

IP69K High Protection



NEW!



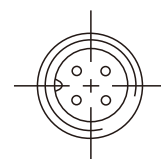
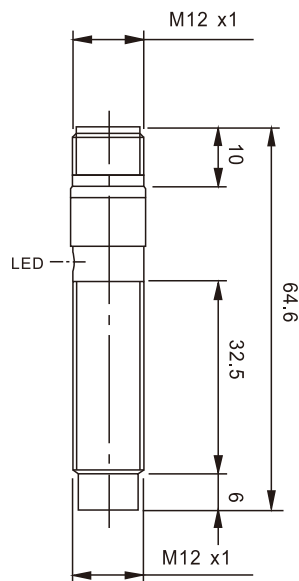
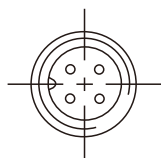
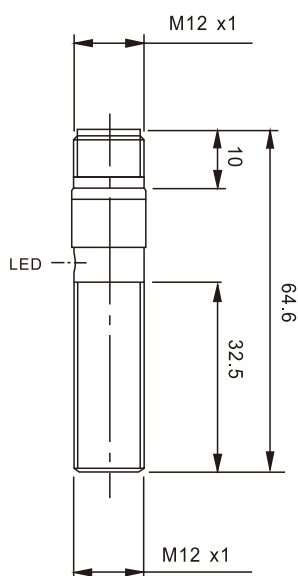
NEW!

Appearance	Shielded		Unshielded	
Mounting				
Sensing distance	2mm	4mm	4mm	8mm
Working distance	0~1.62mm	0~3.24mm		0~6.5mm
Hysteresis	1~20%			
Standard target	12 × 12mm FE360			24 × 24mm FE360
Repeatability	5%			
Operating Voltage	10~30V DC			
Output type	NPNorPNP–NO+NCorNO			
Maximum ripple content	≤10%			
Output current	≤200mA			
Output voltage drop	≤2V			
No-load current	≤15mA			
Leakage current	≤15uA			
operating frequency	2kHz			
Start delay	50ms			
Ambient temperature range	–40℃~+80℃ in a short time (within 15 seconds) up to 100℃ 10%			
Thermal drift	10%			
Shock and vibration	IEC 60947–5–5/7.4			
Weight	30g			
LEDs	NO output status/without led–25℃~+110℃			
Protection level	IP67,IP68(1m,7days);IP69K (in line with DIN 40050–9 standard)			
Electromagnetic compatibility/EMC	Comply with EMC directive requirements and comply with IEC 60947–5–2 specification			
Housing material	Stainless steel			
Sensor head material	PPS (FDA certification)			
Connection method	M12 connector with gold–plated pins			
Tightening torque	25Nm			
Model No	NPN	TPF12-02NR-E2	TPN12-04NR-E2	TPN12-08NR-E2
	PNP	TPF12-02PR-E2	TPN12-04PR-E2	TPN12-08PR-E2

Dimensions (Unit:mm)

TPF12-02NR-E2(PR)
TPF12-04NR-E2(PR)

TPN12-04NR-E2(PR)
TPN12-08NR-E2(PR)





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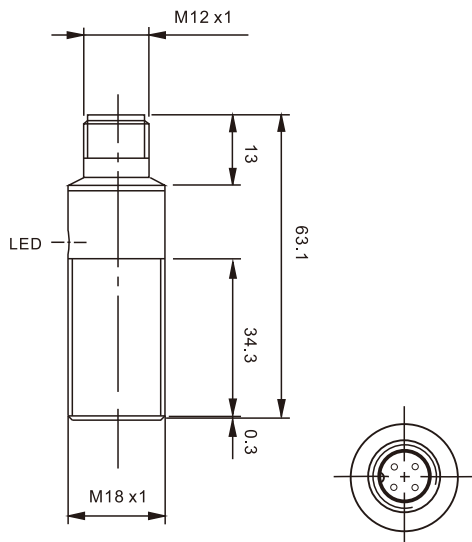


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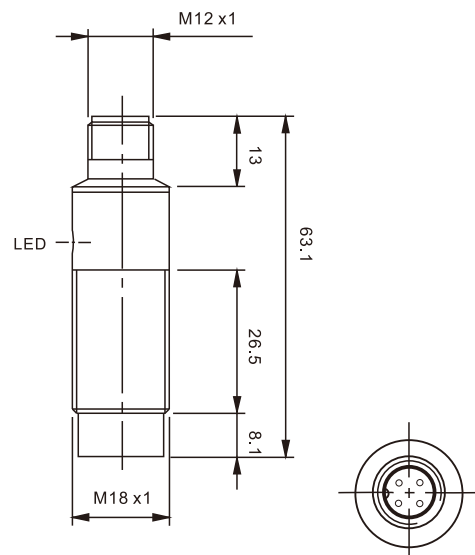
Appearance	Shielded		Unshielded	
Mounting				
Sensing distance	5mm		8mm	12mm
Working distance	0~4mm		0~6.5mm	0~9.72mm
Hysteresis			1~20%	
Standard target	18 × 18mm FE360		36 × 36mm FE360	
Repeatability			5%	
Operating Voltage			10~30V DC	
Output type			NPNorPNP–NO+NOorNO	
Maximum ripple content			≤ 10%	
Output current			≤ 200mA	
Output voltage drop			≤ 2V	
No-load current			≤ 15mA	
Leakage current			≤ 10uA	
operating frequency			15kHz	
Start delay			50ms	
Ambient temperature range			–40℃~+80℃ in a short time (within 15 seconds) up to 100℃	
Thermal drift			10%	
Shock and vibration			IEC 60947–5–5/7.4	
Weight			30g	
LEDs			NO output status / without led–25℃~+110℃	
Protection level			IP67, IP68 (1m, 7 days); IP69K (in accordance with DIN 40050–9 standard)	
Electromagnetic compatibility/EMC			Comply with EMC directive requirements and comply with IEC 60947–5–2 specification	
Housing material			Stainless steel	
Sensor head material			PPS (FDA certification)	
Connection method			M12 connector with gold–plated pins	
Tightening torque			25Nm	
Model No	NPN	TPF18-05NR-E2	TPF18-08NR-E2	TPN18-08NR-E2
	PNP	TPF18-05PR-E2	TPF18-08PR-E2	TPN18-12PR-E2

Dimensions (Unit:mm)

TPF18-05NR-E2(PR)
TPF18-08NR-E2(PR)



TPN18-08NR-E2(PR)
TPN18-12NR-E2(PR)



- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Vision
- Vibration
- Temperature
- Annexes

Guidance

Inductive sensors

- Standard distance
- Extended distance
- Long distance
- Square
- Mini square
- Mini-cylindrical
- Short-body
- Ring-type
- Metal face
- Temperature
- Analog output
- DC 2 wires
- IP69K high protection

Capacitive sensors

- Cylindrical
- Correction resistanc
- Flat type
- Level detection