

1) Optical axis emitter, 3) Operating voltage



IND. CONT. EQ.  
 81U2  
 Class 2 Type 1



### Basic features

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference receiver	BOS 12M-...-RE10-...
Series	12M
Style	Cylinder Straight optics
Trademark	Global

### Display/Operation

Adjuster	no
Display	LED green: Power

### Electrical connection

Cable diameter D	4.60 mm
Cable length L	2 m
Conductor cross-section	0.34 mm <sup>2</sup>
Connection	Cable, 2.00 m, PVC
Number of conductors	2
Polarity reversal protected	yes
Protection against device mix-ups	yes

### Electrical data

No-load current $I_0$ max. at $U_e$	15 mA
Operating voltage $U_b$	10...30 VDC
Rated insulation voltage $U_i$	75 V DC
Rated operating voltage $U_e$ DC	24 V
Ripple max. (% of $U_e$ )	15 %

### Environmental conditions

Ambient temperature	-5...55 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min
Protection degree	IP67

### Functional safety

MTTF (40 °C)	1060 a
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### Material

Housing material	Brass, nickel plated
Material jacket	PVC
Material sensing surface	PMMA
Surface protection	nickel plated

## Mechanical data

Dimension	Ø 12 x 60 mm
Mounting	Nut M12x1
Tightening torque max.	7 Nm 15 Nm

## Optical features

Beam characteristic	Divergent
LED group per IEC 62471	Exempt Group
Light spot size	Ø 280 mm at 8 m
Light type	LED, red light
Principle of optical operation	Through-beam sensor (Emitter)
Wave length	650 nm

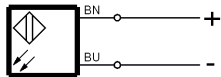
## Range/Distance

Range	0...8 m
Rated operating distance Sn	8 m

## Remarks

Order accessories separately.  
For additional information, refer to user's guide.

## Wiring Diagrams



## Opto Symbols

