

Photoelectrics Through-beam Type ET 5505



- 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



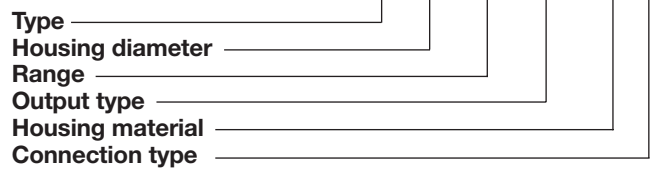
Product Description

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 Selection

Housing diameter (W x H x D)	Rated operating dist. (S _n)	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 _B)	10 to 30 VDC (ripple included)
Ripple	≤ 10%
Supply current (I _o)	≤ 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 _B)	10 to 30 VDC (ripple included)
Ripple	≤ 10%
No-load supply current (I _o)	≤ 15 mA
OFF-state current (I _i)	≤ 100 µA (typ. 0)
Output current (I _e) Continuous	≤ 200 mA
Voltage drop (U _d)	≤ 2.5 VDC
Protection	Reverse polarity, short-circuit, transients
Hysteresis (H)	< 20%
Temperature drift	0.4%/°C
Optical angle	± 7.5°
Ambient light	Max. 5,000 lux
Operating frequency (f)	Typ. 100 Hz
Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	4 ms 6 ms
Power ON delay (t _v)	300 ms
Indication Output ON	LED, yellow

General Specifications

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

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

Accessories

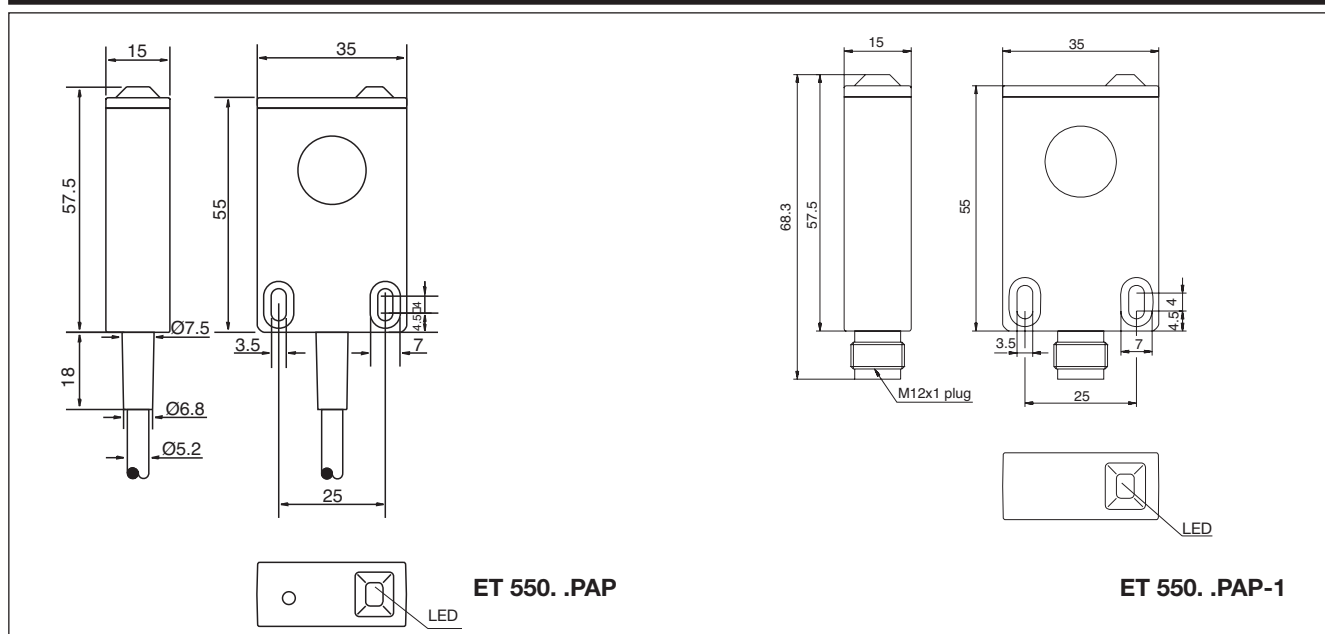
- Connector type CON.1A../CON.14NF.. series.

Please refer to "Accessories".

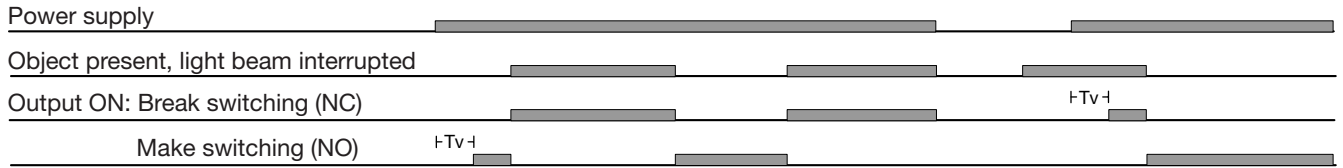
Delivery Contents

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

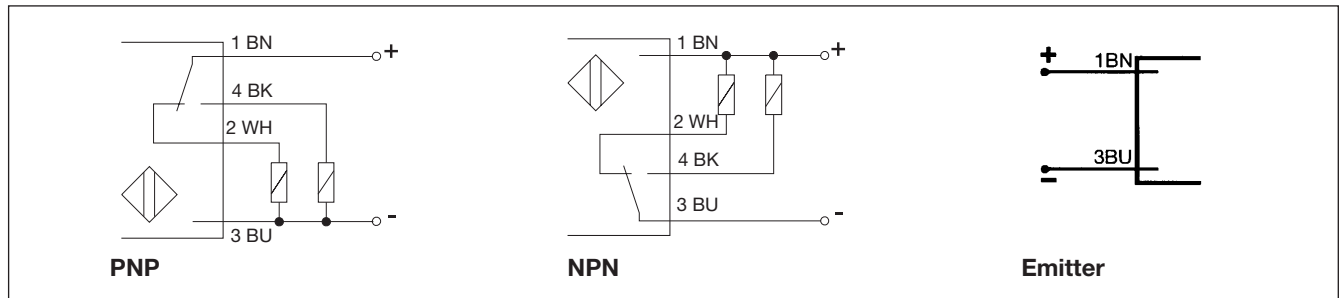
Dimensions



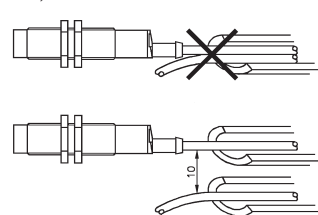
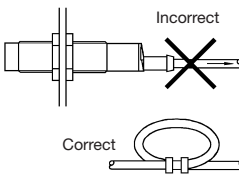
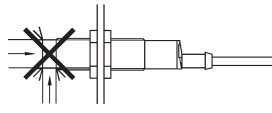
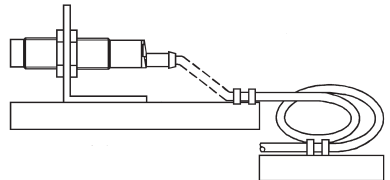
Operation Diagram



Wiring Diagrams



Installation Hints

<p><i>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</i></p> 	<p><i>Relief of cable strain</i></p>  <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</p>	<p><i>Protection of the sensing face</i></p>  <p>A proximity switch should not serve as mechanical stop</p>	<p><i>Switch mounted on mobile carrier</i></p>  <p>Any repetitive flexing of the cable should be avoided</p>
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