

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



Basic features

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

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

Display/Operation

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

Photoelectric Sensors
BGL 50A-003-S49
Order Code: BGL001M

BALLUFF

Electrical data

Load capacitance max. at Ue	0.5 μ F
No-load current I _o max. at Ue	20 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 μ A
Ripple max. (% of U _e)	10 %
Switching frequency	5000 Hz
Turn-off delay t _{off} max.	0.1 ms
Turn-on delay t _{on} max.	0.1 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	IP67

Functional safety

MTTF (40 °C)	316 a
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Interface

Switching output	PNP normally open/normally closed (NO/NC)
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Remarks

Order accessories separately.

For additional information, refer to user's guide.

Factory default setting for switching output: Normally open.

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

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

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.

Material

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

Mechanical data

Dimension	10 x 70 x 88 mm
Fork opening	50 mm
Mounting part	Screw M4

Optical features

Ambient light max.	10000 Lux
Average power P _o max.	390 μ W
Beam characteristic	Collimated
Laser class per IEC 60825-1	1
Light spot size	Ø 0.3 mm Light exit
Light type	Laser red light
Principle of optical operation	Through-beam sensor
Smallest part typ.	0.08 mm
Switching function, optical	dark-on/light-on
Wave length	655 nm

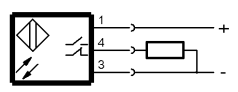
Range/Distance

Hysteresis H max.	0.025 mm
Repeat accuracy lateral max.	10 μ m

Connector Drawings



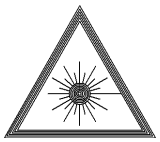
Wiring Diagrams



Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1