



1) Optical axis receiver 2) Optical axis emitter 3) Sn 4) Output function 5) Stability

- Photoelectric sensor
- Series 5K
- LED, red light
- up to 5 m



**General attributes**

Adjuster	Potentiometer 270° (1x)
Approvals / Conformity	cULus CE
Basic standard	IEC 60947-5-2
Enclosure Type per IEC 60529	IP67
Indicator	Output function - LED YE Stability - LED GN
Polarity reversal protected	yes
Reference reflector	BOS R-9
Series	Series 5K
Setting	Sensitivity (Sn)
Short circuit protected	yes
Trademark	GLOBAL

**Electrical attributes**

Connection type	Cable
Eff. operating current I <sub>e</sub>	100 mA
Eff. operating voltage U <sub>e</sub> DC	24.0 V
Electrical version	DC, direct current
No-load current max. I <sub>o</sub> at U <sub>e</sub>	30 mA
Operating voltage U <sub>B</sub> max. DC [V]	30.0 V
Operating voltage U <sub>B</sub> min. DC [V]	10.0 V
Ripple max. (% of U <sub>e</sub> )	10 %
Switching freq. f max. (at U <sub>e</sub> )	500 Hz
Switching function	NO
Switching output	PNP (1x)
Turn on time t <sub>on</sub> max.	1.00 ms
Voltage drop U <sub>d</sub> max. (at I <sub>e</sub> )	2.0 V

**Mechanical attributes**

Ambient temperature T <sub>a</sub> max.	55 °C
Ambient temperature T <sub>a</sub> min.	-25 °C

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Cable diameter D max.	3.5 mm
Cable jacket material	PVC
Cable length	2.00 m
Conductor cross-section	0.20 mm <sup>2</sup>
Eff. operating distance S <sub>r</sub>	4000 mm
Housing material	PC, PBT
Length 1	10.8 mm
Length 2	19.5 mm
Length 3	26.8 mm
Mounting type	Screw M3
Number of conductors	3
Operating range R <sub>o</sub>	0...4 m
Range S <sub>n</sub>	Sn = 4 m, adjustable
Sensing face material	PMMA
Style	Block, 45° connection

**Optical attributes**

Ambient light max.	5,000 Lux
Light type	LED, red light
Polarizing filter	yes
Principle of optical operation	Retro-reflective sensor
Switching function, optical	NO: dark-on
Wavelength	660 nm

**Additional text**

Order accessories separately.  
 For additional information, refer to user's guide.  
 Polarizing filters prevent spurious switching due to reflecting and shiny parts.  
 Operating object (test target): Gray card, 200 x 200, 90 % remission, lateral approach,  
 direction of movement vertical to plane of lens axes.  
 The sensor is functional again after the overload has been eliminated.

Photoelectric sensor

**BOS 5K-PS-RR10-02**  
**BOS012C**

