M18 MULTIFUNCTION OPTOELECTRONIC SENSORS











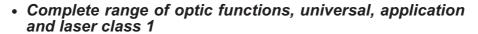






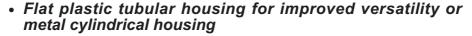
















 Versions with axial or radial optics, with fixed, trimmer or EASYtouch™ teach-in adjustment



 Cable or M12 connection with EN standard NPN or PNP NO-NC configuration

one for all

S50 SERIES

The **\$50** series offers all optical functions within a M18 housing.

With the universal sensing functions of proximity, polarised retroreflex and through beam, which are also available with class 1 laser emission, as well as the more advanced functions of background suppression, background/foreground suppression, analogue displacement, contrast and luminescence, the **\$50** really is one housing for all applications.

The **S50** setting is carried out-by either by potentiometer, which is sealed to IP67, or using the patented $EASYtouch^{TM}$ push-button teach system, which gives rapid and precise automatic setting of the switching points.

The **\$50** series is available both in flat plastic format ideal for M18 nut or screw mounting through the sensor body, as well as a cylindrical metal housing. Axial or radial optics are available in both housings with integral cable or M12 connection conforming to EN 60947-5-2, the European wiring standard. The performance, versatility and extensive optical sensing options, positions the **\$50** series as the new bench mark for customers focused on the evolution of technology and development of standards.



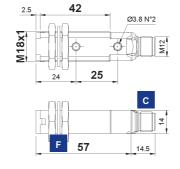
G/F THROUGH BEAM WITH INFRARED EMISSION

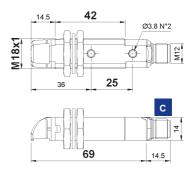
Longer operating distances can be obtained utilising separate emitter and receiver units. The infrared emission is modulated to avoid interference with other light sources and the emitter is fitted with test inputs for remote system interrogation.

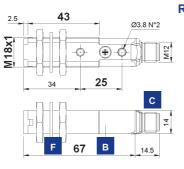


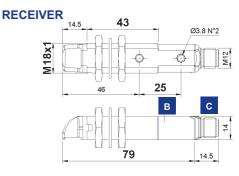
DIMENSIONS

EMITTER













INDICATORS AND SETTINGS



RADIAL OPTICS



- **OUTPUT** status and stability LEDs (receiver); power on LED (emitter)
- Adjustment trimmer (receiver)
- M12 connector output
- Cable output
- Fixing nuts
- Fixing gasket

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.

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

CONNECTIONS

EMITTER

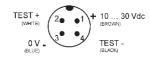




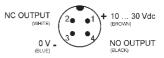
S50-PA/PR-5



BLACK









Versions and options: refer to MODEL ALPHABETICAL INDEX of this catalogue.



TECHNICAL DATA													
	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-F01-PP	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-F01-PP	S50-PR-5-G00-XG
Operating distance:													
axial optics	0 30 m	•	•	•			_	•	•	•		L	L
radial optics	0 25 m					•	•				_	•	•
Power supply:	10 30 Vdc ¹	•	•	•	•	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	•
Consumption:	< 25 ··· A	-		•			•			•	H	\vdash	•
emitter receiver	≤ 35 mA ≤ 30 mA	•	•	_	•	•	_	•	•	_	•	•	_
Light emission:	infrared LED 880 nm ²	-	_	•	_	_	•	_	_	•	Ĕ	Ľ	
Spot dimension:	IIIIIaieu LED 660 IIIII	+		_		\dashv	_	_		_	Н	\vdash	-
axial optics	approx. 500 mm at 15 m			•		\dashv	\dashv	_		•	Н		\vdash
radial optics	approx. 470 mm at 10 m			H			•			Ť	H		•
Setting:	sensitivity trimmer ³	•	•	Н	•	•	Ť	•	•		•	•	Ť
Indicators:	Scholavity unfilled	Ť	Ť	Н	Ť	Ť	\exists	Ť	Ť		Ť	Ť	⊢
maroatoro.	vellow OUTPUT LED	•	•	П	•	•	\neg	•	•	Н	•	•	\vdash
	green STABILITY LED	•	•		•	•		•	•		•	•	П
-	green POWER ON LED	Ť		•			•			•	Ħ		•
Output type:											П		
	PNP, NO and NC		•			•			•		П	•	
	NPN, NO and NC	•			•			•			•		
Output current:	≤ 100 mA	•	•		•	•		•	•		•	•	
Saturation voltage:	≤ 2 V	•	•		•	•		•	•		•	•	
Response time:	2 ms	•	•	П	•	•		•	•		•	•	Г
Switching frequency:	250 Hz	•	•		•	•		•	•		•	•	
Operating mode:	dark on NO / light on NC	•	•		•	•		•	•		•	•	
Auxiliary functions:	Test + and Test - 4			•			•			•			•
Connection:											\sqcup		L
	2 m Ø 4 mm cable⁵	•	•	•	•	•	•					L	
	M12 4-pole connector 6							•	•	•	•	•	•
Electrical protection:	class 2	•	•	•	•	•	•	•	•	•	•	•	•
Mechanical protection:	IP67	•	•	•	•	•	•	•	•	•	•	•	•
Protection devices:	A, B ⁷	•	•	•	•	•	•	•	•	•	•	•	•
Housing material:	PBT	•	•	•	•	•	•	•	•	•	•	•	•
Lens material:	PMMA	•	•	•	•	•	•	•	•	•	•	•	•
Weight:		-		Н		\dashv	_	_			\vdash	L	⊢
	75 g max.	•	•	•	•	•	•		_		Ļ	F	Ļ
On and the state of	25 g max.	L	_	H			_	•	•	•	•	•	•
Operating temperature:	-25 +55°C	•	•	•	•	•	•	•	•	•	•	•	•
Storage temperature:	-25 +70°C	•	•	•	•	•	•	•	•	•	•	•	•
Reference standard:	EN 60947-5-2	•	•	•	•	•	•		•	•	•	•	•

CEI	ECT		TAB	
3FI		ILJIN	IAD	

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

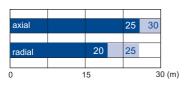
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

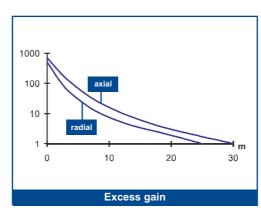
- ¹ Limit values
- ² Average life of 100.000 h with T_A = +25 °C
- ³ 270° single-turn trimmer
- ⁴ Emitter off with Test+ on Vdc and Test- on 0 V
- ⁵ PVC, 4 x 0.14 mm²
- ⁶ Compatible with quick connection systems
- ⁷ A reverse polarity protection
 - B overload and short-circuit protection on receiver outputs

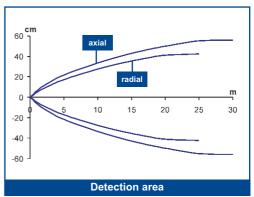


DETECTION DIAGRAMS



Recommended operating distanceMaximum operating distance



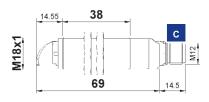




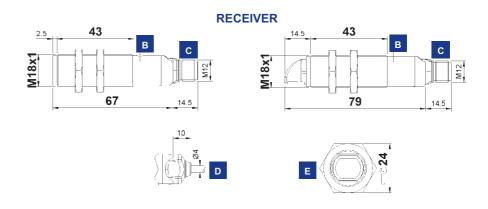
G/F THROUGH BEAM WITH INFRARED EMISSION

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.

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DIMENSIONS

EMITTER

RADIAL OPTICS



INDICATORS AND SETTINGS



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

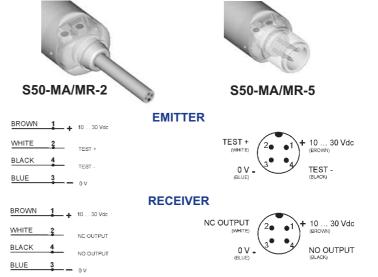
- **OUTPUT** status and STABILITY LEDs (receiver); power on LED (emitter)
- Adjustment trimmer (receiver)
- M12 connector output
- Cable output
- Fixing nuts

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





Versions and options: refer to MODEL ALPHABETICAL INDEX of this catalogue.



Operating distance			S50-MA-2-F01-NN	S50-MA-2-F01-PP	S50-MA-2-G00-XG	S50-MR-2-F01-NN	S50-MR-2-F01-PP	S50-MR-2-G00-XG	S50-MA-5-F01-NN	S50-MA-5-F01-PP	S50-MA-5-G00-XG	S50-MR-5-F01-NN	S50-MR-5-F01-PP	S50-MR-5-G00-XG
	optics	0 30 m	•	•	•	H			•	•	•	H		r
	optics	0 25 m			П	•	•	•				•	•	•
Power supply:	ориос	10 30 Vdc ¹	•	•	•	•	•	•	•	•	•	•	•	•
Ripple:		≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	•
Consumption:														Г
emitt	ter	≤ 35 mA			•			•			•			•
recei	iver	≤ 30 mA	•	•		•	•		•	•		•	•	
Light emission:		infrared LED 880 nm ²			•	Г		•			•	Г		•
Spot dimension:														
	optics	approx. 500 mm at 15 m			•						•			
radia	l optics	approx. 470 mm at 10 m						•						•
Setting:		sensitivity trimmer ³	•	•		•	•		•	•		•	•	
Indicators:														
		yellow OUTPUT LED	•	-		•	•		•	_		•	•	
		green STABILITY LED	•	•		•	•		•	•		•	•	
		green POWER ON LED			•			•			•		L	•
Output type:													L	
		PNP, NO and NC		•		L	•		L	•	Ш		•	
		NPN, NO and NC	•	_		•			•			•	\vdash	
Output current:		≤ 100 mA	•	+		•	•		•	•	Ш	•	•	L
Saturation voltage:		≤ 2 V	•	+-		•	•		•	•		•	•	
Response time:		2 ms	•	-		•	•		•	•	Ш	•	•	
Switching frequenc	y:	250 Hz	•	+-		•	•		•	•	Ш	•	•	
Operating mode:		dark on NO / light on NC	•	•		•	•		•	•	Ш	•	•	L
Auxiliary functions:		Test + and Test - 4		_	•	L		•			•		\vdash	•
Connection:		2 2 4 11 5	•	•	•	•	•	•			Н	\vdash	H	H
		2 m Ø 4 mm cable ⁵		-	_	-	•	_	•	•	•	•	•	
Electrical protection		M12 4-pole connector ⁶		+		-		_	\vdash	-	\vdash		\vdash	\vdash
Electrical protection Mechanical protect		class 2 IP67	•	•	•	•	•	•	•	•	•	•	•	
Protection devices:		A. B ⁷	•	•	•	•	•	•	•	•	•	•	•	•
Housing material:		nickel plated brass	•	•	•	•	•	•	•	•	•	•	•	•
Lens material:		PMMA	•	•	•	•	•	•	•	•		-	•	•
Weight:		FIVIIVIA		-	•	•	•	•	•	•		_	_	-
weight.		110 g max.	•	•	•	•	•	•	_		Н	Н		
		60 g max.		•	_	ľ	_	_	•	•	•		•	
Operating temperat	ure.	-25 +55°C	•	•	•	•	•		•	•	•	•	•	-
Storage temperatur		-25 +70°C	•	-		•	•	•	-	•		Ť	•	•
Reference standard		EN 60947-5-2		-	•		•	•		•		Ī	•	•

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		11111		_
				_

receiver - axial optics - 2 m cable						
S50-MA-2-F01-NN	952021700	NPN				
S50-MA-2-F01-PP	952021250	PNP				
emitter - axial optics - 2	2 m cable					
S50-MA-2-G00-XG	952021060					
receiver - radial optics - 2 m cable						

S50-MR-2-F01-NN	952021640	NPN
S50-MR-2-F01-PP	952021170	PNP

S50-MR-2-G00-XG	952021180	
office Tadial Option	Z III OGDIO	

receiver - axial optics - M12 connector						
S50-MA-5-F01-NN	952021700	NPN				
S50-MA-5-F01-PP	952021250	PNP				

emitter - axial optics - N	M12 connector
S50-MA-5-G00-XG	952021260

receiver - radial optics		
S50-MR-5-F01-NN	952021800	NPN
S50-MR-5-F01-PP	952021370	PNP

emitter - radial optics -	M12 connector	
S50-MR-5-G00-XG	952021380	

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

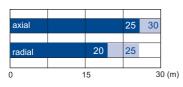
TECHNICAL NOTES

- ¹ Limit values
- 2 Average life of 100.000 h with T_A = +25 $^{\circ} \rm C$
- 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

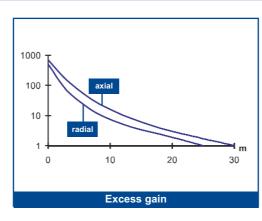


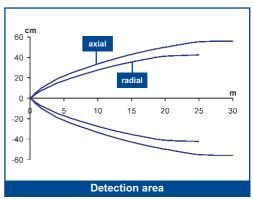


DETECTION DIAGRAMS



Recommended operating distance Maximum operating distance







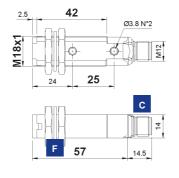
L-G/F LASER THROUGH BEAM WITH RED EMISSION

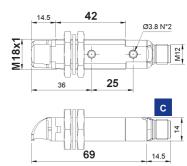
The high operating distance typical of emitter and receiver pairs is notably increased thanks to the use of visible red laser emission. The laser beam can be easily aligned and offers excellent detection resolution of even small objects. The class 1 laser emission guarantees maximum safety for the operators in all applications.

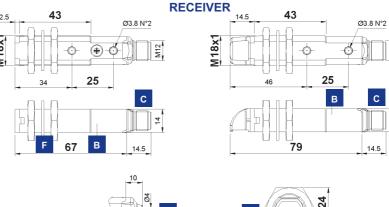


DIMENSIONS

EMITTER







INDICATORS AND SETTINGS



- A OUTPUT status and power on LEDs
- Adjustment trimmer (receiver)
- c M12 connector output
- D Cable output
- E Fixing nuts
- F Fixing gasket

RADIAL OPTICS



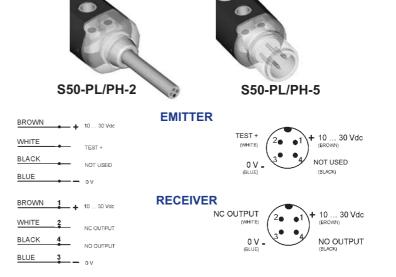
Single-turn trimmer for sensitivity adjustment. Rotate in a clockwise direction to increase the operating distance. Decrease sensitivity to increase resolution.

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





Versions and options: refer to MODEL ALPHABETICAL INDEX of this catalogue.



TECHNICAL DATA												
	S50-PL-2-G00-XG	S50-PL-2-F01-NN	S50-PL-2-F01-PP	S50-PL-5-G00-XG	S50-PL-5-F01-NN	S50-PL-5-F01-PP	S50-PH-2-G00-XG	S50-PH-2-F01-NN	S50-PH-2-F01-PP	S50-PH-5-G00-XG	S50-PH-5-F01-NN	
0 60 m	•	•	•	•	•	•		Ш				
0 50 m							•	•	•	•	•	4
10 30 Vdc ¹	•	•	•	•	•	•	•			•	•	•
≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	•
≤ 35 mA	•			•			•			•		
≤ 30 mA		•	•		•	•		•	•	\neg	•	,
							П	П	T	\exists	П	Г
red Laser 650 nm 2	•			•			•	П	T	•	П	Г
class 1 EN 60825-1								П	T	\exists		Г
class II CDRH21 CFR 1040.10			П				П	П	Ħ	\dashv	\exists	Г
	\vdash						Н	П	\dashv	\dashv	\dashv	H
approx 2.5 mm at 5 m		•	•		•	•	П	•	•	\exists	•	١,
		_	-			-	Н	\rightarrow	\rightarrow	\rightarrow	-	1
		_	-		-	_	П	-	-	-	-	•
		-			_	_	Н	\vdash		\dashv	-	-
Sensitivity tilliller		_	_		_	•	Н	H	_	\dashv	_	F,
vollow OLITPLIT LED							Н			\dashv		
		_	_		_	_					_	_
green owen on LLD	Ť	Ť	Ť	Ť	Ť	Ť	H	H	Ť	-	Ť	H
DND NO and NC							Н	Н		\dashv	\exists	•
			_			-	Н	\vdash	-	\dashv		Ľ
		_			_		Н	\rightarrow		\rightarrow	$\overline{}$	•
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							Н	Н	_	\dashv	\perp	L
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				•	_	_	Ш	Ш	\dashv	$\overline{}$		•
	•	•	-			_	•	\rightarrow	\rightarrow	\rightarrow	•	1
	•	\vdash	•	_	_	-	•	\rightarrow	\rightarrow	•	•	Ľ
A, B ⁷	•	•	•	•	•	•	•	-	•	•	•	1
PBT	•	•	•	•	•	•	•	\rightarrow	•	-	•	4
PMMA / glass	•	•	•	•	•	•	•	•	•	•	•	4
	L	L				L	L	╚				L
75 g max.	•	•	•				•	•	•			Γ
25 g max.				•	•	•	П	П	T	•	•	•
-10 +50°C	•	•	•	•	•	•	•	•	•	•	•	•
-25 +70°C	•	•	•	•	•	•	•	•	•	•	•	1
	•	•	•	•	•	•	•	•	•	•	•	(
EN 60947-5-2,	_	_		- 1	_	_	_	, - 1			_	1
	0 60 m 0 50 m 10 30 Vdc ¹ ≤ 2 Vpp ≤ 35 mA ≤ 30 mA red Laser 650 nm ² class 1 EN 60825-1 class II CDRH21 CFR 1040.10 approx. 2.5 mm at 5 m approx. 5 mm at 10 m approx. 10 mm over 20 m sensitivity trimmer ³ yellow OUTPUT LED green POWER ON LED PNP, NO and NC NPN, NO and NC ≤ 100 mA ≤ 2 V 333 μs 1.5 kHz dark on NO / light on NC Test + ⁴ 2 m Ø 4 mm cable ⁵ M12 4-pole connector ° class 2 IP67 A, B ³ PBT PMMA / glass 75 g max. 25 g max10 +50 °C	0 60 m 0 50 m 10 30 Vdc ¹ ≤ 2 Vpp ≤ 35 mA ≤ 30 mA red Laser 650 nm ² class 1 EN 60825-1 class II CDRH21 CFR 1040.10 approx. 2.5 mm at 5 m approx. 5 mm at 10 m approx. 10 mm over 20 m sensitivity trimmer ³ yellow OUTPUT LED green POWER ON LED PNP, NO and NC NPN, NO and NC ≤ 100 mA ≤ 2 V 333 μs 1.5 kHz dark on NO / light on NC Test + ⁴ 2 m Ø 4 mm cable ⁵ M12 4-pole connector ° class 2 IP67 A, B ¬ PBT PMMA / glass 75 g max. 25 g max10 +50 °C	0 60 m 0 50 m 10 30 Vdc ¹ ≤ 2 Vpp ≤ 35 mA ≤ 30 mA red Laser 650 nm ² class 1 EN 60825-1 class II CDRH21 CFR 1040.10 approx. 2.5 mm at 5 m approx. 5 mm at 10 m approx. 10 mm over 20 m sensitivity trimmer ³ yellow OUTPUT LED green POWER ON LED PNP, NO and NC NPN, NO and NC ≤ 100 mA ≤ 2 V 333 μs 1.5 kHz dark on NO / light on NC Test + ⁴ 2 m Ø 4 mm cable ⁵ M12 4-pole connector ° class 2 IP67 A, B ¬ PBT PMMA / glass 75 g max. 25 g max10 +50 °C	0 60 m 0 50 m 10 30 Vdc ¹ ≤ 2 Vpp ≤ 35 mA ≤ 30 mA red Laser 650 nm ² class 1 EN 60825-1 class II CDRH21 CFR 1040.10 approx. 2.5 mm at 5 m approx. 5 mm at 10 m approx. 10 mm over 20 m sensitivity trimmer ³ yellow OUTPUT LED green POWER ON LED PNP, NO and NC NPN, NO and NC ≤ 100 mA ≤ 2 V 333 μs 1.5 kHz dark on NO / light on NC Test + ⁴ 2 m Ø 4 mm cable ⁵ M12 4-pole connector ° class 2 IP67 A, B ¬ PBT PMMA / glass 75 g max. 25 g max. 25 g max10 +50°C	0 60 m 0 50 m 10 30 Vdc ¹ ≤ 2 Vpp ≤ 35 mA ≤ 30 mA red Laser 650 nm ² class 1 EN 60825-1 class II CDRH21 CFR 1040.10 approx. 2.5 mm at 5 m approx. 5 mm at 10 m approx. 10 mm over 20 m sensitivity trimmer ³ yellow OUTPUT LED green POWER ON LED PNP, NO and NC NPN, NO and NC ≤ 100 mA ≤ 2 V 333 μs 1.5 kHz dark on NO / light on NC Test + ⁴ 2 m Ø 4 mm cable ⁵ M12 4-pole connector ⁶ class 2 IP67 A, B ¬ PBT PMMA / glass 75 g max. 25 g max.	0 60 m 0 50 m 10 30 Vdc ¹ ≤ 2 Vpp ≤ 35 mA ≤ 30 mA red Laser 650 nm ² class 1 EN 60825-1 class II CDRH21 CFR 1040.10 approx. 2.5 mm at 5 m approx. 5 mm at 10 m approx. 10 mm over 20 m sensitivity trimmer ³ yellow OUTPUT LED green POWER ON LED PNP, NO and NC NPN, NO and NC S 100 mA ≤ 2 V 333 µs 1.5 kHz dark on NO / light on NC Test + ⁴ 2 m Ø 4 mm cable ⁵ M12 4-pole connector ⁶ class 2 IP67 A, B ² PBT PMMA / glass 75 g max. 25 g max10 +50°C	0 60 m	0 60 m 0 50 m 10 30 Vdc ¹ ≤ 2 Vpp ≤ 35 mA ≤ 30 mA red Laser 650 nm² class 1 EN 60825-1 class II CDRH21 CFR 1040.10 approx. 2.5 mm at 5 m approx. 10 mm over 20 m sensitivity trimmer ³ yellow OUTPUT LED green POWER ON LED PNP, NO and NC NPN, NO and NC ≤ 100 mA ≤ 2 V 333 μs 1.5 kHz dark on NO / light on NC Test + ⁴ 2 m Ø 4 mm cable ⁵ M12 4-pole connector ⁶ class 2 IP67 A, B ² PBT PMMA / glass 75 g max. 25 g max10 +50°C	O 60 m	O 60 m	0 60 m 0 50 m 10 30 Vdc ¹ ≤ 2 Vpp ≤ 35 mA ≤ 30 mA red Laser 650 nm ² class 1 EN 60825-1 class II CDRH21 CFR 1040.10 approx. 2.5 mm at 5 m approx. 5 mm at 10 m approx. 10 mm over 20 m sensitivity trimmer ³ yellow OUTPUT LED green POWER ON LED PNP, NO and NC NPN, NO and NC NPN, NO and NC NPN, NO and NC S 100 mA ≤ 2 V 333 μs 1.5 kHz dark on NO / light on NC Test + ⁴ 2 m Ø 4 mm cable ⁵ M12 4-pole connector ° class 2 liP67 A, B ¹ PBT PMMA / glass 75 g max. 25 g max10 +50°C	0 60 m 0 50 m 10 30 Vdc¹ ≤ 2 Vpp ≤ 35 mA ≤ 30 mA red Laser 650 nm² class 1 EN 60825-1 class 1I CDRH21 CFR 1040.10 approx. 2.5 mm at 5 m approx. 5 mm at 10 m approx. 10 mm over 20 m sensitivity trimmer³ yellow OUTPUT LED green POWER ON LED PNP, NO and NC NPN, NO and NC NPN, NO and NC S 100 mA ≤ 2 V 333 μs 1.5 kHz dark on NO / light on NC Test + ⁴ 2 m Ø 4 mm cable ⁵ M12 4-pole connector ⁶ class 2 IP67 A, B ⁻ PBT PMMA / glass 75 g max10 +50°C

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emitter - axial optics - 2 m cable						
S50-PL-2-G00-XG	952001420					
receiver - axial optics -	2 m cable					
S50-PL-2-F01-NN	952001890	NPN				
S50-PL-2-F01-PP	952001400	PNP				
emitter - radial optics - 2 m cable						
S50-PH-2-G00-XG	952002060	I				

receiver - radial optics - 2 m cable					
S50-PH-2-F01-NN	952002030	NPN			
S50-PH-2-F01-PP	952002020	PNP			

emitter - axial optics	- M12 connector	
S50-PL-5-G00-XG	952001430	

receiver - axial optics	- M12 connector	
S50-PL-5-F01-NN	952001860	NPN
S50-PL-5-F01-PP	952001410	PNP

emitter - ı	radial o	otics	- M12 con	nector		
S50-PH-5	5-G00-X	G	9520	02070		
					•	

receiver - radial optics	- M12 connector	
S50-PH-5-F01-NN	952002050	NPN
S50-PH-5-F01-PP	952002040	PNP

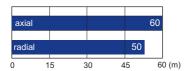
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

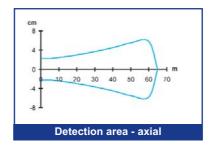
- ¹ Limit values
- ² Average life of 50.000 h with T_A = +25 °C
- ³ 270° single-turn trimmer
- ⁴ Emitter off with Test+ connected to +Vcc Emitter on with Test+ not connected or connected to 0V
- ⁵ PVC, 4 x 0.14 mm²
- ⁶ Compatible with quick connection systems
- ⁷ A reverse polarity protection
 - B overload and short-circuit protection on receiver outputs

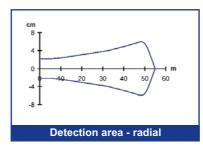
The use of the MICRO-18 fixing bracket (cod. 95ACC1380) is recommended for the correct optic axis alignment of the laser emission.

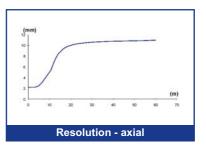
DETECTION DIAGRAMS

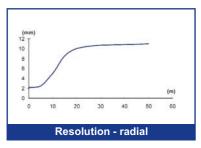


Operating distance









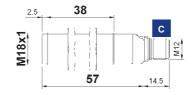


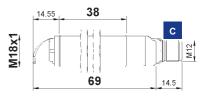
L-G/F LASER THROUGH BEAM WITH RED EMISSION

The high operating distance typical of emitter and receiver pairs is notably increased thanks to the use of visible red laser emission. The laser beam can be easily aligned and offers excellent detection resolution of even small objects. The class 1 laser emission guarantees maximum safety for the operators in all applications.

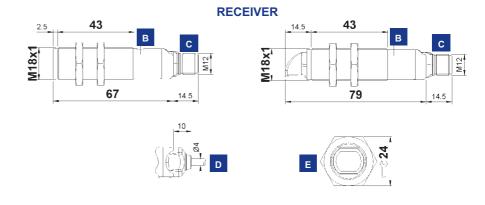
DIMENSIONS

EMITTER









INDICATORS AND SETTINGS

- OUTPUT status and power on LEDs
- Adjustment trimmer (receiver)
- c M12 connector output
- D Cable output
- Fixing nuts
- F Fixing gasket





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

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.

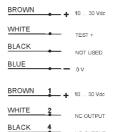
CONNECTIONS



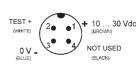




S50-ML/MH-2

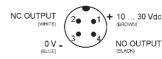


EMITTER



S50-ML/MH-5

RECEIVER



Versions and options: refer to **MODEL ALPHABETICAL INDEX** of this catalogue.



NO OUTPUT



TECHNICAL DATA S50-MH-2-G00-XG S50-MH-2-F01-NN S50-ML-2-F01-PP S50-ML-5-G00-XG S50-ML-5-F01-PP S50-MH-2-G00-XG S50-ML-5-F01-NN Operating distance: 0 ... 60 m axial optics 0 ... 50 m 10 ... 30 Vdc 1 radial optics Power supply: ≤ 2 Vpp Ripple: Consumption: ≤ 35 mA emitter • receiver ≤ 30 mA • • • Light emission: red Laser 650 nm class 1 EN 60825-1 class II CDRH21 CFR 1040.10 Resolution: approx. 2.5 mm at 5 m • • • • • • approx. 5 mm at 10 m • • • • • • • • approx. 10 mm over 20 m • • • • • • Setting: • • • sensitivity trimmer Indicators: yellow OUTPUT 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: 333 µs • • • • • • Switching frequency: 1.5 kHz • • • • • • dark on NO / light on NC Operating mode: **Auxiliary functions:** • Connection: • • • 2 m Ø 4 mm cable M12 4-pole connector 6 . . **Electrical protection:** class 2 Mechanical protection: IP67 A, B **Protection devices:** Housing material: nickel plated brass Lens material: PMMA / glass Weight: 75 g max. 25 g max -10 ... +50°C **Operating temperature:** • • • • • • • • • -25 ... +70°C Storage temperature: Reference standard: EN 60947-5-2 EN 60825-1, CDRH21 CFR 1040.10 • •

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emitter - axial optics - 2 m cable					
S50-ML-2-G00-XG	952021430				
receiver - axial optics -	2 m cable				
S50-ML-2-F01-NN	952021840	NPN			
S50-ML-2-F01-PP	952021420	PNP			
		•			
emitter - radial optics -	2 m cable				
S50-MH-2-G00-XG	952022060				
receiver - radial optics	- 2 m cable				
S50-MH-2-F01-NN	952022030	NPN			
S50-MH-2-F01-PP	952022020	PNP			
		•			
emitter - axial optics -	M12 connector				
S50-ML-5-G00-XG	952021470				
receiver - axial optics -	M12 connector				
S50-ML-5-F01-NN	952021870	NPN			
S50-ML-5-F01-PP	952021460	PNP			

S50-MH-5-G00-XG	952022070	
	•	
receiver - radial ontice	- M12 connector	

emitter - radial optics - M12 connector

receiver - radial optics	- M12 connector	
S50-MH-5-F01-NN	952022050	NPN
S50-MH-5-F01-PP	952022040	PNP

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

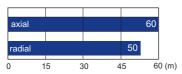
TECHNICAL NOTES

- 1 Limit values
- 2 Average life of 50.000 h with T_A = +25 $^{\circ}$ C
- ³ 270° single-turn trimmer
- ⁴ Emitter off with Test+ connected to +Vcc Emitter on with Test+ not connected or connected to 0V
- 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

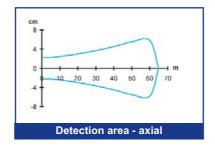
The use of the MICRO-18 fixing bracket (cod. 95ACC1380) is recommended for the correct optic axis alignment of the laser emission.

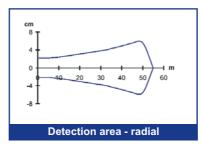


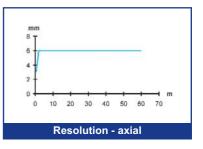
DETECTION DIAGRAMS

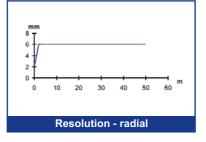


Operating distance











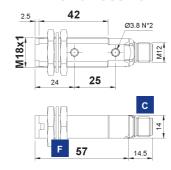
A RETROREFLEX WITH INFRARED EMISSION

With retroreflex sensors the object is detected when it interrupts the light beam generated between the sensor and its associated prismatic reflector. This retroreflex system, created between the sensor and the reflector, offers the advantage of electrically connecting one single unit instead of two, as in the emitter-receiver system.

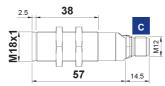


DIMENSIONS

PLASTIC HOUSING



METAL HOUSING

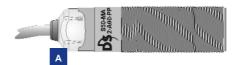






INDICATORS AND SETTINGS





- OUTPUT status LED
- M12 connector output
- Cable output
- E Fixing nuts
- F Fixing gasket

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.

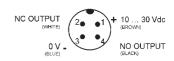






S50-XX-5







TECHNICAL DATA S50-PA-2-A00-PP S50-PA-5-A00-NN S50-PA-5-A00-PP S50-MA-2-A00-NN S50-MA-5-A00-NN S50-MA-5-A00-PP S50-MA-2-A00-PP Operating distance: 0.1 ... 5 m . . . Power supply: 10 ... 30 Vdc • • • • ≤ 2 Vpp Ripple: Consumption: ≤ 35 mA infrared LED 880 nm² Light emission: Spot dimension: approx. 100 mm at 2 m Indicators: yellow OUTPUT LED Output type: PNP, NO and NC . NPN, NO and NC **Output current:** $\leq 100 \text{ mA}$ Saturation voltage: 2 V Response time: 0.5 ms Switching frequency: 1 kHz dark on NO / light on NC Operating mode: Connection: 2 m Ø 4 mm cable³

M12 4-pole connector 4

nickel plated brass

class 2

IP67

A, B

PBT

PMMA

75 g max.

25 g max.

110 g max.

60 g max. -25 ... +55°C

-25 ... +70°C

EN 60947-5-2

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plastic - axial optics - 2	m cable												
S50-PA-2-A00-NN	952002090	NPN											
S50-PA-2-A00-PP	952002080	PNP											
metal - axial optics - 2 m cable S50-MA-2-A00-NN 952022090 NPN													
S50-MA-2-A00-NN	0-MA-2-A00-NN 952022090												
S50-MA-2-A00-PP	952022080	PNP											
plastic - axial optics - M12 connector													
S50-PA-5-A00-NN	tic - axial optics - M12 connector PA-5-A00-NN 952002110												
S50-PA-5-A00-PP	952002100	PNP											
metal - axial optics - M	12 connector												
S50-MA-5-A00-NN	952022110	NPN											

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

952022100

TECHNICAL NOTES

¹ Limit values

S50-MA-5-A00-PP

- ² Average life of 100.000 h with T_A = +25 °C
- ³ PVC. 4 x 0.14 mm²
- ⁴ Compatible with quick connection systems
- ⁵ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

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Electrical protection:

Protection devices:

Housing material:

Lens material:

Weight:

Mechanical protection:

Operating temperature: Storage temperature:

Reference standard:

DETECTION DIAGRAMS

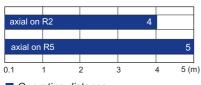
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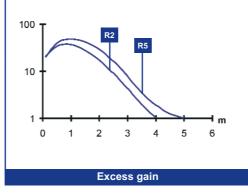
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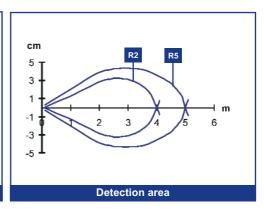
• •

• •



Operating distance





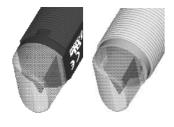


B POLARISED RETROREFLEX WITH RED EMISSION

With retroreflex sensors the object is detected when it interrupts the light beam generated between the sensor and its associated prismatic reflector. Highpolarisation 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



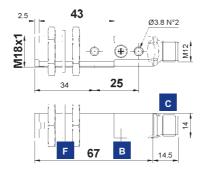
ACCESSORIES

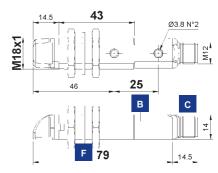
For **dedicated accessories** refer to the **ACCESSORIES** section of this catalogue.

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

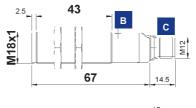
DIMENSIONS

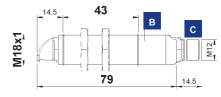
PLASTIC HOUSING





METAL HOUSING









INDICATORS AND SETTINGS





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

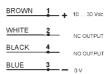
- OUTPUT status and STABILITY LEDs
- B Adjustment trimmer
- M12 connector output
- Cable output
- Fixing nuts
- Fixing gasket

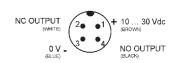






S50-XX-5







Operating distance: axial optics 0.1 4.5 m 0.1 3 m 0.2		•	•	•	•	•			S50-PR-5-B01-NN	S50-PR-2-B01-PP	S50-PR-2-B01-NN	S50-PA-5-B01-PP	S50-PA-5-B01-NN	S50-PA-2-B01-PP	S50-PA-2-B01-NN				
axial optics radial optics 0.1 4.5 m 0.1 3		•	•	•	•		•						+	+					
axial optics radial optics 0.1 4.5 m 0.1 3		•	•	•	•		•					_				+		Operating distance:	
Power supply:		•	•	_	•	•	П					•	•	•	•		0.1 4.5 m		
Power supply: 10 30 Vdc¹ • • • • • • • • • • • • • • • • • • •		•	•	_	•	•			•	•	•								
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		•	•	_	•	•	•	•	•	•	•	•	•	•	•			117	
Light emission: red LED 660 nm² • • • • • • • • • • • • • • • • • • •		•	•	•	•	•	•	•	•	•	•	•	•	•	•				
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	•	-	•		•	•	•	•	•	•	•	•	•	•	•				
radial optics approx. 60 mm at 2 m sensitivity trimmer 3 sensitivity trimer 3 sensitivity trimer 3 sensitivity	•	-	•				П							寸	T	Ţ			
Setting: sensitivity trimmer 3	•	-	•	•	•	•	•					•	•	•	•		approx. 45 mm at 1 m	axial optics	
Indicators:	•	•					Г	•	•	•	•						approx. 60 mm at 2 m	radial optics	
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	• •	- 1					Г						П	П				Indicators:	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		yellow OUTPUT LED		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		•	•	•	•	•	•	•	•	•	•	•	•	•	•		green STABILITY LED		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	++												_	_				Output type:	
		•		•		•		•		•		•		•					
	•		•		•		•		•		•		•	4	•	_			
Suitching frequency:	-	\rightarrow	-			_	-		_	-	\rightarrow	•	•	•	•	_			
Switching frequency:	-	•	-	_	_	-	_		-	<u> </u>	-	•	•	•	•	_			
Operating mode: dark on NO / light on NC Image: Connection of the connection of t		•	-	_	-	•	-		-	•	•	•	•	•	•	_			
Connection: 2 m Ø 4 mm cable 4 • • • • • • • • • M12 4-pole connector 5 • • • • • • • • • Electrical protection: class 2 Mechanical protection: IP67		•	_			•	_	_	-	_	-	•	•	•	•	_			
2 m Ø 4 mm cable 4 • • • • • • • • • • • • M12 4-pole connector 5 • • • • • • • • • • • • Electrical protection: class 2 Mechanical protection: IP67		•	•	•	•	•	•	•	•	•	•	•	•	•	•	1C	dark on NO / light on N		
M12 4-pole connector 5	$\perp \perp$													_				Connection:	
Electrical protection: class 2	$\perp \perp$	•	•			•	•			•	•		4	•	•				
Mechanical protection: IP67	•	\rightarrow			_				_			-	-	\rightarrow		5		Flectrical protection:	
	-	\rightarrow	$\overline{}$		_	_	-		-	_	\rightarrow	-	-	-	-				
Protection devices: A, B°	_	\rightarrow	-		_	_	-		_	_	\rightarrow	-	-	-	-	\rightarrow		Mechanical protection:	
		•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	A, B °		
Housing material:	\vdash						Н		_				_	_			DDT	Housing material:	
PBT				_	_		Ļ	•	•	•	•	•	•	•	•	\rightarrow	· - ·		
menter plated plate		•			_		_											Lana and allah	
2010 1140141		•		•	•	•	•	•	•	•		•	•	•	•	\dashv	PIVIVIA		
Weight:	-				_	_	H						\dashv			_	75	weight:	
70 g max.	+	-	H			-	Н			_	•			•	•	-			
Ze g max.	+							_	_		\vdash	_	-	\dashv	+	\dashv			
g		•	•	_		•	H						+	\dashv	+	\dashv			
	1-1-	•		-	_											\dashv		Operating temperature:	
		•	-			_	-		_			_	_	-		\dashv			
	+	•	-		_	_	\vdash			_	$\overline{}$	_	\rightarrow	_	_	\dashv			
Reference Standard. EIN 00341-3-2	•		•	•	•	•	•	•	_	•	•	•	•	•	•		LIN 00947-3-2	Neierence Standard.	

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JLL		I TAE	,

plastic - axial optics - 2	2 m cable			
S50-PA-2-B01-NN	952001610	NPN		
S50-PA-2-B01-PP	PA-2-B01-PP 952001010 I - axial optics - 2 m cable MA-2-B01-NN 952021500 MA-2-B01-PP 952021000 c - axial optics - M12 connector PA-5-B01-NN 952001500 PA-5-B01-PP 952001020 I - axial optics - M12 connector MA-5-B01-PP 952021600 MA-5-B01-PP 952021200 c - radial optics - 2 m cable PR-2-B01-PP 952001030 I - radial optics - 2 m cable WR-2-B01-PP 952021600 MR-2-B01-PP 952021600 MR-2-B01-PP 952021140 c - radial optics - M12 connector PR-5-B01-NN 952021720			
	•			
metal - axial optics - 2	m cable			
S50-MA-2-B01-NN	952021500	NPN		
S50-MA-2-B01-PP	952021000	PNP		
	•	•		
plastic - axial optics - N	M12 connector			
S50-PA-5-B01-NN	952001500	NPN		
S50-PA-5-B01-PP	952001020	PNP		
metal - axial optics - M	12 connector			
S50-MA-5-B01-NN	952021660	NPN		
S50-MA-5-B01-PP	952021200	PNP		
· ·				
S50-PR-2-B01-NN		NPN		
S50-PR-2-B01-PP	952001030	PNP		
S50-MR-2-B01-NN		NPN		
S50-MR-2-B01-PP	952021140	PNP		
S50-PR-5-B01-NN		NPN		
S50-PR-5-B01-PP	952001040	PNP		
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

- 2 Average life of 100.000 h with T_A = +25 $^{\circ}$ 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

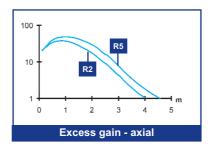


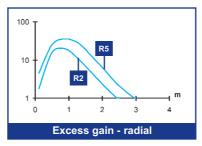
DETECTION DIAGRAMS

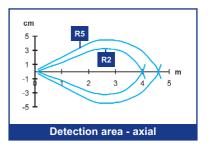


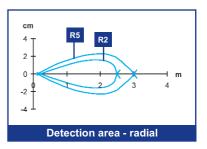
Recommended operating distanceMaximum operating distance

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











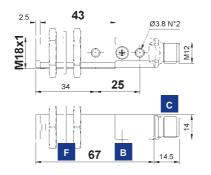
L-B LASER RETROREFLEX WITH RED EMISSION

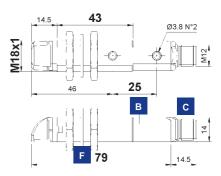
The visible red laser emission increases the operating distance and resolution of the polarised retroreflex sensor. Specific R7 or R8 reflectors with 0.8 mm microprisms are available for high-resolution detection of small objects. The class 1 laser emission guarantees maximum safety for the operators in all applications.

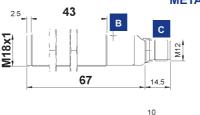


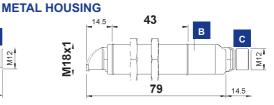
DIMENSIONS

PLASTIC HOUSING













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B DATASENSOR I

INDICATORS AND SETTINGS

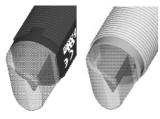
STABILITY LEDs

OUTPUT status and



- c M12 connector output
- Cable output
- Fixing nuts
- Fixing gasket

RADIAL OPTICS



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

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.

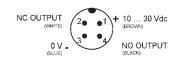






S50-XX-5









	TECHNICAL DA	۱T	Α														
		S50-PL-2-B01-NN	S50-PL-2-B01-PP	S50-PH-2-B01-NN	S50-PH-2-B01-PP	S50-PL-5-B01-NN	S50-PL-5-B01-PP	S50-PH-5-B01-NN	S50-PH-5-B01-PP	S50-ML-2-B01-NN	S50-ML-2-B01-PP	S50-MH-2-B01-NN	S50-MH-2-B01-PP	S50-ML-5-B01-NN	S50-ML-5-B01-PP	S50-MH-5-B01-NN	S50-MH-5-B01-PP
Operating distance:																	
axial optics	0.1 16 m	•	•			•	•			•	•			•	•		
radial optics	0.1 9 m	_	L	•	•			•	•	Ш		•	•	Ш		•	•
Power supply:	10 30 Vdc ¹	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Consumption:	≤ 35 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Light emission:		_	L														
	red Laser 650 nm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	class 1 EN 60825-1	_	L							Ш				Ш			
	class II CDRH21 CFR 1040.10	1												Ш			
Resolution:		╙	L						Ш					Ш			
	2 mm max. at 3 m (on R7)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	5 mm max. over 7 m (on R2)	•	•	•	•	•	•	•	•	•		•	•	•	-	•	•
Setting:	sensitivity trimmer 3	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Indicators:		╙	╙				_		Ш	Ш				Ш			
	yellow OUTPUT LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	green STABILITY LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Output type:														Ш			
	PNP, NO and NC		•		•		•		•		•		•	Ш	•		•
	NPN, NO and NC	•		•		•		•		•		•		•		•	
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Saturation voltage:	≤ 2 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Response time:	333 μs	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Switching frequency:	1.5 kHz	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Operating mode:	dark on NO / light on NC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Connection:										П				П			
	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:	,		Т							П				П			
	PBT	•	•	•	•	•	•	•	•	П				П			
	nickel plated brass	Т	Т		П		1		П	•	•	•	•	•	•	•	•
Lens material:	PMMA / glass	•	•	•	•	•	•	•	•	•	-	•		-	-	•	•
Weight:	· • • • • • • • • • • • • • • • • • • •	\top	T		П		1		П	П	П		П	П		_	
	75 g max.	•	•	•	•		\dashv		Н	Н			Н	П	\exists	_	
	25 g max.	Ť	Ť	Ė	Ė	•	•	•	•	H			Н	П	\exists	_	
	110 g max.		\vdash		Н	-		-	Ť	•	•	•	•	П	\exists	_	
	60 g max.	T	Т				1		П					•	•	•	•
Operating temperature:		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Storage temperature:	-25 +70°C	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•
Reference standard:	EN 60947-5-2,	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	EN 60825-1, CDRH21 CFR 1040.10		•	•	•			•			•	•		•	•	•	•
44 0			-	_	_	_				_	_	_	_	_		_	_

LEC.		

nlastic - avial ontics - 2	m cable		
S50-PL-2-B01-NN		NPN	
S50-PL-2-B01-PP	B01-PP 952001360		
00012220111	00200.000	PNP	
plastic - radial optics -	2 m cable		
S50-PH-2-B01-NN		l NPN	
S50-PH-2-B01-PP		PNP	
metal - axial optics - 2	m cable		
S50-ML-2-B01-NN		NPN	
S50-ML-2-B01-PP	952021400	PNP	
-			
metal - radial optics - 2	? m cable		
S50-MH-2-B01-NN	952021950	NPN	
S50-MH-2-B01-PP	952021940	PNP	
plastic -axial optics - M	112 connector		
S50-PL-5-B01-NN	952001840	NPN	
S50-PL-5-B01-PP	952001370	PNP	
plastic -radial optics - N	M12 connector		
S50-PH-5-B01-NN	952001970	NPN	
S50-PH-5-B01-PP	952001960	PNP	
•	12 connector	NPN	
S50-ML-5-B01-NN	H-5-B01-PP 952001960 - axial optics - M12 connector IL-5-B01-NN 952021850		
S50-ML-5-B01-PP	952021440	PNP	
metal - radial optics - N			
S50-MH-5-B01-NN	952021970	NPN	
S50-MH-5-B01-PP	952021960	PNP	

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

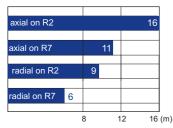
TECHNICAL NOTES

- ¹ Limit values
- 2 Average life of 50.000 h with T_A = +25 $^{\circ} \mathrm{C}$
- 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

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

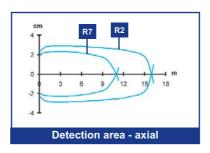


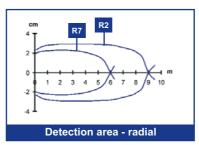
DETECTION DIAGRAMS

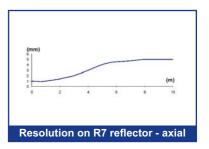


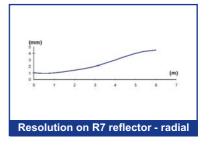
Operating distance

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









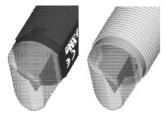


T RETROREFLEX FOR TRANSPARENTS WITH RED EMISSION

With high sensitivity and reduced hysteresis this retroreflex sensor allows the detection of even a small variation of the light emission received by the sensor, typically created by the presence of transparent objects such as glass or PET containers or plastic film sheets for packaging. The presence of polarising filters avoids false switching on shiny surfaces.







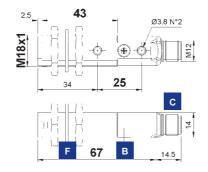
ACCESSORIES

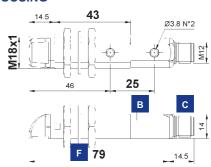
For **dedicated accessories** refer to the **ACCESSORIES** section of this catalogue.

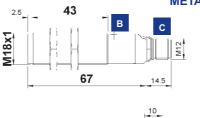
Refer also to Reflectors (A.01), Connectors (A.03) and Fixing brackets (A.04) of the General Catalogue.

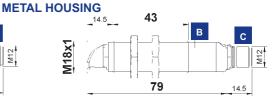
DIMENSIONS

PLASTIC HOUSING













OUTPUT status LED

Adjustment trimmer

INDICATORS AND SETTINGS



- |**‡**
- M12 connector output
- D Cable output
- E Fixing nuts
- F Fixing gasket



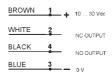
Single-turn trimmer for sensitivity adjustment. Rotate in a clockwise direction to increase the operating distance.

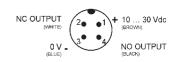






S50-XX-5







S50-PA-2-T01-NN S50-PA-2-T01-NN S50-PA-2-T01-NN S50-PR-2-T01-NN S50-PR-2-T01-N	S50-MR-2-T01-NN S50-MR-2-T01-PP	S50-MR-5-T01-NN
\$50-PA-2-T01-NN \$50-PA-2-T01-NN \$50-PA-2-T01-NP \$50-PA-2-T01-NP \$50-PR-2-T01-NP \$50-PR-2-T01-NP \$50-PR-2-T01-NP \$50-PR-2-T01-NN \$50-PR-2-T01-NN \$50-PR-3-T01-NN \$50-PR-3-T01-NN \$50-PR-3-T01-NN \$50-PR-3-T01-NN \$50-PR-3-T01-NN		S50-MR-5-T01-NN
	• •	
Operating distance:	• •	
axial optics 0.1 1.7 m	• •	
radial optics 0.1 1.7 m		•
Power supply: 10 30 Vdc ¹	•	•
	•	•
Consumption: $\leq 35 \text{ mA}$	•	•
Light emission: red LED 660 nm ²	•	•
Spot dimension:		
axial optics approx. 45 mm at 1 m		Ш
radial optics approx. 60 mm at 1 m	•	•
obtaing:	•	•
,	•	•
Output type:		Ш
PNP, NO and NC	•	•
,		•
	•	•
Odturation voltage.	•	
Response time: 0.5 ms	•	•
Switching frequency: 1 kHz	•	
Operating mode: dark on 1007 light on 100	•	•
Connection:		\sqcup
2 m Ø 4 mm cable 4 • • • • •	•	Ш
M12 4-pole connector ⁵		•
2.000.00.00.00.00.00.00.00.00.00.00.00.0	•	•
	•	•
Protection devices: A, B ⁶	•	•
Housing material:		\vdash
PBT • • • • • • • • • • • • • • • • • • •		
Thicker plated brass	• •	•
Letis material.	•	
Weight:		\vdash
75 g max.		\vdash
25 g max.		1
110 g max.	•	\sqcup
60 g max.		•
Operating temperature: -25 +55°C	• •	•
Storage temperature: -25 +70°C	• •	•
Reference standard: EN 60947-5-2	•	

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- SE	I - (ΙЦ	RIF

m cable		
	NPN	
	PNP	
tic - axial optics - 2 m cable -PA-2-T01-NN 952001690 -PA-2-T01-PP 952001260 al - axial optics - 2 m cable -MA-2-T01-NN 952021570 -MA-2-T01-PP 952021090 tic - axial optics - M12 connector -PA-5-T01-NN 952001580 -PA-5-T01-PP 952001270 al - axial optics - M12 connector -MA-5-T01-PP 952021730 -MA-5-T01-PP 952021290 tic - radial optics - 2 m cable -PR-2-T01-NN 952001830 -PR-2-T01-PP 952021290 al - radial optics - 2 m cable -MR-2-T01-PP 952021190 tic - radial optics - M12 connector -MR-2-T01-PP 952021190 tic - radial optics - M12 connector -PR-5-T01-NN 952021190 tic - radial optics - M12 connector -PR-5-T01-NN 952001770 -PR-5-T01-PP 952001290 al - radial optics - M12 connector -MR-5-T01-NN 952021810 -MR-5-T01-NN 952021810 -MR-5-T01-PP 952021390		
	NPN	
952021090	PNP	
952001580	NPN	
952001270	PNP	
12 connector		
952021730	NPN	
952021290	PNP	
	•	
2 m cable		
	NPN	
952001280	PNP	
	•	
m cable		
	NPN	
	PNP	
002021100		
M12 connector		
PR-2-T01-NN 952001830 PR-2-T01-PP 952001280 II - radial optics - 2 m cable MR-2-T01-NN 952021650 MR-2-T01-PP 952021190 ic - radial optics - M12 connector PR-5-T01-NN 952001770 PR-5-T01-PP 952001290 II - radial optics - M12 connector		
A-5-T01-NN 952021730 A-5-T01-PP 952021290 - radial optics - 2 m cable R-2-T01-PP 952001280 radial optics - 2 m cable R-2-T01-NN 952001280 radial optics - 2 m cable R-2-T01-NN 952021650 R-2-T01-PP 952021190 - radial optics - M12 connector R-5-T01-NN 952001770		
332001230	PNP	
112 connector		
1	NPN	
	PNP	
	952001690 952001260 m cable 952021570 952021090 112 connector 952001270 12 connector 952021730 952021290 2 m cable 952001280 m cable 952021650 952021190 M12 connector 952001770 952001290 112 connector 95201190	

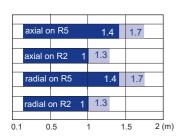
All the ordering codes and information are summarised in the last pages of this catalogue.

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 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

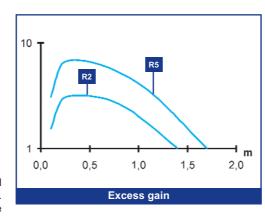


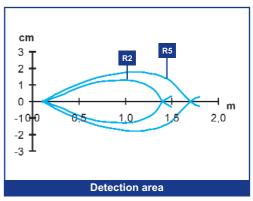
DETECTION DIAGRAMS



Recommended operating distanceMaximum operating distance

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







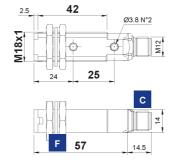
C SHORT DIFFUSE PROXIMITY WITH INFRARED EMISSION

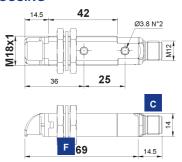
This diffuse proximity sensor represents a reliable, simple and cost-effective solution for the direct detection of any object inside the fixed operating distance. Its particularly compact dimensions permit the installation in very small spaces.



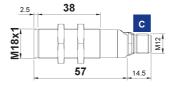
DIMENSIONS

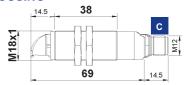
PLASTIC HOUSING





METAL HOUSING









mn

INDICATORS AND SETTINGS





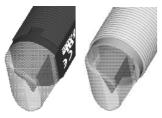
OUTPUT status LED



E Fixing nuts







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.

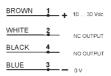
CONNECTIONS

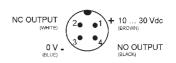
S50-XX-2





S50-XX-5







	TECHNICAL DA	41	A														
		S50-PA-2-C10-NN	S50-PA-2-C10-PP	S50-PA-5-C10-NN	S50-PA-5-C10-PP	S50-PR-2-C10-NN	S50-PR-2-C10-PP	S50-PR-5-C10-NN	S50-PR-5-C10-PP	S50-MA-2-C10-NN	S50-MA-2-C10-PP	S50-MA-5-C10-NN	S50-MA-5-C10-PP	S50-MR-2-C10-NN	S50-MR-2-C10-PP	S50-MR-5-C10-NN	CEO.MD.E.C10.DD
Operating distance:										Г							t
axial optics	0 10 cm	•	•	•	•					•	•	•	•		П		Г
radial optics	0 8 cm					•	•	•	•	Г				•	•	•	•
Power supply:	10 30 Vdc ¹	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Consumption:	≤ 35 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Light emission:	infrared LED 880 nm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Spot dimension:										Г					П		Г
axial optics	approx. 80 mm at 10 cm	•	•	•	•					•	•	•	•			Г	Г
radial optics	approx. 55 mm at 10 cm					•	•	•	•	Г	П			•	•	•	•
Indicators:	vellow OUTPUT LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Output type:	,		Г						П	Г					П	Г	r
	PNP. NO and NC		•		•		•		•	П	•		•		•	Г	•
	NPN, NO and NC	•		•		•		•		•		•		•	Н	•	H
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Saturation voltage:	< 2 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Response time:	0.5 ms	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Switching frequency:	1 kHz	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	1
Operating mode:	dark on NO / light on NC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Connection:	dark on 140 / light on 140	Ť	Ť	Ť	Ť	Ť	Ť	Ť	Ť	ř	Ť	Ť	Ť	Ť	Ť	Ť	H
COMICONOM.	2 m Ø 4 mm cable 3	•	•			•	•				•			•	•		t
	M12 4-pole connector 4	-	•		•		_	•	•	ř	Ť	•	•	_	H	•	١,
Electrical protection:	class 2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Mechanical protection:	IP67	•	•	•	•	•	•	•	•	•	•	•	_	•	•	•	•
Protection devices:	A. B 5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Housing material:	А, Б	_	_	-	_	Ť	Ť	_	Ť	ř	Ť	Ť	Ť	Ť	H	Ť	H
Housing material.	PBT	•				•	•	•		H					Н		H
	nickel plated brass	_	_	•		_	_	Ť	_		•	•	•	•	•	•	١,
Lens material:	PMMA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	ľ
Weight:	FIVIIVIA	_	•	•	•	_	_	_	_	ľ	_	_	_	•	_	-	ŀ
weight.	7F a may	•	•	\vdash		•	•			Н	-				Н	\vdash	H
	75 g max.	_	_	•	•	_	_	•	•	H	Н				Н		H
	25 g max.	\vdash	\vdash	•	•		\vdash	_	-		•			•	•	\vdash	\vdash
	110 g max.		-	-			\vdash			F	_	_		_	•		H
On a wating tampa waters:	60 g max.	-	_	_	_					Ļ		•	•			•	•
Operating temperature:	-25 +55°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	9
Storage temperature:	-25 +70°C	•	•	•	•	•	•	•	•	•	•	-	•	•	•	•	L
Reference standard:	Reference standard: EN 60947-5-2				•			•		•						•	ľ

	TION TABL	
plastic - axial optics - 2	m cable	
S50-PA-2-C10-NN	952001630	NPN
S50-PA-2-C10-PP	952001240	PNP
metal - axial optics - 2 i	m cable	
S50-MA-2-C10-NN	952021520	NPN
S50-MA-2-C10-PP	952021020	PNP
plastic - axial optics - M		
S50-PA-5-C10-NN	952001520	NPN
S50-PA-5-C10-PP	952001250	PNP
metal - axial optics - M	12 connector	
S50-MA-5-C10-NN	952021680	NPN
S50-MA-5-C10-PP	952021220	PNP
)	
plastic - radial optics - 2		NIDNI
S50-PR-2-C10-NN	952001800	NPN PNP
S50-PR-2-C10-PP	952001490	PNP
metal - radial optics - 2	m cable	
S50-MR-2-C10-NN	952021620	NPN
S50-MR-2-C10-PP	952021490	PNP
plastic - radial optics - I	M12 connector	
S50-PR-5-C10-NN	952001740	NPN
S50-PR-5-C10-PP	952001740	PNP

S50-MR-5-C10-PP 952021480 PNP
All the ordering codes and information are summarised in the last pages of this catalogue.

952021780

TECHNICAL NOTES

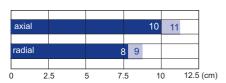
¹ Limit values

S50-MR-5-C10-NN

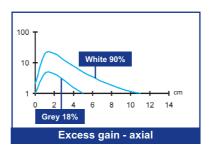
- 2 Average life of 100.000 h with T_A = +25 $^{\circ}\mathrm{C}$
- ³ PVC, 4 x 0.14 mm²
- ⁴ Compatible with quick connection systems
- ⁵ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

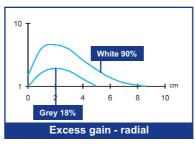


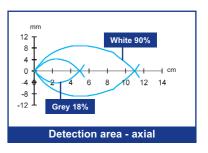
DETECTION DIAGRAMS

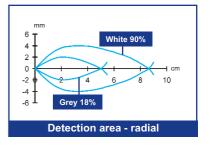


Recommended operating distanceMaximum operating distance











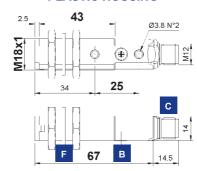
C DIFFUSE PROXIMITY WITH INFRARED EMISSION

This version of diffuse proximity sensor has a detection distance that can be set using the sensitivity adjustment trimmer. The green stability LED indicates whether the received signal is above to the minimum signal for stable output switching.

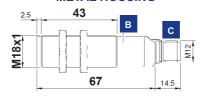


DIMENSIONS

PLASTIC HOUSING



METAL HOUSING

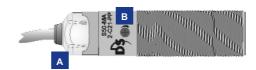






INDICATORS AND SETTINGS





- **OUTPUT** status and STABILITY LEDs
- Adjustment trimmer
- M12 connector output
- Cable output
- Fixing nuts
- 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.

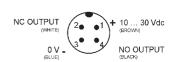
S50-XX-2





S50-XX-5









TECHNICAL DATA S50-PA-5-C21-NN S50-PA-5-C21-PP S50-MA-2-C21-NN S50-MA-5-C21-NN S50-MA-5-C21-PP Operating distance: 0 ... 40 cm • • Power supply: 10 ... 30 Vdc Ripple: ≤ 2 Vpp Consumption: ≤ 35 mA infrared LED 880 nm Light emission: Spot dimension: approx. 100 mm at 300 cm Setting: sensitivity trimmer 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: light on NO / dark on NC Connection: 2 m Ø 4 mm cable 4 • • M12 4-pole connector **Electrical protection:** class 2 Mechanical protection: IP67 Protection devices: A, B 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

		_			
SEI	EC.	TIOI	N TA	RI	Е

piastic - axiai optics - 2	m cable					
S50-PA-2-C21-NN	952002170	NPN				
S50-PA-2-C21-PP	-2-C21-PP 952002160 F					
metal - axial optics - 2	m cable					
S50-MA-2-C21-NN	952022130	NPN				
S50-MA-2-C21-PP	952022120	PNP				
plastic - axial optics - N	112 connector					
S50-PA-5-C21-NN	952002190	NPN				
S50-PA-5-C21-PP 952002180 PNP						

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

952022150

952022140

NPN

PNP

metal - axial optics - M12 connector

S50-MA-5-C21-NN

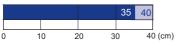
S50-MA-5-C21-PP

TECHNICAL NOTES

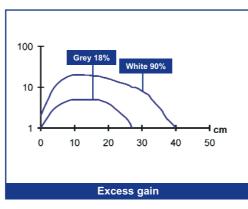
- ¹ Limit values
- 2 Average life of 100.000 h with T_A = +25 $^{\circ}$ C
- ³ 270° single-turn trimmer
- ⁴ PVC, 4 x 0.14 mm²
- ⁵ Compatible with quick connection systems
- ⁶ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

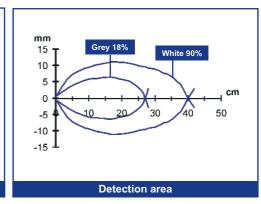


DETECTION DIAGRAMS



Recommended operating distance
Maximum operating distance







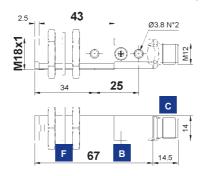
C LONG DIFFUSE PROXIMITY WITH INFRARED EMISSION

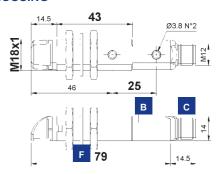
This version of diffuse proximity sensor offers the maximum operating distance for the direct detection of objects. The detection distance can be set using the sensitivity adjustment trimmer. The green stability LED indicates whether the received signal is above to the minimum signal for stable output switching.



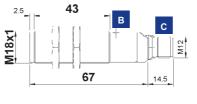
DIMENSIONS

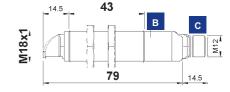
PLASTIC HOUSING





METAL HOUSING









mn

INDICATORS AND SETTINGS



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

Adjustment trimmerM12 connector output

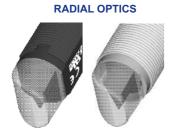
OUTPUT status and

STABILITY LEDs



Fixing nuts

F Fixing gasket



ACCESSORIES

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

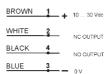
Refer also to Connectors (A.03) and Fixing brackets (A.04) of the General Catalogue.

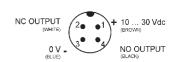






S50-XX-5







TECHNICAL DATA																	
		S50-PA-2-C01-NN	S50-PA-2-C01-PP	S50-PA-5-C01-NN	S50-PA-5-C01-PP	S50-PR-2-C01-NN	S50-PR-2-C01-PP	S50-PR-5-C01-NN	S50-PR-5-C01-PP	S50-MA-2-C01-NN	S50-MA-2-C01-PP	S50-MA-5-C01-NN	S50-MA-5-C01-PP	S50-MR-2-C01-NN	S50-MR-2-C01-PP	S50-MR-5-C01-NN	S50-MR-5-C01-PP
Operating distance:									\vdash	Н					П		
axial optics	0 70 cm	•	•	•	•					•	•	•	•				
radial optics	0 40 cm					•	•	•	•					•	•	•	•
Power supply:	10 30 Vdc 1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Consumption:	≤ 35 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Light emission:	infrared LED 880 nm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Spot dimension:																	
axial optics	approx.200 mm at 60 cm	•	•	•	•				Ĺ	•	•	•	•				
radial optics	approx.35 mm at 40 cm					•	•	•	•	L				•	•	•	•
Setting:	sensitivity trimmer 3	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•
Indicators:															\Box		
	yellow OUTPUT LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	green STABILITY LED	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•
Output type:																	
	PNP, NO and NC		•		•		•		•		•		•		•		•
	NPN, NO and NC	•		•		•		•		•		•		•	\Box	•	
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			•	•			•	•			•	•		\Box	•	•
Electrical protection:	class 2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Mechanical protection:	IP67	•	•	•	•	•	•	•	•	•	-	•	•	•	•	•	•
Protection devices:	A, B ⁶	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Housing material:															Ш		
	PBT	•	•	•	•	•	•	•	•	L					Ш		
	nickel plated brass									•		•	•	•	•	•	•
Lens material:	PMMA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Weight:										L					\sqcup		
	75 g max.	•	•			•	•								Ш		
	25 g max.			•	•			•	•	L					\sqcup		
	110 g max.					Щ				•	•			•	•		
	60 g max.					Щ				L	_	•	•		\sqcup	•	•
Operating temperature:	-25 +55°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Storage temperature:	-25 +70°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Reference standard:	EN 60947-5-2	•	•	•	•	•	•	•	•	•		•	•		•	•	•

SELECT	TION TABL	.E
plastic - axial optics - 2	m cable	
S50-PA-2-C01-NN	952001620	NPN
S50-PA-2-C01-PP	952001050	PNP
metal - axial optics - 2 r	n cable	
S50-MA-2-C01-NN	952021510	NPN
S50-MA-2-C01-PP	952021010	PNP
plastic - axial optics - M	112 connector	
S50-PA-5-C01-NN	952001510	NPN
S50-PA-5-C01-NN	952001010	PNP
0001710 00111	00200.000	
metal - axial optics - M1	12 connector	
S50-MA-5-C01-NN	952021670	NPN
S50-MA-5-C01-PP	952021210	PNP
plastic - radial optics - 2		
S50-PR-2-C01-NN	952001790	NPN
S50-PR-2-C01-PP	952001070	PNP
metal - radial optics - 2		LAIDN
S50-MR-2-C01-NN	952021610	NPN
S50-MR-2-C01-PP	952021150	PNP
plastic - radial optics - N	M12 connector	
S50-PR-5-C01-NN	952001730	NPN
S50-PR-5-C01-PP	952001730	PNP
	55255.550	
metal - radial optics - M	12 connector	
S50-MR-5-C01-NN	952021770	NPN

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

952021350

PNP

TECHNICAL NOTES

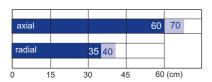
¹ Limit values

S50-MR-5-C01-PP

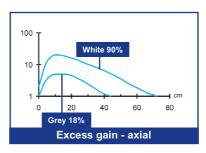
- 2 Average life of 100.000 h with T_A = +25 $^{\circ}\mathrm{C}$
- ³ 270° single-turn trimmer
- ⁴ PVC, 4 x 0.14 mm²
- ⁵ Compatible with quick connection systems
- ⁶ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

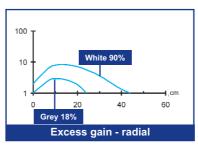


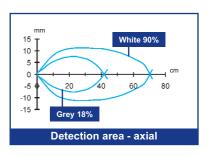
DETECTION DIAGRAMS

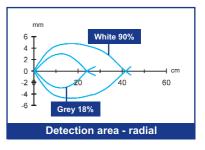


Recommended operating distanceMaximum operating distance











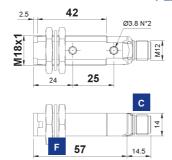
D FIXED FOCUS PROXIMITY WITH RED EMISSION

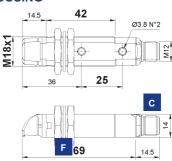
The fixed focus proximity sensor offers a simple fixed background suppression distance beyond which no object is detected. The fixed triangulation of the optics greatly reduces the detection distance of reflective objects. The visible red emission facilitates sensor installation.



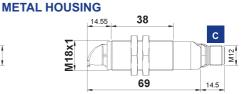
DIMENSIONS

PLASTIC HOUSING





2.5 38 C







mn

INDICATORS AND SETTINGS





- A OUTPUT status LED
- M12 connector output
- D Cable output
- E Fixing nuts
- Fixing gasket

ACCESSORIES

RADIAL OPTICS

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.

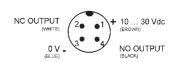






S50-XX-5







TECHNICAL DATA																	
		S50-PA-2-D00-NN	S50-PA-2-D00-PP	S50-PA-5-D00-NN	S50-PA-5-D00-PP	S50-PR-2-D00-NN	S50-PR-2-D00-PP	S50-PR-5-D00-NN	S50-PR-5-D00-PP	S50-MA-2-D00-NN	S50-MA-2-D00-PP	S50-MA-5-D00-NN	S50-MA-5-D00-PP	S50-MR-2-D00-NN	S50-MR-2-D00-PP	S50-MR-5-D00-NN	S50-MR-5-D00-PP
Operating distance:										Ц							
axial optics	0.5 10 cm	•	•	•	•					•	•	•	•				L
radial optics	0 8 cm					•	•	•	•					•	•	•	•
Power supply:	10 30 Vdc1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Consumption:	≤ 35 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Light emission:	red LED 630 nm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Spot dimension:										П							
axial optics	approx. 20 mm at 10 cm	•	•	•	•					•	•	•	•				Г
radial optics	approx. 25 mm at 8 cm	Т				•	•	•	•	П				•	•	•	•
Indicators:	vellow OUTPUT LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Output type:		Ť	Ť	Ť	Ť					Ė							
output type:	PNP, NO and NC		•		•		•		•	Н	•		•		•		•
	NPN. NO and NC	•	Ť	•	Ť	•	Ť	•	Ť	•	Ť	•	Ť	•	Ť	•	Ť
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	•		-	•	_	•	•	_	Ĭ			•	_		÷	
Connection:	dark off NO / light off NO	-	_	_	_	_	•	_	_	ř	-	-	_	_	_	Ť	_
Connection.	2 m Ø 4 mm cable ³	+	_			_	_		Н			-	_	_		_	H
-		•	•	_	_	•	•	_		•	•	_	_	•	-	_	
Electrical and testing	M12 4-pole connector 4			•	•		_	•	•	H	_	_	•			_	-
Electrical protection:	class 2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Mechanical protection:	IP67	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Protection devices:	A, B ⁵	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Housing material:		_		_		_			Н	Н	_	_		_	\dashv		
	PBT	•	•	•	•	•	•	•	•	Н	_	_		_	-		
	nickel plated brass								Ш	•	•	•	•	•	•	•	•
Lens material:	PMMA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Weight:									Ш	Ш	_				\square		
	75 g max.	•	•			•	•										
	25 g max.	\perp		•	•			•	•	Ц					Ш		L
	110 g max.	\perp								•	•			•	•		
	60 g max.											•	•		П	•	•
Operating temperature:	-25 +55°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Storage temperature: -25 +70°C		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Reference standard:	EN 60947-5-2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		-															

SELECT	TION TABL	E.							
plastic - axial optics - 2 m cable									
S50-PA-2-D00-NN	952001640	NPN							
S50-PA-2-D00-PP	952001090	PNP							
metal - axial optics - 2 m cable									
S50-MA-2-D00-NN	952021530	NPN							
S50-MA-2-D00-PP	952021030	PNP							
plastic - axial optics - M									
S50-PA-5-D00-NN	952001530	NPN							
S50-PA-5-D00-PP	952001100	PNP							
metal - axial optics - M1									
S50-MA-5-D00-NN	952021690	NPN							
S50-MA-5-D00-PP	952021230	PNP							
plastic - radial optics - 2									
S50-PR-2-D00-NN	952001810	NPN							
S50-PR-2-D00-PP	952001110	PNP							
metal - radial optics - 2									
S50-MR-2-D00-NN	952021630	NPN							
S50-MR-2-D00-PP	952021160	PNP							
plastic - radial optics - N									
S50-PR-5-D00-NN	952001750	NPN							
S50-PR-5-D00-PP	952001120	PNP							
metal - radial optics - M		A I DA I							
S50-MR-5-D00-NN	952021790	NPN							

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

952021360

PNP

TECHNICAL NOTES

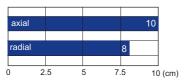
¹ Limit values

S50-MR-5-D00-PP

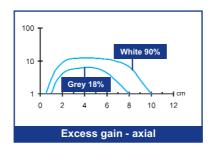
- 2 Average life of 100.000 h with T_A = +25 $^{\circ}$ C
- ³ PVC, 4 x 0.14 mm²
- ⁴ Compatible with quick connection systems
- ⁵ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

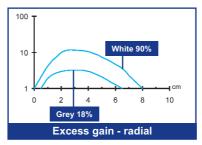


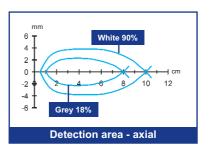
DETECTION DIAGRAMS

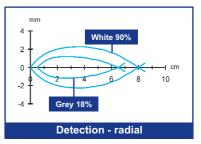


Operating distance











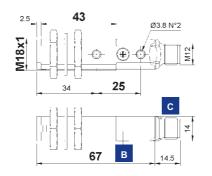
L-C LASER PROXIMITY WITH RED EMISSION

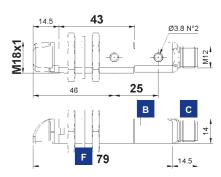
The visible red laser emission allows the accurate detection of very small objects. The sensors operate as a proximity device up to 35 cm and can be used as a contrast sensor for high contrast mark detection. The class 1 laser emission guarantees maximum safety for the operators in all applications.

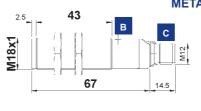


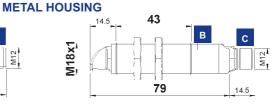
DIMENSIONS

PLASTIC HOUSING













mn

INDICATORS AND SETTINGS





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

A OUTPUT status and STABILITY LEDs

B Adjustment trimmer

c M12 connector output

Cable output

Fixing nuts

Fixing gasket

ACCESSORIES

RADIAL OPTICS

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.







S50-XX-5









		_		_	_												
		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
Operating distance:																	
axial optics	0 35 cm	•	•			•	•			•	•			•	•		_
radial optics				•	•			•	•	Ш		•	•			•	•
Power supply:	10 30 Vdc ¹	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Consumption:	≤ 35 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Light emission:		L								Ш							_
	red Laser 650 nm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	class 1 EN 60825-1	\perp		_						Ц		Ш					_
	class II CDRH21 CFR 1040.10			4						Ц		Ш			_		
Resolution:	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	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Setting:	sensitivity trimmer 3	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Indicators:										Ш							
	yellow OUTPUT LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	green STABILITY LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Output type:		L		_						Ц							
	PNP, NO and NC	L	•	_	•		•		•	Ц	•		•		•		•
	NPN, NO and NC	•		•		•		•		•		•		•		•	
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Saturation voltage:	≤ 2 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Response time:	333 μs	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Switching frequency:	1.5 kHz	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Operating mode:	light on NO / dark on NC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Connection:		L		4			_			Ц					_	_	_
	2 m Ø 4 mm cable⁴	•	•	_		•	•			•	•			•	•		_
	M12 4-pole connector ⁵			•	•			•	•	Ш		•	•			•	•
Electrical protection:	class 2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Mechanical protection:	IP67	•	•	•	•	•	•	•	_	•	•	•	•	-	-	•	•
Protection devices:	A, B ⁶	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Housing material:		╄		4			_			Ш		Ш			_	_	_
	PBT	•	•	•	•	•	•	•	•	Ш							
	nickel plated brass	\vdash		_			\dashv	_		•		•	•		$\overline{}$	•	•
Lens material:	PMMA / glass	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Weight:	75	Ļ	Ļ		_		_			Н		Н			_	_	_
	75 g max.	•	•	•	•				_	Н						_	
	25 g max.	\vdash		4	_	•	•	•	•				•		_	_	_
	110 g max.	+	H	\dashv	-	\dashv	-	\dashv		•	•	•	•				_
O	60 g max.	•	•	•	•	•	•	•	•	•	•	•	•	•	_	•	•
Operating temperature:		•	•	•		•		•		•	•	•	•			•	•
Storage temperature: -25 +70°C						\rightarrow	$\overline{}$	$\overline{}$		\vdash		$\overline{}$			_	_	
Reference standard:	EN 60947-5-2,		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
C C OUD HOLLOTTO	EN 60825-1, CDRH21 CFR 1040.10		•	_	•	_	•	•	_	_	•	-	_	-	•	_	_

\sim E I		 IBIF

SELEC	HON IADL	. =							
plastic - axial optics - 2	m cable								
S50-PL-2-C01-NN	952001880	NPN							
S50-PL-2-C01-NN		PNP							
350-PL-2-C01-PP	952001380	PNP							
plastic - radial optics - 2 m cable									
S50-PH-2-C01-NN	952001990	l NPN							
S50-PH-2-C01-NN	952001990	PNP							
330-FH-2-C01-FF	932001960	FINE							
metal - axial optics - 2	m cablo								
S50-ML-2-C01-NN	952021830	NPN							
S50-ML-2-C01-PP	952021630	PNP							
350-IVIL-2-C01-PP	952021410	PNP							
metal - radial optics - 2	m ooblo								
S50-MH-2-C01-NN		NPN							
	952021990								
S50-MH-2-C01-PP	952021980	PNP							
plastic - axial optics - N	112 connector								
S50-PL-5-C01-NN		NPN							
	952001850	PNP							
S50-PL-5-C01-PP	952001390	PINP							
plastic - radial optics -	M10 compostor								
S50-PH-5-C01-NN	952002010	NPN							
		PNP							
S50-PH-5-C01-PP	952002000	PNP							
motal avialantias M	10								
metal - axial optics - M		NPN							
S50-ML-5-C01-NN	952021860	PNP							
S50-ML-5-C01-PP	952021450	PNP							
metal - radial optics - M12 connector									
S50-MH-5-C01-NN		NPN							
	952022010								
S50-MH-5-C01-PP	952022000	PNP							

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

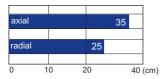
TECHNICAL NOTES

- ¹ Limit values
- 2 Average life of 50.000 h with $T_{\rm A}$ = +25 $^{\circ}{\rm C}$
- 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

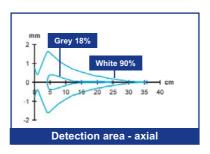
The use of the MICRO-18 fixing bracket (cod. 95ACC1380) is recommended for the correct optic axis alignment of the laser emission.

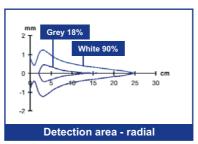
C C (VL) US LISTED

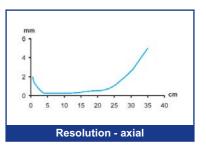
DETECTION DIAGRAMS

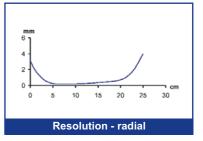


Operating distance











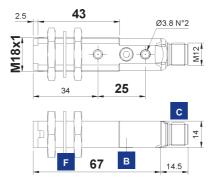
M AXIAL BACKGROUND SUPPRESSION WITH RED EMISSION

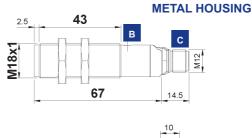
Background suppression proximity allows to precisely adjust the distance over which the object is not detected, with the minimum difference between reflective objects. The *EASYtouch™* setting procedure fixes automatically the best detection conditions, simply pressing once the teach-in pushbutton, in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



DIMENSIONS

PLASTIC HOUSING









INDICATORS AND SETTINGS





READY / ERROR LEDs

Teach-in push-button

OUTPUT status and

B redon in pash battor

c M12 connector output

Cable output

Fixing nuts

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

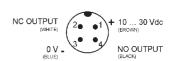
S50-XX-2





S50-XX-5







TECHNICAL DATA S50-PA-2-M03-PP S50-PA-5-M03-NN S50-PA-5-M03-NN S50-MA-2-M03-NN S50-MA-2-M03-NN S50-MA-5-M03-PP 5 ... 10 cm Operating distance: Power supply: 10 ... 30 Vdc Ripple: ≤ 2 Vpp Consumption: ≤ 30 mA Light emission: red LED 630 nm² Spot dimension: approx. 8 mm at 10 cm Setting: teach-in push-button Setting procedure: teach-in EASYtouch™ Indicators: yellow OUTPUT LED green / red READY / ERROR LED • • • • • • • • Output type: PNP, NO and NC NPN, NO and NC **Output current:** ≤ 100 mA Saturation voltage: ≤ 2 V Response time: 1 ms Switching frequency: 500 Hz Operating mode: dark on NO / light on NC Connection: 2 m Ø 4 mm cable 3 M12 4-pole connector 4 **Electrical protection:** class 2 Mechanical protection: IP67 Protection devices: A, B Housing material: PBT nickel plated brass • • • • Lens material: **PMMA** Weight: 75 g max. • • 25 g max. • • 110 g max • • 60 g max. -25 ... +55°C Operating temperature: Storage temperature: -25 ... +70°C Reference standard: EN 60947-5-2

LEC'		

plastic - axial optics - 2 m cable

plastic - axial ontics - M12 connector

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

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

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			

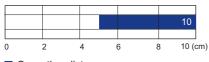
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

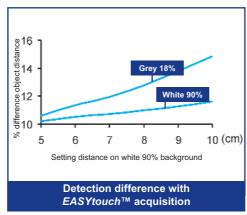
- ¹ Limit values
- ² Average life of 100.000 h with T_A = +25 °C
- ³ PVC, 4 x 0.14 mm²
- ⁴ Compatible with quick connection systems
- ⁵ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

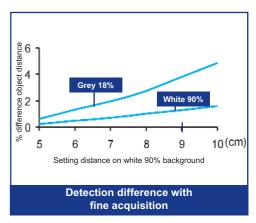


DETECTION DIAGRAMS



Operating distance







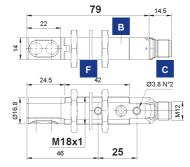
M RADIAL BACKGROUND SUPPRESSION WITH RED EMISSION

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 pushbutton, in presence of the reference to detect.

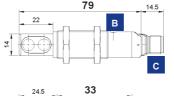


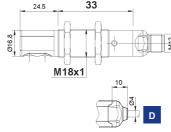
DIMENSIONS

PLASTIC HOUSING



METAL HOUSING







mm

INDICATORS AND SETTINGS





- OUTPUT status and READY/ERROR LEDs
- B Teach-in push-button
- c M12 connector output
- Cable output
- Fixing nuts
- 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.

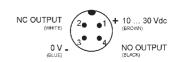






S50-XX-5







Operating distance: 510 cm Power supply: 10 30 Vdc¹ Ripple: ≤ 2 Vpp Consumption: ≤ 30 mA Light emission: red LED 630 nm² Spot dimension: approx. 10 mm at 10 cm Setting: teach-in push-button Setting procedure: teach-in EASYtouch™ Indicators: yellow OUTPUT LED green / red READY / ERROR LED • • • • • • • Output type: PNP, NO and NC NPN, NO and NC • • • • • • • Saturation voltage: ≤ 2 V Response time: 1 ms Switching frequency: 500 Hz Operating mode: dark on NO / light on NC Connection: 2 m Ø 4 mm cable³ M12 4-pole connector ⁴ • • • • • • Electrical protection: class 2 Mechanical protection: lP67 Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass • • • • • • • • Lens material: 90 g max. 40 g max. <td< th=""><th colspan="7">TECHNICAL DATA</th></td<>	TECHNICAL DATA									
Operating distance: 510 cm Power supply: 10 30 Vdc¹ Ripple: ≤ 2 Vpp Consumption: ≤ 30 mA Light emission: red LED 630 nm² Spot dimension: approx. 10 mm at 10 cm Setting: teach-in push-button Setting procedure: teach-in EASYtouch™ Indicators: yellow OUTPUT LED green / red READY / ERROR LED • • • • • • • Output type: PNP, NO and NC NPN, NO and NC • • • • • • • Saturation voltage: ≤ 2 V Response time: 1 ms Switching frequency: 500 Hz Operating mode: dark on NO / light on NC Connection: 2 m Ø 4 mm cable³ M12 4-pole connector ⁴ • • • • • • Electrical protection: class 2 Mechanical protection: lP67 Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass • • • • • • • • Lens material: 90 g max. 40 g max. <td< th=""><th colspan="7">Z a Z a Z a Z a</th></td<>	Z a Z a Z a Z a									
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Operating distance: 510 cm Power supply: 10 30 Vdc¹ Ripple: ≤ 2 Vpp Consumption: ≤ 30 mA Light emission: red LED 630 nm² Spot dimension: approx. 10 mm at 10 cm Setting: teach-in push-button Setting procedure: teach-in EASYtouch™ Indicators: yellow OUTPUT LED green / red READY / ERROR LED • • • • • • • Output type: PNP, NO and NC NPN, NO and NC • • • • • • • Saturation voltage: ≤ 2 V Response time: 1 ms Switching frequency: 500 Hz Operating mode: dark on NO / light on NC Connection: 2 m Ø 4 mm cable³ M12 4-pole connector ⁴ • • • • • • Electrical protection: class 2 Mechanical protection: lP67 Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass • • • • • • • • Lens material: 90 g max. 40 g max. <td< th=""><th></th><th></th><th>50-P</th><th>50-P</th><th>50-P</th><th>50-P</th><th>50-N</th><th>50-N</th><th>50-N</th><th>50-N</th></td<>			50-P	50-P	50-P	50-P	50-N	50-N	50-N	50-N
Power supply: 10 30 Vdc¹			S	S	S	S	S	S	S	တ
Power supply: 10 30 Vdc¹	Operating distance:	5 10 cm	•	•	•	•	•	•	•	•
Ripple:		10 30 Vdc ¹	•	•	•	•	•	•	•	•
Light emission: red LED 630 nm² ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	Ripple:		•	•	•	•	•	•	•	•
Spot dimension: approx. 10 mm at 10 cm Setting: teach-in push-button Setting procedure: teach-in EASYtouch™ Indicators: yellow OUTPUT LED green / red READY / ERROR LED • • • • • • Output type: PNP, NO and NC NPN, NO and NC • • • • • • • • NPN, NO and NC • • • • • • • • • • Saturation voltage: ≤ 2 V Response time: 1 ms Switching frequency: 500 Hz Operating mode: dark on NO / light on NC Connection: 2 m Ø 4 mm cable ³ M12 4-pole connector ⁴ • • • • • Electrical protection: IP67 Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass Lens material: glass Weight: 90 g max. 40 g max. • • • • • • • • • • • • • • • • • • •	Consumption:		•	•	•	•	•	•	•	•
Setting: teach-in push-button Setting procedure: teach-in EASYtouch™ Indicators: yellow OUTPUT LED green / red READY / ERROR LED o o o o o o o o o o o o o o o o o o o	Light emission:	red LED 630 nm ²	•	•	•	•	•	•	•	•
Setting procedure: teach-in EASYtouch™ ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●			•	•	•	•	•	•	•	•
Indicators:			•	-	_	_	•	•	•	•
yellow OUTPUT LED green / red READY / ERROR LED Output type: PNP, NO and NC NPN, NO and NC Saturation voltage: 1 ms Switching frequency: 500 Hz Operating mode: Connection: 2 m Ø 4 mm cable³ M12 4-pole connector⁴ Electrical protection: Response time: 1 ms 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		teach-in <i>EASYtouch</i> ™	•	•	•	•	•	•	•	•
green / red READY / ERROR LED Output type: PNP, NO and NC NPN, NO and NC NPN, NO and NC Output current: ≤ 100 mA Saturation voltage: ≤ 2 V Response time: 1 ms Switching frequency: 500 Hz Operating mode: dark on NO / light on NC Connection: 2 m Ø 4 mm cable³ M12 4-pole connector⁴ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Indicators:									
Output type: PNP, NO and NC NPN, NO and NC ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●			-	-	-	-	_	•	•	•
PNP, NO and NC		green / red READY / ERROR LED	•	•	•	•	•	•	•	•
NPN, NO and NC Output current: ≤ 100 mA ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	Output type:	BUB NO INC								
				•		•		•		•
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			_		-		•		•	-
Response time: 1 ms Switching frequency: 500 Hz Operating mode: dark on NO / light on NC Connection: 2 m Ø 4 mm cable³ M12 4-pole connector⁴ • • • • • • Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass • • • • • • Weight: 90 g max. 40 g max. • • • •			_		_		-	•	•	•
Switching frequency: 500 Hz Operating mode: dark on NO / light on NC Connection: 2 m Ø 4 mm cable ³ M12 4-pole connector ⁴ • • • • • • Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass • • • • • • • Lens material: glass Weight: 90 g max. 40 g max.			+-		-		_	•	•	•
Operating mode: dark on NO / light on NC Connection: 2 m Ø 4 mm cable ³ M12 4-pole connector ⁴ • • • • • • • • Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass • • • • • • Lens material: glass Weight: 90 g max. 40 g max.			-			-	•	-	-	-
Connection: 2 m Ø 4 mm cable³ ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●		dork on NO / light on NO	-	_	_	_		-	-	-
2 m Ø 4 mm cable ³ M12 4-pole connector ⁴ Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass Lens material: glass Weight: 90 g max. 40 g max.		dark off NO / light off NC	-	_	_	_	_	-	•	_
M12 4-pole connector 4 Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B 5 Housing material: PBT / PVC nickel plated brass Lens material: glass Weight: 90 g max. 40 g max.	Connection.	2 m Ø 4 mm cable 3			_	_			_	_
Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass Lens material: glass Weight: 90 g max. 40 g max.			_	_	_		_	•		•
Mechanical protection: IP67 Protection devices: A, B s Housing material: PBT / PVC nickel plated brass Lens material: glass Weight: 90 g max. 40 g max. 0	Electrical protection:				-	_				
Protection devices: A, B ⁵ Housing material: PBT / PVC nickel plated brass Lens material: glass Weight: 90 g max. 40 g max.			-				-	•	•	•
Housing material: PBT / PVC ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●			-			_	_	•	•	•
PBT / PVC nickel plated brass Lens material: glass Weight: 90 g max. 40 g max.		Λ, Β					Ė			
nickel plated brass Lens material: glass Weight: 90 g max. 40 g max.	Troubing materials	PBT / PVC	•	•	•	•	Г			\neg
Lens material: glass Weight: 90 g max. 40 g max. 6							•	•	•	•
90 g max. • • • • • • • • • • • • • • • • • • •	Lens material:		•	•	•	•	•	•	•	•
90 g max. • • • • • • • • • • • • • • • • • • •	Weight:	J • • •								
		90 g max.	•	•						
125 g max		40 g max.			•	•				
		125 g max.	Ĺ				•	•		
75 g max.		75 g max.							•	•
Operating temperature: -25 +55°C			•	•	•	•	•	•	•	•
Storage temperature: -25 +70°C			•	•	•	•	•	•	•	•
Reference standard: EN 60947-5-2	Reference standard:	EN 60947-5-2	•	•	•	•	•	•	•	•

CEL	ECT	TA	
SEI			KI F

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 connecto	or	
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.

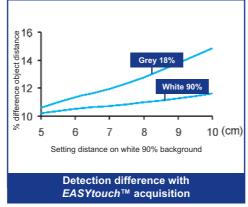
TECHNICAL NOTES

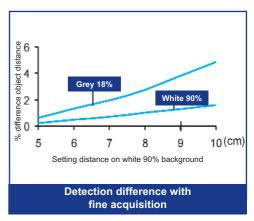
- ¹ Limit values
- ² Average life of 100.000 h with T_A = +25 °C
- ³ PVC, 4 x 0.14 mm²
- ⁴ Compatible with quick connection systems
- ⁵ A reverse polarity protection
 - B overload and short-circuit protection on the outputs



DETECTION DIAGRAMS









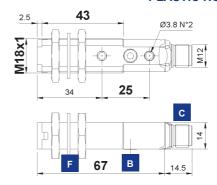
N FORE-BACKGROUND SUPPRESSION WITH RED EMISSION

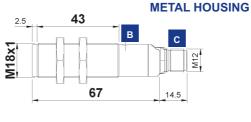
The fore-background suppression proximity allows to precisely adjust the minimum and maximum detection distance. The $EASYtouch^{TM}$ setting procedure fixes automatically the best detection conditions, simply pressing once the teach-in pushbutton, in presence of the reference to detect.



DIMENSIONS

PLASTIC HOUSING









INDICATORS AND SETTINGS





OUTPUT status and READY/ERROR LEDs

B Teach-in push-button

M12 connector output

Cable output

E Fixing nuts

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**.







S50-XX-5







TECHNICAL DATA									
		S50-PA-2-N03-NN	S50-PA-2-N03-PP	S50-PA-5-N03-NN	S50-PA-5-N03-PP	S50-MA-2-N03-NN	S50-MA-2-N03-PP	S50-MA-5-N03-NN	S50-MA-5-N03-PP
Operating distance:	4 10 cm	•	•	•	•	•	•	•	•
Power supply:	10 30 Vdc ¹	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•
Consumption:	≤ 30 mA	•	•	•	•	•	•	•	•
Light emission:	red LED 630 nm ²	•	•	•	•	•	•	•	•
Spot dimension:	approx. 8 mm at 10 cm	•	•	•	•	•	•	•	•
Setting:	teach-in push-button	•	•	•	•	•	•	•	•
Setting procedure:	teach-in <i>EASYtouch</i> ™	•	•	•	•	•	•	•	•
Indicators:									
	yellow OUTPUT LED	•	•	•	•	•	•	•	•
	green / red READY / ERROR LED	•	•	•	•	•	•	•	•
Output type:							Ш		
	PNP, NO and NC		•		•	┖	•		•
	NPN, NO and NC	•		•		•	Ш	•	
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•
Saturation voltage:	≤ 2 V	•	•	•	•	•	•	•	•
Response time:	2 ms	•	•	•	•	•	•	•	•
Switching frequency:	250 Hz	•	•	•	•	•	•	•	•
Operating mode:	dark on NO / light on NC	•	•	•	•	•	•	•	•
Connection:			_			\perp	Ш		
	2 m Ø 4 mm cable ³	•	•			•	•		
	M12 4-pole connector ⁴			•	•		Ш	•	-
Electrical protection:	class 2	•	•	•	•	•	•	•	
Mechanical protection:	IP67	•	•	•	•	•	•	•	_
Protection devices:	A, B ⁵	•	•	•	•	•	•	•	•
Housing material:		_	_			L	$\vdash \vdash$		-
	PBT	•	•	•	•	H	\vdash	_	-
	nickel plated brass					•	•	•	•
Lens material:	PMMA	•	•	•	•	•	•	•	•
Weight:	75		L			H	\vdash		<u> </u>
	75 g max.	•	•		_	L	Н		-
	25 g max.	-	_	•	•	L	H	-	\vdash
	110 g max.	_	_			•	•		H
0	60 g max.		_	_		L	\sqcup	•	_
Operating temperature:	-25 +55°C	•	•	•	•	•	•	•	•
Storage temperature:	-25 +70°C	•	•	•	•	•	•	•	•
Reference standard:	EN 60947-5-2	•	•	•	•				•

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G L		I I		-

plactic axial entice 2 m cable

piastic aniai optios z	- III Gabic					
S50-PA-2-N03-NN	952001680	NPN				
S50-PA-2-N03-PP	952001440	PNP				
metal - axial optics - 2	metal - axial optics - 2 m cable					
S50-MA-2-N03-NN 952021560 NPN						
S50-MA-2-N03-PP	952021080	PNP				

piastic - axiai optics - i	VI12 connector	
S50-PA-5-N03-NN	952001570	NPN
S50-PA-5-N03-PP	952001450	PNP

metal - axial optics - M12 connector					
S50-MA-5-N03-NN	952021720	NPN			
S50-MA-5-N03-PP	952021280	PNP			

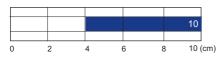
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

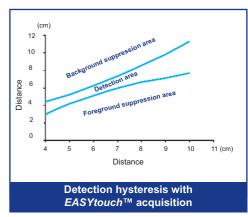
- ¹ Limit values
- ² Average life of 100.000 h with T_A = +25 °C
- ³ PVC, 4 x 0.14 mm²
- ⁴ Compatible with quick connection systems
- ⁵ A reverse polarity protection
 - B overload and short-circuit protection on the outputs



DETECTION DIAGRAMS



Operating distance



Note: in the fine acquisition mode, the foreground suppression distance is nearer to the point where the object has been acquired



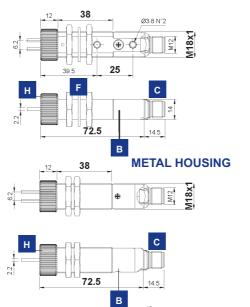
E FIBRE-OPTIC AMPLIFIER WITH RED EMISSION

The amplifier is built to accept any standard 2.2 mm Ø fibre-optic which can be for either diffused or through beam operation. A locking ring when tightened holds the fibres firmly in position. The sensitivity is adjusted by an IP67 rated trimmer. The proximity or through beam fibres are mainly used in applications where space is of a premium and for detection of small objects. Special fibres are also available for high temperature and high wear applications. For further information on extensive range of fibre-optic accessories please see the OF datasheet.



DIMENSIONS

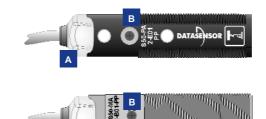
PLASTIC HOUSING

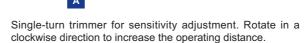




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INDICATORS AND SETTINGS





- A OUTPUT status and STABILITY LEDs
- B Adjustment trimmer
- M12 connector output
- Cable output
- E Fixing nuts
- F Fixing gasket
- H Fibre fixing nut

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.







S50-XX-5









	TECHNICAL DATA								
		S50-PA-2-E01-NN	S50-PA-2-E01-PP	S50-PA-5-E01-NN	S50-PA-5-E01-PP	S50-MA-2-E01-NN	S50-MA-2-E01-PP	S50-MA-5-E01-NN	
Operating distance:						Г	П	П	Г
proximity	3 cm (OF-42-ST-20 standard fibres)	•	•	•	•	•	•	•	•
through beam	10 cm (OF-43-ST-20 standard fibres)	•	•	•	•	•	•	•	•
Power supply:	10 30 Vdc ¹	•	•	•	•	•	•	•	
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•
Consumption:	≤ 35 mA	•	•	•	•	•	•	•	•
Light emission:	red LED 660 nm ²	•	•	•	•	•	•	•	•
Setting:	sensitivity trimmer ³	•	•	•	•	•	•	•	•
Indicators:							Ш		
	yellow OUTPUT LED	•	•	•	•	•	•	•	•
	green STABILITY	•	•	•	•	•	•	•	
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:							Ш		
	2 m Ø 4 mm cable⁴	•	•			•	•		
	M12 4-pole connector 5			•	•			•	•
Electrical protection:	class 2	•	•	•	•	•	•	•	•
Mechanical protection:	IP67	•	•	•	•	•	•	•	•
Protection devices:	A, B ⁶	•	•	•	•	•	•	•	•
Housing material:									
	PBT	•	•	•	•		Ш		
	nickel plated brass					•	•	•	•
Fibre fixing nut material:	ABS	•	•	•	•	•	•	•	•
Weight:						П	П		Г
	75 g max.	•	•						Г
	25 g max.			•	•				
	110 g max.					•	•		
	60 g max.						П	•	•
Operating temperature:	-25 +55°C	•	•	•	•	•	•	•	•
Storage temperature:	-25 +70°C	•	•	•	•	•	•	•	
Reference standard:	EN 60947-5-2					•			

SELECTION TABLE

plastic - axial optics - 2 m cable				
S50-PA-2-E01-NN	952001650	NPN		
S50-PA-2-E01-PP	952001130	PNP		
	•	•		

metal - a	xial optics - 2	m cable	
S50-MA-	2-E01-NN	952021880	NPN
S50-MA-	2-E01-PP	952021040	PNP

plastic - axial optics - M12 connector					
S50-PA-5-E01-NN	952001540	NPN			
S50-PA-5-E01-PP	952001140	PNP			

metal - axial optics - M12 connector					
S50-MA-5-E01-NN	952021890	NPN			
S50-MA-5-E01-PP	952021240	PNP			

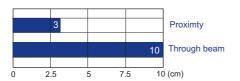
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

- ¹ Limit values
- 2 Average life of 100.000 h with T_{A} = +25 $^{\circ} C$
- 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



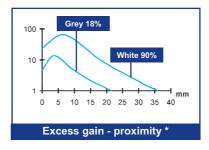
DETECTION DIAGRAMS

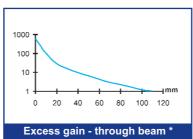


Operating distance with standard fibres

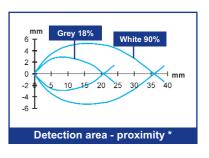
Standard fibre-optics: OF-42-ST-20 proximity OF-43-ST-20 through beam

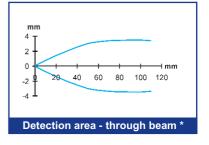
High efficiency fibre-optics or accessory lenses can be used to obtain larger operating distances. Refer to **Fibreoptics** (A.02) of the **General Catalogue**.





^{*} standard fibre-optics







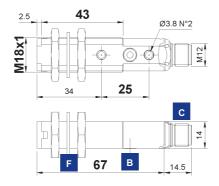
W CONTRAST SENSOR WITH WHITE EMISSION

The white light LED emission is designed for the detection of a large number of coloured or greyscale contrasts, in order to detect print registration marks or similar. 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.

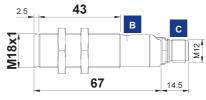


DIMENSIONS

PLASTIC HOUSING



METAL HOUSING







11100

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

INDICATORS AND SETTINGS





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.

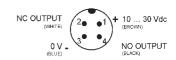






S50-XX-5







Departing distance: 10 mm	TECHNICAL DATA									
Depth of field (max.):			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
Depth of field (max.):	Operating distance:	10 mm	•	•	•	•	•	•	•	•
Power supply:		± 2 mm	•	•	•	•	•	•	•	•
Ripple:		10 30 Vdc ¹	•	•	•	•	•	•	•	•
Light emission: White LED 400 - 700 nm²			•	•	•	•	•	•	•	•
Spot dimension:	Consumption:	≤ 25 mA	•	•	•	•	•	•	•	•
Minimum detectable object: 0.5 mm ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	Light emission:	white LED 400 - 700 nm ²	•	•	•	•	•	•	•	•
Minimum detectable object: 0.5 mm ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●			•	•	•	•	•	•	•	•
Setting procedure: teach-in EASYtouch™	Minimum detectable object:		•	•	•	•	•	•	•	•
Indicators:			•	•	•	•	•	•	•	•
Indicators:	Setting procedure:	teach-in <i>EASYtouch</i> ™	•	•	•	•	•	•	•	•
Green / red READY / ERROR LED										
Output type: PNP, NO and NC ●			•	•	•	•	•	•	•	•
PNP, NO and NC		green / red READY / ERROR LED	•	•	•	•	•	•	•	•
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Output type:									
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				•		•		•		•
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		NPN, NO and NC	•		•		•		•	
Response time: $100 \mu s$ \bullet			•	•	•	•	•	•	•	•
Switching frequency: 5 kHz ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●			•	•	•	•	•	_	_	•
Operating mode:dark with $EASYtouch^{TM}$ automatic dark / light with fine acq.Connection:2 m Ø 4 mm cable 3 M12 4-pole connector 4 Electrical protection:class 2Mechanical protection:IP67Protection devices:A, B 5 Housing material:PBTnickel plated brassLens material:PMMAPMMAWeight:75 g max.25 g max.110 g max.60 g max.Operating temperature:-25 +55°CStorage temperature:-25 +70°C			•	-	-		-	_	•	•
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		5 kHz	•	•	•	•	•	•	•	•
automatic dark / light with fine acq. Connection: 2 m Ø 4 mm cable 3 M12 4-pole connector 4 Electrical protection: Class 2 Mechanical protection: IP67 Protection devices: A, B 5 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	Operating mode:						L			
Connection: 2 m Ø 4 mm cable ³ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■			•	•	•	•			•	•
2 m Ø 4 mm cable 3		automatic dark / light with fine acq.	•	•	•	•	•	•	•	•
M12 4-pole connector ⁴ Electrical protection: Class 2 Mechanical protection: IP67 Protection devices: A, B ⁵ 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	Connection:						L			
Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B ° Housing material: PBT nickel plated brass • • • • • • • Lens material: PMMA Weight: 75 g max. 25 g max. • • • • • • 110 g max. • • • • • • • Operating temperature: -25 +55°C Storage temperature: -25 +70°C			•	•			•	•		L
Mechanical protection: IP67 • • • • • • • • • • • • • • • • • • •					-		L			-
Protection devices: A, B ⁵ Housing material: PBT nickel plated brass ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●			_	_	-		_	-	-	-
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			-	_	-	_	-			-
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		A, B ⁵	•	•	•	•	•	•	•	•
nickel plated brass Lens material: PMMA Weight: 75 g max. 25 g max. 0 110 g max. 0 60 g max. 0 Operating temperature: -25 +55°C 0 0 0 Storage temperature: -25 +70°C 0 0 0 0	Housing material:		_				L			L
Lens material: PMMA ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●		· - ·	•	•	•	•	L			L
Weight: 75 g max. 25 g max. 110 g max. 60 g max. Operating temperature: -25 +55°C Storage temperature: -25 +70°C			_		L		•			-
75 g max.		PMMA	•	•	•	•	•	•	•	•
25 g max. 110 g max. 60 g max. Operating temperature: -25 +55°C Storage temperature: -25 +70°C	Weight:						L			L
110 g max. 60 g max. Operating temperature: -25 +55°C Storage temperature: -25 +70°C			•	•	L	_	L			
60 g max. Operating temperature: -25 +55°C Storage temperature: -25 +70°C			+		•	•	L	L		\vdash
Operating temperature: -25 +55°C • • • • • • • • Storage temperature: -25 +70°C • • • • • • • •			+				•	•	L	L
Storage temperature: -25 +70°C			+				L		•	•
Storage temperature: -25 +70°C							•	•	•	•
			•	•	•	•	•	•	•	•

EN 60947-5-2

SF	LEC	CIT	$N T\Delta$	IBLE

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 - M	112 connector	
S50-PA-5-W03-NN	952001600	NPN
S50-PA-5-W03-PP	952001330	PNP

metal - axial optics - M	12 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.

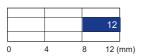
TECHNICAL NOTES

- ¹ Limit values
- 2 Average life of 100.000 h with T_A = +25 $^{\circ} \mathrm{C}$
- ³ PVC, 4 x 0.14 mm²
- ⁴ Compatible with quick connection systems
- ⁵ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

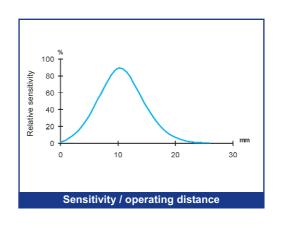


Reference standard:

DETECTION DIAGRAMS



Operating distance



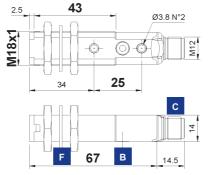


U LUMINESCENCE SENSOR WITH UV EMISSION

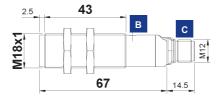
The UV light LED emission detects any luminescent reference, even on very reflective surfaces, such as ceramics, metal or mirrored glass. EASYtouch™ settina procedures fixes automatically the best detection conditions, simply by pressing the teach-in pushbutton once, with the luminescent object present. By pressing the teach-in push-button and holding it down until the green light on the rear of the sensor flashes, with the luminescent object present and then pressing the button again in the presence of a luminescent reference you wish to ignore, a higher level of accuracy is obtained.

DIMENSIONS

PLASTIC HOUSING



METAL HOUSING





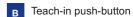


INDICATORS AND SETTINGS





OUTPUT status and READY/ERROR LEDs



c M12 connector output

Cable output

Fixing nuts

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.

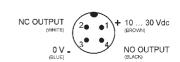
ACCESSORIES

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.









	TECHNICAL DATA								
		S50-PA-2-U03-NN	S50-PA-2-U03-PP	S50-PA-5-U03-NN	S50-PA-5-U03-PP	S50-MA-2-U03-NN	S50-MA-2-U03-PP	S50-MA-5-U03-NN	S50-MA-5-U03-PP
Operating distance:	8 20 mm	•	•	•	•	•	•	•	•
Power supply:	10 30 Vdc ¹	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•
Consumption:	≤ 25 mA	•	•	•	•	•	•	•	•
Light emission:	UV LED 370 nm ²	•	•	•	•	•	•	•	•
Spot dimension:	approx. 3 mm at 20 mm	•	•	•	•	•	•	•	•
Minimum detectable object:	0.5 mm	•	•	•	•	•	•	•	•
Setting:	teach-in push-button	•	•	•	•	•	•	•	•
Setting procedure:	teach-in <i>EASYtouch</i> ™	•	•	•	•	•	•	•	•
Indicators:						Ц			
	yellow OUTPUT LED	•	•	•	•	•	•	•	•
	green / red READY / ERROR LED	•	•	•	•	•	•	•	•
Output type:						Ц			
	PNP, NO and NC		•		•		•		•
	NPN, NO and NC	•		•		•		•	
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•
Saturation voltage:	≤ 2 V	•	•	•	•	•	•	•	•
Response time:	500 μs	•	•	•	•	•	•	•	•
Switching frequency:	1 kHz	•	•	•	•	•	•	•	•
Operating mode:						Ц			
	dark with <i>EASYtouch</i> ™	•	•	•	•	•	•	•	•
	automatic dark / light with fine acq.	•	•	•	•	•	•	•	•
Connection:									
	2 m Ø 4 mm cable ³	•	•			•	•		
	M12 4-pole connector 4			•	•	Ш		•	•
Electrical protection:	class 2	•	•	•	•	•	•	•	•
Mechanical protection:	IP67	•	•	•		_	•	•	•
Protection devices:	A, B ⁵	•	•	•	•	•	•	•	•
Housing material:						Ш			
	PBT	•	•	•	•	Ц	_		
	nickel plated brass					•	_	•	•
Lens material:	PMMA	•	•	•	•	•	•	•	•
Weight:						Ц	_		
	75 g max.	•	•			Ц			
	25 g max.	\perp	Щ	•	•	Ц	_		
-	110 g max.		Ш			•	•		
	60 g max.		Щ			Ц	ᆜ	•	•
Operating temperature:	-25 +55°C	•	•	•	•	•	•	•	•
Storage temperature:	-25 +70°C	•	•	•	•	•	•	•	•
Reference standard:	EN 60947-5-2	•	•	•	•	•	•	•	•

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- 3FI		ΙЦΑΙ	81 F

plastic - axial optics - 2 m cable					
S50-PA-2-U03-NN	952001700	NPN			
S50-PA-2-U03-PP	952001300	PNP			
motal axial antica	2 m aabla				

metai - axiai optics - 2 i	n cable	
S50-MA-2-U03-NN	952021580	NPN
S50-MA-2-U03-PP	952021100	PNP

plastic - axial optics - M12 connector					
S50-PA-5-U03-NN	952001590	NPN			
S50-PA-5-U03-PP	952001310	PNP			

metal - axial optics - M12 connector					
S50-MA-5-U03-NN	952021740	NPN			
S50-MA-5-U03-PP	952021300	PNP			

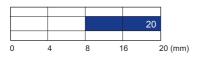
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

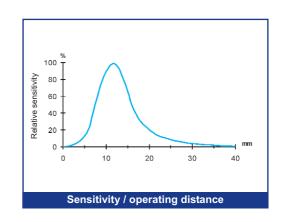
- ¹ Limit values
- 2 Average life of 100.000 h with T_A = +25 $^{\circ} \rm C$
- ³ PVC, 4 x 0.14 mm²
- ⁴ Compatible with quick connection systems
- ⁵ A reverse polarity protection
 - B overload and short-circuit protection on the outputs



DETECTION DIAGRAMS



Operating distance





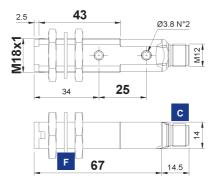
Y DISTANCE SENSOR WITH RED EMISSION

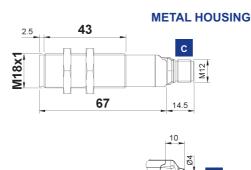
This sensor gives an analogue 0-10 Vdc output proportional to an object's distance from the face of the sensor over a distance of 100 mm. The light intensity of the yellow indicator LED at the rear of the sensor is proportional to the object's distance, the red LED turns on when the object is outside the measurement field.



DIMENSIONS

PLASTIC HOUSING







INDICATORS AND SETTINGS





- A OUTPUT status and field LEDs
- M12 connector output
- Cable output
- Fixing nuts
- Fixing gasket

ACCESSORIES

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

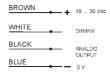
Refer also to **Connectors (A.03)** and **Fixing brackets (A.04)** of the **General Catalogue**.

S50-XX-2





S50-XX-5







	TECHNICAL DATA				
		S50-PA-2-Y00-VK	S50-PA-5-Y00-VK	S50-MA-2-Y00-VK	S50-MA-5-Y00-VK
Operating distance:	5 10 cm	•	•	•	•
Power supply:	18 30 Vdc ¹	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•
Consumption:	≤ 30 mA	•	•	•	•
Light emission:	red LED 630 nm ²	•	•	•	•
Spot dimension:	approx. 8 mm at 10 cm	•	•	•	•
Indicators:	•				
	yellow proportional OUTPUT LED	•	•	•	•
	red field LED	•	•	•	•
Output type:	analogue with 0 10V voltage	•	•	•	•
Output resistance:	2 kΩ	•	•	•	•
Load resistance:	≥ 20 kΩ	•	•	•	•
Response time:	3,33 ms	•	•	•	•
Switching frequency:	150 Hz	•	•	•	•
Resolution:	1 mm / 200 mV	•	•	•	•
Operating mode:	direct / inverse proportionality ³	•	•	•	•
Connection:				Ш	
	2 m Ø 4 mm cable ⁴	•		•	_
	M12 4-pole connector 5		•	Ш	•
Electrical protection:	class 2	•	•	•	•
Mechanical protection:	IP67	•	•	•	•
Protection devices:	A, B ⁶	•	•	•	•
Housing material:				Ш	
	PBT	•	•	Ш	_
	nickel plated brass			•	•
Lens material:	PMMA	•	•	•	•
Weight:			_	Н	_
	75 g max.	•	_	Н	_
	25 g max.		•	L	_
	110 g max.			•	
0	60 g max.	L	Ų	L	_
Operating temperature:	-25 +55°C	•	•	•	•
Storage temperature:	-25 +70°C	•	•		•
Reference standard:	EN 60947-5-2	•		•	•

\sim \sim	LEC.		- T-A	
	1 1-1	11111		KI F

plastic - axial optics - 2 m cable
S50-PA-2-Y00-VK 952001340
metal - axial optics - 2 m cable
S50-MA-2-Y00-VK 952021120
plastic - axial optics - M12 connector
S50-PA-5-Y00-VK 952001350
metal - axial optics - M12 connector
S50-MA-5-Y00-VK 952021320

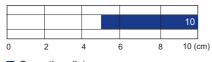
All the ordering codes and information are summarised in the last pages of this catalogue.

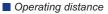
TECHNICAL NOTES

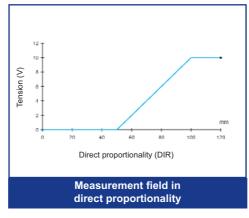
- ¹ Limit values
- 2 Average life of 100.000 h with T_A = +25 $^{\circ} \mathrm{C}$
- ³ Direct proportionality (DIR) is activated when white wire is connected to +Vdc; Inverse proportionality (INV) is activated when white wire is connected to 0 V. The white wire must always be connected.
- ⁴ PVC, 4 x 0.14 mm²
- ⁵ Compatible with quick connection systems
- ⁶ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

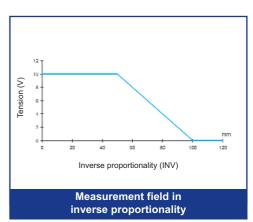


DETECTION DIAGRAMS



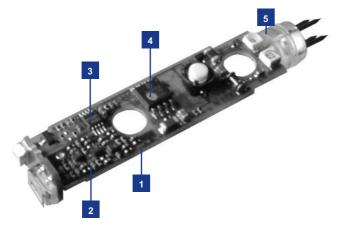








TECHNOLOGY



- 1 Multi-layer fine-line PCB
- Chip-size components, integrated circuits in 8 bumps flip-chip
- Analogue digital ASIC
- Power ASIC for antivalent outputs
- M12 custom connector compatible with quick connection systems. The four terminals are coneshaped to facilitate the direct insertion in the cable conductors (4 x 0,5 mm²)



- Housing and fixing nuts in indeformable plastic providing excellent resistance against hostile environments. Indelible laser marking
- A modular product developed for the automation of the assembling and testing process necessary to guarantee intrinsic quality, repeatability and reliability. One-piece-flow management for improved service



EASYtouchTM is a **Datasensor** patent-covered technology that allows a rapid and safe setting of micro-controlled sensors equipped with a teach-in push-button. A pressure longer than two seconds of the push-button allows a good adjustment of the sensitivity threshold. $EASYtouch^{TM}$ is the easiest and fastest calibration procedure available on the market. The instructions on how to best use $EASYtouch^{TM}$ are given in the product's instruction manual.

ACCESSORIES

The series is compatible with all the **Datasensor** accessories already developed for tubular sensors. In the **General Catalogue** refer to:

- CS connectors
- R reflectors
- OF fibre-optics
- ST fixing brackets

New accessories dedicated to the **\$50** series have been developed to cover all the fixing requirements and to improve the functioning.

In particular $\textit{EASYin}^\intercal$ is an innovative fixing system that can be used only for the plastic flat version, that allows a fast and safe positioning of the sensor, facilitating the adjustment as well as the locking and unlocking.





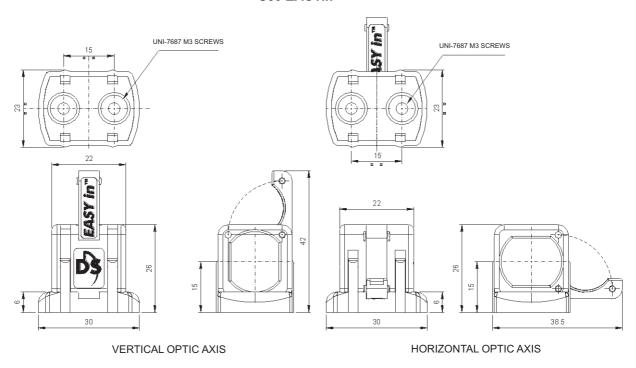
ACCESSORIES SELECTION TABLE AND ORDER INFORMATION

MODEL	DESCRIPTION	ORDER N°
ST-5010	M18/14 fixing bracket	95ACC5230
ST-5011	M18 fixing bracket	95ACC5240
ST-5012	M18 fixing bracket	95ACC5250
ST-5017	M18 fixing bracket	95ACC5270
S50 EASY-IN	M18/14 EASYin™ adjustable fixing support	95ACC5300
JOINT-18	M18 jointed support	95ACC5220
SWING-18	adjustable support for plastic tubular M18 sensors	895000006
MICRO-18	support with micrometric regulation for tubular M18 sensors	95ACC1380
SP-40	fixed support for tubular M18 sensors	95ACC1370
MEK-PROOF	front protection	G5000001

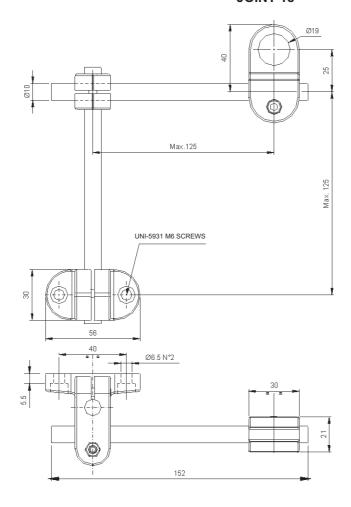
Refer also to Accessories for Sensors of the General Catalogue

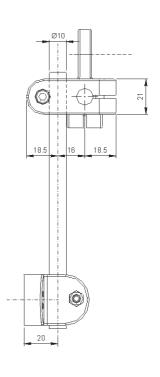


S50 EASYin™



JOINT-18

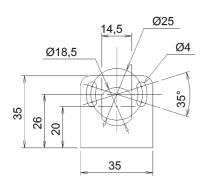




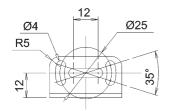


DIMENSIONS ACCESSORIES

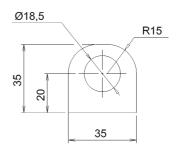
ST-5010



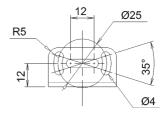




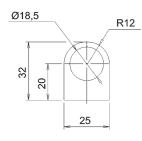
ST-5011

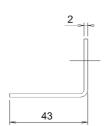


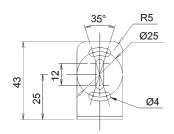




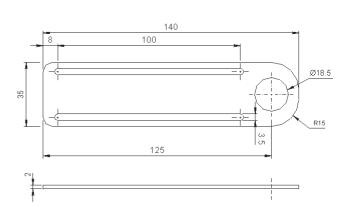
ST-5012





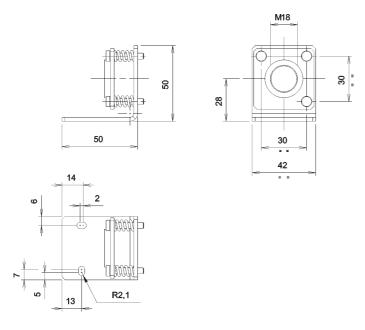


ST-5017

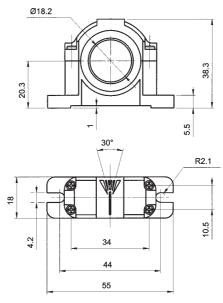


DIMENSIONS ACCESSORIES

MICRO-18

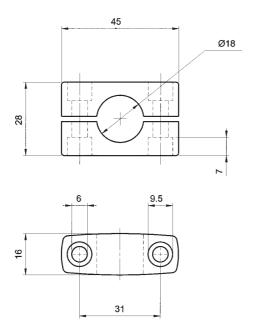


SWING-18

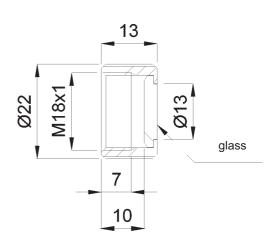


* 2 nuts are included

SP-40



MEK PROOF



MODEL ALPHABETICAL INDEX

PLASTIC FLAT HOU	SING WITH A		
MODEL	CODE N°	OPTIC FUNCTION	PAGE
S50-PA-2-A00-NN	952002090	retroreflex	10
S50-PA-2-A00-PP	952002080	retroreflex	10
S50-PA-2-B01-NN	952001610	polarised retroreflex	12
S50-PA-2-B01-PP	952001010	polarised retroreflex	12
S50-PA-2-C01-NN	952001620	long diffuse proximity	22
S50-PA-2-C01-PP	952001050	long diffuse proximity	22
S50-PA-2-C10-NN	952001630	short diffuse proximity	18
S50-PA-2-C10-PP	952001240	short diffuse proximity	18
S50-PA-2-C21-NN	952002170	midi diffuse proximity	20
S50-PA-2-C21-PP	952002160	midi diffuse proximity	20
S50-PA-2-D00-NN	952001640	fixed focus proximity	24
S50-PA-2-D00-PP	952001090	fixed focus proximity	24
S50-PA-2-E01-NN	952001650	fibre-optic amplifier	34
S50-PA-2-E01-PP	952001130	fibre-optic amplifier	34
S50-PA-2-F01-NN	952001660	receiver	2
S50-PA-2-F01-PP	952001150	receiver	2
S50-PA-2-G00-XG	952001190	emitter	2
S50-PA-2-M03-NN	952001670	background suppression	28
S50-PA-2-M03-PP	952001230	background suppression	28
S50-PA-2-N03-NN	952001230	fore-background suppression	32
S50-PA-2-N03-PP	952001000	fore-background suppression	32
S50-PA-2-T01-NN	952001440	retroreflex for transparents	16
S50-PA-2-T01-PP	952001030	retroreflex for transparents	16
S50-PA-2-U03-NN	952001200	luminescence sensor	38
S50-PA-2-U03-PP	952001700	luminescence sensor	38
S50-PA-2-W03-NN	952001710	contrast sensor	36
S50-PA-2-W03-NN	952001710	contrast sensor	36
S50-PA-2-Y00-VK	952001320	distance sensor	40
S50-PA-5-A00-NN	952001340	retroreflex	10
S50-PA-5-A00-PP	952002110	retroreflex	10
S50-PA-5-B01-NN	952002100	polarised retroreflex	12
S50-PA-5-B01-PP	952001300	polarised retroreflex	12
S50-PA-5-C01-NN	952001510	long diffuse proximity	22
S50-PA-5-C01-NN	952001310	long diffuse proximity	22
S50-PA-5-C10-NN	952001520	short diffuse proximity	18
S50-PA-5-C10-PP	952001320	short diffuse proximity	18
S50-PA-5-C21-NN	952001230	midi diffuse proximity	20
S50-PA-5-C21-NN	952002190	midi diffuse proximity	20
S50-PA-5-D00-NN	952002100	fixed focus proximity	24
S50-PA-5-D00-PP	952001330	fixed focus proximity	24
S50-PA-5-E01-NN	952001100	fibre-optic amplifier	34
S50-PA-5-E01-PP	952001340	fibre-optic amplifier	34
S50-PA-5-E01-PP	952001140	receiver	2
S50-PA-5-F01-NN S50-PA-5-F01-PP	952001330	receiver	2
S50-PA-5-G00-XG	952001100	emitter	2
S50-PA-5-M03-NN	952001200	background suppression	28
S50-PA-5-M03-PP	952001000	background suppression	28
S50-PA-5-N03-NN	952001000		32
S50-PA-5-N03-NN S50-PA-5-N03-PP	952001570	fore-background suppression fore-background suppression	32
S50-PA-5-N03-PP S50-PA-5-T01-NN	952001450		16
		retroreflex for transparents	
S50-PA-5-T01-PP	952001270	retroreflex for transparents	16
S50-PA-5-U03-NN	952001590	luminescence sensor	38
S50-PA-5-U03-PP	952001310	luminescence sensor	38
S50-PA-5-W03-NN	952001600	contrast sensor	36
S50-PA-5-W03-PP	952001330	contrast sensor	36
S50-PA-5-Y00-VK	952001350	distance sensor	40

PLASTIC FLAT HOUSING WITH RADIAL OPTICS				
MODEL	CODE N°	OPTIC FUNCTION	PAGE	

MODEL	CODE N°	OPTIC FUNCTION	PAGE
S50-PR-2-B01-NN	952001780	polarised retroreflex	12
S50-PR-2-B01-PP	952001030	polarised retroreflex	12
S50-PR-2-C01-NN	952001790	long diffuse proximity	22
S50-PR-2-C01-PP	952001070	long diffuse proximity	22
S50-PR-2-C10-NN	952001800	short diffuse proximity	18
S50-PR-2-C10-PP	952001490	short diffuse proximity	18
S50-PR-2-D00-NN	952001810	fixed focus proximity	24
S50-PR-2-D00-PP	952001110	fixed focus proximity	24
S50-PR-2-F01-NN	952001820	receiver	2
S50-PR-2-F01-PP	952001170	receiver	2
S50-PR-2-G00-XG	952001210	emitter	2
S50-PR-2-T01-NN	952001830	retroreflex for transparents	16
S50-PR-2-T01-PP	952001280	retroreflex for transparents	16
S50-PR-5-B01-NN	952001720	polarised retroreflex	12
S50-PR-5-B01-PP	952001040	polarised retroreflex	12
S50-PR-5-C01-NN	952001730	long diffuse proximity	22
S50-PR-5-C01-PP	952001080	long diffuse proximity	22
S50-PR-5-C10-NN	952001740	short diffuse proximity	18
S50-PR-5-C10-PP	952001480	short diffuse proximity	18
S50-PR-5-D00-NN	952001750	fixed focus proximity	24
S50-PR-5-D00-PP	952001120	fixed focus proximity	24
S50-PR-5-F01-NN	952001760	receiver	2
S50-PR-5-F01-PP	952001180	receiver	2
S50-PR-5-G00-XG	952001220	emitter	2
S50-PR-5-T01-NN	952001770	retroreflex for transparents	16
S50-PR-5-T01-PP	952001290	retroreflex for transparents	16

PLASTIC FLAT HOUSING WITH LATERAL OPTICS

MODEL	CODE N°	OPTIC FUNCTION	PAGE
S50-PS-2-M03-NN		background suppression	30
S50-PS-2-M03-PP		background suppression	30
S50-PS-5-M03-NN	952001920	background suppression	30
S50-PS-5-M03-PP	952001930	background suppression	30

PLASTIC FLAT HOUSING WITH LASER AXIAL OPTICS

FLASTIC FLAT HOUSING WITH LASER AXIAL OF HUS					
MODEL	CODE N°	OPTIC FUNCTION	PAGE		
S50-PL-2-B01-NN	952001870	laser retroreflex	14		
S50-PL-2-B01-PP	952001360	laser retroreflex	14		
S50-PL-2-C01-NN	952001880	laser proximity	26		
S50-PL-2-C01-PP	952001380	laser proximity	26		
S50-PL-2-F01-NN	952001890	laser receiver	6		
S50-PL-2-F01-PP	952001400	laser receiver	6		
S50-PL-2 G00-XG	952001420	laser emitter	6		
S50-PL-5-B01-NN	952001840	laser retroreflex	14		
S50-PL-5-B01-PP	952001370	laser retroreflex	14		
S50-PL-5-C01-NN	952001850	laser proximity	26		
S50-PL-5-C01-PP	952001390	laser proximity	26		
S50-PL-5-F01-NN	952001860	laser receiver	6		
S50-PL-5-F01-PP	952001410	laser receiver	6		
S50-PL-5-G00-XG	952001430	laser emitter	6		

PLASTIC FLAT HOUSING WITH LASER RADIAL OPTICS

CODE N°	OPTIC FUNCTION	PAGE
952001950	laser retroreflex	14
952001940	laser retroreflex	14
952001990	laser proximity	26
952001980	laser proximity	26
952002030	laser receiver	6
952002020	laser receiver	6
952002060	laser emitter	6
952001970	laser retroreflex	14
952001960	laser retroreflex	14
952002010	laser proximity	26
952002000	laser proximity	26
952002050	laser receiver	6
952002040	laser receiver	6
952002070	laser emitter	6
	952001950 952001940 952001990 952001980 952002030 952002020 952002060 952001970 952002010 952002010 952002000 952002050 952002040	952001950 laser retroreflex 952001940 laser pretroreflex 952001990 laser proximity 952001980 laser proximity 952002030 laser receiver 952002000 laser receiver 952002000 laser emitter 952001970 laser retroreflex 952002010 laser retroreflex 952002010 laser proximity 952002000 laser receiver 952002040 laser receiver



MODEL ALPHABETICAL INDEX

METAL CYLINDRICAL	HOUSING WITH	AXIAL OPTICS
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METAL CYLINDRICAL HOUSING WITH AXIAL OPTICS						
MODEL	CODE N°	OPTIC FUNCTION	PAGE			
S50-MA-2-A00-NN	952022090	retroreflex	10			
S50-MA-2-A00-PP	952022080	retroreflex	10			
S50-MA-2-B01-NN	952021500	polarised retroreflex	12			
S50-MA-2-B01-PP	952021000	polarised retroreflex	12			
S50-MA-2-C01-NN	952021510	long diffuse proximity	22			
S50-MA-2-C01-PP	952021010	long diffuse proximity	22			
S50-MA-2-C10-NN	952021520	short diffuse proximity	18			
S50-MA-2-C10-PP	952021020	short diffuse proximity	18			
S50-MA-2-C21-NN	952022130	midi diffuse proximity	20			
S50-MA-2-C21-PP	952022120	midi diffuse proximity	20			
S50-MA-2-D00-NN	952021530	fixed focus proximity	24			
S50-MA-2-D00-PP	952021030	fixed focus proximity	24			
S50-MA-2-E01-NN	952021880	fibre-optic amplifier	34			
S50-MA-2-E01-PP	952021040	fibre-optic amplifier	34			
S50-MA-2-F01-NN	952021540	receiver	4			
S50-MA-2-F01-PP	952021050	receiver	4			
S50-MA-2-G00-XG	952021060	emitter	4			
S50-MA-2-M03-NN	952021550	background suppression	28			
S50-MA-2-M03-PP	952021070	background suppression	28			
S50-MA-2-N03-NN	952021560	fore-background suppression	32			
S50-MA-2-N03-PP	952021080	fore-background suppression	32			
S50-MA-2-T01-NN	952021570	retroreflex for transparents	16			
S50-MA-2-T01-PP	952021090	retroreflex for transparents	16			
S50-MA-2-U03-NN	952021580	luminescence sensor	38			
S50-MA-2-U03-PP	952021100	luminescence sensor	38			
S50-MA-2-W03-NN	952021590	contrast sensor	36			
S50-MA-2-W03-PP	952021110	contrast sensor	36			
S50-MA-2-Y00-VK	952021120	distance sensor	40			
S50-MA-5-A00-NN	952022110	retroreflex	10			
S50-MA-5-A00-PP	952022100	retroreflex	10			
S50-MA-5-B01-NN	952021660	polarised retroreflex	12			
S50-MA-5-B01-PP	952021200	polarised retroreflex	12			
S50-MA-5-C01-NN	952021670	long diffuse proximity	22			
S50-MA-5-C01-PP	952021210	long diffuse proximity	22			
S50-MA-5-C10-NN	952021680	short diffuse proximity	18			
S50-MA-5-C10-PP	952021220	short diffuse proximity	18			
S50-MA-5-C21-NN	952022150	midi diffuse proximity	20			
S50-MA-5-C21-PP	952022140	midi diffuse proximity	20			
S50-MA-5-D00-NN S50-MA-5-D00-PP	952021690 952021230	fixed focus proximity	24			
S50-MA-5-E01-NN	952021230	fixed focus proximity	34			
S50-MA-5-E01-PP	952021890	fibre-optic amplifier fibre-optic amplifier	34			
S50-MA-5-F01-NN	952021240	receiver	4			
S50-MA-5-F01-PP	952021700	receiver	4			
S50-MA-5-G00-XG	952021260	emitter	4			
S50-MA-5-M03-NN	952021710	background suppression	28			
S50-MA-5-M03-PP	952021710	background suppression	28			
S50-MA-5-N03-NN	952021720	fore-background suppression	32			
S50-MA-5-N03-PP	952021720	fore-background suppression	32			
S50-MA-5-T01-NN	952021200	retroreflex for transparents	16			
S50-MA-5-T01-NN	952021730	retroreflex for transparents	16			
S50-MA-5-U03-NN	952021740	luminescence sensor	38			
S50-MA-5-U03-PP	952021740	luminescence sensor	38			
S50-MA-5-W03-NN	952021750	contrast sensor	36			
S50-MA-5-W03-PP	952021730	contrast sensor	36			
S50-MA-5-Y00-VK	952021310	distance sensor	40			
222 1111 (2 1 0 0 7 1)	002021020	a.c.a				

METAL CYLINDRICAL HOUSING WITH RADIAL OPTICS

MODEL	CODE N°	OPTIC FUNCTION	PAGE
S50-MR-2-B01-NN	952021600	polarised retroreflex	12
S50-MR-2-B01-PP	952021140	polarised retroreflex	12
S50-MR-2-C01-NN	952021610	long diffuse proximity	22
S50-MR-2-C01-PP	952021150	long diffuse proximity	22
S50-MR-2-C10-NN	952021620	short diffuse proximity	18
S50-MR-2-C10-PP	952021490	short diffuse proximity	18
S50-MR-2-D00-NN	952021630	fixed focus proximity	24
S50-MR-2-D00-PP	952021160	fixed focus proximity	24
S50-MR-2-F01-NN	952021640	receiver	4
S50-MR-2-F01-PP	952021170	receiver	4
S50-MR-2-G00-XG	952021180	emitter	4
S50-MR-2-T01-NN	952021650	retroreflex for transparents	16
S50-MR-2-T01-PP	952021190	retroreflex for transparents	16
S50-MR-5-B01-NN	952021760	polarised retroreflex	12
S50-MR-5-B01-PP	952021340	polarised retroreflex	12
S50-MR-5-C01-NN	952021770	long diffuse proximity	22
S50-MR-5-C01-PP	952021350	long diffuse proximity	22
S50-MR-5-C10-NN	952021780	short diffuse proximity	18
S50-MR-5-C10-PP	952021480	short diffuse proximity	18
S50-MR-5-D00-NN	952021790	fixed focus proximity	24
S50-MR-5-D00-PP	952021360	fixed focus proximity	24
S50-MR-5-F01-NN	952021800	receiver	4
S50-MR-5-F01-PP	952021370	receiver	4
S50-MR-5-G00-XG	952021380	emitter	4
S50-MR-5-T01-NN	952021810	retroreflex for transparents	16
S50-MR-5-T01-PP	952021390	retroreflex for transparents	16

METAL CYLINDRICAL HOUSING WITH LATERAL OPTICS

MODEL	CODE N°	OPTIC FUNCTION	PAGE
S50-MS-2-M03-NN	952021900	background suppression	30
S50-MS-2-M03-PP	952021910	background suppression	30
S50-MS-5-M03-NN	952021920	background suppression	30
S50-MS-5-M03-PP	952021930	background suppression	30

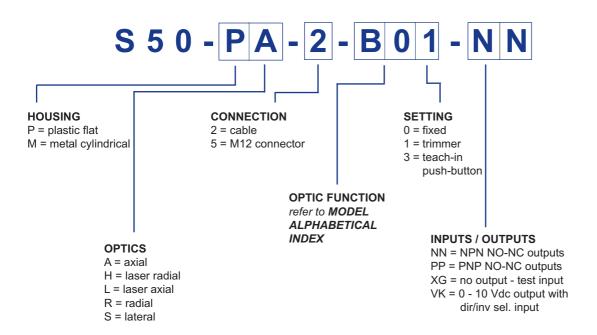
METAL CYLINDRICAL HOUSING WITH LASER AXIAL OPTICS

		,	
MODEL	CODE N°	OPTIC FUNCTION	PAGE
S50-ML-2-B01-NN	952021820	laser retroreflex	14
S50-ML-2-B01-PP	952021400	laser retroreflex	14
S50-ML-2-C01-NN	952021830	laser proximity	26
S50-ML-2-C01-PP	952021410	laser proximity	26
S50-ML-2-F01-NN	952021840	laser receiver	8
S50-ML-2-F01-PP	952021420	laser receiver	8
S50-ML-2-G00-XG	952021430	laser emitter	8
S50-ML-5-B01-NN	952021850	laser retroreflex	14
S50-ML-5-B01-PP	952021440	laser retroreflex	14
S50-ML-5-C01-NN	952021860	laser proximity	26
S50-ML-5-C01-PP	952021450	laser proximity	26
S50-ML-5-F01-NN	952021870	laser receiver	8
S50-ML-5-F01-PP	952021460	laser receiver	8
S50-ML-5-G00-XG	952021470	laser emitter	8

METAL CYLINDRICAL HOUSING WITH LASER RADIAL OPTICS

MODEL	CODE N°	OPTIC FUNCTION	PAGE
S50-MH-2-B01-NN	952021940	laser retroreflex	14
S50-MH-2-B01-PP	952021950	laser retroreflex	14
S50-MH-2-C01-NN	952021990	laser proximity	26
S50-MH-2-C01-PP	952021980	laser proximity	26
S50-MH-2-F01-NN	952022030	laser receiver	8
S50-MH-2-F01-PP	952022020	laser receiver	8
S50-MH-2-G00-XG	952022060	laser emitter	8
S50-MH-5-B01-NN	952021970	laser retroreflex	14
S50-MH-5-B01-PP	952021960	laser retroreflex	14
S50-MH-5-C01-NN	952022010	laser proximity	26
S50-MH-5-C01-PP	952022000	laser proximity	26
S50-MH-5-F01-NN	952022050	laser receiver	8
S50-MH-5-F01-PP	952022040	laser receiver	8
S50-MH-5-G00-XG	952022070	laser emitter	8





Note: Not all code combinations are available. Please refer to alphabetical model index for the list of available models.



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