

MULTI-FUNCTION M18 SENSORS



- *Wide versatility of optic functions and connections*
- *High operating distances for all functions*
- *Models with trimmer adjustment and stability LED*
- *Rugged and impermeable plastic housing*



S5 SERIES

The **S5** series offers a range of plastic tubular M18 photoelectric sensors.

The most varied optic functions can be chosen amongst the fixed focus or diffuse proximity models with short, medium or long operating distances reaching 60 cm; the 4 m retroreflex, 3 m polarised retroreflex and 1 m for detection of transparent materials; the 12 m through beam and models with fibre-optic connection.

Different versions with either axial or radial optics are available. The series offers connector or cable connection, 3 wire Vac versions or 4 wire Vdc versions with complete configuration of the NPN/PNP output and dark/light mode.

A red LED indicating the output status is visible on the bottom side of the sensor.

The versions with trimmer adjustment present also a green LED signalling the switching stability according to the received signal's intensity.

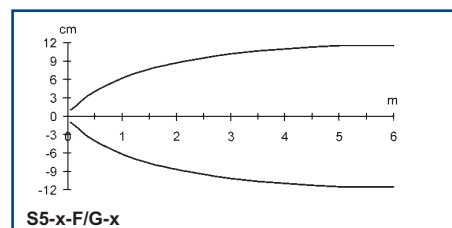
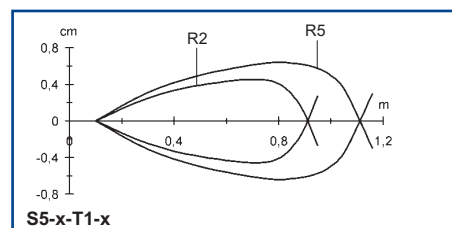
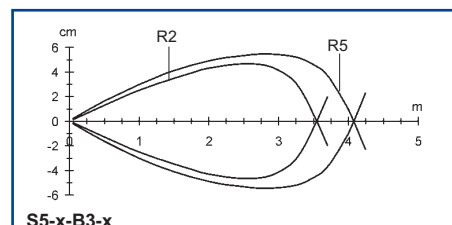
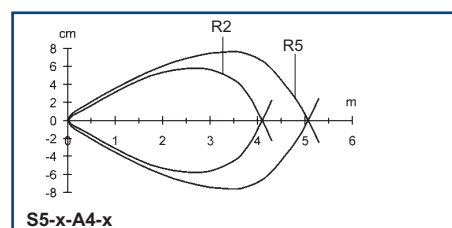
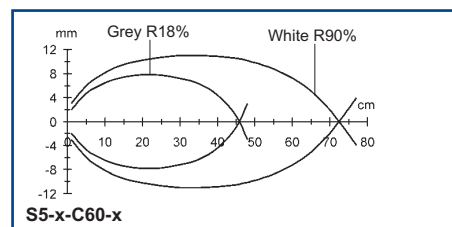
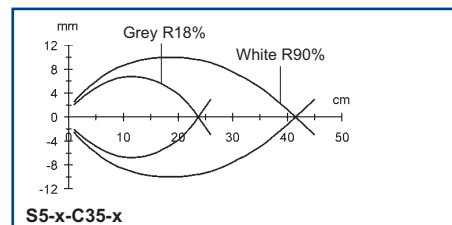
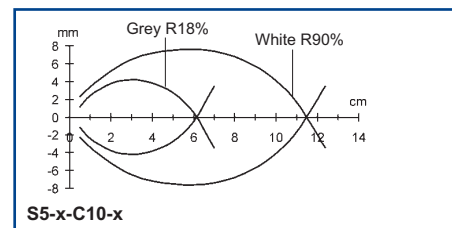
The rugged ABS housing always guarantees IP67 protection.

TECHNICAL DATA

Power supply:	10 ... 30 Vdc (d.c. vers.), reverse polarity protection 15 ... 264 Vac (a.c. vers.)
Consumption:	30 mA max. (d.c. vers.) 10 mA max. (a.c. vers.)
Light emission:	infrared LED 880 nm red LED 660 nm (B, E1 vers.)
Diffuse proximity operating distance:	1 ... 10 cm (C10 vers.), 1 ... 8 cm (C8 vers.) 1 ... 35 cm (C35 vers.), 1 ... 30 cm (C30 vers.) 1 ... 60 cm (C60 vers.)
Fixed focus operating distance:	15 mm with 1 mm spot (D15 vers.)
Retroreflex operating distance:	0.1 ... 4 m (on R2)
Polarised retroreflex operating distance:	0.1 ... 3 m (on R2)
Retroreflex for transparents op. distance:	0.1 ... 0.8 m (on R2)
Through beam operating distance:	0 ... 12 m (F/G12 vers.), 0 ... 8 cm (F/G8 vers.)
Operating distance with fibre-optics:	22 mm proximity (with OF-18-ST) 85 mm through beam (with OF-19-ST) <i>refer to OF series for other fibres</i>
Setting:	sensitivity trimmer (A4, C8, C10, D15, G vers. excluded)
Indicators:	red OUTPUT LED green STABILITY LED (d.c. vers.) red POWER LED (G vers.)
Output type:	NPN or PNP configurable (d.c. vers.) SCR + bridge rectifier (a.c. vers.)
Saturation voltage:	2.5 V max. (vers. d.c.)
Output current:	150 mA max.(vers. d.c.), short-circuit prot. 100 mA max.(vers. a.c.)
Response time:	1 ms max. 2 ms (F vers. in d.c.) 20 ms max. (a.c. vers.)
Switching frequency:	500 Hz max. 250 Hz max. (F vers. in d.c.) 25 Hz max. (a.c. vers.)
Operating mode:	dark/light (configurable in 4 wires d.c. vers.)
Auxiliary functions:	'test +' and 'test -' inputs (G vers. in d.c.)
Connection:	4-pole M12 connector or 2 m Ø 5 mm cable
Electrical protection:	class 1 (a.c. vers.) class 2 (d.c. vers.)
Mechanical protection:	IP67
Housing material:	ABS
Lens material:	PMMA plastic
Weight:	25 g max. (connector vers.) 100 g max. (cable vers.)
Operating temperature:	-25 ... +55°C
Storage temperature:	-25 ... +70°C
Reference standard:	EN 60947-5-2
Certifications:	CE (cUL) US LISTED vers.d.c.)

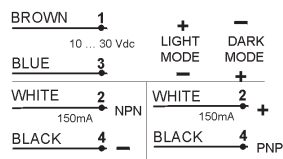
The operating distances indicate the detection distance with excess gain 2.

DETECTION DIAGRAMS

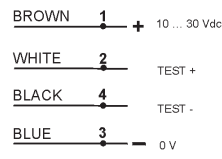


The detection diagrams indicate the typical operating distance with excess gain 1.

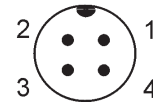
CONNECTIONS



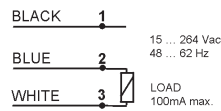
S5-5-x (4 wires)



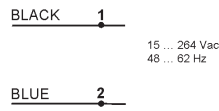
S5-5-G8/G12 (4 wires)



M12 CONNECTOR



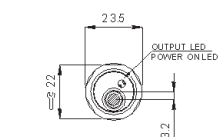
S5-1-x



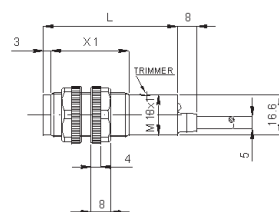
S5-1-G8

DIMENSIONS

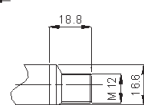
AC AXIAL VERSION



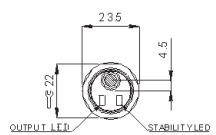
	MODELS	
	with trimmer	without trimmer
X1	52	42
L	75	85



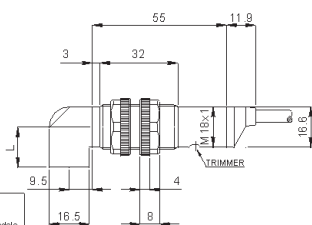
M12 CONNECTOR



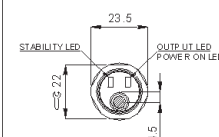
RADIAL VERSION



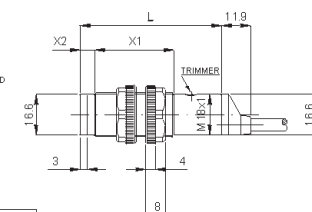
	MODELS		
	mod B	mod F10	other models
L	19.5	20.5	16.5



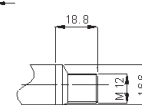
DC AXIAL VERSION



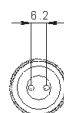
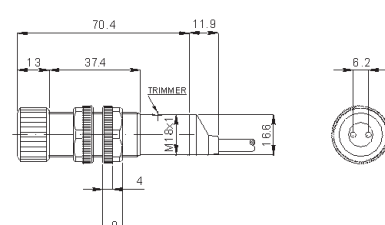
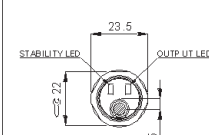
	MODELS		
	without trimmer	with trimmer (except mod. B)	mod. B
L	55	65	88
X1	32	42	42
X2	3	3	6



M12 CONNECTOR



FIBRE OPTIC VERSION



MODEL SELECTION AND ORDER INFORMATION

	AXIAL OPTIC VERSIONS		RADIAL OPTIC VERSIONS	
4 WIRE CONNECTION				
10 - 30 Vdc	4 POLE CABLE	M12 CONN.	4 POLE CABLE	M12 CONN.
Short distance	S5-5-C10-30	S5-5-C10-32	S5-5-C10-35	S5-5-C10-37
diffuse proximity	(G5210530)	(G5210532)	(G5210535)	(G5210537)
Medium distance	S5-5-C35-30	S5-5-C35-32	S5-5-C35-35	S5-5-C35-37
diffuse proximity	(G5210630)	(G5210632)	(G5210635)	(G5210637)
Long distance	S5-5-C60-30	S5-5-C60-32	S5-5-C60-35	S5-5-C60-37
diffuse proximity	(952051640)	(952051650)	(952051660)	(952051670)
Fixed focus proximity	S5-5-D15-30	S5-5-D15-32	S5-5-D15-35	S5-5-D15-37
	(G5210430)	(G5210432)	(G5210435)	(G5210437)
Retroreflex	S5-5-A4-30	S5-5-A4-32	S5-5-A4-35	S5-5-A4-37
	(G5210230)	(G5210232)	(G5210235)	(G5210237)
Polarised	S5-5-B3-30	S5-5-B3-32	S5-5-B3-35	S5-5-B3-37
Retroreflex	(G5210730)	(G5210732)	(G5210735)	(G5210737)
Retroreflex for	S5-5-T1-30	S5-5-T1-32	-	-
transparents	(952051680)	(952051690)		
Through beam receiver	S5-5-F12-30	S5-5-F12-32	S5-5-F8-35	S5-5-F8-37
	(G5210130)	(G5210132)	(G5210135)	(G5210137)
Through beam emitter	S5-5-G12-00	S5-5-G12-02	S5-5-G8-05	S5-5-G8-07
	(G5210000)	(G5210002)	(G5210005)	(G5210007)
Fibre-optic	S5-5-E1-30	S5-5-E1-32	-	-
amplifier	(G5210830)	(G5210832)		
3 WIRE CONNECTION				
15 - 264 Vac	CABLE - dark mode	CABLE - light mode	CABLE - dark mode	CABLE - light mode
Short distance	S5-1-C8-10	S5-1-C8-20	S5-1-C8-15	S5-1-C8-25
diffuse proximity	(G5110510)	(G5110520)	(G5110515)	(G5110525)
Medium distance	S5-1-C30-10	S5-1-C30-20	S5-1-C30-15	S5-1-C30-25
diffuse proximity	(G5110610)	(G5110620)	(G5110615)	(G5110625)
Fixed focus proximity	S5-1-D15-10	S5-1-D15-20		
	(G5110410)	(G5110420)	-	-
Retroreflex	S5-1-A2-10	S5-1-A2-20	S5-1-A2-15	S5-1-A2-25
	(G5110210)	(G5110220)	(G5110215)	(G5110225)
Through beam receiver	S5-1-F8-10	S5-1-F8-20	S5-1-F8-15	S5-1-F8-25
	(G5110110)	(G5110120)	(G5110115)	(G5110125)
Through beam emitter	S5-1-G8-00		S5-1-G8-05	
	(G5110000)		(G5110005)	

ACCESSORY SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	CODE N°
SP-40	fixed support for tubular M18 sensors	95ACC1370
SWING-18	adjustable support for plastic tubular M18 sensors	895000006

Please refer also to **Sensor Accessories**

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HEADQUARTERS

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