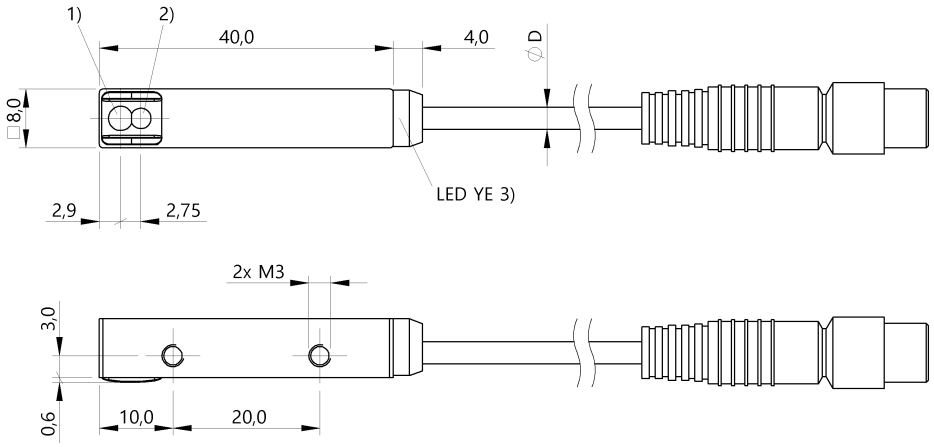
Photoelectric Sensors

BOS Q08M-UUI-KH22-00,2-S49
Order Code: BOS0271



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

Cable diameter D	3.00 mm
Cable length L	0.2 m
Connection	Cable with connector, M8x1-Male, 3-pin, 0.20 m, PUR
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

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Environmental conditions

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

Functional safety

MTTF (40 °C)	360 a

Material

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

Mechanical data

Dimension	8 x 44 x 8 mm
Mounting part	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

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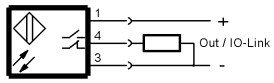
Wiring Diagrams



Opto Symbols