

Photoelectrics Through-beam Type PA18CST10, DC, PBTP-housing

CARLO GAVAZZI



- Range: 10 m
- Modulated infrared light
- Supply voltage: 10-40 VDC
- Output: 200 mA NPN or PNP
- Make and break switching functions
- LED-indication for power supply ON (emitter) and target detected (receiver)
- Protection: Reverse polarity, short-circuit, transients
- Cable and plug versions

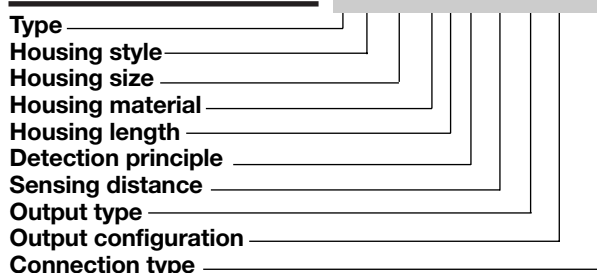
Product Description

The PA18CST.. is a family of inexpensive general purpose Through beam 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 sourcing).

Ordering Key

PA18CST10NAM1



Type Selection

Hous. diam.	Rated op. dist. (S _n)	Ordering no. Rec./NPN Cable Make & break	Ordering no. Rec./NPN Plug Make & break	Ordering no. Rec./PNP Cable Make & break	Ordering no. Rec./PNP Plug Make & break	Ordering no. Emitter Cable	Ordering no. Emitter Plug
M18	10 m	PA18CST10NA	PA18CST10NAM1	PA18CST10PA	PA18CST10PAM1	PA18CST10	PA18CST10M1

Note: Please order emitter and receiver separately. Plugs to be ordered separately.

Specifications Emitter

Rated operational volt. (U_B)	10 to 40 VDC (ripple included)
Ripple (U_{ripple})	≤ 10%
Supply current (I_o)	≤ 20 mA
Protection	Reverse polarity, short-circuits, transients
Light source	GaAlAs LED, 880 nm
Light type	Infrared, modulated
Optical angle	±2°
Indication Supply ON	LED, green

Specifications Receiver

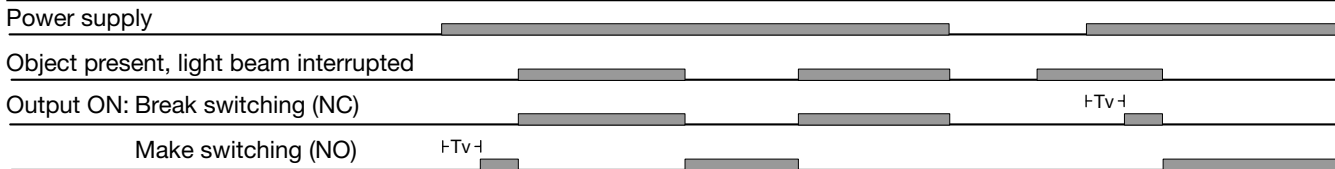
Rated operating dist. (S_n)	Up to 10 m
Temperature drift	0.6%/°C
Hysteresis (H) (Differential travel)	3 to 20%
Rated operational volt. (U_B)	10 to 40 VDC (ripple included)
Ripple (U_{ripple})	Max. 10%
No-load supply current (I_o)	Max. 12 mA (typ. 8 mA)
Min. operational current (I_e)	0.5 mA
OFF-state current (I_i)	Max. 100 µA (typ. 0)
Output current Continuous (I _e) Short-time (I)	Max. 200 mA 200 mA Max. load capacity 100 nF
Voltage drop (U_d)	Max. 2.5 VDC
Protection	Reverse polarity, short-circuit, transients
Optical angle	±2°
Ambient light	Max. 5,000 lux
Operating frequency (f)	Typ. 170 Hz
Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	Typ. 1.6 ms Typ. 4.2 ms



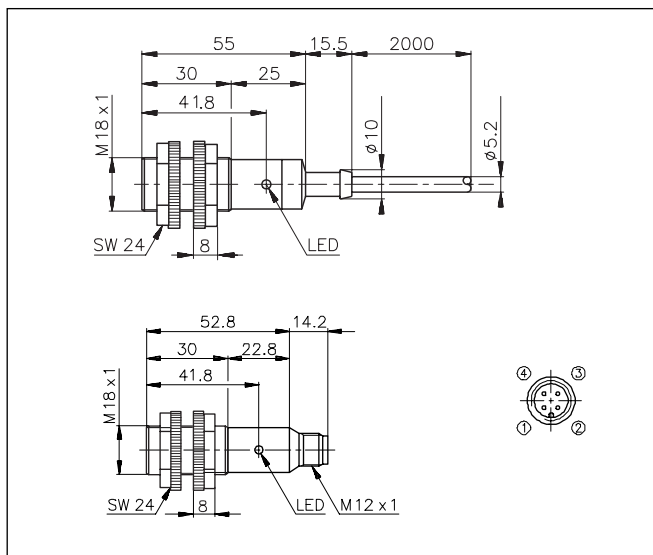
General Specifications

Power ON delay (t_v)	70 ms	Housing material	
Indication	Light and dark (Complementary switch) LED, yellow	Body	PBTP grey thermoplastic polyester housing Luran®, black
Environment		Front	Polyester, black
Overvoltage category	III (IEC 60664/664A; 60947-1)	Cable end	Reinforced nylon
Pollution degree	3 (IEC 60664/664A; 60947-1)	Connection	
Degree of protection	IP 67 (IEC 60529; 60947-1)	Cable	Grey, 2 m oilproof, PVC, 4 x 0.34 mm ² , ø 5.2 mm
Temperature		Receiver	2 x 0.5 mm ² , ø 5.2 mm
Operating	-20° to +60°C (-4° to +140°F)	Ermittler	M 12 x 1
Storage	-30° to +70°C (-22° to +158°F)	Plug	CON.1A-..series
Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)	Cables for plug (M1)	
Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)	Weight	
Dielectric voltage	600 VAC (IEC 60364-4-41)	Cable version	100 g
		Plug version	17 g
		Approvals	UL
		CE-marking	Yes

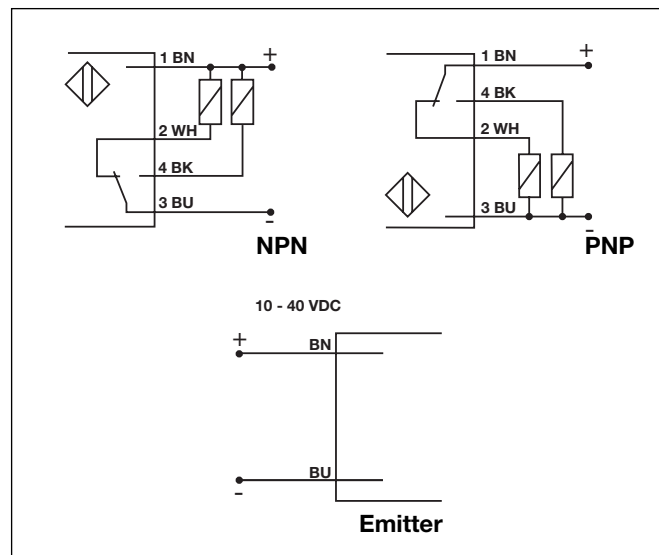
Operation Diagram



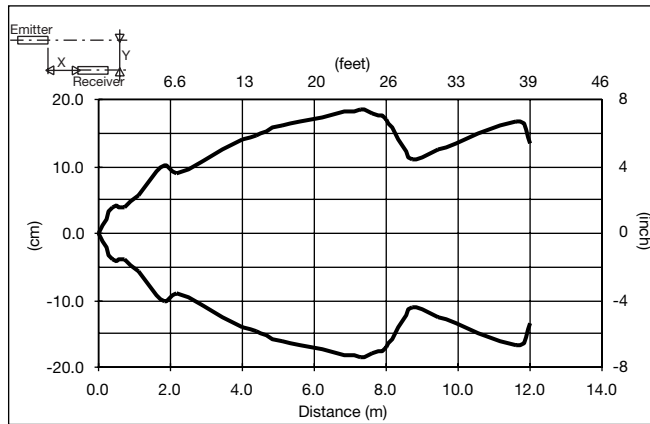
Dimensions



Wiring Diagrams



Detection Diagram



Delivery Contents

- Photoelectric switch: PA18CST10...
- 2 nuts
- **Packaging:** Plastic bag

Accessories

- MB18A
- Plugs DC versions: CON.1A-...series
- Option: Fibre-optics
- APA18-RAR
- APA18-AR

For further information refer to "Accessories".