-M12	Diffuse reflection principle with background suppression	0.025 ... 0.4 m	7 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact/ make-contact	Standard 90 ° deflection	Teach input, connector, M12, 5-pin, 2 independent switching points
50129824	HTU418B-400.W/4TX-M12	Diffuse reflection principle with background suppression	0.025 ... 0.4 m	7 Hz	Transistor, PNP, NO (normally open)		Standard 90 ° deflection	Teach input, connector, M12, 5-pin
50124268	HTU418B-400/4T4-M12	Diffuse reflection principle with background suppression	0.025 ... 0.4 m	7 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact/ make-contact	Standard Front	Teach input, connector, M12, 5-pin, 2 independent switching points
50124269	HTU418B-400/4TX-M12	Diffuse reflection principle with background suppression	0.025 ... 0.4 m	7 Hz	Transistor, PNP, NO (normally open)		Standard Front	Teach input, connector, M12, 5-pin
50124267	HTU418B-400.X3/LT4-M12	Diffuse reflection principle with background suppression	0.025 ... 0.4 m	7 Hz	Transistor, push-pull, IO-Link / NC/NO	Transistor, PNP, break-contact/ make-contact	Standard Front	Inputs/outputs: 1; Interface: IO-Link; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50131020	HTU418B-700/4TX-M12	Diffuse reflection principle with background suppression	0.1 ... 0.7 m	8 Hz	Transistor, PNP, NO (normally open)		Standard Front	Teach input, connector, M12, 5-pin
50129825	HTU418B-1000.W/4TX-M12	Diffuse reflection principle with background suppression	0.15 ... 1 m	8 Hz	Transistor, PNP, NO (normally open)		Standard 90 ° deflection	Teach input, connector, M12, 5-pin
50124270	HTU418B-1000/4TX-M12	Diffuse reflection principle with background suppression	0.15 ... 1 m	8 Hz	Transistor, PNP, NO (normally open)		Standard Front	Teach input, connector, M12, 5-pin
50129827	HTU418B-1300.W/4T4-M12	Diffuse reflection principle with background suppression	0.15 ... 1.3 m	8 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact/ make-contact	Standard 90 ° deflection	2 independent switching points, connector, M12, 5-pin, teach input
50124272	HTU418B-1300/4T4-M12	Diffuse reflection principle with background suppression	0.15 ... 1.3 m	8 Hz	Transistor, PNP, NO (normally open)	Transistor, PNP, break-contact/ make-contact	Standard Front	Teach input, connector, M12, 5-pin, 2 independent switching points
50124271	HTU418B-1300.X3/LT4-M12	Diffuse reflection principle with background suppression	0.15 ... 1.3 m	8 Hz	Transistor, push-pull, IO-Link / NC/NO	Transistor, PNP, break-contact/ make-contact	Standard Front	Inputs/outputs: 1; Interface: IO-Link; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin

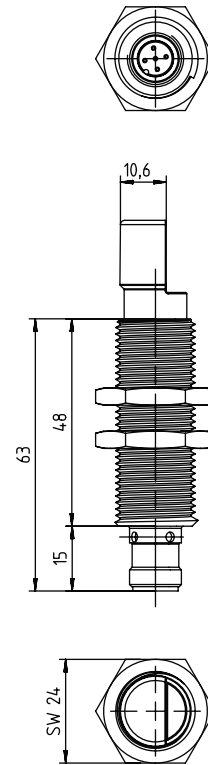
Dimensioned drawings: 418 series



418B Series



418B...W series



Switching
sensors

Measuring
sensors

Products for
safety at work

Identification

Data transmission /
Control components

Industrial image
processing

Accessories

/// 430 series



Whenever large ranges are needed, the M30 sensors from the 430 series are the right choice. Two separate switching outputs can be set independently by means of teach button or IO-Link. A total of 10 of these sensors can be easily synchronized with a cable.



Benefits:

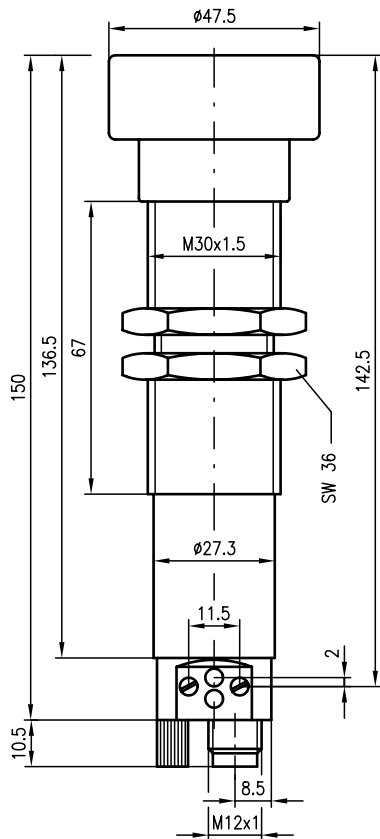
- Particularly compact design: M30
- Precise switching point adjustment through teach or via IO-Link
- One teach button per switching output
- Operating mode setting and configuration via IO-Link (multiplex, parallel, throughbeam)
- High accuracy through temperature compensation
- Small dead zone at long range



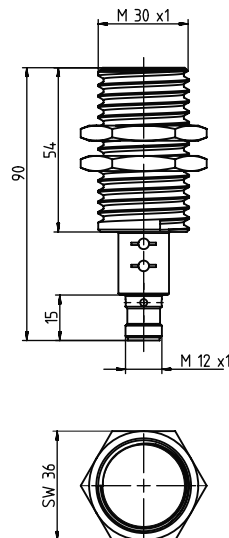
Direct access to the online product selector at www.leuze.com/en/br430u

Part no.	Part description	Operating principle	Operating range	Switching frequency	Switching output 1	Switching output 2	Sound cone Angle of radiation	Description
50124273	HTU430B-3000.X3/LT4-M12	Diffuse reflection principle with background suppression	0.3 ... 3 m	4 Hz	Transistor, push-pull, IO-Link / NC/NO	Transistor, PNP, break-contact/ make-contact	Standard Front	Inputs/outputs: 1; Interface: IO-Link; Operational controls: control buttons, 2 independent switching points, connector, M12, 5-pin
50036264	VRTU 430M/P-1110-6000-S12	Diffuse reflection principle with background suppression	0.6 ... 6 m	1 Hz	Transistor, PNP, break-contact/ make-contact	Transistor, PNP, break-contact/ make-contact	Standard Front	Operational controls: 270 ° potentiometer, synchronization input, connector, M12, 5-pin

Dimensioned drawings: 430 series



430 series



430B series

ACCESSORIES: ULTRASONIC SENSORS, CYLINDRICAL HOUSING

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130692	KD U-M12-4W-P1-020	Connector, M12, angled, female	4-pin	2,000 mm	PUR
50130694	KD U-M12-4W-P1-050	Connector, M12, angled, female	4-pin	5,000 mm	PUR
50130688	KD U-M12-4W-V1-020	Connector, M12, angled, female	4-pin	2,000 mm	PVC
50130690	KD U-M12-4W-V1-050	Connector, M12, angled, female	4-pin	5,000 mm	PVC
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50130654	KD U-M12-4A-P1-020	Connector, M12, axial, female	4-pin	2,000 mm	PUR
50130657	KD U-M12-4A-P1-050	Connector, M12, axial, female	4-pin	5,000 mm	PUR
50130648	KD U-M12-4A-V1-020	Connector, M12, axial, female	4-pin	2,000 mm	PVC
50130652	KD U-M12-4A-V1-050	Connector, M12, axial, female	4-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50113548	BT D18M.5	Angle, L-shape	Screw type	Through-hole mounting	Stainless steel

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50117490	BTU D18M-D12	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	Through-hole mounting	Metal

Further rod mounts can be found on our website

Other mounting systems

Part no.	Part description	Suitable for	Fastening at device	Fastening at system	Material
50125860	BTX-D18M-D30	Sensors with M18 design	Screw type	Mounting thread	Stainless steel

Further mounting systems can be found on our website

Switching
sensors

Measuring
sensors

Products for
safety at work

Identification

Data transmission /
Control components

Industrial image
processing

Accessories

SMART
SENSOR
BUSINESS

 **Leuze electronic**

the **sensor** people



SMART IS TO BE **CLOSE**

I'm happy when my friends feel at ease with me – the same holds for our customers as well. My colleagues and I are therefore constantly further developing our service offerings to meet the needs of our customers.

Junghee Lee,
Customer Service Manager –
Leuze electronic South Korea



www.smart-sensor-business.com

/ FIBER OPTIC SENSORS

HOW TO BEND LIGHT AROUND A CORNER

With the use of fiber optics and appropriate amplifiers, the area of application of optoelectronic sensors is considerably expanded. The flexible fiber optics with various head shapes can be integrated in nearly any system design. The detection range is dependent on the fiber optics and amplifiers used.

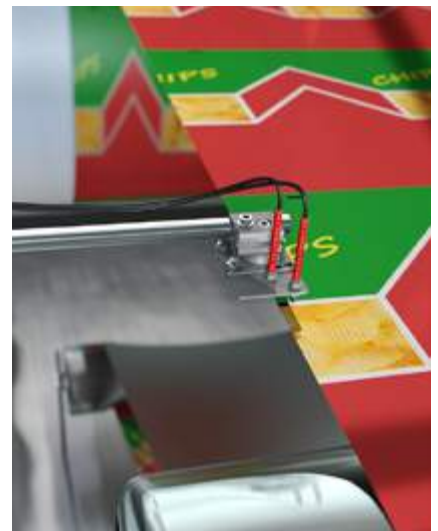


Amplifiers

Page 163

Fiber optics

Page 168



//AMPLIFIERS

SIMPLE SETUP AND CONTROL

The optical fibers are plugged into the amplifier. Depending on the model, the ranges of the fibers and the available functions vary.

/// LV461



The series satisfies all basic requirements: 20-turn potentiometer for high-resolution sensitivity adjustments, 2 switches for light/dark switching and for selecting between larger range or higher switching frequency.



Benefits:

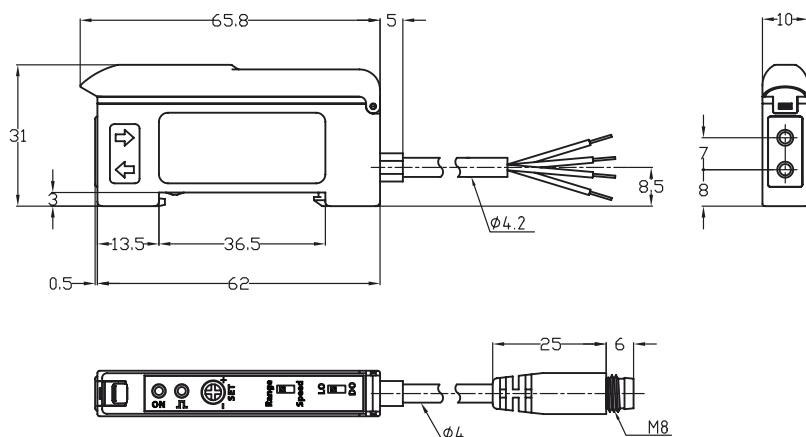
- Mode changeover: range / response time
- Light/dark switching
- 20-turn potentiometer for sensitivity adjustment



Direct access to the online product selector at www.leuze.com/en/lv461

Part no.	Part description	Light source	Switching output	Input/output	Switching frequency	Connection	Operational controls
50118399	LV461.1/P2-150-M8	LED, red	Transistor, PNP	Transistor, NPN	500 Hz	Connector, 150 mm, M8, 4-pin	Multiturn potentiometer, control buttons
50118398	LV461.1/P2	LED, red	Transistor, PNP	Transistor, NPN	500 Hz	Cable, 2,000 mm, 4-wire	Multiturn potentiometer, control buttons

Dimensioned drawings: LV461



LV 461 fiber optic amplifier

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

/// LV462



The series has a 4-digit display for displaying the switching threshold. The setting is made with the AutoSet function or manually with the $\pm$ button. A switch for light/dark switching and simple menu functions for setting the range and various timing functions complement the device features.

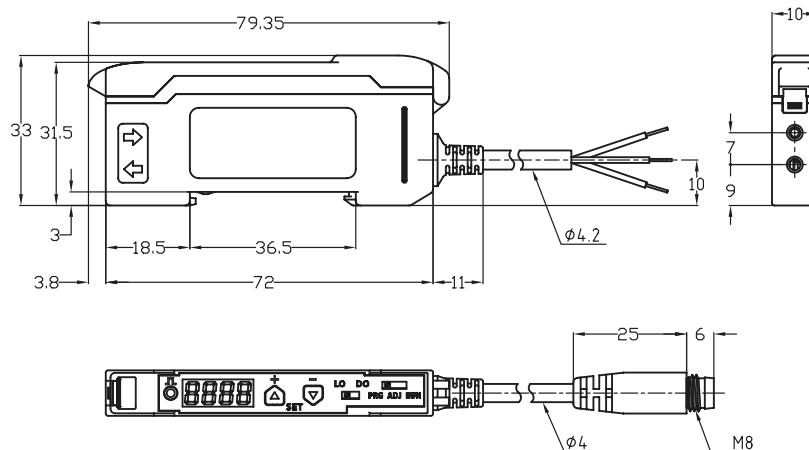
**Benefits:**

- 4-digit display
- High dynamics
- Time functions configurable on the device
- Sensitivity levels configurable on the device
- Light/dark switching
- Easy sensitivity adjustment via AutoSet function



Direct access to the online product selector at www.leuze.com/en/lv462

Part no.	Part description	Light source	Switching output	Switching frequency	Connection	Operational controls
50118401	LV462.4/4X-150-M8	LED, red	Transistor, PNP	500 Hz	Cable with connector, 150 mm, M8, 4-pin	Control buttons, slide switch
50118400	LV462.4/4	LED, red	Transistor, PNP	500 Hz	Cable, 2,000 mm, 4-wire	Control buttons, slide switch
50118403	LV462.4/2X-150-M8	LED, red	Transistor, NPN	500 Hz	Cable with connector, 1,500 mm, M8, 4-pin	Control buttons, slide switch
50118402	LV462.4/2	LED, red	Transistor, NPN	500 Hz	Cable, 2,000 mm, 4-wire	Control buttons, slide switch

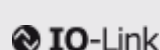
Dimensioned drawings: LV462

LV 462 fiber optic amplifier

/// LV463



The high-performance LV463 fiber optic amplifier convinces with its extensive setting options for operating ranges, sensitivities and time functions. The signal value, and at the same time the switching threshold, are shown on 2 easy-to-read displays. 3 different teach modes considerably simplify configuration. Also available as IO-Link variant.

**Benefits:**

- Double display to show signals and switching thresholds in parallel
- 3 different teach modes for fast sensor setting
- Extensive configuration options, e. g. for operating range, sensitivity or time functions
- Internal multiplex operation of up to 6 units for preventing mutual interference
- Also available as IO-Link variant



Direct access to the online product selector at www.leuze.com/en/lv463

Part no.	Part description	Light source	Switching output	Analog outputs	Input/output	Switching frequency	Connection	Operational controls
50118405	LV463.7/4T-M8	LED, red	Transistor, PNP		Teach input, activation input, multiplex operation	2,500 Hz	Connector, M8, 4-pin	Slide switch, rocker pressure switch
50133974	LV463.XR7/4T-M8	LED, red	Transistor, PNP		Activation input, teach input, multiplex operation	21 Hz	Connector, M8, 4-pin	Rocker pressure switch, slide switch
50133962	LV463.XV7/4T-M8	LED, red	Transistor, PNP		Multiplex operation, activation input, teach input	50,000 Hz	Connector, M8, 4-pin	Rocker pressure switch, slide switch
50133981	LV463.XR7/4T4-150-M12	LED, red	Transistor, PNP		Transistor, PNP, multiplex operation, activation input, teach input	21 Hz	Cable with connector, 150 mm, M12, 5-pin	Slide switch, rocker pressure switch
50133991	LV463.XR7/4TC-150-M12	LED, red	Transistor, PNP	Current	Teach input, activation input, multiplex operation	21 Hz	Cable with connector, 150 mm, M12, 5-pin	Rocker pressure switch, slide switch
50133986	LV463.XR7/4TV-150-M12	LED, red	Transistor, PNP	Voltage	Teach input, multiplex operation, activation input	21 Hz	Cable with connector, 150 mm, M12, 5-pin	Slide switch, rocker pressure switch
50133999	LV463L.XR7/4T4-150-M12	LED, infrared	Transistor, PNP		Transistor, PNP, multiplex operation, activation input, teach input	21 Hz	Cable with connector, 150 mm, M12, 5-pin	Slide switch, rocker pressure switch
50134005	LV463L.XR7/4TC-150-M12	LED, infrared	Transistor, PNP	Current	Multiplex operation, activation input, teach input	21 Hz	Cable with connector, 150 mm, M12, 5-pin	Rocker pressure switch, slide switch
50134002	LV463L.XR7/4TV-150-M12	LED, infrared	Transistor, PNP	Voltage	Teach input, activation input, multiplex operation	21 Hz	Cable with connector, 150 mm, M12, 5-pin	Slide switch, rocker pressure switch
50118407	LV463.7/4T-150-M12	LED, red	Transistor, PNP		Teach input, activation input, multiplex operation	2,500 Hz	Cable with connector, 150 mm, M12, 4-pin	Slide switch, rocker pressure switch
50133975	LV463.XR7/4T-150-M12	LED, red	Transistor, PNP		Activation input, teach input, multiplex operation	21 Hz	Cable with connector, 150 mm, M12, 4-pin	Rocker pressure switch, slide switch
50133964	LV463.XV7/4T-150-M12	LED, red	Transistor, PNP		Activation input, teach input, multiplex operation	50,000 Hz	Cable with connector, 150 mm, M12, 4-pin	Slide switch, rocker pressure switch
50133996	LV463L.XR7/4T-150-M12	LED, infrared	Transistor, PNP		Activation input, teach input, multiplex operation	21 Hz	Cable with connector, 150 mm, M12, 4-pin	Slide switch, rocker pressure switch
50118406	LV463.7/4T-150-M8	LED, red	Transistor, PNP		Teach input, activation input, multiplex operation	2,500 Hz	Cable with connector, 150 mm, M8, 4-pin	Slide switch, rocker pressure switch
50119070	LV463.7/4-150-M8.3	LED, red	Transistor, PNP			2,500 Hz	Cable with connector, 150 mm, M8, 3-pin	Slide switch, rocker pressure switch
50133980	LV463.XR7/4T4	LED, red	Transistor, PNP		Transistor, PNP, multiplex operation, activation input, teach input	21 Hz	Cable, 2,000 mm, 5-wire	Slide switch, rocker pressure switch
50133990	LV463.XR7/4TC	LED, red	Transistor, PNP	Current	Teach input, multiplex operation, activation input	21 Hz	Cable, 2,000 mm, 5-wire	Slide switch, rocker pressure switch
50133985	LV463.XR7/4TV	LED, red	Transistor, PNP	Voltage	Teach input, activation input, multiplex operation	21 Hz	Cable, 2,000 mm, 5-wire	Rocker pressure switch, slide switch
50133998	LV463L.XR7/4T4	LED, infrared	Transistor, PNP		Transistor, PNP, multiplex operation, activation input, teach input	21 Hz	Cable, 2,000 mm, 5-wire	Slide switch, rocker pressure switch
50134004	LV463L.XR7/4TC	LED, infrared	Transistor, PNP	Current	Activation input, teach input, multiplex operation	21 Hz	Cable, 2,000 mm, 5-wire	Rocker pressure switch, slide switch
50134001	LV463L.XR7/4TV	LED, infrared	Transistor, PNP	Voltage	Teach input, activation input, multiplex operation	21 Hz	Cable, 2,000 mm, 5-wire	Rocker pressure switch, slide switch
50118404	LV463.7/4T	LED, red	Transistor, PNP		Teach input, activation input, multiplex operation	2,500 Hz	Cable, 2,000 mm, 4-wire	Slide switch, rocker pressure switch
50133973	LV463.XR7/4T	LED, red	Transistor, PNP		Teach input, activation input, multiplex operation	21 Hz	Cable, 2,000 mm, 4-wire	Slide switch, rocker pressure switch
50133963	LV463.XV7/4T	LED, red	Transistor, PNP		Activation input, multiplex operation, teach input	50,000 Hz	Cable, 2,000 mm, 4-wire	Rocker pressure switch, slide switch
50133995	LV463L.XR7/4T	LED, infrared	Transistor, PNP		Multiplex operation, activation input, teach input	21 Hz	Cable, 2,000 mm, 4-wire	Slide switch, rocker pressure switch
50118409	LV463.7/2T-M8	LED, red	Transistor, NPN		Teach input, activation input, multiplex operation	2,500 Hz	Connector, M8, 4-pin	Slide switch, rocker pressure switch
50133976	LV463.XR7/2T-M8	LED, red	Transistor, NPN		Activation input, teach input, multiplex operation	21 Hz	Connector, M8, 4-pin	Slide switch, rocker pressure switch
50133965	LV463.XV7/2T-M8	LED, red	Transistor, NPN		Activation input, multiplex operation, teach input	50,000 Hz	Connector, M8, 4-pin	Slide switch, rocker pressure switch
50133983	LV463.XR7/2T2-150-M12	LED, red	Transistor, NPN		Transistor, NPN, multiplex operation, activation input, teach input	21 Hz	Cable with connector, 150 mm, M12, 5-pin	Slide switch, rocker pressure switch
50133993	LV463.XR7/2TC-150-M12	LED, red	Transistor, NPN	Current	Teach input, multiplex operation, activation input	21 Hz	Cable with connector, 150 mm, M12, 5-pin	Rocker pressure switch, slide switch
50133988	LV463.XR7/2TV-150-M12	LED, red	Transistor, NPN	Voltage	Activation input, teach input, multiplex operation	21 Hz	Cable with connector, 150 mm, M12, 5-pin	Rocker pressure switch, slide switch
50118411	LV463.7/2T-150-M12	LED, red	Transistor, NPN		Teach input, activation input, multiplex operation	2,500 Hz	Cable with connector, 150 mm, M12, 4-pin	Slide switch, rocker pressure switch
50133978	LV463.XR7/2T-150-M12	LED, red	Transistor, NPN		Activation input, multiplex operation, teach input	21 Hz	Cable with connector, 150 mm, M12, 4-pin	Rocker pressure switch, slide switch
50133967	LV463.XV7/2T-150-M12	LED, red	Transistor, NPN		Multiplex operation, activation input, teach input	50,000 Hz	Cable with connector, 150 mm, M12, 4-pin	Slide switch, rocker pressure switch
50118410	LV463.7/2T-150-M8	LED, red	Transistor, NPN		Teach input, activation input, multiplex operation	2,500 Hz	Cable with connector, 150 mm, M8, 4-pin	Slide switch, rocker pressure switch
50119071	LV463.7/2-150-M8.3	LED, red	Transistor, NPN			2,500 Hz	Cable with connector, 150 mm, M8, 3-pin	Slide switch, rocker pressure switch
50133982	LV463.XR7/2T2	LED, red	Transistor, NPN		Transistor, NPN, teach input, activation input, multiplex operation	21 Hz	Cable, 2,000 mm, 5-wire	Slide switch, rocker pressure switch
50133992	LV463.XR7/2TC	LED, red	Transistor, NPN	Current	Multiplex operation, activation input, teach input	21 Hz	Cable, 2,000 mm, 5-wire	Rocker pressure switch, slide switch
50133987	LV463.XR7/2TV	LED, red	Transistor, NPN	Voltage	Activation input, multiplex operation, teach input	21 Hz	Cable, 2,000 mm, 5-wire	Slide switch, rocker pressure switch
50118408	LV463.7/2T	LED, red	Transistor, NPN		Teach input, activation input, multiplex operation	2,500 Hz	Cable, 2,000 mm, 4-wire	Slide switch, rocker pressure switch
50133977	LV463.XR7/2T	LED, red	Transistor, NPN		Activation input, multiplex operation, teach input	21 Hz	Cable, 2,000 mm, 4-wire	Rocker pressure switch, slide switch

Switching sensors

Measuring sensors

Products for safety at work

Identification

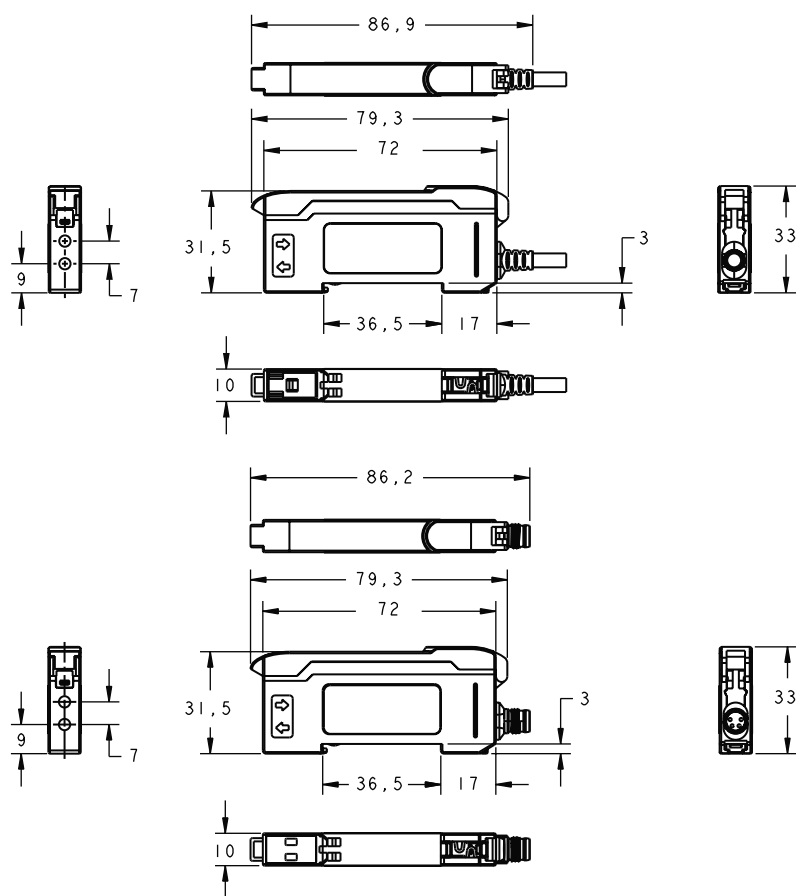
Data transmission / Control components

Industrial image processing

Accessories

Part no.	Part description	Light source	Switching output	Analog outputs	Input/output	Switching frequency	Connection	Operational controls
50133966	LV463.XV7/2T	LED, red	Transistor, NPN		Activation input, multiplex operation, teach input	50,000 Hz	Cable, 2,000 mm, 4-wire	Rocker pressure switch, slide switch
50122456	LV463.7/L4-M8	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	2,500 Hz	Connector, M8, 4-pin	Slide switch, rocker pressure switch
50134007	LV463.XR7/L4-M8	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	21 Hz	Connector, M8, 4-pin	Slide switch, rocker pressure switch
50133969	LV463.XV7/L4-M8	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	50,000 Hz	Connector, M8, 4-pin	Rocker pressure switch, slide switch
50134008	LV463.XR7/L4	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	21 Hz	Connector, 2,000 mm, 4-wire	Slide switch, rocker pressure switch
50133970	LV463.XV7/L4	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	50,000 Hz	Connector, 2,000 mm, 4-wire	Slide switch, rocker pressure switch
50122457	LV463.7/L4-150-M12	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	2,500 Hz	Cable with connector, 150 mm, M12, 4-pin	Slide switch, rocker pressure switch
50134009	LV463.XR7/L4-150-M12	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	21 Hz	Cable with connector, 150 mm, M12, 4-pin	Rocker pressure switch, slide switch
50133971	LV463.XV7/L4-150-M12	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	50,000 Hz	Cable with connector, 150 mm, M12, 4-pin	Rocker pressure switch, slide switch
50122459	LV463.7/L4-150-M8	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	2,500 Hz	Cable with connector, 150 mm, M8, 4-pin	Slide switch, rocker pressure switch
50122460	LV463.7/L4	LED, red	Transistor, push-pull, IO-Link		Transistor, PNP	2,500 Hz	Cable, 2,000 mm, 4-wire	Slide switch, rocker pressure switch

Dimensioned drawings: LV463



LV 463 and LV 463B fiber optic amplifiers

ACCESSORIES: AMPLIFIERS

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130692	KD U-M12-4W-P1-020	Connector, M12, angled, female	4-pin	2,000 mm	PUR
50130694	KD U-M12-4W-P1-050	Connector, M12, angled, female	4-pin	5,000 mm	PUR
50130688	KD U-M12-4W-V1-020	Connector, M12, angled, female	4-pin	2,000 mm	PVC
50130690	KD U-M12-4W-V1-050	Connector, M12, angled, female	4-pin	5,000 mm	PVC
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50130654	KD U-M12-4A-P1-020	Connector, M12, axial, female	4-pin	2,000 mm	PUR
50130657	KD U-M12-4A-P1-050	Connector, M12, axial, female	4-pin	5,000 mm	PUR
50130648	KD U-M12-4A-V1-020	Connector, M12, axial, female	4-pin	2,000 mm	PVC
50130652	KD U-M12-4A-V1-050	Connector, M12, axial, female	4-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC
50130865	KD U-M8-3W-P1-020	Connector, M8, angled, female	3-pin	2,000 mm	PUR
50130867	KD U-M8-3W-P1-050	Connector, M8, angled, female	3-pin	5,000 mm	PUR
50130860	KD U-M8-3W-V1-020	Connector, M8, angled, female	3-pin	2,000 mm	PVC
50130862	KD U-M8-3W-V1-050	Connector, M8, angled, female	3-pin	5,000 mm	PVC
50130873	KD U-M8-4W-P1-020	Connector, M8, angled, female	4-pin	2,000 mm	PUR
50130875	KD U-M8-4W-P1-050	Connector, M8, angled, female	4-pin	5,000 mm	PUR
50130869	KD U-M8-4W-V1-020	Connector, M8, angled, female	4-pin	2,000 mm	PVC
50130871	KD U-M8-4W-V1-050	Connector, M8, angled, female	4-pin	5,000 mm	PVC
50130842	KD U-M8-3A-P1-020	Connector, M8, axial, female	3-pin	2,000 mm	PUR
50130844	KD U-M8-3A-P1-050	Connector, M8, axial, female	3-pin	5,000 mm	PUR
50130837	KD U-M8-3A-V1-020	Connector, M8, axial, female	3-pin	2,000 mm	PVC
50130832	KD U-M8-3A-V1-050	Connector, M8, axial, female	3-pin	5,000 mm	PVC
50130854	KD U-M8-4A-P1-020	Connector, M8, axial, female	4-pin	2,000 mm	PUR
50130856	KD U-M8-4A-P1-050	Connector, M8, axial, female	4-pin	5,000 mm	PUR
50130848	KD U-M8-4A-V1-020	Connector, M8, axial, female	4-pin	2,000 mm	PVC
50130850	KD U-M8-4A-V1-050	Connector, M8, axial, female	4-pin	5,000 mm	PVC

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//FIBER OPTICS

PLASTIC OR GLASS – DEPENDING ON THE AREA OF APPLICATION

For simple integration, each is available in a range of different designs and fiber optics cross sections.

/// Plastic fiber optics



Plastic fiber optic cables are available for reflective operation or for the throughbeam principle. The selection is made depending on the design of the fiber head and the functional characteristics of the fibers.

A very wide selection of different fiber optics are available, including with bend protection.

Benefits:

- Large selection of fiber optics
- Fiber optics with injection-molded bending protection
- Fiber optics with lateral optics
- Cross-section converter
- Fiber optics with V-optics
- Attachment lens for greater ranges or higher precision



Direct access to the online product selector at www.leuze.com/en/plastic-fo

Part no.	Part description	Operating principle	Design	Fiber length Outer diameter	Light beam exit	Minimum object diameter	Fiber sheathing material	Description
50132746	KF-L-320	Throughbeam principle	Cylindrical	2,000 mm 2.8 mm	Front	0.5 mm	PE	Single fiber core
50117739	KF-L-320-D-T14L	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Lateral	0.1 mm	PE	Single fiber core
50137383	KF-L-420	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Front	0.5 mm	PE	Single fiber core
50117741	KF-LD-210-32	Throughbeam principle	Cylindrical	2,000 mm 1.25 mm	Lateral	0.05 mm	PE	Single fiber core
50117738	KF-LE-220	Throughbeam principle	Cylindrical	2,000 mm 1 mm	Front	0.03 mm	PE	Single fiber core
50126967	KF-LH-320-D	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Lateral	0.1 mm	PE	Heat resistant, single fiber core
50122328	KF-LP-FU92-520-Q	Throughbeam principle	Cylindrical	2,000 mm 4 mm	Front	0.5 mm	PTFE	Single fiber core
50122327	KF-LP-FU96-520-Q	Throughbeam principle	Cylindrical	2,000 mm 4 mm	Lateral	0.5 mm	PTFE	Single fiber core
50117750	KF-LY-77TZ-20	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Lateral	0.5 mm	PE	Single fiber core
50117770	KFX-L-320	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Front	0.5 mm	PE	Single fiber core
50117774	KFX-L-320-Q	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Front	0.5 mm	PE	Single fiber core
50117766	KFX-L-420	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Front	0.5 mm	PE	Single fiber core
50117776	KFX-LA-220	Throughbeam principle	Cylindrical	2,000 mm 1.25 mm	Front	0.03 mm	PE	Single fiber core
50117777	KFX-LD-120	Throughbeam principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Single fiber core
50117771	KFX-LD-320	Throughbeam principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Single fiber core
50117775	KFX-LD-320-Q	Throughbeam principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Single fiber core
50117767	KFX-LD-420	Throughbeam principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Single fiber core
50117772	KFX-LH-320	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Front	0.5 mm	PE	Heat resistant, single fiber core
50117768	KFX-LH-420	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Front	0.5 mm	PE	Heat resistant, single fiber core
50117773	KFX-LY-320	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Front	0.5 mm	PE	Single fiber core
50117769	KFX-LY-420	Throughbeam principle	Cylindrical	2,000 mm 2.2 mm	Front	0.5 mm	PE	Single fiber core
50117749	KF-LC32-12	Throughbeam principle	Cylindrical	900 mm 2.8 mm	bent 90 °	0.1 mm	PE	Multiple fiber core, mixed fiber configuration
50117740	KF-LH-305-D	Throughbeam principle	Cylindrical	500 mm 2.2 mm	Lateral	0.1 mm	PE	Heat resistant, single fiber core
50137382	KF-ET-620	Diffuse reflection principle	Cylindrical	2,000 mm 2.2 mm	Front	0.2 mm	PE	50 % / 50 % fiber configuration
50132149	KF-ETC-420	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Coaxial fiber configuration, multiple fiber core

A LV4xx series amplifier is required for operation!

Part no.	Part description	Operating principle	Design	Fiber length Outer diameter	Light beam exit	Minimum object diameter	Fiber sheathing material	Description
50117737	KF-ETE-220	Diffuse reflection principle	Cylindrical	2,000 mm 1 mm	Front	0.05 mm	PE	Single fiber core
50132817	KF-ETW-FU31-20	Diffuse reflection principle	Cylindrical	2,000 mm 1.47 mm	Lateral	0.1 mm	PE	Multiple fiber core
50117752	KFX-ET-620	Diffuse reflection principle	Cylindrical	2,000 mm 2.2 mm	Front	0.2 mm	PE	Single fiber core
50117758	KFX-ETA-320	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Single fiber core
50117755	KFX-ETA-420	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Single fiber core
50117759	KFX-ETC-320	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Multiple fiber core, coaxial fiber configuration
50117761	KFX-ETC-320-Q	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Multiple fiber core, coaxial fiber configuration
50117756	KFX-ETC-420	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Multiple fiber core, coaxial fiber configuration
50117753	KFX-ETC-620	Diffuse reflection principle	Cylindrical	2,000 mm 2.2 mm	Front	0.1 mm	PE	Multiple fiber core, coaxial fiber configuration
50117763	KFX-ETC7-120	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Multiple fiber core, coaxial fiber configuration
50117760	KFX-ETD-320	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.1 mm	PE	Single fiber core
50117762	KFX-ETD-320-Q	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.05 mm	PE	Single fiber core
50117757	KFX-ETD-420	Diffuse reflection principle	Cylindrical	2,000 mm 1.25 mm	Front	0.1 mm	PE	Single fiber core
50117754	KFX-ETH-620	Diffuse reflection principle	Cylindrical	2,000 mm 2.2 mm	Front	0.2 mm	PE	Heat resistant, single fiber core
50117764	KFX-ETY-67TZ-20	Diffuse reflection principle	Cylindrical	2,000 mm 2.2 mm	Lateral	0.2 mm	PE	Single fiber core
50121079	KFX-ET-605	Diffuse reflection principle	Cylindrical	500 mm 2.2 mm	Front	0.2 mm	PE	Single fiber core
50117743	KF-L-10MLD-20	Throughbeam principle	Cubic	2,000 mm 2.2 mm	Lateral	1 mm	PE	Multiple fiber core, mixed fiber configuration
50117744	KF-L-15MLD-10	Throughbeam principle	Cubic	2,000 mm 2.2 mm	Lateral	1 mm	PE	Multiple fiber core, mixed fiber configuration
50117746	KF-L-30ML-20	Throughbeam principle	Cubic	2,000 mm 2.8 mm	Lateral	1 mm	PE	Multiple fiber core, mixed fiber configuration
50117747	KF-L-50ML-20	Throughbeam principle	Cubic	2,000 mm 2.2 mm	Lateral	2 mm	PE	Multiple fiber core, mixed fiber configuration
50117748	KF-LW-FU53-20	Throughbeam principle	Cubic	2,000 mm 1 mm	Lateral	0.1 mm	PE	Single fiber core
50117745	KF-LW-FU57-20	Throughbeam principle	Cubic	2,000 mm 1 mm	Lateral	0.1 mm	PE	Single fiber core
50117751	KF-LY-U09-20	Throughbeam principle	Cubic	2,000 mm 2.2 mm	Lateral		PE	Single fiber core
50117778	KFX-L-20ML-20	Throughbeam principle	Cubic	2,000 mm 2.8 mm	Front	1 mm	PE	Multiple fiber core, mixed fiber configuration
50117742	KF-L-10ML-10	Throughbeam principle	Cubic	1,000 mm 2.2 mm	Front	1 mm	PE	Multiple fiber core, mixed fiber configuration
50117727	KF-ET-10ML-20	Diffuse reflection principle	Cubic	2,000 mm 1.25 mm	Front	1 mm	PE	Multiple fiber core, mixed fiber configuration
50117729	KF-ET-20MLS-20	Diffuse reflection principle	Cubic	2,000 mm 2.2 mm	Front	1 mm	PE	Multiple fiber core, mixed fiber configuration
50117730	KF-ET-30ML-20	Diffuse reflection principle	Cubic	2,000 mm 2.2 mm	Lateral	1 mm	PE	Multiple fiber core, mixed fiber configuration
50117731	KF-ET-50ML-20	Diffuse reflection principle	Cubic	2,000 mm 2.2 mm	Lateral	2 mm	PE	Multiple fiber core, mixed fiber configuration
50117735	KF-ETB-38V-20	Diffuse reflection principle	Cubic	2,000 mm 1.3 mm	Lateral		PE	Single fiber core
50117736	KF-ETH-38H-20	Diffuse reflection principle	Cubic	2,000 mm 2.2 mm	Lateral		PE	Heat resistant, single fiber core
50117733	KF-ETW-FU47-20	Diffuse reflection principle	Cubic	2,000 mm 1 mm	Lateral	0.1 mm	PE	Single fiber core
50117734	KF-ETW-K10-20	Diffuse reflection principle	Cubic	2,000 mm 1 mm	Lateral	0.1 mm	PE	Single fiber core
50117732	KF-ETY-20MLSD-20	Diffuse reflection principle	Cubic	2,000 mm 2.2 mm	Lateral	0.5 mm	PE	Single fiber core
50117765	KFX-ET-20ML-20	Diffuse reflection principle	Cubic	2,000 mm 2.2 mm	Front	1 mm	PE	Multiple fiber core
50117728	KF-ET-15MLD-20	Diffuse reflection principle	Cubic	1,000 mm 1.25 mm	Lateral	1 mm	PE	Multiple fiber core, mixed fiber configuration

A LV4xx series amplifier is required for operation!

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/// Glass fiber optics

For applications with high temperature resistance, glass fiber optics are often used. The selection is made depending on the design of the fiber head and the sheathing material.

Benefits:

- Wide variety of types of glass fiber optics
- Mechanically robust metal sheathing designs, partially from corrosion-proof stainless steel
- Use also possible at high temperatures
- Special solutions for vacuum-sealed light feed-throughs



Direct access to the online product selector at www.leuze.com/en/glas-fo

Part no.	Part description	Operating principle	Design	Fiber length Outer diameter	Light beam exit	Fiber sheathing material	Description
50126470	GF-LB-BR-450-IQ	Throughbeam principle	Cylindrical	5,000 mm 4 mm	On face	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration
50126462	GF-LB-SI-450-IQ	Throughbeam principle	Cylindrical	5,000 mm 4 mm	On face	Silicone	Heat resistant, multiple fiber core, mixed fiber configuration
50126466	GF-LB-SS-450-IQ	Throughbeam principle	Cylindrical	5,000 mm 4 mm	On face	Stainless steel	Heat resistant, multiple fiber core, mixed fiber configuration
50126469	GF-LB-BR-430-IQ	Throughbeam principle	Cylindrical	3,000 mm 4 mm	On face	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration
50126500	GF-LB-BR-630-SD	Throughbeam principle	Cylindrical	3,000 mm 4.5 mm	Lateral without lens	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration
50126461	GF-LB-SI-430-IQ	Throughbeam principle	Cylindrical	3,000 mm 4 mm	On face	Silicone	Heat resistant, multiple fiber core, mixed fiber configuration
50126498	GF-LB-SI-630-SD	Throughbeam principle	Cylindrical	3,000 mm 4.5 mm	Lateral without lens	Silicone	Heat resistant, multiple fiber core
50126465	GF-LB-SS-430-IQ	Throughbeam principle	Cylindrical	3,000 mm 4 mm	On face	Stainless steel	Heat resistant, multiple fiber core, mixed fiber configuration
50126499	GF-LB-SS-630-SD	Throughbeam principle	Cylindrical	3,000 mm 4.5 mm	Lateral without lens	Stainless steel	Heat resistant, multiple fiber core, mixed fiber configuration
50127341	GF-LB-SS-830-SM	Throughbeam principle	Cylindrical	3,000 mm 4.5 mm	Front	Stainless steel	Heat resistant, multiple fiber core, mixed fiber configuration
50126468	GF-LB-BR-410-IQ	Throughbeam principle	Cylindrical	1,000 mm 4 mm	On face	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration
50126497	GF-LB-BR-610-SD	Throughbeam principle	Cylindrical	1,000 mm 4.5 mm	Lateral without lens	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration
50126491	GF-LB-BR-610-SU	Throughbeam principle	Cylindrical	1,000 mm 4.5 mm	bent 90 °	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration
50127340	GF-LB-BR-810-SF	Throughbeam principle	Cylindrical	1,000 mm 4.5 mm	Lateral with lens	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration
50126460	GF-LB-SI-410-IQ	Throughbeam principle	Cylindrical	1,000 mm 4 mm	On face	Silicone	Heat resistant, multiple fiber core, mixed fiber configuration
50126495	GF-LB-SI-610-SD	Throughbeam principle	Cylindrical	1,000 mm 4.5 mm	Lateral without lens	Silicone	Heat resistant, multiple fiber core
50126489	GF-LB-SI-610-SU	Throughbeam principle	Cylindrical	1,000 mm 4.5 mm	bent 90 °	Silicone	Heat resistant, multiple fiber core, mixed fiber configuration
50127338	GF-LB-SI-810-SF	Throughbeam principle	Cylindrical	1,000 mm 4.5 mm	Lateral with lens	Silicone	Heat resistant, multiple fiber core, mixed fiber configuration
50126464	GF-LB-SS-410-IQ	Throughbeam principle	Cylindrical	1,000 mm 4 mm	On face	Stainless steel	Heat resistant, multiple fiber core, mixed fiber configuration
50126496	GF-LB-SS-610-SD	Throughbeam principle	Cylindrical	1,000 mm 4.5 mm	Lateral without lens	Stainless steel	Heat resistant, multiple fiber core, mixed fiber configuration
50126490	GF-LB-SS-610-SU	Throughbeam principle	Cylindrical	1,000 mm 4.5 mm	bent 90 °	Stainless steel	Heat resistant, multiple fiber core, mixed fiber configuration
50127339	GF-LB-SS-810-SF	Throughbeam principle	Cylindrical	1,000 mm 4.5 mm	Lateral with lens	Stainless steel	Heat resistant, multiple fiber core, mixed fiber configuration
50126467	GF-LB-BR-405-IQ	Throughbeam principle	Cylindrical	500 mm 4 mm	On face	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration
50126459	GF-LB-SI-405-IQ	Throughbeam principle	Cylindrical	500 mm 4 mm	On face	Silicone	Heat resistant, multiple fiber core, mixed fiber configuration
50126463	GF-LB-SS-405-IQ	Throughbeam principle	Cylindrical	500 mm 4 mm	On face	Stainless steel	Heat resistant, multiple fiber core, mixed fiber configuration
50126488	GF-ETG-BR-650-IQ	Diffuse reflection principle	Cylindrical	5,000 mm 6 mm	On face	Nickel-plated brass	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126476	GF-ETG-SI-650-IQ	Diffuse reflection principle	Cylindrical	5,000 mm 6 mm	On face	Silicone	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126482	GF-ETG-SS-650-IQ	Diffuse reflection principle	Cylindrical	5,000 mm 6 mm	On face	Stainless steel	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126487	GF-ETG-BR-630-IQ	Diffuse reflection principle	Cylindrical	3,000 mm 6 mm	On face	Nickel-plated brass	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126475	GF-ETG-SI-630-IQ	Diffuse reflection principle	Cylindrical	3,000 mm 6 mm	On face	Silicone	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126481	GF-ETG-SS-630-IQ	Diffuse reflection principle	Cylindrical	3,000 mm 6 mm	On face	Stainless steel	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126485	GF-ETG-BR-310-IQ	Diffuse reflection principle	Cylindrical	1,000 mm 3 mm	On face	Nickel-plated brass	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core

A LVSR 325 series amplifier is required for operation!

Part no.	Part description	Operating principle	Design	Fiber length Outer diameter	Light beam exit	Fiber sheathing material	Description
50126486	GF-ETG-BR-610-IQ	Diffuse reflection principle	Cylindrical	1,000 mm 6 mm	On face	Nickel-plated brass	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126494	GF-ETG-BR-710-SU	Diffuse reflection principle	Cylindrical	1,000 mm 6 mm	bent 90 °	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration
50126473	GF-ETG-SI-310-IQ	Diffuse reflection principle	Cylindrical	1,000 mm 3 mm	On face	Silicone	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126474	GF-ETG-SI-610-IQ	Diffuse reflection principle	Cylindrical	1,000 mm 6 mm	On face	Silicone	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126492	GF-ETG-SI-710-SU	Diffuse reflection principle	Cylindrical	1,000 mm 6 mm	bent 90 °	Silicone	Heat resistant, multiple fiber core
50126479	GF-ETG-SS-310-IQ	Diffuse reflection principle	Cylindrical	1,000 mm 3 mm	On face	Stainless steel	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126480	GF-ETG-SS-610-IQ	Diffuse reflection principle	Cylindrical	1,000 mm 6 mm	On face	Stainless steel	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126493	GF-ETG-SS-710-SU	Diffuse reflection principle	Cylindrical	1,000 mm 6 mm	bent 90 °	Stainless steel	Heat resistant, multiple fiber core
50134919	GF-ETB-SS-305-SM	Diffuse reflection principle	Cylindrical	500 mm 3.8 mm	On face	Stainless steel	Heat resistant, multiple fiber core
50126483	GF-ETG-BR-305-IQ	Diffuse reflection principle	Cylindrical	500 mm 3 mm	On face	Nickel-plated brass	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126484	GF-ETG-BR-605-IQ	Diffuse reflection principle	Cylindrical	500 mm 6 mm	On face	Nickel-plated brass	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126471	GF-ETG-SI-305-IQ	Diffuse reflection principle	Cylindrical	500 mm 3 mm	On face	Silicone	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126472	GF-ETG-SI-605-IQ	Diffuse reflection principle	Cylindrical	500 mm 6 mm	On face	Silicone	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126477	GF-ETG-SS-305-IQ	Diffuse reflection principle	Cylindrical	500 mm 3 mm	On face	Stainless steel	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50126478	GF-ETG-SS-605-IQ	Diffuse reflection principle	Cylindrical	500 mm 6 mm	On face	Stainless steel	Heat resistant, 50 % / 50 % fiber configuration, multiple fiber core
50127342	GF-ETM-BR-402-IM	Diffuse reflection principle	Cylindrical	200 mm 4 mm	Front	Nickel-plated brass	Heat resistant, multiple fiber core, mixed fiber configuration

A LVSR 325 series amplifier is required for operation!

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A day that is well worth your while!"*

Markus Erdorf,
Safety Consultant and Trainer



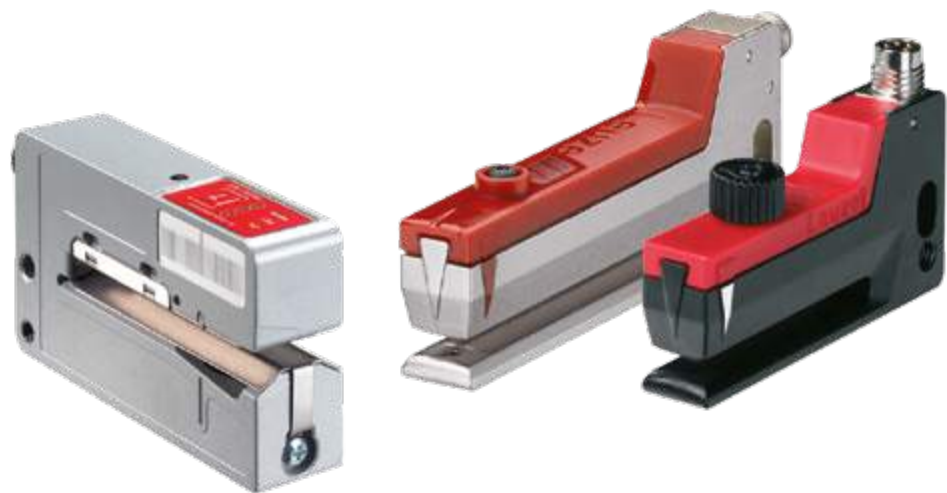
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/ FORKED SENSORS

NOTHING GETS PAST THESE FORKS

Sensors of this series combine transmitter and receiver into a single device and therefore feature high operational safety. They are characterized by simple mounting without alignment work as well as high sensitivity. The sensors are used for detecting small parts or for detecting labels and print marks, even on transparent films.

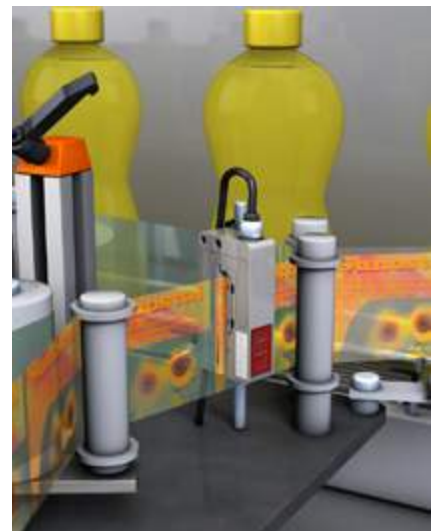


Forked sensors for object detection

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Forked sensors for label detection

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//FORKED SENSORS FOR OBJECT DETECTION

MAXIMUM PRECISION FOR THE SMALLEST PARTS

The design of these sensors makes them the ideal choice for the detection of small parts. High sensitivities and fast reaction times facilitate simple and reliable integration of these sensors in fast automation processes.

/// GS 04



This series, with mouth widths from 20 to 220 mm, can be optimally adapted to a given application by means of their sensitivity adjustment and light/dark switching. Laser variants can be used to reliably detect even the smallest parts.



Benefits:

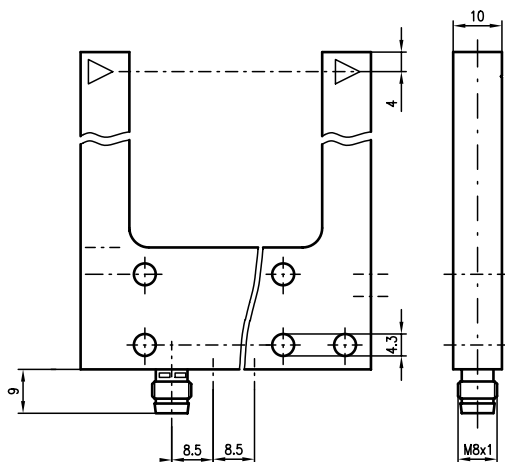
- Sensitivity adjustment and light/dark switching for optimum adaptation to the application
- Sensitivity adjustment on the back of the fork
- Robust metal housing and glass optics for protection against environmental influences
- Transmitter and receiver are installed in the same housing, therefore easy and fast mounting (complex mounting brackets and extensive alignment not necessary)



Direct access to the online product selector at www.leuze.com/en/gs04

Part no.	Part description	Mouth width	Switching frequency	Light source	Switching output	Response time	Description
50110793	GSL 04M/P-30-S8	30 mm	5,000 Hz	Laser, red	Transistor, PNP, light/dark reversible	0.1 ms	Connector, M8, 3-pin, 270 ° potentiometer
50124703	GSL 04M/N-30-S8	30 mm	5,000 Hz	Laser, red	Transistor, NPN, light/dark reversible	0.1 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110794	GSL 04M/P-50-S8	50 mm	5,000 Hz	Laser, red	Transistor, PNP, light/dark reversible	0.1 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110795	GSL 04M/P-80-S8	80 mm	5,000 Hz	Laser, red	Transistor, PNP, light/dark reversible	0.1 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110792	GS 04M/P-20-S8	20 mm	1,500 Hz	LED, red	Transistor, PNP, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110782	GS 04M/P-30-S8	30 mm	1,500 Hz	LED, red	Transistor, PNP, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110791	GS 04M/N-30-S8	30 mm	1,500 Hz	LED, red	Transistor, NPN, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110783	GS 04M/P-50-S8	50 mm	1,500 Hz	LED, red	Transistor, PNP, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110789	GS 04M/N-50-S8	50 mm	1,500 Hz	LED, red	Transistor, NPN, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110784	GS 04M/P-80-S8	80 mm	1,500 Hz	LED, red	Transistor, PNP, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110790	GS 04M/N-80-S8	80 mm	1,500 Hz	LED, red	Transistor, NPN, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110785	GS 04M/P-120-S8	120 mm	1,500 Hz	LED, red	Transistor, PNP, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110787	GS 04M/N-120-S8	120 mm	1,500 Hz	LED, red	Transistor, NPN, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110786	GS 04M/P-220-S8	220 mm	1,500 Hz	LED, red	Transistor, PNP, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer
50110788	GS 04M/N-220-S8	220 mm	1,500 Hz	LED, red	Transistor, NPN, light/dark reversible	0.33 ms	Connector, M8, 3-pin, 270 ° potentiometer

Dimensioned drawings: GS 04



GS 04 forked sensor

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

ACCESSORIES: FORKED SENSORS FOR OBJECT DETECTION

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130865	KD U-M8-3W-P1-020	Connector, M8, angled, female	3-pin	2,000 mm	PUR
50130867	KD U-M8-3W-P1-050	Connector, M8, angled, female	3-pin	5,000 mm	PUR
50130860	KD U-M8-3W-V1-020	Connector, M8, angled, female	3-pin	2,000 mm	PVC
50130862	KD U-M8-3W-V1-050	Connector, M8, angled, female	3-pin	5,000 mm	PVC
50130842	KD U-M8-3A-P1-020	Connector, M8, axial, female	3-pin	2,000 mm	PUR
50130844	KD U-M8-3A-P1-050	Connector, M8, axial, female	3-pin	5,000 mm	PUR
50130837	KD U-M8-3A-V1-020	Connector, M8, axial, female	3-pin	2,000 mm	PVC
50130832	KD U-M8-3A-V1-050	Connector, M8, axial, female	3-pin	5,000 mm	PVC

Further connection cables can be found on our website

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//FORKED SENSORS FOR LABEL DETECTION

RELIABLE DETECTION IN A WIDE RANGE OF DIFFERENT APPLICATIONS

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/// GS 61



Optical forked photoelectric sensor in slim-line design with 3 mm mouth width for exact detection of labels on base material.



Benefits:

- Simple sensitivity adjustment via multiturn potentiometer or optionally via teach-in function
- Slimline-design (reduced fork height) for installation directly at the dispensing edge
- Removable operating head for comfortable potentiometer adjustment
- Smallest dimensions of all industrial forked photoelectric sensors with an excellent price / performance ratio



Direct access to the online product selector at www.leuze.com/en/g61

Part no.	Part description	Principle of physics	Mouth width	Switching frequency	Light source	Switching output 1	Response time	Description
50110108	GS 61/6.2-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 4-pin, teach button
50110763	GS 61/6.2-S8V	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 4-pin, teach button
50110110	GS 61/6-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 4-pin, multiturn potentiometer
50110112	GS 61/6-S8V	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 4-pin, multiturn potentiometer
50110765	GS 61/6.2-S8.3	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 3-pin, teach button
50110761	GS 61/6-S8.3	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 3-pin, multiturn potentiometer
50112422	GS 61/6.2,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, teach button
50112424	GS 61/6.3,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, teach button
50112423	GS 61/6,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, multiturn potentiometer
50112425	GS 61/6.3	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable, 2,000 mm, 5-wire, teach button
50110769	GS 61/6	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable, 2,000 mm, 5-wire, multiturn potentiometer
50110109	GS 61/6D.2-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Connector, M8, 4-pin, teach button
50110764	GS 61/6D.2-S8V	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Connector, M8, 4-pin, teach button
50110111	GS 61/6D-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Connector, M8, 4-pin, multiturn potentiometer
50110113	GS 61/6D-S8V	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Connector, M8, 4-pin, multiturn potentiometer
50110766	GS 61/6D.2-S8.3	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Connector, M8, 3-pin, teach button
50110762	GS 61/6D-S8.3	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Connector, M8, 3-pin, multiturn potentiometer
50112426	GS 61/6D.2,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, teach button
50112427	GS 61/6D,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, multiturn potentiometer
50110767	GS 61/6.2	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Cable, 2,000 mm, 5-wire, teach button
50110768	GS 61/6D.2	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Cable, 2,000 mm, 5-wire, teach button
50110770	GS 61/6D	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Cable, 2,000 mm, 5-wire, multiturn potentiometer

Switching sensors

Measuring sensors

Products for safety at work

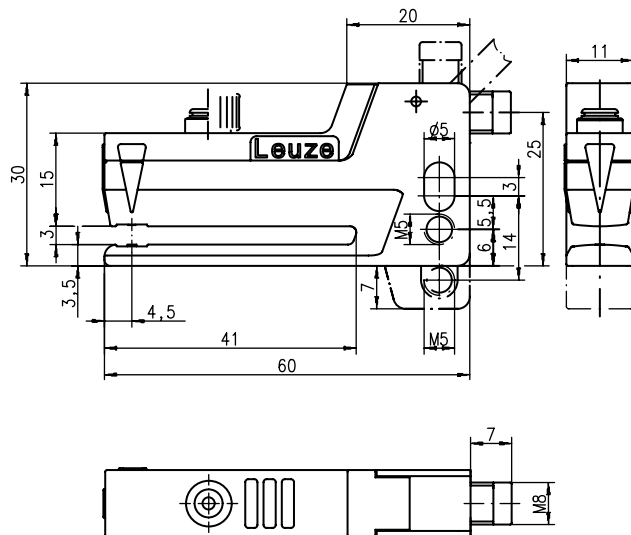
Identification

Data transmission / Control components

Industrial image processing

Accessories

Dimensioned drawings: GS 61



GS 61 forked sensor

/// GS 63B



The chemically nickel-plated metal housing of this optical forked photoelectric sensor is ideal for applications in the foodstuffs sector where it is critical that no paint chipping occurs. The flat fork enables installation in a groove directly at the dispensing edge to achieve – together with the short response time – a high dispensing accuracy. With a 3 mm mouth width and 60 mm mouth depth, the sensor is also very well suited for wide labels.



Benefits:

- High switching frequency and short response time guarantee very good repeatability
- Easy adjustment via lockable teach button or teach input
- Slimline-design (reduced fork height) for installation directly at the dispensing edge
- ALC (auto level control) function: maximum function reserve via automatic online optimization of the switching threshold
- Warning output for indicating teach or function errors

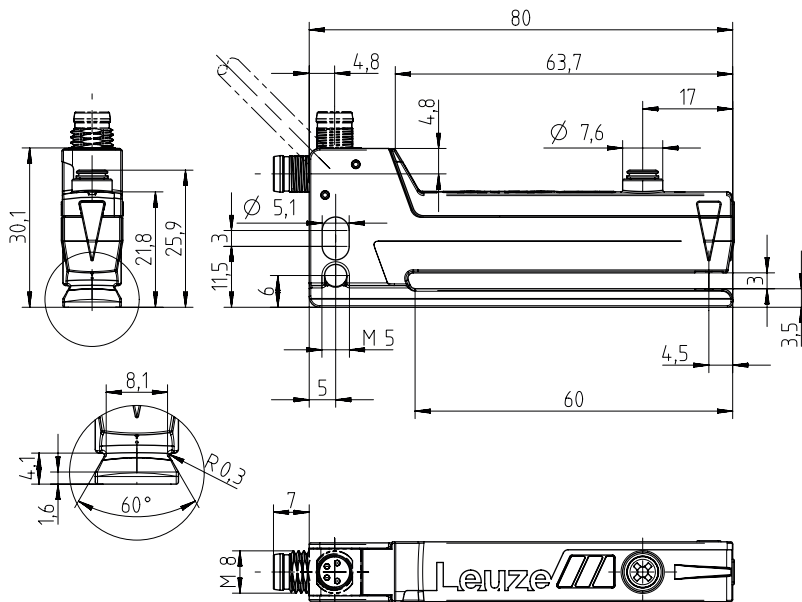


Direct access to the online product selector at www.leuze.com/en/gs63b

Part no.	Part description	Principle of physics	Mouth width	Switching frequency	Light source	Switching output 1	Response time	Description
50128004	GS 63B/6.3-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 4-pin, teach button
50128005	GS 63B/6.3-S8V	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 4-pin, teach button
50128011	GS 63B/6-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 4-pin, multiturn potentiometer
50128012	GS 63B/6-S8V	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Connector, M8, 4-pin, multiturn potentiometer
50128014	IGS 63B/6.3,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, teach button, warning output
50128003	GS 63B/6.01,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, multiturn potentiometer, article set
50128002	GS 63B/6,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, multiturn potentiometer
50129248	GS 63B/6.3,200-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable with connector, M8, 200 mm, 4-pin, teach button
50128013	IGS 63B/6.3	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable, 2,000 mm, 5-wire, teach button, warning output
50128001	GS 63B/6	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal in label gap	0.05 ms	Cable, 2,000 mm, 5-wire, multiturn potentiometer
50128008	GS 63B/6D.3-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Connector, M8, 4-pin, teach button
50128009	GS 63B/6D.3-S8V	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Connector, M8, 4-pin, teach button
50128010	GS 63B/6D-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Connector, M8, 4-pin, multiturn potentiometer

Part no.	Part description	Principle of physics	Mouth width	Switching frequency	Light source	Switching output 1	Response time	Description
50128015	IGS 63B/6D.3,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, teach button, warning output
50128007	GS 63B/6D,200-S12	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Cable with connector, M12, 200 mm, 5-pin, multiturn potentiometer
50131604	GS 63B/6D,200-S8	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Cable with connector, M8, 200 mm, 4-pin, multiturn potentiometer
50128006	GS 63B/6D	Optical	3 mm	10,000 Hz	LED, infrared	Transistor, push-pull, switching signal on label	0.05 ms	Cable, 2,000 mm, 5-wire, multiturn potentiometer

Dimensioned drawings: GS 63B



GS 63B forked sensor

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Switching
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Measuring
sensors

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safety at work

Identification

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Accessories

/// GK 14

The capacitive forked sensor is particularly well suited for transparent labels without metallic coating.

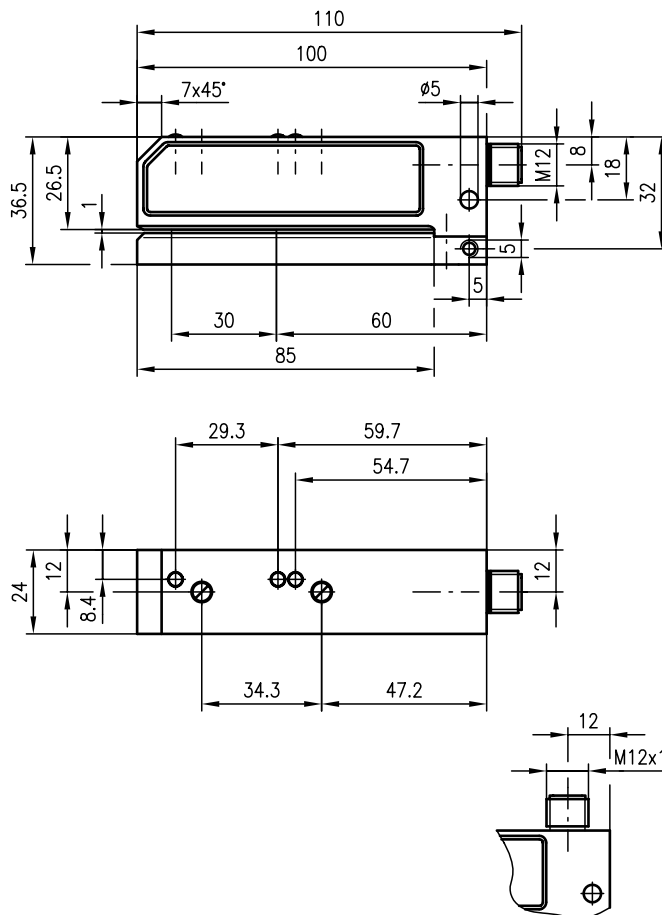
**Benefits:**

- Forked sensor for reliable detection of transparent and opaque labels
- PNP and NPN transistor output for optimum adaptation to the controller
- Robust metal housing with beveled inlet edges
- Inverting input for easy adaptation of the output signal level



Direct access to the online product selector at www.leuze.com/en/gk14

Part no.	Part description	Principle of physics	Mouth width	Switching frequency	Switching output 1	Switching output 2	Response time	Description
50026371	GK 14/24 L	Capacitive	1 mm	5,000 Hz	Transistor, PNP, switching signal in label gap, reversible	Transistor, NPN, switching signal in label gap, reversible	0.1 ms	Connector, M12, 5-pin, multiturn potentiometer
50031714	GK 14/24 L.2	Capacitive	1 mm	5,000 Hz	Transistor, PNP, switching signal in label gap, reversible	Transistor, NPN, switching signal in label gap, reversible	0.1 ms	Connector, M12, 5-pin, multiturn potentiometer

Dimensioned drawings: GK 14

GK 14 capacitive forked sensor

/// GSU 06



This forked sensor with metal housing is very well suited for the detection of foil labels, metallic-coated foil labels and thin metal foils. A special variant for paper tear monitoring is also available.

**Benefits:**

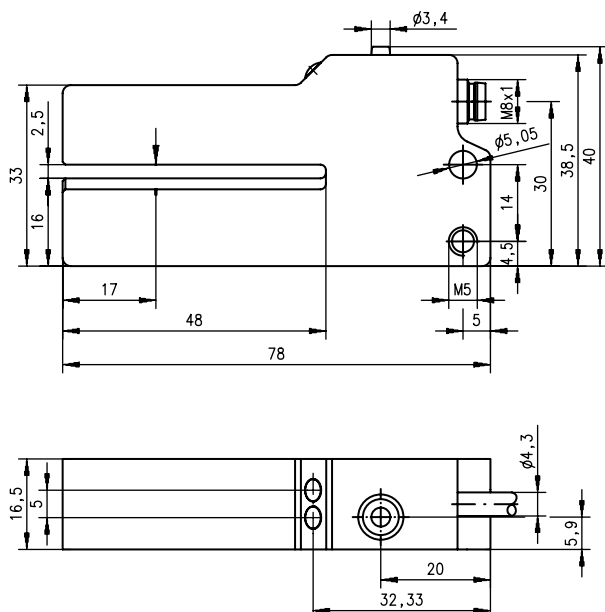
- Reliable detection of foil labels on foil carriers or paper carriers, paper labels on paper carriers, metallic foil labels and thin metal foils
- Simple adjustment via teach-in by pressing a button or remote calibration 1
- Static PNP and NPN transistor outputs for optimum adaptation to the controller
- M8/M12 connector or cable version



Direct access to the online product selector at www.leuze.com/en/gsu06

Part no.	Part description	Principle of physics	Mouth width	Switching output 1	Switching output 2	Response time	Description
50039638	GSU 06/24-2-S8	Ultrasonics	2.5 mm	Transistor, PNP, switching signal in label gap	Transistor, NPN, switching signal in label gap	0.3 ms	Connector, M8, 4-pin, teach button
50040191	GSU 06/24-2	Ultrasonics	2.5 mm	Transistor, PNP, switching signal in label gap	Transistor, NPN, switching signal in label gap	0.3 ms	Cable, 2,000 mm, 5-wire, teach button
50040190	GSU 06/24D-2-S8	Ultrasonics	2.5 mm	Transistor, PNP, switching signal on label	Transistor, NPN, switching signal on label	0.3 ms	Connector, M8, 4-pin, teach button
50040192	GSU 06/24D-2	Ultrasonics	2.5 mm	Transistor, PNP, switching signal on label	Transistor, NPN, switching signal on label	0.3 ms	Cable, 2,000 mm, 5-wire, teach button

The switching frequency is dependent on the conveyor speed, label length and spacing between labels

Dimensioned drawings: GSU 06

GSU 06 ultrasonic forked sensor

/// GSU 14D



Ultrasonic forked sensor for reliable detection and universal application. With its large mouth width, this ultrasonic forked sensor is also suitable for leaflet and booklet labels.



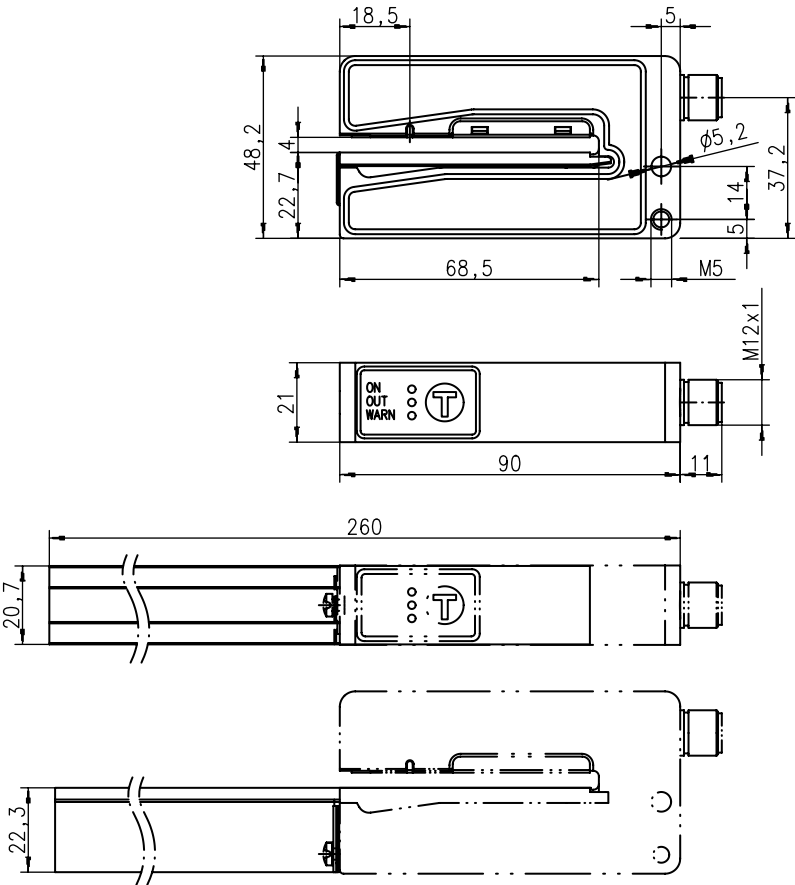
- Benefits:**
- Reliable detection of foil labels on foil carriers, foil labels on paper carriers, paper labels on paper carriers, metallic foil labels and thin metal foils



Direct access to the online product selector at www.leuze.com/en/gsu14d

Part no.	Part description	Principle of physics	Mouth width	Switching output 1	Switching output 2	Response time	Description
50126781	GSU 14D/66.3-S12	Ultrasonics	4 mm	Transistor, push-pull, switching signal in label gap	Transistor, push-pull, switching signal on label	0.2 ms	Connector, M12, 5-pin, teach button, teach input
50126782	GSU 14D/66D.3-S12	Ultrasonics	4 mm	Transistor, push-pull, switching signal on label	Transistor, push-pull, switching signal in label gap	0.2 ms	Connector, M12, 5-pin, teach button
50126783	GSU 14D/66D.31-S12	Ultrasonics	4 mm	Transistor, push-pull, switching signal on label	Transistor, push-pull, switching signal in label gap	0.2 ms	Connector, M12, 5-pin, teach button

Dimensioned drawings: GSU 14D



GSU 14D ultrasonic forked sensor

/// IGSU 14D



The model with chemically nickel-plated metal housing is ideal for applications in the foodstuffs sector where it is critical that no paint chipping occurs. With easyTeach (press button, dispense labels, done), static teaching without loss of labels, ALC function for readjustment of the switching threshold, warning output and practical accessories, this forked sensor is always the first choice for universal label detection. And, with its large mouth width, it is also ideal for booklet and leaflet labels.

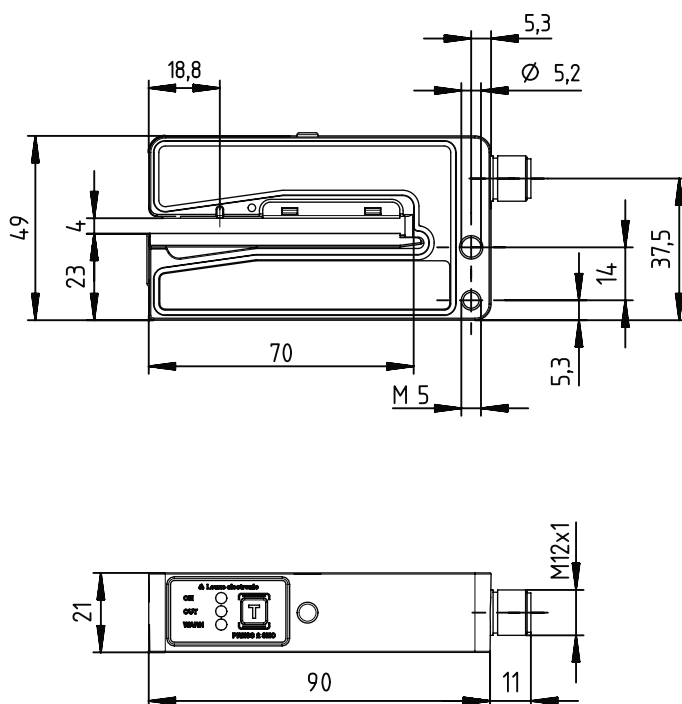
**Benefits:**

- Forked sensor for reliable detection of foil labels on foil carriers or paper carriers, paper labels on paper carriers, metallic foil labels and thin metal foils
- Model for the reliable detection of splice on paper web or plastic web
- easyTeach function: press button – dispense labels – done
- ALC function (auto level control): maximum function reserve via automatic online optimization of the switching threshold



Direct access to the online product selector at www.leuze.com/en/igsu14d

Part no.	Part description	Principle of physics	Mouth width	Switching frequency	Switching output 1	Switching output 2	Response time	Description
50127969	IGSU 14D/6.3G-S12	Ultrasonics	4 mm		Transistor, push-pull, light switching (PNP)/dark switching (NPN)	Transistor, push-pull, 0 V switching	0.2 ms	Connector, M12, 5-pin, teach button, warning output, pre-mounted tape guide
50125790	IGSU 14DN/6.3G-S12	Ultrasonics	4 mm		Transistor, push-pull, light switching (PNP)/dark switching (NPN)	Transistor, push-pull, 0 V switching	0.2 ms	Connector, M12, 5-pin, teach button, warning output, pre-mounted tape guide
50126784	IGSU 14D/6.3-S12	Ultrasonics	4 mm		Transistor, push-pull, light switching (PNP)/dark switching (NPN)	Transistor, push-pull, 0 V switching	0.2 ms	Connector, M12, 5-pin, teach button, warning output
50126786	IGSU 14D/6.31-S12	Ultrasonics	4 mm		Transistor, push-pull, light switching (PNP)/dark switching (NPN)	Transistor, push-pull, 0 V switching	0.2 ms	Connector, M12, 5-pin, teach button, warning output
50126788	IGSU 14DN/6.3-S12	Ultrasonics	4 mm		Transistor, push-pull, light switching (PNP)/dark switching (NPN)	Transistor, push-pull, 0 V switching	0.2 ms	Connector, M12, 5-pin, teach button, warning output
50126785	IGSU 14D/6D.3-S12	Ultrasonics	4 mm		Transistor, push-pull, dark switching (PNP)/light switching (NPN)	Transistor, push-pull, 0 V switching	0.2 ms	Connector, M12, 5-pin, teach button, warning output
50126787	IGSU 14D/6.3SD-S12	Ultrasonics	4 mm	2,000 Hz	Transistor, push-pull, switching signal on splice, reversible		0.25 ms	Connector, M12, 5-pin, teach button, warning output

Dimensioned drawings: IGSU 14D

IGSU 14D ultrasonic forked sensor

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

ACCESSORIES: FORKED SENSORS FOR LABEL DETECTION

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC
50130865	KD U-M8-3W-P1-020	Connector, M8, angled, female	3-pin	2,000 mm	PUR
50130867	KD U-M8-3W-P1-050	Connector, M8, angled, female	3-pin	5,000 mm	PUR
50130860	KD U-M8-3W-V1-020	Connector, M8, angled, female	3-pin	2,000 mm	PVC
50130862	KD U-M8-3W-V1-050	Connector, M8, angled, female	3-pin	5,000 mm	PVC
50130873	KD U-M8-4W-P1-020	Connector, M8, angled, female	4-pin	2,000 mm	PUR
50130875	KD U-M8-4W-P1-050	Connector, M8, angled, female	4-pin	5,000 mm	PUR
50130869	KD U-M8-4W-V1-020	Connector, M8, angled, female	4-pin	2,000 mm	PVC
50130871	KD U-M8-4W-V1-050	Connector, M8, angled, female	4-pin	5,000 mm	PVC
50130842	KD U-M8-3A-P1-020	Connector, M8, axial, female	3-pin	2,000 mm	PUR
50130844	KD U-M8-3A-P1-050	Connector, M8, axial, female	3-pin	5,000 mm	PUR
50130837	KD U-M8-3A-V1-020	Connector, M8, axial, female	3-pin	2,000 mm	PVC
50130832	KD U-M8-3A-V1-050	Connector, M8, axial, female	3-pin	5,000 mm	PVC
50130854	KD U-M8-4A-P1-020	Connector, M8, axial, female	4-pin	2,000 mm	PUR
50130856	KD U-M8-4A-P1-050	Connector, M8, axial, female	4-pin	5,000 mm	PUR
50130848	KD U-M8-4A-V1-020	Connector, M8, axial, female	4-pin	2,000 mm	PVC
50130850	KD U-M8-4A-V1-050	Connector, M8, axial, female	4-pin	5,000 mm	PVC

Further connection cables can be found on our website

User-configurable connectors

Part no.	Part description	Connection	No. of pins
50020502	KD 095-5	Connector, M12, angled, female	5-pin
50020501	KD 095-5A	Connector, M12, axial, female	5-pin

Further connectors can be found on our website

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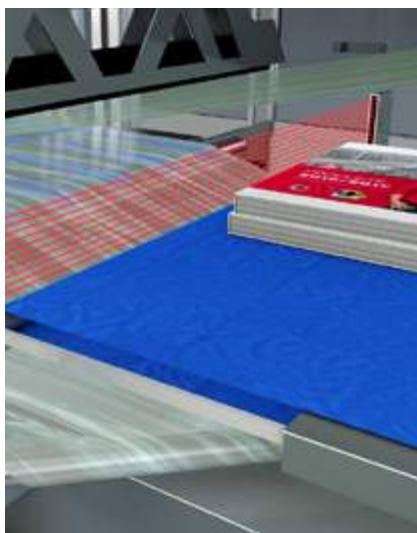
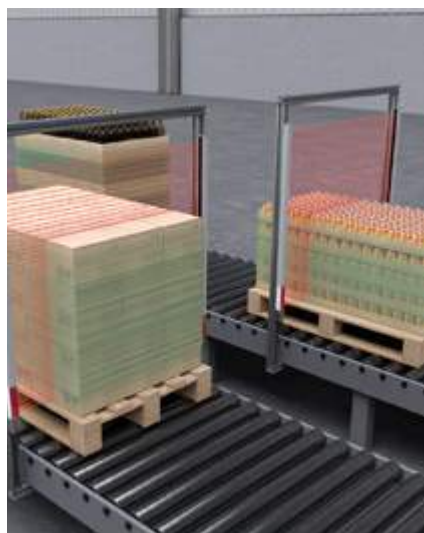
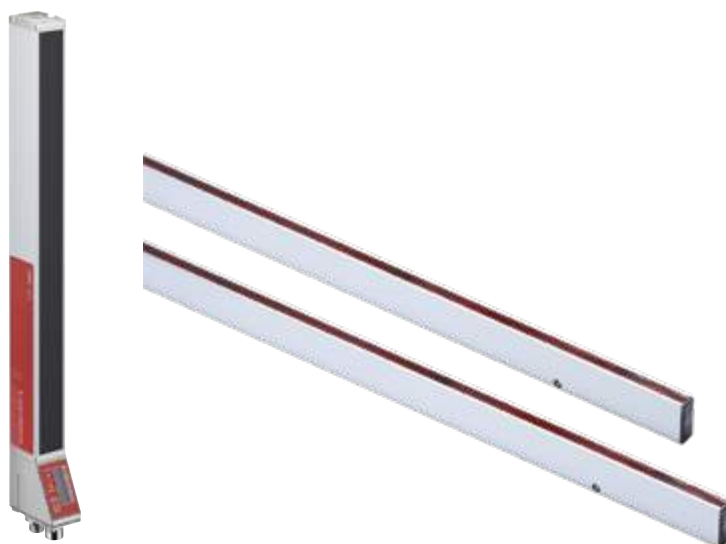


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/ LIGHT CURTAINS

OBJECT DETECTION MADE EASY

The switching light curtains from Leuze electronic are able to monitor a large measurement field and respond if sensor beams in the field are interrupted. Various resolutions and measurement field lengths enable reliable use in a variety of applications.

Switching
sensorsMeasuring
sensorsProducts for
safety at work

Identification

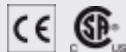
Data transmission /
Control componentsIndustrial image
processing

Accessories

/// CSL 505



The cost-optimized, CSL 505 switching light curtain is specially designed for simple applications. With its slim design, integrated evaluation unit and large opening angle for quick and simple alignment, it can be used for projection monitoring, free field monitoring and object detection.

**Benefits:**

- Different measurement field lengths
- Selectable resolution
- M8 connector plug
- Slim housing
- Operating range up to 5 m
- Short cycle time
- Prefailure message (soiling)



Direct access to the online product selector at www.leuze.com/en/csl505

Part no.	Part description	Beam spacing	Measurement field length	Number of beams	Operating range	Switching outputs	Switching output	Connection
50131365	► CSL505-T05-35-M8	5 mm	35 mm	8x	0.3 ... 5 m			Connector, M8, 4-pin
50131308	◄ CSL505-R05-35-M8	5 mm	35 mm	8x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131366	► CSL505-T05-75-M8	5 mm	75 mm	16x	0.3 ... 5 m			Connector, M8, 4-pin
50131309	◄ CSL505-R05-75-M8	5 mm	75 mm	16x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131367	► CSL505-T05-115-M8	5 mm	115 mm	24x	0.3 ... 5 m			Connector, M8, 4-pin
50131310	◄ CSL505-R05-115-M8	5 mm	115 mm	24x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131368	► CSL505-T05-155-M8	5 mm	155 mm	32x	0.3 ... 5 m			Connector, M8, 4-pin
50131311	◄ CSL505-R05-155-M8	5 mm	155 mm	32x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131369	► CSL505-T05-195-M8	5 mm	195 mm	40x	0.3 ... 5 m			Connector, M8, 4-pin
50131312	◄ CSL505-R05-195-M8	5 mm	195 mm	40x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131370	► CSL505-T05-235-M8	5 mm	235 mm	48x	0.3 ... 5 m			Connector, M8, 4-pin
50131313	◄ CSL505-R05-235-M8	5 mm	235 mm	48x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131371	► CSL505-T05-275-M8	5 mm	275 mm	56x	0.3 ... 5 m			Connector, M8, 4-pin
50131314	◄ CSL505-R05-275-M8	5 mm	275 mm	56x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131372	► CSL505-T05-315-M8	5 mm	315 mm	64x	0.3 ... 5 m			Connector, M8, 4-pin
50131315	◄ CSL505-R05-315-M8	5 mm	315 mm	64x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131373	► CSL505-T05-355-M8	5 mm	355 mm	72x	0.3 ... 5 m			Connector, M8, 4-pin
50131316	◄ CSL505-R05-355-M8	5 mm	355 mm	72x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131374	► CSL505-T05-395-M8	5 mm	355 mm	72x	0.3 ... 5 m			Connector, M8, 4-pin
50131317	◄ CSL505-R05-395-M8	5 mm	355 mm	72x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131375	► CSL505-T12.5-88-M8	12.5 mm	88 mm	8x	0.3 ... 5 m			Connector, M8, 4-pin
50131318	◄ CSL505-R12.5-88-M8	12.5 mm	88 mm	8x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131376	► CSL505-T12.5-188-M8	12.5 mm	188 mm	16x	0.3 ... 5 m			Connector, M8, 4-pin
50131319	◄ CSL505-R12.5-188-M8	12.5 mm	188 mm	16x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131377	► CSL505-T12.5-288-M8	12.5 mm	288 mm	24x	0.3 ... 5 m			Connector, M8, 4-pin
50131321	◄ CSL505-R12.5-288-M8	12.5 mm	288 mm	24x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131378	► CSL505-T12.5-388-M8	12.5 mm	388 mm	32x	0.3 ... 5 m			Connector, M8, 4-pin
50131322	◄ CSL505-R12.5-388-M8	12.5 mm	388 mm	32x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131379	► CSL505-T12.5-488-M8	12.5 mm	488 mm	40x	0.3 ... 5 m			Connector, M8, 4-pin
50131323	◄ CSL505-R12.5-488-M8	12.5 mm	488 mm	40x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131380	► CSL505-T12.5-588-M8	12.5 mm	588 mm	48x	0.3 ... 5 m			Connector, M8, 4-pin
50131324	◄ CSL505-R12.5-588-M8	12.5 mm	588 mm	48x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131381	► CSL505-T12.5-688-M8	12.5 mm	688 mm	56x	0.3 ... 5 m			Connector, M8, 4-pin
50131325	◄ CSL505-R12.5-688-M8	12.5 mm	688 mm	56x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131382	► CSL505-T12.5-788-M8	12.5 mm	788 mm	64x	0.3 ... 5 m			Connector, M8, 4-pin
50131326	◄ CSL505-R12.5-788-M8	12.5 mm	788 mm	64x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131383	► CSL505-T12.5-888-M8	12.5 mm	887.5 mm	72x	0.3 ... 5 m			Connector, M8, 4-pin
50131327	◄ CSL505-R12.5-888-M8	12.5 mm	887.5 mm	72x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131384	► CSL505-T12.5-988-M8	12.5 mm	987.5 mm	80x	0.3 ... 5 m			Connector, M8, 4-pin
50131328	◄ CSL505-R12.5-988-M8	12.5 mm	987.5 mm	80x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131385	► CSL505-T25-175-M8	25 mm	175 mm	8x	0.3 ... 5 m			Connector, M8, 4-pin
50131329	◄ CSL505-R25-175-M8	25 mm	175 mm	8x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131386	► CSL505-T25-275-M8	25 mm	275 mm	12x	0.3 ... 5 m			Connector, M8, 4-pin
50131330	◄ CSL505-R25-275-M8	25 mm	275 mm	12x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131387	► CSL505-T25-375-M8	25 mm	375 mm	16x	0.3 ... 5 m			Connector, M8, 4-pin
50131331	◄ CSL505-R25-375-M8	25 mm	375 mm	16x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131388	► CSL505-T25-475-M8	25 mm	475 mm	20x	0.3 ... 5 m			Connector, M8, 4-pin
50131332	◄ CSL505-R25-475-M8	25 mm	475 mm	20x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131389	► CSL505-T25-575-M8	25 mm	575 mm	24x	0.3 ... 5 m			Connector, M8, 4-pin
50131333	◄ CSL505-R25-575-M8	25 mm	575 mm	24x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131390	► CSL505-T25-675-M8	25 mm	675 mm	28x	0.3 ... 5 m			Connector, M8, 4-pin
50131334	◄ CSL505-R25-675-M8	25 mm	675 mm	28x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin

► transmitter / ◄ receiver

Part no.	Part description	Beam spacing	Measurement field length	Number of beams	Operating range	Switching outputs	Switching output	Connection
50131391	► CSL505-T25-775-M8	25 mm	775 mm	32x	0.3 ... 5 m			Connector, M8, 4-pin
50131335	◄ CSL505-R25-775-M8	25 mm	775 mm	32x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131392	► CSL505-T25-875-M8	25 mm	875 mm	36x	0.3 ... 5 m			Connector, M8, 4-pin
50131336	◄ CSL505-R25-875-M8	25 mm	875 mm	36x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131393	► CSL505-T25-975-M8	25 mm	975 mm	40x	0.3 ... 5 m			Connector, M8, 4-pin
50131337	◄ CSL505-R25-975-M8	25 mm	975 mm	40x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131394	► CSL505-T25-1075-M8	25 mm	1,075 mm	44x	0.3 ... 5 m			Connector, M8, 4-pin
50131338	◄ CSL505-R25-1075-M8	25 mm	1,075 mm	44x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131395	► CSL505-T25-1175-M8	25 mm	1,175 mm	48x	0.3 ... 5 m			Connector, M8, 4-pin
50131339	◄ CSL505-R25-1175-M8	25 mm	1,175 mm	48x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131396	► CSL505-T25-1275-M8	25 mm	1,275 mm	52x	0.3 ... 5 m			Connector, M8, 4-pin
50131340	◄ CSL505-R25-1275-M8	25 mm	1,275 mm	52x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131397	► CSL505-T25-1375-M8	25 mm	1,375 mm	56x	0.3 ... 5 m			Connector, M8, 4-pin
50131341	◄ CSL505-R25-1375-M8	25 mm	1,375 mm	56x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131398	► CSL505-T25-1475-M8	25 mm	1,475 mm	60x	0.3 ... 5 m			Connector, M8, 4-pin
50131342	◄ CSL505-R25-1475-M8	25 mm	1,475 mm	60x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131399	► CSL505-T25-1575-M8	25 mm	1,575 mm	64x	0.3 ... 5 m			Connector, M8, 4-pin
50131343	◄ CSL505-R25-1575-M8	25 mm	1,575 mm	64x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131400	► CSL505-T25-1675-M8	25 mm	1,675 mm	68x	0.3 ... 5 m			Connector, M8, 4-pin
50131344	◄ CSL505-R25-1675-M8	25 mm	1,675 mm	68x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131401	► CSL505-T25-1775-M8	25 mm	1,775 mm	72x	0.3 ... 5 m			Connector, M8, 4-pin
50131345	◄ CSL505-R25-1775-M8	25 mm	1,775 mm	72x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131402	► CSL505-T25-1875-M8	25 mm	1,875 mm	76x	0.3 ... 5 m			Connector, M8, 4-pin
50131346	◄ CSL505-R25-1875-M8	25 mm	1,875 mm	76x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131403	► CSL505-T25-1975-M8	25 mm	1,975 mm	80x	0.3 ... 5 m			Connector, M8, 4-pin
50131347	◄ CSL505-R25-1975-M8	25 mm	1,975 mm	80x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131404	► CSL505-T25-2175-M8	25 mm	2,175 mm	88x	0.3 ... 5 m			Connector, M8, 4-pin
50131348	◄ CSL505-R25-2175-M8	25 mm	2,175 mm	88x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131405	► CSL505-T25-2375-M8	25 mm	2,375 mm	96x	0.3 ... 5 m			Connector, M8, 4-pin
50131349	◄ CSL505-R25-2375-M8	25 mm	2,375 mm	96x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131406	► CSL505-T50-350-M8	50 mm	350 mm	8x	0.3 ... 5 m			Connector, M8, 4-pin
50131350	◄ CSL505-R50-350-M8	50 mm	350 mm	8x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131407	► CSL505-T50-750-M8	50 mm	750 mm	16x	0.3 ... 5 m			Connector, M8, 4-pin
50131351	◄ CSL505-R50-750-M8	50 mm	750 mm	16x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131408	► CSL505-T50-1150-M8	50 mm	1,150 mm	24x	0.3 ... 5 m			Connector, M8, 4-pin
50131352	◄ CSL505-R50-1150-M8	50 mm	1,150 mm	24x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131409	► CSL505-T50-1550-M8	50 mm	1,550 mm	32x	0.3 ... 5 m			Connector, M8, 4-pin
50131353	◄ CSL505-R50-1550-M8	50 mm	1,550 mm	32x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131410	► CSL505-T50-1950-M8	50 mm	1,950 mm	40x	0.3 ... 5 m			Connector, M8, 4-pin
50131354	◄ CSL505-R50-1950-M8	50 mm	1,950 mm	40x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131411	► CSL505-T50-2350-M8	50 mm	2,350 mm	48x	0.3 ... 5 m			Connector, M8, 4-pin
50131355	◄ CSL505-R50-2350-M8	50 mm	2,350 mm	48x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131412	► CSL505-T50-2750-M8	50 mm	2,750 mm	56x	0.3 ... 5 m			Connector, M8, 4-pin
50131356	◄ CSL505-R50-2750-M8	50 mm	2,750 mm	56x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131413	► CSL505-T50-3150-M8	50 mm	3,150 mm	64x	0.3 ... 5 m			Connector, M8, 4-pin
50131357	◄ CSL505-R50-3150-M8	50 mm	3,150 mm	64x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131414	► CSL505-T100-700-M8	100 mm	700 mm	8x	0.3 ... 5 m			Connector, M8, 4-pin
50131358	◄ CSL505-R100-700-M8	100 mm	700 mm	8x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131415	► CSL505-T100-1100-M8	100 mm	1,100 mm	12x	0.3 ... 5 m			Connector, M8, 4-pin
50131359	◄ CSL505-R100-1100-M8	100 mm	1,100 mm	12x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131416	► CSL505-T100-1500-M8	100 mm	1,500 mm	16x	0.3 ... 5 m			Connector, M8, 4-pin
50131360	◄ CSL505-R100-1500-M8	100 mm	1,500 mm	16x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131417	► CSL505-T100-1900-M8	100 mm	1,900 mm	20x	0.3 ... 5 m			Connector, M8, 4-pin
50131361	◄ CSL505-R100-1900-M8	100 mm	1,900 mm	20x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131418	► CSL505-T100-2300-M8	100 mm	2,300 mm	24x	0.3 ... 5 m			Connector, M8, 4-pin
50131362	◄ CSL505-R100-2300-M8	100 mm	2,300 mm	24x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131419	► CSL505-T100-2700-M8	100 mm	2,700 mm	28x	0.3 ... 5 m			Connector, M8, 4-pin
50131363	◄ CSL505-R100-2700-M8	100 mm	2,700 mm	28x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin
50131420	► CSL505-T100-3100-M8	100 mm	3,100 mm	32x	0.3 ... 5 m			Connector, M8, 4-pin
50131364	◄ CSL505-R100-3100-M8	100 mm	3,100 mm	32x	0.3 ... 5 m	2x	Transistor, push-pull, light/dark reversible	Connector, M8, 4-pin

► transmitter / ◄ receiver

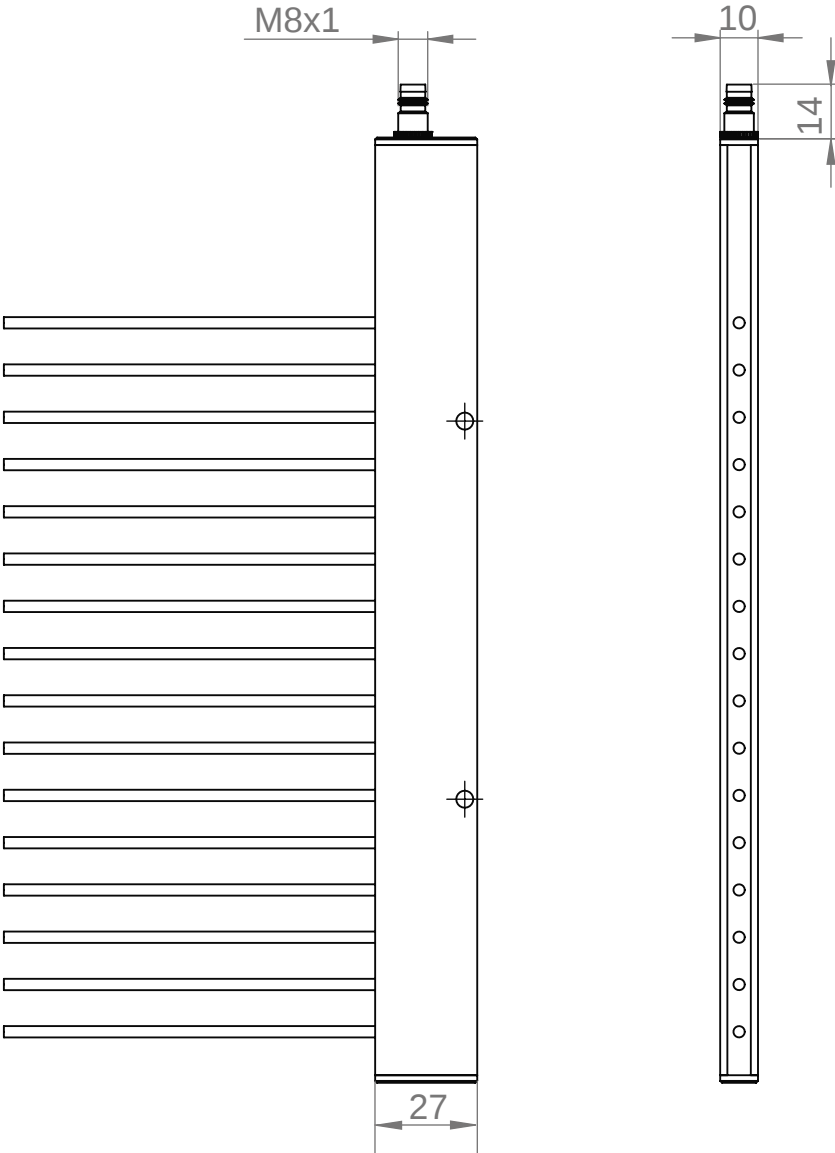
Switching
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sensorsProducts for
safety at work

Identification

Data transmission/
Control componentsIndustrial image
processing

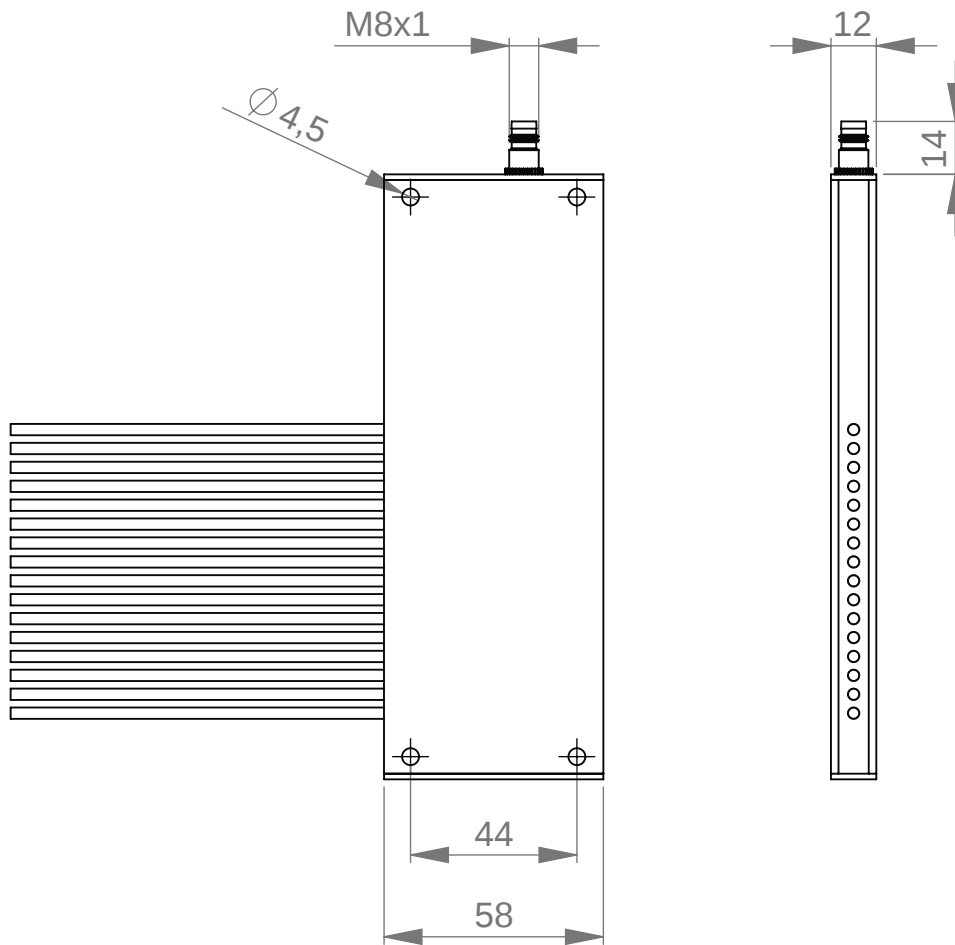
Accessories

Dimensioned drawings: CSL 505



CSL 505 switching light curtain, > 5 mm beam spacing

Dimensioned drawings: CSL 505



CSL 505 switching light curtain, 5 mm beam spacing

ACCESSORIES: CSL 505

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130873	KD U-M8-4W-P1-020	Connector, M8, angled, female	4-pin	2,000 mm	PUR
50130875	KD U-M8-4W-P1-050	Connector, M8, angled, female	4-pin	5,000 mm	PUR
50130869	KD U-M8-4W-V1-020	Connector, M8, angled, female	4-pin	2,000 mm	PVC
50130871	KD U-M8-4W-V1-050	Connector, M8, angled, female	4-pin	5,000 mm	PVC
50130854	KD U-M8-4A-P1-020	Connector, M8, axial, female	4-pin	2,000 mm	PUR
50130856	KD U-M8-4A-P1-050	Connector, M8, axial, female	4-pin	5,000 mm	PUR
50130848	KD U-M8-4A-V1-020	Connector, M8, axial, female	4-pin	2,000 mm	PVC
50130850	KD U-M8-4A-V1-050	Connector, M8, axial, female	4-pin	5,000 mm	PVC

Further connection cables can be found on our website

Configuration devices

Part no.	Part description	Connection 1	No. of pins	Connection 2	Function
50132069	CSL505 interface	Sub-D	9-pin	Terminal	Configuration and test device

Switching
sensorsMeasuring
sensorsProducts for
safety at work

Identification

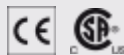
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Control componentsIndustrial image
processing

Accessories

/// CSL 710



The CSL 710 is a switching light curtain with selectable resolution, various measurement field lengths and many useful technical details such as, e.g., a display for simple alignment.

**Benefits:**

- Operating range of up to 6 m for larger function reserve
- Response time of 30 µs per beam for the reliable detection of fast processes
- Large, easy-to-read display in 5 languages for easy alignment and configuration
- Maximum measurement field length of nearly 3 m for measurement on large objects
- Sturdy metal housing also for use in rough industrial environments
- Connection via M12 connector for fast installation
- 4 configurable inputs or outputs



Direct access to the online product selector at www.leuze.com/en/csl710

Part no.	Part description	Beam spacing	Measurement field length	Number of beams	Operating range	Switching output	Connection
50128977	► CSL710-T05-160.A-M12	5 mm	160 mm	32x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128889	◄ CSL710-R05-160.A/L-M12	5 mm	160 mm	32x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128978	► CSL710-T05-240.A-M12	5 mm	240 mm	48x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128890	◄ CSL710-R05-240.A/L-M12	5 mm	240 mm	48x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128979	► CSL710-T05-320.A-M12	5 mm	320 mm	64x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128891	◄ CSL710-R05-320.A/L-M12	5 mm	320 mm	64x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128980	► CSL710-T05-400.A-M12	5 mm	400 mm	80x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128892	◄ CSL710-R05-400.A/L-M12	5 mm	400 mm	80x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128981	► CSL710-T05-480.A-M12	5 mm	480 mm	96x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128893	◄ CSL710-R05-480.A/L-M12	5 mm	480 mm	96x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128982	► CSL710-T05-560.A-M12	5 mm	560 mm	112x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128894	◄ CSL710-R05-560.A/L-M12	5 mm	560 mm	112x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128983	► CSL710-T05-640.A-M12	5 mm	640 mm	128x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128895	◄ CSL710-R05-640.A/L-M12	5 mm	640 mm	128x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128984	► CSL710-T05-720.A-M12	5 mm	720 mm	144x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128896	◄ CSL710-R05-720.A/L-M12	5 mm	720 mm	144x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128985	► CSL710-T05-800.A-M12	5 mm	800 mm	160x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128897	◄ CSL710-R05-800.A/L-M12	5 mm	800 mm	160x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128986	► CSL710-T05-880.A-M12	5 mm	880 mm	176x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128898	◄ CSL710-R05-880.A/L-M12	5 mm	880 mm	176x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128987	► CSL710-T05-960.A-M12	5 mm	960 mm	192x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128899	◄ CSL710-R05-960.A/L-M12	5 mm	960 mm	192x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128988	► CSL710-T05-1040.A-M12	5 mm	1,040 mm	208x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128900	◄ CSL710-R05-1040.A/L-M12	5 mm	1,040 mm	208x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128989	► CSL710-T05-1120.A-M12	5 mm	1,120 mm	224x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128901	◄ CSL710-R05-1120.A/L-M12	5 mm	1,120 mm	224x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128990	► CSL710-T05-1200.A-M12	5 mm	1,200 mm	240x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128902	◄ CSL710-R05-1200.A/L-M12	5 mm	1,200 mm	240x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128991	► CSL710-T05-1280.A-M12	5 mm	1,280 mm	256x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128903	◄ CSL710-R05-1280.A/L-M12	5 mm	1,280 mm	256x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128992	► CSL710-T05-1360.A-M12	5 mm	1,360 mm	272x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128904	◄ CSL710-R05-1360.A/L-M12	5 mm	1,360 mm	272x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128993	► CSL710-T05-1440.A-M12	5 mm	1,440 mm	288x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128905	◄ CSL710-R05-1440.A/L-M12	5 mm	1,440 mm	288x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128994	► CSL710-T05-1520.A-M12	5 mm	1,520 mm	304x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128906	◄ CSL710-R05-1520.A/L-M12	5 mm	1,520 mm	304x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128995	► CSL710-T05-1600.A-M12	5 mm	1,600 mm	320x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128907	◄ CSL710-R05-1600.A/L-M12	5 mm	1,600 mm	320x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128996	► CSL710-T05-1680.A-M12	5 mm	1,680 mm	336x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128908	◄ CSL710-R05-1680.A/L-M12	5 mm	1,680 mm	336x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128997	► CSL710-T05-1760.A-M12	5 mm	1,760 mm	352x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128909	◄ CSL710-R05-1760.A/L-M12	5 mm	1,760 mm	352x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128998	► CSL710-T05-1840.A-M12	5 mm	1,840 mm	368x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128910	◄ CSL710-R05-1840.A/L-M12	5 mm	1,840 mm	368x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50128999	► CSL710-T05-1920.A-M12	5 mm	1,920 mm	384x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128911	◄ CSL710-R05-1920.A/L-M12	5 mm	1,920 mm	384x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin

► transmitter / ◄ receiver

Part no.	Part description	Beam spacing	Measurement field length	Number of beams	Operating range	Switching output	Connection
50129000	► CSL710-T05-2000.A-M12	5 mm	2,000 mm	400x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128912	◄ CSL710-R05-2000.A/L-M12	5 mm	2,000 mm	400x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129001	► CSL710-T05-2080.A-M12	5 mm	2,080 mm	416x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128913	◄ CSL710-R05-2080.A/L-M12	5 mm	2,080 mm	416x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129002	► CSL710-T05-2160.A-M12	5 mm	2,160 mm	432x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128914	◄ CSL710-R05-2160.A/L-M12	5 mm	2,160 mm	432x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129003	► CSL710-T05-2240.A-M12	5 mm	2,240 mm	448x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128915	◄ CSL710-R05-2240.A/L-M12	5 mm	2,240 mm	448x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129004	► CSL710-T05-2320.A-M12	5 mm	2,320 mm	464x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128916	◄ CSL710-R05-2320.A/L-M12	5 mm	2,320 mm	464x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129005	► CSL710-T05-2400.A-M12	5 mm	2,400 mm	480x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128917	◄ CSL710-R05-2400.A/L-M12	5 mm	2,400 mm	480x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129006	► CSL710-T05-2480.A-M12	5 mm	2,480 mm	496x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128918	◄ CSL710-R05-2480.A/L-M12	5 mm	2,480 mm	496x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129007	► CSL710-T05-2560.A-M12	5 mm	2,560 mm	512x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128919	◄ CSL710-R05-2560.A/L-M12	5 mm	2,560 mm	512x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129008	► CSL710-T05-2640.A-M12	5 mm	2,640 mm	528x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128920	◄ CSL710-R05-2640.A/L-M12	5 mm	2,640 mm	528x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129009	► CSL710-T05-2720.A-M12	5 mm	2,720 mm	544x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128921	◄ CSL710-R05-2720.A/L-M12	5 mm	2,720 mm	544x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129010	► CSL710-T05-2800.A-M12	5 mm	2,800 mm	560x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128922	◄ CSL710-R05-2800.A/L-M12	5 mm	2,800 mm	560x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129011	► CSL710-T05-2880.A-M12	5 mm	2,880 mm	576x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128923	◄ CSL710-R05-2880.A/L-M12	5 mm	2,880 mm	576x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129012	► CSL710-T05-2960.A-M12	5 mm	2,960 mm	592x	0.1 ... 3.5 m		Connector, M12, 5-pin
50128924	◄ CSL710-R05-2960.A/L-M12	5 mm	2,960 mm	592x	0.1 ... 3.5 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129013	► CSL710-T10-160.A-M12	10 mm	160 mm	16x	0.3 ... 7 m		Connector, M12, 5-pin
50128929	◄ CSL710-R10-160.A/L-M12	10 mm	160 mm	16x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129014	► CSL710-T10-320.A-M12	10 mm	320 mm	32x	0.3 ... 7 m		Connector, M12, 5-pin
50128930	◄ CSL710-R10-320.A/L-M12	10 mm	320 mm	32x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129015	► CSL710-T10-480.A-M12	10 mm	480 mm	48x	0.3 ... 7 m		Connector, M12, 5-pin
50128931	◄ CSL710-R10-480.A/L-M12	10 mm	480 mm	48x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129016	► CSL710-T10-640.A-M12	10 mm	640 mm	64x	0.3 ... 7 m		Connector, M12, 5-pin
50128932	◄ CSL710-R10-640.A/L-M12	10 mm	640 mm	64x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129017	► CSL710-T10-800.A-M12	10 mm	800 mm	80x	0.3 ... 7 m		Connector, M12, 5-pin
50128933	◄ CSL710-R10-800.A/L-M12	10 mm	800 mm	80x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129018	► CSL710-T10-960.A-M12	10 mm	960 mm	96x	0.3 ... 7 m		Connector, M12, 5-pin
50128934	◄ CSL710-R10-960.A/L-M12	10 mm	960 mm	96x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129019	► CSL710-T10-1120.A-M12	10 mm	1,120 mm	112x	0.3 ... 7 m		Connector, M12, 5-pin
50128935	◄ CSL710-R10-1120.A/L-M12	10 mm	1,120 mm	112x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129020	► CSL710-T10-1280.A-M12	10 mm	1,280 mm	128x	0.3 ... 7 m		Connector, M12, 5-pin
50128936	◄ CSL710-R10-1280.A/L-M12	10 mm	1,280 mm	128x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129021	► CSL710-T10-1440.A-M12	10 mm	1,440 mm	144x	0.3 ... 7 m		Connector, M12, 5-pin
50128937	◄ CSL710-R10-1440.A/L-M12	10 mm	1,440 mm	144x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129022	► CSL710-T10-1600.A-M12	10 mm	1,600 mm	160x	0.3 ... 7 m		Connector, M12, 5-pin
50128938	◄ CSL710-R10-1600.A/L-M12	10 mm	1,600 mm	160x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129023	► CSL710-T10-1760.A-M12	10 mm	1,760 mm	176x	0.3 ... 7 m		Connector, M12, 5-pin
50128939	◄ CSL710-R10-1760.A/L-M12	10 mm	1,760 mm	176x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129024	► CSL710-T10-1920.A-M12	10 mm	1,920 mm	192x	0.3 ... 7 m		Connector, M12, 5-pin
50128940	◄ CSL710-R10-1920.A/L-M12	10 mm	1,920 mm	192x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129025	► CSL710-T10-2080.A-M12	10 mm	2,080 mm	208x	0.3 ... 7 m		Connector, M12, 5-pin
50128941	◄ CSL710-R10-2080.A/L-M12	10 mm	2,080 mm	208x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129026	► CSL710-T10-2240.A-M12	10 mm	2,240 mm	224x	0.3 ... 7 m		Connector, M12, 5-pin
50128942	◄ CSL710-R10-2240.A/L-M12	10 mm	2,240 mm	224x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129027	► CSL710-T10-2400.A-M12	10 mm	2,400 mm	240x	0.3 ... 7 m		Connector, M12, 5-pin
50128943	◄ CSL710-R10-2400.A/L-M12	10 mm	2,400 mm	240x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129028	► CSL710-T10-2560.A-M12	10 mm	2,560 mm	256x	0.3 ... 7 m		Connector, M12, 5-pin
50128944	◄ CSL710-R10-2560.A/L-M12	10 mm	2,560 mm	256x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129029	► CSL710-T10-2720.A-M12	10 mm	2,720 mm	272x	0.3 ... 7 m		Connector, M12, 5-pin
50128945	◄ CSL710-R10-2720.A/L-M12	10 mm	2,720 mm	272x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129030	► CSL710-T10-2880.A-M12	10 mm	2,880 mm	288x	0.3 ... 7 m		Connector, M12, 5-pin
50128946	◄ CSL710-R10-2880.A/L-M12	10 mm	2,880 mm	288x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129031	► CSL710-T20-150.A-M12	20 mm	150 mm	8x	0.3 ... 7 m		Connector, M12, 5-pin
50128948	◄ CSL710-R20-150.A/L-M12	20 mm	150 mm	8x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129032	► CSL710-T20-310.A-M12	20 mm	310 mm	16x	0.3 ... 7 m		Connector, M12, 5-pin
50128949	◄ CSL710-R20-310.A/L-M12	20 mm	310 mm	16x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129033	► CSL710-T20-470.A-M12	20 mm	470 mm	24x	0.3 ... 7 m		Connector, M12, 5-pin
50128950	◄ CSL710-R20-470.A/L-M12	20 mm	470 mm	24x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129034	► CSL710-T20-630.A-M12	20 mm	630 mm	32x	0.3 ... 7 m		Connector, M12, 5-pin
50128951	◄ CSL710-R20-630.A/L-M12	20 mm	630 mm	32x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin

► transmitter / ◄ receiver

Switching
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Identification

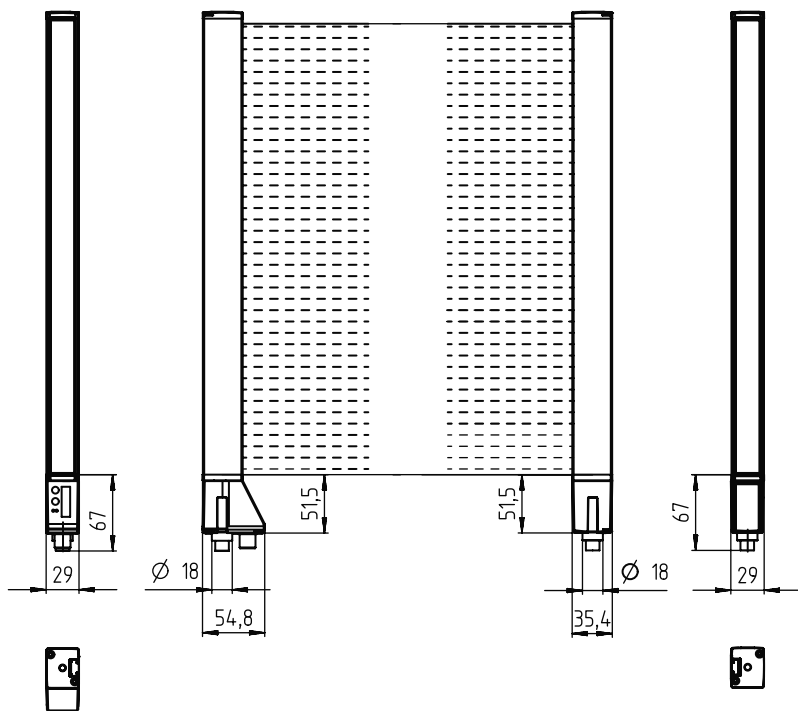
Data transmission/
Control componentsIndustrial image
processing

Accessories

Part no.	Part description	Beam spacing	Measurement field length	Number of beams	Operating range	Switching output	Connection
50129035	► CSL710-T20-790.A-M12	20 mm	790 mm	40x	0.3 ... 7 m		Connector, M12, 5-pin
50128952	◄ CSL710-R20-790.A/L-M12	20 mm	790 mm	40x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129036	► CSL710-T20-950.A-M12	20 mm	950 mm	48x	0.3 ... 7 m		Connector, M12, 5-pin
50128953	◄ CSL710-R20-950.A/L-M12	20 mm	950 mm	48x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129037	► CSL710-T20-1110.A-M12	20 mm	1,110 mm	56x	0.3 ... 7 m		Connector, M12, 5-pin
50128954	◄ CSL710-R20-1110.A/L-M12	20 mm	1,110 mm	56x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129038	► CSL710-T20-1270.A-M12	20 mm	1,270 mm	64x	0.3 ... 7 m		Connector, M12, 5-pin
50128955	◄ CSL710-R20-1270.A/L-M12	20 mm	1,270 mm	64x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129039	► CSL710-T20-1430.A-M12	20 mm	1,430 mm	72x	0.3 ... 7 m		Connector, M12, 5-pin
50128956	◄ CSL710-R20-1430.A/L-M12	20 mm	1,430 mm	72x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129040	► CSL710-T20-1590.A-M12	20 mm	1,590 mm	80x	0.3 ... 7 m		Connector, M12, 5-pin
50128957	◄ CSL710-R20-1590.A/L-M12	20 mm	1,590 mm	80x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129041	► CSL710-T20-1750.A-M12	20 mm	1,750 mm	88x	0.3 ... 7 m		Connector, M12, 5-pin
50128958	◄ CSL710-R20-1750.A/L-M12	20 mm	1,750 mm	88x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129042	► CSL710-T20-1910.A-M12	20 mm	1,910 mm	96x	0.3 ... 7 m		Connector, M12, 5-pin
50128959	◄ CSL710-R20-1910.A/L-M12	20 mm	1,910 mm	96x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129043	► CSL710-T20-2070.A-M12	20 mm	2,070 mm	104x	0.3 ... 7 m		Connector, M12, 5-pin
50128960	◄ CSL710-R20-2070.A/L-M12	20 mm	2,070 mm	104x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129044	► CSL710-T20-2230.A-M12	20 mm	2,230 mm	112x	0.3 ... 7 m		Connector, M12, 5-pin
50128961	◄ CSL710-R20-2230.A/L-M12	20 mm	2,230 mm	112x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129045	► CSL710-T20-2390.A-M12	20 mm	2,390 mm	120x	0.3 ... 7 m		Connector, M12, 5-pin
50128962	◄ CSL710-R20-2390.A/L-M12	20 mm	2,390 mm	120x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129046	► CSL710-T20-2550.A-M12	20 mm	2,550 mm	128x	0.3 ... 7 m		Connector, M12, 5-pin
50128963	◄ CSL710-R20-2550.A/L-M12	20 mm	2,550 mm	128x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129047	► CSL710-T20-2710.A-M12	20 mm	2,710 mm	136x	0.3 ... 7 m		Connector, M12, 5-pin
50128964	◄ CSL710-R20-2710.A/L-M12	20 mm	2,710 mm	136x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129048	► CSL710-T20-2870.A-M12	20 mm	2,870 mm	144x	0.3 ... 7 m		Connector, M12, 5-pin
50128965	◄ CSL710-R20-2870.A/L-M12	20 mm	2,870 mm	144x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129049	► CSL710-T40-290.A-M12	40 mm	290 mm	8x	0.3 ... 7 m		Connector, M12, 5-pin
50128967	◄ CSL710-R40-290.A/L-M12	40 mm	290 mm	8x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129050	► CSL710-T40-610.A-M12	40 mm	610 mm	16x	0.3 ... 7 m		Connector, M12, 5-pin
50128968	◄ CSL710-R40-610.A/L-M12	40 mm	610 mm	16x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129051	► CSL710-T40-930.A-M12	40 mm	930 mm	24x	0.3 ... 7 m		Connector, M12, 5-pin
50128969	◄ CSL710-R40-930.A/L-M12	40 mm	930 mm	24x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129052	► CSL710-T40-1250.A-M12	40 mm	1,250 mm	32x	0.3 ... 7 m		Connector, M12, 5-pin
50128970	◄ CSL710-R40-1250.A/L-M12	40 mm	1,250 mm	32x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129053	► CSL710-T40-1570.A-M12	40 mm	1,570 mm	40x	0.3 ... 7 m		Connector, M12, 5-pin
50128971	◄ CSL710-R40-1570.A/L-M12	40 mm	1,570 mm	40x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129054	► CSL710-T40-1890.A-M12	40 mm	1,890 mm	48x	0.3 ... 7 m		Connector, M12, 5-pin
50128972	◄ CSL710-R40-1890.A/L-M12	40 mm	1,890 mm	48x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129055	► CSL710-T40-2210.A-M12	40 mm	2,210 mm	56x	0.3 ... 7 m		Connector, M12, 5-pin
50128973	◄ CSL710-R40-2210.A/L-M12	40 mm	2,210 mm	56x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129056	► CSL710-T40-2530.A-M12	40 mm	2,530 mm	64x	0.3 ... 7 m		Connector, M12, 5-pin
50128974	◄ CSL710-R40-2530.A/L-M12	40 mm	2,530 mm	64x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin
50129057	► CSL710-T40-2850.A-M12	40 mm	2,850 mm	72x	0.3 ... 7 m		Connector, M12, 5-pin
50128975	◄ CSL710-R40-2850.A/L-M12	40 mm	2,850 mm	72x	0.3 ... 7 m	Inputs/outputs selectable	Connector, M12, 8-pin

► transmitter / ◄ receiver

Dimensioned drawings: CSL 710



CSL 710 switching light curtain, transmitter and receiver

Switching
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sensorsProducts for
safety at work

Identification

Data transmission /
Control componentsIndustrial image
processing

Accessories

ACCESSORIES: CSL 710

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50135121	KD U-M12-8A-P1-020	Connector, M12, axial, female	8-pin	2,000 mm	PUR
50135122	KD U-M12-8A-P1-050	Connector, M12, axial, female	8-pin	5,000 mm	PUR
50135123	KD U-M12-8A-P1-100	Connector, M12, axial, female	8-pin	10,000 mm	PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Interface	Sheathing material
50120999	K-DS M12A-8P-4P-2m-L-PUR	Connector, M12, axial, female	8-pin	Connector, M12, axial, male	4-pin	2,000 mm		PUR
50121000	K-DS M12A-8P-4P-5m-L-PUR	Connector, M12, axial, female	8-pin	Connector, M12, axial, male	4-pin	5,000 mm		PUR
50129779	KDS DN-M12-5A-M12-5A-P3-010	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	1,000 mm	IO-Link, DeviceNet, CANopen	PUR
50129780	KDS DN-M12-5A-M12-5A-P3-020	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	2,000 mm	IO-Link, DeviceNet, CANopen	PUR
50129781	KDS DN-M12-5A-M12-5A-P3-050	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	5,000 mm	IO-Link, DeviceNet, CANopen	PUR
50129782	KDS DN-M12-5A-M12-5A-P3-100	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	10,000 mm	IO-Link, DeviceNet, CANopen	PUR
50129783	KDS DN-M12-5A-M12-5A-P3-200	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	20,000 mm	IO-Link, DeviceNet, CANopen	PUR

Further interconnection cables can be found on our website

User-configurable connectors

Part no.	Part description	Connection	No. of pins
429178	CB-M12-8GF	Connector, M12, axial, female	8-pin

Further connectors can be found on our website

IO-Link USB master

Part no.	Part description	Specification	COM mode	Connection 1	Connection 2
50121098	SET MD12-US2-IL1.1 + acc.	1.0, 1.1	COM1, COM2, COM3	Connector, M12	USB

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
429056	BT-2L	Angle, L-shape	Screw type	Through-hole mounting	Metal
429057	BT-2Z	Angle, Z-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Swivel mounts

Part no.	Part description	Fastening at device	Fastening at system	Material
429046	BT-2R1	Clampable	Through-hole mounting	Metal, plastic

Further swivel mounts can be found on our website

Other mounting systems

Part no.	Part description	Description	Fastening at device	Fastening at system	Material	Contains
424417	BT-2P40	Mounting bracket set	Groove mounting	Groove mounting	Metal	2x BT-P40 clamp bracket
429058	BT-2SSD	Mounting bracket set	Groove mounting, clampable, screw type	Through-hole mounting	Metal	
429049	BT-2SSD-270	Mounting bracket set	Screw type, clampable, groove mounting	Through-hole mounting	Metal	
429059	BT-4SSD	Mounting bracket set	Groove mounting, clampable, screw type	Through-hole mounting	Metal	4x
425740	BT-10NC60	Sliding block set	Groove mounting	Mounting thread	Metal	10x BT-NC sliding block
425741	BT-10NC64	Sliding block set	Groove mounting	Mounting thread	Metal	10x BT-NC-M4-M6 sliding block
425742	BT-10NC65	Sliding block set	Groove mounting	Mounting thread	Metal	10x BT-NC-M5-M6 sliding block

Further mounting systems can be found on our website

/// CSR 780



The CSR 780 is a switching light curtain that functions according to the reflection principle and has high resolution and fast response time specifically for counting objects on machines or for ejection monitoring.



Benefits:

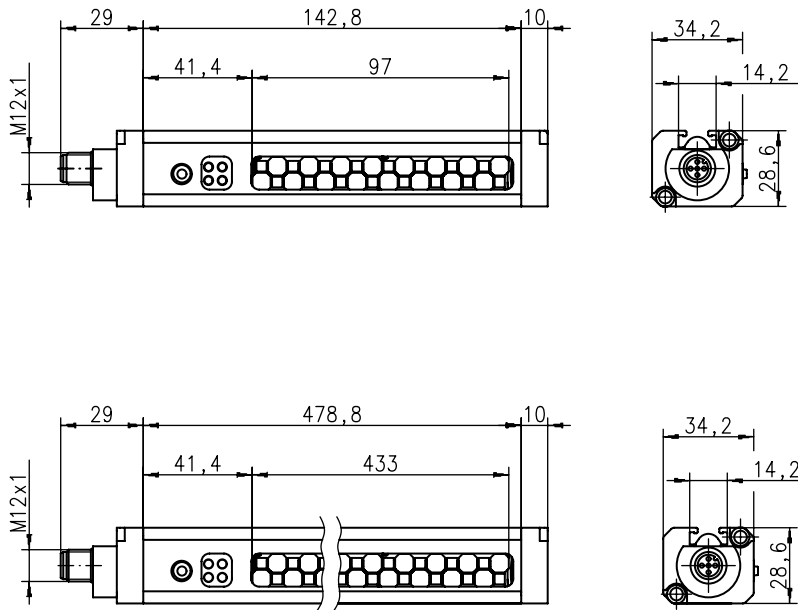
- Transmitter and receiver in one housing
- Reflection principle against a reflector
- Complete detection of small objects (e.g. 10 mm x 10 mm x 1 mm)
- Max. object speed 3.5 m/s
- Readjustment when soiled
- Warning output for prefailure message
- Time-saving adjustment by means of teach-in



Direct access to the online product selector at www.leuze.com/en/csr780

Part no.	Part description	Beam spacing	Measurement field length	Switching outputs	Switching output	Connection	Special design
50128287	CSR780-01-96/GWHE-M12	1 mm	96 mm	1x	Transistor, push-pull, light switching (PNP)/dark switching (NPN)	Connector, M12, 5-pin	Warning output
50128288	CSR780-01-96/GWHE-M12	1 mm	96 mm	1x	Transistor, push-pull, dark switching (PNP)/light switching (NPN)	Connector, M12, 5-pin	Warning output
50128289	CSR780-01-432/GWHE-M12	1 mm	432 mm	1x	Transistor, push-pull, light switching (PNP)/dark switching (NPN)	Connector, M12, 5-pin	Warning output
50128290	CSR780-01-432/GWHE-M12	1 mm	432 mm	1x	Transistor, push-pull, dark switching (PNP)/light switching (NPN)	Connector, M12, 5-pin	Warning output

Dimensioned drawings: CSR 780



CSR 780 switching light curtain

ACCESSORIES: CSR 780

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Reflectors

Standard reflectors

Part no.	Part description	Design	Reflective surface	Material
50111155	OCS 110x80mm-M reflector	Rectangular	120 mm x 85 mm	Plastic
50111154	OCS 450x80mm-M reflector	Rectangular	488 mm x 105 mm	Plastic

Dimensional tolerances for all specified dimensions: ± 0.2 mm

Further standard reflectors can be found on our website

Switching
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Identification

Data transmission /
Control componentsIndustrial image
processing

Accessories

/ SPECIAL SENSORS

RELIABLE, EVEN WHEN THINGS GET CHALLENGING

Under this heading are sensor solutions that must perform special detection tasks or which were developed for specific applications. Here you will find contrast and luminescence scanners as well as color sensors and systems for monitoring double sheets and splices as well as for overlap detection.



Contrast sensors

Page 195

Luminescence sensors

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Color sensors

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//CONTRAST SENSORS

THE CONTRAST MAKES THE DIFFERENCE

This sensor type can use various light sources – such as white light, laser-generated red light or RGB light – to very precisely detect and compare contrasts and report the results to the process with minimal signal jitter. Through the automatic selection of the right transmitter colors, various color or gray value combinations can be reliably detected.

/// KRT 3B



The contrast sensors of the KRT 3B series distinguish between grayscale values, enabling them to detect minimal contrasts. As a result, a check can be performed for the presence of text or imprints or so-called marks detected.



Benefits:

- Range 14.5 mm / 60 mm (laser)
- Multicolor (RGB), white or laser light
- Various teach-in processes,
- Switching-threshold correction via EasyTune
- Min. response time 50 µs
- Switching frequency up to 10 kHz
- Pulse stretching
- IO-Link interface



Direct access to the online product selector at www.leuze.com/en/krt3b

Part no.	Part description	Operating range	Switching frequency	Light source	Digital switching output	Connection	Description
50110592	KRTL 3B/4.3111-S8	0.04 ... 0.08 m	4,000 Hz	Laser, red	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110594	KRTL 3B/4.3111,200-S12	0.04 ... 0.08 m	4,000 Hz	Laser, red	Transistor, PNP, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50134932	KRTL 3B/4.3111	0.04 ... 0.08 m	4,000 Hz	Laser, red	Transistor, PNP, light/dark reversible	Cable, 2,000 mm, 4-wire	Time function, teach input
50110593	KRTL 3B/2.3111-S8	0.04 ... 0.08 m	4,000 Hz	Laser, red	Transistor, NPN, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110595	KRTL 3B/2.3111,200-S12	0.04 ... 0.08 m	4,000 Hz	Laser, red	Transistor, NPN, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50111321	KRTL 3B/6.3111-S8	0.04 ... 0.08 m	4,000 Hz	Laser, red	Transistor, push-pull, IO-Link / light switching (PNP)/dark switching (NPN)	Connector, M8, 4-pin	Interface: IO-Link, teach input, time function
50110582	KRTW 3B/4.1321,200-S12	0.0125 ... 0.165 m	10,000 Hz	LED, white	Transistor, PNP, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50110572	KRTW 3B/4.1110-S8	0.0125 ... 0.0165 m	6,000 Hz	LED, white	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110576	KRTW 3B/4.1121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110580	KRTW 3B/4.1321-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50111769	KRTW 3B/4.2121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110578	KRTW 3B/4.1121,200-S12	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, PNP, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50110573	KRTW 3B/2.1110-S8	0.0125 ... 0.0165 m	6,000 Hz	LED, white	Transistor, NPN, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110577	KRTW 3B/2.1121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, NPN, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110581	KRTW 3B/2.1321-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, NPN, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110579	KRTW 3B/2.1121,200-S12	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, NPN, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50110583	KRTW 3B/2.1321,200-S12	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, NPN, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50111319	KRTW 3B/6.1121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, push-pull, IO-Link / light switching (PNP)/dark switching (NPN)	Connector, M8, 4-pin	Interface: IO-Link, teach input, time function
50111320	KRTW 3B/6.1321-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, white	Transistor, push-pull, IO-Link / light switching (PNP)/dark switching (NPN)	Connector, M8, 4-pin	Interface: IO-Link, teach input, time function
50110584	KRTM 3B/4.1121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110588	KRTM 3B/4.1221-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50111768	KRTM 3B/4.2121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110586	KRTM 3B/4.1121,200-S12	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50110590	KRTM 3B/4.1221,200-S12	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50110585	KRTM 3B/2.1121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110589	KRTM 3B/2.1221-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110587	KRTM 3B/2.1121,200-S12	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50110591	KRTM 3B/2.1221,200-S12	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50111312	KRTM 3B/6.1121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (PNP)/dark switching (NPN)	Connector, M8, 4-pin	Interface: IO-Link, teach input, time function
50111313	KRTM 3B/6.1221-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (PNP)/dark switching (NPN)	Connector, M8, 4-pin	Interface: IO-Link, teach input, time function
50118393	KRTM 3B/6.2121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (PNP)/dark switching (NPN)	Connector, M8, 4-pin	Interface: IO-Link, teach input, time function
50135163	KRTM 3B/L6.1121-S8	0.0125 ... 0.0165 m	10,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (PNP)/dark switching (NPN)	Connector, M8, 4-pin	Interface: IO-Link, time function

Switching sensors

Measuring sensors

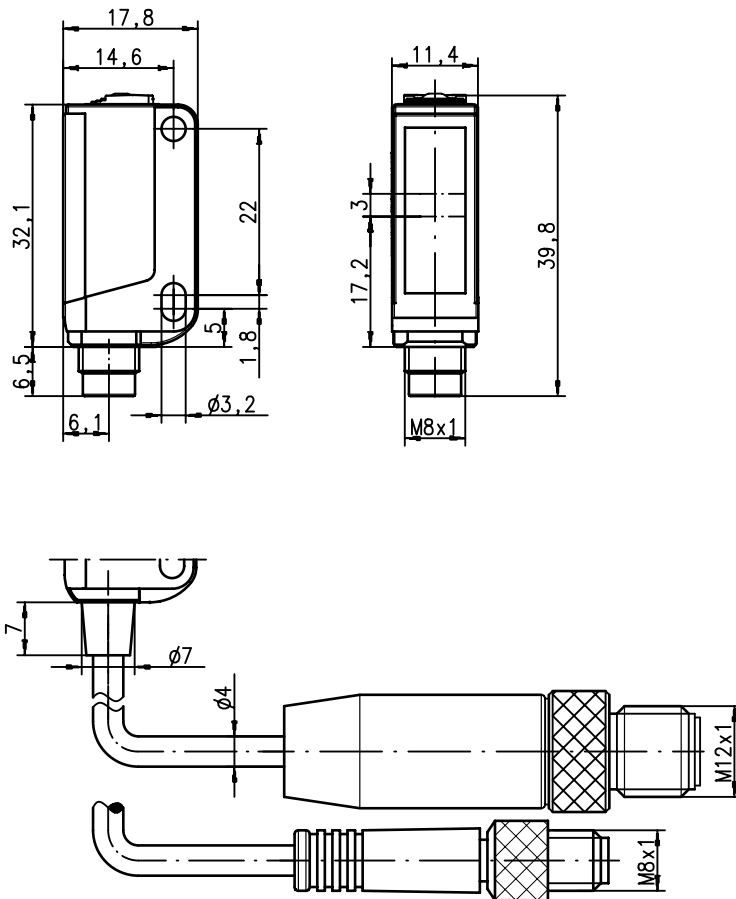
Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

Dimensioned drawings: KRT 3B

KRT 3B contrast sensors

ACCESSORIES: KRT 3B**Connection technology**

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130692	KD U-M12-4W-P1-020	Connector, M12, angled, female	4-pin	2,000 mm	PUR
50130694	KD U-M12-4W-P1-050	Connector, M12, angled, female	4-pin	5,000 mm	PUR
50130688	KD U-M12-4W-V1-020	Connector, M12, angled, female	4-pin	2,000 mm	PVC
50130690	KD U-M12-4W-V1-050	Connector, M12, angled, female	4-pin	5,000 mm	PVC
50130654	KD U-M12-4A-P1-020	Connector, M12, axial, female	4-pin	2,000 mm	PUR
50130657	KD U-M12-4A-P1-050	Connector, M12, axial, female	4-pin	5,000 mm	PUR
50130648	KD U-M12-4A-V1-020	Connector, M12, axial, female	4-pin	2,000 mm	PVC
50130652	KD U-M12-4A-V1-050	Connector, M12, axial, female	4-pin	5,000 mm	PVC
50130873	KD U-M8-4W-P1-020	Connector, M8, angled, female	4-pin	2,000 mm	PUR
50130875	KD U-M8-4W-P1-050	Connector, M8, angled, female	4-pin	5,000 mm	PUR
50130869	KD U-M8-4W-V1-020	Connector, M8, angled, female	4-pin	2,000 mm	PVC
50130871	KD U-M8-4W-V1-050	Connector, M8, angled, female	4-pin	5,000 mm	PVC
50130854	KD U-M8-4A-P1-020	Connector, M8, axial, female	4-pin	2,000 mm	PUR
50130856	KD U-M8-4A-P1-050	Connector, M8, axial, female	4-pin	5,000 mm	PUR
50130848	KD U-M8-4A-V1-020	Connector, M8, axial, female	4-pin	2,000 mm	PVC
50130850	KD U-M8-4A-V1-050	Connector, M8, axial, female	4-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50105546	BT 3B	Angle, L-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50117256	BTU 200M-D10	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 10 mm rod, sheet-metal mounting	Metal
50117255	BTU 200M-D12	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 12 mm rod, sheet-metal mounting	Metal
50117254	BTU 200M-D14	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 14 mm rod, sheet-metal mounting	Metal

Further rod mounts can be found on our website

/// KRT 18B



In many packaging processes, contrast marks must be reliably detected on film, bag and blister packaging or on labels. The KRT 18B contrast sensor combines ease-of-use via permanent signal indicators with high performance. It is also available with an analog output for particularly demanding mark detection.



Benefits:

- Multicolor (RGB)
- Models with teach buttons and potentiometers
- Self-adjusting bar graph for signal display
- Recipe management via IO-Link
- Automatic sensitivity readjustment
- Nickel-plated metal housing
- Switching frequency up to 15/22 kHz
- Degree of protection IP 67 and IP 69K with ECOLAB
- Operating range 13 (± 3) mm
- Response time 20/30 µs
- Adjustment without tool



Direct access to the online product selector at www.leuze.com/en/krt18b

Part no.	Part description	Operating range	Switching frequency	Light source	Digital switching output	Analog switching output	Connection	Description
50131247	KRT18BM.H2/G6T-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, light/dark reversible		Connector, M12, 5-pin	
50132612	KRT18BM.H2/GCT-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, light/dark reversible	Current	Connector, M12, 5-pin	
50131249	KRT18BM.H3/G6X-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, light/dark reversible		Connector, M12, 5-pin	
50131246	KRT18BM.V2/G6T-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, light/dark reversible		Connector, M12, 5-pin	
50132613	KRT18BM.V2/GC1T-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, light/dark reversible	Current	Connector, M12, 5-pin	
50132572	KRT18BM.V2/GCT-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, light/dark reversible	Current	Connector, M12, 5-pin	
50132614	KRT18BM.V2/GV1T-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, light/dark reversible	Voltage	Connector, M12, 5-pin	
50131248	KRT18BM.V3/G6X-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, light/dark reversible		Connector, M12, 5-pin	
50131241	KRT18BM.H5/L6T-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (NPN)/dark switching (PNP)		Connector, M12, 5-pin	Interface: IO-Link, teach input
50131245	KRT18BM.HS5/L6T-M12	0.01 ... 0.016 m	22,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (NPN)/dark switching (PNP)		Connector, M12, 5-pin	Interface: IO-Link, teach input
50131243	KRT18BM.HT5/L6T-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (NPN)/dark switching (PNP)		Connector, M12, 5-pin	Interface: IO-Link, teach input, tracking function
50130950	KRT18BM.V5/L6T-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (NPN)/dark switching (PNP)		Connector, M12, 5-pin	Interface: IO-Link, teach input
50131244	KRT18BM.VS5/L6T-M12	0.01 ... 0.016 m	22,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (NPN)/dark switching (PNP)		Connector, M12, 5-pin	Interface: IO-Link, teach input
50131242	KRT18BM.VT5/L6T-M12	0.01 ... 0.016 m	15,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (NPN)/dark switching (PNP)		Connector, M12, 5-pin	Interface: IO-Link, teach input, tracking function

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories



Connection technology

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50020833	BT 95	Angle, L-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50117256	BTU 200M-D10	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 10 mm rod, sheet-metal mounting	Metal
50117255	BTU 200M-D12	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 12 mm rod, sheet-metal mounting	Metal
50117254	BTU 200M-D14	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 14 mm rod, sheet-metal mounting	Metal
50120426	BTU 200M.5-D12	Mounting system	Screw type	For 12 mm rod	Stainless steel

Further rod mounts can be found on our website

Part no.	Part description	Fastening at device	Fastening at system	Material
50133412	BTX 018M	Screw type	Through-hole mounting	Metal

Further mounting systems can be found on our website

/// KRT 55



Wherever food, beverages, pharmaceutical products or even cosmetics are manufactured, processed and packaged, hygienic design has become a central requirement. These contrast sensors in WASH-DOWN design can withstand even more intensive cleaning and disinfection cycles. The IO-Link interface facilitates simple adaptation to complex applications.

**Benefits:**

- Stainless steel housing AISI 316L
- Operating range 13 mm
- RGB or white light
- Various teach-in processes
- Switching-threshold correction via EasyTune
- Response time 50 µs
- Switching frequency 10 kHz
- Pulse stretching
- IO-Link interface



Direct access to the online product selector at www.leuze.com/en/krt55

Part no.	Part description	Operating range	Switching frequency	Light source	Digital switching output	Connection	Description
50111642	KRTW 55/4.1121-S8	0.011 ... 0.015 m	10,000 Hz	LED, white	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110602	KRTW 55/4.1121,200-S12	0.011 ... 0.015 m	10,000 Hz	LED, white	Transistor, PNP, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50114075	KRTW 55/4.1121,5000	0.011 ... 0.015 m	10,000 Hz	LED, white	Transistor, PNP, light/dark reversible	Cable, 5,000 mm, 4-wire	Teach input, time function
50110601	KRTW 55/2.1121-S8	0.011 ... 0.015 m	10,000 Hz	LED, white	Transistor, NPN, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110603	KRTW 55/2.1121,200-S12	0.011 ... 0.015 m	10,000 Hz	LED, white	Transistor, NPN, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50111644	KRTM 55/4.1121-S8	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110613	KRTM 55/4.1221-S8	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110611	KRTM 55/4.1121,200-S12	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50110615	KRTM 55/4.1221,200-S12	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50114074	KRTM 55/4.1121,5000	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Cable, 5,000 mm, 4-wire	Teach input, time function
50110610	KRTM 55/2.1121-S8	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110614	KRTM 55/2.1221-S8	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible	Connector, M8, 4-pin	Teach input, time function
50110612	KRTM 55/2.1121,200-S12	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50110616	KRTM 55/2.1221,200-S12	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible	Cable with connector, 200 mm, M12, 4-pin	Teach input, time function
50111643	KRTM 55/6.1121-S8	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (PNP)/dark switching (NPN)	Connector, M8, 4-pin	Interface: IO-Link, teach input, time function
50135164	KRTM 55/L6.1121,200-S12	0.011 ... 0.015 m	10,000 Hz	LED, RGB	Transistor, push-pull, IO-Link / light switching (PNP)/dark switching (NPN)	Cable with connector, 200 mm, M12, 4-pin	Interface: IO-Link, time function

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

SMART IS TO BE CLOSE

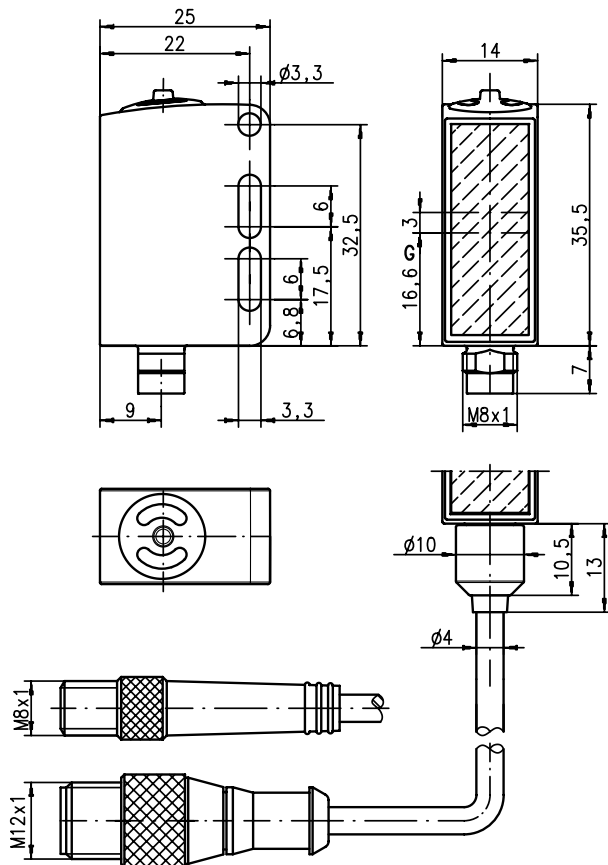


International sales locations –
Always close to you.

Information on our worldwide locations and partners: www.leuze.com/en/worldwide



Dimensioned drawings: KRT 55



KRT 55 contrast sensors

ACCESSORIES: KRT 55

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130692	KD U-M12-4W-P1-020	Connector, M12, angled, female	4-pin	2,000 mm	PUR
50130694	KD U-M12-4W-P1-050	Connector, M12, angled, female	4-pin	5,000 mm	PUR
50130688	KD U-M12-4W-V1-020	Connector, M12, angled, female	4-pin	2,000 mm	PVC
50130690	KD U-M12-4W-V1-050	Connector, M12, angled, female	4-pin	5,000 mm	PVC
50130654	KD U-M12-4A-P1-020	Connector, M12, axial, female	4-pin	2,000 mm	PUR
50130657	KD U-M12-4A-P1-050	Connector, M12, axial, female	4-pin	5,000 mm	PUR
50130648	KD U-M12-4A-V1-020	Connector, M12, axial, female	4-pin	2,000 mm	PVC
50130652	KD U-M12-4A-V1-050	Connector, M12, axial, female	4-pin	5,000 mm	PVC
50130873	KD U-M8-4W-P1-020	Connector, M8, angled, female	4-pin	2,000 mm	PUR
50130875	KD U-M8-4W-P1-050	Connector, M8, angled, female	4-pin	5,000 mm	PUR
50130869	KD U-M8-4W-V1-020	Connector, M8, angled, female	4-pin	2,000 mm	PVC
50130871	KD U-M8-4W-V1-050	Connector, M8, angled, female	4-pin	5,000 mm	PVC
50130854	KD U-M8-4A-P1-020	Connector, M8, axial, female	4-pin	2,000 mm	PUR
50130856	KD U-M8-4A-P1-050	Connector, M8, axial, female	4-pin	5,000 mm	PUR
50130848	KD U-M8-4A-V1-020	Connector, M8, axial, female	4-pin	2,000 mm	PVC
50130850	KD U-M8-4A-V1-050	Connector, M8, axial, female	4-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50040269	BT 25	Angle, L-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

/// KRT 20



With jitter times < 7 µs, with precise, round and small light spots, with memory bank administration and freely programmable interface, with perfect temperature compensation, these devices in a robust metal housing can handle even the fastest processes.

**Benefits:**

- Metal housing with interchangeable lenses
- 12/20 mm and 50 mm operating range
- Very high resolution
- Response time 10 ms
- Switching frequency 50 kHz
- Switching and analog output
- Temperature compensation
- Pulse stretching
- Switching-threshold changeover
- Freely programmable
- Rectangular or round light-spot profile



Direct access to the online product selector at www.leuze.com/en/krt20

Part no.	Part description	Operating range	Switching frequency	Light source	Digital switching output	Analog switching output	Connection	Description
50116177	KRTM 20M/P-50-6320-S12	0.045 ... 0.055 m	50,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible		Connector, M12, 5-pin	Autocollimation, synchronization input, time function
50035674	KRTM 20M/V-50-0001-S12	0.018 ... 0.022 m	16,000 Hz	LED, RGB	Transistor, PNP, light switching	Current	Connector, M12, 5-pin	Autocollimation, crop mark system
50041007	KRTM 20M/V-20-0004-S12	0.018 ... 0.022 m	16,000 Hz	LED, RGB	Transistor, PNP, light switching	Current	Connector, M12, 5-pin	Autocollimation, time function, crop mark system
50113438	KRTM 20M/C-20-6526-S12	0.018 ... 0.022 m	50,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible	Current	Connector, M12, 5-pin	Autocollimation, time function
50114202	KRTM 20M/P-20-3320-S12	0.018 ... 0.022 m	50,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible		Connector, M12, 5-pin	Autocollimation, synchronization input, time function
50113435	KRTM 20M/P-20-6320-S12	0.018 ... 0.022 m	50,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible		Connector, M12, 5-pin	Autocollimation, synchronization input, time function
50113437	KRTM 20M/C-20-6626-S12	0.018 ... 0.022 m	50,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible	Current	Connector, M12, 5-pin	Autocollimation, time function
50114201	KRTM 20M/N-20-3320-S12	0.018 ... 0.022 m	50,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible		Connector, M12, 5-pin	Autocollimation, synchronization input, time function
50113436	KRTM 20M/N-20-6320-S12	0.018 ... 0.022 m	50,000 Hz	LED, RGB	Transistor, NPN, light/dark reversible		Connector, M12, 5-pin	Autocollimation, time function
50133896	KRTM 20M/V-12-0004-S12	0.01 ... 0.014 m	16,000 Hz	LED, RGB	Transistor, PNP, light switching	Current	Connector, M12, 5-pin	Autocollimation, crop mark system, time function
50116474	KRTM 20M/P-12-6420-S12	0.011 ... 0.013 m	50,000 Hz	LED, RGB	Transistor, PNP, light/dark reversible		Connector, M12, 5-pin	Autocollimation, synchronization input, time function

Other operating ranges of 12 ± 1 mm, 20 ± 2 mm or 50 ± 5 mm are possible by changing the lens

SMART IS TO THINK **EASY**

Only with the proper accessories is your solution complete.

We place great value on flexible mounting solutions, simple integration through variable connection technology, alignment aids and innovative mounting systems. Pre-configured and pre-mounted systems also facilitate fast and simple commissioning of, e.g., muting systems for applications in safety at work.



Discover our extensive line of accessories on the web at: www.leuze.com/en/accessories



Switching sensors

Measuring sensors

Products for safety at work

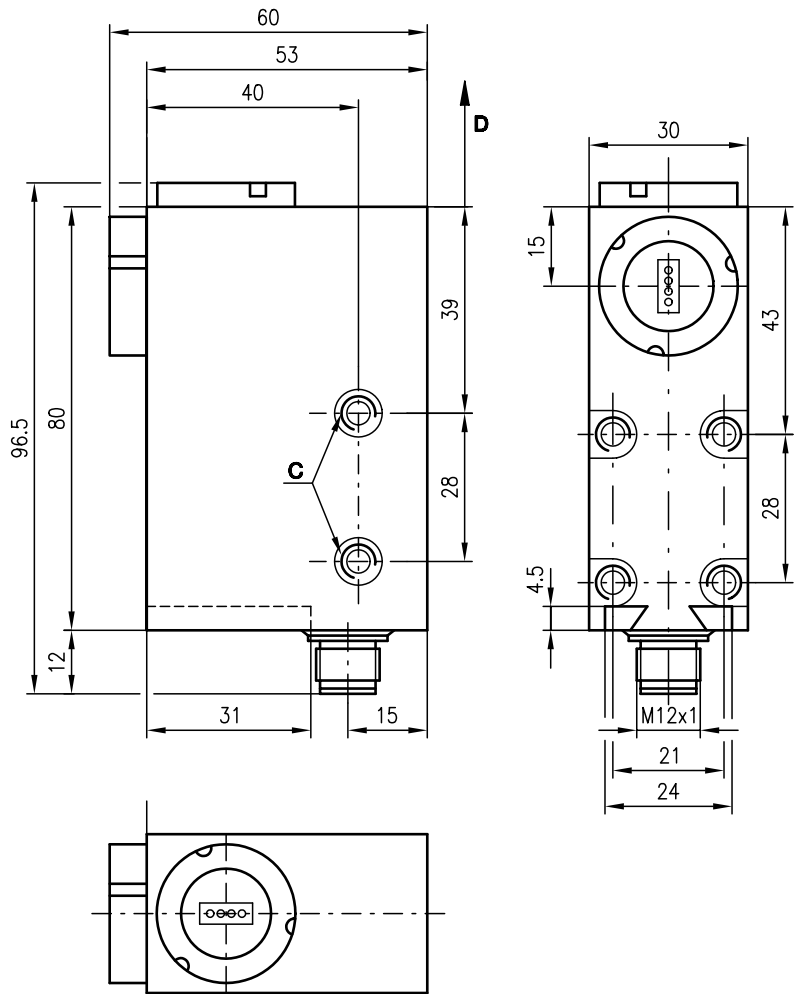
Identification

Data transmission / Control components

Industrial image processing

Accessories

Dimensioned drawings: KRT 20



KRT 20 contrast sensors

ACCESSORIES: KRT 20

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

/// KRT 21



With a response time of 33 μ s, RGB transmitter, interchangeable lenses and other fundamental equipment details, any contrast marks are reliably detected. The simple adjustment to mark and background makes for uncomplicated commissioning.



Benefits:

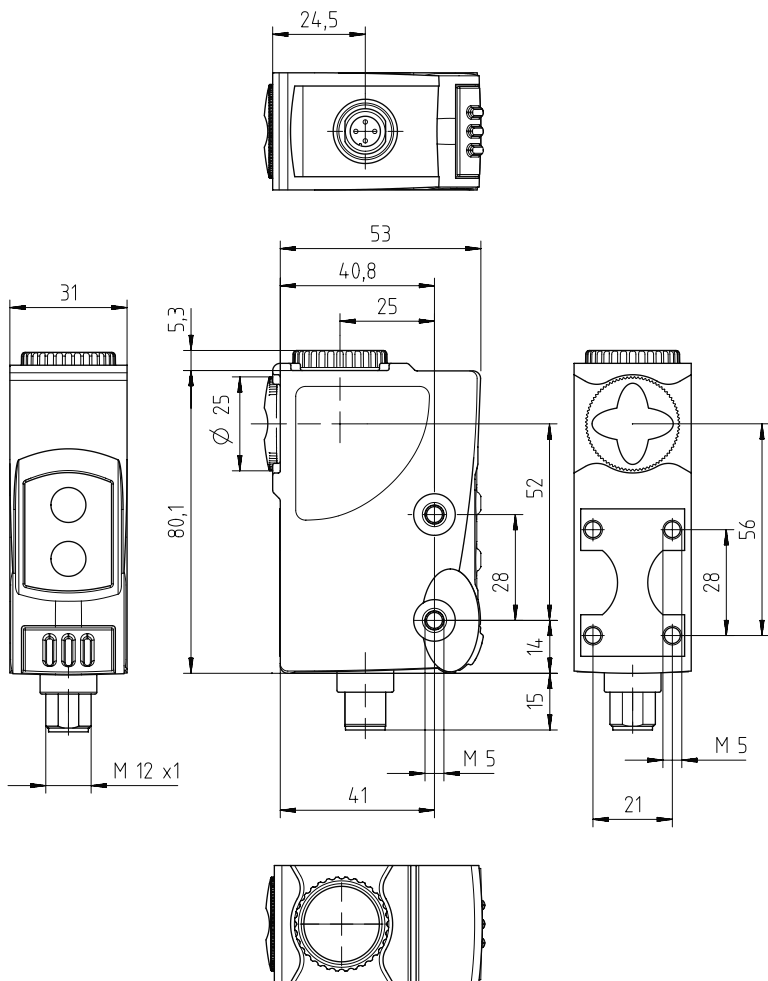
- 9 mm or 18 mm operating range
- Interchangeable lenses made of glass and plastic
- Multicolor (RGB) transmitter
- Static teach-in
- Response time 33 μ s
- Switching frequency 15 kHz
- Pulse stretching



Direct access to the online product selector at www.leuze.com/en/krt21

Part no.	Part description	Operating range	Switching frequency	Light source	Digital switching output	Connection	Description
50127841	KRT21M-09.PL3/42-M12	0.006 ... 0.012 m	15,000 Hz	LED, RGB	Transistor, PNP, switching signal on mark	Connector, M12, 4-pin	Pulse stretching

Dimensioned drawings: KRT 21



KRT 21 contrast sensors

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

ACCESSORIES: KRT 21

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130692	KD U-M12-4W-P1-020	Connector, M12, angled, female	4-pin	2,000 mm	PUR
50130694	KD U-M12-4W-P1-050	Connector, M12, angled, female	4-pin	5,000 mm	PUR
50130688	KD U-M12-4W-V1-020	Connector, M12, angled, female	4-pin	2,000 mm	PVC
50130690	KD U-M12-4W-V1-050	Connector, M12, angled, female	4-pin	5,000 mm	PVC
50130654	KD U-M12-4A-P1-020	Connector, M12, axial, female	4-pin	2,000 mm	PUR
50130657	KD U-M12-4A-P1-050	Connector, M12, axial, female	4-pin	5,000 mm	PUR
50130648	KD U-M12-4A-V1-020	Connector, M12, axial, female	4-pin	2,000 mm	PVC
50130652	KD U-M12-4A-V1-050	Connector, M12, axial, female	4-pin	5,000 mm	PVC

Further connection cables can be found on our website

SMART
SENSOR
BUSINESS

4.0

 **Leuze electronic**

the **sensor** people



SMART IS
TO CREATE THE **FUTURE**

The future has already moved into my smart home – just as it has in industry. Together with my colleagues and customers, I'm developing innovative and future-oriented concepts for Industry 4.0.

Moritz Mullis,
Development Engineer –
Competence Center Electronics



www.smart-sensor-business.com

//LUMINESCENCE SENSORS

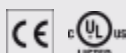
I SEE WHAT YOU DON'T SEE

This sensor detects both visible as well as invisible luminescent markings. It sends the result as switching output or analog value and is used primarily for sorting and inspection tasks in areas in which other detection methods fail to supply reliable results or where the markings should not or must not be visible.

/// LRT 8



With various light spot profiles, filters, transmitter variants and accessories, this compact design includes everything needed for detecting luminescent objects.



Benefits:

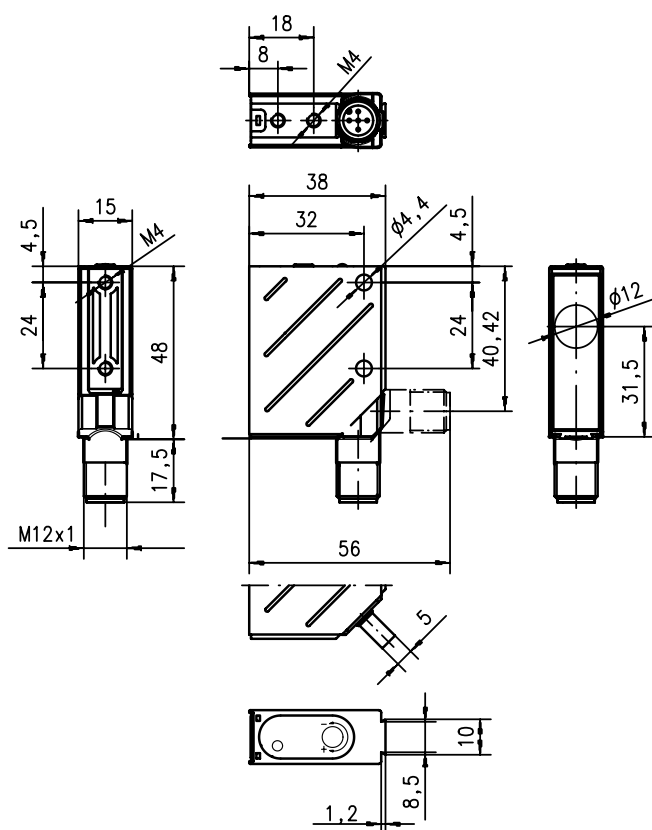
- Ranges up to 200 mm
- Very compact metal construction
- Switching frequency 1.5 kHz
- Sensitivity adjustment via potentiometer
- Turnable M12 connector
- Filter variants



Direct access to the online product selector at www.leuze.com/en/lrt8

Part no.	Part description	Operating range	Light source	Switching frequency	Switching output 1	Switching output 2	Description
50109343	LRT 8/24.04-100-S12	0 ... 0.22 m	LED, UV	1,500 Hz	Transistor, PNP, light switching	Transistor, NPN, light switching	Detection of white paper, detection of any kind of luminescence
50041840	LRT 8/24.04-50-S12	0 ... 0.15 m	LED, UV	1,500 Hz	Transistor, PNP, light switching	Transistor, NPN, light switching	Detection of any kind of luminescence, detection of white paper
50119033	LRT 8/24.10-150-S12	0 ... 0.5 m	LED, blue	1,500 Hz	Transistor, PNP, light switching	Transistor, NPN, light switching	Detection of red marks on wood
50119032	LRT 8/24.14-150-S12	0 ... 0.4 m	LED, UV	1,500 Hz	Transistor, PNP, light switching	Transistor, NPN, light switching	Detection of any kind of luminescence, detection of white paper
50124693	LRT 8/44.14-150-S12	0 ... 0.4 m	LED, UV	1,500 Hz	Transistor, PNP, light switching	Transistor, PNP, dark switching	Detection of white paper, detection of any kind of luminescence
50116732	LRT 8/24.16-80-S12	0 ... 0.1 m	LED, UV	1,500 Hz	Transistor, PNP, light switching	Transistor, NPN, light switching	Detection of yellow print marks

Dimensioned drawings: LRT 8



LRT 8 luminescence sensors

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

ACCESSORIES: LRT 8

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50036195	BT 8	Angle, L-shape	Screw type	Through-hole mounting	Metal
50118543	BT 300M.5	Angle, L-shape	Screw type	Through-hole mounting	Stainless steel, V2A

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50117253	BTU 300M-D10	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 10 mm rod, sheet-metal mounting	Metal
50117252	BTU 300M-D12	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 12 mm rod, sheet-metal mounting	Metal
50117251	BTU 300M-D14	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 14 mm rod, sheet-metal mounting	Metal

Further rod mounts can be found on our website

SMART IS TO SHARE **EXPERIENCE**



Positioning

Sensor technology for quick positioning accurate down to the millimeter



Measurement

Reliable systems for 2D- and 3D-measurement of distances and objects



Safeguarding

Economical solutions in all areas of safety at work



Identification

Innovative code readers and RFID systems



Other applications – field-proven: www.leuze.com/en/praxis

//COLOR SENSORS

ALWAYS GOOD WHEN THINGS GET COLORFUL

This sensor type detects colors and compares them to a stored reference value. They are the right solution whenever the color of an object or marking can serve as a sorting or inspection criteria. Depending on the configuration and specified tolerance values of the system, the result is output as a switching signal.

/// CRT 20B



Thanks to extensive configuration options and 1 or 4 color channels with individually adjustable color tolerance, this series can be used for fast processes with short response times.



Benefits:

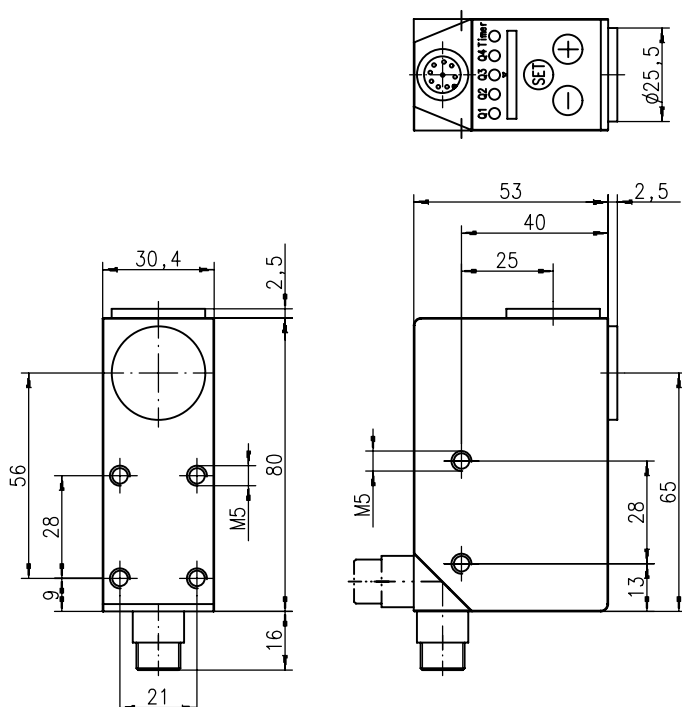
- 12,5 mm or 60 mm operating range
- Very robust metal construction
- Simple teach-in of up to 4 reference colors
- Sensitivity adjustment following teach-in
- Color tolerance separately adjustable per color channel
- Switching frequency up to 6 kHz
- Extensive configuration options
- Turnable M12 connector



Direct access to the online product selector at www.leuze.com/en/crt20b

Part no.	Part description	Operating range	Switching frequency	Light source	Switching outputs	Connection	Description
50109595	CRT 20B M/N-60-001-S12	0.051 ... 0.069 m	6,000 Hz	LED, RGB	1x, transistor, NPN, light/dark reversible	Connector, M12, 5-pin	Detection of one color, autocollimation, teach input
50109597	CRT 20B M/P-60-001-S12	0.051 ... 0.069 m	6,000 Hz	LED, RGB	1x, transistor, PNP, light/dark reversible	Connector, M12, 5-pin	Detection of one color, autocollimation, teach input
50109599	CRT 20B M/N-60-004-S12	0.051 ... 0.069 m	3,500 Hz	LED, RGB	4x, transistor, NPN, light/dark reversible	Connector, M12, 8-pin	Detection of four colors, autocollimation, teach input
50109601	CRT 20B M/P-60-004-S12	0.051 ... 0.069 m	3,500 Hz	LED, RGB	4x, transistor, PNP, light/dark reversible	Connector, M12, 8-pin	Detection of four colors, autocollimation, teach input
50109594	CRT 20B M/N-12-001-S12	0.0095 ... 0.0155 m	6,000 Hz	LED, RGB	1x, transistor, NPN, light/dark reversible	Connector, M12, 5-pin	Detection of one color, autocollimation, teach input
50109596	CRT 20B M/P-12-001-S12	0.0095 ... 0.0155 m	6,000 Hz	LED, RGB	1x, transistor, PNP, light/dark reversible	Connector, M12, 5-pin	Detection of one color, autocollimation, teach input
50109598	CRT 20B M/N-12-004-S12	0.0095 ... 0.0155 m	3,500 Hz	LED, RGB	4x, transistor, NPN, light/dark reversible	Connector, M12, 8-pin	Detection of four colors, autocollimation, teach input
50109600	CRT 20B M/P-12-004-S12	0.0095 ... 0.0155 m	3,500 Hz	LED, RGB	4x, transistor, PNP, light/dark reversible	Connector, M12, 8-pin	Detection of four colors, autocollimation, teach input

Dimensioned drawings: CRT 20B



CRT 20B color sensor

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

ACCESSORIES: CRT 20B

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50135133	KD S-M12-8W-P1-050	Connector, M12, angled, female	8-pin	5,000 mm	PUR
50135134	KD S-M12-8W-P1-100	Connector, M12, angled, female	8-pin	10,000 mm	PUR
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC
50135127	KD S-M12-8A-P1-020	Connector, M12, axial, female	8-pin	2,000 mm	PUR
50135121	KD U-M12-8A-P1-020	Connector, M12, axial, female	8-pin	2,000 mm	PUR
50135128	KD S-M12-8A-P1-050	Connector, M12, axial, female	8-pin	5,000 mm	PUR
50135122	KD U-M12-8A-P1-050	Connector, M12, axial, female	8-pin	5,000 mm	PUR
50135129	KD S-M12-8A-P1-100	Connector, M12, axial, female	8-pin	10,000 mm	PUR
50135123	KD U-M12-8A-P1-100	Connector, M12, axial, female	8-pin	10,000 mm	PUR

Further connection cables can be found on our website

/// CRT 448



This series with 3 color channels and the scan function for color gradients can be used flexibly in many areas of applications.



Benefits:

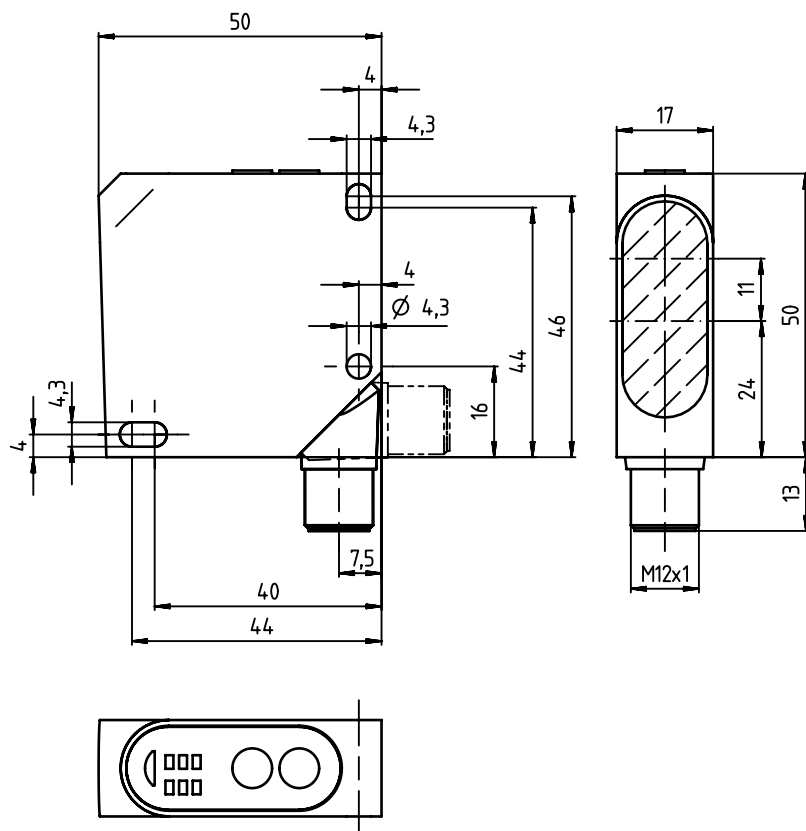
- 22 mm or 32 mm operating range
- Small plastic construction
- Simple teach-in of three reference colors
- Scan function for color gradients
- Color tolerance separately adjustable per color channel
- 500 Hz switching frequency
- Configuration options
- Turnable M12 connector



Direct access to the online product selector at www.leuze.com/en/crt448

Part no.	Part description	Operating range	Switching frequency	Light source	Switching outputs	Connection	Description
50121293	CRT 448.S3/222-M12	0.012 ... 0.032 m	500 Hz	LED, white	3x, transistor, NPN	Connector, M12, 8-pin	Detection of three colors, teach input, synchronization input
50121294	CRT 448.S3/444-M12	0.012 ... 0.032 m	500 Hz	LED, white	3x, transistor, PNP	Connector, M12, 8-pin	Detection of three colors, synchronization input
50121291	CRT 448.L3/222-M12	0.018 ... 0.022 m	500 Hz	LED, white	3x, transistor, NPN	Connector, M12, 8-pin	Detection of three colors, teach input, synchronization input
50121292	CRT 448.L3/444-M12	0.018 ... 0.022 m	500 Hz	LED, white	3x, transistor, PNP	Connector, M12, 8-pin	Detection of three colors, synchronization input

Dimensioned drawings: CRT 448



CRT 448 color sensor

Switching
sensorsMeasuring
sensorsProducts for
safety at work

Identification

Data transmission/
Control componentsIndustrial image
processing

Accessories

ACCESSORIES: CRT 448

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50135133	KD S-M12-8W-P1-050	Connector, M12, angled, female	8-pin	5,000 mm	PUR
50135134	KD S-M12-8W-P1-100	Connector, M12, angled, female	8-pin	10,000 mm	PUR
50135127	KD S-M12-8A-P1-020	Connector, M12, axial, female	8-pin	2,000 mm	PUR
50135121	KD U-M12-8A-P1-020	Connector, M12, axial, female	8-pin	2,000 mm	PUR
50135128	KD S-M12-8A-P1-050	Connector, M12, axial, female	8-pin	5,000 mm	PUR
50135122	KD U-M12-8A-P1-050	Connector, M12, axial, female	8-pin	5,000 mm	PUR
50135129	KD S-M12-8A-P1-100	Connector, M12, axial, female	8-pin	10,000 mm	PUR
50135123	KD U-M12-8A-P1-100	Connector, M12, axial, female	8-pin	10,000 mm	PUR

Further connection cables can be found on our website

Reflectors

Standard reflectors

Part no.	Part description	Design	Reflective surface	Fastening	Material
50022816	TKS 100X100	Rectangular	96 mm x 96 mm	Through-hole mounting, adhesive	Plastic

Dimensional tolerances for all specified dimensions: ± 0.2 mm
Further standard reflectors can be found on our website

MEASURING SENSORS

INTELLIGENT MONITORING AND CONTROL THROUGH MEASURING SENSORS

Measuring sensors can actively check distances, position system parts and monitor other parameters in order to intelligently and independently initiate actions to, e.g., intervene in processes for control purposes. Here, you will find a large selection of technologies and designs for as efficient and fault-free system operation as possible.

"Measuring sensors are suitable for a wide variety of complex detection tasks. In addition to classic features, such as high accuracy, resolution or operating range, our sensors feature characteristics such as the integration of intelligent data evaluations and various interface technologies, easy operation and simple mounting. These make the sensors from Leuze electronic especially attractive for a given task."

Tilo Wolf,
Technical Head of Product Center
Measuring Sensors



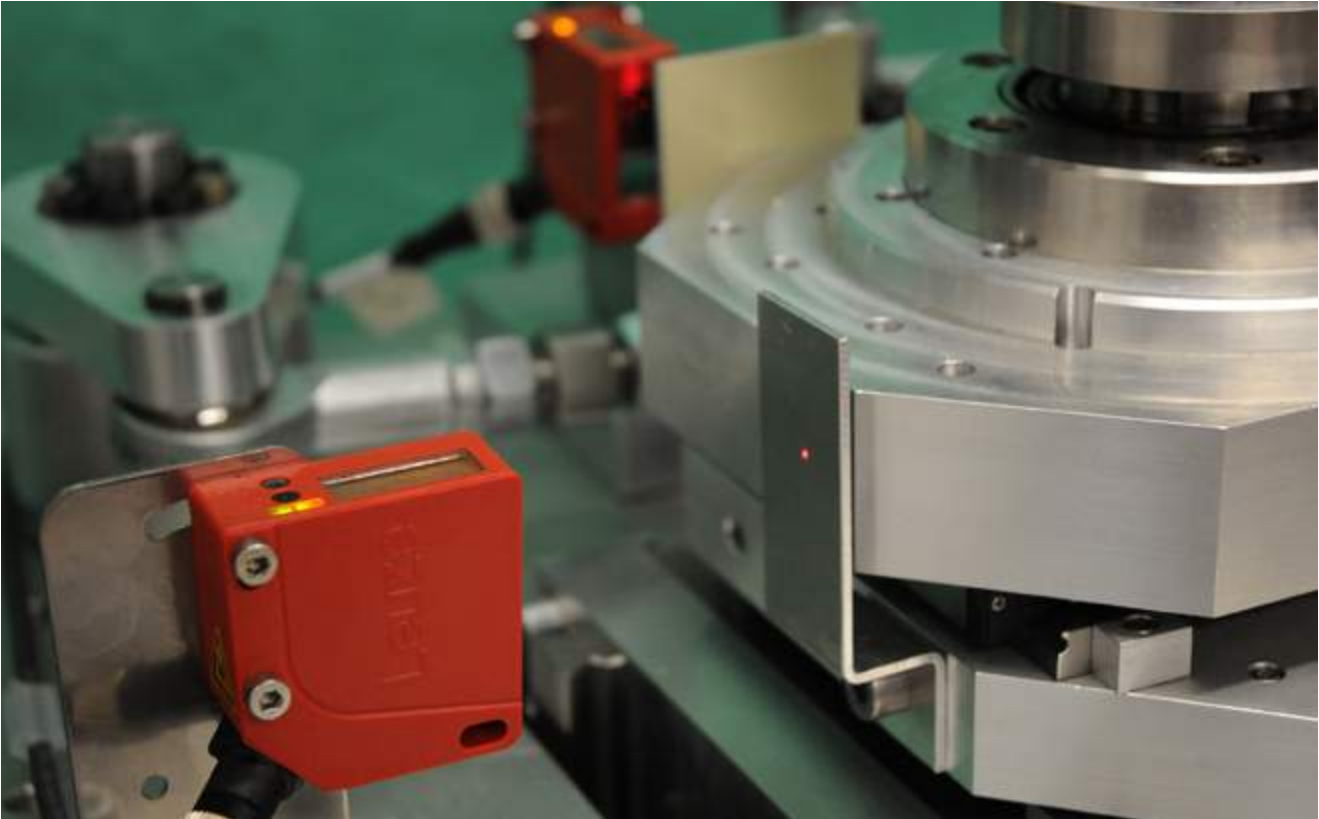
/ Optical distance sensors	Page 212
/ Ultrasonic distance sensors	Page 224
/ Sensors for positioning	Page 232
/ 3D sensors	Page 247
/ Light curtains	Page 254
/ Measuring forked sensors	Page 267

Switching
sensors

Measuring
sensors

Products for
safety at work

Identification



Data transmission /
Control components

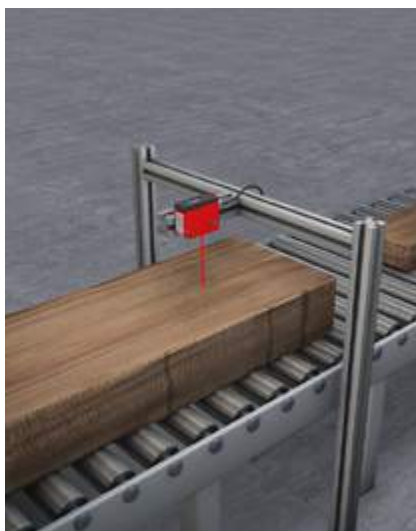
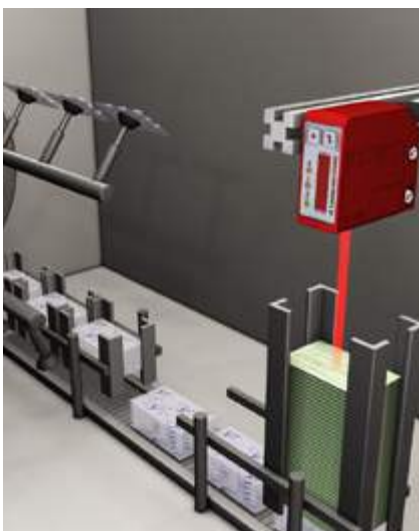
Industrial image
processing

Accessories

/ OPTICAL DISTANCE SENSORS

LIGHTS ON – MEASUREMENT STARTS

These sensors use laser or LED light to quickly and precisely measure distances on a wide range of materials, even at large ranges.



/// ODSL 8



The compact laser distance sensors of this series in a compact metal housing supply reflection-independent distance information. The sensor can be quickly commissioned through teach-in.



Benefits:

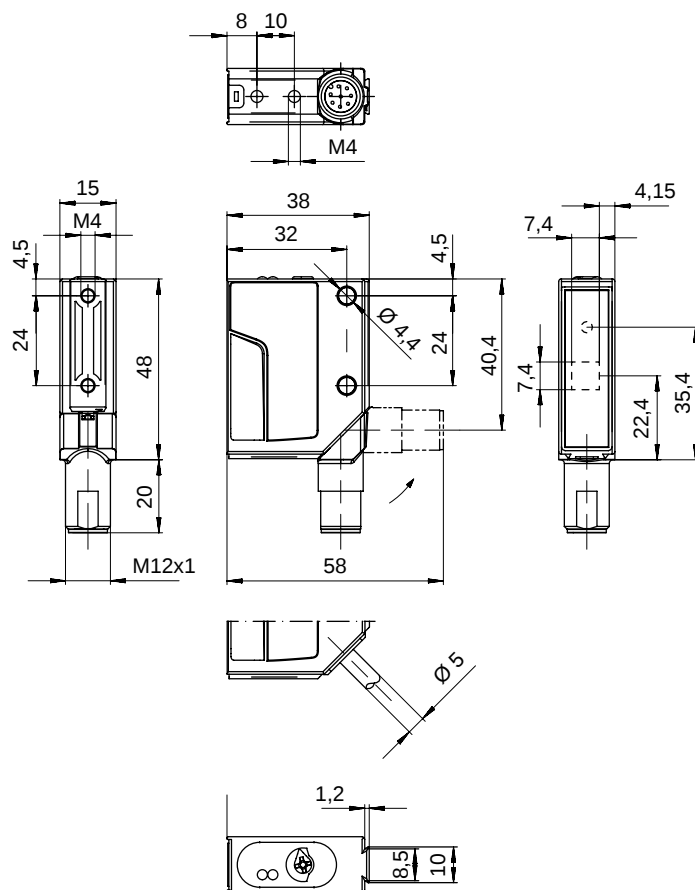
- 20 mm ... 500 mm measurement range
- Robust metal housing
- Teachable analog and switching outputs
- Turnable M12 connector



Direct access to the online product selector at www.leuze.com/en/odsl8

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50101880	ODSL 8/66-500-S12	20 ... 500 mm	Laser, red, 2	2 mm x 6 mm		2x	0.1 ... 0.5 mm	2 ... 7 ms	Connector, M12, metal, 5-pin
50108361	ODSL 8/C66-500-S12	20 ... 500 mm	Laser, red, 2	2 mm x 6 mm	1x, current	2x	0.1 ... 0.5 mm	2 ... 7 ms	Connector, M12, metal, 5-pin
50101879	ODSL 8/V66-500-S12	20 ... 500 mm	Laser, red, 2	2 mm x 6 mm	1x, voltage	2x	0.1 ... 0.5 mm	2 ... 7 ms	Connector, M12, metal, 5-pin
50111175	ODSL 8/V66.01-500-S12	20 ... 500 mm	Laser, red, 2	2 mm x 6 mm	1x, voltage	2x	0.1 ... 0.5 mm	2 ... 7 ms	Connector, M12, metal, 5-pin
50108362	ODSL 8/C66-200-S12	20 ... 200 mm	Laser, red, 2	1 mm	1x, current	2x	0.1 ... 0.2 mm	2 ... 7 ms	Connector, M12, metal, 5-pin
50105761	ODSL 8/V66-200-S12	20 ... 200 mm	Laser, red, 2	1 mm	1x, voltage	2x	0.1 ... 0.2 mm	2 ... 7 ms	Connector, M12, metal, 5-pin
50108364	ODSL 8/C66-45-S12	25 ... 45 mm	Laser, red, 2	1 mm	1x, current	2x	0,03 mm	2 ... 7 ms	Connector, M12, metal, 5-pin
50108363	ODSL 8/V66-45-S12	25 ... 45 mm	Laser, red, 2	1 mm	1x, voltage	2x	0,03 mm	2 ... 7 ms	Connector, M12, metal, 5-pin

Dimensioned drawings: ODSL 8



ODSL 8 optical distance sensor

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

ACCESSORIES: ODSL 8

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50036195	BT 8	Angle, L-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50127177	BTU 008M-D10	Mounting system	Screw type	Sheet-metal mounting, for 10 mm rod	Metal

Further rod mounts can be found on our website

/// ODSL 9



The ODSL 9 optical distance sensors set new standards in precision and ease of use. The sensor enables accurate measurements even under difficult conditions, e.g., with glossy objects. The integrated display shows the measurement values and facilitates easy adjustment of the sensor. The distance sensors reveal their enormous potential for precision when used in combination with digital interfaces.



Direct access to the online product selector at www.leuze.com/en/odsl9

ODSL 9

This series measures very precisely even over longer distances making it suitable for the positioning of actuators and robots.

Benefits:

- High accuracy up to 650 mm
- Reflection-independent distance measurement
- Display for measured value display and configuration
- Analog current/voltage output
- Switching outputs adjustable with millimeter accuracy
- IO-Link, serial interface RS 232/485

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50113583	ODSL 9/C6-650-S12	50 ... 650 mm	Laser, red, 2	1 mm	1x, current	1x	0.1 ... 0.5 mm	2 ms	Connector, M12, plastic, 5-pin
50120000	ODSL 9/D36-650-S12	50 ... 650 mm	Laser, red, 2	1 mm		1x	0.1 ... 0.5 mm	2 ms	Interface: RS 485, connector, M12, plastic, 5-pin
50120825	ODSL 9/L-650-S12	50 ... 650 mm	Laser, red, 2	1 mm			0.1 ... 0.5 mm	2 ms	Interface: IO-Link, connector, M12, plastic, 5-pin
50114627	ODSL 9/V6-650-S12	50 ... 650 mm	Laser, red, 2	1 mm	1x, voltage	1x	0.1 ... 0.5 mm	2 ms	Connector, M12, plastic, 5-pin
50111157	ODSL 9/C6-450-S12	50 ... 450 mm	Laser, red, 2	1 mm	1x, current	1x	0.1 mm	2 ms	Connector, M12, plastic, 5-pin
50111161	ODSL 9/C66-450-S12	50 ... 450 mm	Laser, red, 2	1 mm	1x, current	2x	0.1 mm	2 ms	Connector, M12, plastic, 5-pin
50111159	ODSL 9/D26-450-S12	50 ... 450 mm	Laser, red, 2	1 mm		1x	0.1 mm	2 ms	Interface: RS 232, connector, M12, plastic, 5-pin

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50111160	ODSL 9/D36-450-S12	50 ... 450 mm	Laser, red, 2	1 mm		1x	0.1 mm	2 ms	Interface: RS 485, connector, M12, plastic, 5-pin
50111166	ODSL 9/L-450-S12	50 ... 450 mm	Laser, red, 2	1 mm			0.1 mm	2 ms	Interface: IO-Link, connector, M12, plastic, 5-pin
50111158	ODSL 9/V6-450-S12	50 ... 450 mm	Laser, red, 2	1 mm	1x, voltage	1x	0.1 mm	2 ms	Connector, M12, plastic, 5-pin
50111162	ODSL 9/V66-450-S12	50 ... 450 mm	Laser, red, 2	1 mm	1x, voltage	2x	0.1 mm	2 ms	Connector, M12, plastic, 5-pin
50115029	ODSL 9/C6.C1-450-S12	50 ... 450 mm	Laser, red, 1	1 mm	1x, current	1x	0.1 mm	4 ms	Connector, M12, plastic, 5-pin
50115030	ODSL 9/V6.C1-450-S12	50 ... 450 mm	Laser, red, 1	1 mm	1x, voltage	1x	0.1 mm	4 ms	Connector, M12, plastic, 5-pin
50117334	ODSL 9/C6-200-S12	50 ... 200 mm	Laser, red, 2	1 mm	1x, current	1x	0.1 mm	2 ms	Connector, M12, plastic, 5-pin
50113332	ODSL 9/V6-200-S12	50 ... 200 mm	Laser, red, 2	1 mm	1x, voltage	1x	0.1 mm	2 ms	Connector, M12, plastic, 5-pin

ODSL 9 high resolution

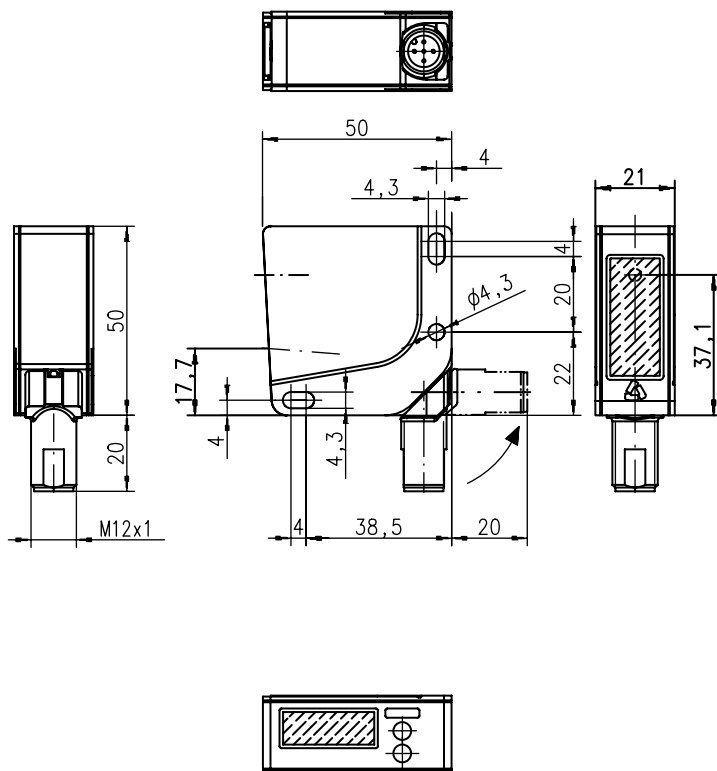
With a resolution of 0.01 mm, the sensors are designed for the contour measurement of small objects and quality control on assembly lines.

Benefits:

- Maximum accuracy in compact design
- Resolution of 0.01 mm with measurement range of 50 mm
- Reflection-independent distance measurement
- Display for measured value display and configuration
- Analog voltage/current output, switching outputs
- IO-Link, serial interface RS 232

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50111167	ODSL 9/C6-100-S12	50 ... 100 mm	Laser, red, 2	1 mm	1x, current	1x	0,01 mm	2 ms	Connector, M12, plastic, 5-pin
50111171	ODSL 9/C66-100-S12	50 ... 100 mm	Laser, red, 2	1 mm	1x, current	2x	0,01 mm	2 ms	Connector, M12, plastic, 5-pin
50111169	ODSL 9/D26-100-S12	50 ... 100 mm	Laser, red, 2	1 mm		1x	0,01 mm	2 ms	Interface: RS 232, connector, M12, plastic, 5-pin
50111170	ODSL 9/D36-100-S12	50 ... 100 mm	Laser, red, 2	1 mm		1x	0,01 mm	2 ms	Interface: RS 485, connector, M12, plastic, 5-pin
50111174	ODSL 9/L-100-S12	50 ... 100 mm	Laser, red, 2	1 mm			0,01 mm	2 ms	Interface: IO-Link, connector, M12, plastic, 5-pin
50111168	ODSL 9/V6-100-S12	50 ... 100 mm	Laser, red, 2	1 mm	1x, voltage	1x	0,01 mm	2 ms	Connector, M12, plastic, 5-pin
50111172	ODSL 9/V66-100-S12	50 ... 100 mm	Laser, red, 2	1 mm	1x, voltage	2x	0,01 mm	2 ms	Connector, M12, plastic, 5-pin

Dimensioned drawings: ODSL 9



ODSL 9 optical distance sensor

ACCESSORIES: ODSL 9

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50036195	BT 8	Angle, L-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50117253	BTU 300M-D10	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 10 mm rod, sheet-metal mounting	Metal
50117252	BTU 300M-D12	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 12 mm rod, sheet-metal mounting	Metal
50117251	BTU 300M-D14	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	For 14 mm rod, sheet-metal mounting	Metal

Further rod mounts can be found on our website

/// ODS 10



The ODS 10 is an optical distance sensor that measures distance against a non-cooperating target and makes the information available as a measurement value. The maximum range of the device is 8,000 mm, whereby an accuracy of ± 15 mm is achieved. Against a reflector, operating ranges of up to 25,000 mm are achieved. The level of accuracy is almost fully independent of the material.



Benefits:

- Eye-safe laser class 1
- Reliable detection of dark, glossy and colored objects
- Recess for M4 bolts enables the installation of this device using just one tool
- No tools required for locking of nuts and screws
- Turnable M12 connection, space-saving cable outlet or pigtail
- Large buttons enable finger operation without tools
- Status LED indicators on top and front allow detection of switching state from afar
- Configuration options via I/O-Link and Sensor Studio
- Compact housing



Direct access to the online product selector at www.leuze.com/en/ods10

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50129533	ODS10L1-25M.8/LAK	100 ... 25,000 mm	Laser, red, 1	25 mm x 25 mm	1x, configurable, factory setting: current	1x	1.0 mm	3.5 ... 1000 ms	Interface: IO-Link, deactivation input, activation input, teach input, cable, 2,000 mm, 5-wire
50129536	ODS10L1-25M.8/LAK,200-M12	100 ... 25,000 mm	Laser, red, 1	25 mm x 25 mm	1x, configurable, factory setting: current	1x	1.0 mm	3.5 ... 1000 ms	Interface: IO-Link, deactivation input, activation input, teach input, cable with connector, 200 mm, M12, plastic, 5-pin
50129530	ODS10L1-25M.8/LAK-M12	100 ... 25,000 mm	Laser, red, 1	25 mm x 25 mm	1x, configurable, factory setting: current	1x	1.0 mm	3.5 ... 1000 ms	Interface: IO-Link, deactivation input, activation input, teach input, connector, M12, plastic, 5-pin
50129528	ODS10L1.8/L6X-M12	50 ... 8,000 mm	Laser, red, 1	7 mm x 7 mm		2x	1.0 mm		Interface: IO-Link, connector, M12, plastic, 5-pin
50129532	ODS10L1.8/LA6	50 ... 8,000 mm	Laser, red, 1	7 mm x 7 mm	1x, configurable, factory setting: current	2x	1.0 mm		Interface: IO-Link, cable, 2,000 mm, 5-wire
50129535	ODS10L1.8/LA6,200-M12	50 ... 8,000 mm	Laser, red, 1	7 mm x 7 mm	1x, configurable, factory setting: current	2x	1.0 mm		Interface: IO-Link, cable with connector, 200 mm, M12, plastic, 5-pin
50129529	ODS10L1.8/LA6-M12	50 ... 8,000 mm	Laser, red, 1	7 mm x 7 mm	1x, configurable, factory setting: current	2x	1.0 mm		Interface: IO-Link, connector, M12, plastic, 5-pin
50129531	ODS10L1.8/LAK	50 ... 8,000 mm	Laser, red, 1	7 mm x 7 mm	1x, configurable, factory setting: current	1x	1.0 mm		Interface: IO-Link, deactivation input, activation input, teach input, cable, 2,000 mm, 5-wire
50129534	ODS10L1.8/LAK,200-M12	50 ... 8,000 mm	Laser, red, 1	7 mm x 7 mm	1x, configurable, factory setting: current	1x	1.0 mm		Interface: IO-Link, deactivation input, activation input, teach input, cable with connector, 200 mm, M12, plastic, 5-pin
50127853	ODS10L1.8/LAK-M12	50 ... 8,000 mm	Laser, red, 1	7 mm x 7 mm	1x, configurable, factory setting: current	1x	1.0 mm		Interface: IO-Link, deactivation input, activation input, teach input, connector, M12, plastic, 5-pin

Switching sensors

Measuring sensors

Products for safety at work

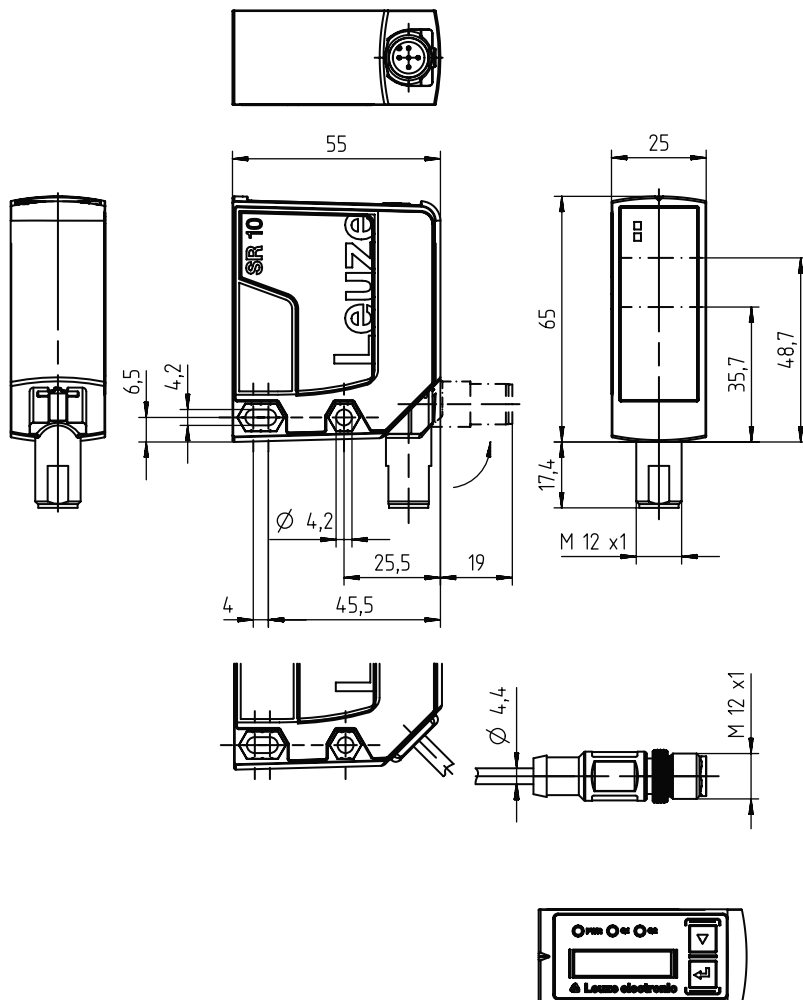
Identification

Data transmission / Control components

Industrial image processing

Accessories

Dimensioned drawings: ODS 10



ODS 10 optical distance sensor

ACCESSORIES: ODS 10

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50128379	BTU 460M-D10	Mounting system	Screw type	For 10 mm rod	Metal
50128380	BTU 460M-D12	Mounting system	Screw type	For 12 mm rod	Metal

Further rod mounts can be found on our website

Reflective tapes

Reflective tapes for distance sensors

Part no.	Part description	Design	Reflective surface	Fastening	Material
50111527	REF 7-A-100x100	Rectangular	100 mm x 100 mm	Self-adhesive	Plastic

Further reflective tapes can be found on our website

/// ODS 96B



Series ODS 96B distance sensors with large measurement ranges of 60 to 25,000 mm are suitable for many different applications and, thanks to the metal housing, are extremely robust. They measure in the ms range. The integrated display shows the measurement values and allows the sensor to be easily adapted to the measurement task. Apart from analog current/voltage interfaces and binary switching outputs, digital interfaces are also available. Digital interfaces prevent conversion losses in the sensor, control and during measurement data transfer.



Direct access to the online product selector at www.leuze.com/en/ods96b

ODS(R) 96B

Measures with either red LED light or infrared light and is suitable for large-area objects, such as bulk material.

Benefits:

- For measurements on objects with large surface area, e.g. bulk material, band materials, plate materials
- Robust metal housing
- High accuracy - reflection-independent distance measurement
- Display for measured value display and configuration

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50106727	ODS 96B M/C66.01-1400-S12	120 ... 1,400 mm	LED, infrared	15 mm x 15 mm	1x, current	2x	0.1 ... 0.5 mm	1 ... 5 ms	Connector, M12, metal, 5-pin
50110231	ODS 96B M/V6-1400-S12	120 ... 1,400 mm	LED, infrared	15 mm x 15 mm	1x, voltage	1x	0.1 ... 2.0 mm	1 ... 5 ms	Connector, M12, metal, 5-pin
50106730	ODSR 96B M/C6-600-S12	100 ... 600 mm	LED, red	15 mm x 15 mm	1x, current	1x	0.1 ... 0.5 mm	1 ... 5 ms	Connector, M12, metal, 5-pin
50106731	ODSR 96B M/V6-600-S12	100 ... 600 mm	LED, red	15 mm x 15 mm	1x, voltage	1x	0.1 ... 0.5 mm	1 ... 5 ms	Connector, M12, metal, 5-pin

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50106720	ODS 96B M/C6-600-S12	100 ... 600 mm	LED, infrared	15 mm x 15 mm	1x, current	1x	0.1 ... 0.5 mm	1 ... 5 ms	Connector, M12, metal, 5-pin
50106721	ODS 96B M/V6-600-S12	100 ... 600 mm	LED, infrared	15 mm x 15 mm	1x, voltage	1x	0.1 ... 0.5 mm	1 ... 5 ms	Connector, M12, metal, 5-pin

ODSL 96B-S

Small laser light spot for the precise measurement of small objects, objects with color structures or for glossy surfaces.

Benefits:

- Small laser light spot
- Precise measurement on small objects and objects with colored structure
- For measurement on metallic surfaces

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50123687	ODSL 96B M/C6.C1S-1500-S12	150 ... 1,500 mm	Laser, red, 1	1 mm	1x, current	1x	0.1 ... 2.0 mm	12 ... 60 ms	Small light spot (S), connector, M12, metal, 5-pin
50123686	ODSL 96B M/V6.C1S-1500-S12	150 ... 1,500 mm	Laser, red, 1	1 mm	1x, voltage	1x	0.1 ... 2.0 mm	12 ... 60 ms	Small light spot (S), connector, M12, metal, 5-pin
50106728	ODSL 96B M/C6.S-800-S12	150 ... 800 mm	Laser, red, 2	1 mm	1x, current	1x	0.1 ... 0.8 mm	1 ... 5 ms	Small light spot (S), connector, M12, metal, 5-pin
50111035	ODSL 96B M/D26.S-800-S12	150 ... 800 mm	Laser, red, 2	1 mm		1x	0.1 ... 0.8 mm	1 ... 5 ms	Interface: RS 232, small light spot (S), connector, M12, metal, 5-pin
50112065	ODSL 96B M/D36.S-800-S12	150 ... 800 mm	Laser, red, 2	1 mm		1x	0.1 ... 0.8 mm	1 ... 5 ms	Interface: RS 485, small light spot (S), connector, M12, metal, 5-pin
50106729	ODSL 96B M/V6.S-800-S12	150 ... 800 mm	Laser, red, 2	1 mm	1x, voltage	1x	0.1 ... 0.8 mm	1 ... 5 ms	Small light spot (S), connector, M12, metal, 5-pin

ODSL 96B-XL

Elongated light spot for precise measurements on porous objects and objects with openings (e.g. corrugated cardboard) as well as on objects that are not aligned precisely.

Benefits:

- Elongated light spot for precise measurement

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50106736	ODSL 96B M/C6.XL-1200-S12	150 ... 1,200 mm	Laser, red, 2	15 mm x 4 mm	1x, current	1x	0.1 ... 1.5 mm (XL)	1 ... 5 ms	Extra long light spot (XL), connector, M12, metal, 5-pin
50106737	ODSL 96B M/V6.XL-1200-S12	150 ... 1,200 mm	Laser, red, 2	15 mm x 4 mm	1x, voltage	1x	0.1 ... 1.5 mm (XL)	1 ... 5 ms	Extra long light spot (XL), connector, M12, metal, 5-pin

ODSL(R) 96B

Even over large ranges of up to 2 m, this sensor measures in the ms range with millimeter precision. High resolving power in compact, robust design.

Benefits:

- For measurements in ms cycle at large operating ranges
- Stable and precise measurement values, even at varying temperatures and objects
- Robust: IP 67, IP 69K

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50106732	ODSLR 96B M/C6-2000-S12	60 ... 2,000 mm	Laser, red, 2, LED, red	2 mm x 6 mm	1x, current	1x	1.0 ... 5.0 mm	1 ... 5 ms	Connector, M12, metal, 5-pin
50106733	ODSLR 96B M/V6-2000-S12	60 ... 2,000 mm	Laser, red, 2, LED, red	2 mm x 6 mm	1x, voltage	1x	1.0 ... 5.0 mm	1 ... 5 ms	Connector, M12, metal, 5-pin
50106599	ODSL 96B M/66-2000-S12	150 ... 2,000 mm	Laser, red, 2	2 mm x 6 mm		2x	1.0 ... 3.0 mm	1 ... 5 ms	Connector, M12, metal, 5-pin
50106735	ODSL 96B M/C6-2000 Ex d	150 ... 2,000 mm	Laser, red, 2	2 mm x 6 mm	1x, current	1x	1.0 ... 3.0 mm	1 ... 5 ms	Ex-protected, cable, 15,000 mm, 5-wire
50106593	ODSL 96B M/C6-2000-S12	150 ... 2,000 mm	Laser, red, 2	2 mm x 6 mm	1x, current	1x	1.0 ... 3.0 mm	1 ... 5 ms	Connector, M12, metal, 5-pin
50106597	ODSL 96B M/D26-2000-S12	150 ... 2,000 mm	Laser, red, 2	2 mm x 6 mm		1x	1.0 ... 3.0 mm	1 ... 5 ms	Interface: RS 232, connector, M12, metal, 5-pin
50106598	ODSL 96B M/D36-2000-S12	150 ... 2,000 mm	Laser, red, 2	2 mm x 6 mm		1x	1.0 ... 3.0 mm	1 ... 5 ms	Interface: RS 485, connector, M12, metal, 5-pin
50136154	ODSL 96B M/L-2000 Ex d	150 ... 2,000 mm	Laser, red, 2	2 mm x 6 mm			1.0 ... 3.0 mm	1 ... 5 ms	Interface: IO-Link, Ex-protected, cable, 15,000 mm, 5-wire
50111164	ODSL 96B M/L-2000-S12	150 ... 2,000 mm	Laser, red, 2	2 mm x 6 mm			1.0 ... 3.0 mm	1 ... 5 ms	Interface: IO-Link, connector, M12, metal, 5-pin
50106594	ODSL 96B M/V6-2000-S12	150 ... 2,000 mm	Laser, red, 2	2 mm x 6 mm	1x, voltage	1x	1.0 ... 3.0 mm	1 ... 5 ms	Connector, M12, metal, 5-pin

ODSL 96-Teach

For simple applications, these sensors with plastic housing offer a large measurement range. The sensor can be quickly commissioned through teach-in.

Benefits:

- Reflection-independent distance information
- 2 teachable switching outputs (push-pull)
- Easy alignment through visible red light
- Degree of protection IP 67
- Measurement range/operating range up to 2,300 mm

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50101882	ODSL 96K/66-2300-S12	150 ... 2,300 mm	Laser, red, 2	3 mm x 8 mm		2x	1.0 ... 5.0 mm	2 ... 7 ms	Connector, M12, plastic, 5-pin
50101881	ODSL 96K/V66-2300-S12	150 ... 2,300 mm	Laser, red, 2	3 mm x 8 mm	1x, voltage	2x	1.0 ... 5.0 mm	2 ... 7 ms	Connector, M12, plastic, 5-pin

ODSL 96B-TOF

Large range also with dark objects. Measurement according to the "time of flight" principle.

Benefits:

- Large range even with dark objects
- Various operating modes for fast or precise measurement
- Robust measurement procedure
- Very high immunity to ambient light
- Display for measured value display and configuration

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50109290	ODSL 96B M/C6-S12	300 ... 10,000 mm	Laser, red, 2	7 mm x 7 mm	1x, current	1x	3.0 mm	1.4 ... 50 ms	Connector, M12, metal, 5-pin
50109295	ODSL 96B M/C66-S12	300 ... 10,000 mm	Laser, red, 2	7 mm x 7 mm	1x, current	2x	3.0 mm	1.4 ... 50 ms	Connector, M12, metal, 5-pin
50109292	ODSL 96B M/D26-S12	300 ... 10,000 mm	Laser, red, 2	7 mm x 7 mm		1x	3.0 mm	1.4 ... 50 ms	Interface: RS 232, connector, M12, metal, 5-pin
50109293	ODSL 96B M/D36-S12	300 ... 10,000 mm	Laser, red, 2	7 mm x 7 mm		1x	3.0 mm	1.4 ... 50 ms	Interface: RS 485, connector, M12, metal, 5-pin
50109294	ODSL 96B M/L-S12	300 ... 10,000 mm	Laser, red, 2	7 mm x 7 mm			3.0 mm	1.4 ... 50 ms	Interface: IO-Link, connector, M12, metal, 5-pin
50109291	ODSL 96B M/V6-S12	300 ... 10,000 mm	Laser, red, 2	7 mm x 7 mm	1x, voltage	1x	3.0 mm	1.4 ... 50 ms	Connector, M12, metal, 5-pin
50109302	ODSIL 96B M/C6-S12	300 ... 10,000 mm	Laser, infrared, 1	7 mm x 7 mm	1x, current	1x	3.0 mm	2.8 ... 100 ms	Connector, M12, metal, 5-pin
50127488	ODSIL 96B M/L-S12	300 ... 10,000 mm	Laser, infrared, 1	7 mm x 7 mm			3.0 mm	2.8 ... 100 ms	Interface: IO-Link, connector, M12, metal, 5-pin
50109303	ODSIL 96B M/V6-S12	300 ... 10,000 mm	Laser, infrared, 1	7 mm x 7 mm	1x, voltage	1x	3.0 mm	2.8 ... 100 ms	Connector, M12, metal, 5-pin

ODKL 96B

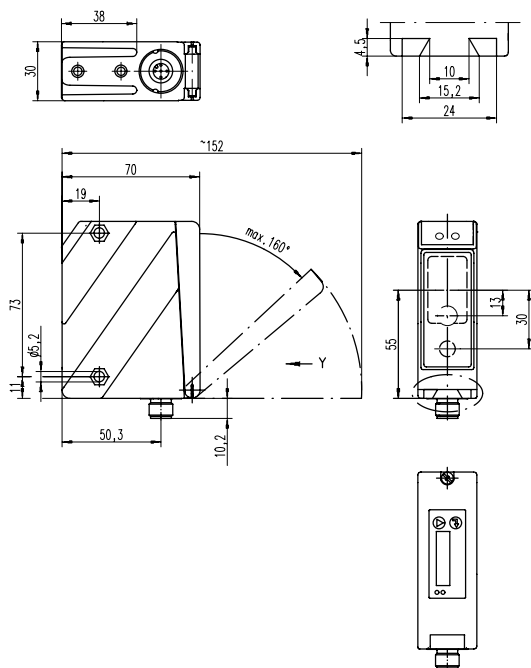
A visible light spot ensures easy alignment. By measuring on reflectors, ranges of up to 25 m are no problem.

Benefits:

- Fast and easy alignment due to well visible laser light spot
- Very high range by measuring on reflective tape
- Compact design

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measurement time	Description
50109297	ODKL 96B M/C6-S12	300 ... 25,000 mm	Laser, red, 2	7 mm x 7 mm	1x, current	1x	3.0 mm	1.4 ... 50 ms	Connector, M12, metal, 5-pin
50109299	ODKL 96B M/D26-S12	300 ... 25,000 mm	Laser, red, 2	7 mm x 7 mm		1x	3.0 mm	1.4 ... 50 ms	Interface: RS 232, connector, M12, metal, 5-pin
50109300	ODKL 96B M/D36-S12	300 ... 25,000 mm	Laser, red, 2	7 mm x 7 mm		1x	3.0 mm	1.4 ... 50 ms	Interface: RS 485, connector, M12, metal, 5-pin
50109301	ODKL 96B M/L-S12	300 ... 25,000 mm	Laser, red, 2	7 mm x 7 mm			3.0 mm	1.4 ... 50 ms	Interface: IO-Link, connector, M12, metal, 5-pin
50109298	ODKL 96B M/V6-S12	300 ... 25,000 mm	Laser, red, 2	7 mm x 7 mm	1x, voltage	1x	3.0 mm	1.4 ... 50 ms	Connector, M12, metal, 5-pin

Dimensioned drawings: ODS 96B



ODS 96B optical distance sensor

ACCESSORIES: ODS 96B

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50025570	BT 96	Angle, L-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50082084	BT 450.1-96	Mounting system	Screw type	For 10 mm rod	Metal
50026204	UMS 96	Mounting system	Clampable	For 10 mm rod, for 12 mm rod, 14 mm rod, 16 mm rod	Metal

Further rod mounts can be found on our website

Reflective tapes

Reflective tapes for distance sensors

Part no.	Part description	Design	Reflective surface	Fastening	Material
50111527	REF 7-A-100x100	Rectangular	100 mm x 100 mm	Self-adhesive	Plastic

Further reflective tapes can be found on our website

/// ODSL 30



The ODSL 30 measures distances on black objects up to 30 m away and on bright objects as far as 65 m away. The sensor resolution of 1 mm enables highly accurate measurements over the complete measurement range. The integrated display shows the measurement values and allows the sensor to be easily adapted to the measurement task. Apart from analog current/voltage interfaces and binary switching outputs, digital interfaces are also available.

The distance sensors reveal their enormous potential for precision when used in combination with digital interfaces.



Benefits:

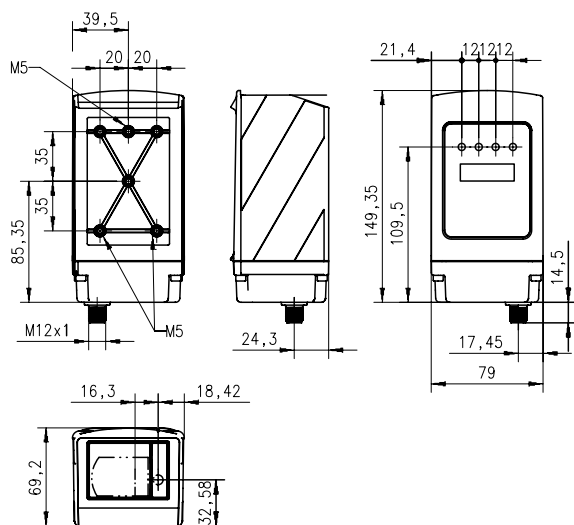
- Absolute measurement accuracy ± 2 mm over the entire measuring range
- Distances of 0.2–30 m on bright and black objects
- Referencing function for preventing fluctuations in measurement values
- Display for measured value display and configuration
- Ex model available



Direct access to the online product selector at www.leuze.com/en/odsl30

Part no.	Part description	Measurement range	Light source Protection class	Light spot dimensions	Analog outputs	Digital switching outputs	Resolution	Measure- ment time	Description
50041203	ODSL 30/D232-30M-S12	0 ... 65,000 mm	Laser, red, 2	6 mm		2x	1.0 mm	30 ... 100 ms	Interface: RS 232, connector, M12, plastic, 8-pin
50041204	ODSL 30/D485-30M-S12	0 ... 65,000 mm	Laser, red, 2	6 mm		2x	1.0 mm	30 ... 100 ms	Interface: RS 485, connector, M12, plastic, 8-pin
50040720	ODSL 30/24-30M-S12	0 ... 30,000 mm	Laser, red, 2	6 mm		3x	1.0 mm	30 ... 100 ms	Connector, M12, plastic, 8-pin
50039447	ODSL 30/V-30M-S12	0 ... 30,000 mm	Laser, red, 2	6 mm	2x, current, voltage	1x	1.0 mm	30 ... 100 ms	Connector, M12, plastic, 8-pin
50122319	ODSL 30/V-30M Ex d	0 ... 30,000 mm	Laser, red, 2	6 mm	2x, current, voltage	1x	1.0 mm	30 ... 100 ms	Ex-protected, cable, 15,000 mm, 8-wire

Dimensioned drawings: ODSL 30



ODSL 30 optical distance sensor

ACCESSORIES: ODSL 30

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50135121	KD U-M12-8A-P1-020	Connector, M12, axial, female	8-pin	2,000 mm	PUR
50135122	KD U-M12-8A-P1-050	Connector, M12, axial, female	8-pin	5,000 mm	PUR
50135123	KD U-M12-8A-P1-100	Connector, M12, axial, female	8-pin	10,000 mm	PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Cable length	Sheathing material
50115050	K-DS M12A-MA-8P-3m-S-PUR	Connector, M12, axial, female	8-pin	JST ZHR	3,000 mm	PUR

Further interconnection cables can be found on our website

Switching
sensorsMeasuring
sensorsProducts for
safety at work

Identification

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SMART IS TO SHARE **EXPERIENCE**

In sport, I'm happy to pass on my years of experience – in my profession as well. Benefiting from this are my colleagues and our customers. Together, we are able to find solutions to even tricky tasks.

Jörg Beintner,
Industry Manager –
Machine Tools



www.smart-sensor-business.com

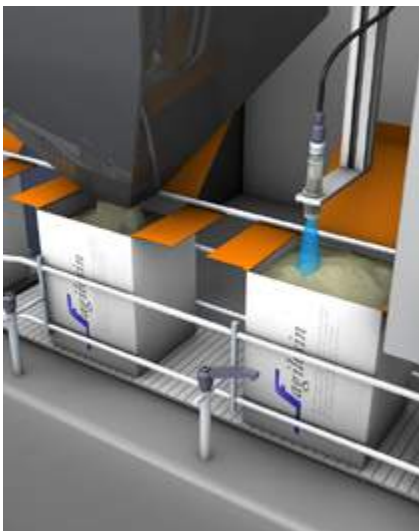
Data transmission /
Control componentsIndustrial image
processing

Accessories

/ ULTRASONIC DISTANCE SENSORS

WHEN LIGHT ISN'T ENOUGH

With ultrasonic technology, it is possible to reliably detect even partially or completely transparent objects and to perform reliable distance measurements. In addition, measurements can be performed in dusty, hazy or humid environments.



/// 318 series



Optimum integration into cylindrical, standard or short design. The plastic housing and temperature compensation make use possible under adverse conditions.



Benefits:

- Color and transmission independent detection of objects
- Current or voltage output configurable via cable or teach button
- Also available with combined analog and digital output
- To avoid mutual interference, max. 6 sensors may be synchronized via one cable
- Independent indicator diodes in devices with 2 switching outputs
- An additional diode as an indicator for the detection range simplifies installation
- Sensor configuration is unnecessary due to internal synchronization and multiplex function
- Operating range up to 1,600 mm



Direct access to the online product selector at www.leuze.com/en/br318

Part no.	Part description	Measurement range	Digital switching output	Analog output	Switching frequency	Resolution	Description
50136073	DMU318-300/CT-M12	40 ... 300 mm		Current		< 2 mm	Teach input, connector, M12, 4-pin
50136072	DMU318-300/VT-M12	40 ... 300 mm		Voltage		< 2 mm	Teach input, connector, M12, 4-pin
50136087	DMU318-400.3/2CK-M12	50 ... 400 mm	Transistor, NPN, NO (normally open)	Current	10 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136085	DMU318-400.3/2VK-M12	50 ... 400 mm	Transistor, NPN, NO (normally open)	Voltage	10 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136086	DMU318-400.3/4CK-M12	50 ... 400 mm	Transistor, PNP, NO (normally open)	Current	10 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136084	DMU318-400.3/4VK-M12	50 ... 400 mm	Transistor, PNP, NO (normally open)	Voltage	10 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136103	DMU318-400.W3/2CK-M12	50 ... 400 mm	Transistor, NPN, NO (normally open)	Current	10 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136101	DMU318-400.W3/2VK-M12	50 ... 400 mm	Transistor, NPN, NO (normally open)	Voltage	10 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136102	DMU318-400.W3/4CK-M12	50 ... 400 mm	Transistor, PNP, NO (normally open)	Current	10 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136100	DMU318-400.W3/4VK-M12	50 ... 400 mm	Transistor, PNP, NO (normally open)	Voltage	10 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136077	DMU318-1200/CT-M12	80 ... 1,200 mm		Current		< 2 mm	Teach input, connector, M12, 4-pin
50136076	DMU318-1200/VT-M12	80 ... 1,200 mm		Voltage		< 2 mm	Teach input, connector, M12, 4-pin
50136093	DMU318-1600.3/2CK-M12	150 ... 1,600 mm	Transistor, NPN, NO (normally open)	Current	2 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136091	DMU318-1600.3/2VK-M12	150 ... 1,600 mm	Transistor, NPN, NO (normally open)	Voltage	2 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136092	DMU318-1600.3/4CK-M12	150 ... 1,600 mm	Transistor, PNP, NO (normally open)	Current	2 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136090	DMU318-1600.3/4VK-M12	150 ... 1,600 mm	Transistor, PNP, NO (normally open)	Voltage	2 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136109	DMU318-1600.W3/2CK-M12	150 ... 1,600 mm	Transistor, NPN, NO (normally open)	Current	2 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136107	DMU318-1600.W3/2VK-M12	150 ... 1,600 mm	Transistor, NPN, NO (normally open)	Voltage	2 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136108	DMU318-1600.W3/4CK-M12	150 ... 1,600 mm	Transistor, PNP, NO (normally open)	Current	2 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136106	DMU318-1600.W3/4VK-M12	150 ... 1,600 mm	Transistor, PNP, NO (normally open)	Voltage	2 Hz	< 2 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin

Switching sensors

Measuring sensors

Products for safety at work

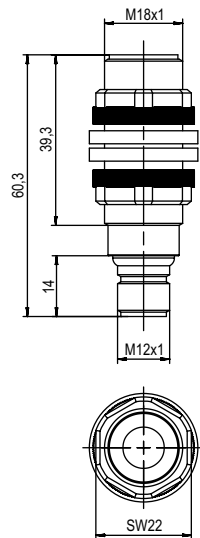
Identification

Data transmission / Control components

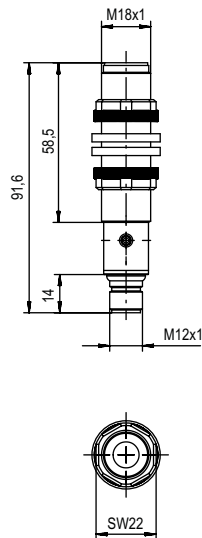
Industrial image processing

Accessories

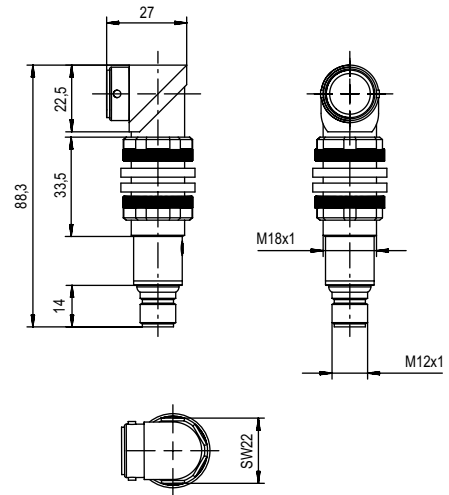
Dimensioned drawings: 318 series



DMU 318
ultrasonic distance sensor



DMU 318 with control button
ultrasonic distance sensor



DMU 318...W with control button
ultrasonic distance sensor

ACCESSORIES: 318 SERIES

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50130654	KD U-M12-4A-P1-020	Connector, M12, axial, female	4-pin	2,000 mm	PUR
50130692	KD U-M12-4W-P1-020	Connector, M12, angled, female	4-pin	2,000 mm	PUR
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50130657	KD U-M12-4A-P1-050	Connector, M12, axial, female	4-pin	5,000 mm	PUR
50130694	KD U-M12-4W-P1-050	Connector, M12, angled, female	4-pin	5,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50130648	KD U-M12-4A-V1-020	Connector, M12, axial, female	4-pin	2,000 mm	PVC
50130688	KD U-M12-4W-V1-020	Connector, M12, angled, female	4-pin	2,000 mm	PVC
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50130652	KD U-M12-4A-V1-050	Connector, M12, axial, female	4-pin	5,000 mm	PVC
50130690	KD U-M12-4W-V1-050	Connector, M12, angled, female	4-pin	5,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50113548	BT D18M.5	Angle, L-shape	Screw type	Through-hole mounting	Stainless steel

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50117490	BTU D18M-D12	Mounting system, clampable, adjustable, turnable, 360 °	Screw type	Through-hole mounting	Metal

Further rod mounts can be found on our website

/// 330 series



The new M30 models in plastic housing provide high measurement accuracy through propagation time measurement. They are much more compact and ideal for the detection of objects independent of their color (e. g. glass, liquid and film). In addition the integrated temperature compensation ensures high measurement accuracy for optimum results.



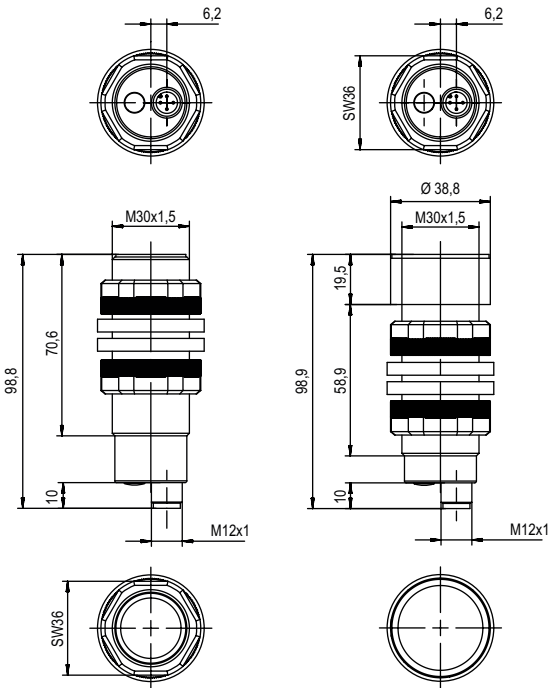
- Benefits:**
- Ideal for detection of levels of liquids, bulk material, transparent media and highly reflective objects
 - Distance information largely independent of surface properties
 - Current or voltage output configurable via teach button
 - Also available with combined analog and digital output
 - To avoid mutual interference, any number of sensors may be synchronized via one cable
 - Independent indicator diodes
 - An additional diode as an indicator for the detection range simplifies installation
 - High accuracy through temperature compensation
 - Operating range up to 6,000 mm



Direct access to the online product selector at www.leuze.com/en/br330

Part no.	Part description	Measurement range	Digital switching output	Analog output	Switching frequency	Resolution	Description
50136115	DMU330-3500.3/2CK-M12	250 ... 3,500 mm	Transistor, NPN, NO (normally open)	Current	2 Hz	5 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136113	DMU330-3500.3/2VK-M12	250 ... 3,500 mm	Transistor, NPN, NO (normally open)	Voltage	2 Hz	5 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136114	DMU330-3500.3/4CK-M12	250 ... 3,500 mm	Transistor, PNP, NO (normally open)	Current	2 Hz	5 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136112	DMU330-3500.3/4VK-M12	250 ... 3,500 mm	Transistor, PNP, NO (normally open)	Voltage	2 Hz	5 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136117	DMU330-6000.3/4CK-M12	350 ... 6,000 mm	Transistor, PNP, NO (normally open)	Current	1 Hz	6 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin

Dimensioned drawings: 330 series



DMU 330 ultrasonic distance sensor

ACCESSORIES: 330 SERIES

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50113510	BT D30M.5	Angle, L-shape	Screw type	Through-hole mounting	Stainless steel

Further mounting brackets can be found on our website

/// 418 series



With its small, cylindrical design, this ultrasonic distance sensor can be integrated problem-free. The full-metal housing and temperature compensation make use possible under adverse conditions.



Benefits:

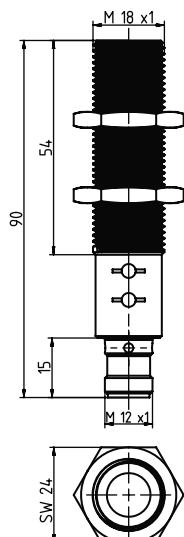
- Color and transmission independent detection of objects
- Current or voltage output configurable via PC software
- To avoid mutual interference, max. 10 sensors may be synchronized via one cable
- Sensitivity, average value calculation, reduction of the response time and outputs configurable via IO-Link
- Teach button



Direct access to the online product selector at www.leuze.com/en/br418mu

Part no.	Part description	Measurement range	Digital switching output	Analog output	Interface	Switching frequency	Resolution	Description
50124260	DMU418B-400.X3/LTC-M12	25 ... 400 mm	Transistor, push-pull, break-contact/make-contact	Current	IO-Link	7 Hz	1.0 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50124261	DMU418B-400.X3/LTV-M12	25 ... 400 mm	Transistor, push-pull, break-contact/make-contact	Voltage	IO-Link	7 Hz	1.0 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50124263	DMU418B-1300.X3/LTC-M12	150 ... 1,300 mm	Transistor, push-pull, break-contact/make-contact	Current	IO-Link	8 Hz	1.0 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50124264	DMU418B-1300.X3/LTV-M12	150 ... 1,300 mm	Transistor, push-pull, break-contact/make-contact	Voltage	IO-Link	8 Hz	1.0 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin

Dimensioned drawings: 418 series



DMU 418B ultrasonic distance sensor

ACCESSORIES: 418 SERIES

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50113548	BT D18M.5	Angle, L-shape	Screw type	Through-hole mounting	Stainless steel

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50117490	BTU D18M-D12	Mounting system, clampable, adjustable, turnable, 360°	Screw type	Through-hole mounting	Metal

Further rod mounts can be found on our website

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

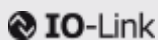
Industrial image processing

Accessories

/// 430 series



The new M30 models in metal housing are much more compact and ideal for detecting levels of liquids and bulk material. High accuracy through temperature compensation.

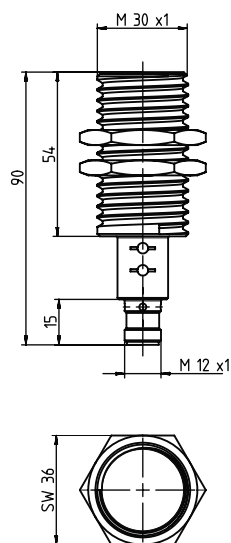
**Benefits:**

- Ideal for detection of levels of liquids, bulk material, transparent media and highly reflective objects
- Distance information largely independent of surface properties
- Current or voltage output and a switching output configurable via PC software
- To avoid mutual interference, max. 10 sensors may be synchronized via one cable
- Sensitivity, average value calculation, reduction of the response time and outputs configurable via IO-Link
- Teach button

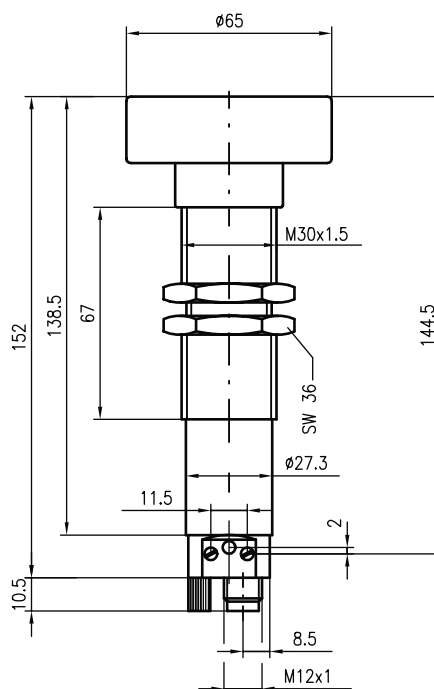


Direct access to the online product selector at www.leuze.com/en/br430mu

Part no.	Part description	Measurement range	Digital switching output	Analog output	Interface	Switching frequency	Resolution	Description
50124265	DMU430B-3000.X3/LTC-M12	300 ... 3,000 mm	Transistor, push-pull, break-contact/make-contact	Current	IO-Link	4 Hz	1.0 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50124266	DMU430B-3000.X3/LTV-M12	300 ... 3,000 mm	Transistor, push-pull, break-contact/make-contact	Voltage	IO-Link	4 Hz	1.0 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136115	DMU330-3500.3/2CK-M12	250 ... 3,500 mm	Transistor, NPN, NO (normally open)	Current		2 Hz	5 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136113	DMU330-3500.3/2VK-M12	250 ... 3,500 mm	Transistor, NPN, NO (normally open)	Voltage		2 Hz	5 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136114	DMU330-3500.3/4CK-M12	250 ... 3,500 mm	Transistor, PNP, NO (normally open)	Current		2 Hz	5 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136112	DMU330-3500.3/4VK-M12	250 ... 3,500 mm	Transistor, PNP, NO (normally open)	Voltage		2 Hz	5 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50136117	DMU330-6000.3/4CK-M12	350 ... 6,000 mm	Transistor, PNP, NO (normally open)	Current		1 Hz	6 mm	Inputs/outputs: 1; Operational controls: control buttons, connector, M12, 5-pin
50036269	VRTU 430M/V-1710-6000-S12	600 ... 6,000 mm	Transistor	Current		1 Hz	1.0 mm	Connector, M12, 5-pin

Dimensioned drawings: 430 series

DMU 430B ultrasonic distance sensor



VRTU 430 ultrasonic distance sensor

ACCESSORIES: 430 SERIES

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50113510	BT D30M.5	Angle, L-shape	Screw type	Through-hole mounting	Stainless steel

Further mounting brackets can be found on our website

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

SMART IS TO BE CLOSE



Product selector

Intuitive web applications for convenient product selection



"It's never been easier for you to select sensors: use our product selector"

Martina Weil,
Customer Care Center

Smart is finding the right product for every application: www.leuze.com



/ SENSORS FOR POSITIONING

AT THE RIGHT POSITION WITH MILLIMETER ACCURACY

With moving system parts that need to automatically work together, the positioning of parts or work pieces with millimeter accuracy is of great importance. We offer devices here with 2 operating principles. One is a laser distance measurement device that measures against a reflector and the other is a bar code positioning system that has a red light laser which determines the position and speed relative to a bar code tape.



Optical laser measurement systems

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Bar code positioning systems

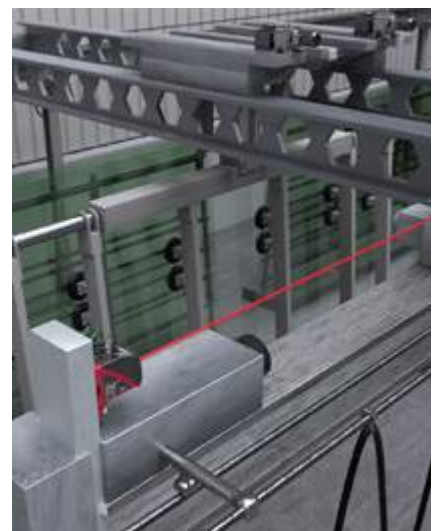
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Camera-based positioning sensors

Page 243

Optical guidance

Page 245



//OPTICAL LASER MEASUREMENT SYSTEMS

THE POWER OF OPTICAL LASER DISTANCE MEASUREMENT

The AMS 300i sensor calculates distances to moving system parts contact-free, fast and with absolute precision at ranges up to 300 m. In cycles lasting just milliseconds, the laser distance measuring system provides the distances required for dynamic control functions with millimeter accuracy using a unique selection of Industrial Ethernet and fieldbus interfaces.

/// AMS 300i



With the AMS 300i, distances of up to 300 m can be calculated with maximum accuracy and in intervals on the order of milliseconds through the use of the latest signal processors. Borderline situations are detected and indicated with the integrated, extensive functionality catalog.



Benefits:

- Repeatability of 1 mm, with tested absolute measurement accuracy from ± 2 mm to ± 5 mm at a range of 300 m
- Simultaneous calculation and monitoring of position and speed
- Integrated interface diversity for problem-free integration into a large array of control systems
- Red light laser for simple alignment and real-time position measurement
- Integrated intelligent mounting solution for simple alignment and fastening
- Plain-text display in five languages for international use
- With the PROFINET and PROFIBUS variants, a parallel SSI interface is available



Direct access to the online product selector at www.leuze.com/en/ams300i

Part no.	Part description	Measurement range	Reproducibility (3 sigma)	Interface	Light source	Description
50113693	AMS 335i 40	200 ... 40,000 mm	0.9 mm	CANopen	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113697	AMS 335i 40 H	200 ... 40,000 mm	0.9 mm	CANopen	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113694	AMS 335i 120	200 ... 120,000 mm	1.5 mm	CANopen	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113698	AMS 335i 120 H	200 ... 120,000 mm	1.5 mm	CANopen	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113695	AMS 335i 200	200 ... 200,000 mm	2.1 mm	CANopen	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113699	AMS 335i 200 H	200 ... 200,000 mm	2.1 mm	CANopen	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113696	AMS 335i 300	200 ... 300,000 mm	3 mm	CANopen	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113700	AMS 335i 300 H	200 ... 300,000 mm	3 mm	CANopen	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113717	AMS 355i 40	200 ... 40,000 mm	0.9 mm	DeviceNet	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113721	AMS 355i 40 H	200 ... 40,000 mm	0.9 mm	DeviceNet	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113718	AMS 355i 120	200 ... 120,000 mm	1.5 mm	DeviceNet	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113722	AMS 355i 120 H	200 ... 120,000 mm	1.5 mm	DeviceNet	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113719	AMS 355i 200	200 ... 200,000 mm	2.1 mm	DeviceNet	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113723	AMS 355i 200 H	200 ... 200,000 mm	2.1 mm	DeviceNet	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113720	AMS 355i 300	200 ... 300,000 mm	3 mm	DeviceNet	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113724	AMS 355i 300 H	200 ... 300,000 mm	3 mm	DeviceNet	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113701	AMS 338i 40	200 ... 40,000 mm	0.9 mm	EtherCAT	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

Part no.	Part description	Measurement range	Reproducibility (3 sigma)	Interface	Light source	Description
50113705	AMS 338i 40 H	200 ... 40,000 mm	0.9 mm	EtherCAT	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113702	AMS 338i 120	200 ... 120,000 mm	1.5 mm	EtherCAT	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113706	AMS 338i 120 H	200 ... 120,000 mm	1.5 mm	EtherCAT	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113703	AMS 338i 200	200 ... 200,000 mm	2.1 mm	EtherCAT	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113707	AMS 338i 200 H	200 ... 200,000 mm	2.1 mm	EtherCAT	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113704	AMS 338i 300	200 ... 300,000 mm	3 mm	EtherCAT	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113708	AMS 338i 300 H	200 ... 300,000 mm	3 mm	EtherCAT	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113725	AMS 358i 40	200 ... 40,000 mm	0.9 mm	EtherNet IP	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113729	AMS 358i 40 H	200 ... 40,000 mm	0.9 mm	EtherNet IP	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113726	AMS 358i 120	200 ... 120,000 mm	1.5 mm	EtherNet IP	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113730	AMS 358i 120 H	200 ... 120,000 mm	1.5 mm	EtherNet IP	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113727	AMS 358i 200	200 ... 200,000 mm	2.1 mm	EtherNet IP	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113731	AMS 358i 200 H	200 ... 200,000 mm	2.1 mm	EtherNet IP	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113728	AMS 358i 300	200 ... 300,000 mm	3 mm	EtherNet IP	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113732	AMS 358i 300 H	200 ... 300,000 mm	3 mm	EtherNet IP	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113685	AMS 308i 40	200 ... 40,000 mm	0.9 mm	Ethernet	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113689	AMS 308i 40 H	200 ... 40,000 mm	0.9 mm	Ethernet	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113686	AMS 308i 120	200 ... 120,000 mm	1.5 mm	Ethernet	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113690	AMS 308i 120 H	200 ... 120,000 mm	1.5 mm	Ethernet	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113687	AMS 308i 200	200 ... 200,000 mm	2.1 mm	Ethernet	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113691	AMS 308i 200 H	200 ... 200,000 mm	2.1 mm	Ethernet	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113688	AMS 308i 300	200 ... 300,000 mm	3 mm	Ethernet	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113692	AMS 308i 300 H	200 ... 300,000 mm	3 mm	Ethernet	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113733	AMS 384i 40	200 ... 40,000 mm	0.9 mm	Interbus-S	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113737	AMS 384i 40 H	200 ... 40,000 mm	0.9 mm	Interbus-S	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113734	AMS 384i 120	200 ... 120,000 mm	1.5 mm	Interbus-S	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113738	AMS 384i 120 H	200 ... 120,000 mm	1.5 mm	Interbus-S	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113735	AMS 384i 200	200 ... 200,000 mm	2.1 mm	Interbus-S	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113739	AMS 384i 200 H	200 ... 200,000 mm	2.1 mm	Interbus-S	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113736	AMS 384i 300	200 ... 300,000 mm	3 mm	Interbus-S	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113740	AMS 384i 300 H	200 ... 300,000 mm	3 mm	Interbus-S	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113677	AMS 304i 40	200 ... 40,000 mm	0.9 mm	PROFIBUS DP, SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113681	AMS 304i 40 H	200 ... 40,000 mm	0.9 mm	PROFIBUS DP, SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113678	AMS 304i 120	200 ... 120,000 mm	1.5 mm	PROFIBUS DP, SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113682	AMS 304i 120 H	200 ... 120,000 mm	1.5 mm	PROFIBUS DP, SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113679	AMS 304i 200	200 ... 200,000 mm	2.1 mm	PROFIBUS DP, SSI	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113683	AMS 304i 200 H	200 ... 200,000 mm	2.1 mm	PROFIBUS DP, SSI	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113680	AMS 304i 300	200 ... 300,000 mm	3 mm	PROFIBUS DP, SSI	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113684	AMS 304i 300 H	200 ... 300,000 mm	3 mm	PROFIBUS DP, SSI	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113709	AMS 348i 40	200 ... 40,000 mm	0.9 mm	PROFINET	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113713	AMS 348i 40 H	200 ... 40,000 mm	0.9 mm	PROFINET	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113710	AMS 348i 120	200 ... 120,000 mm	1.5 mm	PROFINET	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113714	AMS 348i 120 H	200 ... 120,000 mm	1.5 mm	PROFINET	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating

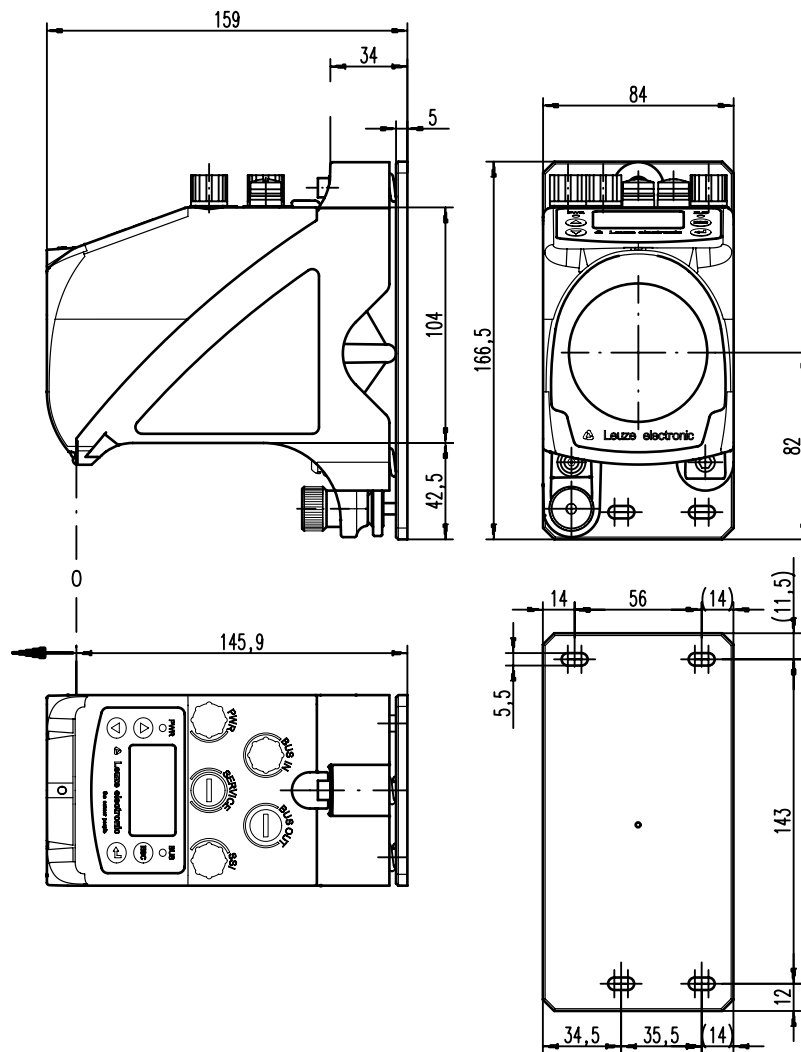
Part no.	Part description	Measurement range	Reproducibility (3 sigma)	Interface	Light source	Description
50113711	AMS 348i 200	200 ... 200,000 mm	2.1 mm	PROFINET	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113715	AMS 348i 200 H	200 ... 200,000 mm	2.1 mm	PROFINET	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113712	AMS 348i 300	200 ... 300,000 mm	3 mm	PROFINET	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113716	AMS 348i 300 H	200 ... 300,000 mm	3 mm	PROFINET	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50127219	AMS 348i 40 SSI	200 ... 40,000 mm	0.9 mm	PROFINET, SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display
50127223	AMS 348i 40 H SSI	200 ... 40,000 mm	0.9 mm	PROFINET, SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display; Functions: heating
50127220	AMS 348i 120 SSI	200 ... 120,000 mm	1.5 mm	PROFINET, SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display
50127224	AMS 348i 120 H SSI	200 ... 120,000 mm	1.5 mm	PROFINET, SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display; Functions: heating
50127221	AMS 348i 200 SSI	200 ... 200,000 mm	2.1 mm	PROFINET, SSI	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display
50127225	AMS 348i 200 H SSI	200 ... 200,000 mm	2.1 mm	PROFINET, SSI	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display; Functions: heating
50127222	AMS 348i 300 SSI	200 ... 300,000 mm	3 mm	PROFINET, SSI	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display
50127226	AMS 348i 300 H SSI	200 ... 300,000 mm	3 mm	PROFINET, SSI	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display; Functions: heating
50113661	AMS 300i 40	200 ... 40,000 mm	0.9 mm	RS 232, RS 422	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113665	AMS 300i 40 H	200 ... 40,000 mm	0.9 mm	RS 232, RS 422	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113662	AMS 300i 120	200 ... 120,000 mm	1.5 mm	RS 232, RS 422	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113666	AMS 300i 120 H	200 ... 120,000 mm	1.5 mm	RS 232, RS 422	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113663	AMS 300i 200	200 ... 200,000 mm	2.1 mm	RS 232, RS 422	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113667	AMS 300i 200 H	200 ... 200,000 mm	2.1 mm	RS 232, RS 422	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113664	AMS 300i 300	200 ... 300,000 mm	3 mm	RS 232, RS 422	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113668	AMS 300i 300 H	200 ... 300,000 mm	3 mm	RS 232, RS 422	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113669	AMS 301i 40	200 ... 40,000 mm	0.9 mm	RS 485	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113673	AMS 301i 40 H	200 ... 40,000 mm	0.9 mm	RS 485	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113670	AMS 301i 120	200 ... 120,000 mm	1.5 mm	RS 485	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113674	AMS 301i 120 H	200 ... 120,000 mm	1.5 mm	RS 485	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113671	AMS 301i 200	200 ... 200,000 mm	2.1 mm	RS 485	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113675	AMS 301i 200 H	200 ... 200,000 mm	2.1 mm	RS 485	Laser, red	Absolute measurement accuracy: 3 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50113672	AMS 301i 300	200 ... 300,000 mm	3 mm	RS 485	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED
50113676	AMS 301i 300 H	200 ... 300,000 mm	3 mm	RS 485	Laser, red	Absolute measurement accuracy: 5 mm; Max. traverse rate: 10 m/s; Display: LC Display, LED; Functions: heating
50137593	AMS 307i 40	200 ... 40,000 mm	0.9 mm	SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display
50137594	AMS 307i 120	200 ... 120,000 mm	0.9 mm	SSI	Laser, red	Absolute measurement accuracy: 2 mm; Max. traverse rate: 10 m/s; Display: LED, LC Display

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Dimensioned drawings: AMS 300i

AMS 300i optical laser measurement system

ACCESSORIES: AMS 300i**Connection technology**

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Interface	Sheathing material
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm		PUR
50114696	KB DN/CAN-5000 BA	Connector, M12, axial, female	5-pin	5,000 mm	DeviceNet, CANopen	PUR
50114697	KB DN/CAN-5000 SA	Connector, M12, axial, male	5-pin	5,000 mm	CANopen, DeviceNet	PUR
50135074	KS ET-M12-4A-P7-050	Connector, M12, axial, male	4-pin	5,000 mm	Ethernet	PUR
50108596	KB IBS-5000-SA	Connector, M12, axial, male	5-pin	5,000 mm	Interbus-S	PUR
50104171	KB SSI/IBS-5000-BA	Connector, M12, axial, female	5-pin	5,000 mm	SSI, Interbus-S	PUR
50135248	KS PB-M12-4A-P3-050	Connector, M12, axial, male	5-pin	5,000 mm	PROFIBUS DP	PUR
50135243	KD PB-M12-4A-P3-050	Connector, M12, axial, female	5-pin	5,000 mm	PROFIBUS DP	PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Interface	Sheathing material
50114698	KB DN/CAN-5000 SBA	Connector, M12, axial, male	5-pin	Connector, M12, axial, female	5-pin	5,000 mm	DeviceNet, CANopen	PUR
50130631	KSS ET-M12-4A-M12-4A-P7-010	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	1,000 mm	Ethernet	PUR
50130632	KSS ET-M12-4A-RJ45-A-P7-010	Connector, M12, axial, male	4-pin	RJ45		1,000 mm	Ethernet	PUR

Further interconnection cables can be found on our website

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Interface	Sheathing material
50137077	KSS ET-M12-4A-M12-4A-P7-020	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	2,000 mm	Ethernet	PUR
50137078	KSS ET-M12-4A-M12-4A-P7-050	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	5,000 mm	Ethernet	PUR
50135081	KSS ET-M12-4A-RJ45-A-P7-050	Connector, M12, axial, male	4-pin	RJ45		5,000 mm	Ethernet	PUR
50137079	KSS ET-M12-4A-M12-4A-P7-100	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	10,000 mm	Ethernet	PUR
50137080	KSS ET-M12-4A-M12-4A-P7-150	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	15,000 mm	Ethernet	PUR
50135254	KDS PB-M12-4A-M12-4A-P3-050	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	4-pin	5,000 mm	PROFIBUS DP	PUR

Further interconnection cables can be found on our website

User-configurable connectors

Part no.	Part description	Connection	No. of pins	Interface
50040097	KD 01-5-BA	Connector, M12, axial, female	5-pin	
50040098	KD 01-5-SA	Connector, M12, axial, male	5-pin	
50038538	KD 02-5-BA	Connector, M12, axial, female	5-pin	PROFIBUS DP, multiNet Plus
50038537	KD 02-5-SA	Connector, M12, axial, male	5-pin	PROFIBUS DP, multiNet Plus
50020501	KD 095-5A	Connector, M12, axial, female	5-pin	

Further connectors can be found on our website

Reflective tape

Reflective tapes

Part no.	Part description	Design	Reflective surface	Reflector material	Fastening	Base material
50104364	Reflective tape 200x200mm-M	Rectangular	200 mm x 200 mm		Through-hole mounting, mounting plate	Aluminum composite
50104361	Reflective tape 200x200mm-S	Rectangular	200 mm x 200 mm	PMMA	Adhesive	
50104365	Reflective tape 500x500mm-M	Rectangular	500 mm x 500 mm		Through-hole mounting, mounting plate	Aluminum composite
50104362	Reflective tape 500x500mm-S	Rectangular	500 mm x 500 mm	PMMA	Adhesive	
50104366	Reflective tape 914x914mm-M	Rectangular	914 mm x 914 mm		Through-hole mounting, mounting plate	Aluminum
50108988	Reflective tape 914x914mm-S	Rectangular	914 mm x 914 mm	PMMA	Adhesive	

Further reflective tapes can be found on our website

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Customer Care Center



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Switching sensors

Measuring sensors

Products for safety at work

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//BAR CODE POSITIONING SYSTEMS

POSITION DATA WITHOUT LIMIT – “INFINITE”, CURVE-GOING AND WITH MILLIMETER ACCURACY

The read head of the bar code positioning system is moved along a bar code tape. It calculates the absolute position data in the direction of travel with millimeter accuracy up to a distance of 10,000 m. The bar code tape is extremely simple to use and can be bonded both in straight lines and in curves. Maximum flexibility, simple mounting, transparent diagnosis as well as a large selection of integrated interfaces are the strengths of this system.

/// BPS 300i



The BPS 300i is the second generation of bar code positioning and sets standards both in performance characteristics and in handling. The new “availability control” function allows diagnosis to be performed during operation. The large working range of ± 60 mm makes mechanical installation easier and precise measurements possible even if the distance to the tape varies.



Benefits:

- Availability control: To reliably prevent failures resulting from contamination, the device constantly reports its function reserve, thereby indicating possible problems due to contamination
- Easy handling: Fast, secure mounting and precise positioning of replacement devices through easy-mount mounting technology
- Absolute positioning up to 10,000 m with reproducible accuracy of ± 0.15 mm
- Maximum speed 10 m/s
- Modularity: 3 selectable connection technologies, heating and display

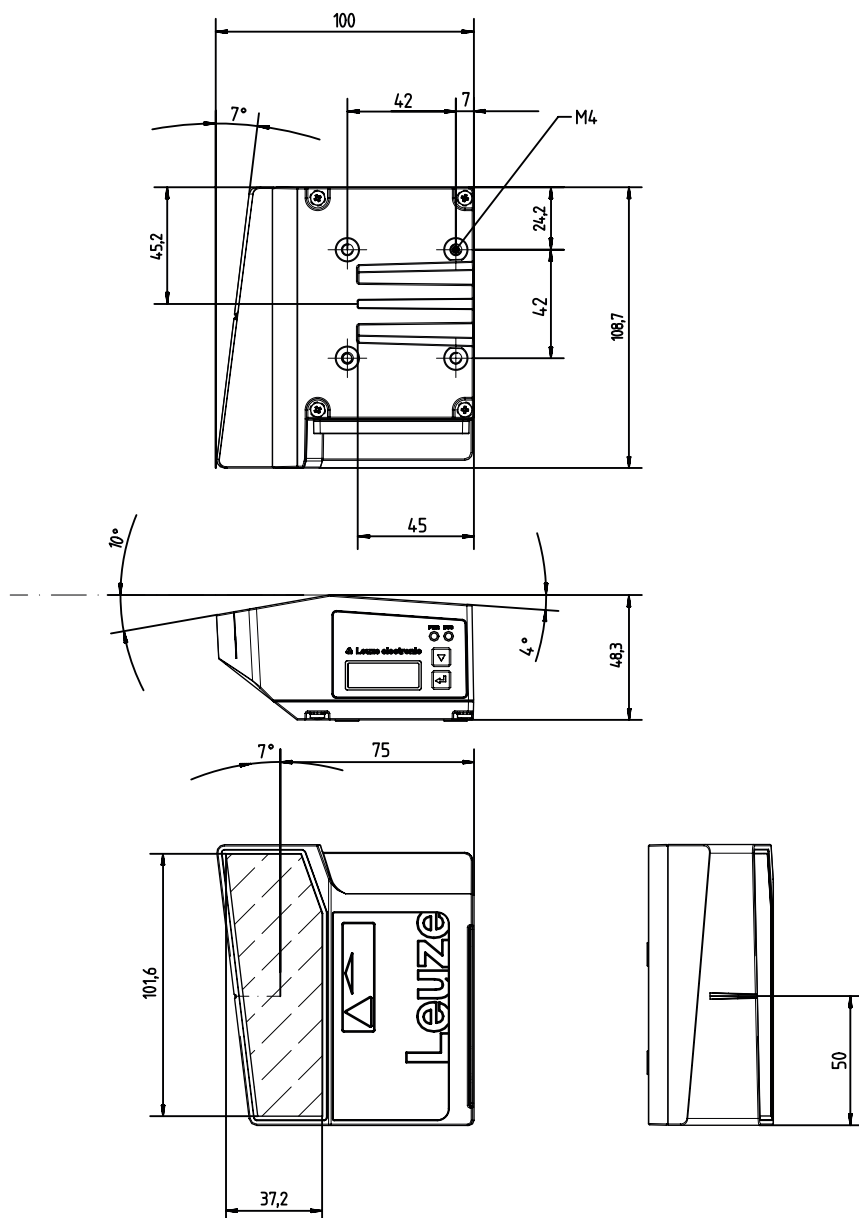


Direct access to the online product selector at www.leuze.com/en/bps300i

Part no.	Part description	Working range	Reproducibility (3 sigma)	Measurement value output	Interface	Light beam exit	Display element	Description
50125670	BPS 300i SM 100	50 ... 170 mm	0.15 mm	1 ... 30 ms	RS 232, RS 422	Lateral	LED	Light source: laser
50125669	BPS 300i SM 100 D	50 ... 170 mm	0.15 mm	1 ... 30 ms	RS 232, RS 422	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser
50125668	BPS 300i SM 100 D H	50 ... 170 mm	0.15 mm	1 ... 30 ms	RS 232, RS 422	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser; Functions: heating
50125673	BPS 301i SM 100	50 ... 170 mm	0.15 mm	1 ... 30 ms	RS 485	Lateral	LED	Light source: laser
50125672	BPS 301i SM 100 D	50 ... 170 mm	0.15 mm	1 ... 30 ms	RS 485	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser
50125671	BPS 301i SM 100 D H	50 ... 170 mm	0.15 mm	1 ... 30 ms	RS 485	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser; Functions: heating
50125676	BPS 304i SM 100	50 ... 170 mm	0.15 mm	2 ms	PROFIBUS DP	Lateral	LED	Light source: laser
50125675	BPS 304i SM 100 D	50 ... 170 mm	0.15 mm	2 ms	PROFIBUS DP	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser
50125674	BPS 304i SM 100 D H	50 ... 170 mm	0.15 mm	2 ms	PROFIBUS DP	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser; Functions: heating
50136335	BPS 304i SM 100 H	50 ... 170 mm	0.15 mm	2 ms	PROFIBUS DP	Lateral	LED	Light source: laser; Functions: heating
50125679	BPS 307i SM 100	50 ... 170 mm	0.15 mm	0.05 ... 2 ms	SSI	Lateral	LED	Light source: laser
50125678	BPS 307i SM 100 D	50 ... 170 mm	0.15 mm	0.05 ... 2 ms	SSI	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser
50125677	BPS 307i SM 100 D H	50 ... 170 mm	0.15 mm	0.05 ... 2 ms	SSI	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser; Functions: heating
50136334	BPS 307i SM 100 H	50 ... 170 mm	0.15 mm	0.05 ... 2 ms	SSI	Lateral	LED	Light source: laser; Functions: heating
50124983	BPS 348i SM 100	50 ... 170 mm	0.15 mm	2 ms	PROFINET	Lateral	LED	Light source: laser
50124982	BPS 348i SM 100 D	50 ... 170 mm	0.15 mm	2 ms	PROFINET	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser
50124981	BPS 348i SM 100 D H	50 ... 170 mm	0.15 mm	2 ms	PROFINET	Lateral	LED, monochromatic graphical display, 128 x 32 pixels	Light source: laser; Functions: heating
50136336	BPS 348i SM 100 H	50 ... 170 mm	0.15 mm	2 ms	PROFINET	Lateral	LED	Light source: laser; Functions: heating

Necessary accessories: A modular connector hood or terminal hood and a bar code tape are required for operation of the BPS 300i!

Dimensioned drawings: BPS 300i



Bar code positioning system BPS 300i

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission /
Control components

ACCESSORIES: BPS 300i

Connection technology

Terminal boxes

Part no.	Part description	Connections	Connection	Suitable for interface
50131256	ME 348 103	4x	Cable with connector	PROFINET
50116465	MK 304	4x	Terminal, M16	PROFIBUS DP
50126131	MK 307	3x	Terminal, M16	SSI
50134931	MK 338	4x	Terminal, M16	EtherCAT
50116467	MK 348	4x	Terminal, M16	PROFINET
50116470	MS 304	4x	Connector, M12	PROFIBUS DP
50126130	MS 307	3x	Connector, M12	SSI
50134930	MS 338	4x	Connector, M12	EtherCAT
50116471	MS 348	4x	Connector, M12	PROFINET

Further terminal boxes can be found on our website

Industrial image processing

Accessories

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Interface	Sheathing material
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm		PUR
50104171	KB SSI/BS-5000-BA	Connector, M12, axial, female	5-pin	5,000 mm	SSI, Interbus-S	PUR
50135248	KS PB-M12-4A-P3-050	Connector, M12, axial, male	5-pin	5,000 mm	PROFIBUS DP	PUR
50135243	KD PB-M12-4A-P3-050	Connector, M12, axial, female	5-pin	5,000 mm	PROFIBUS DP	PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Interface	Sheathing material
50130631	KSS ET-M12-4A-M12-4A-P7-010	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	1,000 mm	Ethernet	PUR
50130632	KSS ET-M12-4A-RJ45-A-P7-010	Connector, M12, axial, male	4-pin	RJ45		1,000 mm	Ethernet	PUR
50137077	KSS ET-M12-4A-M12-4A-P7-020	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	2,000 mm	Ethernet	PUR
50137078	KSS ET-M12-4A-M12-4A-P7-050	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	5,000 mm	Ethernet	PUR
50135081	KSS ET-M12-4A-RJ45-A-P7-050	Connector, M12, axial, male	4-pin	RJ45		5,000 mm	Ethernet	PUR
50137079	KSS ET-M12-4A-M12-4A-P7-100	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	10,000 mm	Ethernet	PUR
50137080	KSS ET-M12-4A-M12-4A-P7-150	Connector, M12, axial, male	4-pin	Connector, M12, axial, male	4-pin	15,000 mm	Ethernet	PUR
50135254	KDS PB-M12-4A-M12-4A-P3-050	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	4-pin	5,000 mm	PROFIBUS DP	PUR

Further interconnection cables can be found on our website

User-configurable connectors

Part no.	Part description	Connection	No. of pins	Interface
50040097	KD 01-5-BA	Connector, M12, axial, female	5-pin	
50038538	KD 02-5-BA	Connector, M12, axial, female	5-pin	PROFIBUS DP, multiNet Plus
50038537	KD 02-5-SA	Connector, M12, axial, male	5-pin	PROFIBUS DP, multiNet Plus
50020501	KD 095-5A	Connector, M12, axial, female	5-pin	

Further connectors can be found on our website

Bar code tapes

Bar code tapes

Part no.	Part description	Suitable for	Dimensions	Grid dimension
50040041	BCB 010	Bar code positioning system, BPS 300i series	47 mm x 10,000 mm	40 mm
50037489	BCB 020	Bar code positioning system, BPS 300i series	47 mm x 20,000 mm	40 mm
50038894	BCB 050	Bar code positioning system, BPS 300i series	47 mm x 50,000 mm	40 mm
50104801	BCB 8 100	BPS 8 series bar code positioning system, BPS 300i series bar code positioning system	47 mm x 100,000 mm	30 mm
50037493	BCB 100	Bar code positioning system, BPS 300i series	47 mm x 100,000 mm	40 mm

Further bar code tapes can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50121433	BT 300 W	Angle, L-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50027375	BT 56	Mounting system	Clampable	For 16 mm rod, for 18 mm rod, 20 mm rod	Metal

Further rod mounts can be found on our website

/// BPS 8



Our BPS 8 compact bar code positioning system convinces with its robust metal housing and turnable M12 connector. The RS 232 or RS 485 interface allows the system to be incorporated in your system architecture. The BPS 8 is available with either front beam exit or with a deflection mirror.



Benefits:

- Absolute position measurement up to 10,000 m
- Curve-going, horizontally and vertically
- Degree of protection: IP 67
- Various protocols on RS 232, RS 485 via MA 8
- Reproducibility: ± 1 mm
- Exact positioning at switches by means of special labels

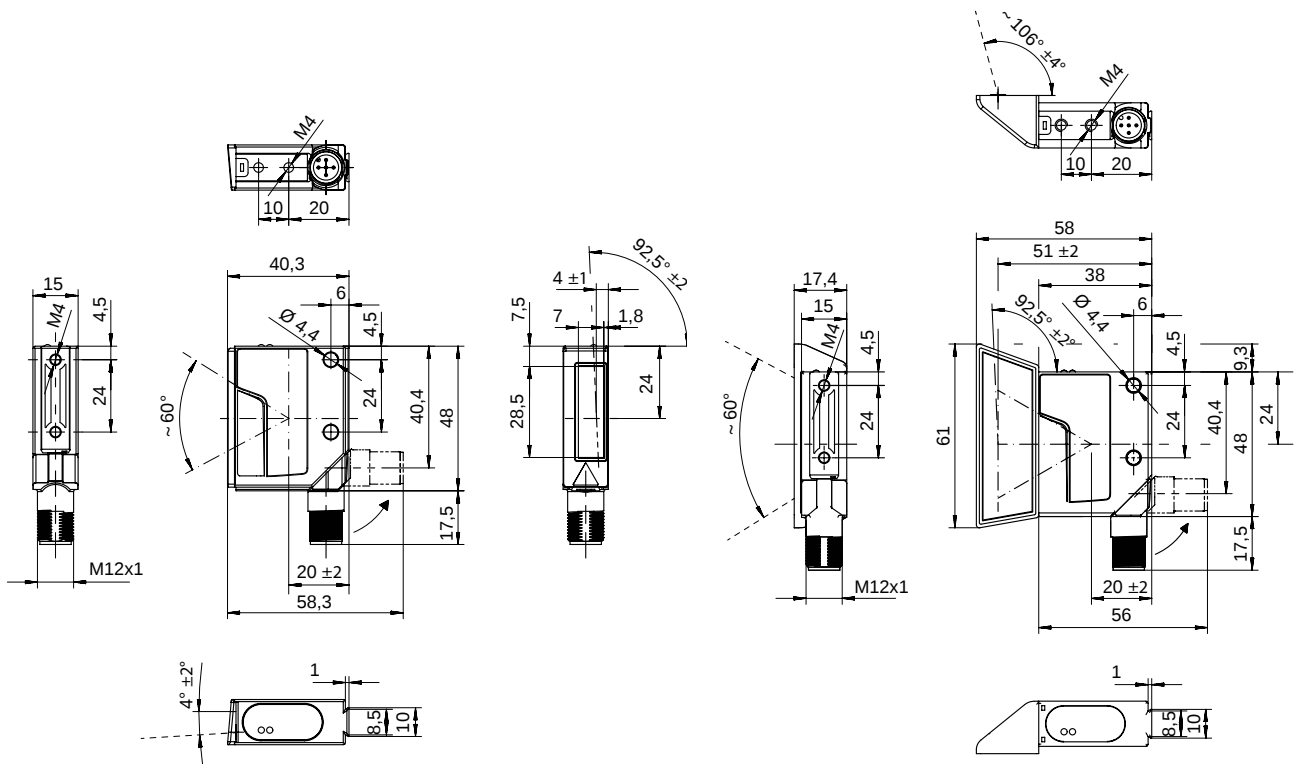


Direct access to the online product selector at www.leuze.com/en/bps8

Part no.	Part description	Working range	Reproducibility (3 sigma)	Measurement value output	Interface	Light beam exit	Display element	Description
50104784	BPS 8 SM 100-01	60 ... 120 mm	1 mm	3.3 ms	RS 232	Lateral with deflecting mirror	LED	Light source: laser
50104783	BPS 8 SM 102-01	80 ... 140 mm	1 mm	3.3 ms	RS 232	Front	LED	Light source: laser

Necessary accessories: A bar code tape is required for operation!

Dimensioned drawings: BPS 8



Bar code positioning system BPS 8 SM 102-01 with front beam exit

Bar code positioning system BPS 8 SM 100-01 with lateral beam exit

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

ACCESSORIES: BPS 8

Connection technology

Connection unit

Part no.	Part description	Suitable for	Interface	Supply voltage	Degree of protection
50104790	MA 8-01	BCL 8 series bar code readers, BPS 8 series bar code positioning system	RS 485	10 ... 30 V, DC	IP 67

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50101941	KB-008-3000 A-S	Connector, M12, axial, male	5-pin	3,000 mm	PUR
50040757	KB 008-3000 A	Connector, M12, axial, female	5-pin	3,000 mm	PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Sheathing material
50133891	KDS S-M12-5A-M12-5A-P1-030	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	3,000 mm	PUR
50133884	KDS S-M12-5A-M12-5W-P1-030	Connector, M12, axial, female	5-pin	Connector, M12, angled, male	5-pin	3,000 mm	PUR

Further interconnection cables can be found on our website

User-configurable connectors

Part no.	Part description	Connection	No. of pins
50040097	KD 01-5-BA	Connector, M12, axial, female	5-pin

Further connectors can be found on our website

Bar code tapes

Bar code tapes

Part no.	Part description	Suitable for	Dimensions	Grid dimension
50104792	BCB 8 010	BPS 8 series bar code positioning system, BPS 300i series bar code positioning system	47 mm x 10,000 mm	30 mm
50104793	BCB 8 020	BPS 8 series bar code positioning system, BPS 300i series bar code positioning system	47 mm x 20,000 mm	30 mm
50104796	BCB 8 050	BPS 8 series bar code positioning system, BPS 300i series bar code positioning system	47 mm x 50,000 mm	30 mm
50104801	BCB 8 100	BPS 8 series bar code positioning system, BPS 300i series bar code positioning system	47 mm x 100,000 mm	30 mm

Further bar code tapes can be found on our website

Mounting systems

Mounting bracket

Part no.	Part description	Fastening at device	Fastening at system	Material
50104791	BT 8-01	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50127177	BTU 008M-D10	Mounting system	Screw type	Sheet-metal mounting, for 10 mm rod	Metal
50036196	BT 8-0	Mounting clamp	Clampable	Mounting thread	Metal

Further rod mounts can be found on our website

//CAMERA-BASED POSITIONING SENSORS

HIGH-BAY STORAGE DEVICES – FROM ROUGH TO FINE POSITIONING

The camera-based sensor is designed for the compartment fine positioning of chassis (X-axis) and lifting unit (Y-axis) of the high-bay storage device. Any deviations from the target reference position that occur during absolute positioning are thereby detected. The reference position is defined by simple bore holes (markers) in the steel profiles (crossbeams or columns) in the shelf compartments. If the bore hole is located in the working range (image field) of the sensor, it delivers the current position relative to the reference position via the integrated Ethernet TCP/IP interface or via 4 digital switching outputs. When the current absolute and reference positions match, the ideal positioning of the high-bay storage device is reached. Smallest size, simple operation, configuration via the integrated web server or directly on the sensor are just a few of the highlights of this device.

/// IPS 200i



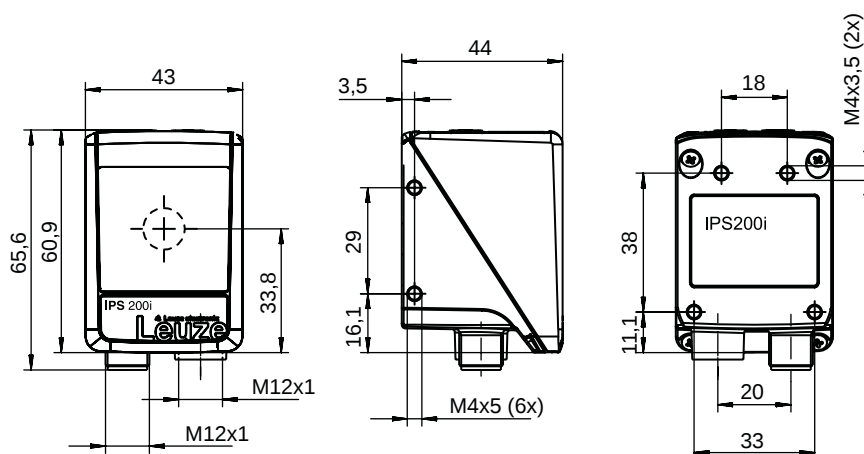
The IPS 200i is a camera-based sensor for the compartment fine positioning of a high-bay storage device with single compartment depth. With just one device model, a large working range from 100 to 600 mm can be achieved; the also available, heated version can be used at ambient temperatures as low as -30°C . Its dimensions are unrivalled with respect to the small size. As a result, installation in constrained spaces poses no problem. Other highlights include the simple operation, the configuration via the integrated web server or directly on the sensor, the 4 alignment LEDs and the information about the function reserve, which is output as a quality score.



Direct access to the online product selector at www.leuze.com/en/ips200i

Part no.	Part description	Working range	Marker size	Resolution, horizontal Resolution, vertical	Interface	Functions	Degree of protection
50135331	IPS 208i FIX-M3-102-I3	100 ... 600 mm	5 ... 20 mm	1,280 px 960 px	Ethernet	Compartment fine positioning	IP 65

Dimensioned drawings: IPS 200i



IPS 200i camera-based positioning sensor

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

Accessories

ACCESSORIES: IPS 200i

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50134943	KD S-M12-CW-P1-050	Connector, M12, angled, female	12-pin	5,000 mm	PUR
50130281	KD S-M12-CA-P1-020	Connector, M12, axial, female	12-pin	2,000 mm	PUR
50130282	KD S-M12-CA-P1-050	Connector, M12, axial, female	12-pin	5,000 mm	PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Sheathing material
50130284	KDS S-M12-CA-M12-CA-P1-020	Connector, M12, axial, female	12-pin	Connector, M12, axial, male	12-pin	2,000 mm	PUR
50130285	KDS S-M12-CA-M12-CA-P1-050	Connector, M12, axial, female	12-pin	Connector, M12, axial, male	12-pin	5,000 mm	PUR

Further interconnection cables can be found on our website

Mounting systems

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50132150	BTU 320M-D12	Mounting system	Screw type	For 12 mm rod	Metal

Further rod mounts can be found on our website

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50132151	BT 320M	Angle, L-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Reflectors

Micro-triad-type reflectors

Part no.	Part description	Design	Reflective surface	Bore hole diameter	Fastening	Material	Contains
50130343	MTKZ 13-30 SET	Round	15 mm	13 mm	Clip	Plastic	100x
50129092	MTKZ 15-30 SET	Round	15 mm	15 mm	Clip	Plastic	100x
50132911	REF 7-A-15-30 SET	Round	15 mm	15 mm		Reflective tape, plastic	500x

Dimensional tolerances for all specified dimensions: ± 0.2 mm
Further micro-triad-type reflectors can be found on our website

SMART IS TO SHARE **EXPERIENCE**

Our experience in the industry is a true treasure trove that we don't mind sharing with our customers



Intralistics



Packaging industry



Automotive industry



Machine tools



Medical technology



More on our industry solutions: www.leuze.com/en/industry

//OPTICAL GUIDANCE

REACH YOUR GOAL QUICKLY – OPTICAL TRACKING THROUGH EDGE DETECTION

Optical tracking through edge detection is an economical option for automating automated guided vehicles. For expansive production and storage areas in which the routes of the vehicles frequently need to be changed, the OGS 600 is the optimum solution.

/// OGS 600



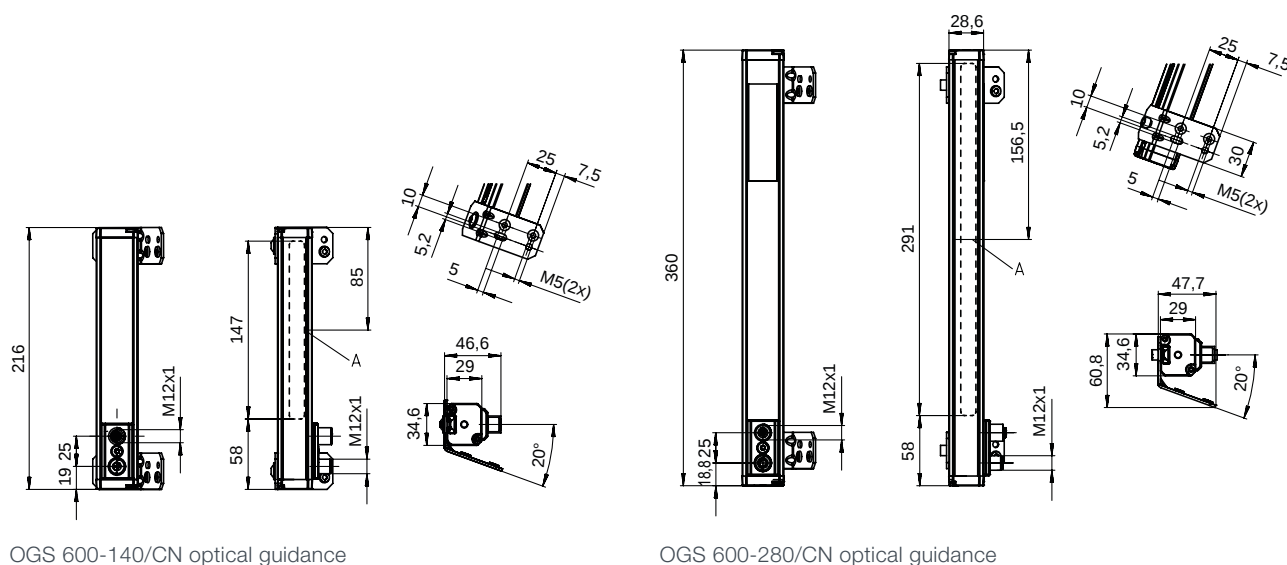
The OGS 600 compact sensor is available in various models with different detection widths and interfaces. It is especially well suited for integration in flat vehicles, as the minimum distance from the floor is just 10 mm.



Direct access to the online product selector at www.leuze.com/en/ogs600

Part no.	Part description	Working range	Detection width for complete trace	Optics cover	Light source	Interface	Measurement value resolution	Degree of protection
50137473	OGS 600-140/CN-M12	10 ... 70 mm	115 mm	Plastic	LED, red	CANopen	1 mm	IP 65
50137477	OGS 600-140/D2-M12.8	10 ... 70 mm	115 mm	Plastic	LED, red	RS 422	1 mm	IP 65
50137475	OGS 600-140/D3-M12.8	10 ... 70 mm	115 mm	Plastic	LED, red	RS 485	1 mm	IP 65
50137472	OGS 600-280/CN-M12	10 ... 70 mm	265 mm	Plastic	LED, red	CANopen	1 mm	IP 65
50137476	OGS 600-280/D2-M12.8	10 ... 70 mm	265 mm	Plastic	LED, red	RS 422	1 mm	IP 65
50137474	OGS 600-280/D3-M12.8	10 ... 70 mm	265 mm	Plastic	LED, red	RS 485	1 mm	IP 65

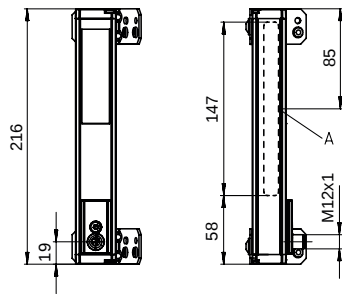
Dimensioned drawings: OGS 600



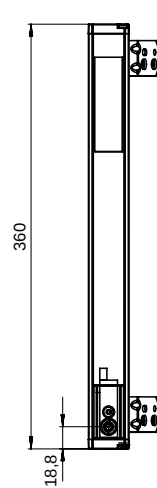
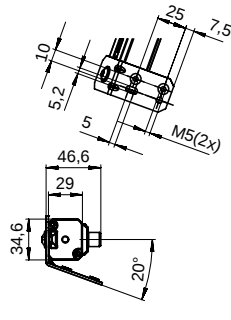
EASY

On the online product detail page you will find:
Matching / necessary accessories, 3D-CAD models, data sheets and much more.

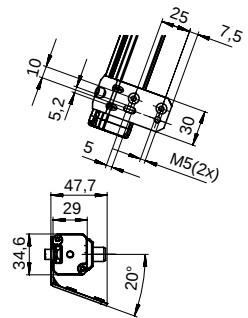
Dimensioned drawings: OGS 600



OGS 600-140/Dx optical guidance



OGS 600-280/Dx optical guidance



ACCESSORIES: OGS 600

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Interface	Sheathing material
50114693	KB DN/CAN-2000 SA	Connector, M12, axial, male	5-pin	2,000 mm	DeviceNet, CANopen	PUR
50114692	KB DN/CAN-2000 BA	Connector, M12, axial, female	5-pin	2,000 mm	DeviceNet, CANopen	PUR
50135120	KD U-M12-8A-P1-010	Connector, M12, axial, female	8-pin	1,000 mm		PUR
50135121	KD U-M12-8A-P1-020	Connector, M12, axial, female	8-pin	2,000 mm		PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Interface	Sheathing material
50118184	K-YN M12A-5m-M12A-S-PUR	Connector, M12, 5-pin, axial, male		Connector, M12, 5-pin, axial, female				PUR
50118185	K-YN M12A-M12A-S-PUR	Connector, M12, axial, male	5-pin	Connector, M12, axial, female	5-pin		CANopen	PUR
50114691	KB DN/CAN-1000 SBA	Connector, M12, axial, male	5-pin	Connector, M12, axial, female	5-pin	1,000 mm	DeviceNet, CANopen	PUR
50114694	KB DN/CAN-2000 SBA	Connector, M12, axial, male	5-pin	Connector, M12, axial, female	5-pin	2,000 mm	DeviceNet, CANopen	PUR
50129779	KDS DN-M12-5A-M12-5A-P3-010	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	1,000 mm	IO-Link, DeviceNet, CANopen	PUR
50129780	KDS DN-M12-5A-M12-5A-P3-020	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	2,000 mm	IO-Link, DeviceNet, CANopen	PUR

Further interconnection cables can be found on our website

Tapes for guidance

Tapes for guidance

Part no.	Part description	Color	Dimension (W x L)	Material	Ambient temperature
50137876	OTB 30/100-BK/WH250	Striped (black and white)	100 mm x 25,000 mm	PVC	-20 ... 55 °C
50137874	OTB 40-BK250	Black	40 mm x 25,000 mm	PVC	-20 ... 55 °C
50137873	OTB 40-GN250	Green	40 mm x 25,000 mm	PVC	-20 ... 55 °C
50137875	OTB 40-WH250	White	40 mm x 25,000 mm	PVC	-20 ... 55 °C
50137877	OTB SET-GN/BK/WH003	Striped (green, black, white, black and white)	40 mm x 300 mm	PVC	-20 ... 55 °C

/ 3D SENSORS

WOULD YOU LIKE ANOTHER DIMENSION WITH THAT?

These sensors determine height contours. 3D data can be easily generated for moving objects or by moving the sensor. The measurement data can either be output for external processing or preprocessed in the sensor for convenient object measurement or detection.

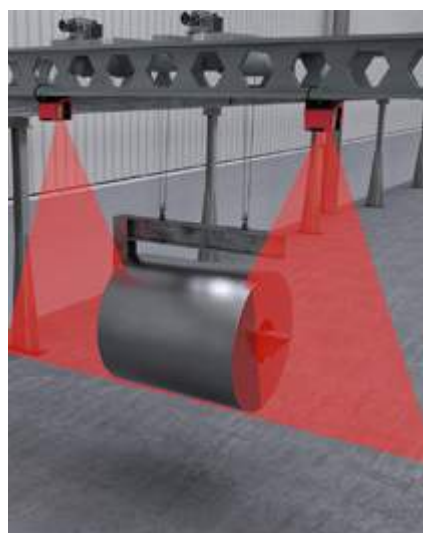


Light section sensors

Page 248

Laser scanners

Page 252



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//LIGHT SECTION SENSORS

ALONG THE LINE

Light section sensors measure height profiles along a projected laser line. With these sensors, objects with high resolution can be detected quickly and reliably in 3D. Depending on the model, the function range extends from simply presence control to edge measurement to 3D measurement of objects.

/// LPS 36



The LPS 36 profile camera is used wherever height profiles need to be determined for moving or static objects. An additional encoder port supports the generation of calibrated 3D data. This opens numerous application possibilities, such as robot guidance as well as contour/volume measurements.



Benefits:

- Laser measurement technology with light-section method
- 600 mm laser line at a distance of 800 mm
- Measurement time: 10 ms
- Measurement range: 200 ... 800 mm
- Compact size: 160 x 74 x 56 mm
- Interface: Ethernet
- Optional: encoder input

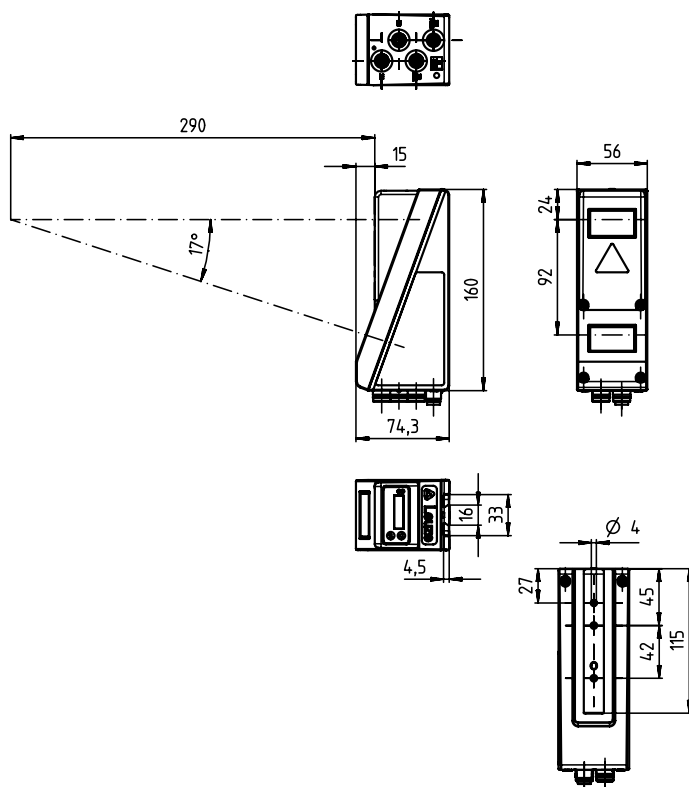


Direct access to the online product selector at www.leuze.com/en/lps36

Part no.	Part description	Application	Measurement range, z-axis	Measurement range, x-axis	Resolution	Light source	Switching inputs Switching outputs	Description
50111325	LPS 36	Contour measurement, object measurement	200 ... 800 mm	150 ... 600 mm	1 ... 3 mm	Laser, 2M, red	2x 2x	Interface: Ethernet; Lens cover: glass
50111324	LPS 36/EN	Contour measurement, object measurement	200 ... 800 mm	150 ... 600 mm	1 ... 3 mm	Laser, 2M, red	2x 2x	Interface: Ethernet; Lens cover: glass
50111334	LPS 36HI/EN	Contour measurement, object measurement	200 ... 600 mm	46 ... 140 mm	0.1 ... 0.9 mm	Laser, 2M, red	2x 2x	Interface: Ethernet; Lens cover: glass
50137351	LPS 36HI/EN.10	Contour measurement, object measurement	200 ... 600 mm	46 ... 140 mm	0.1 ... 0.9 mm	Laser, 2M, red	2x 2x	Interface: Ethernet; Lens cover: plastic

Measurement ranges: Luminosity coefficient 6 ... 90 %, entire measurement range, at 20 °C after 30 minutes warmup time, medium range of U_a Resolution: minimum and maximum value depend on measurement distance

Dimensioned drawings: LPS 36



LPS 36 line profile sensor

/// LES 36



The integrated edge detection of LES sensors determines the dimensions of objects or measures the exterior edges of web material products. The calibrated measurement data can easily be further processed via Ethernet, analog interface or fieldbus. Height, width and position measurements can be quickly and easily realized through configuration.



- Benefits:**
- Laser measurement technology with light-section method
 - Up to 4 measurement fields in 16 inspection tasks
 - Measurement time: 10 ms
 - Measurement range: 200 ... 800 mm
 - Data calculation and processing directly inside the sensor
 - Compact size: 160 x 74 x 56 mm
 - Interface: Ethernet, analog or fieldbus

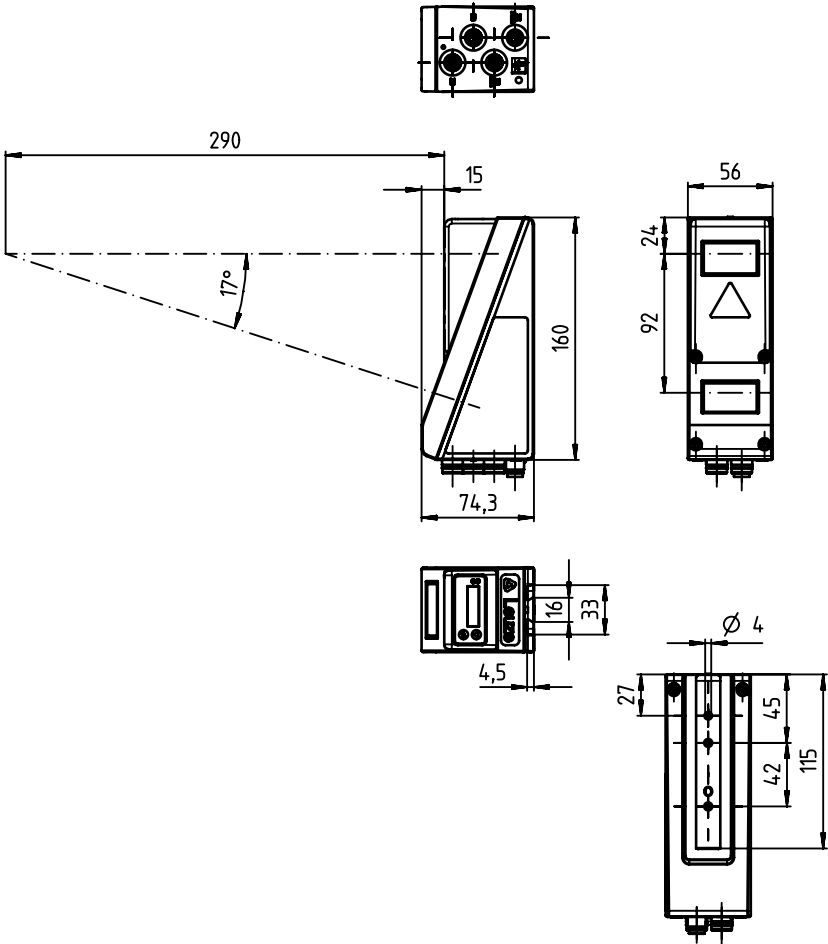


Direct access to the online product selector at www.leuze.com/en/les36

Part no.	Part description	Application	Measurement range, z-axis	Measurement range, x-axis	Resolution	Minimum object size	Light source	Analog output	Switching inputs Switching outputs	Description
50111327	LES 36/PB	3D object detection, object measurement	200 ... 800 mm	150 ... 600 mm	1 ... 3 mm	2 ... 6 mm	Laser, 2M, red		2x 2x	Interface: PROFIBUS DP, Ethernet; Lens cover: glass
50111333	LES 36/VC6	3D object detection, object measurement	200 ... 800 mm	150 ... 600 mm	1 ... 3 mm	2 ... 6 mm	Laser, 2M, red	Current, voltage	5x 6x	Interface: Ethernet; Lens cover: glass
50111331	LES 36HI/PB	Object measurement, 3D object detection	200 ... 600 mm	50 ... 140 mm	0.1 ... 0.9 mm	0.4 ... 3 mm	Laser, 2M, red		2x 2x	Interface: PROFIBUS DP, Ethernet; Lens cover: glass
50111329	LES 36HI/VC6	3D object detection, object measurement	200 ... 600 mm	50 ... 140 mm	0.1 ... 0.9 mm	0.4 ... 3 mm	Laser, 2M, red	Current, voltage	5x 6x	Interface: Ethernet; Lens cover: glass
50136678	LES 36HI/VC6.10	3D object detection, object measurement	200 ... 600 mm	50 ... 140 mm	0.1 ... 0.9 mm	0.4 ... 3 mm	Laser, 2M, red	Current, voltage	5x 6x	Interface: Ethernet; Lens cover: plastic

Measurement ranges: Luminosity coefficient 6 ... 90 %, entire measurement range, at 20 °C after 30 minutes warmup time, medium range of U_b. Resolution: minimum and maximum value depend on measurement distance

Dimensioned drawings: LES 36



LES 36 line profile sensor

Switching sensors

Measuring sensors

Products for safety at work

Identification

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Industrial image processing

Accessories

/// LRS 36



Line range sensors are designed to perform scanning, two-dimensional object detection along a laser line. Up to 16 objects can be simultaneously detected with one sensor. Through configuration settings, complex detection tasks can be mastered with just one sensor. Results are output via Ethernet, fieldbus interfaces or binary switching outputs. A perfect solution, e. g., for multiple track transport or completeness monitoring.



Benefits:

- Laser scanning using the light section method
- Up to 16 detection fields in 16 inspection tasks
- Measurement time: 10 ms
- Scanning range: 200 ... 800 mm
- Data calculation and processing directly inside the sensor
- Compact size: 160 x 74 x 56 mm
- Interface: Ethernet, I/O or fieldbus

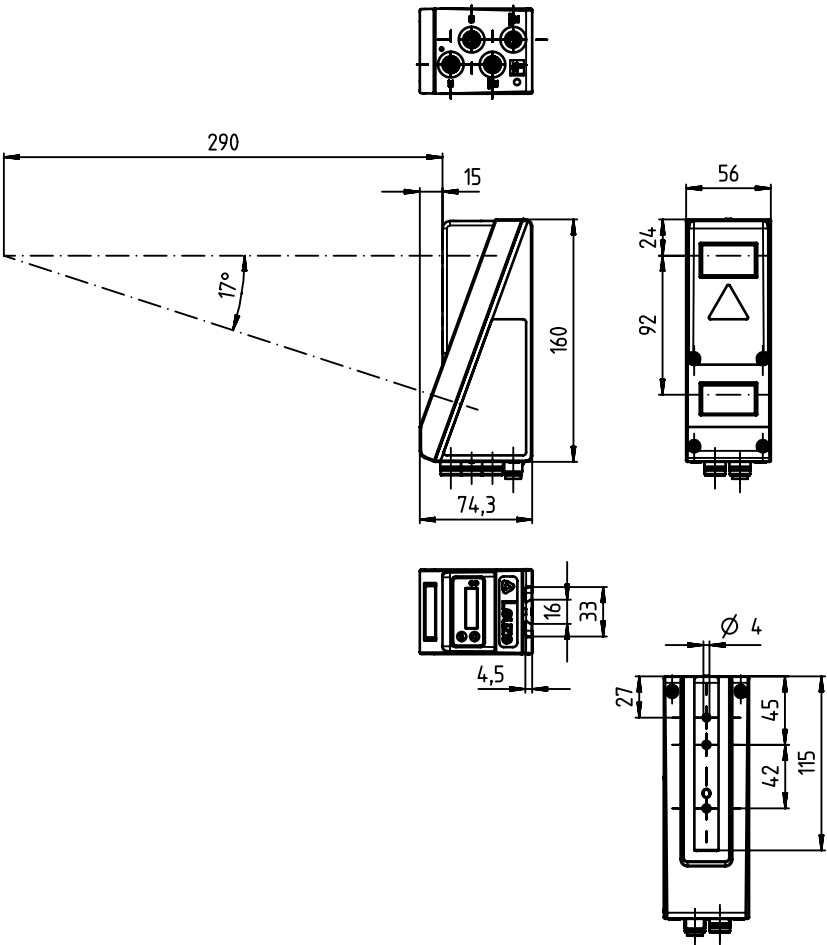


Direct access to the online product selector at www.leuze.com/en/lrs36

Part no.	Part description	Application	Detection range, z-axis	Detection range, x-axis	Minimum object size	Light source	Switching inputs Switching outputs	Description
50111330	LRS 36/6	3D object detection	200 ... 800 mm	150 ... 600 mm	2 ... 6 mm	Laser, 2M, red	5x 6x	Interface: Ethernet; Lens cover: glass
50115418	LRS 36/6.10	3D object detection	200 ... 800 mm	150 ... 600 mm	2 ... 6 mm	Laser, 2M, red	5x 6x	Interface: Ethernet; Lens cover: plastic
50111332	LRS 36/PB	3D object detection	200 ... 800 mm	150 ... 600 mm	2 ... 6 mm	Laser, 2M, red	2x 2x	Interface: PROFIBUS DP, Ethernet; Lens cover: glass

Measurement ranges: Luminosity coefficient 6 ... 90 %, entire measurement range, at 20 °C after 30 minutes warmup time, medium range of U_g Resolution: minimum and maximum value depend on measurement distance

Dimensioned drawings: LRS 36



LRS 36 line profile sensor

ACCESSORIES: LXS 36

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Interface	Sheathing material
50135139	KS S-M12-8A-P1-050	Connector, M12, axial, male	8-pin	5,000 mm		PUR
50135122	KD U-M12-8A-P1-050	Connector, M12, axial, female	8-pin	5,000 mm		PUR
50135248	KS PB-M12-4A-P3-050	Connector, M12, axial, male	5-pin	5,000 mm	PROFIBUS DP	PUR
50135243	KD PB-M12-4A-P3-050	Connector, M12, axial, female	5-pin	5,000 mm	PROFIBUS DP	PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Interface	Sheathing material	Description
50125541	K-DS M12A-8P-0,75m-LxS36-CP	Connector, M12, axial, female	8-pin	Connector, M12, axial, male	8-pin	750 mm		PUR	Configuration cable
50130632	KSS ET-M12-4A-RJ45-A-P7-010	Connector, M12, axial, male	4-pin	RJ45		1,000 mm	Ethernet	PUR	
50135081	KSS ET-M12-4A-RJ45-A-P7-050	Connector, M12, axial, male	4-pin	RJ45		5,000 mm	Ethernet	PUR	

Further interconnection cables can be found on our website

Mounting systems

Rod mounts

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50027375	BT 56	Mounting system	Clampable	For 16 mm rod, for 18 mm rod, 20 mm rod	Metal

Further rod mounts can be found on our website

SMART
SENSOR
BUSINESS

 **Leuze electronic**

the **sensor** people



SMART IS
TO BE **CLOSE**

I'm happy when my friends feel at ease with me – the same holds for our customers as well. My colleagues and I are therefore constantly further developing our service offerings to meet the needs of our customers.

Junghee Lee,
Customer Service Manager –
Leuze electronic South Korea



www.smart-sensor-business.com

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//LASER SCANNERS

HIGH OPERATING RANGES WITH LARGE VIEWING ANGLES

Laser scanners detect their environment using a quickly-rotating laser measurement beam. This allows objects to be detected over large distances with very large viewing angles and also enables contours to be measured.

/// ROD 4



Contactless laser scanners for object detection and contour measurement. A laser measurement beam is deflected by a rotating mirror and covers an area of 190 ° with a radius of up to 65 m. The measurement contour is output via Ethernet or a serial interface. In addition, there are models for object detection in up to 4 simultaneous detection fields.



Benefits:

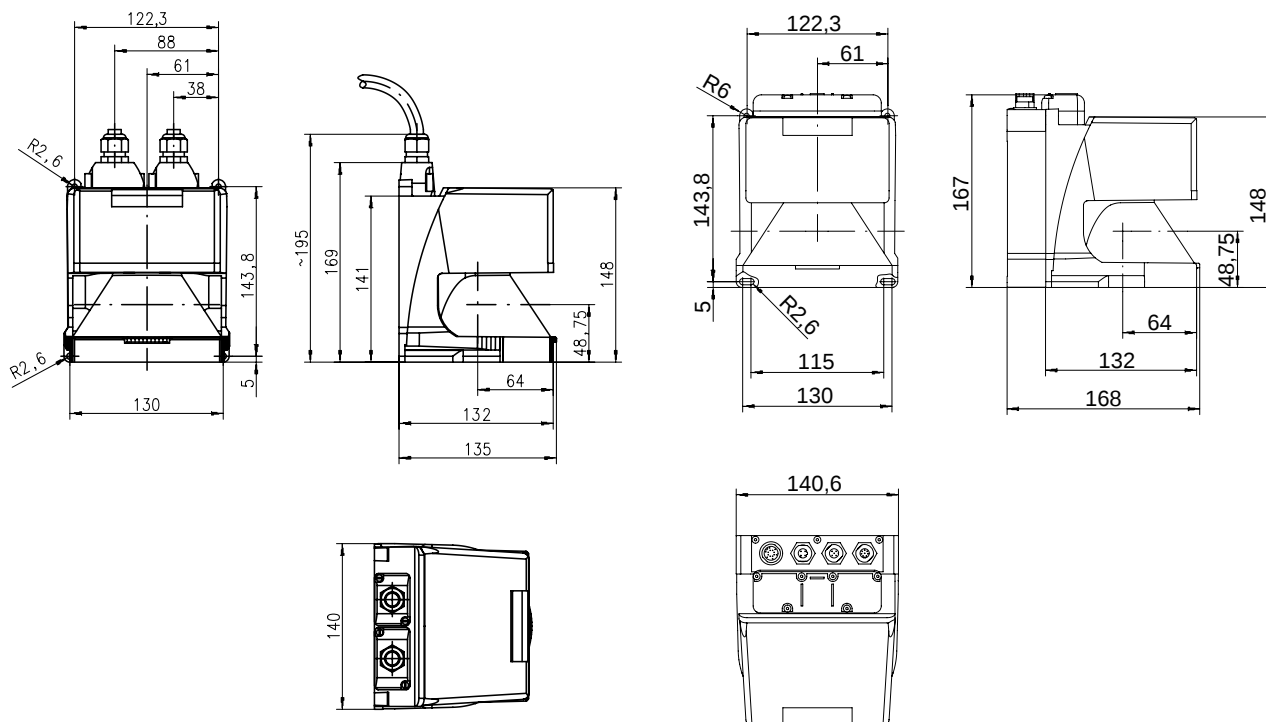
- Measurement range 0 ... 65 m, radius of detection field up to max. 50 m
- 7 configurable and selectable detection field pairs (near and far) for object detection
- Simple device exchange without PC by means of config. connector
- Reference contour for presence/absence control of objects
- Independent, simultaneous monitoring of 4 detection fields
- Interference suppression in the event of particles in the air
- ROD 4-36 with heating and ROD 4-38 with heating, dust-insensitive version



Direct access to the online product selector at www.leuze.com/en/rod4

Part no.	Part description	Measurement range	Light source Laser protection class	Scanning rate	Digital switching outputs	Number of connections	Interface	Special design
50106481	ROD4 plus	0 ... 65,000 mm	Laser, infrared, 1	25 scans/s	4x	4x	Ethernet, RS 232, RS 422	Warning output
50110238	ROD4-30	0 ... 65,000 mm	Laser, infrared, 1	25 scans/s	4x	2x	RS 232, RS 422	Warning output
50110666	ROD4-36	0 ... 65,000 mm	Laser, infrared, 1	25 scans/s	4x	2x	RS 232, RS 422	Heating, warning output
50113226	ROD4-50 plus	0 ... 65,000 mm	Laser, infrared, 1	50 scans/s		4x	Ethernet, RS 232, RS 422	Warning output
50129795	ROD4-56 plus	0 ... 65,000 mm	Laser, infrared, 1	50 scans/s		4x	Ethernet, RS 232, RS 422	Heating, warning output
50106480	ROD4-08 plus	0 ... 25,000 mm	Laser, infrared, 1	25 scans/s	4x	4x	Ethernet, RS 232, RS 422	Dust suppression, heating, warning output
50110667	ROD4-38	0 ... 25,000 mm	Laser, infrared, 1	25 scans/s	4x	2x	RS 232, RS 422	Dust suppression, heating, warning output
50113225	ROD4-58 plus	0 ... 25,000 mm	Laser, infrared, 1	50 scans/s		4x	Ethernet, RS 232, RS 422	Dust suppression, heating, warning output

Dimensioned drawings: ROD 4



ROD 4 laser scanner

ROD 4 plus laser scanner

Switching
sensorsMeasuring
sensorsProducts for
safety at work

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Control componentsIndustrial image
processing

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ACCESSORIES: ROD 4

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50108138	KB-ROD4-CP-5000	Sub-D, female, axial	15-pin	5,000 mm	PVC
50106976	KB-014S- 5000-14	Connector, M16, angled, female	14-pin	5,000 mm	PVC
50135122	KD U-M12-8A-P1-050	Connector, M12, axial, female	8-pin	5,000 mm	PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Interface	Sheathing material
50038069	KB-ROD4PC-3000	Sub-D, male, axial	9-pin	Sub-D, female, axial		3,000 mm		PVC
50106881	KB-ROD4 plus-5000	Sub-D, female, axial	9-pin	Connector, M12, axial, male	5-pin	5,000 mm		PUR
50130632	KSS ET-M12-4A-RJ45-A-P7-010	Connector, M12, axial, male	4-pin	RJ45		1,000 mm	Ethernet	PUR
50135081	KSS ET-M12-4A-RJ45-A-P7-050	Connector, M12, axial, male	4-pin	RJ45		5,000 mm	Ethernet	PUR
50110677	KB-RS232-USB	Sub-D, male, axial	9-pin	USB		1,000 mm	RS 232, USB	PVC

Further interconnection cables can be found on our website

Mounting systems

Other mounting systems

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
50038066	ROD4-MS	Mounting system	Screw type	Through-hole mounting	Metal

Further mounting systems can be found on our website

/ LIGHT CURTAINS

MANY BEAMS SEE MORE THAN ONE

Our measuring light curtains monitor a large measurement field and output measurement information from this field. Depending on the configuration and model, the devices are suitable for a variety of measurement tasks with various resolutions and can be integrated in different fieldbus environments.



/// CML700i



Integrated interfaces enable the quick and easy integration of these measuring light curtains into fieldbus environments without additional gateway boxes and corresponding space requirements and mounting effort. Cascade mounting with a dead zone of just 23 mm between beams, fast response times and the detection of transparent media enable e.g. continuous object tracing on a transport system. Available in this series are variants that are certified for use in potentially explosive areas of group II, category 3, zone 2 (gas) and zone 22 (dust).



Direct access to the online product selector at www.leuze.com/en/cml700i

Switching sensors

Measuring sensors

Products for safety at work

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PART NUMBER CODES – CML 700i measuring light curtains

C M L 7 x 0 i - T 0 5 - 1 9 2 0 . A - P S - M 1 2 - E X

C M L 7 x 0 i - R 0 5 - 1 9 2 0 . A / C N - P S - M 1 2 - E X

Operating principle

CML Measuring light curtain

Series

720i 720i series

730i 730i series

Function

T Transmitter

R Receiver

Beam spacing¹⁾

05 5 mm

10 10 mm

20 20 mm

40 40 mm

Measurement field length

xxxx Measurement field length [mm], depends on beam spacing

Equipment²⁾

A Plug outlet, axial

R Plug outlet rear side

Interface³⁾

L IO-Link

CN CANopen

PB PROFIBUS-DP

PN PROFINET

CV Analog: current and voltage

D3 RS 485 (Modbus)

Special variant (CML 730i only)

PS Power setting

Electrical connection

M12 M12 connector

Explosion protection (CML 720i only)

Ex explosion-proof: II 3G Ex nA op is IIB T4 Gc X

II 3D Ex to IIIB T85 °C Dc IP54 X

¹⁾ For devices with Ex protection: the 5 mm and 40 mm beam spacings can only be ordered following consultation with Leuze electronic

²⁾ For devices with Ex protection: only A, axial plug outlet

³⁾ For devices with Ex protection: only CN, CANopen

CML720i

With 6 m operating range and a response time of 30 microseconds per beam, the light curtains of the CML720i series are the perfect introduction to easy detection and measurement even of moving objects.

Benefits:

- Operating range of up to 6 m for larger function reserve
- Response time of 30 µs per beam for the reliable detection of fast processes
- Integrated PROFIBUS, PROFINET, CANopen, RS485 and IO-Link interfaces for direct configuration via the control
- Large, easy-to-read display in 5 languages with robust membrane keyboard and bar graph display for easy alignment
- Maximum measurement field length of nearly 3 m for measurement on large objects
- Sturdy metal housing also for use in rough industrial environments
- Connection via M12 connector for fast installation

Part no.	Part description	Beam spacing	Number of beams	Measurement field length	Cycle time	Operating range	Interface	Analog outputs	Switching inputs/outputs	Connection
50119377	► CML720i-T05-800.A-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m				Connector, M12, axial, 5-pin
50119805	◄ CML720i-R05-800.A/CV-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m		Voltage, current	2x	Connector, M12, axial, 8-pin
50119615	◄ CML720i-R05-800.A/CN-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	CANopen		2x	Connector, M12, axial, 8-pin
50119724	◄ CML720i-R05-800.A/L-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	IO-Link		4x	Connector, M12, axial, 8-pin
50122954	◄ CML720i-R05-800.A/PB-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	PROFIBUS DP		2x	Connector, M12, axial, 8-pin
50131908	◄ CML720i-R05-800.A/PN-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	PROFINET		2x	Connector, M12, axial, 8-pin
50123449	◄ CML720i-R05-800.A/D3-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	RS 485		2x	Connector, M12, axial, 8-pin
50119458	► CML720i-T05-800.R-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m				Connector, M12, rear side, 5-pin
50120131	◄ CML720i-R05-800.R/CV-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m		Voltage, current	2x	Connector, M12, rear side, 8-pin
50119913	◄ CML720i-R05-800.R/CN-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	CANopen		2x	Connector, M12, rear side, 8-pin
50119994	◄ CML720i-R05-800.R/L-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	IO-Link		4x	Connector, M12, rear side, 8-pin
50122957	◄ CML720i-R05-800.R/PB-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	PROFIBUS DP		2x	Connector, M12, rear side, 8-pin
50131909	◄ CML720i-R05-800.R/PN-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	PROFINET		2x	Connector, M12, rear side, 8-pin
50123584	◄ CML720i-R05-800.R/D3-M12	5 mm	160x	800 mm	5.2 ms	0.1 ... 3.5 m	RS 485		2x	Connector, M12, rear side, 8-pin
50119409	► CML720i-T10-800.A-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m				Connector, M12, axial, 5-pin
50119837	◄ CML720i-R10-800.A/CV-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m		Voltage, current	2x	Connector, M12, axial, 8-pin
50119647	◄ CML720i-R10-800.A/CN-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	CANopen		2x	Connector, M12, axial, 8-pin
50119756	◄ CML720i-R10-800.A/L-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	IO-Link		4x	Connector, M12, axial, 8-pin
50122989	◄ CML720i-R10-800.A/PB-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	PROFIBUS DP		2x	Connector, M12, axial, 8-pin
50131946	◄ CML720i-R10-800.A/PN-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	PROFINET		2x	Connector, M12, axial, 8-pin
50123482	◄ CML720i-R10-800.A/D3-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	RS 485		2x	Connector, M12, axial, 8-pin
50119491	► CML720i-T10-800.R-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m				Connector, M12, rear side, 5-pin
50120164	◄ CML720i-R10-800.R/CV-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m		Voltage, current	2x	Connector, M12, rear side, 8-pin
50119945	◄ CML720i-R10-800.R/CN-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	CANopen		2x	Connector, M12, rear side, 8-pin
50120080	◄ CML720i-R10-800.R/L-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	IO-Link		4x	Connector, M12, rear side, 8-pin
50122998	◄ CML720i-R10-800.R/PB-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	PROFIBUS DP		2x	Connector, M12, rear side, 8-pin
50131947	◄ CML720i-R10-800.R/PN-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	PROFINET		2x	Connector, M12, rear side, 8-pin
50123616	◄ CML720i-R10-800.R/D3-M12	10 mm	80x	800 mm	2.8 ms	0.3 ... 7 m	RS 485		2x	Connector, M12, rear side, 8-pin

► transmitter / ◄ receiver

Further products of this series can be found on our website

Part no.	Part description	Beam spacing	Number of beams	Measurement field length	Cycle time	Operating range	Interface	Analog outputs	Switching inputs/outputs	Connection
50119427	► CML720i-T20-790.A-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m				Connector, M12, axial, 5-pin
50119855	◄ CML720i-R20-790.A/CV-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m		Voltage, current	2x	Connector, M12, axial, 8-pin
50119665	◄ CML720i-R20-790.A/CN-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	CANopen		2x	Connector, M12, axial, 8-pin
50119774	◄ CML720i-R20-790.A/L-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	IO-Link		4x	Connector, M12, axial, 8-pin
50123046	◄ CML720i-R20-790.A/PB-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	PROFIBUS DP		2x	Connector, M12, axial, 8-pin
50131982	◄ CML720i-R20-790.A/PN-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	PROFINET		2x	Connector, M12, axial, 8-pin
50123553	◄ CML720i-R20-790.A/D3-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	RS 485		2x	Connector, M12, axial, 8-pin
50119509	► CML720i-T20-790.R-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m				Connector, M12, rear side, 5-pin
50120182	◄ CML720i-R20-790.R/CV-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m		Voltage, current	2x	Connector, M12, rear side, 8-pin
50119963	◄ CML720i-R20-790.R/CN-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	CANopen		2x	Connector, M12, rear side, 8-pin
50120098	◄ CML720i-R20-790.R/L-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	IO-Link		4x	Connector, M12, rear side, 8-pin
50123037	◄ CML720i-R20-790.R/PB-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	PROFIBUS DP		2x	Connector, M12, rear side, 8-pin
50131983	◄ CML720i-R20-790.R/PN-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	PROFINET		2x	Connector, M12, rear side, 8-pin
50123634	◄ CML720i-R20-790.R/D3-M12	20 mm	40x	790 mm	1.6 ms	0.3 ... 7 m	RS 485		2x	Connector, M12, rear side, 8-pin
50119443	► CML720i-T40-930.A-M12	40 mm	24x	930 mm	1.12 ms	0.3 ... 7 m				Connector, M12, axial, 5-pin
50119871	◄ CML720i-R40-930.A/CV-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m		Voltage, current	2x	Connector, M12, axial, 8-pin
50119681	◄ CML720i-R40-930.A/CN-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	CANopen		2x	Connector, M12, axial, 8-pin
50119790	◄ CML720i-R40-930.A/L-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	IO-Link		4x	Connector, M12, axial, 8-pin
50123057	◄ CML720i-R40-930.A/PB-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	PROFIBUS DP		2x	Connector, M12, axial, 8-pin
50132002	◄ CML720i-R40-930.A/PN-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	PROFINET		2x	Connector, M12, axial, 8-pin
50123569	◄ CML720i-R40-930.A/D3-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	RS 485		2x	Connector, M12, axial, 8-pin
50119525	► CML720i-T40-930.R-M12	40 mm	24x	930 mm	1.12 ms	0.3 ... 7 m				Connector, M12, rear side, 5-pin
50120198	◄ CML720i-R40-930.R/CV-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m		Voltage, current	2x	Connector, M12, rear side, 8-pin
50119979	◄ CML720i-R40-930.R/CN-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	CANopen		2x	Connector, M12, rear side, 8-pin
50120115	◄ CML720i-R40-930.R/L-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	IO-Link		4x	Connector, M12, rear side, 8-pin
50123062	◄ CML720i-R40-930.R/PB-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	PROFIBUS DP		2x	Connector, M12, rear side, 8-pin
50132003	◄ CML720i-R40-930.R/PN-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	PROFINET		2x	Connector, M12, rear side, 8-pin
50123652	◄ CML720i-R40-930.R/D3-M12	40 mm	23x	930 mm	1.09 ms	0.3 ... 7 m	RS 485		2x	Connector, M12, rear side, 8-pin

► transmitter / ◄ receiver

Further products of this series can be found on our website

Switching sensors

Measuring sensors

Products for safety at work

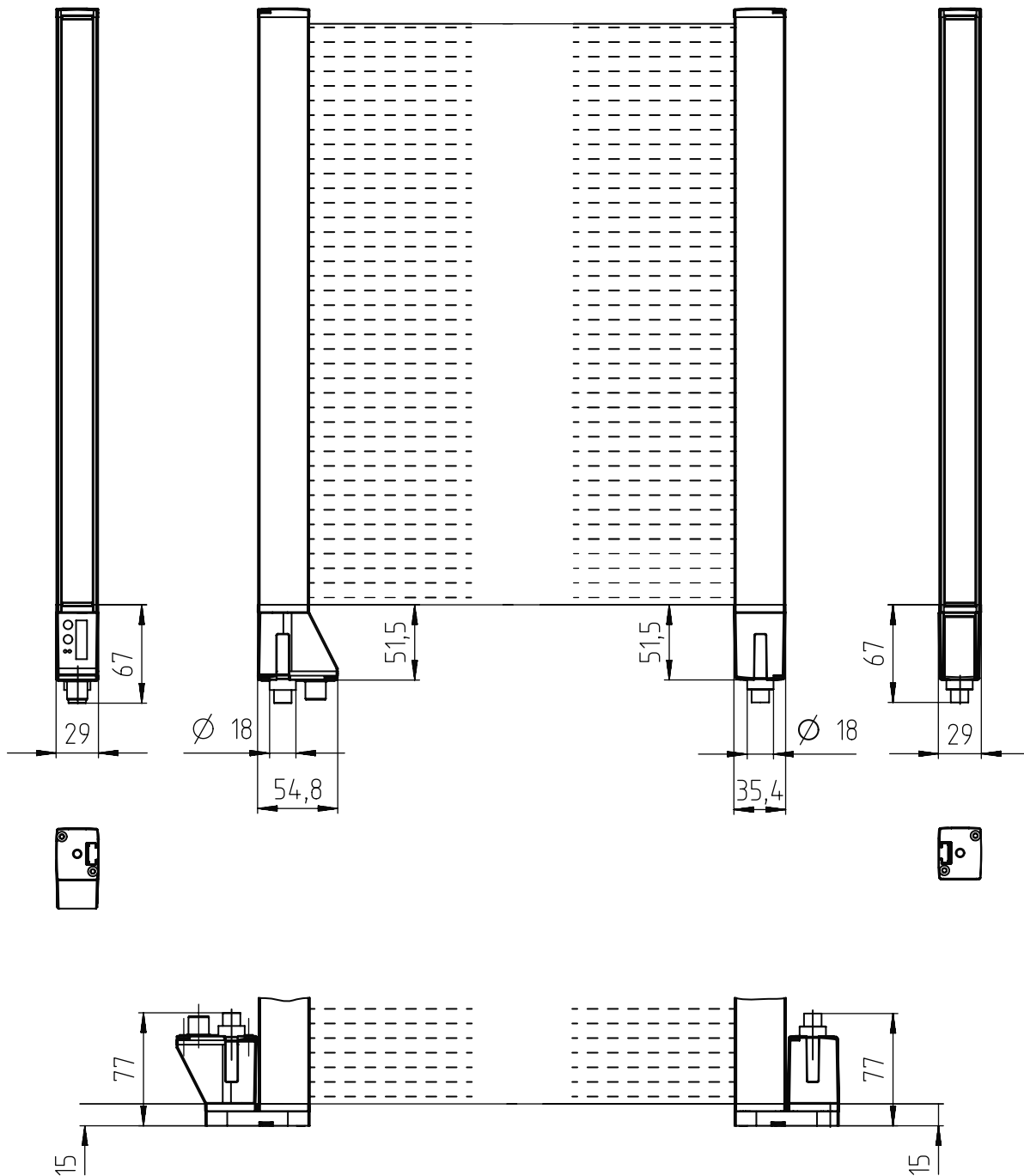
Identification

Data transmission / Control components

Industrial image processing

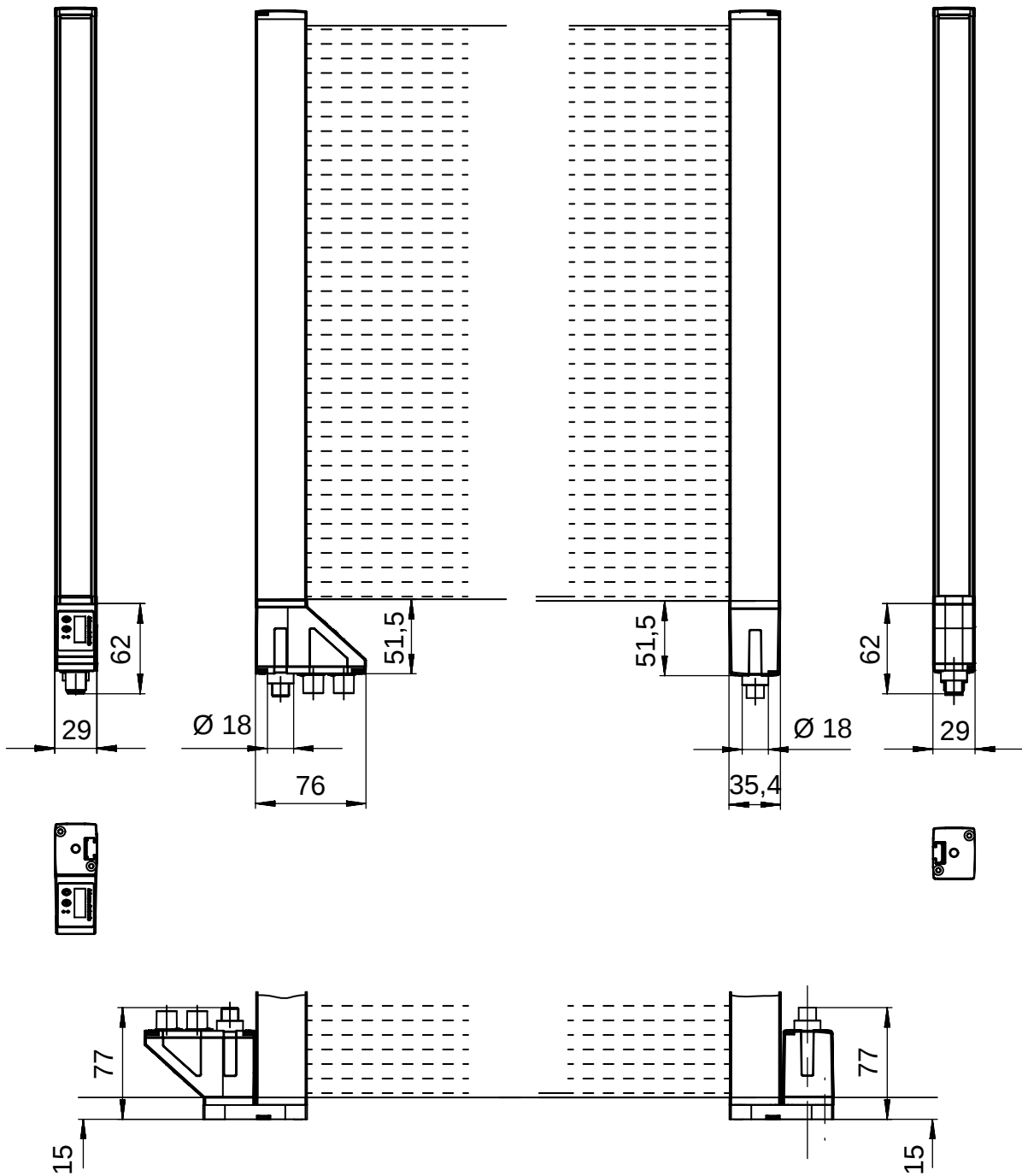
Accessories

Dimensioned drawings: CML720i



CML720i measuring light curtain

Dimensioned drawings: CML720i



CML720i – PROFINET measuring light curtain

Switching
sensors

Measuring
sensors

Products for
safety at work

Identification

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processing

Accessories



EASY

CML720i Ex

Available in this series are variants that are certified for use in potentially explosive areas of group II, category 3, zone 2 (gas) and zone 22 (dust). With 6 m operating range and a response time of 30 µs per beam, the light curtains of the CML720i Ex series are the perfect introduction to easy detection and measurement even of moving objects.

Benefits:

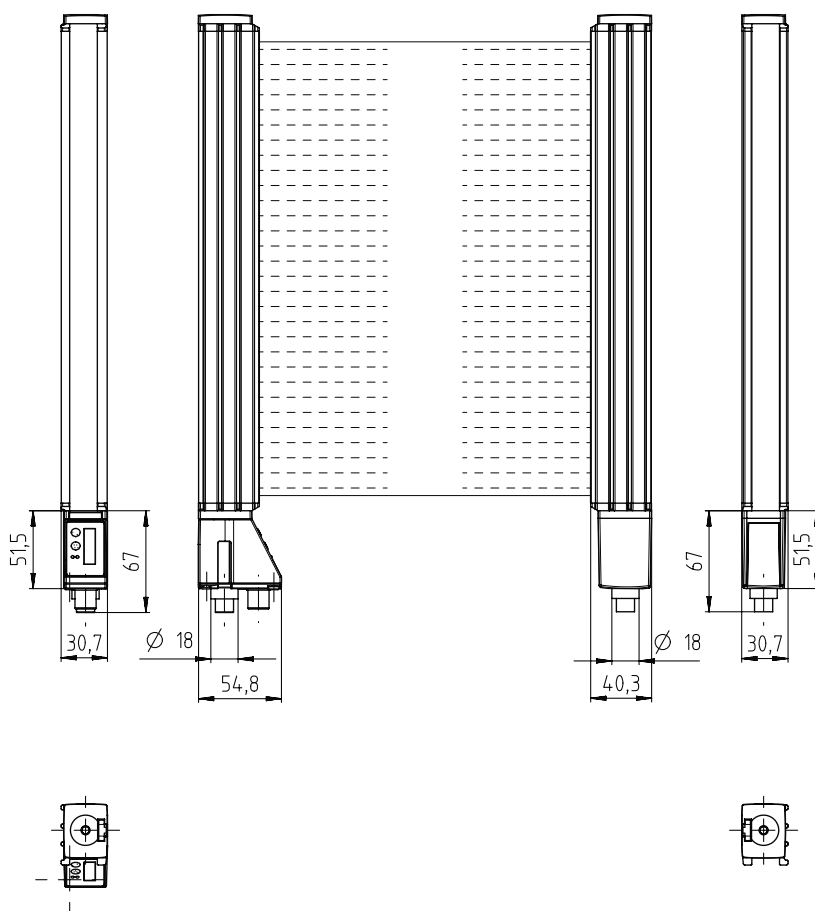
- Operating range of up to 6 m for larger function reserve
- Response time of 30 µs per beam for the reliable detection of fast processes
- Integrated CANopen and IO-Link interfaces for direct configuration via the control
- Large, easy-to-read display in 5 languages with robust membrane keyboard and bar graph display for easy alignment
- Maximum measurement field length of nearly 3 m for measurement on large objects
- Sturdy metal housing also for use in rough industrial environments
- Connection via M12 connector for fast installation

Part no.	Part description	Beam spacing	Number of beams	Measurement field length	Cycle time	Operating range	Interface	Switching inputs/outputs	Connection
50126391	► CML720i-T10-620.A-M12-EX	10 mm	620x	620 mm	2.32 ms	0.3 ... 7 m			Connector, M12, axial, 5-pin
50126360	◄ CML720i-R10-620.A/CN-M12-EX	10 mm	62x	620 mm	2.32 ms	0.3 ... 7 m	CANopen, IO-Link	2x	Connector, M12, axial, 8-pin
50126392	► CML720i-T10-780.A-M12-EX	10 mm	780x	780 mm	2.8 ms	0.3 ... 7 m			Connector, M12, axial, 5-pin
50126361	◄ CML720i-R10-780.A/CN-M12-EX	10 mm	78x	780 mm	2.8 ms	0.3 ... 7 m	CANopen, IO-Link	2x	Connector, M12, axial, 8-pin
50126393	► CML720i-T10-940.A-M12-EX	10 mm	940x	940 mm	3.28 ms	0.3 ... 7 m			Connector, M12, axial, 5-pin
50126362	◄ CML720i-R10-940.A/CN-M12-EX	10 mm	94x	940 mm	3.28 ms	0.3 ... 7 m	CANopen, IO-Link	2x	Connector, M12, axial, 8-pin
50126405	► CML720i-T20-610.A-M12-EX	20 mm	31x	610 mm	1.36 ms	0.3 ... 7 m			Connector, M12, axial, 5-pin
50126374	◄ CML720i-R20-610.A/CN-M12-EX	20 mm	31x	610 mm	1.36 ms	0.3 ... 7 m	CANopen, IO-Link	2x	Connector, M12, axial, 8-pin
50126406	► CML720i-T20-770.A-M12-EX	20 mm	39x	770 mm		0.3 ... 7 m			Connector, M12, axial, 5-pin
50126375	◄ CML720i-R20-770.A/CN-M12-EX	20 mm	39x	770 mm	1.57 ms	0.3 ... 7 m	CANopen, IO-Link	2x	Connector, M12, axial, 8-pin
50126407	► CML720i-T20-930.A-M12-EX	20 mm	47x	930 mm	1.84 ms	0.3 ... 7 m			Connector, M12, axial, 5-pin
50126376	◄ CML720i-R20-930.A/CN-M12-EX	20 mm	47x	930 mm	1.84 ms	0.3 ... 7 m	CANopen, IO-Link	2x	Connector, M12, axial, 8-pin

► transmitter / ◄ receiver

Further products of this series can be found on our website

Dimensioned drawings: CML720i Ex



CML720i EX measuring light curtain

CML730i

In addition to its integrated interfaces and the innovative plug outlets for gapless object tracing, the CML730i measuring light curtain stands out in particular due to its range of up to 8 m and a unique measurement cycle of 10 µs per beam. In addition, it reliably detects even transparent objects up to 3.5 m.

Benefits:

- Integrated PROFIBUS, PROFINET, CANopen, RS 485 and IO-Link interfaces for direct configuration via the control
- Large, easy-to-read display with robust membrane keyboard and bar graph display for easy alignment
- Reliable detection of even transparent media up to 3.5 m
- Operating range of up to 8 m for larger function reserves
- Extremely short response time of 10 µs per beam for the reliable detection of even fast processes
- Maximum measurement field length of nearly 3 m for measurement on large objects
- Sturdy metal housing also for use in rough industrial environments
- Connection via M12 connector for fast installation

Part no.	Part description	Beam spacing	Number of beams	Measurement field length	Cycle time	Operating range	Interface	Analog outputs	Switching inputs/outputs	Connection
50118585	► CML730i-T05-800.A-M12	5 mm	160x	800 mm	1.8 ms	0.1 ... 4 m				Connector, M12, axial, 5-pin
50118827	◄ CML730i-R05-800.A/CV-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m		Voltage, current	2x	Connector, M12, axial, 8-pin
50118664	◄ CML730i-R05-800.A/CN-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	CANopen		2x	Connector, M12, axial, 8-pin
50118746	◄ CML730i-R05-800.A/L-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	IO-Link		4x	Connector, M12, axial, 8-pin
50123130	◄ CML730i-R05-800.A/PB-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	PROFIBUS DP		2x	Connector, M12, axial, 8-pin
50131746	◄ CML730i-R05-800.A/PN-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	PROFINET		2x	Connector, M12, axial, 8-pin
50123279	◄ CML730i-R05-800.A/D3-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	RS 485		2x	Connector, M12, axial, 8-pin
50133772	► CML730i-T05-800.A-PS-M12	5 mm	160x	800 mm	1.8 ms	0.1 ... 4 m				Connector, M12, axial, 5-pin
50133771	◄ CML730i-R05-800.A/CV-PS-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4 m		Freely configurable	3x	Connector, M12, axial, 8-pin
50118921	► CML730i-T05-800.R-M12	5 mm	160x	800 mm	1.8 ms	0.1 ... 4 m				Connector, M12, rear side, 5-pin
50119219	◄ CML730i-R05-800.R/CV-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m		Voltage, current	2x	Connector, M12, rear side, 8-pin
50119002	◄ CML730i-R05-800.R/CN-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	CANopen		2x	Connector, M12, rear side, 8-pin
50119139	◄ CML730i-R05-800.R/L-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	IO-Link		4x	Connector, M12, rear side, 8-pin
50123137	◄ CML730i-R05-800.R/PB-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	PROFIBUS DP		2x	Connector, M12, rear side, 8-pin
50131747	◄ CML730i-R05-800.R/PN-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	PROFINET		2x	Connector, M12, rear side, 8-pin
50123362	◄ CML730i-R05-800.R/D3-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4.5 m	RS 485		2x	Connector, M12, rear side, 8-pin
50133790	► CML730i-T05-800.R-PS-M12	5 mm	160x	800 mm	1.8 ms	0.1 ... 4 m				Connector, M12, rear side, 5-pin
50133789	◄ CML730i-R05-800.R/CV-PS-M12	5 mm	160x	800 mm	1.75 ms	0.1 ... 4 m		Freely configurable	3x	Connector, M12, rear side, 8-pin
50118616	► CML730i-T10-800.A-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m				Connector, M12, axial, 5-pin
50118872	◄ CML730i-R10-800.A/CV-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m		Voltage, current	2x	Connector, M12, axial, 8-pin
50118697	◄ CML730i-R10-800.A/CN-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	CANopen		2x	Connector, M12, axial, 8-pin
50118778	◄ CML730i-R10-800.A/L-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	IO-Link		4x	Connector, M12, axial, 8-pin
50123173	◄ CML730i-R10-800.A/PB-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	PROFIBUS DP		2x	Connector, M12, axial, 8-pin
50131784	◄ CML730i-R10-800.A/PN-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	PROFINET		2x	Connector, M12, axial, 8-pin
50123312	◄ CML730i-R10-800.A/D3-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	RS 485		2x	Connector, M12, axial, 8-pin

► transmitter / ◄ receiver

Further products of this series can be found on our website

Switching sensors

Measuring sensors

Products for safety at work

Identification

Data transmission / Control components

Industrial image processing

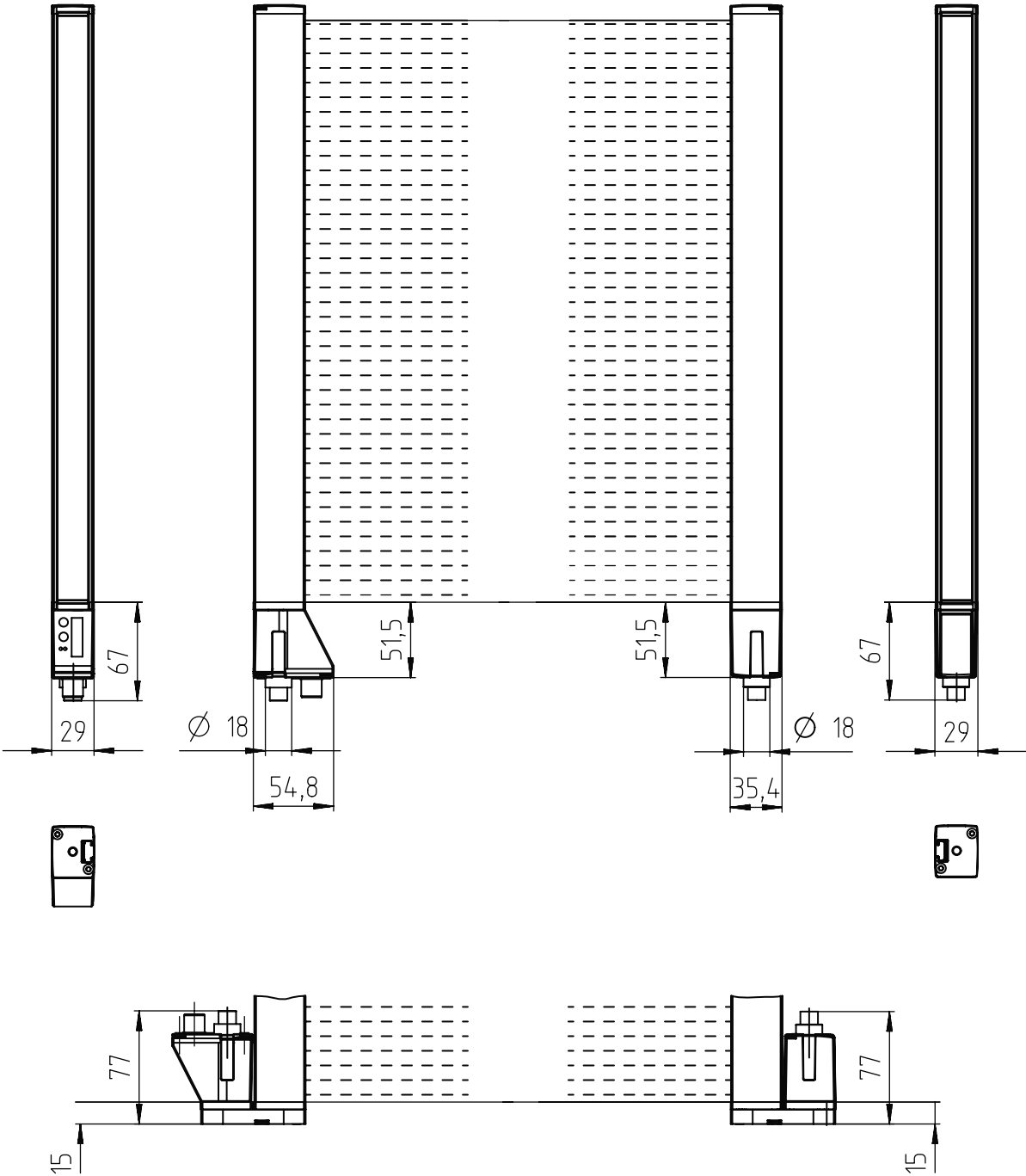
Accessories

Part no.	Part description	Beam spacing	Number of beams	Measurement field length	Cycle time	Operating range	Interface	Analog outputs	Switching inputs/outputs	Connection
50118953	► CML730i-T10-800.R-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m				Connector, M12, rear side, 5-pin
50119251	◄ CML730i-R10-800.R/CV-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m		Voltage, current	2x	Connector, M12, rear side, 8-pin
50119090	◄ CML730i-R10-800.R/CN-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	CANopen		2x	Connector, M12, rear side, 8-pin
50119171	◄ CML730i-R10-800.R/L-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	IO-Link		4x	Connector, M12, rear side, 8-pin
50123179	◄ CML730i-R10-800.R/PB-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	PROFIBUS DP		2x	Connector, M12, rear side, 8-pin
50131785	◄ CML730i-R10-800.R/PN-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	PROFINET		2x	Connector, M12, rear side, 8-pin
50123394	◄ CML730i-R10-800.R/D3-M12	10 mm	80x	800 mm	1 ms	0.3 ... 9.5 m	RS 485		2x	Connector, M12, rear side, 8-pin
50118633	► CML730i-T20-790.A-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m				Connector, M12, axial, 5-pin
50118890	◄ CML730i-R20-790.A/CV-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m		Voltage, current	2x	Connector, M12, axial, 8-pin
50118715	◄ CML730i-R20-790.A/CN-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	CANopen		2x	Connector, M12, axial, 8-pin
50118796	◄ CML730i-R20-790.A/L-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	IO-Link		4x	Connector, M12, axial, 8-pin
50123206	◄ CML730i-R20-790.A/PB-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	PROFIBUS DP		2x	Connector, M12, axial, 8-pin
50131820	◄ CML730i-R20-790.A/PN-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	PROFINET		2x	Connector, M12, axial, 8-pin
50123330	◄ CML730i-R20-790.A/D3-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	RS 485		2x	Connector, M12, axial, 8-pin
50118970	► CML730i-T20-790.R-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m				Connector, M12, rear side, 5-pin
50119269	◄ CML730i-R20-790.R/CV-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m		Voltage, current	2x	Connector, M12, rear side, 8-pin
50119108	◄ CML730i-R20-790.R/CN-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	CANopen		2x	Connector, M12, rear side, 8-pin
50119188	◄ CML730i-R20-790.R/L-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	IO-Link		4x	Connector, M12, rear side, 8-pin
50123221	◄ CML730i-R20-790.R/PB-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	PROFIBUS DP		2x	Connector, M12, rear side, 8-pin
50131821	◄ CML730i-R20-790.R/PN-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	PROFINET		2x	Connector, M12, rear side, 8-pin
50123412	◄ CML730i-R20-790.R/D3-M12	20 mm	40x	790 mm	1 ms	0.3 ... 9.5 m	RS 485		2x	Connector, M12, rear side, 8-pin
50118649	► CML730i-T40-930.A-M12	40 mm	24x	930 mm	1 ms	0.3 ... 9.5 m				Connector, M12, axial, 5-pin
50118906	◄ CML730i-R40-930.A/CV-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m		Voltage, current	2x	Connector, M12, axial, 8-pin
50118731	◄ CML730i-R40-930.A/CN-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	CANopen		2x	Connector, M12, axial, 8-pin
50118812	◄ CML730i-R40-930.A/L-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	IO-Link		4x	Connector, M12, axial, 8-pin
50123216	◄ CML730i-R40-930.A/PB-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	PROFIBUS DP		2x	Connector, M12, axial, 8-pin
50131840	◄ CML730i-R40-930.A/PN-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	PROFINET		2x	Connector, M12, axial, 8-pin
50123346	◄ CML730i-R40-930.A/D3-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	RS 485		2x	Connector, M12, axial, 8-pin
50118986	► CML730i-T40-930.R-M12	40 mm	24x	930 mm	1 ms	0.3 ... 9.5 m				Connector, M12, rear side, 5-pin
50119285	◄ CML730i-R40-930.R/CV-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m		Voltage, current	2x	Connector, M12, rear side, 8-pin
50119124	◄ CML730i-R40-930.R/CN-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	CANopen		2x	Connector, M12, rear side, 8-pin
50119204	◄ CML730i-R40-930.R/L-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	IO-Link		4x	Connector, M12, rear side, 8-pin
50123231	◄ CML730i-R40-930.R/PB-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	PROFIBUS DP		2x	Connector, M12, rear side, 8-pin
50131841	◄ CML730i-R40-930.R/PN-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	PROFINET		2x	Connector, M12, rear side, 8-pin
50123432	◄ CML730i-R40-930.R/D3-M12	40 mm	23x	930 mm	1 ms	0.3 ... 9.5 m	RS 485		2x	Connector, M12, rear side, 8-pin

► transmitter / ◄ receiver

Further products of this series can be found on our website

Dimensioned drawings: CML730i



CML730i measuring light curtain

Switching
sensors

Measuring
sensors

Products for
safety at work

Identification

Data transmission /
Control components

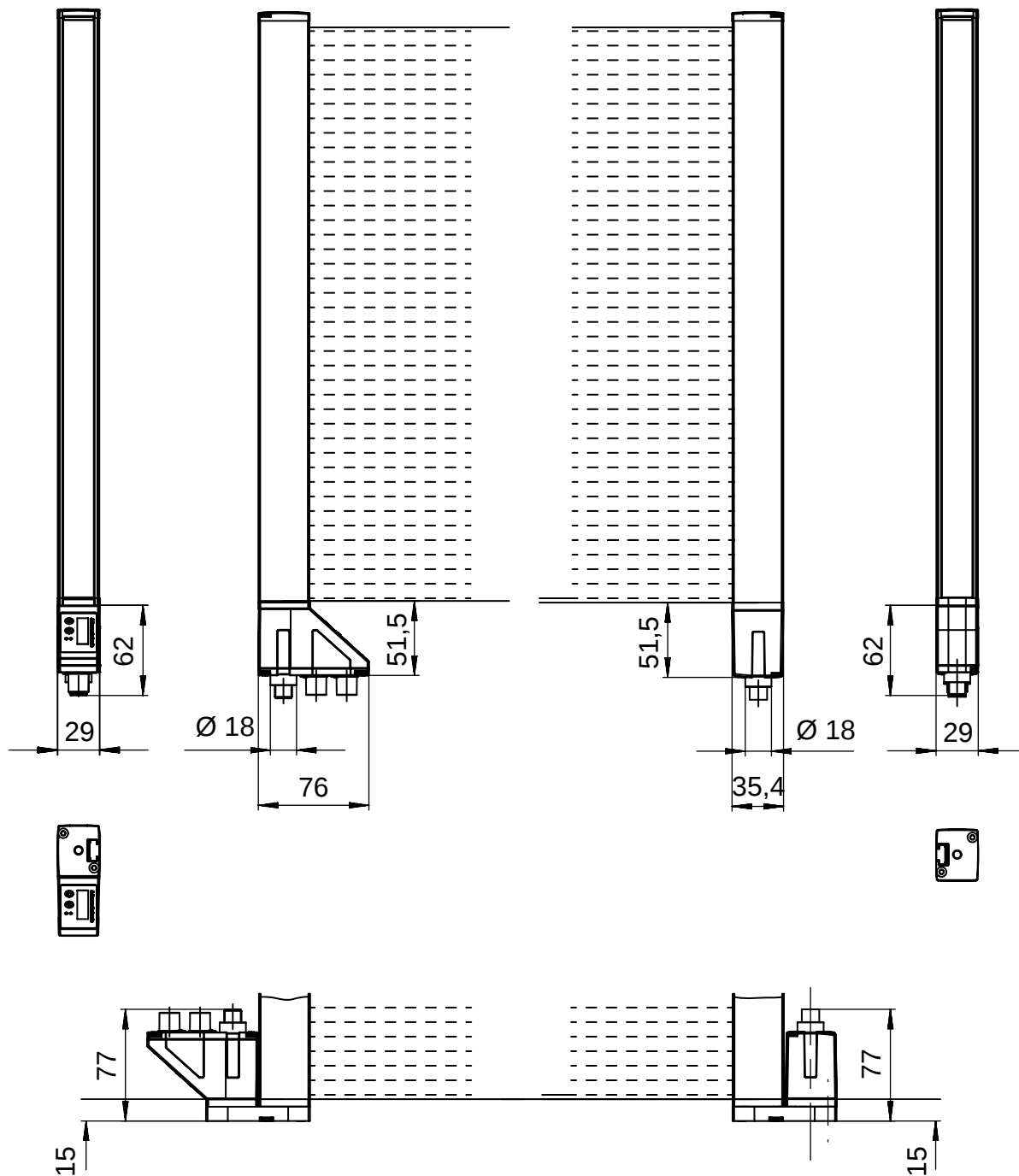
Industrial image
processing

Accessories



EASY

Dimensioned drawings: CML730i



CML730i – PROFINET measuring light curtain

ACCESSORIES: CML700i

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Interface	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm		PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm		PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm		PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm		PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm		PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm		PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm		PVC

Further connection cables can be found on our website

Part no.	Part description	Connection 1	No. of pins	Cable length	Interface	Sheathing material
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm		PVC
50135121	KD U-M12-8A-P1-020	Connector, M12, axial, female	8-pin	2,000 mm		PUR
50135122	KD U-M12-8A-P1-050	Connector, M12, axial, female	8-pin	5,000 mm		PUR
50135123	KD U-M12-8A-P1-100	Connector, M12, axial, female	8-pin	10,000 mm		PUR
50135247	KS PB-M12-4A-P3-020	Connector, M12, axial, male	5-pin	2,000 mm	PROFIBUS DP	PUR
50135248	KS PB-M12-4A-P3-050	Connector, M12, axial, male	5-pin	5,000 mm	PROFIBUS DP	PUR
50135249	KS PB-M12-4A-P3-100	Connector, M12, axial, male	5-pin	10,000 mm	PROFIBUS DP	PUR
50135250	KS PB-M12-4A-P3-150	Connector, M12, axial, male	5-pin	15,000 mm	PROFIBUS DP	PUR
50135242	KD PB-M12-4A-P3-020	Connector, M12, axial, female	5-pin	2,000 mm	PROFIBUS DP	PUR
50135243	KD PB-M12-4A-P3-050	Connector, M12, axial, female	5-pin	5,000 mm	PROFIBUS DP	PUR
50135244	KD PB-M12-4A-P3-100	Connector, M12, axial, female	5-pin	10,000 mm	PROFIBUS DP	PUR
50135245	KD PB-M12-4A-P3-150	Connector, M12, axial, female	5-pin	15,000 mm	PROFIBUS DP	PUR

Further connection cables can be found on our website

Interconnection cables

Part no.	Part description	Connection 1	Connection 1, no. of pins	Connection 2	Connection 2, no. of pins	Cable length	Interface	Sheathing material
50120999	K-DS M12A-8P-4P-2m-L-PUR	Connector, M12, axial, female	8-pin	Connector, M12, axial, male	4-pin	2,000 mm		PUR
50121000	K-DS M12A-8P-4P-5m-L-PUR	Connector, M12, axial, female	8-pin	Connector, M12, axial, male	4-pin	5,000 mm		PUR
50129779	KDS DN-M12-5A-M12-5A-P3-010	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	1,000 mm	IO-Link, DeviceNet, CANopen	PUR
50129780	KDS DN-M12-5A-M12-5A-P3-020	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	2,000 mm	IO-Link, DeviceNet, CANopen	PUR
50129781	KDS DN-M12-5A-M12-5A-P3-050	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	5,000 mm	IO-Link, DeviceNet, CANopen	PUR
50129782	KDS DN-M12-5A-M12-5A-P3-100	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	10,000 mm	IO-Link, DeviceNet, CANopen	PUR
50129783	KDS DN-M12-5A-M12-5A-P3-200	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	5-pin	20,000 mm	IO-Link, DeviceNet, CANopen	PUR
50135253	KDS PB-M12-4A-M12-4A-P3-020	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	4-pin	2,000 mm	PROFIBUS DP	PUR
50135254	KDS PB-M12-4A-M12-4A-P3-050	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	4-pin	5,000 mm	PROFIBUS DP	PUR
50135255	KDS PB-M12-4A-M12-4A-P3-100	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	4-pin	10,000 mm	PROFIBUS DP	PUR
50135256	KDS PB-M12-4A-M12-4A-P3-150	Connector, M12, axial, female	5-pin	Connector, M12, axial, male	4-pin	15,000 mm	PROFIBUS DP	PUR

Further interconnection cables can be found on our website

Y-distribution cables

Part no.	Part description	Suitable for	Connection 1	Connection 2	Connection 3	Cable length fork 1 Cable length fork 2	Interface	Sheathing material	Suitable for interface
50118182	K-Y1 M12A-2m-M12A-S-PUR	CML700i light curtains	Connector, M12, 5-pin, axial, female	Connector, M12, 5-pin, axial, male	Connector, M12, 8-pin, axial, female	2,000 mm 150 mm		PUR	
50118183	K-Y1 M12A-5m-M12A-S-PUR	CML700i light curtains	Connector, M12, 5-pin, axial, female	Connector, M12, 5-pin, axial, male	Connector, M12, 8-pin, axial, female	5,000 mm 150 mm		PUR	
50122336	K-Y1 M12A-10m-M12A-S-PUR	CML700i light curtains	Connector, M12, 5-pin, axial, female	Connector, M12, 5-pin, axial, male	Connector, M12, 8-pin, axial, female	10,000 mm 150 mm		PUR	
50122337	K-Y1 M12A-20m-M12A-S-PUR	CML700i light curtains	Connector, M12, 5-pin, axial, female	Connector, M12, 5-pin, axial, male	Connector, M12, 8-pin, axial, female	20,000 mm 150 mm		PUR	
50118185	K-YN M12A-M12A-S-PUR	CML700i light curtains	Connector, M12, axial, male	Connector, M12, axial, female	Connector, M12, 5-pin, axial, male	250 mm 350 mm	CANopen	PUR	
50118184	K-YN M12A-5m-M12A-S-PUR	CML700i light curtains	Connector, M12, 5-pin, axial, male	Connector, M12, 5-pin, axial, female	Connector, M12, 5-pin, axial, male	250 mm 5,000 mm		PUR	CANopen
50123265	K-YPB M12A-5m-M12A-S-PUR	CML700i light curtains	Connector, M12, 5-pin, axial, male	Connector, M12, 5-pin, axial, female	Connector, M12, 5-pin, axial, male	5,000 mm 250 mm		PUR	PROFIBUS DP
50123263	K-YPB M12A-M12A-S-PUR	CML700i light curtains	Connector, M12, 5-pin, axial, male	Connector, M12, 5-pin, axial, female	Connector, M12, 5-pin, axial, male	300 mm 250 mm		PUR	PROFIBUS DP

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User-configurable connectors

Part no.	Part description	Connection	No. of pins	Interface
50038538	KD 02-5-BA	Connector, M12, axial, female	5-pin	PROFIBUS DP, multiNet Plus
429178	CB-M12-8GF	Connector, M12, axial, female	8-pin	

Further connectors can be found on our website

Termination/bus termination

Part no.	Part description	Connection 1	Connection 2	Cable length	Sheathing material	Function	Suitable for interface
50124297	K-SSPB M12A-M12A-2P-0,3m-S-PUR	Connector, M12, axial, male, 4-pin	Connector, M12, axial, male, 2-pin	300 mm	PUR	Bus termination	PROFIBUS DP
50040099	TS 01-5-SA	Connector, M12, axial, male, 5-pin				Bus termination	DeviceNet, CANopen
50038539	TS 02-4-SA	Connector, M12, axial, male, 4-pin				Bus termination	MultiNet Plus, PROFIBUS DP

Further terminator plugs can be found on our website

Adapter

Part no.	Part description	Connection 1	Connection 2	Connection 3	Suitable for interface
50109834	KDS BUS OUT M12-T-5P	Connector, M12, axial, male, 5-pin	Connector, M12, axial, female, 5-pin	Connector, M12, axial, male, 5-pin	MultiNet Plus, PROFIBUS DP

Further adapters can be found on our website

IO-Link USB master

Part no.	Part description	Functions	Suitable for
50121098	SET MD12-US2-IL1.1 + acc.	Configuration and test device	IO-Link

Mounting systems

Mounting bracket

Part no.	Part description	Design	Fastening at device	Fastening at system	Material
429056	BT-2L	Angle, L-shape	Screw type	Through-hole mounting	Metal
429057	BT-2Z	Angle, Z-shape	Screw type	Through-hole mounting	Metal

Further mounting brackets can be found on our website

Swivel mounts

Part no.	Part description	Type of mounting device	Fastening at device	Fastening at system	Material
429046	BT-2R1	Turnable, 360 °	Clampable	Through-hole mounting	Metal, plastic

Further swivel mounts can be found on our website

Other mounting systems

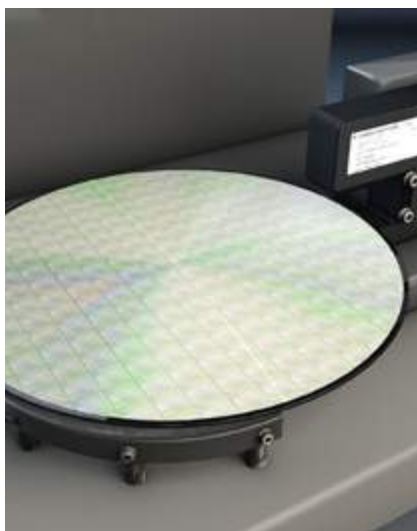
Part no.	Part description	Description	Type of mounting device	Fastening at device	Fastening at system	Material
424417	BT-2P40	Mounting bracket set	Clampable	Groove mounting	Groove mounting	Metal
429058	BT-2SSD	Mounting bracket set	Swiveling	Groove mounting, clampable, screw type	Through-hole mounting	Metal
429049	BT-2SSD-270	Mounting bracket set	Swiveling	Screw type, clampable, groove mounting	Through-hole mounting	Metal
429059	BT-4SSD	Mounting bracket set	Swiveling	Groove mounting, clampable, screw type	Through-hole mounting	Metal
425740	BT-10NC60	Sliding block set		Groove mounting	Mounting thread	Metal
425741	BT-10NC64	Sliding block set		Groove mounting	Mounting thread	Metal
425742	BT-10NC65	Sliding block set		Groove mounting	Mounting thread	Metal

Further mounting systems can be found on our website

/ MEASURING FORKED SENSORS

FORK IS JUST ANOTHER WORD FOR EXACT

The forked shape offers measurement resolutions as great as 0.014 mm with high reproducibility without time-consuming alignment. An infrared light-band illuminates a line-scan camera (CCD line) and returns analog or digital output signals depending on the illuminated pixels and configuration.


Switching
sensors

**Measuring
sensors**

Products for
safety at work

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/// GS 754B



With mouth widths of 27 or 98 mm, this forked photoelectric sensor delivers accurate measurement results over a 25 mm long measurement range thanks to its CCD line. Depending on the configuration, it is possible to measure transparent edges, the diameters of wires, threads and much more.

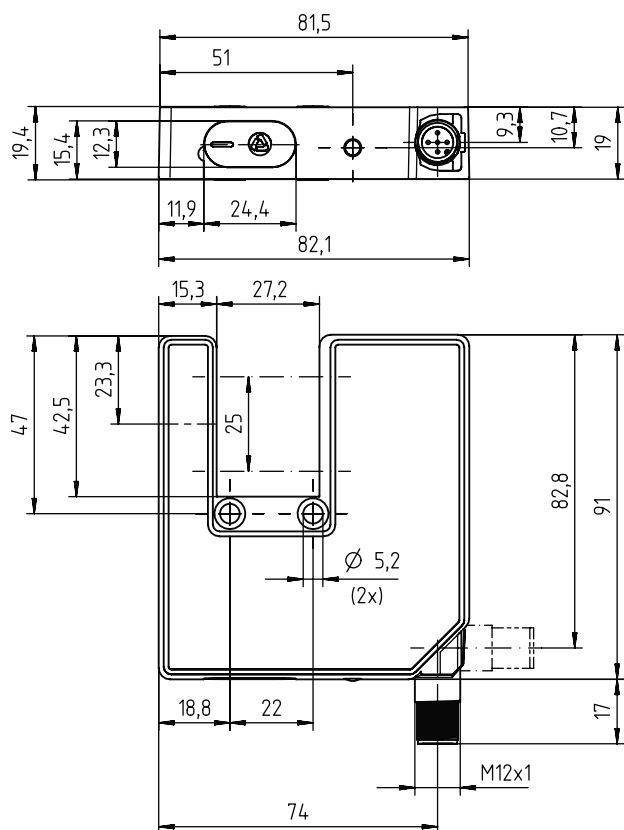
**Benefits:**

- Measurement range: 25 mm
- Resolution: 14 µm
- Configurable measurement range and measure mode
- Teach-in function, switching or warning output
- Multiple object detection
- Standard interface (RS 232) for configuration and visualization
- M12 data interface (process interface) with analog or digital data output
- M12 turning connector



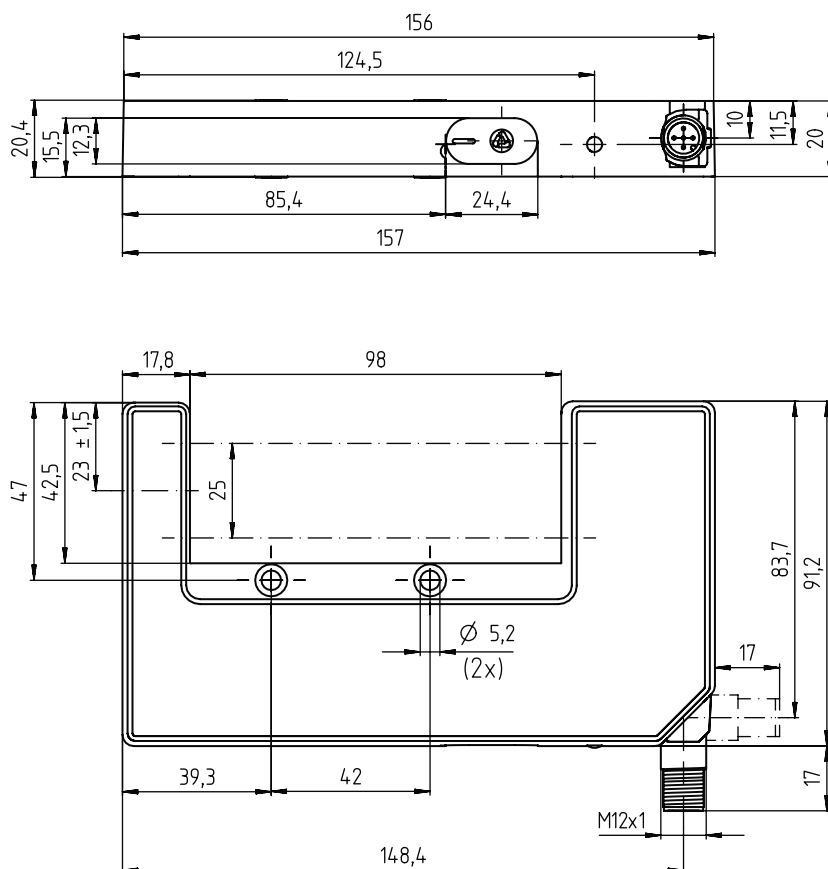
Direct access to the online product selector at www.leuze.com/en/gs754b

Part no.	Part description	Mouth width	Mouth depth	Measurement field length	Light source	Analog output	Switching inputs/outputs	Interface	Connection
50119712	GS 754B/C4-98-S12	98 mm	42 mm	25 mm	LED, infrared	Current	Switching output/switching state, teach input		Connector, M12, metal, 5-pin
50119711	GS 754B/D3-98-S12	98 mm	42 mm	25 mm	LED, infrared			RS 422	Connector, M12, metal, 5-pin
50119710	GS 754B/D24-98-S12	98 mm	42 mm	25 mm	LED, infrared		Switching output/switching state, teach input	RS 232	Connector, M12, metal, 5-pin
50117818	GS 754B/V4-98-S12	98 mm	42 mm	25 mm	LED, infrared	Voltage	Switching output/switching state, teach input		Connector, M12, metal, 5-pin
50115803	GS 754B/C4-27-S12	27 mm	42 mm	25 mm	LED, infrared	Current	Teach input, switching output/switching state		Connector, M12, metal, 5-pin
50115806	GS 754B/D3-27-S12	27 mm	42 mm	25 mm	LED, infrared			RS 422	Connector, M12, metal, 5-pin
50115807	GS 754B/D24-27-S12	27 mm	42 mm	25 mm	LED, infrared		Teach input, switching output/switching state	RS 232	Connector, M12, metal, 5-pin
50115809	GS 754B/V4-27-S12	27 mm	42 mm	25 mm	LED, infrared	Voltage	Teach input, switching output/switching state		Connector, M12, metal, 5-pin

Dimensioned drawings: GS 754B

GS 754B...-27-S12 measuring forked sensor

Dimensioned drawings: GS 754B



GS 754B...-98-S12 measuring forked sensor

Switching
sensors

Measuring
sensors

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safety at work

Identification

ACCESSORIES: GS 754B

Connection technology

Connection cables

Part no.	Part description	Connection 1	No. of pins	Cable length	Sheathing material
50132536	KD U-M12-5W-P1-020	Connector, M12, angled, female	5-pin	2,000 mm	PUR
50132537	KD U-M12-5W-P1-050	Connector, M12, angled, female	5-pin	5,000 mm	PUR
50133842	KD U-M12-5W-V1-020	Connector, M12, angled, female	5-pin	2,000 mm	PVC
50133802	KD U-M12-5W-V1-050	Connector, M12, angled, female	5-pin	5,000 mm	PVC
50133839	KD U-M12-5A-P1-020	Connector, M12, axial, female	5-pin	2,000 mm	PUR
50133841	KD U-M12-5A-P1-050	Connector, M12, axial, female	5-pin	5,000 mm	PUR
50132077	KD U-M12-5A-V1-020	Connector, M12, axial, female	5-pin	2,000 mm	PVC
50132079	KD U-M12-5A-V1-050	Connector, M12, axial, female	5-pin	5,000 mm	PVC

Further connection cables can be found on our website

Data transmission/
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PRODUCTS FOR SAFETY AT WORK

EFFICIENTLY SAFEGUARD MACHINES AND SYSTEMS

As one of the technology leaders in the area of optoelectronic safety sensors for industrial automation, we offer efficient personnel protection devices in accordance with international safety standards.

"In addition to reliability, the ideally fault-free integration of a solution in the processes is also decisive for practical use. This is precisely the focus of our products, service and consultation."

Alexander Mielchen,
Product Management –
Product Center Safety



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/ OPTOELECTRONIC SAFETY SENSORS

EVERYTHING FOR SAFETY

Whether individual devices or optimally matched sets: in our extensive line of safety sensors, you will always find a suitable and efficient safety solution for point-of-operation, danger-zone and access guarding. All devices satisfy the applicable legal regulations and standards.



Safety light curtains

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Multiple light beam safety devices

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Single light beam safety devices

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Safety laser scanners

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Protective sensor sets

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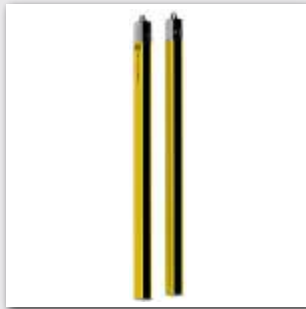


//SAFETY LIGHT CURTAINS

CURTAIN FOR EFFICIENT SAFETY

Reliable and interference-immune sensor safety technology ensures high system availability and productivity. Wherever man and machine work "hand in hand", our safety light curtains can be used vertically as hand and finger protection, as access guarding as well as horizontally as area protection. With respect to integration capability, availability and cost effectiveness, they meet the highest requirements.

/// MLC 500



The MLC 500 series includes the newest generation of extremely sturdy type 4 safety light curtains. 3 function classes – Basic, Standard and Extended – enable the most efficient use of devices from simple standard applications to complex controlled safeguarding processes. The devices can be used universally, due to the flexible fastening concept and the option of form-locking installation. In addition, the series offers custom solutions for further areas of application. These include extra slim design, AIDA-compliant pin assignment, integrated AS-i interface, protection classes IP 67/69K as well as especially impact-resistant, cascable or EX-certified models.



Direct access to the online product selector at www.leuze.com/en/mlc500

PART NUMBER CODES – MLC 500, MLC 300 safety light curtains

M L C 3 0 0 T 1 4 h h h h H / A - E X 2

Type

MLC Safety light curtain

Series

3 MLC 300
5 MLC 500

Function

00 Transmitter
01 Transmitter (AIDA)
02 Transmitter with test input
10 Automatic restart
11 Automatic restart (AIDA)
20 EDM/RES selectable
30 Muting/blinking/linkage (MLC 530 only)

Device type

T Transmitter
R Receiver

Resolution

14 14 mm / operating range 0–6 m (MLC 500 only)
20 20 mm / operating range 0 ... 14 m
30 30 mm / operating range 0 ... 10 m
40 40 mm / operating range 0 ... 20 m
90 90 mm / operating range 0 ... 20 m

Protective field height

hhhh 150...3000 mm

Host/Guest

H Host
MG MiddleGuest
G Guest

Interface (MLC 500 only)

/A AS-Interface

Option

EX2 Explosion protection
/V Extra shock-resistant
SPG Smart Process Gating

Switching
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safety at work

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MLC 510

This Basic model of the type 4 safety light curtains provides the most important functions. Range reduction on the transmitter, reversible transmission channels, a LED indicator as well as an automatic start/restart interlock round out the range of service. The type 4 Basic model is suitable for a range of applications and is optionally available with AS-i interface or protection class IP 67/69K.

Benefits:

- Automatic start/restart
- Optimal handling
- Prevention of mutual interference of the sensors by selectable transmission channels and range reduction, if applicable
- Universal application due to standard functions
- Short delivery times and global availability
- QR code on the sensor for quick service information

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Design
68001101	► MLC510R14-150	150 mm	14 mm		Connector, metal, M12, 5-pin	
68000101	◄ MLC500T14-150	150 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008101	◄ MLC502T14-150	150 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007101	► MLC510R14-150/A	150 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006101	◄ MLC500T14-150/A	150 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001103	► MLC510R14-300	300 mm	14 mm		Connector, metal, M12, 5-pin	
68000103	◄ MLC500T14-300	300 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008103	◄ MLC502T14-300	300 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007103	► MLC510R14-300/A	300 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006103	◄ MLC500T14-300/A	300 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001133	► MLC510R14-300/V	300 mm	14 mm		Connector, metal, M12, 5-pin	Extra shock-resistant
68000133	◄ MLC500T14-300/V	300 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
544007	► MLC510R14-300-IP	300 mm	14 mm		Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
544000	◄ MLC500T14-300-IP	300 mm	14 mm	0 ... 4.8 m	Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
68001104	► MLC510R14-450	450 mm	14 mm		Connector, metal, M12, 5-pin	
68000104	◄ MLC500T14-450	450 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008104	◄ MLC502T14-450	450 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007104	► MLC510R14-450/A	450 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006104	◄ MLC500T14-450/A	450 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001134	► MLC510R14-450/V	450 mm	14 mm		Connector, metal, M12, 5-pin	Extra shock-resistant
68000134	◄ MLC500T14-450/V	450 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
544008	► MLC510R14-450-IP	450 mm	14 mm		Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
544001	◄ MLC500T14-450-IP	450 mm	14 mm	0 ... 4.8 m	Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
68001106	► MLC510R14-600	600 mm	14 mm		Connector, metal, M12, 5-pin	
68000106	◄ MLC500T14-600	600 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008106	◄ MLC502T14-600	600 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007106	► MLC510R14-600/A	600 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006106	◄ MLC500T14-600/A	600 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001136	► MLC510R14-600/V	600 mm	14 mm		Connector, metal, M12, 5-pin	Extra shock-resistant
68000136	◄ MLC500T14-600/V	600 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
544009	► MLC510R14-600-IP	600 mm	14 mm		Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
544002	◄ MLC500T14-600-IP	600 mm	14 mm	0 ... 4.8 m	Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
68001107	► MLC510R14-750	750 mm	14 mm		Connector, metal, M12, 5-pin	
68000107	◄ MLC500T14-750	750 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008107	◄ MLC502T14-750	750 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007107	► MLC510R14-750/A	750 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006107	◄ MLC500T14-750/A	750 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001137	► MLC510R14-750/V	750 mm	14 mm		Connector, metal, M12, 5-pin	Extra shock-resistant
68000137	◄ MLC500T14-750/V	750 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
544010	► MLC510R14-750-IP	750 mm	14 mm		Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
544003	◄ MLC500T14-750-IP	750 mm	14 mm	0 ... 4.8 m	Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
68001109	► MLC510R14-900	900 mm	14 mm		Connector, metal, M12, 5-pin	
68000109	◄ MLC500T14-900	900 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008109	◄ MLC502T14-900	900 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007109	► MLC510R14-900/A	900 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006109	◄ MLC500T14-900/A	900 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001139	► MLC510R14-900/V	900 mm	14 mm		Connector, metal, M12, 5-pin	Extra shock-resistant
68000139	◄ MLC500T14-900/V	900 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant

► receiver / ◄ transmitter

Included in delivery: sliding blocks. For MLC...-IP: mounting bracket.

Further products of this series can be found on our website.

Available resolutions: 14 mm, 20 mm, 30 mm, 40 mm, 90 mm. Operating ranges up to 20 m.

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Design
544011	► MLC510R14-900-IP	900 mm	14 mm		Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
544004	◄ MLC500T14-900-IP	900 mm	14 mm	0 ... 4.8 m	Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
68001110	► MLC510R14-1050	1,050 mm	14 mm		Connector, metal, M12, 5-pin	
68000110	◄ MLC500T14-1050	1,050 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008110	◄ MLC502T14-1050	1,050 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007110	► MLC510R14-1050/A	1,050 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006110	◄ MLC500T14-1050/A	1,050 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
544012	► MLC510R14-1050-IP	1,050 mm	14 mm		Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
544005	◄ MLC500T14-1050-IP	1,050 mm	14 mm	0 ... 4.8 m	Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
68001112	► MLC510R14-1200	1,200 mm	14 mm		Connector, metal, M12, 5-pin	
68000112	◄ MLC500T14-1200	1,200 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008112	◄ MLC502T14-1200	1,200 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007112	► MLC510R14-1200/A	1,200 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006112	◄ MLC500T14-1200/A	1,200 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
544013	► MLC510R14-1200-IP	1,200 mm	14 mm		Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
544006	◄ MLC500T14-1200-IP	1,200 mm	14 mm	0 ... 4.8 m	Cable with connector, metal, M12, 5-pin, 15,000 mm	IP 67 / IP 69K
68001113	► MLC510R14-1350	1,350 mm	14 mm		Connector, metal, M12, 5-pin	
68000113	◄ MLC500T14-1350	1,350 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008113	◄ MLC502T14-1350	1,350 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007113	► MLC510R14-1350/A	1,350 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006113	◄ MLC500T14-1350/A	1,350 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001115	► MLC510R14-1500	1,500 mm	14 mm		Connector, metal, M12, 5-pin	
68000115	◄ MLC500T14-1500	1,500 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008115	◄ MLC502T14-1500	1,500 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007115	► MLC510R14-1500/A	1,500 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006115	◄ MLC500T14-1500/A	1,500 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001116	► MLC510R14-1650	1,650 mm	14 mm		Connector, metal, M12, 5-pin	
68000116	◄ MLC500T14-1650	1,650 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008116	◄ MLC502T14-1650	1,650 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007116	► MLC510R14-1650/A	1,650 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006116	◄ MLC500T14-1650/A	1,650 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001118	► MLC510R14-1800	1,800 mm	14 mm		Connector, metal, M12, 5-pin	
68000118	◄ MLC500T14-1800	1,800 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68008118	◄ MLC502T14-1800	1,800 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Test signal input
68007118	► MLC510R14-1800/A	1,800 mm	14 mm		Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68006118	◄ MLC500T14-1800/A	1,800 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	AS-Interface Safety at Work
68001119	► MLC510R14-1950	1,950 mm	14 mm		Connector, metal, M12, 5-pin	
68000119	◄ MLC500T14-1950	1,950 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68001121	► MLC510R14-2100	2,100 mm	14 mm		Connector, metal, M12, 5-pin	
68000121	◄ MLC500T14-2100	2,100 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68001122	► MLC510R14-2250	2,250 mm	14 mm		Connector, metal, M12, 5-pin	
68000122	◄ MLC500T14-2250	2,250 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68001124	► MLC510R14-2400	2,400 mm	14 mm		Connector, metal, M12, 5-pin	
68000124	◄ MLC500T14-2400	2,400 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68001125	► MLC510R14-2550	2,550 mm	14 mm		Connector, metal, M12, 5-pin	
68000125	◄ MLC500T14-2550	2,550 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68001127	► MLC510R14-2700	2,700 mm	14 mm		Connector, metal, M12, 5-pin	
68000127	◄ MLC500T14-2700	2,700 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68001128	► MLC510R14-2850	2,850 mm	14 mm		Connector, metal, M12, 5-pin	
68000128	◄ MLC500T14-2850	2,850 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68001130	► MLC510R14-3000	3,000 mm	14 mm		Connector, metal, M12, 5-pin	
68000130	◄ MLC500T14-3000	3,000 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	

► receiver / ◄ transmitter

Included in delivery: sliding blocks. For MLC...-IP: mounting bracket.

Further products of this series can be found on our website.

Available resolutions: 14 mm, 20 mm, 30 mm, 40 mm, 90 mm. Operating ranges up to 20 m.

Switching
sensors

Measuring
sensors

Products for
safety at work

Identification

Data transmission/
Control components

Industrial image
processing

Accessories

MLC 511

The devices have a plug connection with AIDA-compliant M12 pin assignment (Automatisierungs-Initiative deutscher Automobilisten (AIDA) = Automation Initiative of German automobile manufacturers).

Benefits:

- Automatic start/restart
- Optimal handling
- Range reduction on demand
- Universal application due to standard functions
- Short delivery times and global availability
- QR code on the sensor for quick service information

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Design
68005103	► MLC511R14-300	300 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004103	◄ MLC501T14-300	300 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005104	► MLC511R14-450	450 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004104	◄ MLC501T14-450	450 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005106	► MLC511R14-600	600 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004106	◄ MLC501T14-600	600 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005107	► MLC511R14-750	750 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004107	◄ MLC501T14-750	750 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005109	► MLC511R14-900	900 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004109	◄ MLC501T14-900	900 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005110	► MLC511R14-1050	1,050 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004110	◄ MLC501T14-1050	1,050 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005112	► MLC511R14-1200	1,200 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004112	◄ MLC501T14-1200	1,200 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005113	► MLC511R14-1350	1,350 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004113	◄ MLC501T14-1350	1,350 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005115	► MLC511R14-1500	1,500 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004115	◄ MLC501T14-1500	1,500 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005116	► MLC511R14-1650	1,650 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004116	◄ MLC501T14-1650	1,650 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant
68005118	► MLC511R14-1800	1,800 mm	14 mm		Connector, metal, M12, 4-pin	AIDA-compliant
68004118	◄ MLC501T14-1800	1,800 mm	14 mm	0 ... 6 m	Connector, metal, M12, 4-pin	AIDA-compliant

► receiver / ◄ transmitter

Included in delivery: sliding blocks.

Further products of this series can be found on our website.

Available resolutions: 14 mm, 30 mm.

MLC 520

The Standard version of these type 4 safety light curtains features a start/restart interlock (RES) and contactor monitoring (EDM) for increased performance – and it is simple to handle and integrate into your systems. Reaching under and stepping behind protection as well as rear zone guarding can be efficiently implemented with the cascable model.

Benefits:

- Basic functions such as automatic start/restart, start/restart interlock (RES), contactor monitoring (EDM)
- Optimal handling due to function selection without PC as well as LED and 7-segment display with integrated 3-zone alignment aid
- Prevention of mutual interference of the sensors by selectable transmission channels and range reduction, if applicable
- Models for cascading up to 3 devices facilitate easy implementation of reaching under and stepping behind protection as well as rear zone guarding
- Short delivery times and global availability
- QR code on the sensor for quick service information

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Design
68002101	► MLC520R14-150	150 mm	14 mm		Connector, metal, M12, 8-pin	
68000101	◄ MLC500T14-150	150 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002131	► MLC520R14-150/V	150 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000131	◄ MLC500T14-150/V	150 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68002103	► MLC520R14-300	300 mm	14 mm		Connector, metal, M12, 8-pin	
68000103	◄ MLC500T14-300	300 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002133	► MLC520R14-300/V	300 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000133	◄ MLC500T14-300/V	300 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant

► receiver / ◄ transmitter

Included in delivery: sliding blocks.

Further products of this series can be found on our website.

Available resolutions: 14 mm, 20 mm, 30 mm, 40 mm, 90 mm. Operating ranges up to 20 m.

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Design
68002104	► MLC520R14-450	450 mm	14 mm		Connector, metal, M12, 8-pin	
68000104	◄ MLC500T14-450	450 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002134	► MLC520R14-450/V	450 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000134	◄ MLC500T14-450/V	450 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68002106	► MLC520R14-600	600 mm	14 mm		Connector, metal, M12, 8-pin	
68000106	◄ MLC500T14-600	600 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002136	► MLC520R14-600/V	600 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000136	◄ MLC500T14-600/V	600 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68002107	► MLC520R14-750	750 mm	14 mm		Connector, metal, M12, 8-pin	
68000107	◄ MLC500T14-750	750 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002137	► MLC520R14-750/V	750 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000137	◄ MLC500T14-750/V	750 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68002109	► MLC520R14-900	900 mm	14 mm		Connector, metal, M12, 8-pin	
68000109	◄ MLC500T14-900	900 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002139	► MLC520R14-900/V	900 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000139	◄ MLC500T14-900/V	900 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68002110	► MLC520R14-1050	1,050 mm	14 mm		Connector, metal, M12, 8-pin	
68000110	◄ MLC500T14-1050	1,050 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002112	► MLC520R14-1200	1,200 mm	14 mm		Connector, metal, M12, 8-pin	
68000112	◄ MLC500T14-1200	1,200 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002113	► MLC520R14-1350	1,350 mm	14 mm		Connector, metal, M12, 8-pin	
68000113	◄ MLC500T14-1350	1,350 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002115	► MLC520R14-1500	1,500 mm	14 mm		Connector, metal, M12, 8-pin	
68000115	◄ MLC500T14-1500	1,500 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002116	► MLC520R14-1650	1,650 mm	14 mm		Connector, metal, M12, 8-pin	
68000116	◄ MLC500T14-1650	1,650 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002118	► MLC520R14-1800	1,800 mm	14 mm		Connector, metal, M12, 8-pin	
68000118	◄ MLC500T14-1800	1,800 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002119	► MLC520R14-1950	1,950 mm	14 mm		Connector, metal, M12, 8-pin	
68000119	◄ MLC500T14-1950	1,950 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002121	► MLC520R14-2100	2,100 mm	14 mm		Connector, metal, M12, 8-pin	
68000121	◄ MLC500T14-2100	2,100 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002122	► MLC520R14-2250	2,250 mm	14 mm		Connector, metal, M12, 8-pin	
68000122	◄ MLC500T14-2250	2,250 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002124	► MLC520R14-2400	2,400 mm	14 mm		Connector, metal, M12, 8-pin	
68000124	◄ MLC500T14-2400	2,400 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002125	► MLC520R14-2550	2,550 mm	14 mm		Connector, metal, M12, 8-pin	
68000125	◄ MLC500T14-2550	2,550 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002127	► MLC520R14-2700	2,700 mm	14 mm		Connector, metal, M12, 8-pin	
68000127	◄ MLC500T14-2700	2,700 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002128	► MLC520R14-2850	2,850 mm	14 mm		Connector, metal, M12, 8-pin	
68000128	◄ MLC500T14-2850	2,850 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68002130	► MLC520R14-3000	3,000 mm	14 mm		Connector, metal, M12, 8-pin	
68000130	◄ MLC500T14-3000	3,000 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	

► receiver / ◄ transmitter

Included in delivery: sliding blocks.

Further products of this series can be found on our website.

Available resolutions: 14 mm, 20 mm, 30 mm, 40 mm, 90 mm. Operating ranges up to 20 m.

Switching
sensors

Measuring
sensors

Products for
safety at work

Identification

Data transmission /
Control components

Industrial image
processing

Accessories

MLC 520-S (extra slim design)

This model is particularly useful whenever perfect integration with the machine's design is required. It features an extra slim design of only 15.4 mm and a fine gradation of the protective field height with a 30 mm grid. Together with the dead zone-free device concept and optional cascading, the permissible safety distances can be optimally utilized.

Benefits:

- Basic functions such as automatic start/restart, start/restart interlock (RES) and contactor monitoring (EDM)
- Perfect integration in the machine design due to extra slim design of only 15.4 mm, device design without dead zones and fine length gradation in 30 mm grid
- Optimal handling due to function selection without PC as well as LED indicators with alignment aid
- Cascading function for up to 3 devices for easy implementation of reaching under and stepping behind protection

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Connection 2	Design
68601015	MLC520-S-14-150	150 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601021	MLC520-S-14-210	210 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601027	MLC520-S-14-270	270 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601030	MLC520-S-14-300	300 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601033	MLC520-S-14-330	330 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601036	MLC520-S-14-360	360 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601039	MLC520-S-14-390	390 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601042	MLC520-S-14-420	420 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601045	MLC520-S-14-450	450 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601048	MLC520-S-14-480	480 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601051	MLC520-S-14-510	510 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601054	MLC520-S-14-540	540 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601057	MLC520-S-14-570	570 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601060	MLC520-S-14-600	600 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601063	MLC520-S-14-630	630 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601066	MLC520-S-14-660	660 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601069	MLC520-S-14-690	690 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601072	MLC520-S-14-720	720 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601075	MLC520-S-14-750	750 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601078	MLC520-S-14-780	780 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601081	MLC520-S-14-810	810 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601084	MLC520-S-14-840	840 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601087	MLC520-S-14-870	870 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601090	MLC520-S-14-900	900 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601093	MLC520-S-14-930	930 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601096	MLC520-S-14-960	960 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601099	MLC520-S-14-990	990 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601102	MLC520-S-14-1020	1,020 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601105	MLC520-S-14-1050	1,050 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601108	MLC520-S-14-1080	1,080 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601111	MLC520-S-14-1110	1,110 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601114	MLC520-S-14-1140	1,140 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)

Included in the scope of delivery: transmitter and receiver, each with 2x C-mounting brackets, 3x for protective field heights from 600 mm. 2x O-shaped mounting bracket.

Further products of this series can be found on our website.

Available resolutions: 14 mm, 24 mm.

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Connection 2	Design
68601117	MLC520-S-14-1170	1,170 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)
68601120	MLC520-S-14-1200	1,200 mm	14 mm	0.2 ... 6 m	Cable with connector, plastic, M12, 5-pin, 160 mm	Cable with connector, plastic, M12, 5-pin, 160 mm	Narrow housing (15 mm)

Included in the scope of delivery: transmitter and receiver, each with 2x C-mounting brackets, 3x for protective field heights from 600 mm. 2x O-shaped mounting bracket.
Further products of this series can be found on our website.
Available resolutions: 14 mm, 24 mm.

MLC 530

Whenever you need additional control functions, the MLC 530 Extended version is the perfect choice. With its 5 different operating modes, the integrated muting function and 3 different scan modes, the sensor leaves almost nothing to be desired. Device linking enables the construction of 2-channel, contact-based safety circuits as well as serial connections of several devices with safety-related switching outputs (OSSD).

Benefits:

- Integrated function for timing controlled muting for temporary proper bridging of the protective function, e. g. when transporting materials through the protective field
- Fixed or floating beam blanking, reduced resolution: necessary whenever objects must be in the protective field for operational reasons
- Different scan modes: to adjust availability, select SingleScan, DoubleScan or MaxiScan
- Teaching without PC: configuration and teaching, e. g. of floating beam blanking, is quick and easy

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Design
68003101	► MLC530R14-150	150 mm	14 mm		Connector, metal, M12, 8-pin	
68000101	◄ MLC500T14-150	150 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003103	► MLC530R14-300	300 mm	14 mm		Connector, metal, M12, 8-pin	
68000103	◄ MLC500T14-300	300 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003133	► MLC530R14-300/V	300 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000133	◄ MLC500T14-300/V	300 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68003104	► MLC530R14-450	450 mm	14 mm		Connector, metal, M12, 8-pin	
68000104	◄ MLC500T14-450	450 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003134	► MLC530R14-450/V	450 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000134	◄ MLC500T14-450/V	450 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68003106	► MLC530R14-600	600 mm	14 mm		Connector, metal, M12, 8-pin	
68000106	◄ MLC500T14-600	600 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003136	► MLC530R14-600/V	600 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000136	◄ MLC500T14-600/V	600 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68003107	► MLC530R14-750	750 mm	14 mm		Connector, metal, M12, 8-pin	
68000107	◄ MLC500T14-750	750 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003137	► MLC530R14-750/V	750 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000137	◄ MLC500T14-750/V	750 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68003109	► MLC530R14-900	900 mm	14 mm		Connector, metal, M12, 8-pin	
68000109	◄ MLC500T14-900	900 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003139	► MLC530R14-900/V	900 mm	14 mm		Connector, metal, M12, 8-pin	Extra shock-resistant
68000139	◄ MLC500T14-900/V	900 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	Extra shock-resistant
68003110	► MLC530R14-1050	1,050 mm	14 mm		Connector, metal, M12, 8-pin	
68000110	◄ MLC500T14-1050	1,050 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003112	► MLC530R14-1200	1,200 mm	14 mm		Connector, metal, M12, 8-pin	
68000112	◄ MLC500T14-1200	1,200 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003113	► MLC530R14-1350	1,350 mm	14 mm		Connector, metal, M12, 8-pin	
68000113	◄ MLC500T14-1350	1,350 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003115	► MLC530R14-1500	1,500 mm	14 mm		Connector, metal, M12, 8-pin	
68000115	◄ MLC500T14-1500	1,500 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003116	► MLC530R14-1650	1,650 mm	14 mm		Connector, metal, M12, 8-pin	
68000116	◄ MLC500T14-1650	1,650 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003118	► MLC530R14-1800	1,800 mm	14 mm		Connector, metal, M12, 8-pin	
68000118	◄ MLC500T14-1800	1,800 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003119	► MLC530R14-1950	1,950 mm	14 mm		Connector, metal, M12, 8-pin	
68000119	◄ MLC500T14-1950	1,950 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003121	► MLC530R14-2100	2,100 mm	14 mm		Connector, metal, M12, 8-pin	
68000121	◄ MLC500T14-2100	2,100 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003122	► MLC530R14-2250	2,250 mm	14 mm		Connector, metal, M12, 8-pin	
68000122	◄ MLC500T14-2250	2,250 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	

► receiver / ◄ transmitter

Included in delivery: sliding blocks.

Further products of this series can be found on our website.

Available resolutions: 14 mm, 20 mm, 30 mm, 40 mm, 90 mm. Operating ranges up to 20 m.

Switching
sensors

Measuring
sensors

Products for
safety at work

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Control components

Industrial image
processing

Accessories

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Design
68003124	► MLC530R14-2400	2,400 mm	14 mm		Connector, metal, M12, 8-pin	
68000124	◄ MLC500T14-2400	2,400 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003125	► MLC530R14-2550	2,550 mm	14 mm		Connector, metal, M12, 8-pin	
68000125	◄ MLC500T14-2550	2,550 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003127	► MLC530R14-2700	2,700 mm	14 mm		Connector, metal, M12, 8-pin	
68000127	◄ MLC500T14-2700	2,700 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003128	► MLC530R14-2850	2,850 mm	14 mm		Connector, metal, M12, 8-pin	
68000128	◄ MLC500T14-2850	2,850 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	
68003130	► MLC530R14-3000	3,000 mm	14 mm		Connector, metal, M12, 8-pin	
68000130	◄ MLC500T14-3000	3,000 mm	14 mm	0 ... 6 m	Connector, metal, M12, 5-pin	

► receiver / ◄ transmitter

Included in delivery: sliding blocks.

Further products of this series can be found on our website.

Available resolutions: 14 mm, 20 mm, 30 mm, 40 mm, 90 mm. Operating ranges up to 20 m.

MLC 530 SPG

The MLC 530 SPG Smart Process Gating variant is the specialist for access guarding with material transport. It allows for a particularly compact system design as it works without the use of muting sensors. Process control takes place here in combination with the system controller. This provides a high level of protection against tampering and at the same time a high degree of availability.

Benefits:

- Integrated Smart Process Gating function for process control together with the system controller, no muting sensors necessary
- Allows the system to be very compact and thus saves valuable space
- Optimal handling due to function selection without PC as well as LED and 7-segment display with integrated 3-zone alignment aid
- Reduced risk of tampering and increased reliability for a high degree of system availability

Part no.	Part description	Protective field height	Resolution	Operating range	Connection	Design
68009301	► MLC530R30-150-SPG	150 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000301	◄ MLC500T30-150	150 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009302	► MLC530R30-225-SPG	225 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000302	◄ MLC500T30-225	225 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009303	► MLC530R30-300-SPG	300 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000303	◄ MLC500T30-300	300 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009304	► MLC530R30-450-SPG	450 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000304	◄ MLC500T30-450	450 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009306	► MLC530R30-600-SPG	600 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000306	◄ MLC500T30-600	600 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009307	► MLC530R30-750-SPG	750 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000307	◄ MLC500T30-750	750 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009309	► MLC530R30-900-SPG	900 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000309	◄ MLC500T30-900	900 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009310	► MLC530R30-1050-SPG	1,050 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000310	◄ MLC500T30-1050	1,050 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009312	► MLC530R30-1200-SPG	1,200 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000312	◄ MLC500T30-1200	1,200 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009313	► MLC530R30-1350-SPG	1,350 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000313	◄ MLC500T30-1350	1,350 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009315	► MLC530R30-1500-SPG	1,500 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000315	◄ MLC500T30-1500	1,500 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009316	► MLC530R30-1650-SPG	1,650 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000316	◄ MLC500T30-1650	1,650 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009318	► MLC530R30-1800-SPG	1,800 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000318	◄ MLC500T30-1800	1,800 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009319	► MLC530R30-1950-SPG	1,950 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000319	◄ MLC500T30-1950	1,950 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009321	► MLC530R30-2100-SPG	2,100 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000321	◄ MLC500T30-2100	2,100 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009322	► MLC530R30-2250-SPG	2,250 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000322	◄ MLC500T30-2250	2,250 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	
68009324	► MLC530R30-2400-SPG	2,400 mm	30 mm		Connector, metal, M12, 8-pin	Smart Process Gating
68000324	◄ MLC500T30-2400	2,400 mm	30 mm	0 ... 10 m	Connector, metal, M12, 5-pin	

► receiver / ◄ transmitter

Included in delivery: sliding blocks.

Further products of this series can be found on our website.

Available resolutions: 30 mm, 40 mm, 90 mm.