



Inductive Sensors

DC 2-wire Inductive Sensors

Our **standard line of 2-wire DC versions**. This extensive line includes sensors from M8 to M30 as well as block designs for practically every application in automation.



Cylinder Designs

M8×1	571
M12×1	574
M18×1	576
M30×1.5	579

Block Designs

20×32×8 mm (R01)	582
26×26×26 mm (Z03)	583
40×66×40 mm (Unicompact)	584
40×121×40 mm (Unisensor)	585
80×92×40 mm (Maxisensor)	586



Basic information and definitions can be found on **page 934**.



DC 2-wire Inductive Sensors

DC 2-wire sensors can be used universally: They can be used in conjunction with most PNP or NPN controllers. Use of these sensors enables a reduction in the number of inventoried part numbers. Suitability of the 2-wire sensors for the respective PNP or NPN controller should be tested in advance.



Global: The complete series of standard sensors

Inductive standard sensors are mostly available ex warehouse, can be used around the world and meet worldwide standards. They offer an optimal price/performance ratio.

- Short and mid-size designs Ø 6.5 mm to M30×1.5
- Shielded and unshielded designs
- Cable and connector versions
- Standard and extended switching distance



Model	
Installation type (observe instructions in the Basic Information chapter)	
Rated switching distance s_n	
Assured switching distance s_a	
Switching distance marking	
Polarized, NO	Ordering code
	Part number
Polarized, NC	Ordering code
	Part number
Non-polarized, NO	Ordering code
	Part number
Non-polarized, NC	Ordering code
	Part number
Supply voltage U_S	
Voltage drop U_d at I_o max.	
Rated insulation voltage U_i	
Rated operating current I_o	
Minimum operating current I_m	
Residual current I_r max.	
Permissible load capacitance max.	
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	

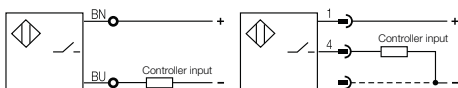
Wiring diagrams, see page 958.

The meaning of switching distance markings can be found on page 962.

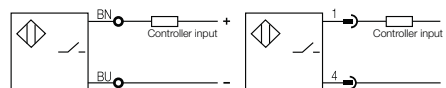
Additional cable lengths on request.

Recommendation for connection wiring for polarized sensors on 3-wire controllers

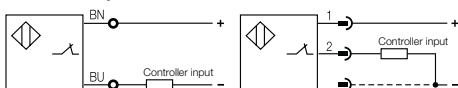
PNP, NO



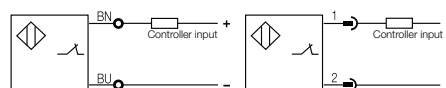
NPN, NO



PNP, normally closed



NPN, NC



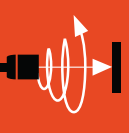


Global



Global

M8x1	M8x1	M8x1	M8x1
Flush	Flush	Flush	Flush
2 mm	2 mm	1.5 mm	2 mm
0...1.6 mm	0...1.6 mm	0...1.2 mm	0...1.6 mm
■ ■	■ ■	■	■ ■
BES0022			BES001Z
BES M08ME1-GSC20B-S04G			BES M08MG-GSC20B-BP00,3-GS04
BES024N			BES03H8
BES M08ME1-GOC20B-S04G			BES M08MG-GOC20B-BP00,3-GS04
BES001Y	BES03KP		
BES M08ME1-USC20B-S04G	BES M08ME1-USH20B-S04G		
BES024P		BES031N	
BES M08ME1-UOC20B-S04G		BES 516-527-S4-H	
10...36 V DC	10...55 V DC	10...55 V DC	10...36 V DC
5 V	5 V	5 V	5 V
75 V DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	130 mA	100 mA
5 mA	5 mA	5 mA	5 mA
600 µA	600 µA	500 µA	600 µA
1 µF	1 µF	1 µF	1 µF
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	1.5 kHz	3 kHz	1.5 kHz
Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67
CE, cULus	CE	CE, cULus	CE, cULus
Brass-coated	Brass-coated	Stainless steel	Brass-coated
PBT	PBT	PBT	PBT
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	0.3 m PUR cable with M12 connector, 4-pin



Inductive Sensors

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

Cylinder Designs

Block Designs

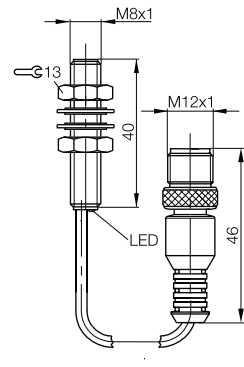
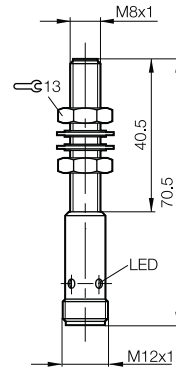
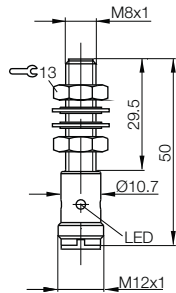
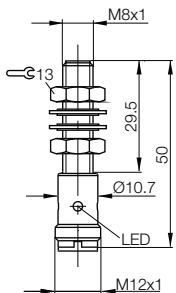
AC/DC 2-wire

AC 2-wire

Special Properties

Analog Distance Measurement

Accessories



DC 2-wire Inductive Sensors

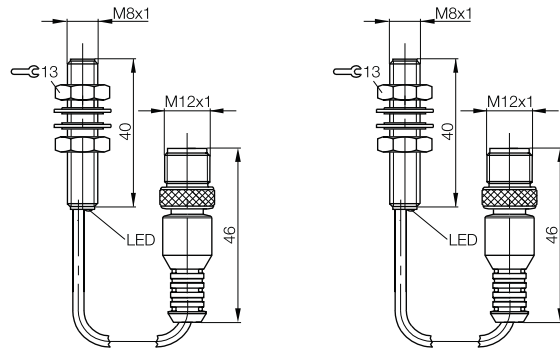
Cylinder designs, M8x1



Model		M8x1	M8x1
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush
Rated switching distance s_n		2 mm	2 mm
Assured switching distance s_a		0...1.6 mm	0...1.4 mm
Switching distance marking		■■	■■
Polarized, NO	Ordering code	BES03KR	BES0324
	Part number	BES M08MG-GSH20B-BP00,3-GS04	BES M08MG-GSC20B-BP00,3-GS04-101
Polarized, NC	Ordering code		
	Part number		
Non-polarized, NO	Ordering code		
	Part number		
Non-polarized, NC	Ordering code		
	Part number		
Supply voltage U_S		10...55 V DC	10...30 V DC
Voltage drop U_d at I_e max.		5 V	5 V
Rated insulation voltage U_i		75 V DC	75 V DC
Rated operating current I_e		100 mA	100 mA
Minimum operating current I_m		5 mA	5 mA
Residual current I_r max.		600 μ A	600 μ A
Permissible load capacitance max.		1 μ F	1 μ F
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.		1.5 kHz	1.5 kHz
Output function indicator		Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67
Approvals		CE	CE, cULus
Material	Housing	Brass-coated	Brass-coated
	Sensing surface	PBT	With ceramic coating
Connection		0.3 m PUR cable with M12 connector, 4-pin	0.3 m PUR cable with M12 connector, 4-pin

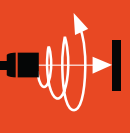
Wiring diagrams, see page 958.
The meaning of switching distance markings can be found on page 962.

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





Global



M8x1	M8x1		
Flush	Flush		
2 mm	2 mm		
0...1.6 mm	0...1.6 mm		
■ ■	■ ■		
BES001L			
BES M08MG-GSC20B-BV02			
BES024R			
BES M08MG-GOC20B-BV02			
BES001T	BES03KT		
BES M08MG-USC20B-BV02	BES M08MG-USH20B-BV02		
BES024T			
BES M08MG-UOC20B-BV02			
10...36 V DC	10...55 V DC		
5 V	5 V		
75 V DC	75 V DC		
100 mA	100 mA		
5 mA	5 mA		
600 µA	600 µA		
1 µF	1 µF		
Yes/Yes/Yes	Yes/Yes/Yes		
-25...+70 °C	-25...+70 °C		
1.5 kHz	1.5 kHz		
Yellow LED	Yellow LED		
IP 67	IP 67		
CE, cULus	CE		
Brass-coated	Brass-coated		
PBT	PBT		
2 m PVC cable, 2x0.14 mm ²	2 m PVC cable, 2x0.14 mm ²		

Inductive
Sensors

Global
DC 3-wire

DC 3-/4-wire

DC 2-wire

Cylinder
Designs

Block Designs

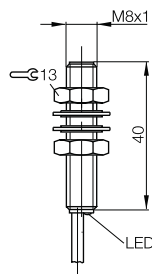
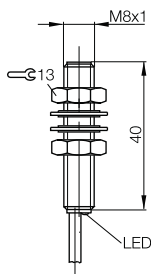
AC/DC 2-wire

AC 2-wire

Special
Properties

Analog
Distance
Measurement

Accessories



DC 2-wire Inductive Sensors

Cylinder designs, M12x1



Global

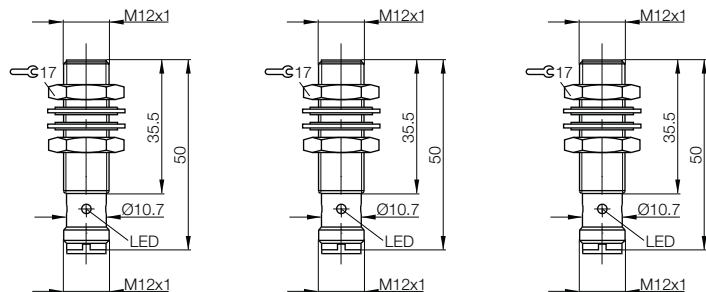


Model		M12x1	M12x1	M12x1	
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush	
Rated switching distance s_n		3 mm	3 mm	3 mm	
Assured switching distance s_a		0...2.4 mm	0...2.2 mm	0...2.4 mm	
Switching distance marking		■ ■	■ ■	■ ■	
Polarized, NO	Ordering code	BES003Z	BES00C1		
	Part number	BES M12MF-GSC30B-S04G	BES M12MF-GSC30B-S04G-101		
Polarized, NC	Ordering code	BES024J			
	Part number	BES M12MF-GOC30B-S04G			
Non-polarized, NO	Ordering code	BES0041		BES03KU	
	Part number	BES M12MF-USC30B-S04G		BES M12MF-USH30B-S04G	
Non-polarized, NC	Ordering code	BES024K			
	Part number	BES M12MF-UOC30B-S04G			
Supply voltage U_S		10...36 V DC	10...30 V DC	10...55 V DC	
Voltage drop U_d at I_e max.		≤ 5 V	5 V	5 V	
Rated insulation voltage U_i (protection class)		75 V DC	75 V DC	75 V DC	
Rated operating current I_e		100 mA	100 mA	100 mA	
Minimum operating current I_m		5 mA	5 mA	5 mA	
Residual current I_r max.		600 μ A	600 μ A	600 μ A	
Permissible load capacitance max.		1 μ F	1 μ F	1 μ F	
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.		1.3 kHz	1.5 kHz	1.3 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	
Material	Housing	Brass-coated	Brass-coated	Brass-coated	
	Sensing surface	PA 12	With ceramic coating	PA 12	
Connection		M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	

Wiring diagrams, see page 958.

The meaning of switching distance markings can be found on page 962.

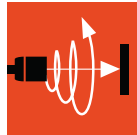
Additional cable lengths and PUR cable jacket material available on request.



DC 2-wire Inductive Sensors Cylinder designs, M12x1



M12x1	M12x1	M12x1	M12x1	M12x1
Flush	Flush	Flush	Flush	Flush
3 mm	3 mm	3 mm	3 mm	3 mm
0...2.4 mm	0...2.2 mm	0...2.4 mm	0...2.4 mm	0...2.4 mm
■ ■	■ ■	■ ■	■ ■	■ ■
BES0042	BES0326	BES03KW	BES0045	
BES M12MG-GSC30B-BP00,3-GS04	BES M12MG-GSC30B-BP00,3-GS04-101	BES M12MG-GSH30B-BP00,3-GS04	BES M12MG-GSC30B-BV02	
BES03HK			BES024L	
BES M12MG-GOC30B-BP00,3-GS04			BES M12MG-GOC30B-BV02	
			BES004T	BES03KN
			BES M12MG-USC30B-BV02	BES M12MG-USH30B-BV02
			BES024M	
			BES M12MG-UOC30B-BV02	
10...36 V DC	10...30 V DC	10...55 V DC	10...36 V DC	10...55 V DC
4 V	4 V	4 V	≤ 5 V	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
5 mA	5 mA	5 mA	5 mA	5 mA
600 µA	600 µA	600 µA	600 µA	600 µA
1 µF	1 µF	1 µF	1 µF	1 µF
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
1.3 kHz	1.3 kHz	1.3 kHz	1.3 kHz	1.3 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	CE, cULus	CE
Brass-coated	Brass-coated	Brass-coated	Brass-coated	Brass-coated
PA 12	With ceramic coating	PA 12	PA 12	PA 12
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 M12 connector, 4-pin	2 m PVC cable, 2x0.34 mm ²	2 m PVC cable, 2x0.34 mm ²



Inductive Sensors

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

Cylinder Designs

Block Designs

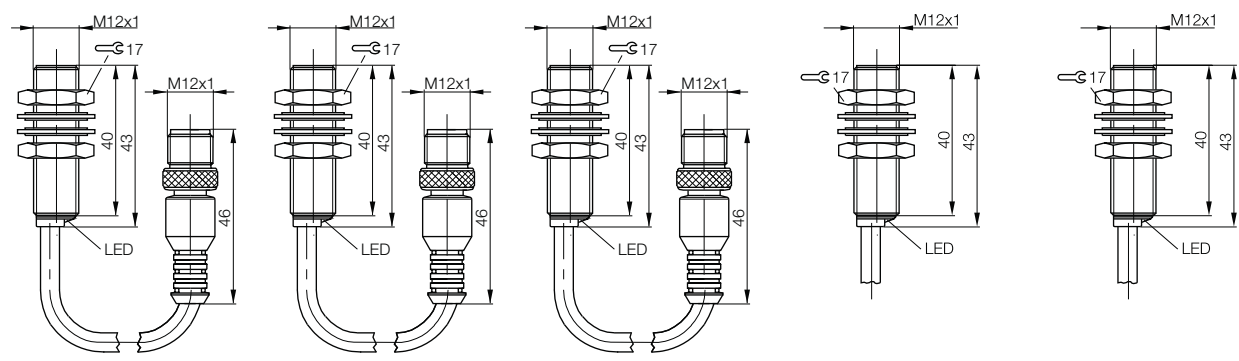
AC/DC 2-wire

AC 2-wire

Special Properties

Analog Distance Measurement

Accessories



DC 2-wire Inductive Sensors

Cylinder designs, M18x1



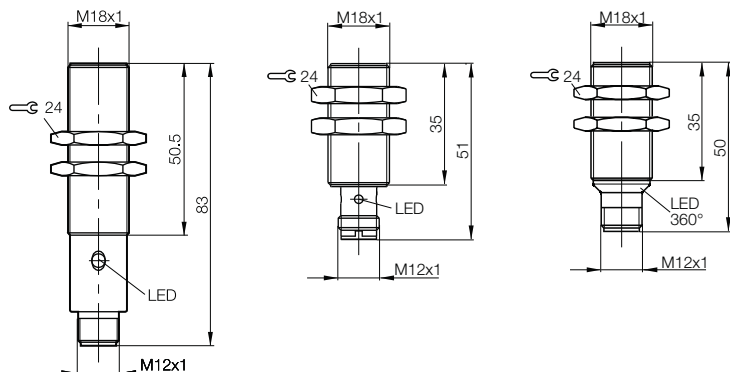
Global



Model	M18x1	M18x1	M18x1	
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	Flush	
Rated switching distance s_n	5 mm	7 mm	7 mm	
Assured switching distance s_a	0...4 mm	0...5.6 mm	0...5.6 mm	
Switching distance marking	■	■■	■■■	
Polarized, NO	Ordering code	BES0328		
	Part number	BES M18MF-GSC70B-S04G		
Polarized, NC	Ordering code	BES02NL		
	Part number	BES M18MF-GOC70B-S04G		
Non-polarized, NO	Ordering code	BES02NR	BES039M	
	Part number	BES M18MF-USC70B-S04G	BES M18MF-USH70B-S04K	
Non-polarized, NC	Ordering code	BES031P	BES02NN	
	Part number	BES 516-539-S4-H	BES M18MF-UOC70B-S04G	
Supply voltage U_s	10...55 V DC	10...36 V DC	10...55 V DC	
Voltage drop U_d at I_e max.	5 V	≤ 5 V	5 V	
Rated insulation voltage U_i	250 V AC (□)	75 V DC	75 V DC	
Rated operating current I_e	200 mA	100 mA	100 mA	
Minimum operating current I_m	5 mA	5 mA	5 mA	
Residual current I_r max.	500 μ A	600 μ A	600 μ A	
Permissible load capacitance max.	1 μ F	1 μ F	1 μ F	
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.	250 Hz	600 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 67	IP 67	
Approvals	CE, cULus	CE, cULus	CE	
Material	Housing	Brass-coated	Brass-coated	
	Sensing surface	PA 12	PA 12	
Connection	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	

Wiring diagrams, see page 958.
The meaning of switching distance markings can be found on page 962.

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



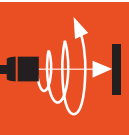


Global



Global

M18x1	M18x1	M18x1	M18x1
Flush	Flush	Flush	Flush
7 mm	7 mm	7 mm	7 mm
0...5.6 mm	0...5.5 mm	0...5.6 mm	0...5.6 mm
■ ■	■ ■	■ ■	■ ■
BES006C	BES0329	BES039P	BES00FA
BES M18MG-GSC70B-BP00,3-GS04	BES M18MG-GSC70B-BP00,3-GS04-101	BES M18MG-GSH70B-BP00,3-GS04	BES M18MG-GSC70B-BV02
BES039L			BES02NT
BES M18MG-GOC70B-BP00,3-GS04			BES M18MG-GOC70B-BV02
			BES0073
			BES M18MG-USC70B-BV02
			BES02NU
			BES M18MG-UOC70B-BV02
10...36 V DC	10...30 V DC	10...55 V DC	10...36 V DC
4 V	4 V	4 V	≤ 5 V
75 V DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	100 mA	100 mA
5 mA	5 mA	5 mA	5 mA
600 µA	600 µA	600 µA	600 µA
1 µF	1 µF	1 µF	1 µF
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70 °C	-25...+70 °C	-25...+70 °C	-25...+70 °C
600 Hz	600 Hz	600 Hz	600 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE	CE, cULus
Brass-coated	Brass-coated	Brass-coated	Brass-coated
PA 12	With ceramic coating	PA 12	PA 12
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 M12 connector, 4-pin	2 m PVC cable, 3x0.34 mm ²



Inductive Sensors

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

Cylinder Designs

Block Designs

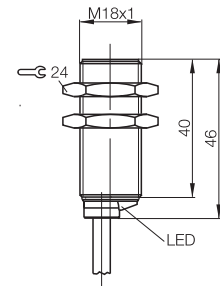
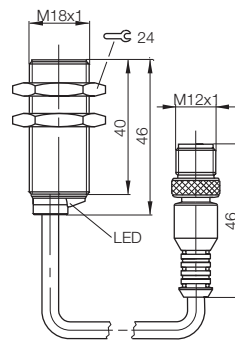
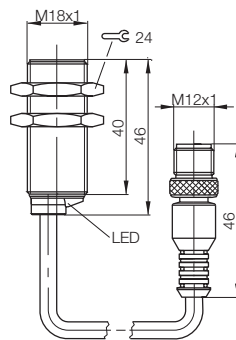
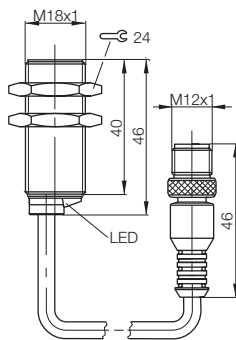
AC/DC 2-wire

AC 2-wire

Special Properties

Analog Distance Measurement

Accessories



DC 2-wire Inductive Sensors

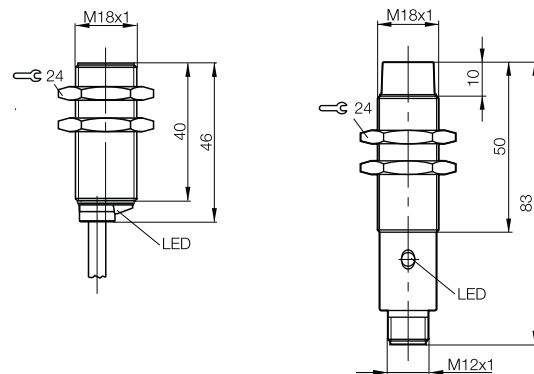
Cylinder designs, M18x1



Model	M18x1	M18x1	
Installation type (observe instructions in the Basic Information chapter)	Flush	Not flush	
Rated switching distance s_n	7 mm	8 mm	
Assured switching distance s_a	0...5.6 mm	0...6.5 mm	
Switching distance marking	■ ■	■	
Polarized, NO	Ordering code		
	Part number		
Polarized, NC	Ordering code		
	Part number		
Non-polarized, NO	Ordering code	BES039N	
	Part number	BES M18MG-USH70B-BV02	
Non-polarized, NC	Ordering code		BES0322
	Part number		BES 516-547-S4-H
Supply voltage U_s	10...55 V DC	10...55 V DC	
Voltage drop U_d at I_o max.	5 V	5 V	
Rated insulation voltage U_i (protection class)	75 V DC	250 V AC (□)	
Rated operating current I_o	100 mA	200 mA	
Minimum operating current I_m	5 mA	5 mA	
Residual current I_r max.	600 μ A	500 μ A	
Permissible load capacitance max.	1 μ F	1 μ F	
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.	600 Hz	200 Hz	
Output function indicator	Yellow LED	Yellow LED	
Degree of protection as per IEC 60529	IP 67	IP 68 per BWN Pr. 20	
Approvals	CE	CE, cULus	
Material	Housing Sensing surface	Brass-coated Brass-coated	
		PA 12 PA 12	
Connection	2 m PVC cable, 2x0.34 mm ²	M12 connector, 4-pin	

Wiring diagrams, see page 958.
The meaning of switching distance markings can be found on page 962.

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





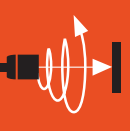
Global



Global



M30×1.5	M30×1.5	M30×1.5	M30×1.5
Flush	Flush	Flush	Flush
10 mm	15 mm	15 mm	15 mm
0...8 mm	0...12 mm	0...12 mm	0...12 mm
■	■ ■	■ ■	■ ■
	BES027L	BES008W	
	BES M30MF-GSC15B-S04G	BES M30MF-GSC15B-S04K	
	BES027C	BES027J	
	BES M30MF-GOC15B-S04G	BES M30MF-GOC15B-S04K	
	BES027E	BES0094	BES03FP
	BES M30MF-USC15B-S04G	BES M30MF-USC15B-S04K	BES M30MF-USH15B-S04K
BES031T	BES027F	BES027H	
BES 516-541-S4-H	BES M30MF-UOC15B-S04G	BES M30MF-UOC15B-S04K	
10...55 V DC	10...36 V DC	10...36 V DC	10...55 V DC
5 V	≤ 5 V	≤ 5 V	5 V
250 V AC (□)	75 V DC	75 V DC	75 V DC
200 mA	100 mA	100 mA	100 mA
5 mA	5 mA	5 mA	5 mA
500 µA	600 µA	600 µA	600 µA
1 µF	1 µF	1 µF	1 µF
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70 °C	-25...+70 °C	-25...+70 °C	-25...+70 °C
150 Hz	400 Hz	400 Hz	400 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE
Brass-coated	Brass-coated	Brass-coated	Brass-coated
PA 12	PA 12	PA 12	PA 12
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin



Inductive Sensors

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

Cylinder Designs

Block Designs

AC/DC 2-wire

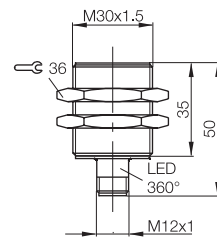
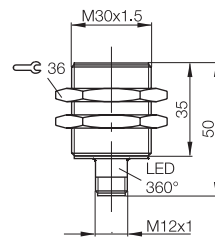
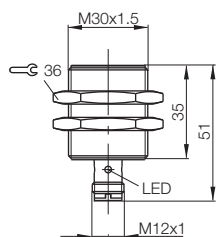
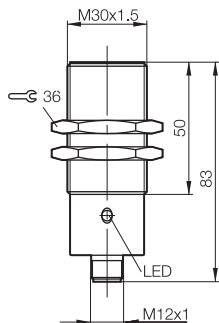
AC 2-wire

Special Properties

Properties

Analog Distance Measurement

Accessories



DC 2-wire Inductive Sensors

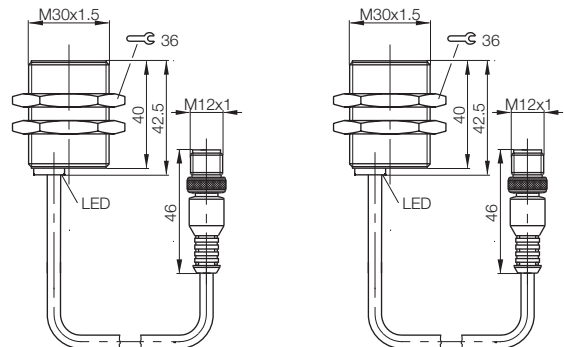
Cylinder designs, M30×1.5



Model	M30×1.5	M30×1.5	
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush	
Rated switching distance s_n	15 mm	15 mm	
Assured switching distance s_a	0...12 mm	0...12 mm	
Switching distance marking	■ ■	■ ■	
Polarized, NO	Ordering code	BES03H5	BES032A
	Part number	BES M30MF-GSH15B-BP00,3-GS04	BES M30MF-GSC15B-BP00,3-GS04-101
Polarized, NC	Ordering code		
	Part number		
Non-polarized, NO	Ordering code		
	Part number		
Non-polarized, NC	Ordering code		
	Part number		
Supply voltage U_s	10...55 V DC	10...36 V DC	
Voltage drop U_d at I_e max.	4 V	4 V	
Rated insulation voltage U_i (protection class)	75 V DC	75 V DC	
Rated operating current I_e	100 mA	100 mA	
Minimum operating current I_m	5 mA	5 mA	
Residual current I_r max.	600 μ A	600 μ A	
Permissible load capacitance max.	1 μ F	1 μ F	
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.	400 Hz	400 Hz	
Output function indicator	Yellow LED	Yellow LED	
Degree of protection as per IEC 60529	IP 67	IP 67	
Approvals	CE	CE, cULus	
Material	Housing Sensing surface	Brass-coated PA 12	Brass-coated With ceramic coating
Connection	0.3 m PUR cable with M12 connector, 4-pin	0.3 m PUR cable with M12 connector, 4-pin	

Wiring diagrams, see page 958.
The meaning of switching distance markings can be found on page 962.

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



DC 2-wire Inductive Sensors Cylinder designs, M30×1.5



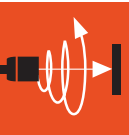
Global



Global



M30×1.5	M30×1.5	M30×1.5	M30×1.5
Flush	Flush	Flush	Not flush
15 mm	15 mm	15 mm	15 mm
0...12 mm	0...12 mm	0...12 mm	0...12 mm
■ ■	■ ■	■ ■	■
BES008Y	BES008R		
BES M30MF-GSC15B-BP00,3-GS04	BES M30MF-GSC15B-BV02		
BES03H4	BES0279		
BES M30MF-GOC15B-BP00,3-GS04	BES M30MF-GOC15B-BV02		
	BES0091	BES03FT	
	BES M30MF-USC15B-BV02	BES M30MF-USH15B-BV02	
	BES027A		BES0323
	BES M30MF-UOC15B-BV02		BES 516-549-S4-H
10...36 V DC	10...36 V DC	10...55 V DC	10...55 V DC
4 V	≤ 5 V	5 V	5 V
75 V DC	75 V DC	75 V DC	250 V AC (□)
100 mA	100 mA	100 mA	200 mA
5 mA	5 mA	5 mA	5 mA
600 μA	600 μA	600 μA	500 μA
1 μF	1 μF	1 μF	1 μF
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+70 °C	-25...+70 °C	-25...+70 °C	-25...+70 °C
400 Hz	400 Hz	400 Hz	100 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 67	IP 67	IP 67	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE	CE, cULus
Brass-coated	Brass-coated	Brass-coated	Brass-coated
PA 12	PA 12	PA 12	PA 12
0.3 m PUR cable with M12 connector, 4-pin	2 m PVC cable, 2×0.34 mm ²	2 m PVC cable, 2×0.34 mm ²	M12 connector, 4-pin



Inductive Sensors

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

Cylinder Designs

Block Designs

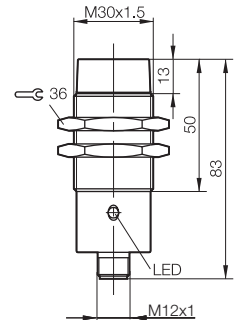
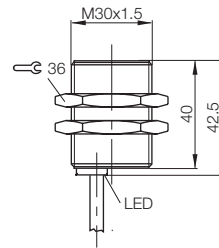
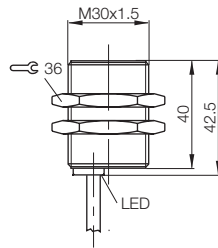
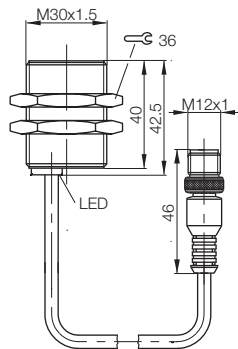
AC/DC 2-wire

AC 2-wire

Special Properties

Analog Distance Measurement

Accessories



DC 2-wire Inductive Sensors

Block designs, 20×32×8 mm

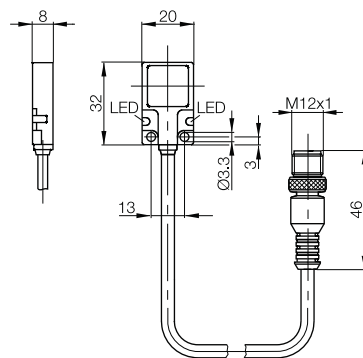


Model	20×32×8 mm R01	
Installation type (observe instructions in the Basic Information chapter)	Flush	
Rated switching distance s_n	5 mm	
Assured switching distance s_a	0...3.9 mm	
Switching distance marking	■	
Non-polarized, NO	Ordering code	BES03TM
	Part number	BES R01ZC-USC50B-BP00.2-GS04-101
Supply voltage U_s	10...30 V DC	
Voltage drop U_d at I_e max.	5 V	
Rated insulation voltage U_i	75 V DC	
Rated operating current I_e	100 mA	
Minimum operating current I_m	5 mA	
Residual current I_r max.	600 μ A	
Permissible load capacitance max.	1 μ F	
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	
Ambient temperature T_a	-25...+70 °C	
Switching frequency f max.	300 Hz	
Output function indicator	Yellow LED	
Degree of protection as per IEC 60529	IP 67	
Approvals	CE	
Material	Housing	Cast zinc
	Sensing surface	With ceramic coating
Connection	0.2 m PUR cable with M12 connector, 4-pin	

Wiring diagrams, see page 958.

The meaning of switching distance markings can be found on page 962.

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





Inductive Sensors

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

Cylinder Designs

Block Designs

AC/DC 2-wire

AC 2-wire

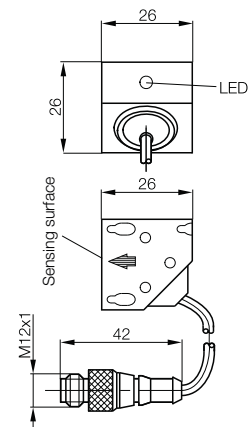
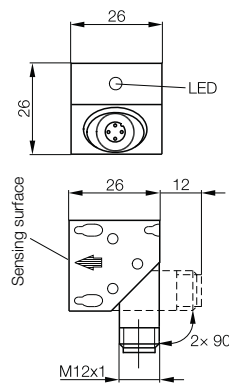
Special Properties

Analog Distance Measurement

Accessories

Model	26×26×26 mm Z03	26×26×26 mm Z03
Installation type (observe instructions in the Basic Information chapter)	Flush	Flush
Rated switching distance s_n	10 mm	10 mm
Assured switching distance s_a	0...8.1 mm	0...8.1 mm
Switching distance marking	■	■
Polarized, NO	Ordering code BES030H	BES030E
	Part number	BES Z03K-GSS10B-S04U-006
Supply voltage U_s	10...36 V DC	10...36 V DC
Voltage drop U_d at I_e max.	4.6 V	4.6 V
Rated insulation voltage U_i (protection class)	250 V AC (□)	250 V AC (□)
Rated operating current I_e	100 mA	100 mA
Minimum operating current I_m	2 mA	2 mA
Residual current I_r max.	600 μ A	600 μ A
Permissible load capacitance max.	0.1 μ F	0.1 μ F
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.	250 Hz	250 Hz
Output function indicator	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67
Approvals	CE	CE
Material	Housing PA	PA
	Sensing surface PA	PA
Connection	M12 connector, 4-pin	0.15 m PUR cable with M12 connector, 4-pin

Wiring diagrams, see page 958.
The meaning of switching distance markings can be found on page 962.

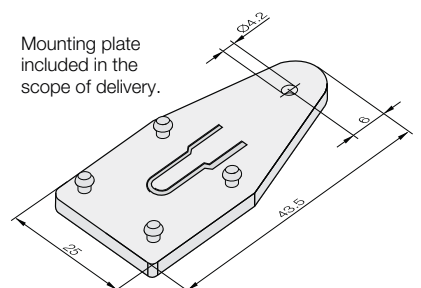
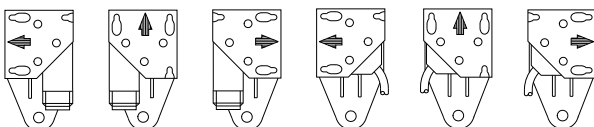


Small, compact block sensor with increased switching distance for quick installation

The connector mount can be rotated and the sensing face can be oriented in three directions.

Simple replacement with no loss of position thanks to the fixed mounting plate:

- Cost savings
- No special tools necessary
- Simple to install



Mounting plate included in the scope of delivery.

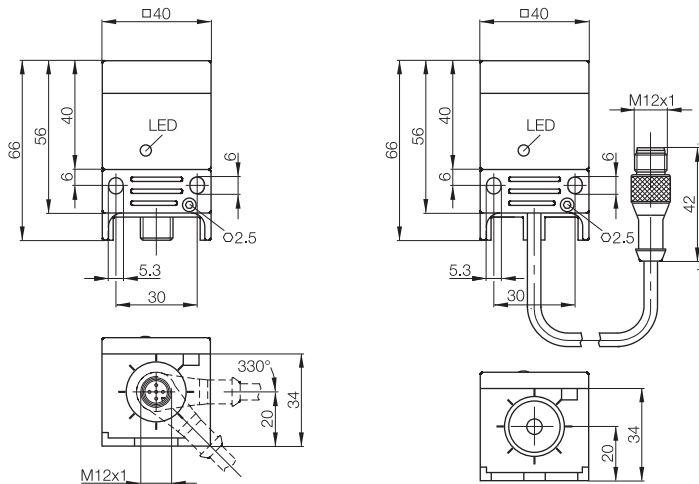
DC 2-wire Inductive Sensors

Block designs, 40×66×40 mm



Model		40×66×40 mm Unicomcompact	40×66×40 mm Unicomcompact
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush
Rated switching distance s_n		15 mm	15 mm
Assured switching distance s_a		0...12 mm	0...12 mm
Switching distance marking		■	■
Polarized, NO	Ordering code	BES0303	BES0302
	Part number	BES Q40KFU-GSH15B-S04G	BES Q40KFU-GSH15B-EP00,8-GS04
Polarized, NC	Ordering code		BES0301
	Part number		BES Q40KFU-GOH15B-EP00,8-GS04
Supply voltage U_S		10...55 V DC	10...55 V DC
Voltage drop U_d at I_e max.		4.6 V	4.6 V
Rated insulation voltage U_i (protection class)		250 V AC (□)	250 V AC (□)
Rated operating current I_e		100 mA	100 mA
Minimum operating current I_m		2 mA	5 mA
Residual current I_r max.		800 μ A	800 μ A
Permissible load capacitance max.		1 μ F	1 μ F
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.		150 Hz	150 Hz
Output function indicator		Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67
Approvals		CE	CE
Material	Housing	PPE, PPS	PPE, PPS
	Sensing surface	PPE	PPE
Connection		M12 connector, 4-pin	0.8 m PUR cable with M12 connector, 4-pin

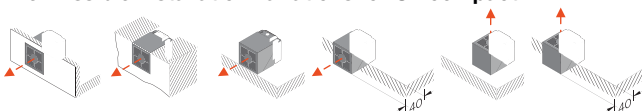
Wiring diagrams, see page 958.
The meaning of switching distance markings can be found on page 962.



Unicomcompact

The flexible sensor for mechanical engineering and equipment manufacturing. The detection direction can be adjusted in 5 directions. Long switching distance in compact package.

Permissible installation variations for Unicomcompact



DC 2-wire Inductive Sensors

Block designs, 40×121×40 mm



Model	40×121×40 mm Unisensor	
Installation type (observe instructions in the Basic Information chapter)	Not flush	
Rated switching distance s_n	20 mm	
Assured switching distance s_a	0...16 mm	
Switching distance marking	■	
Polarized, complementary	Ordering code	BES0309
	Part number	BES Q40KU-GPH20F-KM21
Supply voltage U_S	10...55 V DC	
Voltage drop U_d at I_o max.	4.6 V	
Rated insulation voltage U_i (protection class)	250 V AC (II)	
Rated operating current I_o	400 mA	
Minimum operating current I_m	4 mA	
Residual current I_r max.	1 mA	
Permissible load capacitance max.	1 μ F	
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	
Ambient temperature T_a	-25...+80 °C	
Switching frequency f max.	300 Hz	
Output function indicator	Red LED	
Degree of protection as per IEC 60529	IP 65	
Approvals	CE	
Material	Housing	PPE
	Sensing surface	PPE
Connection	Screw terminal	

Inductive Sensors

Global DC 3-wire

DC 3-/4-wire

DC 2-wire

Cylinder Designs

Block Designs

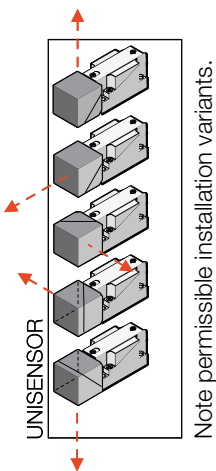
AC/DC 2-wire

AC 2-wire

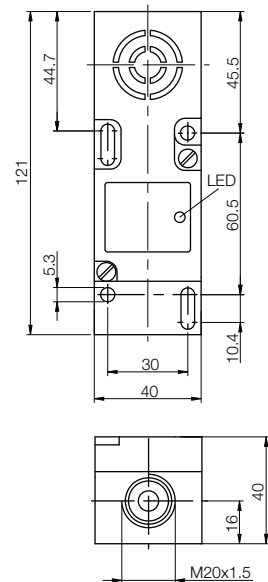
Special Properties

Analog Distance Measurement

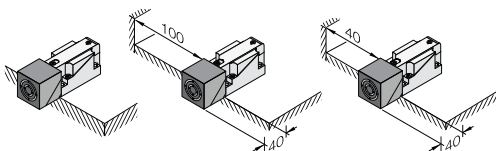
Accessories



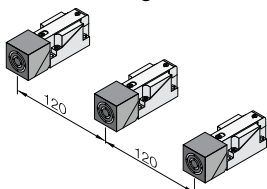
Wiring diagrams, see page 958.
The meaning of switching distance markings can be found on page 962.



Installation variations



Row mounting



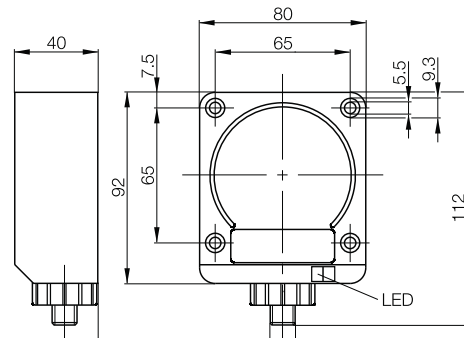
DC 2-wire Inductive Sensors

Block designs, 80×92×40 mm



Model	80×92×40 mm Maxisensor	
Installation type (observe instructions in the Basic Information chapter)	Flush	
Rated switching distance s_n	50 mm	
Assured switching distance s_a	0...40 mm	
Switching distance marking	■	
Polarized, NO	Ordering code	BES030A
	Part number	BES Q80KA-GSH50B-S04Q
Supply voltage U_s	10...55 V DC	
Voltage drop U_d at I_e max.	4.6 V	
Rated insulation voltage U_i (protection class)	250 V AC (Ⓜ)	
Rated operating current I_e	400 mA	
Minimum operating current I_m	4 mA	
Residual current I_r max.	600 μ A	
Permissible load capacitance max.	1 μ F	
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	
Ambient temperature T_a	-25...+70 °C	
Switching frequency f max.	90 Hz	
Output function indicator	Yellow LED	
Degree of protection as per IEC 60529	IP 67	
Approvals	CE	
Material	Housing	PPE
	Sensing surface	PPE
Connection	M12 connector, 4-pin	

Wiring diagrams, see page 958.
The meaning of switching distance markings can be found on page 962.

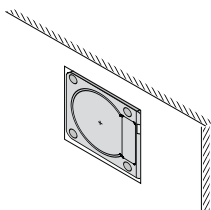


Maxisensor

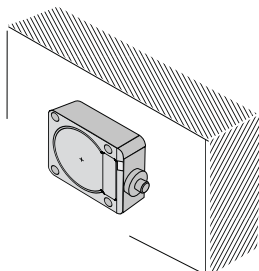
Long switching distance with low installation height in the detection direction. Ideal for equipment manufacturing and conveyor technology.

Permissible Maxisensor installation options

Installation in steel or non-ferrous metals



Installation on steel or non-ferrous metals



The switching distance is reduced by max. 5.5 mm when not installed flush.

