

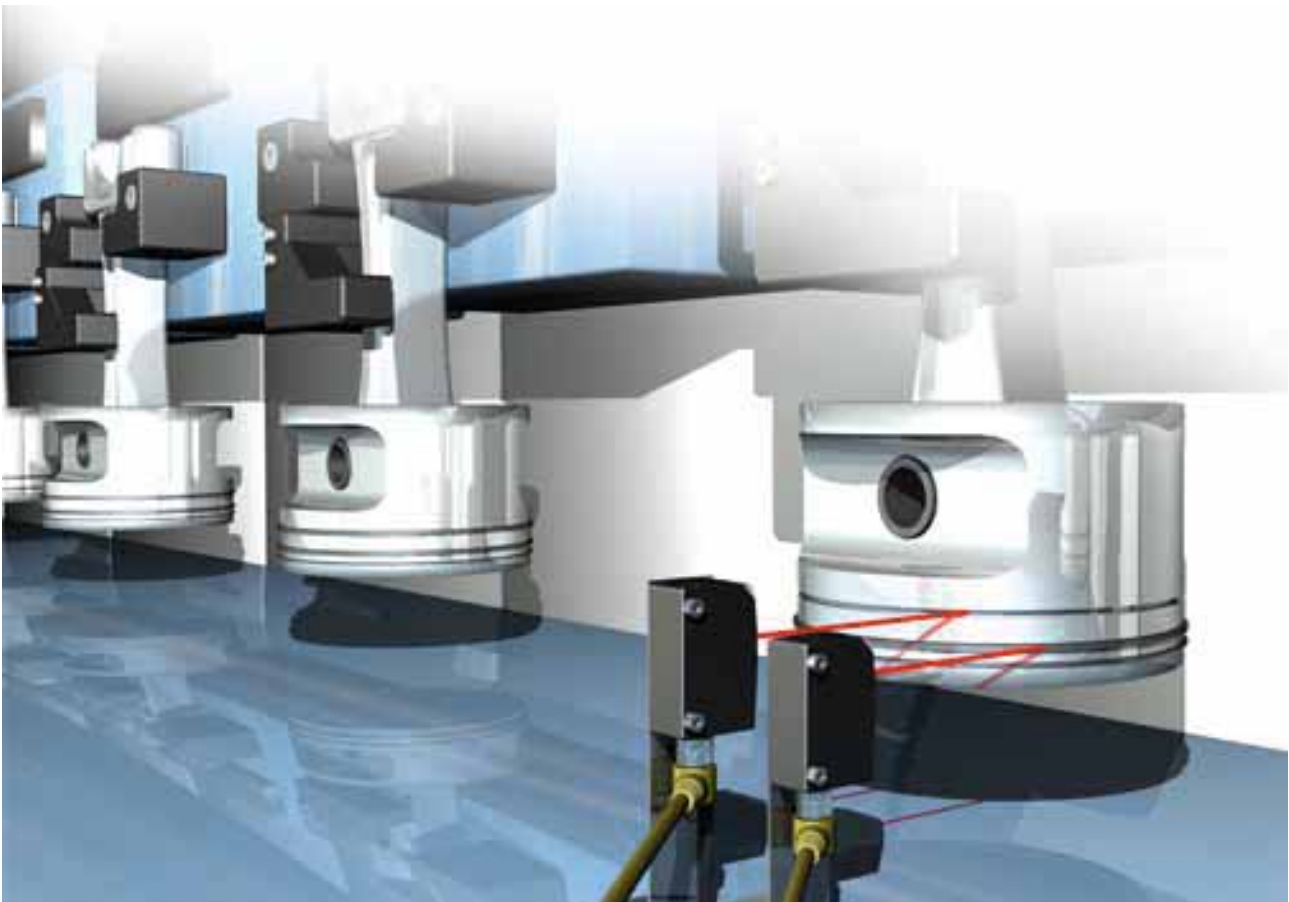
Due to its high performance, the **BOS 6K** can be used almost anywhere. When space is at a premium, it is particularly advantageous. This is because its small size allows better integration of the sensors into the machine. Red light and background suppression make the sensor extremely user-friendly. Additionally, there are multiple varieties of lasers for an "absolute" detection of small parts, so that even objects smaller than 1 mm can be accurately measured. Calibration using the control lines means the sensor can be installed at virtually inaccessible locations. Dynamic teach-in in running operation means less attention needs to be paid to the sensors.

**Features**

- Teach-in-button and control line
- Dynamic teach-in possible (i. e., without stopping the machine)
- Multi-function display visible from any direction
- Disable buttons
- Versions with 3- or 4-pin M8-plug or with 2 m cable
- Solid workmanship with IP 67 protection
- Red light- and laser versions

**Applications**

- Packaging machines
- Handling- and assembly
- Specialty machines
- Printing and paper machinery



# Photoelectric Sensors

## BOS 6K

### Product Overview



Photoelectric Sensors

Photoelectric Sensors

Cylinder Designs

Block Designs

Fork Sensors

BGL

Angle Sensors

BWL

Photoelectric Sensors with Special Properties

Photoelectric Distance Sensors for Analog Distance Measurement

Accessories for Photoelectric Sensors

Type	Sensing distance/Range	Light type		Output	Switching type		Switching frequency	U <sub>S</sub>	Connection			Special features			Page
		Red light	Laser		Light switching	Dark switching			M8 connector, 3-pin	M8 connector, 4-pin	Cable	Polarizing filter	Glass detection	Autocollimation	
Diffuse sensor with background suppression															
<b>BOS009Y</b> BOS 6K-PU-1HA-S75-C	25...100 mm	■	▲	■	■	■	1 kHz	■	■						170
<b>BOS009U</b> BOS 6K-PU-1HA-S49-C	25...100 mm	■	▲	■	■	■	1 kHz	■	■						170
<b>BOS009T</b> BOS 6K-PU-1HA-C-02	25...100 mm	■	▲	■	■	■	1 kHz	■			■				171
<b>BOS00A0</b> BOS 6K-PU-1LHA-S75-C	20...60 mm			■	■	■	1 kHz	■		■					176
<b>BOS009Z</b> BOS 6K-PU-1LHA-C-02	20...60 mm			■	■	■	1 kHz	■			■				176
<b>BOS00A2</b> BOS 6K-PU-1LHA-SA1-S75-C	30...110 mm			■	■	■	1 kHz	■		■					177
<b>BOS00A1</b> BOS 6K-PU-1LHA-SA1-C-02	30...110 mm			■	■	■	1 kHz	■			■				177
Diffuse sensor															
<b>BOS00A9</b> BOS 6K-PU-10C-S75-C	20...300 mm	■		■	■	■	1 kHz	■		■					171
<b>BOS00A8</b> BOS 6K-PU-10C-S49-C	20...300 mm	■		■	■	■	1 kHz	■	■						171
<b>BOS00A7</b> BOS 6K-PU-10C-C-02	20...300 mm	■		■	■	■	1 kHz	■			■				171
Retroreflective sensor															
<b>BOS00AE</b> BOS 6K-PU-1QA-S75-C	50...700 mm	■		■	■	■	1 kHz	■		■		■	■		172
<b>BOS00AC</b> BOS 6K-PU-1QA-S49-C	50...700 mm	■		■	■	■	1 kHz	■	■			■	■		172
<b>BOS00AA</b> BOS 6K-PU-1QA-C-02	50...700 mm	■		■	■	■	1 kHz	■			■	■	■		173
<b>BOS00A4</b> BOS 6K-PU-1LQA-S75-C	0.05...3 m			■	■	■	4 kHz	■		■		■			177
<b>BOS00A3</b> BOS 6K-PU-1LQA-C-02	0.05...3 m			■	■	■	4 kHz	■			■	■			177
<b>BOS00AJ</b> BOS 6K-PU-1QC-S75-C	0.05...3 m	■		■	■	■	1 kHz	■		■		■			173
<b>BOS00AH</b> BOS 6K-PU-1QC-S49-C	0.05...3 m	■		■	■	■	1 kHz	■	■			■			173
<b>BOS00AF</b> BOS 6K-PU-1QC-C-02	0.05...3 m	■		■	■	■	1 kHz	■			■	■			173
Retroreflective sensor with autocollimation															
<b>BOS00AL</b> BOS 6K-PU-1TA-S75-C	0...500 mm	■		■	■	■	1 kHz	■		■		■	■	■	174
<b>BOS00AK</b> BOS 6K-PU-1TA-C-02	0...500 mm	■		■	■	■	1 kHz	■			■	■	■	■	174
<b>BOS01CH</b> BOS 6K-PU-1LQD-S75-C	0...4 m			■	■	■	4 kHz	■		■		■		■	178
<b>BOS01HH</b> BOS 6K-PU-1LQD-S49-C	0...4 m			■	■	■	4 kHz	■	■			■		■	178
Through-beam sensor Receiver															
<b>BOS007J</b> BLE 6K-PU-1E-S75-C	0...6.5 m	■		■	■	■	500 Hz	■		■					175
<b>BOS007H</b> BLE 6K-PU-1E-S49-C	0...6.5 m	■		■	■	■	500 Hz	■	■						175
<b>BOS007F</b> BLE 6K-PU-1E-C-02	0...6.5 m	■		■	■	■	500 Hz	■			■				175
Through-beam sensor Emitter															
<b>BOS007P</b> BLS 6K-XX-1E-S75	0...6.5 m	■						■		■					175
<b>BOS007N</b> BLS 6K-XX-1E-S49	0...6.5 m	■						■	■						175
<b>BOS007M</b> BLS 6K-XX-1E-02	0...6.5 m	■						■			■				175

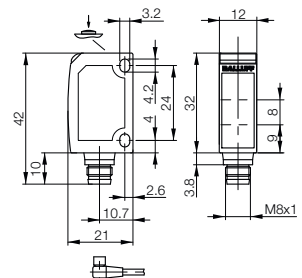
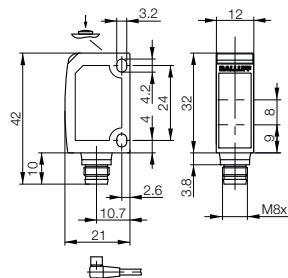
NPN on request



Type		Diffuse sensor with background suppression	Diffuse sensor with background suppression
Detection range		<b>25...100 mm</b>	<b>25...100 mm</b>
PNP NC/NO	<b>Ordering code</b>	<b>BOS009Y</b>	<b>BOS009U</b>
	Part number	BOS 6K-PU-1HA-S75-C	BOS 6K-PU-1HA-S49-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.		$\leq 35$ mA	$\leq 35$ mA
Switching type		Light/dark switching (selectable)	Light/dark switching (selectable)
Polarity reversal/short-circuit protected		Yes/Yes	Yes/Yes
Settings		Teach-in	Teach-in
Emitter, light type		LED, red light	LED, red light
Wavelength		660 Nm	660 Nm
Light spot diameter		approx. 5x5 mm at 60 mm	approx. 5x5 mm at 60 mm
Gray value shift (90%/18%)		$\leq 10\%$	$\leq 10\%$
Distance hysteresis		$\leq 5\%$	$\leq 5\%$
Switching state indicator		Yellow LED	Yellow LED
Stability indicator		Green LED	Green LED
Response time		0.5 ms	0.5 ms
Switching frequency f		1 KHz	1 KHz
Degree of protection as per IEC 60529		IP 67	IP 67
Ambient temperature $T_a$		-20...+60 °C	-20...+60 °C
Permissible ambient light per		5 klx	5 klx
Material	Housing	Impact-resistant ABS	Impact-resistant ABS
	Optical surface	PMMA	PMMA
Connection		M8 connector, 4-pin	M8 connector, 3-pin

Reference object: white, 90% reflection, 200x200 mm

For wiring diagrams see page 180.



# Photoelectric Sensors

## BOS 6K



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Photoelectric Sensors with Special Properties

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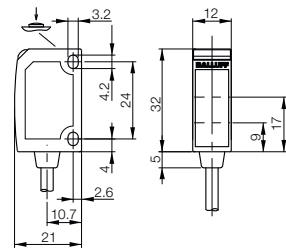
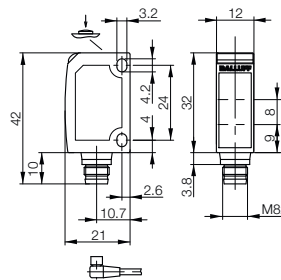
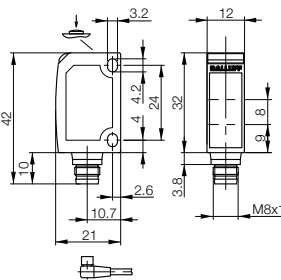
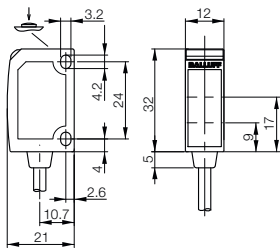
Photoelectric Distance Sensors for Analog Distance Measurement

Photoelectric Distance Sensors for Analog Distance Measurement

Photoelectric Distance Sensors for Analog Distance Measurement



Diffuse sensor with background suppression 25...100 mm <b>BOS009T</b> BOS 6K-PU-1HA-C-02	Diffuse sensor 20...300 mm <b>BOS00A9</b> BOS 6K-PU-10C-S75-C	Diffuse sensor 20...300 mm <b>BOS00A8</b> BOS 6K-PU-10C-S49-C	Diffuse sensor 20...300 mm <b>BOS00A7</b> BOS 6K-PU-10C-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	≤ 25 mA	≤ 25 mA	≤ 25 mA
Light/dark switching (selectable)	Light/dark switching (selectable)	Light/dark switching (selectable)	Light/dark switching (selectable)
Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
Teach-in	Teach-in	Teach-in	Teach-in
LED, red light	LED, red light	LED, red light	LED, red light
660 Nm	660 Nm	660 Nm	660 Nm
approx. 5x5 mm at 60 mm	approx. 12x12 mm at 160 mm	approx. 12x12 mm at 160 mm	approx. 12x12 mm at 160 mm
≤ 10%			
≤ 5 %			
Yellow LED	Yellow LED	Yellow LED	Yellow LED
Green LED	Green LED	Green LED	Green LED
0.5 ms	0.5 ms	0.5 ms	0.5 ms
1 KHz	1 KHz	1 KHz	1 KHz
IP 67	IP 67	IP 67	IP 67
-20...+60 °C	-20...+60 °C	-20...+60 °C	-20...+60 °C
5 klx	5 klx	5 klx	5 klx
Impact-resistant ABS	Impact-resistant ABS	Impact-resistant ABS	Impact-resistant ABS
PMMA	PMMA	PMMA	PMMA
2 m PVC cable, 4x0.14 mm <sup>2</sup>	M8 connector, 4-pin	M8 connector, 3-pin	2 m cable PCV, 4x0.14 mm <sup>2</sup>





# Photoelectric Sensors

## BOS 6K



Photoelectric Sensors

Photoelectric Sensors

Cylinder Designs

Block Designs

Fork Sensors

BGL

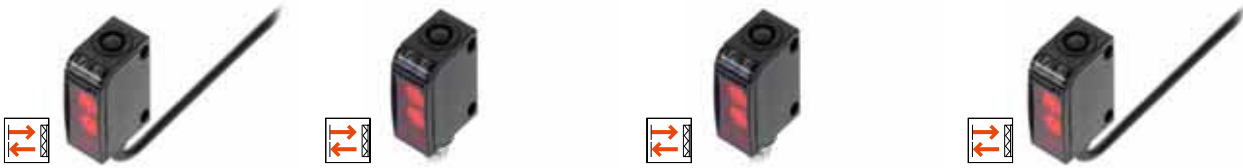
Angle Sensors

BWL

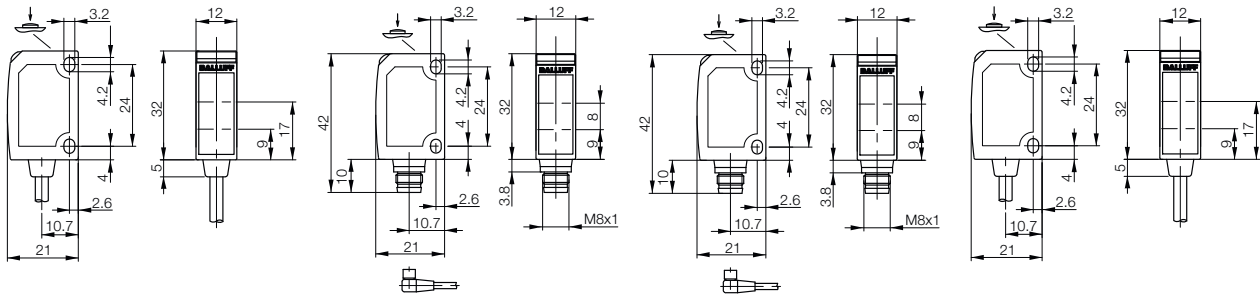
Photoelectric Sensors with Special Properties

Photoelectric Distance Sensors for Analog Distance Measurement

Accessories for Photoelectric Sensors



Retroreflective sensor 50...700 mm <b>BOS00AA</b> BOS 6K-PU-1QA-C-02	Retroreflective sensor 0.05...3 m <b>BOS00AJ</b> BOS 6K-PU-1QC-S75-C	Retroreflective sensor 0.05...3 m <b>BOS00AH</b> BOS 6K-PU-1QC-S49-C	Retroreflective sensor 0.05...3 m <b>BOS00AF</b> BOS 6K-PU-1QC-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	≤ 25 mA	≤ 25 mA	≤ 25 mA
Light/dark switching (selectable)	Light/dark switching (selectable)	Light/dark switching (selectable)	Light/dark switching (selectable)
Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
Teach-in	Teach-in	Teach-in	Teach-in
LED, red light	LED, red light	LED, red light	LED, red light
660 Nm	660 Nm	660 Nm	660 Nm
20x20 mm up to 500 mm	approx. 75x75 mm at 1.5 m	approx. 75x75 mm at 1.5 m	approx. 75x75 mm at 1.5 m
Yellow LED	Yellow LED	Yellow LED	Yellow LED
Green LED	Green LED	Green LED	Green LED
0.5 ms	0.5 ms	0.5 ms	0.5 ms
1 KHz	1 KHz	1 KHz	1 KHz
IP 67	IP 67	IP 67	IP 67
-20...+60 °C	-20...+60 °C	-20...+60 °C	-20...+60 °C
5 klx	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
Impact-resistant ABS	Impact-resistant ABS	Impact-resistant ABS	Impact-resistant ABS
PMMA	PMMA	PMMA	PMMA
2 m cable PCV, 4x0.14 mm <sup>2</sup>	M8 connector, 4-pin	M8 connector, 3-pin	2 m cable PCV, 4x0.14 mm <sup>2</sup>





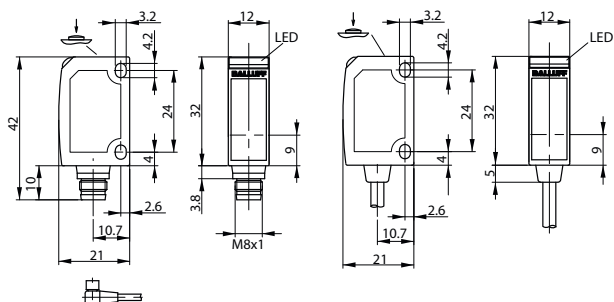
Type		<b>Retroreflective light sensor with autocollimation</b>	<b>Retroreflective light sensor with autocollimation</b>
Detection range		<b>0...500 mm</b>	<b>0...500 mm</b>
PNP NC/NO	Polarizing filter, glass detection, autocollimation	<b>Ordering code</b> <b>BOS00AL</b>	<b>Ordering code</b> <b>BOS00AK</b>
		Part number BOS 6K-PU-1TA-S75-C	Part number BOS 6K-PU-1TA-C-02
PNP NC/NO	Receiver	<b>Ordering code</b>	
		Part number	
	Emitter	<b>Ordering code</b>	
		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.		$\leq 25$ mA	$\leq 25$ mA
Switching type		Light/dark switching (selectable)	Light/dark switching (selectable)
Polarity reversal/short-circuit protected		Yes/Yes	Yes/Yes
Settings		Teach-in	Teach-in
Emitter, light type		LED, red light	LED, red light
Wavelength		660 Nm	660 Nm
Light spot diameter		20x20 mm up to 500 mm	20x20 mm up to 500 mm
Switching state indicator		Yellow LED	Yellow LED
Stability indicator		Green LED	Green LED
Response time		0.5 ms	0.5 ms
Switching frequency $f$		1 KHz	1 KHz
Degree of protection as per IEC 60529		IP 67	IP 67
Ambient temperature $T_a$		-20...+60 °C	-20...+60 °C
Permissible ambient light per		5 klx	5 klx
Material	Housing	Impact-resistant ABS	Impact-resistant ABS
	Optical surface	PMMA	PMMA
Connection		M8 connector, 4-pin	2 m cable PCV, 4x0.14 mm <sup>2</sup>

Reference reflector: BOS R-22

For wiring diagrams see page 180.

can only be used with reflector BOS R-22

can only be used with reflector BOS R-22



# Photoelectric Sensors

## BOS 6K



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Photoelectric Sensors with Special Properties

Photoelectric Sensors for Analog Distance Measurement

Accessories for Photoelectric Sensors

Photoelectric Sensors

Distance Sensors

for Analog Distance Measurement

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Accessories for Photoelectric Sensors

Photoelectric Sensors

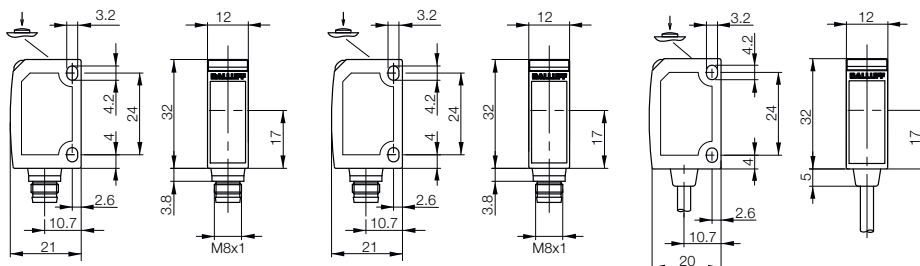
Distance Sensors

for Analog Distance Measurement

Accessories for Photoelectric Sensors



Through-beam sensor	Through-beam sensor	Through-beam sensor	
<b>0...6.5 m</b>	<b>0...6.5 m</b>	<b>0...6.5 m</b>	
<b>BOS007J</b>	<b>BOS007H</b>	<b>BOS007F</b>	
BLE 6K-PU-1E-S75-C	BLE 6K-PU-1E-S49-C	BLE 6K-PU-1E-C-02	
<b>BOS007P</b>	<b>BOS007N</b>	<b>BOS007M</b>	
BLS 6K-XX-1E-S75	BLS 6K-XX-1E-S49	BLS 6K-XX-1E-02	
10...30 V DC	10...30 V DC	10...30 V DC	
100 mA	100 mA	100 mA	
≤ 25 mA	≤ 25 mA	≤ 25 mA	
Light/dark switching (selectable)	Light/dark switching (selectable)	Light/dark switching (selectable)	
Yes/Yes	Yes/Yes	Yes/Yes	
Teach-in	Teach-in	Teach-in	
LED, red light	LED, red light	LED, red light	
660 Nm	660 Nm	660 Nm	
Yellow LED	Yellow LED	Yellow LED	
Green LED	Green LED	Green LED	
1 ms	1 ms	1 ms	
500 Hz	500 Hz	500 Hz	
IP 67	IP 67	IP 67	
-20...+60 °C	-20...+60 °C	-20...+60 °C	
EN 60947-5-2	EN 60947-5-2	EN 60947-5-2	
Impact-resistant ABS	Impact-resistant ABS	Impact-resistant ABS	
PMMA	PMMA	PMMA	
M8 connector, 4-pin	M8 connector, 3-pin	2 m cable PCV, 4x0.14 mm <sup>2</sup>	

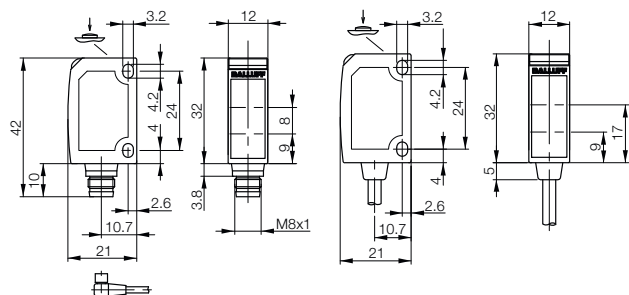




Type	Diffuse sensor with background suppression		Diffuse sensor with background suppression	
Detection range	20...60 mm		20...60 mm	
PNP NC/NO	<b>Ordering code</b>	<b>BOS00A0</b>	<b>Ordering code</b>	<b>BOS009Z</b>
	Part number	BOS 6K-PU-1LHA-S75-C	Part number	BOS 6K-PU-1LHA-C-02
PNP NC/NO	Polarizing filter	<b>Ordering code</b>		
		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.	$\leq 25$ mA		$\leq 25$ mA	
Switching type	Light/dark switching (selectable)		Light/dark switching (selectable)	
Polarity reversal/short-circuit protected	Yes/Yes		Yes/Yes	
Settings	Teach-in		Teach-in	
Emitter, light type	Laser, red light		Laser, red light	
Wavelength	650 Nm		650 Nm	
Laser class	1		1	
Light spot diameter	0.5 mm in focus (35 mm)		0.5 mm in focus (35 mm)	
Distance hysteresis	$\leq 7\%$		$\leq 7\%$	
Switching state indicator	Yellow LED		Yellow LED	
Stability indicator	Green LED		Green LED	
Response time	0.5 ms		0.5 ms	
Switching frequency $f$	1 KHz		1 KHz	
Degree of protection as per IEC 60529	IP 67		IP 67	
Ambient temperature $T_a$	$-20...+60$ °C		$-20...+60$ °C	
Permissible ambient light per	EN 60947-5-2		EN 60947-5-2	
Material	Housing	Impact-resistant ABS	Optical surface	Impact-resistant ABS
		PMMA		PMMA
Connection		M8 connector, 4-pin		2 m PVC cable, 4x0.14 mm <sup>2</sup>

Reference object: white, 18% reflection, 200x200 mm  
 Reference reflector: BOS R-22

For wiring diagrams see page 180.





# Photoelectric Sensors

## BOS 6K Laser



Photoelectric Sensors

Photoelectric Sensors

Cylinder Designs

Block Designs

Fork Sensors

BGL

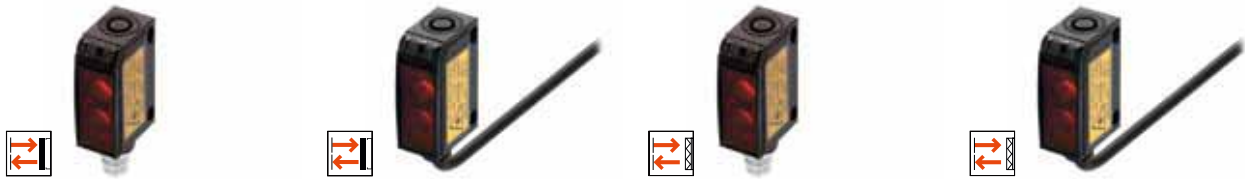
Angle Sensors

BWL

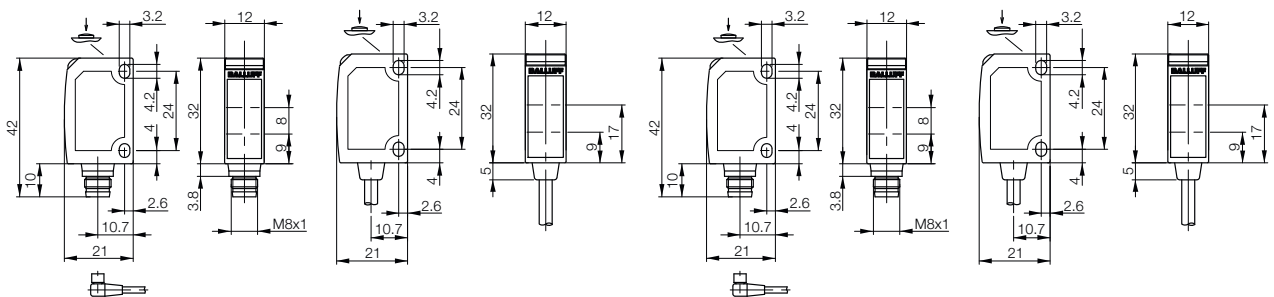
Photoelectric Sensors with Special Properties

Photoelectric Distance Sensors for Analog Distance Measurement

Accessories for Photoelectric Sensors



Diffuse sensor with background suppression 30...110 mm <b>BOS00A2</b> BOS 6K-PU-1LHA-SA1-S75-C	Diffuse sensor with background suppression 30...110 mm <b>BOS00A1</b> BOS 6K-PU-1LHA-SA1-C-02	Retroreflective sensor 0.05...3 m <b>BOS00A4</b> BOS 6K-PU-1LQA-S75-C	Retroreflective sensor 0.05...3 m <b>BOS00A3</b> BOS 6K-PU-1LQA-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
≤ 25 mA	≤ 25 mA	≤ 25 mA	≤ 25 mA
Light/dark switching (selectable)	Light/dark switching (selectable)	Light/dark switching (selectable)	Light/dark switching (selectable)
Yes/Yes	Yes/Yes	Yes/Yes	Yes/Yes
Teach-in	Teach-in	Teach-in	Teach-in
Laser, red light	Laser, red light	Laser, red light	Laser, red light
650 Nm	650 Nm	650 Nm	650 Nm
2	2	1	1
0.7 mm in focus (85 mm ± 5 mm)	0.7 mm in focus (85 mm ± 5 mm)	1 mm in 300 mm	1 mm in 300 mm
≤ 7%	≤ 7%		
Yellow LED	Yellow LED	Yellow LED	Yellow LED
Green LED	Green LED	Green LED	Green LED
0.5 ms	0.5 ms	0.125 ms	0.125 ms
1 KHz	1 KHz	4KHz	4KHz
IP 67	IP 67	IP 67	IP 67
-20...+60 °C	-20...+60 °C	-20...+60 °C	-20...+60 °C
EN 60947-5-2	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
Impact-resistant ABS	Impact-resistant ABS	Impact-resistant ABS	Impact-resistant ABS
PMMA	PMMA	PMMA	PMMA
M8 connector, 4-pin	2 m cable PCV, 4x0.14 mm <sup>2</sup>	M8 connector, 4-pin	2 m cable PCV, 4x0.14 mm <sup>2</sup>

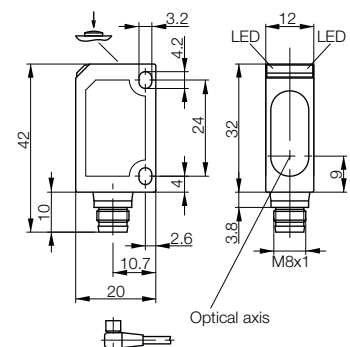
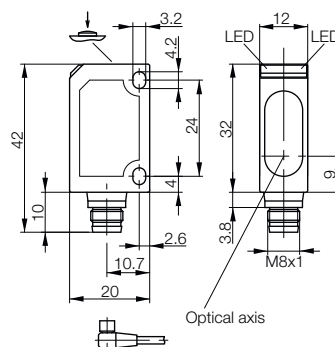




Type	<b>Retroreflective light sensor with autocollimation</b>		<b>BOS01CH</b>	<b>Retroreflective light sensor with autocollimation</b>		<b>BOS01HH</b>
Detection range			<b>0...4 m</b>			<b>0...4 m</b>
PNP	Polarizing filter	<b>Ordering code</b>	<b>BOS01CH</b>			<b>BOS01HH</b>
		Part number	BOS 6K-PU-1LQD-S75-C			BOS 6K-PU-1LQD-S49-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.			≤ 25 mA			≤ 25 mA
Switching type			Light/dark switching (selectable)			Light/dark switching (selectable)
Polarity reversal/short-circuit protected			Yes/Yes			Yes/Yes
Settings			Teach-in			Teach-in
Emitter, light type			Laser, red light			Laser, red light
Wavelength			650 Nm			650 Nm
Laser class			1			1
Light spot diameter			2 mm in 2500 mm			2 mm in 2500 mm
Switching state indicator			Yellow LED			Yellow LED
Stability indicator			Green LED			Green LED
Response time			0.125 ms			0.125 ms
Switching frequency $f$			4KHz			4KHz
Degree of protection as per IEC 60529			IP 67			IP 67
Ambient temperature $T_a$			-20...+60 °C			-20...+60 °C
Permissible ambient light per			EN 60947-5-2			EN 60947-5-2
Material	Housing		Impact-resistant ABS			Impact-resistant ABS
	Optical surface		PMMA			PMMA
Connection			M8 connector, 4-pin			M8 connector, 3-pin

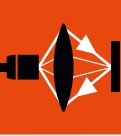
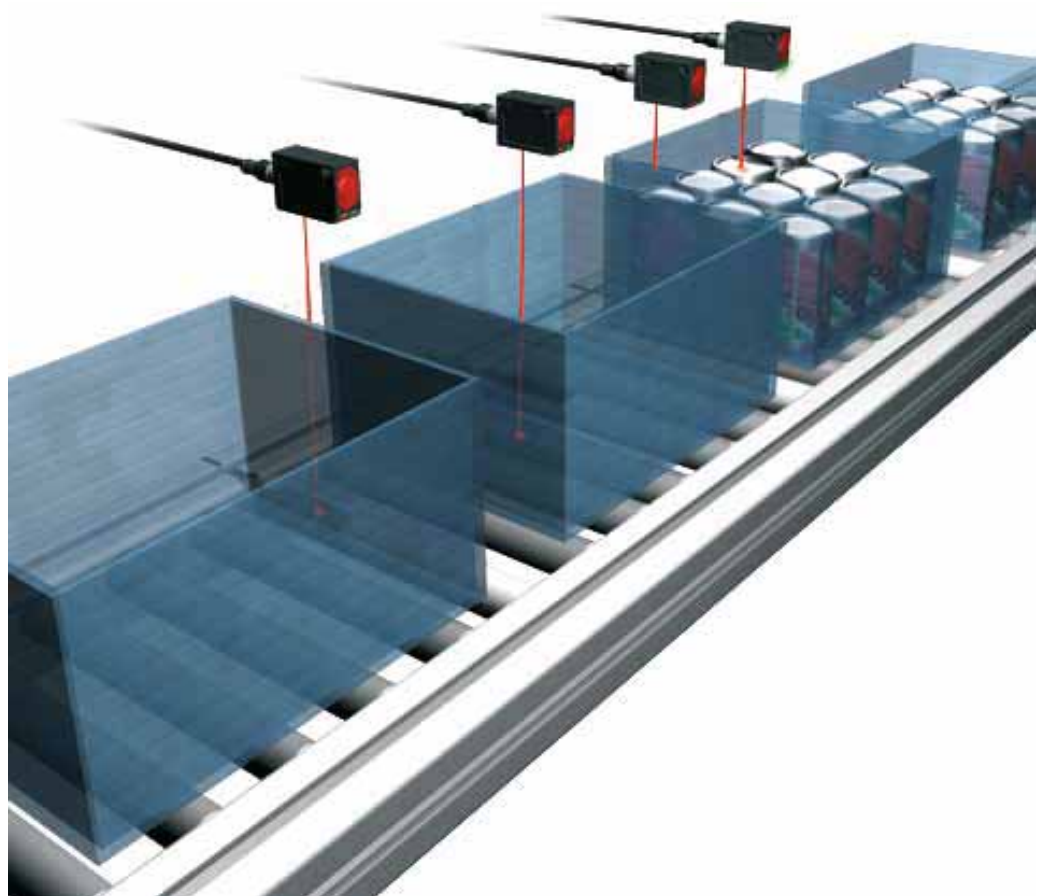
Reference reflector: BOS R-22

Wiring diagrams on page 176.





Photoelectric Sensors  
**BOS 6K Laser**



Photoelectric Sensors

Photoelectric Sensors

Cylinder Designs

**Block Designs**

Fork Sensors

BGL

Angle Sensors

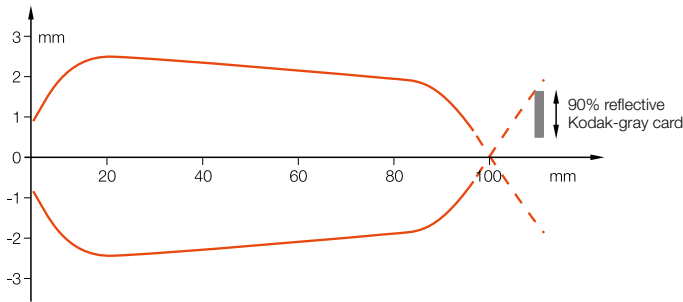
BWL

Photoelectric Sensors with Special Properties

Photoelectric Distance Sensors for Analog Distance Measurement

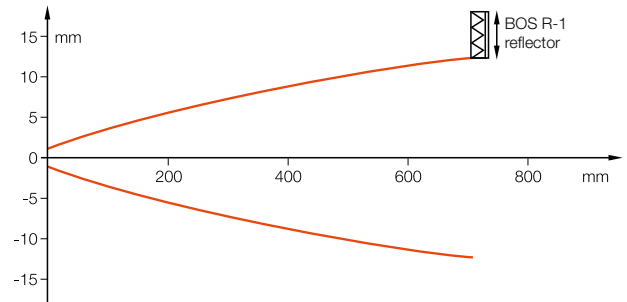
Accessories for Photoelectric Sensors

#### Diffuse sensor BOS 6K-..-1HA-...



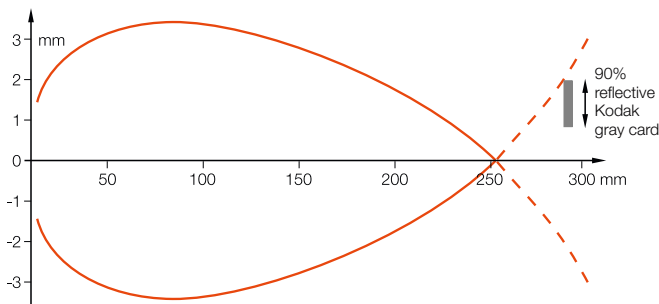
Sensing distance with side approach of Kodak-gray card.

#### Retroreflective sensor BOS 6K-..-1QA-...



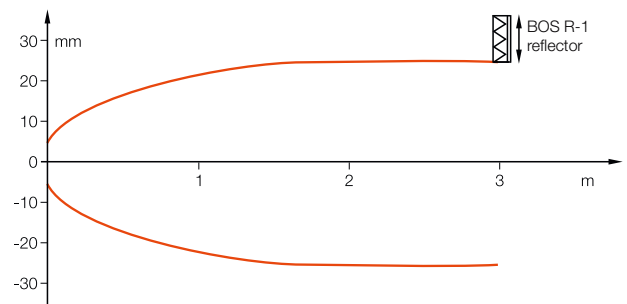
Range measured with side approach with reflector.

#### Diffuse sensor BOS 6K-..-1OC-...



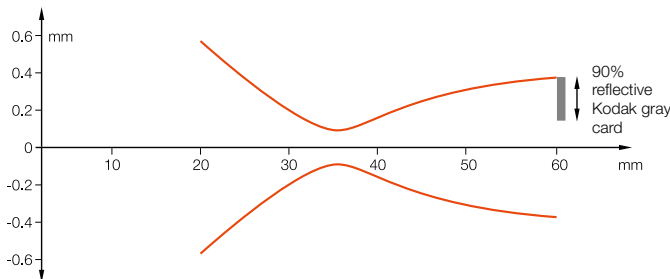
Sensing distance with side approach of Kodak-gray card.

#### Retroreflective sensor BOS 6K-..-1QC-...



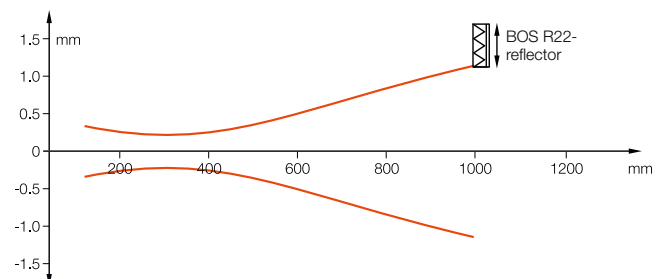
Range measured with side approach with reflector.

#### Diffuse sensor BOS 6K-...-1LHA-...



Sensing distance with side approach of Kodak-gray card.

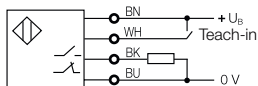
#### Retroreflective sensor BOS 6K-...-1LQA-...



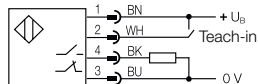
Range measured with side approach with reflector.

#### Wiring diagrams

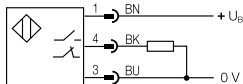
BOS 6K-P-./BLE 6K-P



BOS 6K-P-..-S75/BLE 6K-P...S75



BOS 6K-P-...-S49/BLE 6K-P...S49



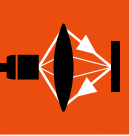
BLS 6K



# Photoelectric Sensors

## BOS 6K

### Configuration notes, accessories



Photoelectric Sensors

Photoelectric Sensors

Cylinder Designs

Block Designs

Fork Sensors BGL

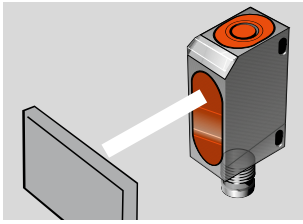
Angle Sensors BWL

Photoelectric Sensors with Special Properties

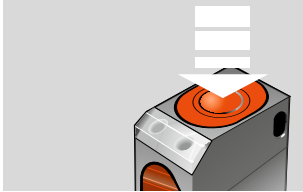
Photoelectric Distance Sensors for Analog Distance Measurement

Accessories for Photoelectric Sensors

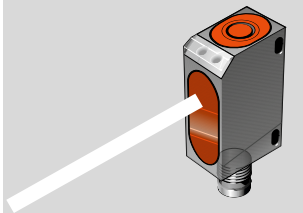
#### Diffuse sensor



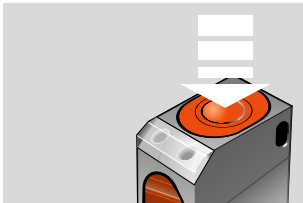
Direct sensor at object.



Press button for approx. 3 sec. until both LEDs flash at the same time.

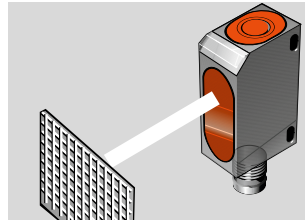


Remove object from beam path.

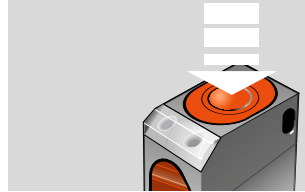


Hold down button for 1 sec. Green LED flashes briefly and then stays on. The sensor is ready. If both LEDs blink at the same time, reconfigure your settings.

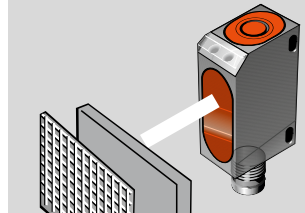
#### Retroreflective/through-beam



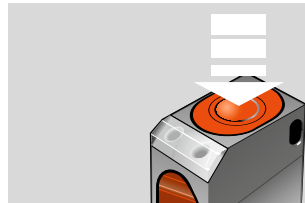
Direct sensor at reflector/receiver.



Press button for approx. 3 sec. until both LEDs flash at the same time.



Bring objects into detection range.



Hold down button for 1 sec. Green LED flashes briefly and then stays on. The sensor is ready. If both LEDs blink at the same time, reconfigure your settings.

#### Recommended accessories (please order separately)

Description	Ordering code
① Reflector	<b>BAM00UK</b>
② Reflector	<b>BAM00WL</b>
③ Laser reflector	<b>BAM00UY</b>
④ Mounting bracket	<b>BAM00UH</b>



#### Suitable connectors (please order separately)



Size	Design	Cable material	Color	Length	Ordering code
M8, 3-pin	Straight	PUR	Black	2 m	<b>BCC02M8</b>
M8, 3-pin	Straight	PVC	Gray	2 m	<b>BCC02NU</b>
M8, 3-pin	Angled	PUR	Black	2 m	<b>BCC02ML</b>
M8, 3-pin	Angled	PVC	Gray	2 m	<b>BCC02P5</b>

Connectors without LED are suitable for PNP and NPN sensors.

Size	Design	Cable material	Color	Length	Ordering code
M8, 4-pin	Straight	PUR	Black	2 m	<b>BCC02N2</b>
M8, 4-pin	Straight	PVC	Gray	2 m	<b>BCC02PL</b>
M8, 4-pin	Angled	PUR	Black	2 m	<b>BCC02NC</b>
M8, 4-pin	Angled	PVC	Gray	2 m	<b>BCC02PZ</b>

Connectors without LED are suitable for PNP and NPN sensors.

You can find special accessories for diffuse sensors, such as **reflectors, apertures, lenses, filters and deflection heads**, in this catalog starting on page 376.

**More mechanical accessories:** You can find a large selection of mounting components of all types, such as clamping holders, mounting brackets and the Balluff mounting system BMS, in our **Accessories Line** catalog.

**More electrical accessories:** You can find a large selection of plug connectors and connector cables in a wide variety of cable materials, colors and lengths in our **Industrial Networking and Connectivity** catalog.