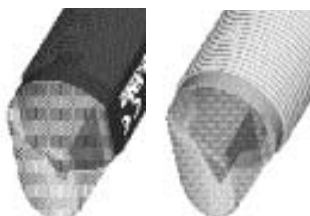


B POLARISED RETROREFLEX WITH RED EMISSION

With retroreflex sensors the object is detected when it interrupts the light beam generated between the sensor and its associated prismatic reflector. High-polarisation optic filters also allow reliable detection of very reflective objects, such as mirrored surfaces that, differently from the prismatic reflector, reflect the light beam without rotating the polarisation plane.



RADIAL OPTICS



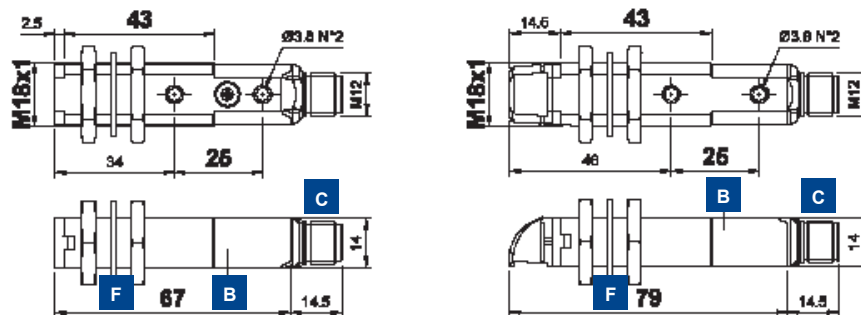
ACCESSORIES

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

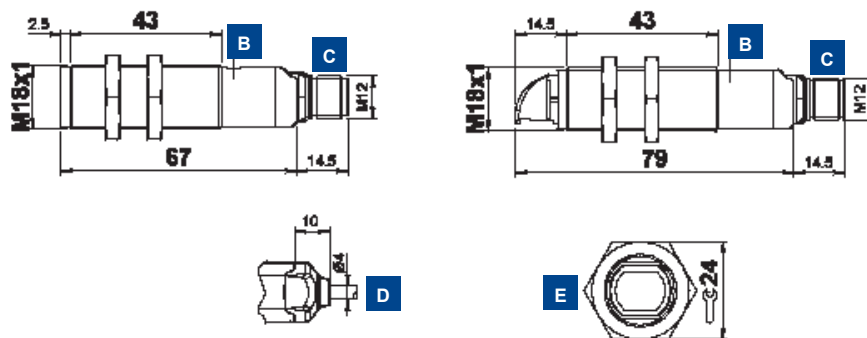
Refer also to **Reflectors (A.01)**, **Connectors (A.03)** and **Fixing brackets (A.04)** of the General Catalogue.

DIMENSIONS

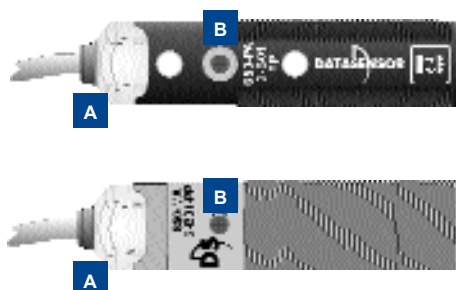
PLASTIC HOUSING



METAL HOUSING



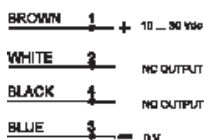
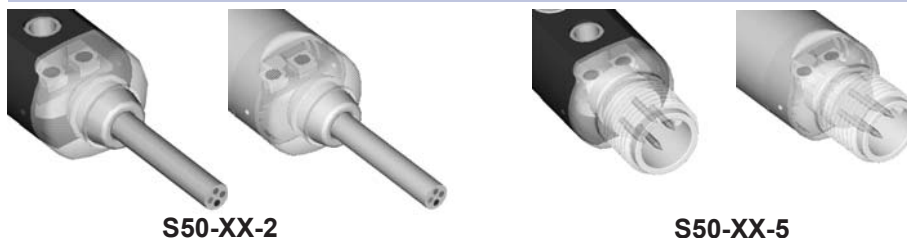
INDICATORS AND SETTINGS



- 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.

CONNECTIONS





TECHNICAL DATA

		S50-PA-2-B01-NN	S50-PA-2-B01-PP	S50-PA-5-B01-NN	S50-PA-5-B01-PP	S50-PR-2-B01-NN	S50-PR-2-B01-PP	S50-PR-5-B01-NN	S50-PR-5-B01-PP	S50-MA-2-B01-NN	S50-MA-2-B01-PP	S50-MA-5-B01-NN	S50-MA-5-B01-PP	S50-MR-2-B01-NN	S50-MR-2-B01-PP	S50-MR-5-B01-NN	S50-MR-5-B01-PP
Operating distance:																	
	axial optics	0.1 ... 4.5 m	●	●	●					●	●	●					
	radial optics	0.1 ... 3 m				●	●	●	●				●	●	●	●	●
Power supply:	10 ... 30 Vdc ¹	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Ripple:	≤ 2 Vpp	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Consumption:	≤ 35 mA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Light emission:	red LED 660 nm ²	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Spot dimension:																	
	axial optics	approx. 45 mm at 1 m	●	●	●					●	●	●					
	radial optics	approx. 60 mm at 2 m				●	●	●	●				●	●	●	●	●
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:	0.5 ms	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Switching frequency:	1 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Weight:																	
	75 g max.	●	●														
	25 g max.		●	●													
	110 g max.				●					●	●		●	●			
	60 g max.											●	●			●	●
Operating temperature:	-25 ... +55°C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Storage temperature:	-25 ... +70°C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Reference standard:	EN 60947-5-2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

SELECTION TABLE

plastic - axial optics - cable 2 m		
S50-PA-2-B01-NN	952001610	NPN
S50-PA-2-B01-PP	952001010	PNP

metal - axial optics - 2 m cable		
S50-MA-2-B01-NN	952021500	NPN
S50-MA-2-B01-PP	952021000	PNP

plastic - axial optics - M12 connector		
S50-PA-5-B01-NN	952001500	NPN
S50-PA-5-B01-PP	952001020	PNP

metal - axial optics - M12 connector		
S50-MA-5-B01-NN	952021660	NPN
S50-MA-5-B01-PP	952021200	PNP

plastic - radial optics - 2 m cable		
S50-PR-2-B01-NN	952001780	NPN
S50-PR-2-B01-PP	952001030	PNP

metal - radial optics - 2 m cable		
S50-MR-2-B01-NN	952021600	NPN
S50-MR-2-B01-PP	952021140	PNP

plastic - radial optics - M12 connector		
S50-PR-5-B01-NN	952001720	NPN
S50-PR-5-B01-PP	952001040	PNP

metal - radial optics - M12 connector		
S50-MR-5-B01-NN	952021760	NPN
S50-MR-5-B01-PP	952021340	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 100.000 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



DETECTION DIAGRAMS

Optics	Recommended operating distance (m)	Maximum operating distance (m)
axial on R5	4	4.5
axial on R2	3.5	4
radial on R5	2.5	3
radial on R2	2	2.5

■ Recommended operating distance
■ Maximum operating distance

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

