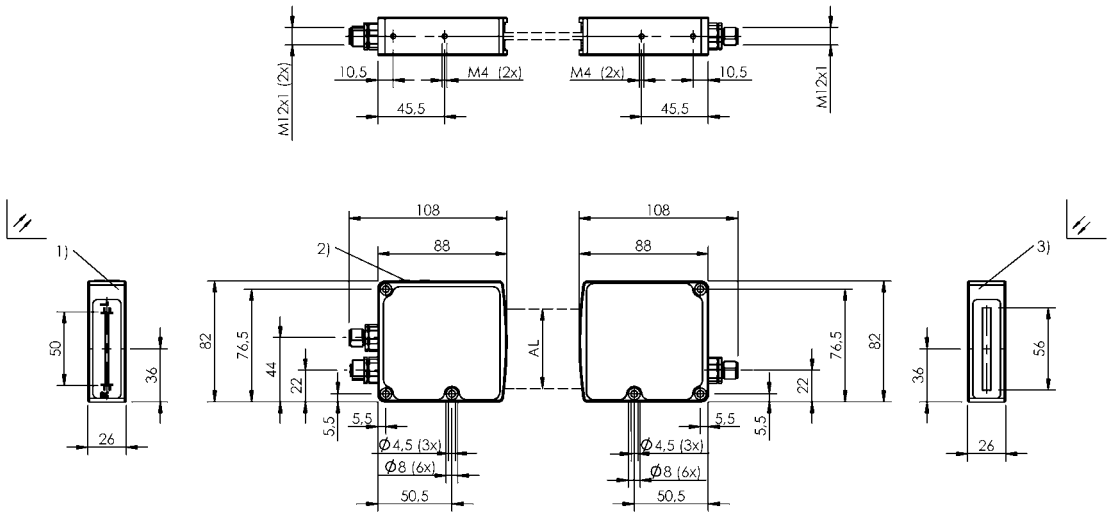
BLA 50D-002-S4
Order Code: BLA000C



1) Receiver, 2) Display and control panel, 3) Emitter

Basic features

Approval/Conformity	CE WEEE cULus UKCA
Basic standard	IEC 60947-5-2
Principle of operation	Light array
Scope of delivery	Holding system Connection cable (emitter - receiver) Manual
Series	D
Style	Square Straight connection

Display/Operation

Adjuster	Key (4x)
Display	Communication - Green LED, flashing CCD signal - OLED display Setting menu - OLED display Measuring mode - OLED display Analog meas.val. - OLED displ. Object in meas. field - LED orange Object mode - OLED display Object number - OLED display Object visualization - OLED display Meas.field limits - OLED disp

Setting	Measurement mode (2 independent measurement values) Object mode (digital values) Meas.field limits Factory setting (Reset) Output active/inactive Teach in objects (max. 6) Key disable on/off Read direction of the OLED display Contrast of the OLED display OLED display on/off Normalize CCD signal Align via CCD signal disp. Signal scaling Setting block Averaging mode Object detection tolerance

Electrical connection

Connection	Connector, M12x1-Male, 4-pin
Connection 2	M12x1-Female, 4-pin, A-coded
Connection 3	M12x1-Male, 4-pin, A-coded
Contact, surface protection	Gold plated
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

No-load current Io max. at Ue	100 mA
Operating voltage Ub	18...30 VDC
Rated insulation voltage Ui	75 V DC
Rated operating voltage Ue DC	24 V
Ready delay tv max.	300 ms
Ripple max. (% of Ue)	10 %

Environmental conditions

Ambient temperature	5...55 °C
EN 60068-2-27, Shock	Half-sinus, 30 g_n, 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP54

Functional safety

MTTF (40 °C)	30 a

IO-Link

IO-Link Profil IDs	N/A

Interface

Baud rate	COM2 (38.4 kBaud)
Interface	IO-Link 1.1

Material

Housing material	Aluminium, Anodized
Housing material, surface protection	Anodized
Material sensing surface	Glass
Surface protection	Anodized

Mechanical data

Mounting part	Screw M4

Optical features

Ambient light max.	5000 Lux
Average power Po max.	90 µW
Beam characteristic	Collimated light strip, width 54 mm
Laser class per IEC 60825-1	1
Light type	Laser red light
Principle of optical operation	Through-beam sensor
Pulse frequency	0.01...1 kHz
Pulse power Pp max.	0.2 mW
Smallest part typ.	Wire Ø 0.3 mm at R0 ≤ 0.25m Wire Ø 0.5 mm at R0 ≤ 1m Wire Ø 1.0 mm at R0 ≤ 2m
Special optical feature	CCD technology
Wave length	650 nm

Range/Distance

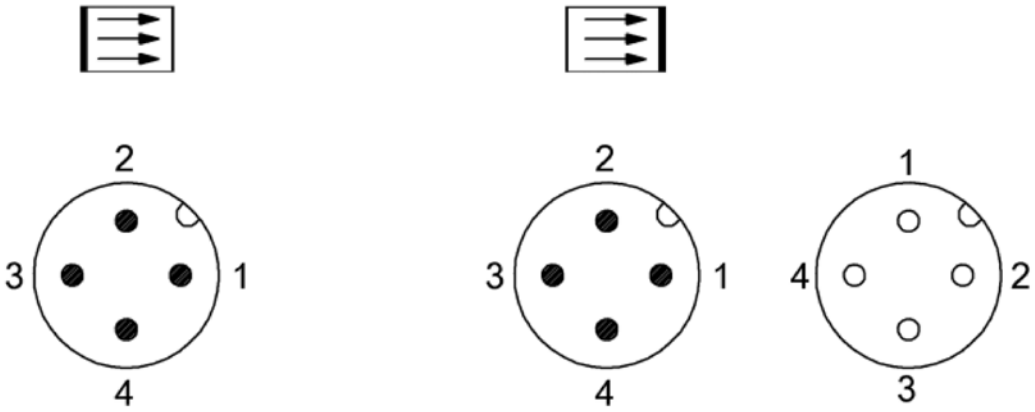
Accuracy	±30 µm (R0≤0.25m) 60 µm (R0≤1m) 100 µm (R0≤2m)
Active length AL 1	50 mm
Range	0...2 m
Rated operating distance Sn	2 m
Repeat accuracy	15 µm (R0 ≤ 0.25 m) 20 µm (R0 ≤ 1 m) 70 µm (R0 ≤ 2 m)
Resolution	≤ 0.01 mm

Remarks

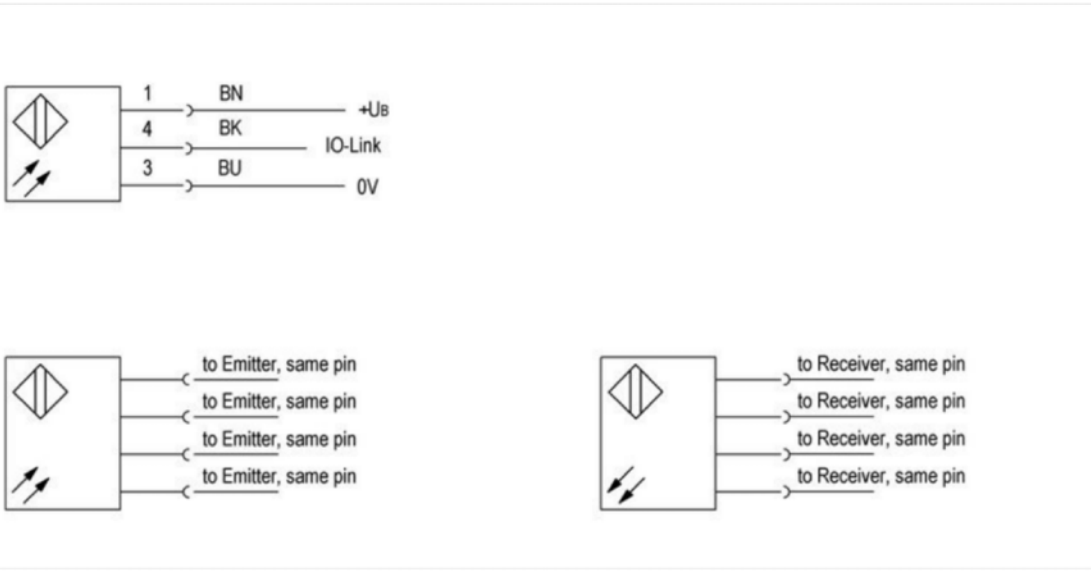
For additional information, refer to user's guide.
Do not press key using a pointed tool.
Reference object (target): Steel cylinder diameter 8.0 mm.
For more information about MTTF and B10d see MTTF / B10d Certificate

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.

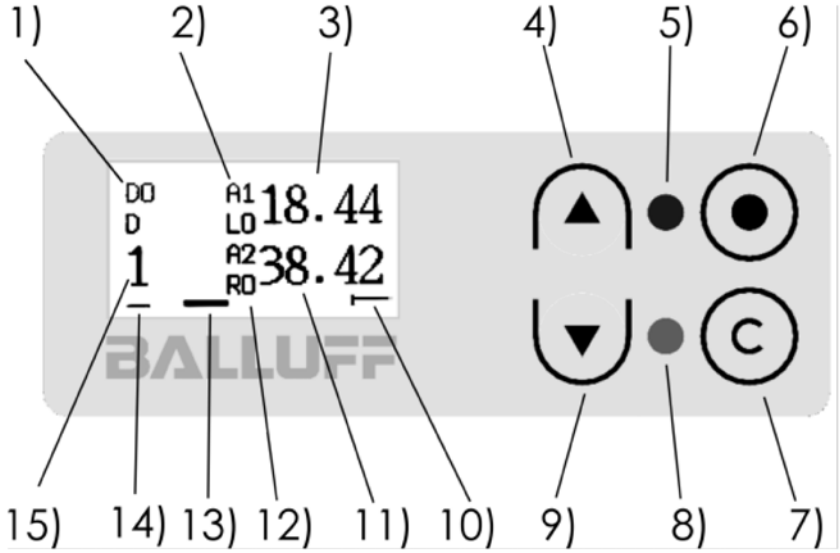
Connector Drawings



Wiring Diagrams

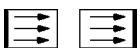


Help Views

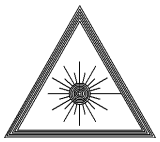


1) Object mode digital outputs
2) Measuring mode analog out1
3) Measured value analog out1
4) Scroll / increase value
5) LED 2 - Object detected
6) Menu, confirm selection
7) Discard selection, back
8) LED 1 - Operating voltage
9) Scroll / Reduce value
10) Vis. meas. field - blank.
11) Measured value analog out2
12) Measuring mode analog out2
13) Vis. meas. field - object
14) Vis. meas. field - autobl.
15) No. of identified object

Opto Symbols



Warning Symbols



LASER CLASS 1 per IEC 60825-1