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 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	Up to 400 mm
Fixed	100, 200 or 400 mm
	Reference target: Kodak test card R27, white, 90% reflectivity
Size: S_n < 400 mm	100 x 100 mm
S_n ≥ 400 mm	200 x 200 mm
Sensitivity	
Adjustable type only	270° turn potentiometer,
Temperature drift	0.4%/K
Hysteresis (H)	
(Differential travel)	3 to 20%,
Rated operational volt. (U_B)	20 to 250 VAC, 45 to 65 Hz
Output current (AC12, AC140)	
Continuous (I_e)	≤ 500 mA
Short-time (I)	≤ 3 A, max. 20 ms

Min. operational current (I_m)	10 mA
OFF-state current (I_r)	Max < 5 mA, typ. 2.6 mA
Voltage drop (U_d)	Max ≤ 10 V, typ. 7 VAC
Protection	Transients
Transient voltage	Max 1 kV/0,5 J
Light source	GaAlAs LED, 880 nm
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})	≤ 20 ms
ON-OFF (t_{OFF})	≤ 30 ms
Power ON delay (t_V)	Typ. 100 ms
Indication function	Dark (NC) or light (NO) switching
Output ON	LED, yellow

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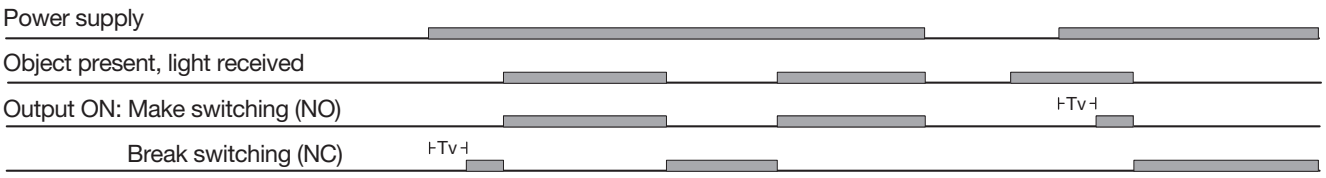
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Specifications (cont.)

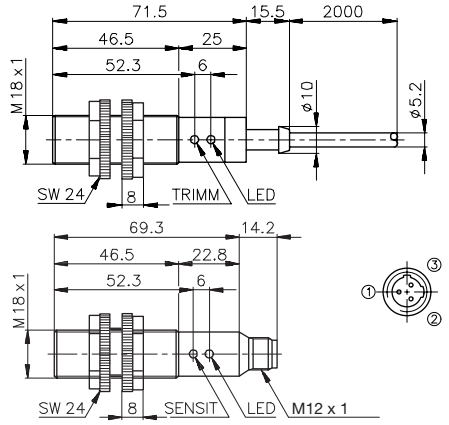
Environment	
Overvoltage category	III (IEC 60664/60664A; 60947-1)
Pollution degree	3 (IEC 60664/60664A; 60947-1)
Degree of protection	IP 67 (IEC 60529; 60947-1)
Temperature	
Operating	-20° to +60°C (-4° to 140°F)
Storage	-30° to + 70°C (-22° to 158°F)
Vibration	10 to 150 Hz, 0.5 mm/- 7.5 g (IEC 60068-2-6)
Shock	2 x 1 m 100 x 0.5 m (IEC 60068-2-32)
Dielectric voltage	1600 VAC (IEC 60364-4-41)

Housing material	
Body	PBTP, grey thermoplastic polyester
Front	Luran®, black
Cable end	Polyester, black
Nuts	Reinforced nylon
Connection	
Cable	Grey, 2 m, 2 x 0.5 mm², oilproof PVC,
Plug	M12 x 1
Cables for plug (M6)	CON.6A-.. series
Weight	
Cable version	105 g
Plug version	22 g
Approvals	UL, CSA
CE-marking	Yes

Operation Diagram

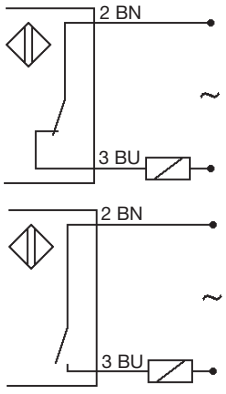


Dimensions

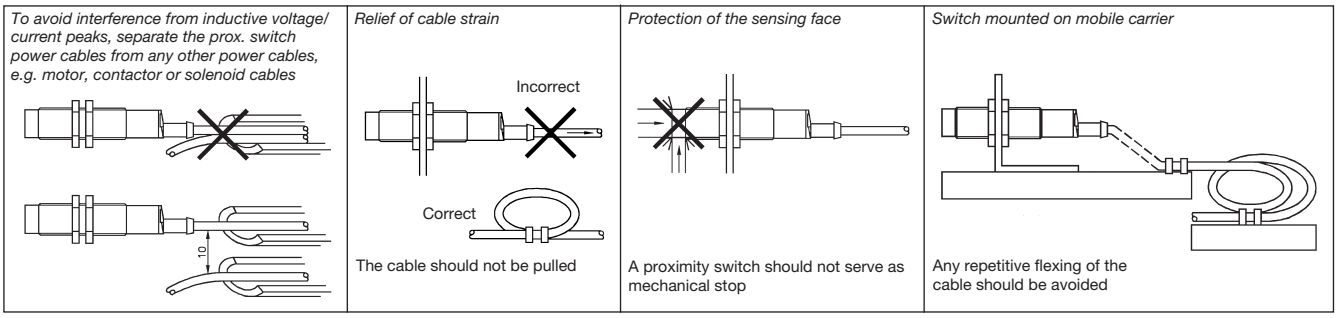


Note: Sensitivity only 400 mm adjustable

Wiring Diagrams



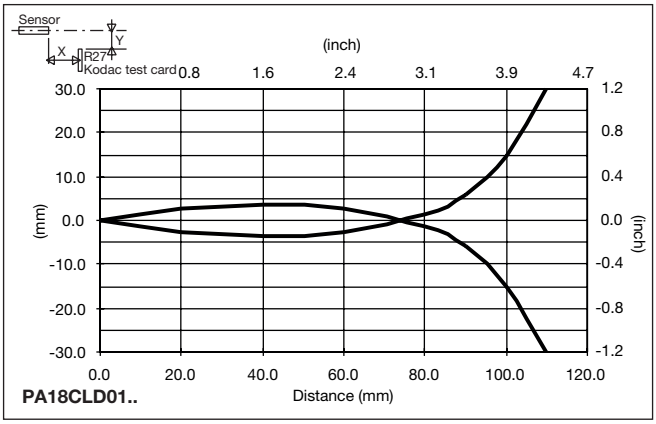
Installation Hints

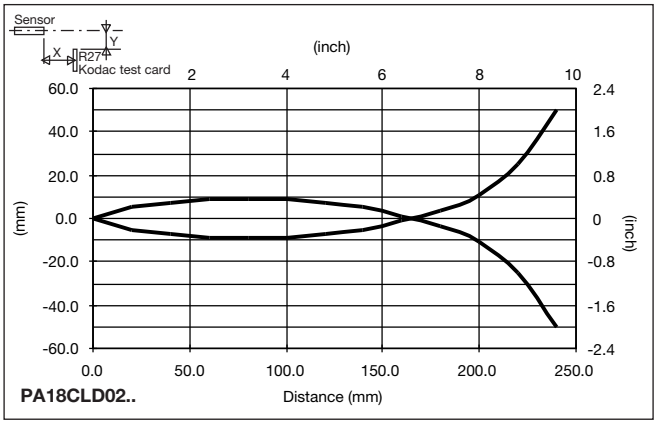


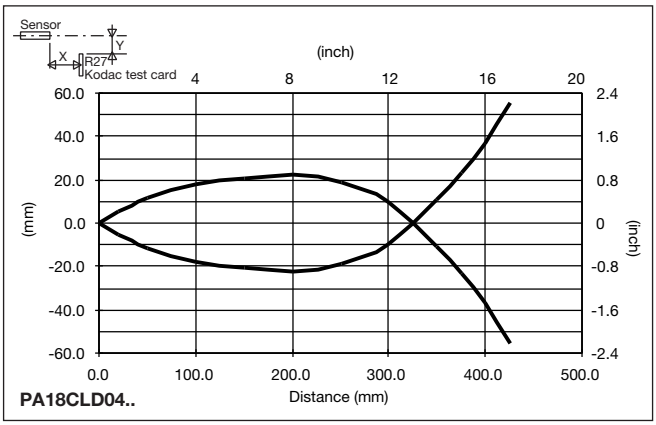
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Detection Diagrams







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

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