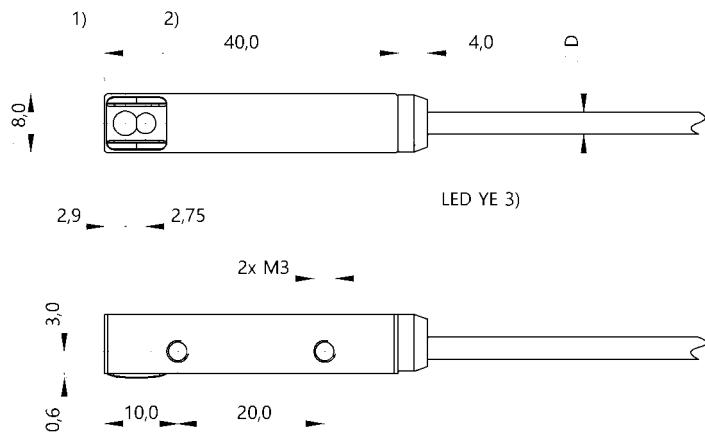


Photoelectric Sensors
BOS Q08M-PS-KF21-02
Order Code: BOS026W

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

Cable diameter D	3.00 mm
Cable length L	2 m
Conductor cross-section	0.14 mm ²
Connection	Cable, 2.0 m, PUR
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 ₀ 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, 30 g _n , 11 ms, 3x6
EN 60068-2-6, Vibration	Half-sinus, 100 g _n , 2 ms, 3x8000
	10...2000 Hz, amplitude 1 mm, 30 g _n , 3x5 h
	10...55 Hz, amplitude 1 mm, 3x30 min

IP rating IP67

Functional safety

MTTF (40 °C) 360 a

Interface

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 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.

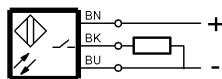
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.

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.

Wiring Diagrams



Opto Symbols

