

Photoelectrics

Retro-reflective

Type PA18CLR30T, AC, PBTP housing

CARLO GAVAZZI



- Range: 3 m
- Modulated infrared light
- Supply voltage: 20 to 250 VAC
- Output: 500 mA SCR
- Make and break switching functions
- LED output indication
- High immunity to ambient light
- Cable and plug versions

Product Description

The PA18CLR.. is a family of inexpensive general purpose Retro-reflective sensors in industrial standard 18 mm cylindrical PBTP housing. They are useful for simple applications 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

PA18CLR30TOM6

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	3 m	PA18CLR30TO	PA18CLR30TOM6	PA18CLR30TC	PA18CLR30TCM6

Note: Plugs and reflectors to be ordered separately

Specifications

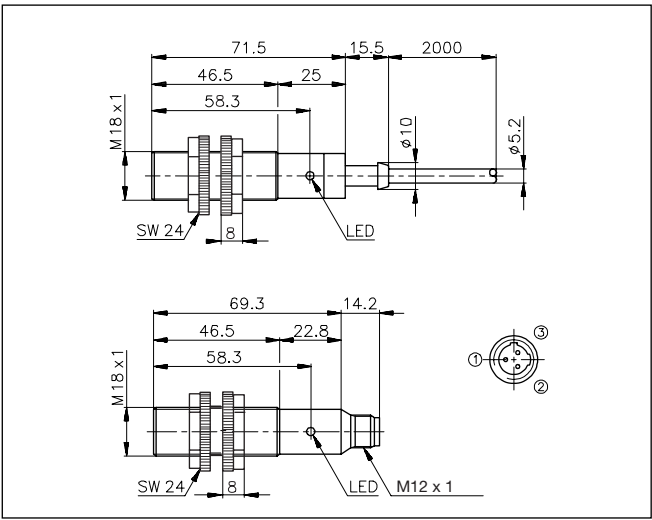
Rated operating dist. (S_n)	Up to 3 m Ref. reflector type ER4, Ø 84 mm	Operating frequency (f)	Max. 20 Hz, light/dark ratio 1:2
Temperature drift	0.4%/K	Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 20 ms ≤ 30 ms
Hysteresis (H) (Differential travel)	3 to 20%	Power ON delay (t_v)	Typ. 100 ms
Rated operational volt. (U_B)	20 to 250 VAC, 45 to 65 Hz	Indication function Output ON	Dark (NC) or light (NO) switching LED, yellow
Output current (AC 12, AC 140) Continuous (I _e) Short-time (I)	≤ 500 mA ≤ 3 A, max. 20 ms	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)
Min. operational current (I_m)	10 mA	Temperature Operating Storage	-20° to +60°C (-4° to 140°F) -30° to +70°C (-22° to 158°F)
OFF-state current (I_r)	< 5 mA, typ. 2.6 mA	Vibration	10 to 150 Hz, 0.5 mm/- 7.5 g (IEC 60068-2-6)
Voltage drop (U_d)	≤ 10 VAC, typ. 7 VAC	Shock	2 x 1 m 100 x 0.5 m (IEC 60068-2-32)
Protection	Transients	Dielectric voltage	1600 V (IEC 60364-4-41)
Transient voltage	1 kV/0.5 J		
Light source	GaAlAs LED, 880 nm		
Light type	Infrared, modulated		
Optical angle	± 2.2°		
Light spot size	150 mm at 2 m		
Ambient light	Max. 10,000 lux		



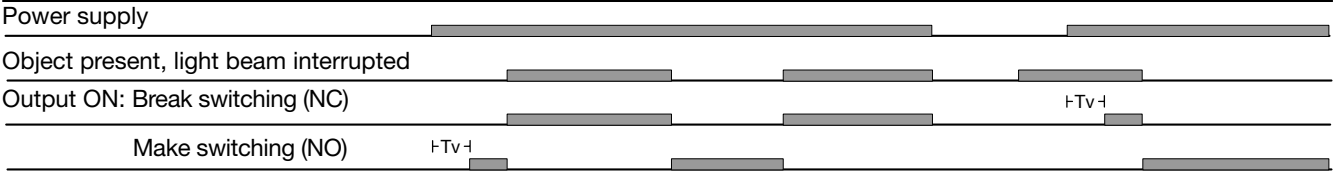
Specifications (cont.)

Housing material	
Body	PBTP grey thermoplastic polyester
Front	Luran®, black
Cable end	Polyester, black
Nuts	Reinforced nylon
Connection	
Cable	Grey, 2 m, 2 x 0.5 mm², oilproof PVC
Plug	M12 x 1
Cables for plug (M6)	CON.6A-.. serie
Weight	
Cable version	105 g
Plug version	22 g
Approvals	
UL, CSA	
CE-marking	
Yes	

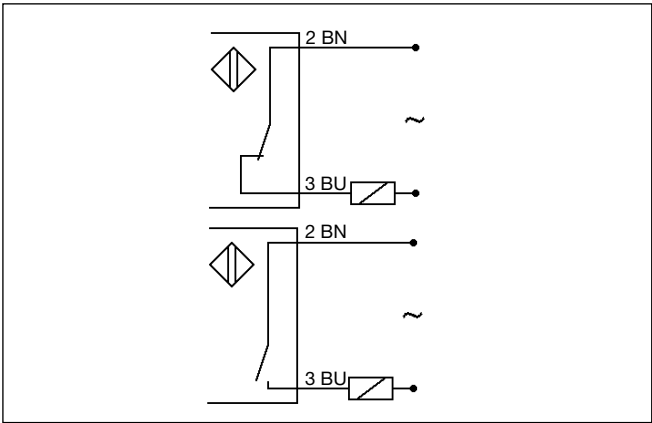
Dimensions



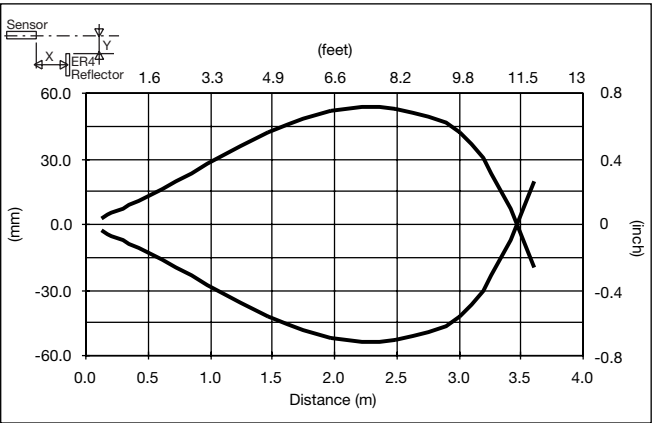
Operation Diagram



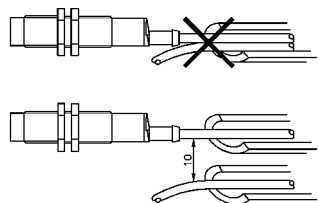
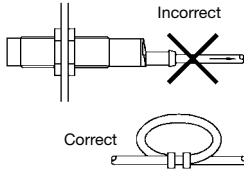
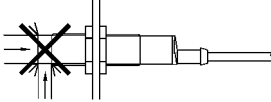
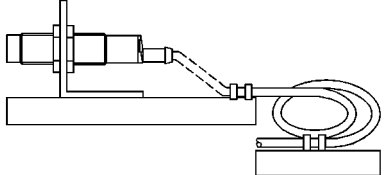
Wiring Diagrams



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>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: PA18CLR30T.
- 2 nuts
- **Packaging:** plastic bag

Accessories

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

For further information refer to "Accessories"