

1) Emitter, 2) Optical axis, 3) Receiver, 4) Operating voltage, 5) Output function



### Basic features

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

### Electrical connection

<b>Cable diameter D</b>	2.40 mm
<b>Cable length L</b>	2 m
<b>Conductor cross-section</b>	0.20 mm <sup>2</sup>
<b>Connection</b>	Cable, 2.00 m, PVC
<b>Number of conductors</b>	2
<b>Polarity reversal protected</b>	yes
<b>Protection against device mix-ups</b>	yes
<b>Short-circuit protection</b>	yes

### Display/Operation

<b>Display</b>	LED green: Power LED yellow: Light received
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### Electrical data

<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Rated operating current I<sub>e</sub></b>	100 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Ready delay t<sub>v</sub> max.</b>	100 ms
<b>Ripple max. (% of U<sub>e</sub>)</b>	10 %
<b>Switching frequency</b>	800 Hz
<b>Turn-off delay t<sub>off</sub> max.</b>	0.63 ms
<b>Turn-on delay t<sub>on</sub> max.</b>	0.63 ms
<b>Voltage drop U<sub>d</sub> max. at I<sub>e</sub></b>	2 V

Photoelectric Sensors  
**BOS R020K-PS-RX11-02**  
**Order Code: BOS0211**



**Environmental conditions**

Ambient temperature	-25...55 °C
IP rating	IP67

**Functional safety**

MTTF (40 °C)	2659 a
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**Interface**

Switching output	PNP normally open (NO)
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**Material**

Housing material	PC PBT
Material jacket	PVC
Material sensing surface	PMMA

**Mechanical data**

Dimension	7.7 x 26.8 x 13.5 mm
Mounting part	Screw M3

**Optical features**

Ambient light max.	5000 Lux
Beam characteristic	Divergent
Light spot size	Ø 23 mm at 500 mm
Light type	LED, red light
Principle of optical operation	Through-beam sensor
Switching function, optical	dark-on
Wave length	660 nm

**Range/Distance**

Range	0...2 m
Rated operating distance Sn	2 m

**Remarks**

Actuation object (target): gray card, 200 x 200, lateral approach.

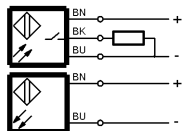
For additional information, refer to user's guide.

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**

