

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



Basic features

Approval/Conformity	CE UKCA cULus 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	50 nF
No-load current I _o max. at Ue	15 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	33.0 kOhm
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	100 mA
Rated operating voltage U _e DC	24 V
Ready delay t _v max.	150 ms
Residual current I _r max.	50 µA
Ripple max. (% of U _e)	10 %
Switching frequency	500 Hz
Turn-off delay t _{off} max.	1 ms
Turn-on delay t _{on} max.	1 ms
Utilization category	DC -13
Voltage drop U _d max. at I _e	0.8 V

Environmental conditions

Ambient temperature	-5...55 °C
EN 60068-2-27, Shock	Half-sinus, 100 gn, 2 ms, 3x8000 Half-sinus, 30 gn, 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
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IO-Link

IO-Link Profil IDs	0x0001 SSP0
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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)

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

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

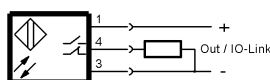
Order accessories separately.
 For additional information, refer to user's guide.
 Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.
 Actuation object (target): gray card, 200 x 200, 90 % remission, 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



Photoelectric Sensors
BOS Q08M-UII-KH22-00,2-S49
Order Code: BOS0271

BALLUFF

Opto Symbols

