

# Photoelectrics Retro-reflective, Polarized Type EP 5520, PRELIMINARY

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- Range: 2.0 m
- Adjustable sensitivity
- Modulated, red light, polarized
- Rated operational voltage: 10 to 30 VDC
- Output: DC 200 mA, NPN or PNP
- Make and break switching function, LED indication
- High immunity to ambient light
- Photoelectric, inductive and capacitive flat pack series in PC/ABS housing, IP67
- Cable or M12 plug versions
- Protection: Reverse polarity, short-circuit, transients



## Product Description

Retroreflective photoelectric switch with polarized light. Range up to 2.0 m Easily adjustable sensitivity with 270° potentiometer. LED indication for output ON. Flat pack housing size (W x H x D) 35 x 55 x

15 mm made in polycarbonate/ABS blend. Easy mounting with only two M 4 screws. Ideal for use in conveying and material handling applications.

## 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 <sub>n</sub> )	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

## Specifications

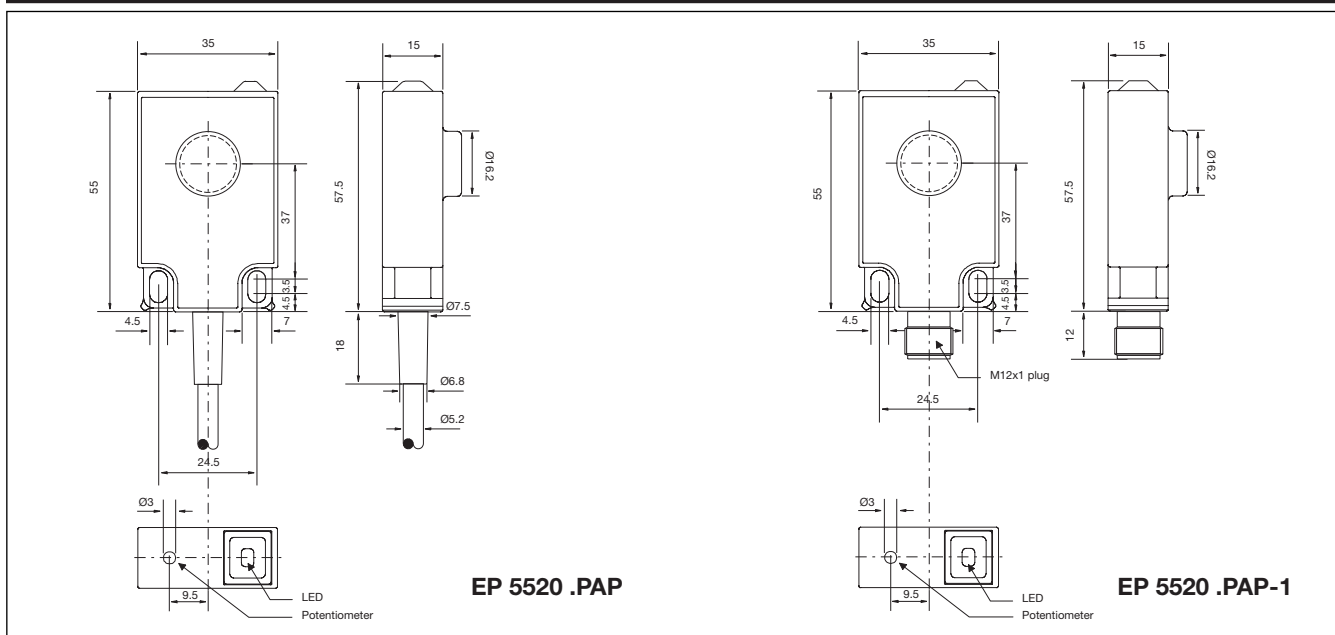
<b>Rated operating dist. (S<sub>n</sub>)</b> EP 5520	2.0 m. Reference reflector type ER4 Ø 84 mm	<b>Light source</b>	GaAlAs LED, 660 nm
<b>Temperature drift</b>	0.5%/°C	<b>Light type</b>	Red, modulated, synchronized
<b>Hysteresis (H)</b> (Differential travel)	< 20%	<b>Sensing angle</b>	± 2°
<b>Rated operational volt. (U<sub>B</sub>)</b>	10 to 30 VDC (ripple included)	<b>Ambient light</b>	Max. 10,000 lux
<b>Ripple (U<sub>ripp</sub>)</b>	≤ 10%	<b>Operating frequency (f)</b>	100 Hz, light/dark ratio 1:2
<b>Output current</b> Continuous (I <sub>a</sub> )	≤ 200 mA	<b>Response time</b> OFF-ON (t <sub>ON</sub> )	≤ 4 ms
Short-time (I)	200 mA	ON-OFF (t <sub>OFF</sub> )	≤ 6 ms
Max. load capacity	100 nF	<b>Power ON delay (t<sub>v</sub>)</b>	Typ. 100 ms
<b>No load supply current (I<sub>o</sub>)</b>	≤ 30 mA,	<b>Indication</b> Output ON	LED, yellow (indicates the presence of a target i.e. reflector)
<b>Min. load current (I<sub>m</sub>)</b>	0.5 mA	<b>Environment</b> Overvoltage category	III (IEC 60664/60664A; 60947-1)
<b>OFF-state current (I<sub>i</sub>)</b>	≤ 100 µA	Pollution degree	3 (IEC 60664/60664A; 60947-1)
<b>Voltage drop (U<sub>d</sub>)</b>	≤ 2.5 V	Degree of protection	IP 67 (IEC 60529; 60947-1)
<b>EMC</b>	Approved according to EN 50080, EN 50081		
<b>Transient voltage</b>	Max 1 kV/0,5 J		
<b>Sensitivity</b>	Adjustable, 270° turn potentiometer		



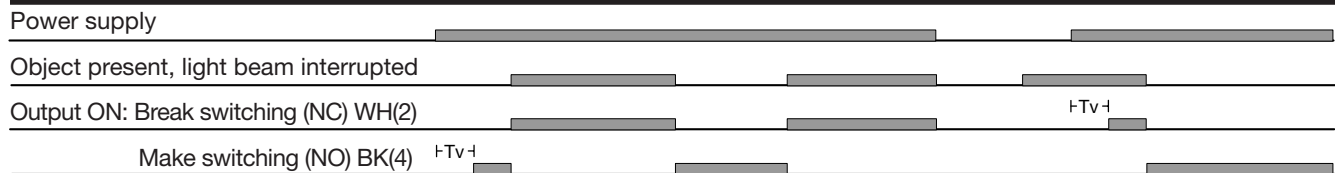
## Specifications (cont.)

<b>Temperature</b>		<b>Connection</b>	
Operating	-20° to +60°C (-4° to +140°F)	Cable	Grey, 2 m, oilproof PVC, 4 x 0.34 mm <sup>2</sup> ,
Storage	-30° to +70°C (-22° to +158°F)	<b>Note:</b>	Other cable lengths on request
<b>Vibration</b>	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)	Plug (-1)	M12, CONH1A-.. serie
<b>Shock</b>	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)	<b>Weight</b>	125 g cable version 40 g plug version
<b>Dielectric voltage</b>	500 VAC (rms)		
<b>Housing material</b>	Polycarbonate/ABS blend Grey housing - red front		

## Dimensions



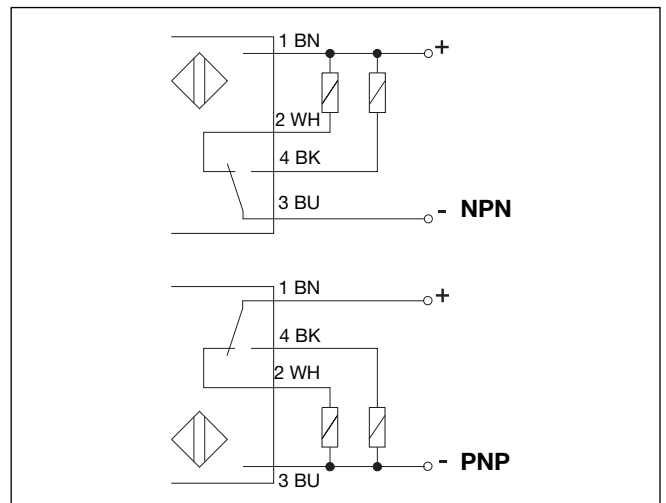
## Operation Diagram



### Truth Table

	Make switching		Break switching	
	Yes	No	Yes	No
Object present	Yes	No	Yes	No
DC types				
LED	OFF	ON	OFF	ON
Load	Non-active	Active	Active	Non-active
Output NPN	High	Low	Low	High
Output PNP	Low	High	High	Low

### Wiring Diagrams



### Accessories

- Plugs CONH1A-.. serie.
- Reflectors: ER serie, please refer to Accessories.

### Delivery Contents

- Photoelectric switch: EP5520
- Screw driver
- **Packaging:** Corrugated cardboard (environmentally friendly recycling material).