

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

CARLO GAVAZZI



- 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	_____
Housing style	_____
Housing size	_____
Housing material	_____
Housing length	_____
Detection principle	_____
Sensing distance	_____
Output type	_____
Output configuration	_____
Connection type	_____
Adjustable	_____

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

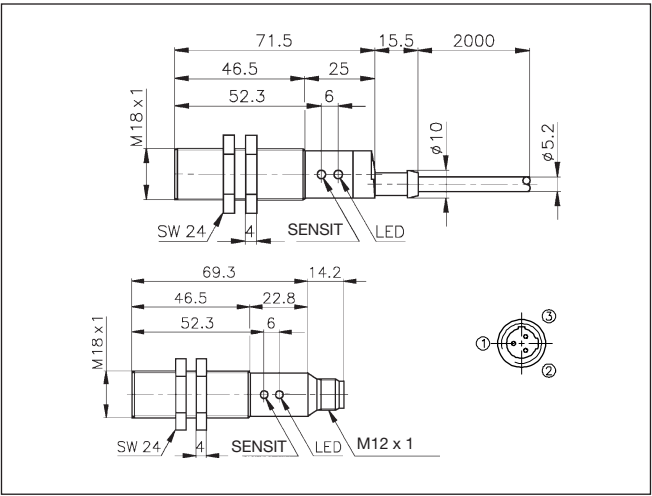
Rated operating dist. (S_n)	Up to 2.0 m. Ref. reflector type ER4 Ø 84 mm	Light spot size	150 mm at 2 m
Sensitivity	270° single-turn pot. meter	Ambient light	Max 5'000 lux
Blind zone	0.15 m	Operating frequency (f)	Max. 25 Hz light-dark ratio 1.2
Temperature drift	0.4%/°C	Response time	
Hysteresis (H)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



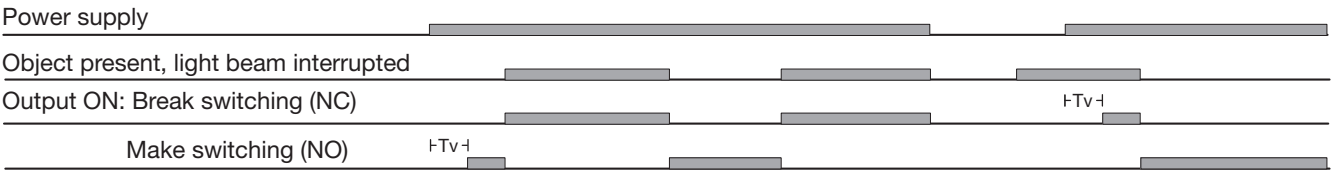
Specifications (cont.)

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 mm², oilproof PVC
Plug	M12 x 1
Cables for plug (M6)	CONH6A...series
Weight	
Cable version	230 g
Plug version	145 g
Approvals	
UL, CSA	
CE-marking	
Yes	

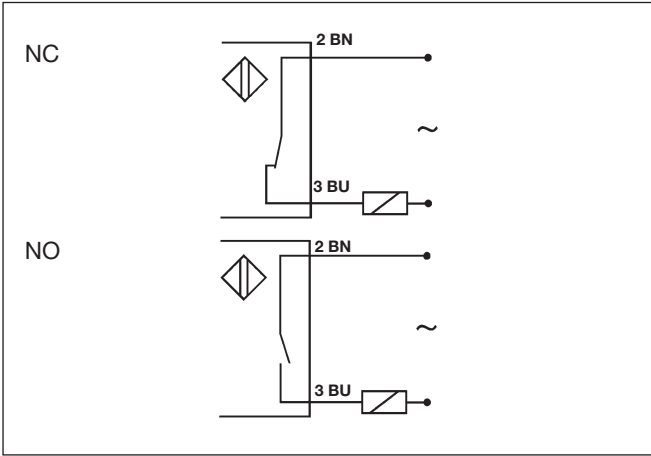
Dimensions



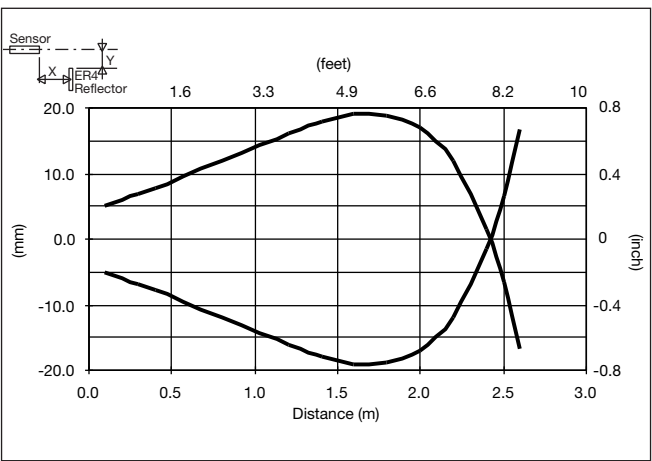
Operation Diagram



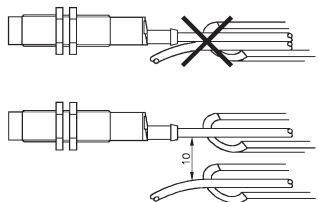
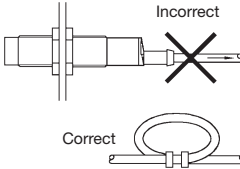
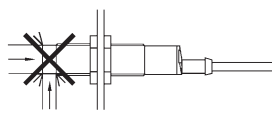
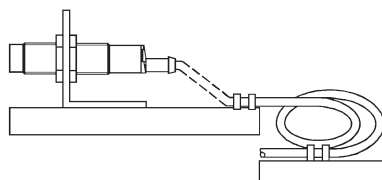
Wiring Diagrams



Detection Diagram



Installation Hints

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

For further information refer to "Accessories".