

1) Output function, 2) Operating voltage, 3) Optical axis, 4) Light-on/dark-on, 5) 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
Short-circuit protection	yes

#### Display/Operation

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

**Electrical data**

Load capacitance max. at Ue	1 $\mu$ F
No-load current I <sub>0</sub> max. at Ue	35 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	200 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Ready delay t <sub>v</sub> max.	200 ms
Residual current I <sub>r</sub> max.	50 $\mu$ A
Ripple max. (% of Ue)	10 %
Switching frequency	1000 Hz
Turn-off delay t <sub>off</sub> max.	0.5 ms
Turn-on delay t <sub>on</sub> max.	0.5 ms
Utilization category	DC-13
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	3 V

**Environmental conditions**

Ambient temperature	-10...60 °C
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

**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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**Material**

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

**Mechanical data**

Dimension	10 x 140 x 93 mm
Fork opening	120 mm
Mounting part	Screw M4

**Optical features**

Ambient light max.	5000 Lux
Beam characteristic	Divergent
Light spot size	Ø 2.5 mm Light exit
Light type	Infrared
Principle of optical operation	Through-beam sensor
Smallest part typ.	1.50 mm
Switching function, optical	dark-on/light-on
Wave length	880 nm

**Range/Distance**

Hysteresis H max.	0.5 mm
Repeat accuracy lateral max.	200 $\mu$ m

**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.

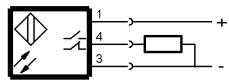
**Connector Drawings**



Photoelectric Sensors  
BGL 120A-007-S49  
Order Code: BGL000F

**BALLUFF**

### Wiring Diagrams



### Opto Symbols

