

one for all

The **S50** 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 **S50** 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.

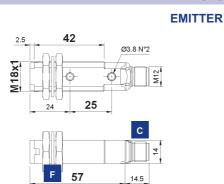
The **S50** series is available both in flat plastic format ideal for M18 nut or screw mounting through the sensor body, as well as a cylindrical metal housing. Axial or radial optics are available in both housings with integral cable or M12 connection conforming to EN 60947-5-2, the European wiring standard. The performance, versatility and extensive optical sensing options, positions the **S50** series as the new bench mark for customers focused on the evolution of technology and development of standards.



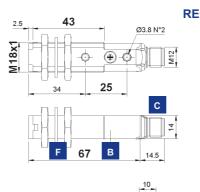
G/F THROUGH BEAM WITH INFRARED EMISSION

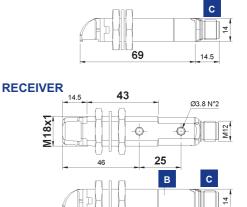
Longer operating distances can be obtained utilising separate emitter and receiver units. The infrared emission is modulated to avoid interference with other light sources and the emitter is fitted with test inputs for remote system interrogation.





DIMENSIONS





79

42

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Ø3.8 N°2

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25

M12

14.5

36

M18x1





14.5

mm

INDICATORS AND SETTINGS

D

Α	OUTPUT status and stability LEDs (receiver); power on LED (emitter)
В	Adjustment trimmer (receiver)
С	M12 connector output
D	Cable output
E	Fixing nuts
F	Fixing gasket

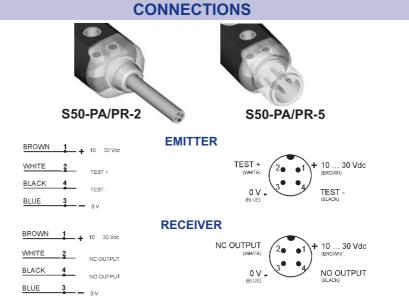
Single-turn trimmer for sensitivity adjustment. Rotate in a clockwise direction to increase the operating distance.

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**.





TECHNICAL DATA

X d S X d S X d S X d S

			S50-PA-2-F01-NN	S50-PA-2-F01-PF	S50-PA-2-G00-X(S50-PR-2-F01-N	S50-PR-2-F01-PF	S50-PR-2-G00-X	S50-PA-5-F01-NN	S50-PA-5-F01-PF	S50-PA-5-G00-X(S50-PR-5-F01-N	S50-PR-5-F01-PF	S50-PR-5-G00-X
Operating dis	tance:													
	axial optics	0 30 m	•	•	•				٠	٠	•			
	radial optics	0 25 m				•	•	•				٠	•	•
Power supply	/:	10 30 Vdc ¹	•	•	•	•	•	•	٠	٠	\bullet	٠	\bullet	•
Ripple:		≤ 2 Vpp	•	٠	٠	٠	٠	٠	٠	٠		٠	\bullet	٠
Consumption	1:													
	emitter	≤ 35 mA			•			•			•			•
	receiver	≤ 30 mA	•	٠		•	٠		٠	٠		٠	٠	
Light emissio	n:	infrared LED 880 nm ²			٠									٠
Spot dimensi	on:													
	axial optics	approx. 500 mm at 15 m			٠									
	radial optics	approx. 470 mm at 10 m												٠
Setting:		sensitivity trimmer 3	٠	٠		•	٠		٠	٠		٠	٠	
Indicators:														
		yellow OUTPUT LED	۲	٠		٠	٠		٠	٠		٠	٠	
		green STABILITY LED	•	•		•	٠		٠	٠		•	٠	
		green POWER ON LED			٠			•			•			٠
Output type:														
		PNP, NO and NC		•			٠						٠	
		NPN, NO and NC	•			٠			٠			٠		
Output currer	nt:	≤ 100 mA	•	٠		•	•		٠	•		٠	•	
Saturation vo	Itage:	≤ 2 V	•	٠		•	٠		٠	•		•	٠	
Response tim	ie:	2 ms	•	٠		•	٠		٠	٠		•	٠	
Switching fre	quency:	250 Hz	•	٠		•	٠		٠	٠		•	٠	
Operating mo	ode:	dark on NO / light on NC	•	•		•	•		٠	•		•	\bullet	
Auxiliary fund	ctions:	Test + and Test - 4			٠									٠
Connection:														
		2 m Ø 4 mm cable⁵	•	٠	•	•	٠	٠						
		M12 4-pole connector 6							•	•	\bullet	٠	•	٠
Electrical pro		class 2	•	•	•	•	•		٠			٠		•
Mechanical p	rotection:	IP67	•	•	•	•	•	•	٠	٠		٠	•	•
Protection de	vices:	A, B ⁷	•	٠	٠	٠	٠		٠	۲		٠	٠	٠
Housing mate	erial:	PBT	•	•	•	•	•	•	•	٠		٠	\bullet	•
Lens material	1:	PMMA	•	٠	•	٠	•		٠	٠	٠	٠	٠	•
Weight:														
		75 g max.	•	٠	٠	٠	٠	•						
		25 g max.							٠	٠	•	٠	٠	٠
Operating ten	nperature:	-25 +55°C	٠	٠	٠	٠	٠	•	٠	٠	٠	٠	•	٠
Storage temp		-25 +70°C	٠	٠	٠	٠	٠	•	٠	٠	٠	٠	•	•
Reference sta	andard:	EN 60947-5-2	•	٠	•	٠	•		٠	•	•	٠	•	•
										<u> </u>				

SELECTION TABLE

receiver - axial optics -	2 m cable	
S50-PA-2-F01-NN	952001660	NPN
S50-PA-2-F01-PP	952001150	PNP
emitter - axial optics - 2	2 m cable	
S50-PA-2-G00-XG	952001190	
		1
receiver - radial optics	- 2 m cable	
S50-PR-2-F01-NN	952001820	NPN
S50-PR-2-F01-PP	952001170	PNP
000111210111	002001110	
emitter - radial optics -	2 m cable	
S50-PR-2-G00-XG	952001210	1
550-111-2-000-20	332001210	
receiver - axial optics -	M12 connector	
S50-PA-5-F01-NN		NPN
	952001550	
S50-PA-5-F01-PP	952001160	PNP
emitter - axial optics - I		
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	

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

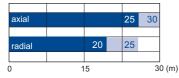
² Average life of 100.000 h with $T_A = +25 \degree C$

- 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

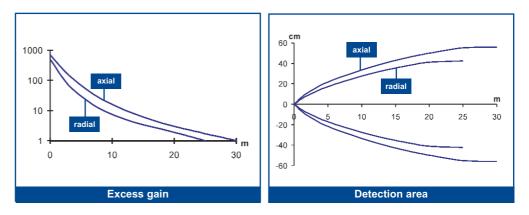
- ⁷ A reverse polarity protection
 - B overload and short-circuit protection on receiver outputs





Recommended operating distance
 Maximum operating distance

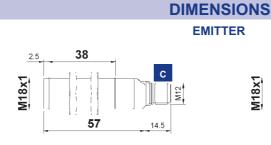
DETECTION DIAGRAMS

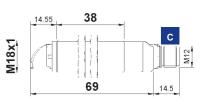


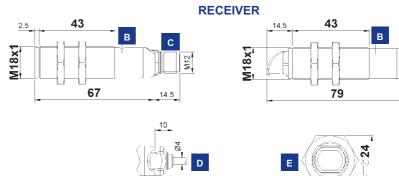
G/F THROUGH BEAM WITH INFRARED EMISSION

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.





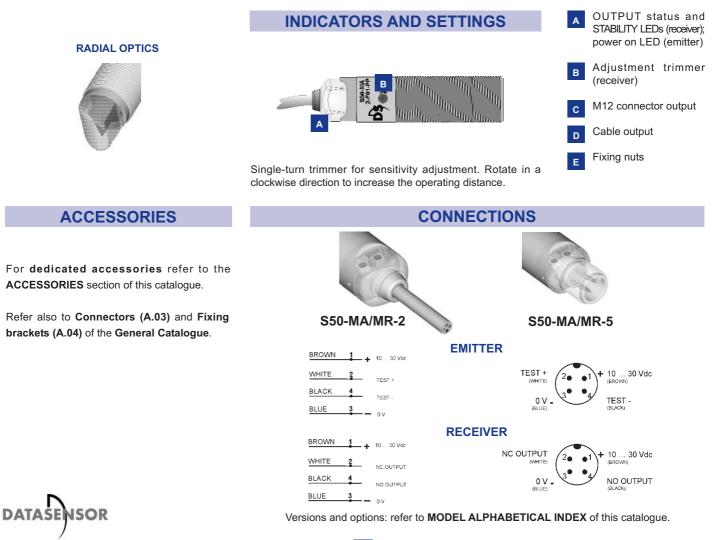




mm

M12

14.5



RADIAL OPTICS



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-MA/MR 30 m

TECHNICAL DATA

		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
Operating distance:													
axial optics	0 30 m	•	•	٠				٠	•	•			
radial optics	0 25 m				•		•				•	•	•
Power supply:	10 30 Vdc ¹	•	٠	•	•	•	٠	•	٠	•	٠	٠	٠
Ripple:	≤ 2 Vpp	•	٠	•	•	•	٠	•	٠	•	٠	٠	٠
Consumption:	••												
emitter	≤ 35 mA			•			•			•			٠
receiver	≤ 30 mA	•	•		٠			•			٠	٠	
Light emission:	infrared LED 880 nm ²			•			٠			•			٠
Spot dimension:													
axial optics	approx. 500 mm at 15 m			•						٠			
radial optics	approx. 470 mm at 10 m						٠						٠
Setting:	sensitivity trimmer ³	•	٠		٠	•		•	٠		٠	٠	
Indicators:	,												_
	vellow OUTPUT LED	•	•		•	•		•	•		•	•	_
	areen STABILITY LED	•	•		•	•		•	•		•	•	_
	green POWER ON LED			•						•			٠
Output type:													
	PNP, NO and NC		•			•			•			•	_
	NPN, NO and NC	•			•			٠			•		
Output current:	≤ 100 mA	•	•		•	•		•	•		•	•	_
Saturation voltage:	≤ 2 V	•	•		•	•		•	•		•	•	_
Response time:	2 ms	•	•		•	•		•	•		•	•	_
Switching frequency:	250 Hz	•	•		•	•		•	•		•	•	_
Operating mode:	dark on NO / light on NC	•	•		•	•		•	•		•	•	_
Auxiliary functions:	Test + and Test - 4			•		-	•	-	_	•	Ē	-	•
Connection:							-			-			_
	2 m Ø 4 mm cable ⁵	•	•	•	•	•	•						_
	M12 4-pole connector ⁶							•	٠	•	•	•	٠
Electrical protection:	class 2	•	•	•	•	•	•	•	•	•		•	•
Mechanical protection:	IP67	•	•	•	•	•		•	•	•		•	•
Protection devices:	A. B ⁷	•	•	•	•	•	•	•	•	•	•	•	•
Housing material:	nickel plated brass	•	•	•	•	•	•	•	•	•	•	•	•
Lens material:	PMMA			•		•							
Weight:			ľ		F		-	-				-	-
	110 g max.	•	•	•	•	•	•			\vdash			_
	60 g max.		Ť	-		-	-		•				
Operating temperature:	-25 +55°C		•	•	•	•	•		•			-	
Storage temperature:	-25 +70°C		•	•	•	•	•	•	•	•	•	•	•
Reference standard:	EN 60947-5-2			-	-		-	-	-			-	
Reference Standard.			-	-	-	-	-	-	-	-	_	-	-

SELECTION TABLE

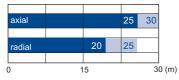
receiver - axial optics -	2 m cable	
S50-MA-2-F01-NN	952021700	NPN
S50-MA-2-F01-PP	952021250	PNP
emitter - axial optics - 2	2 m cable	
S50-MA-2-G00-XG	952021060	
	I	
receiver - radial optics	- 2 m cable	
S50-MR-2-F01-NN	952021640	NPN
S50-MR-2-F01-PP	952021170	PNP
emitter - radial optics -	2 m cable	
S50-MR-2-G00-XG	952021180	
		I
receiver - axial optics -	M12 connector	
S50-MA-5-F01-NN	952021700	NPN
S50-MA-5-F01-PP	952021250	PNP
emitter - axial optics - I	M12 connector	
S50-MA-5-G00-XG	952021260	
	1	
receiver - radial optics	- M12 connector	
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	
	112021000	l

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

TECHNICAL NOTES

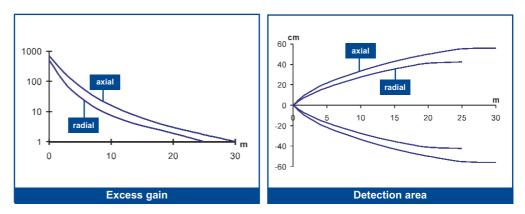
¹ Limit values

- 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 mm^2
- ⁶ Compatible with quick connection systems
- ⁷ A reverse polarity protection
 - B overload and short-circuit protection on receiver outputs



Recommended operating distance
 Maximum operating distance

DETECTION DIAGRAMS



L-G/F LASER THROUGH BEAM WITH RED EMISSION

2.5

M18x1

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.



RADIAL OPTICS

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.

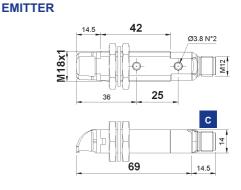
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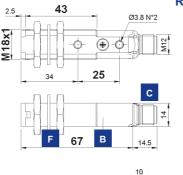
Ø3.8 N°2

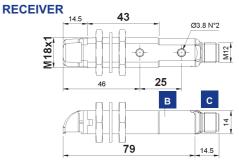
M12

Q



DIMENSIONS





INDICATORS AND SETTINGS

D

DATASE

Е

Α	OUTPUT status and power on LEDs
В	Adjustment trimmer (receiver)
С	M12 connector output
D	Cable output
Е	Fixing nuts
F	Fixing gasket

mm

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

CONNECTIONS S50-PL/PH-2 S50-PL/PH-5 **EMITTER** BROWN 10 ... 30 Vdd TEST 10 ... 30 Vdc WHITE (WHITE) TEST + BLACK NOT USED NOT USED OV-(BLACK) BLUE οv RECEIVER BROWN 10 ... 30 Vd NC OUTPUT . 30 Vdc WHITE NC OUTPUT BLACK 4 NO OUTPUT ov. NO OUTPUT BLUE 3 - 0 V

datasensor

60 m

									1	- 1		-	_
		ő	Z	4	Š	N	6	Š.	NN	8	Ň	N	8
		0	5	01-1	00	6-1	01	0	-1-0	5	ġ	5	5
		9 Q	5	2-F	9-9-	÷	ц.	-5	-2-F	5	μ	÷.	÷
		550-PL-2-G00-XG	 	Ę.	S50-PL-5-G00-XG	550-PL-5-F01-NN	550-PL-5-F01-PP	Ŧ	Ŧ	Ŧ	550-PH-5-G00-XG	Ŧ	Ŧ
		S50	S50-PL-2-F01-NN	S50-PL-2-F01-PP	S50	S50	S50	S50-PH-2-G00-XG	S50	S50-PH-2-F01-PP	S50	S50-PH-5-F01-NN	S50-PH-5-F01-PP
Operating distance:												1	
axial optics	0 60 m	٠	٠		•	•							
radial optics	0 50 m							•	•	•	•	•	
Power supply:	10 30 Vdc 1	•	•	•	•	•	•	•	•	•	•		•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	
Consumption:		-	-	-	-	-	-	-	-	-	-	-	-
emitter	≤ 35 mA	•			•						•	+	-
receiver	≤ 30 mA	•			-	-		-				+	
	≤ 50 IIIA		•	•		•	•		•	•	-	•	•
Light emission:											$ \rightarrow $	-	_
	red Laser 650 nm ²	•			•			•		_	•	+	
	class 1 EN 60825-1											\downarrow	
	class II CDRH21 CFR 1040.10												
Resolution:													
	approx. 2.5 mm at 5 m		٠	٠		•	•		•	٠		•	
	approx. 5 mm at 10 m		٠	٠		•	•		•	٠		•	
	approx. 10 mm over 20 m		٠	٠		•			•			•	
Setting:	sensitivity trimmer ³		•	•		•	•		•	•	+	•	
Indicators:			-	-		-	-		-	-	+	-	-
Indioutorol	yellow OUTPUT LED		•	•		•	•		•	•	-	•	
	green POWER ON LED	•	•	•	•	•	•	•	•	_	•		
Output type:	greent ower on LED	-	-	-	-	-	-	-	-	-	-	-	-
Output type.	PNP, NO and NC			•			•			•	-	+	•
	NPN, NO and NC		•	-	_	•	-		•	-	-	•	-
Outrast ourreats	$\leq 100 \text{ mA}$		•	•		_	•		•		-	_	•
Output current:	≤ 100 mA ≤ 2 V		•	•		•	•		•		_		•
Saturation voltage:			•	•			•		•		_		
Response time:	<u>333 µs</u>		-				-				_		-
Switching frequency:	1.5 kHz		•	•		•	•			•	_	-	_
Operating mode:	dark on NO / light on NC		•	•		•	•		•	•	_		•
Auxiliary functions:	Test + ⁴	•			•			•			•		
Connection:													
	2 m Ø 4 mm cable ⁵	٠	٠	٠				•	•	•			
	M12 4-pole connector 6					•	•				•	•	
Electrical protection:	class 2	٠		•	•	•	•	•	•	•	•	•	
Mechanical protection:	IP67	٠	٠	•	٠	•	•	•	•	•	•	•	
Protection devices:	A. B 7	•	•	•	•	•	•	•	•	•	•	•	•
Housing material:	PBT	•	•		•	•	•	•	•	•	•	•	
Lens material:	PMMA / glass	•	•	•	•	•	•	•	-	•	•	•	
Weight:		-	-	-	-	-	-		-	-	-+	+	Ĩ
	75 g max.	•	•		_	-	\vdash	•	•	•	+	+	\neg
		-	F	-	•	•	•	-	-	-	•	•	
Operating townshires	25 g max.	-	-		-	-	-				-	-	-
Operating temperature:	-10 +50°C	•	•	•	•	-	•		•	•	-		
Storage temperature:	-25 +70°C	•	-	•	•	•	•	•	-	-	-	•	-
Reference standard:	EN 60947-5-2,	•	•	•	•	•	•	•	•	•	-	•	•
	EN 60825-1, CDRH21 CFR 1040.10	٠			٠			٠					

TECHNICAL DATA

SELECTION TABLE

emitter - axial optics - 2	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	
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 - radial optics -		
S50-PH-5-G00-XG	952002070	
receiver - radial optics		
S50-PH-5-F01-NN	952002050	NPN
S50-PH-5-F01-PP	952002040	PNP
All the ordering of	doc and inform	nation are

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

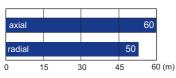
TECHNICAL NOTES

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

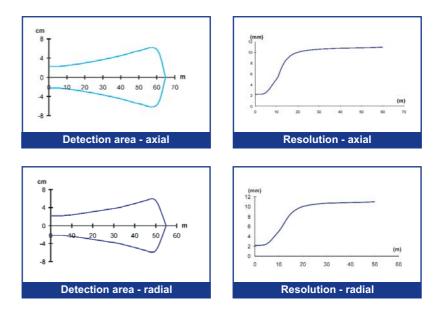
The use of the MICRO-18 fixing bracket (cod. 95ACC1380) is recommended for the correct optic axis alignment of the laser emission.

DATASENSOR



Operating distance

DETECTION DIAGRAMS



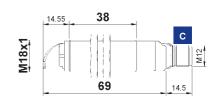
L-G/F LASER THROUGH BEAM WITH RED EMISSION

M18x1

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.

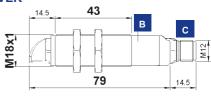


EMITTER 38 2.5 С M18x1 M12 57 14.5



RECEIVER 43 43 2.5 в В С M18x1 M12 67 79 14.5 10 Е

DIMENSIONS





mm

OUTPUT status and Α power on LEDs Adjustment trimmer в (receiver) M12 connector output С Cable output Fixing nuts F Fixing gasket F

RADIAL OPTICS





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

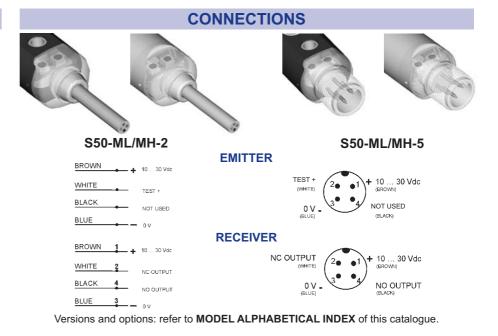
Refer also to Connectors (A.03) and Fixing brackets (A.04) of the General Catalogue.

DATASENSOR



INDICATORS AND SETTINGS

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



60 m

TECHNICAL DATA

		(1)	_		(1)	_		6	_		(1)	_	_
		550-ML-2-G00-XG	S50-ML-2-F01-NN	S50-ML-2-F01-PP	S50-ML-5-G00-XG	S50-ML-5-F01-NN	S50-ML-5-F01-PP	S50-MH-2-G00-XG	S50-MH-2-F01-NN	S50-MH-2-F01-PP	S50-MH-5-G00-XG	S50-MH-5-F01-NN	S50-MH-5-F01-PP
		õ	Ę	-F0	õ	Ŀ Ŀ	Į Ę	ğ	È	È	ទី	È	È
		L-2	1-2	IL-2	L-5	1-5	2	E	IH-2	E-1	불	11-5	1H-5
		50-N	20-N	50-N	50-N	20-N	20-1	20-1	50-N	50-N	20-2	20-N	50-N
		õ	ö	ő	õ	õ	δ	õ	ö	õ	õ	õ	õ
Operating distance:							-		_	_	_	-	_
axial optics	0 60 m	•	•	•	•	•	•				-		-
radial optics	0 50 m	-	-	-	-	-	-	•	•	•	•	•	•
Power supply:	10 30 Vdc 1	•	•	•	•	•	•	•	•	-	•		-
Ripple:	≤ 2 Vpp	•	•		•	_	•	•	•	_	•	•	-
Consumption:		1	-	-	-	-	-	F	-	-	-	-	-
emitter	≤ 35 mA	•			•			•			•		-
receiver	≤ 30 mA		•	•	-	•	•		•	•	-	•	
Light emission:	2 30 MA		-			-	-	⊢	-	-	-	-	-
Light emission.	red Laser 650 nm ²	•			•			•			•	-	_
	class 1 EN 60825-1	-			-		\vdash	F	_	-	-	-	-
	class II CDRH21 CFR 1040.10						-	⊢		_	_	-	_
Resolution:	approx. 2.5 mm at 5 m		•	•		•	•	-	•	•	_	•	_
Resolution.	approx. 5 mm at 10 m		•	•		•	•	-	-	•	_	•	•
	approx. 10 mm over 20 m		•	•		•	•	-	•	•	_	•	•
Setting:	sensitivity trimmer ³		•	•		•	•		•	•	-	•	•
Indicators:	sensitivity unimer		-	•		-	-	⊢	-	-		-	-
Indicators:	vellow OUTPUT LED		•	•		•	•	-	•	•		•	_
	green POWER ON LED	•	•	•	•	•	•	•	•	-	•	•	•
Output turner	green POWER ON LED	-	-	-	•	-		-	-	-	-	-	-
Output type:	PNP, NO and NC			•			•	⊢		•	-	-	•
	NPN, NO and NC		•	-		•		-	•	-	_	•	-
Output current:	$\leq 100 \text{ mA}$		•	•		•	•	⊢	•	•	_	-	•
Saturation voltage:	$\leq 100 \text{ MA}$ $\leq 2 \text{ V}$			•		•	•	⊢		•	_	•	•
Response time:			•	•		•	•		•	•	_	•	•
Switching frequency:	<u>333 μs</u> 1.5 kHz		•	•		•	•	-	-	•		•	-
· · · · ·	dark on NO / light on NC		•	•		•	•	-	-	•	_	•	•
Operating mode: Auxiliary functions:	Test + ⁴	•	-	-	•	-	-	•	-	-	•	-	-
Connection:	Test +	-			-		-	F		-	-	+	_
	2 m Ø 4 mm cable ⁵	•	-	•			-	•	•		_	+	_
	M12 4-pole connector ⁶		-	-	•	•	•	F	-	-	•	•	•
Electrical protection:	class 2	•	•	•	•	•	•	•	•	•	-	•	•
Mechanical protection:	IP67	•	•	•	•	•	•	•	•	•	•	-	•
Protection devices:	A. B ⁷	•	•	•	•	•	•	•	•	•	•	-	-
Housing material:	nickel plated brass		•	•	•	•	•	•	-	•	•		-
Lens material:		•	•	•	•	•	•	•	•	•	•		-
Weight:	PMMA / glass	-	-	-	•	-	-	F	-	-	-	-	-
weight.	75 g may	•		•		-	-	•	•	•	_	+	_
	75 g max.	-	-	-	•	•	•	F	-	-	•	•	•
Operating temperature:	25 g max. -10 +50°C				-	_	<u> </u>						-
	-10 +50 C -25 +70°C	•	•	•	•	•	•	•		•	•	•	•
Storage temperature: Reference standard:	EN 60947-5-2.	•	•	•	•	•	•	•	•	•	•	•	-
Reference standard:		-	-	-	•	-		•	-	-	•	-	-
	EN 60825-1, CDRH21 CFR 1040.10				-						-		

SELECTION TABLE

emitter - axial optics - 2	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
	1	
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
emitter - radial optics -	M12 connector	
S50-MH-5-G00-XG	952022070	
receiver - radial optics	- M12 connector	
S50-MH-5-F01-NN	952022050	NPN
S50-MH-5-F01-PP	952022040	PNP
	all a stand to f	

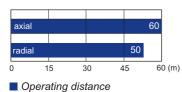
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

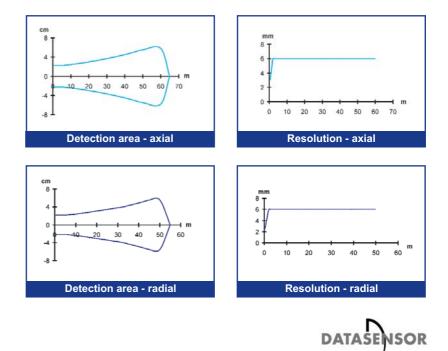
¹ Limit values

- 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

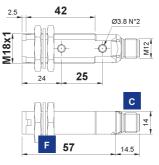


A RETROREFLEX WITH INFRARED EMISSION

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



mm

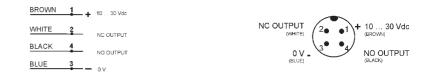


ACCESSORIES

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-MA

5 m

TECHNICAL DATA

		_	-			-	_	_	_
		S50-PA-2-A00-NN	S50-PA-2-A00-PP	S50-PA-5-A00-NN	S50-PA-5-A00-PP	S50-MA-2-A00-NN	S50-MA-2-A00-PP	S50-MA-5-A00-NN	S50-MA-5-A00-PP
		S5	S5	S5(S51	S5	S5	S5	S5
0	0.4 5								
Operating distance:	0.1 5 m	•			•		•	-	-
Power supply:	10 30 Vdc ¹	•			-		-	-	-
Ripple:	≤ 2 Vpp	•		-	•	•	•	•	-
Consumption:	≤ 35 mA	•	•	•	•	•	•	•	•
Light emission:	infrared LED 880 nm ²	•	•	•	•	•	•	•	•
Spot dimension:	approx. 100 mm at 2 m	•	•	•	•	•	٠	•	•
Indicators:	yellow OUTPUT LED	•	•	•	•	•	٠	•	•
Output type:									
	PNP, NO and NC		•		•		•		•
	NPN, NO and NC	•		•				٠	
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•
Saturation voltage:	≤ 2 V	•	•		٠	•	٠	•	•
Response time:	0.5 ms	•	•	•	٠	•	٠	•	•
Switching frequency:	1 kHz	•	•		٠	•	٠	•	•
Operating mode:	dark on NO / light on NC	•	•	•	•	•	•	•	•
Connection:				1					_
	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:	Λ, D		-	-	-	F	-	-	-
nousing material.	PBT					⊢		-	—
	nickel plated brass	•		F	ľ		•	•	
Lens material:	PMMA	•	•		•			-	-
	FIVIIVIA		-	┢	-	┡	-	-	-
Weight:	75	•		+	-	⊢		_	_
	75 g max.		•	•	•	\vdash		-	_
	<u>25 g max.</u>		-	┻	-			_	
	110 g max.			⊢	-	•	•		_
	60 g max.			_				•	•
Operating temperature:	-25 +55°C	•	٠	•	•	۰	٠	•	•
Storage temperature:	-25 +70°C	•		•	•	۰	•	•	٠
Reference standard:	EN 60947-5-2	•						•	•

SELECTION TABLE

plastic - axial optics - 2	m cable								
S50-PA-2-A00-NN	952002090	NPN							
S50-PA-2-A00-PP 952002080 PNP									
metal - axial optics - 2 i	m cable								
S50-MA-2-A00-NN	952022090	NPN							
S50-MA-2-A00-PP	952022080	PNP							
plastic - axial optics - M	112 connector								
S50-PA-5-A00-NN	952002110	NPN							
S50-PA-5-A00-PP 952002100 PNP									
metal - axial optics - M12 connector									

S50-MA-5-A00-NN	952022110	NPN
S50-MA-5-A00-PP	952022100	PNP

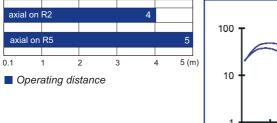
All the ordering codes and information are summarised in the last pages of this catalogue.

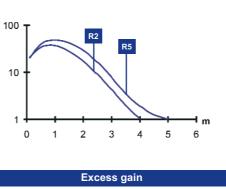
TECH	INICAL	NOTES

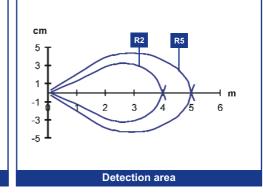
¹ Limit values

- 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





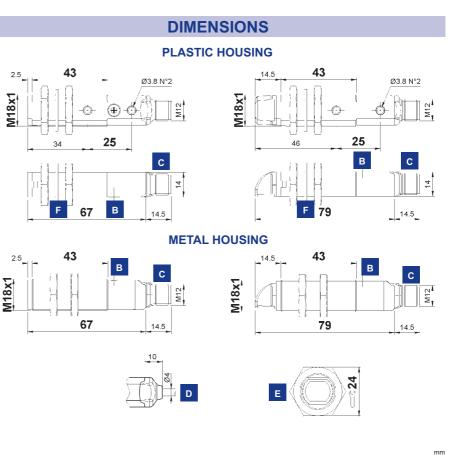




B POLARISED RETROREFLEX WITH RED EMISSION

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.





INDICATORS AND SETTINGS

A

OUTPUT status and STABILITY LEDs

B

Adjustment trimmer

C

M12 connector output

D

Cable output

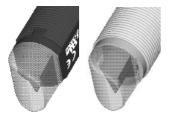
E

Fixing nuts

F

Fixing gasket

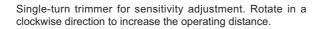
RADIAL OPTICS



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**.



Α





DATASENSOR

S50-MA/MR 4.5 m

TECHNICAL DATA

					_			_		_	_					_	_
		z	<u>e</u>	ş	<u>e</u>	ş	6	ş	<u>e</u>	z	6	Z	6	Z	8	Z	6
		1-1-1	01-F	4-	5	-1-	01-F	5	01-F	5	0-1	01-1	01-1	1-1	1-10	1-1	1-1
		2-B	-B	-B	-B	2-B	2-B	8	5-B	- - -	-B B	ц.	Ë.	9-19-		ц.	Ч.
		PA	PA-	Ą	Å	Ř	Å	Ř	R,	Å	ΜĀ	ΜĀ	MA	ЯŘ	ЯŘ	MR.	В
		S50-PA-2-B01-NN	S50-PA-2-B01-PP	S50-PA-5-B01-NN	S50-PA-5-B01-PP	S50-PR-2-B01-NN	S50-PR-2-B01-PP	S50-PR-5-B01-NN	S50-PR-5-B01-PP	S50-MA-2-B01-NN	S50-MA-2-B01-PP	S50-MA-5-B01-NN	S50-MA-5-B01-PP	S50-MR-2-B01-NN	S50-MR-2-B01-PP	550-MR-5-B01-NN	S50-MR-5-B01-PP
		s	S	S	S	s	S	S	s	ľ	s s	S	S	S	S	S	S
Operating distance:			_				_		_			_				\vdash	
axial optics	0.1 4.5 m	•	•				_		_	•	•	•	•			\vdash	
radial optics	0.1 3 m	-	-	-	-			•	•	ľ	H	-	-				
Power supply:	10 30 Vdc ¹	•	•	•	•	-	•	•	•					•			
		-	•	•	-	•	•	•	•	•	•	-	•	•	•	•	
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	-	•	•	•	•	•
Consumption:	<u>≤ 35 mA</u>	-	-	-	•	-				-	-	-	-			-	-
Light emission:	red LED 660 nm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-
Spot dimension:																	
axial optics	approx. 45 mm at 1 m	٠	•	٠	•					•	•	٠	٠				
radial optics	approx. 60 mm at 2 m					•	٠	•	•					•	٠	٠	•
Setting:	sensitivity trimmer ³	٠	•	\bullet	•	•		•	•	٠	•	•		•	•		
Indicators:																	
	yellow OUTPUT LED	٠	٠	•	•	•	٠	•	٠	٠	٠	•	٠	•	٠	•	٠
	green STABILITY LED	٠	•	•	•	•	•	•	٠	٠	٠	٠	٠	•	٠	•	٠
Output type:	0																
	PNP, NO and NC		٠		•		•		•				•		٠		•
	NPN, NO and NC	•		•		•		•		•		•		•		•	
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•	•		•	•	•	•		•
Saturation voltage:	$\leq 2 V$	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Response time:	0.5 ms	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Switching frequency:	1 kHz	•	•	•	•	•	•	•	•	•	•			•	•	•	•
Operating mode:	dark on NO / light on NC		•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Connection:			-	-	-	-	-	-	-	F	-	-	-	-	-	-	-
connection.	2 m Ø 4 mm cable⁴		-			•	•			•	•	_			•	\vdash	\vdash
		•	•			-	-		•	-	-		-	-	-		
Flastrical musta stiem.	M12 4-pole connector 5		_	•	•	•	•	•	•	•	•	-	•		•	•	-
Electrical protection:	class 2	•	•	•	•	•	•	•	•	-	•	-	•	•	•		
Mechanical protection:	IP67	•	•	•	•	•	-	•	•	•	•	-	•	•	-	•	
Protection devices:	A, B ⁶	•	•	•	-	-	-	-	-	-	-	•	•	•	•	-	-
Housing material:																	
	PBT	•	•	•	•	•	•	•	•								
	nickel plated brass									•	•	•	٠	•	•	•	•
Lens material:	PMMA	•	•	•	•	•	٠	•	•	•	٠	•	•	•	٠	•	•
Weight:																	
	75 g max.	•	•			•	٠										
	25 g max.				٠			٠	۲								
	110 g max.										•			•	٠		
	60 g max.											•	•			•	
Operating temperature:	-25 +55°C	٠			٠	٠	٠	٠	•	٠		٠	٠	٠	٠	•	
Storage temperature:	-25 +70°C	•	•	•	•	•	•	•	•	•	•	٠	•	•	٠	•	
Reference standard:	EN 60947-5-2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
														-			

SELECTION TABLE

plastic - axial optics - 2	m cable	
S50-PA-2-B01-NN	952001610	NPN
S50-PA-2-B01-PP	952001010	PNP
metal - axial optics - 2 r	n cable	
S50-MA-2-B01-NN	952021500	NPN
S50-MA-2-B01-PP	952021000	PNP
plastic - axial optics - M	112 connector	
S50-PA-5-B01-NN	952001500	NPN
S50-PA-5-B01-PP	952001020	PNP
metal - axial optics - M ²	12 connector	
S50-MA-5-B01-NN	952021660	NPN
S50-MA-5-B01-PP	952021200	PNP
plastic - radial optics - 2	2 m cable	
S50-PR-2-B01-NN	952001780	NPN
S50-PR-2-B01-PP	952001030	PNP
metal - radial optics - 2	m cable	
S50-MR-2-B01-NN	952021600	NPN
S50-MR-2-B01-PP	952021140	PNP
plastic - radial optics - I	V12 connector	
S50-PR-5-B01-NN	952001720	NPN
S50-PR-5-B01-PP	952001040	PNP
metal - radial optics - M	112 connector	
S50-MR-5-B01-NN	952021760	NPN
S50-MR-5-B01-PP	952021340	PNP

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

TECHNICAL NOTES

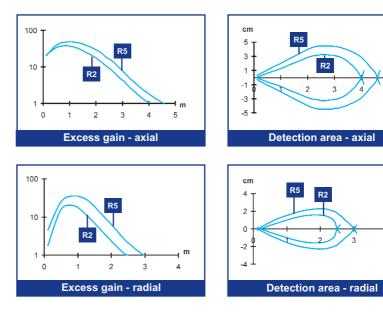
- ¹ Limit values
- ² Average life of 100.000 h with $T_A = +25 \degree C$
- ³ 270° single-turn trimmer
- ⁴ PVC, 4 x 0.14 mm²
- ⁵ Compatible with quick connection systems
- ⁶ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

	_							_
axial on	R5					4	4.5	
axial on	R2				3.5	4		
radial or	n R5		2.5	3				
radial or	ו R2	2	2.5					
0.1	1	:	2	:	3		4	5 (m
Reco	omm	ende	ed o	pera	atina	dist	tance	

Recommended operating distance
 Maximum operating distance

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

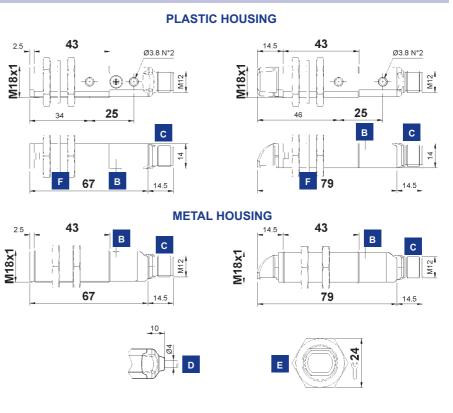
DETECTION DIAGRAMS



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 highresolution detection of small objects. The class 1 laser emission guarantees maximum safety for the operators in all applications.





DIMENSIONS

mm

OUTPUT status and

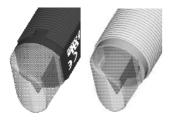
INDICATORS AND SETTINGS Α STABILITY LEDs B Adjustment trimmer M12 connector output Cable output D Fixing nuts F Fixing gasket F Α

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





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.



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

BLUE

S50-MH/ML

16 m

TE	СН	NIC	ΔΙ	DA	ТΔ
	UII			DA	

		S50-PL-2-B01-NN	S50-PL-2-B01-PP	S50-PH-2-B01-NN	S50-PH-2-B01-PF	S50-PL-5-B01-NN	S50-PL-5-B01-PP	S50-PH-5-B01-NN	S50-PH-5-B01-PF	S50-ML-2-B01-NN	S50-ML-2-B01-PF	S50-MH-2-B01-NI	S50-MH-2-B01-PF	S50-ML-5-B01-NN	S50-ML-5-B01-PF	S50-MH-5-B01-N	S50-MH-5-B01-PF
		S50-	S50-	S50-													
Operating distance:		-	-			_				_			_				
axial optics	0.1 16 m	•	•			•	•			•	•			•	•		_
radial optics	0.1 9 m			•	•			•	•			•	•			•	
Power supply:	10 30 Vdc ¹	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Ripple:	$\leq 2 \text{ Vpp}$	•		•	•	•	•	•	•	•	•	•	•	•	•	•	
Consumption:	≤ 35 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Light emission:		-	-	-		-	-	-	-	-	-	-	-	-	-		_
Light officeren	red Laser 650 nm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	class 1 EN 60825-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_
	class II CDRH21 CFR 1040.10		\vdash				_				_		-				_
Resolution:	51400 H 0D1(121 011(1040.10									\vdash							
	2 mm max. at 3 m (on R7)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	5 mm max. over 7 m (on R2)	•	•	•	•	•	•	•	•	•	•	•	•	•	-	•	•
Setting:	sensitivity trimmer ³	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Indicators:			-	-	-	-	-	-	-	-	-	-	-	-		-	
Indicators.	vellow OUTPUT LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
	green STABILITY LED	•	•	•	•	•	•		•	•		-	•	•	-	•	
Output type:	gicen of Abien 1 EED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_
Output type.	PNP, NO and NC	-	•		•	-	•		•		•		•	_	•		
	NPN, NO and NC	•		•	-	•	-	•	-	•	-	•	-	•		•	
Output current:	\leq 100 mA	•		-								-					
Saturation voltage:	≤ 2 V	•		•	•	•	•	•	•	•	•	•	-	•	•		
Response time:	<u>333 μs</u>	•		•	•	•	•	•	•	•	•	•	•	•	•	•	
Switching frequency:	1.5 kHz	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Operating mode:		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Connection:	dark on NO / light on NC	-	-	-	•	-	•	-	•	-	-	•	-	-	-	-	-
connection.	2 m Ø 4 mm cable ⁴		•				•			•	•		_	•	•		
	M12 4-pole connector ⁵	•	•		•	•		•		-	-	•	•	-	-		
Electrical protection:	class 2	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Electrical protection: Mechanical protection:	IP67	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-
Protection devices:	A. B ⁶	-	•	•	•	•	•	•	•	•	•	•		•	-	•	-
	А, Б	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-
Housing material:	PBT				_	-	_			-	_	_	_	_	\vdash		
		•	•	•	•	•	•	•	•								
Lens material:	nickel plated brass PMMA / glass			•	•		•	•		•	•	•		•	•	•	
Weight:	riviivia / ylass	•	•	•	-	•		-	•	-	•	•	-	•	-	•	-
weight.	75 g mov					_		_			_		_	_	$ \vdash $		
	75 g max.	•	•	•	•					\vdash		_			\vdash		_
	25 g max.		-			•	•	•	•		_				\vdash		_
	110 g max.	-	-					-		•	•	•	•				
One setting to set	60 g max.						_	-			-			•	•	•	-
Operating temperature:		•	•	•	•	•	•	•	•	-	-	•	•	•	•	•	-
Storage temperature:	<u>-25 +70°C</u>		•	•	•	•	•	•	•	•	•	•	•	•	•	•	-
Reference standard:	EN 60947-5-2,	•	•	•	•	•	•	•	•	•	•	•	•	•		•	-
	EN 60825-1, CDRH21 CFR 1040.10		•	•	•	•		•	•		•	•	•	•		•	

SELECTION TABLE

plastic - axial optics - 2		NDN						
S50-PL-2-B01-NN	952001870	NPN						
S50-PL-2-B01-PP	952001360	PNP						
plastic - radial optics - 2	2 m cable							
S50-PH-2-B01-NN	952001950	NPN						
S50-PH-2-B01-PP	952001940	PNP						
metal - axial optics - 2 i	m cable							
S50-ML-2-B01-NN	952021820	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	12 connector							
S50-PL-5-B01-NN	952001840	NPN						
S50-PL-5-B01-PP	952001370	PNP						
	002001010							
plastic -radial optics - N	112 connector							
S50-PH-5-B01-NN	952001970	NPN						
S50-PH-5-B01-PP	952001960	PNP						
	002001000							
metal - axial optics - M	12 connector							
S50-ML-5-B01-NN	952021850	NPN						
S50-ML-5-B01-PP	952021830	PNP						
330-IVIL-3-DUI-FF	332021440							
motal radial antica. M	112 connector							
metal - radial optics - M S50-MH-5-B01-NN	952021970	NPN						
S50-MH-5-B01-NN S50-MH-5-B01-PP	952021970	PNP						

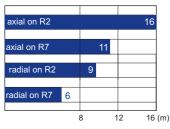
All the ordering codes and information are summarised in the last pages of this catalogue.

TECHNICAL NOTES

- ¹ Limit values
- ² Average life of 50.000 h with $T_A = +25 \degree C$
- ³ 270° single-turn trimmer
- ⁴ PVC, 4 x 0.14 mm²
- $^{\rm 5}$ 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.

DATASENSOR

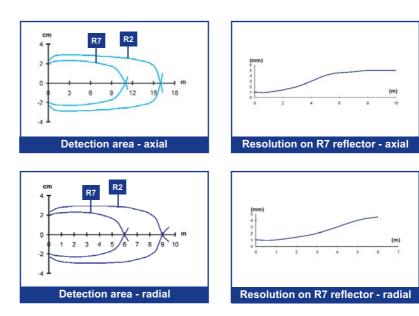


Operating distance

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

DETECTION DIAGRAMS

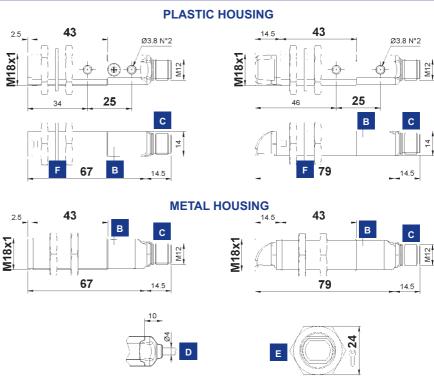
15



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.





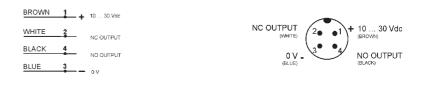
DIMENSIONS

A OUTPUT status LED B Adjustment trimmer C M12 connector output Cable output E Fixing nuts F Fixing gasket

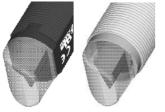
mm

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





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**.

DATASENSOR

S50-MA/MR 1.7 m

TECHNICAL DATA

		_					_						_		_	_	
		S50-PA-2-T01-NN	S50-PA-2-T01-PP	S50-PA-5-T01-NN	S50-PA-5-T01-PP	S50-PR-2-T01-NN	S50-PR-2-T01-PP	S50-PR-5-T01-NN	-PR-5-T01-PP	S50-MA-2-T01-NN	S50-MA-2-T01-PP	S50-MA-5-T01-NN	S50-MA-5-T01-PP	S50-MR-2-T01-NN	S50-MR-2-T01-PP	S50-MR-5-T01-NN	S50-MR-5-T01-PP
		S50	S50	S50	S50	S50	S50	S50	S50	S50	S50						
Operating distance:																	
axial optics	0.1 1.7 m	•	•	٠	٠					•	•	٠	٠				
radial optics	0.1 1.7 m					٠	٠	٠	٠					٠	•	٠	٠
Power supply:	10 30 Vdc1	٠	٠	•	٠	٠	٠	٠	٠	•	٠	٠	٠	٠	٠	٠	٠
Ripple:	≤ 2 Vpp	٠	٠	٠	٠	•	٠	•	٠	•		•	٠	٠		٠	•
Consumption:	≤ 35 mA	٠	٠	٠	٠	•	٠	٠	٠	٠	٠	٠	٠	٠		٠	•
Light emission:	red LED 660 nm ²	٠	٠	٠	٠	•	•	•	٠	•	۲	•	•	•	•	•	•
Spot dimension:																	
axial optics	approx. 45 mm at 1 m	•	•	•	•					•	•	•	•				
radial optics	approx. 60 mm at 1 m					•	•	•	•					•	•	•	•
Setting:	sensitivity trimmer ³	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Indicators:	yellow OUTPUT LED		•		•	•	•	•	•		•	•	•	•	•	•	•
Output type:	Jone 11 00 11 01 110		-			-	-	-	-	F	-	-	-	-	Ē	-	Ē
	PNP, NO and NC		•		•		•		•		•		•		•		•
	NPN, NO and NC	•	-	•	-	•		•		•	_	•		•		•	
Output current:	\leq 100 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Saturation voltage:	≤ 2 V	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Response time:	0.5 ms	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•
Switching frequency:	1 kHz	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Operating mode:	dark on NO / light on NC	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Connection:		-	-	-	-						_					-	
connection.	2 m Ø 4 mm cable ⁴	•	•	-		•	•			•	•	_		•		-	
	M12 4-pole connector 5	-	-			-	-			F	-			-	H		•
Electrical protection:	class 2	•		•		•	•	•	•	•		•	•	•	•		•
	IP67	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Mechanical protection: Protection devices:	A. B ⁶	•	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	А, Б°	•	•	•	-	-	-	-	-	F	-	-	-	-	H	-	-
Housing material:	PBT	•	•	•	•	•	•	•	•		\vdash			-	\square	-	
	nickel plated brass	-	-	-	-	-	-	-	-		•	•	•	•	•		•
Lens material:	PMMA	•	•	•	•	•	•	•	•		-	•		•		•	
		-	-	-	-	-	-	-	ľ	F	-	-	ľ	-	Ĩ	Ľ	Ě
Weight:	75		•	<u> </u>		•	•			\vdash					\vdash	-	\vdash
	75 g max.	•	-			-	-				-		-	-	\vdash	-	\vdash
	25 g max.	-		•	•			•	•							-	\vdash
	110 g max.	<u> </u>								•	•			•	•		
O	60 g max.	-	-		_	-	6	-	-			•	•	-	H	•	•
Operating temperature:	-25 +55°C	•	•	•	•	•	•	•	•		•	•	•	•		•	
Storage temperature:	-25 +70°C		•	•	•	•	•	•	•		•	•	•	•		•	•
Reference standard:	EN 60947-5-2		•	•	•	•	•	٠			•	•	•	•	•	•	•

SELECTION TABLE

plastic - axial optics - 2	m cable	
S50-PA-2-T01-NN	952001690	NPN
S50-PA-2-T01-PP	952001260	PNP
metal - axial optics - 2	m cable	
S50-MA-2-T01-NN	952021570	NPN
S50-MA-2-T01-PP	952021090	PNP
plastic - axial optics - M	112 connector	
S50-PA-5-T01-NN	952001580	NPN
S50-PA-5-T01-PP	952001270	PNP
metal - axial optics - M	12 connector	
S50-MA-5-T01-NN	952021730	NPN
S50-MA-5-T01-PP	952021290	PNP
plastic - radial optics - 2	2 m cable	
S50-PR-2-T01-NN	952001830	NPN
S50-PR-2-T01-PP	952001280	PNP
metal - radial optics - 2	m cable	
S50-MR-2-T01-NN	952021650	NPN
S50-MR-2-T01-PP	952021190	PNP
		,
plastic - radial optics - I	M12 connector	
S50-PR-5-T01-NN	952001770	NPN
S50-PR-5-T01-PP	952001290	PNP
metal - radial optics - M	112 connector	
S50-MR-5-T01-NN	952021810	NPN
S50-MR-5-T01-PP	952021390	PNP
All the ordering of		

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 $T_{\rm A}$ = +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

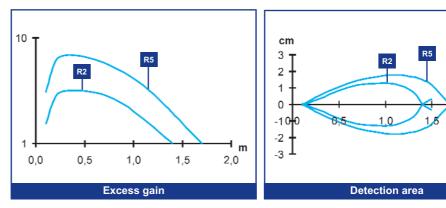
B - overload and short-circuit protection on the outputs

axial o	n R5	1.4	4	1.7		
axial o	n R2 1	1.3				
radial	n DE	1	4	1.7		
	on Ro	1.	.4	1.7		
radial o	on R2 1	1.3				
0.1 0	.5	1	1	.5	2 ((m

Recommended operating distance Maximum operating distance

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

DETECTION DIAGRAMS



DATASENSOR

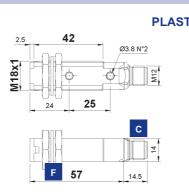
m

2,0

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.



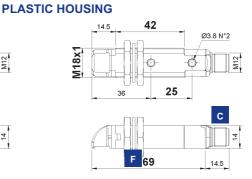


38

57

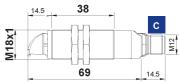
2.5

M18x1



METAL HOUSING

DIMENSIONS



С

14.5

M12

E **25**

mm

INDICATORS AND SETTINGS

RADIAL OPTICS

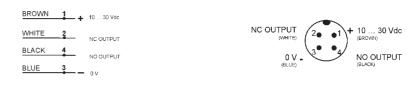
Image: Construction of the set o

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.







10 cm S50-MA/MR I∓I

TECHNICAL DATA

Z 0 **Z** 0 **Z** 0 **Z** 0 **Z** 0 **Z** 0 **Z** 0

		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	550-MR-5-C10-NN	S50-MR-5-C10-PP
		S50-PA-2	S50-PA-2	S50-PA-5	S50-PA-5	S50-PR-2	S50-PR-2	S50-PR-6	S50-PR-6	S50-MA-	S50-MA-	S50-MA-	S50-MA-	S50-MR-	S50-MR-	S50-MR-	S50-MR-
Operating distance:													_				
axial optics	0 10 cm	٠	٠	٠	•					•	٠	•	•				
radial optics	0 8 cm					٠	•	٠	٠					•	٠	•	٠
Power supply:	10 30 Vdc1	٠	٠	•	•	٠	٠	٠	٠	•	٠	٠	۲	•	٠	•	٠
Ripple:	≤ 2 Vpp	٠	٠	٠	٠	•	٠	٠	٠	٠	٠	•	٠	•	٠		٠
Consumption:	≤ 35 mA	٠	٠	•	•	•	٠	•	٠	٠	٠	•	٠	•	٠		٠
Light emission:	infrared LED 880 nm ²	•	٠	•	•	•	•	•	•	٠	٠	•	•	•	•	•	•
Spot dimension:																	
axial optics	approx. 80 mm at 10 cm	٠	٠	٠	٠					٠	٠	٠	٠				
radial optics	approx. 55 mm at 10 cm					٠	٠	•	•					•	٠	•	٠
Indicators:	yellow OUTPUT LED	٠	٠	٠	•	•	•	•	٠	٠	٠	•	•	•	٠	•	٠
Output type:	-																
	PNP, NO and NC		•		•		•		•		•		•		•		•
	NPN, NO and NC	٠		٠		•		•		•		•		•		•	
Output current:	≤ 100 mA		٠		٠		٠		•	•	٠	٠		•	•	٠	٠
Saturation voltage:	$\leq 2 V$		•		•	•	٠	•	•	•	•	•	•	•	•	\bullet	•
Response time:	0.5 ms	٠	٠	٠	٠	•	٠	٠	٠	٠	٠	•	٠	٠	٠	•	٠
Switching frequency:	1 kHz	٠	٠	٠	٠	٠	•	٠	٠	٠	٠	٠	•	•	٠	•	•
Operating mode:	dark on NO / light on NC	٠	•	•	•	•	٠	•	•	•	٠	•	٠	•			٠
Connection:																	
	2 m Ø 4 mm cable ³	•	•			•	•			•	٠			•	•		
	M12 4-pole connector ⁴			•	•			•	•			•				•	٠
Electrical protection:	class 2		٠	•	•	•	•	•	•	•	٠	•		•	•	•	٠
Mechanical protection:	IP67		٠	•	٠	•	٠		•	•	٠	•		•	•	•	٠
Protection devices:	A, B ⁵	٠	٠	٠	٠	•	٠	•	٠	٠	•	•		•	٠	•	٠
Housing material:																	
	PBT	٠	•	٠	۲	•	٠	•	٠								
	nickel plated brass									•	٠	•	٠	•	٠	•	٠
Lens material:	PMMA	٠	٠	٠	•	٠	٠	٠	٠	•	٠	٠	٠	•	٠	•	٠
Weight:																	
	75 g max.	٠	٠			•	٠										
	25 g max.			٠	•			•	•								
	110 g max.									•	٠			•	٠		
	60 g max.											•	•			•	٠
Operating temperature:	-25 +55°C	٠	٠	٠	•	٠	٠	٠	٠	٠	٠	٠		•	٠	•	•
Storage temperature:	-25 +70°C	٠	٠	•	•	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	ullet	٠
Reference standard:	EN 60947-5-2	٠	٠	۲	۲	٠	٠	•	٠	•	٠	٠	٠	•	٠		٠

SELECTION TABLE

plastic - axial optics - 2	m cable									
S50-PA-2-C10-NN	952001630	NPN								
S50-PA-2-C10-PP	952001240	PNP								
metal - axial optics - 2 m cable										
S50-MA-2-C10-NN	952021520	NPN								
S50-MA-2-C10-PP	952021020	PNP								
plastic - axial optics - M	112 connector									
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	2 m cable									
S50-PR-2-C10-NN	952001800	NPN								
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	952001480	PNP								
metal - radial optics - M	112 connector									
S50-MR-5-C10-NN	952021780	NPN								

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

TECHNICAL NOTES

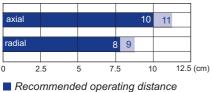
¹ Limit values

 2 Average life of 100.000 h with $T_{\rm A}$ = +25 $^{\circ}{\rm C}$

³ PVC, 4 x 0.14 mm²

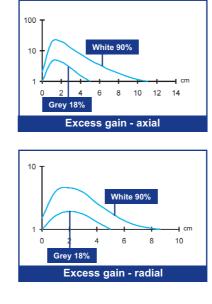
⁴ Compatible with quick connection systems

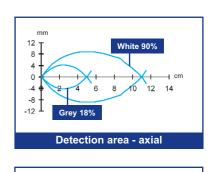
- ⁵ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

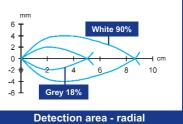


Maximum operating distance

DETECTION DIAGRAMS



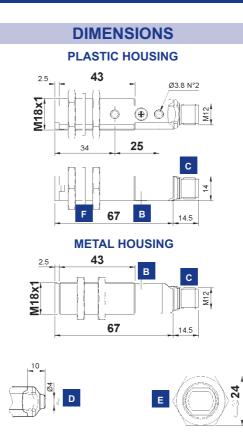




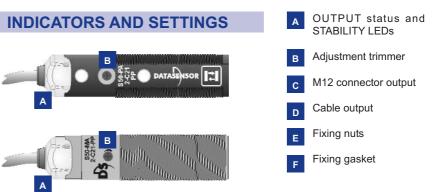
C DIFFUSE PROXIMITY WITH INFRARED EMISSION

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.





mm



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-MA

40 cm

TECHNICAL DATA

		z	•	z	۵.	z	٩	z	٩
		S50-PA-2-C21-NN	S50-PA-2-C21-PP	S50-PA-5-C21-NN	S50-PA-5-C21-PP	S50-MA-2-C21-NN	S50-MA-2-C21-PP	S50-MA-5-C21-NN	S50-MA-5-C21-PP
		5	-C2	ပြ	ç	5 7	5 5	5 2	U S S
		PA-:	PA-	Å	Å	ÅΡ	MA-	AA-	ΜΑ
		50-	50-	50-	50-	50-	50-	50-	50-
		05	0,	0	00	ľ	0,	0	00
Operating distance:	0 40 cm	•	٠	٠	٠	٠	٠	•	٠
Power supply:	10 30 Vdc ¹	•	٠	•	•	•	٠		•
Ripple:	≤ 2 Vpp	•	٠	٠	٠	•	۲	\bullet	٠
Consumption:	≤ 35 mA	•	۲	•	٠	•	۲		٠
Light emission:	infrared LED 880 nm ²	•	٠	٠	•	•	٠		•
Spot dimension:	approx. 100 mm at 300 cm	•	٠	•	•	•	۲	\bullet	•
Setting:	sensitivity trimmer ³	•	٠	•	•	•	۲	•	•
Indicators:									
	yellow OUTPUT LED		•	٠	٠	٠	٠		٠
	green STABILITY LED		•	٠	٠	•	•	٠	•
Output type:									
E	PNP, NO and NC		•		•		•		٠
	NPN, NO and NC	•		•		•		•	
Output current:	≤ 100 mA	•	٠	•	•	•	•	•	٠
Saturation voltage:	$\leq 2 V$	•	٠	•	•	•	•	•	٠
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	•	٠			•	•		
	M12 4-pole connector ⁵			•	•			•	•
Electrical protection:	class 2	•	•	•	•	•	•	•	•
Mechanical protection:	IP67	•	•	•	•	•	•	•	•
Protection devices:	A, B ⁶	•	•	•	•	•	•	•	•
Housing material:									
	PBT	•	•	•	•				-
	nickel plated brass					•	•	•	•
Lens material:	PMMA	•	•	•	•	•	•	•	•
Weight:			-	-	-	-	-	Ē	-
Toight	75 g max.	•	•						-
	25 g max.			•	•				-
	110 g max.		+	Ē	-	•	•		-
	60 g max.		-			Ē	-		
Operating temperature:	-25 +55°C	•	•		-	•			
Storage temperature:	-25 +33 C			•	•		-	-	
Reference standard:	EN 60947-5-2						-	-	
Reference Stanuaru:	LIN 00947-0-2			-	-	-	•	-	-

SELECTION TABLE

plastic - axial optics - 2	m cable							
S50-PA-2-C21-NN	NPN							
S50-PA-2-C21-PP	S50-PA-2-C21-PP 952002160							
metal - axial optics - 2	m cable							
S50-MA-2-C21-NN	NPN							
S50-MA-2-C21-PP	952022120	PNP						
plastic - axial optics - M	112 connector							
S50-PA-5-C21-NN	952002190	NPN						
S50-PA-5-C21-PP	PNP							
metal - axial optics - M12 connector								

metal - axial optics - M12 connector									
S50-MA-5-C21-NN	952022150	NPN							
S50-MA-5-C21-PP	952022140	PNP							

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

¹ Limit values

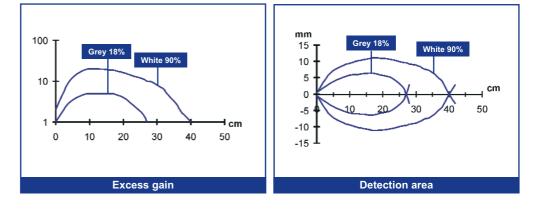
- 2 Average life of 100.000 h with T_A = +25 $^\circ C$
- ³ 270° single-turn trimmer
- ⁴ PVC, 4 x 0.14 mm²
- $^{\rm 5}$ Compatible with quick connection systems
- ⁶ A reverse polarity protection
 - *B* overload and short-circuit protection on the outputs

CE CUUS LISTED



Recommended operating distance
 Maximum operating distance

DETECTION DIAGRAMS

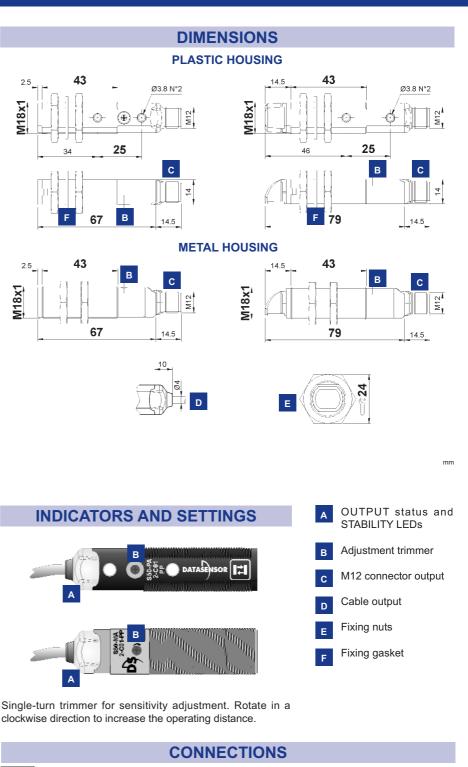




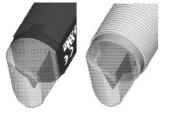
C LONG DIFFUSE PROXIMITY WITH INFRARED EMISSION

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.









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-MA/MR 70 cm 🖂

TECHNICAL DATA

					_											_	
		Z	đ	NN	6	N	6	N	6	N.	ď	NN	ď.	N N	ď	NN.	٩.
		-10	01-1	01-1	-10	5	01-	-10	5	5	:01	:01	30	:01	30-	<u>Š</u>	5
		9 5	-0 -0	-2-0	²	2	-2	-2-0	4	-9	-5	4	ĥ	5	4 F	4	ĥ
		S50-PA-2-C01-NN	S50-PA-2-C01-PP	S50-PA-5-C01-NN	Å	S50-PR-2-C01-NN	S50-PR-2-C01-PP	S50-PR-5-C01-NN	R,	ΜĀ.	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
		S50	S50	S50	S50-PA-5-C01-PP	S50	S50	S50	S50-PR-5-C01-PP	S50-MA-2-C01-NN	S50						
					.,		.,				-,			-,			
Operating distance:																	
axial optics	0 70 cm		•	•	٠						•	•	•				
radial optics	0 40 cm					•	•	•	•					•	•	•	•
Power supply:	10 30 Vdc ¹		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Consumption:	\leq 35 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Light emission:	infrared LED 880 nm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Spot dimension:			_			-	-	-	-	-	-	-	-	-	-	-	-
axial optics	approx.200 mm at 60 cm	•	•	•	•					•	•	•	•		-		\neg
radial optics	approx.35 mm at 40 cm		-	-		•	•	•	•	-	-	-	-	•	•	•	•
Setting:	sensitivity trimmer ³	•	•	•	_			•	•	•	•	•	•	•	•	•	•
Indicators:		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	—
Indibutors.	vellow OUTPUT LED	•	•	•	•	•	•	•	•		•	•	•		•		
	green STABILITY LED	•	•	•	_	-	_	•	•	•	•	•	_	•	•		
Output type:	green on when the	-	-	-	-	-	•	-	-	-	-	-	-	-	-		
Output type:	PNP, NO and NC		•	_	•		•	_	•		•	_	•		•		
	NPN, NO and NC	•	-	•	-	•	-	•	-	•	-	•	-	•	-	•	-
Output current:	\leq 100 mA	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•
Saturation voltage:	≤ 2 V	•	•	•	-	•	•	•	•	•	•	•	•	•			
Response time:	0.5 ms	•	•		-	•	•	•	•		•	-	•		-		
Switching frequency:	1 kHz	•	•	•	-	•	•	•	•		-	-	•	•	-		
Operating mode:	dark on NO / light on NC	-	•	•	•	•	-	•			-	-			-		
Connection:	dark of NO / light of NC	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-	-
connection.	2 m Ø 4 mm cable ⁴	•	•		-	•	•			•		_			•	-	\vdash
	M12 4-pole connector ⁵	-	-	•	•	•	•	•	•	-	•	•	•	•	•	•	•
Electrical protection:	class 2	•	•	•	-	•	•	•	•	•	•	-	•	•	•	•	
Mechanical protection:	IP67	•	•	•	_	•	•	•	•		•	•	•		•		
Protection devices:	A, B ⁶	•	•	•	•	•	•	•	•		•	•	•		•	•	
Housing material:	Λ, Β	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
nousing material.	PBT	•	•	•	•	•	•		•	\vdash		_			-	-	\vdash
	nickel plated brass	-	•	•	-	•	•	•	-								
Lens material:	PMMA	•	•	•	•		•	•	•					•	•	•	•
Weight:		-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
weight:	75 a maay		•		_		-	_			_	_				-	$\left - \right $
	75 g max.	•	-	•	•	•	•	•	•	\vdash		_			_	-	\vdash
	25 g max.			•	-	-	_	-	-		_	_			-	-	Н
	110 g max.				-	_		\vdash		•	•	•	•	•	•		•
On exeting temps exeture:	60 g max.											-	-				
Operating temperature:	<u>-25 +55°C</u>	•	•	•	-	•	•	•	•		•	•	•	•	-	-	-
Storage temperature:	-25 +70°C	•	•	•	•	•	-	•	•		•	-	•	•	•	-	
Reference standard:	EN 60947-5-2	•	-	•	-	•	•	•	•	•		•	•		•	•	•

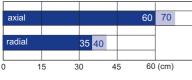
SELECTION TABLE

plastic - axial optics - 2		
S50-PA-2-C01-NN	952001620	NPN
S50-PA-2-C01-PP	952001050	PNP
metal - axial optics - 2 i	m 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-PP	952001060	PNP
metal - axial optics - M	12 connector	
S50-MA-5-C01-NN	952021670	NPN
S50-MA-5-C01-PP	952021210	PNP
plastic - radial optics - 2	2 m cable	
S50-PR-2-C01-NN	952001790	NPN
S50-PR-2-C01-PP	952001070	PNP
metal - radial optics - 2	m cable	
S50-MR-2-C01-NN	952021610	NPN
S50-MR-2-C01-PP	952021150	PNP
plastic - radial optics - I	M12 connector	
S50-PR-5-C01-NN	952001730	NPN
S50-PR-5-C01-PP	952001080	PNP
metal - radial optics - M	112 connector	
S50-MR-5-C01-NN	952021770	NPN
S50-MR-5-C01-PP	952021350	PNP

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

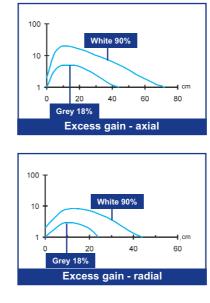
TECHNICAL NOTES

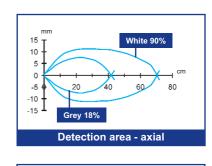
- ¹ Limit values
- 2 Average life of 100.000 h with $T_{\rm A}$ = +25 $^{\circ}{\rm C}$
- ³ 270° single-turn trimmer
- ⁴ PVC, 4 x 0.14 mm²
- ⁵ Compatible with quick connection systems
- ⁶ A reverse polarity protection
- B overload and short-circuit protection on the outputs

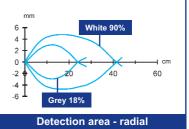


Recommended operating distance
 Maximum operating distance

DETECTION DIAGRAMS



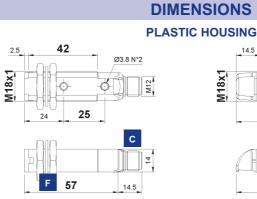




D FIXED FOCUS PROXIMITY WITH RED EMISSION

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.





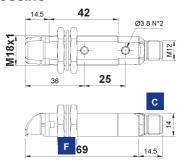
38

57

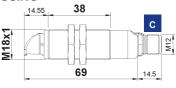
Α

2.5

M18x1



METAL HOUSING



С

14.5

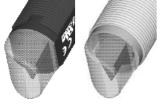
M12

24 Е

mm



RADIAL OPTICS





BROWN + 10 ... 30 Vdd NC OUTPUT 10 ... 30 Vdc WHITE NC OUTPUT BLACK NO OUTPUT ον. BLUE

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-MA/MR 10 cm

		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:														_	\neg		
axial optics	0.5 10 cm	٠	•	٠	٠					•	•	•	•				
radial optics	0 8 cm					•	•	•	٠					•	•	•	٠
Power supply:	10 30 Vdc1	٠	٠	•	•	•	•	٠	٠	•	•	•	٠	٠	•	•	•
Ripple:	≤ 2 Vpp	٠	٠	٠	٠	•	•	•	•	•	•	•	٠	•	٠	•	
Consumption:	≤ 35 mA	٠	٠	٠	٠	•	٠		٠	•	٠	•	٠	•	٠	•	•
Light emission:	red LED 630 nm ²	٠	٠	٠	٠	•	•	•	•	٠	•	•	•	•	•	•	•
Spot dimension:																	
axial optics	approx. 20 mm at 10 cm	٠	٠	٠	•					•	•	•	٠	1	\neg		
radial optics	approx. 25 mm at 8 cm					•	•	•	•					•	•	•	•
Indicators:	vellow OUTPUT LED	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Output type:	,	-	-	-	-				-		-		_	-	-	-	
	PNP. NO and NC		•		•		•		•		•		•	-	•	-	•
	NPN, NO and NC	•	-	•	-	•		•		•		•	-	•	+	•	
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Saturation voltage:	$\leq 2 V$	•	•	•	•	•	-	•	•	•	•	•		•		•	•
Response time:	0.5 ms		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Switching frequency:	1 kHz	•	•		•	•	•	•	•	•	•	•	•	•	•	•	
Operating mode:	dark on NO / light on NC		•	•		•	•	•	•	•	•	•	•	•	-	•	•
Connection:	dank on No / light on No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Ē
	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:	Λ, Β	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
nousing material.	PBT	•						•			-	-	+	+	+	+	
	nickel plated brass					-	-	-	-	•	•	•	•	•	•	•	•
Lens material:	PMMA	•	•	•	•	•	•	•	•	-	•	-	•	-	-	-	•
Weight:		-	-	-	-	-	-	-	-		-	-	-	-	-	-	F
weight.	75 g max	•	•	-			•		-		-	-	+	+	+	+	
	75 g max. 25 g max.	-			•	•	-	•	•	\vdash	_	-	\rightarrow	+	+	-	\vdash
			-	•		\vdash		•	-		•	-	+		•	+	
	110 g max.						_		_	•	-			•	-		
Operating to protecting	60 g max.	•	•									•	•			•	•
Operating temperature:	-25 +55°C		-			•	•	•	•	•	•	-	-	•	-	•	-
Storage temperature:	-25 +70°C	•	•	•	•	•	•	•	•	•	-	-		•	-	•	•
Reference standard:	EN 60947-5-2	•	•	•			٠	•	•	•	•	۰	٠	•		•	•

TECHNICAL DATA

plastic - axial optics - 2	m cable	
S50-PA-2-D00-NN	952001640	NPN
S50-PA-2-D00-PP	952001090	PNP
metal - axial optics - 2 r	n cable	
S50-MA-2-D00-NN	952021530	NPN
S50-MA-2-D00-PP	952021030	PNP
plastic - axial optics - M	112 connector	
S50-PA-5-D00-NN	952001530	NPN
S50-PA-5-D00-PP	952001100	PNP
metal - axial optics - M ²	12 connector	
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	m cable	
S50-MR-2-D00-NN	952021630	NPN
S50-MR-2-D00-PP	952021160	PNP
plastic - radial optics - N	V12 connector	
S50-PR-5-D00-NN	952001750	NPN
S50-PR-5-D00-PP	952001120	PNP
metal - radial optics - M	112 connector	
S50-MR-5-D00-NN	952021790	NPN
S50-MR-5-D00-PP	952021360	PNP

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

TECHNICAL NOTES

¹ Limit values

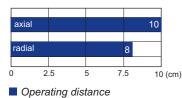
² Average life of 100.000 h with T_A = +25 °C

³ PVC, 4 x 0.14 mm²

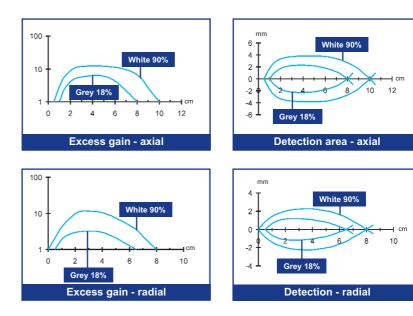
⁴ Compatible with quick connection systems

- ⁵ A reverse polarity protection
- B overload and short-circuit protection on the outputs

CE CUUS LISTED



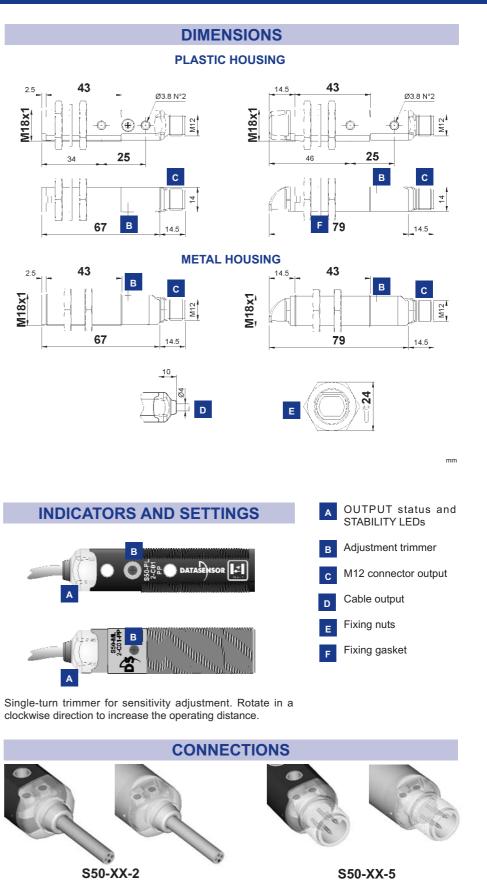
DETECTION DIAGRAMS



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.





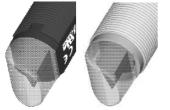
 BROWN
 1
 +
 10
 ...
 30
 Vdc

 WHITE
 NC OUTPUT
 NC OUTPUT
 (WHITE)
 2
 1
 +
 10
 ...
 30
 Vdc

 BLACK
 NO OUTPUT
 NO OUTPUT
 0
 V
 10
 ...
 30
 Vdc

 BLUE
 3
 0
 V
 0
 V
 NO OUTPUT

RADIAL OPTICS



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.

datasensor

S50-MH/ML 35 cm

TEC	HNI	CAL	DATA
ILV		UAL	DAIA

		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-PF	S50-MH-2-C01-N	S50-MH-2-C01-PF	S50-ML-5-C01-NN	S50-ML-5-C01-PF	S50-MH-5-C01-N	S50-MH-5-C01-PF
Operating distance:																	
axial optics	0 35 cm	•	•			٠	•			•	٠			•	٠		
radial optics	0 25 cm			•	٠			•	•			•	•			•	
Power supply:	10 30 Vdc ¹	•	•	٠	٠	•	•	•	٠	•	•	•	٠	•	•	٠	•
Ripple:	≤ 2 Vpp	•	٠	•	٠	•	•	•	•	•	٠	•	•	•	•	•	•
Consumption:	≤ 35 mA	•	•	•	٠	•	•	•	•	•	•	•	•	•	•	٠	•
Light emission:															Ш		_
	red Laser 650 nm ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	٠	•
	class 1 EN 60825-1						_										_
	class II CDRH21 CFR 1040.10						_										_
Resolution:	approx. 0.3 mm at 5 cm	•	•	•	٠	•	•	٠	٠	•	٠	٠	٠	•	٠	٠	•
	approx. 0.3 mm at 10 cm	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	approx. 0.5 mm at 20 cm	•	٠	•	٠	•	•	٠	•	•	٠	٠	۲	•	٠	٠	
	approx. 2 mm at 30 cm	•	•	٠	٠	•	•	•	•	•	٠	٠	٠	•	٠	٠	٠
Setting:	sensitivity trimmer ³	•	•	•	٠	•	•	•	•	•	•	•	•	•	•	•	•
Indicators:																	_
	yellow OUTPUT LED	•	•	•	٠	•	•	•	•	•	٠	٠	٠	٠	•	•	•
	green STABILITY LED	•	٠	٠	٠	•	•	•	•	•	•	•	٠	•	•	•	•
Output type:																	
	PNP, NO and NC		٠		٠		•		•		•		•		•		•
	NPN, NO and NC	•		•		•		•		•		۰		•		•	
Output current:	≤ 100 mA	•	٠	٠	٠	٠	•	•	•	٠	٠	٠	٠	٠	٠	٠	•
Saturation voltage:	$\leq 2 V$	•	٠	٠	٠	٠	•	٠	•	٠	٠	٠	٠	٠	٠	٠	•
Response time:	<u>333 μs</u>	•	•	•	٠	•	•	•	٠	•	٠	•	•	•	٠	٠	•
Switching frequency:	1.5 kHz	•	٠	•	٠	٠	•	•	٠	•	٠	٠	٠	٠	٠	٠	٠
Operating mode:	light on NO / dark on NC	•	٠	•	٠	•	•	٠	•	•	٠	•	٠	•	•	•	
Connection:							_										
	2 m Ø 4 mm cable ⁴	•	٠			•	٠			٠	٠			٠			_
	M12 4-pole connector ⁵			•	•			•	•			٠	•		Ш	•	•
Electrical protection:	class 2	•	٠	•	٠	•	•	٠	٠	•	٠	٠	٠	•	٠	٠	
Mechanical protection:	IP67	•	٠	٠	٠	۲	•	•	•	•	۲	•	٠	•	\bullet	•	•
Protection devices:	A, B ⁶	•	٠	٠	٠	۲	٠	•	٠	•	٠	•	٠	•	•	٠	
Housing material:																	
	PBT	•	٠	•	•	•	•	•	٠								
	nickel plated brass									•	٠	٠	٠		•	•	
Lens material:	PMMA / glass	•	٠	٠	٠	•	٠	٠	•	•	٠	٠	٠	•	٠	•	
Weight:							_										_
	75 g max.	•	٠	•	٠										Ш		
	25 g max.					•	•	•	•								
	110 g max.									•	•	•	•		Ц		
	60 g max.													•		•	
Operating temperature:		•	•	•	•	•	•	•	•	•	•	•	٠	•	-	•	•
Storage temperature:	-25 +70°C	•	٠	•	٠	•				•	٠	•		•	۰	•	•
Reference standard:	EN 60947-5-2,	•	٠	•	٠	•	•	•	•	•	•	•	•	•		•	
	EN 60825-1, CDRH21 CFR 1040.10	•	•	•	•	•	•	٠	•	•	•		٠	•	•	•	•

SELECTION TABLE

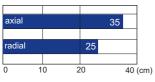
plastic - axial optics - 2	m cable	
S50-PL-2-C01-NN	952001880	NPN
S50-PL-2-C01-PP	952001380	PNP
00012200111	0020010000	
plastic - radial optics - 2	2 m cable	
S50-PH-2-C01-NN	952001990	NPN
S50-PH-2-C01-PP	952001980	PNP
metal - axial optics - 2 i	m cable	
S50-ML-2-C01-NN	952021830	NPN
S50-ML-2-C01-PP	952021410	PNP
metal - radial optics - 2		
S50-MH-2-C01-NN	952021990	NPN
S50-MH-2-C01-PP	952021980	PNP
plastic - axial optics - M	1	
S50-PL-5-C01-NN	952001850	NPN
S50-PL-5-C01-PP	952001390	PNP
plastic - radial optics - I		
S50-PH-5-C01-NN	952002010	NPN
S50-PH-5-C01-PP	952002000	PNP
metal - axial optics - M		
S50-ML-5-C01-NN	952021860	NPN
S50-ML-5-C01-PP	952021450	PNP
metal - radial optics - N		
S50-MH-5-C01-NN	952022010	NPN
S50-MH-5-C01-PP	952022000	PNP

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

TECHNICAL NOTES

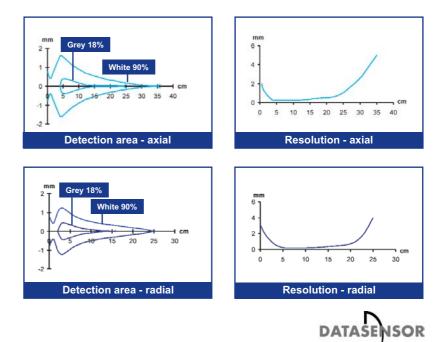
- ¹ Limit values
- 2 Average life of 50.000 h with $T_{\rm A}$ = +25 $^{\circ}{\rm C}$
- ³ 270° single-turn trimmer
- ⁴ PVC, 4 x 0.14 mm²
- ⁵ Compatible with quick connection systems
- ⁶ A reverse polarity protection
 - B overload and short-circuit protection on the outputs

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



Operating distance

DETECTION DIAGRAMS



M AXIAL BACKGROUND SUPPRESSION WITH RED EMISSION

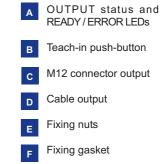
Background suppression proximity allows to precisely adjust the distance over which the object is not detected, with the minimum difference between reflective objects. The EASYtouch[™] setting procedure fixes automatically the best detection conditions, simply pressing once the teach-in pushbutton, in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



PLASTIC HOUSING 43 25 Ø3.8 N°2 M18x1 M12 25 34 С 4 в F 67 14.5 **METAL HOUSING** 43 2.5 в С M18x1 Я Ц2 67 14.5 D Е **INDICATORS AND SETTINGS** в Cable output D

DIMENSIONS





Teach-in button for setting.

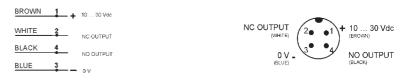
EASYtouch™ provides two setting modes: standard or fine, both obtained by pressing the push-button only once. Please refer to instructions manual for operating details.

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-MA

3-PP 3-PP 3-PP 3-PP 33-NN 33-PP 33-NN 33-PP 10 cm

I≭IX

TECHNICAL DATA

		S50-PA-2-M03	S50-PA-2-M03	S50-PA-5-M03	S50-PA-5-M03	S50-MA-2-M0:	S50-MA-2-M0	S50-MA-5-M0	S50-MA-5-M0:
		S5	S5	S5	S5	S5	S5	S5	S5
Operating distance:	5 10 cm	•	•	•	•	•	•	•	
Power supply:	10 30 Vdc ¹	•				•	•		
Ripple:	≤ 2 Vpp		-	-	-				
Consumption:	\leq 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 EASYtouch™	•	-	-	-	•	-	-	-
Indicators:		-	-	-	•	-	-	-	-
mulcaluis.	vellow OUTPUT LED	•				•	•		
	green / red READY / ERROR LED	•	•	•	•	•	•	-	-
Output type:	gieen / ieu READT / ERROR LED	-		•	•	•	-	-	-
Output type:	PNP. NO and NC		•		•	\vdash	•		•
	NPN, NO and NC	•	-		-	•	-	•	_
Output current:	\leq 100 mA	•	•	•	•	•	•	•	_
Saturation voltage:	< 2 V	•						-	-
Response time:	≤ 2 V 1 ms	•	•	•	•	•	•	•	•
	500 Hz			-				-	-
Switching frequency:		•	-	-	•	•	•	-	-
Operating mode: Connection:	dark on NO / light on NC	-	-	-	•	-	-	-	-
Connection:		•	•			•	•		—
	2 m Ø 4 mm cable ³	-	•	-		-	-		_
Flastrical musta stiem.	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:							$ \rightarrow $		
	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	•	•	٠	٠	•	•	•	•

SELECTION TABLE

plastic - axial optics - 2 m cable									
S50-PA-2-M03-NN	-M03-NN 952001670 NP								
S50-PA-2-M03-PP	P 952001230 PN								
metal - axial optics - 2	m cable								
S50-MA-2-M03-NN	952021550	NPN							
S50-MA-2-M03-PP	952021070	PNP							
plastic - axial optics - I	M12 connector								
S50-PA-5-M03-NN	952001560	NPN							
S50-PA-5-M03-PP	PA-5-M03-PP 952001000 PN								

metal - axial optics - N	112 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.

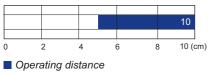
TECHNICAL NOTES

¹ Limit values

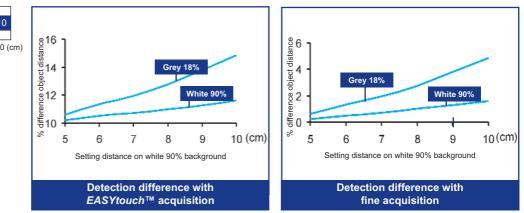
 2 Average life of 100.000 h with T_A = +25 $^\circ C$

- 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





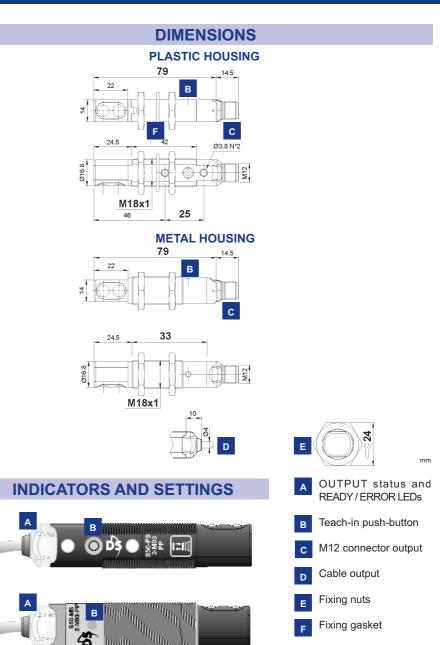
DETECTION DIAGRAMS



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*TM setting procedure fixes automatically the best detection conditions, simply pressing once the teach-in pushbutton, in presence of the reference to detect.





Teach-in button for setting.

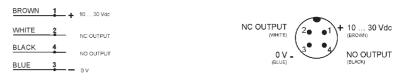
EASYtouch[™] provides two setting modes: standard or fine, both obtained by pressing the push-button only once. Please refer to instructions manual for operating details.

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-MS

10 cm

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TECHNICAL DATA

		S50-PS-2-M03-NN	S50-PS-2-M03-PP	S50-PS-5-M03-NN	S50-PS-5-M03-PP	S50-MS-2-M03-NN	S50-MS-2-M03-PP	S50-MS-5-M03-NN	S50-MS-5-M03-PP
Operating distance:	5 10 cm	•	٠	٠	٠	٠	٠	٠	٠
Power supply:	10 30 Vdc1	•	•	•	•	•	•	٠	٠
Ripple:	≤ 2 Vpp	•	•	•	•	•	•	٠	٠
Consumption:	≤ 30 mA	•	•	•	•	•	•	•	•
Light emission:	red LED 630 nm ²	•	•	٠	٠	•	•	•	•
Spot dimension:	approx. 10 mm at 10 cm	•	٠	٠	٠	•	٠	٠	
Setting:	teach-in push-button	•	•	٠	•	•	•	•	•
Setting procedure:	teach-in <i>EASYtouch</i> ™	•	•	•	•	•	•	٠	•
Indicators:									
	yellow OUTPUT LED	•	•	•	•	•	•	•	•
	green / red READY / ERROR LED	•	•	•	•	•	•	٠	•
Output type:	0								
	PNP, NO and NC		•		•		•		•
	NPN, NO and NC	•		•		•		•	
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•
Saturation voltage:	$\leq 2 V$	•	•	•	•	•	•	•	•
Response time:	1 ms	•	•	٠	٠	•	٠	٠	٠
Switching frequency:	500 Hz	•	•	•	•	•	•	٠	٠
Operating mode:	dark on NO / light on NC	•	٠	٠	٠	•	•	٠	٠
Connection:	0								
	2 m Ø 4 mm cable ³	•	٠			•	•		
	M12 4-pole connector ⁴			•	•			•	•
Electrical protection:	class 2	•	•	•	•	•	•	•	•
Mechanical protection:	IP67	•	•	•	•	•	•	•	•
Protection devices:	A, B ⁵	•	•	•	•	٠	•	٠	•
Housing material:	.,_								
g	PBT / PVC	•	•	•	•				
	nickel plated brass					•	•	•	•
Lens material:	glass	•	•	•	•	•	•	•	•
Weight:	9.000		-	-	-		-	-	-
	90 g max.	•	•						
	40 g max.			•	•		\square		
	125 g max.			-	-	•	•		
	75 g max.					É	-	•	•
Operating temperature:	-25 +55°C	•		•	•	•			
Storage temperature:	-25 +70°C			•		•			•
Reference standard:	EN 60947-5-2							-	

SELECTION TABLE

plastic - 2 m cable		
S50-PS-2-M03-NN	952001900	NPN
S50-PS-2-M03-PP	952001910	PNP
metal - 2 m cable		
S50-MS-2-M03-NN	952021900	NPN
S50-MS-2-M03-PP	952021910	PNP
plastic - M12 connecto	or	
S50-PS-5-M03-NN	952001920	NPN
S50-PS-5-M03-PP	952001930	PNP
motol M10 compositor		

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



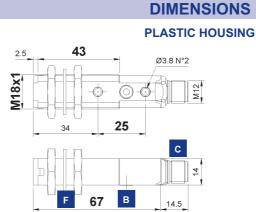
10 % difference object distance 01 01 01 01 difference object distance 6 8 10 (cm) 0 2 4 Operating distance Grev 18% Grey 18% White 90% White 90% % 10 (cm) 10 (cm) 5 6 7 8 9 5 6 7 8 9 Setting distance on white 90% background Setting distance on white 90% background Detection difference with Detection difference with EASYtouch™ acquisition fine acquisition

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.



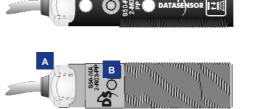


METAL HOUSING





INDICATORS AND SETTINGS



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

Teach-in button for setting. *EASYtouch*™ provides tw

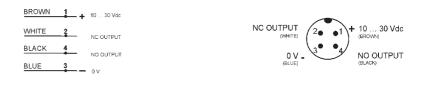
EASYtouch[™] provides two setting modes: standard or fine, both obtained by pressing the push-button only once. Please refer to instructions manual for operating details.

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-MA

10 cm

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	•	٠	٠	٠	٠	٠		٠
Power supply:	10 30 Vdc1	•	•	٠	•	٠	•	•	
Ripple:	≤ 2 Vpp	•	•	•	٠	•	•	•	•
Consumption:	≤ 30 mA	•	•	٠	٠	•	٠	•	٠
Light emission:	red LED 630 nm ²	•	٠	٠	٠	٠	٠	٠	٠
Spot dimension:	approx. 8 mm at 10 cm	•	٠	٠	•	•	٠	•	٠
Setting:	teach-in push-button	•	•	٠	٠	•	٠	•	
Setting procedure:	teach-in <i>EASYtouch</i> ™	•	•	•	•	•	•		
Indicators:									
	yellow OUTPUT LED	•	•	•	•	•	•	•	•
	green / red READY / ERROR LED	•	•	•	•	•	•	•	
Output type:	5								
	PNP, NO and NC		•		•		•		
	NPN, NO and NC	•		•		•		•	
Output current:	≤ 100 mA	•	•	•	•	•	•	•	•
Saturation voltage:	$\leq 2 V$	•	•	•	•	•	•	•	•
Response time:	2 ms		•			•	•		
Switching frequency:	250 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	•	•	•	•				
	nickel plated brass		Ť	-	-	•	•	•	•
Lens material:	PMMA	•	•	•	•	•	•	•	•
Weight:			-	-	-	-		-	
	75 g max.	•	•						
	25 g max.	-	É	•	•				
	110 g max.			-		•	•		
	60 g max.					Ē	F		•
Operating temperature:	-25 +55°C	•	•	•	•		•		
Storage temperature:	-25 +70°C			•					
Reference standard:	EN 60947-5-2					Ľ		-	-

SELECTION TABLE

plastic - axial optics - 2 m cable										
S50-PA-2-N03-NN	103-NN 952001680 NF									
S50-PA-2-N03-PP	952001440	PNP								
metal - axial optics - 2	m cable									
S50-MA-2-N03-NN	2-N03-NN 952021560 NF									
S50-MA-2-N03-PP	952021080	PNP								
plastic - axial optics - I	V12 connector									
S50-PA-5-N03-NN	103-NN 952001570 NPN									
S50-PA-5-N03-PP	952001450	PNP								

metal - axial optics - M	112 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

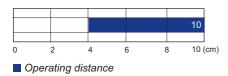
¹ Limit values

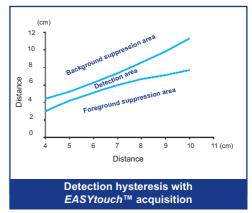
² Average life of 100.000 h with $T_A = +25 \degree C$

- 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









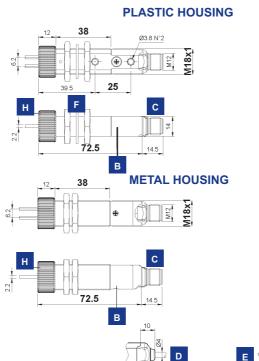
 $\ensuremath{\textbf{Note:}}$ in the fine acquisition mode, the foreground suppression distance is nearer to the point where the object has been acquired



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 the extensive range of fibre-optic accessories please see the OF datasheet.

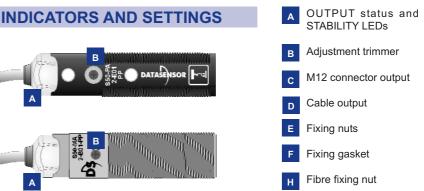
DIMENSIONS





mm





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

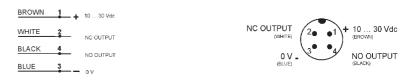
А

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-PA

S50-MA :

NN dd N dd N dd

3/10 cm 🗔

TECHNICAL DATA

green STABILITYOutput type:PNP, NO and NCNPN, NO and NCOutput current: $\leq 100 \text{ mA}$ Saturation voltage: $\leq 2 V$ Response time:0.5 msSwitching frequency:1 kHzOperating mode:dark on NO / light on NCConnection:2 m Ø 4 mm cable ⁴ Mt2 4-pole connector ⁵ Electrical protection:lectrical protection:left 4PBTnickel plated brassFibre fixing nut material:ABSWeight:75 g max.25 g max.60 g max.060 g max.60 g			S50-PA-2-E01-N	S50-PA-2-E01-P	S50-PA-5-E01-N	S50-PA-5-E01-P	S50-MA-2-E01-h	S50-MA-2-E01-F	S50-MA-5-E01-N	S50-MA-5-E01-F
through beam10 cm (OF-43-ST-20 standard fibres)Power supply:10 30 Vdc 1Ripple: ≤ 2 VppConsumption: ≤ 35 mALight emission:red LED 660 nm²Setting:sensitivity trimmer 3Indicators:Image: Standard fibres and the sensitivity trimmer 3Output type:Image: Standard fibres and the sensitivity trimmer 3Output type:Image: Standard fibres and the sensitivity trimmer 3Output type:Image: Standard fibres and the sensitivity trimmer 3Output current: ≤ 100 mASaturation voltage: ≤ 2 VResponse time:0.5 msSwitching frequency:1 kHzOperating mode:dark on NO / light on NCConnection:Image: Standard fibres and the sensitivity fibre and th										
Power supply: 10 30 Vdc ¹ ● ● ● ● ● ● ● ● Ripple: ≤ 2 Vpp ● ● ● ● ● ● ● ● ● ● Consumption: ≤ 35 mA ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● <td></td> <td></td> <td>•</td> <td>-</td> <td>-</td> <td>-</td> <td>•</td> <td>٠</td> <td>•</td> <td>•</td>			•	-	-	-	•	٠	•	•
Ripple: < 2 Vpp < • • • • • • • • • • Consumption: < 35 mA • • • • • • • • Light emission: red LED 660 nm² • • • • • • • Setting: sensitivity trimmer ³ • • • • • • • • Indicators:			-	-	-	-	•	•	•	•
Consumption: $\leq 35 \text{ mA}$ $\bullet \bullet \bullet$ Light emission:red LED 660 nm² $\bullet \bullet \bullet$ Setting:sensitivity trimmer ³ $\bullet \bullet $			•			۰	•	•	•	•
Light emission: red LED 660 nm² Setting: sensitivity trimmer ³ Indicators: yellow OUTPUT LED green STABILITY • • • • • • • • • Output type: • • • • • • • • • • • • • • • • • • •			•	٠	٠	٠	•	•	•	٠
Setting: sensitivity trimmer ³ Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Indicators: green STABILITY Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Output type: Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Output type: Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Output current: 100 mA Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Saturation voltage: 2 V Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Saturation voltage: 2 V Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Saturation voltage: 2 V Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Saturation voltage: Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Image: Sensitivity trimmer ³ Switching frequency: 1 kHz Ithz Image: Sensitivity trimmer ³ Im			•	٠	٠	٠	•	•	•	٠
Indicators:yellow OUTPUT LEDImage: StabilityOutput type:Image: StabilityImage: StabilityOutput type:Image: StabilityPNP, NO and NCImage: StabilityNPN, NO and NCImage: StabilityOutput current: $\leq 100 \text{ mA}$ Saturation voltage: $\leq 2 V$ Response time:0.5 msSwitching frequency:1 kHzOperating mode:dark on NO / light on NCConnection:Image: StabilityImage: StabilityImage: StabilityImage: StabilityImage: StabilityImage: StabilityImage: StabilityImage: StabilityImage: StabilityOperating mode:Image: StabilityImage: Stability			•	٠	٠	٠	•	٠		٠
yellow OUTPUT LEDImage: StabilityOutput type:Image: StabilityPNP, NO and NCImage: StabilityNPN, NO and NCImage: StabilityOutput current: $\leq 100 \text{ mA}$ Saturation voltage: $\leq 2 V$ Response time: 0.5 ms Switching frequency:1 kHzOperating mode:dark on NO / light on NCConnection:Image: Stability2 m Ø 4 mm cable 4M12 4-pole connector 5Electrical protection:IP67Protection devices:A, B 6Housing material:PBTnickel plated brassFibre fixing nut material:ABSWeight:75 g max.25 g max.60 g max.60 g max.Operating temperature:-25 +55°CImage: Stability		sensitivity trimmer ³	•	٠	•	•	•	\bullet	•	•
green STABILITYOutput type:PNP, NO and NCNPN, NO and NCOutput current: $\leq 100 \text{ mA}$ Saturation voltage: $\leq 2 V$ Response time:0.5 msSwitching frequency:1 kHzOperating mode:dark on NO / light on NCConnection:2 m Ø 4 mm cable ⁴ M12 4-pole connector ⁵ Electrical protection:lectrical protection:PR7Protection devices:A, B ⁶ Housing material:PBTnickel plated brassFibre fixing nut material:ABSWeight:75 g max.60 g max.60 g max.60 g max.60 g max.60 g max.00 <tr< th=""><td>Indicators:</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>	Indicators:									
Output type:PNP, NO and NCNPN, NO and NCImage: Image:			-	-	-	-	•	-	-	٠
PNP, NO and NCNPN, NO and NCOutput current: $\leq 100 \text{ mA}$ Saturation voltage: $\leq 2 V$ Response time:0.5 msSwitching frequency:1 kHzOperating mode:dark on NO / light on NCConnection:2 m Ø 4 mm cable 4M12 4-pole connector 5Electrical protection:class 2Mechanical protection:IP67Protection devices:A, B 6Housing material:PBTnickel plated brassFibre fixing nut material:ABSWeight:75 g max.60 g max.60 g max.60 g max.0perating temperature:-25 +55°C• • • • • • • • • • • • • • • • • • •		green STABILITY	•	٠	•	•	•	•	•	٠
$\begin{tabular}{ c c c c c } \hline NPN, NO and NC & & & & & & & & & & & & & & & & & & $	Output type:									
Output current: $\leq 100 \text{ mA}$ $\bullet \bullet \bullet$ Saturation voltage: $\leq 2 \text{ V}$ $\bullet \bullet \bullet$ Response time: 0.5 ms $\bullet \bullet $				٠		۰				•
Saturation voltage: $\leq 2 V$ $\bullet \bullet $			•		•		•			
Response time: 0.5 ms Switching frequency: 1 kHz Operating mode: dark on NO / light on NC Connection: Image: Connector for the second seco			•	٠	٠	٠	•	•	•	٠
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 6 Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B ° Housing material: 9 PBT 0 nickel plated brass 0 Fibre fixing nut material: ABS Weight: 0 25 g max. 0 110 g max. 0 60 g max. 0 Operating temperature: -25 +55°C			•	٠	٠	٠		٠	\bullet	٠
Operating mode: dark on NO / light on NC 2 m Ø 4 mm cable 4 • M12 4-pole connector 5 • Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B 6 Housing material: • PBT • nickel plated brass • Fibre fixing nut material: ABS Weight: • 25 g max. • 110 g max. • 60 g max. • Operating temperature: -25 +55°C			•	•	•	•	•	•		٠
Connection: 2 m Ø 4 mm cable 4 • • • M12 4-pole connector 5 • • • • Electrical protection: class 2 • • • • • Mechanical protection: IP67 • • • • • Protection devices: A, B ° • • • • • Housing material: • • • • • • • • PBT • • • • • • • • nickel plated brass • • • • • • • Fibre fixing nut material: ABS • • • • Weight: • • • • • • 25 g max. • • • • • 110 g max. • • • • • 60 g max. • • • • • Operating temperature: -25 +55°C • • • •			•	•	•	•		\bullet		٠
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		dark on NO / light on NC	•	•	٠	٠	•	٠		٠
M12 4-pole connector 5 • <td>Connection:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Connection:									
Electrical protection: class 2 Mechanical protection: IP67 Protection devices: A, B ⁶ Housing material: PBT nickel plated brass • • • • Fibre fixing nut material: ABS Veight: • • • • 75 g max. • • • 110 g max. • • • 60 g max. • • • Operating temperature: -25 +55°C			•	٠			•	٠		
Mechanical protection: IP67 <					•	•				•
Protection devices: A, B ° Housing material: PBT nickel plated brass • • • • Fibre fixing nut material: ABS Veight: • • • 75 g max. • • • 25 g max. • • • 110 g max. • • 60 g max. • • 0 perating temperature: -25 +55°C	Electrical protection:		•	٠	•	•	•	\bullet		٠
Housing material: PBT • • • • • • • nickel plated brass • • • • • • • • • • Fibre fixing nut material: ABS • • • • • • • • • • • Weight: - - • • • • • • • • • 25 g max. • • • • • • • • • • • • 110 g max. • • • • • • • • • 60 g max. • • • • • • • • • 0perating temperature: -25 +55°C • • • • • • • • • •	Mechanical protection:		•	۲	٠	٠	•	٠	\bullet	٠
PBT Image: Constraint of the system of t	Protection devices:	A, B ⁶	•	٠	•	•	•	\bullet	\bullet	٠
nickel plated brass • • • Fibre fixing nut material: ABS Weight: • • 75 g max. • • 25 g max. • • 110 g max. • • 60 g max. • • 0 • • 60 g max. • • 0 • • 0 • • 60 g max. • • 0 • • 60 g max. • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • • •	Housing material:									
Fibre fixing nut material: ABS Image: Constraint of the second seco			•	۰	•	•				
Weight: 75 g max. •		nickel plated brass					•	٠		•
75 g max. • • 25 g max. • • 110 g max. • • 60 g max. • • 0perating temperature: -25 +55°C • •	Fibre fixing nut material:	ABS	•	٠	•	•	•	\bullet		•
25 g max. ● 110 g max. ● 60 g max. ● Operating temperature: -25 +55°C	Weight:									
110 g max. ● 60 g max. ● Operating temperature: -25 +55°C		75 g max.	•	•						
60 g max. Operating temperature: -25 +55°C		25 g max.			٠	٠				
Operating temperature: -25 +55°C		110 g max.								
									•	•
	Operating temperature:	-25 +55°C		٠	٠	٠				٠
	Storage temperature:	-25 +70°C		٠	٠	•				•
Reference standard: EN 60947-5-2	Reference standard:	EN 60947-5-2		٠	٠	٠				•

SELECTION TABLE

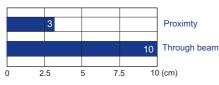
plastic - axial optics - 2 m cable								
S50-PA-2-E01-NN	952001650	NPN						
S50-PA-2-E01-PP	952001130	PNP						
metal - axial optics - 2 m cable								
S50-MA-2-E01-NN	952021880	NPN						
S50-MA-2-E01-PP	952021040	PNP						
plastic - axial optics - M12 connector								
S50-PA-5-E01-NN	952001540	NPN						
S50-PA-5-E01-PP	952001140	PNP						

0001/020111	502001140	1 1 1
metal - axial optics - M	112 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

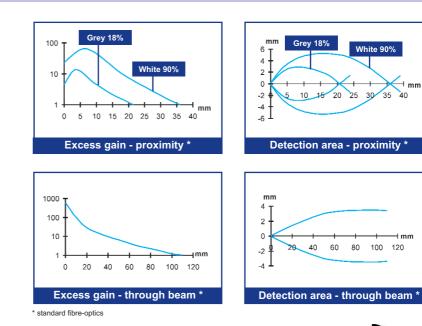


Operating distance with standard fibres

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 **Fibre**optics (A.02) of the **General Catalogue**.

DETECTION DIAGRAMS



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™ The 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 43 2.5 Ø3.8 N°2 **I8x1** ž 25 34 С 4 в F 67 14.5 **METAL HOUSING** 43 2.5 в С M18x1 M12 67 14.5 D E OUTPUT status and **INDICATORS AND SETTINGS** Α READY / ERROR LEDs Teach-in push-button в DATASE M12 connector output С Cable output D Fixing nuts F



Teach-in button for setting.

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

ACCESSORIES

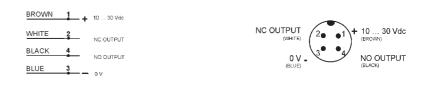
For **dedicated accessories** refer to the **ACCESSORIES** section of this catalogue.

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

CONNECTIONS

S50-XX-5

Fixing gasket





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

S50-XX-2

S50-PA

TECHNICAL DATA

		S50-PA-2-W03-NN	S50-PA-2-W03-PP	S50-PA-5-W03-NN	S50-PA-5-W03-PP	S50-MA-2-W03-NN	S50-MA-2-W03-PP	S50-MA-5-W03-NN	S50-MA-5-W03-PP
Operating distance:	10 mm	•	•	•	•	•	•	•	•
Depth of field (max.):	± 2 mm	•	•	•	٠	•	•	•	•
Power supply:	10 30 Vdc ¹	•	٠	•	•	•	•	•	•
Ripple:	≤ 2 Vpp	•	٠	•	•	•	•	•	•
Consumption:	≤ 25 mA	•	٠	•	•	•	•	•	•
Light emission:	white LED 400 - 700 nm ²	•	•	•	•	•	•		•
Spot dimension:	approx. 4.5 mm at 10 mm	•	•	•	•	•	•	•	•
Minimum detectable object:	0.5 mm	•	•	•	•	•	•	•	•
Setting:	teach-in push-button	•	•	•	•	•	-	•	•
Setting procedure:	teach-in <i>EASYtouch</i> ™	•	•	•	•	•	•	•	•
Indicators:									
	yellow OUTPUT LED	•	•	•	•	•	٠	•	•
	green / red READY / ERROR LED	۲	٠		•	•	٠	٠	
Output type:									
	PNP, NO and NC		•		•		•		
	NPN, NO and NC	•		•		•		•	
Output current:	≤ 100 mA	•	٠	\bullet	•	•	٠	•	
Saturation voltage:	$\leq 2 V$	•	٠	•	•	•	-	•	
Response time:	100 μs	•	٠	•	•	•	•	•	•
Switching frequency:	5 kHz	•	٠	•	•	•	٠	•	•
Operating mode:									
	dark with EASYtouch™	•	٠	•	•	•	٠	•	
	automatic dark / light with fine acq.	•	٠	•	•	•	•	•	
Connection:									
	2 m Ø 4 mm cable ³	•	٠			•	•		
	M12 4-pole connector ⁴			•	•			•	•
Electrical protection:	class 2	•	٠	•	•	•	-	•	•
Mechanical protection:	IP67	•	٠	•	•	•	-	•	
Protection devices:	A, B ⁵	•	٠	•	•	•	•	•	•
Housing material:									
	PBT	•	•	•	٠				
	nickel plated brass					•	•	•	
Lens material:	PMMA	•	٠	٠	٠	•	٠	٠	
Weight:									
	75 g max.	•	•			\square			
	25 g max.			•	٠				
	110 g max.						٠		
	60 g max.							•	
Operating temperature:	-25 +55°C	•	•	•	٠		•	•	
Storage temperature:	-25 +70°C	•	٠	٠	٠		٠		
Reference standard:	EN 60947-5-2		٠		٠		•	٠	

S50-MA

10 mm

SELECTION TABLE

plastic - axial optics - 2	m cable	
S50-PA-2-W03-NN	952001710	NPN
S50-PA-2-W03-PP	952001320	PNP
metal - axial optics - 2	m cable	
S50-MA-2-W03-NN	952021590	NPN
S50-MA-2-W03-PP	952021110	PNP
plastic - axial optics - 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

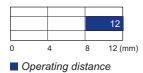
¹ Limit values

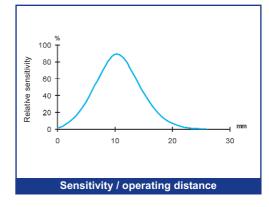
 2 Average life of 100.000 h with T_A = +25 $^\circ C$

- 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



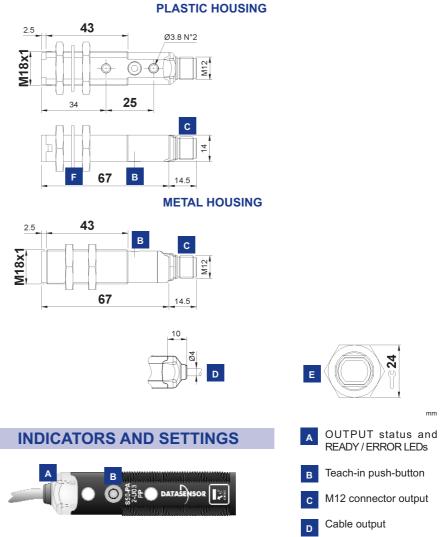




U LUMINESCENCE SENSOR WITH UV EMISSION

The UV light LED emission detects any luminescent reference, even on very reflective surfaces, such as ceramics, metal or mirrored glass. The 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



Fixing nuts F Fixing gasket

Teach-in button for setting.

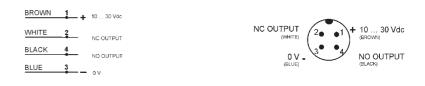
EASYtouch[™] provides two setting modes: standard or fine, both obtained by pressing the push-button only once. Please refer to instructions manual for operating details.

ACCESSORIES

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

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





DATASENSOR

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

S50-PA

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	•	•	٠	٠	•	•	٠	
Power supply:	10 30 Vdc ¹	•	•	٠	•	•	\bullet	٠	•
Ripple:	≤ 2 Vpp	•	•	٠	٠	•	\bullet	٠	•
Consumption:	≤ 25 mA	•	•	٠	٠	•	\bullet	٠	•
Light emission:	UV LED 370 nm ²	•	•	٠	•	•	\bullet	•	•
Spot dimension:	approx. 3 mm at 20 mm	•	•	٠	٠	•	\bullet	٠	
Minimum detectable object:	0.5 mm	•	•	•	•	•	\bullet	•	•
Setting:	teach-in push-button	•	•	•	•	•	\bullet	•	
Setting procedure:	teach-in <i>EASYtouch</i> ™	•	٠	٠	٠	٠	٠	٠	•
Indicators:									
	yellow OUTPUT LED	•	٠	٠	٠	•	٠	•	•
	green / red READY / ERROR LED	•	٠	٠	٠	•	٠	٠	
Output type:									
	PNP, NO and NC		٠		٠		•		
	NPN, NO and NC	•				•		٠	
Output current:	≤ 100 mA	•	•	•	•	•			
Saturation voltage:	≤ 2 V	•	٠	•	•	•	•	•	
Response time:	500 μs	•	•	٠	•	•	٠	•	
Switching frequency:	1 kHz	•	•	•	•	•	•	•	
Operating mode:									
	dark with <i>EASYtouch</i> ™	•	٠	٠	٠	•		٠	
	automatic dark / light with fine acq.	•	٠	٠	٠	•	٠	٠	
Connection:									
	2 m Ø 4 mm cable ³	•	٠			•	•		
	M12 4-pole connector ⁴			•	•			•	
Electrical protection:	class 2	•	•	٠	٠	•	٠	٠	
Mechanical protection:	IP67	•	•	٠	٠	•	٠		
Protection devices:	A, B ⁵	•	•	•	•	•	•	•	
Housing material:									
	PBT	•	٠	٠	٠				
	nickel plated brass					•	•	•	
Lens material:	PMMA	•	٠	٠	٠	•		٠	
Weight:									
	75 g max.	•	•						Γ
	25 g max.		Ĺ	•	•				F
	110 g max.					•		_	Γ
	60 g max.					Γ		•	
Operating temperature:	-25 +55°C	•	•	٠	•	•		٠	
Storage temperature:	-25 +70°C	•	•	•	•			•	
Reference standard:	EN 60947-5-2		•	•	•				

S50-MA

20 mm 🔀

SELECTION TABLE

plastic - axial optics - 2 m cable								
S50-PA-2-U03-NN	952001700	NPN						
S50-PA-2-U03-PP	952001300	PNP						
metal - axial optics - 2	m cable							
S50-MA-2-U03-NN	952021580	NPN						
S50-MA-2-U03-PP	952021100	PNP						
plastic - axial optics - N	112 connector							
S50-PA-5-U03-NN	952001590	NPN						
S50-PA-5-U03-PP	952001310	PNP						
		-						

metal - axial optics - M	12 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.

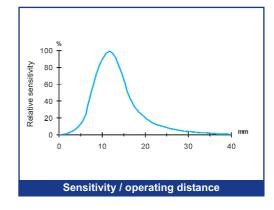
TECHNICAL NOTES

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



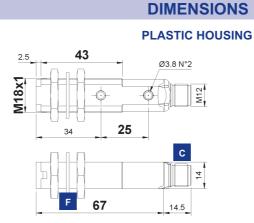




Y DISTANCE SENSOR WITH RED EMISSION

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.



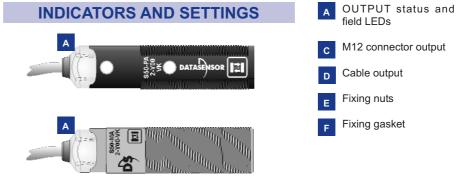


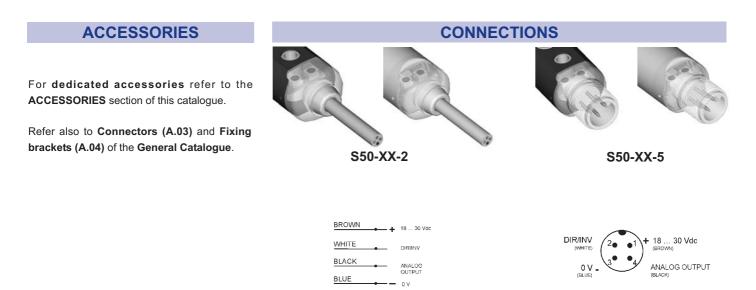
METAL HOUSING





mm





DATASENSOR

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

S50-PA

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	•		•	٠
Consumption:	≤ 30 mA	•		•	
Light emission:	red LED 630 nm ²	•		•	
Spot dimension:	approx. 8 mm at 10 cm	•		•	
Indicators:				Γ	
	yellow proportional OUTPUT LED	•		•	
	red field LED	•		•	
Output type:	analogue with 0 10V voltage	•		•	
Output resistance:	2 kΩ	•		•	•
Load resistance:	\geq 20 k Ω	•		•	•
Response time:	3.33 ms	•			
Switching frequency:	150 Hz	•		•	
Resolution:	1 mm / 200 mV	•		•	•
Operating mode:	direct / inverse proportionality ³	•		•	
Connection:				\square	
	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	•	•		
	nickel plated brass			•	•
Lens material:	PMMA	•	•		•
Weight:				T	
	75 g max.	•		Γ	
	25 g max.		•	T	
	110 g max.			•	\square
	60 g max.			\top	•
Operating temperature:	-25 +55°C	•		•	•
Storage temperature:	-25 +70°C			•	•
Reference standard:	EN 60947-5-2			•	•

S50-MA

10 cm

SELECTION TABLE

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						

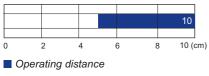
metal - axial optics - M12 connector S50-MA-5-Y00-VK 952021320

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

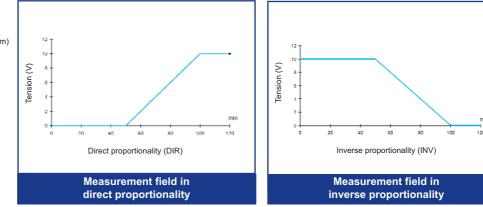
TECHNICAL NOTES

- 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

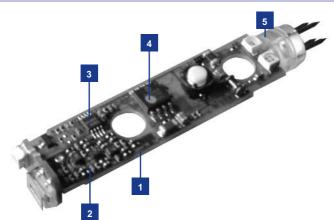
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DETECTION DIAGRAMS



DATASENSOR



- 1 Multi-layer fine-line PCB
- 2 Chip-size components, integrated circuits in 8 bumps flip-chip
- Analogue digital ASIC
- Power ASIC for antivalent outputs
- ⁵ 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)



- 6 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 **S50** series have been developed to cover all the fixing requirements and to improve the functioning.

In particular **EASYin**^M 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

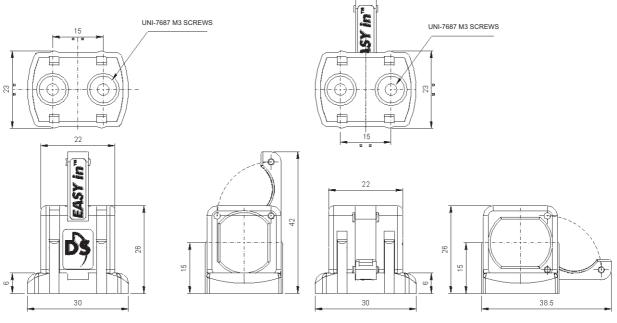
Refer also to Accessories for Sensors of the General Catalogue





DATASENSOR
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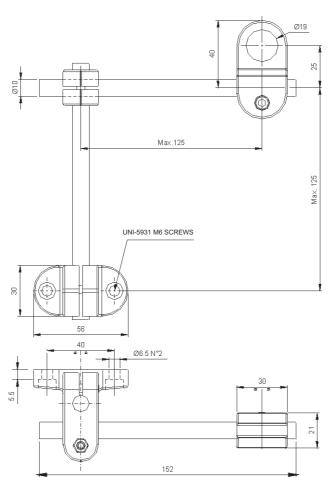
S50 EASYin™

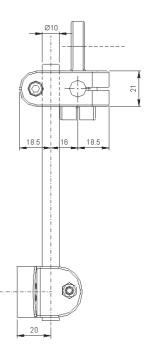


VERTICAL OPTIC AXIS

HORIZONTAL OPTIC AXIS

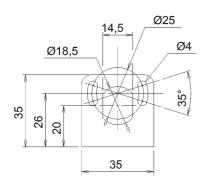
JOINT-18

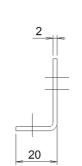


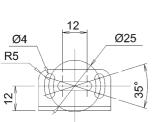


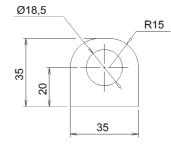


ST-5010



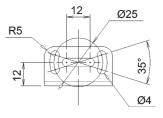






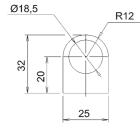
ST-5011



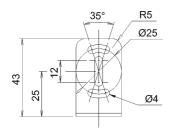


ST-5012

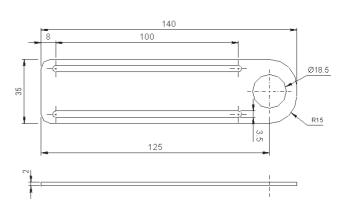










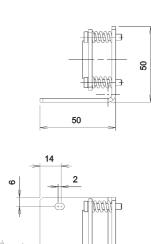


DATASENSOR

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MICRO-18

SWING-18

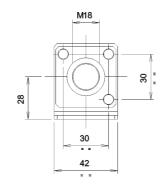


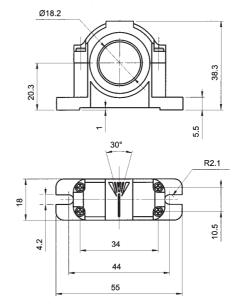
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R2,1

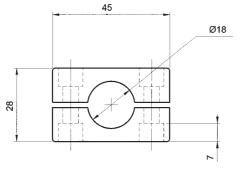


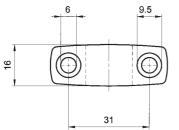


* 2 nuts are included

SP-40









MODEL ALPHABETICAL INDEX

PLASTIC FLAT HOUSING WITH AXIAL OPTICS

PLASTIC FLAT HOU			
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	952001680	fore-background suppression	32
S50-PA-2-N03-PP	952001440	fore-background suppression	32
S50-PA-2-T01-NN	952001690	retroreflex for transparents	16
S50-PA-2-T01-PP	952001260	retroreflex for transparents	16
S50-PA-2-U03-NN	952001200	luminescence sensor	38
S50-PA-2-U03-PP	952001300	luminescence sensor	38
S50-PA-2-W03-NN	952001300	contrast sensor	36
S50-PA-2-W03-PP	952001320	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	10
S50-PA-5-B01-PP	952001000	polarised retroreflex	12
S50-PA-5-C01-NN	952001020		12
S50-PA-5-C01-INN S50-PA-5-C01-PP	952001510	long diffuse proximity long diffuse proximity	22
	952001060		
S50-PA-5-C10-NN		short diffuse proximity	18
S50-PA-5-C10-PP	952001250	short diffuse proximity	18
S50-PA-5-C21-NN	952002190	midi diffuse proximity	20
S50-PA-5-C21-PP	952002180	midi diffuse proximity	20
S50-PA-5-D00-NN	952001530	fixed focus proximity	24
S50-PA-5-D00-PP	952001100	fixed focus proximity	24
S50-PA-5-E01-NN	952001540	fibre-optic amplifier	34
S50-PA-5-E01-PP	952001140	fibre-optic amplifier	34
S50-PA-5-F01-NN	952001550	receiver	2
S50-PA-5-F01-PP	952001160	receiver	2
S50-PA-5-G00-XG	952001200	emitter	2
S50-PA-5-M03-NN	952001560	background suppression	28
S50-PA-5-M03-PP	952001000	background suppression	28
S50-PA-5-N03-NN	952001570	fore-background suppression	32
S50-PA-5-N03-PP	952001450	fore-background suppression	32
S50-PA-5-T01-NN	952001580	retroreflex for transparents	16
S50-PA-5-T01-PP	952001270	retroreflex for transparents	16
330-FA-3-101-FF	952001590	luminescence sensor	38
S50-PA-5-U03-NN	952001590		
	952001390	luminescence sensor	38
S50-PA-5-U03-NN		luminescence sensor contrast sensor	38 36
S50-PA-5-U03-NN S50-PA-5-U03-PP	952001310		

PLASTIC FLAT HOUSING WITH RADIAL OPTICS

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

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PLASTIC FLAT HOUSING WITH LASER AXIAL OPTICS

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

LASTICITEAT HOUSING WITH LASER RADIAL OF HOS			
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	
	CODE N° 952001950 952001940 952001980 952002030 952002030 952002060 952001970 952001960 952002010 952002010 952002000 952002050 952002040	CODE N° OPTIC FUNCTION 952001950 laser retroreflex 952001940 laser retoreflex 952001940 laser proximity 952001980 laser proximity 952001980 laser proximity 952002030 laser receiver 952002030 laser receiver 952002040 laser receiver 952002050 laser retroreflex 952001970 laser retroreflex 952002010 laser retroreflex 952002010 laser proximity 952002050 laser proximity 952002050 laser proximity 952002050 laser receiver 952002050 laser receiver	



MODEL ALPHABETICAL INDEX

MODEL	CODE N°	WITH AXIAL OPTICS	PAGE
S50-MA-2-A00-NN	952022090	retroreflex	10
S50-MA-2-A00-NN	952022090	retroreflex	10
S50-MA-2-B01-NN	952022000	polarised retroreflex	12
S50-MA-2-B01-NN	952021500		12
S50-MA-2-C01-NN	952021000	polarised retroreflex	22
S50-MA-2-C01-NN	952021010	long diffuse proximity	22
S50-MA-2-C10-NN	952021010	long diffuse proximity	18
S50-MA-2-C10-NN	952021520	short diffuse proximity	18
S50-MA-2-C10-PP	952021020	short diffuse proximity	20
	952022130	midi diffuse proximity	20
S50-MA-2-C21-PP S50-MA-2-D00-NN	952022120	midi diffuse proximity	-
		fixed focus proximity	24
S50-MA-2-D00-PP	952021030	fixed focus proximity	
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
350-MA-2-G00-XG	952021060	emitter	4
350-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	952021690	fixed focus proximity	24
S50-MA-5-D00-PP	952021230	fixed focus proximity	24
S50-MA-5-E01-NN	952021890	fibre-optic amplifier	34
S50-MA-5-E01-PP	952021240	fibre-optic amplifier	34
S50-MA-5-F01-NN	952021700	receiver	4
S50-MA-5-F01-PP	952021250	receiver	4
S50-MA-5-G00-XG	952021260	emitter	4
S50-MA-5-M03-NN	952021710	background suppression	28
S50-MA-5-M03-PP	952021270	background suppression	28
S50-MA-5-N03-NN	952021720	fore-background suppression	32
S50-MA-5-N03-PP	952021280	fore-background suppression	32
S50-MA-5-T01-NN	952021730	retroreflex for transparents	16
S50-MA-5-T01-PP	952021290	retroreflex for transparents	16
S50-MA-5-U03-NN	952021740	luminescence sensor	38
S50-MA-5-U03-PP	952021300	luminescence sensor	38
S50-MA-5-W03-NN	952021750	contrast sensor	36
S50-MA-5-W03-PP	952021310	contrast sensor	36
S50-MA-5-Y00-VK	952021320	distance sensor	40

METAL CYLINDRICAL	HOUSING WITH	I 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

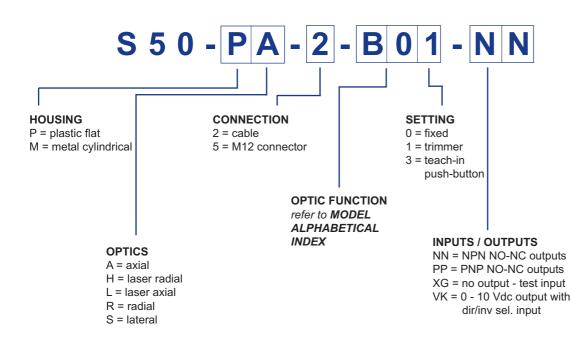
METAL CYLINDRICAL HOUSING WITH LASER AXIAL OPTICS

CODE N°	OPTIC FUNCTION	PAGE
952021820	laser retroreflex	14
952021400	laser retroreflex	14
952021830	laser proximity	26
	laser proximity	26
952021840	laser receiver	8
952021420	laser receiver	8
952021430	laser emitter	8
952021850	laser retroreflex	14
952021440	laser retroreflex	14
952021860	laser proximity	26
952021450	laser proximity	26
952021870	laser receiver	8
952021460	laser receiver	8
952021470	laser emitter	8
	952021820 952021400 952021830 952021840 952021420 952021420 952021430 952021850 952021850 952021860 952021860 952021870 952021870	952021820 laser retroreflex 952021400 laser retroreflex 952021830 laser proximity 952021410 laser proximity 952021410 laser proximity 952021410 laser receiver 952021420 laser receiver 952021430 laser retroreflex 952021450 laser retroreflex 952021850 laser retroreflex 952021850 laser retroreflex 952021860 laser retroreflex 952021860 laser proximity 952021870 laser receiver 952021860 laser proximity 952021870 laser receiver 952021870 laser receiver 952021860 laser receiver

METAL CYLINDRICAL HOUSING WITH LASER RADIAL OPTICS

METAL CTLINDRICAL 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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