

## Plastic square shape photoelectric sensors **PTF** series



### Features

- ◆ Through beam reflection working principle;
- ◆ Excellent anti-interference performance
- ◆ High detection accuracy

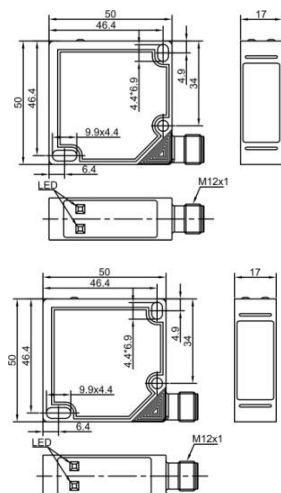
### Part number

		Emitter		Receiver	
NPN	NO	PTF-TM20D-E2	PTF-TM20DNO-E2	PNP	NO
NPN	NC	PTF-TM20D-E2	PTF-TM20DNC-E2P	PNP	NC
NPN	NO+NC	PTF-TM20D-E2	TF-TM20DNR-E2	PNP	NO/NC

### Technical specifications

Detection type	Through beam	Consumption current	≤25mA
Rated distance [Sn]	20m (non-adjustable)	Circuit protection	Short-circuit and reverse polarity
Standard target	> φ15mm opaque object	Response time	< 8.2ms
Light source	Infrared LED (880nm)	Output indicator	Emitter: Green LED Receiver: Yellow LED
Dimensions	50 mm *50 mm *17mm	Ambient temperature	-15°C...+55°C
Output	NO/NC (depends on part No.)	Ambient humidity	35-85%RH (non-condensing)
Supply voltage	10...30 VDC	Voltage withstand	1000V/AC 50/60Hz 60s
Min target	.....	Insulation resistance	≥50MΩ(500VDC)
Hysteresis range [%/Sr]	.....	Vibration resistance	10...50Hz (0.5mm)
Repeat accuracy [R]	≤5%	Degree of protection	IP64
Load current	≤200mA (receiver)	Housing material	PC/ABS
Residual voltage	≤2.5V (receiver)	Connection type	M12 Connector

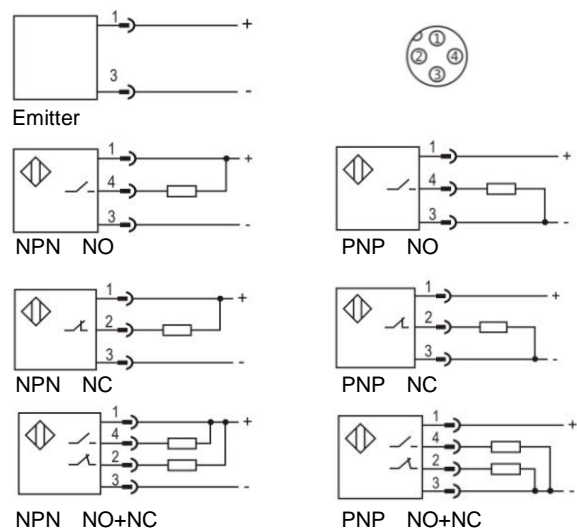
### Dimensions



Emitter

Receiver

### Wiring diagram



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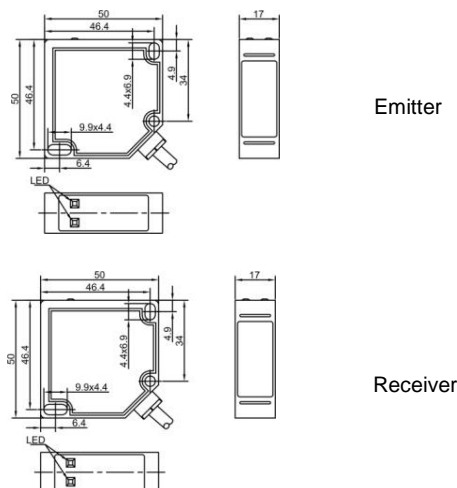
### Part number

		Emitter		Receiver	
NPN	NO	PTF-TM20D	PTF-TM20DNO	PNP	NO
NPN	NC	PTF-TM20D	PTF-TM20DNCP	PNP	NC
NPN	NO+NC	PTF-TM20D	TF-TM20DNR	PNP	NO/NC

### Technical specifications

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Min target	.....	Insulation resistance	≥50MΩ(500VDC)
Hysteresis range [%/Sr]	.....	Vibration resistance	10...50Hz (0.5mm)
Repeat accuracy [R]	≤5%	Degree of protection	IP64
Load current	≤200mA (receiver)	Housing material	PC/ABS
Residual voltage	≤2.5V (receiver)	Connection type	2m PVC cable

### Dimensions



### Wiring diagram

