



1) LED function indicator, 2) LED function indicator, 3) Optical axis



Basic features

Approval/Conformity	CE UKCA WEEE cULus Ecolab
Basic standard	IEC 60947-5-2
Operating mode	SIO Mode IO-Link Mode
Principle of operation	Photoelectric sensor
Reference receiver	BOS R080K-UIM-RE10-00,3-S4
Scope of delivery	Mounting instruction
Series	R080K
Style	Square with M18 Bullnose

Electrical data

Load capacitance max. at Ue	100 nF
No-load current I_o max. at Ue	20 mA
Operating voltage U_b	10...30 VDC
Protection class	II
Rated insulation voltage U_i	75 V DC
Rated operating current I_e	100 mA
Rated operating voltage U_e DC	24 V
Ready delay t_v max.	300 ms
Residual current I_r max.	500 µA
Ripple max. (% of U_e)	10 %
Utilization category	DC -13
Voltage drop U_d max. at I_e	2.5 V

Display/Operation

Display	2x tricoloured - LED
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Electrical connection

Cable diameter D	3.85...4.15 mm
Cable length L	300 mm
Connection	Cable with connector, M12x1-Male, 4-pin, 300 mm, PVC
Contact, surface protection	Gold plated
Number of conductors	4
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Environmental conditions

Ambient temperature	-10...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
IP rating	IP67, IP6K9K

Functional safety

MTTF (40 °C)	273.6 a
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Smart Automation and Monitoring System
 Photoelectric Sensors
BOS R080K-XM-RS10-00,3-S4
 Order Code: BOS028K



IO-Link

IO-Link Profil IDs	0x0001 SSP0 0x4000 Identification and Diagnosis
IO-Link function classes	0x800C Transducer Disable
Supported IO-Link Profiles	Common Profile Legacy Smart Sensor Profile

Interface

Analog output	Analog, current 4...20 mA
Baud rate	COM3 (230,4 kBaud)
Interface	IO-Link 1.1
Process data IN	17 bytes
Process data OUT	1 byte
Process data cycle min.	5 ms
Switching output	Pin 2: PNP/NPN/push-pull NO/NC Pin 4: Push-pull NO/NC
Time function	Single pulse On/off delay

Material

Housing material	PA 12 PA PACM 12
Material jacket	PVC, Flame-resistant
Material sensing surface	PA PACM 12

Mechanical data

Dimension	19 x 44.1 x 37.5 mm
Mounting part	Screw M3
Weight	25.6 g

Optical features

LED group per IEC 62471	Exempt Group
Light type	LED, red light
Principle of optical operation	Through-beam sensor (Emitter)
Wave length	633 nm

Range/Distance

Range	0...20 m
Rated operating distance Sn	20 m
Temperature drift max. (% of Sr)	10 %

Remarks

Order accessories separately.
 For additional information, refer to user's guide.
 The sensor is functional again after the overload has been eliminated.
 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 10...30V, IO-Link 18...30 V)
2	I/Q (Digital input / digital output / analog output)
3	L- (Operating voltage -)
4	C/Q (IO-Link communication / digital output in SIO mode)

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BALLUFF

Opto Symbols

