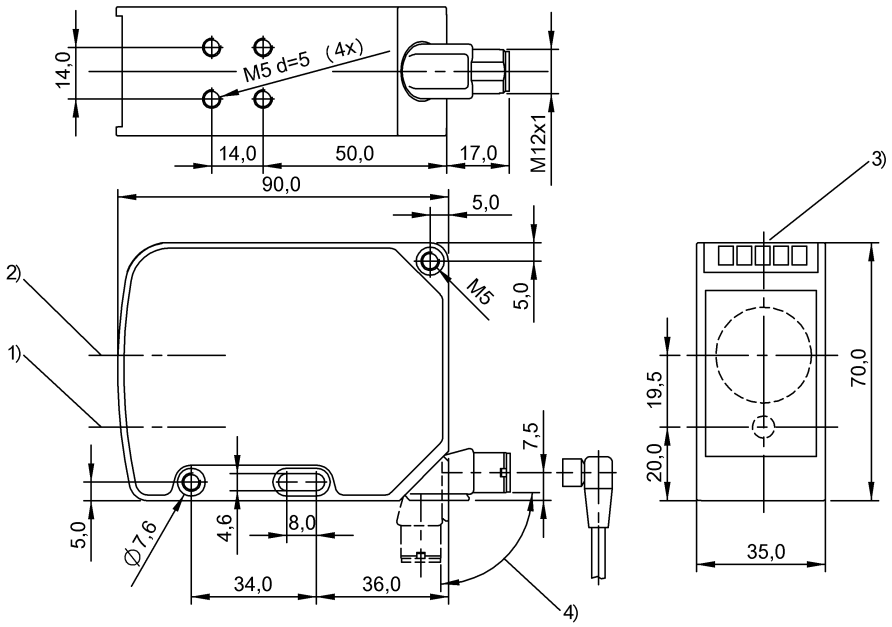
BOD 63M-LB04-S115
Order Code: BOD0011



1) Optical axis emitter, 2) Optical axis receiver, 3) Display and control panel, 4) rotatable 270°

Basic features

Application	Distance measurement
Approval/Conformity	CE EAC cULus WEEE
Basic standard	IEC 60947-5-2, IEC 60947-5-7
Principle of operation	Photoelectric distance sensor
Series	63M
Style	Square Connection can be rotated

Display/Operation

Adjuster	Potentiometer 4-turn (2x)
Display	Output function- LED yellow Ready - LED green Error - LED red
Setting	Rated switching distance (Sn)

Electrical connection

Connection	Connector, M12x1-Male, 8-pin
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Short-circuit protection	yes

Photoelectric Sensors

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Electrical data

Input function	Emitter on/off
Load capacitance max. at Ue	0.47 µF
Load resistance RL max. (Analog I)	500 ohms
Mean life expectancy	100,000 h, 25 °C
No-load current Io max. at Ue	75 mA
Operating voltage Ub	15...30 VDC
Protection class	II
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	200 mA
Rated operating voltage Ue DC	24 V
Ready delay tv max.	20 ms
Residual current Ir max.	10 µA
Ripple max. (% of Ue)	15 %
Switching frequency	250 Hz
Turn-off delay toff max.	2 ms
Turn-on delay ton max.	2 ms
Utilization category	DC -13
Voltage drop Ud max. at Ie	2 V

Environmental conditions

Ambient temperature	-10...60 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g_n, 11 ms, 3x6
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	173 a

Interface

Analog output	Analog, current 4...20 mA
Output characteristic	linear increasing
Supplementary output	Error output PNP
Switch function, supplementary output	Normally closed (NC)
Switching output	2x PNP normally open (NO)

Material

Housing material	Aluminium, Die casting, Painted
Material sensing surface	Glass
Surface protection	Painted

Mechanical data

Dimension	35 x 70 x 90 mm
Mounting part	Screw M4 Screw M5

Optical features

Ambient light max.	10000 Lux
Average power Po max.	1 mW
Beam characteristic	Collimated
Laser class per IEC 60825-1	2
Light spot size	Ø 10 mm at 6 m
Light type	Laser red light
Principle of optical operation	Light time-of-flight
Pulse duration t max.	0.007 µs
Pulse frequency	2050 kHz
Pulse power Pp max.	70.0 mW
Switching function, optical	Light-on
Wave length	660 nm

Range/Distance

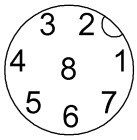
Accuracy	±1 % FS
Distance deviation 18 % max. (% of Sr)	1.5 %, S = 1000...6000 mm
Hysteresis H max. (% of Sr)	0.3 %
Range	200...6000 mm
Rated operating distance Sn	6 m Adjustable
Repeat accuracy	0.033 %FS
Repeat accuracy max. (% of Sr)	0.2 %
Repeatability	±2 mm
Resolution	≤ 1.0 mm
Temperature drift max. (% of Sr)	0.9 %

Remarks

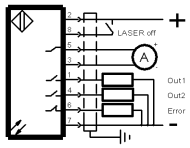
Order accessories separately.
Full accuracy after warmup phase
Only for applications per NFPA 79 (machines with a supply voltage of maximum 600 V). Use an R/C (CYJV2) cable with suitable properties for attaching the device.
Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.
The sensor is functional again after the overload has been eliminated.
For additional information, refer to user's guide.
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.

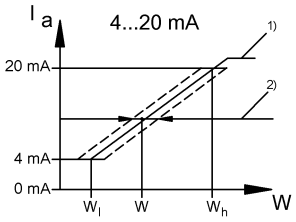
Connector Drawings



Wiring Diagrams (Schematic)

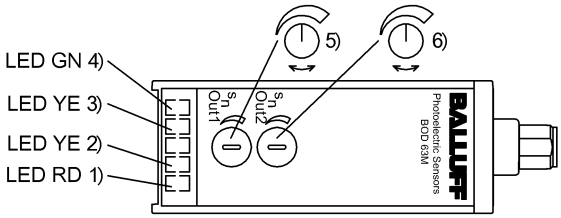


Technical Drawings



1) Analog output curve
2) Output curve deviation

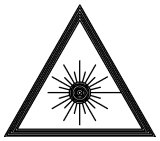
Help Views



1) stability
2) Output function
3) Output function
4) Operating voltage
5) Sn Out1
6) Sn Out2

Opto Symbols

Warning Symbols



LASER BEAM - DO NOT STARE INTO THE LIGHT BEAM!

LASER CLASS 2 per IEC60825-1: 2003-10