

TECHNICAL DATA

		S50-PA-2-F01-NN	S50-PA-2-F01-PP	S50-PA-2-G00-XG	S50-PR-2-F01-NN	S50-PR-2-G00-XG	S50-PA-5-F01-NN	S50-PA-5-F01-PP	S50-PA-5-G00-XG	S50-PR-5-F01-NN	S50-PR-5-G00-XG
Operating distance:											
axial optics	0 ... 20 m	•	•	•			•	•	•		
radial optics	0 ... 15 m				•	•				•	•
Power supply:	10 ... 30 Vdc ¹	•	•	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•
Consumption:											
emitter	≤ 35 mA		•		•		•		•		•
receiver	≤ 30 mA	•	•		•	•	•	•	•	•	•
Light emission:	infrared LED 880 nm ²		•		•		•		•		•
Spot dimension:											
axial optics	aprox. 500 mm at 15 m		•					•			
radial optics	aprox. 470 mm at 10 m				•						•
Setting:	sensitivity trimmer ³	•	•		•	•	•	•	•	•	•
Indicators:											
	yellow OUTPUT LED	•	•		•	•	•	•	•	•	•
	green STABILITY LED	•	•		•	•	•	•	•	•	•
	green POWER ON LED		•		•			•			•
Output type:											
	PNP, NO and NC		•		•		•		•		•
	NPN, NO and NC	•			•		•		•		•
Output current:	≤ 100 mA	•	•		•	•	•	•	•	•	•
Saturation voltage:	≤ 2 V	•	•		•	•	•	•	•	•	•
Response time:	2 ms	•	•		•	•	•	•	•	•	•
Switching frequency:	250 Hz	•	•		•	•	•	•	•	•	•
Operating mode:	dark on NO / light on NC	•	•		•	•	•	•	•	•	•
Auxiliary functions:	Test + and Test - ⁴		•		•			•		•	•
Connection:											
	2 m Ø 4 mm cable ⁵	•	•	•	•	•					
	M12 4-pole connector ⁶						•	•	•	•	•
Electrical protection:	class 2	•	•	•	•	•	•	•	•	•	•
Mechanical protection:	IP67	•	•	•	•	•	•	•	•	•	•
Protection devices:	A, B ⁷	•	•	•	•	•	•	•	•	•	•
Housing material:	PBT	•	•	•	•	•	•	•	•	•	•
Lens material:	PMMA	•	•	•	•	•	•	•	•	•	•
Weight:											
	75 g max.	•	•	•	•	•					
	25 g max.						•	•	•	•	•
Operating temperature:	-25 ... +55°C	•	•	•	•	•	•	•	•	•	•
Storage temperature:	-25 ... +70°C	•	•	•	•	•	•	•	•	•	•
Reference standard:	EN 60947-5-2	•	•	•	•	•	•	•	•	•	•

SELECTION TABLE

receiver - axial optics - 2 m cable		
S50-PA-2-F01-NN	952001660	NPN
S50-PA-2-F01-PP	952001150	PNP

emitter - axial optics - 2 m cable		
S50-PA-2-G00-XG	952001190	

receiver - radial optics - 2 m cable		
S50-PR-2-F01-NN	952001820	NPN
S50-PR-2-F01-PP	952001170	PNP

emitter - radial optics - 2 m cable		
S50-PR-2-G00-XG	952001210	

receiver - axial optics - M12 connector		
S50-PA-5-F01-NN	952001550	NPN
S50-PA-5-F01-PP	952001160	PNP

emitter - axial optics - M12 connector		
S50-PA-5-G00-XG	952001200	

receiver - radial optics - M12 connector		
S50-PR-5-F01-NN	952001760	NPN
S50-PR-5-F01-PP	952001180	PNP

emitter - radial optics - M12 connector		
S50-PR-5-G00-XG	952001220	

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 $T_A = +25^\circ\text{C}$

³ 270° single-turn trimmer

⁴ Emitter off with Test+ on Vdc and Test- on 0 V

⁵ PVC, 4 x 0.14 mm²

⁶ Compatible with quick connection systems

⁷ A - reverse polarity protection

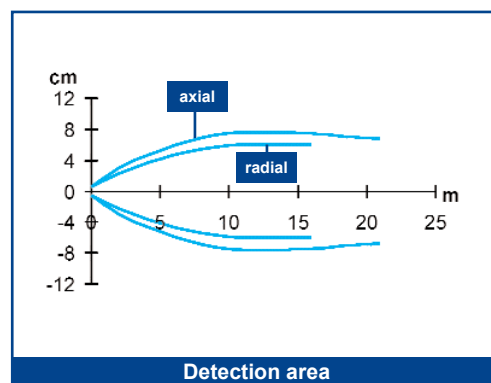
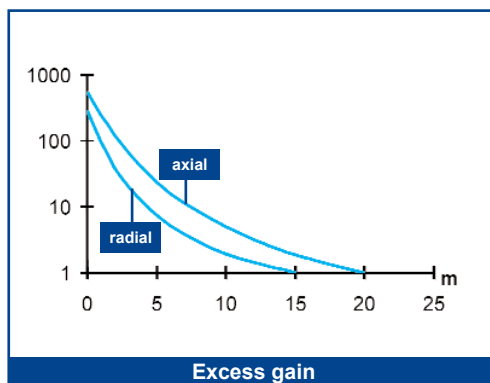
B - overload and short-circuit protection on receiver outputs



DETECTION DIAGRAMS

axial	15	20
radial	10	15

■ Recommended operating distance
 ■ Maximum operating distance



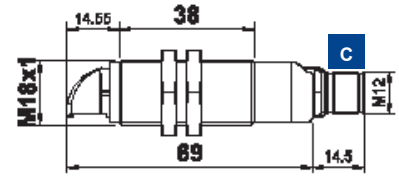
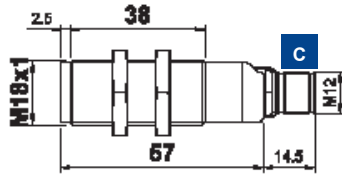
G/F THROUGH BEAM WITH INFRARED EMISSION

Longer operating distances can be obtained utilising separate emitter and receiver units. The infrared emission is modulated to avoid interference with other light sources and the emitter is fitted with test inputs for remote system interrogation.

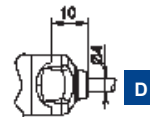
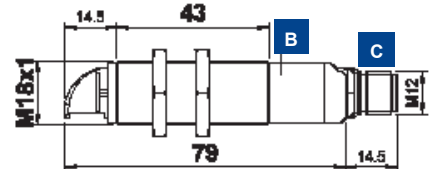
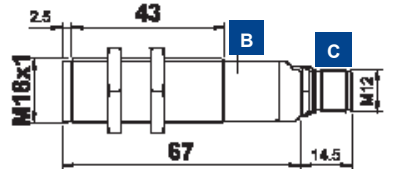


DIMENSIONS

EMITTER



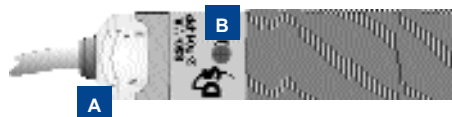
RECEIVER



RADIAL OPTICS



INDICATORS AND SETTINGS



- A** OUTPUT status and stability LEDs (receiver); power on LED (emitter)
- B** Adjustment trimmer (receiver)
- C** M12 connector output
- D** Cable output
- E** Fixing nuts

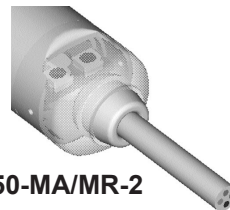
Single-turn trimmer for sensitivity adjustment. Rotate in a clockwise direction to increase the operating distance.

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**.

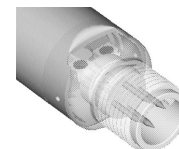
CONNECTIONS



S50-MA/MR-2

BROWN	1	+	10 ... 30 Vdc
WHITE	2	TEST +	
BLACK	4	TEST -	
BLUE	3	0 V	

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



S50-MA/MR-5

TEST + (WHITE)	2	+	10 ... 30 Vdc (BROWN)
0 V - (BLUE)	3		
TEST - (BLACK)	4		

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

EMITTER

RECEIVER