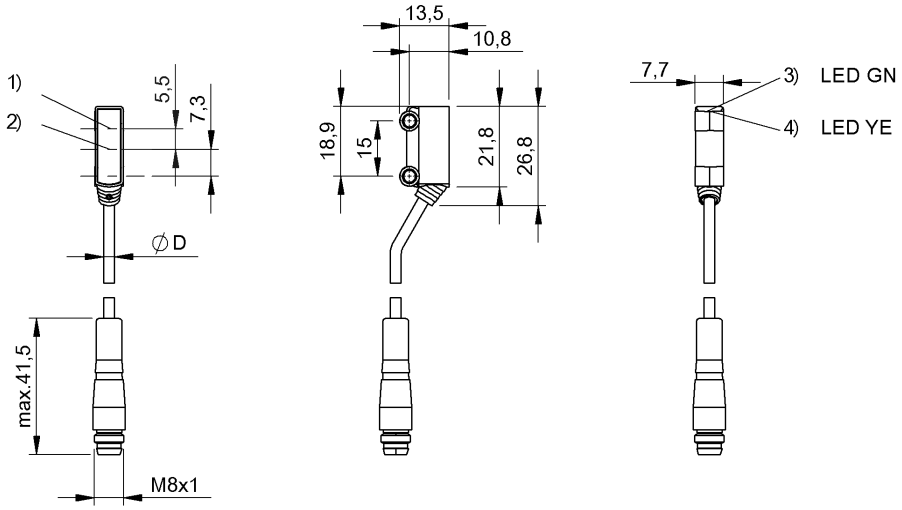
Photoelectric Sensors

BOS R020K-PS-RF11-00,2-S49
Order Code: BOS020M



1) Optical axis receiver, 2) Optical axis emitter, 3) Operating voltage, 4) Light reception

Basic features

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Series	R020K
Style	Square Connection 60°

Display/Operation

Display	LED green: Power LED yellow: Light received

Electrical connection

Cable diameter D	2.40 mm
Cable length L	0.2 m
Connection	Cable with connector, M8x1-Male, 3-pin, 0.20 m, PVC
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

No-load current Io max. at Ue	20 mA
Operating voltage Ub	10...30 VDC
Protection class	III
Rated insulation voltage Ui	50 V DC
Rated operating current Ie	50 mA
Rated operating voltage Ue DC	24 V
Ripple max. (% of Ue)	20 %
Switching frequency	800 Hz
Turn-off delay toff max.	0.63 ms
Turn-on delay ton max.	0.63 ms
Voltage drop Ud max. at Ie	2.5 V

Environmental conditions

Ambient temperature	-25...50 °C
IP rating	IP67

Functional safety

MTTF (40 °C)	3487 a

Interface

Switching output	PNP normally open (NO)

Material

Housing material	ABS
Material jacket	PVC
Material sensing surface	PMMA

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Mechanical data

Dimension	7.7 x 26.8 x 13.5 mm
Mounting part	Screw M3

Range/Distance

Range	1...30 mm
Rated operating distance Sn	30 mm

Optical features

Ambient light max.	5000 Lux
Beam characteristic	Focus, typical at 15 mm
Light spot size	Ø 3 mm at 15 mm
Light type	LED, red light
Principle of optical operation	Diffuse sensor, HGA fixed
Special optical feature	Background suppression
Switching function, optical	Light-on
Wave length	660 nm

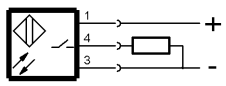
Remarks

Order accessories separately.
For additional information, refer to user's guide.
Reference object (target): gray card, 100 x 100, 90 % remission, axial approach.
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