



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

Photoelectric Sensors
BGL 80A-011-S49
Order Code: BGL003L

BALLUFF

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	2000 Hz
Turn-off delay t _{off} max.	0.25 ms
Turn-on delay t _{on} max.	0.25 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

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.

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.

Material

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

Mechanical data

Dimension	10 x 100 x 88 mm
Fork opening	80 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.	0.80 mm
Special optical feature	Water detection
Switching function, optical	dark-on/light-on
Wave length	1480 nm

Range/Distance

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

Connector Drawings



Wiring Diagrams



Opto Symbols

