

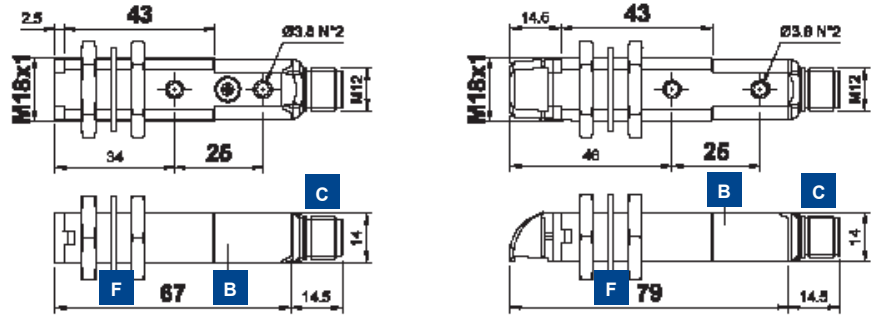
L-B LASER RETROREFLEX WITH RED EMISSION

The visible red laser emission increases the operating distance and resolution of the polarised retroreflex sensor. Specific R7 or R8 reflectors with 0.8 mm micro-prisms are available for high-resolution detection of small objects. The class 1 laser emission guarantees maximum safety for the operators in all applications.

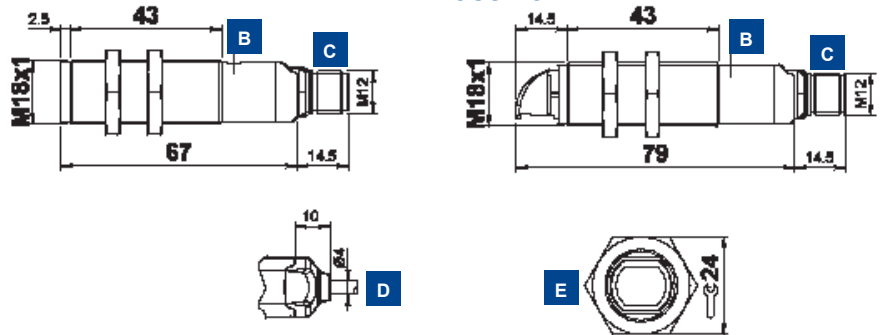


DIMENSIONS

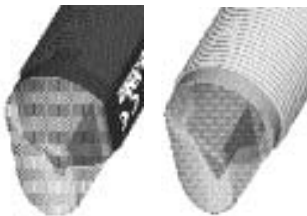
PLASTIC HOUSING



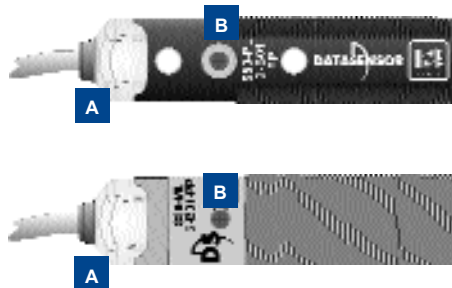
METAL HOUSING



RADIAL OPTICS



INDICATORS AND SETTINGS



- A** OUTPUT status and STABILITY LEDs
- B** Adjustment trimmer
- C** M12 connector output
- D** Cable output
- E** Fixing nuts
- F** Fixing gasket

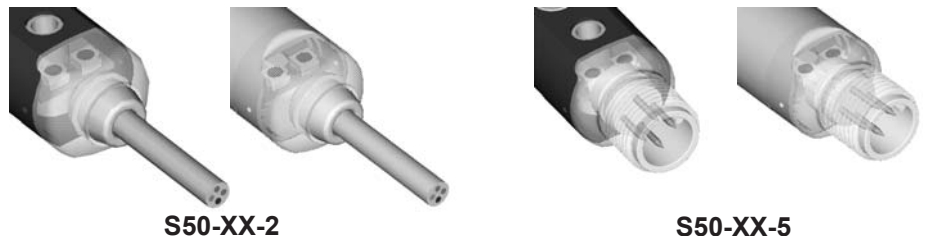
Single-turn trimmer for sensitivity adjustment. Rotate in a clockwise direction to increase the operating distance. Decrease sensitivity to increase resolution.

ACCESSORIES

For dedicated accessories refer to the **ACCESSORIES** section of this catalogue.

Refer also to **Reflectors (A.01)**, **Connectors (A.03)** and **Fixing brackets (A.04)** of the General Catalogue.

CONNECTIONS



BROWN	1	+	10 ... 30 Vdc
WHITE	2		NC OUTPUT
BLACK	3		NC OUTPUT
BLUE	4		0 V



TECHNICAL DATA

	S50-PL-2-B01-NN	S50-PL-2-B01-PP	S50-PH-2-B01-NN	S50-PH-2-B01-PP	S50-PL-5-B01-NN	S50-PL-5-B01-PP	S50-PH-5-B01-NN	S50-PH-5-B01-PP	S50-ML-2-B01-NN	S50-ML-2-B01-PP	S50-MH-2-B01-NN	S50-MH-2-B01-PP	S50-ML-5-B01-NN	S50-ML-5-B01-PP	S50-MH-5-B01-NN	S50-MH-5-B01-PP	
Operating distance:																	
axial optics	0.1 ... 16 m	●	●		●	●			●	●			●	●			
radial optics	0.1 ... 9 m			●	●		●	●			●	●			●	●	
Power supply:	10 ... 30 Vdc ¹	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Ripple:	≤ 2 Vpp	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Consumption:	≤ 35 mA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Light emission:																	
	red Laser 650 nm ²	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	class 1 EN 60825-1																
	class II CDRH21 CFR 1040.10																
Resolution:																	
	2 mm max. at 3 m (on R7)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	5 mm max. over 7 m (on R2)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Setting:	sensitivity trimmer ³	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Indicators:																	
	yellow OUTPUT LED	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	green STABILITY LED	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Output type:																	
	PNP, NO and NC		●		●		●		●		●		●		●		
	NPN, NO and NC	●		●		●		●	●		●		●		●		
Output current:	≤ 100 mA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Saturation voltage:	≤ 2 V	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Response time:	333 μs	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Switching frequency:	1.5 kHz	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Operating mode:	dark on NO / light on NC	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Connection:																	
	2 m Ø 4 mm cable ⁴	●	●		●	●		●			●	●			●	●	
	M12 4-pole connector ⁵	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Electrical protection:	class 2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Mechanical protection:	IP67	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Protection devices:	A, B ⁶	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Housing material:																	
	PBT	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	nickel plated brass								●	●	●	●	●	●	●	●	
Lens material:	PMMA / glass	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Weight:																	
	75 g max.	●	●	●													
	25 g max.				●	●	●	●									
	110 g max.								●	●	●	●					
	60 g max.												●	●	●	●	
Operating temperature:	-10 ... +50°C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Storage temperature:	-25 ... +70°C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Reference standard:	EN 60947-5-2,	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	EN 60825-1, CDRH21 CFR 1040.10	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	



SELECTION TABLE

plastic - axial optics - 2 m cable		
S50-PL-2-B01-NN	952001870	NPN
S50-PL-2-B01-PP	952001360	PNP

plastic - radial optics - 2 m cable		
S50-PH-2-B01-NN	952001950	NPN
S50-PH-2-B01-PP	952001940	PNP

metal - axial optics - 2 m cable		
S50-ML-2-B01-NN	952021820	NPN
S50-ML-2-B01-PP	952021400	PNP

metal - radial optics - 2 m cable		
S50-MH-2-B01-NN	952021950	NPN
S50-MH-2-B01-PP	952021940	PNP

plastic - axial optics - M12 connector		
S50-PL-5-B01-NN	952001840	NPN
S50-PL-5-B01-PP	952001370	PNP

plastic - radial optics - M12 connector		
S50-PH-5-B01-NN	952001970	NPN
S50-PH-5-B01-PP	952001960	PNP

metal - axial optics - M12 connector		
S50-ML-5-B01-NN	952021850	NPN
S50-ML-5-B01-PP	952021440	PNP

metal - radial optics - M12 connector		
S50-MH-5-B01-NN	952021970	NPN
S50-MH-5-B01-PP	952021960	PNP

All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

- ¹ Limit values
- ² Average life of 50.000 h with T_A = +25 °C
- ³ 270° single-turn trimmer
- ⁴ PVC, 4 x 0.14 mm²
- ⁵ Compatible with quick connection systems
- ⁶ A - reverse polarity protection
B - overload and short-circuit protection on the outputs

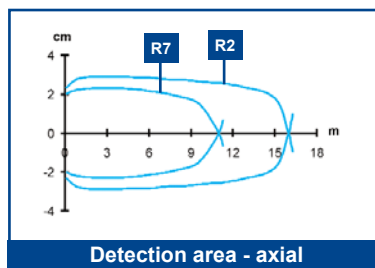
The use of the MICRO-18 fixing bracket (cod. 95ACC1380) is recommended for the correct optic axis alignment of the laser emission.

DETECTION DIAGRAMS

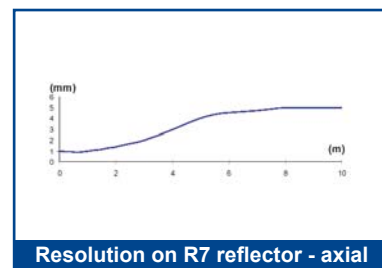
axial on R2	16
axial on R7	11
radial on R2	9
radial on R7	6

■ Operating distance

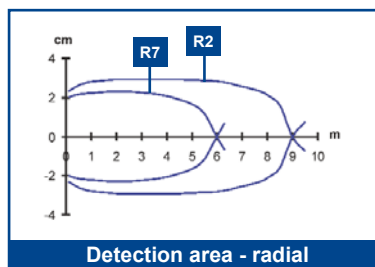
High efficiency reflectors can be used to obtain larger operating distances. Refer to **Reflectors (A.01)** of the **General Catalogue**.



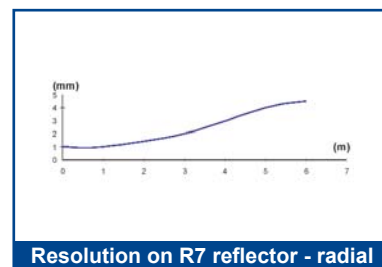
Detection area - axial



Resolution on R7 reflector - axial



Detection area - radial



Resolution on R7 reflector - radial