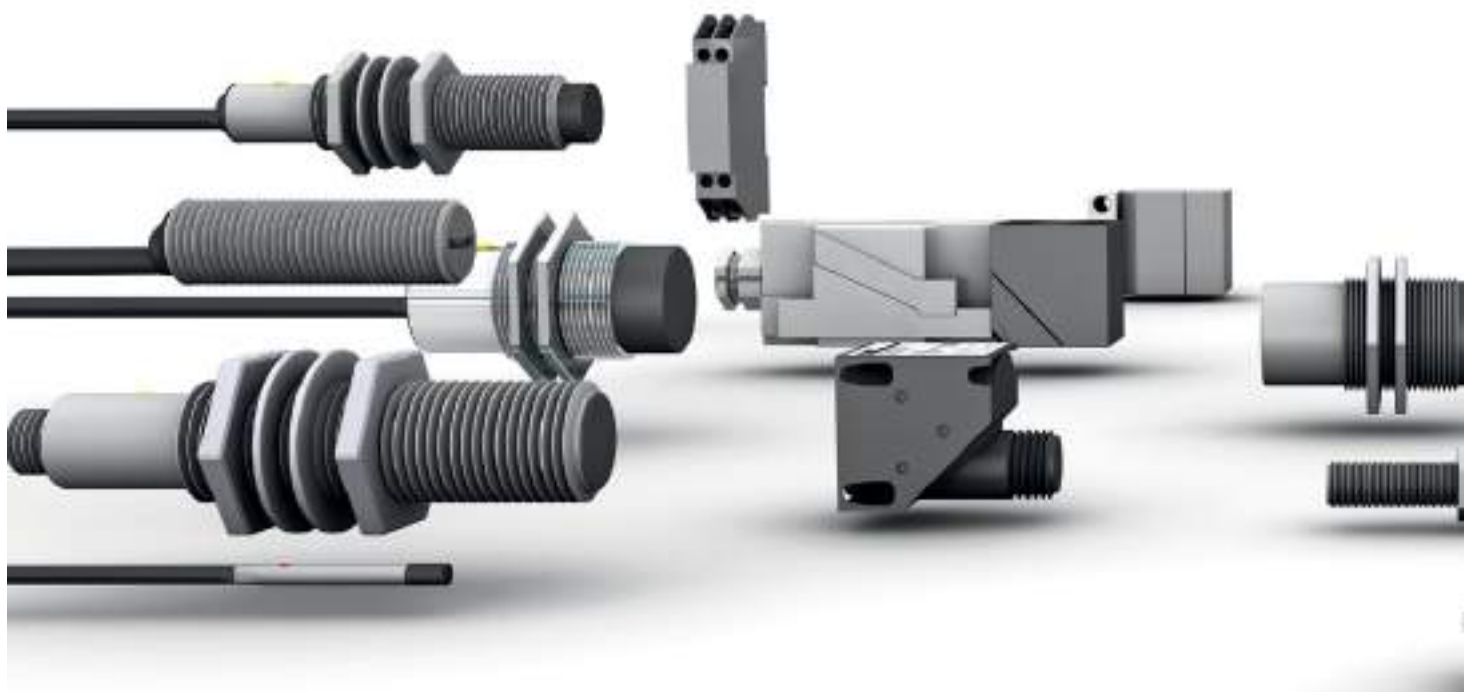




Inductive Sensors

Inductive sensors for object detection

Automation is almost inconceivable without inductive sensors. Wherever processes are automated, non-contact position detection, freedom from wear, and reliability are in demand. Whether in machine building, automation technology, electronics manufacturing or the plastics industry, in textile machines, wood processing or in the automobile industry – Balluff sensors monitor, control and automate processes and states. Providing the highest quality and optimized for any application. From standard to extended switching distance, from temperature and high pressure rated to "Factor 1" from mini to maxi: You too can take advantage of Balluff's versatility in your applications. And profit from the reliability and quality of proven products from your full-line provider.



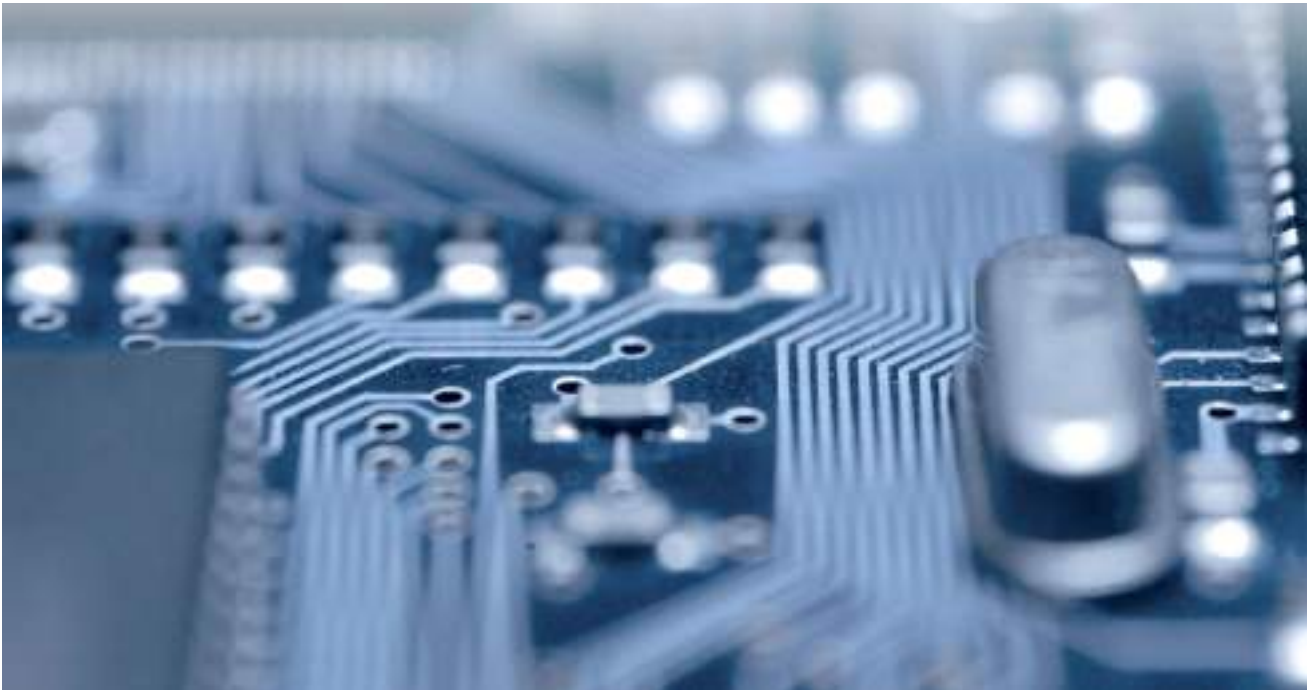
Inductive sensors		Inductive sensors with special properties	
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		Prox mounts for tubular sensors	761
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		Mounting brackets for 8x8 block sensors & seal nuts	764
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Basic information and definitions can be found on page 952.



DC 3-/4-Wire	F1
DC 2-Wire	PTFE Coated Weld Immune
AC/ DC 2-Wire	500bar High Pressure
	120°C High Temperature
IP68 BWN Pr27 BWN Pr20	Stainless Steel



Inductive Sensors

Introduction



Inductive Sensors

Introduction

Product overview

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories

Inductive Sensors

Product overview



Housing size	Ø 3 mm, Ø 4 mm, M4x0.5	M5x0.5 Ø 6.5	M8x1, Ø 8 mm	M12x1	M16x1	M18x1	
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Inductive sensors							
DC 3-wire Global			page 476	page 481		page 484	
DC 3-/4-wire	page 492	page 498 page 503	page 512	page 530		page 538	
DC 2-wire			page 595	page 597		page 600	
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Steelface sensors			page 665	page 666		page 667	
High temperature sensors		page 670	page 670	page 670		page 671 page 673	
Sensors for harsh environments				page 674		page 676	
Factor 1 sensors			page 685	page 686		page 689	
Weld field immune sensors				page 697		page 699	
Large housing							
Tube sensors							
Ring sensors							

Inductive distance sensors for analog distance measurement							
Tubular-style housings			page 721	page 722		page 725	
Block housings							
Ring sensors							

Inductive Sensors

Product overview



M30×1.5	5×5 mm	8×8 mm	8×16 mm R04	10×30 mm R03	16.5×30 mm	20×32 mm R01	99×17.6 mm
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Inductive Sensors

Introduction

Product overview

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories

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Inductive Sensors

Product overview



Housing size	25x50 mm	26x26 mm	26x40 mm	42x48 mm	74x60.5 mm	40x40 mm	
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Inductive sensors							
DC 3-wire Global							
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AC 2-wire							

Inductive Sensors with Special Properties							
High pressure sensors							
Steelface sensors							
High temperature sensors	page 671						
Sensors for harsh environments							
Factor 1 sensors						page 693	
Weld field immune sensors						page 703	
Large housing							
Tube sensors							
Ring sensors							

Inductive distance sensors for analog distance measurement							
Tubular-style housings							
Block housings							

Inductive Sensors

Product overview



	40x40 mm	80x80 mm	35x35 mm	Ø 80x67 mm	Ø 110x110 mm	Ring sensors	Tube sensors
	page 581	page 588					
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		page 639					
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Inductive Sensors

Introduction

Product overview

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

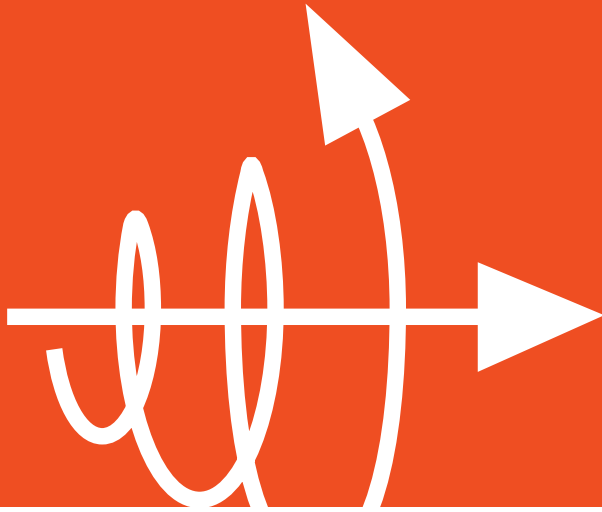
AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories



Inductive Sensors

DC 3-wire inductive Global Sensors

DC 3-wire inductive global sensors: Global sensors are the most economical sensors from the Balluff group. These standardized sensors are readily available and are ideal for general-purpose applications



Tubular design

M8×1

476

M12×1

481

M18×1

484

M30×1.5

487



Global



DC 3-wire Inductive Global Sensors

Tubular housing, M8x1

Global: Performance and value in inductive proximity sensors

Balluff Global sensors are proven performers that are globally standardized with an optimum price point ratio.

- Short and mid-size designs M8 to M30x1.5
- Shielded and unshielded designs
- Cable and connector versions
- Standard and extended switching distance

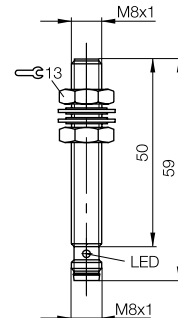
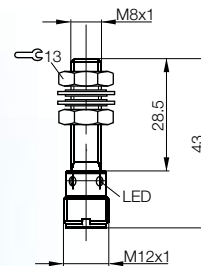
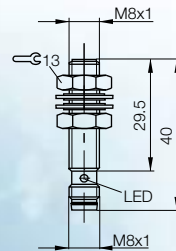


Housing size	M8 x 1	M8 x 1	M8 x 1
Installation type (observe instructions in Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a	0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code Part number	BES00CJ BES M08EE-PSC15B-S49G-003	BES00CH BES M08EE-PSC15B-S04G-003
PNP, NC	Ordering code Part number	BES00CC BES M08EE-POC15B-S49G-003	BES00CA BES M08EE-POC15B-S04G-003
NPN, NO	Ordering code Part number	BES00C7 BES M08EE-NSC15B-S49G-003	BES00C6 BES M08EE-NSC15B-S04G-003
NPN, NC	Ordering code Part number	BES00C3 BES M08EE-NOC15B-S49G-003	BES00C2 BES M08EE-NOC15B-S04G-003
Supply voltage U_B	10...30 V DC	10...30 V DC	12...30 V DC
Voltage drop U_d at I_o max.	2.5 V	2.5 V	2 V
Rated insulation voltage U_i (protection class)	250 V AC (□)	250 V AC (□)	75 V DC
Rated operating current I_o	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...70 °C	-25...70 °C	-25...70 °C
Switching frequency f max.	1 kHz	1 kHz	1 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Approvals	CE, cULus	CE, cULus	CE, cULus
Material	Housing: Stainless steel Sensing surface: PBT	Stainless steel PBT	Brass-coated PA 12
Connection	M8 connector, 3-pin	M12 connector, 4-pin	M8 connector, 3-pin
Suggested mating cable	BCC M313-0000-10-001-VX43T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013	BCC M313-0000-10-001-VX43T2-020-C013

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.





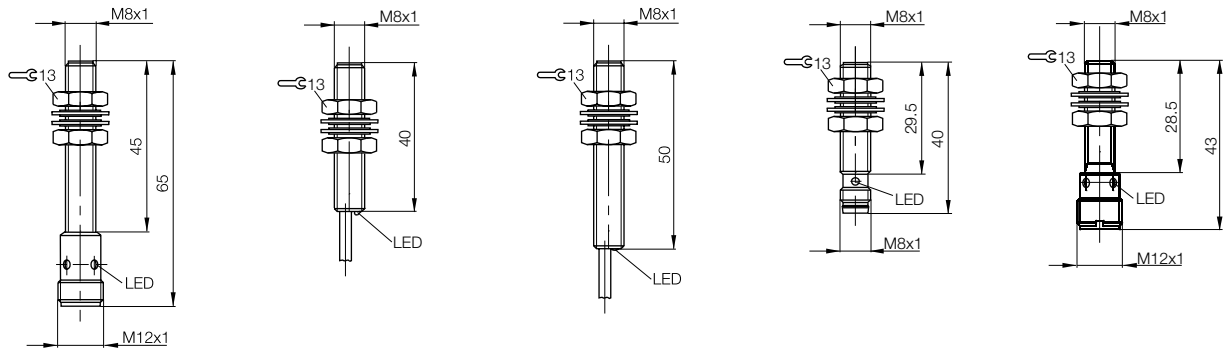
DC 3-wire Inductive Global Sensors

Tubular housing, M8x1



M8 x 1	M8 x 1	M8 x 1	M8 x 1	M8 x 1
Flush	Flush	Flush	Flush	Flush
1.5 mm	1.5 mm	1.5 mm	2 mm	2 mm
0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.6 mm	0...1.6 mm
1X	1X	1X	2X	2X
BES0027	BES00CU	BES0037	BES00CK	BES00FC
BES M08MH1-PSC15B-S04G	BES M08EF-PSC15B-BP02-003	BES M08MI-PSC15B-BV02	BES M08EE-PSC20B-S49G-003	BES M08EE-PSC20B-S04G-003
BES0026	BES00CR	BES0030	BES00CF	BES00CE
BES M08MH1-POC15B-S04G	BES M08EF-POC15B-BP02-003	BES M08MI-POC15B-BV02	BES M08EE-POC20B-S49G-003	BES M08EE-POC20B-S04G-003
BES0024	BES00CN	BES002F	BES00C9	BES00C8
BES M08MH1-NSC15B-S04G	BES M08EF-NSC15B-BP02-003	BES M08MI-NSC15B-BV02	BES M08EE-NSC20B-S49G-003	BES M08EE-NSC20B-S04G-003
BES0023	BES00CL	BES03PJ	BES00C5	BES00C4
BES M08MH1-NOC15B-S04G	BES M08EF-NOC15B-BP02-003	BES M08MI-NOC15B-BV02	BES M08EE-NOC20B-S49G-003	BES M08EE-NOC20B-S04G-003
12...30 V DC	10...30 V DC	12...30 V DC	10...30 V DC	10...30 V DC
2 V	2.5 V	2 V	2.5 V	2.5 V
75 V DC	250 V AC (□)	75 V DC	250 V AC (□)	250 V AC (□)
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C
1 kHz	1 kHz	1 kHz	700 Hz	700 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Brass-coated	Stainless steel	Brass-coated	Stainless steel	Stainless steel
PA 12	PBT	PA 12	PBT	PBT
M12 connector, 4-pin	2 m PUR cable, 26 AWG	2 m PVC cable, 26 AWG	M8 connector, 3-pin	M12 connector, 4-pin
BCC M415-0000-1A-003-VX44T2-020-C013			BCC M313-0000-10-001-VX43T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013

Inductive sensors
Global DC 3-wire
Tubular housings
Block housings
DC 3-/4-wire
DC 2-wire
AC/DC 2-wire
AC 2-wire
Special properties
Analog distance measurement
Accessories



DC 3-wire Inductive Global Sensors

Tubular housing, M8x1

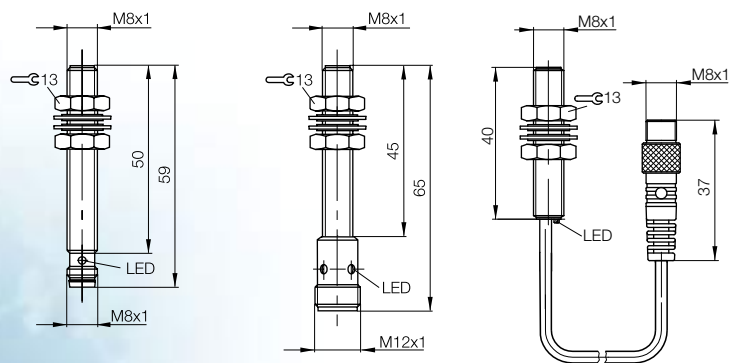


Housing size		M8 x 1	M8 x 1	M8 x 1
Installation type (observe instructions in Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		2 mm	2 mm	2 mm
Assured switching distance s_a		0...1.6 mm	0...1.6 mm	0...1.6 mm
Sensing distance		2X	2X	2X
PNP, NO	Ordering code	BES003P	BES0028	
	Part number	BES M08MI-PSC20B-S49G	BES M08MH1-PSC20B-S04G	
PNP, NC	Ordering code	BES0033	BES03T5	
	Part number	BES M08MI-POC20B-S49G	BES M08MH1-POC20B-S04G	
NPN, NO	Ordering code	BES002U	BES0025	BES045P
	Part number	BES M08MI-NSC20B-S49G	BES M08MH1-NSC20B-S04G	BES M08EF-NSC20B-BP00,3-GS49
NPN, NC	Ordering code	BES03TJ	BES03T6	
	Part number	BES M08MI-NOC20B-S49G	BES M08MH1-NOC20B-S04G	
Supply voltage U_B		12...30 V DC	12...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)		75 V DC	75 V DC	250 V AC (II)
Rated operating current I_o		200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...70 °C	-25...70 °C	-25...70 °C
Switching frequency f max.		700 Hz	700 Hz	700 Hz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 68 per BWN Pr. 20
Approvals		CE, cULus	CE, cULus	CE, cULus
Material	Housing	Brass-coated	Brass-coated	Stainless steel
	Sensing surface	PA 12	PA 12	PBT
Connection		M8 connector, 3-pin	M12 connector, 4-pin	0.3 m PUR cable with M8 connector, 3-pin
Suggested mating cable		BCC M313-0000-10-001-VX43T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013	BCC M313-0000-10-001-VX43T2-020-C013

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



Global



DC 3-wire Inductive Global Sensors

Tubular housing, M8x1



M8 x 1	M8 x 1	M8 x 1	M8 x 1	M8 x 1
Flush	Flush	Flush	Non-flush	Non-flush
2 mm	2 mm	2 mm	4 mm	4 mm
0...1.6 mm	0...1.6 mm	0...1.6 mm	0...3.2 mm	0...3.2 mm
2X	2X	2X	2X	2X
BES003E	BES00CW	BES003K	BES000M	BES001J
BES M08MI-PSC20B-BP00,2-GS04	BES M08EF-PSC20B-BP02-003	BES M08MI-PSC20B-BV02	BES M08EB-PSC40F-S49G	BES M08EH-PSC40F-S49G
	BES00CT	BES03TH	BES000L	BES001F
	BES M08EF-POC20B-BP02-003	BES M08MI-POC20B-BV02	BES M08EB-POC40F-S49G	BES M08EH-POC40F-S49G
	BES00CP	BES002P	BES000K	BES001C
	BES M08EF-NSC20B-BP02-003	BES M08MI-NSC20B-BV02	BES M08EB-NSC40F-S49G	BES M08EH-NSC40F-S49G
	BES00CM	BES03TF	BES000J	BES0019
	BES M08EF-NOC20B-BP02-003	BES M08MI-NOC20B-BV02	BES M08EB-NOC40F-S49G	BES M08EH-NOC40F-S49G
12...30 V DC	10...30 V DC	12...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
75 V DC	250 V AC (□)	75 V DC	250 V AC (□)	250 V AC (□)
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C
700 Hz	700 Hz	700 Hz	1.5 kHz	1.5 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Brass-coated	Stainless steel	Brass-coated	Stainless steel	Stainless steel
PA 12	PBT	PA 12	PBT	PBT
0.2 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 26 AWG	2 m PVC cable, 26 AWG	M8 connector, 3-pin	M8 connector, 3-pin
BCC M415-0000-1A-003-VX44T2-020-C013			BCC M313-0000-10-001-VX43T2-020-C013	BCC M313-0000-10-001-VX43T2-020-C013



Inductive sensors

Global DC 3-wire

Tubular housings

Block housings

DC 3-/4-wire

DC 2-wire

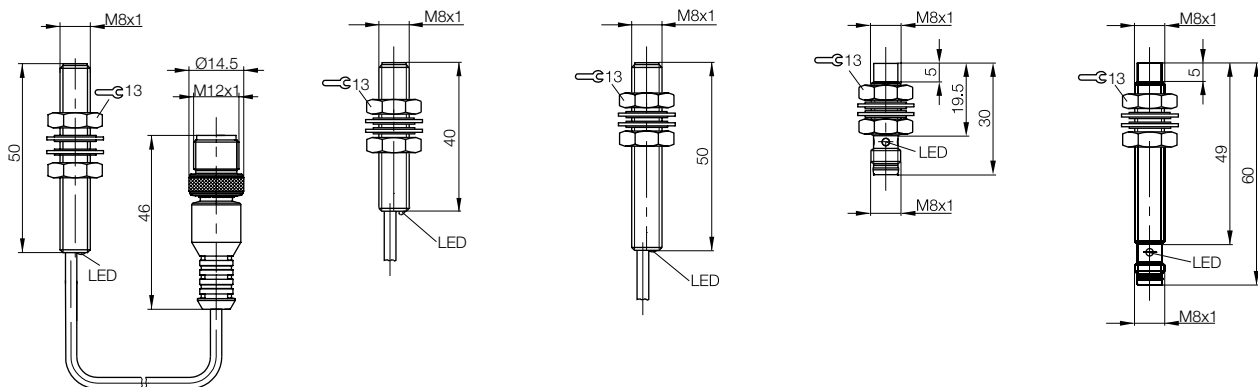
AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories



DC 3-wire Inductive Global Sensors

Tubular housing, M8x1

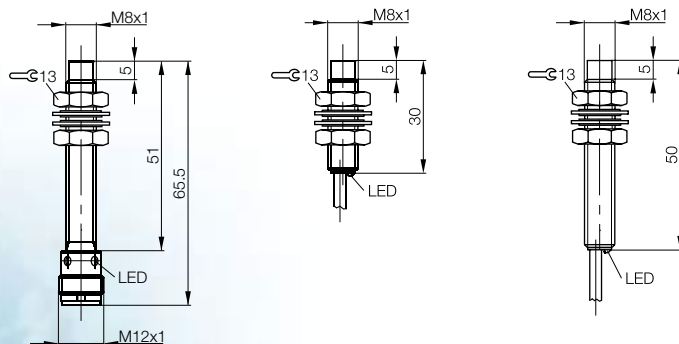


Housing size	M8 x 1	M8 x 1	M8 x 1
Installation type (observe instructions in Basic Information chapter)	Non-flush	Non-flush	Non-flush
Rated switching distance s_n	4 mm	4 mm	4 mm
Assured switching distance s_a	0...3.2 mm	0...3.2 mm	0...3.2 mm
Sensing distance	2X	2X	2X
PNP, NO	Ordering code Part number	BES001H BES M08EH-PSC40F-S04G	BES000Z BES M08ED-PSC40F-BV02
PNP, NC	Ordering code Part number	BES001E BES M08EH-POC40F-S04G	BES000W BES M08ED-POC40F-BV02
NPN, NO	Ordering code Part number	BES001A BES M08EH-NSC40F-S04G	BES000T BES M08ED-NSC40F-BV02
NPN, NC	Ordering code Part number	BES0018 BES M08EH-NOC40F-S04G	BES000P BES M08ED-NOC40F-BV02
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)	250 V AC (II)	250 V AC (II)	250 V AC (II)
Rated operating current I_o	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...70 °C	-25...70 °C	-25...70 °C
Switching frequency f max.	1.5 kHz	1.5 kHz	1.5 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
Approvals	CE, cULus	CE, cULus	CE, cULus
Material	Housing: Stainless steel Sensing surface: PBT	Stainless steel PA 12	Stainless steel PBT
Connection	M12 connector, 4-pin	2 m PVC cable, 26 AWG	2 m PVC cable, 26 AWG
Suggested mating cable	BCC M415-0000-1A-003-VX44T2-020-C013		

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



Global



DC 3-wire Inductive Global Sensors

Tubular housing, M12x1



M12x1	M12x1	M12x1	M12x1	M12x1	M12x1
Flush	Flush	Flush	Flush	Flush	Flush
2 mm	2 mm	2 mm	2 mm	2 mm	4 mm
0...1.6 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm	0...3.2 mm
1X	1X	1X	1X	1X	2X
BES00EE	BES0060	BES00E4	BES005U	BES00EF	
BES M12ME-PSC20B-S04G-003	BES M12MI-PSC20B-S04G	BES M12MD-PSC20B-BP02-003	BES M12MI-PSC20B-BV02	BES M12ME-PSC40B-S04G-003	
BES00EA	BES005F	BES00E2	BES00FP	BES00EC	
BES M12ME-POC20B-S04G-003	BES M12MI-POC20B-S04G	BES M12MD-POC20B-BP02-003	BES M12MI-POC20B-BV02	BES M12ME-POC40B-S04G-003	
BES00E8	BES0054	BES00E0	BES00FL	BES00E9	
BES M12ME-NSC20B-S04G-003	BES M12MI-NSC20B-S04G	BES M12MD-NSC20B-BP02-003	BES M12MI-NSC20B-BV02	BES M12ME-NSC40B-S04G-003	
BES00E6	BES004Y	BES00CY	BES03PR	BES00E7	
BES M12ME-NOC20B-S04G-003	BES M12MI-NOC20B-S04G	BES M12MD-NOC20B-BP02-003	BES M12MI-NOC20B-BV02	BES M12ME-NOC40B-S04G-003	
10...30 V DC	12...30 V DC	10...30 V DC	12...30 V DC	10...30 V DC	
2 V	2.5 V	2 V	2.5 V	2.5 V	
250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)	
200 mA	200 mA	200 mA	200 mA	200 mA	
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	
-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C	
1.2 kHz	1.2 kHz	1.2 kHz	1.2 kHz	300 Hz	
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED	
IP 67	IP 68 per BWN Pr. 20	IP 67	IP 68 per BWN Pr. 20	IP 67	
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	
Brass-coated	Brass-coated	Brass-coated	Brass-coated	Brass-coated	
PBT	PA 12	PBT	PA 12	LCP	
M12 connector, 4-pin	M12 connector, 4-pin	2 m PUR cable, 22 AWG	2 m PVC cable, 22 AWG	M12 connector, 4-pin	
BCC M415-0000-1A-003-VX44T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013			BCC M415-0000-1A-003-VX44T2-020-C013	



Inductive sensors

Global DC 3-wire

Tubular housings

Block housings

DC 3-/4-wire

DC 2-wire

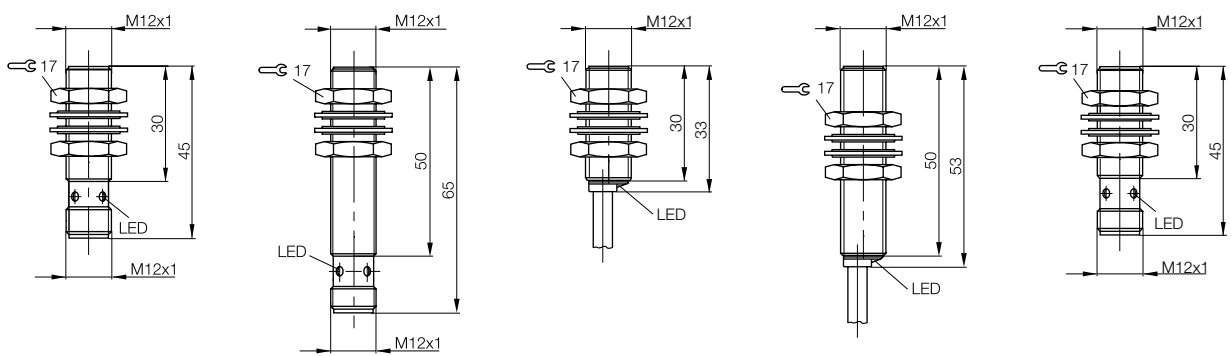
AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories



DC 3-wire Inductive Global Sensors

Tubular housing, M12x1

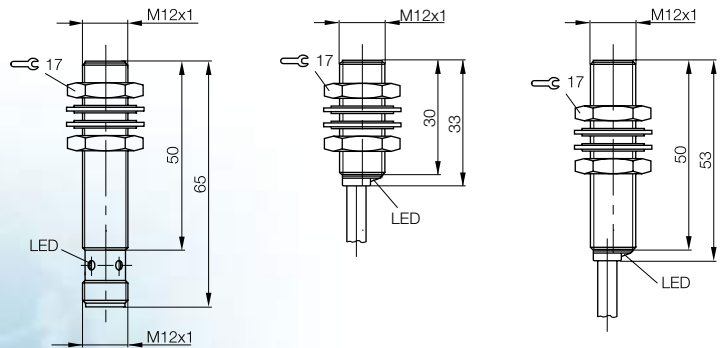


Housing size		M12x1	M12x1	M12x1
Installation type (observe instructions in Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		4 mm	4 mm	4 mm
Assured switching distance s_a		0...3.2 mm	0...3.2 mm	0...3.2 mm
Sensing distance		2X	2X	2X
PNP, NO	Ordering code	BES0068	BES00E5	BES0064
	Part number	BES M12MI-PSC40B-S04G	BES M12MD-PSC40B-BP02-003	BES M12MI-PSC40B-BV02
PNP, NC	Ordering code	BES005N	BES00E3	BES005L
	Part number	BES M12MI-POC40B-S04G	BES M12MD-POC40B-BP02-003	BES M12MI-POC40B-BV02
NPN, NO	Ordering code	BES0059	BES00E1	BES00FM
	Part number	BES M12MI-NSC40B-S04G	BES M12MD-NSC40B-BP02-003	BES M12MI-NSC40B-BV02
NPN, NC	Ordering code	BES004Z	BES00CZ	BES03PT
	Part number	BES M12MI-NOC40B-S04G	BES M12MD-NOC40B-BP02-003	BES M12MI-NOC40B-BV02
Supply voltage U_B		12...30 V DC	10...30 V DC	12...30 V DC
Voltage drop U_d at I_o max.		2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)		250 V AC (II)	250 V AC (II)	250 V AC (II)
Rated operating current I_o		200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...70 °C	-25...70 °C	-25...70 °C
Switching frequency f max.		500 Hz	300 Hz	500 Hz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 68 per BWN Pr. 20	IP 67	IP 68 per BWN Pr. 20
Approvals		CE, cULus	CE, cULus	CE, cULus
Material	Housing	Brass-coated	Brass-coated	Brass-coated
	Sensing surface	PA 12	LCP	PA 12
Connection		M12 connector, 4-pin	2 m PUR cable, 22 AWG	2 m PVC cable, 22 AWG
Suggested mating cable		BCC M415-0000-1A-003-VX44T2-020-C013		

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



Global



DC 3-wire Inductive Global Sensors

Tubular housing, M12x1



M12x1	M12x1	M12x1		
Non-flush	Non-flush	Non-flush		
8 mm	8 mm	8 mm		
0...6.4 mm	0...6.4 mm	0...6.4 mm		
2X	2X	2X		
BES01PY	BES004N	BES004M		
BES M12MD-PSC80F-S04G	BES M12MG-PSC80F-S04G	BES M12MG-PSC80F-BV02		
BES01PU	BES004K	BES004J		
BES M12MD-POC80F-S04G	BES M12MG-POC80F-S04G	BES M12MG-POC80F-BV02		
BES01PT	BES004F	BES004E		
BES M12MD-NSC80F-S04G	BES M12MG-NSC80F-S04G	BES M12MG-NSC80F-BV02		
BES01PR	BES004A	BES0049		
BES M12MD-NOC80F-S04G	BES M12MG-NOC80F-S04G	BES M12MG-NOC80F-BV02		
10...30 V DC	10...30 V DC	10...30 V DC		
2.5 V	2.5 V	2.5 V		
250 V AC (□)	250 V AC (□)	250 V AC (□)		
200 mA	200 mA	200 mA		
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes		
-25...70 °C	-25...70 °C	-25...70 °C		
800 Hz	800 Hz	800 Hz		
Yellow LED	Yellow LED	Yellow LED		
IP 68 per BWN Pr. 20	IP 67	IP 67		
CE, cULus	CE, cULus	CE, cULus		
Brass-coated	Brass-coated	Brass-coated		
PBT	PBT	PBT		
M12 connector, 4-pin	M12 connector, 4-pin	2 m PVC cable, 22 AWG		
BCC M415-0000-1A-003-VX44T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013			



Inductive sensors

Global DC 3-wire Tubular housings Block housings

DC 3-/4-wire

DC 2-wire

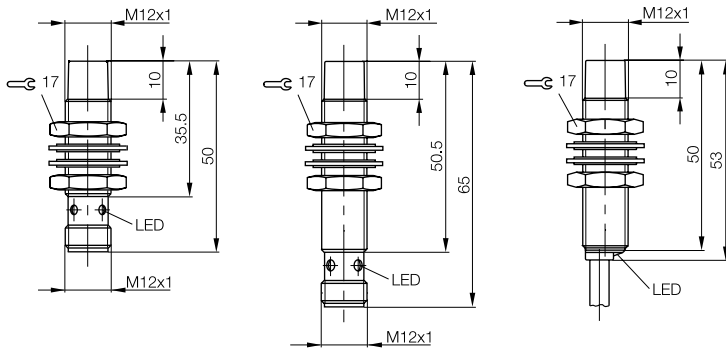
AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories



DC 3-wire Inductive Global Sensors

Tubular housing, M18x1

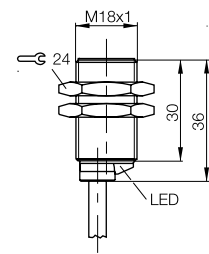
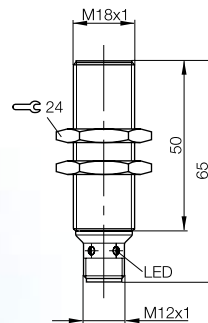
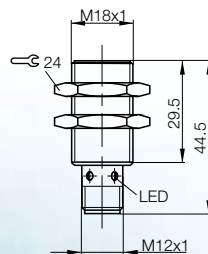


	M18x1	M18x1	M18x1
Housing size	M18x1	M18x1	M18x1
Installation type (observe instructions in Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	5 mm	5 mm	5 mm
Assured switching distance s_a	0...4 mm	0...4 mm	0...4 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code Part number	BES00EY BES M18ME-PSC50B-S04G-003	BES0086 BES M18MI-PSC50B-S04G
PNP, NC	Ordering code Part number	BES00EU BES M18ME-POC50B-S04G-003	BES043J BES M18MI-POC50B-S04G
NPN, NO	Ordering code Part number	BES00ER BES M18ME-NSC50B-S04G-003	BES00EJ BES M18MD-NSC50B-BP02-003
NPN, NC	Ordering code Part number	BES03T7 BES M18ME-NOC50B-S04G-003	BES03T8 BES M18MD-NOC50B-BP02-003
Supply voltage U_B	10...30 V DC	12...30 V DC	10...30 V DC
Voltage drop U_d at I_e max.	2 V	2.5 V	2 V
Rated insulation voltage U_i (protection class)	75 V DC	250 V AC (II)	75 V DC
Rated operating current I_e	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...70 °C	-25...70 °C	-25...70 °C
Switching frequency f max.	700 Hz	700 Hz	700 Hz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 68 per BWN Pr. 20	IP 67
Approvals	CE, cULus	CE, cULus	CE, cULus
Material	Housing: Brass-coated Sensing surface: PA 12	Brass-coated PA 12	Brass-coated PA 12
Connection	M12 connector, 4-pin	M12 connector, 4-pin	2 m PUR cable, 22 AWG
Suggested mating cable	BCC M415-0000-1A-003-VX44T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013	

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



Global

DC 3-wire Inductive Global Sensors

Tubular housing, M18x1



Inductive sensors

Global DC 3-wire

Tubular housings

Block housings

DC 3-/4-wire

DC 2-wire

AC/DC 2-wire

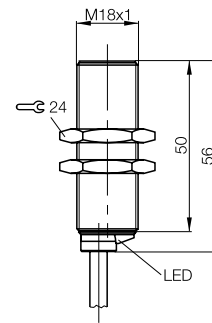
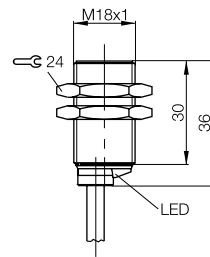
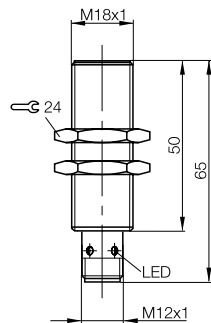
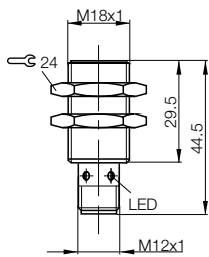
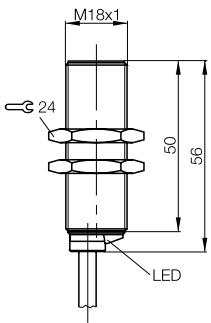
AC 2-wire

Special properties

Analog distance measurement

Accessories

M18x1	M18x1	M18x1	M18x1	M18x1
Flush	Flush	Flush	Flush	Flush
5 mm	8 mm	8 mm	8 mm	8 mm
0...4 mm	0...6.4 mm	0...6.4 mm	0...6.4 mm	0...6.4 mm
1X	2X	2X	2X	2X
BES0082	BES00EZ	BES008L	BES00EP	BES008E
BES M18MI-PSC50B-BV02	BES M18ME-PSC80B-S04G-003	BES M18MI-PSC80B-S04G	BES M18MD-PSC80B-BP02-003	BES M18MI-PSC80B-BV02
BES007R	BES00EW	BES03RP	BES00EM	BES03PY
BES M18MI-POC50B-BV02	BES M18ME-POC80B-S04G-003	BES M18MI-POC80B-S04G	BES M18MD-POC80B-BP02-003	BES M18MI-POC80B-BV02
BES007A	BES00ET	BES007L	BES00EK	BES00FE
BES M18MI-NSC50B-BV02	BES M18ME-NSC80B-S04G-003	BES M18MI-NSC80B-S04G	BES M18MD-NSC80B-BP02-003	BES M18MI-NSC80B-BV02
BES03RR	BES03RN	BES0077	BES00EH	BES03T4
BES M18MI-NOC50B-BV02	BES M18ME-NOC80B-S04G-003	BES M18MI-NOC80B-S04G	BES M18MD-NOC80B-BP02-003	BES M18MI-NOC80B-BV02
12...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	12...30 V DC
2.5 V	3.5 V	2.5 V	3.5 V	2.5 V
250 V AC (□)	75 V DC	250 V AC (□)	75 V DC	250 V AC (□)
200 mA	130 mA	200 mA	130 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C
700 Hz	150 Hz	1 kHz	150 Hz	150 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 67	IP 67	IP 67	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Brass-coated	Brass-coated	Brass-coated	Brass-coated	Brass-coated
PA 12	PBT	PBT	PBT	PA 12
2 m PVC cable, 22 AWG	M12 connector, 4-pin BCC M415-0000-1A-003-VX44T2-020-C013	M12 connector, 4-pin BCC M415-0000-1A-003-VX44T2-020-C013	2 m PUR cable, 22 AWG	2 m PVC cable, 22 AWG



DC 3-wire Inductive Global Sensors

Tubular housing, M18x1

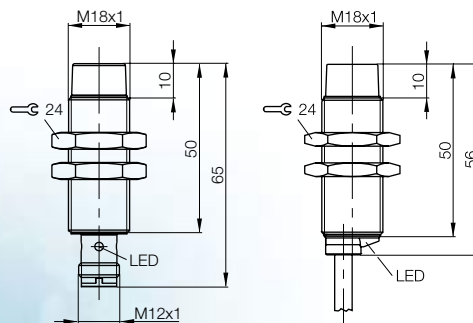


Housing size	M18x1	M18x1		
Installation type (observe instructions in Basic Information chapter)	Non-flush	Non-flush		
Rated switching distance s_n	16 mm	16 mm		
Assured switching distance s_a	0...13 mm	0...13 mm		
Sensing distance	2X	2X		
PNP, NO	Ordering code	BES03RM	BES006Z	
	Part number	BES M18MG-PSC16F-S04G	BES M18MG-PSC16F-BV02	
PNP, NC	Ordering code	BES03RL	BES006U	
	Part number	BES M18MG-POC16F-S04G	BES M18MG-POC16F-BV02	
NPN, NO	Ordering code		BES006P	
	Part number		BES M18MG-NSC16F-BV02	
NPN, NC	Ordering code		BES006L	
	Part number		BES M18MG-NOC16F-BV02	
Supply voltage U_B	10...30 V DC	10...30 V DC		
Voltage drop U_d at I_o max.	2.5 V	2.5 V		
Rated insulation voltage U_i (protection class)	75 V DC (□)	250 V AC (□)		
Rated operating current I_o	200 mA	200 mA		
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes		
Ambient temperature T_a	-25...70 °C	-25...70 °C		
Switching frequency f max.	800 Hz	800 Hz		
Output function indicator	Yellow LED	Yellow LED		
Degree of protection as per IEC 60529	IP 67	IP 67		
Approvals	CE, cULus	CE, cULus		
Material	Housing	Brass-coated	Brass-coated	
	Sensing surface	PBT	PBT	
Connection	M12 connector, 4-pin	2 m PVC cable, 22 AWG		
Suggested mating cable	BCC M415-0000-1A-003-VX44T2-020-C013			

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



Global

DC 3-wire Inductive Global Sensors

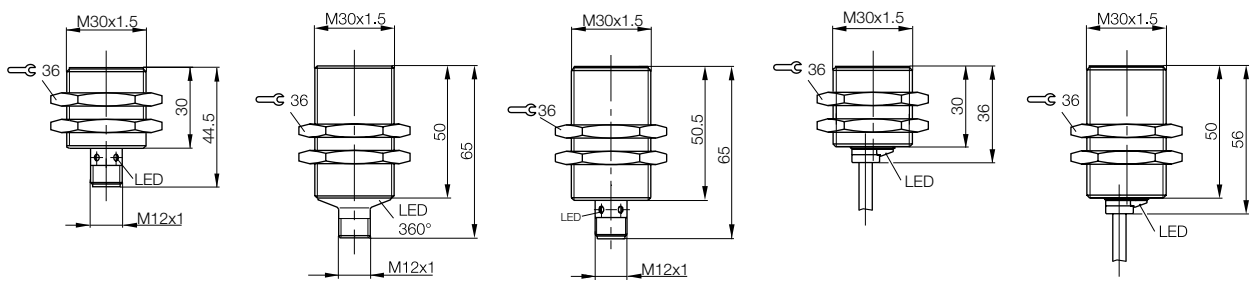
Tubular housing, M30x1.5



M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5
Flush	Flush	Flush	Flush	Flush
10 mm	10 mm	10 mm	10 mm	10 mm
0...8 mm	0...8.1 mm	0...8.1 mm	0...8.1 mm	0...8.1 mm
1X	1X	1X	1X	1X
BES00F8	BES00A4	BES00A3	BES00F3	BES00A0
BES M30ME-PSC10B-S04G-003	BES M30MI-PSC10B-S04K	BES M30MI-PSC10B-S04G	BES M30MD-PSC10B-BP02-003	BES M30MI-PSC10B-BV02
BES00F6	BES009P	BES043H	BES03TC	BES009M
BES M30ME-POC10B-S04G-003	BES M30MI-POC10B-S04K	BES M30MI-POC10B-S04G	BES M30MD-POC10B-BP02-003	BES M30MI-POC10B-BV02
BES00F5	BES009H		BES00F0	BES009C
BES M30ME-NSC10B-S04G-003	BES M30MI-NSC10B-S04K		BES M30MD-NSC10B-BP02-003	BES M30MI-NSC10B-BV02
BES03TA	BES0097		BES03TE	BES0096
BES M30ME-NOC10B-S04G-003	BES M30MI-NOC10B-S04K		BES M30MD-NOC10B-BP02-003	BES M30MI-NOC10B-BV02
10...30 V DC	12...30 V DC	12...30 V DC	10...30 V DC	12...30 V DC
3.5 V	2.5 V	2.5 V	3.5 V	2.5 V
75 V DC	250 V AC (□)	75 V DC	75 V DC	250 V AC (□)
130 mA	200 mA	200 mA	130 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C
150 Hz	400 Hz	400 Hz	150 Hz	400 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 68 per BWN Pr. 20	IP 67	IP67	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Brass-coated	Brass-coated	Brass-coated	Brass-coated	Brass-coated
PA 12	PA 12	PA 12	PA 12	PA 12
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	2 m PUR cable, 22 AWG	2 m PVC cable, 22 AWG
BCC M415-0000-1A-003-VX44T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013		



- Inductive sensors
- Global DC 3-wire
- Tubular housings
- Block housings
- DC 3-/4-wire
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Special properties
- Analog distance measurement
- Accessories



DC 3-wire Inductive Global Sensors

Tubular housing, M30x1.5

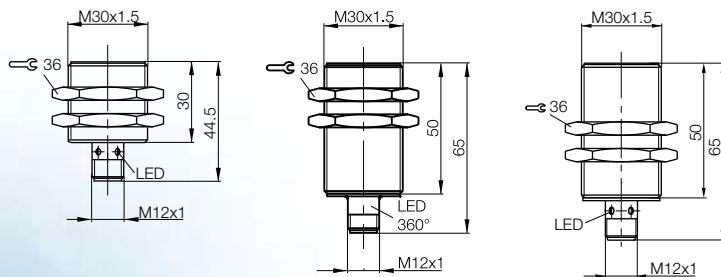


		M30x1.5	M30x1.5	M30x1.5
Housing size		M30x1.5	M30x1.5	M30x1.5
Installation type (observe instructions in Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		15 mm	15 mm	15 mm
Assured switching distance s_a		0...12 mm	0...12.2 mm	0...12.2 mm
Sensing distance		2X	2X	2X
PNP, NO	Ordering code	BES00F9	BES00AH	BES00AF
	Part number	BES M30ME-PSC15B-S04G-003	BES M30MI-PSC15B-S04K	BES M30MI-PSC15B-S04G
PNP, NC	Ordering code	BES00F7	BES009U	BES03RK
	Part number	BES M30ME-POC15B-S04G-003	BES M30MI-POC15B-S04K	BES M30MI-POC15B-S04G
NPN, NO	Ordering code		BES009J	
	Part number		BES M30MI-NSC15B-S04K	
NPN, NC	Ordering code		BES0098	
	Part number		BES M30MI-NOC15B-S04K	
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_e max.		3.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)		75 DC	250 V AC (□)	250 V AC (□)
Rated operating current I_e		130 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...70 °C	-25...70 °C	-25...70 °C
Switching frequency f max.		75 Hz	100 Hz	100 Hz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 67
Approvals		CE, cULus	CE, cULus	CE, cULus
Material	Housing	Brass-coated	Brass-coated	Brass-coated
	Sensing surface	PA 12	PA 12	PA 12
Connection		M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin
Suggested mating cables		BCC M415-0000-1A-003-VX44T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013	BCC M415-0000-1A-003-VX44T2-020-C013

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



Global

DC 3-wire Inductive Global Sensors

Tubular housing, M30×1.5



M30×1.5	M30×1.5	M30×1.5	M30×1.5	M30×1.5
Flush	Flush	Non-flush	Non-flush	Non-flush
15 mm	15 mm	30 mm	30 mm	30 mm
0...12 mm	0...12.2 mm	0...24 mm	0...24 mm	0...24 mm
2X	2X	2X	2X	2X
BES00F4	BES00AA	BES00AZ	BES03RE	BES00AY
BES M30MD-PSC15B-BP02-003	BES M30MI-PSC15B-BV02	BES M30MM-PSC30F-S04K	BES M30MM-PSC30F-S04G	BES M30MM-PSC30F-BV02
BES00F2	BES009T	BES00AU	BES03RC	BES00AT
BES M30MD-POC15B-BP02-003	BES M30MI-POC15B-BV02	BES M30MM-POC30F-S04K	BES M30MM-POC30F-S04G	BES M30MM-POC30F-BV02
BES00F1	BES03RH	BES00AP		BES00AN
BES M30MD-NSC15B-BP02-003	BES M30MI-NSC15B-BV02	BES M30MM-NSC30F-S04K		BES M30MM-NSC30F-BV02
	BES03RJ	BES00AL		BES00AK
	BES M30MI-NOC15B-BV02	BES M30MM-NOC30F-S04K		BES M30MM-NOC30F-BV02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
3.5 V	2.5 V	2.5 V	2.5 V	2.5 V
75 V DC	250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)
130 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C
75 Hz	100 Hz	300 Hz	300 Hz	300 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Brass-coated	Brass-coated	Brass-coated	Brass-coated	Brass-coated
PA 12	PA 12	PBT	PBT	PBT
2 m PUR cable, 22 AWG	2 m PVC cable, 22 AWG	M12 connector, 4-pin BCC M415-0000-1A-003-VX44T2-020-C013	M12 connector, 4-pin BCC M415-0000-1A-003-VX44T2-020-C013	2 m PVC cable, 22 AWG



Inductive sensors

Global DC 3-wire

Tubular housings

Block housings

DC 3-/4-wire

DC 2-wire

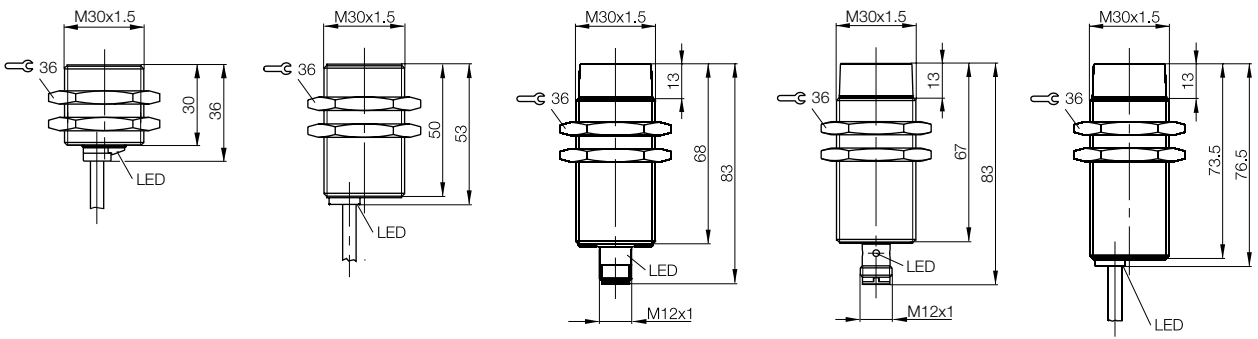
AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories





Inductive Sensors

DC 3-/4-wire inductive tubular sensors

Balluff's largest and most popular sensor family DC 3 and 4 wire sensors

are used extensively around the world. Available from \varnothing 3 mm to 80x80 mm for practically every application in automation. These high-quality sensors are designed and manufactured according to worldwide standards and the latest technology. Our 100 % final inspection of all products guarantees that only carefully tested sensors leave our plants. Balluff DC 3 and 4 wire sensors are available with PNP, NPN, and complementary outputs and come with Balluff's lifetime warranty.



Tubular housings

Ø 3 mm	493
Ø 4 mm	494
M4x0.5	497
M5x0.5	498
Ø 6.5 mm	502
Ø 8 mm	512
M8x1	513
M12x1	530
M18x1	538
M30x1.5	547

Block designs

5x5 mm	552
8x8 mm	556
8x16x4 mm (R04)	562
10x30x6 mm (R03)	566
30x20x10 mm	567
16x30x10 mm	568
20x32x8 mm (R01)	569
20x50x10 mm	571
26x40x12 mm (R05)	572
42x48x22 mm	574
74x60.5x28 mm	575
40x40 mm (Unicompact)	577
40x40 mm (Unisensor)	581
80x80 mm (Maxisensor)	588

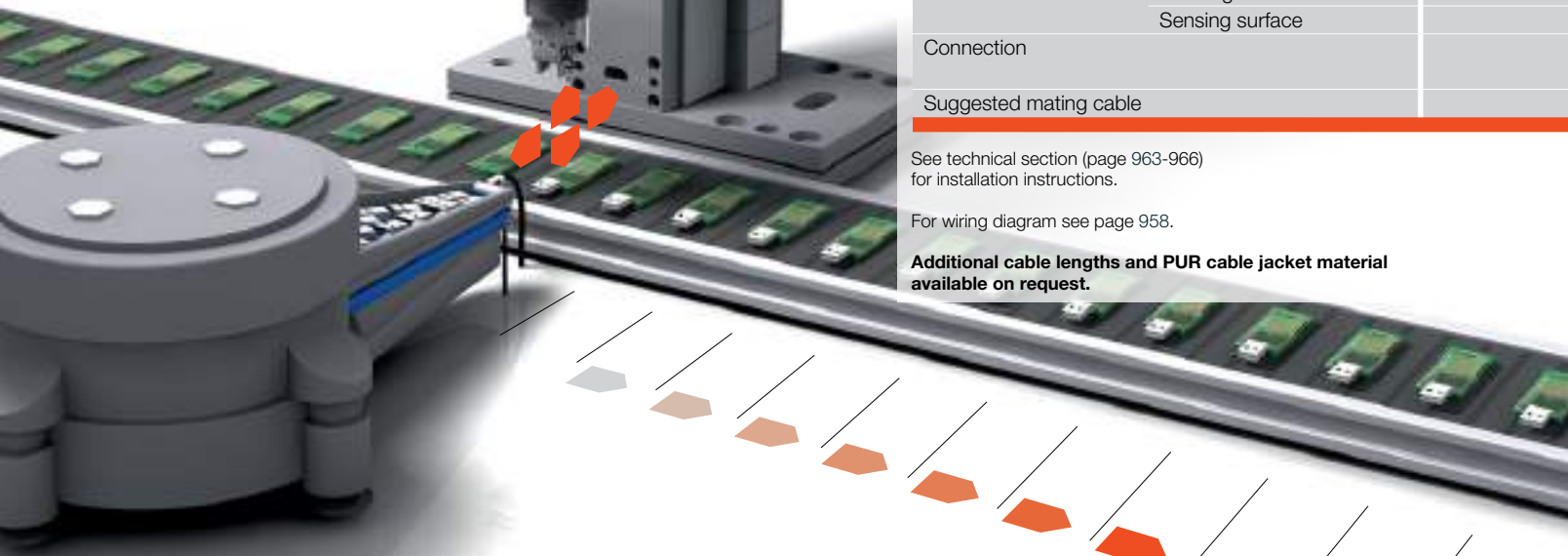


DC 3-/4-wire Inductive Tubular Sensors

Inductive mini-sensors

High-performance and compact

Inductive mini-sensors are ideal for position sensing in rough environments, and stand out due to an optimum price/performance ratio. They are easy to install and can be fully integrated even in narrow assemblies such as linear units, valves and actuators. As a result, position sensing is now possible where there was never space for a sensor before. Application tooling can be made even smaller. The low weight of the mini-sensors allows applications with extremely fast acceleration, so that pick-and-place is easy to manage.



Housing size		
Installation type (observe instructions in the Basic Information chapter)		
Rated switching distance s_n		
Assured switching distance s_a		
Sensing distance		
PNP, NO	Ordering code	
	Part number	
PNP, NC	Ordering code	
	Part number	
NPN, NO	Ordering code	
	Part number	
Supply voltage U_B		
Voltage drop U_d at I_o max.		
Rated insulation voltage U_i		
Rated operating current I_o		
Polarity reversal protected/transposition protected/short-circuit protected		
Ambient temperature T_a		
Switching frequency f max.		
Output function indicator		
Degree of protection as per IEC 60529		
Approvals		
Special properties		
Material	Housing	
	Sensing surface	
Connection		
Suggested mating cable		

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.

SuperShorties and slim designs

Inductive mini sensors are available with especially small diameter: with 3 mm, 4 mm and 5 mm. They are also available as compact short housings, with lengths of just 6 mm — offering the shortest inductive sensors on the market.

- The most compact on the market: can be fully integrated
- Unmatched in thinness and, as SuperShorty, unmatched in their short length
- Low weight (0.7 g) for extreme accelerations



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 3 mm



Ø 3 mm	Ø 3 mm	Ø 3 mm	Ø 3 mm	Ø 3 mm
Flush	Flush	Flush	Flush	Non-flush
1 mm	1 mm	1 mm	1 mm	3 mm
0...0.8 mm	0...0.8 mm	0...0.8 mm	0...0.8 mm	0...2.3 mm
2X	2X	2X	2X	2X
BES0468	BES00M5	BES00M3		BES00MH
BES 516-3044-G-E4-C-S26-00,3	BES 516-3044-G-E4-C-S49-00,3	BES 516-3044-G-E4-C-PU-02		BES 516-3048-G-E4-C-S26-00,3
	BES0415	BES00M7		
	BES G03ED-POC10B-EP00,3-GS49	BES 516-3045-G-E4-C-PU-02		
			BES00M9	
			BES 516-3046-G-E4-L-PU-02	
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	21.6...26.4 V DC
2.5 V	2.5 V	2.5 V	1.5 V	2.5 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	100 mA	100 mA	50 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/No	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	0...+70 °C	0...+70 °C
2 kHz	2 kHz	2 kHz	5 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE	CE, cULus
Slim design	Slim design	Slim design	Slim design	Slim design
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
POM	POM	POM	POM	PET-C
0.3 m PUR cable with M5 connector, 4-pin BKS-B 25-3-PU-03	0.3 m PUR cable with M8 connector, 3-pin BCC M313-0000-10-001-EX43T2-020	2 m PUR cable, 26 AWG	2 m PUR cable, 26 AWG	0.3 m PUR cable with M5 connector, 4-pin BKS-B 25-3-PU-03



Inductive sensors

Global DC 3-wire

DC 3-/4-wire Tubular housings

Block housings

DC 2-wire

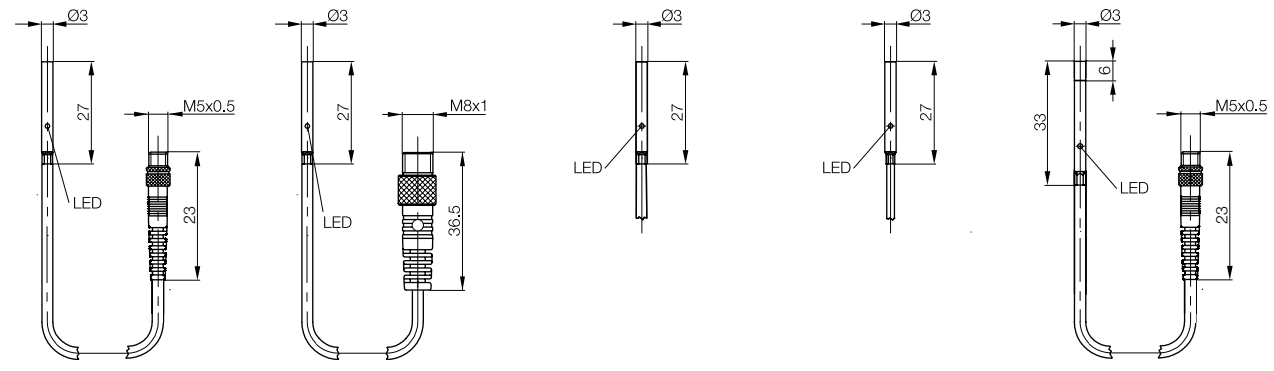
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housings, Ø 3 mm, Ø 4 mm

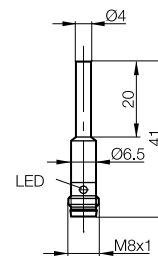
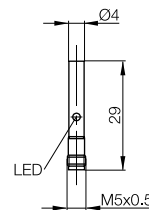
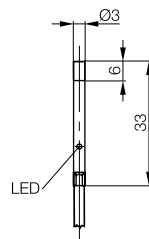


Housing size	Ø 3 mm	Ø 4 mm	Ø 4 mm
Installation type (observe instructions in the Basic Information chapter)	Non-flush	Flush	Flush
Rated switching distance s_n	3 mm	0.8 mm	0.8 mm
Assured switching distance s_a	0...2.3 mm	0...0.65 mm	0...0.65 mm
Sensing distance	3X	1X	1X
PNP, NO	Ordering code	BES00ME	BES0122
	Part number	BES 516-3048-G-E4-C-PU-02	BES G04EC-PSC08B-S26G
PNP, NC	Ordering code	BES00MJ	BES0120
	Part number	BES 516-3049-G-E4-C-PU-02	BES G04EC-POC08B-S26G
NPN, NO	Ordering code	BES011Y	
	Part number		BES G04EC-NSC08B-S26G
NPN, NC	Ordering code	BES011W	BES00KF
	Part number		BES 516-3018-E5-C-S49
Supply voltage U_B	21.6...26.4 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V	3 V	3 V
Rated insulation voltage U_i	75 V DC	75 V DC	75 V DC
Rated operating current I_o	50 mA	100 mA	100 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	0...+70 °C	-25...+70°C	-25...+70°C
Switching frequency f max.	3 kHz	3 kHz	3 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Approvals	CE, cULus	CE, cULus	CE, cULus
Special properties	Slim design, large switching distance	Slim design	Slim design
Material	Housing	Stainless steel	Stainless steel
	Sensing surface	PET-C	PBT
Connection	2 m PUR cable, 26 AWG	M5 connector, 4-pin	M8 connector, 3-pin
Suggested mating cable		BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

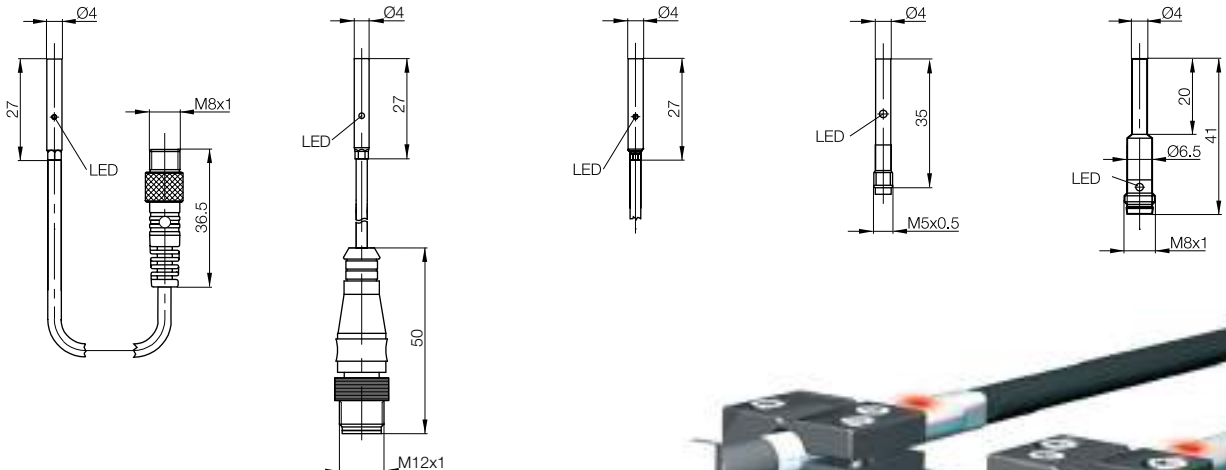
Tubular housing, Ø 4 mm



Ø 4 mm	Ø 4 mm	Ø 4 mm	Ø 4 mm	Ø 4 mm
Flush	Flush	Flush	Flush	Flush
0.8 mm	0.8 mm	0.8 mm	1.5 mm	1.5 mm
0...0.65 mm	0...0.65 mm	0...0.65 mm	0...1.2 mm	0...1.2 mm
1X	1X	1X	2X	2X
BES00J3	BES00J0	BES00HW	BES012F	BES00JN
BES 516-3007-E4-C-S49-00,3	BES 516-3007-E4-C-S4-00,3	BES 516-3007-E4-C-PU-02	BES G04ED-PSC15B-S26G	BES 516-3007-G-E5-C-S49
BES00K3		BES00K1	BES012A	BES00KA
BES 516-3017-E4-C-S49-00,3		BES 516-3017-E4-C-PU-02	BES G04ED-POC15B-S26G	BES 516-3017-G-E5-C-S49
		BES00JP	BES0126	BES00K0
		BES 516-3008-E4-C-PU-02	BES G04ED-NSC15B-S26G	BES 516-3008-G-E5-C-S49
		BES00KC	BES0123	BES00KK
		BES 516-3018-E4-C-PU-02	BES G04ED-NOC15B-S26G	BES 516-3018-G-E5-C-S49
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
3 V	3 V	3 V	3 V	3 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	100 mA	100 mA	100 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Slim design	Slim design	Slim design	Slim design	Slim design
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PBT	PBT	PBT
0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 26 AWG	M5 connector, 4-pin	M8 connector, 3-pin
BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020		BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



mini.s Mini design

Ø 3 mm inductive sensors: Large switching distance with the smallest installation space.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 4 mm

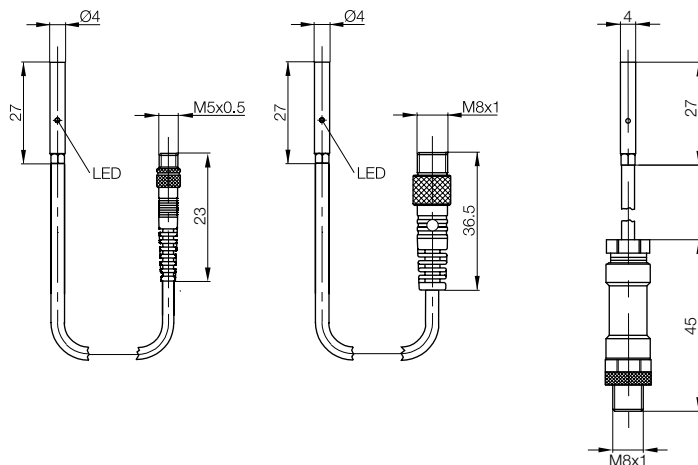


Housing size		Ø 4 mm	Ø 4 mm	Ø 4 mm
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a		0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance		2X	2X	2X
PNP, NO	Ordering code	BES00J8	BES00JJ	
	Part number	BES 516-3007-G-E4-C-S26-00,2	BES 516-3007-G-E4-C-S49-00,3	
PNP, NC	Ordering code		BES00K9	
	Part number		BES 516-3017-G-E4-C-S49-00,3	
NPN, NO	Ordering code			BES0156
	Part number			BES 516-3008-G-E4-C-S49-PU-00,3
NPN, NC	Ordering code			
	Part number			
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		3 V	3 V	3 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Rated operating current I_o		100 mA	100 mA	100 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		3 kHz	3 kHz	1.8 kHz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 67
Approvals		CE, cULus	CE, cULus	CE, cULus
Special properties		Slim design	Slim design	Slim design
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection		0.2 m PUR cable with M5 connector, 4-pin	0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin
Suggested mating cable		BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

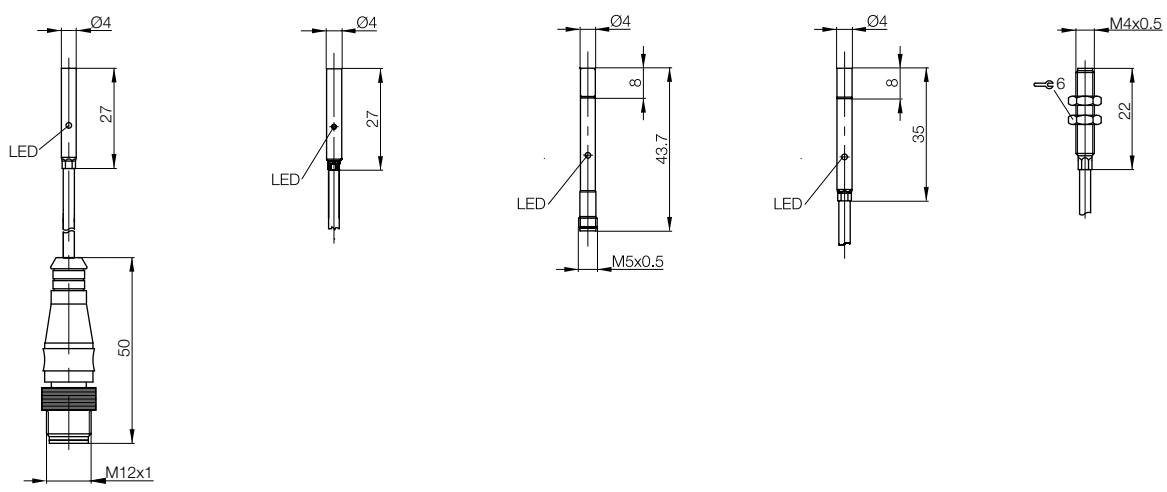
Tubular housings, Ø 4 mm, M4x0.5



Ø 4 mm	Ø 4 mm	Ø 4 mm	Ø 4 mm	M4x0.5
Flush	Flush	Non-flush	Non-flush	Flush
1.5 mm	1.5 mm	5 mm	5 mm	0.6 mm
0...1.2 mm	0...1.2 mm	0...4 mm	0...4 mm	0...0.42 mm
2X	2X	3X	3X	1X
BES00JA	BES00J6	BES012K	BES012H	BES01P0
BES 516-3007-G-E4-C-S4-00,3	BES 516-3007-G-E4-C-PU-02	BES G04ED-PSC50F-S26G	BES G04ED-PSC50F-EP02	BES M04EC-PSD06B-BP02
	BES00K5	BES012E	BES0127	
	BES 516-3017-G-E4-C-PU-02	BES G04ED-POC50F-S26G	BES G04ED-NSC50F-EP02	
	BES00JW	BES0129		
	BES 516-3008-G-E4-C-PU-02	BES G04ED-NSC50F-S26G		
	BES00KH	BES0125		
	BES 516-3018-G-E4-C-PU-02	BES G04ED-NOC50F-S26G		
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
3 V	3 V	2.5 V	2.5 V	2.5 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	100 mA	100 mA	100 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	2 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	No
IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Slim design	Slim design	Slim design, large switching distance	Slim design, large switching distance	Slim design
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PET-C	PET-C	POM
0.3 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 26 AWG	M5 connector, 4-pin	2 m PUR cable, 26 AWG	2 m PUR cable, 26 AWG
BCC M415-0000-1A-003-EX44T2-020		BKS-B 25-3-PU-03		



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M5x0.5

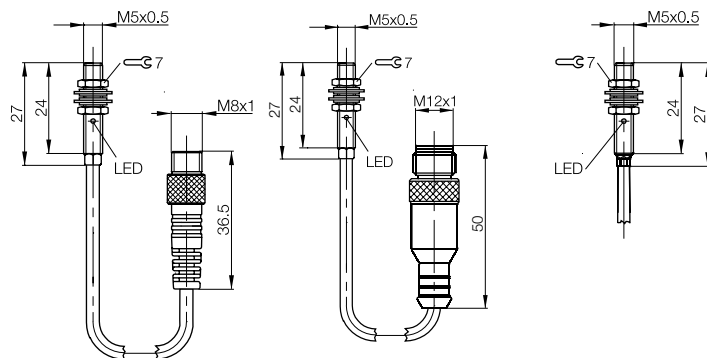


Housing size		M5x0.5	M5x0.5	M5x0.5
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a		0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance		2X	2X	2X
PNP, NO	Ordering code	BES00HC	BES00H7	BES00H3
	Part number	BES 516-3005-G-E4-C-S49-00,3	BES 516-3005-G-E4-C-S4-00,3	BES 516-3005-G-E4-C-PU-02
PNP, NC	Ordering code	BES00L4		BES00L2
	Part number	BES 516-3022-G-E4-C-S49-00,3		BES 516-3022-G-E4-C-PU-02
NPN, NO	Ordering code			BES00HM
	Part number			BES 516-3006-G-E4-C-PU-02
NPN, NC	Ordering code			
	Part number			
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		3 V	3 V	3 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Rated operating current I_o		100 mA	100 mA	100 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		3 kHz	3 kHz	3 kHz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 67
Approvals		CE, cULus	CE, cULus	CE, cULus
Special properties		Slim design	Slim design	Slim design
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection		0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 26 AWG
Suggested mating cable		BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M5x0.5



M5x0.5	M5x0.5	M5x0.5		
Non-flush	Non-flush	Non-flush		
5 mm	5 mm	5 mm		
0...4 mm	0...4 mm	0...4 mm		
3X	3X	3X		
BES013H	BES013C	BES013E		
BES M05ED-PSC50F-S26G	BES M05ED-PSC50F-EP00,3-GS04	BES M05ED-PSC50F-EP02		
BES0139				
BES M05ED-POC50F-S26G				
BES0136		BES0134		
BES M05ED-NSC50F-S26G		BES M05ED-NSC50F-EP02		
BES0132				
BES M05ED-NOC50F-S26G				
10...30 V DC	10...30 V DC	10...30 V DC		
2.5 V	2.5 V	2.5 V		
75 V DC	75 V DC	75 V DC		
100 mA	100 mA	100 mA		
Yes/Yes/Yes	No/Yes/Yes	Yes/Yes/Yes		
-25...+70°C	-25...+70°C	-25...+70°C		
3 kHz	3 kHz	3 kHz		
Yellow LED	Yellow LED	Yellow LED		
IP 67	IP 67	IP 67		
CE, cULus	CE, cULus	CE, cULus		
Slim design, large switching distance	Slim design, large switching distance	Slim design, large switching distance		
Stainless steel	Stainless steel	Stainless steel		
PET-C	PET-C	PET-C		
M5 connector, 4-pin	0.3 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 26 AWG		
BKS-B 25-3-PU-03	BCC M415-0000-1A-003-EX44T2-020			



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

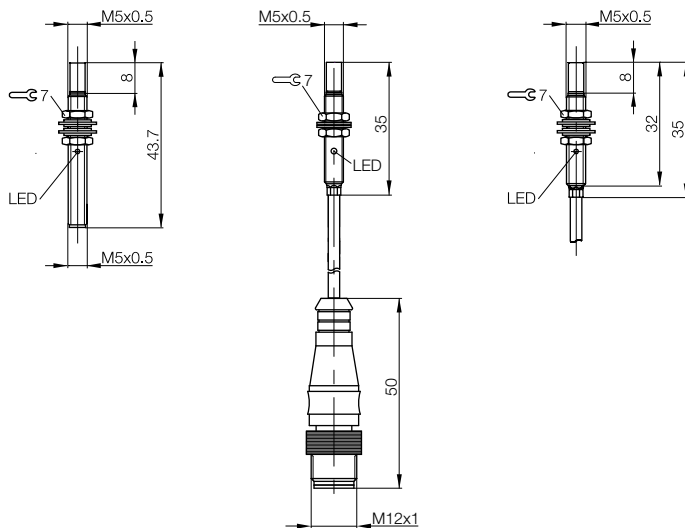
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M5×0.5

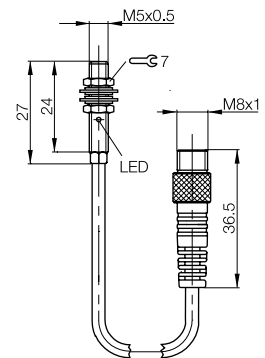
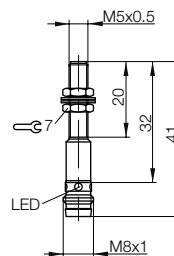
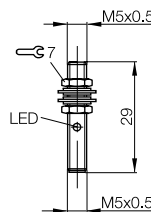


	M5×0.5	M5×0.5	M5×0.5
Housing size	M5×0.5	M5×0.5	M5×0.5
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	0.8 mm	0.8 mm	0.8 mm
Assured switching distance s_a	0...0.65 mm	0...0.65 mm	0...0.65 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code Part number	BES012Z BES M05EC-PSC08B-S26G	BES00H2 BES 516-3005-E5-C-S49
PNP, NC	Ordering code Part number	BES012Y BES M05EC-POC08B-S26G	BES00L1 BES 516-3022-E5-C-S49
NPN, NO	Ordering code Part number	BES012W BES M05EC-NSC08B-S26G	BES00HL BES 516-3006-E5-C-S49
NPN, NC	Ordering code Part number	BES012U BES M05EC-NOC08B-S26G	BES00L8 BES 516-3023-E5-C-S49
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	3 V	3 V	3 V
Rated insulation voltage U_i	75 V DC	75 V DC	75 V DC
Rated operating current I_o	100 mA	100 mA	100 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	3 kHz	3 kHz	3 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Approvals	CE, cULus	CE, cULus	CE, cULus
Special properties	Slim design	Slim design	Slim design
Material	Housing: Stainless steel Sensing surface: PBT	Stainless steel PBT	Stainless steel PBT
Connection	M5 connector, 4-pin	M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin
Suggested mating cable	BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

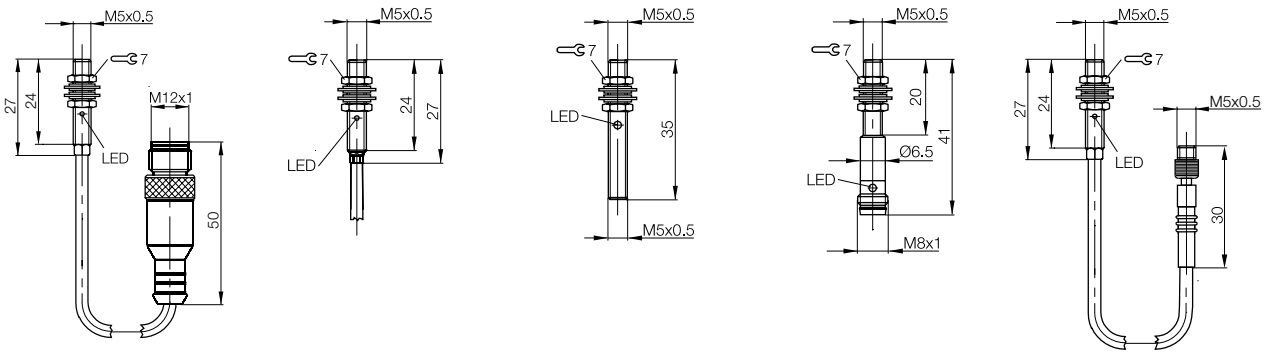
Tubular housing, M5x0.5



M5x0.5	M5x0.5	M5x0.5	M5x0.5	M5x0.5	M5x0.5
Flush	Flush	Flush	Flush	Flush	Flush
0.8 mm	0.8 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm
0...0.65 mm	0...0.65 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm
1X	1X	2X	2X	2X	2X
BES00FW	BES00FT	BES013A	BES00HF	BES00H5	
BES 516-3005-E4-C-S4-00,3	BES 516-3005-E4-C-PU-02	BES M05ED-PSC15B-S26G	BES 516-3005-G-E5-C-S49	BES 516-3005-G-E4-C-S26-00,3	
	BES00KZ	BES0137			
	BES 516-3022-E4-C-PU-02	BES M05ED-POC15B-S26G			
	BES00HJ	BES0133			
	BES 516-3006-E4-C-PU-02	BES M05ED-NSC15B-S26G			
	BES00L6	BES0130			
	BES 516-3023-E4-C-PU-02	BES M05ED-NOC15B-S26G			
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
3 V	3 V	3 V	3 V	3 V	3 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	100 mA	100 mA	100 mA	100 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Slim design	Slim design	Slim design	Slim design	Slim design	Slim design
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PBT	PBT	PBT	PBT
0.3 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 26 AWG	M5 connector, 4-pin	M8 connector, 3-pin	0.3 m PUR cable with M5 connector, 4-pin	0.3 m PUR cable with M5 connector, 4-pin
BCC M415-0000-1A-003-EX44T2-020		BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020	BKS-B 25-3-PU-03	



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 6.5 mm



Housing size		
Installation type (observe instructions in Basic Information chapter)		
Rated switching distance s_n		
Assured switching distance s_a		
Sensing distance		
PNP, NO	Ordering code	
	Part number	
PNP, NC	Ordering code	
	Part number	
NPN, NO	Ordering code	
	Part number	
NPN, NC	Ordering code	
	Part number	
Supply voltage U_B		
Voltage drop U_d at I_o max.		
Rated insulation voltage U_i (protection class)		
Rated operating current I_o		
Polarity reversal protected/transposition protected/short-circuit protected		
Ambient temperature T_a		
Switching frequency f max.		
Output function indicator		
Degree of protection as per IEC 60529		
Approvals		
Material	Housing	
	Sensing surface	
Connection		
Suggested mating cable		

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.

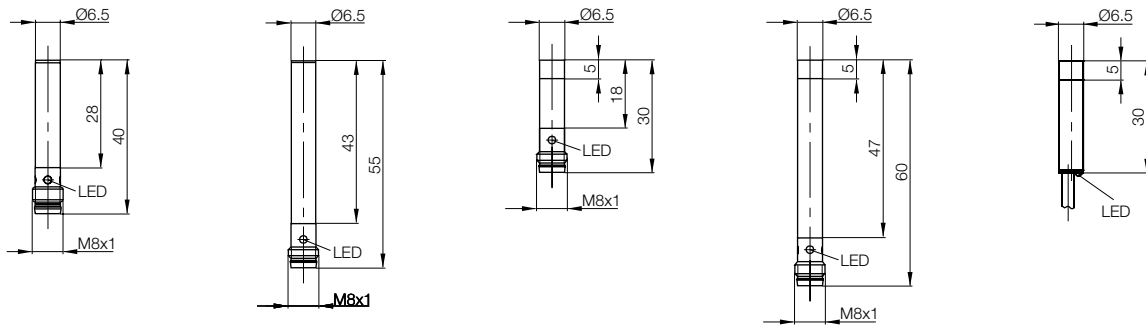
DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 6.5 mm



Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm
Flush	Flush	Non-flush	Non-flush	Non-flush
2 mm	2 mm	4 mm	4 mm	4 mm
0...1.6 mm	0...1.6 mm	0...3.2 mm	0...3.2 mm	0...3.2 mm
2X	2X	2X	2X	2X
BES03R9	BES03P4	BES0005	BES03P5	BES000F
BES G06EE-PSC20B-S49G-003	BES G06EH-PSC20B-S49G	BES G06EB-PSC40F-S49G	BES G06EH-PSC40F-S49G	BES G06ED-PSC40F-BV02
BES03RY	BES03RT	BES0004	BES03T1	BES000C
BES G06EE-POC20B-S49G-003	BES G06EH-POC20B-S49G	BES G06EB-POC40F-S49G	BES G06EH-POC40F-S49G	BES G06ED-POC40F-BV02
BES03RZ		BES0003	BES03T2	BES0009
BES G06EE-NSC20B-S49G-003		BES G06EB-NSC40F-S49G	BES G06EH-NSC40F-S49G	BES G06ED-NSC40F-BV02
BES03T0		BES0002	BES03T3	BES0007
BES G06EE-NOC20B-S49G-003		BES G06EB-NOC40F-S49G	BES G06EH-NOC40F-S49G	BES G06ED-NOC40F-BV02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
75 V DC	75 V DC	75 V DC	75 V DC	250 V AC (□)
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C	-25...70 °C
700 Hz	1.5 kHz	1.5 kHz	1.5 kHz	1.5 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PA 12	PBT	PBT
M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin	2 m PVC cable, 26 AWG
BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	

-  Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 6.5 mm



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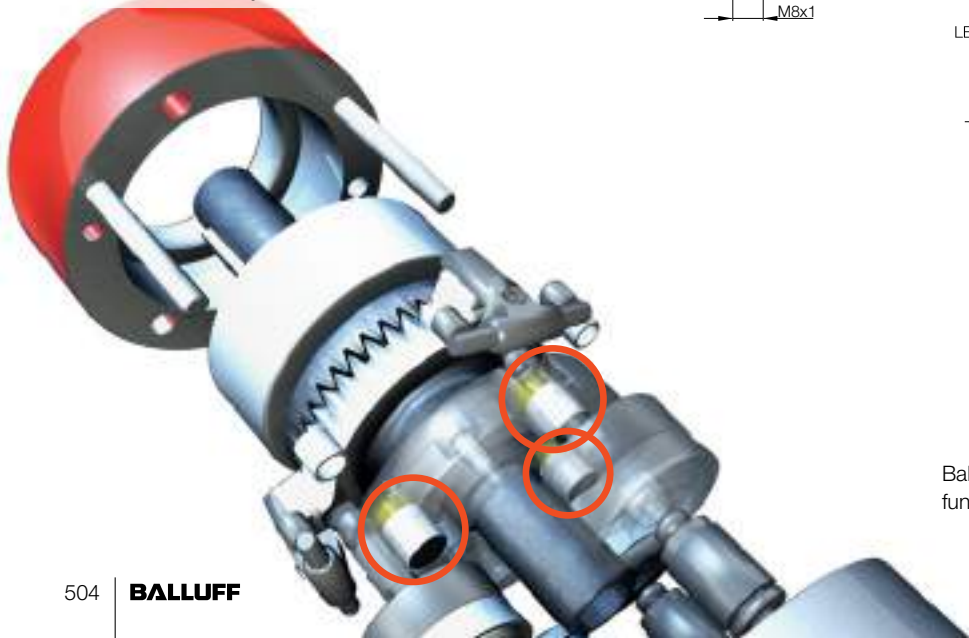
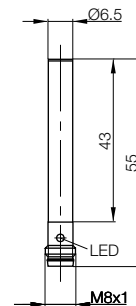
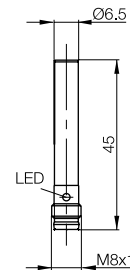
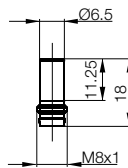


Housing size		Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a		0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance		1X	1X	1X
PNP, NO	Ordering code	BES025N	BES00ZC	BES01KJ
	Part number	BES G06EA-PSD15B-S49G	BES 516-371-E5-C-S49	BES 516-371-S49-C
PNP, NC	Ordering code	BES025J		
	Part number	BES G06EA-POD15B-S49G		
NPN, NO	Ordering code	BES025F		
	Part number	BES G06EA-NSD15B-S49G		
NPN, NC	Ordering code	BES025A		
	Part number	BES G06EA-NOD15B-S49G		
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)		75 V DC	75 V DC	75 V DC
Rated operating current I_o		150 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		3 kHz	3 kHz	3 kHz
Output function indicator		No	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 67
Approvals		CE, cULus	CE, cULus	CE, cULus
Special properties		Short design		
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection		M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin
Suggested mating cable		BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



Balluff's SuperShorty sensors monitor the function of a pneumatic stepping motor.

DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 6.5 mm



SUPERSHORTY™



SUPERSHORTY™



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Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm
Flush	Flush	Flush	Flush	Flush
1.5 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm
0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm
1X	1X	1X	1X	1X
BES0253	BES0254	BES00ZA	BES00Z8	BES0256
BES G06E60-PSC15B-EP00,3-GS26	BES G06E60-PSC15B-EP00,3-GS49	BES 516-371-E4-C-S49-00,3	BES 516-371-E4-C-S4-00,3	BES G06E60-PSC15B-EP02
				BES0251
				BES G06E60-POC15B-EP02
	BES024Y			BES024Z
	BES G06E60-NSC15B-EP00,3-GS49			BES G06E60-NSC15B-EP02
				BES024W
				BES G06E60-NOC15B-EP02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
75 V DC	75 V DC	250 V AC (□)	250 V AC (□)	75 V DC
150 mA	150 mA	200 mA	200 mA	150 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Short design	Short design			Short design
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PBT	PBT	PBT
0.3 m PUR cable with M5 connector, 4-pin	0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 28 AWG
BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

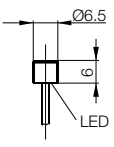
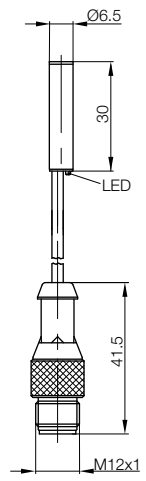
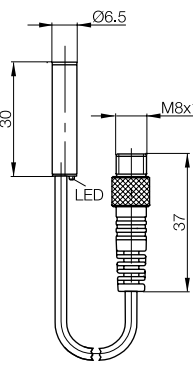
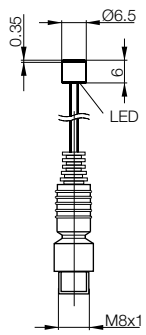
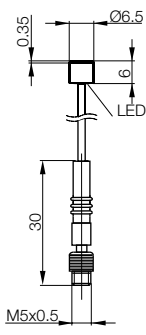
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 6.5 mm

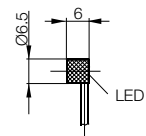
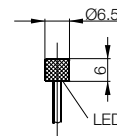
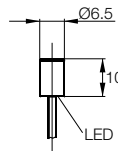


Housing size	Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a	0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code Part number	BES025M BES G06EA-PSC15B-EP02	BES026F BES K06K60-PSC15B-EP02
PNP, NC	Ordering code Part number	BES025H BES G06EA-POC15B-EP02	BES026E BES K06K60-POC15B-EP02
NPN, NO	Ordering code Part number	BES025E BES G06EA-NSC15B-EP02	BES026C BES K06K60-NSC15B-EP02
NPN, NC	Ordering code Part number	BES0259 BES G06EA-NOC15B-EP02	BES026A BES K06K60-NOC15B-EP02
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)	75 V DC	75 V DC	75 V DC
Rated operating current I_o	150 mA	150 mA	150 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	3 kHz	3 kHz	3 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 65	IP 65
Approvals	CE, cULus	CE, cULus	CE, cULus
Special properties	Short design	Short design	Short design
Material	Housing: Stainless steel Sensing surface: PBT	PBT	PBT
Connection	2 m PUR cable, 28 AWG	2 m PUR cable, 28 AWG	2 m PUR cable, 28 AWG
Suggested mating cable			

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.

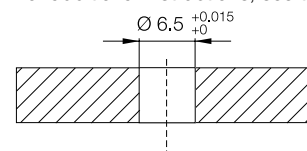


Features

- Simple installation with glue-in sensor
- Flexible use with optional radial cable outlet

Installation recommended for Ø 6.5 mm smooth sensor

Prepare and clean drill hole and sensor according to the specifications of the glue used. Coat hole and sensor with adhesive and position sensor in hole. Allow to cure. For additional instructions, see the data sheet.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 6.5 mm



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Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm
Flush	Flush	Flush	Flush	Flush
1.5 mm	1.5 mm	1.5 mm	2 mm	2 mm
0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.6 mm	0...1.6 mm
1X	1X	1X	2X	2X
BES00Z2	BES00Z5	BES01K7		BES037K
BES 516-371-E4-C-02	BES 516-371-E4-C-PU-02	BES 516-371-EO-C-02		BES 516-371-SA15-C-S49
			BES025K	
			BES G06EA-POD20B-S49G	
BES00ZW	BES0100	BES01L1		
BES 516-372-E4-C-02	BES 516-372-E4-C-PU-02	BES 516-372-EO-C-02		
			BES025C	
			BES G06EA-NOD20B-S49G	
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
250 V AC (□)	250 V AC (□)	250 V AC (□)	75 V DC	75 V DC
200 mA	200 mA	200 mA	150 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	1.5 kHz
Yellow LED	Yellow LED	Yellow LED	No	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
			Short design	
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PBT	PBT	PBT
2 m PVC cable, 26 AWG	2 m PUR cable, 26 AWG	2 m PVC cable, 26 AWG	M8 connector, 3-pin	M8 connector, 3-pin
			BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

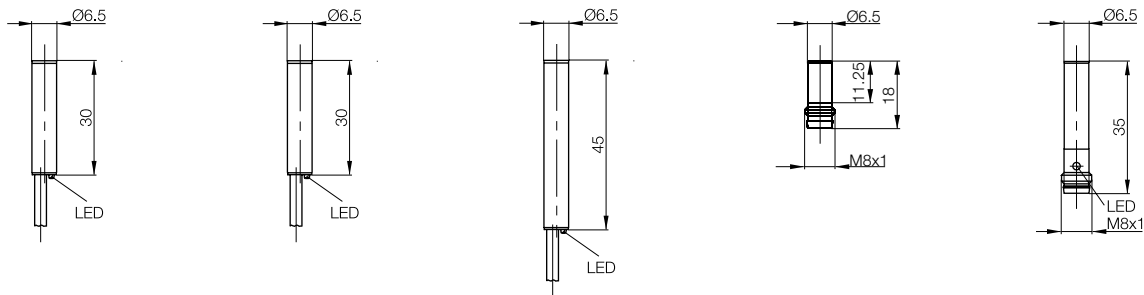
AC/DC 2-wire

AC 2-wire

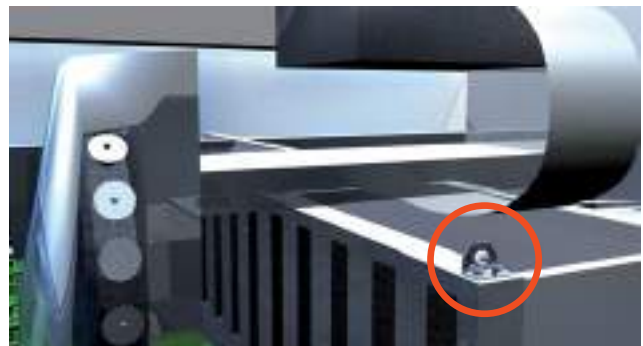
Analog distance measurement

Special properties

Special accessories



SuperShorty sensors in electronics production: SMT placement equipment



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 6.5 mm



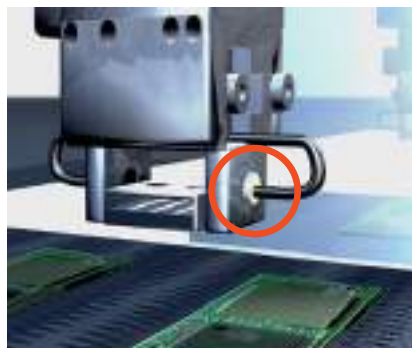
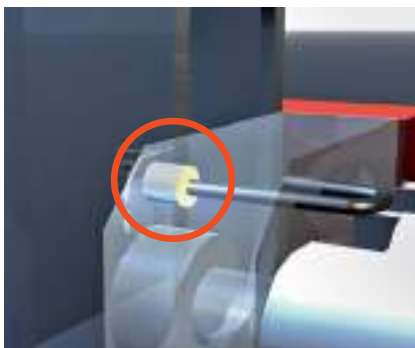
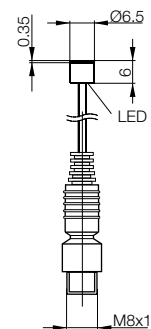
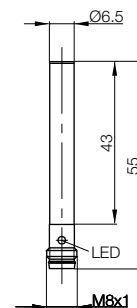
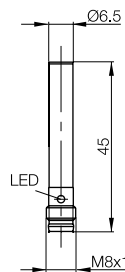
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Housing size		Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		2 mm	2 mm	2 mm
Assured switching distance s_a		0...1.6 mm	0...1.6 mm	0...1.6 mm
Sensing distance		2X	2X	2X
PNP, NO	Ordering code	BES00ZU	BES01KH	BES0257
	Part number	BES 516-371-G-E5-C-S49	BES 516-371-G-S49-C	BES G06E60-PSC20B-EP00,3-GS49
PNP, NC	Ordering code	BES00KY		
	Part number	BES 516-3021-G-E5-C-S49		
NPN, NO	Ordering code	BES0107	BES03RU	
	Part number	BES 516-372-G-E5-C-S49	BES G06EH-NSC20B-S49G	
NPN, NC	Ordering code		BES03RW	
	Part number		BES G06EH-NOC20B-S49G	
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)		75 V DC	75 V DC	75 V DC
Rated operating current I_o		200 mA	200 mA	150 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		1.5 kHz	1.5 kHz	3 kHz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 67
Approvals		CE, cULus	CE, cULus	CE, cULus
Special properties				Short design
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection		M8 connector, 3-pin	M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin
Suggested mating cable		BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

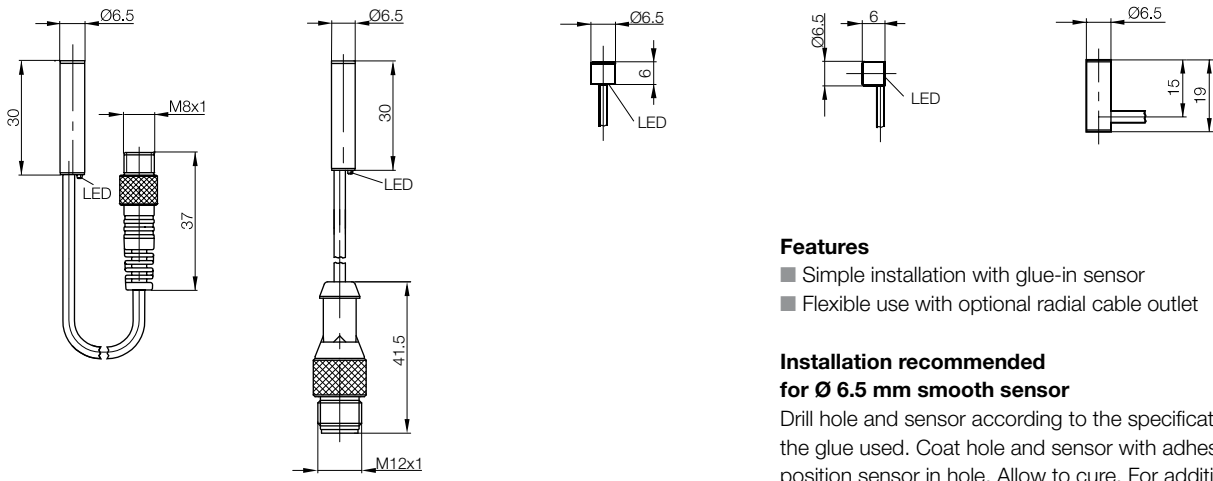
Tubular housing, Ø 6.5 mm



Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm
Flush	Flush	Flush	Flush	Flush
2 mm	2 mm	2 mm	2 mm	2 mm
0...1.6 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm
2X	2X	2X	2X	2X
BES00ZR	BES00ZN	BES0258	BES03ZA	BES01KW
BES 516-371-G-E4-C-S49-00,3	BES 516-371-G-E4-C-S4-00,2	BES G06E60-PSC20B-EP02	BES G06K40-PSC20B-FP02	BES 516-371-SA13-PU-02
BES03F8	BES00KU			
BES 516-3021-G-E4-C-S49-00,3	BES 516-3021-G-E4-C-S4-00,2			
BES0106		BES0250		
BES 516-372-G-E4-C-S49-00,3		BES G06E60-NSC20B-EP02		
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
250 V AC (□)	250 V AC (□)	75 V DC	75 V DC	75 V DC
200 mA	200 mA	150 mA	150 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
1.5 kHz	1.5 kHz	3 kHz	1.5 kHz	2 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	No
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67	IP 65	IP 65
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE
		Short design	Short design	
Stainless steel	Stainless steel	Stainless steel	PBT	Stainless steel
PBT	PBT	PBT	PBT	PBT
0.3 m PUR cable with M8 connector, 3-pin	0.2 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 28 AWG	2 m PUR cable, 28 AWG	2 m PUR cable, 26 AWG
BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020			



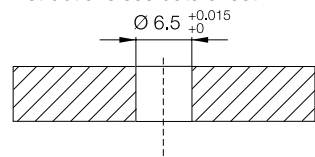
- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



- Features**
- Simple installation with glue-in sensor
 - Flexible use with optional radial cable outlet

Installation recommended for Ø 6.5 mm smooth sensor

Drill hole and sensor according to the specifications of the glue used. Coat hole and sensor with adhesive and position sensor in hole. Allow to cure. For additional instructions see data sheet.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 6.5 mm

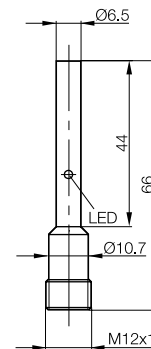
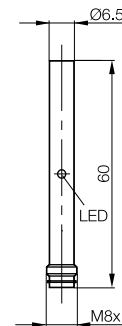
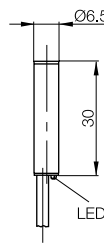


Housing size	Ø 6.5 mm		Ø 6.5 mm	Ø 6.5 mm
Installation type (observe instructions in the Basic Information chapter)	Flush		Quasi-flush	Quasi-flush
Rated switching distance s_n	2 mm		3 mm	3 mm
Assured switching distance s_a	0...1.6 mm		0...2.4 mm	0...2.4 mm
Sensing distance	2X		3X	3X
PNP, NO	Ordering code	BES00ZF	BES02UY	BES02UR
	Part number	BES 516-371-G-E4-C-02	BES G06MI-PSC30B-S49G	BES G06MH1-PSC30B-S04G
PNP, NC	Ordering code	BES00KP	BES02UW	
	Part number	BES 516-3021-G-E4-C-02	BES G06MI-POC30B-S49G	
NPN, NO	Ordering code	BES0102	BES02UU	BES02UP
	Part number	BES 516-372-G-E4-C-02	BES G06MI-NSC30B-S49G	BES G06MH1-NSC30B-S04G
NPN, NC	Ordering code		BES02UT	
	Part number		BES G06MI-NOC30B-S49G	
Supply voltage U_B	10...30 V DC		10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V		2 V	2 V
Rated insulation voltage U_i (protection class)	250 V AC (II)		75 V DC	75 V DC
Rated operating current I_o	200 mA		200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes		Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C		-25...+70°C	-25...+70°C
Switching frequency f max.	1.5 kHz		1 kHz	1 kHz
Output function indicator	Yellow LED		Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 68 per BWN Pr. 20		IP 67	IP 67
Approvals	CE, cULus		CE	CE
Special properties			Large switching distance	Large switching distance
Material	Housing	Stainless steel	Brass-coated	Brass-coated
	Sensing surface	PBT	PBT	PBT
Connection	2 m PVC cable, 26 AWG		M8 connector, 3-pin	M12 connector, 4-pin
Suggested mating cable			BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 6.5 mm



Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm		
Quasi-flush	Non-flush	Non-flush		
4 mm	2.5 mm	4 mm		
0...2.9 mm	0...2 mm	0...3.2 mm		
4X	1X	2X		
BES01NT	BES00TZ	BES01NP		
BES G06MI-PSC40B-S49G	BES 516-349-E4-C-02	BES G06EF-PSC40F-S49G		
BES01NR	BES00U6			
BES G06MI-NSC40B-S49G	BES 516-350-E4-C-02			
10...30 V DC	10...30 V DC	10...30 V DC		
2.8 V	2.5 V	2.5 V		
75 V DC	250 V AC (□)	75 V DC		
200 mA	200 mA	200 mA		
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes		
0...+60 °C	-25...+70°C	-25...+70°C		
700 Hz	2 kHz	1.5 kHz		
Yellow LED	Yellow LED	Yellow LED		
IP 65	IP 68 per BWN Pr. 20	IP 67		
CE, cULus	CE, cULus	CE, cULus		
Large switching distance				
Brass-coated	Stainless steel	Stainless steel		
PBT	PBT	PBT		
M8 connector, 3-pin	2 m PVC cable, 26 AWG	M8 connector, 3-pin		
BCC M313-0000-10-001-EX43T2-020		BCC M313-0000-10-001-EX43T2-020		



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

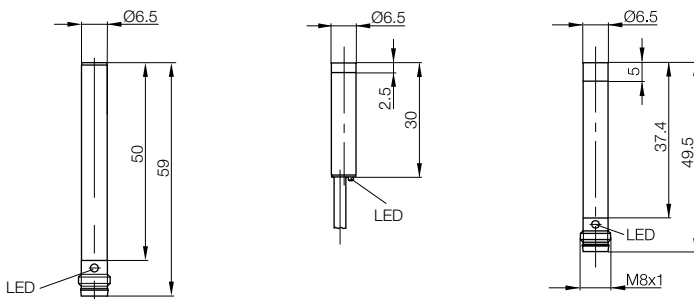
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, Ø 8 mm

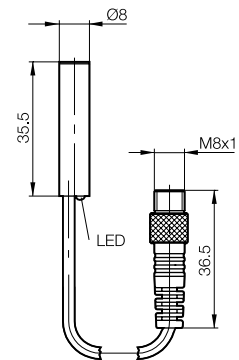
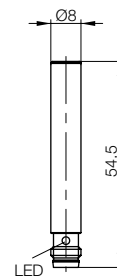
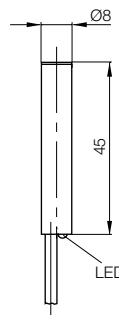


Housing size		Ø 8 mm	Ø 8 mm	Ø 8 mm
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		1.5 mm	2 mm	2 mm
Assured switching distance s_a		0...1.2 mm	0...1.6 mm	0...1.6 mm
Sensing distance		1X	2X	2X
PNP, NO	Ordering code	BES01NY	BES0379	
	Part number	BES G08EG-PSC15B-BV02	BES 516-369-G-SA2-S49-C	
PNP, NC	Ordering code		BES0349	BES0348
	Part number		BES 516-3013-G-SA2-S49-C	BES 516-3013-G-SA2-S49-00,5
NPN, NO	Ordering code			
	Part number			
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.5 V	3.5 V	3.5 V
Rated insulation voltage U_i (protection class)		250 V AC (II)	75 V DC	75 V DC
Rated operating current I_o		200 mA	130 mA	130 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		3 kHz	800 Hz	800 Hz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 68 per BWN Pr. 20	IP 67	IP 67
Approvals		CE, cULus	CE, cULus	CE
Special properties				
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PA 12	PA 12
Connection		2 m PVC cable, 26 AWG	M8 connector, 3-pin	0.5 m PUR cable with M8 connector, 3-pin
Suggested mating cable			BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housings, Ø 8 mm, M8x1



SUPERSHORTY™

Ø 8 mm	Ø 8 mm	M8 x 1	M8 x 1	M8 x 1
Flush	Flush	Flush	Flush	Flush
2 mm	2 mm	0.5 mm	1 mm	1 mm
0...1.6 mm	0...1.6 mm	0...0.36 mm	0...0.8 mm	0...0.8 mm
2X	2X	1X	1X	1X
BES0388	BES012N	BES03P0		BES02HP
BES G08EC-PSC20B-EP01-GS04-516	BES G08EE-PSC20B-BV02	BES M08EA-PSC05B-EP02		BES 516-324-SA8-02
			BES0367	
			BES 516-343-SA13-E5-C-S49	
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	1.5 V
75 V DC	250 V AC (□)	75 V DC	75 V DC	75 V DC
200 mA	200 mA	150 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/No/No
-25...+70°C	-25...+70°C	-25...85 °C	-25...+70°C	-25...+100 °C
2 kHz	1.5 kHz	2 kHz	3.5 kHz	2 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	No
IP 67	IP 68 per BWN Pr. 20	IP 67	IP 67	IP 67
CE	CE, cULus	CE, cULus	CE, cULus	CE
		Short design		
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Ceramic	PBT	PBT	PBT	PBT
1 m PUR cable with M12 connector, 4-pin	2 m PVC cable, 26 AWG	2 m PUR cable, 28 AWG	M8 connector, 3-pin	2 m PVC cable, 26 AWG
BCC M415-0000-1A-003-EX44T2-020			BCC M313-0000-10-001-EX43T2-020	



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

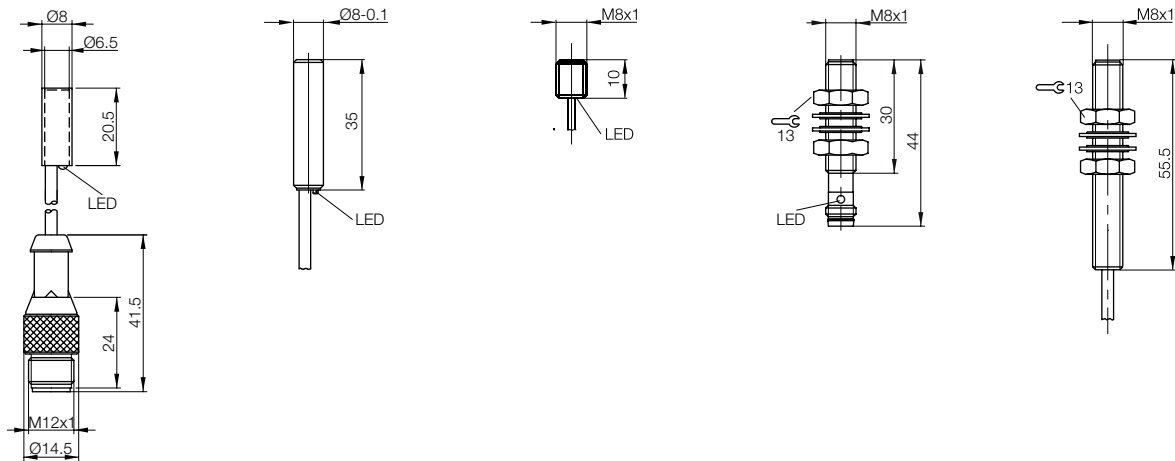
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1



SUPERSHORTY™

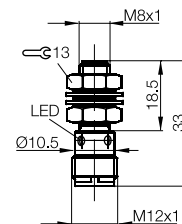
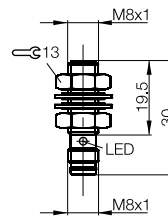
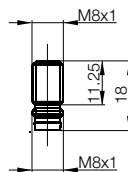


Housing size	M8 x 1	M8 x 1	M8 x 1	
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush	
Rated switching distance s_n	1.5 mm	1.5 mm	1.5 mm	
Assured switching distance s_a	0...1.2 mm	0...1.2 mm	0...1.2 mm	
Sensing distance	1X	1X	1X	
PNP, NO	Ordering code Part number	BES0277 BES M08EA-PSD15B-S49G	BES013N BES M08EC-PSC15B-S49G	BES013M BES M08EC-PSC15B-S04G
PNP, NC	Ordering code Part number	BES0270 BES M08EA-POD15B-S49G	BES013K BES M08EC-POC15B-S49G	
NPN, NO	Ordering code Part number	BES026W BES M08EA-NSD15B-S49G	BES013J BES M08EC-NSC15B-S49G	
NPN, NC	Ordering code Part number	BES026R BES M08EA-NOD15B-S49G		
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC	
Voltage drop U_d at I_o max.	2.5 V	2.5 V	2.5 V	
Rated insulation voltage U_i (protection class)	75 V DC	250 V AC (□)	250 V AC (□)	
Rated operating current I_o	150 mA	200 mA	200 mA	
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C	
Switching frequency f max.	3 kHz	3 kHz	3 kHz	
Output function indicator	No	Yellow LED	Yellow LED	
Degree of protection as per IEC 60529	IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	
Approvals	CE, cULus	CE, cULus	CE, cULus	
Special properties	Short design			
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection	M8 connector, 3-pin	M8 connector, 3-pin	M12 connector, 4-pin	
Suggested mating cable	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

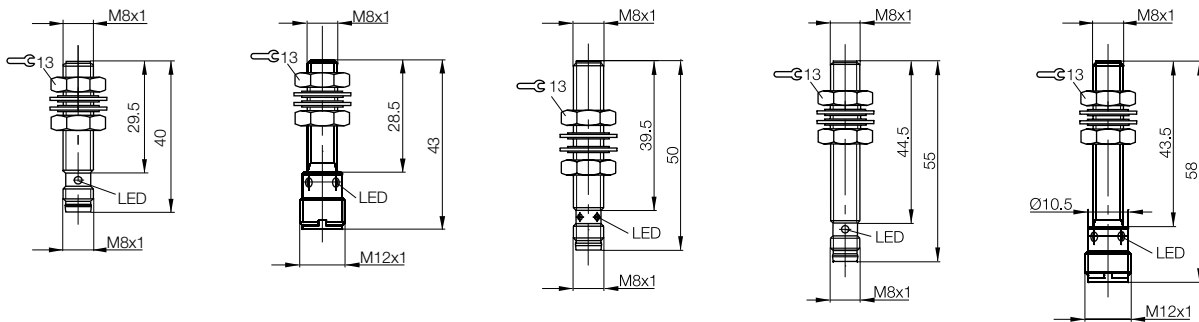
Tubular housing, M8x1



M8 x 1	M8 x 1	M8 x 1	M8 x 1	M8 x 1
Flush	Flush	Flush	Flush	Flush
1.5 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm
0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm
1X	1X	1X	1X	1X
BES0147	BES0146	BES01P7	BES01AW	BES01PF
BES M08EE-PSC15B-S49G	BES M08EE-PSC15B-S04G	BES M08EG-PSC15B-S49G	BES 516-324-S49-C	BES M08EH-PSC15B-S04G
BES0143	BES0142		BES01LR	BES01PE
BES M08EE-POC15B-S49G	BES M08EE-POC15B-S04G		BES 516-377-S49-C	BES M08EH-POC15B-S04G
BES013Z	BES013Y		BES01F5	BES01PC
BES M08EE-NSC15B-S49G	BES M08EE-NSC15B-S04G		BES 516-343-S49-C	BES M08EH-NSC15B-S04G
BES013T	BES013R		BES01LZ	BES01PA
BES M08EE-NOC15B-S49G	BES M08EE-NOC15B-S04G		BES 516-378-S49-C	BES M08EH-NOC15B-S04G
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PBT	PBT	PBT
M8 connector, 3-pin	M12 connector, 4-pin	M8 connector, 3-pin	M8 connector, 3-pin	M12 connector, 4-pin
BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1

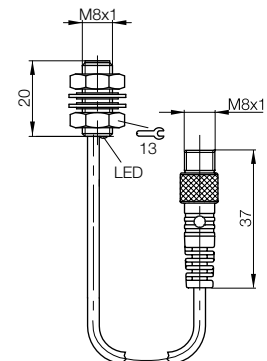
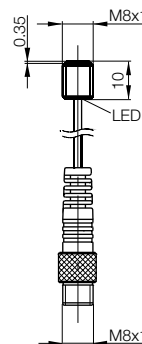
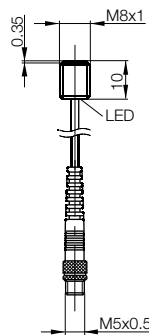


	M8 x 1	M8 x 1	M8 x 1
Housing size	M8 x 1	M8 x 1	M8 x 1
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a	0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code Part number	BES0272 BES M08EA-PSC15B-EP00,3-GS26	BES0273 BES M08EA-PSC15B-EP00,3-GS49
PNP, NC	Ordering code Part number		BES034Y BES 516-324-SA44-C-S49-00,3
NPN, NO	Ordering code Part number	BES026T BES M08EA-NSC15B-EP00,3-GS49	
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)	75 V DC	75 V DC	75 V DC
Rated operating current I_o	150 mA	150 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	3 kHz	3 kHz	4 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Approvals	CE, cULus	CE, cULus	CE
Special properties	Short design	Short design	
Material	Housing: Stainless steel Sensing surface: PBT	Stainless steel PBT	Stainless steel PBT
Connection	0.3 m PUR cable with M5 connector, 4-pin	0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin
Suggested mating cable	BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1



M8 x 1	M8 x 1	M8 x 1	M8 x 1	M8 x 1
Flush	Flush	Flush	Flush	Flush
1.5 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm
0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm
1X	1X	1X	1X	1X
BES00NK	BES00N9	BES00MU	BES00MT	BES01AL
BES 516-324-E4-C-S49-00,3	BES 516-324-E4-C-S4-00,3	BES 516-324-E3-C-S49-00,3	BES 516-324-E3-C-S4-00,3	BES 516-324-EO-C-S49-00,3
			BES010N	BES01LN
			BES 516-377-E3-C-S4-PU-00,3	BES 516-377-EO-C-S49-00,3
				BES01F4
				BES 516-343-EO-C-S49-00,3
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PBT	PBT	PBT
0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M12 connector, 4-pin	0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M12 connector, 4-pin	0.3 m PUR cable with M8 connector, 3-pin
BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020



Inductive sensors

Global DC 3-wire

DC 3-/4-wire Tubular housings

Block housings

DC 2-wire

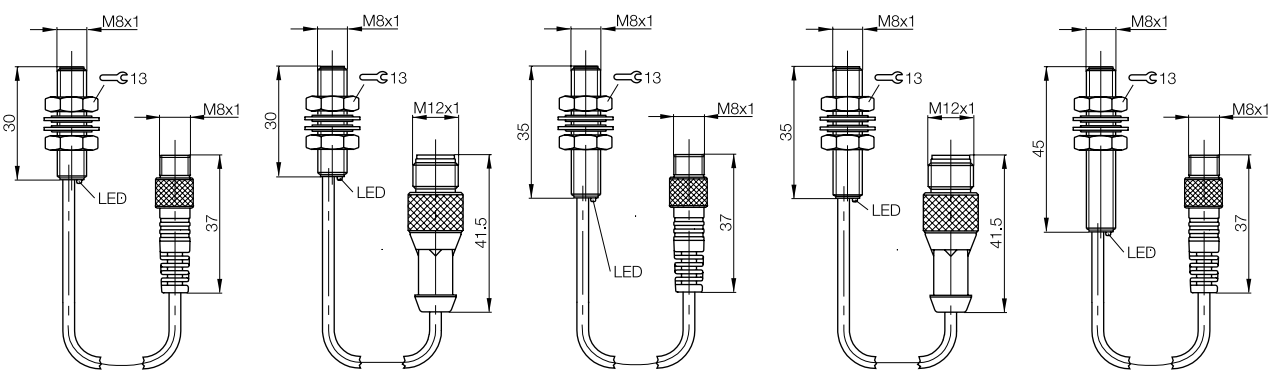
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1

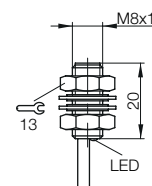
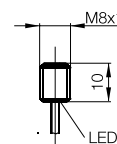
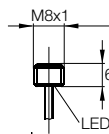


		M8 x 1	M8 x 1	M8 x 1
Housing size		M8 x 1	M8 x 1	M8 x 1
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a		0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance		1X	1X	1X
PNP, NO	Ordering code	BES026M	BES0275	BES034P
	Part number	BES M08E60-PSC15B-EP02	BES M08EA-PSC15B-EP02	BES 516-324-SA44-C-02
PNP, NC	Ordering code	BES026K	BES026Y	
	Part number	BES M08E60-POC15B-EP02	BES M08EA-POC15B-EP02	
NPN, NO	Ordering code	BES026J	BES026U	
	Part number	BES M08E60-NSC15B-EP02	BES M08EA-NSC15B-EP02	
NPN, NC	Ordering code	BES026H	BES026N	
	Part number	BES M08E60-NOC15B-EP02	BES M08EA-NOC15B-EP02	
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)		75 V DC	75 V DC	75 V DC
Rated operating current I_o		150 mA	150 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		3 kHz	3 kHz	4 kHz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 67
Approvals		CE, cULus	CE, cULus	CE
Special properties		Short design	Short design	
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection		2 m PUR cable, 28 AWG	2 m PUR cable, 28 AWG	2 m PVC cable, 26 AWG

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1



M8 x 1	M8 x 1	M8 x 1	M8 x 1	M8 x 1
Flush	Flush	Flush	Flush	Flush
1.5 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm
0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm
1X	1X	1X	1X	1X
BES00MY		BES014K	BES01A7	BES01AC
BES 516-324-E4-C-02		BES M08EF-PSC15B-BP02	BES 516-324-EO-C-02	BES 516-324-EO-C-PU-02
BES010T	BES010K	BES014H	BES01LC	BES01LH
BES 516-377-E4-C-02	BES 516-377-E3-C-PU-02	BES M08EF-POC15B-BP02	BES 516-377-EO-C-02	BES 516-377-EO-C-PU-02
BES00TL		BES03J6	BES01EY	BES01F1
BES 516-343-E4-C-02		BES M08EF-NSC15B-BP02	BES 516-343-EO-C-02	BES 516-343-EO-C-PU-02
		BES014C	BES01LT	
		BES M08EF-NOC15B-BP02	BES 516-378-EO-C-02	
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PBT	PBT	PBT
2 m PVC cable, 26 AWG	2 m PUR cable, 26 AWG	2 m PUR cable, 26 AWG	2 m PVC cable, 26 AWG	2 m PUR cable, 26 AWG



Inductive sensors

Global DC 3-wire

DC 3-/4-wire Tubular housings

Block housings

DC 2-wire

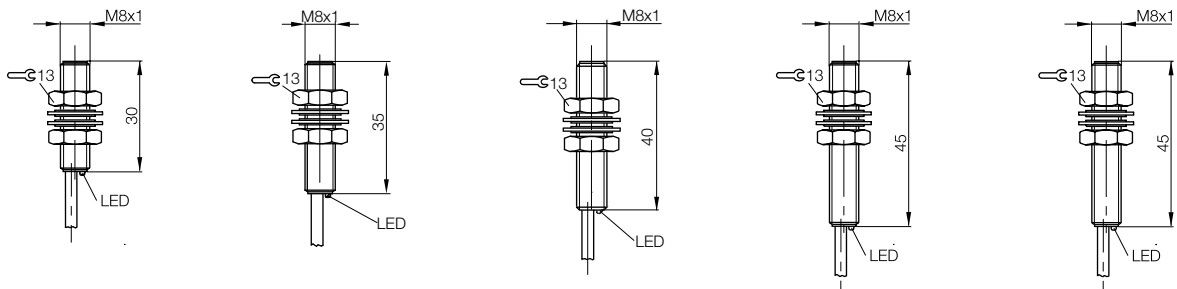
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1



SUPERSHORTY™

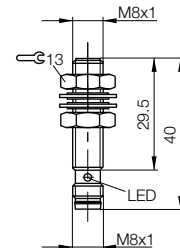
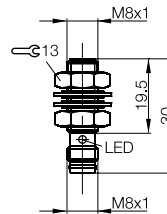
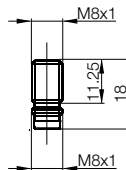


		M8 x 1	M8 x 1	M8 x 1
Housing size		M8 x 1	M8 x 1	M8 x 1
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		2 mm	2 mm	2 mm
Assured switching distance s_a		0...1.6 mm	0...1.6 mm	0...1.6 mm
Sensing distance		2X	2X	2X
PNP, NO	Ordering code	BES0278	BES013P	BES014A
	Part number	BES M08EA-PSD20B-S49G	BES M08EC-PSC20B-S49G	BES M08EE-PSC20B-S49G
PNP, NC	Ordering code		BES013L	BES0145
	Part number		BES M08EC-POC20B-S49G	BES M08EE-POC20B-S49G
NPN, NO	Ordering code	BES01P1		BES0141
	Part number	BES M08EA-NSD20B-S49G		BES M08EE-NSC20B-S49G
NPN, NC	Ordering code			BES013W
	Part number			BES M08EE-NOC20B-S49G
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)		75 V DC	250 V AC (□)	250 V AC (□)
Rated operating current I_o		150 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		3 kHz	1.5 kHz	1.5 kHz
Output function indicator		No	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
Approvals		CE, cULus	CE, cULus	CE, cULus
Special properties		Short design		
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection		M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin
Suggested mating cable		BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1



M8 x 1	M8 x 1	M8 x 1	M8 x 1	M8 x 1
Flush	Flush	Flush	Flush	Flush
2 mm	2 mm	2 mm	2 mm	2 mm
0...1.6 mm	0...1.4 mm	0...1.6 mm	0...1.4 mm	0...1.6 mm
2X	2X	2X	2X	2X
BES0148	BES0149	BES00P7	BES02P0	BES01AU
BES M08EE-PSC20B-S04G	BES M08EE-PSC20B-S04G-101	BES 516-324-G-E5-C-S49	BES 516-324-SA96-G-E5-C-S49	BES 516-324-G-S49-C
BES0144		BES0113		BES01LP
BES M08EE-POC20B-S04G		BES 516-377-G-E5-C-S49		BES 516-377-G-S49-C
BES0140		BES00TY	BES02P1	
BES M08EE-NSC20B-S04G		BES 516-343-G-E5-C-S49	BES 516-343-SA96-G-E5-C-S49	
BES013U		BES0118		
BES M08EE-NOC20B-S04G		BES 516-378-G-E5-C-S49		
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
1.5 kHz	1.5 kHz	1.5 kHz	1.5 kHz	1.5 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	With ceramic coating	PBT	with ceramic coating	PBT
M12 connector, 4-pin	M12 connector, 4-pin	M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

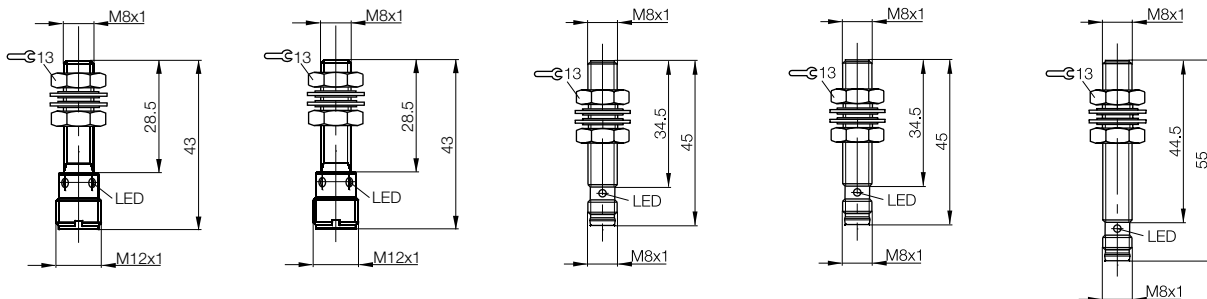
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1



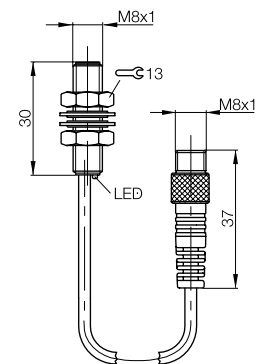
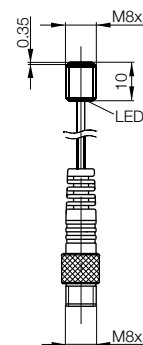
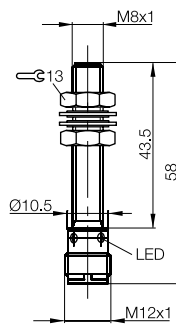
SUPERSHORTY™

Housing size	M8 x 1	M8 x 1	M8 x 1
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	2 mm	2 mm	2 mm
Assured switching distance s_a	0...1.6 mm	0...1.6 mm	0...1.6 mm
Sensing distance	2X	2X	2X
PNP, NO	Ordering code Part number	BES01PH BES M08EH-PSC20B-S04G	BES0276 BES M08EA-PSC20B-EP00,3-GS49
PNP, NC	Ordering code Part number		BES00P4 BES 516-324-G-E4-C-S49-00,3
NPN, NC	Ordering code Part number		BES0112 BES 516-377-G-E4-C-S49-00,3
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)	250 V AC (□)	75 V DC	250 V AC (□)
Rated operating current I_o	200 mA	150 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	1.5 kHz	3 kHz	1.5 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 68 per BWN Pr. 20	IP 67	IP 68 per BWN Pr. 20
Approvals	CE, cULus	CE, cULus	CE, cULus
Special properties		Short design	
Material	Housing Sensing surface	Stainless steel PBT	Stainless steel PBT
Connection	M12 connector, 4-pin	0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin
Suggested mating cable	BCC M415-0000-1A-003-EX44T2-020	BCC M813-0000-10-001-EX43T2-020	BCC M813-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1



SUPERSHORTY™

M8 x 1	M8 x 1	M8 x 1	M8 x 1	M8 x 1
Flush	Flush	Flush	Flush	Flush
2 mm	2 mm	2 mm	2 mm	2 mm
0...1.6 mm	0...1.4 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm
2X	2X	2X	2X	2X
BES00P2	BES02P5	BES03TU	BES01AT	
BES 516-324-G-E4-C-S4-00,3	BES 516-324-SA96-G-E4-C-S4-00,3	BES M08EF-PSC20B-BP00,3-GS49	BES 516-324-G-EO-C-S49-01	
				BES026Z
				BES M08EA-POC20B-EP02
				BES026P
				BES M08EA-NOC20B-EP02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)	75 V DC
200 mA	200 mA	200 mA	200 mA	150 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
1.5 kHz	1.5 kHz	1.5 kHz	1.5 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
				Short design
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	with ceramic coating	PBT	PBT	PBT
0.3 m PUR cable with M12 connector, 4-pin	0.3 m PUR cable with M12 connector, 4-pin	0.3 m PUR cable with M8 connector, 3-pin	1 m PUR cable with M8 connector, 3-pin	2 m PUR cable, 28 AWG
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	



Inductive sensors

Global DC 3-wire

DC 3-/4-wire Tubular housings

Block housings

DC 2-wire

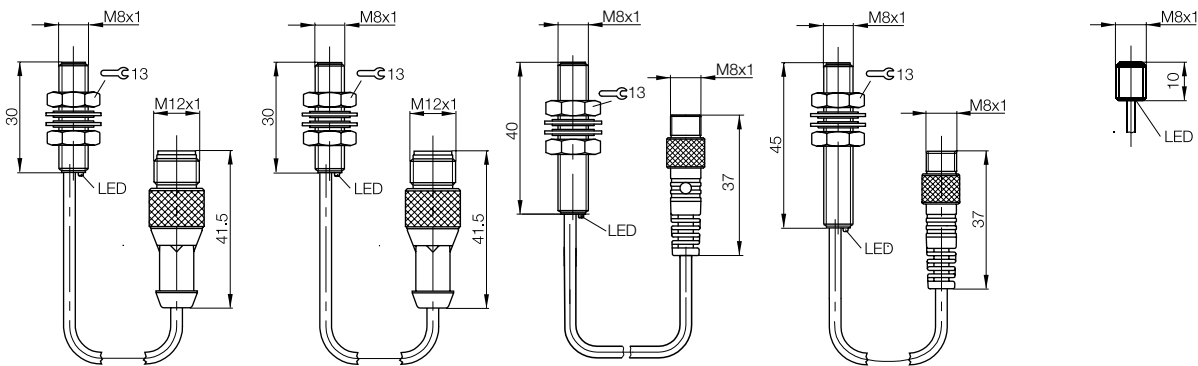
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1

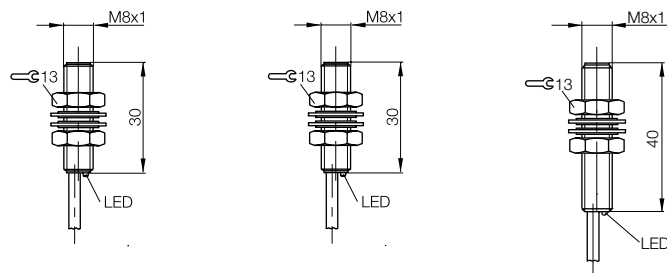


Housing size	M8 x 1	M8 x 1	M8 x 1	
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush	
Rated switching distance s_n	2 mm	2 mm	2 mm	
Assured switching distance s_a	0...1.6 mm	0...1.6 mm	0...1.6 mm	
Sensing distance	2X	2X	2X	
PNP, NO	Ordering code Part number	BES00NR BES 516-324-G-E4-C-02	BES00NY BES 516-324-G-E4-C-PU-02	BES014L BES M08EF-PSC20B-BP02
PNP, NC	Ordering code Part number	BES010Y BES 516-377-G-E4-C-02	BES010Z BES 516-377-G-E4-C-PU-02	BES014J BES M08EF-POC20B-BP02
NPN, NO	Ordering code Part number	BES00TT BES 516-343-G-E4-C-02		BES014F BES M08EF-NSC20B-BP02
NPN, NC	Ordering code Part number	BES0116 BES 516-378-G-E4-C-02		BES014E BES M08EF-NOC20B-BP02
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC	
Voltage drop U_d at I_o max.	2.5 V	2.5 V	2.5 V	
Rated insulation voltage U_i (protection class)	250 V AC (□)	250 V AC (□)	250 V AC (□)	
Rated operating current I_o	200 mA	200 mA	200 mA	
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C	
Switching frequency f max.	1.5 kHz	1.5 kHz	1.5 kHz	
Output function indicator	Yellow LED	Yellow LED	Yellow LED	
Degree of protection as per IEC 60529	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	
Approvals	CE, cULus	CE, cULus	CE, cULus	
Special properties				
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection		2 m PVC cable, 26 AWG	2 m PUR cable, 26 AWG	2 m PUR cable, 26 AWG
Suggested mating cable				

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

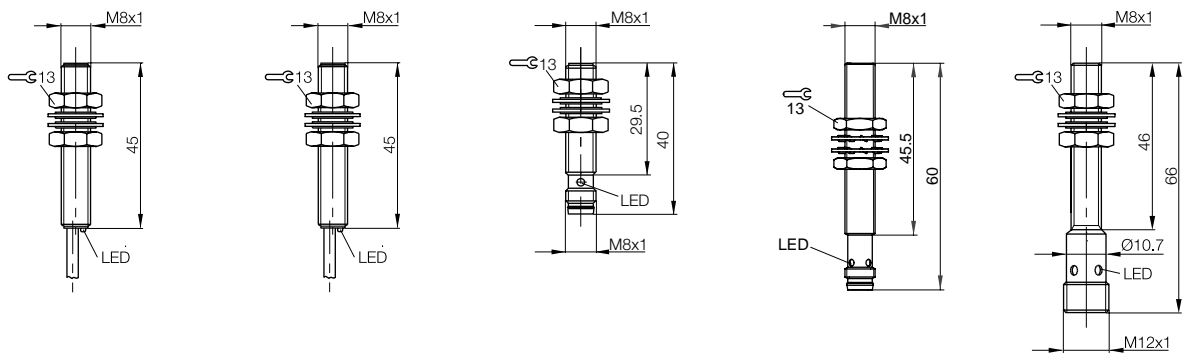
Tubular housing, M8x1



M8 x 1	M8 x 1	M8 x 1	M8 x 1	M8 x 1
Flush	Flush	Flush	Quasi-flush	Quasi-flush
2 mm	2 mm	2.5 mm	3 mm	3 mm
0...1.6 mm	0...1.6 mm	0...2 mm	0...2.4 mm	0...2.4 mm
2X	2X	2X	3X	3X
BES01AM	BES01AN	BES0427	BES02WA	BES02W9
BES 516-324-G-EO-C-02	BES 516-324-G-EO-C-PU-02	BES M08EE-PSC25B-S49G	BES M08MH1-PSC30B-S49G	BES M08MH1-PSC30B-S04G
		BES0423		
		BES M08EE-POC25B-S49G		
			BES02W8	BES02W7
			BES M08MH1-NSC30B-S49G	BES M08MH1-NSC30B-S04G
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2 V	2 V
250 V AC (□)	250 V AC (□)	250 V AC	75 V DC	75 V DC
200 mA	200 mA	100 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	0...+60 °C	-25...+70°C	-25...+70°C
1.5 kHz	1.5 kHz	1 kHz	1 kHz	1 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE	CE
			Large switching distance	Large switching distance
Stainless steel	Stainless steel	Stainless steel	Brass-coated	Brass-coated
PBT	PBT	PBT	PBT	PBT
2 m PVC cable, 26 AWG	2 m PUR cable, 26 AWG	M8 connector, 3-pin	M8 connector, 3-pin	M12 connector, 4-pin
		BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1

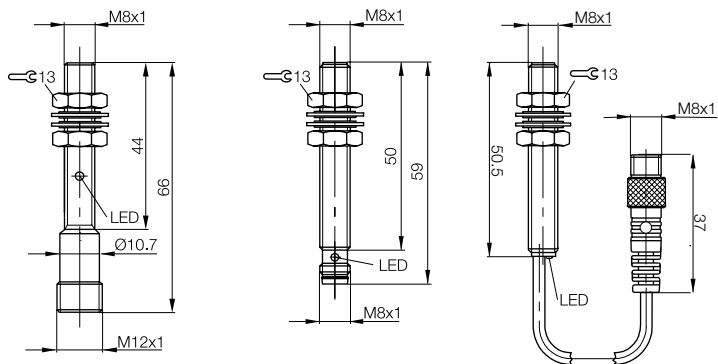


Housing size	M8 x 1	M8 x 1	M8 x 1
Installation type (observe instructions in the Basic Information chapter)	Quasi-flush	Quasi-flush	Quasi-flush
Rated switching distance s_n	3 mm	4 mm	4 mm
Assured switching distance s_a	0...2.2 mm	0...2.9 mm	0...2.9 mm
Sensing distance	3X	4X	4X
PNP, NO	Ordering code Part number	BES02PW BES M08MH1-PSC30B-S04G-101	BES01ZW BES M08MI-PSC40B-S49G
PNP, NC	Ordering code Part number		BES003R BES M08MI-PSC40B-BP00,3-GS49
NPN, NO	Ordering code Part number		BES01ZT BES M08MI-NSC40B-S49G
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2 V	2.8 V	2.8 V
Rated insulation voltage U_i (protection class)	75 V DC	75 V DC	75 V DC
Rated operating current I_o	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	0...+60 °C	0...+60 °C
Switching frequency f max.	1 kHz	800 Hz	800 Hz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Approvals	CE	CE, cULus	CE, cULus
Special properties	Large switching distance	Large switching distance	Large switching distance
Material	Housing Sensing surface	Brass-coated with ceramic coating	Brass-coated PBT
Connection	M12 connector, 4-pin	M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin
Suggested mating cable	BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1



M8 x 1	M8 x 1	M8 x 1	M8 x 1	M8 x 1
Quasi-flush	Non-flush	Non-flush	Non-flush	Non-flush
4 mm	2.5 mm	2.5 mm	2.5 mm	2.5 mm
0...2.9 mm	0...2 mm	0...2 mm	0...2 mm	0...2 mm
4X	1X	1X	1X	1X
BES01ZU	BES01P3	BES01M6	BES01P8	
BES M08MI-PSC40B-BP00,2-GS04	BES M08ED-PSC25F-S04G	BES 516-383-S49-C	BES M08EG-PSC25F-S04G	
			BES01P6	
			BES M08EG-POC25F-S04G	
BES01ZR	BES01P2		BES01P5	BES011U
BES M08MI-NSC40B-BP00,2-GS04	BES M08ED-NSC25F-S04G		BES M08EG-NSC25F-S04G	BES 516-384-E4-C-S49-00.2
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.8 V	2.5 V	2.5 V	2.5 V	2.5 V
75 V DC	250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
0...+60 °C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
800 Hz	2 kHz	2 kHz	2 kHz	2 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Large switching distance				
Brass-coated	Stainless steel	Stainless steel	Stainless steel	Stainless steel
PBT	PBT	PBT	PBT	PBT
0.2 m PUR cable with M12 connector, 4-pin	M12 connector, 4-pin	M8 connector, 3-pin	M12 connector, 4-pin	0.2 m PVC cable with M8 connector, 3-pin
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

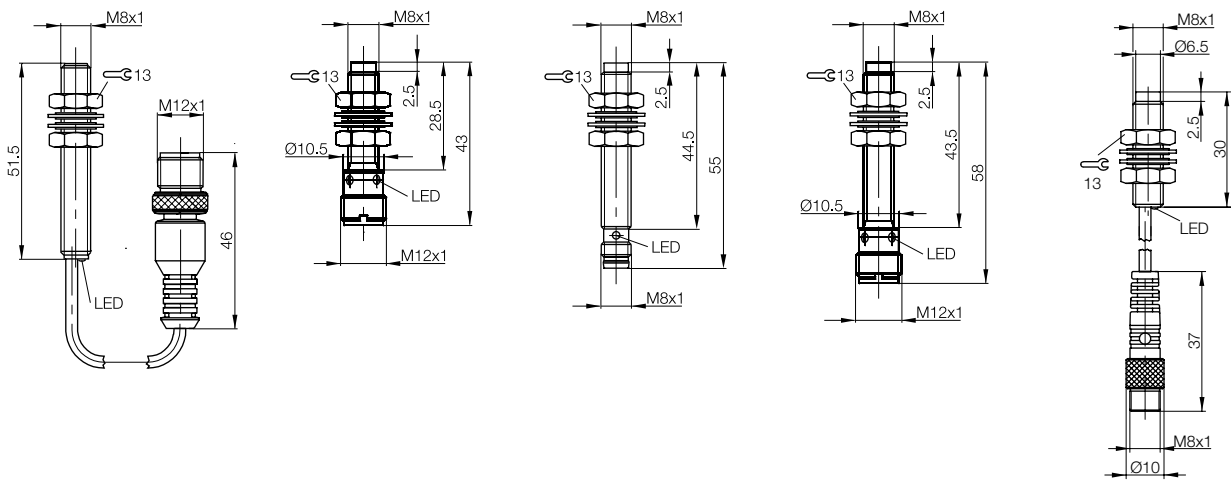
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1

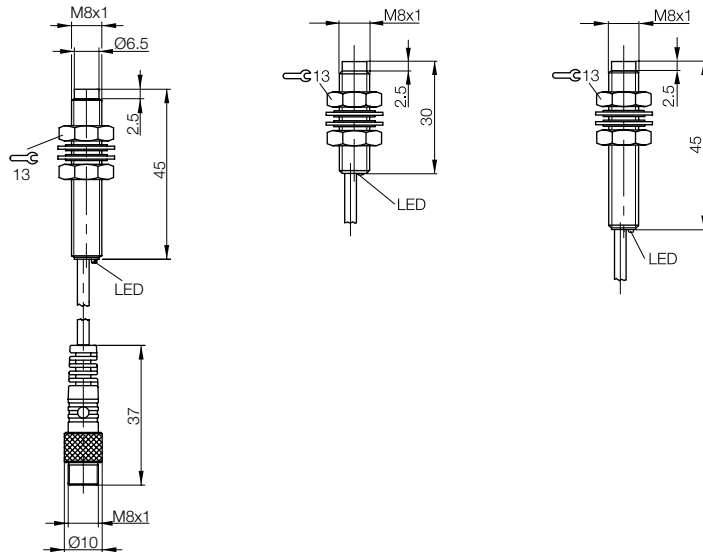


Housing size	M8 x 1	M8 x 1	M8 x 1
Installation type (observe instructions in the Basic Information chapter)	Non-flush	Non-flush	Non-flush
Rated switching distance s_n	2.5 mm	2.5 mm	2.5 mm
Assured switching distance s_a	0...2 mm	0...2 mm	0...2 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code	BES011A	BES01M0
	Part number	BES 516-383-E4-C-02	BES 516-383-EO-C-02
PNP, NC	Ordering code		
	Part number		
NPN, NO	Ordering code	BES01MA	BES011M
	Part number	BES 516-384-EO-C-S49-00.2	BES 516-384-E4-C-02
NPN, NC	Ordering code		BES01M7
	Part number		BES 516-384-EO-C-02
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)	250 V AC (□)	250 V AC (□)	250 V AC (□)
Rated operating current I_o	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	2 kHz	2 kHz	2 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
Approvals	CE, cULus	CE, cULus	CE, cULus
Special properties			
Material	Housing	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT
Connection	0.2 m PVC cable with M8 connector, 3-pin	2 m PVC cable, 26 AWG	2 m PVC cable, 26 AWG
Suggested mating cable	BCC M313-0000-10-001-EX43T2-020		

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M8x1



M8 x 1	M8 x 1	M8 x 1	M8 x 1	
Non-flush	Non-flush	Non-flush	Non-flush	
4 mm	4 mm	6 mm	6 mm	
0...3.2 mm	0...3.2 mm	0...4.8 mm	0...4.8 mm	
2X	2X	3X	3X	
BES014M	BES01P9	BES02W4	BES02W3	
BES M08EF-PSC40F-S49G	BES M08EG1-PSC40F-S04G	BES M08MG1-PSC60F-S49G	BES M08MG1-PSC60F-S04G	
		BES02W2		
		BES M08MG1-POC60F-S49G		
			BES02W0	
			BES M08MG1-NSC60F-S04G	
		BES02UZ		
		BES M08MG1-NOC60F-S49G		
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	
2.5 V	2.5 V	2 V	2 V	
250 V AC (□)	250 V AC (□)	75 V DC	75 V DC	
200 mA	200 mA	200 mA	200 mA	
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	
1.5 kHz	5 kHz	500 Hz	500 Hz	
Yellow LED	Yellow LED	Yellow LED	Yellow LED	
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67	IP 67	
CE, cULus	CE, cULus	CE	CE	
		Large switching distance	Large switching distance	
Stainless steel	Stainless steel	Brass-coated	Brass-coated	
PBT	PBT	PBT	PBT	
M8 connector, 3-pin	M12 connector, 4-pin	M8 connector, 3-pin	M12 connector, 4-pin	
BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

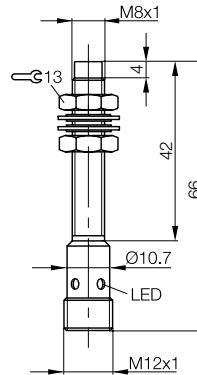
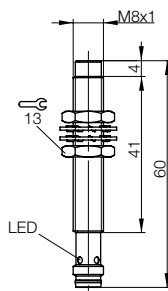
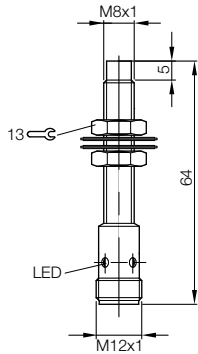
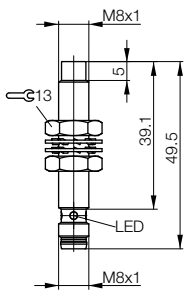
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M12x1

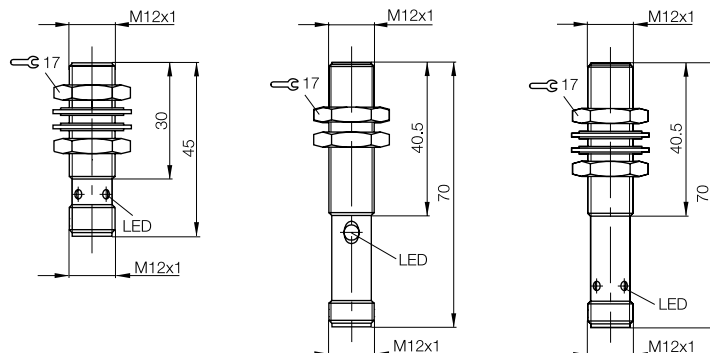


Housing size		M12x1	M12x1	M12x1
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		2 mm	2 mm	2 mm
Assured switching distance s_a		0...1.6 mm	0...1.6 mm	0...1.6 mm
Sensing distance		1X	1X	1X
PNP, NO	Ordering code	BES00PK	BES02EL	BES01C8
	Part number	BES 516-325-E5-C-S4	BES 515-325-S4-C	BES 516-325-S4-C
PNP, NC	Ordering code	BES00YT	BES01K6	
	Part number	BES 516-370-E5-C-S4	BES 516-370-S4-C	
PNP, complementary	Ordering code			BES0161
	Part number			BES 516-113-S4-C
NPN, NO	Ordering code	BES00T5	BES01EN	
	Part number	BES 516-329-E5-C-S4	BES 516-329-S4-C	
NPN, NC	Ordering code	BES010A	BES01LA	
	Part number	BES 516-375-E5-C-S4	BES 516-375-S4-C	
NPN, complementary	Ordering code			BES016E
	Part number			BES 516-118-S4-C
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_a at I_e max.		2 V	1.5 V	1.5 V
Rated insulation voltage U_i (protection class)		250 V AC (□)	250 V AC (□)	250 V AC (□)
Rated operating current I_e		200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-40...+85 °C
Switching frequency f max.		5 kHz	3 kHz	2.5 kHz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
Approvals		CE, cULus	CE, cULus	CE, cULus
Material	Housing	Brass-coated	Stainless steel	Stainless steel
	Sensing surface	PBT	PA 12	PA 12
Connection		M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin
Suggested mating cable		BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M12x1



M12x1	M12x1	M12x1	M12x1	M12x1
Flush	Flush	Flush	Flush	Flush
2 mm	2 mm	2 mm	4 mm	4 mm
0...1.6 mm	0...1.6 mm	0...1.6 mm	0...3.2 mm	0...3.2 mm
1X	1X	1X	2X	2X
BES00PH	BES00P8	BES01AZ	BES00PY	BES014W
BES 516-325-E4-C-S4-00,5	BES 516-325-E4-C-02	BES 516-325-BO-C-02	BES 516-325-G-E5-C-S4	BES M12EE-PSC40B-S04G
	BES00YL	BES01K2	BES00Z0	BES014U
	BES 516-370-E4-C-02	BES 516-370-BO-C-02	BES 516-370-G-E5-C-S4	BES M12EE-POC40B-S04G
	BES00T0	BES01EF	BES00TC	
	BES 516-329-E4-C-02	BES 516-329-BO-C-02	BES 516-329-G-E5-C-S4	
	BES0108	BES01L7	BES010H	
	BES 516-375-E4-C-02	BES 516-375-BO-C-02	BES 516-375-G-E5-C-S4	
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2 V	2 V	1.5 V	2.5 V	2 V
250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)	250 V AC (□)
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-40...+85 °C	-25...+70°C	-25...+85 °C
5 kHz	5 kHz	3 kHz	2.5 kHz	2 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Brass-coated	Brass-coated	Stainless steel	Brass-coated	Stainless steel
PBT	PBT	PA 12	LCP	LCP
0.5 m PUR cable with M12 connector, 4-pin	2 m PVC cable, 22 AWG	2 m PVC cable, 22 AWG	M12 connector, 4-pin	M12 connector, 4-pin
BCC M415-0000-1A-003-EX44T2-020			BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

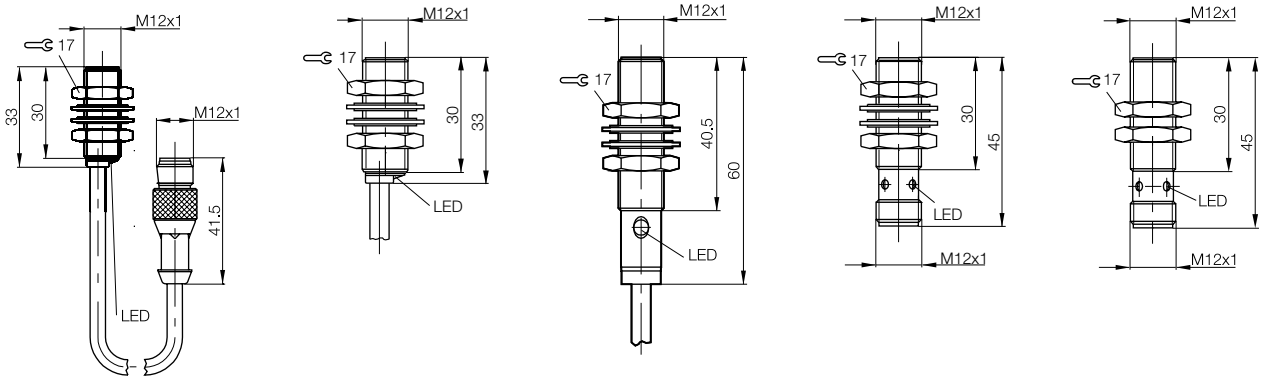
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M12x1

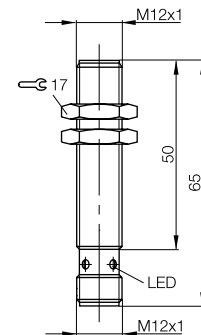
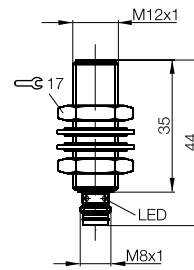
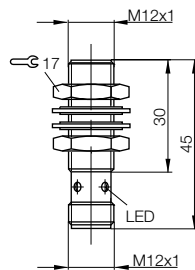


Housing size		M12x1	M12x1	M12x1
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		4 mm	4 mm	4 mm
Assured switching distance s_a		0...3 mm	0...3.2 mm	0...3.2 mm
Sensing distance		2X	2X	2X
PNP, NO	Ordering code		BES00PZ	BES02FU
	Part number		BES 516-325-G-E5-C-S49	BES M12EI-PSC40B-S04G
PNP, NC	Ordering code		BES00Z1	BES02FT
	Part number		BES 516-370-G-E5-C-S49	BES M12EI-POC40B-S04G
NPN, NO	Ordering code	BES03UP	BES00TE	BES02FR
	Part number	BES 516-329-SA96-G-E5-C-S4	BES 516-329-G-E5-C-S49	BES M12EI-NSC40B-S04G
NPN, NC	Ordering code		BES010J	
	Part number		BES 516-375-G-E5-C-S49	
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.5 V	2.5 V	2.5 V
Rated insulation voltage U_i (protection class)		250 V AC (II)	75 V DC	250 V AC (II)
Rated operating current I_o		200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+85 °C
Switching frequency f max.		2.5 kHz	2.5 kHz	1 kHz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 68 per BWN Pr. 20	IP 67	IP 68 per BWN Pr. 20
Approvals		CE, cULus	CE, cULus	CE, cULus
Special properties				
Material	Housing	Brass-coated	Brass-coated	Stainless steel
	Sensing surface	with ceramic coating	LCP	LCP
Connection		M12 connector, 4-pin	M8 connector, 3-pin	M12 connector, 4-pin
Suggested mating cable		BCC M415-0000-1A-003-EX44T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M12x1



SUPERSHORTY™

M12x1	M12x1	M12x1	M12x1	M12x1
Flush	Flush	Flush	Flush	Flush
4 mm	4 mm	4 mm	4 mm	4 mm
0...3.2 mm	0...3.2 mm	0...3 mm	0...3.2 mm	0...3.2 mm
2X	2X	2X	2X	2X
BES038C	BES01C7	BES035R	BES0464	BES00PW
BES M12EI-PSC40B-S04G-009	BES 516-325-G-S4-C	BES 516-325-SA96-G-S4-C	BES M12EA-PSC40B-EP00,3-GS04	BES 516-325-G-E4-C-S4-00,5
			BES0465	
			BES M12EA-POC40B-EP00,3-GS04	
			BES0467	BES03EK
			BES M12EA-NSC40B-EP00,3-GS04	BES 516-329-G-E4-C-S4-PU-00,5
			BES0466	
			BES M12EA-NOC40B-EP00,3-GS04	
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	1.7 V	2.5 V
250 V AC (□)	250 V AC (□)	250 V AC (□)	75 V DC	250 V AC (□)
200 mA	200 mA	200 mA	100 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-40...+85 °C	-25...+70°C	-25...+70°C	-40...+85 °C	-25...+70°C
2 kHz	1 kHz	1 kHz	1 kHz	2.5 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
			Short design	
Stainless steel	Brass-coated	Brass-coated	Stainless steel	Brass-coated
LCP	LCP	with ceramic coating	LCP	LCP
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	0.3 m PUR cable with M12 connector, 4-pin	0.5 m PUR cable with M12 connector, 4-pin
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

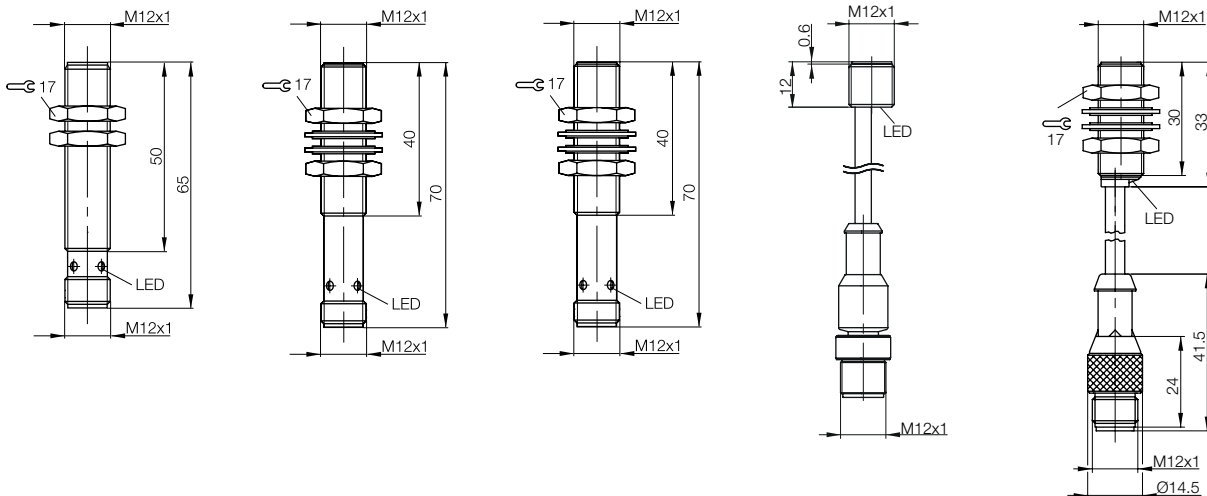
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M12x1

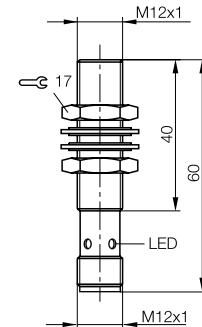
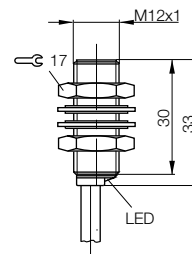
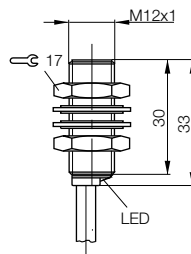


Housing size		M12x1	M12x1	M12x1
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Quasi-flush
Rated switching distance s_n		4 mm	4 mm	6 mm
Assured switching distance s_a		0...3.2 mm	0...3.2 mm	0...4.8 mm
Sensing distance		2X	2X	3X
PNP, NO	Ordering code	BES00PL	BES00PP	BES02WZ
	Part number	BES 516-325-G-E4-C-02	BES 516-325-G-E4-C-PU-02	BES M12MG1-PSC60B-S04G
PNP, NC	Ordering code	BES00YU	BES00YW	BES02WY
	Part number	BES 516-370-G-E4-C-02	BES 516-370-G-E4-C-PU-02	BES M12MG1-POC60B-S04G
PNP, complementary	Ordering code			
	Part number			
NPN, NO	Ordering code	BES00T6	BES00T9	BES02WW
	Part number	BES 516-329-G-E4-C-02	BES 516-329-G-E4-C-PU-02	BES M12MG1-NSC60B-S04G
NPN, NC	Ordering code	BES010C	BES010E	BES02WU
	Part number	BES 516-375-G-E4-C-02	BES 516-375-G-E4-C-PU-02	BES M12MG1-NOC60B-S04G
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.5 V	2.5 V	2 V
Rated insulation voltage U_i (protection class)		250 V AC (II)	250 V AC (II)	75 V DC
Rated operating current I_o		200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		2.5 kHz	2.5 kHz	800 Hz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67
Approvals		CE, cULus	CE, cULus	CE
Special properties				Large switching distance
Material	Housing	Brass-coated	Brass-coated	Brass-coated
	Sensing surface	LCP	LCP	PBT
Connection		2 m PVC cable, 22 AWG	2 m PUR cable, 22 AWG	M12 connector, 4-pin
Suggested mating cable				BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

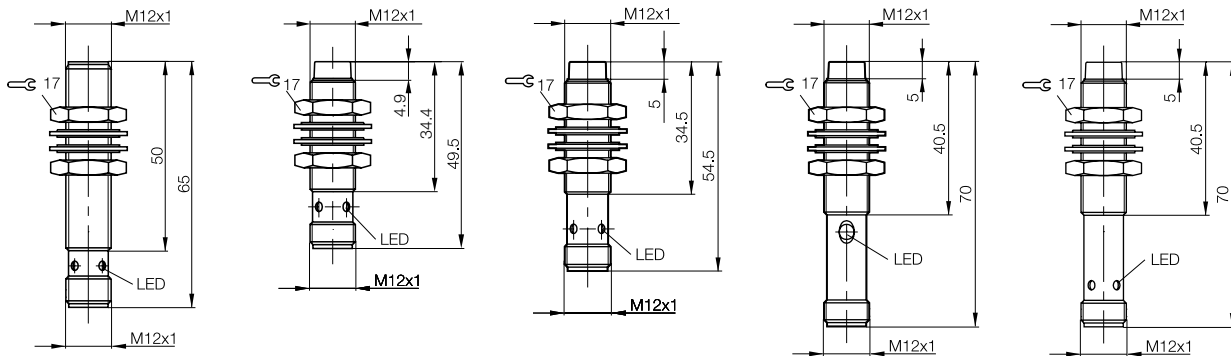
Tubular housing, M12x1



M12x1	M12x1	M12x1	M12x1	M12x1
Quasi-flush	Non-flush	Non-flush	Non-flush	Non-flush
8 mm	4 mm	4 mm	4 mm	4 mm
0...5.8 mm	0...3.2 mm	0...3.2 mm	0...3.2 mm	0...3.2 mm
4X	1X	1X	1X	1X
BES01ZN	BES00UY		BES02FC	BES01H6
BES M12MI-PSH80B-S04G	BES 516-356-E5-C-S4		BES 515-356-S4-C	BES 516-356-S4-C
	BES00KM		BES018Y	
	BES 516-3019-E5-C-S4		BES 516-3019-S4-C	
				BES0178
				BES 516-131-S4-C
BES01ZY		BES030Z	BES01HE	
BES M12MI-NSH80B-S04G		BES 516-357-E5-Y-S4	BES 516-357-S4-C	
			BES019E	
			BES 516-3030-S4-C	
10...55 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2 V	3.5 V	1.5 V	1.5 V
250 V AC (□)	250 V AC (□)	75 V DC	250 AC (□)	250 V AC (□)
200 mA	200 mA	130 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
0...+60 °C	-25...+70°C	-25...+70°C	-40...+85 °C	-40...+85 °C
300 Hz	2 kHz	400 Hz	1.5 kHz	1.5 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
CE	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Large switching distance				
Brass-coated	Brass-coated	Brass-coated	Stainless steel	Stainless steel
LCP	PBT	PA 12	PA 12	PA 12
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M12x1

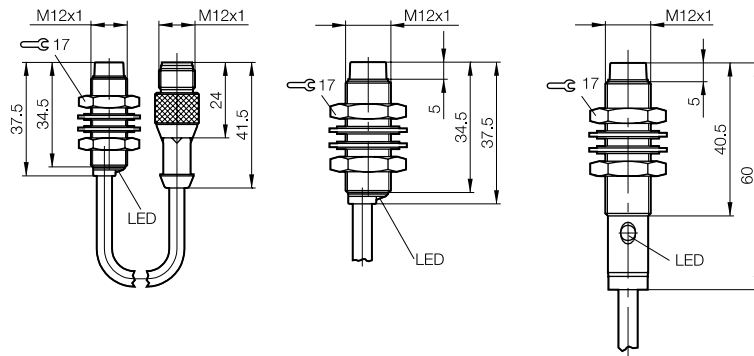


	M12x1	M12x1	M12x1
Housing size	M12x1	M12x1	M12x1
Installation type (observe instructions in the Basic Information chapter)	Non-flush	Non-flush	Non-flush
Rated switching distance s_n	4 mm	4 mm	4 mm
Assured switching distance s_a	0...3.2 mm	0...3.2 mm	0...3.2 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code Part number	BES00UT BES 516-356-E4-C-S4-00,3	BES00UL BES 516-356-E4-C-02
PNP, NC	Ordering code Part number		BES01H1 BES 516-356-BO-C-02
NPN, NO	Ordering code Part number	BES00W0 BES 516-357-E4-C-02	BES01H7 BES 516-357-BO-C-02
NPN, NC	Ordering code Part number	BES00M0 BES 516-3030-E4-C-02	BES019A BES 516-3030-BO-C-02
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2 V	2 V	1.5 V
Rated insulation voltage U_i (protection class)	250 V AC (II)	250 V AC (II)	250 V AC (II)
Rated operating current I_o	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-40...+85 °C
Switching frequency f max.	2 kHz	2 kHz	1.2 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
Approvals	CE, cULus	CE, cULus	CE, cULus
Special properties			
Material	Housing: Brass-coated Sensing surface: PBT	Brass-coated PBT	Stainless steel PA 12
Connection	0.3 m PUR cable with M12 connector, 4-pin	2 m PVC cable, 22 AWG	2 m PVC cable, 22 AWG
Suggested mating cable	BCC M415-0000-1A-003-EX44T2-020		

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M12x1



SUPERSHORTY™

M12x1	M12x1	M12x1	M12x1	M12x1
Non-flush	Non-flush	Non-flush	Non-flush	Non-flush
6 mm	8 mm	10 mm	10 mm	
0...4.8 mm	0...6.4 mm	0...8 mm	0...8 mm	
2X	2X	3X	3X	
BES047L	BES01PN	BES02WK	BES02WR	
BES M12EA-PSC60F-EP00,3-GS04	BES M12EG-PSC80F-S04G	BES M12MC1-PSC10F-S04G	BES M12MF1-PSC10F-S04G	
BES047M			BES02WP	
BES M12EA-POC60F-EP00,3-GS04			BES M12MF1-POC10F-S04G	
BES047P		BES02WJ	BES02WN	
BES M12EA-NSC60F-EP00,3-GS04		BES M12MC1-NSC10F-S04G	BES M12MF1-NSC10F-S04G	
BES047N				
BES M12EA-NOC60F-EP00,3-GS04				
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	
2.5 V	2.5 V	2 V	2 V	
75 V DC	250 V AC (□)	75 V DC	75 V DC	
100 mA	200 mA	200 mA	200 mA	
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	
-40...+85 °C	-25...+70°C	-25...+70°C	-25...+70°C	
1 kHz	1.5 kHz	400 Hz	400 Hz	
Yellow LED	Yellow LED	Yellow LED	Yellow LED	
IP 67	IP 68 per BWN Pr. 20	IP 67	IP 67	
CE, cULus	CE, cULus	CE	CE	
Short design		Large switching distance	Large switching distance	
Stainless steel	Stainless steel	Brass-coated	Brass-coated	
LCP	PBT	PBT	PBT	
0.3 m PUR cable with M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

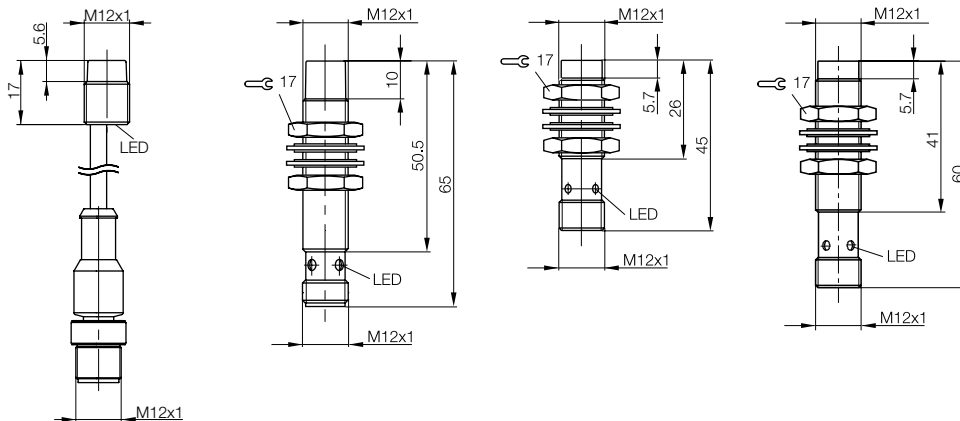
AC/DC 2-wire

AC 2-wire

Analog distance measurement

Special properties

Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M18x1

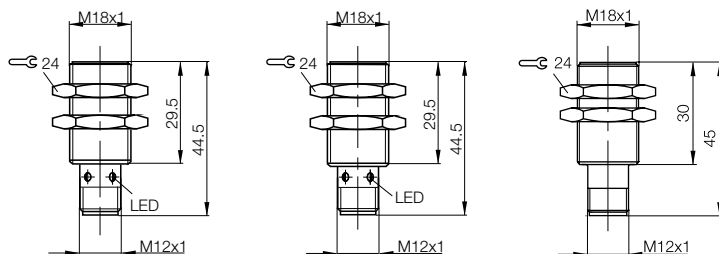


Housing size		M18x1	M18x1	M18x1
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		5 mm	5 mm	5 mm
Assured switching distance s_a		0...4 mm	0...4 mm	0...4 mm
Sensing distance		1X	1X	1X
PNP, NO	Ordering code	BES00R6		BES02ET
	Part number	BES 516-326-E5-C-S4		BES 515-326-E5-T-S4
PNP, NC	Ordering code		BES00YC	
	Part number		BES 516-367-E5-Y-S4	
PNP, complementary	Ordering code			
	Part number			
NPN, NO	Ordering code		BES00UC	
	Part number		BES 516-355-E5-Y-S4	
NPN, NC	Ordering code			
	Part number			
NPN, complementary	Ordering code			
	Part number			
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_a at I_e max.		2 V	3.5 V	3.5 V
Rated insulation voltage U_i (protection class)		75 V DC	75 V DC	75 V DC
Rated operating current I_e		200 mA	130 mA	130 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-40...+105 °C*
Switching frequency f max.		1 kHz	500 Hz	500 Hz
Output function indicator		Yellow LED	Yellow LED	No
Degree of protection as per IEC 60529		IP 67	IP 67	IP 69K, IP 68 as per BWN Pr. 27
Approvals		CE, cULus	CE, cULus	CE, cULus
Special properties				Resistant to high pressure cleaners
Material	Housing	Brass-coated	Brass-coated	Stainless steel
	Sensing surface	PBT	PA 12	PA 12
Connection		M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin
Suggested mating cable		BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020

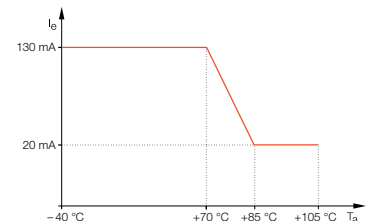
See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



*max. load current over temperature



DC 3-/4-wire Inductive Tubular Sensors

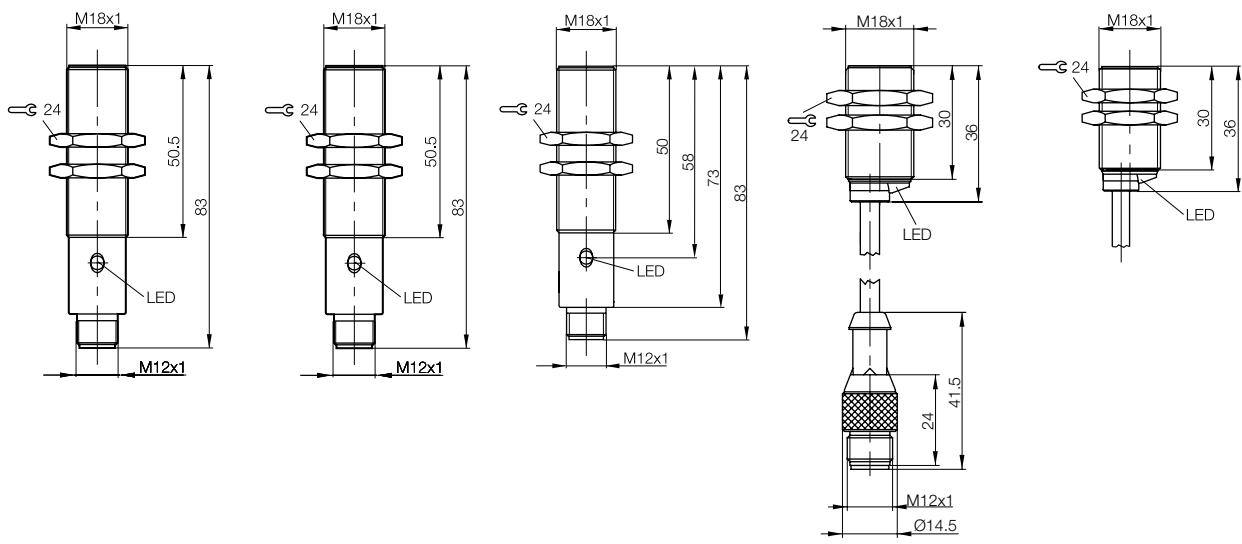
Tubular housing, M18x1



M18x1	M18x1	M18x1	M18x1	M18x1
Flush	Flush	Flush	Flush	Flush
5 mm	5 mm	5 mm	5 mm	5 mm
0...4 mm	0...4 mm	0...4 mm	0...4 mm	0...4 mm
1X	1X	1X	1X	1X
BES01CW	BES01CZ	BES02EU	BES00R5	BES00R0
BES 516-326-S4-C	BES 516-326-S4-H	BES 515-326-S4-C	BES 516-326-E4-C-S4-00,2	BES 516-326-E4-C-02
BES01JW				
BES 516-367-S4-C				
BES015N				
BES 516-105-S4-C				
BES01H0				
BES 516-355-S4-C				
BES01JU				
BES 516-366-S4-C				
BES015U				
BES 516-111-S4-C				
10...30 V DC	10...55 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	1.5 V	1.5 V	2 V	2 V
250 V AC (□)	250 V AC (□)	250 V AC (□)	75 V DC	75 V DC
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-40...+85 °C	-25...+70°C	-25...+70°C
900 Hz	900 Hz	900 Hz	1 kHz	1 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67	IP 67
CE, cULus	CE	CE, cULus	CE, cULus	CE, cULus
Brass-coated	Brass-coated	Stainless steel	Brass-coated	Brass-coated
PA 12	PA 12	PA 12	PA 12	PBT
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	0.2 m PUR cable with M12 connector, 4-pin	2 m PVC cable, 22 AWG
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M18x1

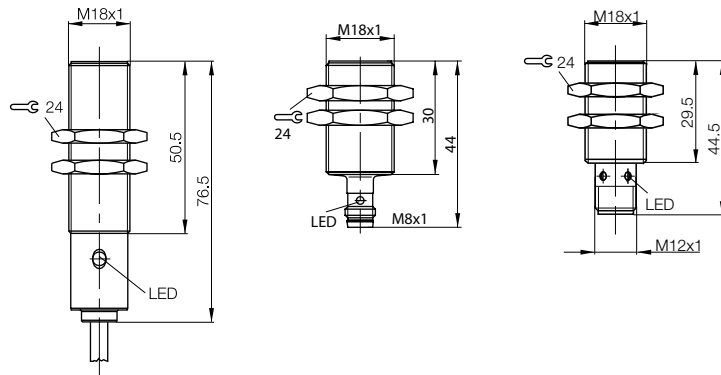


Housing size		M18x1	M18x1	M18x1
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		5 mm	8 mm	8 mm
Assured switching distance s_a		0...4 mm	0...6.4 mm	0...6.4 mm
Sensing distance		1X	2X	2X
PNP, NO	Ordering code	BES01CE	BES030R	BES00RC
	Part number	BES 516-326-BO-C-02	BES 516-326-G-E5-Y-S49	BES 516-326-G-E5-C-S4
PNP, NC	Ordering code		BES00YK	BES00YJ
	Part number		BES 516-367-G-E5-Y-S49	BES 516-367-G-E5-Y-S4
PNP, complementary	Ordering code			
	Part number			
NPN, NO	Ordering code	BES01JP	BES00UK	BES00UJ
	Part number	BES 516-366-BO-C-02	BES 516-355-G-E5-Y-S49	BES 516-355-G-E5-Y-S4
NPN, NC	Ordering code			
	Part number			
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.5 V	3.5 V	3.5 V
Rated insulation voltage U_i (protection class)		250 V AC (□)	75 V DC	75 V DC
Rated operating current I_o		200 mA	130 mA	130 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		500 Hz	200 Hz	200 Hz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 68 per BWN Pr. 20	IP 67	IP 67
Approvals		CE, cULus	CE, cULus	CE, cULus
Material	Housing	Brass-coated	Brass-coated	Brass-coated
	Sensing surface	PA 12	PBT	PBT
Connection		2 m PVC cable, 22 AWG	M8 connector, 3-pin	M12 connector, 4-pin
Suggested mating cable			BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

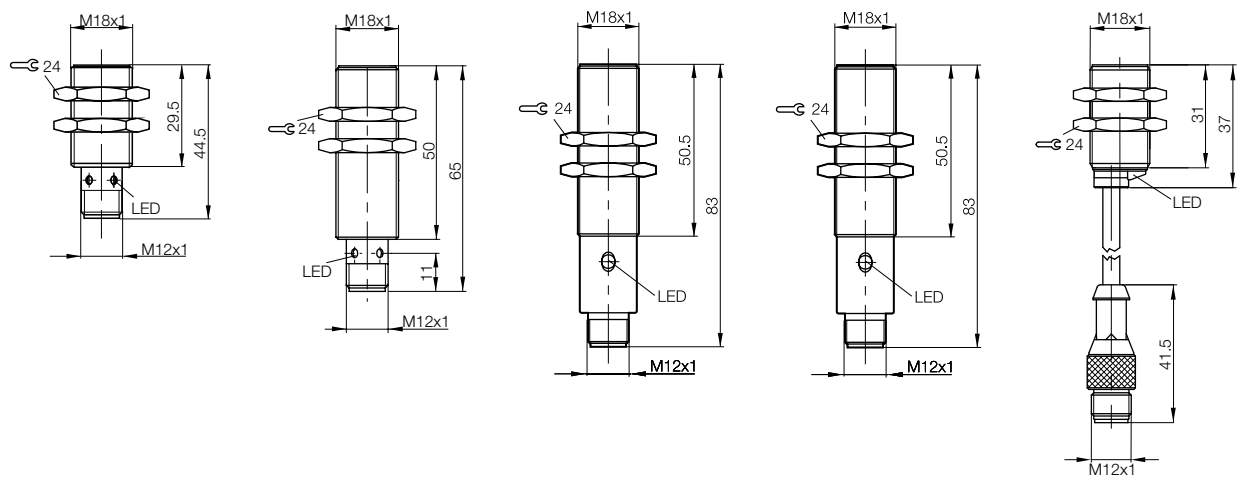
Tubular housing, M18x1



M18x1	M18x1	M18x1	M18x1	M18x1
Flush	Flush	Flush	Flush	Flush
8 mm	8 mm	8 mm	8 mm	8 mm
0...6.3 mm	0...6.4 mm	0...6.4 mm	0...6.4 mm	0...6.4 mm
2X	2X	2X	2X	2X
BES02P3	BES02H0	BES01CT	BES01CU	BES00RA
BES 516-326-SA96-G-E5-Y-S4	BES M18EI-PSC80B-S04G	BES 516-326-G-S4-C	BES 516-326-G-S4-H	BES 516-326-G-E4-C-S4-00,3
	BES02FZ			
	BES M18EI-POC80B-S04G			
			BES015M	
			BES 516-105-G-S4-H	
BES02P4	BES02FY			
BES 516-355-SA96-G-E5-Y-S4	BES M18EI-NSC80B-S04G			
	BES02FW			
	BES M18EI-NOC80B-S04G			
10...30 V DC	10...30 V DC	10...30 V DC	10...55 V DC	10...30 V DC
3.5 V	2.5 V	2.5 V	2.5 V	2.5 V
75 V DC	250 V AC (□)	75 V DC (□)	75 V DC	75 V DC
130 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-40...+85 °C	0...70 °C	0...+70 °C	-25...+70°C
200 Hz	700 Hz	80 Hz	80 Hz	500 Hz
Yellow LED	Yellow LED	Yes	Yellow LED	Yellow LED
IP 67	IP 68 per BWN Pr. 20	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE	CE, cULus
Brass-coated	Stainless steel	Brass-coated	Brass-coated	Brass-coated
with ceramic coating	PBT	PBT	PBT	PBT
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	0.3 m PUR cable with M12 connector, 4-pin
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M18x1

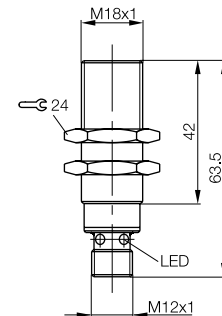
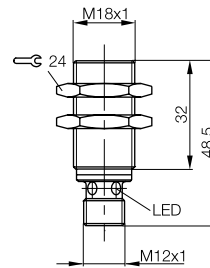
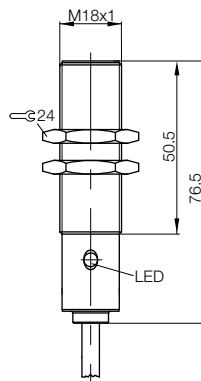


Housing size	M18x1	M18x1	M18x1
Installation type (observe instructions in the Basic Information chapter)	Flush	Quasi-flush	Quasi-flush
Rated switching distance s_n	8 mm	12 mm	12 mm
Assured switching distance s_a	0...6.4 mm	0...9.6 mm	0...9.6 mm
Sensing distance	2X	3X	3X
PNP, NO	Ordering code Part number	BES02Y5 BES M18MD1-PSC12B-S04G	BES02Y9 BES M18MG1-PSC12B-S04G
PNP, NC	Ordering code Part number		
NPN, NO	Ordering code Part number	BES02Y4 BES M18MD1-NSC12B-S04G	BES02Y8 BES M18MG1-NSC12B-S04G
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V	2 V	2 V
Rated insulation voltage U_i (protection class)	250 V AC (II)	75 V DC	75 V DC
Rated operating current I_o	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	0...+70 °C	-25...+70°C	-25...+70°C
Switching frequency f max.	80 Hz	500 Hz	500 Hz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Approvals	CE, cULus	CE	CE
Special properties		Large switching distance	Large switching distance
Material	Housing: Brass-coated Sensing surface: PA 12	Brass-coated PBT	Brass-coated PBT
Connection	2 m PUR cable, 22 AWG	M12 connector, 4-pin	M12 connector, 4-pin
Suggested mating cable		BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M18x1



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

AC/DC 2-wire

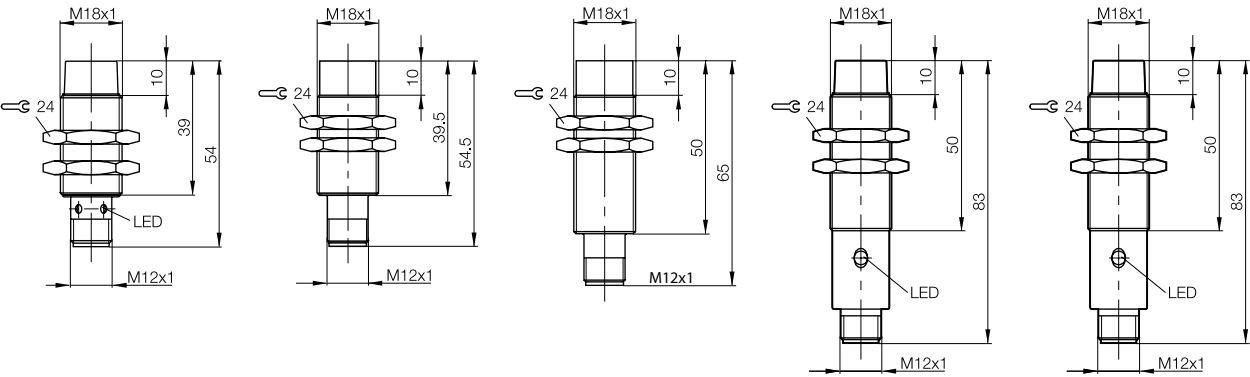
AC 2-wire

Analog distance measurement

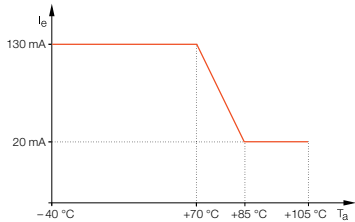
Special properties

Special accessories

M18x1	M18x1	M18x1	M18x1	M18x1
Non-flush	Non-flush	Non-flush	Non-flush	Non-flush
8 mm	8 mm	8 mm	8 mm	8 mm
0...6.5 mm	0...6.5 mm	0...6.5 mm	0...6.5 mm	0...6.5 mm
1X	1X	1X	1X	1X
BES00WM	BES02FK	BES02FM	BES03AW	BES01HY
BES 516-360-E5-Y-S4	BES 515-360-E5-T-S4	BES 515-360-SA12-S4-T	BES 516-360-S4-L	BES 516-360-S4-C
BES00LL				BES0193
BES 516-3026-E5-Y-S4				BES 516-3026-S4-C
BES00WT				
BES 516-361-E5-Y-S4				
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
3.5 V	3.5 V	3.5 V	2.5 V	1.5 V
75 V DC	75 DC	75 V DC	250 V AC (□)	250 V AC (□)
130 mA	130 mA	130 mA	400 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/No/No	Yes/Yes/Yes
-25...+70°C	-40...+105 °C*	-40...+85 °C (momentarily 105 °C)	-40...+85 °C	-25...+70°C
200 Hz	200 Hz	200 Hz	200 Hz	600 Hz
Yellow LED	No	No	Yellow LED	Yellow LED
IP 67	IP 69K, IP 68 as per BWN Pr. 27	IP 69K, IP 68 as per BWN Pr. 27	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
	Resistant to high pressure cleaners	Resistant to high pressure cleaners		
Brass-coated	Stainless steel	Stainless steel	Brass-coated	Brass-coated
PA 12	PA 12	PA 12	PA 12	PA 12
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020



*max. load current over temperature



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M18x1

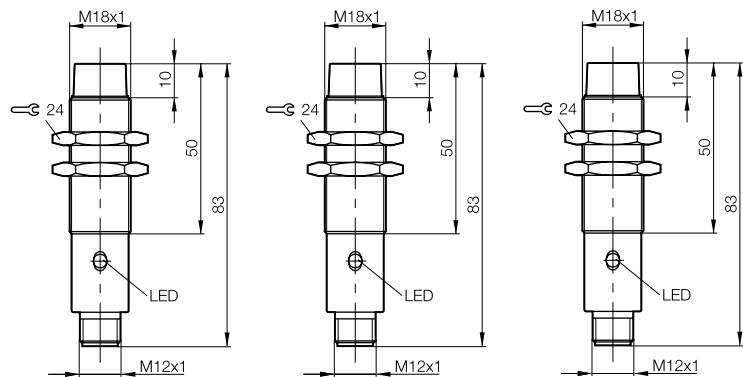


Housing size	M18x1	M18x1	M18x1
Installation type (observe instructions in the Basic Information chapter)	Non-flush	Non-flush	Non-flush
Rated switching distance s_n	8 mm	8 mm	8 mm
Assured switching distance s_a	0...6.5 mm	0...6.5 mm	0...6.5 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code		BES02FL
	Part number		BES 515-360-S4-C
PNP, NC	Ordering code		
	Part number		
PNP, complementary	Ordering code	BES016Y	
	Part number	BES 516-123-S4-C	
NPN, NO	Ordering code		BES01J5
	Part number		BES 516-361-S4-C
NPN, NC	Ordering code		BES019H
	Part number		BES 516-3031-S4-C
NPN, complementary	Ordering code		BES0171
	Part number		BES 516-124-S4-C
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_a at I_e max.	2.5 V	2.5 V	1.5 V
Rated insulation voltage U_i (protection class)	250 V AC (II)	250 V AC (II)	250 V AC (II)
Rated operating current I_e	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-40...+85 °C	-25...+70 °C	-40...+85 °C
Switching frequency f max.	200 Hz	200 Hz	600 Hz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
Approvals	CE, cULus	CE, cULus	CE, cULus
Material			
Housing	Brass-coated	Brass-coated	Stainless steel
Sensing surface	PA 12	PA 12	PA 12
Connection	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin
Suggested mating cable	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

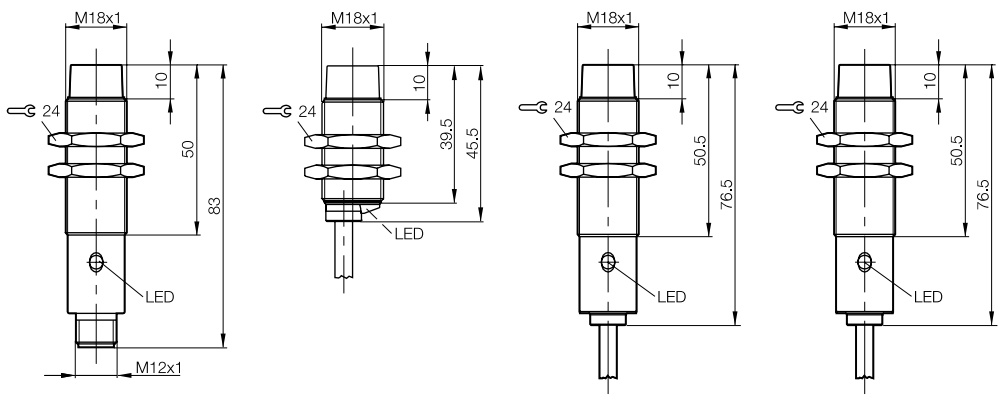
Tubular housing, M18x1



M18x1 Non-flush 8 mm 0...6.5 mm 1X	M18x1 Non-flush 8 mm 0...6.5 mm 1X BES00WH BES 516-360-E4-Y-02	M18x1 Non-flush 8 mm 0...6.5 mm 1X	M18x1 Non-flush 8 mm 0...6.5 mm 1X BES018Z BES 516-3026-BO-C-02	
BES02E1 BES 515-123-S4-C	BES00LH BES 516-3026-E4-Y-02			
	BES00WN BES 516-361-E4-Y-02	BES01HZ BES 516-361-BO-C-02		
		BES019F BES 516-3031-BO-C-02		
10...30 V DC 2.5 V 250 V AC (□) 200 mA Yes/Yes/Yes -40...+85 °C 200 Hz Yellow LED IP 68 per BWN Pr. 20 CE, cULus Stainless steel PA 12 M12 connector, 4-pin BCC M415-0000-1A-003-EX44T2-020	10...30 V DC 3.5 V 250 V AC (□) 130 mA Yes/Yes/Yes -25...+70°C 200 Hz Yellow LED IP 68 per BWN Pr. 20 CE, cULus Brass-coated PA 12 2 m PVC cable, 22 AWG	10...30 V DC 2.5 V 250 V AC (□) 200 mA Yes/Yes/Yes -25...+70°C 200 Hz Yellow LED IP 67 CE, cULus Brass-coated PA 12 2 m PVC cable, 22 AWG	10...30 V DC 1.5 V 250 V AC (□) 200 mA Yes/Yes/Yes -25...+70°C 600 Hz Yellow LED IP 68 per BWN Pr. 20 CE, cULus Brass-coated PA 12 2 m PVC cable, 22 AWG	



- Inductive sensors
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- AC 2-wire
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- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M18x1

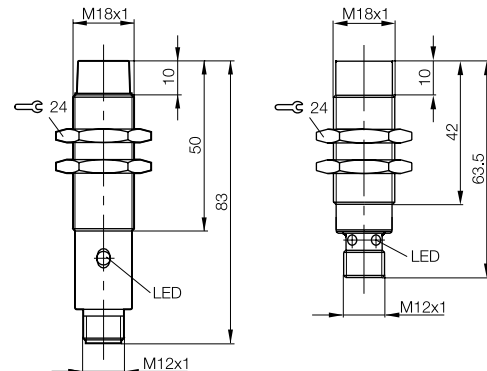


Housing size		M18x1	M18x1
Installation type (observe instructions in the Basic Information chapter)		Non-flush	Non-flush
Rated switching distance s_n		16 mm	20 mm
Assured switching distance s_a		0...13 mm	0...16 mm
Sensing distance		2X	3X
PNP, NO	Ordering code	BES016W	BES02Y7
	Part number	BES 516-123-G-S4-H	BES M18ME1-PSC20F-S04G
PNP, NC	Ordering code	BES01HW	
	Part number	BES 516-360-G-S4-H	
PNP, complementary	Ordering code		
	Part number		
NPN, NO	Ordering code		BES02Y6
	Part number		BES M18ME1-NSC20F-S04G
NPN, complementary	Ordering code		
	Part number		
Supply voltage U_B		10...55 V DC	10...30 V DC
Voltage drop U_d at I_e max.		2.5 V	2 V
Rated insulation voltage U_i (protection class)		250 V AC (II)	75 V DC
Rated operating current I_e		200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C
Switching frequency f max.		80 Hz	200 Hz
Output function indicator		Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 68 per BWN Pr. 20	IP 67
Approvals		CE	CE
Special properties			Large switching distance
Material	Housing	Brass-coated	Brass-coated
	Sensing surface	PA 12	PBT
Connection		M12 connector, 4-pin	M12 connector, 4-pin
Suggested mating cable		BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



Monitor rotary speed

Two inductive sensors are used to protect rotary applications from overspeed. Attached to a perforated disk, they determine rotary speed and direction.

- Extremely reliable (EMC, shock)
- For extreme conditions (temperature fluctuations)
- Long service life

DC 3-/4-wire Inductive Tubular Sensors

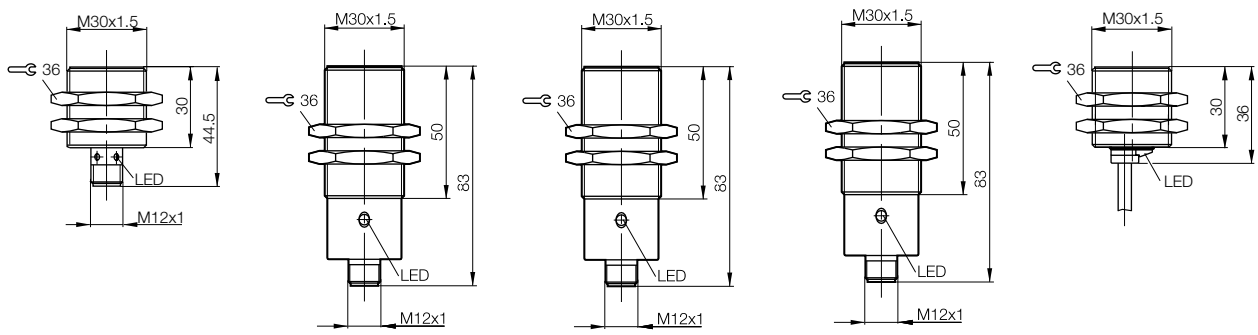
Tubular housing, M30x1.5



M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5
Flush	Flush	Flush	Flush	Flush
10 mm	10 mm	10 mm	10 mm	10 mm
0...8 mm	0...8.1 mm	0...8.1 mm	0...8.1 mm	0...8.1 mm
1X	1X	1X	1X	1X
BES00RP	BES01EE	BES02F1		BES00RF
BES 516-327-E5-Y-S4	BES 516-327-S4-C	BES 515-327-S4-C		BES 516-327-E4-Y-02
BES00LM	BES0195			
BES 516-3028-E5-Y-S4	BES 516-3028-S4-C			
	BES0167		BES02E0	
	BES 516-114-S4-C		BES 515-114-S4-C	
BES00W9	BES01HL			BES00W5
BES 516-359-E5-Y-S4	BES 516-359-S4-C			BES 516-359-E4-Y-02
	BES016J			
	BES 516-120-S4-C			
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
3.5 V	2.5 V	2.5 V	2.5 V	3.5 V
75 V DC	250 V AC (□)	250 V AC (□)	250 V AC (□)	75 V DC
130 mA	200 mA	200 mA	200 mA	130 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-40...+85 °C	-25...+70°C
200 Hz	300 Hz	300 Hz	300 Hz	200 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Brass-coated	Brass-coated	Stainless steel	Stainless steel	Brass-coated
PA 12	PA 12	PA 12	PA 12	PA 12
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	2 m PVC cable, 22 AWG
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	



- Inductive sensors
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- Block housings
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- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M30×1.5

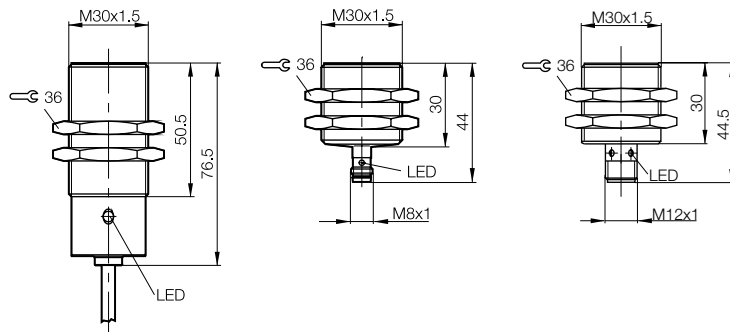


Housing size	M30×1.5	M30×1.5	M30×1.5
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	10 mm	15 mm	15 mm
Assured switching distance s_a	0...8.1 mm	0...12 mm	0...12 mm
Sensing distance	1X	2X	2X
PNP, NO	Ordering code Part number	BES01E3 BES 516-327-BO-C-02	BES00RY BES 516-327-G-E5-Y-S49
PNP, NC	Ordering code Part number		BES00RW BES 516-327-G-E5-Y-S4
PNP, complementary	Ordering code Part number		BES00LU BES 516-3028-G-E5-Y-S4
NPN, NO	Ordering code Part number	BES01HF BES 516-359-BO-C-02	BES00WE BES 516-359-G-E5-Y-S49
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V	3.5 V	3.5 V
Rated insulation voltage U_i (protection class)	250 V AC (□)	75 V DC	75 V DC
Rated operating current I_o	200 mA	130 mA	130 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	300 Hz	100 Hz	100 Hz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 68 per BWN Pr. 20
Approvals	CE, cULus	CE, cULus	CE, cULus
Special properties			
Material	Housing Sensing surface	Brass-coated PA 12	Brass-coated PA 12
Connection	2 m PVC cable, 22 AWG	M8 connector, 3-pin	M12 connector, 4-pin
Suggested mating cable		BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

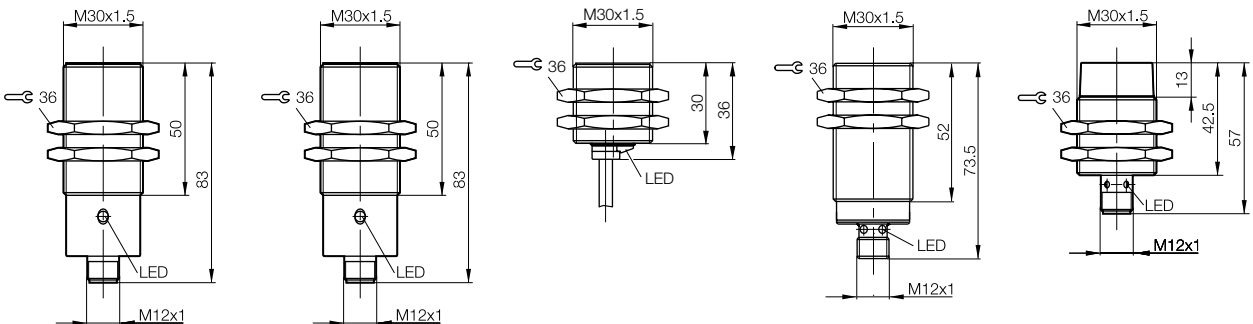
Tubular housing, M30x1.5



M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5
Flush	Flush	Flush	Quasi-flush	Non-flush	
15 mm	15 mm	15 mm	22 mm	15 mm	
0...12 mm	0...12 mm	0...12 mm	0...17.6 mm	0...12.2 mm	
2X	2X	2X	3X	1X	
BES01EA	BES01EC	BES00RR	BES02YM	BES00Y0	
BES 516-327-G-S4-C	BES 516-327-G-S4-H	BES 516-327-G-E4-Y-02	BES M30MI1-PSC22B-S04G	BES 516-362-E5-Y-S4	
		BES00LN	BES02YL	BES00LZ	
		BES 516-3028-G-E4-Y-02	BES M30MI1-POC22B-S04G	BES 516-3029-E5-Y-S4	
	BES0166			BES00Y4	
	BES 516-114-G-S4-H			BES 516-363-E5-Y-S4	
		BES00WA	BES02YK		
		BES 516-359-G-E4-Y-02	BES M30MI1-NSC22B-S04G		
10...30 V DC	10...55 V DC	10...30 V DC	10...30 V DC	10...30 V DC	
2.5 V	2.5 V	3.5 V	2 V	3.5 V	
250 V AC (□)	250 V AC (□)	75 V DC	75 V DC	75 V DC	
200 mA	200 mA	130 mA	200 mA	130 mA	
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	
100 Hz	150 Hz	100 Hz	200 Hz	100 Hz	
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED	
IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 67	IP 67	
CE, cULus	CE	CE, cULus	CE	CE, cULus	
			Large switching distance		
Brass-coated	Brass-coated	Brass-coated	Brass-coated	Brass-coated	
PA 12	PA 12	PA 12	PBT	PA 12	
M12 connector, 4-pin	M12 connector, 4-pin	2 m PVC cable, 22 AWG	M12 connector, 4-pin	M12 connector, 4-pin	
BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020		BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	



- Inductive sensors
- Global DC 3-wire
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- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Tubular Sensors

Tubular housing, M30×1.5

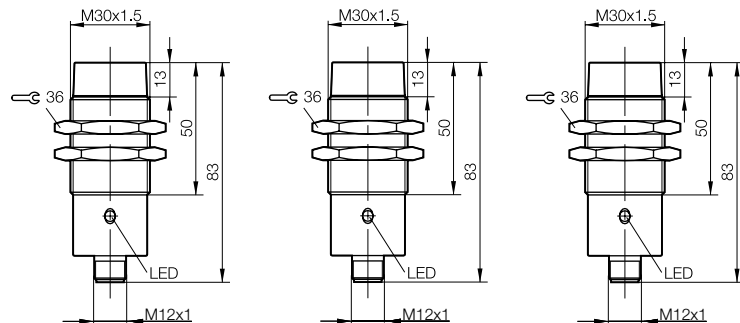


Housing size	M30×1.5	M30×1.5	M30×1.5
Installation type (observe instructions in the Basic Information chapter)	Non-flush	Non-flush	Non-flush
Rated switching distance s_n	15 mm	15 mm	15 mm
Assured switching distance s_a	0...12.2 mm	0...12.2 mm	0...12.2 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code Part number	BES01JE BES 516-362-S4-C	BES03AL BES M30ML-PSC15F-S04G-002
PNP, NC	Ordering code Part number	BES0198 BES 516-3029-S4-C	
PNP, complementary	Ordering code Part number	BES0173 BES 516-125-S4-C	
NPN, NO	Ordering code Part number	BES01JN BES 516-363-S4-C	BES03AT BES M30ML-NSC15F-S04G-002
NPN, NC	Ordering code Part number	BES019N BES 516-3033-S4-C	
Supply voltage U_B	10...30 V DC	10...30 V DC	10...55 V DC
Voltage drop U_d at I_o max.	2.5 V	2.5 V	1.5 V
Rated insulation voltage U_i (protection class)	250 V AC (□)	250 V AC (□)	250 V AC (□)
Rated operating current I_o	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	100 Hz	75 Hz	400 Hz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 68 per BWN Pr. 20	IP 67	IP 68 per BWN Pr. 20
Approvals	CE, cULus	CE	CE
Special properties			
Material	Housing Sensing surface	Brass-coated PA 12	Brass-coated PA 12
Connection	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin
Suggested mating cable	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Tubular Sensors

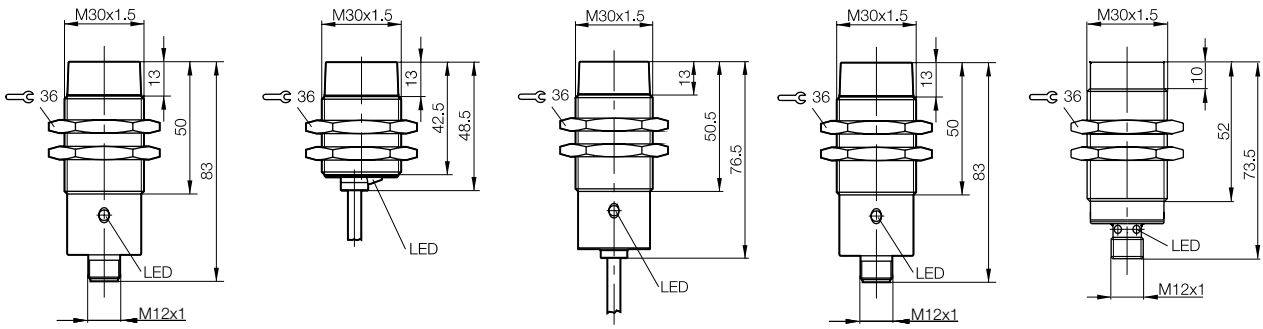
Tubular housing, M30×1.5



M30×1.5	M30×1.5	M30×1.5	M30×1.5	M30×1.5
Non-flush	Non-flush	Non-flush	Non-flush	Non-flush
15 mm	15 mm	15 mm	30 mm	40 mm
0...12.2 mm	0...12.2 mm	0...12.2 mm	0...24.00 mm	0...32 mm
1X	1X	1X	2X	3X
BES02FN	BES00WU	BES01J6	BES01JC	BES02YJ
BES 515-362-S4-C	BES 516-362-E4-Y-02	BES 516-362-BO-C-02	BES 516-362-G-S4-H	BES M30MG1-PSC40F-S04G
	BES00LW			
	BES 516-3029-E4-Y-02			
		BES01JJ		
		BES 516-363-BO-C-02		
	BES00Y1	BES019L		BES02YH
	BES 516-363-E4-Y-02	BES 516-3033-BO-C-02		BES M30MG1-NSC40F-S04G
10...30 V DC	10...30 V DC	10...30 V DC	10...55 V DC	10...30 V DC
2.5 V	3.5 V	2.5 V	2.5 V	2 V
250 V AC (□)	75 V DC	250 V AC (□)	250 V AC	75 V DC
200 mA	130 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
100 Hz	100 Hz	100 Hz	70 Hz	100 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	IP 54
CE, cULus	CE, cULus	CE, cULus	CE	CE
				Large switching distance
Stainless steel	Brass-coated	Brass-coated	Brass-coated	Brass-coated
PA 12	PA 12	PA 12	PA 12	PBT
M12 connector, 4-pin	2 m cable PVC, 22 AWG	2 m cable PVC, 22 AWG	M12 connector, 4-pin	M12 connector, 4-pin
BCC M415-0000-1A-003-EX44T2-020			BCC M415-0000-1A-003-EX44T2-020	BCC M415-0000-1A-003-EX44T2-020



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Analog distance measurement
- Special properties
- Special accessories



DC 3-/4-wire Inductive Block Sensors

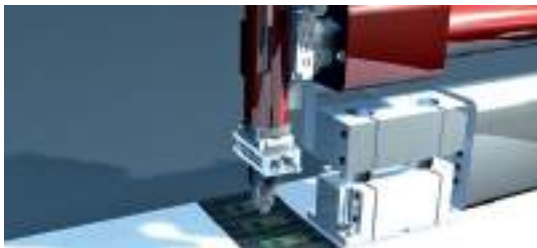
Block housing, 5x5 mm

Five good reasons for using inductive 5x5 sensors

- Rugged, compact metal housing
- Switching variants (can be installed flush): 0.8 mm for high-precision applications, new 1.5 mm for extended range applications
- Connections: Supply (+), Ground (-), Output. Easy to integrate into standard and special controllers.
- Interface variants: PNP or NPN, normally open or normally closed
- Narrow installation design



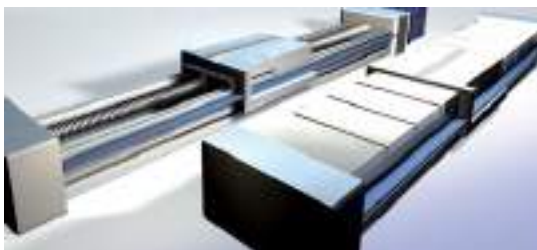
Electronics manufacturing: Applications require miniature sensors. Balluff offers mini.s in the highest degree of precision.



Robotics automation: The trend towards miniaturization continues. Balluff is leading the way.



Punching/reshaping technology: Automated assemblies are getting smaller and smaller. Balluff sensors adapt to this.



Linear technology: Position detection mini sensor designs achieve precise position with maximum performance.

Housing size	
Installation type (observe instructions in the Basic Information chapter)	
Rated switching distance s_n	
Assured switching distance s_a	
Sensing distance	
PNP, NO	Ordering code
	Part number
PNP, NC	Ordering code
	Part number
NPN, NO	Ordering code
	Part number
NPN, NC	Ordering code
	Part number
Supply voltage U_B	
Voltage drop U_d at I_o max.	
Rated insulation voltage U_i	
Rated operating current I_o	
Polarity reversal protected/transposition protected/short-circuit protected	
Ambient temperature T_a	
Switching frequency f max.	
Output function indicator	
Degree of protection as per IEC 60529	
Approvals	
Special properties	
Material	Housing
	Sensing surface
Connection	
Suggested mating cable	

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Block Sensors

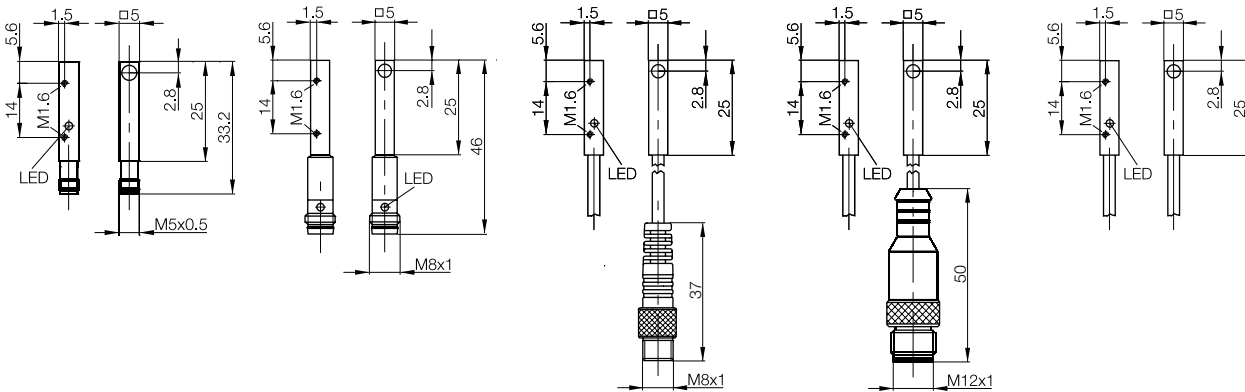
Block housing, 5×5 mm



5×5 mm	5×5 mm	5×5 mm	5×5 mm	5×5 mm
Flush	Flush	Flush	Flush	Flush
0.8 mm	0.8 mm	0.8 mm	0.8 mm	0.8 mm
0...0.65 mm	0...0.65 mm	0...0.65 mm	0...0.65 mm	0...0.65 mm
1X	1X	1X	1X	1X
BES01RM	BES01ZF	BES019W	BES019T	BES019P
BES Q05AC-PSC08B-S26G	BES 516-3040-I02-C-S49	BES 516-3040-I02-C-S49-00,3	BES 516-3040-I02-C-S4-00,3	BES 516-3040-I02-C-PU-02
BES01RH	BES01ZH			BES01A1
BES Q05AC-POC08B-S26G	BES 516-3042-I02-C-S49			BES 516-3042-I02-C-PU-02
BES01RA	BES01A0			BES019Y
BES Q05AC-NSC08B-S26G	BES 516-3041-I02-C-S49			BES 516-3041-I02-C-PU-02
BES01R6	BES01A5			BES01A3
BES Q05AC-NOC08B-S26G	BES 516-3043-I02-C-S49			BES 516-3043-I02-C-PU-02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
75 V DC	75 DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	100 mA	100 mA	100 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Slim design	Slim design	Slim design	Slim design	Slim design
Anodized aluminum	Anodized aluminum	Anodized aluminum	Anodized aluminum	Anodized aluminum
PBT	PBT	PBT	PBT	PBT
M5 connector, 3-pin	M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 26 AWG
BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M415-0000-1A-003-EX44T2-020	



- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire
- Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Special properties
- Analog distance measurement
- Accessories



DC 3-/4-wire Inductive Block Sensors

Block housing, 5x5 mm

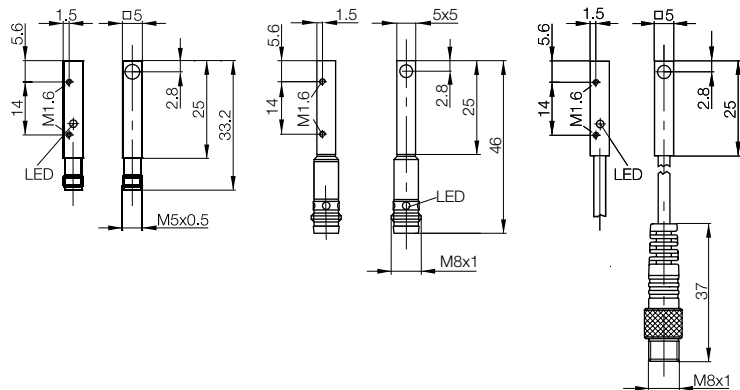


Housing size	5x5 mm	5x5 mm	5x5 mm
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a	0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance	2X	2X	2X
PNP, NO	Ordering code Part number	BES01RP BES Q05AC-PSC15B-S26G	BES01RR BES Q05AC-PSC15B-S49G
PNP, NC	Ordering code Part number	BES01RK BES Q05AC-POC15B-S26G	BES01RL BES Q05AC-POC15B-S49G
NPN, normally open	Ordering code Part number	BES01RE BES Q05AC-NSC15B-S26G	BES01RF BES Q05AC-NSC15B-S49G
NPN, NC	Ordering code Part number	BES01R8 BES Q05AC-NOC15B-S26G	BES01R9 BES Q05AC-NOC15B-S49G
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.5 V	3 V	3 V
Rated insulation voltage U_i	75 V DC	75 V DC	75 V DC
Rated operating current I_o	100 mA	100 mA	100 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	2 kHz	2 kHz	2 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Approvals	CE, cULus	CE, cULus	CE, cULus
Special properties	Slim design	Slim design	Slim design
Material	Housing: Stainless steel Sensing surface: PBT	Stainless steel PBT	Stainless steel PBT
Connection	M5 connector, 3-pin	M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin
Suggested mating cable	BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.





DC 3-/4-wire Inductive Block Sensors

Block housing, 5x5 mm



5x5 mm				
Flush				
1.5 mm				
0...1.2 mm				
2X				
BES01RN				
BES Q05AC-PSC15B-EP02				
BES01RJ				
BES Q05AC-POC15B-EP02				
BES01RC				
BES Q05AC-NSC15B-EP02				
BES01R7				
BES Q05AC-NOC15B-EP02				
10...30 V DC				
3 V				
75 V DC				
100 mA				
Yes/Yes/Yes				
-25...+70°C				
2 kHz				
Yellow LED				
IP 67				
CE, cULus				
Slim design				
Stainless steel				
PBT				
2 m PUR cable, 26 AWG				

Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

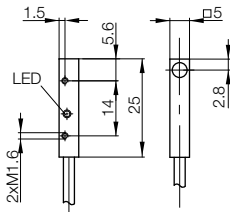
AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories



DC 3-/4-wire Inductive Block Sensors

Block housing, 8×8 mm



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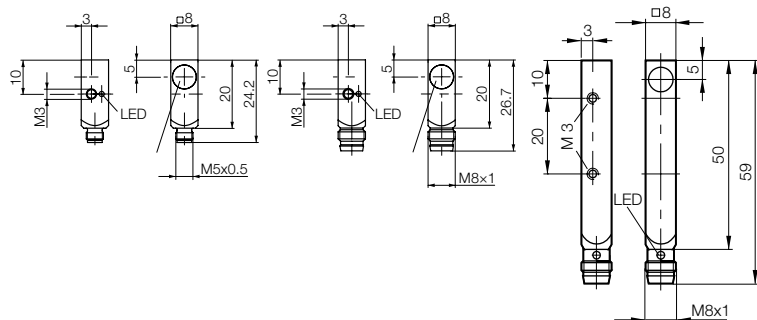
SUPERSHORTY™

Housing size	8×8 mm	8×8 mm	8×8 mm
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a	0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code Part number	BES03U1 BES Q08MEC-PSC15B-S26G	BES03Y6 BES Q08MEC-PSC15B-S49G
PNP, NC	Ordering code Part number	BES03YE BES Q08MEC-POC15B-S26G	BES03U0 BES Q08MEC-POC15B-S49G
NPN, NO	Ordering code Part number	BES03Y7 BES Q08MEC-NSC15B-S26G	BES03U8 BES Q08MEC-NSC15B-S49G
NPN, NC	Ordering code Part number	BES03U9 BES Q08MEC-NOC15B-S26G	BES03YC BES Q08MEC-NOC15B-S49G
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	2.8 V	2.8 V	2.5 V
Rated insulation voltage U_i	75 V DC	75 V DC	75 V DC
Rated operating current I_o	200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	3 kHz	3 kHz	5 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Approvals	CE, cULus	CE, cULus	CE, cULus
Special properties	Short design	Short design	
Material	Housing: Brass-coated Sensing surface: PBT	Brass-coated PBT	Cast zinc PBT
Connection	M5 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin
Suggested mating cable	BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.





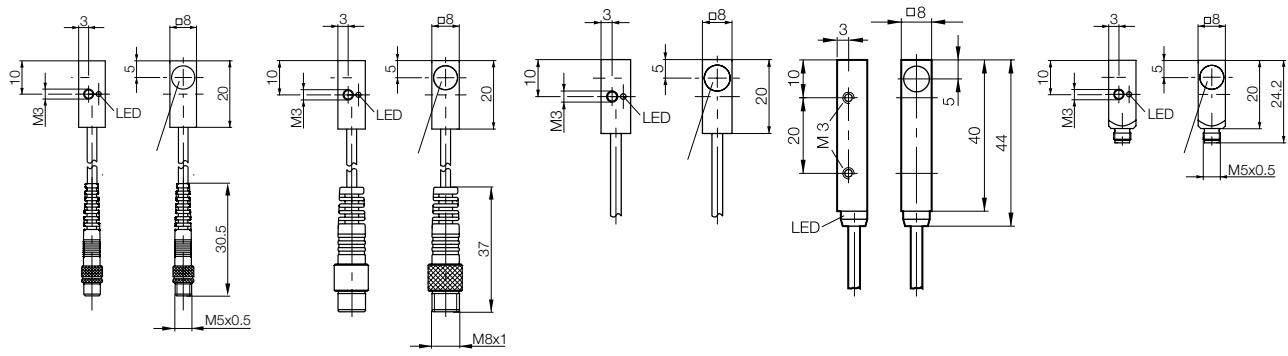
DC 3-/4-wire Inductive Block Sensors

Block housing, 8x8 mm



8x8 mm	8x8 mm	8x8 mm	8x8 mm	8x8 mm
Flush	Flush	Flush	Flush	Flush
1.5 mm	1.5 mm	1.5 mm	1.5 mm	2 mm
0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.2 mm	0...1.6 mm
1X	1X	1X	1X	2X
BES041J	BES041C	BES03TZ	BES017R	BES03U4
BES Q08MEC-PSC15B-EP00,3-GS26	BES Q08MEC-PSC15B-EP00,3-GS49	BES Q08MEC-PSC15B-EP02	BES 516-300-S166-02	BES Q08MEC-PSC20B-S26G
BES041K	BES041E	BES03Y5		BES03YH
BES Q08MEC-POC15B-EP00,3-GS26	BES Q08MEC-POC15B-EP00,3-GS49	BES Q08MEC-POC15B-EP02		BES Q08MEC-POC20B-S26G
BES041L	BES041F	BES03YA		BES03Y9
BES Q08MEC-NSC15B-EP00,3-GS26	BES Q08MEC-NSC15B-EP00,3-GS49	BES Q08MEC-NSC15B-EP02		BES Q08MEC-NSC20B-S26G
BES041M	BES041H	BES03U7		BES03UE
BES Q08MEC-NOC15B-EP00,3-GS26	BES Q08MEC-NOC15B-EP00,3-GS49	BES Q08MEC-NOC15B-EP02		BES Q08MEC-NOC20B-S26G
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.8 V	2.8 V	2.8 V	2.5 V	2.8 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
3 kHz	3 kHz	3 kHz	3 kHz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
Short design	Short design	Short design		Short design
Brass-coated	Brass-coated	Brass-coated	Cast zinc	Brass-coated
PBT	PBT	PBT	PBT	PBT
0.3 m PUR cable with M5 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin	2 m PUR cable, 26 AWG	2 m PVC cable, 26 AWG	M5 connector, 3-pin
BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020			BKS-B 25-3-PU-03

- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire
- Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Special properties
- Analog distance measurement
- Accessories



DC 3-/4-wire Inductive Block Sensors

Block housing, 8x8 mm

Supershorty inductive sensors

- Thanks to the miniature housing size, position sensing is now also possible when minimum space is required
- Assemblies can be shrunk even further, since the sensors require less space
- Ideal price/performance ratio
- Robust due to high-quality metal housing

Common application examples

- Linear units
- Machine position
- Part presence
- Robotics and automation
- Vibrating conveyor
- Error proofing



Housing size		
Installation type (observe instructions in the Basic Information chapter)		
Rated switching distance s_n		
Assured switching distance s_a		
Sensing distance		
PNP, NO	Ordering code	
	Part number	
PNP, NC	Ordering code	
	Part number	
NPN, normally open	Ordering code	
	Part number	
NPN, NC	Ordering code	
	Part number	
Supply voltage U_B		
Voltage drop U_d at I_o max.		
Rated insulation voltage U_i		
Rated operating current I_o		
Polarity reversal protected/transposition protected/short-circuit protected		
Ambient temperature T_a		
Switching frequency f max.		
Output function indicator		
Degree of protection as per IEC 60529		
Approvals		
Special properties		
Material	Housing	
	Sensing surface	
Connection		
Suggested mating cable		

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.





DC 3-/4-wire Inductive Block Sensors

Block housing, 8x8 mm



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8x8 mm	8x8 mm	8x8 mm	8x8 mm	8x8 mm	8x8 mm
Flush	Flush	Flush	Flush	Flush	Flush
2 mm	2 mm	2 mm	2 mm	2 mm	2 mm
0...1.6 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm
2X	2X	2X	2X	2X	2X
BES03Y8	BES01U2	BES01UW	BES041U	BES041N	
BES Q08MEC-PSC20B-S49G	BES Q08ZC-PSC20B-S49G	BES Q08ZE-PSC20B-S49G	BES Q08MEC-PSC20B-EP00,3-GS26	BES Q08MEC-PSC20B-EP00,3-GS49	
BES03U3	BES01TF	BES01UK	BES041W	BES041P	
BES Q08MEC-POC20B-S49G	BES Q08ZC-POC20B-S49G	BES Q08ZE-POC20B-S49G	BES Q08MEC-POC20B-EP00,3-GS26	BES Q08MEC-POC20B-EP00,3-GS49	
BES03UC	BES01T3	BES01UC	BES041Y	BES041R	
BES Q08MEC-NSC20B-S49G	BES Q08ZC-NSC20B-S49G	BES Q08ZE-NSC20B-S49G	BES Q08MEC-NSC20B-EP00,3-GS26	BES Q08MEC-NSC20B-EP00,3-GS49	
BES03YJ	BES01RW	BES01U6	BES041Z	BES041T	
BES Q08MEC-NOC20B-S49G	BES Q08ZC-NOC20B-S49G	BES Q08ZE-NOC20B-S49G	BES Q08MEC-NOC20B-EP00,3-GS26	BES Q08MEC-NOC20B-EP00,3-GS49	
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	
2.8 V	2.5 V	2.5 V	2.8 V	2.8 V	
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC	
200 mA	200 mA	200 mA	200 mA	200 mA	
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	
3 kHz	3 kHz	3 kHz	3 kHz	3 kHz	
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED	
IP 67	IP 67	IP 67	IP 67	IP 67	
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus	
Short design			Short design	Short design	
Brass-coated	Cast zinc	Cast zinc	Brass-coated	Brass-coated	
PBT	PBT	PBT	PBT	PBT	
M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin	0.3 m PUR cable with M5 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin	
BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BCC M313-0000-10-001-EX43T2-020	BKS-B 25-3-PU-03	BCC M313-0000-10-001-EX43T2-020	



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

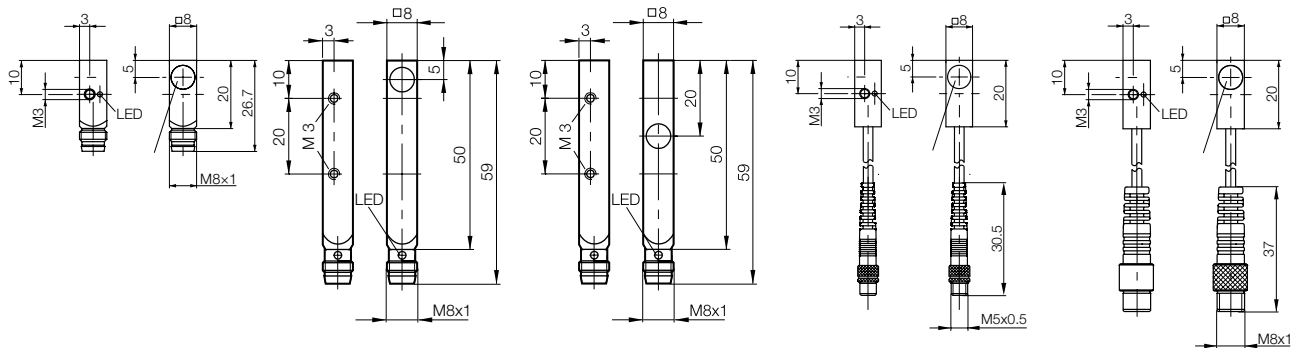
AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories



DC 3-/4-wire Inductive Block Sensors

Block housing, 8×8 mm



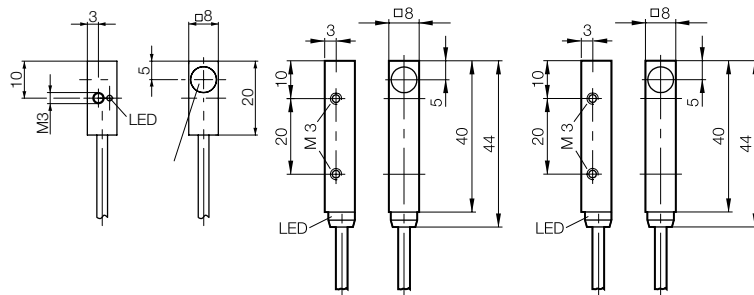
SUPERSHORTY™

Housing size		8×8 mm	8×8 mm	8×8 mm
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		2 mm	2 mm	2 mm
Assured switching distance s_a		0...1.6 mm	0...1.6 mm	0...1.6 mm
Sensing distance		2X	2X	2X
PNP, NO	Ordering code	BES03U2	BES01TZ	BES01TN
	Part number	BES Q08MEC-PSC20B-EP02	BES Q08ZC-PSC20B-BV02	BES Q08ZC-PSC20B-BP02
PNP, NC	Ordering code	BES03YK	BES01TA	BES01T7
	Part number	BES Q08MEC-POC20B-EP02	BES Q08ZC-POC20B-BV02	BES Q08ZC-POC20B-BP02
NPN, NO	Ordering code		BES01T2	BES01RZ
	Part number		BES Q08ZC-NSC20B-BV02	BES Q08ZC-NSC20B-BP02
NPN, NC	Ordering code	BES03UA	BES01RU	BES01TL
	Part number	BES Q08MEC-NOC20B-EP02	BES Q08ZC-NOC20B-BV02	BES Q08ZC-NOC20B-BP02
Supply voltage U_B		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.		2.8 V	2.5 V	2.5 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Rated operating current I_o		200 mA	200 mA	200 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.		3 kHz	3 kHz	3 kHz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 67
Approvals		CE, cULus	CE, cULus	CE, cULus
Special properties				
Material	Housing	Brass-coated	Cast zinc	Cast zinc
	Sensing surface	PBT	PBT	PBT
Connection		2 m PUR cable, 26 AWG	2 m PVC cable, 26 AWG	2 m PUR cable, 26 AWG
Suggested mating cable				

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.





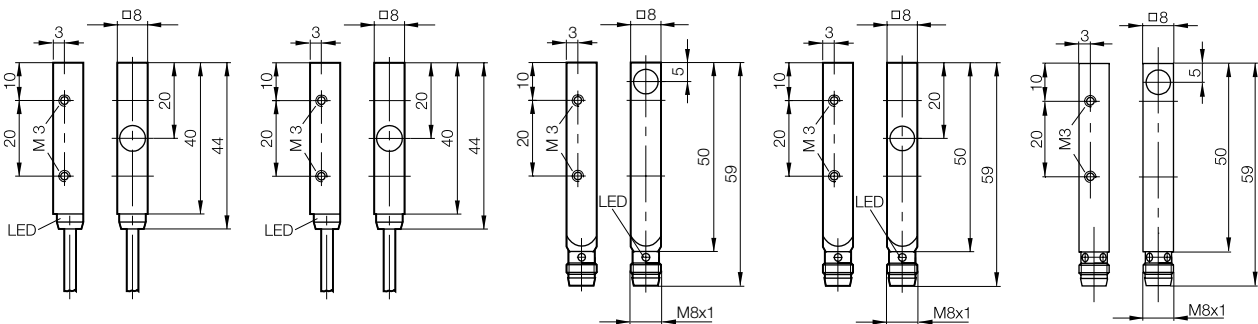
DC 3-/4-wire Inductive Block Sensors

Block housing, 8x8 mm



8x8 mm	8x8 mm	8x8 mm	8x8 mm	8x8 mm
Flush	Flush	Flush	Flush	Quasi-flush
2 mm	2 mm	2.5 mm	2.5 mm	3 mm
0...1.6 mm	0...1.6 mm	0...2 mm	0...2 mm	0...2.4 mm
2X	2X	2X	2X	3X
BES01UR	BES01UM	BES01U3	BES01UY	BES01U4
BES Q08ZE-PSC20B-BV02	BES Q08ZE-PSC20B-BP02	BES Q08ZC-PSC25B-S49G	BES Q08ZE-PSC25B-S49G	BES Q08ZC-PSC30B-S49G
BES01UH	BES01UE			
BES Q08ZE-POC20B-BV02	BES Q08ZE-POC20B-BP02			
BES01UA	BES01U7			
BES Q08ZE-NSC20B-BV02	BES Q08ZE-NSC20B-BP02			
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
200 mA	200 mA	200 mA	200 mA	200 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	0...+70 °C	0...+70 °C	-25...+70°C
3 kHz	3 kHz	2 kHz	2 kHz	1 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE
				Long range
Cast zinc	Cast zinc	Cast zinc	Cast zinc	Brass-coated
PBT	PBT	PBT	PBT	PBT
2 m PVC cable, 26 AWG	2 m PUR cable, 26 AWG	M8 connector, 3-pin BCC M313-0000-10-001-EX43T2-020	M8 connector, 3-pin BCC M313-0000-10-001-EX43T2-020	M8 connector, 3-pin BCC M313-0000-10-001-EX43T2-020

- Inductive sensors
- Global DC 3-wire
- DC 3-/4-wire
- Tubular housings
- Block housings
- DC 2-wire
- AC/DC 2-wire
- AC 2-wire
- Special properties
- Analog distance measurement
- Accessories



DC 3-/4-wire Inductive Block Sensors

Block housings, 8×16×4 mm R04

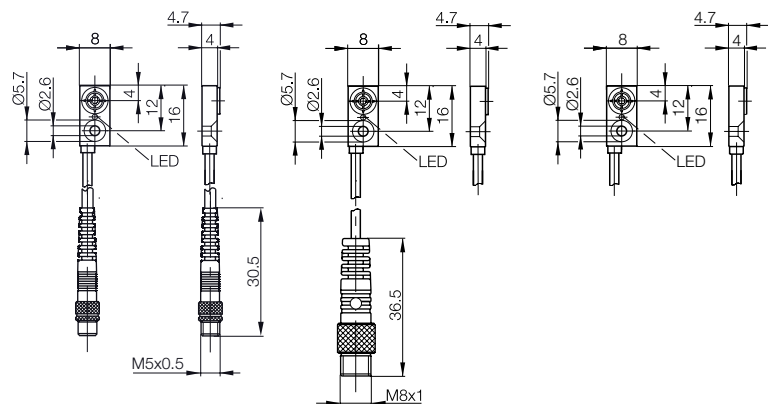


Housing size	8×16×4.7 mm R04	8×16×4.7 mm	8×16×4.7 mm R04
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush
Rated switching distance s_n	1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a	0...1.2 mm	0...1.2 mm	0...1.2 mm
Sensing distance	1X	1X	1X
PNP, NO	Ordering code	BES01YC	BES01YE
	Part number	BES R04KC-PSC15B-EP00,2-GS26	BES R04KC-PSC15B-EP00,3-GS49
PNP, NC	Ordering code	BES01Y7	BES01Y8
	Part number	BES R04KC-POC15B-EP00,2-GS26	BES R04KC-POC15B-EP00,3-GS49
NPN, normally open	Ordering code		BES01Y3
	Part number		BES R04KC-NSC15B-EV02
NPN, NC	Ordering code	BES01WY	BES01WZ
	Part number	BES R04KC-NOC15B-EP00,2-GS26	BES R04KC-NOC15B-EV02
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o max.	1.5 V	1.5 V	1.8 V
Rated insulation voltage U_i	75 V DC	75 V DC	75 V DC
Rated operating current I_o	100 mA	100 mA	100 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+70°C	-25...+70°C	-25...+70°C
Switching frequency f max.	600 Hz	600 Hz	2.5 kHz
Output function indicator	Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Approvals	CE, cULus	CE, cULus	CE, cULus
Material	Housing	PA 6	PA 6
	Sensing surface	PA 6/GF 30	PA 6/GF 30
Connection	0.2 m PUR cable with M5 connector, 3-pin	0.3 m PUR cable with M8 connector, 3-pin	2 m PVC cable, 28 AWG
Suggested mating cable	BKS-B 25-3-PU-03	BCC M813-0000-10-001-EX43T2-020	

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.



DC 3-/4-wire Inductive Block Sensors

Block housings, 8x16x4 mm R04



8x16x4.7 mm R04	8x16x4.7 mm R04	8x16x4.7 mm R04	8x16x4.7 mm R04	8x16x4.7 mm R04
Flush	Flush	Flush	Flush	Non-flush
1.5 mm	2 mm	2 mm	2 mm	2.5 mm
0...1.2 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm	0...2.2 mm
1X	2X	2X	2X	2X
BES01YF	BES03UN	BES048E	BES049E	BES01YM
BES R04KC-PSC15B-EP02	BES R04MC-PSC20B-EP02	BES R04MC-PSC20B-EP00,2-GS49	BES R04MC-PSC20B-EP00,2-GS49-107	BES R04KC-PSC25F-EP00,3-GS49
				BES0447
				BES R04KC-POC25F-EP00,3-GS49
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
2.5 V	2.5 V	2.5 V	2.5 V	2.5 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	100 mA	100 mA	100 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C	-25...+70°C
2.5 kHz	5,000 Hz	5,000 Hz	5,000 Hz	3 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus	CE, cULus
PA 6	CuZn Ni-free coating	CuZn Ni-free coating	CuZn Ni-free coating	PA 6
PA 6/GF 30	PBT	PBT	Ceramic	PA 6/GF 30
2 m PUR cable, 26 AWG	2 m PUR cable, 26 AWG	0.2 m PUR cable with M8 connector, 3-pin BCC M313-0000-10-001-EX43T2-020	0.2 mm silicon rubber cable with M8 connector, 3-pin BCC M313-0000-10-001-EX43T2-020	0.3 m PUR cable with M8 connector, 3-pin BCC M313-0000-10-001-EX43T2-020



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

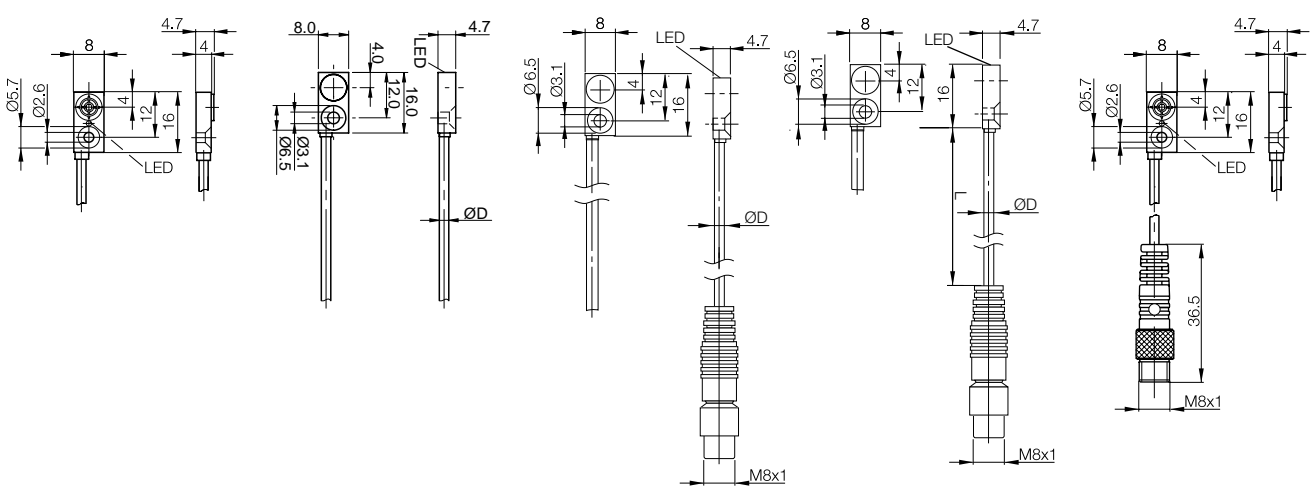
AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories



DC 3-/4-wire Inductive Block Sensors

Block housings, 8×16×4 mm R04

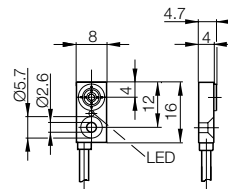


Housing size	8×16×4 mm R04	
Installation type (observe instructions in the Basic Information chapter)	Non-flush	
Rated switching distance s_n	2.5 mm	
Assured switching distance s_a	0...2 mm	
Sensing distance	2X	
PNP, NO	Ordering code	BES01YT
	Part number	BES R04KC-PSC25F-EV02
PNP, NC	Ordering code	
	Part number	
NPN, normally open	Ordering code	
	Part number	
NPN, NC	Ordering code	
	Part number	
Supply voltage U_B	10...30 V DC	
Voltage drop U_d at I_e max.	2.5 V	
Rated insulation voltage U_i	75 V DC	
Rated operating current I_e	100 mA	
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	
Ambient temperature T_a	-25...+70°C	
Switching frequency f max.	150 Hz	
Output function indicator	Yellow LED	
Degree of protection as per IEC 60529	IP 67	
Approvals	CE, cULus	
Material	Housing	PA 6
	Sensing surface	PA 6/GF 30
Connection	2 m PVC cable, 28 AWG	

See technical section (page 963-966) for installation instructions.

For wiring diagram see page 958.

Additional cable lengths and PUR cable jacket material available on request.





DC 3-/4-wire Inductive Block Sensors

Block housings, 8×16×4 mm R04



8×16×4 mm R04	
Non-flush	
2.5 mm	
0...2.2 mm	
2X	
BES01YN	
BES R04KC-PSC25F-EP02	
BES03R8	
BES R04KC-NSC25F-EP02	
10...30 V DC	
2.5 V	
75 V DC	
100 mA	
Yes/Yes/Yes	
-25...+70°C	
3 kHz	
Yellow LED	
IP 67	
CE, cULus	
PA 6	
PA 6/GF 30	
2 m PUR cable, 26 AWG	



Inductive sensors

Global DC 3-wire

DC 3-/4-wire

Tubular housings

Block housings

DC 2-wire

AC/DC 2-wire

AC 2-wire

Special properties

Analog distance measurement

Accessories

