

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	_____
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. 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

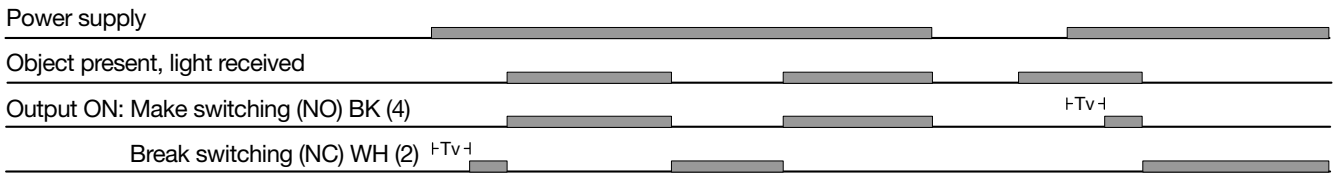
Rated operating dist. (S_n) Adjustable Fixed	Up to 400 mm 100, 200 or 400 mm Reference target: Kodak test card R27, white, 90% reflectivity 100 x 100 mm 200 x 200 mm	No load supply current (I₀)	Max. 20 mA
Size: S _n < 400 mm S _n ≥ 400 mm		Min. operational current (I_m)	0.5 mA
Sensitivity Adjustable type only	270° turn potentiometer	OFF-state current (I_f)	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 ± 25° at 1/2 range Max. 10,000 lux
		Sensing angle	
		Ambient light	
		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



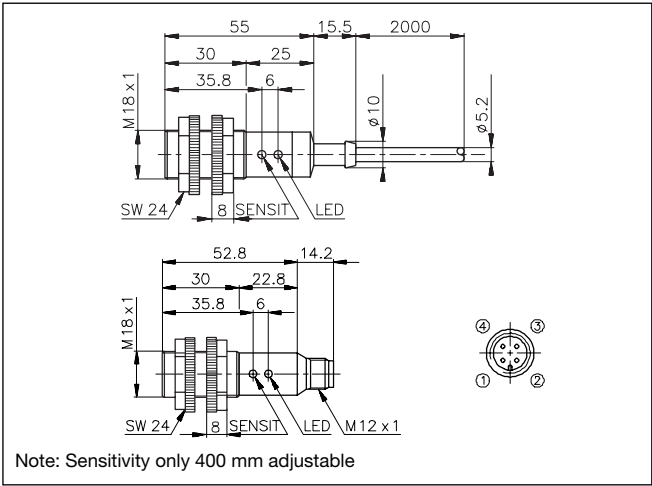
Specifications (cont.)

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

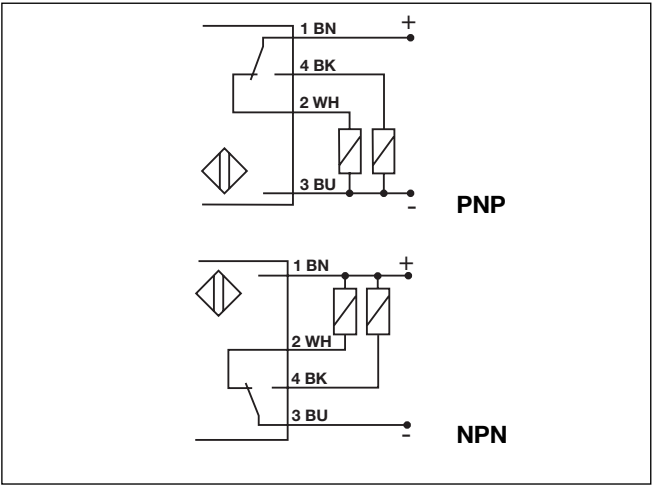
Operation Diagram



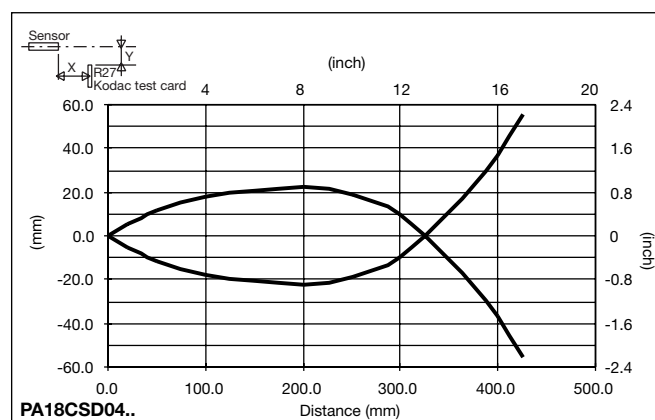
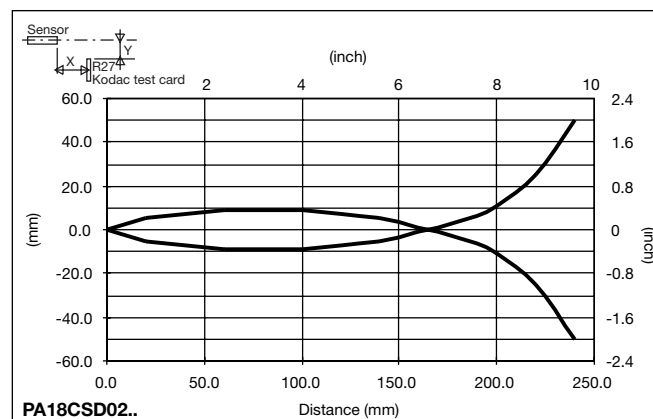
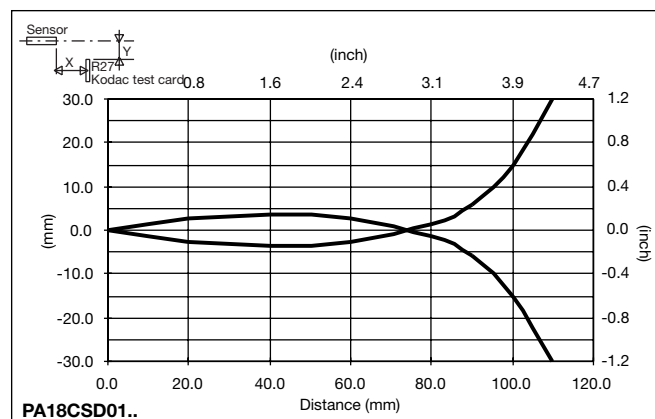
Dimensions



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"