

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 µF
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 µA
Switching frequency	11 Hz

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



**Environmental conditions**

<b>Ambient temperature</b>	-15...50 °C
<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 0.5 mm, 3x30 min
<b>IP rating</b>	IP67

**Functional safety**

<b>MTTF (40 °C)</b>	68 a
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**Interface**

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

**Material**

<b>Housing material</b>	Zinc, Die casting
<b>Material sensing surface</b>	PMMA

**Mechanical data**

<b>Dimension</b>	60 x 37 x 72.3 mm
<b>Mounting part</b>	Screw M4

**Optical features**

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

**Range/Distance**

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

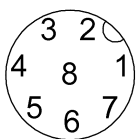
**Remarks**

For additional information, refer to user's guide.

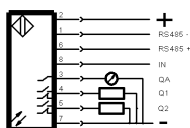
For more information about MTTF and B10d see MTTF / B10d Certificate

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**



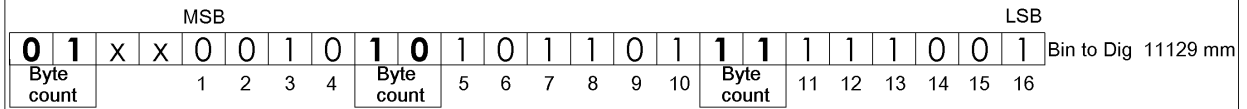
**Wiring Diagrams**



## Help Views

### RS 485

#### Output stream



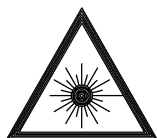
#### Input comand

RS-485 Cmd	1 <sup>o</sup> byte	2 <sup>o</sup> byte	3 <sup>o</sup> byte	4 <sup>o</sup> byte	5 <sup>o</sup> byte
Get Measure	"0x40"hex	"0x43"hex	"Node N <sup>o</sup> "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