

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	PA18CST10NAM1
Housing style	PA18CST10NAM1
Housing size	PA18CST10NAM1
Housing material	PA18CST10NAM1
Housing length	PA18CST10NAM1
Detection principle	PA18CST10NAM1
Sensing distance	PA18CST10NAM1
Output type	PA18CST10NAM1
Output configuration	PA18CST10NAM1
Connection type	PA18CST10NAM1

Type Selection

Hous. diam.	Rated ope. 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 _{rp})	≤ 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	LED, green
Supply ON	

Specifications Receiver

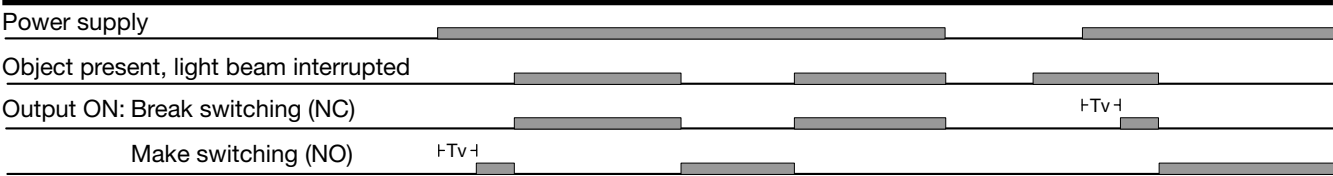
Rated operating dist. (S _n)	Up to 10 m
Temperature drift	0.6%/°C
Hysteresis (H) (Differential travel)	3 to 20%
Rated operational volt. (U _B)	10 to 40 VDC (ripple included)
Ripple (U _{rp})	Max. 10%
No-load supply current (I _o)	Max. 12 mA (typ. 8 mA)
Min. operational current (I _e)	0.5 mA
OFF-state current (I _i)	Max. 100 µA (typ. 0)
Output current	
Continuous (I _e)	Max. 200 mA
Short-time (I)	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})	Typ. 1.6 ms
ON-OFF (t _{OFF})	Typ. 4.2 ms



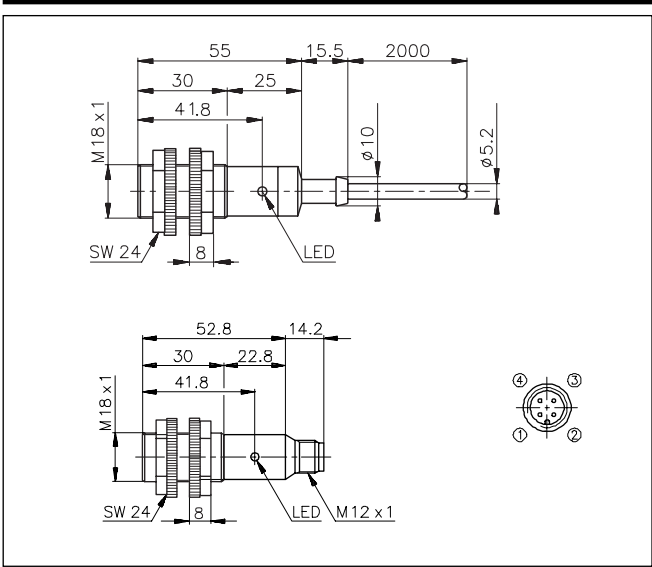
General Specifications

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

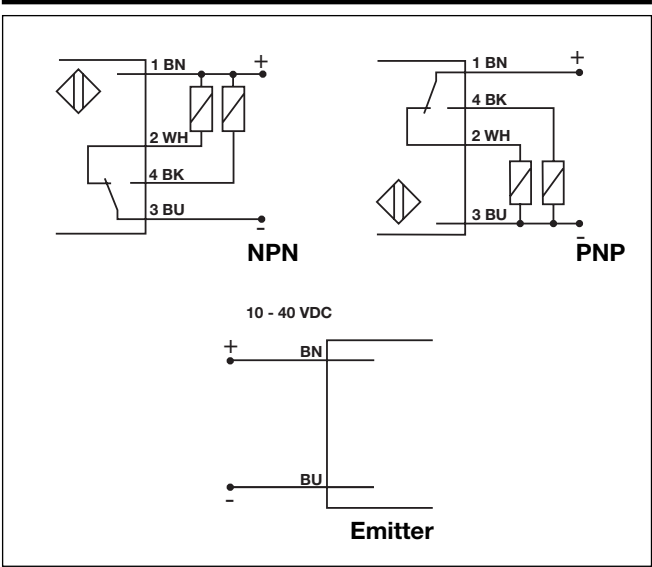
Operation Diagram



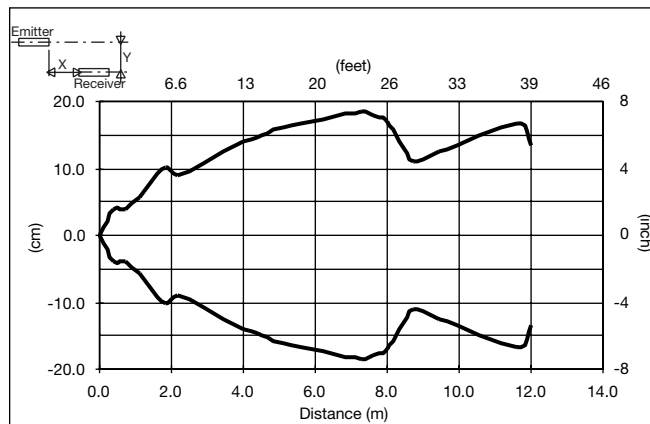
Dimensions



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".