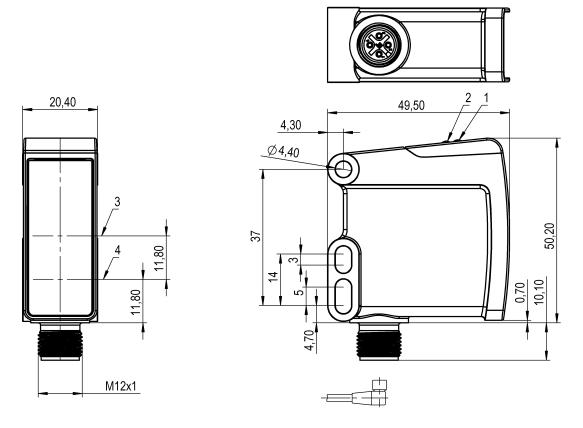
Smart Automation and Monitoring System Photoelectric Sensors BOS R254K-UUI-PR10-S4 Order Code: BOS0286





1) LED 1, 2) LED 2, 3) Optical axis receiver, 4) Optical axis emitter



Basic features

Approval/Conformity	CE
	EAC
	cULus
	WEEE
	Ecolab
Basic standard	IEC 60947-5-2
Operating mode	SIO Mode
	IO-Link Mode
Principle of operation	Photoelectric sensor
Reference reflector	BOS R-1
Scope of delivery	Mounting instruction
Series	R254K
Style	Square

Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Display/Operation

Display

2x tricoloured - LED

Smart Automation and Monitoring System **Photoelectric Sensors** BOS R254K-UUI-PR10-S4 **Order Code: BOS0286**



PA 12

Electrical data

Load capacitance max. at Ue	100 nF
No-load current lo max. at Ue	20 mA
Operating voltage Ub	1030 VDC
Protection class	II
Rated insulation voltage Ui	75 V DC
Rated operating current le	100 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	300 ms
Residual current Ir max.	500 μA
Ripple max. (% of Ue)	10 %
Switching frequency	1 kHz 2 kHz (Speed mode)
Turn-off delay toff max.	0.5 ms
Turn-on delay ton max.	0.5 ms
Utilization category	DC -13
Voltage drop Ud max. at le	2.5 V

Environmental conditions

Ambient temperature	-10 °C70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms, 3x6
EN 60068-2-6, Vibration	1055 Hz, amplitude 0.5 mm,
	3x30 min
IP rating	IP67, IP6K9K

Functional safety

MTTF (40 °C)	273.6 a
IO-Link	
IO-Link Profil IDs	0x0001 SSP0
	0x0007 SSP2.4
	0x0008 SSP2.5
	0x0009 SSP2.6
	0x4000 Identification and
	Diagnosis
IO-Link function classes	0x8001 Binary Data Channel
	0x8007 Single Value Teach
	0x8008 Two Value Teach
	0x8009 Dynamic Teach
	0x800C Transducer Disable
Supported IO-Link Profiles	Common Profile
	Legacy Smart Sensor Profile
	Smart Sensor Profile - Adjustable
	Switching Sensor

Housing material	FA 12
	PA PACM 12
Material sensing surface	PA PACM 12
Mechanical data	
Dimension	20.4 x 60.3 x 49.5 mm
Mounting part	Screw M4
Optical features	
Ambient light max.	10000 Lux
Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light spot size	200 x 200 mm at 8 m
Light type	LED, red light
Polarizing filter	yes
Principle of optical operation	Retroreflective sensor
Switching function, optical	Light/dark switching
Wave length	633 nm
Output/Interface	
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Anala

Material

Housing material

Analog output	Analog, current 420 mA
Baud rate	COM3 (230,4 kBaud)
Interface	IO-Link 1.1
Process data IN	1 byte
Process data OUT	1 byte
Process data cycle min.	3 ms
Switching output	Pin 2: PNP/NPN/push-pull NO/
	NC
	Pin 4: Push-pull NO/NC
Time function	Single pulse
	On/off delay
Denne/Dietenee	
Range/Distance	
Hysteresis H max. (% of Sr)	10 %

Tiysteresis IT max. (70 01 51)	10 /0
Hysteresis H typ. (% of Sr)	5 %
Range	8 m
Rated operating distance Sn	8 m Adjustable
Temperature drift max. (% of Sr)	10 %

Remarks

For additional information, refer to user's guide. Order accessories separately. The sensor is functional again after the overload has been eliminated. For use with reflector BOS R-1 For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.



Connector Drawings



Wiring Diagrams

Pin	
1	L+ (Operating voltage +, SIO 1030V, IO-Link 1830 V)
2	ا/Q (Digital input / digital outout / analog output)
3	L- (Operating voltage -)
4	C/Q (IO-Link communication / digital output in SIO mode)

Opto Symbols