

Capacitive Sensors



No.	Classification	Explanation of model numbers
①	Series	A: Analog Output D: DC 2-wire E: Mini Square G: High-temperature Resistant H: Ring-type L: Extended Distance M: Metal Face Q: Square R: Standard Distance S: Short-body P: IP69K SS: Extra Short Outer Casing X: Mini-cylindrical Y: Long Distance Z: Low Temperature Resistant
②	Mounting	F: Shielded N: Unshielded
③	Specifications	08: M8 12: M12 18: M18 30: M30
④	Sensing Distance	1.5: 1.5mm 02: 2mm 05: 5mm 08: 8mm
⑤	Output Type	N: NPN P: PNP H: DC 2-Wire
⑥	Output Status	O: Normally open C: Normally closed A: Current output V: Voltage output
⑦	Connection	Null: Pre-wired type E1: M8 3 pin connector E2: M12 4 pin connector

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity**
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- Vibration
- Temperature
- Cables
- Tester

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 resistant type
- Flat type
- Level detection

Capacitive Sensors



No.	Classification	Explanation of model numbers
①	Series	E: Liquid Level Detection K: Plastic Shells Q: Flat Type W: Corrosion resistant
②	Mounting	F: Shielded N: Unshielded
③	Specifications	08: M8 12: M12 18: M18 30: M30
④	Sensing Distance	1.5: 1.5mm 02: 2mm 05: 5mm 08: 8mm
⑤	Output Type	N: NPN P: PNP H: DC 2-Wire
⑥	Output Status	O: Normally open C: Normally closed
⑦	Connection	Null: Pre-wired type E1: M8 3 pin connector E2: M12 4 pin connector

Standard Distance

Pre-wired

Proximity

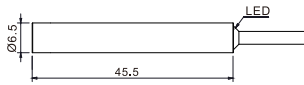
Appearance												
Mounting	Shielded		Shielded			Unshielded			Unshielded			
Housing size	φ6.5	M8	M12	M18	M30	φ6.5	M8	M12	M18	M30		
Sensing distance	1.5mm ± 10%	1.5mm ± 10%	2mm ± 10%	5mm ± 10%	10mm ± 10%	2mm ± 10%	2mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%		
Housing material	Stainless steel		Nickel copper alloy			Stainless steel			Nickel copper alloy			
Operating voltage	10~30V DC(Ripple < 10%)											
Voltage drop	< 1.5V		< 2.0V			< 1.5V			< 2.0V			
Load Current, Max	150mA											
Current consumption	< 10mA								< 20mA			
Leakage current	< 0.01mA											
Switch frequency	2KHz	1.5KHz	1KHz		300Hz	2KHz	1KHz	800Hz	500Hz	150Hz		
Repeat accuracy	< 1.0% (Sr)							< 5.0% (Sr)		< 1.0% (Sr)		
Hysteresis	< 15% (Sr)					< 15% (Sr)						
Sensing surface material	PBT											
Operating temperature	-25°C~+75°C											
Protective circuit	Short circuit											
Degree of protection	IP67											
Area	<div style="display: flex; justify-content: space-between;"> Model No. NPN Normally open TRF6.5-1.5[NIO] TRF08-1.5[NIO] TRF12-02[NIO] TRF18-05[NIO] TRF30-10[NIO] TRN6.5-02[NIO] TRN08-02[NIO] TRN12-04[NIO] TRN18-08[NIO] TRN30-15[NIO] </div>											
Others	<div style="display: flex; justify-content: space-between;"> [NIO]:NPN Normally open [NIC]:NPN Normally closed [PIO]:PNP Normally open [PIC]:PNP Normally closed </div>											

Connector Type

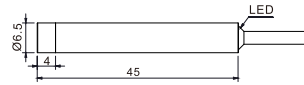
Appearance								
Mounting	Shielded				Unshielded			
Housing size	M8	M12	M18	M30	M8	M12	M18	M30
Sensing distance	1.5mm ± 10%	2mm ± 10%	5mm ± 10%	10mm ± 10%	2mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%
Housing material	Stainless steel	Nickel copper alloy			Stainless steel	Nickel copper alloy		
Operating voltage	10~30V DC(Ripple < 10%)							
Voltage drop	< 1.5V							
Load Current Max	150mA							
Current consumption	< 10mA							
Leakage current	< 0.01mA							
Switch frequency	1.5KHz	2KHz	1KHz	300Hz	1KHz	500Hz	150Hz	
Repeat accuracy	< 1.0% (Sr)							
Hysteresis	< 15% (Sr)							
Sensing surface material	PBT							
Operating temperature	-25°C~+75°C							
Protective circuit	Short circuit							
Degree of protection	IP67							
Area	<div style="display: flex; justify-content: space-between;"> Model No. NPN Normally open TRF08-1.5[NIO]-E1 TRF12-02[NIO]-E2 TRF18-05[NIO]-E2 TRF30-10[NIO]-E2 TRN08-02[NIO]-E1 TRN12-04[NIO]-E2 TRN18-08[NIO]-E2 TRN30-15[NIO]-E2 </div>							
Others	<div style="display: flex; justify-content: space-between;"> [NIO]:NPN Normally open [NIC]:NPN Normally closed [PIO]:PNP Normally open [PIC]:PNP Normally closed </div>							

φ6.5

TRF6.5-1.5□□

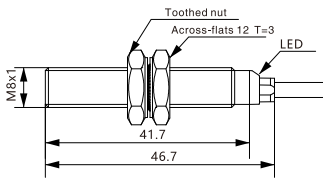


TRN6.5-02□□

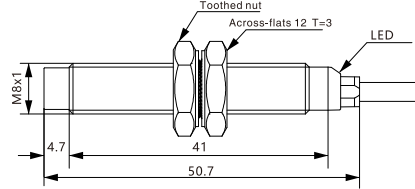


M8

TRF08-1.5□□

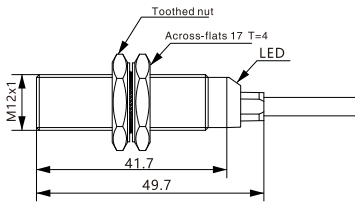


TRN08-02□□

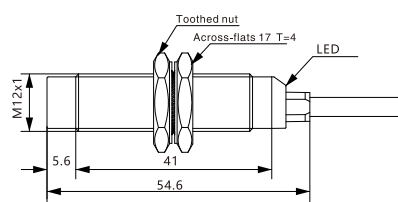


M12

TRF12-02□□

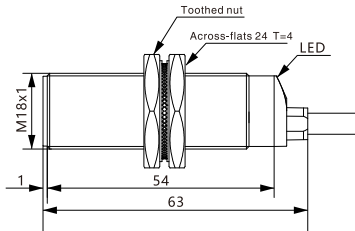


TRN12-04□□

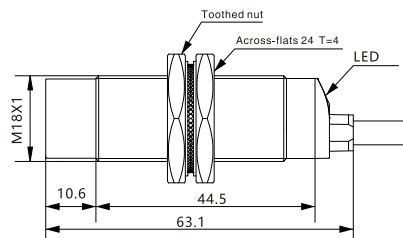


M18

TRF18-05□□

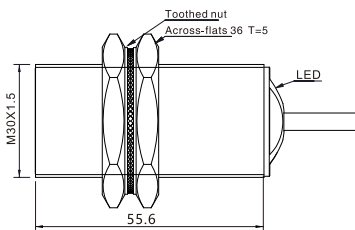


TRN18-08□□

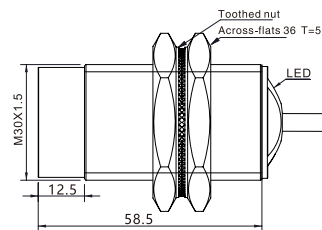


M30

TRF30-10□□



TRN30-15□□



Fiber Optic
Slot Sensors
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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

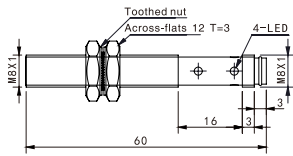
Capacitive sensors
Cylindrical
Correction resistanc type
Flat type
Level detection

Standard Distance

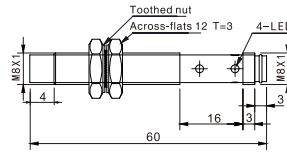
Dimensions- Connector Type (Unit:mm)

M8

TRF08-1.5□□-E1

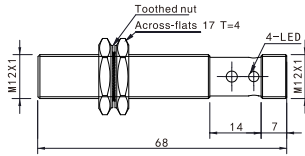


TRN08-02□□-E1

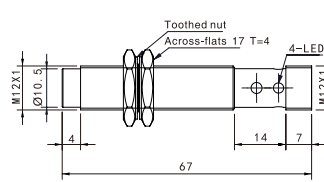


M12

TRF12-02□□-E2

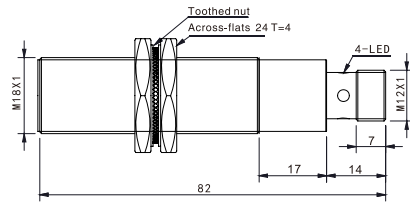


TRN12-04□□-E2

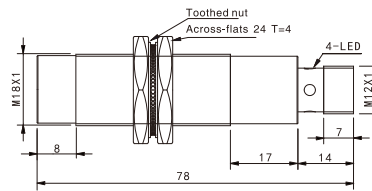


M18

TRF18-05□□-E2

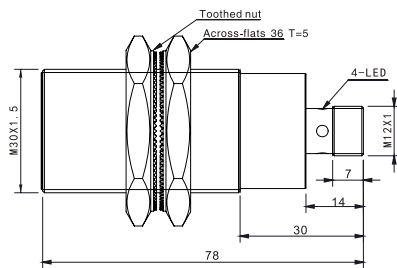


TRN18-08□□-E2

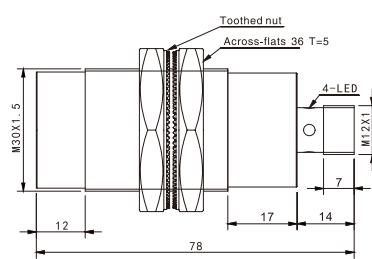


M30

TRF30-10□□-E2



TRN30-15□□-E2



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