

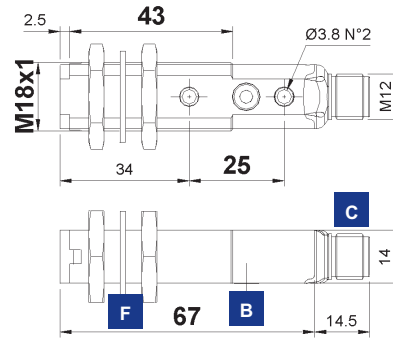
# M AXIAL BACKGROUND SUPPRESSION WITH RED EMISSION

Background suppression proximity allows to precisely adjust the distance over which the object is not detected, with the minimum difference between reflective objects. The *EASYtouch™* setting procedure fixes automatically the best detection conditions, simply pressing once the teach-in push-button, in presence of the reference to detect.

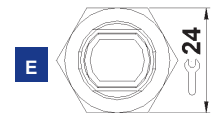
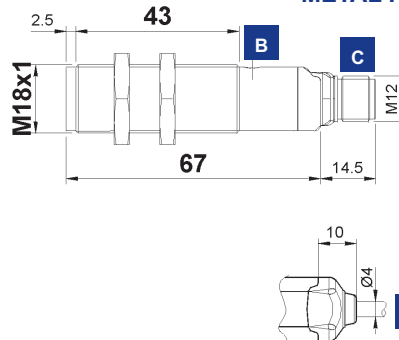


## DIMENSIONS

### PLASTIC HOUSING

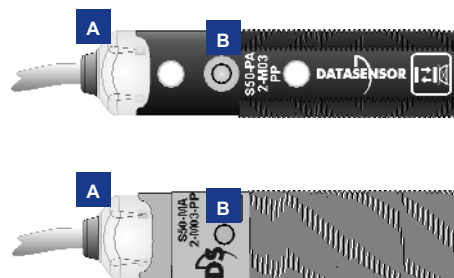


### METAL HOUSING



mm

## INDICATORS AND SETTINGS



- A** OUTPUT status and READY / ERROR LEDs
- B** Teach-in push-button
- C** M12 connector output
- D** Cable output
- E** Fixing nuts
- F** Fixing gasket

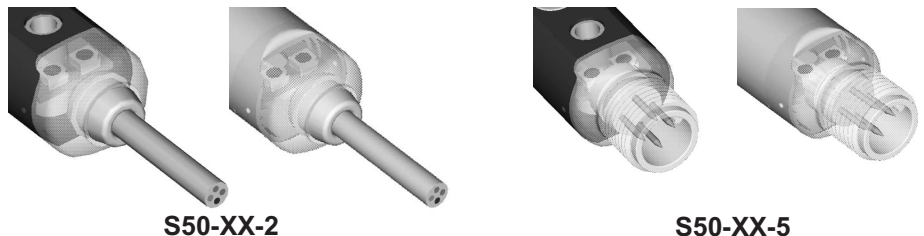
Teach-in button for setting.  
*EASYtouch™* provides two setting modes: standard or fine, both obtained by pressing the push-button only once. Please refer to instructions manual for operating details.

## ACCESSORIES

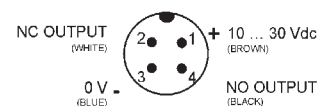
For dedicated accessories refer to the **ACCESSORIES** section of this catalogue.

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-PA-2-M03-NN	S50-PA-2-M03-PP	S50-PA-5-M03-NN	S50-PA-5-M03-PP	S50-MA-2-M03-NN	S50-MA-2-M03-PP	S50-MA-5-M03-NN	S50-MA-5-M03-PP
<b>Operating distance:</b>	5 ... 10 cm	●	●	●	●	●	●	●	●
<b>Power supply:</b>	10 ... 30 Vdc <sup>1</sup>	●	●	●	●	●	●	●	●
<b>Ripple:</b>	≤ 2 Vpp	●	●	●	●	●	●	●	●
<b>Consumption:</b>	≤ 30 mA	●	●	●	●	●	●	●	●
<b>Light emission:</b>	red LED 630 nm <sup>2</sup>	●	●	●	●	●	●	●	●
<b>Spot dimension:</b>	approx. 8 mm at 10 cm	●	●	●	●	●	●	●	●
<b>Setting:</b>	teach-in push-button	●	●	●	●	●	●	●	●
<b>Setting procedure:</b>	teach-in <i>EASYtouch</i> <sup>TM</sup>	●	●	●	●	●	●	●	●
<b>Indicators:</b>									
	yellow OUTPUT LED	●	●	●	●	●	●	●	●
	green / red READY / ERROR 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>	1 ms	●	●	●	●	●	●	●	●
<b>Switching frequency:</b>	500 Hz	●	●	●	●	●	●	●	●
<b>Operating mode:</b>	dark on NO / light on NC	●	●	●	●	●	●	●	●
<b>Connection:</b>									
	2 m Ø 4 mm cable <sup>3</sup>	●	●			●	●		
	M12 4-pole connector <sup>4</sup>			●	●			●	●
<b>Electrical protection:</b>	class 2	●	●	●	●	●	●	●	●
<b>Mechanical protection:</b>	IP67	●	●	●	●	●	●	●	●
<b>Protection devices:</b>	A, B <sup>5</sup>	●	●	●	●	●	●	●	●
<b>Housing material:</b>									
	PBT	●	●	●					
	nickel plated brass					●	●	●	●
<b>Lens material:</b>	PMMA	●	●	●	●	●	●	●	●
<b>Weight:</b>									
	75 g max.	●	●						
	25 g max.			●	●				
	110 g max.					●	●		
	60 g max.							●	●
<b>Operating temperature:</b>	-25 ... +55°C	●	●	●	●	●	●	●	●
<b>Storage temperature:</b>	-25 ... +70°C	●	●	●	●	●	●	●	●
<b>Reference standard:</b>	EN 60947-5-2	●	●	●	●	●	●	●	●

SELECTION TABLE

plastic - axial optics - 2 m cable		
S50-PA-2-M03-NN	952001670	NPN
S50-PA-2-M03-PP	952001230	PNP

metal - axial optics - 2 m cable		
S50-MA-2-M03-NN	952021550	NPN
S50-MA-2-M03-PP	952021070	PNP

plastic - axial optics - M12 connector		
S50-PA-5-M03-NN	952001560	NPN
S50-PA-5-M03-PP	952001000	PNP

metal - axial optics - M12 connector		
S50-MA-5-M03-NN	952021710	NPN
S50-MA-5-M03-PP	952021270	PNP

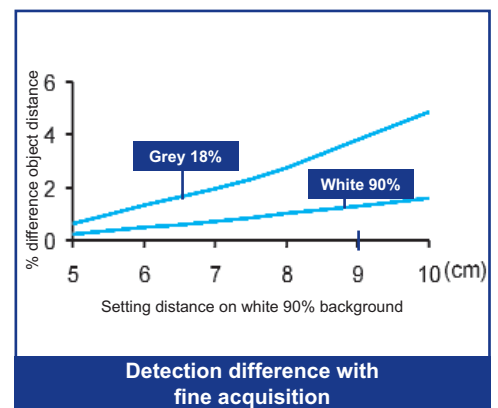
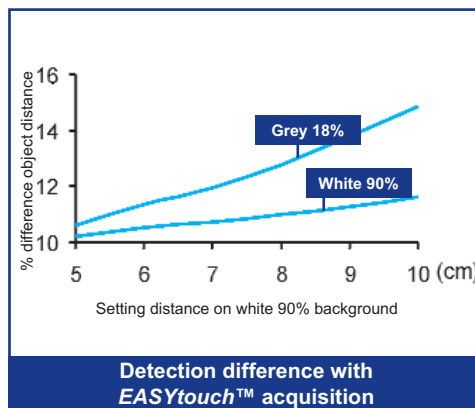
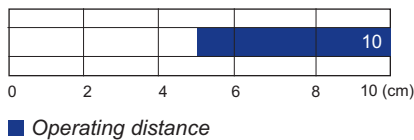
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

- <sup>1</sup> Limit values
- <sup>2</sup> Average life of 100.000 h with  $T_A = +25^\circ\text{C}$
- <sup>3</sup> PVC, 4 x 0.14 mm<sup>2</sup>
- <sup>4</sup> Compatible with quick connection systems
- <sup>5</sup> A - reverse polarity protection  
B - overload and short-circuit protection on the outputs



DETECTION DIAGRAMS



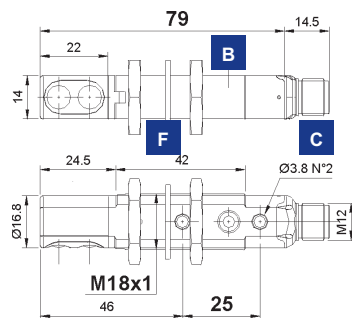
# M RADIAL BACKGROUND SUPPRESSION WITH RED EMISSION

Background suppression proximity allows to precisely adjust the distance over which the object is not detected, with the minimum difference between reflective objects. The *EASYtouch™* setting procedure fixes automatically the best detection conditions, simply pressing once the teach-in push-button, in presence of the reference to detect.

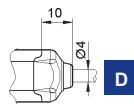
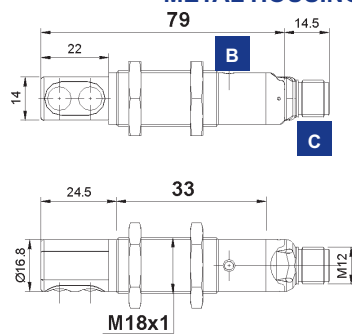


## DIMENSIONS

### PLASTIC HOUSING

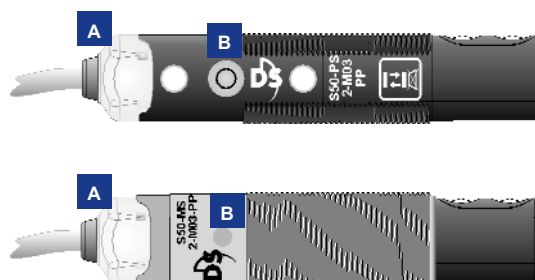


### METAL HOUSING



mm

## INDICATORS AND SETTINGS



- A** OUTPUT status and READY / ERROR LEDs
- B** Teach-in push-button
- C** M12 connector output
- D** Cable output
- E** Fixing nuts
- F** Fixing gasket

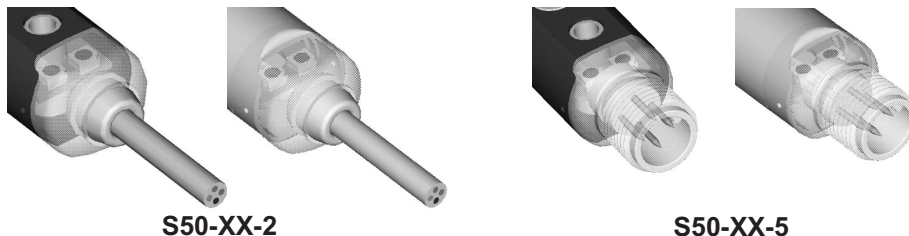
Teach-in button for setting. *EASYtouch™* provides two setting modes: standard or fine, both obtained by pressing the push-button only once. Please refer to instructions manual for operating details.

## ACCESSORIES

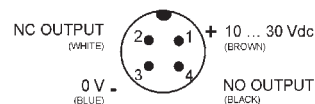
For dedicated accessories refer to the **ACCESSORIES** section of this catalogue.

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

## CONNECTIONS



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





TECHNICAL DATA

	S50-PS-2-M03-NN	S50-PS-2-M03-PP	S50-PS-5-M03-NN	S50-PS-5-M03-PP	S50-MS-2-M03-NN	S50-MS-2-M03-PP	S50-MS-5-M03-NN	S50-MS-5-M03-PP
<b>Operating distance:</b>	5 ... 10 cm							
<b>Power supply:</b>	10 ... 30 Vdc <sup>1</sup>							
<b>Ripple:</b>	≤ 2 Vpp							
<b>Consumption:</b>	≤ 30 mA							
<b>Light emission:</b>	red LED 630 nm <sup>2</sup>							
<b>Spot dimension:</b>	approx. 10 mm at 10 cm							
<b>Setting:</b>	teach-in push-button							
<b>Setting procedure:</b>	teach-in <i>EASytouch</i> <sup>TM</sup>							
<b>Indicators:</b>	yellow OUTPUT LED							
	green / red READY / ERROR 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>	1 ms							
<b>Switching frequency:</b>	500 Hz							
<b>Operating mode:</b>	dark on NO / light on NC							
<b>Connection:</b>	2 m Ø 4 mm cable <sup>3</sup>							
	M12 4-pole connector <sup>4</sup>							
<b>Electrical protection:</b>	class 2							
<b>Mechanical protection:</b>	IP67							
<b>Protection devices:</b>	A, B <sup>5</sup>							
<b>Housing material:</b>	PBT / PVC							
	nickel plated brass							
<b>Lens material:</b>	glass							
<b>Weight:</b>	90 g max.							
	40 g max.							
	125 g max.							
	75 g max.							
<b>Operating temperature:</b>	-25 ... +55°C							
<b>Storage temperature:</b>	-25 ... +70°C							
<b>Reference standard:</b>	EN 60947-5-2							

SELECTION TABLE

plastic - 2 m cable		
S50-PS-2-M03-NN	952001900	NPN
S50-PS-2-M03-PP	952001910	PNP

metal - 2 m cable		
S50-MS-2-M03-NN	952021900	NPN
S50-MS-2-M03-PP	952021910	PNP

plastic - M12 connector		
S50-PS-5-M03-NN	952001920	NPN
S50-PS-5-M03-PP	952001930	PNP

metal - M12 connector		
S50-MS-5-M03-NN	952021920	NPN
S50-MS-5-M03-PP	952021930	PNP

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

TECHNICAL NOTES

- <sup>1</sup> Limit values
- <sup>2</sup> Average life of 100.000 h with  $T_A = +25^\circ\text{C}$
- <sup>3</sup> PVC, 4 x 0.14 mm<sup>2</sup>
- <sup>4</sup> Compatible with quick connection systems
- <sup>5</sup> A - reverse polarity protection  
B - overload and short-circuit protection on the outputs



DETECTION DIAGRAMS

