

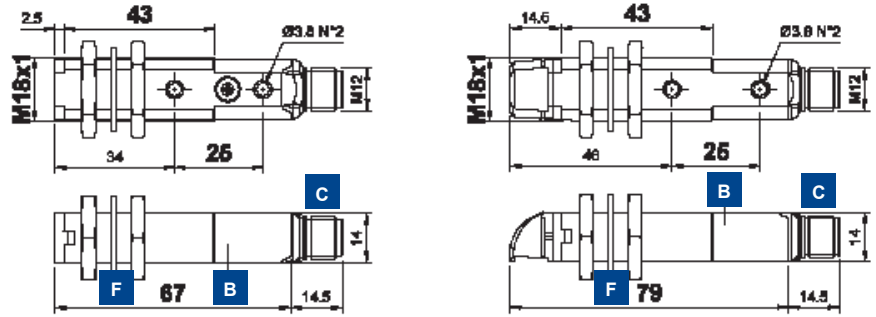
L-B LASER RETROREFLEX WITH RED EMISSION

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.

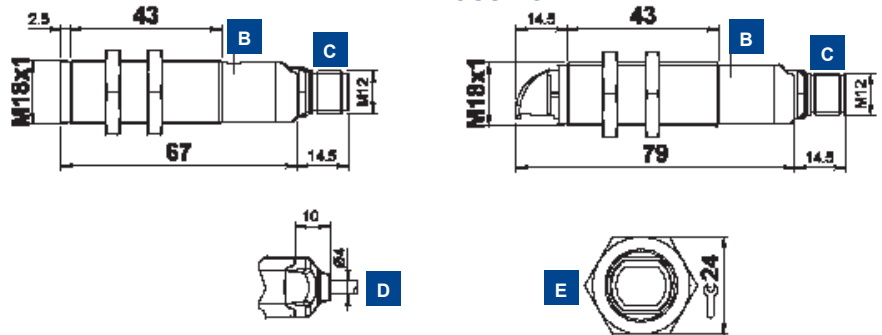


DIMENSIONS

PLASTIC HOUSING

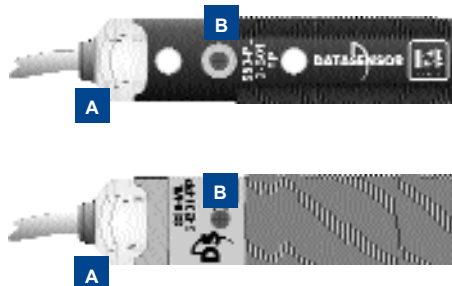
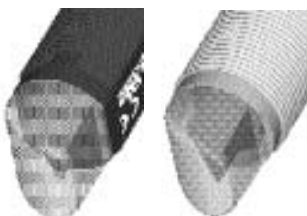


METAL HOUSING



INDICATORS AND SETTINGS

RADIAL OPTICS



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

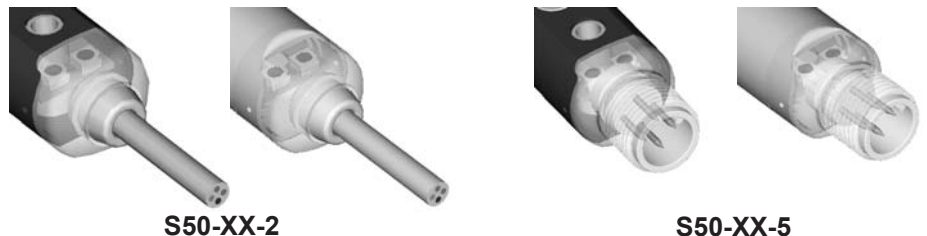
Single-turn trimmer for sensitivity adjustment. Rotate in a clockwise direction to increase the operating distance. Decrease sensitivity to increase resolution.

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		NO OUTPUT
BLACK	3		NO 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**.

