

Photoelectrics Diffuse-reflective Type PA18CLD0.T, AC, PBTP-housing

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- 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 dif-fuse 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

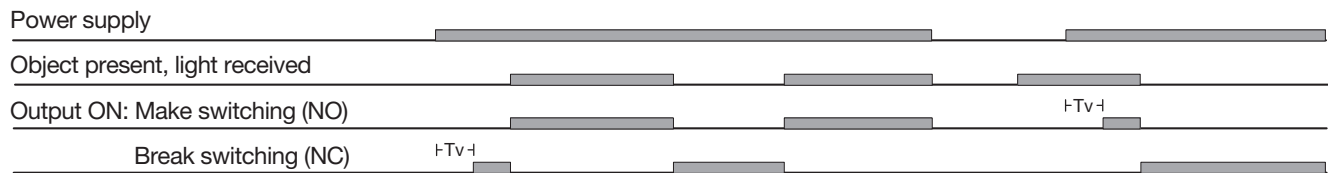
Specifications

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 Light type	GaAlAs LED, 880 nm Infrared, modulated synchronized
Output current (AC12, AC140) Continuous (I _a) Short-time (I)	≤ 500 mA ≤ 3 A, max. 20 ms	Sensing angle Ambient light	± 25° at 1/2 range 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

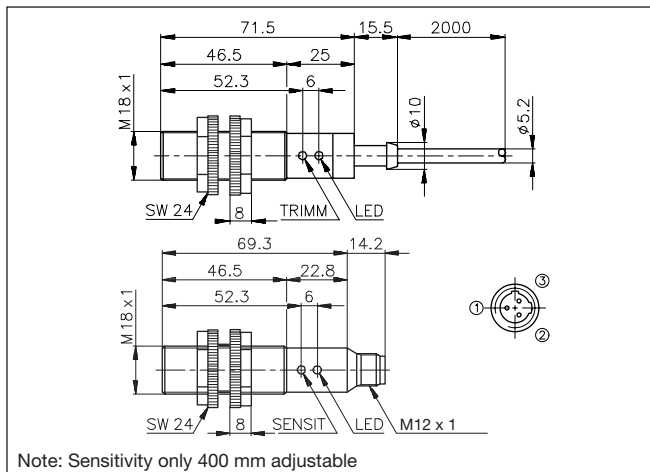
Specifications (cont.)

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

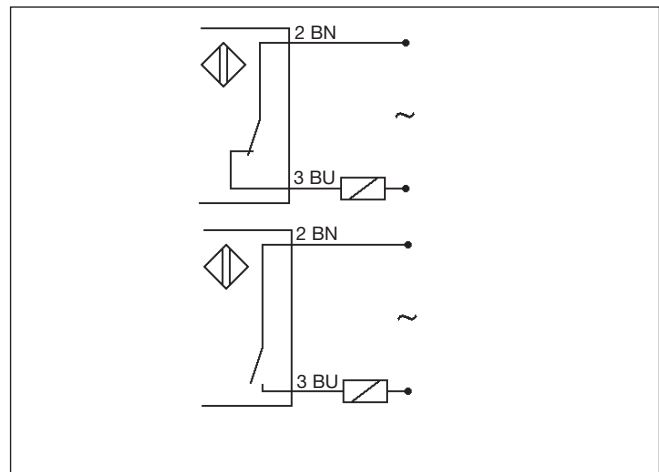
Operation Diagram



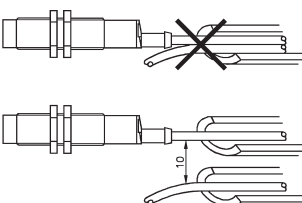
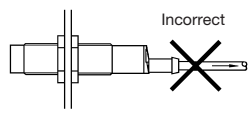
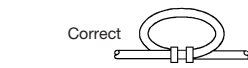
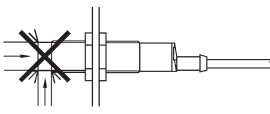
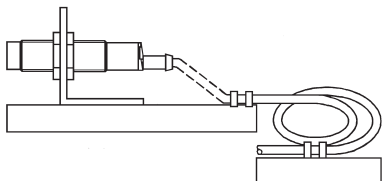
Dimensions



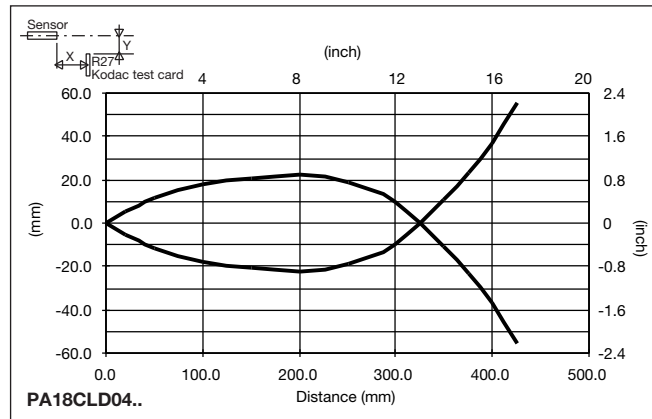
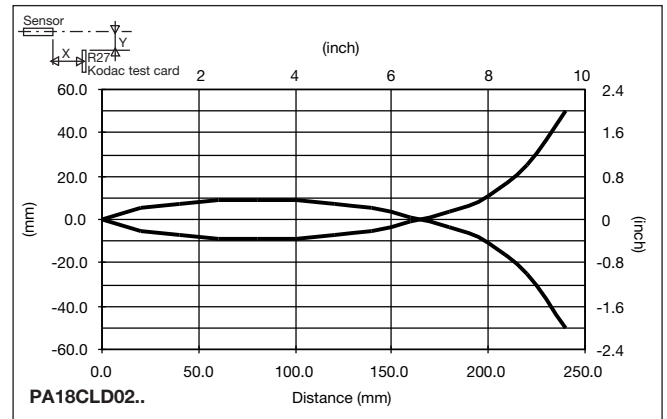
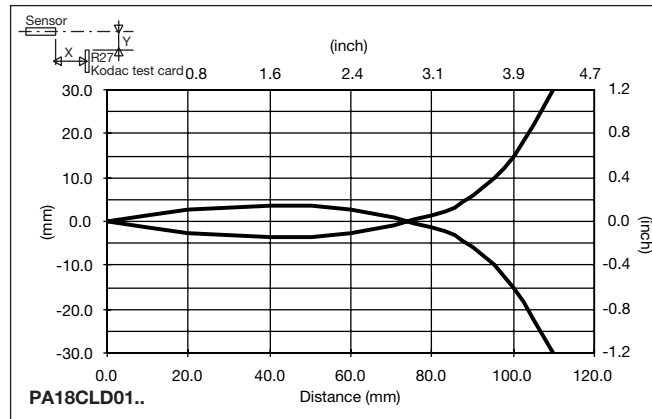
Wiring Diagrams



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>Incorrect</p>  <p>Correct</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