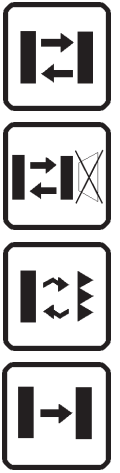# MULTI-FUNCTION SENSORS

UNIVERSAL MAXI SENSORS

- *50 m through beam, 12 m polarised retroreflex*
- *2 m diffuse proximity, 1 m background suppression*
- *Direct or alternate current power supply*
- *NPN/PNP or relay output with timing possibility*

S30 SERIES

Thanks to a 12 m polarised retroreflex model, a 2 m diffuse proximity, a background suppression over 1 m, and a 50 m through beam couple, the **S30** series is the reference for the most demanding applications.

Versions with 10-30 Vdc power supply and transistor output, or free voltage versions with relay output are foreseen; both offer also versions with the output timing function. Terminal block or M12 connector versions are available.

The housing, created in glass-fibre reinforced polycarbonate, guarantees maximum resistance.

Moreover versions with glass-front protection with active defogging system are available.

DATASENSOR
value through detection

TECHNICAL DATA

Power supply:	10 ... 30 Vdc, reverse polarity protection
	17 ... 264 Vac/Vdc (free voltage vers.)
Consumption:	40 mA max. (B, C, F, G vers. in d.c.)
	70 mA max. (M in d.c. vers.)
	60 mA max. (B, C, F, G free voltage vers.)
	90mA max. (M free voltage vers.)
Light emission:	infrared LED 880 nm
	red LED 660 nm (B vers.)
Diffuse proximity operating distance:	0.05 ... 2 m
Background suppression op. distance:	0.2 ... 1.1 m
Polarised retroreflex operating distance:	0.1 ... 8 m (on R2)
Through beam operating distance:	0 ... 50 m
Setting:	sensitivity trimmer
	distance adjustment screw (M vers.)
Indicators:	two red OUTPUT LEDs (one for M vers.)
	green STABILITY LED
Output type:	NPN and PNP, open collector (d.c. vers.)
	relay SPDT (free voltage vers.)
Saturation voltage:	1.5 V max. (d.c. vers.)
Output current:	200 mA max. (d.c. vers.), short-circuit prot.
	3 A max. resistive load (free voltage vers.)
Response time:	1 ms max. (d.c. vers.)
	20 ms max. (free voltage vers.)
Switching frequency:	500 Hz max. (d.c. vers.)
	10 Hz max.(free voltage vers.)
Timing function:	normal, ON-delay, OFF-delay, ON/OFF-delay, one-shot all adjustable with trimmer from 0.02 to 12 sec.
Operating mode:	dark/light selectable with deviator
Auxiliary functions:	alarm output PNP 200 mA (d.c. vers.)
	test input (d.c. vers.)
Connection:	4-pole M12 connector
	terminal block
	gland for cables with 8 to 12 mm diameter
Electrical protection:	class 1 (free voltage vers.)
	class 2 (d.c. vers.)
Mechanical protection:	IP67
Housing material:	glass-fibre reinforced polycarbonate
Lens material:	PMMA plastic
Weight:	165 g max.
Operating temperature:	-25 ... +55°C
Storage temperature:	-25 ... +70°C
Reference standard:	EN 60947-5-2
Certifications:	CE

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

DETECTION DIAGRAMS

S30-x-C200-x

S30-x-M110-x

S30-x-B8-x

S30-x-F/G-x
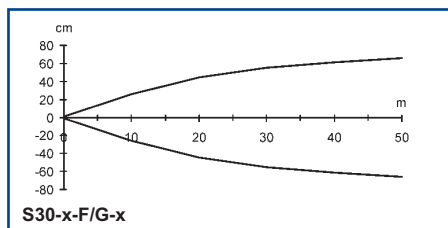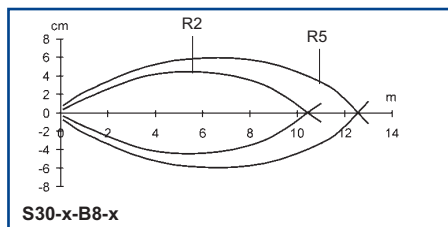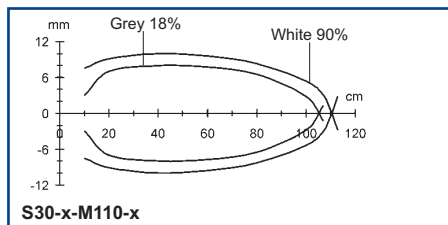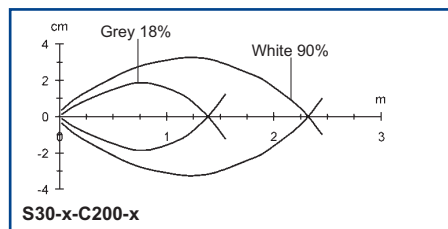
The detection diagrams indicate the typical operating distance with excess gain 1.

CONNECTIONS

TERMINAL BLOCK VERSIONS

1 — 17 … 264 Vac/Vdc
2
3
4 — NC
5 — NO
6 — COMMON
3A / 250 Vac

S30-1-B8/C200/M110

1 — 17 … 264 Vac/Vdc
2
3
4 — NC
5 — NO
6 — COMMON
3A / 250 Vac

S30-1-F50

1 — 17 … 264 Vac/Vdc
2
3

S30-1-G50

M12 CONN. VERSIONS

ALARM (WHITE)   + 10 … 30 Vdc (BROWN)
0 V (BLUE) −   PNP (BLACK)

S30-5-B8/C200/M110/F50

---

1 — + 10 … 30 Vdc −
2
3 — TEST
4 — PNP ALARM OUT 200 mA
5 — NPN LOAD 200 mA max.
6 — PNP

S30-5-B8/C200/M110

1 — + 10 … 30 Vdc −
2
3 — ANALOG OUT
4 — PNP ALARM OUT 200 mA
5 — NPN LOAD 200 mA max.
6 — PNP

S30-5-F50

1 — + 10 … 30 Vdc −
2
3 — TEST

S30-5-G50

Not used (WHITE)   + 10 … 30 Vdc (BROWN)
0 V (BLUE) −   TEST (BLACK)

S30-5-G50

DIMENSIONS

T-OFF TRIMMER (*)   T-ON TRIMMER (*)

SENSITIVITY TRIMMER ADJUSTMENT SCREW (S30-x-M110)
TIMER OPERATING MODE SELECTOR (*)
DARK/LIGHT SWITCH TIME BASE (*)

M12 CONNECTOR

M12x1   27

73   Ø5.6   8
8.4
85   62   46
11
6
18
26   M5x10   18.5

32   20
32
OUTPUT LED   18

32   23
4.5
58

S30-x-M110

(*) S30-x-xxxxT versions

STABILITY LED
OUTPUT LED
POWER ON LED

24

mm

MODEL SELECTION AND ORDER INFORMATION

VERSIONS WITH 17 ... 264 Vdc POWER SUPPLY

MODEL	OPTIC FUNCTION	CONNECTION	TIMER	OUTPUT	CODE N°
S30-1-C200-1	diffuse proximity	terminal block		relay	G3110500
S30-1-C200T-1	diffuse proximity	terminal block	•	relay with timer	G3110510
S30-1-C200T-1-M	diffuse proximity *	terminal block	•	relay with timer	960201130
S30-1-M110-1	background suppression	terminal block		relay	960211100
S30-1-M110T-1	background suppression	terminal block	•	relay with timer	960211130
S30-1-M110T-1-M	background suppression *	terminal block	•	relay with timer	960211290
S30-1-B8-1	polarised retroreflex	terminal block		relay	G3110700
S30-1-B8T-1	polarised retroreflex	terminal block	•	relay with timer	G3110710
S30-1-B8T-1-M	polarised retroreflex *	terminal block	•	relay with timer	960201170
S30-1-F50-1	receiver	terminal block		relay	G3110100
S30-1-F50T-1	receiver	terminal block	•	relay with timer	G3110110
S30-1-F50T-1-M	receiver *	terminal block	•	relay with timer	960201090
S30-1-G50-1	emitter	terminal block		relay	G3110000
S30-1-G50-1-M	emitter *	terminal block		relay	G311000001

VERSIONS WITH 10 ... 30 Vdc POWER SUPPLY

MODEL	OPTIC FUNCTION	CONNECTION	TIMER	OUTPUT	CODE N°
S30-5-C200-1	diffuse proximity	terminal block		NPN/PNP	G3210500
S30-5-C200-2P	diffuse proximity	M12 connector		PNP	G3210503
S30-5-C200T-1	diffuse proximity	terminal block	•	NPN/PNP with timer	G3210510
S30-5-C200T-2P	diffuse proximity	M12 connector	•	PNPwith timer	G3210513
S30-5-M110-1	background suppression	terminal block		NPN/PNP	960211000
S30-5-M110-2P	background suppression	M12 connector		PNP	960211010
S30-5-M110T-1	background suppression	terminal block	•	NPN/PNP with timer	960211050
S30-5-M110T-2P	background suppression	M12 connector	•	PNP with timer	960211060
S30-5-B8-1	polarised retroreflex	terminal block		NPN/PNP	G3210700
S30-5-B8-2P	polarised retroreflex	M12 connector		PNP	G3210703
S30-5-B8T-1	polarised retroreflex	terminal block	•	NPN/PNP with timer	G3210710
S30-5-B8T-2P	polarised retroreflex	M12 connector	•	PNP with timer	G3210713
S30-5-F50-1	receiver	terminal block		NPN/PNP	G3210100
S30-5-F50-2P	receiver	M12 connector		PNP	G3210103
S30-5-F50T-1	receiver	terminal block	•	NPN/PNP with timer	G3210110
S30-5-F50T-2P	receiver	M12 connector	•	PNP with timer	G3210113
S30-5-G50-1	emitter	terminal block		NPN/PNP	G3210000
S30-5-G50-2	emitter	M12 connector		PNP	G3210002

Versions with glass front and defogging system

ACCESSORY SELECTION AND ORDER INFORMATION

MODEL	DESCRIPTION	CODE N°
ST-130	1 pc fixing bracket	95ACC1350
ST-138	1 pc fixing bracket (RT7 compatible)	95ACC1360

*Please refer also to **Sensor Accessories***

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