

# Photoelectrics Through-beam Type ET 5505

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- Range: 5 m
- Modulated infrared light
- Rated operational voltage: 10 to 30 VDC
- Output: DC 200 mA, NPN or PNP
- Make and break switching functions
- LED-indication for power supply ON (emitter) and target detected (receiver)
- Photoelectric, inductive and capacitive flat pack series in PC housing, IP 67
- Cable and/or plug versions



## Product Description

High power through-beam photoelectric switch. Range up to 5 m. LED indication for target detected (emitter). Precise detection through narrow beam. Flat pack housing size

35 x 55 x 15 mm (W x H x D) made in polycarbonate. Easy mounting with only two M3.5 screws. Ideal for use in conveying and material handling applications.

## Ordering Key

**ET 55 05 NPA P-1**

Type \_\_\_\_\_  
Housing diameter \_\_\_\_\_  
Range \_\_\_\_\_  
Output type \_\_\_\_\_  
Housing material \_\_\_\_\_  
Connection type \_\_\_\_\_

## Type Selection

Housing diameter (W x H x D)	Rated operating dist. (S <sub>n</sub> )	Connection	Ordering no. Receiver/NPN Make & break switching	Ordering no. Receiver/PNP Make & break switching	Ordering no. Emitter
35 x 55 x 15	5 m 5 m	Cable Plug	ET 5505 NPAP ET 5505 NPAP-1	ET 5505 PPAP ET 5505 PPAP-1	ET 5505 ET 5505-1

**Note:** Please order emitter and receiver separately.

## Specifications Emitter

Rated operational volt. (U <sub>B</sub> )	10 to 30 VDC (ripple included)
Ripple	≤ 10%
Supply current (I <sub>o</sub> )	≤ 30 mA
Protection	Reverse polarity, short-circuits, transients
Light source	GaAlAs LED, 880 nm
Light type	Infrared, modulated
Optical angle	± 8°
Indication Supply ON	LED, green

## Specifications Receiver

Rated operational volt. (U <sub>B</sub> )	10 to 30 VDC (ripple included)
Ripple	≤ 10%
No-load supply current (I <sub>o</sub> )	≤ 15 mA
OFF-state current (I <sub>r</sub> )	≤ 100 µA (typ. 0)
Output current (I <sub>e</sub> ) Continuous	≤ 200 mA
Voltage drop (U <sub>d</sub> )	≤ 2.5 VDC
Protection	Reverse polarity, short-circuit, transients
Hysteresis (H)	< 20%
Temperature drift	0.4%/°C
Optical angle Ambient light	± 7.5° Max. 5,000 lux
Operating frequency (f)	Typ. 100 Hz
Response time OFF-ON (t <sub>ON</sub> ) ON-OFF (t <sub>OFF</sub> )	4 ms 6 ms
Power ON delay (t <sub>v</sub> )	300 ms
Indication Output ON	LED, yellow



General Specifications

<b>Environment</b>	
Overvoltage category	III (IEC 60664/60664A; 60947-1)
Pollution degree	3 (IEC 60664/60664A; 60947-1)
Degree of protection	IP 67 (IEC 60529; 60947-1) <b>Note:</b> Plug version, IP 67 with mounted plug, CON.1A..
<b>Temperature</b>	
Operating	-20° to +60°C (-4° to +140°F)
Storage	-30° to +70°C (-22° to +158°F)
<b>Vibration</b>	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
<b>Shock</b>	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
<b>Dielectric voltage</b>	500 VAC (rms)
<b>Housing material</b>	Polycarbonate, black
<b>Connection cable</b>	
Cable	Grey, 2 m oilproof, PVC, 4 x 0.34 m, ø 5.2 mm <b>Note:</b> Other lengths on request
Plug (-1)	M 12
Cables for plug (-1)	CON.1A-.. series
<b>Weight</b>	
Cable version	125 g
Plug version	40 g
<b>Approval</b>	UL
<b>CE-marking</b>	Yes

Truth Table

	Make switching		Break switching	
	Yes	No	Yes	No
Object present				
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

Accessories

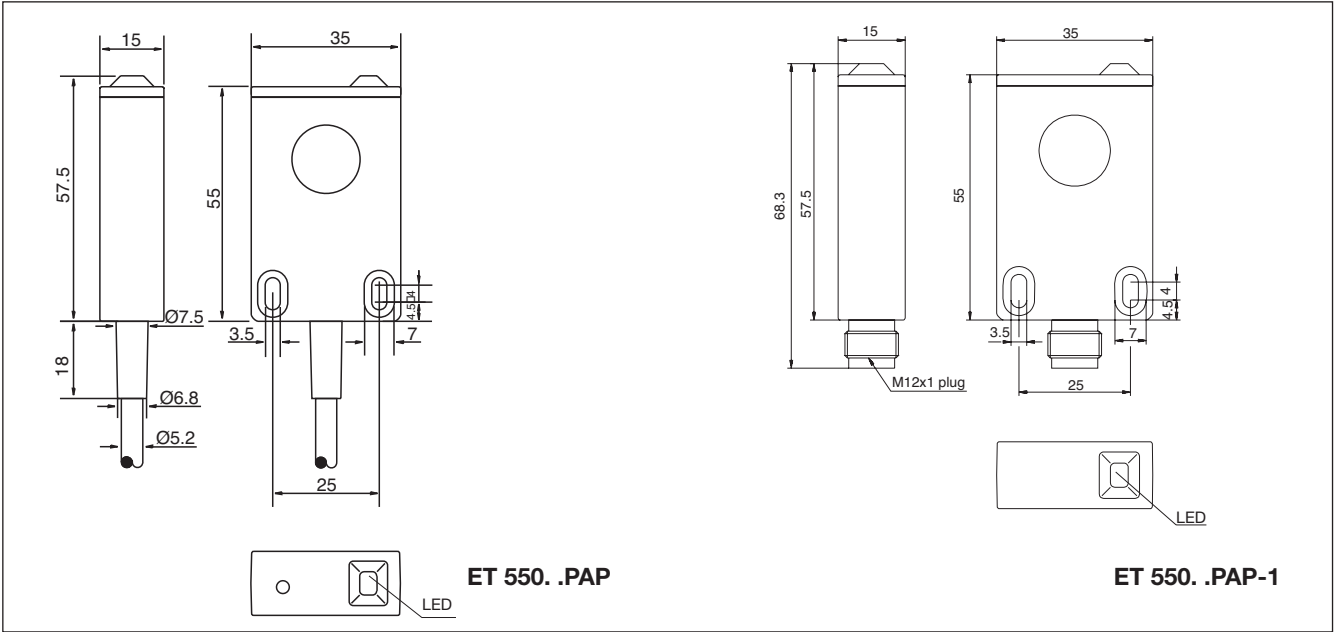
- Connector type CON.1A../CON.14NF.. series.

Please refer to "Accessories".

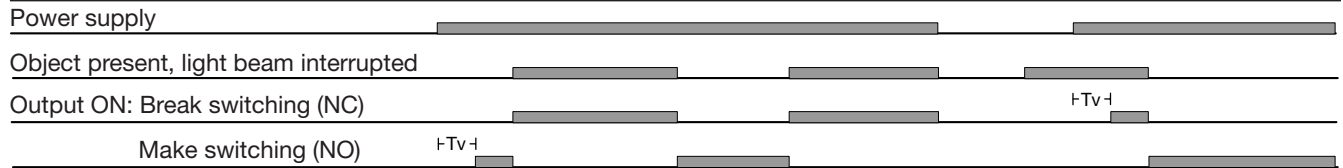
Delivery Contents

- Photoelectric switch: ET 5505 ....
- **Packaging:** Plastic bag

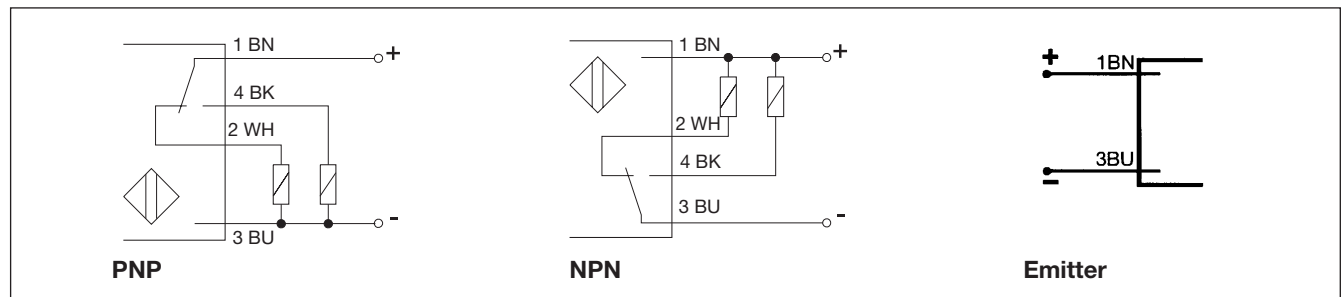
Dimensions



## Operation Diagram



## Wiring Diagrams



## Installation Hints

