

**Basic features**

Approval/Conformity	CE cULus UKCA WEEE
Principle of operation	Photoelectric sensor
Scope of delivery	Mounting bracket
Series	R81K
Style	Square with M18 Bullnose

**Display/Operation**

Display	Output function- LED yellow supply voltage - LED green
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**Electrical connection**

Connection	M12x1-Male, 4-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

**Electrical data**

No-load current $I_0$ max. at $U_e$	25 mA
Operating voltage $U_b$	10...30 VDC
Rated operating current $I_e$	100 mA
Rated operating voltage $U_e$ DC	24 V
Ready delay $t_v$ max.	100 ms
Voltage drop $U_d$ max. at $I_e$	1.8 V

**Environmental conditions**

Ambient temperature	-15...60 °C
IP rating	IP67

**Functional safety**

MTTF (40 °C)	529 a
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**Interface**

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

Housing material	ABS PMMA
Material sensing surface	PMMA

Photoelectric Sensors  
**BOS R81K-PA-RH10-S4**  
Order Code: BOS029E

**BALLUFF**

**Mechanical data**

Dimension	15 x 48.9 x 31 mm
Mounting part	Thread M18x1 Screw M3 (2x)

**Range/Distance**

Hysteresis H max.	5 %
Range	100 mm
Rated operating distance Sn	100 mm

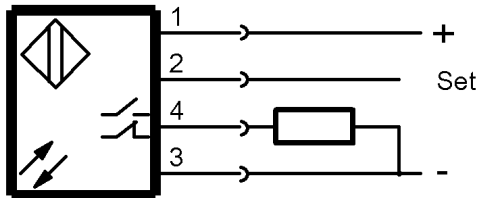
**Optical features**

Ambient light max.	10000 Lux
Light spot size	8 x 8 mm at 100 mm
Light type	LED, red light
Principle of optical operation	Triangulation
Wave length	660 nm

**Connector Drawings**



**Wiring Diagrams**



**Opto Symbols**

