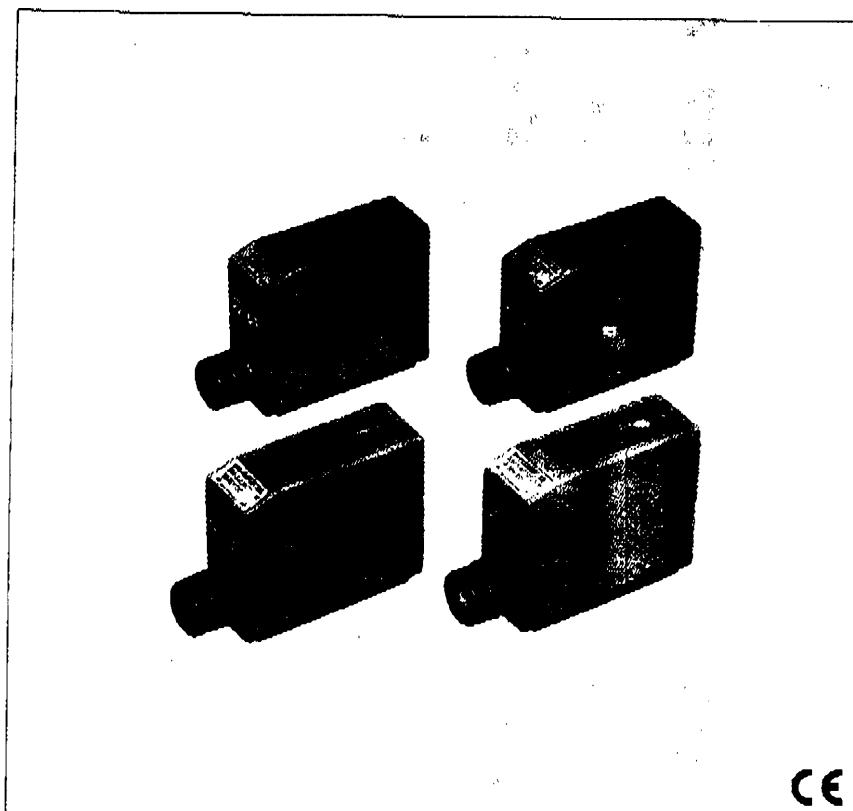


431-523

UNIVERSAL PHOTOELECTRIC SENSORS

DATA LOGIC



S30 series

- Multivoltage or DC power supply
- Dark/light and timing function selection
- Standard sensitivity regulation on all models
- Short circuit protection for static output versions
- Versions with glass lenses and defogging systems
- All DC models with auto diagnostic systems
- Background suppression versions
- Receiver versions with analog output to facilitate installation
- Red LED to indicate the output logic status

TECHNICAL DESCRIPTION

The **S30** series, in fibreglass-reinforced plastic, is extremely versatile due to its various optical and electronic functions.

The following optical functions are available:

- *Polarised retroreflex*
- *Proximity scanner*
- *Emitter / Receiver*
- *Background suppression*

All models are equipped with a green LED stability indicator and red LED output indicator. The first facilitates installation and alignment of the sensor, while the second indicates the output logic status.

The **S30** timer versions are available with two independent timers to allow different delay ON and delay OFF times to be set.

The power supply can be multivoltage versions from 17 to 264 Vac/Vdc with relay output, or direct current versions from 10 to 30 V, with NPN and PNP transistor output. All direct current versions are equipped with auto diagnostic systems: test input and alarm output.

The protection level for versions with a terminal block or M12 connectors is IP67; while it is IP65 for the versions with other connectors.

The **S30** series has been specifically designed to be used under extreme environmental conditions. For special applications MEK-proof and defogging versions are also available.

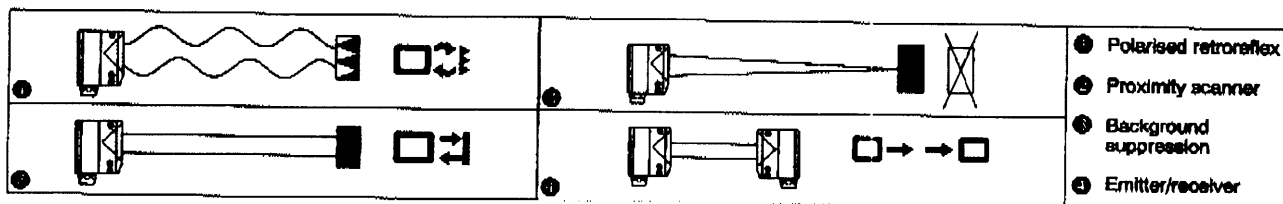
APPLICATIONS

- Conveyor systems
- Automatic machinery
- Palletising and de-palletising equipment
- General industrial automation
- Long range detection

UNIVERSAL PHOTOELECTRIC SENSORS

DATA LOGIC

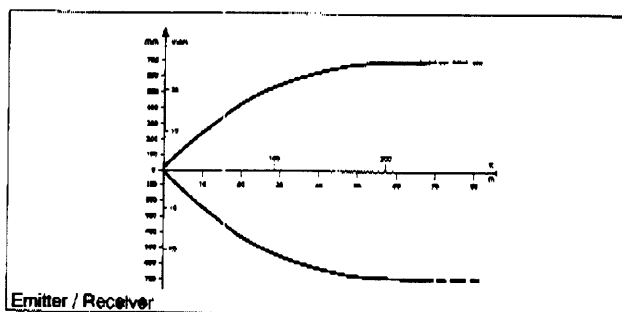
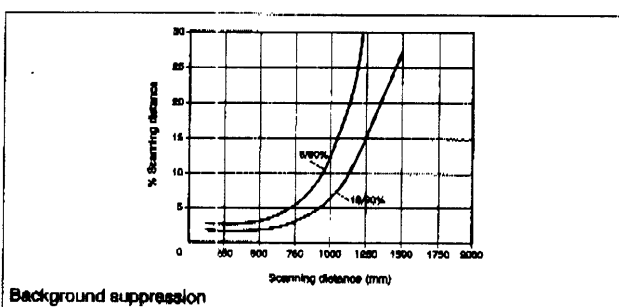
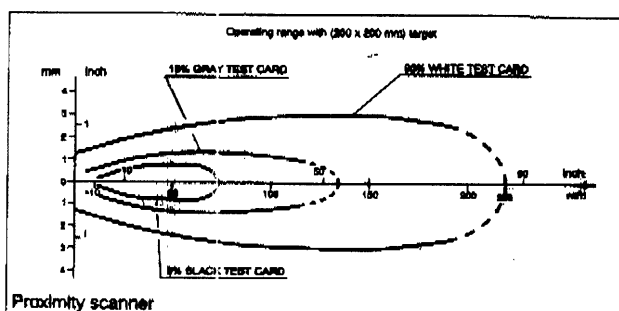
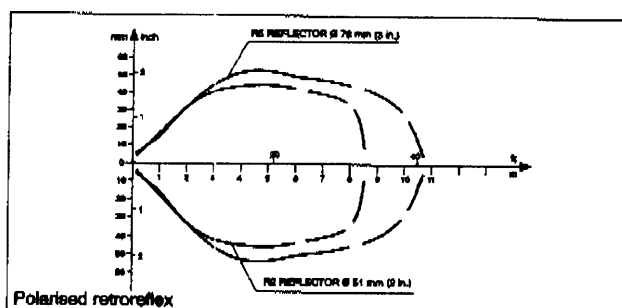
FUNCTIONS



SPECIFICATIONS

EFFECTIVE BEAM DIAMETER

EMISSION	880 nm IR LED 880 nm red LED for polarised retroreflex versions
LENSES	PMMA (glass for defogging versions)
INDICATORS	Two red output LEDs/ One red output LED (Bkgr. suppression) Green stability LED
HOUSING MATERIAL	Fibreglass-reinforced plastic
CONNECTIONS (protection class)	Terminal block (IP67) M12 connector - D.C. versions only (IP67) DIN43650 connector - D.C. versions only (IP65) DIN43651 connector - all versions (IP65) UM070 connector - D.C. versions only (IP65) UM610 connector - A.C. versions only (IP65)
OPERATING TEMPERATURE	-20 to +55 °C (-30° C for defogging versions)
STORAGE TEMPERATURE	-40 to +70 °C
HUMIDITY	35 to 85% RH non condensing
WEIGHT	Approx. 160 g
AMBIENT LIGHT IMMUNITY	3,000 lux max. incandescent lamp 10,000 lux max. sun light
VIBRATION RESISTANCE	10 to 55 Hz amplitude 1.5 mm 2 hours each in 3 directions
SHOCK RESISTANCE	500 m/sec ² (approx. 50 G) 11 ms, 3 shocks each in 3 directions
SENSITIVITY/DISTANCE CONTROL	One-turn trimmer standard on all models
DARK/LIGHT SELECTION	By slide switch
TIME REGULATION	ON/OFF delay regulation independent by means of 2 trimmers
TIME FUNCTIONS	Normal, ON delay, OFF delay, ON-OFF delay, one shot
TIME SCALE	0.02 to 2 s, 0.2 to 12 s
DIRECT CURRENT VERSIONS	
POWER SUPPLY	10 to 30 Vdc, limiting values
POWER RIPPLE	< 2 Vpp, within limiting values
CURRENT CONSUMPTION	40 mA max. (70 mA for defogging versions)
OUTPUT	NPN and PNP (open collector)
LOAD CURRENT	200 mA max., short circuit protected
SATURATION VOLTAGE	1.5 V max. (200 mA) 1.2 V max (100 mA) TTL ($V_{sat} < 0.8 V @ 0.5 mA$)
RESPONSE TIME	1 ms max.
OPERATING FREQUENCY	500 Hz max.
TEST INPUT	Standard on all models
ALARM OUTPUT	PNP 200 mA open collector, not short circuit protected
MULTIVOLTAGE VERSIONS	
POWER SUPPLY	17 to 264 Vac/Vdc, limiting values
CURRENT CONSUMPTION	60 mA max., (90 mA for defogging versions)
OUTPUT (resistive load)	SPDT relay, 3 A @ 250 Vac, 3 A @ 24 Vdc
RESPONSE TIME	20 ms
SWITCHING FREQUENCY	10 Hz



The standard values for the operating ranges are referred to ideal conditions, i.e. clear air, clean lenses, etc.. Dust, air pollution and other kinds of ambient contamination reduce the operating ranges.



UNIVERSAL PHOTOELECTRIC SENSORS

DATA LOGIC

DIRECT CURRENT VERSIONS: AVAILABLE MODELS

TYPE	OPERATING DIST. FUNCTION	OUTPUT	Terminal Block	M12	CONNECTION DIN43650	DIN43651	UM070	TIMERS	ORDER No.
S30-5-B8-1 S30-5-B8-2P S30-5-B8-3P S30-5-B8-4 S30-5-B8-5 S30-5-B8T-1 S30-5-B8T-2P S30-5-B8T-3P S30-5-B8T-4 S30-5-B8T-5	Polarised retroreflex (0.3 to 9 m with R5 reflector, 0.1 to 6 m with R2 reflector)	NPN/PNP PNP PNP NPN/PNP NPN/PNP PNP PNP NPN/PNP NPN/PNP	.	.	.	.	.	.	G3210700 G3210703 G3210705 G3210708 G3210709 G3210710 G3210713 G3210715 G3210718 G3210719
S30-5-C200-1 S30-5-C200-2P S30-5-C200-3P S30-5-C200-4 S30-5-C200-5 S30-5-C200T-1 S30-5-C200T-2P S30-5-C200T-3P S30-5-C200T-4 S30-5-C200T-5	Proximity scanner (0.05 to 2 m with 20x20 mm, white target 90%)	NPN/PNP PNP PNP NPN/PNP NPN/PNP PNP PNP NPN/PNP NPN/PNP	.	.	.	.	.	.	G3210500 G3210503 G3210505 G3210508 G3210509 G3210510 G3210513 G3210515 G3210518 G3210519
S30-5-M110-1 S30-5-M110-2P S30-5-M110T-1 S30-5-M110T-2P	Bkgr. suppression 0.2 to 1.1 m (8%/90%)	NPN/PNP PNP NPN/PNP PNP	.	.	.	.	.	.	960211000 960211010 960211050 960211060
S30-5-F50-1 S30-5-F50-2P S30-5-F50-3P S30-5-F50-4 S30-5-F50-5 S30-5-F50T-1 S30-5-F50T-2P S30-5-F50T-3P S30-5-F50T-4 S30-5-F50T-5	Receiver 70 m	NPN/PNP PNP PNP NPN/PNP NPN/PNP NPN/PNP PNP PNP NPN/PNP NPN/PNP	.	.	.	.	.	.	G3210100 G3210103 G3210105 G3210108 G3210109 G3210110 G3210113 G3210115 G3210118 G3210119
S30-5-G50-1 S30-5-G50-2 S30-5-G50-3 S30-5-G50-4 S30-5-G50-5	Emitter 70 m		.	.	.	.	.	.	G3210000 G3210002 G3210004 G3210008 G3210009

MULTIVOLTAGE VERSIONS: AVAILABLE MODELS

TYPE	OPERATING DISTANCE FUNCTION	OUTPUT	Terminal Block	CONNECTION DIN43651	UM010	TIMERS	ORDER No.
S30-1-B8-1 S30-1-B8-4 S30-1-B8-7 S30-1-B8T-1 S30-1-B8T-4 S30-1-B8T-7	Polarised retroreflex (0.3 to 9 m with R5 reflector, 0.1 to 6 m with R2 reflector)	relay relay relay relay relay relay	.	.	.	.	G3110700 G3110708 G3110707 G3110710 G3110718 G3110717
S30-1-C200-1 S30-1-C200-4 S30-1-C200-7 S30-1-C200T-1 S30-1-C200T-4 S30-1-C200T-7	Proximity scanner (0.05 to 2 m with 20x20 mm, white target 90%)	relay relay relay relay relay relay	.	.	.	.	G3110500 G3110506 G3110507 G3110510 G3110518 G3110517
S30-1-M110-1 S30-1-M110T-1	Bkgr. suppression 0.2 to 1.1 m (8%/90%)	relay relay	.	.	.	.	960211100 960211130
S30-1-F50-1 S30-1-F50-4 S30-1-F50-7 S30-1-F50T-1 S30-1-F50T-4 S30-1-F50T-7	Receiver 70 m	relay relay relay relay relay relay	.	.	.	.	G3110100 G3110108 G3110107 G3110110 G3110118 G3110117
S30-1-G50-1 S30-1-G50-4 S30-1-G50-7	Emitter 70 m	relay relay relay	.	.	.	.	G3110000 G3110008 G3110007

* For all terminal block and M12 connector models, versions with defogging lenses are available. These models are identified by a "M" at the end of their descriptions (I.E. S30-x-xxxx-x-M).



UNIVERSAL PHOTOELECTRIC SENSORS

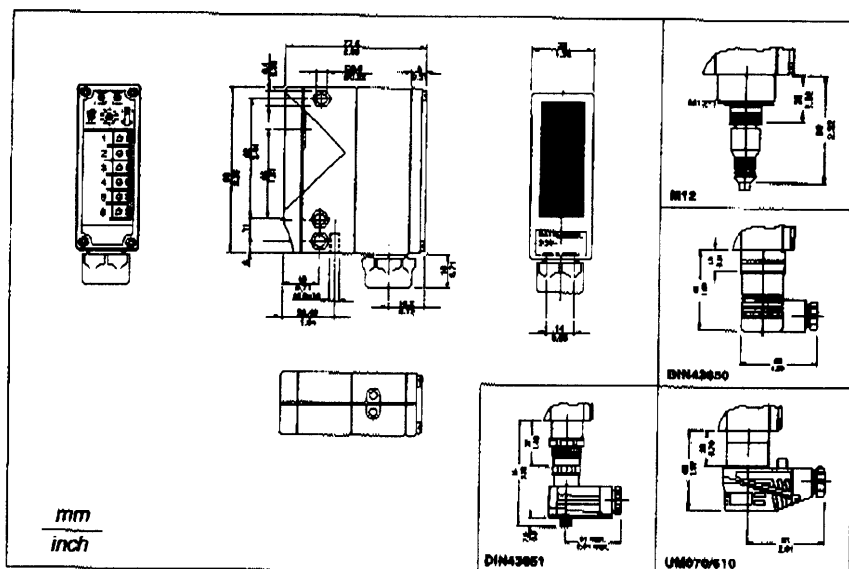
DATA LOGIC

ACCESSORIES*

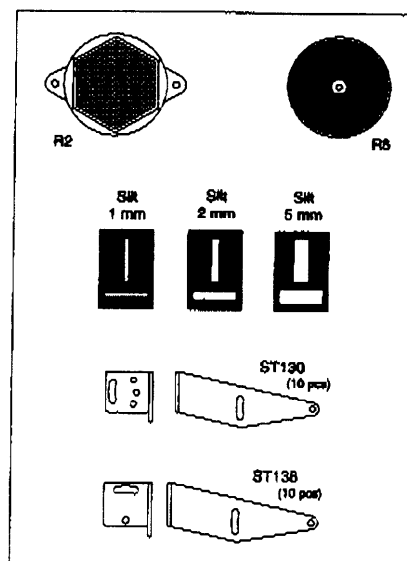
TYPE	DESCRIPTION	ORDER NO.
ST130	S30 standard fixing bracket (10 pcs)	G6070006
ST138	RT7 compatible fixing bracket (10 pcs)	98D441000
AS1	Adhesive slits for emitter/receiver	G3040215
R2	Plastic reflector (48 mm)	S940700048
R5	Plastic reflector (75 mm)	S940700075

*Must be ordered separately

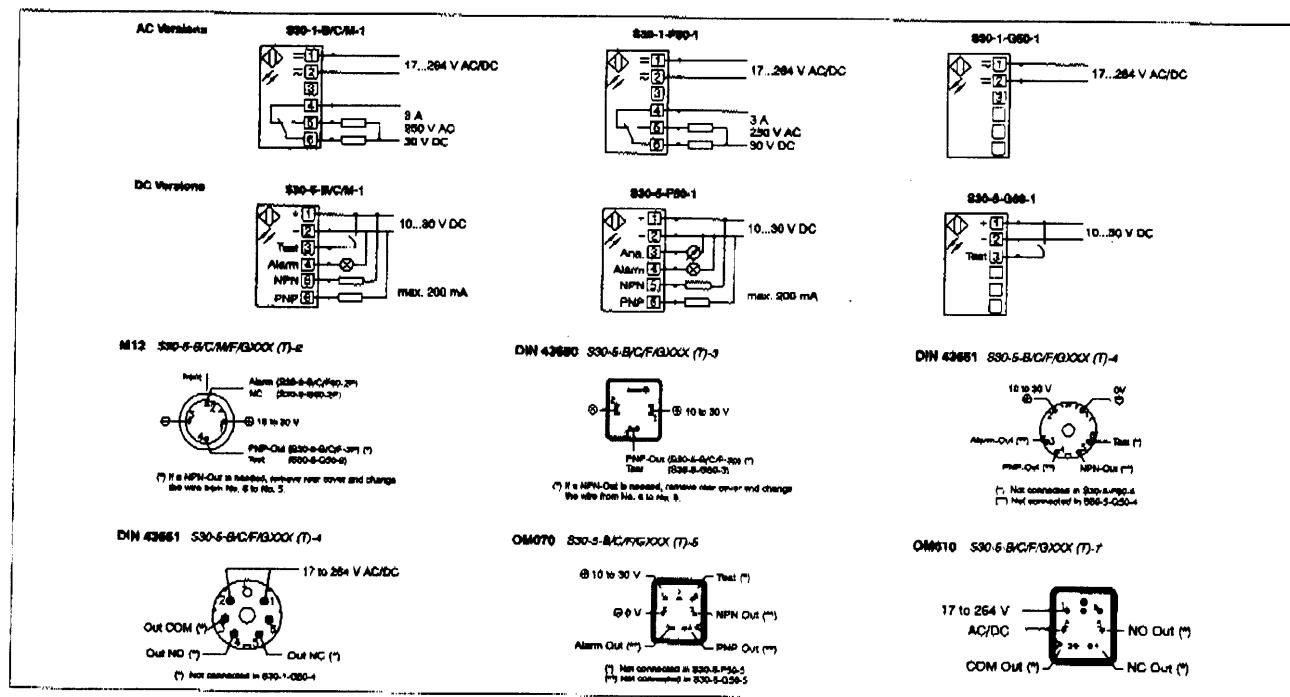
DIMENSIONS



ACCESSORIES DIAGRAMS



CONNECTIONS



We reserve the right to make modifications and improvements

