

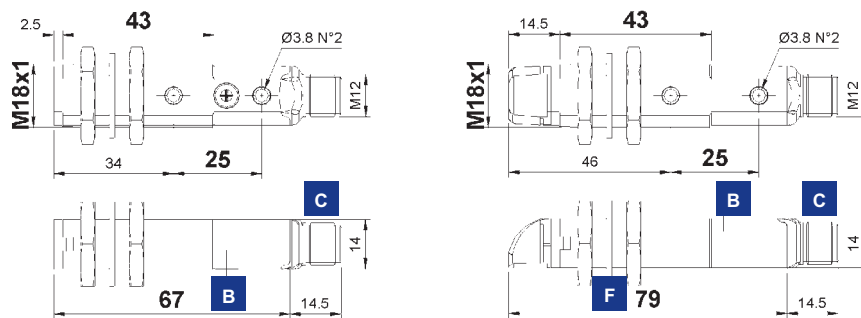
# L-C LASER PROXIMITY WITH RED EMISSION

The visible red laser emission allows the accurate detection of very small objects. The sensors operate as a proximity device up to 35 cm and can be used as a contrast sensor for high contrast mark detection. The class 1 laser emission guarantees maximum safety for the operators in all applications.

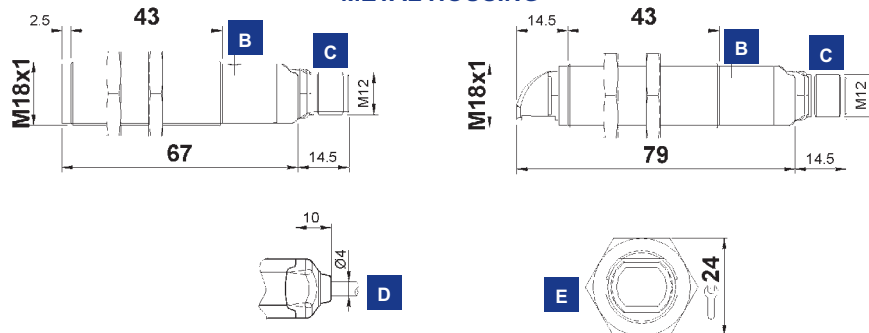


## DIMENSIONS

### PLASTIC HOUSING



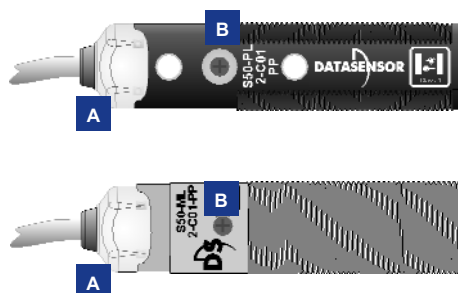
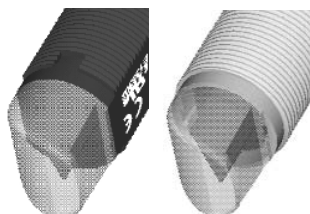
### METAL HOUSING



mm

## 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

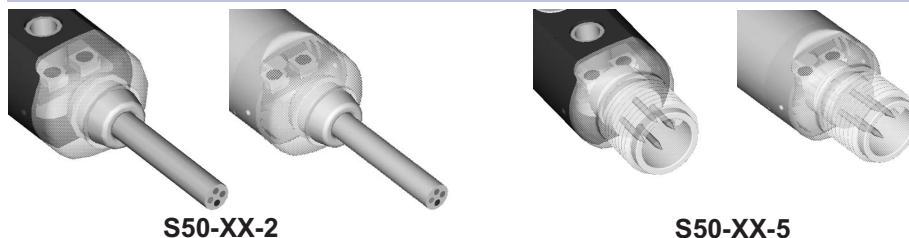
Single-turn trimmer for sensitivity adjustment. Rotate in a clockwise direction to increase the operating distance.

## ACCESSORIES

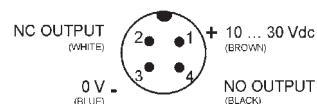
For dedicated accessories refer to the **ACCESSORIES** section of this catalogue.

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

## CONNECTIONS



- BROWN 1 + 10 ... 30 Vdc
- WHITE 2 NC OUTPUT
- BLACK 4 NO OUTPUT
- BLUE 3 - 0 V



TECHNICAL DATA

	S50-PL-2-C01-NN	S50-PL-2-C01-PP	S50-PH-2-C01-NN	S50-PH-2-C01-PP	S50-PL-5-C01-NN	S50-PL-5-C01-PP	S50-PH-5-C01-NN	S50-PH-5-C01-PP	S50-ML-2-C01-NN	S50-ML-2-C01-PP	S50-MH-2-C01-NN	S50-MH-2-C01-PP	S50-ML-5-C01-NN	S50-ML-5-C01-PP	S50-MH-5-C01-NN	S50-MH-5-C01-PP
<b>Operating distance:</b>																
axial optics	0 ... 35 cm	●	●		●	●			●	●			●	●		
radial optics	0 ... 25 cm			●	●		●	●			●	●			●	●
<b>Power supply:</b>	10 ... 30 Vdc <sup>1</sup>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Ripple:</b>	≤ 2 Vpp	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Consumption:</b>	≤ 35 mA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Light emission:</b>	red Laser 650 nm <sup>2</sup>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	class 1 EN 60825-1															
	class II CDRH21 CFR 1040.10															
<b>Resolution:</b>	approx. 0.3 mm at 5 cm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	approx. 0.3 mm at 10 cm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	approx. 0.5 mm at 20 cm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	approx. 2 mm at 30 cm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Setting:</b>	sensitivity trimmer <sup>3</sup>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Indicators:</b>	yellow OUTPUT LED	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	green STABILITY LED	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Output type:</b>	PNP, NO and NC	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	NPN, NO and NC	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Output current:</b>	≤ 100 mA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Saturation voltage:</b>	≤ 2 V	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Response time:</b>	333 μs	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Switching frequency:</b>	1.5 kHz	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Operating mode:</b>	light on NO / dark on NC	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Connection:</b>	2 m Ø 4 mm cable <sup>4</sup>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	M12 4-pole connector <sup>5</sup>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Electrical protection:</b>	class 2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Mechanical protection:</b>	IP67	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Protection devices:</b>	A, B <sup>6</sup>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Housing material:</b>	PBT	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	nickel plated brass	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Lens material:</b>	PMMA / glass	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Weight:</b>	75 g max.	●	●	●	●											
	25 g max.			●	●	●	●									
	110 g max.							●	●	●	●					
	60 g max.											●	●	●	●	
<b>Operating temperature:</b>	-10 ... +50°C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Storage temperature:</b>	-25 ... +70°C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>Reference standard:</b>	EN 60947-5-2,	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	EN 60825-1, CDRH21 CFR 1040.10	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●



SELECTION TABLE

plastic - axial optics - 2 m cable		
S50-PL-2-C01-NN	952001880	NPN
S50-PL-2-C01-PP	952001380	PNP

plastic - radial optics - 2 m cable		
S50-PH-2-C01-NN	952001990	NPN
S50-PH-2-C01-PP	952001980	PNP

metal - axial optics - 2 m cable		
S50-ML-2-C01-NN	952021830	NPN
S50-ML-2-C01-PP	952021410	PNP

metal - radial optics - 2 m cable		
S50-MH-2-C01-NN	952021990	NPN
S50-MH-2-C01-PP	952021980	PNP

plastic - axial optics - M12 connector		
S50-PL-5-C01-NN	952001850	NPN
S50-PL-5-C01-PP	952001390	PNP

plastic - radial optics - M12 connector		
S50-PH-5-C01-NN	952002010	NPN
S50-PH-5-C01-PP	952002000	PNP

metal - axial optics - M12 connector		
S50-ML-5-C01-NN	952021860	NPN
S50-ML-5-C01-PP	952021450	PNP

metal - radial optics - M12 connector		
S50-MH-5-C01-NN	952022010	NPN
S50-MH-5-C01-PP	952022000	PNP

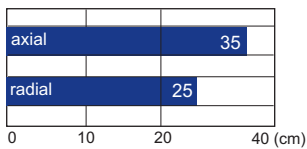
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

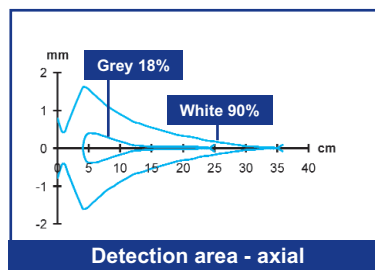
- Limit values
- Average life of 50.000 h with  $T_A = +25^\circ\text{C}$
- 270° single-turn trimmer
- PVC, 4 x 0.14 mm<sup>2</sup>
- Compatible with quick connection systems
- A - reverse polarity protection  
B - overload and short-circuit protection on the outputs

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

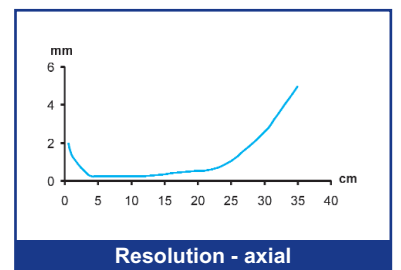
DETECTION DIAGRAMS



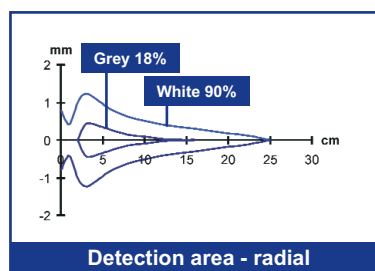
■ Operating distance



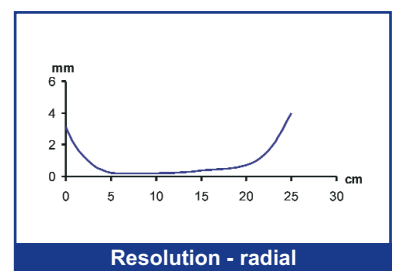
Detection area - axial



Resolution - axial



Detection area - radial



Resolution - radial