

1) Light-on/dark-on, 2) Sensitivity, 3) Output function, 4) Optical axis



Basic features

Approval/Conformity	cULus CE UKCA WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Fork sensor
Series	A
Style	Fork Straight connection

Display/Operation

Adjuster	Potentiometer 270° (2x)
Display	Output function- LED yellow
Setting	Light-on/dark-on Sensitivity

Electrical connection

Connection	Connector, M8x1-Male, 3-pin
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	1 µF
No-load current I _o max. at Ue	35 mA
Operating voltage U _b	10...30 VDC
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	200 mA
Rated operating voltage U _e DC	24 V
Ready delay t _v max.	200 ms
Residual current I _r max.	50 µA
Ripple max. (% of U _e)	10 %
Switching frequency	1500 Hz
Turn-off delay t _{off} max.	0.333 ms
Turn-on delay t _{on} max.	0.333 ms
Utilization category	DC -13
Voltage drop U _d max. at I _e	3 V

Environmental conditions

Ambient temperature	-10...60 °C
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms, 3x6
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP65

Functional safety

MTTF (40 °C)	307 a
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Interface

Switching output	PNP normally open/normally closed (NO/NC)
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Photoelectric Sensors
BGL 50A-001-SA2-S49
Order Code: BGL001K

BALLUFF

Material

Housing material	Zinc, Die casting, Painted
Material sensing surface	Glass
Surface protection	Painted

Mechanical data

Dimension	10 x 70 x 105 mm
Fork opening	50 mm
Mounting part	Screw M4

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Divergent
Light spot size	Ø 1.5 mm Light exit
Light type	LED, red light
Principle of optical operation	Through-beam sensor
Smallest part typ.	0.40 mm
Switching function, optical	dark-on/light-on
Wave length	636 nm

Range/Distance

Hysteresis H max.	0.15 mm
Repeat accuracy lateral max.	40 µm

Remarks

The sensor is functional again after the overload has been eliminated.

Reference object (target): Steel plate, 50 x 50, thickness 0.5 mm, lateral approach.

Factory default setting for switching output: Normally open.

For additional information, refer to user's guide.

Order accessories separately.

Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.

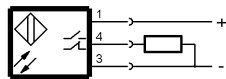
For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

Connector Drawings



Wiring Diagrams



Opto Symbols

