

Photoelectrics

Diffuse-reflective

Type PA18CLD0.T, AC, PBTP-housing

CARLO GAVAZZI



- Range: 400 mm adjustable
100, 200 or 400 mm fixed
- Modulated, infrared light
- Supply voltage: 20 to 250 VAC
- Output: 500 mA SCR
- Make or break switching function, LED indication
- High immunity to ambient light
- Cable and plug versions



Product Description

The PA18CLD.. is a family of inexpensive general purpose Diffuse-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 (except 400 mm diffuse adjustable type). The output is a 2-wire NO or NC thyristor (SCR) output.

Ordering Key PA18CLD04TCM6SA

Type	PA18CLD04TCM6SA
Housing style	04
Housing size	TC
Housing material	M6
Housing length	SA
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
M 18	100 mm fixed	PA18CLD01TO	PA18CLD01TOM6	PA18CLD01TC	PA18CLD01TCM6
M 18	200 mm fixed	PA18CLD02TO	PA18CLD02TOM6	PA18CLD02TC	PA18CLD02TCM6
M 18	400 mm fixed	PA18CLD04TO	PA18CLD04TOM6	PA18CLD04TC	PA18CLD04TCM6
M 18	400 mm adjust.	PA18CLD04TOSA	PA18CLD04TOM6SA	PA18CLD04TCSA	PA18CLD04TCM6SA

Note: Plugs to be ordered separately

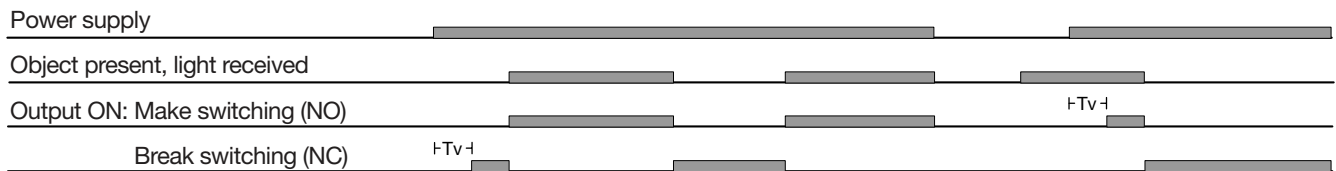
Specifications

Rated operating dist. (S_n) Adjustable Fixed	Up to 400 mm 100, 200 or 400 mm	Min. operational current (I_m) 10 mA	Reference target: Kodak test card R27, white, 90% reflectivity	OFF-state current (I_l) Max < 5 mA, typ. 2.6 mA
	Size: S _n < 400 mm S _n ≥ 400 mm		100 x 100 mm 200 x 200 mm	
Sensitivity Adjustable type only	270° turn potentiometer,	Protection	Transients	
Temperature drift	0.4%/K	Transient voltage	Max 1 kV/0,5 J	
Hysteresis (H) (Differential travel)	3 to 20%,	Light source	GaAlAs LED, 880 nm	
Rated operational volt. (U_B)	20 to 250 VAC, 45 to 65 Hz	Light type	Infrared, modulated synchronized	
Output current (AC12, AC140) Continuous (I _a) Short-time (I)	≤ 500 mA ≤ 3 A, max. 20 ms	Sensing angle	± 25° at 1/2 range	
			Max 10'000 lux	
		Ambient light		
		Operating frequency (f)	20 Hz, light/dark ratio 1:2	
		Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 20 ms ≤ 30 ms	
		Power ON delay (t_v)	Typ. 100 ms	
		Indication function Output ON	Dark (NC) or light (NO) switching LED, yellow	

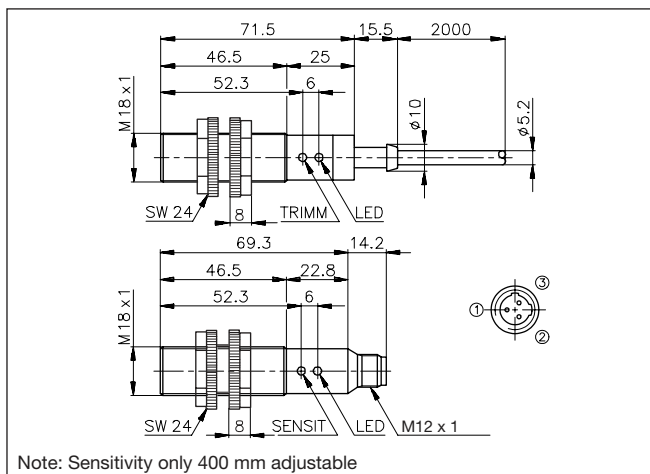
Specifications (cont.)

Environment		Housing material	
Overvoltage category	III (IEC 60664/60664A; 60947-1)	Body	PBTP, grey thermoplastic polyester
Pollution degree	3 (IEC 60664/60664A; 60947-1)	Front	Luran®, black
Degree of protection	IP 67 (IEC 60529; 60947-1)	Cable end	Polyester, black
Temperature		Nuts	Reinforced nylon
Operating	-20° to +60°C (-4° to 140°F)	Connection	
Storage	-30° to +70°C (-22° to 158°F)	Cable	Grey, 2 m, 2 x 0.5 mm ² , oilproof PVC,
Vibration		Plug	M12 x 1
10 to 150 Hz, 0.5 mm/-7.5 g (IEC 60068-2-6)		Cables for plug (M6)	CON.6A-... series
Shock		Weight	
2 x 1 m 100 x 0.5 m (IEC 60068-2-32)		Cable version	105 g
Dielectric voltage		Plug version	22 g
1600 VAC (IEC 60364-4-41)		Approvals	UL, CSA
		CE-marking	Yes

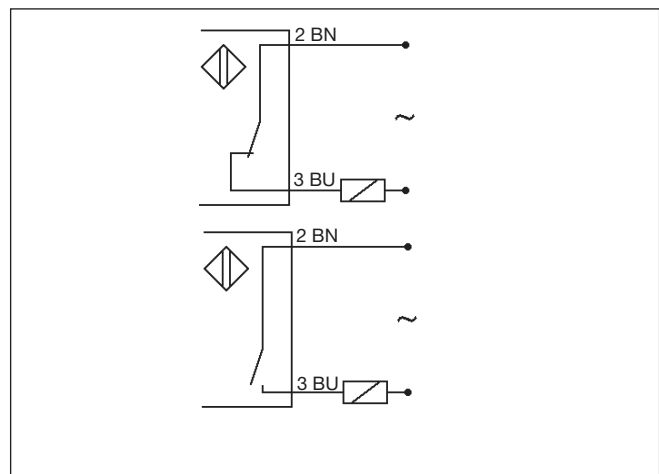
Operation Diagram



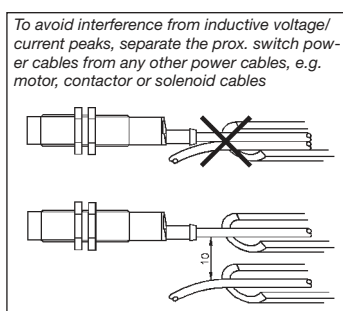
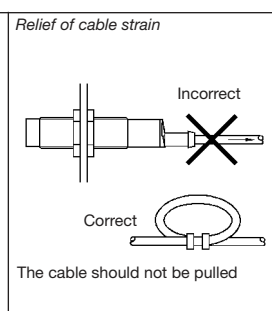
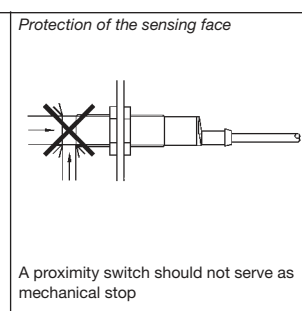
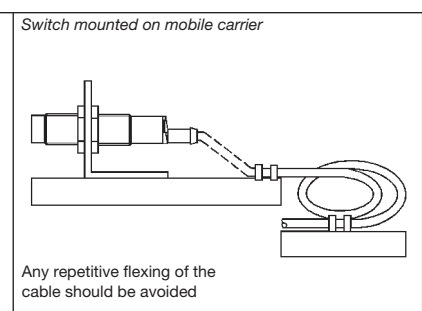
Dimensions



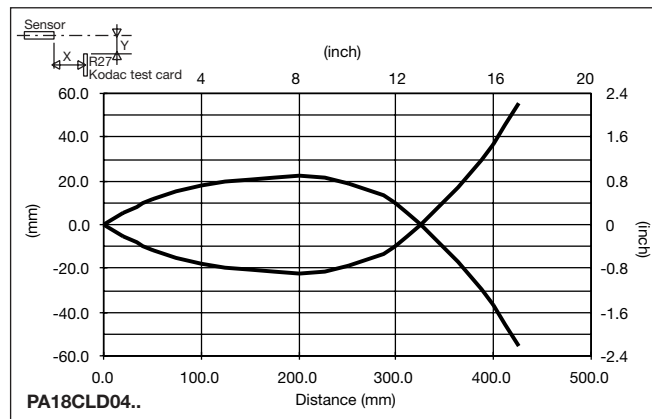
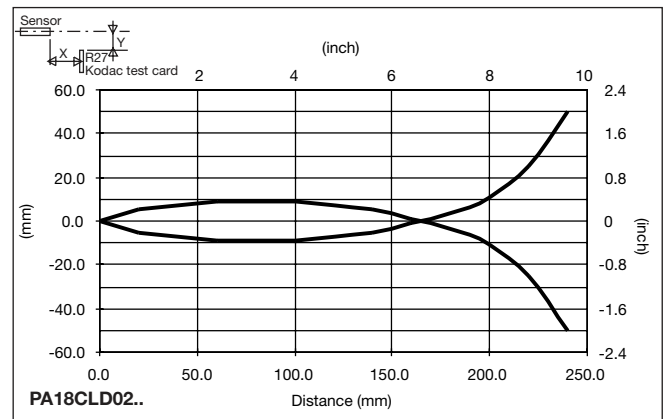
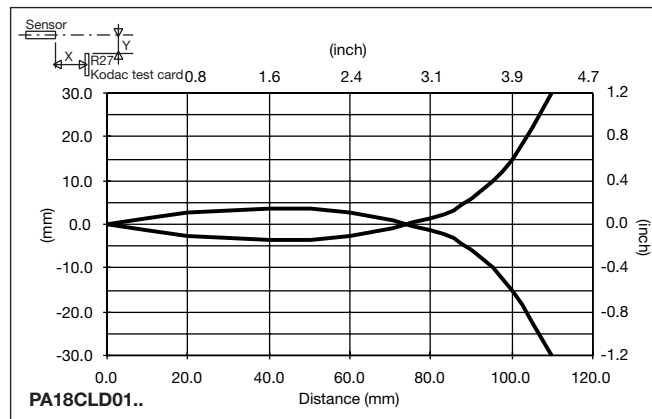
Wiring Diagrams



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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Detection Diagrams



Delivery Contents

- Photoelectric switch: PA18CLD04T
- 2 nuts
- **Packaging:** plastic bag

Accessories

- Fibre optics
- Connector type CON.6A-.. series.
- Screw driver for adjustments: 77-000
- MB18A
- APA18-RAR

For further informations refer to "Accessories"