

DC 3-/4-wire Inductive Sensors

Cylinder design, Ø 6.5 mm



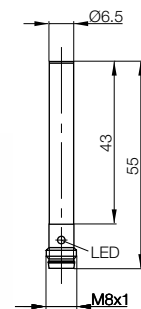
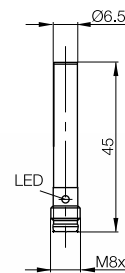
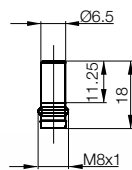
SUPERSHORTIES



Model	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
Switching distance marking	■	■	■
PNP, NO	Ordering code Part number	BES025N BES G06EA-PSD15B-S49G	BES00ZC BES 516-371-E5-C-S49
PNP, NC	Ordering code Part number	BES025J BES G06EA-POD15B-S49G	
NPN, NO	Ordering code Part number	BES025F BES G06EA-NSD15B-S49G	
NPN, NC	Ordering code Part number	BES025A BES G06EA-NOD15B-S49G	
Supply voltage U_s	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_e 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_e	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

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



SuperShorties monitor the function of a pneumatic stepping motor.

DC 3-/4-wire Inductive Sensors

Cylinder design, Ø 6.5 mm



SUPERSHORTIES



SUPERSHORTIES



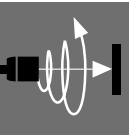
Ø 6.5 mm



Ø 6.5 mm



SUPERSHORTIES



Inductive Sensors

Global DC 3-wire

DC 3-/4-wire

Cylinder Designs

Block Designs

DC 2-wire

AC/DC 2-wire

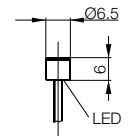
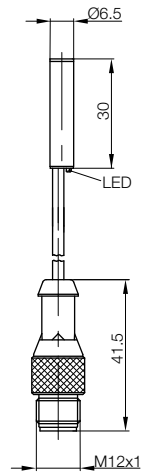
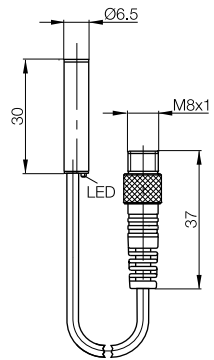
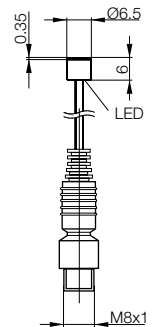
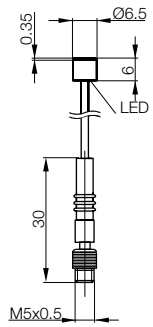
AC 2-wire

Special Properties

Analog Distance measurement

Accessories

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
■	■	■	■	■
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, 3x0.073 mm ²



DC 3-/4-wire Inductive Sensors

Cylinder design, Ø 6.5 mm



SUPERSHORTIES



SUPERSHORTIES

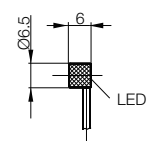
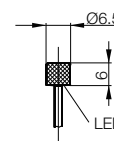
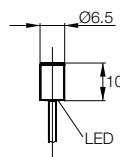


SUPERSHORTIES

Model		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
Switching distance marking		■	■	■
PNP, NO	Ordering code	BES025M	BES026F	BES0269
	Part number	BES G06EA-PSC15B-EP02	BES K06K60-PSC15B-EP02	BES K06K40-PSC15B-FP02
PNP, NC	Ordering code	BES025H	BES026E	BES0262
	Part number	BES G06EA-POC15B-EP02	BES K06K60-POC15B-EP02	BES K06K40-POC15B-FP02
NPN, NO	Ordering code	BES025E	BES026C	BES0261
	Part number	BES G06EA-NSC15B-EP02	BES K06K60-NSC15B-EP02	BES K06K40-NSC15B-FP02
NPN, NC	Ordering code	BES0259	BES026A	BES0260
	Part number	BES G06EA-NOC15B-EP02	BES K06K60-NOC15B-EP02	BES K06K40-NOC15B-FP02
Supply voltage U_s		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_e 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_e		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	PBT	PBT
	Sensing surface	PBT	PBT	PBT
Connection		2 m PUR cable, 3x0.073 mm ²	2 m PUR cable, 3x0.073 mm ²	2 m PUR cable, 3x0.073 mm ²

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

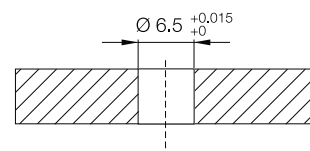


Features

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

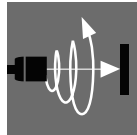
Recommendation for gluing in the sensor Ø 6.5 mm smooth

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 Sensors

Cylinder design, Ø 6.5 mm

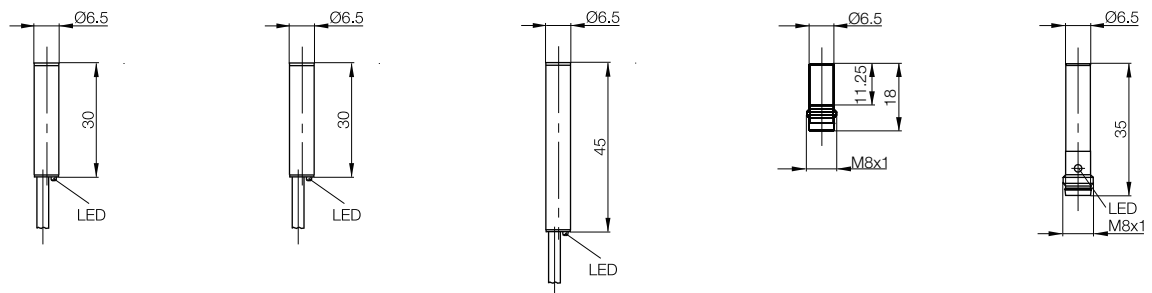


Inductive Sensors
Global DC 3-wire
DC 3-/4-wire
Cylinder Designs
Block Designs
DC 2-wire
AC/DC 2-wire
AC 2-wire
Special Properties
Analog Distance measurement
Accessories

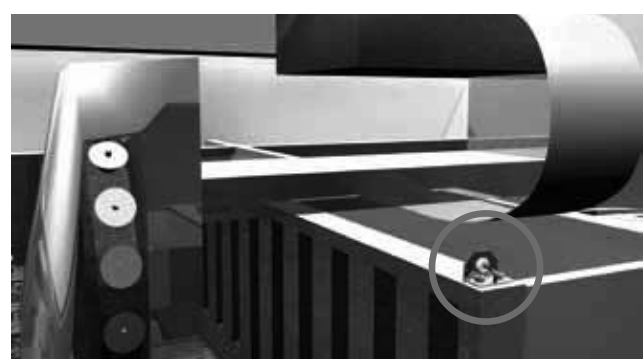
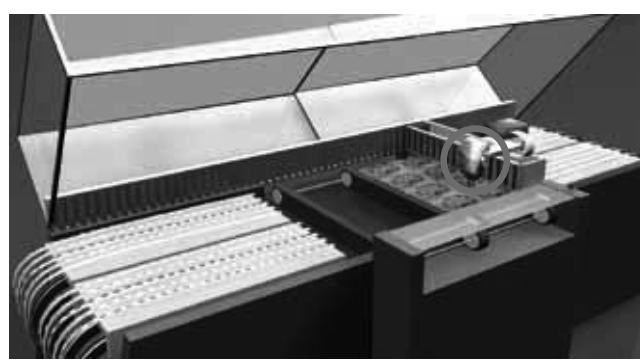


SUPERSHORTIES

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
■	■	■	■ ■	■ ■
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
Stainless steel	Stainless steel	Stainless steel	Short design Stainless steel	Stainless steel
PBT	PBT	PBT	PBT	PBT
2 m PVC cable, 3x0.14 mm ²	2 m PUR cable, 3x0.14 mm ²	2 m PVC cable, 3x0.14 mm ²	M8 connector, 3-pin	M8 connector, 3-pin



SuperShorties in electronics production: Automatic board assembler



DC 3-/4-wire Inductive Sensors

Cylinder design, Ø 6.5 mm

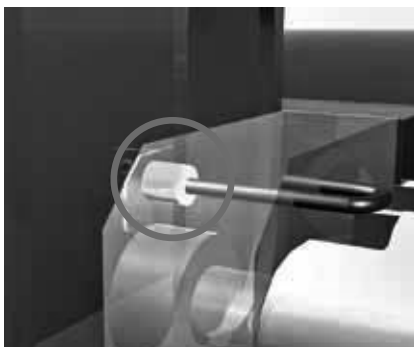
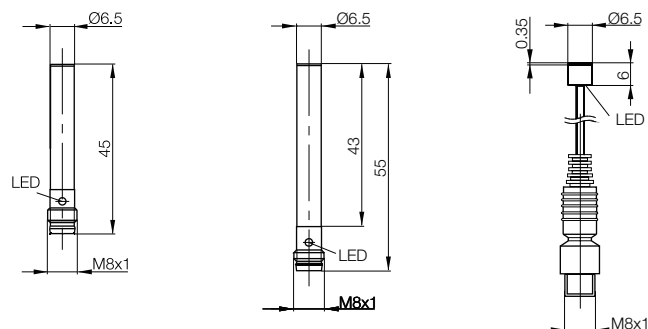


SUPERSHORTIES

Model		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
Switching distance marking		■ ■	■ ■	■ ■
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_s		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_e 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_e		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

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



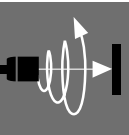
DC 3-/4-wire Inductive Sensors

Cylinder design, Ø 6.5 mm

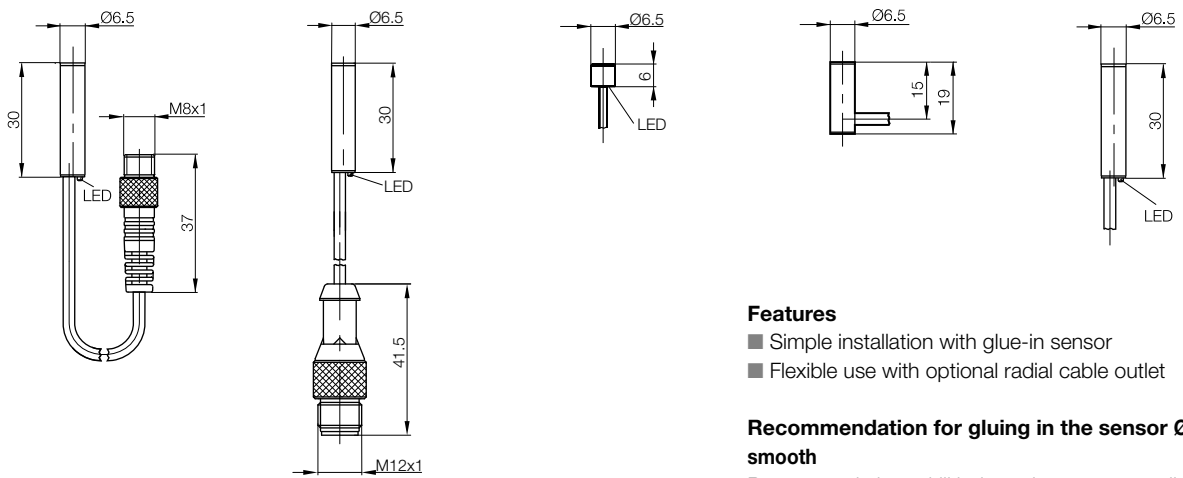


SUPERSHORTIES

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
■ ■	■ ■	■ ■	■ ■	■ ■
BES00ZR	BES00ZN	BES0258	BES01KW	BES00ZF
BES 516-371-G-E4-C-S49-00,3	BES 516-371-G-E4-C-S4-00,2	BES G06E60-PSC20B-EP02	BES 516-371-SA13-PU-02	BES 516-371-G-E4-C-02
BES03F8	BES00KU			BES00KP
BES 516-3021-G-E4-C-S49-00,3	BES 516-3021-G-E4-C-S4-00,2			BES 516-3021-G-E4-C-02
BES0106		BES0250		BES0102
BES 516-372-G-E4-C-S49-00,3		BES G06E60-NSC20B-EP02		BES 516-372-G-E4-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 (□)	75 V DC	75 V DC	250 V AC (□)
200 mA	200 mA	150 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	3 kHz	2 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 67	IP 65	IP 68 per BWN Pr. 20
CE, cULus	CE, cULus	CE, cULus	CE	CE, cULus
		Short 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	0.2 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 3x0.073 mm ²	2 m PUR cable, 3x0.14 mm ²	2 m PVC cable, 3x0.14 mm ²



Inductive Sensors
Global DC 3-wire
DC 3-/4-wire
Cylinder Designs
Block Designs
DC 2-wire
AC/DC 2-wire
AC 2-wire
Special Properties
Analog Distance measurement
Accessories

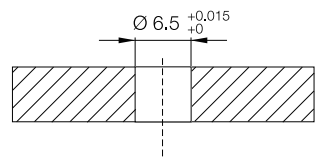


Features

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

Recommendation for gluing in the sensor Ø 6.5 mm smooth

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 Sensors

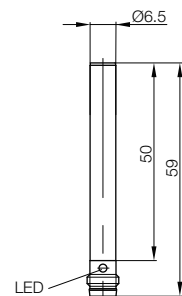
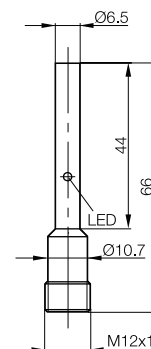
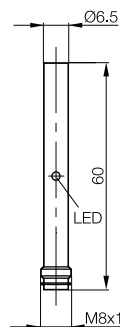
Cylinder design, Ø 6.5 mm



		TRIPLEPROX	TRIPLEPROX	HYPERPROX
Model		Ø 6.5 mm	Ø 6.5 mm	Ø 6.5 mm
Installation type (observe instructions in the Basic Information chapter)		Quasi-flush	Quasi-flush	Quasi-flush
Rated switching distance s_n		3 mm	3 mm	4 mm
Assured switching distance s_a		0...2.4 mm	0...2.4 mm	0...2.9 mm
Switching distance marking		■■■	■■■	■■■■
PNP, NO	Ordering code	BES02UY	BES02UR	BES01NT
	Part number	BES G06MI-PSC30B-S49G	BES G06MH1-PSC30B-S04G	BES G06MI-PSC40B-S49G
PNP, NC	Ordering code	BES02UW		
	Part number	BES G06MI-POC30B-S49G		
NPN, NO	Ordering code	BES02UU	BES02UP	BES01NR
	Part number	BES G06MI-NSC30B-S49G	BES G06MH1-NSC30B-S04G	BES G06MI-NSC40B-S49G
NPN, NC	Ordering code	BES02UT		
	Part number	BES G06MI-NOC30B-S49G		
Supply voltage U_s		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_e max.		2 V	2 V	2.8 V
Rated insulation voltage U_i (protection class)		75 V DC	75 V DC	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	0...+60 °C
Switching frequency f max.		1 kHz	1 kHz	700 Hz
Output function indicator		Yellow LED	Yellow LED	Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 65
Approvals		CE	CE	CE, cULus
Special properties		Large switching distance	Large switching distance	Large switching distance
Material	Housing	Brass-coated	Brass-coated	Brass-coated
	Sensing surface	PBT	PBT	PBT
Connection		M8 connector, 3-pin	M12 connector, 4-pin	M8 connector, 3-pin

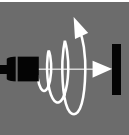
Wiring diagrams, see page 958.
The meaning of switching distance markings can be found on page 962.

Additional cable lengths and PUR cable jacket material available on request





Ø 6.5 mm	Ø 6.5 mm			
Not flush	Not flush			
2.5 mm	4 mm			
0...2 mm	0...3.2 mm			
■	■ ■			
BES00TZ	BES01NP			
BES 516-349-E4-C-02	BES G06EF-PSC40F-S49G			
BES00U6				
BES 516-350-E4-C-02				
10...30 V DC	10...30 V DC			
2.5 V	2.5 V			
250 V AC (□)	75 V DC			
200 mA	200 mA			
Yes/Yes/Yes	Yes/Yes/Yes			
-25...+70 °C	-25...+70 °C			
2 kHz	1.5 kHz			
Yellow LED	Yellow LED			
IP 68 per BWN Pr. 20	IP 67			
CE, cULus	CE, cULus			
Stainless steel	Stainless steel			
PBT	PBT			
2 m PVC cable, 3x0.14 mm ²	M8 connector, 3-pin			



Inductive Sensors
Global DC 3-wire
DC 3-/4-wire
Cylinder Designs
Block Designs
DC 2-wire
AC/DC 2-wire
AC 2-wire
Special Properties
Analog Distance measurement
Accessories

