

1) Mode settings, 2) Optical axis receiver, 3) Optical axis emitter, 4) Power indicator, 5) stability, 6) Sensitivity



Basic features

Approval/Conformity	cULus CE UKCA EAC WEEE
Principle of operation	Photoelectric sensor
Series	R090K
Style	Square Connection 90°

Display/Operation

Adjuster	Potentiometer 270° Rotary switch 2 positions
Display	Output function- LED yellow Stability - LED green
Setting	Sensitivity (Sn) Light-on/dark-on

Electrical connection

Connection	Connector, M8x1, 4-pin
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

No-load current I_0 max. at U_e	20 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.	300 ms
Ripple max. (% of U_e)	10 %
Switching frequency	1000 Hz
Turn-off delay t_{off} max.	0.5 ms
Turn-on delay t_{on} max.	0.5 ms
Voltage drop U_d max. at I_e	2 V

Environmental conditions

Ambient temperature	-30...55 °C
IP rating	IP67

Photoelectric Sensors
BOS R090K-PU-RD11-S75
Order Code: BOS02A9

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Functional safety

MTTF (40 °C) 90 a

Interface

Switching output PNP normally open/normally closed (NO/NC)

Material

Housing material PC
PBT
Material sensing surface PMMA

Mechanical data

Dimension 10.7 x 43.5 x 19.5 mm
Mounting part Screw M3
Tightening torque max. 0.5 Nm

Optical features

Ambient light max. 10000 Lux
Beam characteristic Divergent
Light type LED, red light
Principle of optical operation Diffuse sensor, energetic
Switching function, optical dark-on/light-on
Wave length 660 nm

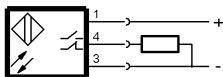
Range/Distance

Range 50...150 mm
Rated operating distance Sn 150 mm

Connector Drawings



Wiring Diagrams



Opto Symbols

