

# Standard Distance

## Pre-wired

Appearance											
Mounting	Shielded		Shielded			Unshielded		Unshielded			
Housing size	φ 6.5	M8	M12	M18	M30	φ 6.5	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		1KHz		300Hz	2KHz	1KHz	800Hz	500Hz	150Hz	
Repeat accuracy	< 1.0% (Sr)							< 5.0% (Sr)		< 1.0% (Sr)	
Hysteresis	< 15% (Sr)										
Sensing surface material	PBT										
Operating temperature	-25°C~+75°C										
Protective circuit	Short circuit										
Degree of protection	IP67										
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]
	Others	[NIO]:NPN Normally open		[NIC]:NPN Normally closed		[PIO]:PNP Normally open		[PIC]:PNP Normally closed			

## Connector Type

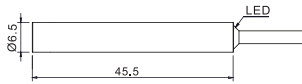
Appearance									
Mounting	Shielded				Unshielded				
Housing size	M8	M12	M18	M30	M8	M12	M18	M30	
Sensing distance	1.5mm ± 10%	2mm ± 10%	5mm ± 10%	10mm ± 10%	2mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%	
Housing material	Stainless steel	Nickel copper alloy			Stainless steel	Nickel copper alloy			
Operating voltage	10~30V DC(Ripple < 10%)								
Voltage drop	< 1.5V								
Load Current Max	150mA								
Current consumption	< 10mA								
Leakage current	< 0.01mA								
Switch frequency	2KHz		1KHz		300Hz	2KHz	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								
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]
	Others	[NIO]:NPN Normally open		[NIC]:NPN Normally closed		[PIO]:PNP Normally open		[PIC]:PNP Normally closed	

# Standard Distance

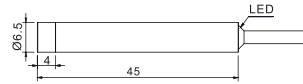
## Dimensions- Pre-wired Type (Unit:mm)

φ 6.5

TRF6.5-1.5 □ □

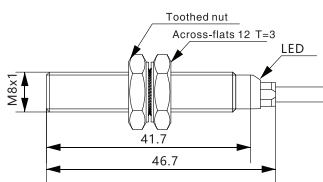


TRN6.5-02 □ □

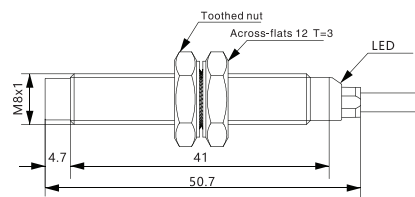


M8

TRF08-1.5 □ □

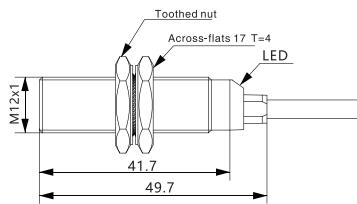


TRN08-02 □ □

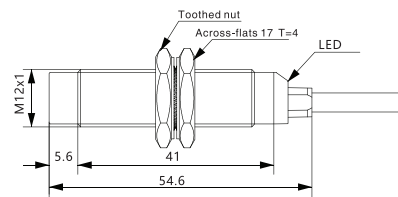


M12

TRF12-02 □ □

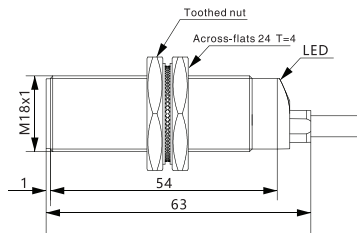


TRN12-04 □ □

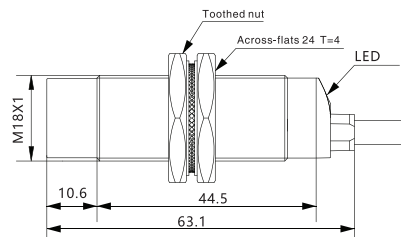


M18

TRF18-05 □ □

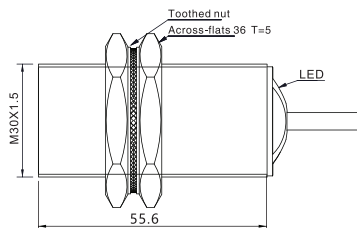


TRN18-08 □ □

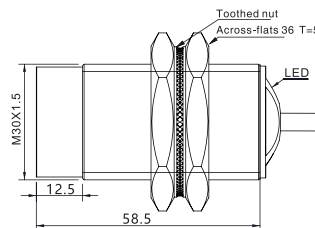


M30

TRF30-10 □ □



TRN30-15 □ □

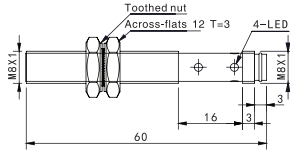


# Standard Distance

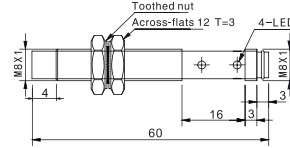
## Dimensions- Connector Type (Unit:mm)

### M8

TRF08-1.5□□-E1



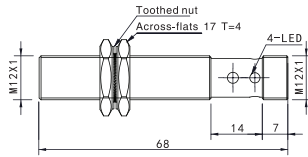
TRN08-02□□-E1



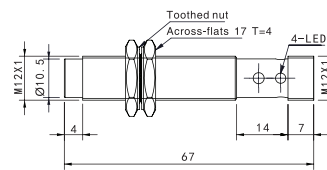
M8 3 Pin

### M12

TRF12-02□□-E2



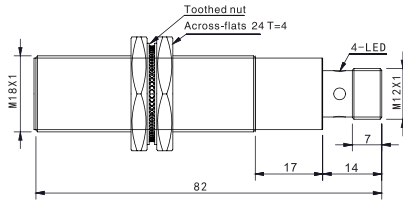
TRN12-04□□-E2



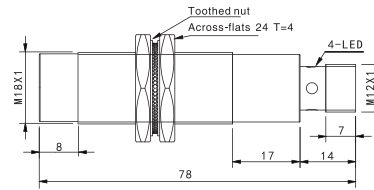
M12 4 Pin

### M18

TRF18-05□□-E2



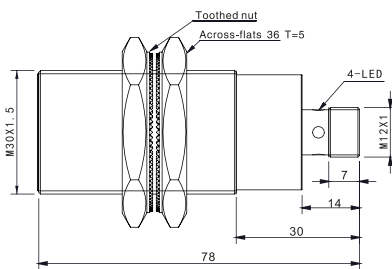
TRN18-08□□-E2



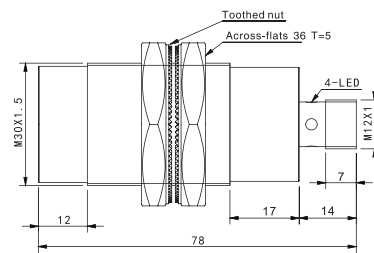
M18 4 Pin

### M30

TRF30-10□□-E2



TRN30-15□□-E2



M30 4 Pin