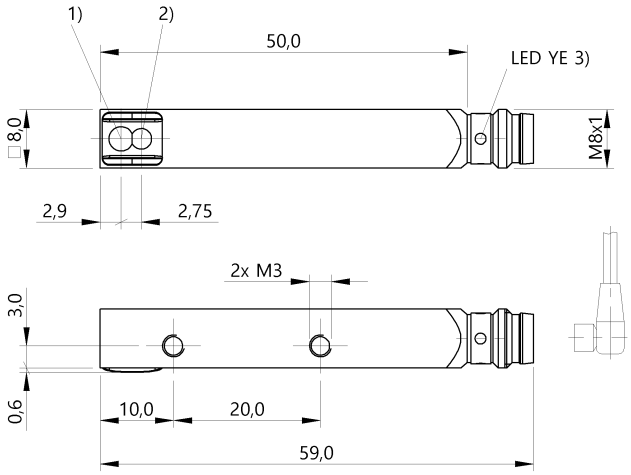
Photoelectric Sensors

BOS Q08M-UUI-KH22-S49
Order Code: BOS0270



1) Emitter, 2) Receiver, 3) LED function indicator

Basic features

Approval/Conformity	CE cULus EAC IO-Link WEEE
Basic standard	IEC 60947-5-2
Operating mode	SIO Mode IO-Link Mode
Principle of operation	Photoelectric sensor
Series	Q08M
Style	Square Connection 90°

Display/Operation

Adjuster	no
Display	Limit range - LED yellow, flashing LED yellow: Light received
Setting	Rated switching distance (Sn) Hysteresis

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	0.1 µF
No-load current Io max. at Ue	15 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	33.0 kOhm
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	10 ms
Residual current Ir max.	50 µA
Ripple max. (% of Ue)	10 %
Switching frequency	500 Hz
Turn-off delay toff max.	1 ms
Turn-on delay ton max.	1 ms
Utilization category	DC -13
Voltage drop Ud max. at Ie	0.8 V

Environmental conditions

Ambient temperature	-5...55 °C
EN 60068-2-27, Shock	Half-sinus, 100 g_n, 2 ms, 3x8000 Half-sinus, 30 g_n, 11 ms, 3x6
EN 60068-2-6, Vibration	10…2000 Hz, amplitude 1 mm, 30 g_n, 3x5 h 10…55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

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Functional safety

MTTF (40 °C)	360 a

Material

Housing material	Zinc, Die casting, nickel plated
Material sensing surface	PMMA
Surface protection	nickel plated

Mechanical data

Dimension	8 x 59 x 8 mm
Mounting	Screw M3

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light spot size	Ø 3 mm Light exit
Light type	LED, red light
Principle of optical operation	Diffuse sensor, triangulation
Special optical feature	Background suppression
Switching function, optical	Light-on
Wave length	650 nm

Output/Interface

Baud rate	38.4 kBaud
Function class, smart sensor	Switching signal channel
Interface	IO-Link 1.1
Interface setting option	BDC mode 1-pt./2-pt./window
Process data IN	Teaching active/inactive Limit range yes/no Switching state active/inactive
Profile	Smart Sensor
Switching output	PNP normally open (NO)

Range/Distance

Distance deviation 18 % max. (% of Sr)	10 %
Hysteresis H max. (% of Sr)	10 %
Range	10...30 mm
Rated operating distance Sn	30 mm Adjustable
Repeat accuracy max. (% of Sr)	3 %
Temperature drift max. (% of Sr)	10 %

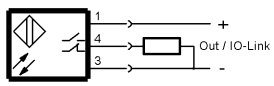
Remarks

Order accessories separately.
For additional information, refer to user's guide.
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.
Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.
The sensor is functional again after the overload has been eliminated.
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