

Photoelectrics Retro-reflective, Polarized Type PA18CLP20T, 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
- Cable and plug versions



Product Description

The PA18CLP.. is a family of inexpensive general purpose Polarized Retro-reflective sensors in industrial standard 18 mm cylindrical PBTP housing. They are useful for simple applica-

tions where a basic sensor provides adequate sensing performance. The sensors are simple to use and no adjustment are necessary. The output is a 2-wire NO or NC thyristor (SCR) output.

Ordering Key

PA18CLP20TOM6

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

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	2.0 m	PA18CLP20TO	PA18CLP20TOM6	PA18CLP20TC	PA18CLP20TCM6

Note: Plugs and reflectors to be ordered separately.

Specifications

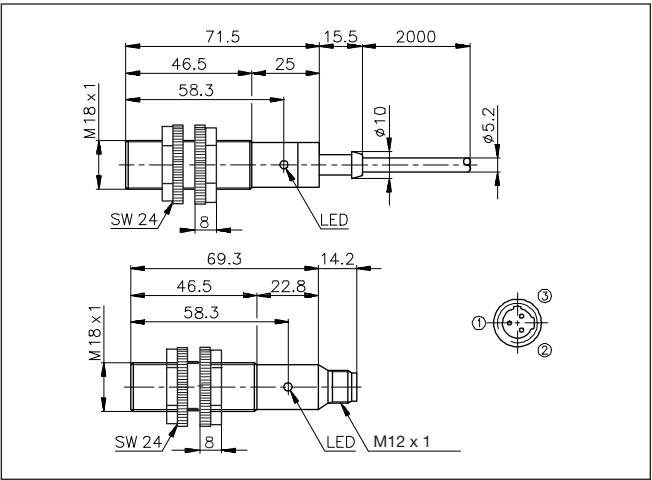
Rated operating dist. (S_n)	Up to 2.0 m. Ref. reflector type ER4 Ø 84 mm	Light spot size	150 mm at 2 m
Blind zone	0.15 m	Ambient light	Max 5'000 lux
Temperature drift	0.4%/°C	Operating frequency (f)	Max. 25 Hz light-dark ratio 1.2
Hysteresis (H) (Differential travel)	3 to 20 %	Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 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) Continuous (I _a) Short-time (I)	≤ 500 mA ≤ 3 A, max. 20 ms	Indication function Output ON	Dark (NC) or light (NO) switching LED, yellow
Min. operational current (I_m)	10 mA	Environment Overvoltage category Pollution degree Degree of protection	III (IEC 60664/60664A; 60947-1) 3 (IEC 60664/60664A; 60947-1) IP 67 (IEC 60529; 60947-1)
OFF-state current (I_i)	≤ 5 mA, typ. 2.6 mA	Temperature Operating Storage	-20° to +60°C (-4° to 140°F) -30° to +70°C (-22° to 158°F)
Voltage drop (U_d)	Typ. ≤ 7 VAC max. ≤ 10 VAC	Vibration	10 to 150 Hz, 0.5 mm/- 7.5 g (IEC 60068-2-6)
Protection	Transients	Shock	2 x 1 m 100 x 0.5 m (IEC 60068-2-32)
Transient voltage	1 kV / 0.5 J	Dielectric voltage	1600 V (IEC 60364-4-41)
Light source	GaAlAs LED, 660 nm		
Light type	Red polarized, modulated		
Optical angle	± 2°		



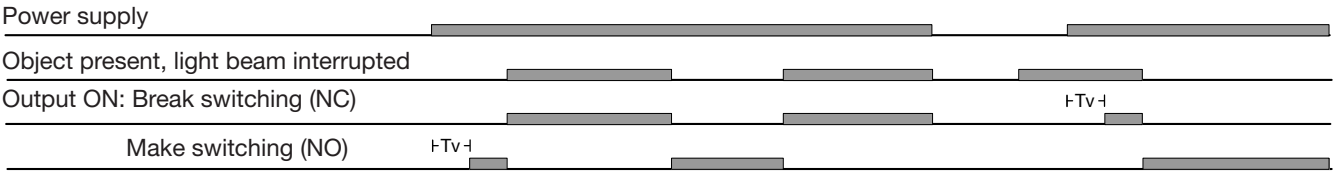
Specifications (cont.)

Housing material	
Body	PBTP thermoplastic polyester
Front	PMMA, red
Cable (Cable end)	PVC, black
Nuts	Reinforced nylon
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	105 g
Plug version	22 g
Approvals	UL, CSA
CE-marking	Yes

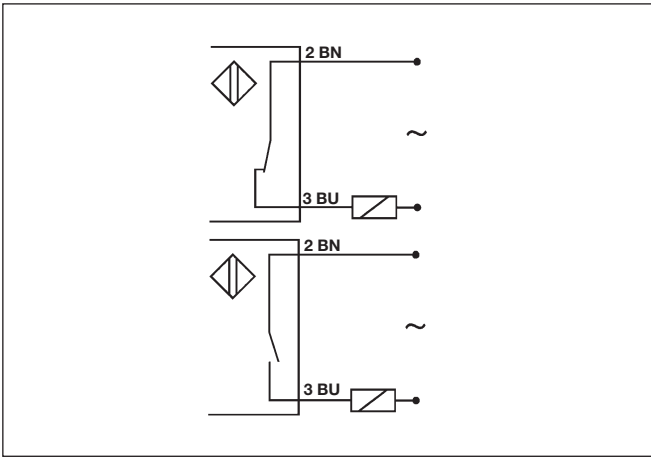
Dimensions



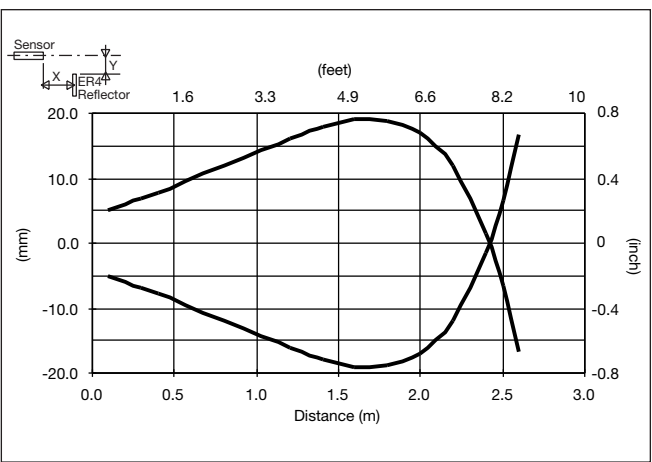
Operation Diagram



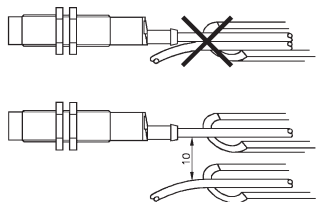
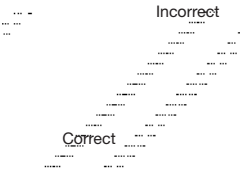
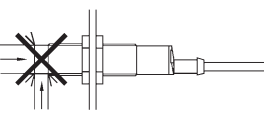
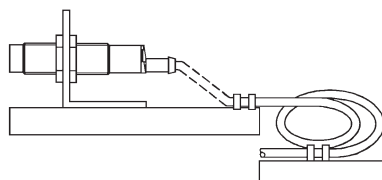
Wiring Diagrams



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: PA18CLP20T.
- 2 nuts
- **Packaging:** Plastic bag

Accessories

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

For further information refer to "Accessories".