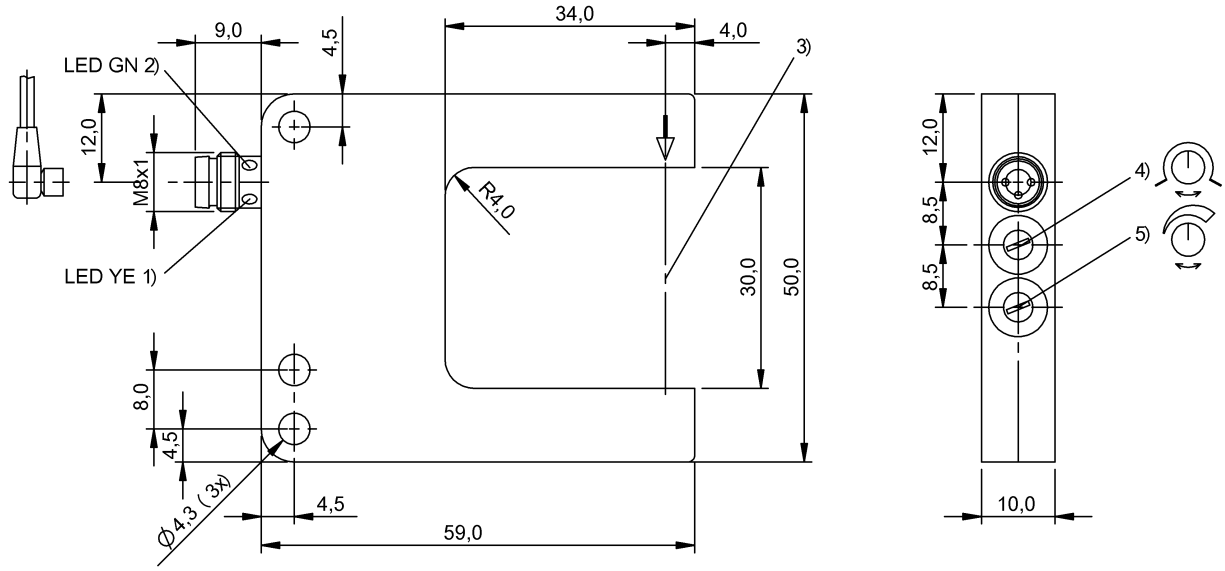
Photoelectric Sensors

BGL 30A-011-S49
Order Code: BGL003J



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

Display/Operation

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

Electrical connection

Connection	Connector, M8x1-Male, 3-pin
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Short-circuit protection	yes

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Electrical data

Load capacitance max. at Ue	1 µF
No-load current Io max. at Ue	35 mA
Operating voltage Ub	10...30 VDC
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	200 ms
Residual current Ir max.	50 µA
Ripple max. (% of Ue)	10 %
Switching frequency	2000 Hz
Turn-off delay toff max.	0.25 ms
Turn-on delay ton max.	0.25 ms
Utilization category	DC -13
Voltage drop Ud max. at Ie	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)	307 a

Interface

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

Material

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

Mechanical data

Dimension	10 x 50 x 68 mm
Fork opening	30 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.	0.60 mm
Special optical feature	Water detection
Switching function, optical	dark-on/light-on
Wave length	1550 nm

Range/Distance

Hysteresis H max.	0.2 mm
Repeat accuracy lateral max.	100 µm

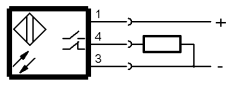
Remarks

Order accessories separately.
For additional information, refer to user's guide.
Factory default setting for switching output: Normally open.
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.
Reference object (target): Steel plate, 50 x 50, thickness 0.5 mm, lateral approach.
For plain water a liquid thickness of 2mm is sufficient for reliable detection. If the water component of the liquid diminishes, the thickness must be accordingly greater.
Measuring through bowed or thick-walled containers may yield false results due to refraction and absorption effects.
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 (Schematic)



Opto Symbols