

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



Basic features

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

Display/Operation

Adjuster	6-turn potentiometer Rotary switch 2 positions
Display	Output function- LED yellow Stability - LED green
Setting	Rated switching distance (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	-35...55 °C
IP rating	IP67

Photoelectric Sensors
BOS R090K-PU-RH10-S75
Order Code: BOS029M



Functional safety

MTTF (40 °C) 92 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 Focus, typical at 90 mm
 Light spot size Ø 4.5 mm at 60 mm
 Light type LED, red light
 Principle of optical operation Diffuse sensor, triangulation
 Special optical feature Background suppression
 Switching function, optical dark-on/light-on
 Wave length 660 nm

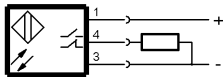
Range/Distance

Range 20...350 mm
 Rated operating distance S_n 350 mm Adjustable

Connector Drawings



Wiring Diagrams



Opto Symbols

