

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_o 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-ID11-S75
Order Code: BOS02AF

BALLUFF

Functional safety

MTTF (40 °C) 81 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 spot size Ø 70 mm at 500 mm
Light type LED infrared
Principle of optical operation Diffuse sensor, energetic
Switching function, optical dark-on/light-on
Wave length 880 nm

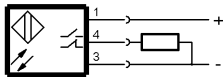
Range/Distance

Range 0...1000 mm
Rated operating distance S_n 1000 mm

Connector Drawings



Wiring Diagrams



Opto Symbols

