

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 _____
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
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

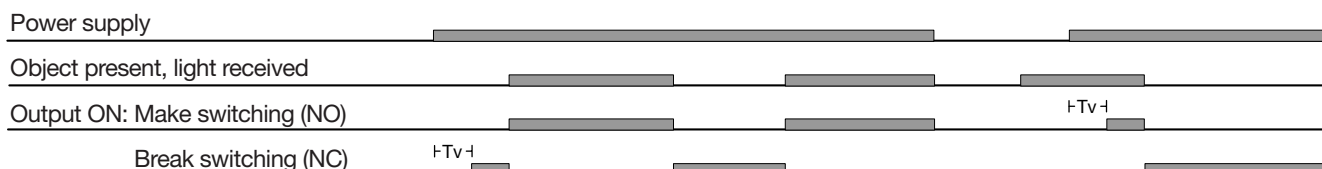
Specifications

Rated operating dist. (S_n) Adjustable Fixed	Up to 400 mm 100, 200 or 400 mm Reference target: Kodak test card R27, white, 90% reflectivity 100 x 100 mm 200 x 200 mm	Min. operational current (I_m)	10 mA
Size: S _n < 400 mm S _n ≥ 400 mm		OFF-state current (I_i)	Max < 5 mA, typ. 2.6 mA
Sensitivity Adjustable type only	270° turn potentiometer,	Voltage drop (U_d)	Max ≤ 10 V, typ. 7 VAC
Temperature drift	0.4%/K	Protection	Transients
Hysteresis (H) (Differential travel)	3 to 20%,	Transient voltage	Max 1 kV/0,5 J
Rated operational volt. (U_B)	20 to 250 VAC, 45 to 65 Hz	Light source	GaAlAs LED, 880 nm
Output current (AC12, AC140) Continuous (I _a) Short-time (I)	≤ 500 mA ≤ 3 A, max. 20 ms	Light type	Infrared, modulated synchronized
		Sensing angle	± 25° at 1/2 range
		Ambient light	Max 10'000 lux
		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

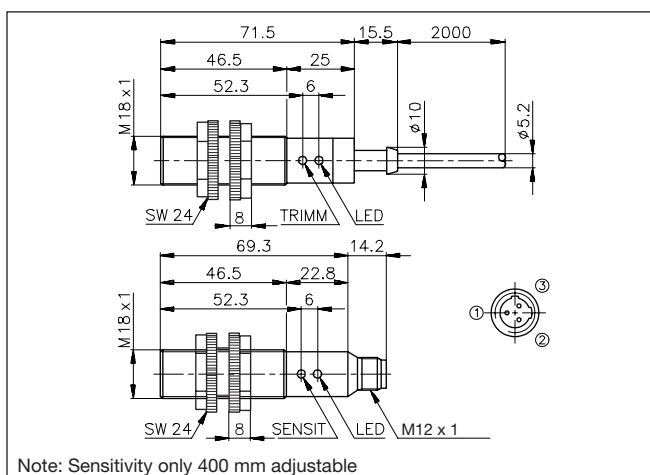
Specifications (cont.)

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, M12 x 1 CON.6A-... series
Vibration		Plug	
Shock		Cables for plug (M6)	
Dielectric voltage		Weight	
		Cable version	105 g
		Plug version	22 g
		Approvals	UL, CSA
		CE-marking	Yes

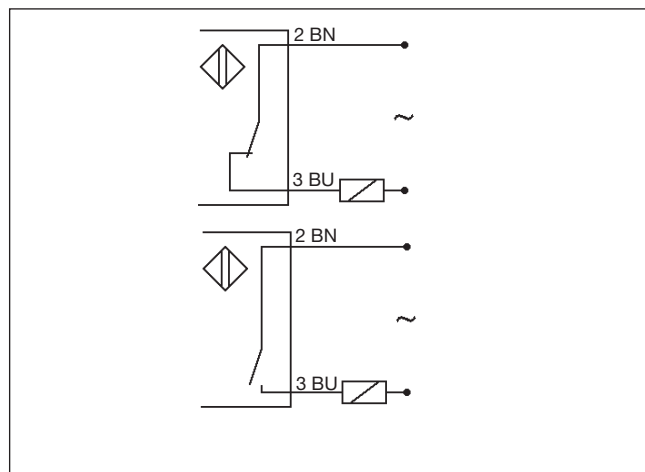
Operation Diagram



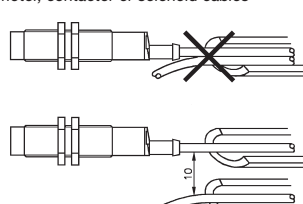
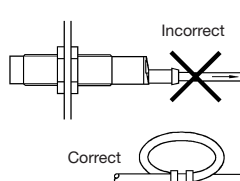
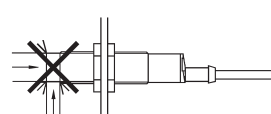
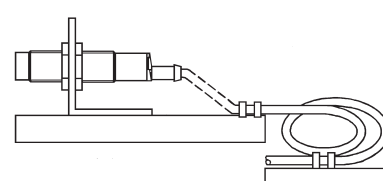
Dimensions



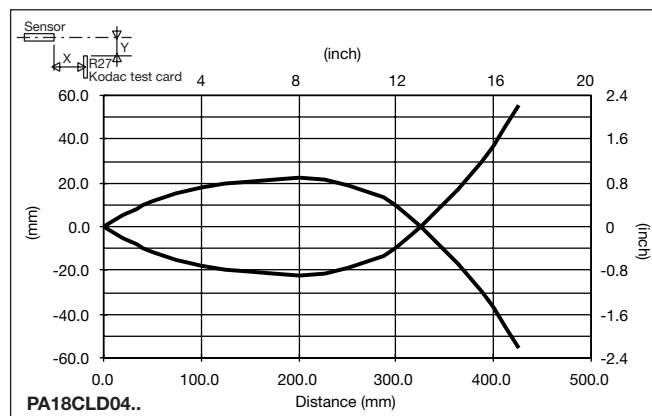
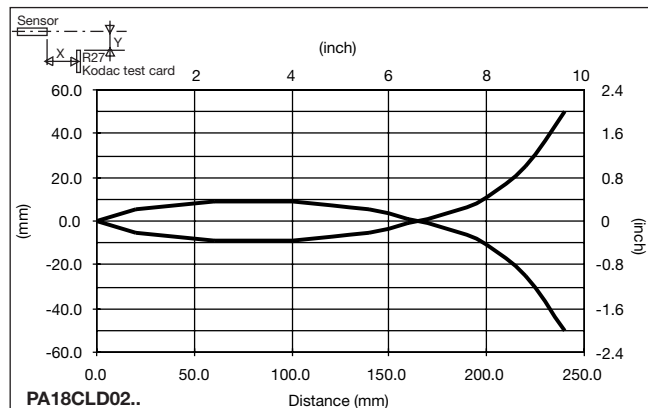
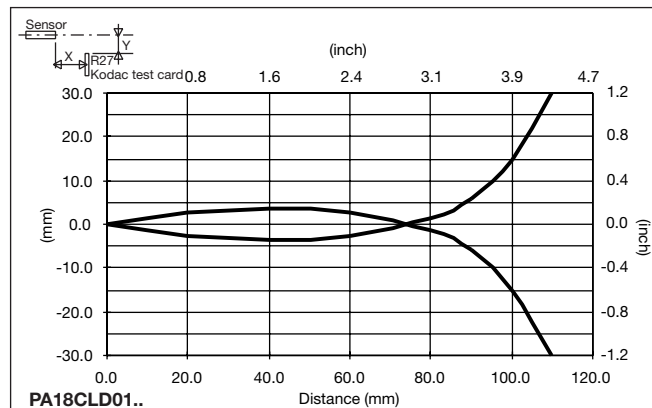
Wiring Diagrams



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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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"

Mouser Electronics

Authorized Distributor

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[PA18CLD04TCM6](#) [PA18CLD02TCM6](#) [PA18CLD04TCSA](#) [PA18CLD04TC](#) [PA18CLD01TC](#) [PA18CLD01TO](#)
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