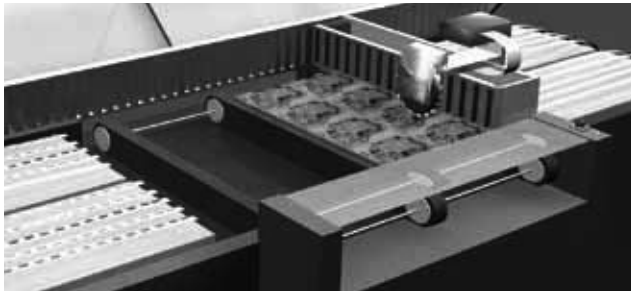


DC 3-/4-wire Inductive Sensors

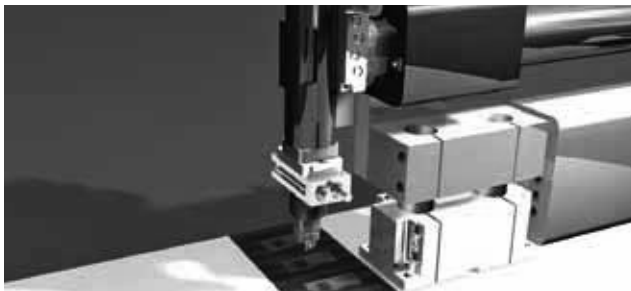
Block design, 5x5 mm

Five good reasons for using inductive 5x5 sensors

- One rugged, compact metal housing
- Two Switching distance variants (flush mountable): 0.8 mm for high-precision applications, new 1.5 mm for more function reserve
- Three connections: Supply (+), Ground (-), Output. Easy to integrate into standard and special controllers.
- Four interface variants: PNP or NPN, normally open or normally closed
- Five millimeter installation height in the sensing direction



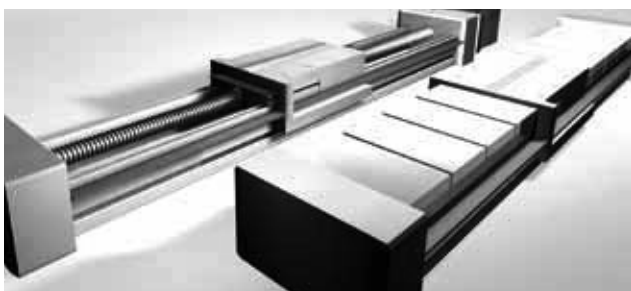
Electronics manufacturing: Mechatronic modules require miniature sensors. Balluff offers mini.s in the highest degree of precision.



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



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



Linear technology: Position detection in a simple manner through mini designs with maximum performance.

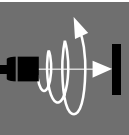
Model	
Installation type (observe instructions in the Basic Information chapter)	
Rated switching distance s_n	
Assured switching distance s_a	
Switching distance marking	
PNP, NO	Ordering code
	Part number
PNP, NC	Ordering code
	Part number
NPN, NO	Ordering code
	Part number
NPN, NC	Ordering code
	Part number
Supply voltage U_S	
Voltage drop U_d at I_e max.	
Rated insulation voltage U_i	
Rated operating current I_e	
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	

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

Additional cable lengths on request.

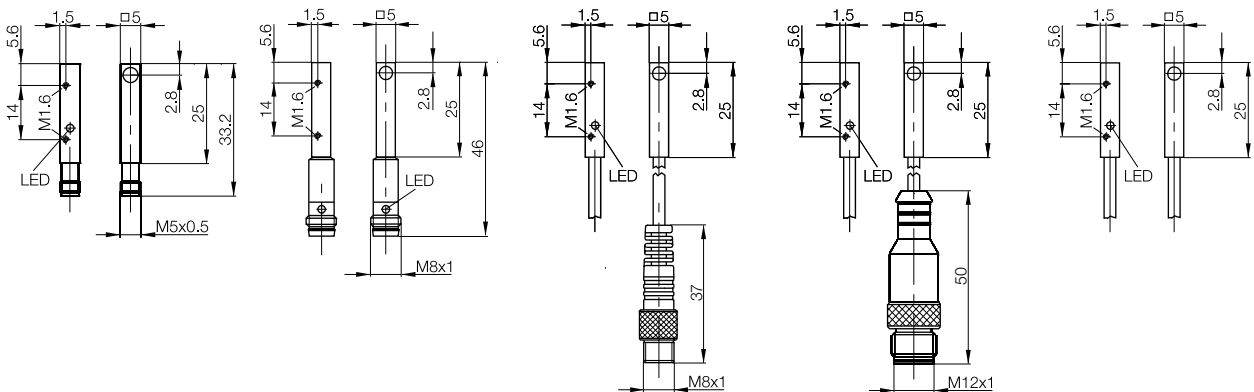
DC 3-/4-wire Inductive Sensors

Block design, 5x5 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

5x5 mm	5x5 mm	5x5 mm	5x5 mm	5x5 mm	5x5 mm
Flush	Flush	Flush	Flush	Flush	Flush
0.8 mm	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	0...0.65 mm
■	■	■	■	■	■
BES01RM	BES01ZF	BES019W	BES019T	BES019P	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	BES 516-3040-I02-C-PU-02
BES01RH	BES01ZH			BES01A1	BES 516-3042-I02-C-PU-02
BES Q05AC-POC08B-S26G	BES 516-3042-I02-C-S49			BES019Y	BES 516-3041-I02-C-PU-02
BES01RA	BES01A0			BES01A3	BES 516-3043-I02-C-PU-02
BES Q05AC-NSC08B-S26G	BES 516-3041-I02-C-S49			BES 516-3043-I02-C-PU-02	
BES01R6	BES01A5				
BES Q05AC-NOC08B-S26G	BES 516-3043-I02-C-S49				
10...30 V DC	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	2.5 V
75 V DC	75 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
Narrow design	Narrow design	Narrow design	Narrow design	Narrow design	Narrow design
Anodized aluminum	Anodized aluminum	Anodized aluminum	Anodized aluminum	Anodized aluminum	Anodized aluminum
PBT	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, 3x0.14 mm ²	



DC 3-/4-wire Inductive Sensors

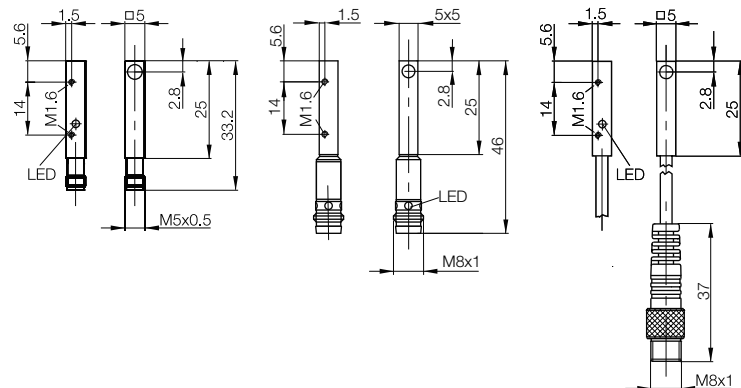
Block design, 5x5 mm

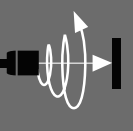


Model		5x5 mm	5x5 mm	5x5 mm
Installation type (observe instructions in the Basic Information chapter)		Flush	Flush	Flush
Rated switching distance s_n		1.5 mm	1.5 mm	1.5 mm
Assured switching distance s_a		0...1.2 mm	0...1.2 mm	0...1.2 mm
Switching distance marking		■ ■	■ ■	■ ■
PNP, NO	Ordering code	BES01RP	BES01RR	BES03UW
	Part number	BES Q05AC-PSC15B-S26G	BES Q05AC-PSC15B-S49G	BES Q05AC-PSC15B-EP00,3-GS49
PNP, NC	Ordering code	BES01RK	BES01RL	
	Part number	BES Q05AC-POC15B-S26G	BES Q05AC-POC15B-S49G	
NPN, NO	Ordering code	BES01RE	BES01RF	
	Part number	BES Q05AC-NSC15B-S26G	BES Q05AC-NSC15B-S49G	
NPN, NC	Ordering code	BES01R8	BES01R9	
	Part number	BES Q05AC-NOC15B-S26G	BES Q05AC-NOC15B-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	3 V	3 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Rated operating current I_e		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		Narrow design	Narrow design	Narrow design
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection		M5 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 on request.





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

5x5 mm				
Flush				
1.5 mm				
0...1.2 mm				
■ ■				
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				
Narrow design				
Stainless steel				
PBT				
2 m PUR cable, 3x0.14 mm ²				

