

Photoelectrics Diffuse-reflective Type PA18CSD0., DC, PBTP-housing

CARLO GAVAZZI



- Range: 400 mm adjustable
100, 200 or 400 mm fixed
- Modulated, infrared light
- Supply voltage: 10 to 40 VDC
- Output: 200 mA NPN or PNP
- Make and break switching function, LED indication
- Protection: Reverse polarity, short-circuit, transients
- High immunity to ambient light
- Cable and plug versions

Product Description

The PA18CSD.. 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 4-wire complementary (NO and NC) output in NPN (current sinking) or PNP (current sourcing).

Ordering Key

PA18CSD04NAM1SA

Type	PA18CSD04NAM1SA
Housing style	PA18CSD04NAM1SA
Housing size	PA18CSD04NAM1SA
Housing material	PA18CSD04NAM1SA
Housing length	PA18CSD04NAM1SA
Detection principle	PA18CSD04NAM1SA
Sensing distance	PA18CSD04NAM1SA
Output type	PA18CSD04NAM1SA
Output configuration	PA18CSD04NAM1SA
Connection type	PA18CSD04NAM1SA
Adjustable	PA18CSD04NAM1SA

Type Selection

Housing diameter	Rated operating dist. (S _n)	Ordering no. NPN/Cable Make & break swit.	Ordering no. NPN/Plug Make & break swit.	Ordering no. PNP/Cable Make & break swit.	Ordering no. PNP/Plug Make & break swit.
M 18	100 mm fixed	PA18CSD01NA	PA18CSD01NAM1	PA18CSD01PA	PA18CSD01PAM1
M 18	200 mm fixed	PA18CSD02NA	PA18CSD02NAM1	PA18CSD02PA	PA18CSD02PAM1
M 18	400 mm fixed	PA18CSD04NA	PA18CSD04NAM1	PA18CSD04PA	PA18CSD04PAM1
M 18	400 mm adjust.	PA18CSD04NASA	PA18CSD04NAM1SA	PA18CSD04PASA	PA18CSD04PAM1SA

Note: Plugs to be ordered separately

Specifications

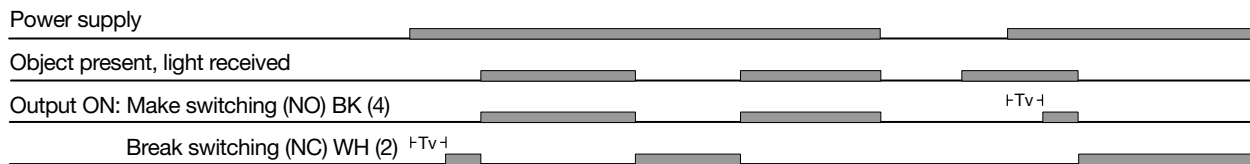
Rated operating dist. (S_n) Adjustable Fixed	Up to 400 mm 100, 200 or 400 mm Reference target: Kodak test card R27, white, 90% reflectivity 100 x 100 mm 200 x 200 mm	No load supply current (I₀)	Max. 20 mA
Size: S _n < 400 mm S _n ≥ 400 mm		Min. operational current (I_m)	0.5 mA
Sensitivity Adjustable type only	270° turn potentiometer	OFF-state current (I_r)	Max. 100 μA
Temperature drift	0.4%/K	Voltage drop (U_d)	Max. 2.5 V @ 200 mA
Hysteresis (H) (Differential travel)	3 to 20%	Protection	Reverse polarity, short circuit, transients
Rated operational volt. (U_B)	10 to 40 VDC (ripple included)	Transient voltage	Max. 1 kV/0.5 J
Ripple (U_{rip})	Max. 10%	Light source	GaAlAs LED, 880 nm
Output current Continuous (I _e) Short-time (I)	Max. 200 mA 200 mA, max. load capacity 100 nF	Light type	Infrared, modulated synchronized
		Sensing angle	± 25° at 1/2 range
		Ambient light	Max. 10,000 lux
		Operating frequency (f)	120 Hz, light/dark ratio 1:2
		Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 3.2 ms ≤ 5 ms
		Power ON delay (t_v)	Typ. 100 ms



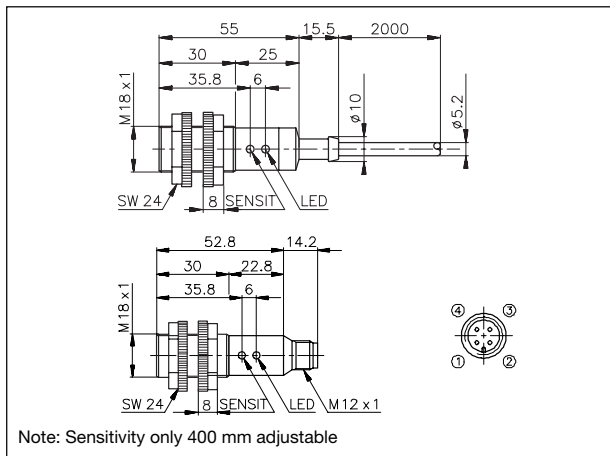
Specifications (cont.)

Indication function	Dark and light (complementary switch) LED, yellow	Housing material	Body PBTP, grey thermoplastic polyester
Output ON		Front Luran®, black	
Environment	Overvoltage category III (IEC 60664/60664A; 60947-1)	Cable end Polyester, black	
Pollution degree	3 (IEC 60664/60664A; 60947-1)	Nuts Reinforced nylon	
Degree of protection	IP 67 (IEC 60529; 60947-1)	Connection	Cable Grey, 2 m, 4 x 0.35 mm ² oilproof PVC
Temperature	Operating -20° to +60°C (-4° to 140°F)	Plug M 12 x 1	CON.1-.... series
Storage	-30° to + 70°C (-22° to 158°F)	Cables for plug (M1)	
Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)	Weight	Cable version 100 g
Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)	Plug version 17 g	
Dielectric voltage	600 VAC (IEC 60365-4-41)	Approvals	UL
		CE-marking	Yes

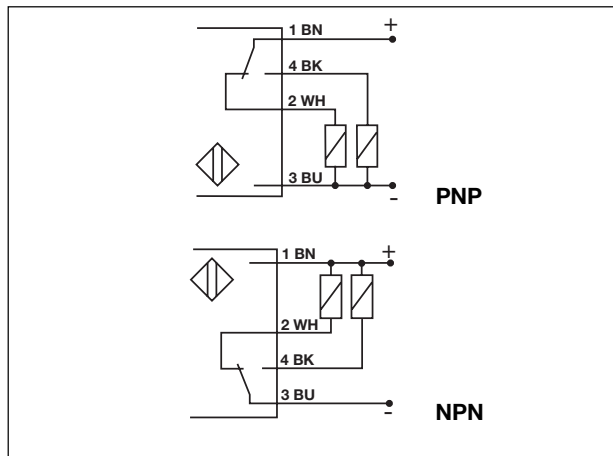
Operation Diagram



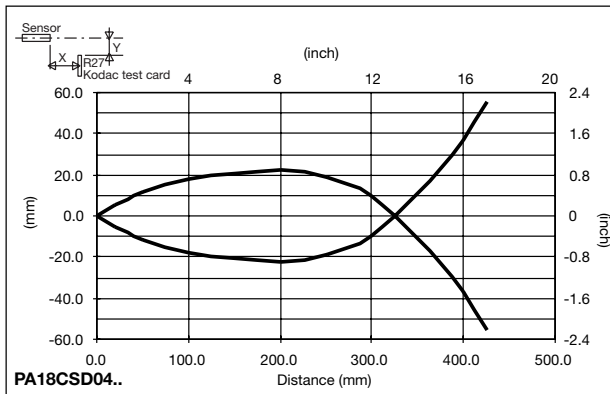
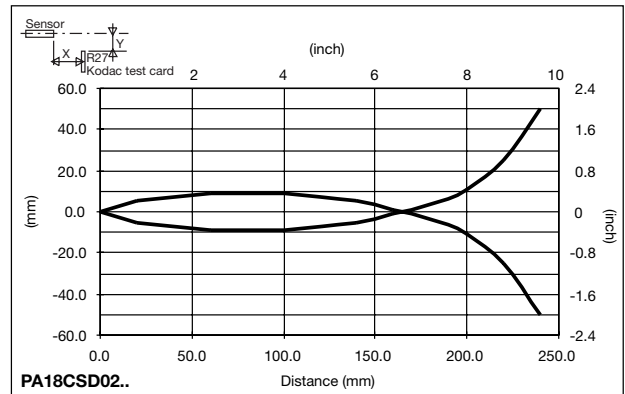
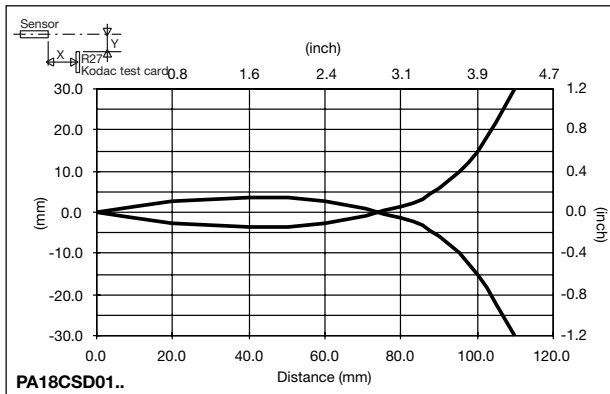
Dimensions



Wiring Diagrams



Detection Diagrams



Delivery Contents

- Photoelectric switch PA18CSD04
- 2 nuts
- **Packaging:** plastic bag

Accessories

- MB18A
- Plugs CON.1A-..
- Screw driver for adjustments: 77-000
- APA18-RAR

For further information refer to "Accessories"