Photoelectrics Retro-reflective Type PA18CSR30., DC, PBTP-housing





- Range: 3 m
- 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 PA18CSR.. is a family of inexpensive general purpose Retro-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. The output is a 4-wire complementary (NO and NC) output in NPN (current sinking) or PNP (current souring).

Ordering Key	PA18CSR30NAM1
Type Housing style Housing size Housing material Housing length Detection principle Sensing distance Output type Output configuration	
Connection type	

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	3 m	PA18CSR30NA	PA18CSR30NAM1	PA18CSR30PA	PA18CSR30PAM1

Note: Plugs and reflectors to be ordered separately

Specifications

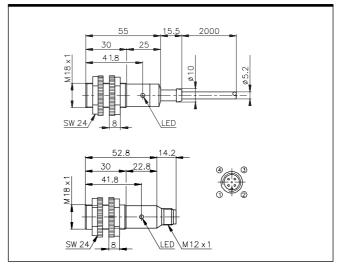
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Rated operating dist. (S _n) Temperature drift	Up to 3 m Reflector type ER4 Ø 84 mm 0.4%/K	Light source Light type Optical angle Light spot size	GaAlAs LED, 880 nm Infrared, modulated ± 2.2° 150 mm at 2 m	
Hysteresis (H)	0.1.000/	Ambient light Operating frequency (f)	Max. 10,000 lux Max. 120 Hz, light/dark ratio 1:2	
(Differential travel)	3 to 20%		Max. 120 Hz, light/dark ratio 1.2	
Rated operational volt. (U _B)	10 to 40 VDC (ripple included)	Response time		
Ripple (U _{rpp})	Max. 10%	OFF-ON (t _{on})	≤ 3.2 ms	
	1070	ON-OFF (t _{OFF})	≤5 ms	
Output current Continuous (I _e) Short-time (I)	Max. 200 mA 200 mA, max. load capacity 100 nF	Indication function Output ON	Dark and light (complementary switch) LED, yellow	
No load supply current (I _O)	Max. 20 mA @ 200 mA	Environment	W (FO 00004/00004A 00047 4)	
Min. operational current (I _m)	0.5 mA	Overvoltage category Pollution degree	III (IEC 60664/60664A; 60947-1) 3 (IEC 60664/60664A; 60947-1)	
OFF-state current (I _r)	Max. 100 μA	Degree of protection	IP 67 (IEC 60529; 60947-1)	
Voltage drop (U _d)	Max. 2.5 V	Temperature		
Protection	Reverse polarity, short circuit overload, transients	Operating Storage	-20° to +60°C (-4° to 140°F) -30° to + 70°C (-22° to 158°F)	
Transient voltage	1 kV/0.5 J	Vibration	10 to 150 Hz, 0.5 mm/7.5 g	
Power ON delay (t _v)	Typ. 100 ms	Shock	(IEC 60068-2-6) 2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)	



Specifications (cont.)

Dielectric voltage	600 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, 4 x 0.35 mm ² ,
	oilproof PVC
Plug	M12 x 1
Cables for plug (M1)	CON.1Aseries
Weight	
Cable version	100 g
Plug version	17 g
Approvals	UL
CE-marking	Yes

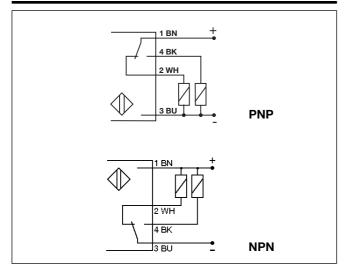
Dimensions



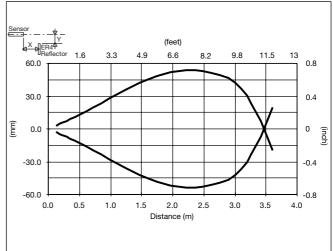
Operation Diagram

Power supply				
Object present, light beam interrupted	1			ı
Output ON: Break switching (NC), WH (2)	1		⊦Tv-l	
Make switching (NO), BK (4) ⊦⊤v-l		_		

Wiring Diagrams



Detection Diagram



Delivery Contents

- Photoelectric switch: PA18CSR30..
- 2 nuts
- Packaging: plastic bag

Accessories

- Reflectors: ER series
- Plugs: CON.1A-.. serie
- Option: Fibre-optics
- MB18A
- APA18-RAR

For further information refer to "Accessories"