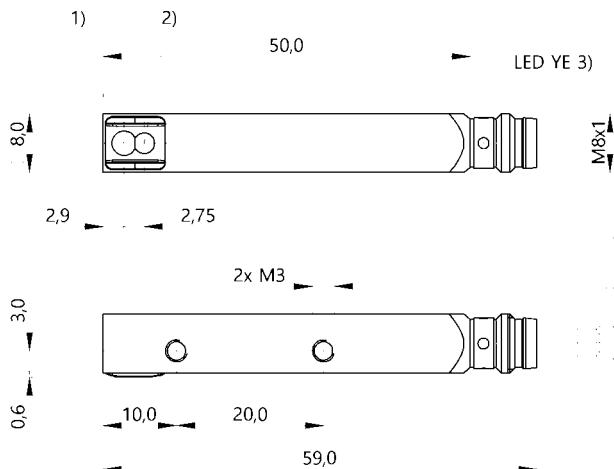


Photoelectric Sensors
BOS Q08M-NS-KF21-S49
Order Code: BOS026Y

BALLUFF



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



Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2
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

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 U_e	50 nF
No-load current I_0 max. at U_e	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 μ A
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, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	Half-sinus, 100 gn, 2 ms, 3x8000 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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Interface

Switching output NPN normally open (NO)

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 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 Fixed 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 5...30 mm
Rated operating distance Sn 30 mm
Repeat accuracy max. (% of Sr) 3 %
Temperature drift max. (% of Sr) 10 %

Remarks

The sensor is functional again after the overload has been eliminated.

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.

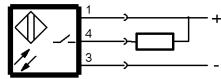
For more information about MTTF and B10d see MTTF / B10d Certificate

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



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Opto Symbols

