

1) Optical axis emitter, 2) Display and control panel, 3) 240° rotatable



**Basic features**

Approval/Conformity	CE UKCA cULus WEEE Ecolab
Basic standard	IEC 60947-5-2
Operating mode	SIO Mode IO-Link Mode
Principle of operation	Photoelectric sensor
Reference receiver	BOS 21M-PAI-RE30-S4
Series	21M
Style	Square Connection can be rotated

**Display/Operation**

Display	Run - LED green Communication - Green LED, flashing (10:1) Error - LED green, flashing
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**Electrical connection**

Connection	Connector, M12x1-Male, 4-pin
Polarity reversal protected	yes
Protection against device mix-ups	yes

**Electrical data**

Input function	Test (Emitter off)
No-load current $I_o$ max. at $U_e$	35 mA
Operating voltage $U_b$	10...30 VDC
Protection class	II
Rated insulation voltage $U_i$	75 V DC
Rated operating voltage $U_e$ DC	24 V
Ready delay $t_v$ max.	200 ms
Ripple max. (% of $U_e$ )	8 %
Utilization category	DC -13

Photoelectric Sensors  
BOS 21M-XI-RS31-S4  
Order Code: BOS027P

**BALLUFF**

Environmental conditions

Ambient temperature	-25...60 °C
Ambient temperature UL max.	55 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67, IP69K

Functional safety

MTTF (40 °C)	1046 a
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IO-Link

IO-Link Profil IDs	N/A
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Interface

Baud rate	38.4 kBaud
Interface	IO-Link 1.1
Interface setting option	Display limit range Display temperature
Process data IN	0 bytes
Process data OUT	1 byte
Process data cycle min.	4 ms

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.

Material

Housing material	Zinc, Die casting, Powder coated Die-cast zinc
Material sensing surface	PMMA
Surface protection	Powder coated

Mechanical data

Dimension	15.4 x 51.1 x 42.7 mm
Mounting part	Screw M4

Optical features

LED group per IEC 62471	Exempt Group
Light type	LED, red light
Principle of optical operation	Through-beam sensor (Emitter)
Wave length	650 nm

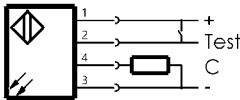
Range/Distance

Range	0...20 m
Rated operating distance Sn	20 m Adjustable

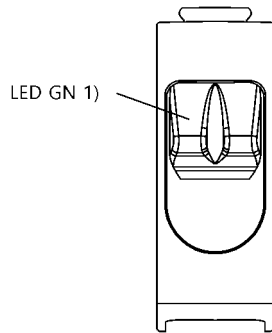
Connector Drawings



Wiring Diagrams



## Help Views



1) Oper. voltage/Error/IO-Link

## Opto Symbols

