

Photoelectrics

Diffuse-reflective

Type PA18CLD0.T, AC, PBTP-housing



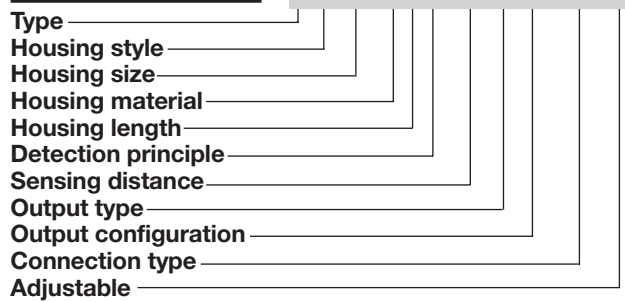
- Range: 400 mm adjustable
100, 200 or 400 mm fixed
- Modulated, infrared light
- Supply voltage: 20 to 250 VAC
- Output: 500 mA SCR
- Make or break switching function, LED indication
- High immunity to ambient light
- Cable and plug versions



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 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

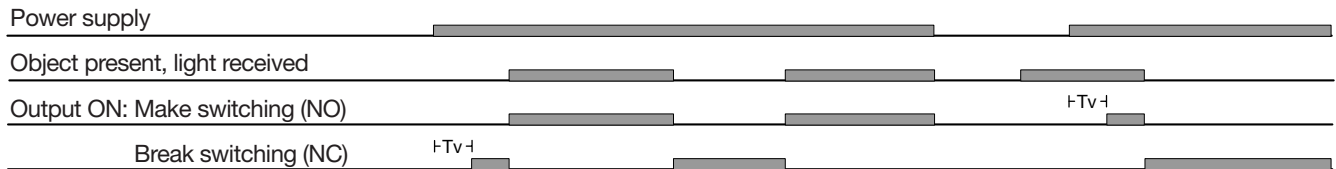
Rated operating dist. (S_n) Adjustable Fixed	Up to 400 mm 100, 200 or 400 mm	Min. operational current (I_m) 10 mA	10 mA
	Reference target: Kodak test card R27, white, 90% reflectivity 100 x 100 mm 200 x 200 mm		OFF-state current (I_l) Max < 5 mA, typ. 2.6 mA
Size: S _n < 400 mm S _n ≥ 400 mm		Voltage drop (U_d) Max ≤ 10 V, typ. 7 VAC	
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
		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



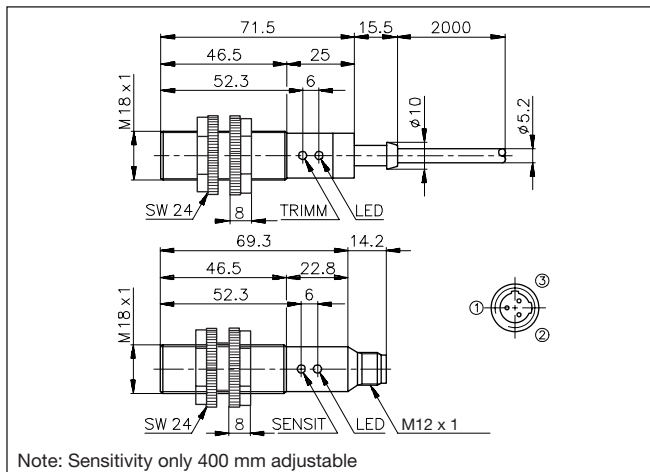
Specifications (cont.)

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,
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

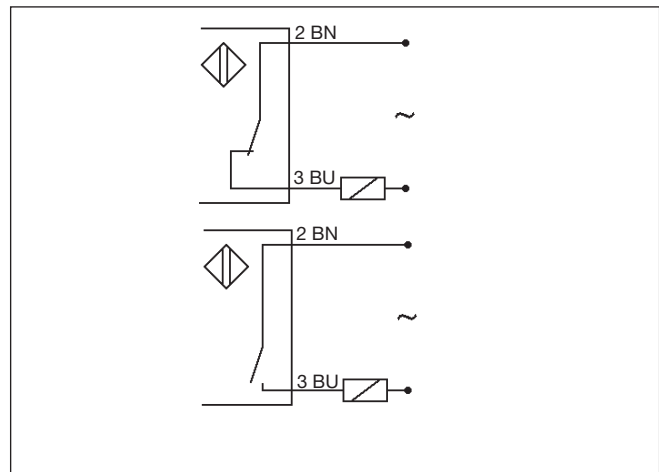
Operation Diagram



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>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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