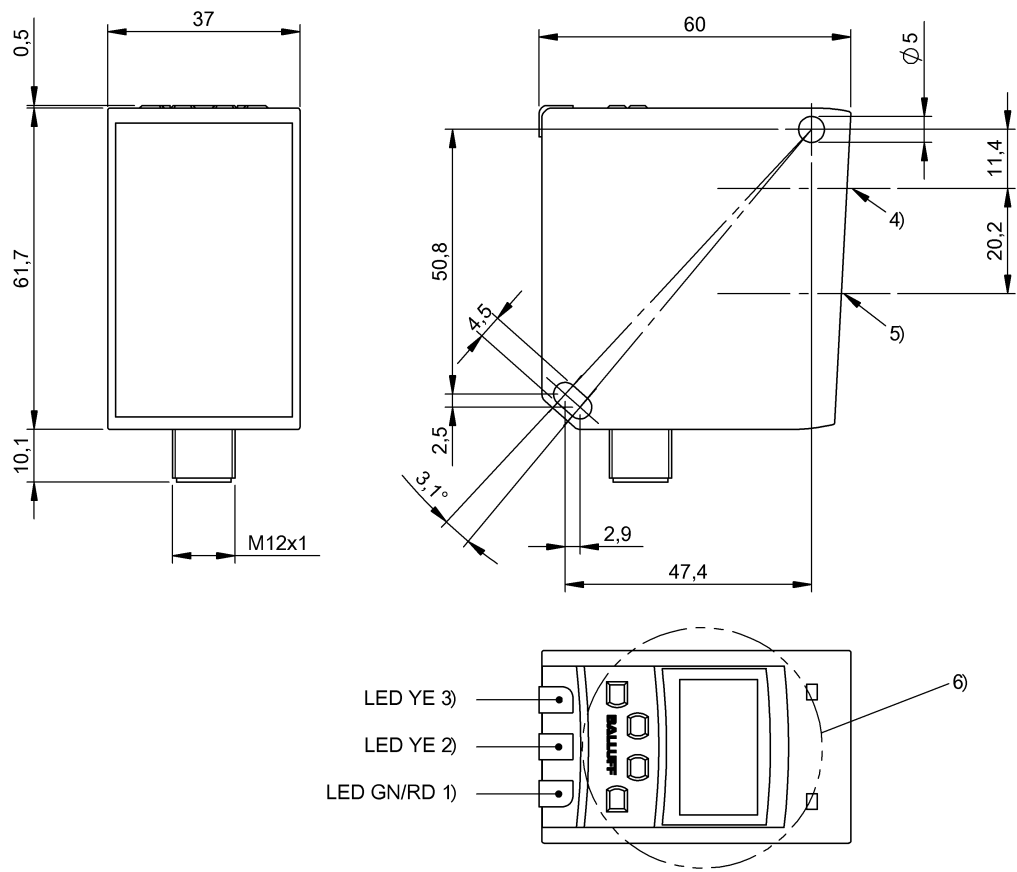




1) Operating voltage/Error, 2) Switchpoint Q2, 3) Switchpoint Q1, 4) Optical axis emitter, 5) Optical axis receiver, 6) Display and keypad



Basic features

Approval/Conformity	CE cULus WEEE
Basic standard	IEC 60947-5-2, IEC 60947-5-7
Principle of operation	Photoelectric distance sensor
Series	37M
Style	Square Connection 90°

Display/Operation

Adjuster	Key (4x)
Display	LED green: Power Teach mode - LED yellow, flashing Object not in range - LED red
Setting	Switching output Q Switching distance, 2 values Factory setting (Reset)

Electrical connection

Connection	Connector, M12x1-Male, 8-pin
Polarity reversal protected	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	0.5 μ F
Load resistance RL max. (Analog I)	500 ohms
Load resistance RL min. (Analog V)	1.2 kOhm
No-load current Io max. at Ue	130 mA
Operating voltage Ub	19.2...28.8 VDC
Rated insulation voltage Ui	500 V AC
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Residual current Ir max.	400 μ A
Switching frequency	11 Hz

Photoelectric Sensors
BOD 37M-LPR02-S115
Order Code: BOD001Y

BALLUFF

Environmental conditions

Ambient temperature	-15...50 °C
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 0.5 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	68 a
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Interface

Analog output	Analog, voltage/Analog, current 0.2...10 V/4...20 mA
Interface	RS485
Output characteristic	linear rising/falling
Switching output	2x PNP/NPN/push-pull NO/NC

Material

Housing material	Zinc, Die casting
Material sensing surface	PMMA

Mechanical data

Dimension	60 x 37 x 72.3 mm
Mounting part	Screw M4

Optical features

Ambient light max.	40000 Lux
Average power Po max.	1 mW
Beam characteristic	Collimated
Laser class per IEC 60825-1	2
Light spot size	Ø 15 mm at 10 m
Light type	Laser red light
Principle of optical operation	Light time-of-flight
Pulse duration t max.	0.004 µs
Switching function, optical	Light/dark switching
Wave length	658 nm

Range/Distance

Accuracy	±0.035 % FS
Hysteresis H max. (% of Sr)	5 %
Range	200...20000 mm
Rated operating distance Sn	20 m Adjustable
Repeat accuracy	0.01 %FS
Resolution	≤ 1.0 mm

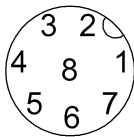
Remarks

For additional information, refer to user's guide.

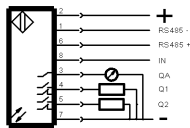
For more information about MTTF and B10d see MTTF / B10d Certificate

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



Help Views

RS 485

Output stream

MSB

LSB

Bin to Dig 11129 mm

0	1	X	X	0	0	1	0	1	0	1	0	1	1	0	1	1	1	1	0	0	1																		
Byte count		1				2		3		4		Byte count		5		6		7		8		9		10		Byte count		11		12		13		14		15		16	

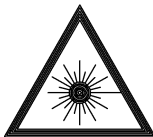
Input comand

RS-485 Cmd	1 ^o byte	2 ^o byte	3 ^o byte	4 ^o byte	5 ^o byte
Get Measure	"0x40"hex	"0x43"hex	"Node N ^o "hex	"0x00"hex	"0x01"hex

Opto Symbols



Warning Symbols



LASER BEAM - DO NOT STARE INTO THE LIGHT BEAM!

LASER CLASS 2 per IEC60825-1: 2003-10