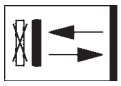
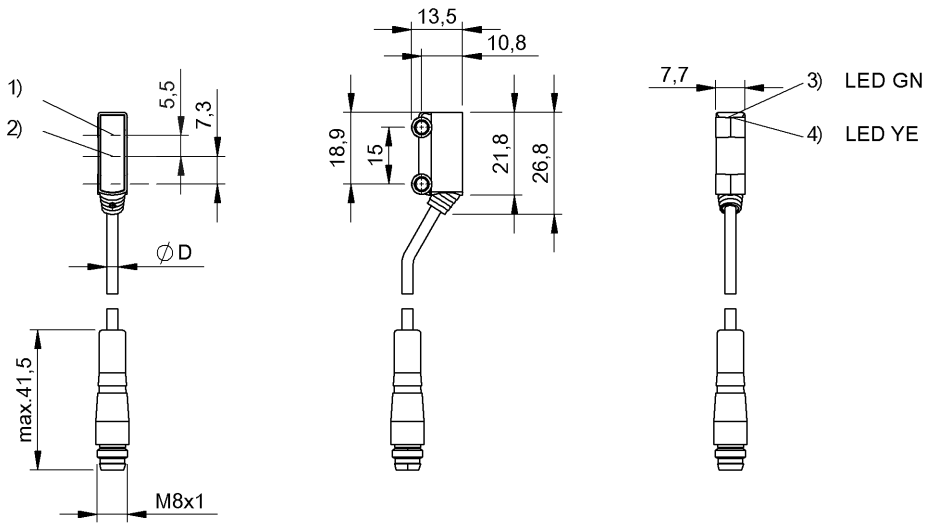
Photoelectric sensor

BOS R020K-PS-RF10-00,2-S49
BOS021C

BALLUFF
sensors worldwide





1) Optical axis receiver 2) Optical axis emitter 3) Power 4) Light reception

- **Photoelectric sensor**
- **Series R020K**
- **LED, red light**
- **15 mm**

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

General attributes

Approvals / Conformity	CE cULus
Basic standard	IEC 60947-5-2
Enclosure Type per IEC 60529	IP67
Indicator	Light receipt - LED YE Power - LED GN
Polarity reversal protected	yes
Protection Class	III
Series	Series R020K
Short circuit protected	yes
MTTF	3,487 a

Electrical attributes

Connection type	Cable with connector
Eff. operating current Ie	50 mA
Eff. operating voltage Ue DC	24.0 V
Electrical version	DC, direct current
No-load current max. Io at Ue	20 mA
Operating voltage UB max. DC [V]	30.0 V
Operating voltage UB min. DC [V]	10.0 V
Rated insulation voltage Ui	50 V DC
Ripple max. (% of Ue)	20 %
Switching freq. f max. (at Ue)	800 Hz
Switching function	NO
Switching output	PNP (1x)
Turn on time ton max.	0.63 ms
Voltage drop Ud max. (at Ie)	2.5 V

Mechanical attributes

Ambient temperature Ta max.	50 °C
Ambient temperature Ta min.	-25 °C
Cable jacket material	PVC
Cable length	0.20 m
Connector type	M8x1-S49
Detection range Sd	1...15 mm
Eff. operating distance Sr	15 mm
Housing material	ABS
Length 1	7.7 mm
Length 2	13.5 mm
Length 3	26.8 mm
Minimum operating distance	1 mm
Mounting type	Screw M3
Range Sn	Sn = 15 mm
Sensing face material	PMMA
Style	Block, 60° connection

Optical attributes

Ambient light max.	5,000 Lux
Light spot size, typical	Ø2 mm at 8 mm
Light type	LED, red light
Optical special feature	Background suppression
Principle of optical operation	Light scanner, triangulation
Switching function, optical	NO: light-on
Wavelength	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 further information on MTTF/B10d, please refer to the MTTF / B10d Certificate.

Specification of the MTTF value and the B10d value do not represent any binding quality and/or life expectancy guarantees.

