

1) Output function, 2) Error, 3) Stability, 4) Sn, 5) Optical axis



### Basic features

Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference emitter	BLS 18M-XX-1LT-..
Series	18MR
Style	Cylinder Optics 90°

### Display/Operation

Adjuster	18-turn potentiometer
Display	Output function- LED yellow Error - LED red Stability - LED green
Setting	Sensitivity (Sn)

### Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Polarity reversal protected	yes
Short-circuit protection	yes

### Electrical data

Load capacitance max. at Ue	1 µF
No-load current I <sub>o</sub> max. at Ue	15 mA
Operating voltage U <sub>b</sub>	10...30 VDC
Protection class	II
Rated insulation voltage U <sub>i</sub>	75 V DC
Rated operating current I <sub>e</sub>	200 mA
Rated operating voltage U <sub>e</sub> DC	24 V
Ready delay t <sub>v</sub> max.	10 ms
Residual current I <sub>r</sub> max.	50 µA
Ripple max. (% of U <sub>e</sub> )	15 %
Switching frequency	6000 Hz
Turn-off delay t <sub>off</sub> max.	0.08 ms
Turn-on delay t <sub>on</sub> max.	0.08 ms
Voltage drop U <sub>d</sub> max. at I <sub>e</sub>	2.5 V

Photoelectric Sensors  
**BLE 18MR-BA-1LT-S4-C**  
**Order Code: BOS0076**



**Environmental conditions**

<b>Ambient temperature</b>	-10...50 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6
<b>EN 60068-2-6, Vibration</b>	10...55 Hz, amplitude 1 mm, 3x30 min
<b>IP rating</b>	IP65

**Functional safety**

<b>MTTF (40 °C)</b>	15 a
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**Interface**

<b>Switching output</b>	PNP normally closed (NC) PNP normally open (NO) Pins 4-2
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**Material**

<b>Housing material</b>	Brass, nickel-plated
<b>Material sensing surface</b>	Glass
<b>Surface protection</b>	nickel-plated

**Remarks**

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

The sensor is functional again after the overload has been eliminated.

Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.

Actuation object (target): gray card, 200 x 200, lateral approach.

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.

**Mechanical data**

<b>Dimension</b>	20 x 85 x 28.5 mm
<b>Mounting part</b>	Nut M18x1

**Optical features**

<b>Ambient light max.</b>	2000 Lux
<b>Light type</b>	Red light
<b>Principle of optical operation</b>	Through-beam sensor (receiver)
<b>Smallest part typ.</b>	30 µm at focal point, R0 = 20...80 cm
<b>Switching function, optical</b>	Light-on dark-on

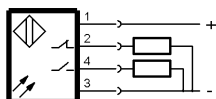
**Range/Distance**

<b>Range</b>	0...50 m
<b>Rated operating distance Sn</b>	50 m Adjustable

**Connector Drawings**



**Wiring Diagrams**



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**BALLUFF**

Opto Symbols

