

# Photoelectrics Diffuse-reflective Type PA18ALD04T., AC, Metal-housing

CARLO GAVAZZI



- Range: 400 mm adjustable
- 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
- Heavy duty M18 metal housing, IP67
- Cable and plug versions

## Product Description

The PA18ALD.. is a family of general purpose diffuse-reflective sensors in industrial standard 18 mm cylindrical nickel-plated brass housing for heavy duty applications. They are useful for simple applications where a basic

sensor provides adequate sensing performance. The sensors are easy to adjust with 270° single-turn potentiometer. The output is a 2-wire NO or NC thyristor (SCR) output.

## Ordering Key PA18ALD04TOM6SA

Type	PA18ALD04TOM6SA
Housing style	PA18ALD04TOM6SA
Housing size	PA18ALD04TOM6SA
Housing material	PA18ALD04TOM6SA
Housing length	PA18ALD04TOM6SA
Detection principle	PA18ALD04TOM6SA
Sensing distance	PA18ALD04TOM6SA
Output type	PA18ALD04TOM6SA
Output configuration	PA18ALD04TOM6SA
Connection type	PA18ALD04TOM6SA
Adjustable	PA18ALD04TOM6SA

## Type Selection

Housing diameter	Rated operating dist. (S <sub>n</sub> )	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	400 mm	PA18ALD04TOSA	PA18ALD04TOM6SA	PA18ALD04TCSA	PA18ALD04TCM6SA

Note: Plugs to be ordered separately

## Specifications

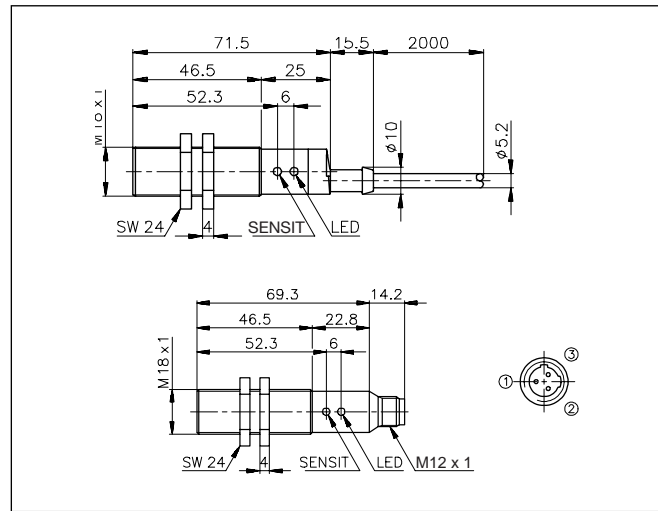
<b>Rated operating dist. (S<sub>n</sub>)</b> Adjustable	Up to 400 mm, Ref. target Kodac test card 227, white, 90° reflectivity, 200 x 200 mm	<b>Sensing angle</b>	±25° at 1/2 range Max 10'000 lux
<b>Sensitivity</b>	270° single-turn pot. meter	<b>Ambient light</b>	
<b>Temperature drift</b>	0.4%/K	<b>Operating frequency (f)</b>	20 Hz, light/dark ratio 1:2
<b>Hysteresis (H)</b> (Differential travel)	3 to 20%,	<b>Response time</b>	
<b>Rated operational volt. (U<sub>B</sub>)</b>	20 to 250 VAC, 45 to 65 Hz	OFF-ON (t <sub>ON</sub> )	≤ 20 ms
<b>Output current (AC12, AC140)</b>		ON-OFF (t <sub>OFF</sub> )	≤ 30 ms
Continuous (I <sub>e</sub> )	≤ 500 mA	<b>Power ON delay (t<sub>v</sub>)</b>	Typ. 100 ms
Short-time (I)	≤ 3A, max. 20 ms	<b>Indication function</b>	Dark (NC) or light (NO) switching Output ON LED, yellow
<b>Min. operational current (I<sub>m</sub>)</b>	10 mA	<b>Environment</b>	
<b>OFF-state current (I<sub>r</sub>)</b>	Max < 5 mA, typ. 2.6 mA	Overvoltage category	II (IEC 60664/60664A; 60947-1)
<b>Voltage drop (U<sub>d</sub>)</b>	Max ≤ 10 V, typ. 7 VAC	Pollution degree	3 (IEC 60664/60664A; 60947-1)
<b>Protection</b>	Transients	Degree of protection	IP 67 (IEC 60529; 60947-1)
<b>Transient voltage</b>	Max 1 kV/0,5 J	<b>Temperature</b>	
<b>Light source</b>	GaAlAs LED, 880 nm	Operating	-20° to +60°C (-4° to 140°F)
<b>Light type</b>	Infrared, modulated synchronized	Storage	-30° to +70°C (-22° to 158°F)
		<b>Vibration</b>	10 to 150 Hz, 0.5 mm/- 7.5 g (IEC 60068-2-6)
		<b>Shock</b>	2 x 1 m 100 x 0.5 m (IEC 60068-2-32)
		<b>Dielectric voltage</b>	1600 VAC (IEC 60364-4-41)



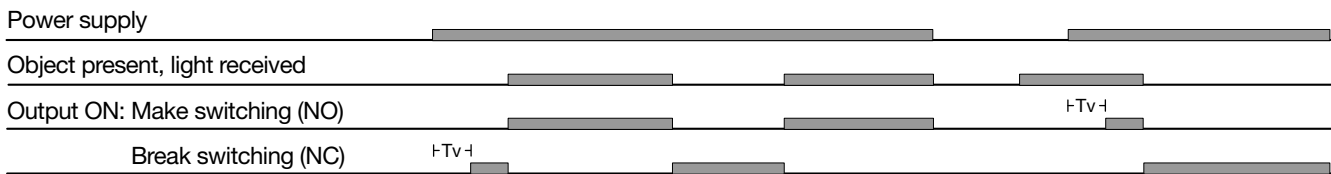
## Specifications (cont.)

<b>Housing material</b>	
Body	Nickel-plated brass
Front	Luran®, black
Cable end	Polyester, black
Nuts	Nickel-plated brass
<b>Connection</b>	
Cable	Grey, 2 m, 2 x 0.5 mm <sup>2</sup> , oilproof PVC, M12 x 1
Plug	M12 x 1
Cables for plug (-6)	CON.6A-... series
<b>Weight</b>	
Cable version	150 g
Plug version	65 g
<b>Approvals</b>	UL
<b>CE-marking</b>	Yes

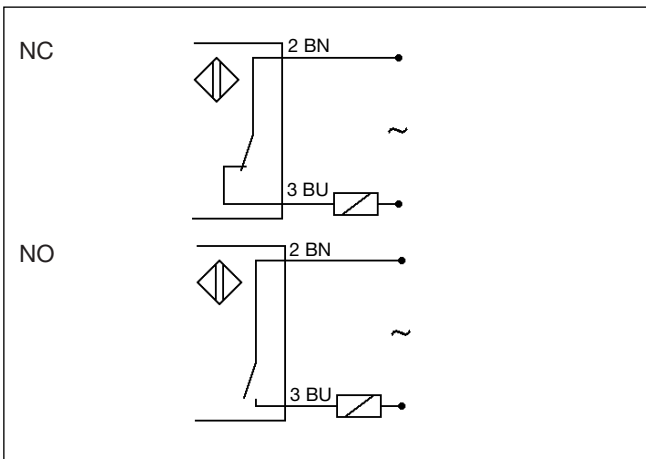
## Dimensions



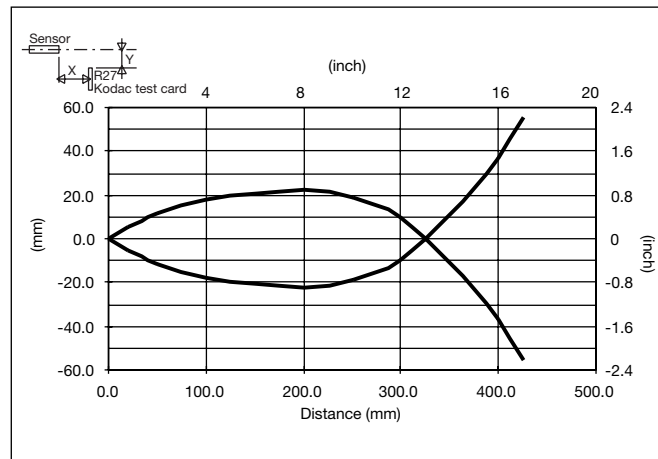
## Operation Diagram



## Wiring Diagrams



## Detection Diagram



## Delivery Contents

- Photoelectric switch: PA18ALD04..
- 2 nuts
- **Packaging:** plastic bag

## Accessories

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

For further informations refer to "Accessories"