

Thru-beam sensors are unsurpassed in their accuracy, ability to discriminate small parts and fine detail, as well as their operating reliability. The only disadvantages are in installation and setup. The goal of eliminating these objections has led to the concept of the slot sensor. Slot sensors allow very precise thru-beam configurations to be integrated into very small housings containing both the emitter and receiver.

The advantages compared with a fiber optic cable approach are not only price related, but also in their ease of handling, setup and operating reliability. The rugged metal housing ensures that production is not interrupted by undesired mechanical misalignment.

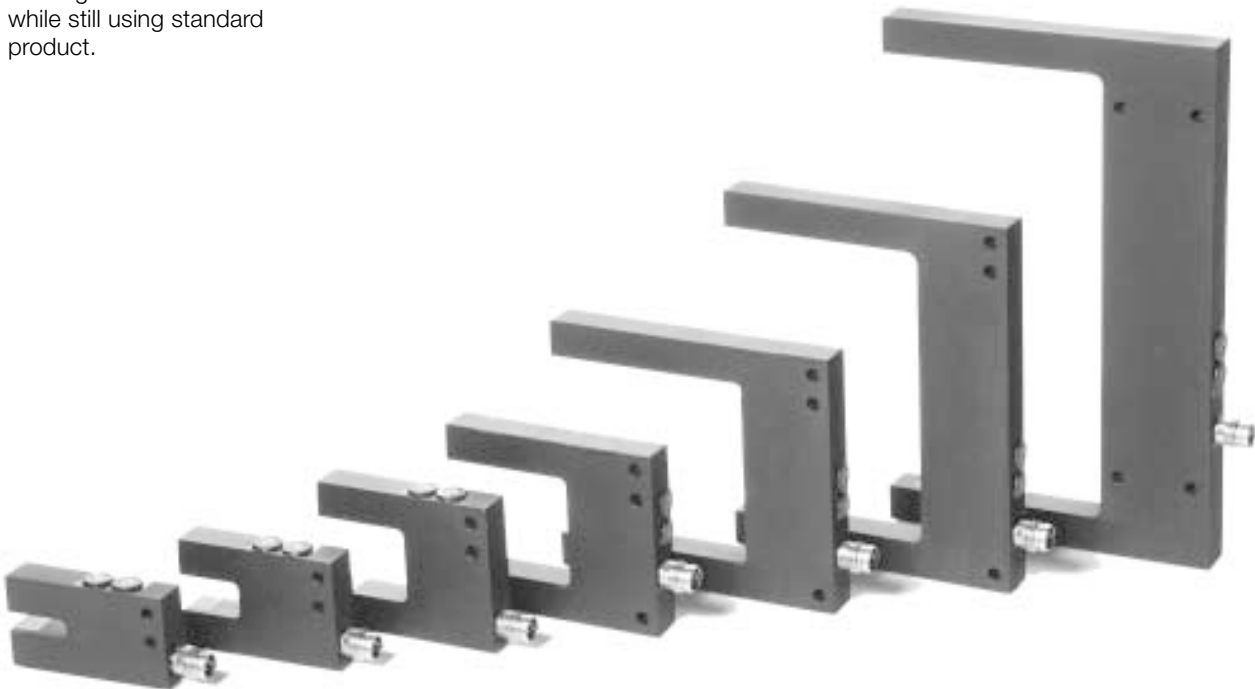
A full range of slot sensors with a variety of slot separations and dimensions ensures that virtually any sensing task can be handled while still using standard product.

Features

- Integrated signal processing
- Easy handling and setup
- Only one cable connection required
- Rugged metal housing
- Active surface made of glass
- High switching frequency
- Adjustable sensitivity
- High resolution
- N.O./N.C. selectable
- 360 deg. LED indicator
- Red emitter light

Applications

- Parts sensing on conveyor rails and conveying belts
- Label discrimination with transparent substrates
- Parts dimension verification
- Parts counting in assembly lines
- Tool break monitoring
- Position verification
- Feed verification on automatic assembly equipment
- Checking for complete count (e. g. connector pins)
- Level monitoring in tanks
- Handling and assembly technology



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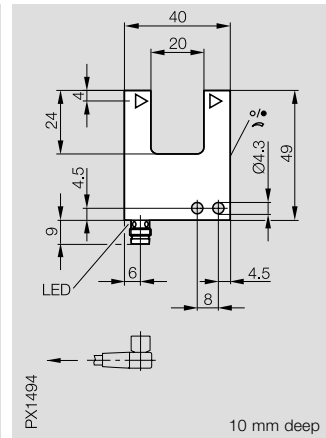
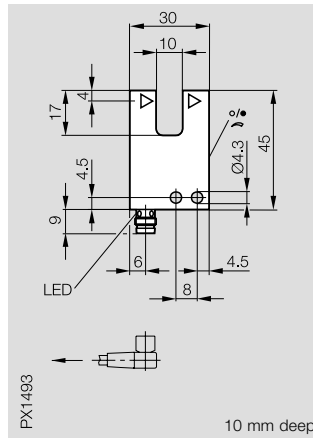
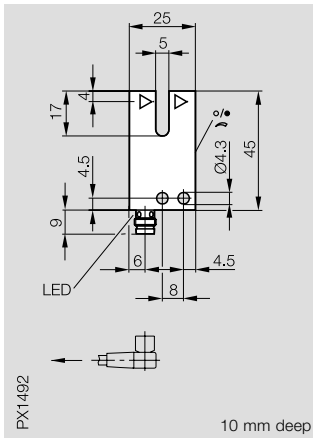
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Series	BGL	BGL	BGL
Slot sensor slot spacing	5 mm	10 mm	20 mm

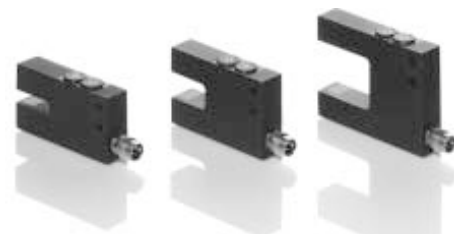
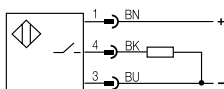


PNP O/●	BGL 5A-001-S 49	BGL 10A-001-S 49	BGL 20A-001-S 49
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U_d at I_e	< 3 V	< 3 V	< 3 V
Rated isolation voltage U_i	75 V DC	75 V DC	75 V DC
Rated operational current I_e	200 mA	200 mA	200 mA
No-load supply current I_0 max.	≤ 35 mA	≤ 35 mA	≤ 35 mA
Protected against polarity reversal	yes	yes	yes
Short circuit protected	yes	yes	yes
Permissible capacitance	0.2 μF	0.2 μF	0.2 μF
On/off delay	0.2 ms	0.2 ms	0.33 ms
Frequency of operating cycles f	3000 Hz	3000 Hz	1500 Hz
Utilization category	DC 13	DC 13	DC 13
Output	PNP*	PNP*	PNP*
Output function	O/● selectable	O/● selectable	O/● selectable
Permissible ambient light	10 kLux	10 kLux	10 kLux
Sensitivity/range adjustment	potentiometer 0...270°	potentiometer 0...270°	potentiometer 0...270°
Function indicator (receiver sees light)	LED red	LED red	LED red
Ambient temperature range T_a	-10...60 °C	-10...60 °C	-10...60 °C
Degree of protection per IEC 60529	IP 65	IP 65	IP 65
Housing material	Al anodized	Al anodized	Al anodized
Material of sensing face	glass	glass	glass
Connection	connector	connector	connector
Recommended connector	BKS-B 48/BKS-B 49	BKS-B 48/BKS-B 49	BKS-B 48/BKS-B 49
Weight	20 g	23 g	28 g
Emitter type	red 640 nm	red 640 nm	red 640 nm
Switching hysteresis	≤ 0.1 mm	≤ 0.1 mm	≤ 0.1 mm
Resolution	0.3 mm	0.3 mm	0.3 mm
Repeatability	0.02 mm	0.02 mm	0.02 mm

*NPN version on request.



Wiring diagram



Slot Sensors

Optoelectronic Sensors

BGL Slot Sensors

BGL 30 mm	BGL 50 mm	BGL 80 mm	BGL 120 mm
BGL 30A-001-S 49	BGL 50A-001-S 49	BGL 80A-001-S 49	BGL 120A-001-S 49
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
< 3 V	< 3 V	< 3 V	< 3 V
75 V DC	75 V DC	75 V DC	75 V DC
200 mA	200 mA	200 mA	200 mA
≤ 35 mA	≤ 35 mA	≤ 35 mA	≤ 35 mA
yes	yes	yes	yes
yes	yes	yes	yes
0.2 µF	0.2 µF	0.2 µF	0.2 µF
0.33 ms	0.33 ms	0.33 ms	0.33 ms
1500 Hz	1500 Hz	1500 Hz	1500 Hz
DC 13	DC 13	DC 13	DC 13
PNP*	PNP*	PNP*	PNP*
○/● selectable	○/● selectable	○/● selectable	○/● selectable
10 kLux	5 kLux	5 kLux	5 kLux
potentiometer 0...270°	potentiometer 0...270°	potentiometer 0...270°	potentiometer 0...270°
LED red	LED red	LED red	LED red
-10...60 °C	-10...60 °C	-10...60 °C	-10...60 °C
IP 65	IP 65	IP 65	IP 65
Al anodized	Al anodized	Al anodized	Al anodized
glass	glass	glass	glass
connector	connector	connector	connector
BKS-B 48/BKS-B 49	BKS-B 48/BKS-B 49	BKS-B 48/BKS-B 49	BKS-B 48/BKS-B 49
36 g	58 g	76 g	116 g
red 640 nm	red 640 nm	red 640 nm	red 640 nm
≤ 0.1 mm	≤ 0.15 mm	≤ 0.2 mm	≤ 0.2 mm
0.3 mm	0.5 mm	0.5 mm	0.8 mm
0.02 mm	0.04 mm	0.06 mm	0.08 mm



Recommended accessories
please order separately

Connector
BKS-B 48/BKS-B 49



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