

Photoelectrics Retro-reflective Type PA18ALR30T., AC, Metal 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
- Heavy duty M18 metal housing, IP 67
- Cable and plug versions

Product Description

The PA18LR30.. is a family of general purpose retro-reflective sensors 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 PA18ALR30TOM6SA

Type	PA18ALR30TOM6SA
Housing style	PA18ALR30TOM6SA
Housing size	PA18ALR30TOM6SA
Housing material	PA18ALR30TOM6SA
Housing length	PA18ALR30TOM6SA
Detection principle	PA18ALR30TOM6SA
Sensing distance	PA18ALR30TOM6SA
Output type	PA18ALR30TOM6SA
Output configuration	PA18ALR30TOM6SA
Connection type	PA18ALR30TOM6SA
Adjustable	PA18ALR30TOM6SA

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	PA18ALR30TOSA	PA18ALR30TOM6SA	PA18ALR30TCSA	PA18ALR30TCM6SA

Note: Plugs and reflector to be ordered separately

Specifications

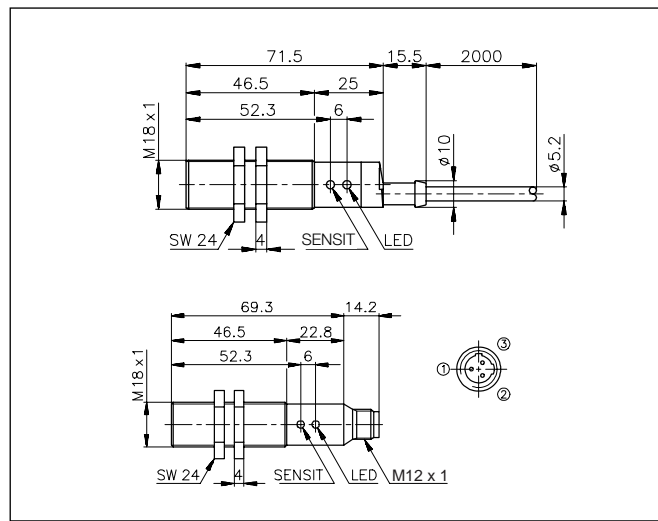
Rated operating dist. (S_n)	Up to 3 m Ref. reflector type ER4, Ø 84 mm	Optical angle	±2.2°
Sensitivity	270° single-turn pot. meter	Light spot size	150 mm at 2 m
Temperature drift	0.4%/K	Ambient light	Max. 10,000 lux
Hysteresis (H) (Differential travel)	3 to 20%	Operating frequency (f)	Max. 20 Hz, light/dark ratio 1:2
Rated operational volt. (U_B)	20 to 250 VAC, 45 to 65 Hz	Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 20 ms ≤ 30 ms
Output current (AC 12, AC 140) Continuous (I _e) Short-time (I)	≤ 500 mA ≤ 3 A, max. 20 ms	Power ON delay (t_v)	Typ. 100 ms
Min. operational current (I_m)	10 mA	Indication function Output ON	Dark (NC) or light (NO) switching LED, yellow
OFF-state current (I_i)	< 5 mA, typ. 2.6 mA	Environment Overvoltage category Pollution degree Degree of protection	II (IEC 60664/60664A; 60947-1) 3 (IEC 60664/60664A; 60947-1) IP 67 (IEC 60529; 60947-1)
Voltage drop (U_d)	≤ 10 VAC, typ. 7 VAC	Temperature Operating Storage	-20° to +60°C (-4° to 140°F) -30° to +70°C (-22° to 158°F)
Protection	Transients	Vibration	10 to 150 Hz, 0.5 mm/- 7.5 g (IEC 60068-2-6) 2 x 1 m 100 x 0.5 m (IEC 60068-2-32)
Transient voltage	1 kV/0.5 J	Shock	
Light source	GaAlAs LED, 880 nm		
Light type	Infrared, modulated		



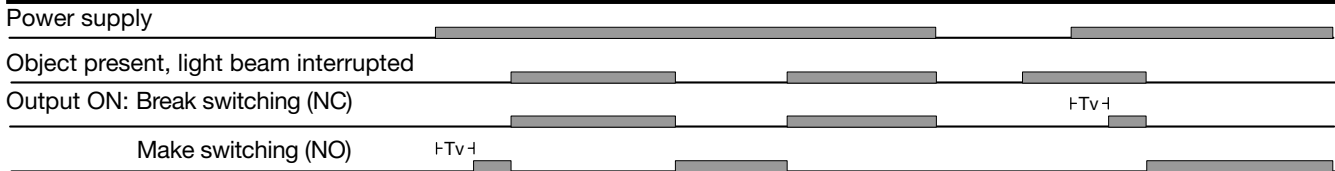
Specifications (cont.)

Dielectric voltage	1500 V (IEC 60364-4-41)
Housing material	
Body	Nickel-plated brass
Front	Luran®, black
Cable end	Polyester, 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 (-3)	CON.6A-.. serie
Weight	
Cable version	150 g
Plug version	65 g
Approvals	UL, CSA
CE-marking	Yes

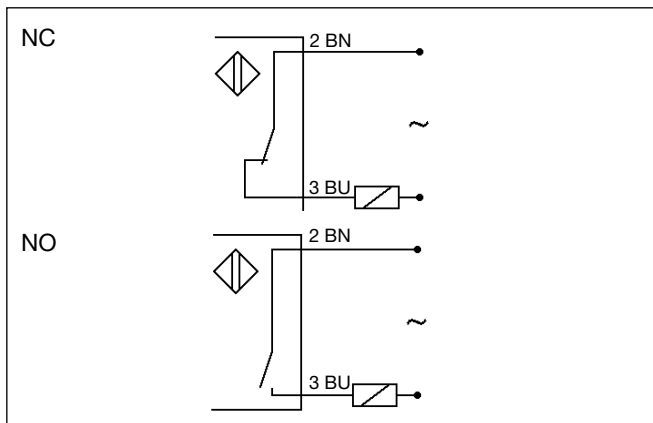
Dimensions



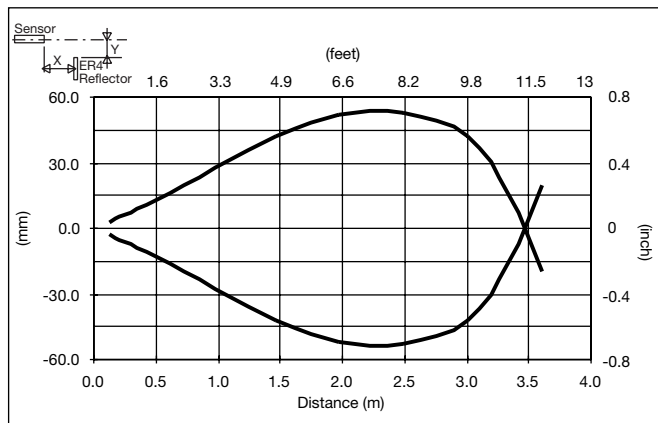
Operation Diagram



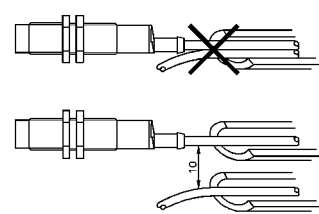
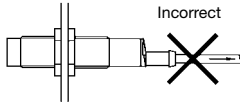
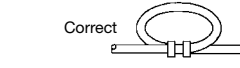
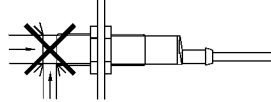
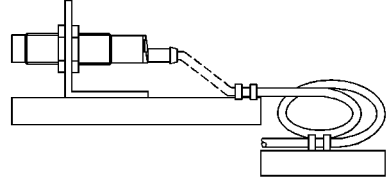
Wiring Diagrams



Detection Diagram



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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Delivery Contents

- Photoelectric switch: PA18ALR..
- 2 nuts
- **Packaging:** plastic bag

Accessories

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

For further information refer to "Accessories"