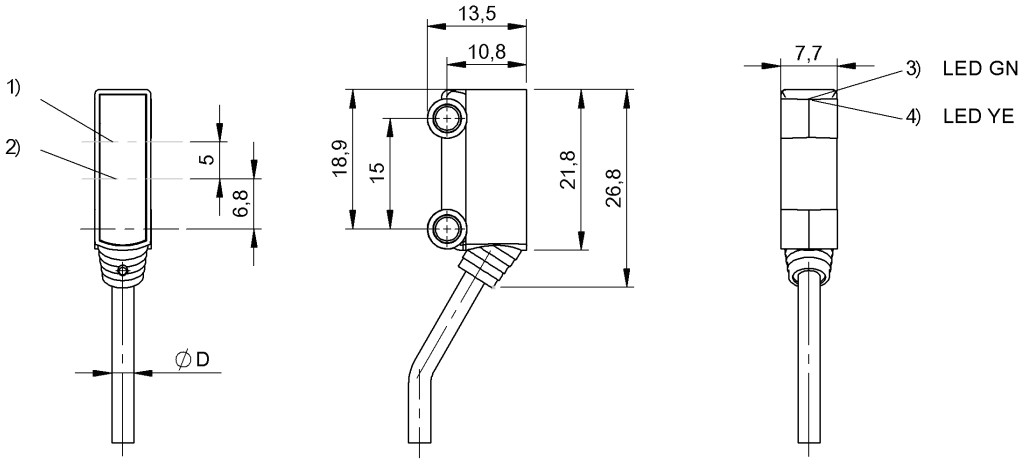
Photoelectric Sensors

BOS R020K-PS-PR11-02
Order Code: BOS020R



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

IND. CONT. EQ 4R97 for use in the secondary of a class 2 source of supply

Basic features

Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference reflector	BOS R-9
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	2 m
Conductor cross-section	0.09 mm²
Connection	Cable, 2.00 m, PVC
Number of conductors	3
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
Protection degree	IP67

Functional safety

MTTF (40 °C)	3487 a

Material

Housing material	ABS
Material jacket	PVC
Material sensing surface	PMMA

Mechanical data

Dimension	7.7 x 26.8 x 13.5 mm
Mounting	Screw M3

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Optical features

Ambient light max.	5000 Lux
Beam characteristic	Divergent
Blind zone	25 mm
Light spot size	Ø 11 mm at 250 mm
Light type	LED, red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Switching function, optical	dark-on
Wave length	660 nm

Output/Interface

Switching output	PNP normally open (NO)

Range/Distance

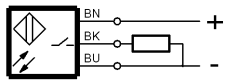
Range	0...3 m
Rated operating distance Sn	3 m

Remarks

The sensor is functional again after the overload has been eliminated.
Actuation object (target): gray card, 200 x 200, 90 % remission, lateral approach, approach direction vertical to lens axis plane.
For additional information, refer to user's guide.
Order accessories separately.
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