

1) Optical axis 2) Sn 3) Output function 4) Adjustment error



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



Display/Operation

Adjuster	Potentiometer 270°
Display	Output function- LED yellow Alignment error - LED red
Setting	Sensitivity (Sn)

Electrical connection

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

Electrical data

Load capacitance max. at Ue	0.5 µF
No-load current I _o max. at Ue	15 mA
Operating voltage U _b	10...30 VDC
Output resistance R _a	33.0 kOhm
Rated insulation voltage U _i	75 V DC
Rated operating current I _e	200 mA
Rated operating voltage U _e DC	24 V
Ready delay t _v max.	100 ms
Residual current I _r max.	50 µA
Ripple max. (% of U _e)	15 %
Switching frequency	500 Hz
Turn-off delay t _{off} max.	1 ms
Turn-on delay t _{on} max.	1 ms
Utilization category	DC -13
Voltage drop U _d max. at I _e	2.5 V

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)	580 a
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General data

Approval/Conformity	CE cULus EAC WEEE
Basic standard	IEC 60947-5-2
Principle of operation	Photoelectric sensor
Reference emitter	BLS 12M-XX-1RD...
Series	12M
Style	Cylinder Straight optics
Trademark	Global

Material

Housing material	Brass
Material sensing surface	PMMA
Surface protection	nickel plated

Mechanical data

Dimension	Ø 12 x 70 mm
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Mounting Nut M12x1
 Tightening torque max. 15 Nm

Optical data

Ambient light max. 5000 Lux
 Light type LED, red light
 Principle of optical operation Through-beam sensor (receiver)
 Switching function, optical Light-on dark-on

Output/Interface

Switching output PNP normally open (NO)
 PNP NC Pins 4-2

Range/Distance

Range 0...5 m
 Rated operating distance Sn 5 m Adjustable
 Temperature drift max. (% of Sr) 10 %

Remarks

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

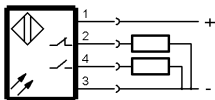
For more information about MTTF and B10d see MTTF / B10d Certificate

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.

Connector view



Wiring Diagram



Symbols for Optoelectronic Sensors

