

Photoelectrics Retro-reflective, Polarized Type EP 5520

CARLO GAVAZZI



- Range: 2.0 m
- Adjustable sensitivity
- Modulated, red light, polarized
- Supply voltage: 10 to 30 VDC
- Output: DC 200 mA, NPN or PNP
- Make and break switching functions, LED indication
- Photoelectric, inductive and capacitive flat pack series in PC/ABS housing, IP67
- Improved immunity to reflective surfaces
- Cable and M12 plug versions



Product Description

The EP 5520 is a family of inexpensive general purpose polarized retro-reflective sensors in a flat-pack housing. The size (W x H x D) is 35 x 55 x 15 cm, made in grey PC/ABS, is ideal for use

where the space is limited. Easy mounting with only two M4 screws. The output is a 4-wire complementary (NO and NC) output in NPN (current sinking) or PNP (current sourcing).

Ordering Key

EP 55 20 NPA P-1

Type	
Housing	
Range	
Output type	
Housing material	
Connection type	

Type Selection

Housing diameter W x H x D	Rated operating dist. (S _n)	Ordering no. NPN/cable Make & break swit.	Ordering no. NPN/plug Make & break swit.	Ordering no. PNP/cable Make & break swit.	Ordering no. PNP/plug Make & break swit.
35 x 55 x 15	2.0 m	EP 5520 NPAP	EP 5520 NPAP-1	EP 5520 PPAP	EP 5520 PPAP-1

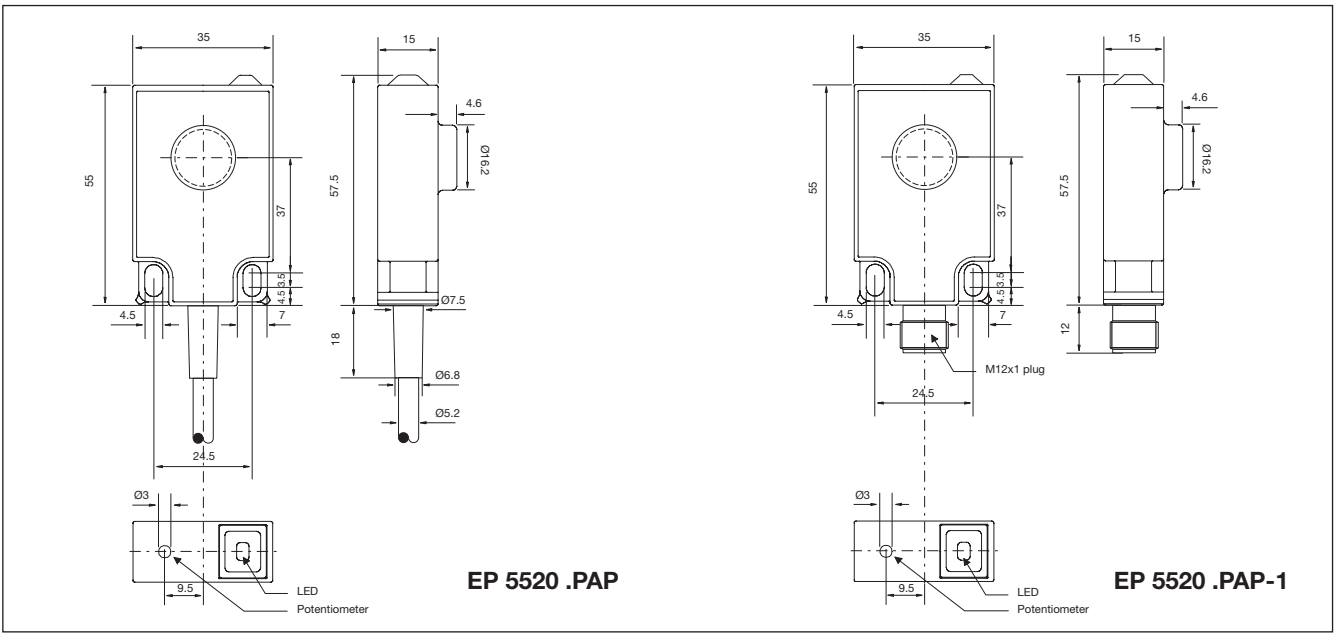
Note: Plugs and reflectors to be ordered separately.

Specifications

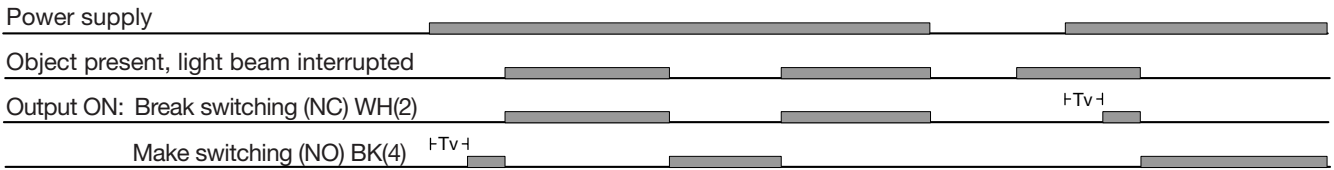
Rated operating dist. (S_n)	Up to 2.0 m. Reference reflector type ER4 Ø 84 mm	Power ON delay (t_v)	Typ. 100 ms
Sensitivity	Adjust. 270° turn poten.meter	Indication	
Temperature drift	0.5%/°C	Function	Dark and light (complementary) switch. LED, yellow
Hysteresis (Diff. travel) (H)	3 - 20%	Output ON	
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	Environment	
Ripple (U_{rip})	≤ 10%	Overvoltage category	III (IEC 60664/60664A; 60947-1)
Output current		Pollution degree	3 (IEC 60664/60664A; 60947-1)
Continuous (I _a)	≤ 200 mA	Degree of protection	IP 67 (IEC 60529; 60947-1)
Short-time (I)	200 mA (max. load 100 nF)	Temperature	
No load supply current (I_o)	≤ 40 mA,	Operating	-20° to +60°C (-4° to +140°F)
Min. operational current (I_m)	0.5 mA	Storage	-30° to +70°C (-22° to +158°F)
OFF-state current (I_r)	≤ 100 µA	Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Voltage drop (U_d)	≤ 2.5 V	Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
Protection	Reverse polarity, short-circuit, transients	Dielectric voltage	600 V (IEC 60364-4-41)
Transient voltage	1 kV/0,5 J	Housing material	Grey polycarbonate/ABS blend PMMA
Light source	GaAlAs LED, 660 nm	Connection	
Light type	Red, modulated, synchronized	Cable	Grey, 2 m, 4 x 0.34 mm ² , oilproof PVC
Sensing angle	± 2°	Plug	M12 x 1
Ambient light	Max. 10,000 lux	Cable for plug	CON.1A-... serie
Operating frequency (f)	250 Hz, light/dark ratio 1:2	Weight	125 g cable version 40 g plug version
Response time		CE-marking	Yes
OFF-ON (t _{ON})	≤ 1 ms		
ON-OFF (t _{OFF})	≤ 3 ms		



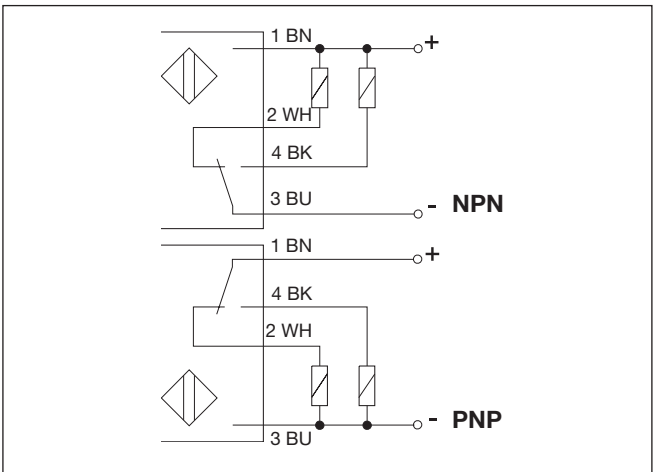
Dimensions



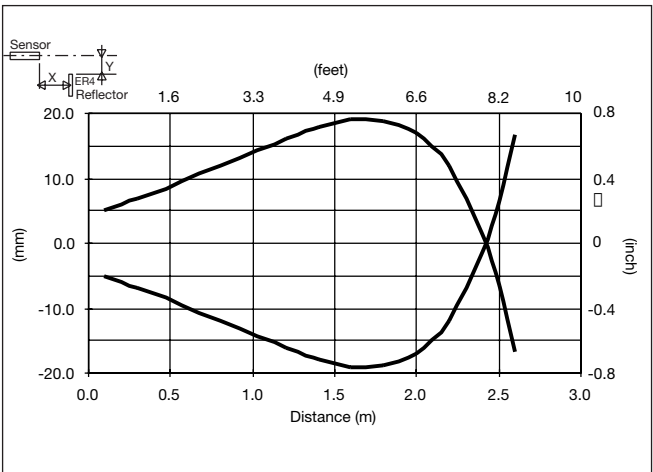
Operation Diagram



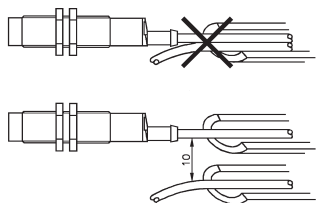
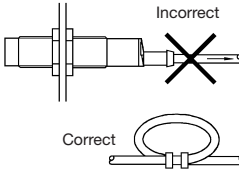
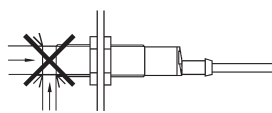
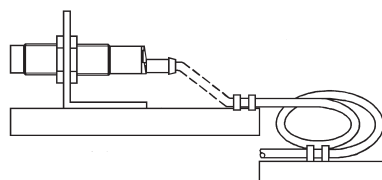
Wiring Diagrams



Detection Diagram



Installation Hints

<p>To avoid interference from inductive voltage/current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables</p> 	<p>Relief of cable strain</p>  <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</p>	<p>Protection of the sensing face</p>  <p>A proximity switch should not serve as mechanical stop</p>	<p>Switch mounted on mobile carrier</p>  <p>Any repetitive flexing of the cable should be avoided</p>
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Accessories

- Reflectors: ER series
- Connector type CON.1A-.. serie

For further information refer to "Accessories".

Delivery Contents

- Photoelectric switch: EP5520
- Screw driver
- **Packaging:** Corrugated cardboard