

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 WEEE
Principle of operation	Photoelectric sensor
Series	R090K
Style	Square Connection 45°

#### Electrical connection

Cable diameter D	3.50 mm
Cable length L	2 m
Conductor cross-section	0.20 mm <sup>2</sup>
Connection	Cable, 2.00 m, PVC
Number of conductors	3
Polarity reversal protected	yes
Short-circuit protection	yes

#### 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 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

Functional safety

MTTF (40 °C)	90 a
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Interface

Switching output	NPN normally open/normally closed (NO/NC)
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Material

Housing material	PC PBT
Material jacket	PVC
Material sensing surface	PMMA

Mechanical data

Dimension	10.7 x 32.7 x 19.5 mm
Mounting part	Screw M3
Tightening torque max.	0.5 Nm

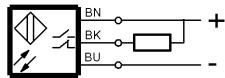
Optical features

Ambient light max.	10000 Lux
Beam characteristic	Divergent
Light spot size	Ø 105 mm at 2 m
Light type	LED, red light
Principle of optical operation	Retroreflective sensor
Switching function, optical	dark-on/light-on
Wave length	660 nm

Range/Distance

Range	0...5 m
Rated operating distance Sn	5 m

Wiring Diagrams



Opto Symbols

