

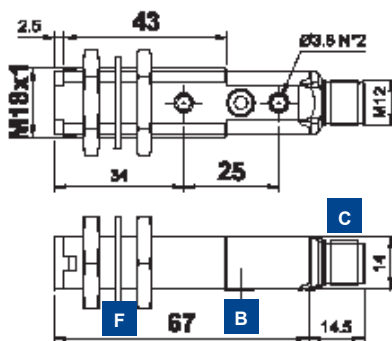
# W CONTRAST SENSOR WITH WHITE EMISSION

The white light LED emission is designed for the detection of a large number of coloured or grey-scale contrasts, in order to detect print registration marks or similar. The *EASYtouch™* setting procedures automatically selects the best detection conditions, simply by pressing the teach-in push-button once, in the presence of a reference mark. By pressing the teach-in push-button and holding it down until the green light on the rear of the sensor flashes, in the presence of the reference mark and then pressing the button again in the presence of the contrast you wish to ignore, a higher level of accuracy is obtained.

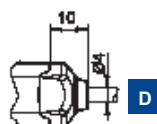
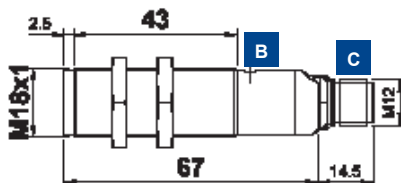


## DIMENSIONS

### PLASTIC HOUSING



### METAL HOUSING



## 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

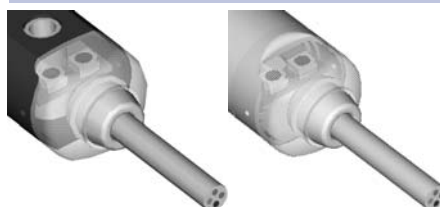
Teach-in button for setting.  
*EASYtouch™* provides two setting modes: standard or fine, both obtained by pressing the push-button only once. Please refer to instructions manual for operating details.

## ACCESSORIES

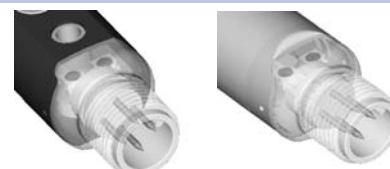
For **dedicated accessories** refer to the **ACCESSORIES** section of this catalogue.

Refer also to **Fibre-optics (A.02)**, **Connectors (A.03)** and **Fixing brackets (A.04)** of the General Catalogue.

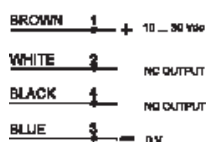
## CONNECTIONS



S50-XX-2



S50-XX-5





## TECHNICAL DATA

		S50-PA-2-W03-NN	S50-PA-2-W03-PP	S50-PA-5-W03-NN	S50-PA-5-W03-PP	S50-MA-2-W03-NN	S50-MA-2-W03-PP	S50-MA-5-W03-NN	S50-MA-5-W03-PP
<b>Operating distance:</b>	10 mm	●	●	●	●	●	●	●	●
<b>Depth of field (max.):</b>	± 2 mm	●	●	●	●	●	●	●	●
<b>Power supply:</b>	10 ... 30 Vdc <sup>1</sup>	●	●	●	●	●	●	●	●
<b>Ripple:</b>	≤ 2 Vpp	●	●	●	●	●	●	●	●
<b>Consumption:</b>	≤ 25 mA	●	●	●	●	●	●	●	●
<b>Light emission:</b>	white LED 400 - 700 nm <sup>2</sup>	●	●	●	●	●	●	●	●
<b>Spot dimension:</b>	approx. 4.5 mm at 10 mm	●	●	●	●	●	●	●	●
<b>Minimum detectable object:</b>	0.5 mm	●	●	●	●	●	●	●	●
<b>Setting:</b>	teach-in push-button	●	●	●	●	●	●	●	●
<b>Setting procedure:</b>	teach-in <i>EASYtouch™</i>	●	●	●	●	●	●	●	●
<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>	100 μs	●	●	●	●	●	●	●	●
<b>Switching frequency:</b>	5 kHz	●	●	●	●	●	●	●	●
<b>Operating mode:</b>									
	dark with <i>EASYtouch™</i>	●	●	●	●	●	●	●	●
	automatic dark / light with fine acq.	●	●	●	●	●	●	●	●
<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-W03-NN	952001710	NPN
S50-PA-2-W03-PP	952001320	PNP

## metal - axial optics - 2 m cable

S50-MA-2-W03-NN	952021590	NPN
S50-MA-2-W03-PP	952021110	PNP

## plastic - axial optics - M12 connector

S50-PA-5-W03-NN	952001600	NPN
S50-PA-5-W03-PP	952001330	PNP

## metal - axial optics - M12 connector

S50-MA-5-W03-NN	952021750	NPN
S50-MA-5-W03-PP	952021310	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>

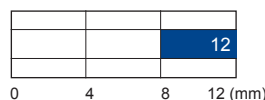
<sup>4</sup> Compatible with quick connection systems

<sup>5</sup> A - reverse polarity protection

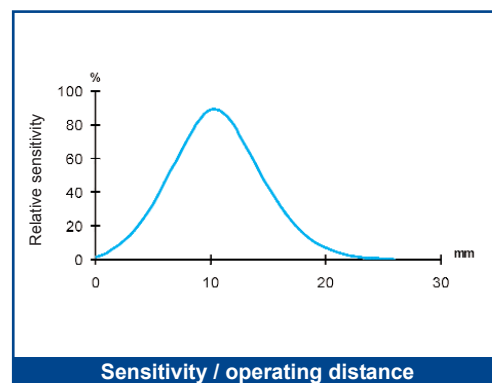
B - overload and short-circuit protection on the outputs



## DETECTION DIAGRAMS



■ Operating distance



Sensitivity / operating distance