

Global Sensors

The complete series for standard applications





As the leading sensor specialist and system provider with more than 90 years of company tradition, Balluff GmbH has been a recognized partner in factory automation for decades. The global player has a strong presence with 56 sales branches and representative offices as well as nine production sites on all continents. The corporate headquarters in Neuhausen a.d.F. is located near Stuttgart.

Balluff masters the entire technological variety with various operating principles, including high-quality sensors and systems for position measurement and identification, as well as sensors for detecting objects and measuring fluids. The full-range assortment includes optimal network and connection technology and a comprehensive line of accessory products.

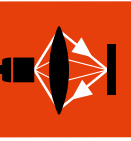
We offer innovative, first-class products tested in our own accredited laboratory, and maintain certified quality management in accordance with DIN EN 9001:2008. Our technology speaks for itself in international applications since it also meets regional standards.

Balluff stands for application-specific customer solutions, comprehensive services, individual consultation and prompt service. Our staff of more than 2750 employees is committed to providing outstanding service worldwide.

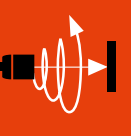
Benefit from comprehensive sensor expertise from a single source. Achieve solutions suited to your requirements.



Photoelectric Global Sensors 7



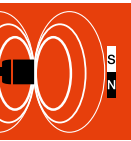
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Global Sensors

Sophisticated sensor technology and accessories for all areas of industrial automation

Global sensors – Your complete series of standard sensors

For object detection, we offer a wide range of top-quality, performance proven products for standard applications. These Global products are economically priced and suitable for all-purpose.

The Global series includes inductive, photoelectric, capacitive and magnetic field sensors – and the matching accessories.

The standard product line can be used globally and complies with the most important international approvals to meet the demands of a global customer base. Most Global products can be supplied in-stock and in high quantities.

Your benefits at a glance

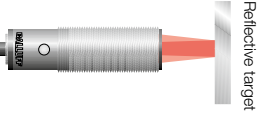
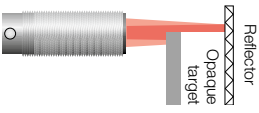
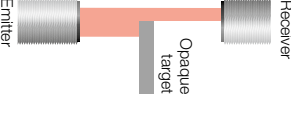




- **Quality products for standard applications**
- **Optimal price/performance ratio**
- **Short delivery time**
- **International certifications such as CE, cULus, etc.**
- **Worldwide applicable and worldwide service.**
- **Tested above and beyond standard**

Additional Global products can be found at www.balluff.com in the selector of each product area

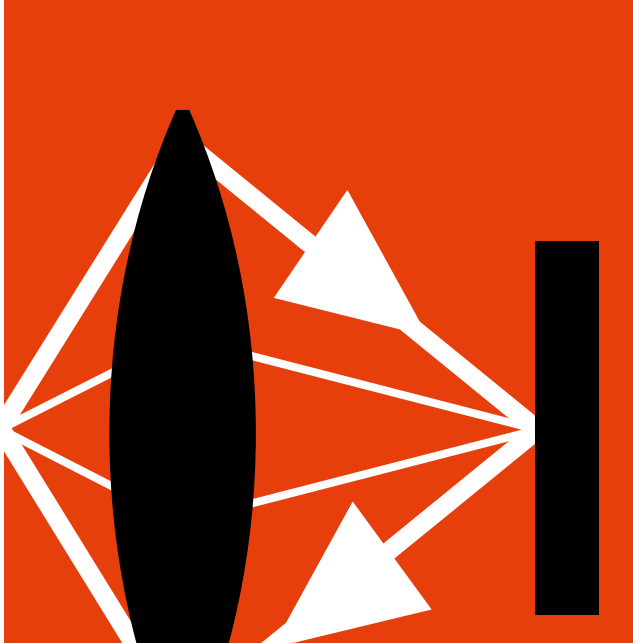


Global

All available sensor technologies

	Description	Range (typ.)	Advantages	Disadvantages	Applications
Photoelectric diffuse 	Detects any target capable of reflecting light	0...900 mm	Wide variety of applications, good for detecting small targets, only install at one point, cost less than through-beam or reflective	Short sensing range, sensitive to dirt, color-dependent	All-purpose, color marking, detecting labels
Photoelectric retroreflective 	Detect all parts that interrupt or reduce the light beam	0...16 m	Sensing range better than diffuse, ideally for conveyors or transparent targets, very reliable	Must install at two points on system: sensor and reflector, slightly more costly than diffuse	Conveyors, large openings, bottle detection
Photoelectric through-beam 	Detect all parts that interrupt or reduce the light beam	0...50 m	Longest sensing range, look through translucent object, very reliable, insensitive to dirt	Must install at two points on system: emitter and receiver	Height detection, control loops, level
Inductive 	Detect different metals based on the magnetic field	0...30 mm	Versatile application highly rugged, especially in difficult environmental conditions, economical, ease of handling	Short detection range, detects only metal targets	All-purpose models, welding, metal cutting, speed measurement
Capacitive object detection (flush) 	Detect parts based on change in density	0...20 mm	For detecting dense materials; adjustable, ease of handling. Even through plastic or glass walls	Small detection range, can be impaired by changes in humidity	Detect objects regardless of color, structure or material
Capacitive level detection (non-flush) 	Detect parts based on change in density	0...25 mm	For detecting bulk material or liquids – in contact with media	Can be impaired by material deposits	Detect objects regardless of color, structure or material
Magnetic 	Detects a magnet	Magnet-dependent	For pneumatic cylinders, detects most objects (except steel). Fits in nearly all standard cylinders	Short range, requires a magnet	Detect the cylinder position





Photoelectric Global Sensors

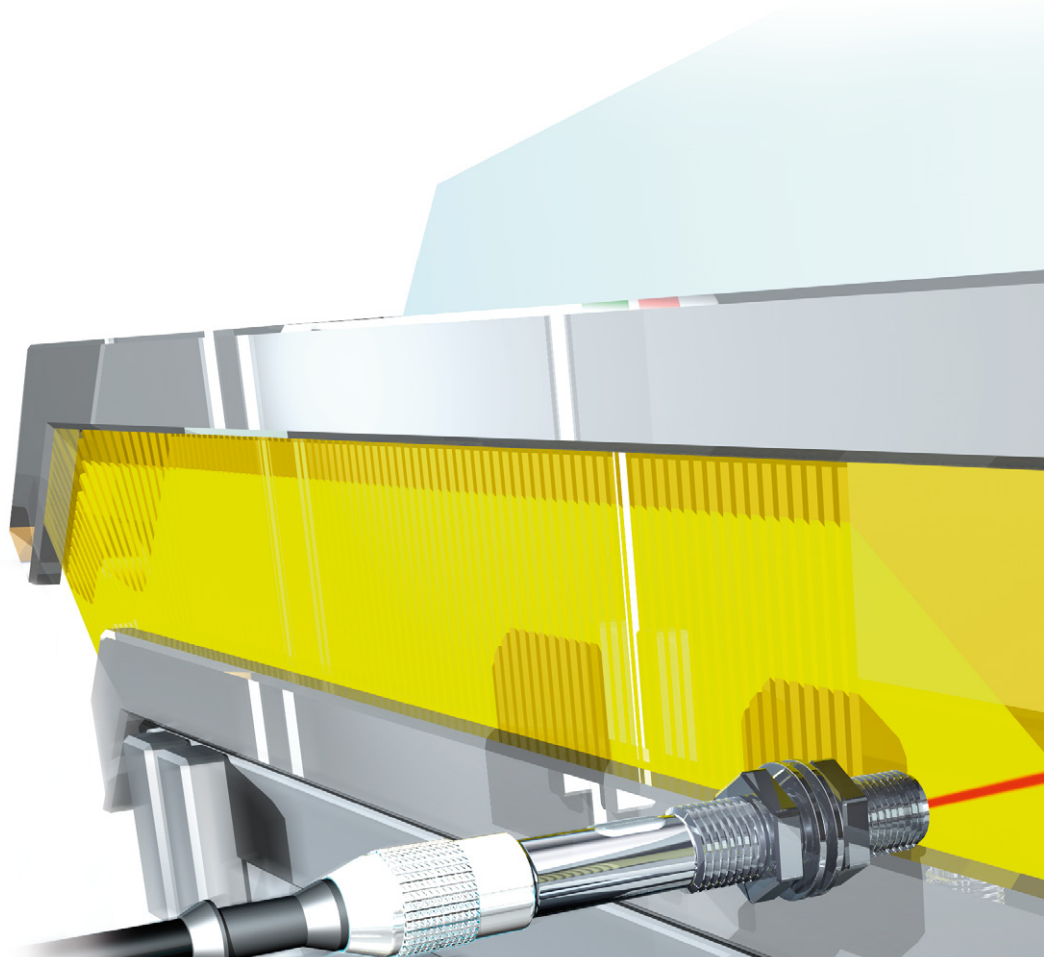
Photoelectric Global sensors – the first choice for your standard applications

Easy operation, fast installation, affordable price – the highlights of our photoelectric Global sensors.

The broad spectrum of diffuse sensors, retroreflective light sensors and through-beam sensors in various housing designs has a wide variety of applications.

Features

- **Sound performance and reliable object detection**
- **ideal for standard applications**
- **cost-effective in every light type**





Photoelectric Global Sensors

Contents

Block Designs

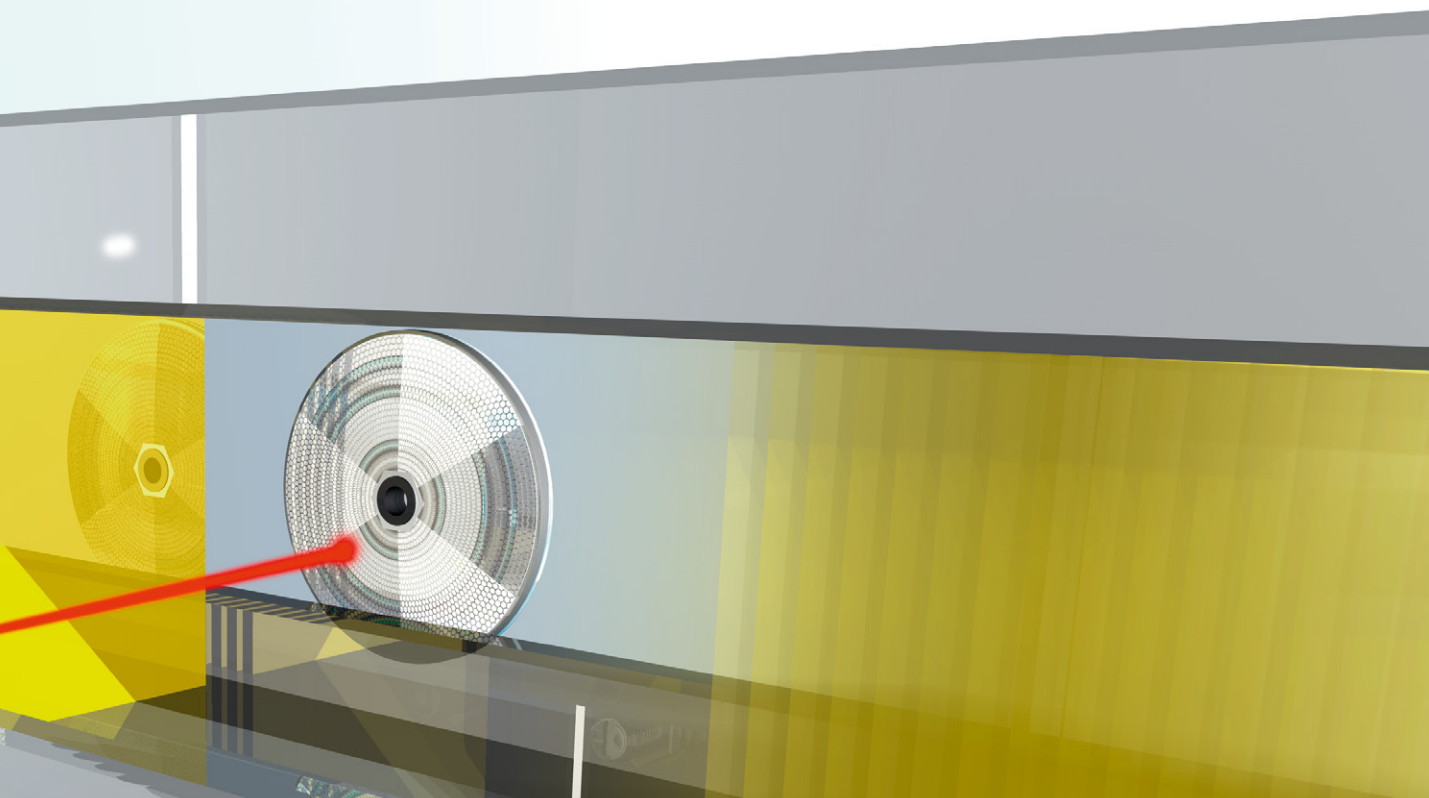
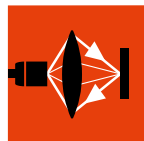
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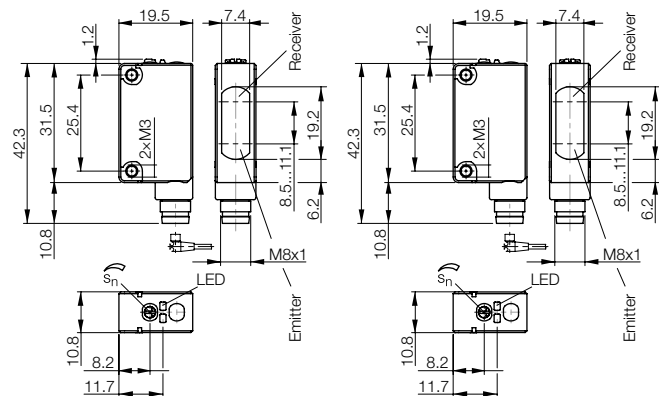
Preferred variants
 available immediately



Type			Diffuse sensor with background suppression 20...200 mm	Diffuse sensor with background suppression 40...200 mm
Detection range				
PNP NO		Order code	BOS015U	BOS012A
		Part number	BOS 5K-PS-RH12-S49	BOS 5K-PS-RH12-S75
PNP NC		Order code	BOS015W	BOS011Z
		Part number	BOS 5K-PO-RH12-S49	BOS 5K-PO-RH12-S75
NPN NO		Order code	BOS015Y	BOS011F
		Part number	BOS 5K-NS-RH12-S49	BOS 5K-NS-RH12-S75
NPN NC		Order code	BOS015Z	BOS0112
		Part number	BOS 5K-NO-RH12-S49	BOS 5K-NO-RH12-S75
Supply voltage U_s			10...30 V DC	10...30 V DC
Output current			100 mA	100 mA
No-load supply current I_0 max.			≤ 30 mA	≤ 30 mA
Polarity reversal/short-circuit protected			Yes/Yes	Yes/Yes
Settings			Potentiometer, 6-turn	Potentiometer, 6-turn
Emitter, light type			LED, red light	LED, red light
Switching frequency f			500 Hz	500 Hz
Degree of protection as per IEC 60529			IP 67	IP 67
Ambient temperature T_a			-25...+55 °C	-25...+55 °C
Material	Housing		PC/PBT	PC/PBT
	Optical surface		PC	PC
Connection			M8 connector, 4-pin	M8 connector, 4-pin

Reference object: white, 90% reflection, 200×200 mm

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M8, 4-pin/straight	2 m/PVC	BCC02PL
M8, 4-pin/angled	2 m/PVC	BCC02PZ
M8, 4-pin/straight	5 m/PVC	BCC02PM
M8, 4-pin/angled	5 m/PVC	BCC02R0

Recommended accessories

Description	Order code
Mounting bracket	BAM00U5
Mounting bracket	BAM00U6

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

Photoelectric Global Sensors

Block design, BOS 5K

Range 200 mm, 900 mm

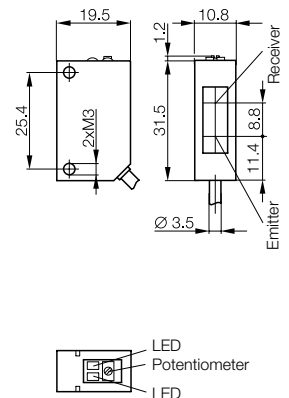
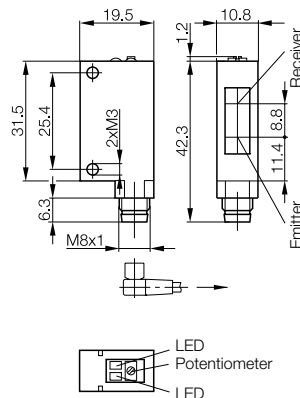
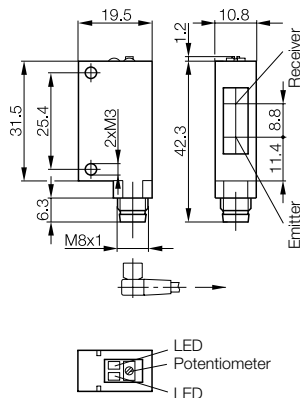
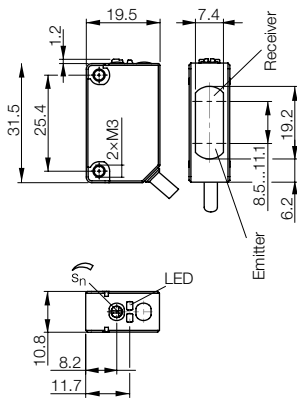


Photoelectric Global Sensors

Block Design

Cylinder Design
Fork Sensors

Diffuse sensor with background suppression	Diffuse sensor, small beam	Diffuse sensor	Diffuse sensor
40...200 mm	50...200 mm	0...900 mm	0...900 mm
BOS0129	BOS0128	BOS0124	BOS0123
BOS 5K-PS-RH12-02	BOS 5K-PS-RD11-S75	BOS 5K-PS-ID10-S75	BOS 5K-PS-ID10-02
BOS011Y	BOS011W	BOS011L	BOS011K
BOS 5K-PO-RH12-02	BOS 5K-PO-RD11-S75	BOS 5K-PO-ID10-S75	BOS 5K-PO-ID10-02
BOS011E	BOS011C	BOS0117	BOS0116
BOS 5K-NS-RH12-02	BOS 5K-NS-RD11-S75	BOS 5K-NS-ID10-S75	BOS 5K-NS-ID10-02
BOS0111	BOS0110	BOS010R	BOS010P
BOS 5K-NO-RH12-02	BOS 5K-NO-RD11-S75	BOS 5K-NO-ID10-S75	BOS 5K-NO-ID10-02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
100 mA	100 mA	100 mA	100 mA
≤ 30 mA	≤ 30 mA	≤ 30 mA	≤ 30 mA
Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
Potentiometer, 6-turn	Potentiometer, 270°	Potentiometer, 270°	Potentiometer, 270°
LED, red light	LED, red light	LED, infrared	LED, infrared
500 Hz	500 Hz	500 Hz	500 Hz
IP 67	IP 67	IP 67	IP 67
-25...+55 °C	-25...+55 °C	-25...+55 °C	-25...+55 °C
PC/PBT	PC/PBT	PC/PBT	PC/PBT
PC	PC	PC	PC
2 m PVC cable, 3x0.2 mm ²	M8 connector, 4-pin	M8 connector, 4-pin	2 m PVC cable, 3x0.2 mm ²



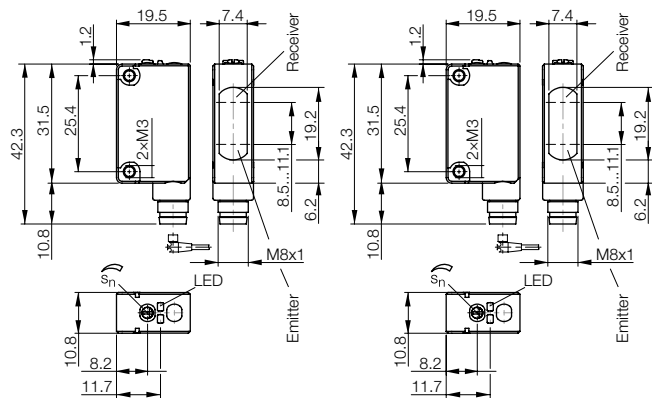
Preferred variants
 available immediately



Type			Retroreflective sensor	Retroreflective sensor
Detection range			0.1...4 m	0.1...4 m
PNP NO	Order code		BOS015E	BOS012E
		Part number	BOS 5K-PS-RR10-S49	BOS 5K-PS-RR10-S75
PNP NC	Order code		BOS015C	BOS0121
		Part number	BOS 5K-PO-RR10-S49	BOS 5K-PO-RR10-S75
NPN NO	Order code		BOS015H	BOS011J
		Part number	BOS 5K-NS-RR10-S49	BOS 5K-NS-RR10-S75
NPN NC	Order code		BOS015F	BOS0114
		Part number	BOS 5K-NO-RR10-S49	BOS 5K-NO-RR10-S75
Supply voltage U_S			10...30 V DC	10...30 V DC
Output current			100 mA	100 mA
No-load supply current I_0 max.			≤ 30 mA	≤ 30 mA
Polarity reversal/short-circuit protected			Yes/Yes	Yes/Yes
Settings			Potentiometer, 270°	Potentiometer, 270°
Emitter, light type			LED, red light	LED, red light
Switching frequency f			500 Hz	500 Hz
Degree of protection as per IEC 60529			IP 67	IP 67
Ambient temperature T_a			-25...+55 °C	-25...+55 °C
Material	Housing		PC/PBT	PC/PBT
	Optical surface		PC	PC
Connection			M8 connector, 3-pin	M8 connector, 4-pin

Reference object: white, 90% reflection, 200×200 mm
 Reference reflector: BOS R-9

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M8, 4-pin/straight	2 m/PVC	BCC02PL
M8, 4-pin/angled	2 m/PVC	BCC02PZ
M8, 4-pin/straight	5 m/PVC	BCC02PM
M8, 4-pin/angled	5 m/PVC	BCC02R0

Recommended accessories

Description	Order code
Mounting bracket	BAM00U5
Mounting bracket	BAM00U6
Reflector 51×61 mm	BAM00WL

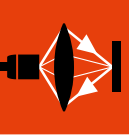
You can find additional electrical accessories in our catalog
Industrial Networking and Connectivity.

You can find additional mechanical accessories in
 our catalog **Accessories Line.**

Photoelectric Global Sensors

Block design, BOS 5K

Range 4 m, 10 m



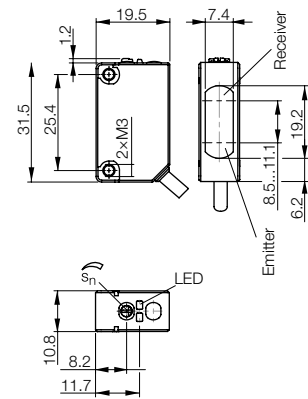
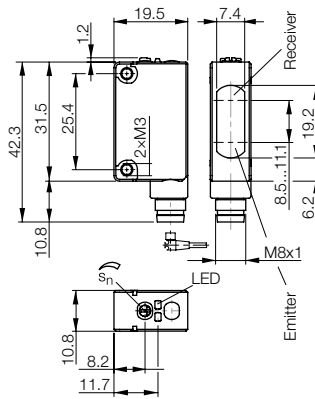
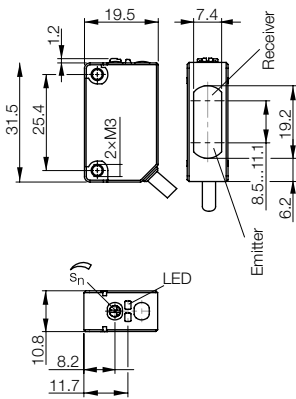
Photoelectric Global Sensors

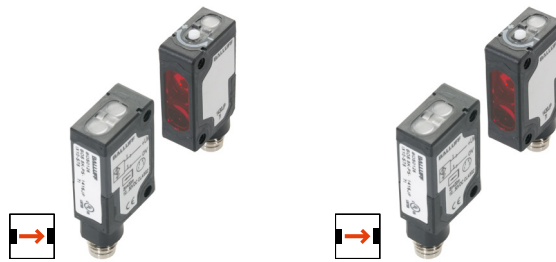
Block Design

Cylinder Design

Fork Sensors

Retroreflective sensor 0.1...4 m	Through-beam sensor 0...10 m	Through-beam sensor 0...10 m
BOS012C	BOS0126	BOS0125
BOS 5K-PS-RR10-02	BOS 5K-PS-IX10-S75	BOS 5K-PS-IX10-02
BOS0120	BOS011R	BOS011N
BOS 5K-PO-RR10-02	BOS 5K-PO-IX10-S75	BOS 5K-PO-IX10-02
BOS0113	BOS0119	BOS0118
BOS 5K-NS-RR10-02	BOS 5K-NS-IX10-S75	BOS 5K-NS-IX10-02
BOS011H	BOS010W	BOS010U
BOS 5K-NO-RR10-02	BOS 5K-NO-IX10-S75	BOS 5K-NO-IX10-02
10...30 V DC	10...30 V DC	10...30 V DC
100 mA	100 mA	100 mA
≤ 30 mA	≤ 20 mA (receiver), ≤ 15mA (emitter)	≤ 20 mA (receiver), ≤ 15mA (emitter)
Yes/Yes	Yes/Yes	Yes/Yes
Potentiometer, 270°	Potentiometer, 270°	Potentiometer, 270°
LED, red light	LED, infrared	LED, infrared
500 Hz	500 Hz	500 Hz
IP 67	IP 67	IP 67
-25...+55 °C	-25...+55 °C	-25...+55 °C
PC/PBT	PC/PBT	PC/PBT
PC	PC	PC
2 m PVC cable, 3x0.2 mm ²	M8 connector, 4-pin	2 m PVC cable, 3(2)x0.2 mm ² (emitter)



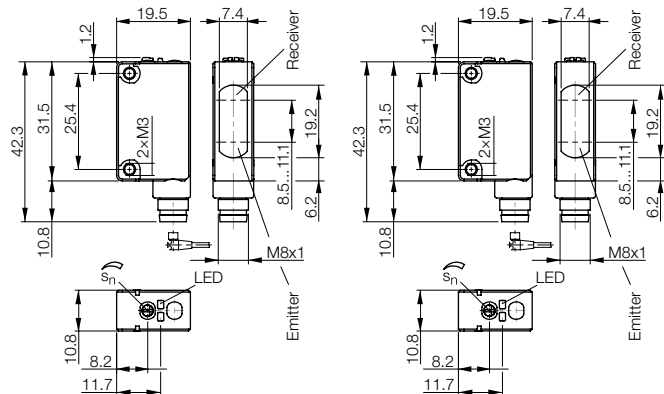


Preferred variants
 available immediately

Type		Through-beam sensor	Through-beam sensor
Detection range		0...20 m	0...20 m
PNP NO	Order code	BOS0158	
	Part number	BOS 5K-PS-IX10-S49	
PNP NC	Order code	BOS0157	BOS011T
	Part number	BOS 5K-PO-IX10-S49	BOS 5K-PO-IX10-S75-S
NPN NO	Order code	BOS015A	
	Part number	BOS 5K-NS-IX10-S49	
NPN NC	Order code	BOS0159	BOS010Y
	Part number	BOS 5K-NO-IX10-S49	BOS 5K-NO-IX10-S75-S
Supply voltage U_s		10...30 V DC	10...30 V DC
Output current		100 mA	100 mA
No-load supply current I_0 max.		≤ 20 mA (receiver), ≤15mA (emitter)	≤ 20 mA (receiver), ≤15mA (emitter)
Polarity reversal/short-circuit protected		Yes/Yes	Yes/Yes
Settings		Potentiometer, 270°	Potentiometer, 270°
Emitter, light type		LED, infrared	LED, infrared
Switching frequency f		500 Hz	500 Hz
Degree of protection as per IEC 60529		IP 67	IP 67
Ambient temperature T_a		-25...+55 °C	-25...+55 °C
Material	Housing	PC/PBT	PC/PBT
	Optical surface	PC	PC
Connection		M8 connector, 3-pin	M8 connector, 4-pin

Reference object: white, 90% reflection, 200×200 mm

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M8, 4-pin/straight	2 m/PVC	BCC02PL
M8, 4-pin/angled	2 m/PVC	BCC02PZ
M8, 4-pin/straight	5 m/PVC	BCC02PM
M8, 4-pin/angled	5 m/PVC	BCC02R0

Recommended accessories

Description	Order code
Mounting bracket	BAM00U5
Mounting bracket	BAM00U6
Reflector 14×23 mm	BAM00UM
Reflector 51×62 mm	BAM00UY

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

Photoelectric Global Sensors

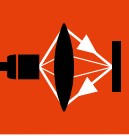
Block design, BOS 5K Laser

Range 300 mm, 10 m, 30 m



Laser Class 1

Preferred variants available immediately



Photoelectric Global Sensors

Block Design

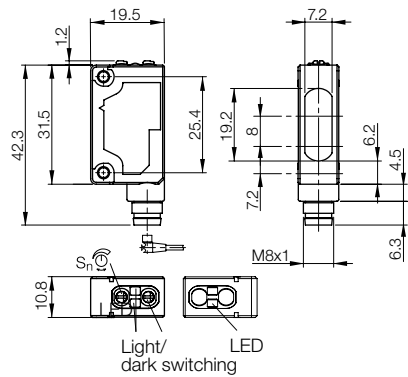
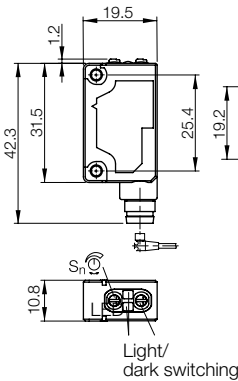
Cylinder Design

Fork Sensors

Type	Diffuse sensor with background suppression	Retroreflective sensor	Through-beam sensor
Detection range	20...300 mm	0.3...10 m	0...30 m
PNP	Order code BOS01JK	BOS01JW	BOS01JP
NO/NC	Part number BOS 5K-PU-LH12-S75	BOS 5K-PU-LR10-S75	BOS 5K-PU-LX10-S75
NPN	Order code BOS01K0	BOS01JU	BOS01JN
NO/NC	Part number BOS 5K-NU-LH12-S75	BOS 5K-NU-LR10-S75	BOS 5K-NU-LX10-S75
Supply voltage U_s	10...30 V DC	10...30 V DC	10...30 V DC
Output current	100 mA	100 mA	100 mA
No-load supply current I_0 max.	35 mA	35 mA	35 mA
Polarity reversal/short-circuit protected	Yes/Yes	Yes/Yes	Yes/Yes
Settings	Potentiometer, 270°	Potentiometer, 270°	Potentiometer, 270°
Emitter, light type	Laser, red light	Laser, red light	Laser, red light
Laser class	1	1	1
Switching frequency f	2000 Hz	2000 Hz	2000 Hz
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Ambient temperature T_a	-10...+55 °C	-10...+55 °C	-10...+55 °C
Material Housing	PC/PBT	PC/PBT	PC/PBT
Optical surface	PMMA	PMMA	PMMA
Connection	M8 connector, 4-pin	M8 connector, 4-pin	M8 connector, 4-pin

Reference object: white, 90% reflection, 200x200 mm
Reference reflector: BOS R-22

Other variants on our website or on request.



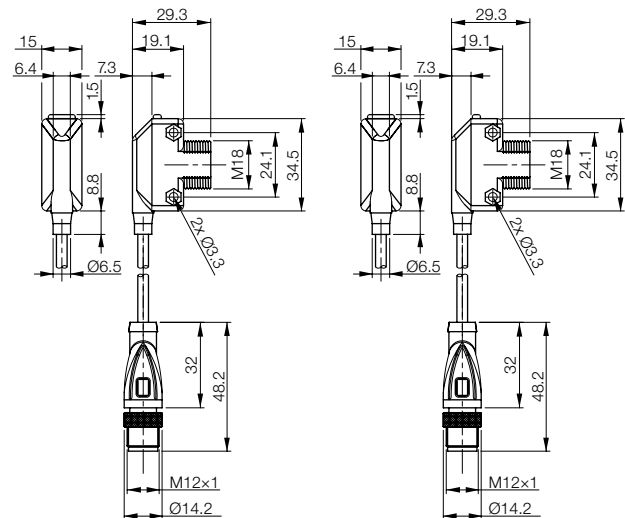
Preferred variants
 available immediately



Type		Diffuse sensor with background suppression 10...50 mm	Diffuse sensor with background suppression 10...100 mm
Detection range		10...50 mm	10...100 mm
PNP NO/NC	Order code	BOS014R	BOS019A
	Part number	BOS 11K-PA-RH10-00.15-S4	BOS 11K-PA-RH11-00.15-S4
NPN NO/NC	Order code	BOS014U	BOS019C
	Part number	BOS 11K-NA-RH10-00.15-S4	BOS 11K-NA-RH11-00.15-S4
Emitter	Order code		
	Part number		
Receiver PNP NO/NC	Order code		
	Part number		
Receiver NPN NO/NC	Order code		
	Part number		
Supply voltage U_s		10...30 V DC	10...30 V DC
Output current		100 mA	100 mA
No-load supply current I_0 max.		≤ 25 mA	≤ 25 mA
Polarity reversal/short-circuit protected		Yes/Yes	Yes/Yes
Settings			
Ermitter, light type		LED, red light	LED, red light
Switching frequency f		500 Hz	500 Hz
Degree of protection as per IEC 60529		IP 67	IP 67
Ambient temperature T_a		-20...+55 °C	-20...+55 °C
Material	Housing	ABS	ABS
	Optical surface	PMMA	PMMA
Connection		0.15 m PVC cable with M12 connector, 4-pin	0.15 m PVC cable with M12 connector, 4-pin

Reference reflector: BOS R-1

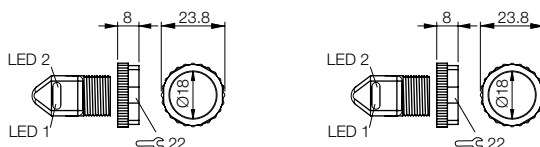
Other variants on our website or on request.



Recommended accessories

Description	Order code
Mounting bracket	BAM00PT

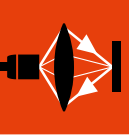
You can find additional mechanical accessories in our catalog **Accessories Line**.



Photoelectric Sensors

Block design, BOS 11K

Range 450 mm, 3.5 m, 6.5 m, 20 m



Photoelectric
Global
Sensors

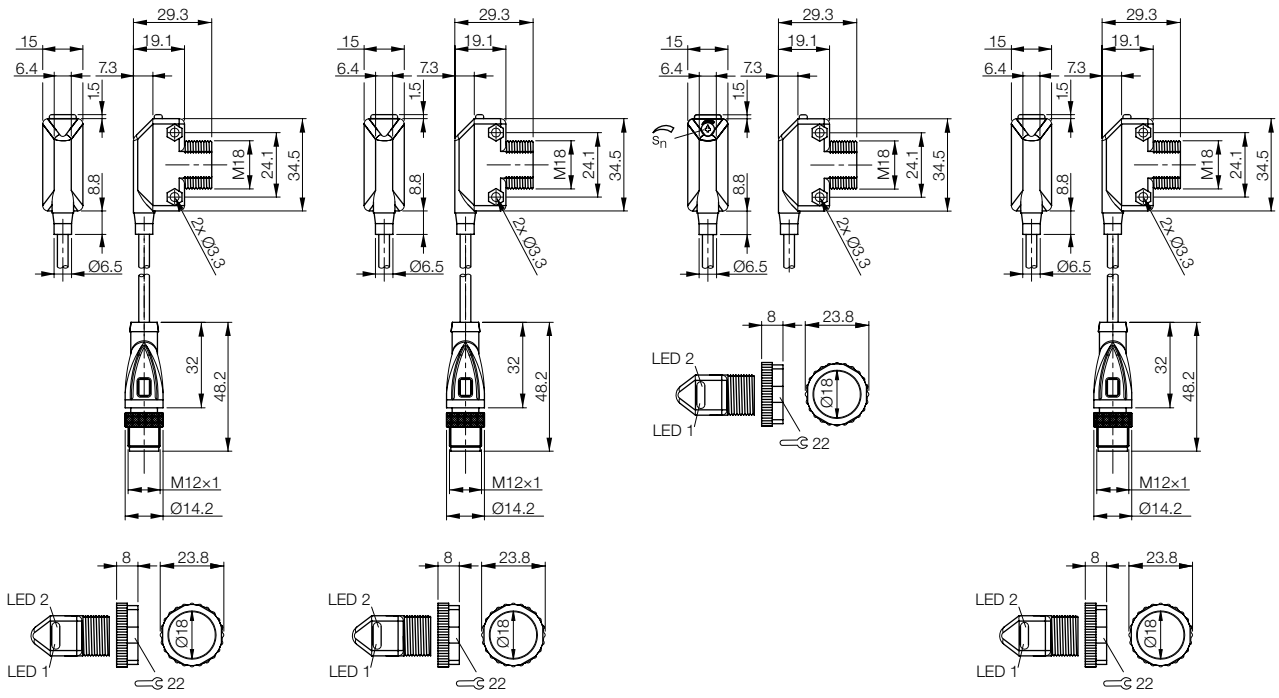
Block
Design

Cylinder
Design

Fork Sensors



Diffuse sensor	Retroreflective sensor polarized	Retroreflective sensor	Through-beam sensor
10...450 mm	0.5...3.5 m	0.5...6.5 m	20 m
BOS012P	BOS012W	BOS012Z	
BOS 11K-PA-ID10-00,15-S4	BOS 11K-PA-PR10-00,15-S4	BOS 11K-PA-RR10-02	
BOS012F	BOS012L	BOS012N	
BOS 11K-NA-ID10-00,15-S4	BOS 11K-NA-PR10-00,15-S4	BOS 11K-NA-RR10-02	
			BOS0130
			BOS 11K-X-IS11-00,15-S4
			BOS012T
			BOS 11K-PA-IE11-00,15-S4
			BOS012J
			BOS 11K-NA-IE11-00,15-S4
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
100 mA	100 mA	100 mA	100 mA
≤ 25 mA	≤ 25 mA	≤ 25 mA	≤ 25 mA
Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
LED, infrared	LED, red light	Potentiometer, 270°	LED, infrared
500 Hz	500 Hz	500 Hz	500 Hz
IP 67	IP 67	IP 67	IP 67
-20...+55 °C	-20...+55 °C	-20...+55 °C	-25...+55 °C
ABS	ABS	ABS	ABS
PMMA	PMMA	PMMA	PMMA
0.15 m PVC cable with M12 connector, 4-pin	0.15 m PVC cable with M12 connector, 4-pin	2 m PVC cable	0.15 m PVC cable with M12 connector, 4-pin



Photoelectric Sensors
Cylinder design, BOS 12M
Range 60 mm, 200 mm



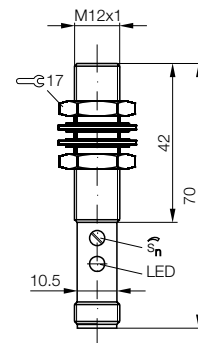
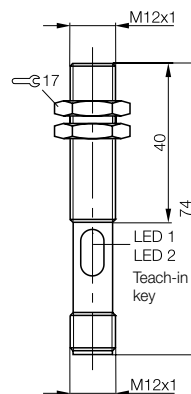
Preferred variants available immediately



Type		Diffuse sensor with background suppression	Diffuse sensor
Detection range		10...60 mm	0...200 mm
PNP NO/NC	Order code	BOS007T	
	Part number	BOS 12M-PU-1HA-S4-C	
PNP NO	Order code		BOS000W
	Part number		BOS 12M-PS-1PB-S4-C
PNP NC	Order code		
	Part number		
Supply voltage U_S		10...30 V DC	10...30 V DC
Output current		100 mA	≤ 200 mA
No-load supply current I_0 max.		≤ 25 mA	≤ 20 mA
Polarity reversal/short-circuit protected		Yes/Yes	Yes/Yes
Settings		Teach-in	Potentiometer, 270°
Emitter, light type		LED, red light	LED, infrared light
Switching frequency f		1 kHz	200 Hz
Degree of protection as per IEC 60529		IP 67	IP 67
Ambient temperature T_a		-20...+60 °C	-5...+55 °C
Material	Housing	Nickel-plated brass	Nickel-plated brass
	Optical surface	PMMA	PMMA
Connection		M12 connector, 4-pin	M12 connector, 4-pin

Reference object: white, 90% reflection, 200×200 mm

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

Recommended accessories

Description	Order code
Mounting bracket	BAM00C0
Mounting cuff	BAM00C4

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

Photoelectric Sensors

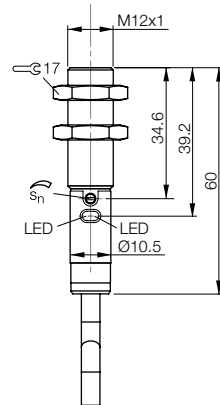
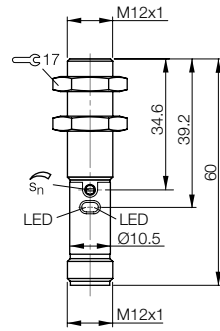
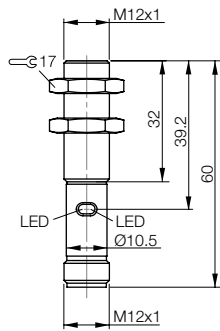
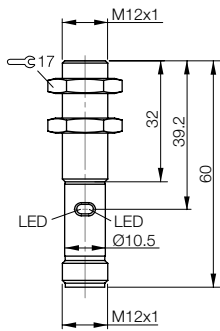
Cylinder design, BOS 12M

Range 100 mm, 200 mm, 250 mm



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Diffuse sensor	Diffuse sensor	Diffuse sensor	Diffuse sensor
1...100 mm	1...200 mm	1...250 mm	1...250 mm
BOS01TN	BOS01TU	BOS01TP	BOS01TR
BOS 12M-PS-RD11-S4	BOS 12M-PS-RD12-S4	BOS 12M-PS-RD10-S4	BOS 12M-PS-RD10-02
10...30 VDC 100 mA 20 mA Yes/Yes	10...30 VDC 100 mA 20 mA Yes/Yes	10...30 VDC 100 mA 20 mA Yes/Yes Potenziometer 270°	10...30 VDC 100 mA 20 mA Yes/Yes Potenziometer 270°
LED, red light 1000 Hz IP67 -5...+55 °C Nickel-plated brass PMMA M12 connector, 4-pin	LED, red light 1000 Hz IP67 -5...+55 °C Nickel-plated brass PMMA M12 connector, 4-pin	LED, red light 1000 Hz IP67 -5...+55 °C Nickel-plated brass PMMA M12 connector, 4-pin	LED, red light 1000 Hz IP67 -5...+55 °C Nickel-plated brass PMMA 2 m PVC cabel, 4x0.34 mm ²



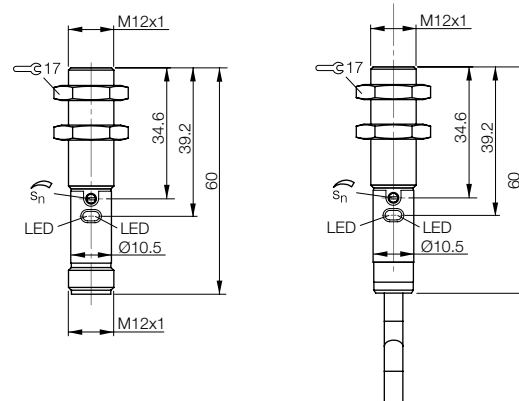
Preferred variants available immediately



Type		Retroreflective sensor polarized	Retroreflective sensor polarized
Detection range		0...3 m	0...3 m
PNP NO	Order code	BOS01TT	BOS01WR
	Part number	BOS 12M-PS-PR10-S4	BOS 12M-PS-PR10-02
PNP NC	Order code	BOS01Y1	
	Part number	BOS 12M-PO-PR10-S4	
PNP NC	Ermitter	Order code	
		Part number	
PNP NO	Receiver	Order code	
		Part number	
Supply voltage U_S		10...30 VDC	10...30 VDC
Output current		100 mA	100 mA
No-load supply current I_0 max.		20 mA	20 mA
Polarity reversal/short-circuit protected		Yes/Yes	Yes/Yes
Settings			
Emitter, light type		LED, red light	LED, red light
Switching frequency f		1000 Hz	1000 Hz
Degree of protection as per IEC 60529		IP67	IP67
Ambient temperature T_a		-5...+55 °C	-5...+55 °C
Material	Housing	Nickel-plated brass	Nickel-plated brass
	Optical surface	PMMA	PMMA
Connection		M12 connector, 4-pin	2 m PVC cabel, 3x0.34 mm ²

Reference object: white, 90% reflection, 200x200 mm
 Reference reflector: BOS R-1

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

Recommended accessories

Description	Order code
Mounting bracket	BAM00C0
Mounting cuff	BAM00C4
Reflector Ø 84 mm	BAM00UK

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

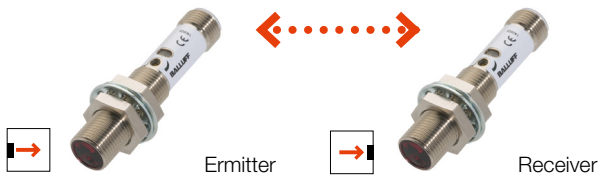
Photoelectric Sensors

Cylinder design, BOS 12M

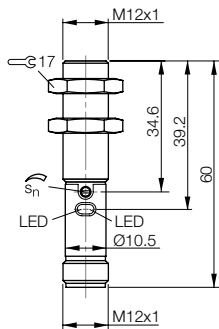
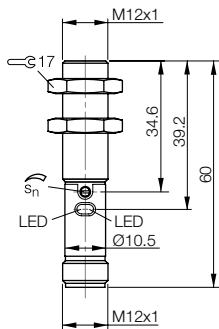
Range 8 m



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Through-beam sensor	Through-beam sensor		
0...8 m	0...8 m		
BOS01TW	BOS01TY		
BOS 12M-X-RS10-S4	BOS 12M-PS-RE10-S4		
10...30 VDC	10...30 VDC		
100 mA	100 mA		
20 mA	20 mA		
Yes/Yes	Yes/Yes		
Potenziometer 270°	Potenziometer 270°		
LED, red light	LED, red light		
1000 Hz	1000 Hz		
IP67	IP67		
-5...+55 °C	-5...+55 °C		
Nickel-plated brass	Nickel-plated brass		
PMMA	PMMA		
M12 connector, 4-pin	M12 connector, 4-pin		



Photoelectric Global Sensors
Cylinder design, BOS 18M
Range 400 mm, 600 mm

M18
Global

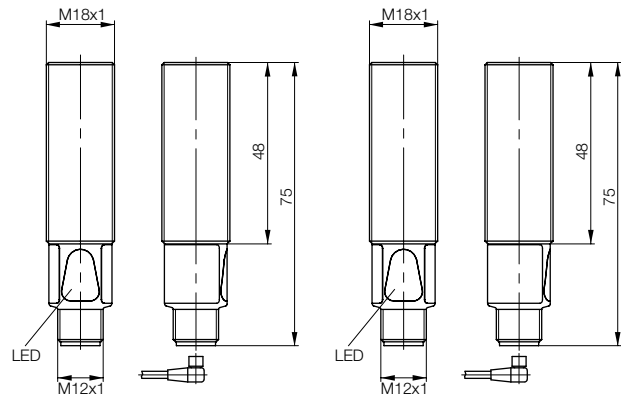
Preferred variants
 available immediately



Type		Diffuse sensor	Diffuse sensor
Detection range		1...400 mm	1...600 mm
PNP NO	Order code	BOS01FA	BOS01HL
	Part number	BOS 18M-PS-RD23-S4	BOS 18M-PS-ID23-S4
PNP NC	Order code	BOS01FC	
	Part number	BOS 18M-PO-RD23-S4	
PNP NO	Polarizing filter	Order code	
		Part number	
PNP NC	Polarizing filter	Order code	
		Part number	
Supply voltage U_S		10...30 V DC	10...30 V DC
Output current		100 mA	100 mA
Polarity reversal/short-circuit protected		Yes/Yes	Yes/Yes
Settings		Fixed	Fixed
Emitter, light type		LED, red light	LED, infrared
Received light indicator		Yellow LED	Yellow LED
Response time		1.25 ms	1.25 ms
Switching frequency f		400 Hz	400 Hz
Degree of protection as per IEC 60529		IP 67	IP 67
Ambient temperature T_a		-5...+55 °C	-5...+55 °C
Permissible ambient light		10 klx	5 klx
Material	Housing	Nickel-plated brass	Nickel-plated brass
	Optical surface	Glass	Glass
Connection		M12 connector, 4-pin	M12 connector, 4-pin

Reference object: white, 90% reflection, 200x200 mm
 Reference reflector: BOS R-1

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

Recommended accessories

Description	Order code
Mounting bracket	BAM00EY
Mounting bracket	BAM00RY
Mounting cuff	BAM00F2
Reflector Ø 84 mm	BAM00UK

You can find additional electrical accessories in our catalog
Industrial Networking and Connectivity.

You can find additional mechanical accessories in
 our catalog **Accessories Line.**

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Cylinder design, BOS 18M

Range 4 m, 6 m

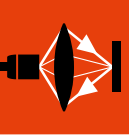
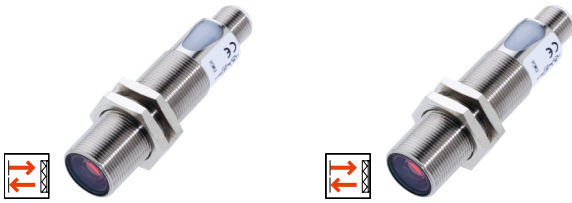
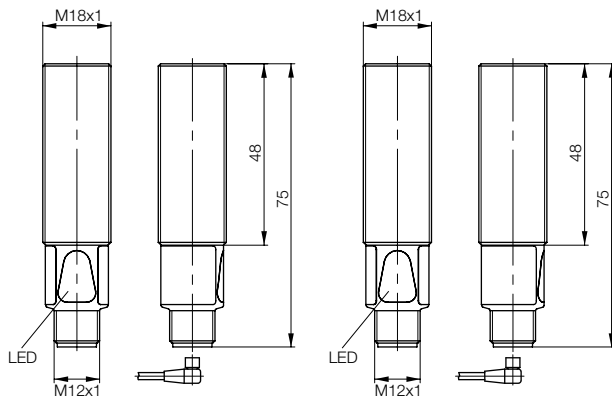


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Retroreflective sensor 4 m	Retroreflective sensor 6 m		
	BOS01HK		
	BOS 18M-PS-IR23-S4		
BOS01F8			
BOS 18M-PS-PR23-S4			
BOS01F9			
BOS 18M-PO-PR23-S4			
10...30 V DC	10...30 V DC		
100 mA	100 mA		
Yes/Yes	Yes/Yes		
Fixed	Fixed		
LED, red light	LED, infrared		
Yellow LED	Yellow LED		
1.25 ms	1.25 ms		
400 Hz	400 Hz		
IP 67	IP 67		
-5...+55 °C	-5...+55 °C		
10 klx	5 klx		
Nickel-plated brass	Nickel-plated brass		
Glass	Glass		
M12 connector, 4-pin	M12 connector, 4-pin		



Preferred variants
 available immediately



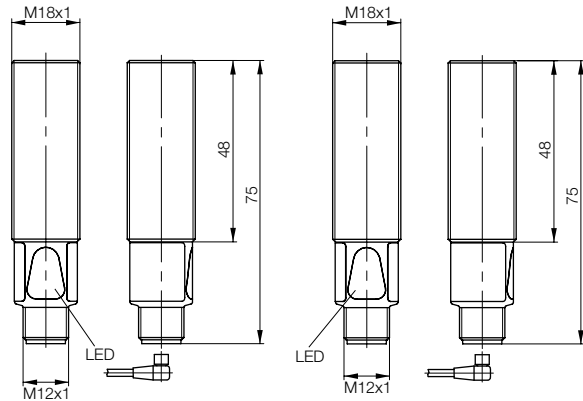
Emitter



Receiver

Type	Through-beam sensor		Through-beam sensor
Detection range	0...20 m		0...20 m
PNP NC	Emitter	Order code BOS01FH	
		Part number BOS 18M-X-RS23-S4	
PNP NO	Receiver	Order code BOS01FE	
		Part number BOS 18M-PS-RE23-S4	
Supply voltage U_s	10...30 V DC		10...30 V DC
Output current			100 mA
Polarity reversal/short-circuit protected	Yes/Yes		Yes/Yes
Settings	Fixed		Fixed
Emitter, light type	LED, red light		LED, red light
Received light indicator			Yellow LED
Response time			1.25 ms
Switching frequency f			400 Hz
Degree of protection as per IEC 60529	IP 67		IP 67
Ambient temperature T_a	-5...+55 °C		-5...+55 °C
Permissible ambient light	10 klx		10 klx
Material	Housing	Nickel-plated brass	Nickel-plated brass
	Optical surface	Glass	Glass
Connection	M12 connector, 4-pin		M12 connector, 4-pin

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

Recommended accessories

Description	Order code
Mounting bracket	BAM00EY
Mounting bracket	BAM00RY
Mounting cuff	BAM00F2

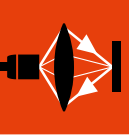
You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

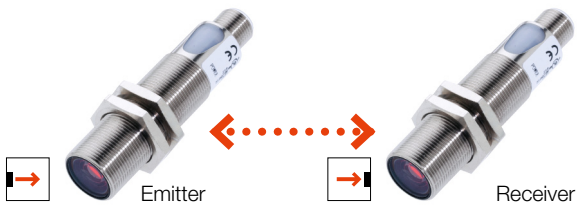
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Cylinder design, BOS 18M

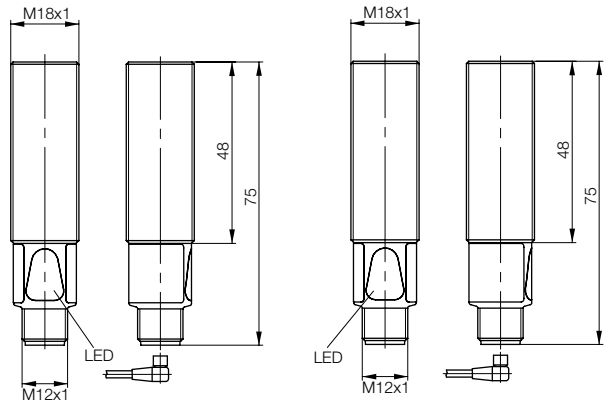
Range 50 m



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Block Design
Cylinder Design
Fork Sensors



Through-beam sensor 0...50 m BOS01HM BOS 18M-X-IS23-S4	Through-beam sensor 0...50 m BOS01HP BOS 18M-PS-IE23-S4		
10...30 V DC	10...30 V DC		
Yes/Yes	100 mA		
Fixed	Yes/Yes		
LED, infrared	Fixed		
	LED, infrared		
	Yellow LED		
	1.25 ms		
	400 Hz		
IP 67	IP 67		
-5...+55 °C	-5...+55 °C		
5 klx	5 klx		
Nickel-plated brass	Nickel-plated brass		
Glass	Glass		
M12 connector, 4-pin	M12 connector, 4-pin		



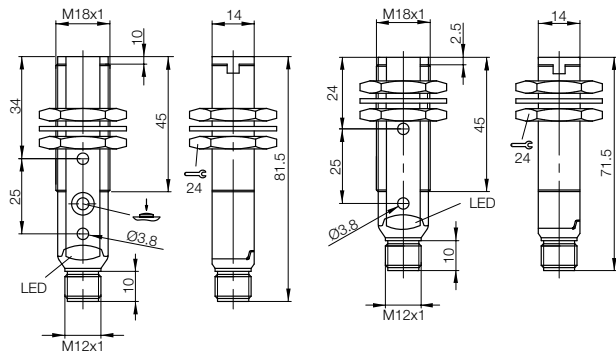
Preferred variants available immediately



Type	Diffuse sensor with background suppression 50...100 mm		Diffuse sensor with background suppression 5...100 mm	
Detection range	50...100 mm		5...100 mm	
PNP NC/NO	Order code		BOS00JW	
	Part number		BOS 18KF-PA-1N1R-S4-C	
PNP NC/NO Teach-in	Order code	BOS00JM		
	Part number	BOS 18KF-PA-1HA-S4-C		
NPN NC/NO	Order code			
	Part number			
NPN NC/NO Teach-in	Order code	BOS00HR		
	Part number	BOS 18KF-NA-1HA-S4-C		
Supply voltage U_S	10...30 V DC		10...30 V DC	
Output current	100 mA		100 mA	
No-load supply current I_0 max.	≤ 30 mA		≤ 35 mA	
Switching type	Light and dark switching		Light and dark switching	
Polarity reversal/short-circuit protected	Yes/Yes		Yes/Yes	
Settings	Teach-in		Fixed	
Emitter, light type	LED, red light		LED, red light	
Switching frequency f	500 Hz		1 kHz	
Degree of protection as per IEC 60529	IP 67		IP 67	
Ambient temperature T_a	$-25...+55$ °C		$-25...+55$ °C	
Reference standard	EN 60947-5-2		EN 60947-5-2	
Material	Housing	PBT	PBT	
	Optical surface	PMMA	PMMA	
Connection	M12 connector, 4-pin		M12 connector, 4-pin	

Reference object: white, 90% reflection, 200×200 mm

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

Recommended accessories

Description	Order code
Mounting bracket	BAM00EY
Mounting bracket	BAM00RY
Clamping holders	BAM00RW

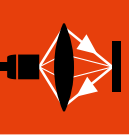
You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

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Cylinder design, BOS 18KF

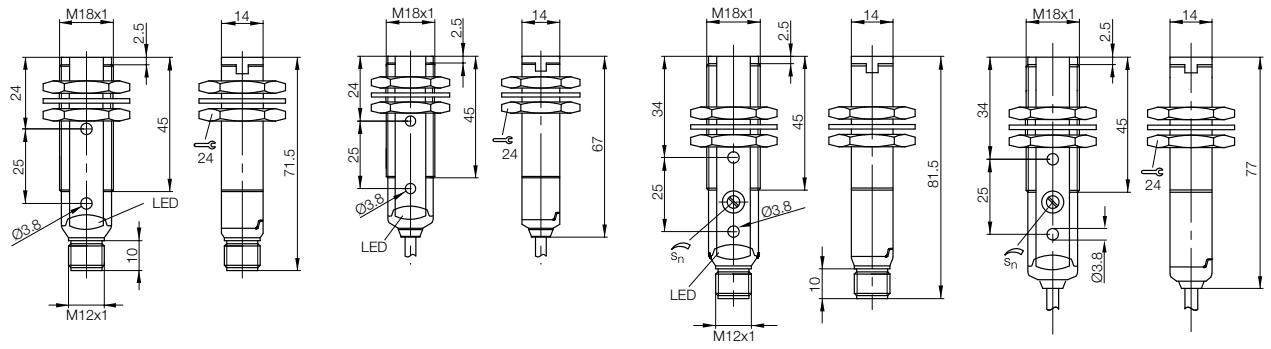
Range 100 mm, 400 mm



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Cylinder Design
Fork Sensors



Diffuse sensor	Diffuse sensor	Diffuse sensor	Diffuse sensor
0...100 mm	0...100 mm	0...400 mm	0...400 mm
BOS00K9	BOS00K8	BOS00JZ	BOS00JY
BOS 18KF-PA-1XA-S4-C	BOS 18KF-PA-1XA-C-02	BOS 18KF-PA-1PD-S4-C	BOS 18KF-PA-1PD-C-02
	BOS00JE	BOS00J3	BOS00J1
	BOS 18KF-NA-1XA-C-02	BOS 18KF-NA-1PD-S4-C	BOS 18KF-NA-1PD-C-02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
100 mA	100 mA	100 mA	100 mA
≤ 35 mA	≤ 35 mA	≤ 35 mA	≤ 35 mA
Light and dark switching	Light/dark (complementary)	Light/dark (complementary)	Light/dark (complementary)
Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
Fixed	Fixed	Potentiometer, 270°	Potentiometer, 270°
LED, infrared	LED, infrared	LED, infrared	LED, infrared
1 kHz	1 kHz	1 kHz	1 kHz
IP 67	IP 67	IP 67	IP 67
-25...+55 °C	-25...+55 °C	-25...+55 °C	-25...+55 °C
EN 60947-5-2	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
PBT	PBT	PBT	PBT
PMMA	PMMA	PMMA	PMMA
M12 connector, 4-pin	2 m PVC cable, 4x0.14 mm ³	M12 connector, 4-pin	2 m PVC cable, 4x0.14 mm ³



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Cylinder design, BOS 18KF

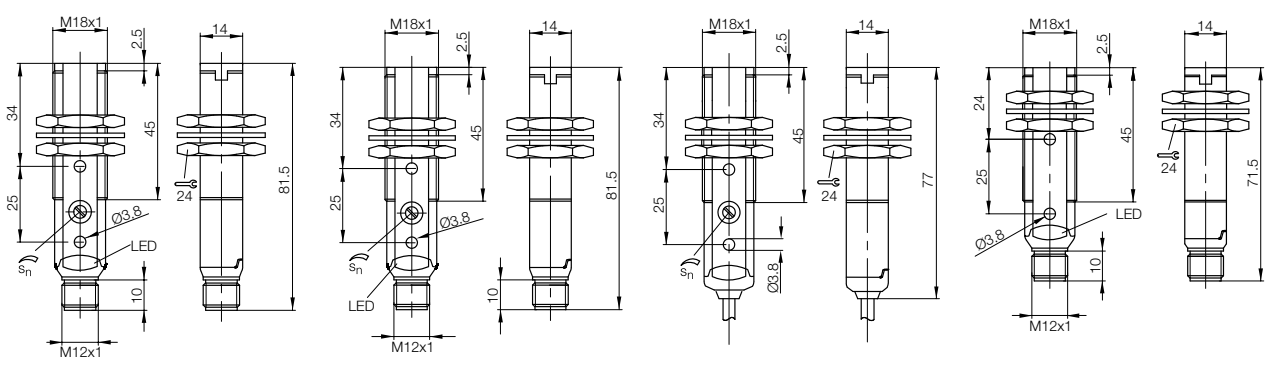
Range 1.7 m, 4.5 m, 5 m



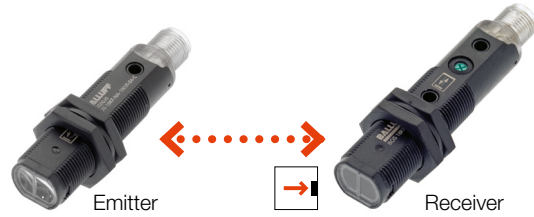
Photoelectric Global Sensors
Block Design
Cylinder Design
Fork Sensors



Retroreflective sensor 0.1...1.7 m BOS00K7 BOS 18KF-PA-1TB-S4-C	Retroreflective sensor 0.1...4.5 m BOS00K3 BOS 18KF-PA-1QD-S4-C	Retroreflective sensor 0.1...4.5 m BOS00K2 BOS 18KF-PA-1QD-C-02	Retroreflective sensor 0.1...5 m BOS00K5 BOS 18KF-PA-1RE-S4-C
	BOS00J7 BOS 18KF-NA-1QD-S4-C	BOS00J6 BOS 18KF-NA-1QD-C-02	BOS00J9 BOS 18KF-NA-1RE-S4-C
10...30 V DC 100 mA Yes/Yes Potentiometer, 270° LED, red light 1 kHz IP 67 -25...+55 °C EN 60947-5-2 PBT PMMA M12 connector, 4-pin	10...30 V DC 100 mA Yes/Yes Potentiometer, 270° LED, red light 1 kHz IP 67 -25...+55 °C EN 60947-5-2 PBT PMMA M12 connector, 4-pin	10...30 V DC 100 mA Yes/Yes Potentiometer, 270° LED, red light 1 kHz IP 67 -25...+55 °C EN 60947-5-2 PBT PMMA 2 m PVC cable, 4x0.14 mm ³	10...30 V DC 100 mA Yes/Yes Fixed LED, infrared 1 kHz IP 67 -25...+55 °C EN 60947-5-2 PBT PMMA M12 connector, 4-pin

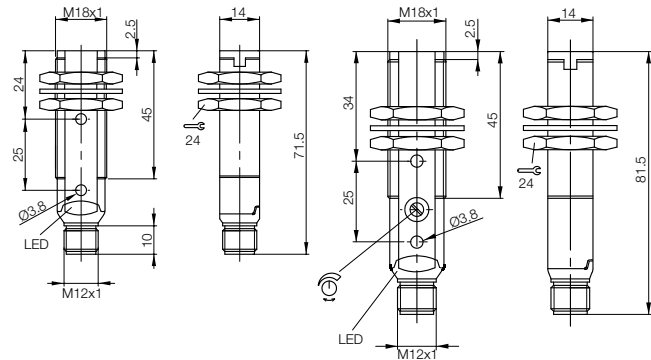


Preferred variants available immediately



Type	Through-beam sensor			Through-beam sensor
Detection range	0...20 m			0...20 m
PNP NC/NO	Emitter	Order code	BOS00EP	
		Part number	BLS 18KF-XX-1P-S4-L	
PNP NC/NO	Receiver	Order code		BOS00CK
		Part number		BLE 18KF-PA-1PP-S4-C
NPN NC/NO	Receiver	Order code		BOS00CE
		Part number		BLE 18KF-NA-1PP-S4-C
Supply voltage U_s	10...30 V DC			10...30 V DC
Output current	≤ 35 mA			100 mA
No-load supply current I_0 max.	≤ 35 mA			≤ 30 mA
Polarity reversal/short-circuit protected	Yes/Yes			Yes/Yes
Settings				Potentiometer, 270°
Help functions	Test input			
Emitter, light type	LED, infrared			
Switching frequency f				250 Hz
Degree of protection as per IEC 60529	IP 67			IP 67
Ambient temperature T_a	-25...+55 °C			-25...+55 °C
Reference standard	EN 60947-5-2			EN 60947-5-2
Material	Housing	PBT		PBT
	Optical surface	PMMA		PMMA
Connection	M12 connector, 4-pin			M12 connector, 4-pin

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

Recommended accessories

Description	Order code
Mounting bracket	BAM00EY
Mounting bracket	BAM00RY
Clamping holder	BAM00RW

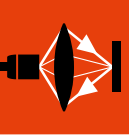
You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

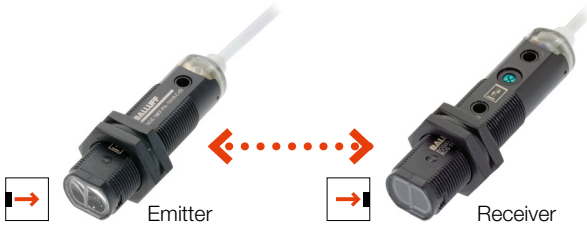
Photoelectric Global Sensors

Cylinder design, BOS 18KF

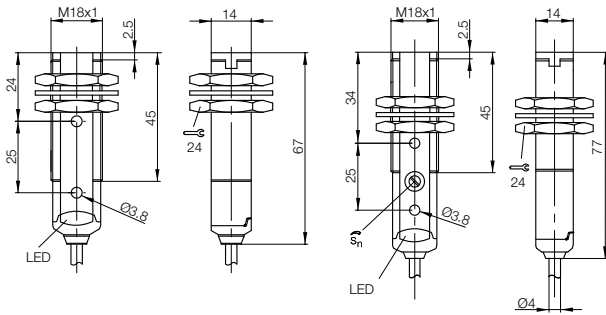
Range 20 m



Photoelectric Global Sensors
Block Design
Cylinder Design
Fork Sensors



Through-beam sensor 0...20 m BOS00EN BLS 18KF-XX-1P-L-02	Through-beam sensor 0...20 m BOS00CJ BLE 18KF-PA-1PP-C-02 BOS00CC BLE 18KF-NA-1PP-C-02		
10...30 V DC	10...30 V DC		
≤ 35 mA	100 mA		
Yes/Yes	≤ 30 mA		
Test input	Potentiometer, 270°		
LED, infrared			
IP 67	250 Hz		
-25...+55 °C	IP 67		
EN 60947-5-2	-25...+55 °C		
PBT	EN 60947-5-2		
PMMA	PBT		
2 m PVC cable, 4x0.14 mm ²	PMMA		
	2 m PVC cable, 4x0.14 mm ²		



Photoelectric Global Sensors
Cylinder design, BOS 18KF Laser
Range 350 mm, 16 m

M18
Laser
Global

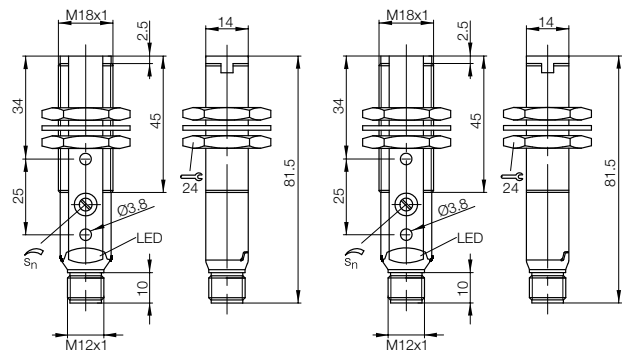
Preferred variants
 available immediately



Type			Diffuse sensor	Retroreflective sensor
Detection range			0...350 mm	0.1...16 m
Emitter			Order code	
			Part number	
Receiver			Order code	
			Part number	
PNP	NC/NO		BOS00JP	
			BOS 18KF-PA-1LOC-S4-C	
PNP	NC/NO	Polarizing filter	Order code	BOS00JT
			Part number	BOS 18KF-PA-1LQP-S4-C
NPN	NC/NO		BOS00HU	
			BOS 18KF-NA-1LOC-S4-C	
NPN	NC/NO	Polarizing filter	Order code	BOS00HY
			Part number	BOS 18KF-NA-1LQP-S4-C
Supply voltage U_s			10...30 V DC	10...30 V DC
Output current			100 mA	100 mA
Polarity reversal/short-circuit protected			Yes/Yes	Yes/Yes
Settings			Potentiometer, 270°	Potentiometer, 270°
Emitter, light type			Laser, red light	Laser, red light
Laser class			1	1
Switching frequency f			1.5 kHz	1.5 kHz
Degree of protection as per IEC 60529			IP 67	IP 67
Ambient temperature T_a			-10...+50 °C	-10...+50 °C
Reference standard			EN 60947-5-2	EN 60947-5-2
Material		Housing	PBT	PBT
		Optical surface	PMMA	PMMA
Connection			M12 connector, 4-pin	M12 connector, 4-pin

Reference object: white, 90% reflection, 200x200 mm
 Reference reflector: BOS R-1

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

Recommended accessories

Description	Order code
Mounting bracket	BAM00EY
Mounting bracket	BAM00RY
Clamping holders	BAM00RW

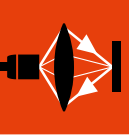
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You can find additional mechanical accessories in our catalog **Accessories Line**.

Photoelectric Global Sensors

Cylinder design, BOS 18KF Laser

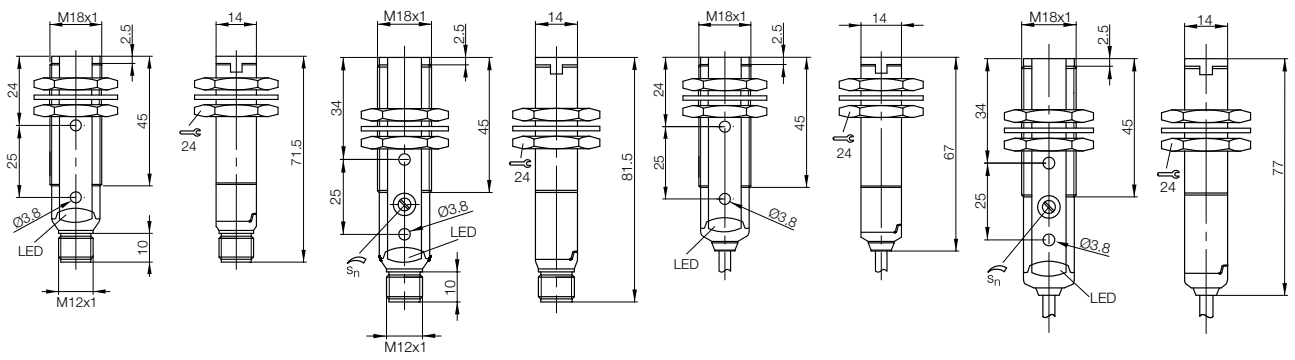
Range 60 m



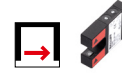
Photoelectric Global Sensors
Block Design
Cylinder Design
Fork Sensors



Through-beam sensor 0...60 m BOS00EM BLS 18KF-XX-1LT-S4-L	Through-beam sensor 0...60 m BOS00CH BLE 18KF-PA-1LT-S4-C	Through-beam sensor 0...60 m BOS00EL BLS 18KF-XX-1LT-L-02	Through-beam sensor 0...60 m BOS00CF BLE 18KF-PA-1LT-C-02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
Yes/Yes	100 mA	Yes/Yes	100 mA
Laser, red light	Yes/Yes	Laser, red light	Yes/Yes
1	Potentiometer, 270°	1	Potentiometer, 270°
IP 67	1.5 kHz	IP 67	1.5 kHz
-10...+50 °C	IP 67	-10...+50 °C	IP 67
EN 60947-5-2	-10...+50 °C	EN 60947-5-2	-10...+50 °C
PBT	EN 60947-5-2	PBT	EN 60947-5-2
PMMA	PBT	PMMA	PBT
M12 connector, 4-pin	PMMA	2 m PVC cable, 4x0.14 mm ²	PMMA
	M12 connector, 4-pin		2 m PVC cable, 4x0.14 mm ²

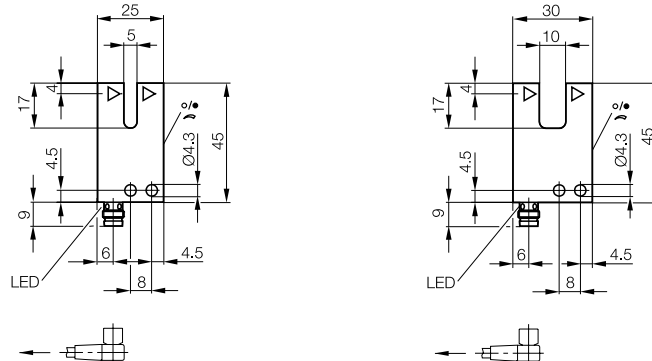


Preferred variants
available immediately



Series	BGL	BGL
Fork opening	5 mm	10 mm
Fork depth	17 mm	17 mm
PNP NO/NC	Order code BGL001W	BGL0001
	Part number BGL 5A-001-S49	BGL 10A-001-S49
NPN NO/NC	Order code BGL001Y	BGL0002
	Part number BGL 5A-002-S49	BGL 10A-002-S49
Supply voltage U_s	10...30 V DC	10...30 V DC
Output current	200 mA	200 mA
Polarity reversal/short-circuit protected	Yes/Yes	Yes/Yes
Settings	Potentiometer, 270°	Potentiometer, 270°
Emitter, light type	LED, red light	LED, red light
Resolution (smallest discernible part)	0.3 mm	0.3 mm
Repeat accuracy	20 μ m	20 μ m
Switching hysteresis	\leq 0.1 mm	\leq 0.1 mm
Switching frequency	3 kHz	3 kHz
Degree of protection as per IEC 60529	IP 67	IP 67
Ambient temperature T_a	-10...+60 °C	-10...+60 °C
Ambient light limit according to	EN 60947-5-2	EN 60947-5-2
Material	Housing GD-Zn	GD-Zn
	Optical surface Glass	Glass
Connection	M8 connector, 3-pin	M8 connector, 3-pin

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M8, 3-pin/straight	2 m/PVC	BCC02NU
M8, 3-pin/angled	2 m/PVC	BCC02P5
M8, 3-pin/straight	5 m/PVC	BCC02NW
M8, 3-pin/angled	5 m/PVC	BCC02P6

You can find additional electrical accessories in our catalog
Industrial Networking and Connectivity.

Photoelectric Global Sensors

Fork sensors BGL

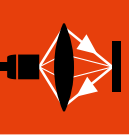
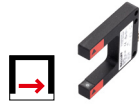
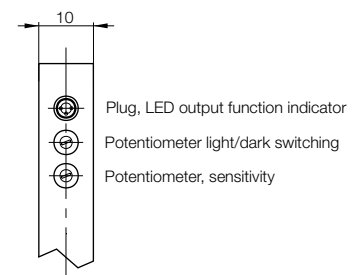
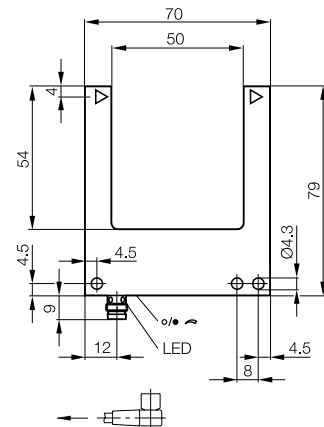
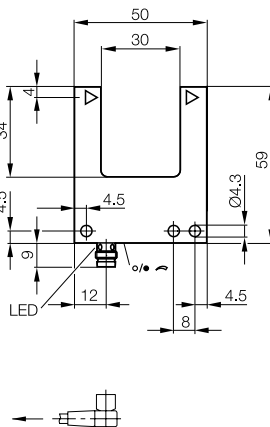
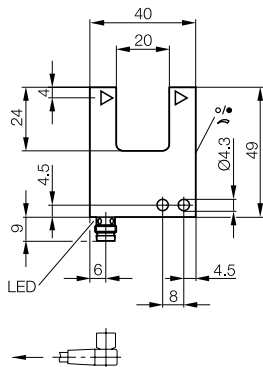


Photo-
electric
Global
Sensors
Block
Design
Cylinder
Design
Fork Sensors



BGL 20 mm 24 mm	BGL 30 mm 34 mm	BGL 50 mm 54 mm
BGL000R	BGL0016	BGL001J
BGL 20A-001-S49	BGL 30A-001-S49	BGL 50A-001-S49
BGL000T	BGL0018	BGL001L
BGL 20A-002-S49	BGL 30A-002-S49	BGL 50A-002-S49
10...30 V DC	10...30 V DC	10...30 V DC
200 mA	200 mA	200 mA
Yes/Yes	Yes/Yes	Yes/Yes
Potentiometer, 270°	Potentiometer, 270°	Potentiometer, 270°
LED, red light	LED, red light	LED, red light
0.3 mm	0.3 mm	0.4 mm
20 µm	20 µm	40 µm
≤ 0.1 mm	≤ 0.1 mm	≤ 0.15 mm
1.5 kHz	1.5 kHz	1.5 kHz
IP 67	IP 67	IP 67
-10...+60 °C	-10...+60 °C	-10...+60 °C
EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
GD-Zn	GD-Zn	GD-Zn
Glass	Glass	Glass
M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin

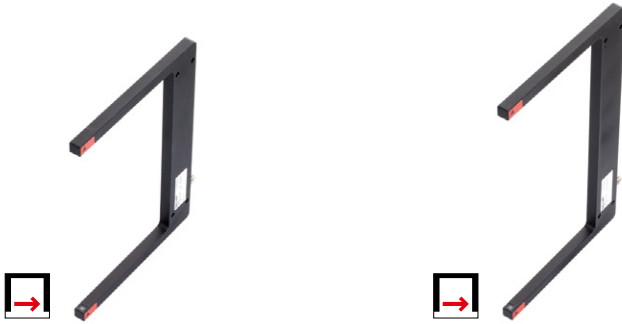


Photoelectric Global Sensors

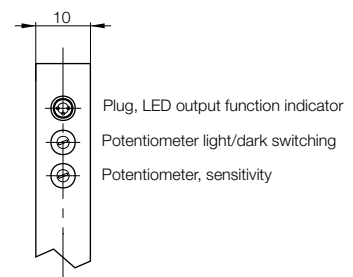
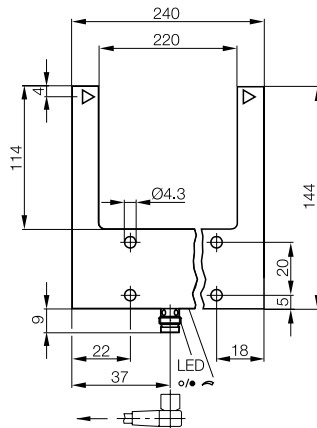
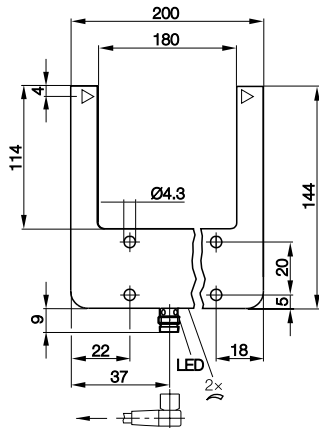
Fork sensors BGL

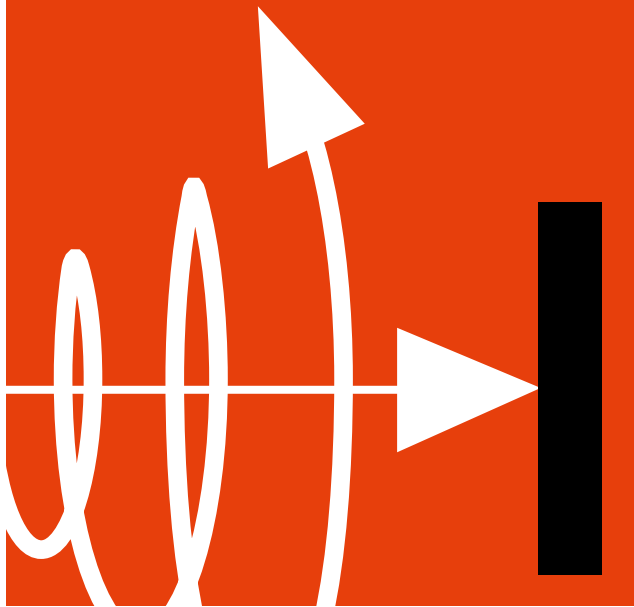


Photo-
electric
Global
Sensors
Block
Design
Cylinder
Design
Fork Sensors



BGL 180 mm 114 mm BGL000J	BGL 220 mm 114 mm BGL0010	
BGL 180A-001-S49	BGL 220A-001-S49	
BGL000K	BGL0011	
BGL 180A-002-S49	BGL 220A-002-S49	
10...30 V DC	10...30 V DC	
200 mA	200 mA	
Yes/Yes	Yes/Yes	
Potentiometer, 270°	Potentiometer, 270°	
LED, red light	LED, red light	
0.6 mm	0.6 mm	
80 µm	80 µm	
≤ 0.2 mm	≤ 0.2 mm	
1.5 kHz	1.5 kHz	
IP 67	IP 67	
-10...+60 °C	-10...+60 °C	
EN 60947-5-2	EN 60947-5-2	
GD-Zn	GD-Zn	
Glass	Glass	
M8 connector, 3-pin	M8 connector, 3-pin	





Inductive Global Sensors

Inductive Global sensors – wide variety of models provide flexibility

Inductive Global sensors provide sophisticated technology at the best price. The wide range of over 400 models includes cylindrical sensors in M8, M12, M18 and M30, and DC 3-wire and DC 2-wire versions.

Features

- **Wide variety of versions: DC 2-wire and DC 3-wire as normally open or normally closed version**
- **Shielded and unshielded versions**
- **Plug or cable connection**
- **Highly reliable due to protection against short-circuit, overvoltage, polarity reversal and overcurrent**
- **Robust designs with metal plug for rough environments**
- **As standard version and with increased switching distance**



Inductive Global Sensors

Contents

Cylinder design, DC 3-wire

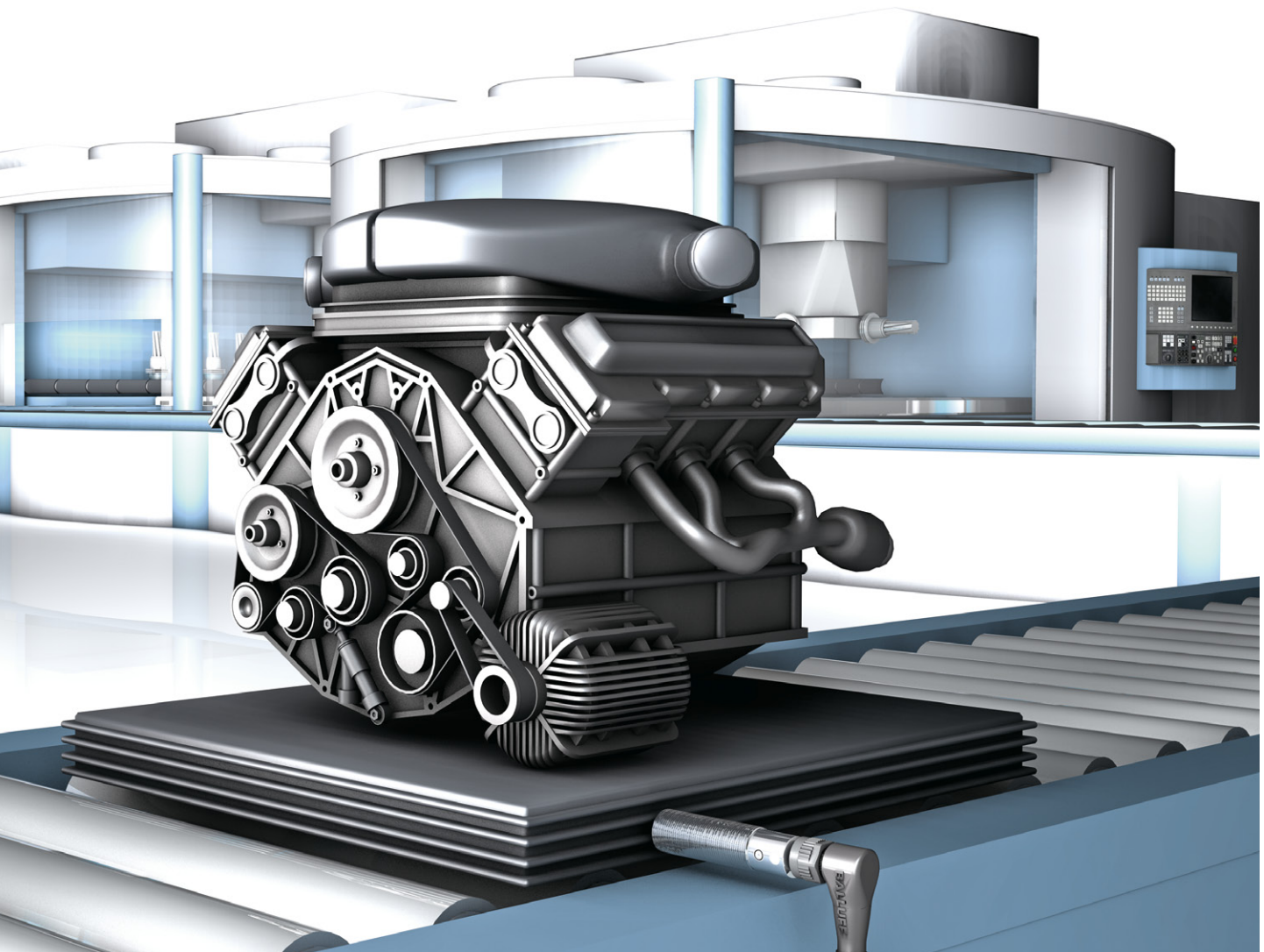
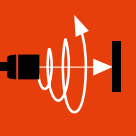
M5x0,5	38
M8x1	40
M12x1	44
M18x1	47
M30x1	49

Block Designs

40x40 mm	50
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Cylinder Designs, DC 2-wire

M8x1	52
M12x1	52
M30x1.5	53



Inductive Global Sensors
Cylinder design, DC 3-wire
M5x0,5, range 0.8 mm, 1.5 mm

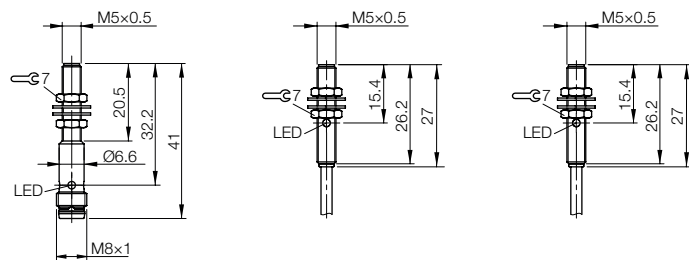
M5, Ø 6.5
Global

Preferred variants available immediately

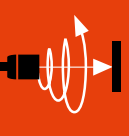


Model		M5x0.5	M5x0.5	M5x0.5
Installation type		Flush	Flush	Flush
Range s_n		0.8 mm	0.8 mm	1.5 mm
Assured switching distance s_a		0...0.65 mm	0...0.65 mm	0...1.2 mm
PNP, NO	Order code	BES00H2	BES00FT	BES00H3
	Part number	BES 516-3005-E5-C-S49	BES 516-3005-E4-C-PU-02	BES 516-3005-G-E4-C-PU-02
PNP, NC	Order code		BES00KZ	BES00L2
	Part number		BES 516-3022-E4-C-PU-02	BES 516-3022-G-E4-C-PU-02
NPN, NO	Order code			BES00HM
	Part number			BES 516-3006-G-E4-C-PU-02
NPN, NC	Order code			
	Part number			
Supply voltage U_s		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
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
Connection		M8 connector, 3-pin	2 m PUR cable, 3x0.14 mm ²	2 m PUR cable, 3x0.14 mm ²

Other variants on our website or on request.

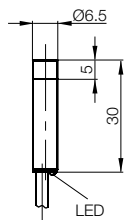
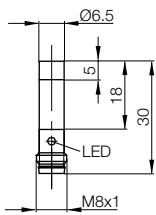


Inductive Global Sensors
Cylinder design, DC 3-wire
Ø 6.5 mm, range 4 mm



Inductive
Global
Sensors
**Cylinder
Design,
DC 3-wire**
Block
Design,
DC 3-/4-wire
Cylinder
Design,
DC 2-wire

Ø 6.5 mm	Ø 6.5 mm			
Not flush	Not flush			
4 mm	4 mm			
0...3.2 mm	0...3.2 mm			
BES0005	BES000E			
BES G06EB-PSC40F-S49G	BES G06ED-PSC40F-BP02			
BES0004	BES000A			
BES G06EB-POC40F-S49G	BES G06ED-POC40F-BP02			
BES0003	BES0008			
BES G06EB-NSC40F-S49G	BES G06ED-NSC40F-BP02			
BES0002	BES0006			
BES G06EB-NOC40F-S49G	BES G06ED-NOC40F-BP02			
10...30 V DC	10...30 V DC			
2.5 V	2.5 V			
75 V DC	250 V AC (⊞)			
200 mA	200 mA			
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 68 per BWN Pr. 20			
CE, cULus	CE, cULus			
Stainless steel	Stainless steel			
PA 12	PUR			
M8 connector, 3-pin	2 m PVC cable, 3x0.14 mm ²			

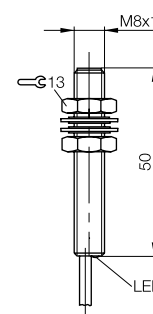
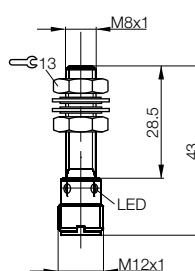
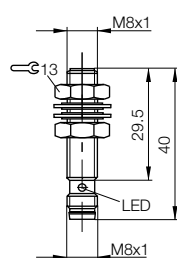


Preferred variants
 available immediately



Series		M8x1	M8x1	M8x1
Installation type		Flush	Flush	Flush
Range 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
PNP, NO	Order code	BES00CJ	BES00CH	BES0037
	Part number	BES M08EE-PSC15B-S49G-003	BES M08EE-PSC15B-S04G-003	BES M08MI-PSC15B-BV02
PNP, NC	Order code	BES00CC	BES00CA	BES0030
	Part number	BES M08EE-POC15B-S49G-003	BES M08EE-POC15B-S04G-003	BES M08MI-POC15B-BV02
NPN, NO	Order code	BES00C7	BES00C6	BES002F
	Part number	BES M08EE-NSC15B-S49G-003	BES M08EE-NSC15B-S04G-003	BES M08MI-NSC15B-BV02
NPN, NC	Order code	BES00C3	BES00C2	BES03PJ
	Part number	BES M08EE-NOC15B-S49G-003	BES M08EE-NOC15B-S04G-003	BES M08MI-NOC15B-BV02
Supply voltage U_S		10...30 V DC	10...30 V DC	12...30 V DC
Voltage drop U_d at I_e 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_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.		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	Stainless steel	Brass-coated
	Sensing surface	PBT	PBT	PA 12
Connection		M8 connector, 3-pin	M12 connector, 4-pin	2 m PVC cable, 3x0.14 mm ²

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M8, 3-pin/straight	2 m/PVC	BCC02NU
M8, 3-pin/angled	2 m/PVC	BCC02P5
M8, 3-pin/straight	5 m/PVC	BCC02NW
M8, 3-pin/angled	5 m/PVC	BCC02P6
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

Recommended accessories

Description	Order code
Mounting bracket	BAM009U
Mounting cuff	BAM00A2

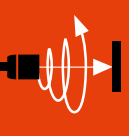
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Inductive Global Sensors

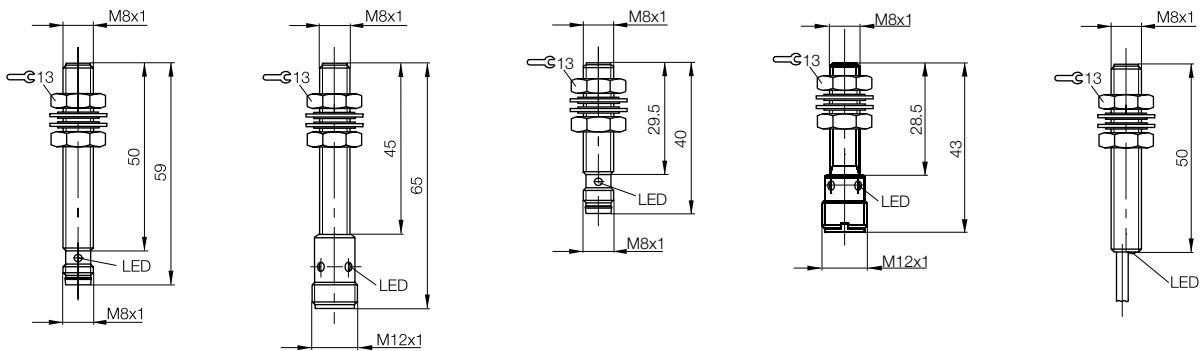
Cylinder design, DC 3-wire

M8x1, range 1.5 mm, 2 mm



Inductive Global Sensors
Cylinder Design, DC 3-wire
Block Design, DC 3-/4-wire
Cylinder Design, DC 2-wire

M8x1	M8x1	M8x1	M8x1	M8x1
Flush	Flush	Flush	Flush	Flush
1.5 mm	1.5 mm	2 mm	2 mm	2 mm
0...1.2 mm	0...1.2 mm	0...1.6 mm	0...1.6 mm	0...1.6 mm
BES003C	BES0027	BES00CK	BES00FC	BES003K
BES M08MI-PSC15B-S49G	BES M08MH1-PSC15B-S04G	BES M08EE-PSC20B-S49G-003	BES M08EE-PSC20B-S04G-003	BES M08MI-PSC20B-BV02
BES03P6	BES0026	BES00CF	BES00CE	BES03TH
BES M08MI-POC15B-S49G	BES M08MH1-POC15B-S04G	BES M08EE-POC20B-S49G-003	BES M08EE-POC20B-S04G-003	BES M08MI-POC20B-BV02
BES002K	BES0024	BES00C9	BES00C8	BES002P
BES M08MI-NSC15B-S49G	BES M08MH1-NSC15B-S04G	BES M08EE-NSC20B-S49G-003	BES M08EE-NSC20B-S04G-003	BES M08MI-NSC20B-BV02
BES03PK	BES0023	BES00C5	BES00C4	BES03TF
BES M08MI-NOC15B-S49G	BES M08MH1-NOC15B-S04G	BES M08EE-NOC20B-S49G-003	BES M08EE-NOC20B-S04G-003	BES M08MI-NOC20B-BV02
12...30 V DC	12...30 V DC	10...30 V DC	10...30 V DC	12...30 V DC
2 V	2 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
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	700 Hz	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	Brass-coated	Stainless steel	Stainless steel	Brass-coated
PA 12	PA 12	PBT	PBT	PA 12
M8 connector, 3-pin	M12 connector, 4-pin	M8 connector, 3-pin	M12 connector, 4-pin	2 m PVC cable, 3x0.14 mm ²

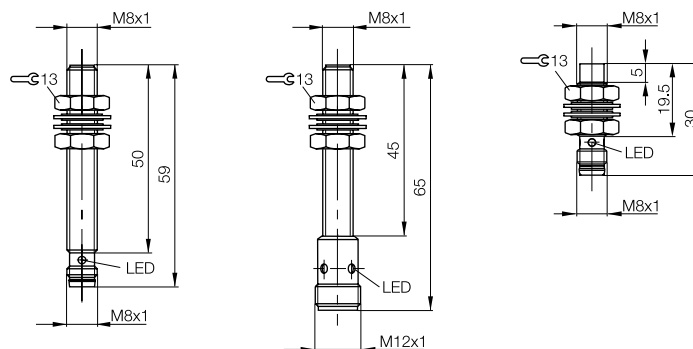


Preferred variants
available immediately



Series	M8x1	M8x1	M8x1
Installation type	Flush	Flush	Non-flush
Range s_n	2 mm	2 mm	4 mm
Assured switching distance s_a	0...1.6 mm	0...1.6 mm	0...3.2 mm
PNP, NO	Order code	BES003P	BES0028
	Part number	BES M08MI-PSC20B-S49G	BES M08MH1-PSC20B-S04G
PNP, NC	Order code	BES0033	BES0025
	Part number	BES M08MI-POC20B-S49G	BES M08MH1-POC20B-S04G
NPN, NO	Order code	BES002U	BES000K
	Part number	BES M08MI-NSC20B-S49G	BES M08MH1-NSC20B-S04G
NPN, NC	Order code	BES03TJ	BES000J
	Part number	BES M08MI-NOC20B-S49G	BES M08MH1-NOC20B-S04G
Supply voltage U_s	12...30 V DC	12...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	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	-25...70 °C	-25...70 °C	-25...70 °C
Switching frequency f max.	700 Hz	700 Hz	1.5 kHz
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
	Sensing surface	PA 12	PA 12
Connection	M8 connector, 3-pin	M12 connector, 4-pin	M8 connector, 3-pin

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M8, 3-pin/straight	2 m/PVC	BCC02NU
M8, 3-pin/angled	2 m/PVC	BCC02P5
M8, 3-pin/straight	5 m/PVC	BCC02NW
M8, 3-pin/angled	5 m/PVC	BCC02P6
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

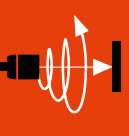
Recommended accessories

Description	Order code
Mounting bracket	BAM009U
Mounting cuff	BAM00A2

You can find additional mechanical accessories in our catalog **Accessories Line**.

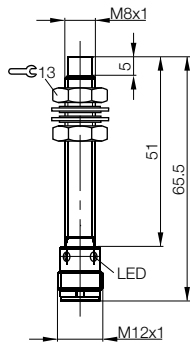
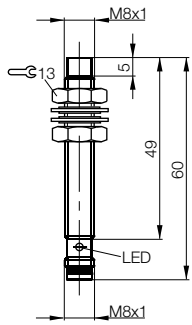
You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

Inductive Global Sensors
Cylinder design, DC 3-wire
M8x1, range 4 mm



Inductive
Global
Sensors
**Cylinder
Design,
DC 3-wire**
Block
Design,
DC 3-/4-wire
Cylinder
Design,
DC 2-wire

M8x1	M8x1			
Non-flush	Non-flush			
4 mm	4 mm			
0...3.2 mm	0...3.2 mm			
BES001J	BES001H			
BES M08EH-PSC40F-S49G	BES M08EH-PSC40F-S04G			
BES001F	BES001E			
BES M08EH-POC40F-S49G	BES M08EH-POC40F-S04G			
BES001C	BES001A			
BES M08EH-NSC40F-S49G	BES M08EH-NSC40F-S04G			
BES0019	BES0018			
BES M08EH-NOC40F-S49G	BES M08EH-NOC40F-S04G			
10...30 V DC	10...30 V DC			
2.5 V	2.5 V			
250 V AC (□)	250 V AC (□)			
200 mA	200 mA			
Yes/Yes/Yes	Yes/Yes/Yes			
-25...70 °C	-25...70 °C			
1.5 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			
M8 connector, 3-pin	M12 connector, 4-pin			



Inductive Global Sensors
Cylinder design, DC 3-wire
M12x1, range 2 mm

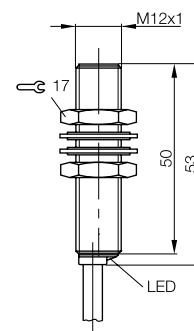
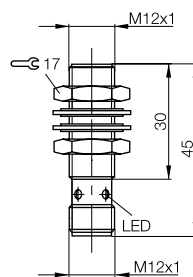
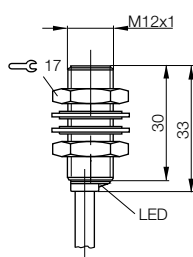


Preferred variants available immediately



Series		M12x1	M12x1	M12x1
Installation type		Flush	Flush	Flush
Range 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
PNP, NO	Order code	BES04CU	BES00EE	BES005U
	Part number	BES M12MD-PSC20B-BV02-003	BES M12ME-PSC20B-S04G-003	BES M12MI-PSC20B-BV02
PNP, NC	Order code		BES00EA	BES00FP
	Part number		BES M12ME-POC20B-S04G-003	BES M12MI-POC20B-BV02
NPN, NO	Order code	BES04CW	BES00E8	BES00FL
	Part number	BES M12MD-NSC20B-BV02-003	BES M12ME-NSC20B-S04G-003	BES M12MI-NSC20B-BV02
NPN, NC	Order code		BES00E6	BES03PR
	Part number		BES M12ME-NOC20B-S04G-003	BES M12MI-NOC20B-BV02
Supply voltage U_s		10...30 V DC	10...30 V DC	12...30 V DC
Voltage drop U_d at I_e max.		2 V	2 V	2.5 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	-25...70 °C
Switching frequency f max.		1.2 kHz	1.2 kHz	1.2 kHz
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	Brass-coated
	Sensing surface	PBT	PBT	PA 12
Connection		2 m PUR cable, 3x0.34 mm ²	M12 connector, 4-pin	2 m PVC cable, 3x0.34 mm ²

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

Recommended accessories

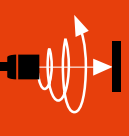
Description	Order code
Mounting bracket	BAM00C0
Mounting cuff	BAM00C4

You can find additional mechanical accessories in our catalog **Accessories Line**.

Inductive Global Sensors

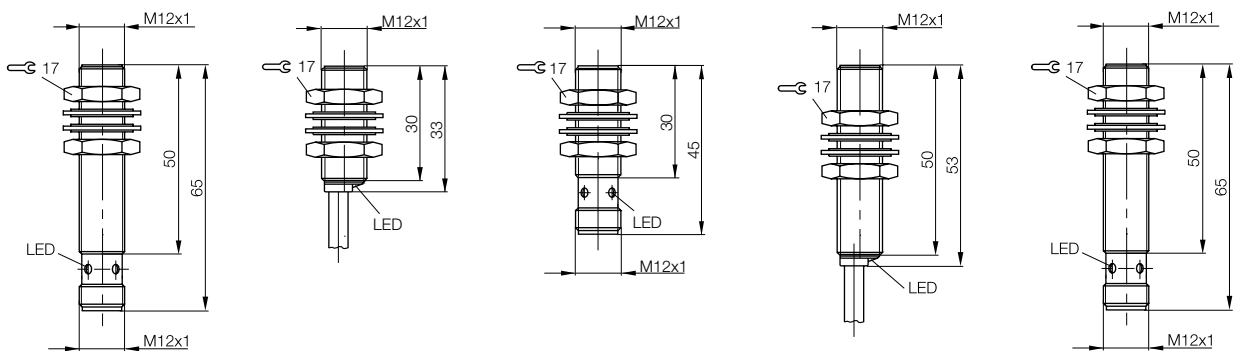
Cylinder design, DC 3-wire

M12x1, range 2 mm, 4 mm



Inductive
Global
Sensors
**Cylinder
Design,
DC 3-wire**
Block
Design,
DC 3-/4-wire
Cylinder
Design,
DC 2-wire

M12x1	M12x1	M12x1	M12x1	M12x1
Flush	Flush	Flush	Flush	Flush
2 mm	4 mm	4 mm	4 mm	4 mm
0...1.6 mm	0...3.2 mm	0...3.2 mm	0...3.2 mm	0...3.2 mm
BES0060	BES00E5	BES00EF	BES0064	BES0068
BES M12MI-PSC20B-S04G	BES M12MD-PSC40B-BP02-003	BES M12ME-PSC40B-S04G-003	BES M12MI-PSC40B-BV02	BES M12MI-PSC40B-S04G
BES005F	BES00E3	BES00EC	BES005L	BES005N
BES M12MI-POC20B-S04G	BES M12MD-POC40B-BP02-003	BES M12ME-POC40B-S04G-003	BES M12MI-POC40B-BV02	BES M12MI-POC40B-S04G
BES0054	BES00E1	BES00E9	BES00FM	BES0059
BES M12MI-NSC20B-S04G	BES M12MD-NSC40B-BP02-003	BES M12ME-NSC40B-S04G-003	BES M12MI-NSC40B-BV02	BES M12MI-NSC40B-S04G
BES004Y	BES00CZ	BES00E7	BES03PT	BES004Z
BES M12MI-NOC20B-S04G	BES M12MD-NOC40B-BP02-003	BES M12ME-NOC40B-S04G-003	BES M12MI-NOC40B-BV02	BES M12MI-NOC40B-S04G
12...30 V DC	10...30 V DC	10...30 V DC	12...30 V DC	12...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
1.2 kHz	300 Hz	300 Hz	500 Hz	500 Hz
Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
IP 68 per BWN Pr. 20	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	Brass-coated	Brass-coated	Brass-coated	Brass-coated
PA 12	LCP	LCP	PA 12	PA 12
M12 connector, 4-pin	2 m PUR cable, 3x0.34 mm ²	M12 connector, 4-pin	2 m PVC cable, 3x0.34 mm ²	M12 connector, 4-pin

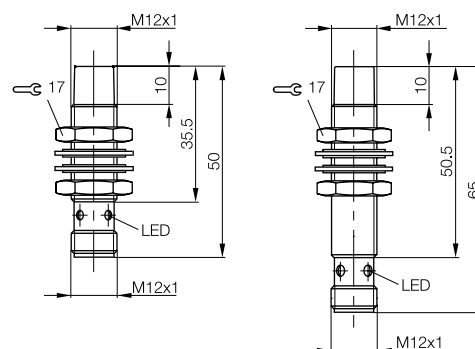


Preferred variants
 available immediately



Series		M12x1	M12x1		
Installation type		Non-flush	Non-flush		
Range s_n		8 mm	8 mm		
Assured switching distance s_a		0...6.4 mm	0...6.4 mm		
PNP, NO	Order code	BES01PY	BES004N		
	Part number	BES M12MD-PSC80F-S04G	BES M12MG-PSC80F-S04G		
PNP, NC	Order code	BES01PU	BES004K		
	Part number	BES M12MD-POC80F-S04G	BES M12MG-POC80F-S04G		
NPN, NO	Order code	BES01PT	BES004F		
	Part number	BES M12MD-NSC80F-S04G	BES M12MG-NSC80F-S04G		
NPN, NC	Order code	BES01PR	BES004A		
	Part number	BES M12MD-NOC80F-S04G	BES M12MG-NOC80F-S04G		
Supply voltage U_s		10...30 V DC	10...30 V DC		
Voltage drop U_d at I_e max.		2.5 V	2.5 V		
Rated insulation voltage U_i (protection class)		250 V AC (□)	250 V AC (□)		
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.		800 Hz	800 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, cULus	CE, cULus		
Material	Housing	Brass-coated	Brass-coated		
	Sensing surface	PBT	PBT		
Connection		M12 connector, 4-pin	M12 connector, 4-pin		

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

Recommended accessories

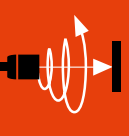
Description	Order code
Mounting cuff	BAM00C4
Mounting cuff	BAM00F2
Mounting bracket	BAM00C0
Mounting bracket	BAM00EY

You can find additional mechanical accessories in our catalog **Accessories Line**.

Inductive Global Sensors

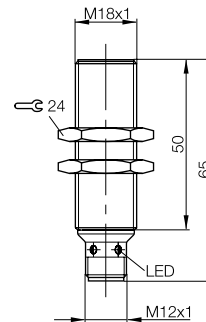
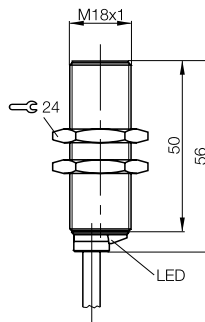
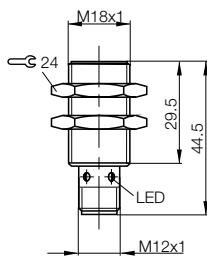
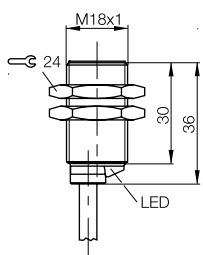
Cylinder design, DC 3-wire

M18x1, range 5 mm



Inductive
Global
Sensors
**Cylinder
Design,
DC 3-wire**
Block
Design,
DC 3-/4-wire
Cylinder
Design,
DC 2-wire

M18x1	M18x1	M18x1	M18x1	
Flush	Flush	Flush	Flush	
5 mm	5 mm	5 mm	5 mm	
0...4 mm	0...4 mm	0...4 mm	0...4 mm	
BES00EN	BES00EY	BES0082	BES0086	
BES M18MD-PSC50B-BP02-003	BES M18ME-PSC50B-S04G-003	BES M18MI-PSC50B-BV02	BES M18MI-PSC50B-S04G	
BES00EL	BES00EU	BES007R	BES043J	
BES M18MD-POC50B-BP02-003	BES M18ME-POC50B-S04G-003	BES M18MI-POC50B-BV02	BES M18MI-POC50B-S04G	
BES00EJ	BES00ER	BES007A	BES044F	
BES M18MD-NSC50B-BP02-003	BES M18ME-NSC50B-S04G-003	BES M18MI-NSC50B-BV02	BES M18MI-NSC50B-S04G	
BES03T8	BES03T7	BES03RR		
BES M18MD-NOC50B-BP02-003	BES M18ME-NOC50B-S04G-003	BES M18MI-NOC50B-BV02		
10...30 V DC	10...30 V DC	12...30 V DC	12...30 V DC	
2 V	2 V	2.5 V	2.5 V	
75 V DC	75 V DC	250 V AC (□)	250 V AC (□)	
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	
700 Hz	700 Hz	700 Hz	700 Hz	
Yellow LED	Yellow LED	Yellow LED	Yellow LED	
IP 67	IP 67	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20	
CE, cULus	CE, cULus	CE, cULus	CE, cULus	
Brass-coated	Brass-coated	Brass-coated	Brass-coated	
PA 12	PA 12	PA 12	PA 12	
2 m PUR cable, 3 x 0.34 mm ²	M12 connector, 4-pin	2 m PVC cable, 3x0.34 mm ²	M12 connector, 4-pin	

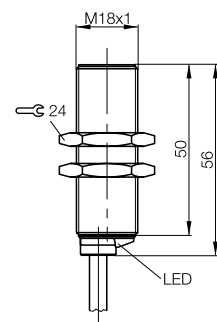
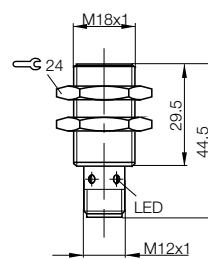
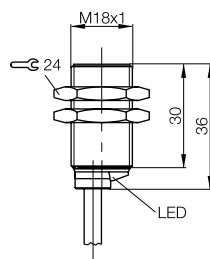


Preferred variants
available immediately



Series		M18x1	M18x1	M18x1
Installation type		Flush	Flush	Flush
Range s_n		8 mm	8 mm	8 mm
Assured switching distance s_a		0...6.4 mm	0...6.4 mm	0...6.4 mm
PNP, NO	Order code	BES00EP	BES00EZ	BES008E
	Part number	BES M18MD-PSC80B-BP02-003	BES M18ME-PSC80B-S04G-003	BES M18MI-PSC80B-BV02
PNP, NC	Order code	BES00EM	BES00EW	BES03PY
	Part number	BES M18MD-POC80B-BP02-003	BES M18ME-POC80B-S04G-003	BES M18MI-POC80B-BV02
NPN, NO	Order code	BES00EK	BES00ET	
	Part number	BES M18MD-NSC80B-BP02-003	BES M18ME-NSC80B-S04G-003	
NPN, NC	Order code	BES00EH	BES03RN	
	Part number	BES M18MD-NOC80B-BP02-003	BES M18ME-NOC80B-S04G-003	
Supply voltage U_s		10...30 V DC	10...30 V DC	12...30 V DC
Voltage drop U_d at I_e max.		3.5 V	3.5 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_e		130 mA	130 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.		150 Hz	150 Hz	150 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	Brass-coated
	Sensing surface	PBT	PBT	PA 12
Connection		2 m PUR cable, 3x0.34 mm ²	M12 connector, 4-pin	2 m PVC cable, 3x0.34 mm ²

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

Recommended accessories

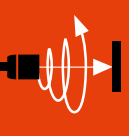
Description	Order code
Mounting cuff	BAM00F2
Mounting bracket	BAM00EY

You can find additional mechanical accessories in our catalog **Accessories Line**.

Inductive Global Sensors

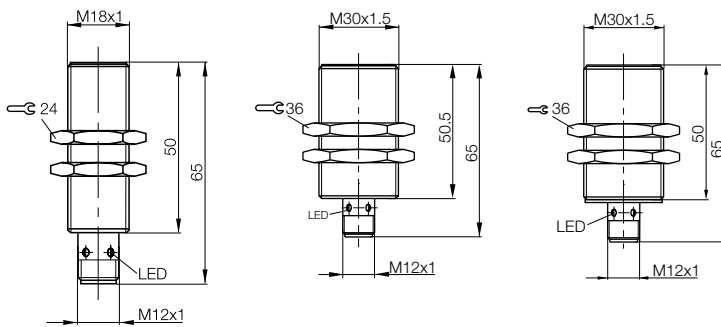
Cylinder design, DC 3-wire

M18x1, M30x1, range 8 mm, 10 mm, 15 mm



Inductive
Global
Sensors
**Cylinder
Design,
DC 3-wire**
Block
Design,
DC 3-/4-wire
Cylinder
Design,
DC 2-wire

M18x1	M30x1.5	M30x1.5		
Flush	Flush	Flush		
8 mm	10 mm	15 mm		
0...6.4 mm	0...8.1 mm	0...12.2 mm		
BES008L	BES00A3	BES00AF		
BES M18MI-PSC80B-S04G	BES M30MI-PSC10B-S04G	BES M30MI-PSC15B-S04G		
BES03RP	BES043H	BES03RK		
BES M18MI-POC80B-S04G	BES M30MI-POC10B-S04G	BES M30MI-POC15B-S04G		
BES007L				
BES M18MI-NSC80B-S04G				
BES0077				
BES M18MI-NOC80B-S04G				
10...30 V DC	12...30 V DC	10...30 V DC		
2.5 V	2.5 V	2.5 V		
250 V AC (□)	75 V DC	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		
1 kHz	400 Hz	100 Hz		
Yellow LED	Yellow LED	Yellow LED		
IP 67	IP 67	IP 67		
CE, cULus	CE, cULus	CE, cULus		
Brass-coated	Brass-coated	Brass-coated		
PBT	PA 12	PA 12		
M12 connector, 4-pin	M12 connector, 4-pin	M12 connector, 4-pin		



Inductive Global Sensors
Block design, DC 3-/4-wire
40x40 mm, range 20 mm, 25 mm

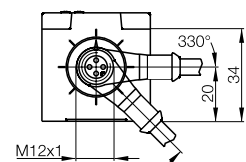
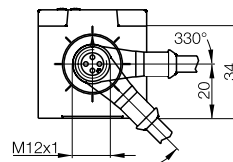
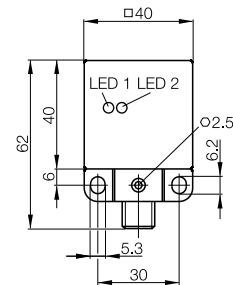
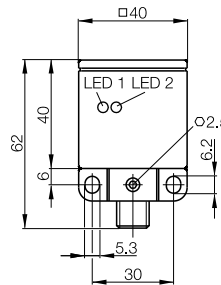
40x40 mm
Global

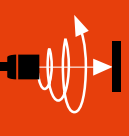
Preferred variants
 available immediately



		40x40 mm Unicompact	40x40 mm
Model		40x40 mm Unicompact	40x40 mm
Installation type		Flush	Not flush
Rated switching distance s_n		20 mm	25 mm
Assured switching distance s_a		0...16 mm	0...20 mm
PNP, NO	Order code	BES021W	
	Part number	BES Q40KFU-PSC20B-S04G	
PNP, complementary	Order code	BES0217	
	Part number	BES Q40KFU-PAC20B-S04G	
NPN, complementary	Order code		BES022J
	Part number		BES Q40KFU-NAC25F-S04G
Supply voltage U_s		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)		250 V AC (□)	250 V AC (□)
Rated operating current I_o		200 mA	200 mA
Polarity reversal protected/t ransposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+70 °C	-25...+70 °C
Switching frequency f max.		50 Hz	50 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	PA	PBT
	Sensing surface	PA	PBT
Connection		M12 connector, 4-pin	M12 connector, 4-pin

Other variants on our website or on request.





Inductive
Global
Sensors
Cylinder
Design,
DC 3-wire
**Block
Design,
DC 3-/4-wire**
Cylinder
Design,
DC 2-wire



Inductive Global Sensors
 Cylinder design, DC 2-wire
 M8x1, M12x1, range 2 mm, 3 mm

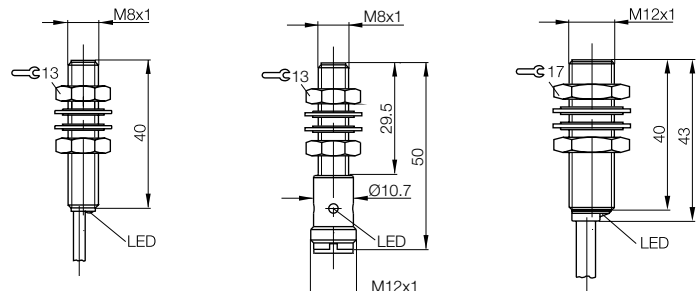
M8, M12,
 M18, M30
Global

Preferred variants
 available immediately



Series	M8x1	M8x1	M12x1
Installation type	Flush	Flush	Flush
Range s_n	2 mm	2 mm	3 mm
Assured switching distance s_a	0...1.6 mm	0...1.6 mm	0...2.4 mm
Polarized, NO	Order code BES001L Part number BES M08MG-GSC20B-BV02	Order code BES0022 Part number BES M08ME1-GSC20B-S04G	Order code BES0045 Part number BES M12MG-GSC30B-BV02
Polarized, NC	Order code BES024R Part number BES M08MG-GOC20B-BV02	Order code BES024N Part number BES M08ME1-GOC20B-S04G	Order code BES024L Part number BES M12MG-GOC30B-BV02
Non-polarized, NO	Order code BES001T Part number BES M08MG-USC20B-BV02	Order code BES001Y Part number BES M08ME1-USC20B-S04G	Order code BES004T Part number BES M12MG-USC30B-BV02
Non-polarized, NC	Order code BES024T Part number BES M08MG-UOC20B-BV02	Order code BES024P Part number BES M08ME1-UOC20B-S04G	Order code BES024M Part number BES M12MG-UOC30B-BV02
Supply voltage U_s	10...36 V DC	10...36 V DC	10...36 V DC
Voltage drop U_d at I_e max.	5 V	5 V	≤ 5 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
Minimum operational 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.	1.5 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, cULus
Material	Housing: Brass-coated Sensing surface: PBT	Housing: Brass-coated Sensing surface: PBT	Housing: Brass-coated Sensing surface: PA 12
Connection	2 m PVC cable, 2x0.14 mm ²	M12 connector, 4-pin	2 m PVC cable, 2x0.34 mm ²

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036N
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036P

Recommended accessories

Description	Order code
Mounting cuff	BAM00F2
Mounting cuff	BAM0219
Mounting bracket	BAM00EY

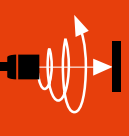
You can find additional electrical accessories in our catalog
Industrial Networking and Connectivity.

You can find additional mechanical accessories in
 our catalog **Accessories Line.**

Inductive Global Sensors

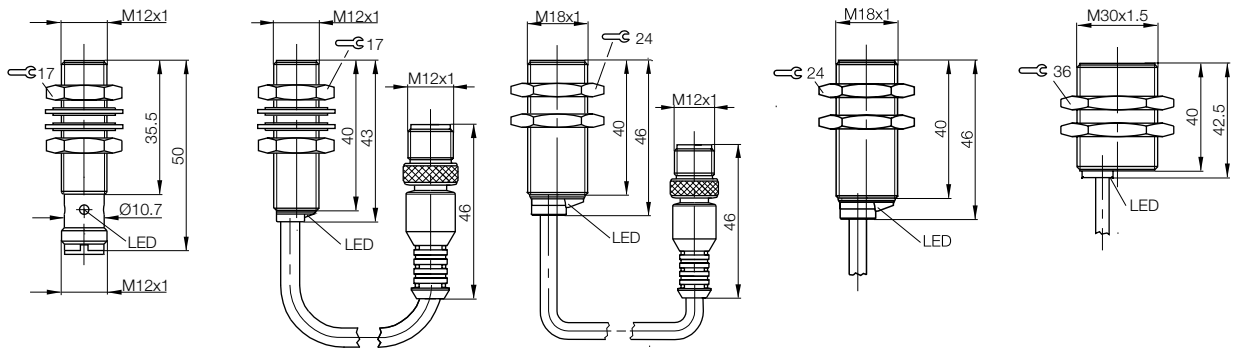
Cylinder design, DC 2-wire

M12x1, M18x1, M30x1.5, range 3 mm, 7 mm, 15 mm



Inductive
Global
Sensors
Cylinder
Design,
DC 3-wire
Block
Design,
DC 3-/4-wire
Cylinder
Design,
DC 2-wire

M12x1	M12x1	M18x1	M18x1	M30x1.5
Flush	Flush	Flush	Flush	Flush
3 mm	3 mm	7 mm	7 mm	15 mm
0...2.4 mm	0...2.4 mm	0...5.6 mm	0...5.6 mm	0...12 mm
BES003Z	BES0042	BES006C	BES00FA	BES008R
BES M12MF-GSC30B-S04G	BES M12MG-GSC30B-BP00,3-GS04	BES M18MG-GSC70B-BP00,3-GS04	BES M18MG-GSC70B-BV02	BES M30MF-GSC15B-BV02
BES024J	BES03HK	BES039L	BES02NT	BES0279
BES M12MF-GOC30B-S04G	BES M12MG-GOC30B-BP00,3-GS04	BES M18MG-GOC70B-BP00,3-GS04	BES M18MG-GOC70B-BV02	BES M30MF-GOC15B-BV02
BES0041			BES0073	BES0091
BES M12MF-USC30B-S04G			BES M18MG-USC70B-BV02	BES M30MF-USC15B-BV02
BES024K			BES02NU	BES027A
BES M12MF-UOC30B-S04G			BES M18MG-UOC70B-BV02	BES M30MF-UOC15B-BV02
10...36 V DC	10...36 V DC	10...36 V DC	10...36 V DC	10...36 V DC
≤ 5 V	4 V	4 V	4 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	600 Hz	600 Hz	400 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	PA 12	PA 12	PA 12
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	2 m PVC cable, 2x0.34 mm ²





Capacitive Global Sensors

Capacitive Global sensors – above-average technology at the best price

For object and level detection, capacitive Global sensors are particularly cost-effective. They offer a wide range of performance-proven products in above-average technology with the best possible EMC protection at a low price.

The complete series includes M12, M18 and M30 variants in cable version and with M12 male. In a plastic or stainless steel housing. This guarantees maximum versatility in application.

All sensors can be easily adjusted to applications via potentiometers.

Features

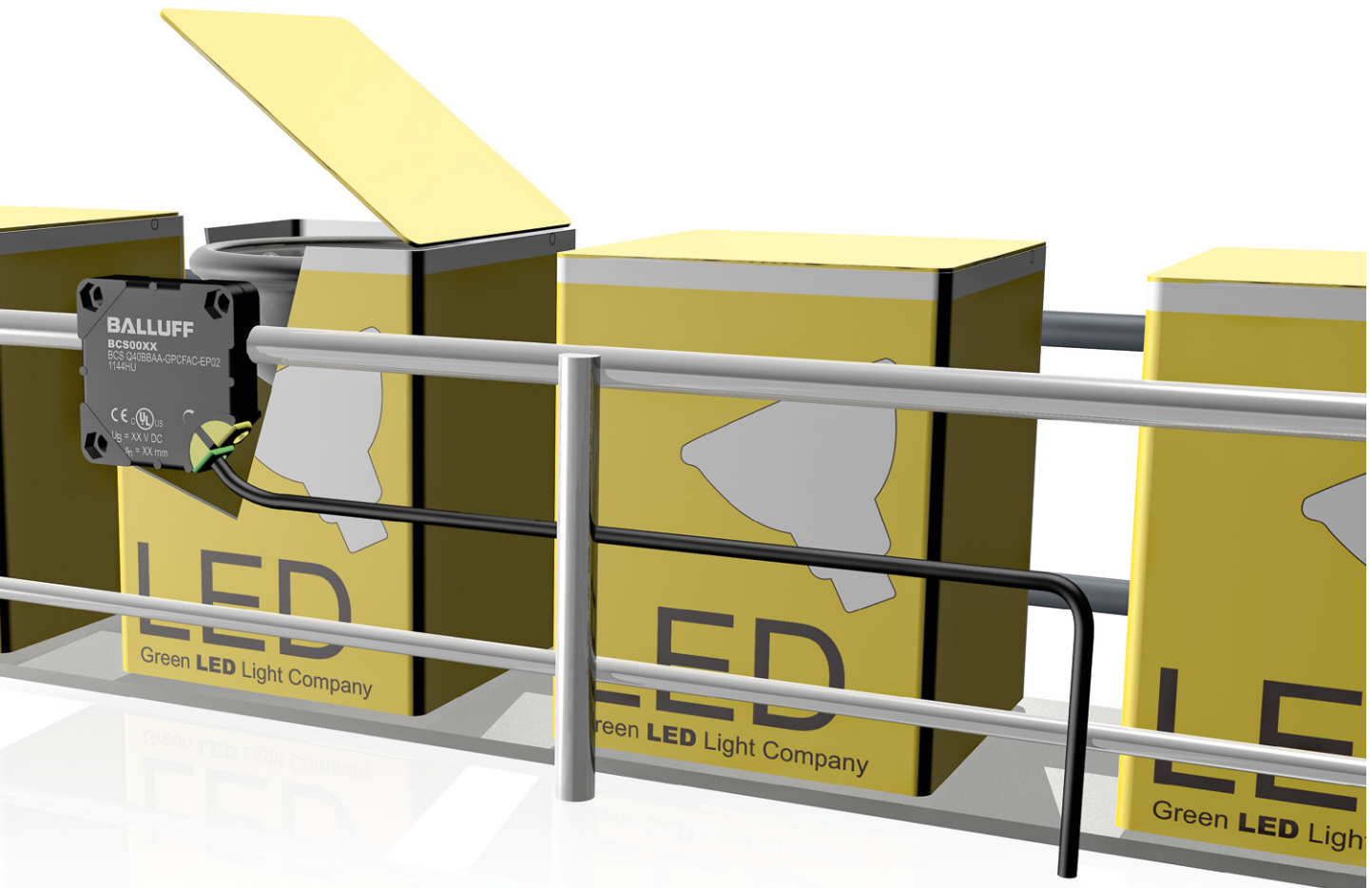
- **Stainless steel or plastic housing (PBT)**
- **PNP and NPN versions with normally open or normally closed**
- **Power-on indicator (large green LED)**
- **Output function indicator (large yellow LED)**
- **High electromagnetic compatibility (EMC)**



Capacitive Global Sensors

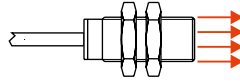
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Capacitive Global Sensors for Level Detection	
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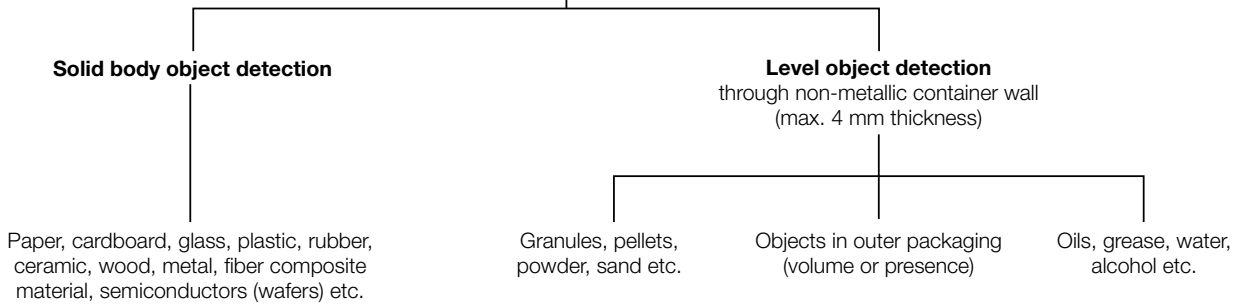
Object Detection

- Flush-mount
- Extended switching distance
- For example, detecting plastic parts



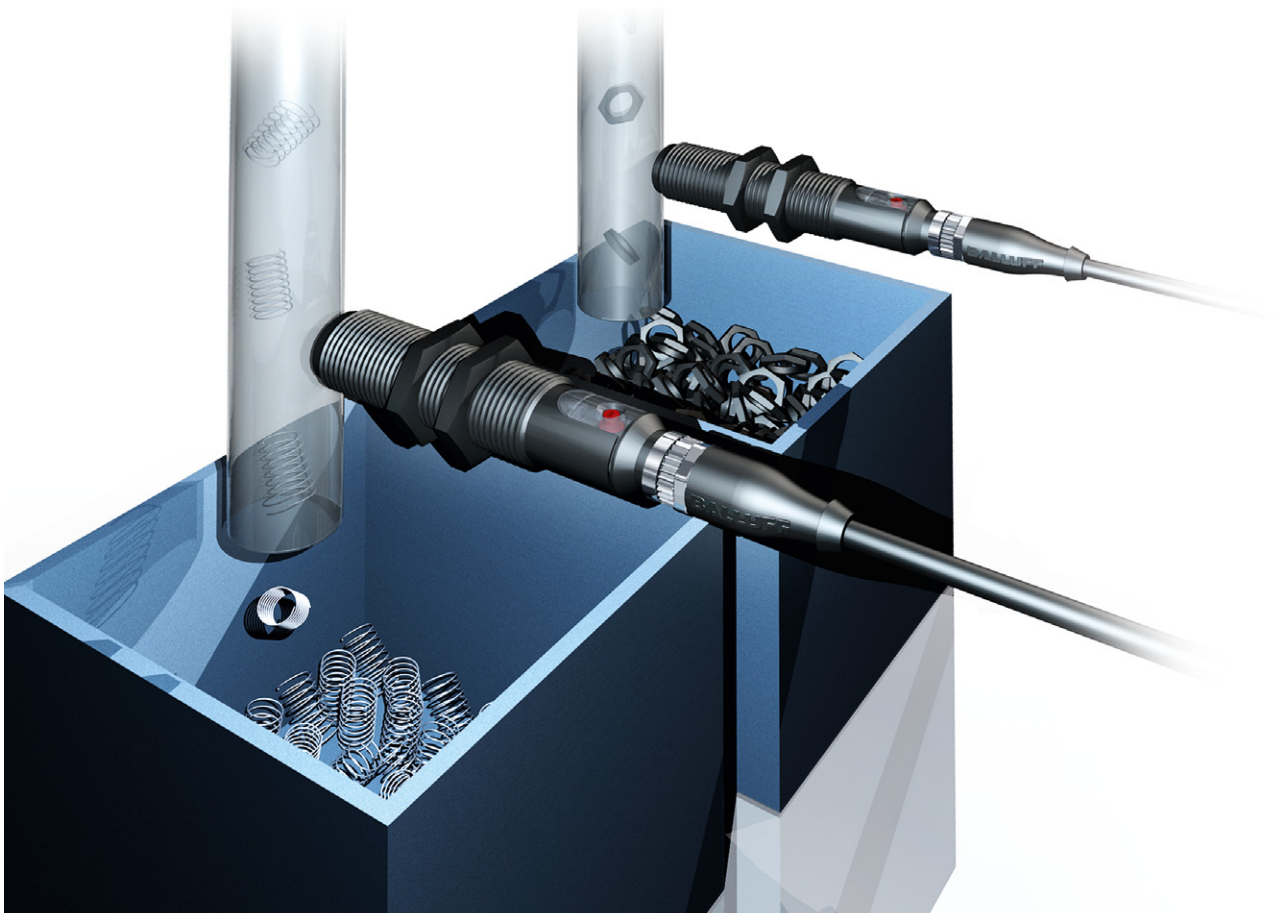
Flush-mount capacitive sensors detect objects reliably, even from a great distance. Regardless of color, structure and material.

Shielded sensors
Fields of application



Benefit

The concentrated electrical field enables also to detect media with a low dielectric constant reliably. (electrically weak or non-conductive, non-metallic materials).

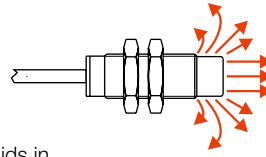


Capacitive Global Sensors

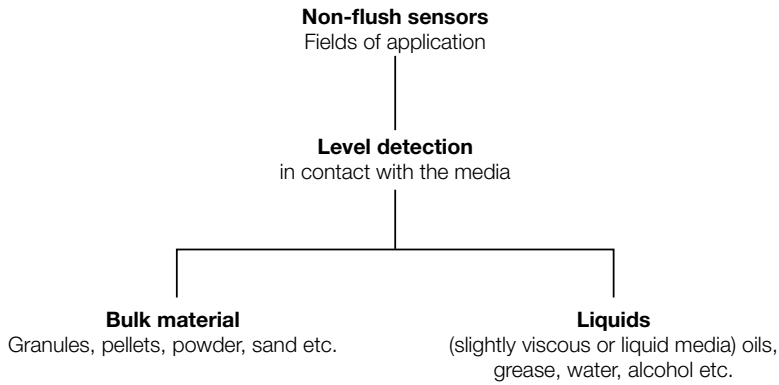
Performance spectrum

Level detection

- Non-flush mount: improved adhesion compensation
- User adjustable sensitivity

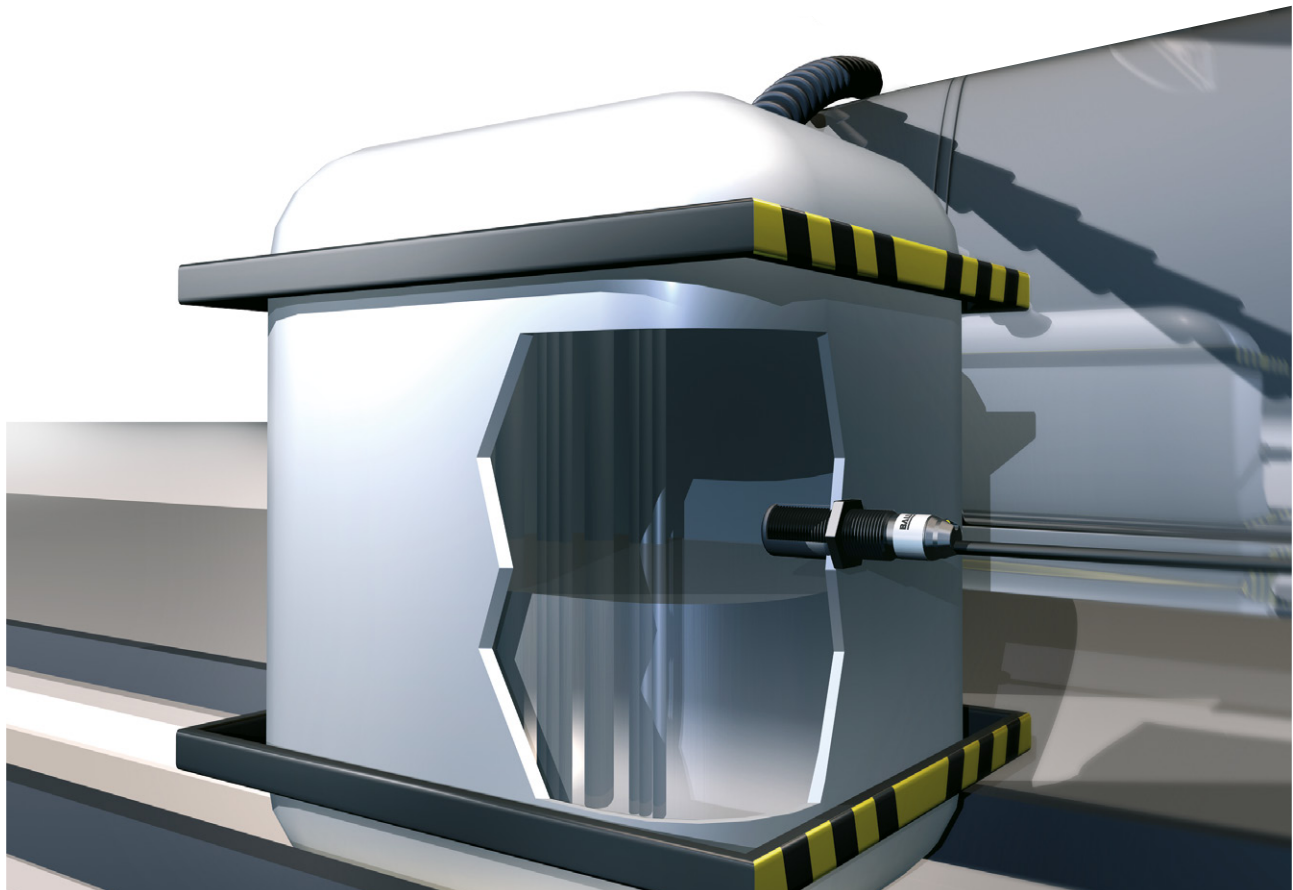


Non-flush mount Global sensors are ideal for level detection of bulk materials or liquids in direct contact. Material deposits are suppressed reliably in the process.



Benefit

Their spherical electrical field effectively compensates for material adhesion on the sensing face.



Capacitive Global Sensors
Performance Spectrum
Capacitive Sensors for Object Detection, Cylinder Design, Block Design
Capacitive Sensors for Level Detection, Cylinder Design

Capacitive Global Sensors
For object detection, cylinder design, DC 3-wire
M12×1, range 4 mm

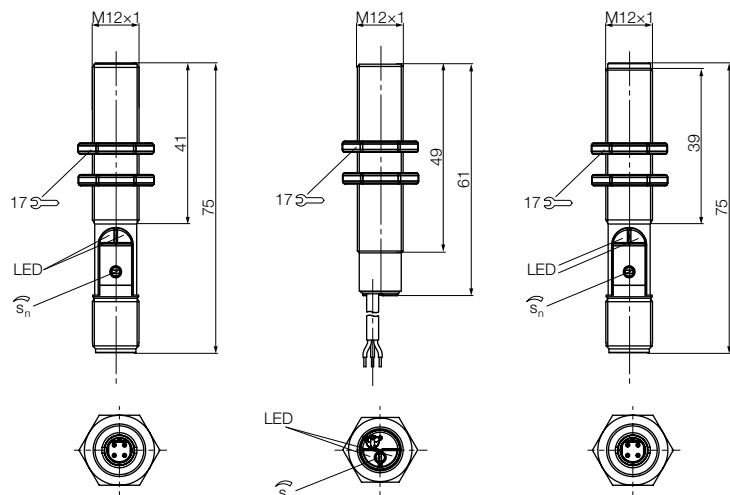
M12, M18
Global

Preferred variants
 available immediately



Size	M12×1	M12×1	M12×1
Installation type	Flush	Flush	Flush
Rated switching distance s_n	1...4 mm	1...4 mm	1...4 mm
PNP, NO	Order code	BCS00P0	BCS00R4
	Part number	BCS M12B4G2-PSC40D-S04K	BCS M12B4I1-PSC40D-EP02
PNP, NC	Order code	BCS00P1	BCS00P8
	Part number	BCS M12B4G2-POC40D-S04K	BCS M12B4I1-POC40D-EP02
NPN, NO	Order code	BCS00P2	BCS00P9
	Part number	BCS M12B4G2-NSC40D-S04K	BCS M12B4I1-NSaC40D-EP02
NPN, NC	Order code	BCS00P3	BCS00PA
	Part number	BCS M12B4G2-NOC40D-S04K	BCS M12B4I1-NOC40D-EP02
Supply voltage U_S	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o	≤ 1.5 V	≤ 1.5 V	≤ 1.5 V
Rated insulation voltage U_i	75 V DC	75 V DC	75 V DC
Output current max.	100 mA	100 mA	100 mA
No-load supply current I_o max.	≤ 15 mA	≤ 15 mA	≤ 15 mA
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a	-25...+85 °C	-25...+85 °C	-25...+85 °C
Switching frequency f	100 Hz	100 Hz	100 Hz
Supply voltage/output function indicator	Green LED/Yellow LED	Green LED/Yellow LED	Green LED/Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Material	Housing	Stainless steel	PBT
	Sensing surface	PBT	PBT
	Cover	PA 12, PBT	PA 12
Connection	M12 connector, 4-pin, A-coded	2 m PUR cable, 3×0.14 mm ²	M12 connector, 4-pin, A-coded

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036P
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036N

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

Recommended accessories

Description	Order code
Mounting bracket	BAM00C0
Mounting bracket	BAM00EY

You can find additional mechanical accessories in our catalog **Accessories Line**.

Capacitive Global Sensors

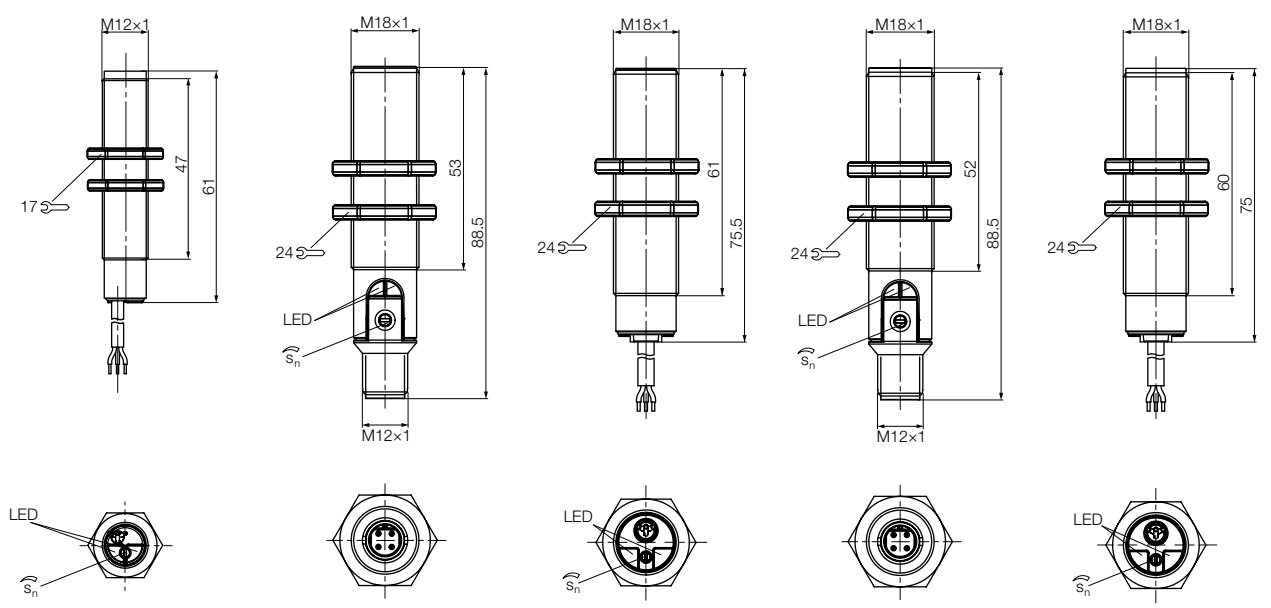
For object detection, cylinder design, DC 3-wire M12×1, M18×1, range 4 mm, 8 mm



M12×1	M18×1	M18×1	M18×1	M18×1
Flush	Flush	Flush	Flush	Flush
1...4 mm	2...8 mm	2...8 mm	2...8 mm	2...8 mm
BCS00PU	BCS00MF	BCS00LK	BCS00M8	BCS00NZ
BCS M12BBI1-PSC40D-EP02	BCS M18B4I3-PSC80D-S04K	BCS M18B4N1-PSC80D-EP02	BCS M18BBI3-PSC80D-S04K	BCS M18BBN1-PSC80D-EP02
BCS00PW	BCS00M4	BCS00LR	BCS00MH	BCS00M1
BCS M12BBI1-POC40D-EP02	BCS M18B4I3-POC80D-S04K	BCS M18B4N1-POC80D-EP02	BCS M18BBI3-POC80D-S04K	BCS M18BBN1-POC80D-EP02
BCS00PY	BCS00M5	BCS00LN	BCS00MJ	BCS00M2
BCS M12BBI1-NSC40D-EP02	BCS M18B4I3-NSC80D-S04K	BCS M18B4N1-NSC80D-EP02	BCS M18BBI3-NSC80D-S04K	BCS M18BBN1-NSC80D-EP02
BCS00PZ	BCS00M6	BCS00LP	BCS00MK	BCS00M3
BCS M12BBI1-NOC40D-EP02	BCS M18B4I3-NOC80D-S04K	BCS M18B4N1-NOC80D-EP02	BCS M18BBI3-NOC80D-S04K	BCS M18BBN1-NOC80D-EP02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
≤ 1.5 V	≤ 1.5 V	≤ 1.5 V	≤ 1.5 V	≤ 1.5 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
≤ 15 mA	≤ 15 mA	≤ 15 mA	≤ 15 mA	≤ 15 mA
Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+85 °C	-25...+85 °C	-25...+85 °C	-25...+85 °C	-25...+85 °C
100 Hz	100 Hz	100 Hz	100 Hz	100 Hz
Green LED/Yellow LED	Green LED/Yellow LED	Green LED/Yellow LED	Green LED/Yellow LED	Green LED/Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
PBT	Stainless steel	Stainless steel	PBT	PBT
PBT	PBT	PBT	PBT	PBT
PA 12	PA 12, PBT	PA 12	PA 12, PBT	PA 12
2 m PUR cable, 3×0.14 mm ²	M12 connector, 4-pin, A-coded	2 m PUR cable, 3×0.34 mm ²	M12 connector, 4-pin, A-coded	2 m PUR cable, 3×0.34 mm ²



Capacitive Global Sensors
Performance Spectrum
Capacitive Sensors for Object Detection, Cylinder Design, Block Design
Capacitive Sensors for Level Detection, Cylinder Design



Capacitive Global Sensors

For object detection, cylinder design, DC 3-wire
M30×1.5, range 15 mm

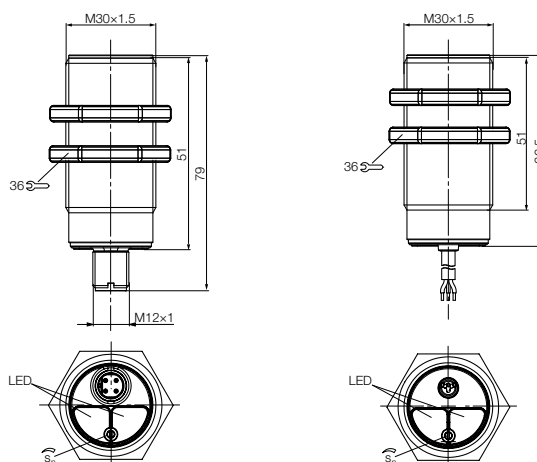


Preferred variants available immediately



Size		M30×1.5	M30×1.5
Installation type		Flush	Flush
Rated switching distance s_n		2...15 mm	2...15 mm
PNP, NO	Order code	BCS00MR	BCS00N2
	Part number	BCS M30B4I2-PSC15D-S04K	BCS M30B4I1-PSC15D-EP02
PNP, NC	Order code	BCS00MT	BCS00N3
	Part number	BCS M30B4I2-POC15D-S04K	BCS M30B4I1-POC15D-EP02
NPN, NO	Order code	BCS00MU	BCS00N4
	Part number	BCS M30B4I2-NSC15D-S04K	BCS M30B4I1-NSC15D-EP02
NPN, NC	Order code	BCS00MW	BCS00N5
	Part number	BCS M30B4I2-NOC15D-S04K	BCS M30B4I1-NOC15D-EP02
Supply voltage U_S		10...30 V DC	10...30 V DC
Voltage drop U_d at I_o		≤ 1.5 V	≤ 1.5 V
Rated insulation voltage U_i		75 V DC	75 V DC
Output current max.		100 mA	100 mA
No-load supply current I_o max.		≤ 15 mA	≤ 15 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+85 °C	-25...+85 °C
Switching frequency f		100 Hz	100 Hz
Supply voltage/output function indicator		Green LED/Yellow LED	Green LED/Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67
Material	Housing	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT
	Cover	PA 12, PBT	PA 12, PBT
Connection		M12 connector, 4-pin, A-coded	2 m PUR cable, 3×0.34 mm ²

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036P
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036N

Recommended accessories

Description	Order code
Mounting bracket	BAM00HH
Clamping holders	BAM015H
Mounting cuff	BAM00HN

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

Capacitive Global Sensors

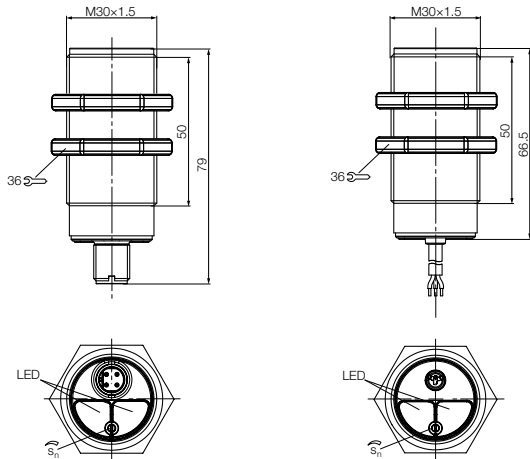
For object detection, cylinder design, DC 3-wire M30×1.5, range 15 mm



M30×1.5	M30×1.5		
Flush	Flush		
2...15 mm	2...15 mm		
BCS00NA	BCS00NM		
BCS M30BBI2-PSC15D-S04K	BCS M30BBI1-PSC15D-EP02		
BCS00NC	BCS00NN		
BCS M30BBI2-POC15D-S04K	BCS M30BBI1-POC15D-EP02		
BCS00NE	BCS00NP		
BCS M30BBI2-NSC15D-S04K	BCS M30BBI1-NSC15D-EP02		
BCS00NF	BCS00NR		
BCS M30BBI2-NOC15D-S04K	BCS M30BBI1-NOC15D-EP02		
10...30 V DC	10...30 V DC		
≤ 1.5 V	≤ 1.5 V		
75 V DC	75 V DC		
100 mA	100 mA		
≤ 15 mA	≤ 15 mA		
Yes/Yes/Yes	Yes/Yes/Yes		
-25...+85 °C	-25...+85 °C		
100 Hz	100 Hz		
Green LED/Yellow LED	Green LED/Yellow LED		
IP 67	IP 67		
PBT	PBT		
PBT	PBT		
PA 12, PBT	PA 12, PBT		
M12 connector, 4-pin, A-coded	2 m PUR cable, 3×0.34 mm ²		



Capacitive
Global
Sensors
Performance
Spectrum
Capacitive
Sensors
for Object
Detection,
Cylinder
Design,
Block
Design
Capacitive
Sensors for
Level
Detection,
Cylinder
Design



Capacitive Global Sensors
For object detection, block design, DC 3-wire
40×40×10 mm Uniflat, range 20 mm

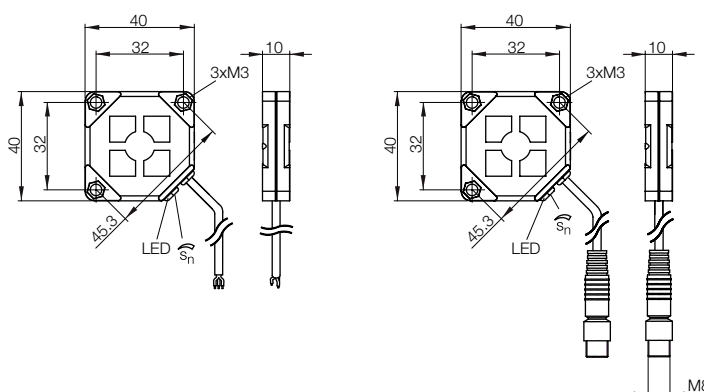
40×40×10 mm
16×34×8 mm
Global

Preferred variants
 available immediately



Size		40×40×10 mm Uniflat	40×40×10 mm Uniflat
Installation type		Flush	Flush
Rated switching distance s_n		1...20 mm	1...20 mm
PNP/NPN and NO/NC, can be coded	Order code	BCS00TR	
	Part number	BCS Q40BBAA-GPC20C-EP02	
PNP, NO	Order code		BCS00U6
	Part number		BCS Q40BBAA-PSC20C-EP00,3-GS49
PNP, NC	Order code		BCS00U5
	Part number		BCS Q40BBAA-POC20C-EP00,3-GS49
Supply voltage U_s		10...30 V DC	10...30 V DC
Voltage drop U_d at I_o		≤ 2.5 V	≤ 2.5 V
Rated insulation voltage U_i		75 V DC	75 V DC
Output current max.		100 mA	100 mA
No-load supply current I_o max.		≤ 15 mA	≤ 15 mA
Polarity reversal protected/transposition protected/short-circuit protected		No/No/Yes	Yes/Yes/Yes
Ambient temperature T_a		-5...+85 °C	-5...+85 °C
Switching frequency f		100 Hz	100 Hz
Supply voltage/output function indicator		Green LED/Yellow LED	Green LED/Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67
Material	Housing	PBT	PBT
	Sensing surface	PBT	PBT
	Cover	PBT	PBT
Connection		2 m PUR cable, 3×0.14 mm ²	0.3 m PUR cable with M8 plug, 3-pin

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M8, 3-pin/straight	2 m/PVC	BCC02NU
M8, 3-pin/angled	5 m/PVC	BCC02NW

Recommended accessories

Description	Order code
Ø 20 mm sensor holder	BAM01UL

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

Capacitive Global Sensors

For object detection, block design, DC 3-wire

16x34x8 mm Micro-Box



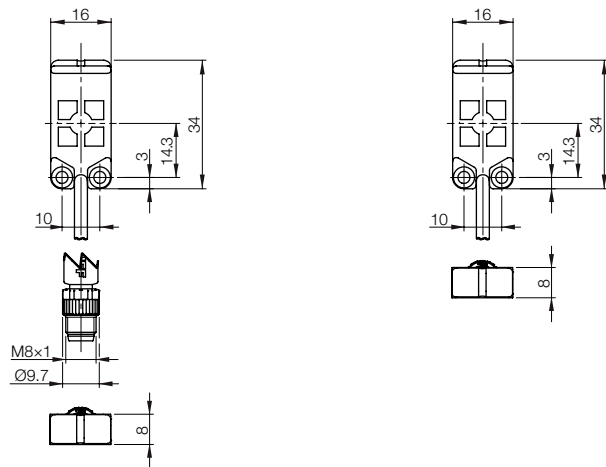
Preferred variants available immediately



Size	16x34x8 mm MicroBox	16x34x8 mm MicroBox
Mounting type	Flush	Flush
Rated switching distance s_n	1...8 mm	1...8 mm
PNP, NO	Order code	BCS012T
	Part number	BCS R08RRE-PSM80C-EP00,3-GS75
PNP, NC	Order code	BCS012U
	Part number	BCS R08RRE-POM80C-EP00,3-GS75
NPN, NO	Order code	BCS012W
	Part number	BCS R08RRE-NSM80C-EP00,3-GS75
NPN, NC	Order code	BCS012Y
	Part number	BCS R08RRE-NOM80C-EP00,3-GS75
Supply voltage U_S	12...30 V DC	12...30 V DC
Voltage drop U_d at I_e	≤ 1.5 V	≤ 1.5 V
Rated insulation voltage U_i	75 V DC	75 V DC
Output current max.	50 mA	50 mA
No-load supply current I_0 max.	≤ 12 mA	≤ 12 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	50 Hz	50 Hz
Output function indicator	Yellow LED	Yellow LED
Degree of protection as per IEC 60529	IP 67	IP 67
Material	Housing	PP
	Sensing surface	PP
Connection	0.3 m PUR cable, 4x0.14 mm ² with M8 connector, 4-pin	2 m PUR cable, 4x0.14 mm ²

Capacitive Global Sensors
Performance Spectrum
Capacitive Sensors for Object Detection, Cylinder Design, Block Design
Capacitive Sensors for Level Detection, Cylinder Design

Other variants on our website or on request.



Capacitive Global Sensors
For level detection, cylinder design, DC 3-wire
M12x1

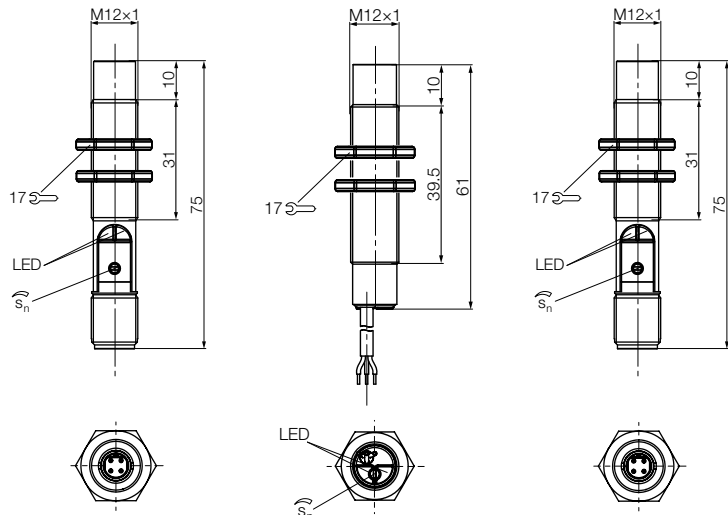
M12, M18
Metal
Global

Preferred variants
available immediately



Size		M12x1	M12x1	M12x1
Installation type		Non-flush	Non-flush	Non-flush
Rated switching distance s_n		1...8 mm	1...8 mm	1...8 mm
PNP, NO	Order code	BCS00P4	BCS00PC	BCS00PN
	Part number	BCS M12B4E2-PSC80H-S04K	BCS M12B4G1-PSC80H-EP02	BCS M12BBE2-PSC80H-S04K
PNP, NC	Order code	BCS00P5	BCS00PE	BCS00PP
	Part number	BCS M12B4E2-POC80H-S04K	BCS M12B4G1-POC80H-EP02	BCS M12BBE2-POC80H-S04K
NPN, NO	Order code	BCS00P6	BCS00PF	BCS00PR
	Part number	BCS M12B4E2-NSC80H-S04K	BCS M12B4G1-NSC80H-EP02	BCS M12BBE2-NSC80H-S04K
NPN, NC	Order code	BCS00P7	BCS00PH	BCS00PT
	Part number	BCS M12B4E2-NOC80H-S04K	BCS M12B4G1-NOC80H-EP02	BCS M12BBE2-NOC80H-S04K
Supply voltage U_s		10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_o		≤ 1.5 V	≤ 1.5 V	≤ 1.5 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Output current max.		100 mA	100 mA	100 mA
No-load supply current I_o max.		≤ 15 mA	≤ 15 mA	≤ 15 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+85 °C	-25...+85 °C	-25...+85 °C
Switching frequency f		100 Hz	100 Hz	100 Hz
Output function indicator		Yellow LED	Yellow LED	Green LED/Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67	IP 67
Material	Housing	Stainless steel	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT	PBT
	Cover	PA 12, PBT	PA 12	PA 12, PBT
Connection		M12 connector, 4-pin, A-coded	2 m PUR cable, 3x0.14 mm ²	M12 connector, 4-pin, A-coded

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036P
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036N

Recommended accessories

Description	Order code
Mounting bracket	BAM00C0
Mounting bracket	BAM00EY
Clamping holder with positive stop	BAM00CY

You can find additional electrical accessories in our catalog
Industrial Networking and Connectivity.

You can find additional mechanical accessories in
our catalog **Accessories Line**.

Capacitive Global Sensors

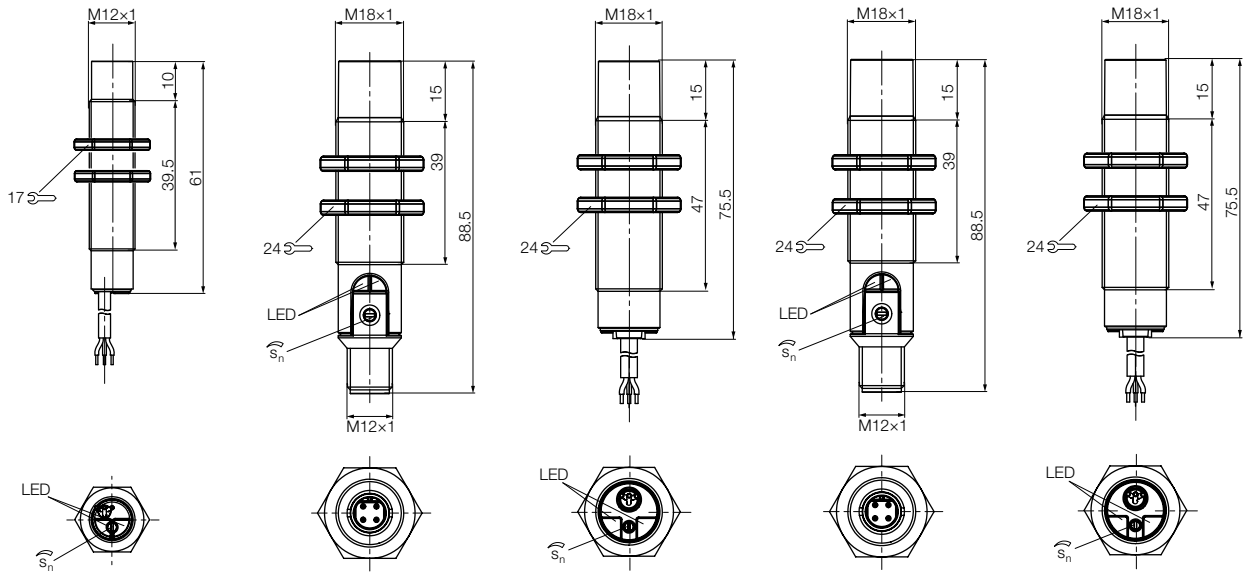
For level detection, cylinder design, DC 3-wire M12×1, M18×1



M12×1	M18×1	M18×1	M18×1	M18×1
Non-flush	Non-flush	Non-flush	Non-flush	Non-flush
1...8 mm	2..15 mm	2..15 mm	2..15 mm	2..15 mm
BCS00R0	BCS00ME	BCS00M7	BCS00LM	BCS00LL
BCS M12BBG1-PSC80H-EP02	BCS M18B4G2-PSC15H-S04K	BCS M18B4H1-PSC15H-EP02	BCS M18BBG2-PSC15H-S04K	BCS M18BBH1-PSC15H-EP02
BCS00R1	BCS00ML	BCS00M9	BCS00LT	BCS00LY
BCS M12BBG1-POC80H-EP02	BCS M18B4G2-POC15H-S04K	BCS M18B4H1-POC15H-EP02	BCS M18BBG2-POC15H-S04K	BCS M18BBH1-POC15H-EP02
BCS00R2	BCS00MM	BCS00MA	BCS00LU	BCS00LZ
BCS M12BBG1-NSC80H-EP02	BCS M18B4G2-NSC15H-S04K	BCS M18B4H1-NSC15H-EP02	BCS M18BBG2-NSC15H-S04K	BCS M18BBH1-NSC15H-EP02
BCS00R3	BCS00MN	BCS00MC	BCS00LW	BCS00MO
BCS M12BBG1-NOC80H-EP02	BCS M18B4G2-NOC15H-S04K	BCS M18B4H1-NOC15H-EP02	BCS M18BBG2-NOC15H-S04K	BCS M18BBH1-NOC15H-EP02
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
≤ 1.5 V	≤ 1.5 V	≤ 1.5 V	≤ 1.5 V	≤ 1.5 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
≤ 15 mA	≤ 15 mA	≤ 15 mA	≤ 15 mA	≤ 15 mA
Yes/Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes/Yes	Yes/Yes/Yes
-25...+85 °C	-25...+85 °C	-25...+85 °C	-25...+85 °C	-25...+85 °C
100 Hz	100 Hz	100 Hz	100 Hz	100 Hz
Green LED/Yellow LED	Green LED/Yellow LED	Green LED/Yellow LED	Green LED/Yellow LED	Green LED/Yellow LED
IP 67	IP 67	IP 67	IP 67	IP 67
PBT	Stainless steel	Stainless steel	PBT	PBT
PBT	PBT	PBT	PBT	PBT
PA 12	PA 12, PBT	PA 12	PA 12, PBT	PA 12
2 m PUR cable, 3×0.14 mm ²	M12 connector, 4-pin, A-coded	2 m PUR cable, 3×0.34 mm ²	M12 connector, 4-pin, A-coded	2 m PUR cable 3×0.34 mm ²



Capacitive Global Sensors
Performance Spectrum
Capacitive Sensors for Object Detection, Cylinder Design, Block Design
Capacitive Sensors for Level Detection, Cylinder Design



Capacitive Global Sensors

For level detection, cylinder design, DC 3-wire

M30×1.5

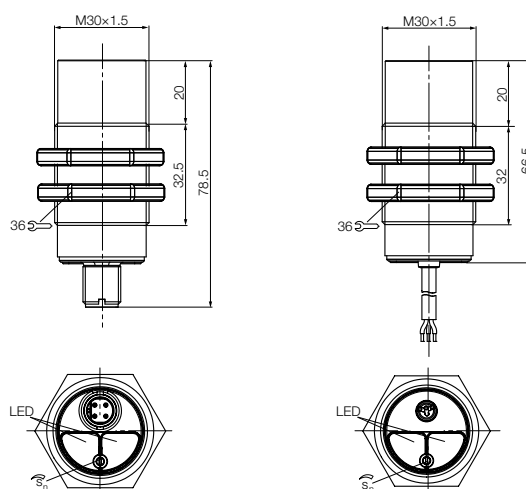


Preferred variants available immediately



Size		M30×1.5	M30×1.5
Installation type		Non-flush	Non-flush
Rated switching distance s_n		1...25 mm	1...25 mm
PNP, NO	Order code	BCS00MY	BCS00N6
	Part number	BCS M30B4E2-PSC25H-S04K	BCS M30B4E1-PSC25H-EP02
PNP, NC	Order code	BCS00MZ	BCS00N7
	Part number	BCS M30B4E2-POC25H-S04K	BCS M30B4E1-POC25H-EP02
NPN, NO	Order code	BCS00N0	BCS00N8
	Part number	BCS M30B4E2-NSC25H-S04K	BCS M30B4E1-NSC25H-EP02
NPN, NC	Order code	BCS00N1	BCS00N9
	Part number	BCS M30B4E2-NOC25H-S04K	BCS M30B4E1-NOC25H-EP02
Supply voltage U_S		10...30 V DC	10...30 V DC
Voltage drop U_d at I_o		≤ 1.5 V	≤ 1.5 V
Rated insulation voltage U_i		75 V DC	75 V DC
Output current max.		100 mA	100 mA
No-load supply current I_o max.		≤ 15 mA	≤ 15 mA
Polarity reversal protected/transposition protected/short-circuit protected		Yes/Yes/Yes	Yes/Yes/Yes
Ambient temperature T_a		-25...+85 °C	-25...+85 °C
Switching frequency f		100 Hz	100 Hz
Supply voltage/output function indicator		Green LED/Yellow LED	Green LED/Yellow LED
Degree of protection as per IEC 60529		IP 67	IP 67
Material	Housing	Stainless steel	Stainless steel
	Sensing surface	PBT	PBT
	Cover	PA 12, PBT	PA 12, PBT
Connection		M12 connector, 4-pin, A-coded	2 m PUR cable, 3×0.34 mm ²

Other variants on our website or on request.



Suitable connectors

Size/design	Length/cable material	Order code
M12, 4-pin/straight	2 m/PVC	BCC0367
M12, 4-pin/angled	2 m/PVC	BCC036P
M12, 4-pin/straight	5 m/PVC	BCC0368
M12, 4-pin/angled	5 m/PVC	BCC036N

Recommended accessories

Description	Order code
Mounting bracket	BAM00HH
Mounting cuff	BAM00HN

You can find additional electrical accessories in our catalog **Industrial Networking and Connectivity**.

You can find additional mechanical accessories in our catalog **Accessories Line**.

Capacitive Global Sensors

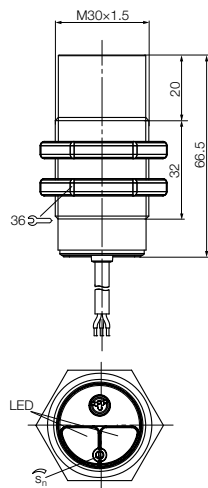
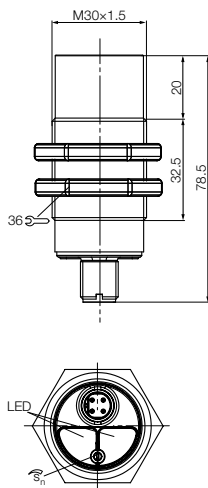
For level detection, cylinder design, DC 3-wire M30×1.5



M30×1.5 Non-flush 1...25 mm BCS00NH BCS M30BBE2-PSC25H-S04K	M30×1.5 Non-flush 1...25 mm BCS00NT BCS M30BBE1-PSC25H-EP02		
BCS00NJ BCS M30BBE2-POC25H-S04K	BCS00NU BCS M30BBE1-POC25H-EP02		
BCS00NK BCS M30BBE2-NSC25H-S04K	BCS00NW BCS M30BBE1-NSC25H-EP02		
BCS00NL BCS M30BBE2-NOC25H-S04K	BCS00NY BCS M30BBE1-NOC25H-EP02		
10...30 V DC ≤ 1.5 V 75 V DC 100 mA ≤ 15 mA Yes/Yes/Yes	10...30 V DC ≤ 1.5 V 75 V DC 100 mA ≤ 15 mA Yes/Yes/Yes		
-25...+85 °C 100 Hz Green LED/Yellow LED IP 67	-25...+85 °C 100 Hz Green LED/Yellow LED IP 67		
PBT PBT PA 12, PBT M12 connector, 4-pin, A-coded	PBT PBT PA 12, PBT 2 m PUR cable, 3×0.34 mm ²		



Capacitive
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for Object
Detection,
Cylinder
Design,
Block
Design
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Sensors for
Level
Detection,
Cylinder
Design





Magnetic Global Cylinder Sensors

Magnetic Global cylinder sensors – for perfect grip in the pneumatic cylinder

Our compact magnetic Global cylinder sensors offer the perfect grip. They are precisely matched to the different cylinder groove shapes. Therefore, they can not only be installed flush in the respective slot, but also fit in completely.

- Insertion from above or the side
- Cable or connector versions
- Compact design

For the C-slot: BMF 204 and BMF 214

BMF 204 – for 3.8 mm slot

BMF 214 – for 4 mm slot

- Can be inserted via the groove end
- Exceptional grip
- Miniature design for grippers and short-stroke cylinders
- Exactly positionable

For the T-slot: BMF 235

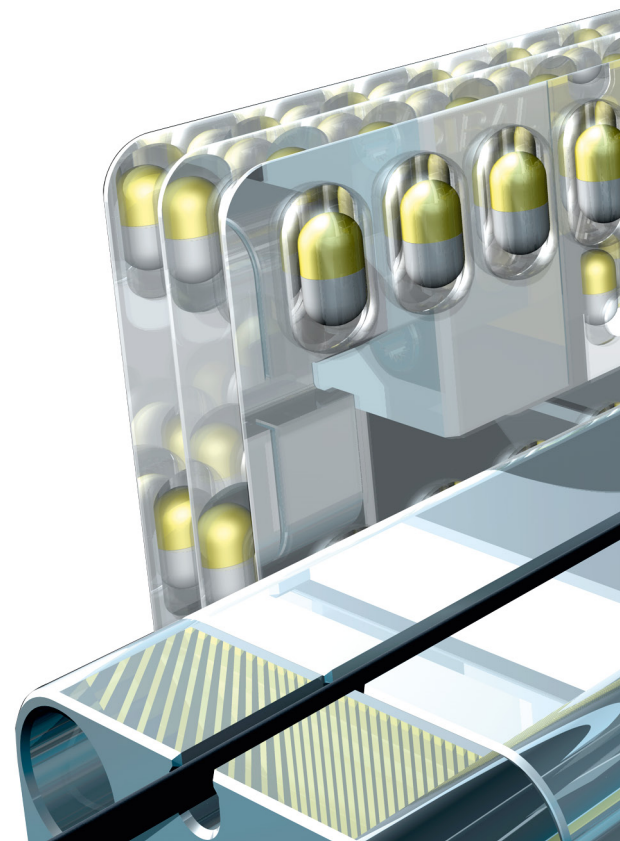
BMF 235 – the standard

- Large and extremely bright LED for simple diagnostics
- Can be installed in the T-slot from above (drop-in installation)
- with standard screwdriver or 1.5 mm Allen key
- Short, compact design with outstanding grip

V-Twin® – one plug for two sensors

In M8 or M12

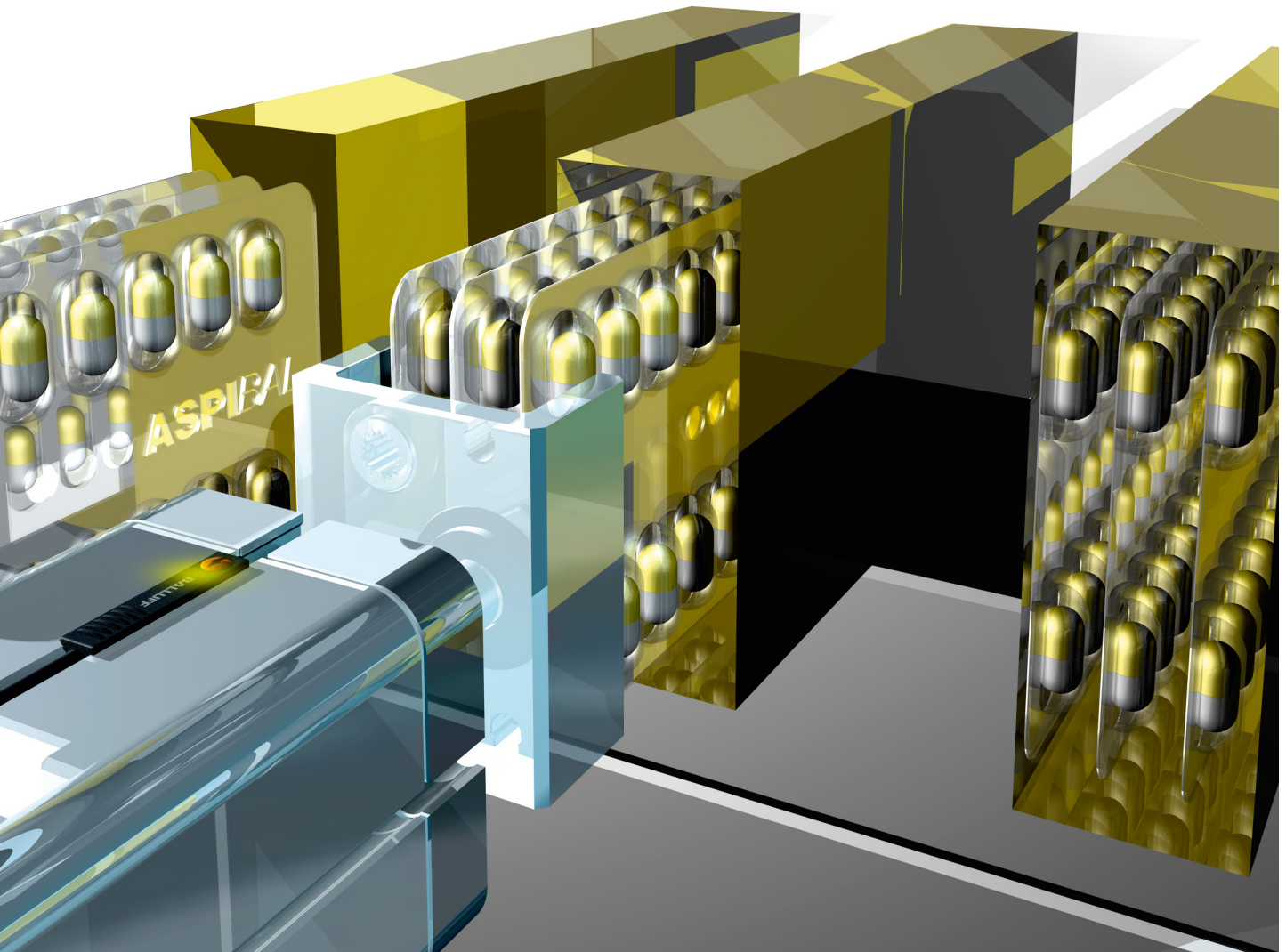
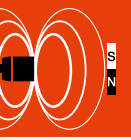
- With one 4-core or 3-core cables
- Reduces use of materials
- Fast installation
- Lowers costs
- Simply double sensors on a multi-interface block/sensor splitter



Magnetic Global Cylinder Sensors
Contents

Compact Design

BMF 204	70
BMF 214	72
BMF 243	74
BMF 235	76



Magnetic Global Cylinder Sensors

Compact design, BMF 204

C-slot (size 10 slot)

Global

Secure hold in the slot

The design is adapted to the slot, i.e. the sensor can be inserted into the slot.

Installed and adjusted quickly and easily

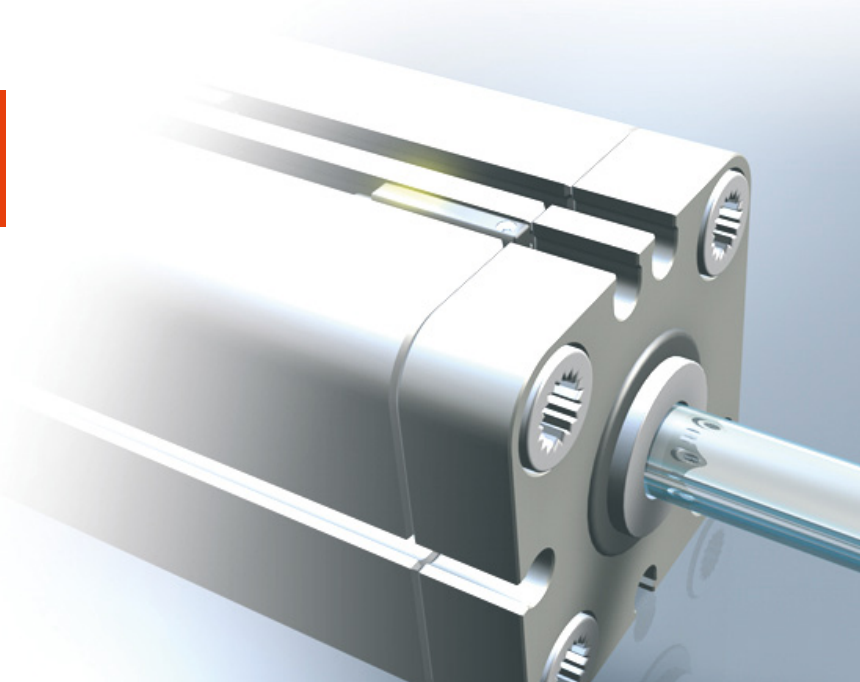
The retaining element is integrated into the sensor.

Can also be used in space-critical applications

Flush-mounted, the sensor "disappears" in the slot.

Optimum solution for every gripper and short-stroke cylinder

Miniature design, extremely short



Preferred variants available immediately



Series	
Properties	
PNP, NO	Order code Part number
Supply voltage U_S	
Voltage drop U_d	
Rated insulation voltage U_i	
Rated operating current I_o	
No-load supply current I_o max.	
Polarity reversal protected/transposition protected/short-circuit protected	
Rated switching field strength I_{H_n}	
Assured switching field strength I_{H_a}	
Temperature drift of switch-on point of I_{H_n}	
On/off delay	
Ambient temperature T_a	
Degree of protection as per IEC 60529	
Approval	
Material	Housing
Connection	
Assembly	
Slot	

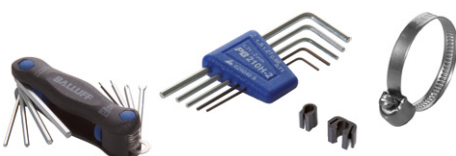


The BMF 204 and BMF 214 have an impressive, extremely compact design.

Other variants on our website or on request.



Recommended accessories
(please order separately)

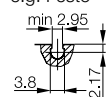


Special accessories for magnetic cylinder sensors, such as **installation tools, cable clips, or hose clamps**, can be found in the Object Detection catalog on page 879.

Slot dimension

C-slot (size 10 slot)

e.g. Festo



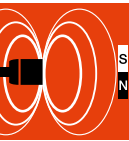


Magnetic Global Cylinder Sensors

Compact design, BMF 204

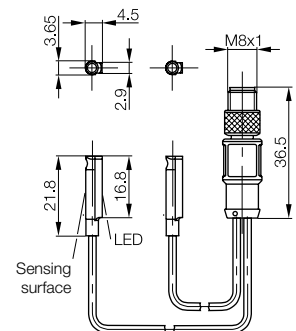
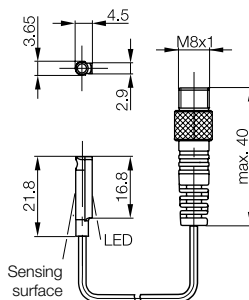
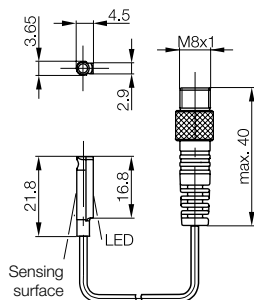
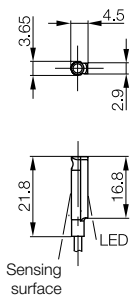


BMF 204	BMF 204	BMF 204	BMF 204
Small housing for the Festo C-slot with direct PUR cable	Small housing for the Festo C-slot with M8 connector	Small housing for the Festo C-slot with M8 connector	Small housing for the Festo C-slot with M12 connector
BMF0001	BMF0002	BMF0003	BMF00A6
BMF 204K-PS-C-2A-PU-02	BMF 204K-PS-C-2A-SA2-S49-00,3	BMF 204K-PS-C-2A-SA2-S49-00,5	BMF 204K-PS-C-2A-SA2-S4-00,3
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
75 V DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	100 mA	100 mA
≤ 8 mA	≤ 8 mA	≤ 8 mA	≤ 8 mA
Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
1.2 kA/m	1.2 kA/m	1.2 kA/m	1.2 kA/m
≥ 2 kA/m	≥ 2 kA/m	≥ 2 kA/m	≥ 2 kA/m
≤ 0.3%/°C	≤ 0.3%/°C	≤ 0.3%/°C	≤ 0.3%/°C
≤ 0.07 ms/≤ 0.07 ms	≤ 0.07 ms/≤ 0.07 ms	≤ 0.07 ms/≤ 0.07 ms	≤ 0.07 ms/≤ 0.07 ms
-25...+85 °C	-25...+85 °C	-25...+85 °C	-25...+85 °C
IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus
PA12	PA12	PA12	PA12
2 m PUR cable, 3×0.1 mm ²	0.3 m PUR cable with M8 connector, 3-pin	0.5 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M12 connector, 4-pin
Can be inserted from the side	Can be inserted from the side	Can be inserted from the side	Can be inserted from the side
∩ C-slot (size 10 slot)	∩ C-slot (size 10 slot)	∩ C-slot (size 10 slot)	∩ C-slot (size 10 slot)



Magnetic Global Cylinder Sensors in Compact Design

BMF 204
BMF 214
BMF 243
BMF 235



Secure hold in the slot

The design is adapted to the slot, i.e. the sensor can be inserted into the slot.

Installed and adjusted quickly and easily

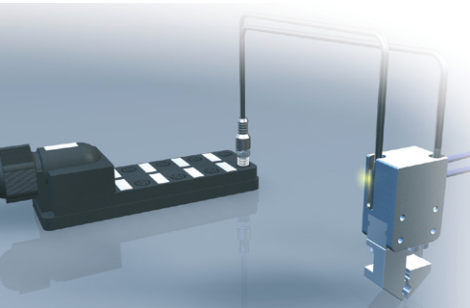
The retaining element is integrated into the sensor.

Can also be used in space-critical applications

Flush-mounted, the sensor "disappears" in the slot.

Optimum solution for every gripper and short-stroke cylinder

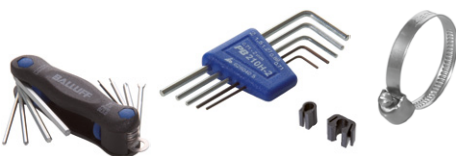
Miniature design, extremely short.



V-Twin – two sensors, one connector

- Save on connectors and increase value creation.
- Just one plug-in position for two sensors
- Flexibly detect multiple positions on pneumatic grippers and cylinders.

Recommended accessories
(please order separately)

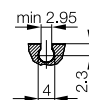


Special accessories for magnetic cylinder sensors, such as **installation tools, cable clips, or hose clamps**, can be found in the Object Detection catalog on page 879.

Slot dimension

C-slot (rounded groove)

e.g. SMC

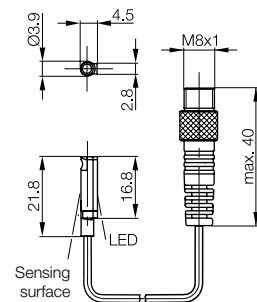


Preferred variants available immediately



Series	BMF 214	
Properties	Small housing for the SMC C-slot with M8 connector	
PNP, NO	Order code	BMF00A2
	Part number	BMF 214K-PS-C-2A-SA2-S49-00,3
Supply voltage U_S	10...30 V DC	
Voltage drop U_d	≤ 2.5 V	
Rated insulation voltage U_i	75 V DC	
Rated operating current I_o	100 mA	
No-load supply current I_o max.	≤ 8 mA	
Polarity reversal protected/transposition protected/short-circuit protected	Yes/Yes	
Rated switching field strength $ H_n $	1.2 kA/m	
Assured switching field strength $ H_a $	≥ 2 kA/m	
Temperature drift of switch-on point of $ H_n $	≤ 0.3%/°C	
On/off delay	≤ 0.07 ms/≤ 0.07 ms	
Ambient temperature T_a	-25...+85 °C	
Degree of protection as per IEC 60529	IP 67	
Approval	CE, cULus	
Material	Housing	PA12
Connection	0.3 m PUR cable with M8 connector, 3-pin	
Assembly	Can be inserted from the side	
Slot	C-slot (rounded groove)	

Other variants on our website or on request.





Magnetic Global Cylinder Sensors

Compact design, BMF 214

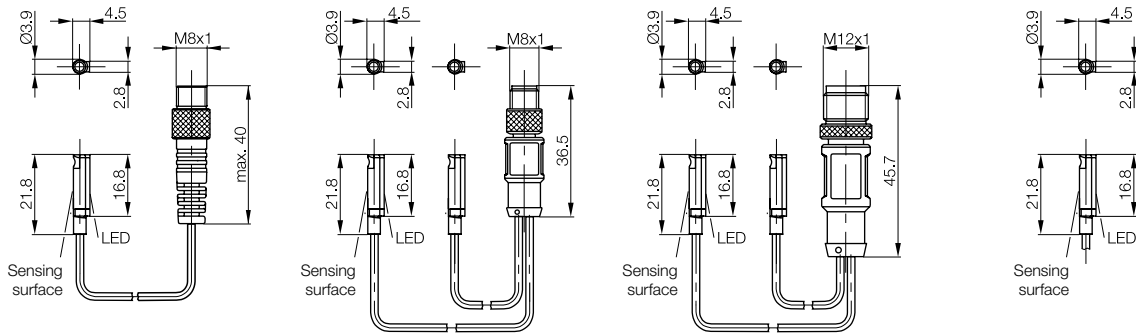


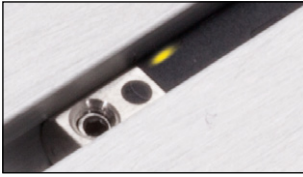
BMF 214	BMF 214	BMF 214	BMF 214
Small housing for the SMC C-slot with M8 connector	Small housing for the SMC C-slot with M8 connector	Small housing for the SMC C-slot with M12 connector	Small housing for the SMC C-slot with direct PUR cable
BMF00A3	BMF00A5	BMF00A4	BMF00A1
BMF 214K-PS-C-2A-SA2-S49-00,5	BMF 214K-PS-C-2A-SA95-S75-00,3	BMF 214K-PS-C-2A-SA95-S4-00,3	BMF 214K-PS-C-2A-PU-02
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
75 V DC	75 V DC	75 V DC	75 V DC
100 mA	100 mA	100 mA	100 mA
≤ 8 mA	≤ 8 mA	≤ 8 mA	≤ 8 mA
Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
1.2 kA/m	1.2 kA/m	1.2 kA/m	1.2 kA/m
≥ 2 kA/m	≥ 2 kA/m	≥ 2 kA/m	≥ 2 kA/m
≤ 0.3%/°C	≤ 0.3%/°C	≤ 0.3%/°C	≤ 0.3%/°C
≤ 0.07 ms/≤ 0.07 ms	≤ 0.07 ms/≤ 0.07 ms	≤ 0.07 ms/≤ 0.07 ms	≤ 0.07 ms/≤ 0.07 ms
-25...+85 °C	-25...+85 °C	-25...+85 °C	-25...+85 °C
IP 67	IP 67	IP 67	IP 67
CE, cULus	CE, cULus	CE, cULus	CE, cULus
PA12	PA12	PA12	PA12
0.5 m PUR cable with M8 connector, 3-pin	0.3 m PUR cable with M8 connector, 4-pin	0.3 m PUR cable with M12 connector, 4-pin	2 m PUR cable, 3×0.1 mm ²
Can be inserted from the side	Can be installed from above	Can be installed from above	Can be installed from above
∩ C-slot (rounded groove)	∩ C-slot (rounded groove)	∩ C-slot (rounded groove)	∩ C-slot (rounded groove)



Magnetic Global Cylinder Sensors in Compact Design

BMF 204
BMF 214
BMF 243
BMF 235

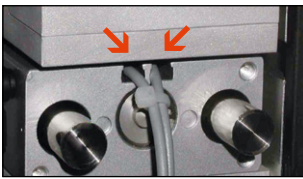




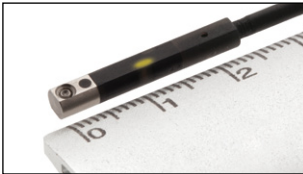
New mounting concept
Solid hold in the slot, sensor cannot be wrenched from the slot.



Can be installed in the slot from above
Can be installed even on cylinders with a covered slot



Compact design, i.e. can be mounted flush
Can also be used in space-critical applications



As short as possible (24 mm)
Can also be used in space-critical applications



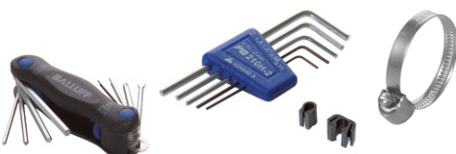
Preferred variants available immediately



Series		
Properties		
PNP, NO	Order code	
	Part number	
PNP, NC	Order code	
	Part number	
NPN, NO	Order code	
	Part number	
NPN, NC	Order code	
	Part number	
Supply voltage U_S		
Voltage drop U_d		
Rated insulation voltage U_i		
Rated operating current I_o		
No-load supply current I_o max.		
Polarity reversal protected/transposition protected/short-circuit protected		
Rated switching field strength $ H_n $		
Assured switching field strength $ H_a $		
On/off delay		
Ambient temperature T_a		
Degree of protection as per IEC 60529		
Approval		
Material	Housing	
Connection		
Assembly		
Slot		

Other variants on our website or on request.

Recommended accessories
(please order separately)



Special accessories for magnetic cylinder sensors, such as **installation tools, cable clips, or hose clamps**, can be found in the Object Detection catalog on page 879.



Magnetic Global Cylinder Sensors

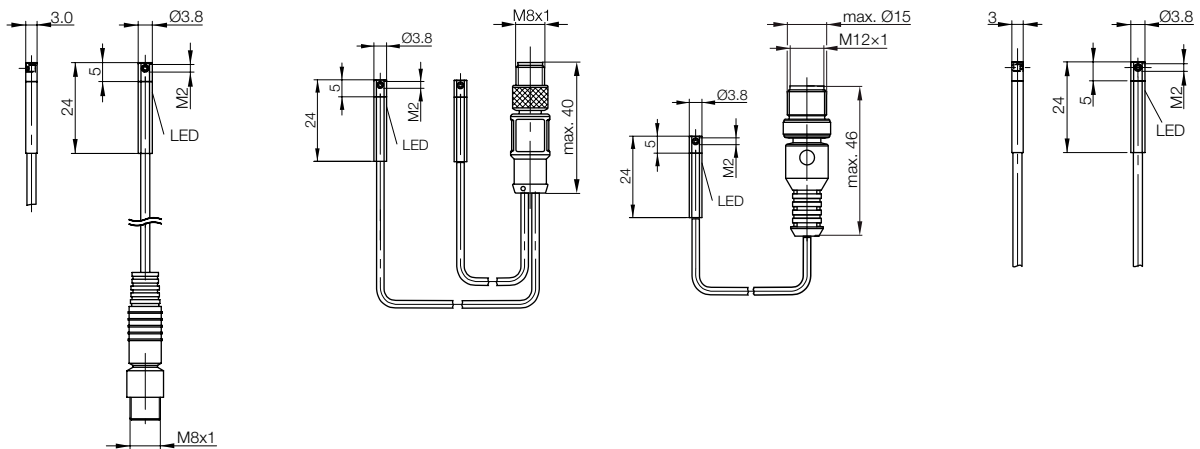
Compact design, BMF 243



BMF 243	BMF 243	BMF 243	BMF 243
The new benchmark for every C-slot (rounded groove) with M8 connector	The new benchmark for every C-slot (rounded groove) with M8 connector	The new benchmark for every C-slot (rounded groove) with M12 connector	The new benchmark for every C-slot (rounded groove) with direct PUR cable
BMF00EL	BMF00ET	BMF00ER	BMF00EF
BMF 243K-PS-C-2A-SA2-S49-00,3	BMF 243K-PS-C-2A-SA95-S75-00,3	BMF 243K-PS-C-2A-SA2-S4-00,3	BMF 243K-PS-C-2A-PU-02
BMF00EM			BMF00EH
BMF 243K-PO-C-2A-SA2-S49-00,3			BMF 243K-PO-C-2A-PU-02
BMF00EN			BMF00EJ
BMF 243K-NS-C-2A-SA2-S49-00,3			BMF 243K-NS-C-2A-PU-02
BMF00EP			BMF00EK
BMF 243K-NO-C-2A-SA2-S49-00,3			BMF 243K-NO-C-2A-PU-02
10...30 V DC ≤ 2.4 V 75 V DC 100 mA 7.5 mA Yes/Yes/Yes	10...30 V DC ≤ 2.4 V 75 V DC 100 mA 7.5 mA Yes/Yes/Yes	10...30 V DC ≤ 2.4 V 75 V DC 100 mA 7.5 mA Yes/Yes/Yes	10...30 V DC ≤ 2.4 V 75 V DC 100 mA 7.5 mA Yes/Yes/Yes
2 kA/m ≥ 2.4 kA/m ≤ 0.07 ms/≤ 0.07 ms -25...+85 °C IP 67 CE, cULus	2 kA/m ≥ 2.4 kA/m ≤ 0.07 ms/≤ 0.07 ms -25...+85 °C IP 67 CE, cULus	2 kA/m ≥ 2.4 kA/m ≤ 0.07 ms/≤ 0.07 ms -25...+85 °C IP 67 CE, cULus	2 kA/m ≥ 2.4 kA/m ≤ 0.07 ms/≤ 0.07 ms -25...+85 °C IP 67 CE, cULus
PA 12 and A2 steel 0.3 m PUR cable with M8 connector, 3-pin Can be installed from above ∩ C-slot (rounded groove)	PA 12 and A2 steel 0.3 m PUR cable with M8 connector, 4-pin Can be installed from above ∩ C-slot (rounded groove)	PA 12 and A2 steel 0.3 m PUR cable with M12 connector, 4-pin Can be installed from above ∩ C-slot (rounded groove)	PA 12 and A2 steel 2 m PUR cable, 3×0.10 mm ² Can be installed from above ∩ C-slot (rounded groove)



Magnetic Global Cylinder Sensors in Compact Design
BMF 204
BMF 214
BMF 243
BMF 235





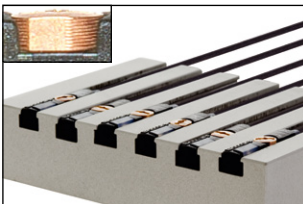
Very bright LED

Reliable detection of switching function from far away (25 m in bright factory building).



New mounting concept

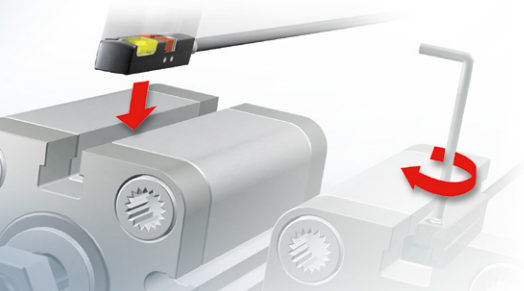
Solid hold in the slot, sensor cannot be wrenched from the slot.



Knurled screw

Sensor screws in firmly, extremely secure hold in any slot (e.g. Parker, Festo, SMC, Bosch).

Can be installed from above.
Easy installation with Allen or slotted screwdriver



Recommended accessories (please order separately)



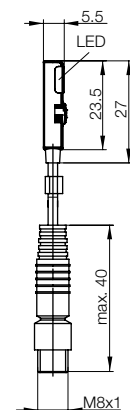
Special accessories for magnetic cylinder sensors, such as **installation tools, cable clips, or hose clamps**, can be found in the Object Detection catalog on page 879.

Preferred variants available immediately



Series	BMF 235	
Properties	The new benchmark for every T-slot with M8 connector	
PNP, NO	Order code	BMF00C4
	Part number	BMF 235K-PS-C-2A-SA2-S49-00,3
PNP, NC	Order code	BMF00C6
	Part number	BMF 235K-PO-C-2A-SA2-S49-00,3
NPN, NO	Order code	BMF00C2
	Part number	BMF 235K-NS-C-2A-SA2-S49-00,3
NPN, NC	Order code	BMF00C3
	Part number	BMF 235K-NO-C-2A-SA2-S49-00,3
Supply voltage U_S	10...30 V DC	
Voltage drop U_d	≤ 2.5 V	
Rated insulation voltage U_i	75 V DC	
Rated operating current I_o	100 mA	
No-load supply current I_o max.	6 mA	
Polarity reversal protected/transposition protected/short-circuit protected	Yes/No/Yes	
Rated switching field strength $ H_n $	1.2 kA/m	
Assured switching field strength $ H_a $	≥ 2 kA/m	
Temperature drift of switch-on point of $ H_n $	≤ 0.3 %/°C	
On/off delay	≤ 0.1 ms/ ≤ 0.1 ms	
Ambient temperature T_a	-25...+85 °C	
Degree of protection as per IEC 60529	IP 67	
Approval	CE, cULus	
Material	Housing	PA12
Connection	0.3 m PUR cable with M8 connector, 4-pin	
Assembly	Can be installed from above	
Slot	T-slot	

Other variants on our website or on request.





Magnetic Global Cylinder Sensors

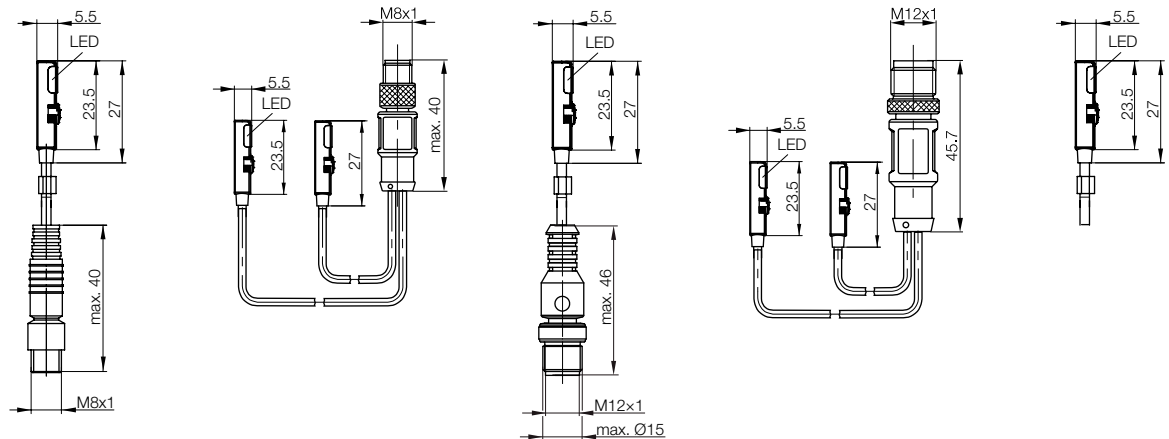
Compact design, BMF 235

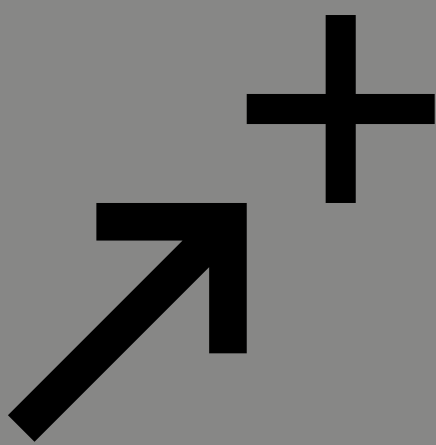


BMF 235	BMF 235	BMF 235	BMF 235	BMF 235
The new benchmark for every T-slot with M8 connector	The new benchmark for every T-slot with M8 connector	The new benchmark for every T-slot with M12 connector	The new benchmark for every T-slot with M12 connector	The new benchmark for every T-slot with direct PUR cable
BMF00CF	BMF00CA	BMF00C5	BMF00C9	BMF00AR
BMF 235K-PS-C-2A-SA2-S49-00,5	BMF 235K-PS-C-2A-SA95-S75-00,3	BMF 235K-PS-C-2A-SA2-S4-00,3	BMF 235K-PS-C-2A-SA95-S4-00,3	BMF 235K-PS-C-2A-PU-02
				BMF00AT BMF 235K-PO-C-2A-PU-02
				BMF00AU BMF 235K-NS-C-2A-PU-02
				BMF00AW BMF 235K-NO-C-2A-PU-02
10...30 V DC ≤ 2.5 V 75 V DC 100 mA 6 mA Yes/No/Yes	10...30 V DC ≤ 2.5 V 75 V DC 100 mA 6 mA Yes/No/Yes	10...30 V DC ≤ 2.5 V 75 V DC 100 mA 6 mA Yes/No/Yes	10...30 V DC ≤ 2.5 V 75 V DC 100 mA 6 mA Yes/No/Yes	10...30 V DC ≤ 2.5 V 75 V DC 100 mA 6 mA Yes/No/Yes
1.2 kA/m ≥ 2 kA/m ≤ 0.3 %/°C ≤ 0.1 ms/≤ 0.1 ms -25...+85 °C IP 67 CE, cULus PA12	1.2 kA/m ≥ 2 kA/m ≤ 0.3 %/°C ≤ 0.1 ms/≤ 0.1 ms -25...+85 °C IP 67 CE, cULus PA12	1.2 kA/m ≥ 2 kA/m ≤ 0.3 %/°C ≤ 0.1 ms/≤ 0.1 ms -25...+85 °C IP 67 CE, cULus PA12	1.2 kA/m ≥ 2 kA/m ≤ 0.3 %/°C ≤ 0.1 ms/≤ 0.1 ms -25...+85 °C IP 67 CE, cULus PA12	1.2 kA/m ≥ 2 kA/m ≤ 0.3 %/°C ≤ 0.1 ms/≤ 0.1 ms -25...+85 °C IP 67 CE, cULus PA12
0.5 m PUR cable with M8 connector, 4-pin	0.3 m PUR cable with M8 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 PUR cable, 3x0.1 mm ²
Can be installed from above ┌┐ T-slot	Can be installed from above ┌┐ T-slot	Can be installed from above ┌┐ T-slot	Can be installed from above ┌┐ T-slot	Can be installed from above ┌┐ T-slot



Magnetic Global Cylinder Sensors in Compact Design
 BMF 204
 BMF 214
 BMF 243
 BMF 235





Accessories

Accessories – a partial listing
from our extensive product line

Fitting accessories are the optimal peripherals for sensors:
We provide reliable products for time and cost-saving
integration into your automation system and for reliable
operation. We have put together a selection for you from our
comprehensive product line.



Accessories

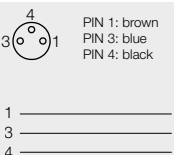
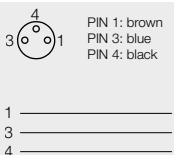
Contents




Accessories	
M8 Connectors	80
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Passive Splitters	86
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Mounting Brackets, Reflectors	96
Mounting Brackets, Mounting Adapters	97
Mounting Brackets, Hose Clamp	98
Mounting Brackets, Mounting Cuffs	99



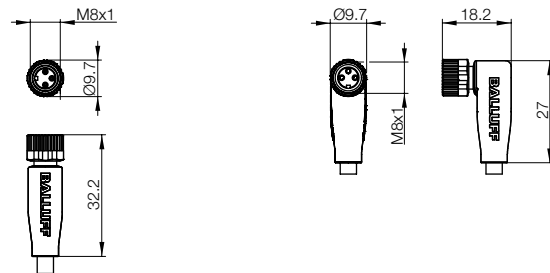
Preferred variants available immediately



Connector diagram and wiring	 PIN 1: brown PIN 3: blue PIN 4: black	 PIN 1: brown PIN 3: blue PIN 4: black
Max. supply voltage AC U_s	60 V AC	60 V AC
Max. supply voltage DC U_s	60 V DC	60 V DC
Cable	Molded	Molded
Number of conductors × conductor cross-section	3×0.34 mm ²	3×0.34 mm ²
Degree of protection as per IEC 60529	IP 67	IP 67
Ambient temperature T_a	-25...+90 °C / -25...+90 °C	-25...+90 °C / -25...+90 °C
Static/moving	PUR (UL 80 °C)	PUR (UL 80 °C)
	PVC (UL 80 °C)	PVC (UL 80 °C)

Cable material	Color	Length	Order code
PVC	 gray	2 m	BCC02NU BCC M313-0000-10-001-VX8334-020
PVC	 gray	5 m	BCC02NW BCC M313-0000-10-001-VX8334-050
PVC	 gray	10 m	BCC02NY BCC M313-0000-10-001-VX8334-100
			BCC02P5 BCC M323-0000-10-001-VX8334-020
			BCC02P6 BCC M323-0000-10-001-VX8334-050
			BCC02P7 BCC M323-0000-10-001-VX8334-100

Other variants on our website or on request.



Connectors

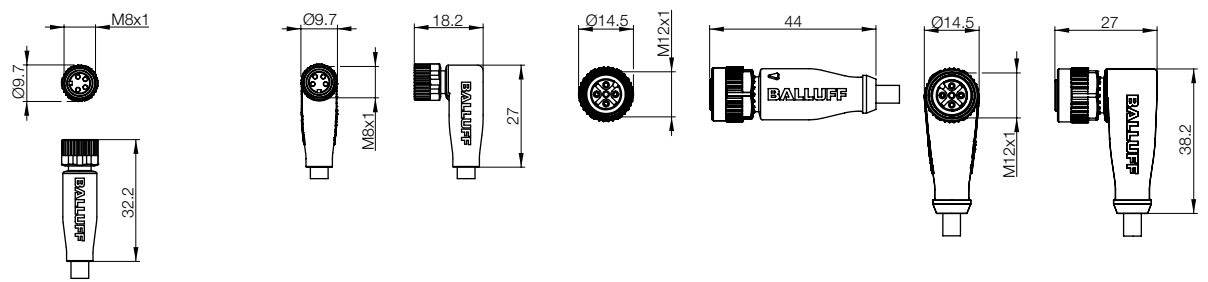
M8, M12 female straight and right-angle, 4-pin, no LED



Order code	Part number	Order code	Part number
BCC02PL BCC M314-0000-10-003-VX8434-020	BCC02PZ BCC M324-0000-10-003-VX8434-020	BCC0367 BCC M415-0000-1A-003-VX8434-020	BCC036N BCC M425-0000-1A-003-VX8434-020
BCC02PM BCC M314-0000-10-003-VX8434-050	BCC02R0 BCC M324-0000-10-003-VX8434-050	BCC0368 BCC M415-0000-1A-003-VX8434-050	BCC036P BCC M425-0000-1A-003-VX8434-050
BCC02PN BCC M314-0000-10-003-VX8434-100	BCC02R1 BCC M324-0000-10-003-VX8434-100	BCC0369 BCC M415-0000-1A-003-VX8434-100	BCC036R BCC M425-0000-1A-003-VX8434-100



Accessories
M8 Connectors
M12 Connectors
 Valve Connectors
 Passive Splitter
 Power Supplies
 Mounting Brackets,
 Reflectors,
 Mounting Adapters
 Mounting Brackets,
 Hose Clamp,
 Mounting Cuffs

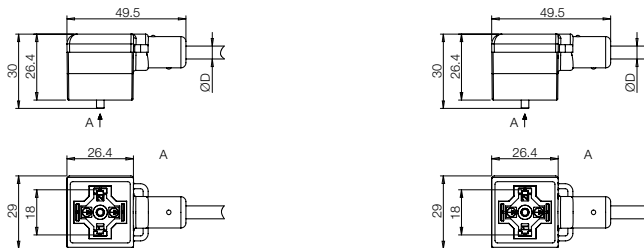




Connector diagram and wiring	<p>PIN 1: black PIN 2: blue PIN PE: green/yellow</p>	<p>PIN 1: black PIN 2: blue PIN PE: green/yellow</p>	
Cable outlet	0°/180°	0°/180°	
Supply voltage AC U_s	24 V AC	230 V AC	
Supply voltage DC U_s	24 V DC	230 V DC	
Cable	Molded	Molded	
Current rating	4.0 A	4.0 A	
Suppressor	Suppressor diode	No	
No. of wires x conductor cross-section	3x0.5 mm ²	3x0.5 mm ²	
Degree of protection as per IEC 60529	IP 67	IP 67	
Ambient temperature T_a	PUR -25...+90 °C/-25...+80 °C	PVC -25...+90 °C/-25...+80 °C	
static/moving	PVC -25...+105 °C/-25...+105 °C	PVC -25...+105 °C/-25...+105 °C	
LED	1x (PNP), yellow	1x (PNP), yellow	

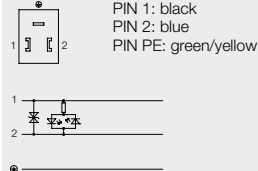
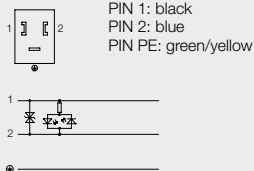
Cable material	Color	Length	Order code	Part number
PVC	Gray	2 m	BCC04W3 BCC VA04-0000-10-053-VX8350-020	BCC04W9 BCC VA04-0000-10-054-VX8350-020
PVC	Gray	5 m	BCC04W4 BCC VA04-0000-10-053-VX8350-050	BCC04WA BCC VA04-0000-10-054-VX8350-050
PVC	Gray	10 m	BCC04W5 BCC VA04-0000-10-053-VX8350-100	BCC04WC BCC VA04-0000-10-054-VX8350-100

Other variants on our website or on request.



Valve Connectors

Style B, DIN, 10 mm, 3-pin



0°
 24 V AC
 24 V DC
 Molded
 4.0 A
 Suppressor diode
 3x0.5 mm²
 IP 67
 -25...+90 °C/-25...+80 °C
 -25...+105 °C/-25...+105 °C
 1x (PNP), yellow

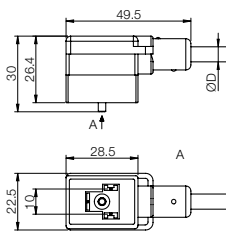
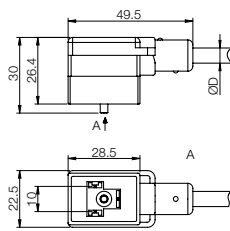
180°
 24 V AC
 24 V DC
 Molded
 4.0 A
 Suppressor diode
 3x0.5 mm²
 IP 67
 -25...+90 °C/-25...+80 °C
 -25...+105 °C/-25...+105 °C
 1x (PNP), yellow

Order code

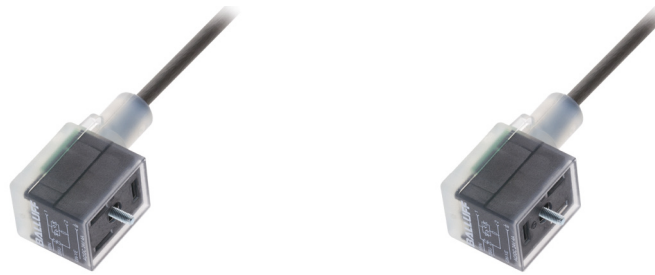
Part number

BCC03ZZ
 BCC VB03-0000-10-055-VX8350-020
BCC0400
 BCC VB03-0000-10-055-VX8350-050
BCC0401
 BCC VB03-0000-10-055-VX8350-100

BCC0402
 BCC VB23-0000-10-055-VX8350-020
BCC0403
 BCC VB23-0000-10-055-VX8350-050
BCC0404
 BCC VB23-0000-10-055-VX8350-100



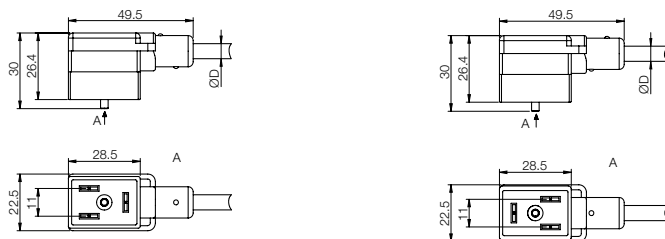
- Accessories
- M8 Connectors
- M12 Connectors
- Valve Connectors**
- Passive Splitter
- Power Supplies
- Mounting Brackets, Reflectors, Mounting Adapters
- Mounting Brackets, Hose Clamp, Mounting Cuffs



Connector diagram and wiring	<p>PIN 1: black PIN 2: blue PIN PE: green/yellow</p>	<p>PIN 1: black PIN 2: blue PIN PE: green/yellow</p>	
Cable outlet	0°	180°	
Supply voltage AC U_s	24 V AC	24 V AC	
Supply voltage DC U_s	24 V DC	24 V DC	
Cable	Molded	Molded	
Current rating	4.0 A	4.0 A	
Suppressor	Suppressor diode	Suppressor diode	
No. of wires × conductor cross-section	3×0.5 mm ²	3×0.5 mm ²	
Degree of protection as per IEC 60529	IP 67	IP 67	
Ambient temperature T_a PUR	-25...+90 °C/-25...+80 °C	-25...+90 °C/-25...+80 °C	
static/moving PVC	-25...+105 °C/-25...+105 °C	-25...+105 °C/-25...+105 °C	
LED	1× (PNP), yellow	1× (PNP), yellow	

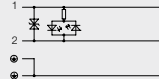
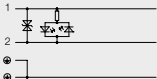
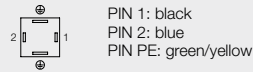
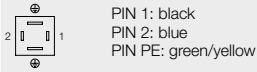
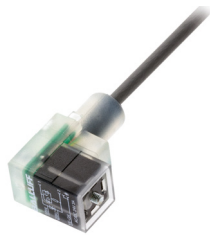
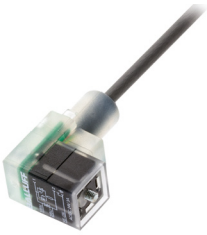
Cable material	Color	Length	Order code	
			Part number	
PVC	Gray	2 m	BCC0405 BCC VB43-0000-10-055-VX8350-020	BCC0408 BCC VB63-0000-10-055-VX8350-020
PVC	Gray	5 m	BCC0406 BCC VB43-0000-10-055-VX8350-050	BCC0409 BCC VB63-0000-10-055-VX8350-050
PVC	Gray	10 m	BCC0407 BCC VB43-0000-10-055-VX8350-100	BCC040A BCC VB63-0000-10-055-VX8350-100

Other variants on our website or on request.



Valve Connectors

Style C, DIN, 8 mm, 4-pin



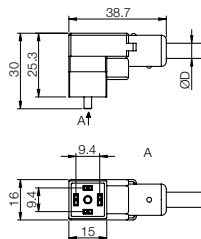
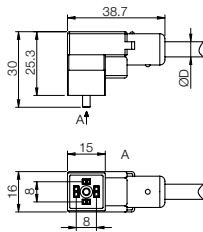
0°/180°
 24 V AC
 24 V DC
 Molded
 4.0 A
 Suppressor diode
 3x0.5 mm²
 IP 67
 -25...+90 °C/-25...+80 °C
 -25...+105 °C/-25...+105 °C
 1x (PNP), yellow

0°/180°
 24 V AC
 24 V DC
 Molded
 4.0 A
 Suppressor diode
 3x0.5 mm²
 IP 67
 -25...+90 °C/-25...+80 °C
 -25...+105 °C/-25...+105 °C
 1x (PNP), yellow

Order code

Part number





BCC04N2 BCC VC04-0000-10-053-VX8350-020	BCC04RK BCC VC44-0000-10-053-VX8350-020
BCC04N3 BCC VC04-0000-10-053-VX8350-050	BCC04RL BCC VC44-0000-10-053-VX8350-050
BCC04N4 BCC VC04-0000-10-053-VX8350-100	BCC04RM BCC VC44-0000-10-053-VX8350-100



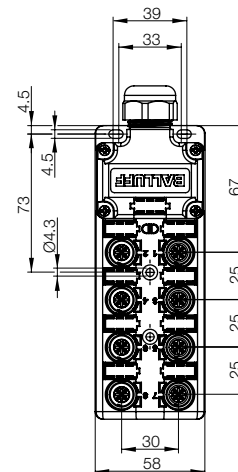
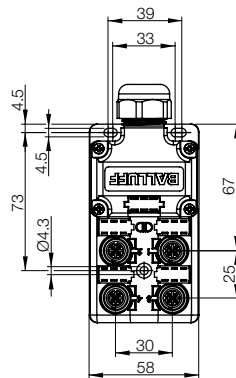
- Accessories
- M8 Connectors
- M12 Connectors
- Valve Connectors**
- Passive Splitter
- Power Supplies
- Mounting Brackets, Reflectors, Mounting Adapters
- Mounting Brackets, Hose Clamp, Mounting Cuffs



Preferred variants
available immediately

Description	4-way, M12 with LEDs	 	8-way, M12 with LEDs	 
Order code	BPI007K		BPI007H	
Part number	BPI 4M4A5P-2K-00-TPSG		BPI 8M4A5P-2K-00-TPSN	
Rated operating voltage U_e	24 V DC		24 V DC	
Supply voltage U_s	10...30 V DC		10...30 V DC	
Function indicator	Yes		Yes	
Power-on indicator	Green LED		Green LED	
Sensor connection	5-pin female, M12×1		5-pin female, M12×1	
Controller connection	Cap connection without cable		Cap connection without cable	
Number of sockets	4		8	
Current load capacity	2 A		2 A	
Total current	6 A		6 A	
Housing material	PBT, GF, fully potted		PBT, GF, fully potted	
Degree of protection as per IEC 60529	IP 67 (when screwed into place)		IP 67 (when screwed into place)	
Ambient temperature T_a	-25...+80 °C		-25...+80 °C	
Use	PNP normally open/normally closed (NO/NC) - / - / - / -		PNP normally open/normally closed (NO/NC) - / - / - / -	
Recommended connector - port	BCC M415...		BCC M415...	

Other variants on our website or on request.









Passive Splitters

BPI, 5-pin



■ Preferred variants available immediately

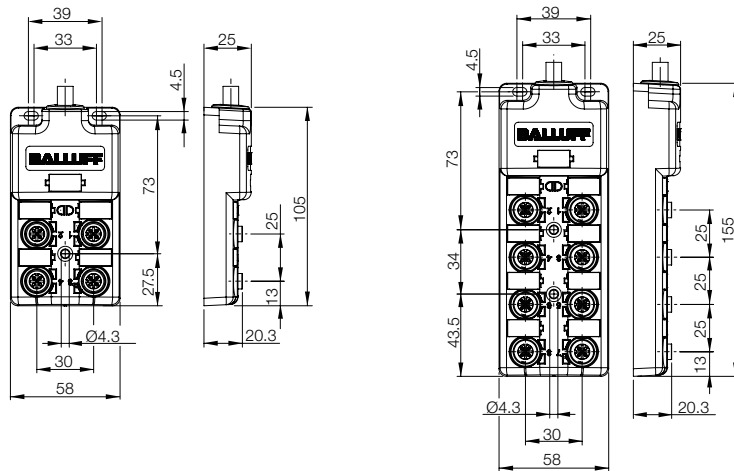
Description	4-way, M12 with LEDs   	8-way, M12 with LEDs   
Rated operating voltage U_e	24 V DC	24 V DC
Supply voltage U_B	10...30 V DC	10...30 V DC
Function indicator	Yes	Yes
Power-on indicator	Green LED	Green LED
Sensor connection	5-pin female, M12×1	5-pin female, M12×1
Controller connection	Fixed cable	Fixed cable
Number of sockets	4	8
Current load capacity	2 A	2 A
Total current	8 A	8 A
Housing material	PBT, GF	PBT, GF
Degree of protection as per IEC 60529	IP 67 (when connected)	IP 67 (when connected)
Ambient temperature T_a	-25...+80 °C	-25...+80 °C

Cable material	Order code	
	Part number	
PUR	BPI009W BPI 4M4A5P-2K-B0-KPXB0-030	BPI0098 BPI 8M4A5P-2K-B0-KPXL0-030
PUR	BPI009Y BPI 4M4A5P-2K-B0-KPXB0-050	BPI0099 BPI 8M4A5P-2K-B0-KPXL0-050
PUR	BPI009Z BPI 4M4A5P-2K-B0-KPXB0-100	BPI009A BPI 8M4A5P-2K-B0-KPXL0-100
PUR	BPI00A0 BPI 4M4A5P-2K-B0-KPXB0-150	BPI009C BPI 8M4A5P-2K-B0-KPXL0-150

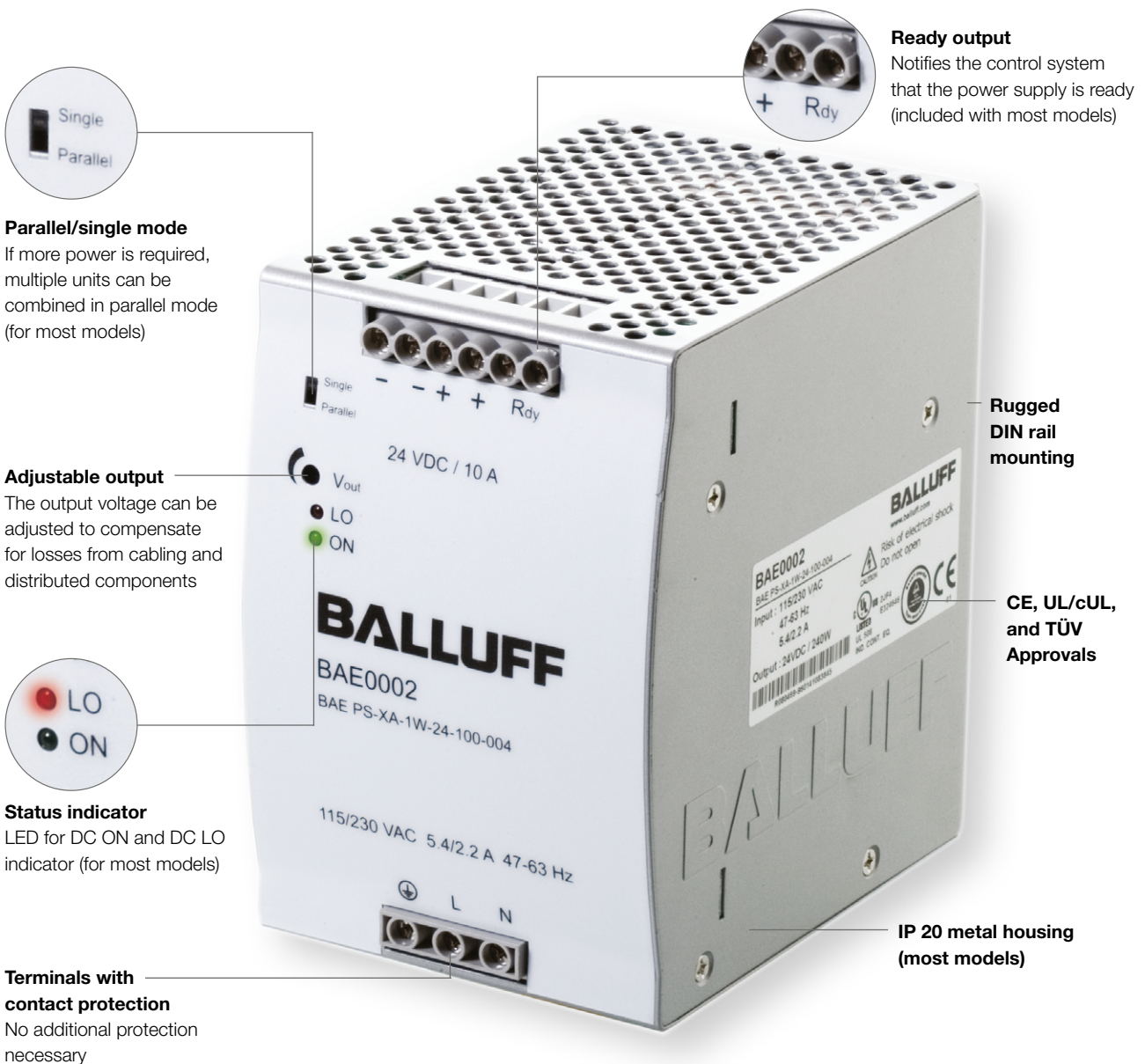


Accessories
M8 Connectors
M12 Connectors
Valve Connectors
Passive Splitter
Power Supplies
Mounting Brackets,
Reflectors,
Mounting Adapters
Mounting Brackets,
Hose Clamp,
Mounting Cuffs

Other variants on our website or on request.



- **Ultra-reliable power supplies**
 for protecting sensitive control electronics
- **Protection against unforeseen events**
 Integrated overload and overvoltage protection
- **Wide selection of models**
 Individual devices or individually combinations of different models available
- **Clean, precise power supply for particularly demanding systems**
 Load regulation $\pm 1\%$ for all models, ripple and noise under 50 mV for most models
- **Long service life for less system downtime**
 MTBF (Mean Time Between Failure) up to 800,000 hours/91 years



Power Supplies

Standard units

Power for controllers and networks

Specially designed for control devices, Balluff power supplies are easily integrated into your control package and offer extra security.

The PS series of ultra-reliable power supply units is available in a wide range of 12, 24, and 48 V DC models with single or 3-phase input. With a bandwidth of 18 W to 960 W, they truly leave nothing to be desired. If you need even more power, simply connect multiple power supplies together in parallel (parallel mode).

If you need different voltages, simply contact us.



Accessories

- M8 Connectors
- M12 Connectors
- Valve Connectors
- Passive Splitter

Power Supplies

- Mounting Brackets, Reflectors, Mounting Adapters
- Mounting Brackets, Hose Clamp, Mounting Cuffs

Output voltage (24 V DC)								Input voltage	Features			Product information	
0.75 A/18 W	1.25 A/30 W	2.5 A/60 W	3.8 A/91.20 W	5 A/120 W	10 A/240 W	20 A/480 W	40 A/960 W		Housing material	Parallel mode	Ready output	Order code	Part number
■								Single-phase ¹	Plastic		■	BAE0001	BAE-PS-XA-1W-24-007-001
	■							Single-phase ¹	Plastic		■	BAE0004	BAE-PS-XA-1W-24-012-002
		■						Single-phase ¹	Plastic		■	BAE0005	BAE-PS-XA-1W-24-025-002
			■					Single-phase ²	Metal	■	■	BAE003J	BAE-PS-XA-1W-24-038-003
				■				Single-phase ²	Metal	■	■	BAE0006	BAE-PS-XA-1W-24-050-003
					■			Single-phase ²	Metal	■	■	BAE0002	BAE-PS-XA-1W-24-100-004
						■		Single-phase ²	Metal	■	■	BAE0003	BAE-PS-XA-1W-24-200-005
				■				3-phase ³	Metal		■	BAE0007	BAE-PS-XA-3Y-24-050-009
					■			3-phase ³	Metal	■	■	BAE0008	BAE-PS-XA-3Y-24-100-006
						■		3-phase ³	Metal	■	■	BAE0009	BAE-PS-XA-3Y-24-200-007
							■	3-phase ³	Metal	■	■	BAE003R	BAE-PS-XA-3Y-24-400-010

¹ = 100...240 V AC
² = 115/230 V AC (Auto-Select)
³ = 340...575 V AC

Power Supplies

Single-phase input voltage

0.75 A, 1.25 A

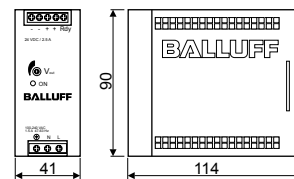
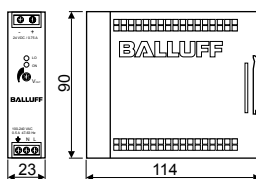


■ Preferred variants available immediately



Output current	0.75 A	1.25 A	
Output power	18 W	30 W	
Output voltage	24 V DC (SELV)	24 V DC (SELV)	
Input voltage	100...240 V AC	100...240 V AC	
Order code	BAE0001	BAE0004	
Part number	BAE PS-XA-1W-24-007-001	BAE PS-XA-1W-24-012-002	
Input voltage range	90...264 V AC/120...375 V DC	85...264 V AC/90...375 V DC	
Frequency range	47...63 Hz	47...63 Hz	
Input fuse	T2 A/250 V AC internal	T2 A/250 V AC internal	
Voltage adjustment range	22.5...28.5 V DC	22.5...28.5 V DC	
Status indicator DC ON	Green LED	Green LED	
Status indicator DC LOW	Red LED		
Efficiency	77 %	86 %	
Response	Hiccup mode	Forward characteristic	
Ambient temperature	-20...+70 °C	-40...+70 °C	
Derating	-2.5%/°C of +61 °C	-2.5%/°C of +61 °C	
Degree of protection as per IEC 60529	IP 20	IP 20	
Ready output	No	DC OK output	
Cooling	Free convection	Free convection	
Approvals	CE, UL/cUL, TÜV	CE, UL/cUL, TÜV	
Wiring diagram			

*SELV = Safety Extra Low Voltage



Power Supplies

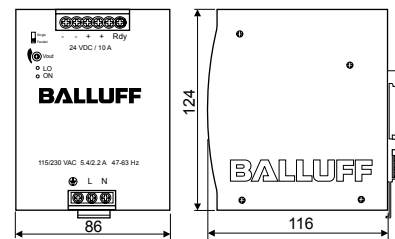
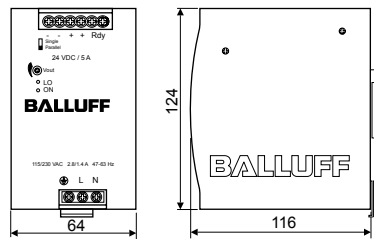
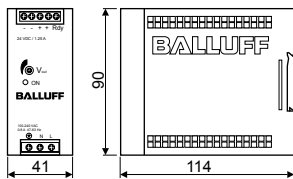
Single-phase input voltage 2.5 A, 3.8 A, 5 A



2.5 A	3.8 A	5 A
60 W	91.20 W	120 W
24 V DC (SELV)	24 V DC (SELV)	24 V DC (SELV)
100...240 V AC	115/230 V AC (Auto-Select)	115/230 V AC (Auto-Select)
BAE0005	BAE003J	BAE0006
BAE PS-XA-1W-24-025-002	BAE PS-XA-1W-24-038-003	BAE PS-XA-1W-24-050-003
85...264 V AC/90...375 V DC	90...132 V AC; 180...264 V AC/210...375 V DC	90...132 V AC; 180...264 V AC/210...375 V DC
47...63 Hz	47...63 Hz	47...63 Hz
T2 A/250 V AC internal	T3.15 A/250 V AC internal	T3.15 A/250 V AC internal
22.5...28.5 V DC	22.5...24.5 V DC	22.5...28.5 V DC
Green LED	Green LED	Green LED
	Red LED	Red LED
89 %	86 %	86 %
Forward characteristic	Forward characteristic	Forward characteristic
-40...+70 °C	-35...+70 °C	-35...+70 °C
-2.5%/°C of +61 °C	-2.5%/°C of +61 °C	-2.5%/°C of +61 °C
IP 20	IP 20	IP 20
DC OK output	DC OK output relay	DC OK output relay
Free convection	Free convection	Free convection
CE, UL/cUL, TÜV	CE, UL/cUL, TÜV, ODVA	CE, UL/cUL, TÜV



- Accessories
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 - Mounting Brackets, Hose Clamp, Mounting Cuffs



Power Supplies

Single-phase input voltage

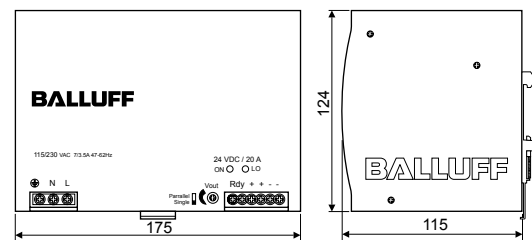
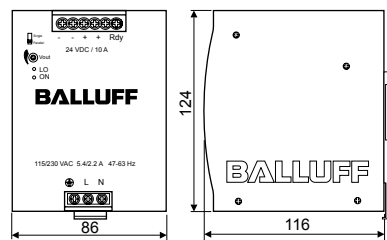
10 A, 20 A



Preferred variants available immediately

Output current	10 A	20 A	
Output power	240 W	480 W	
Output voltage	24 V DC (SELV)	24 V DC (SELV)	
Input voltage	115/230 V AC (Auto-Select)	115/230 V AC (Auto-Select)	
Order code	BAE0002	BAE0003	
Part number	BAE PS-XA-1W-24-100-004	BAE PS-XA-1W-24-200-005	
Input voltage range	90...132 V AC; 180...264 V AC/210...375 V DC	90...264 V AC/120...370 V DC	
Frequency range	47...63 Hz	47...63 Hz	
Input fuse	T6.3 A/250 V AC internal	T10 A/250 V AC internal	
Voltage adjustment range	22.5...28.5 V DC	22.5...28.5 V DC	
Status indicator DC ON	Green LED	Green LED	
Status indicator DC LOW	Red LED	Red LED	
Efficiency	89 %	89 %	
Response	Forward characteristic	Forward characteristic	
Ambient temperature	-40...+70 °C	-40...+70 °C	
Derating	-2.5%/°C of +61 °C	-2.5%/°C of +56 °C	
Degree of protection as per IEC 60529	IP 20	IP 20	
Ready output	DC OK output relay	DC OK output relay	
Cooling	Free convection	Free convection	
Approvals	CE, UL/cUL, TÜV	CE, UL/cUL, TÜV	
Wiring diagram			

*SELV = Safety Extra Low Voltage



Power Supplies

3-phase input voltage

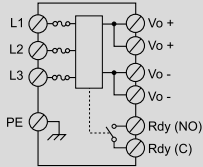
5 A, 10 A



5 A
120 W
24 V DC (SELV)
3x 400...500 V AC

BAE0007

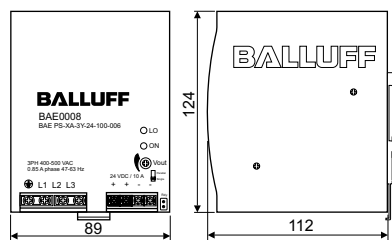
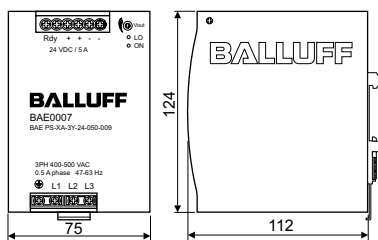
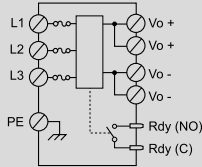
BAE PS-XA-3Y-24-050-009
340...575 V AC/480...820 V DC
47...63 Hz
2 A/600 V AC internal/phase
22.5...28.5 V DC
Green LED
Red LED
89 %
Hiccup mode
-40...+70 °C
-2.5%/°C of +61 °C
IP 20
DC OK output relay
Free convection
CE, UL/cUL, TÜV



10 A
240 W
24 V DC (SELV)
3x 400...500 V AC

BAE0008

BAE PS-XA-3Y-24-100-006
340...575 V AC/480...820 V DC
47...63 Hz
T2 A/600 V AC internal/phase
22.5...28.5 V DC
Green LED
Red LED
90 %
Hiccup mode
-40...+70 °C
-2.5%/°C of +61 °C
IP 20
DC OK output relay
Free convection
CE, UL/cUL, TÜV



- Accessories
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Power Supplies
3-phase input voltage
20 A, 40 A

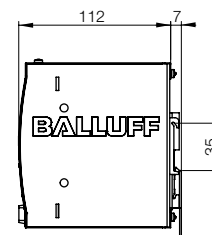
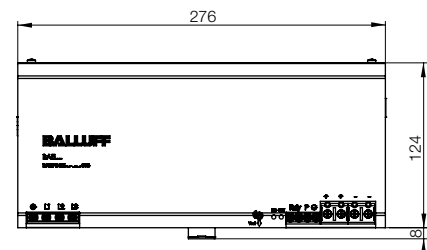
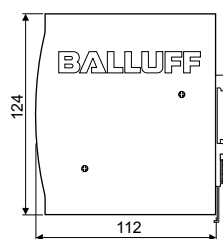
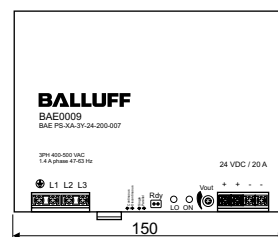


■ Preferred variants available immediately



Output current	20 A	40 A
Output power	480 W	960 W
Output voltage	24 V DC (SELV)	24 V DC (SELV)
Input voltage	3x 400...500 V AC	3x 400...500 V AC
Order code	BAE0009	BAE003R
Part number	BAE PS-XA-3Y-24-200-007	BAE PS-XA-3Y-24-400-010
Input voltage range	340...575 V AC/480...820 V DC	340...575 V AC/480...820 V DC
Frequency range	47...63 Hz	47...63 Hz
Input fuse	3.15 A/500 V AC internal/phase	T5 A/500 V AC internal/phase
Voltage adjustment range	22.5...28.5 V DC	22.5...28.5 V DC
Status indicator DC ON	Green LED	Green LED
Status indicator DC LOW	Red LED	Red LED
Efficiency	90 %	92 %
Response	Forward characteristic (C), restart after 30 s (D), Shutoff within 3 s, (C)/(D) toggable	Hiccup mode
Ambient temperature	-30...+70 °C	-40...+70 °C
Derating	-2.5%/°C of +61 °C	-3.5%/°C above +61 °C
Degree of protection as per IEC 60529	IP 20	IP 20
Ready output	DC OK output relay	No
Cooling	Free convection	Free convection
Approvals	CE, UL/cUL, TÜV	CE, UL/cUL, TÜV
Wiring diagram		

*SELV =
 Safety Extra
 Low Voltage

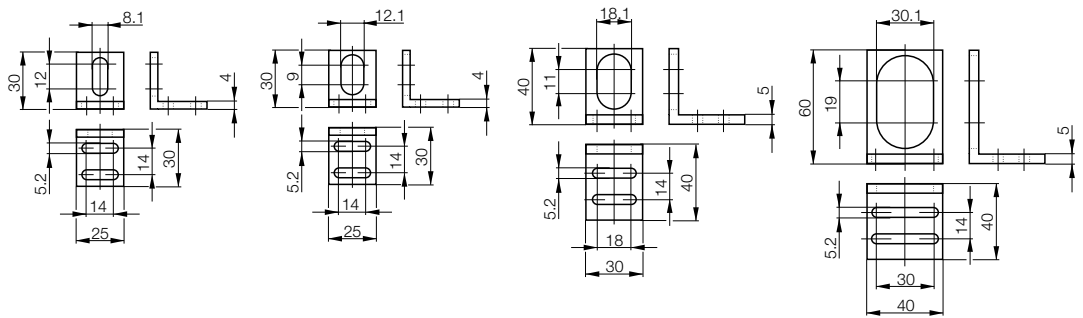




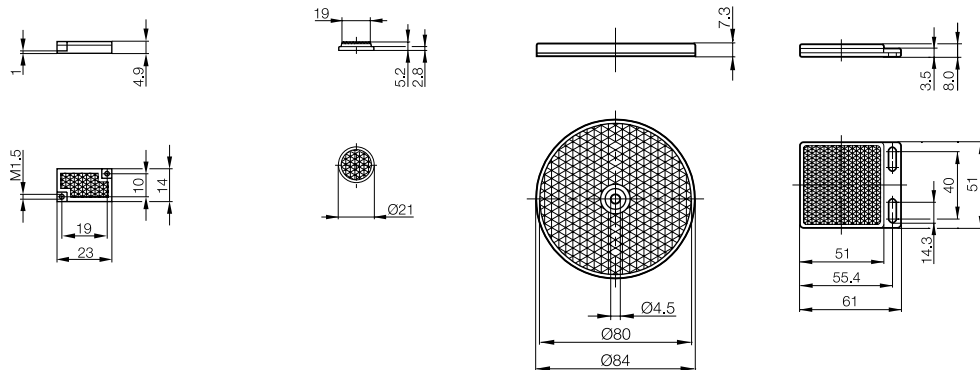
- Accessories
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- Mounting Brackets, Reflectors, Mounting Adapters
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Description	Mounting bracket	Mounting bracket	Mounting bracket	Mounting bracket
Use	For sensors and clamps M8	For sensors and clamps M12	for M18 sensors	for M30 sensors
Order code	BAM009U	BAM00C0	BAM00EY	BAM00HH
Part number	BES 08,0-HW-1	BES 12,0-HW-1	BES 18,0-HW-1	BES 30,0-HW-1
Material	Anodized aluminum	Anodized aluminum	Anodized aluminum	Anodized aluminum



Description	Reflector 14×23 mm	Reflector Ø 21 mm	Reflector Ø 84 mm	Reflector 51×61 mm
Fastener	Two M1.5 screws	Glue	M4 screw	two M4 screws
Order code	BAM00UM	BAM00UT	BAM00UK	BAM00WL
Part number	BOS R-12	BOS R-16	BOS R-1	BOS R-9
Material	PMMA/ABS	PMMA/ABS	PMMA/ABS	PMMA/ABS
Triple size	0.9 mm	1.2 mm	4 mm	4 mm
Special features	for laser retroreflective sensors	for laser retroreflective sensors	for Retroreflective sensors	for Retroreflective sensors
Temperature range	-20...+60 °C	-20...+60 °C	-20...+60 °C	-20...+60 °C

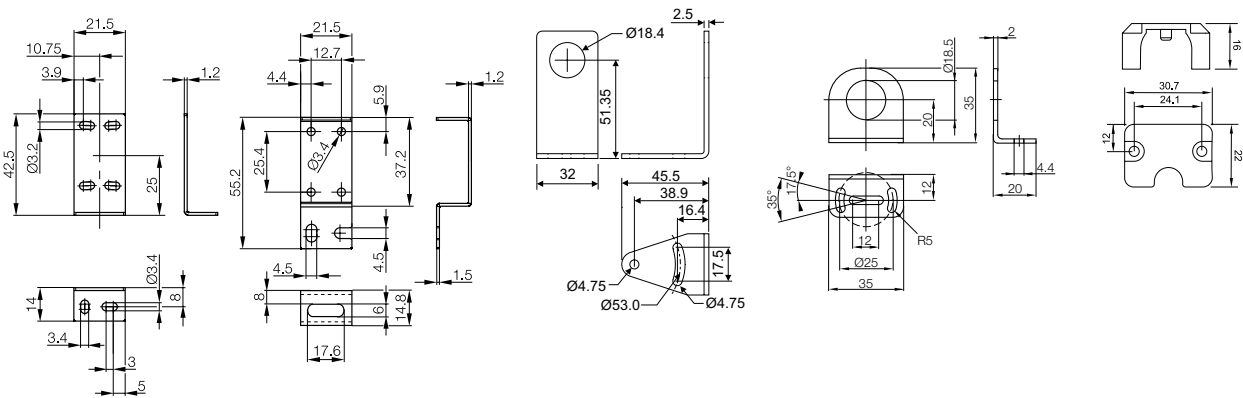


Accessories

Mounting brackets, mounting adapters



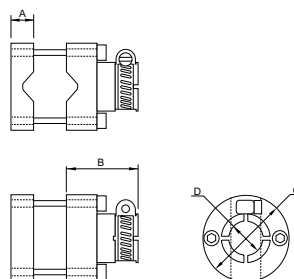
Mounting bracket for BOS 5K	Mounting bracket for BOS 5K	Small L bracket Two M3 screws	Mounting bracket for BOS 18	Mounting adapters for BOS 18KF/KW
BAM00U5	BAM00U6	BAM00PT	BAM00RY	BAM00RW
BOS 5-HW-1	BOS 5-HW-2	BOS 11-HW-1	BOS 18,0-HW-1	BOS 18,0-BS-3
Stainless steel	Stainless steel	Stainless steel	Stainless steel	Durethan



- Accessories
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- Mounting Brackets, Hose Clamp, Mounting Cuffs

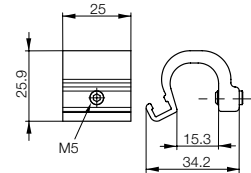
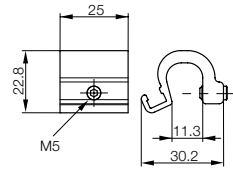


Description	Mounting brackets for M12 sensors	Mounting brackets for M18 sensors	Mounting brackets for M30 sensors
Use	for M12 sensors	for M18 sensors	for M30 sensors
Order code	BAM015E	BAM015F	BAM015H
Part number	BCSA-SG-12-D	BCSA-SG-18-D	BCSA-SG-30-D
Size	A	10.5 mm	11.7 mm
	B	29.5 mm	38.1 mm
	C	38.1 mm	45.0 mm
	D	12.1 mm	18.1 mm
Diameter	9.4...20.6 mm	9.4...20.6 mm	25.4...44.5 mm





Mounting bracket for Slot	BMF 235 Profile/tie rod	BMF 235 Profile/tie rod
Order code	BAM01M9	BAM01MA
Part number	BMF 235-HW-109	BMF 235-HW-110
Cylinder type, for example	For profile/tie rod cylinders 5...11 mm in conjunction with T-slot holder, for example BAM00L2	For profile/tie rod cylinders 9...15 mm in conjunction with T-slot holder, for example BAM00L2



Piston diameter	Hose clamp BMF size_ for BMF 235	
≤ 8 mm	0	BAM00N2
8...10 mm	1	BAM00N3
12 mm	1	
16 mm	1	
20 mm	2	BAM00N4
25 mm	2	
32 mm	3	BAM00N5
40 mm	4	BAM00N6
50 mm	5	BAM00N7
63 mm	6	BAM00N8
70 mm	8	BAM00N9
80 mm	7	BAM00NA
90 mm	10	BAM01TC
100 mm	9	BAM01F4

Accessories

Mounting brackets, mounting cuffs



BMF 235

 Profile/tie rod

BAM01MC

BMF 235-HW-111

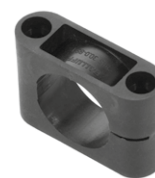
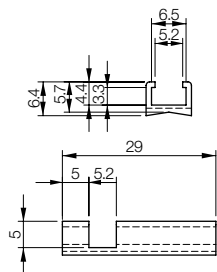
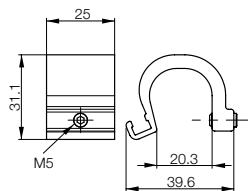
For profile/tie rod cylinders **14...20 mm** in conjunction with T-slot holder, for example BAM00L2

BMF 235

BAM01Y9

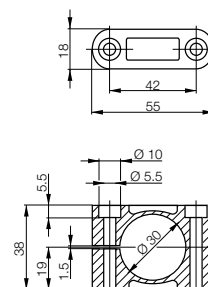
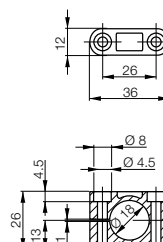
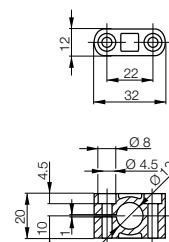
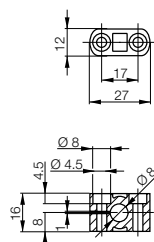
BMF 307-HW-112

Piston diameter **< 8...110 mm** pneumatic cylinder, round without slot or tie rod



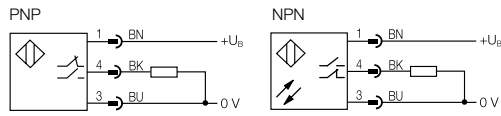
- Accessories
- M8 Connectors
- M12 Connectors
- Valve Connectors
- Passive Splitter
- Power Supplies
- Mounting Brackets, Reflectors, Mounting Adapters
- Mounting Brackets, Hose Clamp, Mounting Cuffs**

Description	Mounting cuff	Mounting cuff	Mounting cuff	Mounting cuff
Use	Ø 8 mm	Ø 12 mm	Ø 18 mm	Ø 30 mm
Order code	BAM00A2	BAM00C4	BAM00F2	BAM00HN
Part number	BES 08,0-BS-1	BES 12,0-BS-1	BES 18,0-BS-1	BES 30,0-BS-1
Material	PA 6	PA 6	PA 6	PA 6

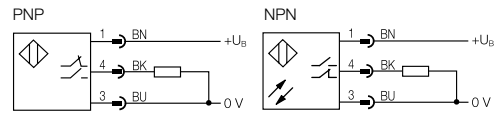


**Photoelectric
 Wiring diagram**

Fork sensors BGL



Angle sensors BWL



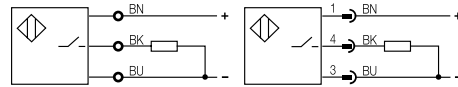
**Inductive (BES)
 Wiring diagrams**

Cable/terminals Male

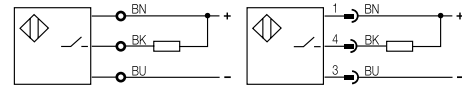
Cable/terminals Male

DC 3/4 wire
 Normally open

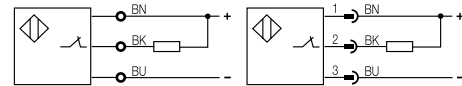
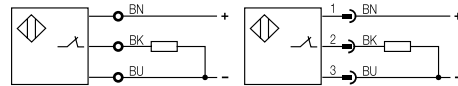
PNP (+) sourcing



NPN (-) sinking

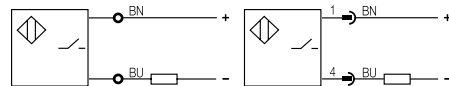


Normally closed

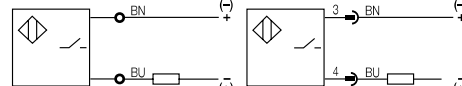


DC 2-wire
 Normally open

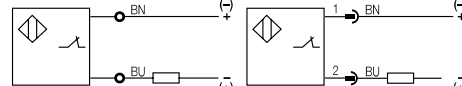
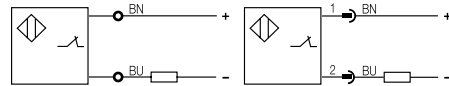
polarized



non-polarized



Normally closed



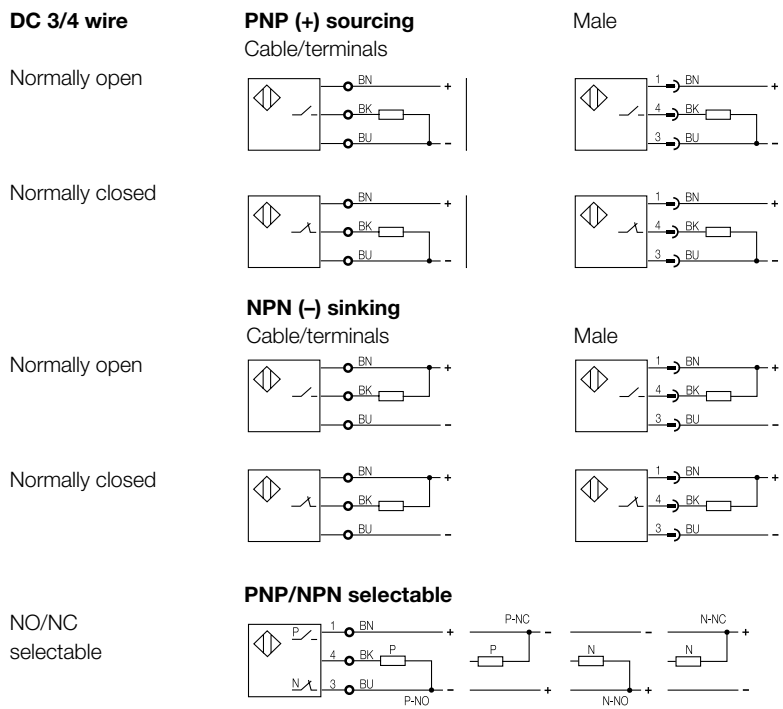
Correction factors

The correction factor indicates the reduction of the switching distance in damping materials which deviate from Fe 360.

Material	Factor
Steel	1.0
Copper	0.25...0.45
Brass	0.35...0.50
Aluminum	0.30...0.45
Stainless steel	0.60...1.00
Nickel	0.65...0.75
Cast iron	0.93...1.05

Further and additional information can be found on our website.

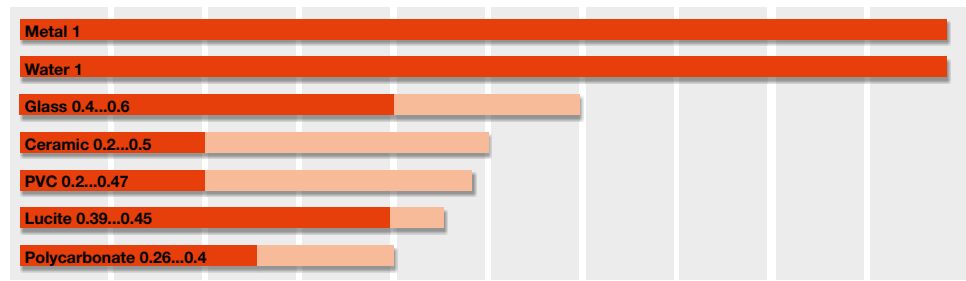
Capacitive (BCS) Wiring diagrams



Operating conditions and correction factors

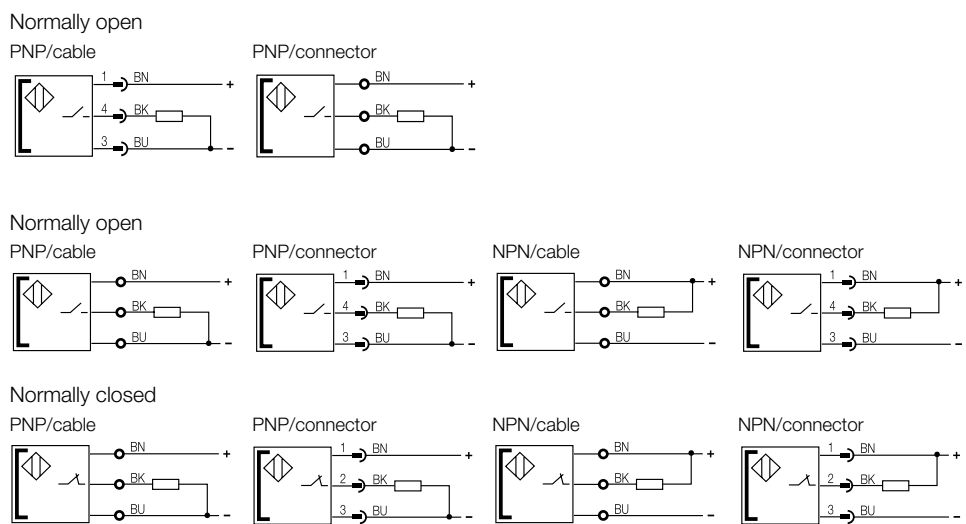
If an electrically non-conducting actuation element (target) enters the sensor field, the capacitance changes proportionally to ϵ_r and to the immersion depth or to the distance to the sensing surface. As the rated switching distance s_n based on a grounded standard target made of Fe 360, the switching distances must be corrected when using other materials.

Correction factors for typical materials



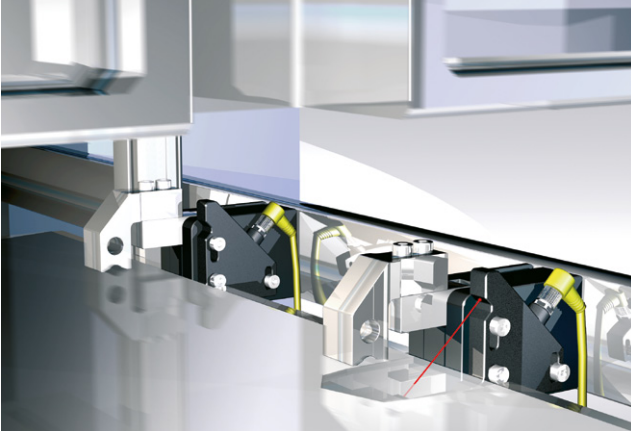
Correction factors should be determined using the target material directly.

Magnetic (BMF) Wiring diagrams

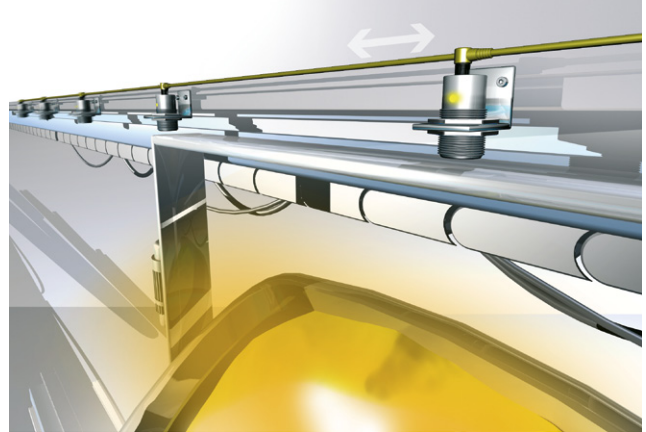


Global sensors

Quality at a fair price – for your standard application



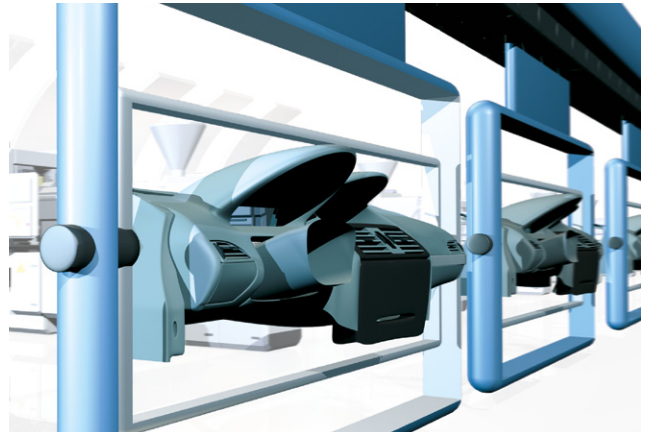
Angle sensors enable reliable position detection.



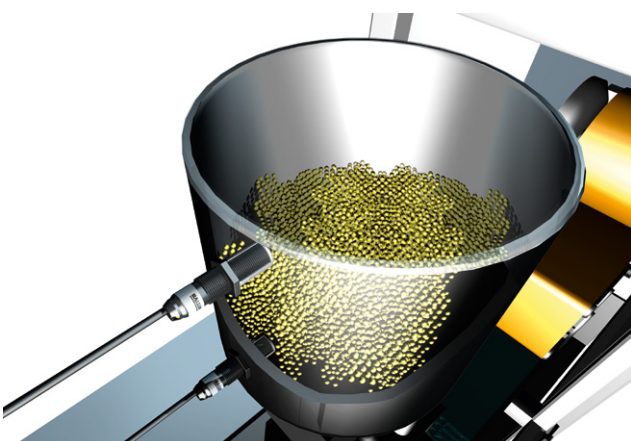
Inductive sensors detect positions reliably.



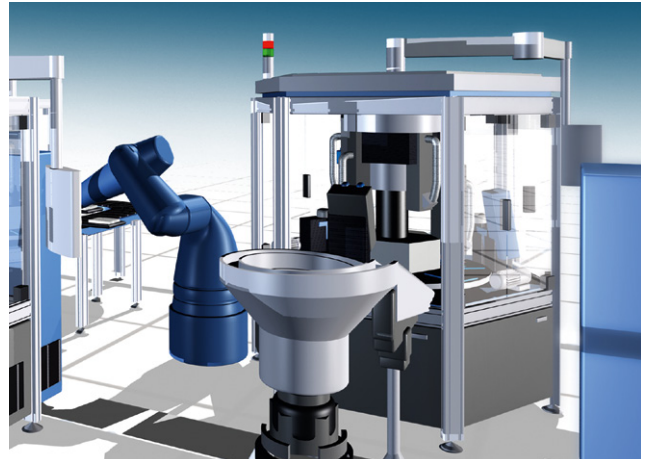
Whether at the injection molding machine or for assembly and automation, different sensor technologies control the material feed precisely.



The harmonious interaction between various sensors ensures optimal process in component production.



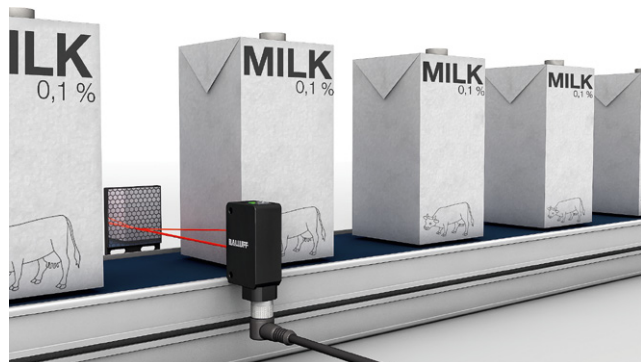
Capacitive sensors guarantee correct level detection.



Photoelectric sensors optimize positioning tasks.



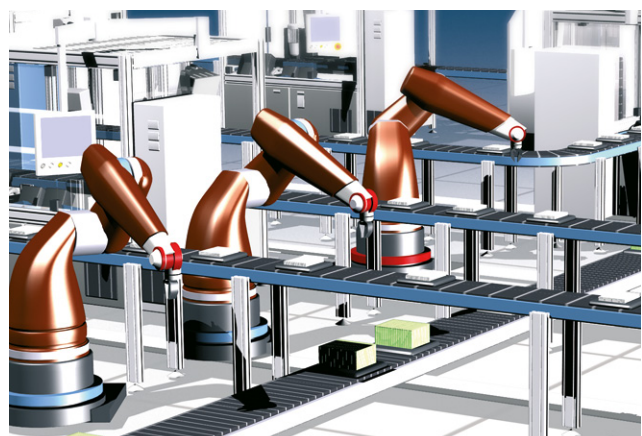
Multiple sensors support the correct process in tire production.



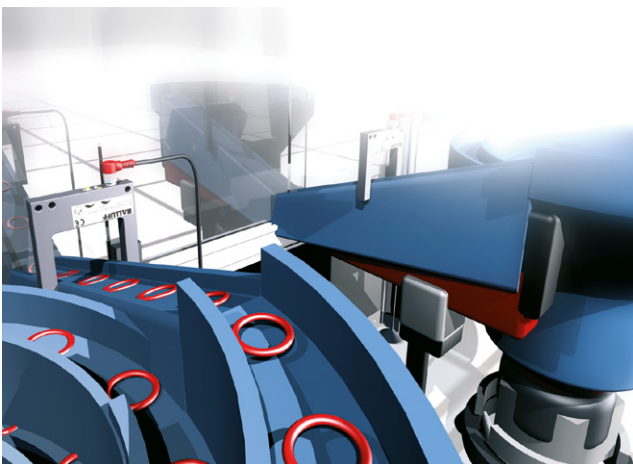
Sensors check packaging with reliability.



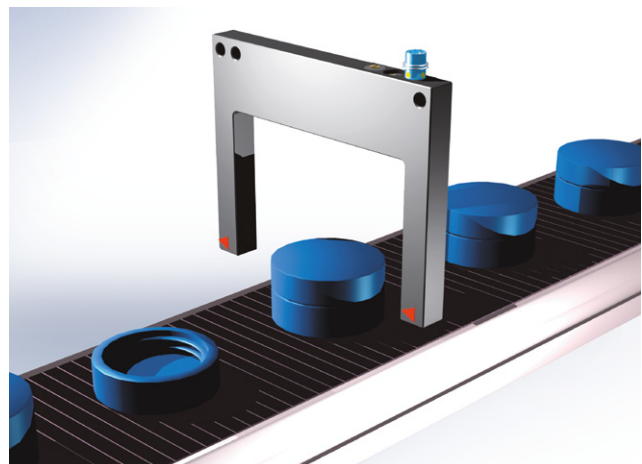
Reliable sensors carry out frequent format changes, for example, when cartoning, in a flexible manner.



Different sensors are perfectly tuned to take over the handling and assembly tasks of robotics.



Fork sensors provide the visual information you need at vibrating conveyors and part separators.



Fork sensors are easy to operate. Receivers and emitters in a single housing guarantee an easy installation.

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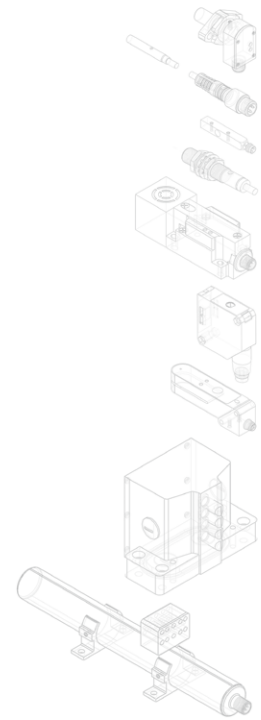
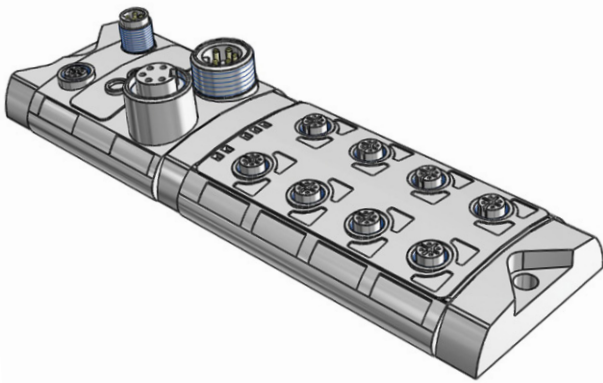
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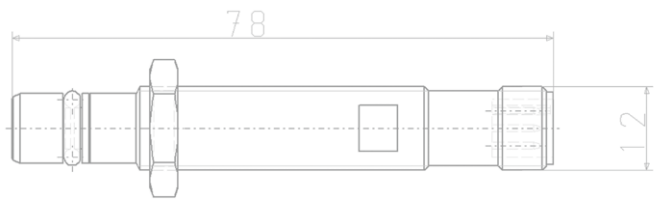
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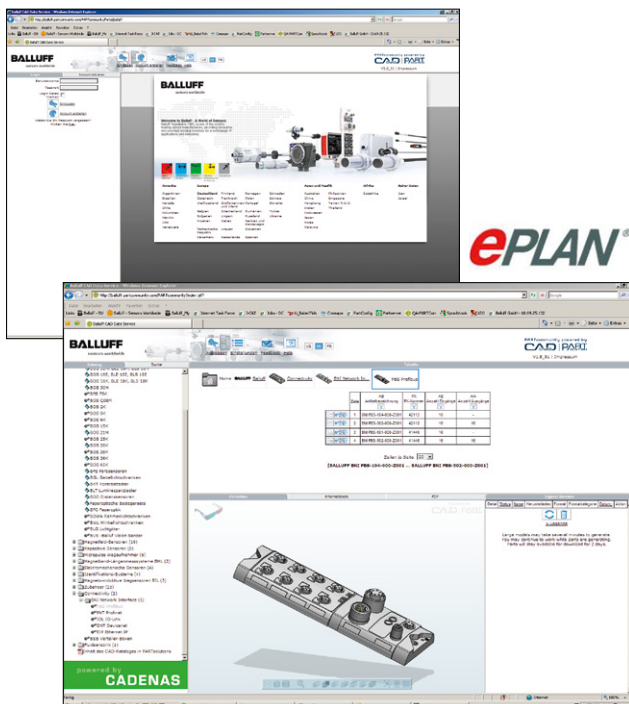
Retrieving CAD and E-Plan formats online



- All catalog products are available: inductive sensors, photoelectric sensors, sensors for pneumatic cylinders, micropulse transducers, industrial RFID systems, vision sensors BVS, mechanical single and multiple position switches, industrial networking and connectivity, and so on.
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- Select a sensor and perform an optional check via 3D preview
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- Once you have entered your details, the CAD files of your choice are sent to you by e-mail

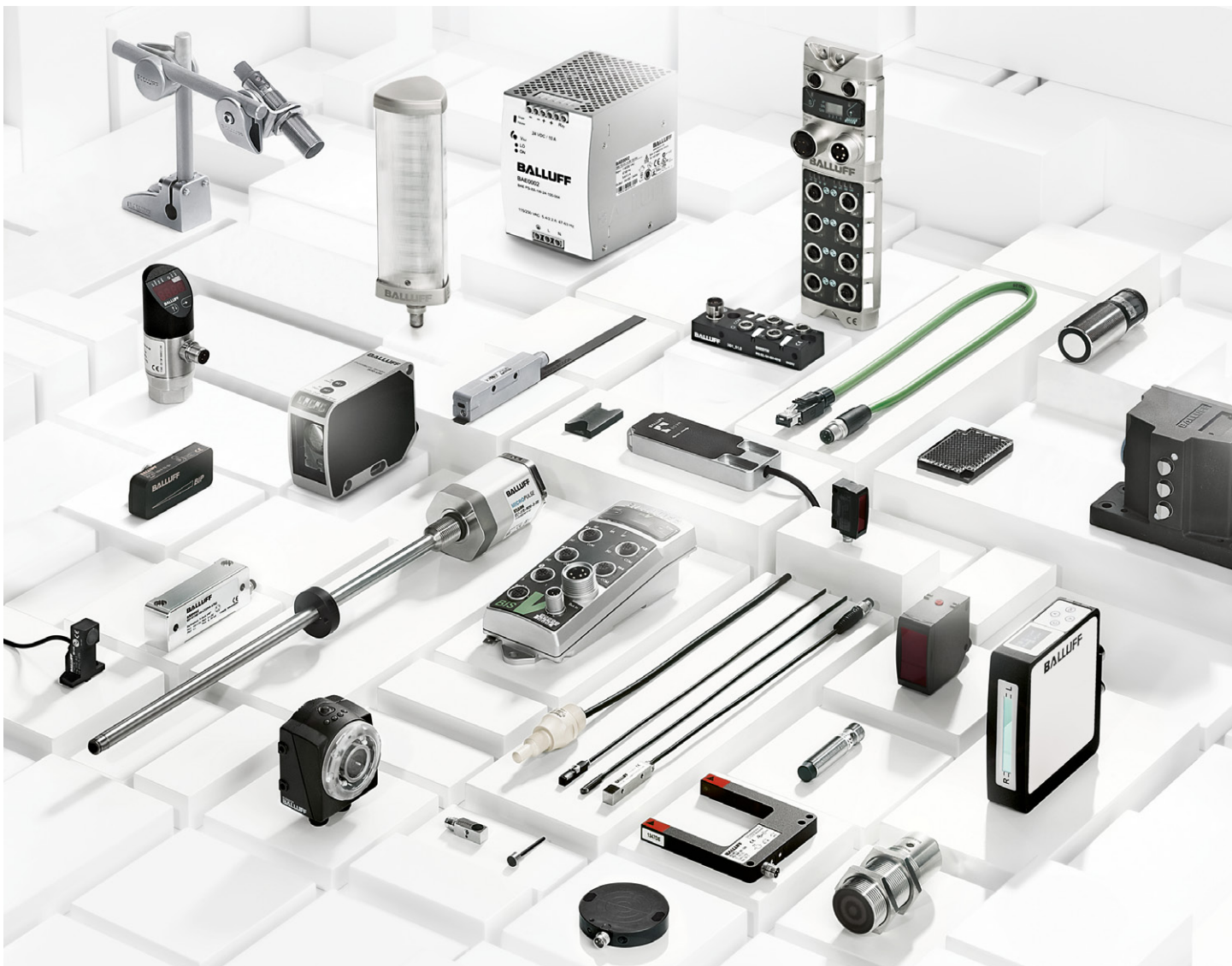
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