

Photoelectrics Retro-reflective, Polarized Type PA18ALP20T.., AC, PBTP housing

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- Range: 2.0 m
- Modulated red light, polarized
- Supply voltage: 20 to 250 VAC
- Output: 500 mA SCR
- Make and break switching functions
- LED-output indication
- Improved immunity to reflecting surfaces
- Heavy duty M18 metal housing, IP67
- Cable and plug versions



Product Description

The PA18ALP20T.. is a family of general purpose polarized retro-reflective sensor in a long M18 nickel-plated brass housing for heavy duty applications. They are useful for simple applications where a

basic sensor provides adequate sensing performance. The sensors are easy to adjust with a 270° single-turn potentiometer. The output is a 2-wire NO or NC thyristor (SCR) output.

Ordering Key PA18ALP20TOM6SA

Type	PA18ALP20TOM6SA
Housing style	PA18ALP20TOM6SA
Housing size	PA18ALP20TOM6SA
Housing material	PA18ALP20TOM6SA
Housing length	PA18ALP20TOM6SA
Detection principle	PA18ALP20TOM6SA
Sensing distance	PA18ALP20TOM6SA
Output type	PA18ALP20TOM6SA
Output configuration	PA18ALP20TOM6SA
Connection type	PA18ALP20TOM6SA
Adjustable	PA18ALP20TOM6SA

Type Selection

Housing diameter	Rated operating dist. (S _n)	Ordering no. SCR/cable Make switching	Ordering no. SCR/plug Make switching	Ordering no. SCR/cable Break switching	Ordering no. SCR/plug Break switching
M18	2 m	PA18ALP20TOSA	PA18ALP20TOM6SA	PA18ALP20TCSA	PA18ALP20TCM6SA

Note: Plugs and reflector to be ordered separately

Specifications

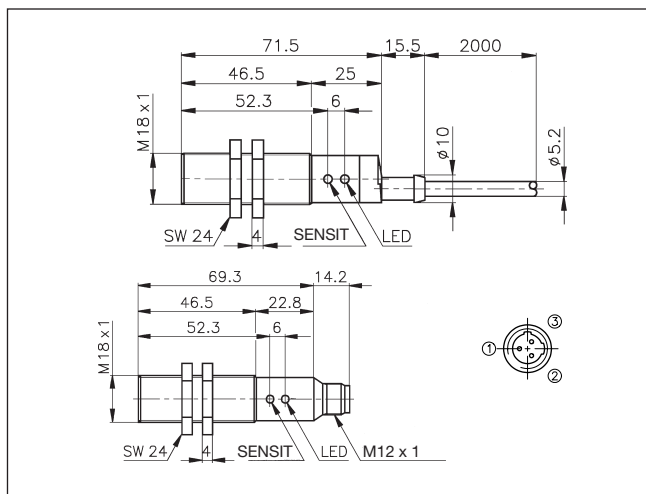
Rated operating dist. (S _n)	Up to 2.0 m. Ref. reflector type ER4 Ø 84 mm	Light spot size	150 mm at 2 m
Sensitivity	270° single-turn pot. meter	Ambient light	Max 5'000 lux
Blind zone	0.15 m	Operating frequency (f)	Max. 25 Hz light-dark ratio 1.2
Temperature drift	0.4%/°C	Response time	OFF-ON (t _{ON}) ON-OFF (t _{OFF})
Hysteresis (H) (Differential travel)	3 to 20 %		≤ 20 ms ≤ 30 ms
Rated operational volt. (U _B)	20 to 250 VAC, 45 to 65 Hz	Power ON delay (t _v)	Typ. 70 ms
Output current (AC 12, AC 140)		Indication function	Dark (NC) or light (NO) switching LED, yellow
Continuous (I _a)	≤ 500 mA	Environment	
Short-time (I)	≤ 3 A, max. 20 ms	Overvoltage category	II (IEC 60664/60664A; 60947-1)
Min. operational current (I _m)	10 mA	Pollution degree	3 (IEC 60664/60664A; 60947-1)
OFF-state current (I _r)	≤ 5 mA, typ. 2.6 mA	Degree of protection	IP 67 (IEC 60529; 60947-1)
Voltage drop (U _d)	Typ. ≤ 7 VAC Max. ≤ 10 VAC	Temperature	
Protection	Transients	Operating	-20° to +60°C (-4° to 140°F)
Transient voltage	1 kV / 0.5 J	Storage	-30° to +70°C (-22° to 158°F)
Light source	GaAlAs LED, 660 nm	Vibration	10 to 150 Hz, 0.5 mm/- 7.5 g (IEC 60068-2-6)
Light type	Red polarized, modulated	Shock	2 x 1 m 100 x 0.5 m (IEC 60068-2-32)
Optical angle	± 2°	Dielectric voltage	1500 V (IEC 60364-4-41)



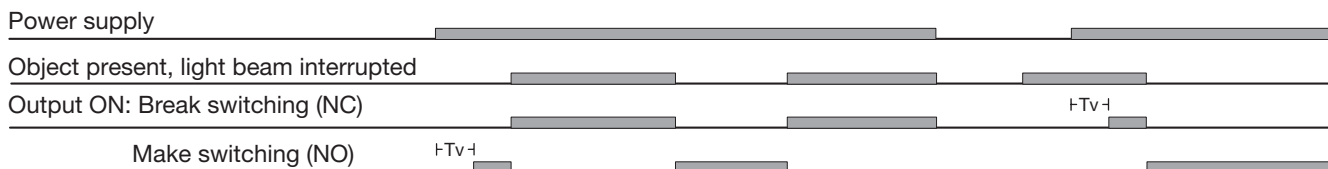
Specifications (cont.)

Housing material	
Body	Nickel-plated brass
Front	PMMA, red
Cable (Cable end)	PVC, black
Nuts	Nickel-plated brass
Connection	
Cable	Grey, 2 m, 2 x 0.5 mm ² , oilproof PVC
Plug	M12 x 1
Cables for plug (M6)	CON.6A-.. series
Weight	
Cable version	230 g
Plug version	145 g
Approvals	UL, CSA
CE-marking	Yes

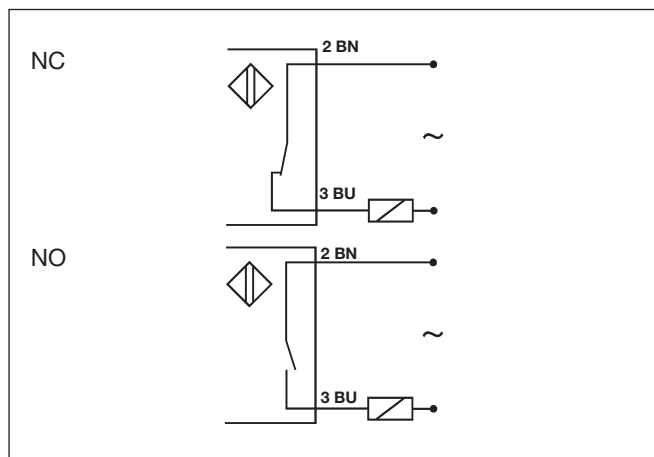
Dimensions



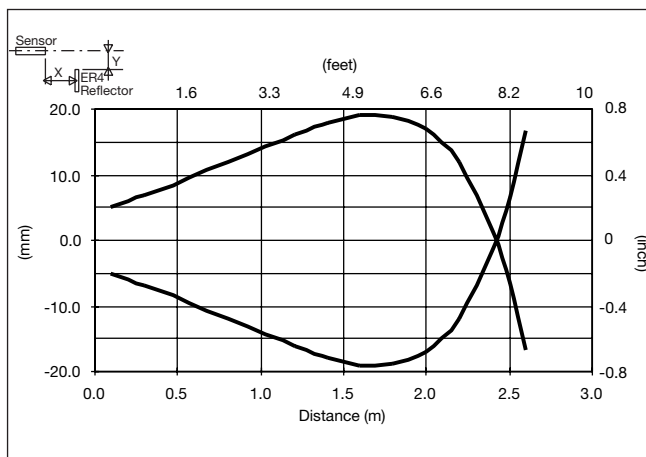
Operation Diagram



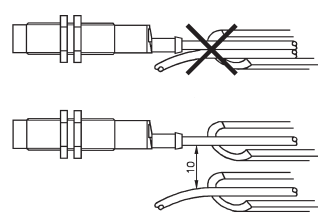
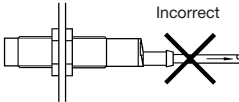
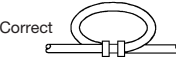
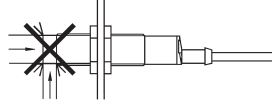
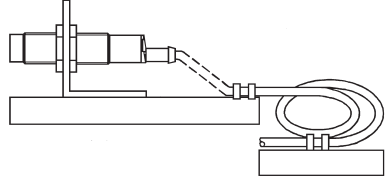
Wiring Diagrams



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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Delivery Contents

- Photoelectric switch: PA18ALP20..
- 2 nuts
- **Packaging:** Plastic bag

Accessories

- Reflectors: ER series
- Connector type CON.6A-.. serie
- MB18A
- APA18-RAR