

# Photoelectrics Diffuse-reflective Types ED 5502/5506



- Range: 200 or 600 mm
- Adjustable sensitivity
- Modulated, infrared light
- 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 housing, IP 67
- Cable or M12 plug versions



## Product Description

Diffuse-reflective photoelectric with sensing distance up to 600 mm. 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. Easy mounting with only two M 3.5 screws. Ideal for use in conveying and material handling applications

## Ordering Key ED 55 06 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	200 mm 600 mm	ED 5502 NPAP ED 5506 NPAP	ED 5502 NPAP-1 ED 5506 NPAP-1	ED 5502 PPAP ED 5506 PPAP	ED 5502 PPAP-1 ED 5506 PPAP-1

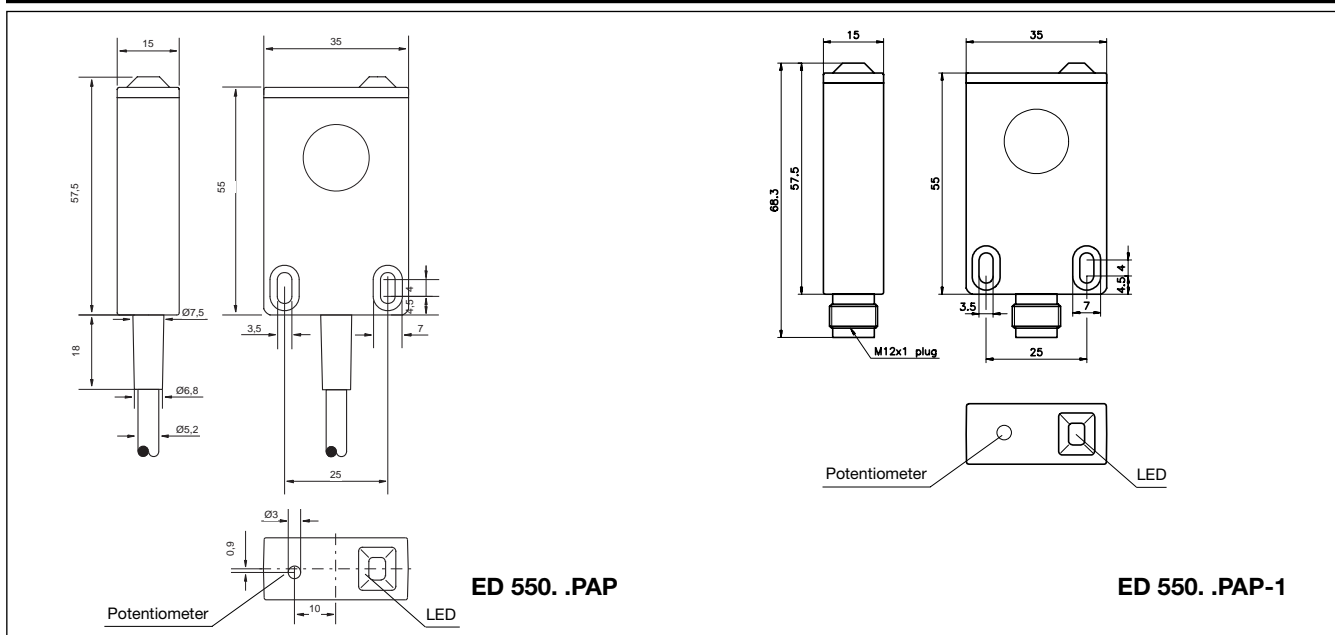
## Specifications

<b>Rated operating dist. (S<sub>n</sub>)</b>	<b>ED 5502</b>	Up to 200 mm	<b>Protection</b>	Reverse polarity, short-circuit, transients	
	<b>ED 5506</b>	Up to 600 mm		<b>Transient voltage</b>	Max. 1 kV/0.5 J
<b>Adjustable range</b>	<b>ED 5502</b>	100 x 100 mm	<b>Sensitivity</b>	Adjustable, 270° turn potentiometer	
	<b>ED 5506</b>	200 x 200 mm	<b>Light source</b>	GaAlAs LED, 880 nm	
<b>Temperature drift</b>	<b>ED 5502</b>	50 to 200 mm	<b>Light type</b>	Infrared, modulated, synchronized	
	<b>ED 5506</b>	150 to 600 mm	<b>Sensing angle</b>	±25° at 1/2 range	
<b>Hysteresis (H)</b> (Differential travel)		< 20%	<b>Ambient light</b>	Max. 10,000 lux	
<b>Rated operational volt. (U<sub>B</sub>)</b>		10 to 30 VDC (ripple included)	<b>Operating frequency (f)</b>		
<b>Ripple (U<sub>ripple</sub>)</b>		≤ 10%	<b>ED 5502</b>	500 Hz, light/dark ratio 1:2	
<b>Output current</b>			<b>ED 5506</b>	100 Hz, light/dark ratio 1:2	
Continuous (I <sub>o</sub> )		≤ 200 mA	<b>Response time</b>		
Short-time (I)		200 mA	OFF-ON (t <sub>ON</sub> )	<b>ED 5502</b>	≤ 0.67 ms
Max. load capacity		100 nF		<b>ED 5506</b>	≤ 4 ms
<b>No load supply current (I<sub>o</sub>)</b>		≤ 30 mA,	ON-OFF (t <sub>OFF</sub> )	<b>ED 5502</b>	≤ 1.33 ms
<b>Min. load current (I<sub>m</sub>)</b>		0.5 mA		<b>ED 5506</b>	≤ 6 ms
<b>OFF-state current (I<sub>o</sub>)</b>		≤ 100 μA	<b>Power ON delay (t<sub>v</sub>)</b>		Typ. 100 ms
<b>Voltage drop (U<sub>d</sub>)</b>		≤ 2.5 V	<b>Indication</b>		
			Output ON		LED, yellow (indicates the present of a target or object)
			<b>Environment</b>		
			Overvoltage category		III (IEC 664/664A; 947-1)
			Pollution degree		3 (IEC 664/664A; 947-1)
			Degree of protection		IP 67 (IEC 529; 947-1)

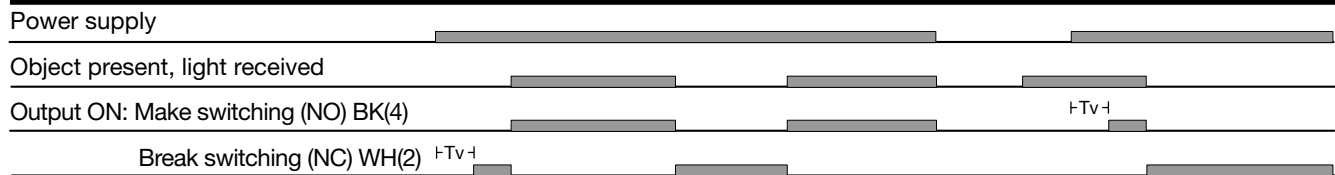
## Specifications (cont.)

<b>Temperature</b>		<b>Connection</b>
Operating	-20° to +60°C (-4° to +140°F)	Cable
Storage	-30° to +70°C (-22° to +158°F)	Grey, 2 m, oilproof PVC, 4 x 0.34 mm <sup>2</sup> ,
<b>Vibration</b>		<b>Note:</b>
10 to 150 Hz, 0.5 mm/7.5 g (IEC 68-2-6)		Other cable lengths on request
<b>Shock</b>		Plug (-1)
2 x 1 m & 100 x 0.5 m (IEC 68-2-32)		<b>Weight</b>
<b>Dielectric voltage</b>		125 g cable version
500 VAC (rms)		40 g plug version
<b>Housing material</b>		
Polycarbonate, black		

## Dimensions



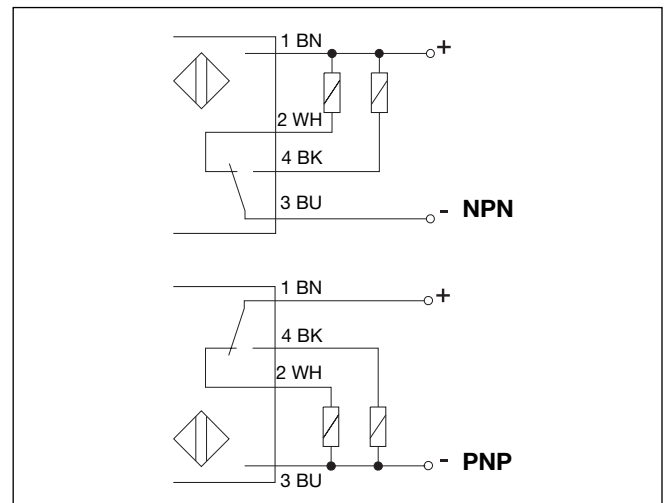
## Operation Diagram



### Truth Table

	Make switching		Break switching	
	No	Yes	No	Yes
Object present	No	Yes	No	Yes
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.

### Delivery Contents

- Photoelectric switch: ED 550. ....
- Screw driver
- **Packaging:** plastic bag