

# Standard Distance

## Pre-wired

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		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	TRF6.5-1.5NIO	TRF08-1.5NIO	TRF12-02NIO	TRF18-05NIO	TRF30-10NIO	TRN6.5-02NIO	TRN08-02NIO	TRN12-04NIO	TRN18-08NIO	TRN30-15NIO
	Others	NIO:NPN Normally open		NIC:NPN Normally closed		PIO:PNP Normally open		PIC:PNP Normally closed			

## Connector Type

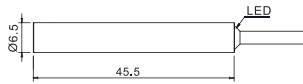
Appearance									
Mounting	Shielded				Unshielded				
Housing size	M8	M12	M18	M30	M8	M12	M18	M30	
Sensing distance	1.5mm ± 10%	2mm ± 10%	5mm ± 10%	10mm ± 10%	2mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%	
Housing material	Stainless steel	Nickel copper alloy			Stainless steel	Nickel copper alloy			
Operating 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	TRF08-1.5NIO-E1	TRF12-02NIO-E2	TRF18-05NIO-E2	TRF30-10NIO-E2	TRN08-02NIO-E1	TRN12-04NIO-E2	TRN18-08NIO-E2	TRN30-15NIO-E2
	Others	NIO:NPN Normally open		NIC:NPN Normally closed		PIO:PNP Normally open		PIC:PNP Normally closed	

# Standard Distance

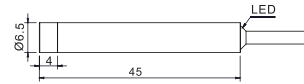
## Dimensions- Pre-wired Type (Unit:mm)

φ 6.5

TRF6.5-1.5□□

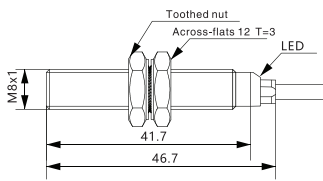


TRN6.5-02□□

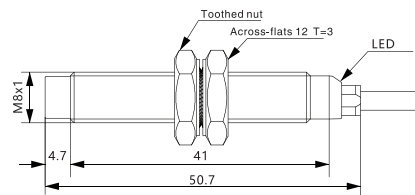


M8

TRF08-1.5□□

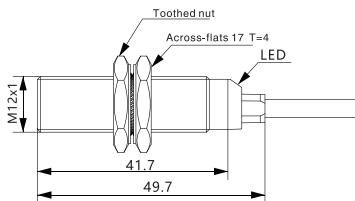


TRN08-02□□

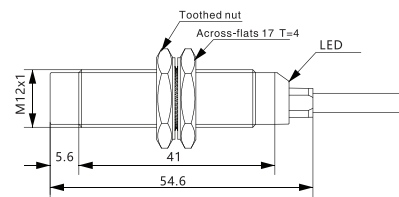


M12

TRF12-02□□

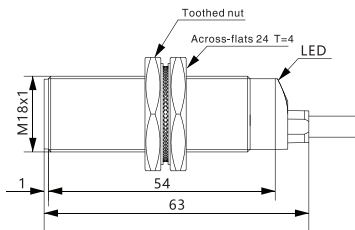


TRN12-04□□

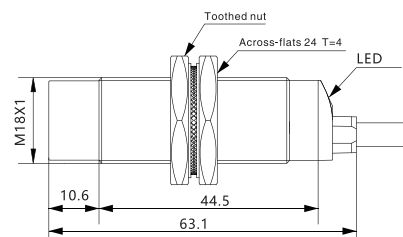


M18

TRF18-05□□

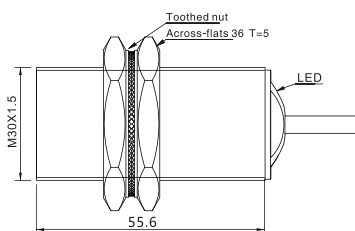


TRN18-08□□

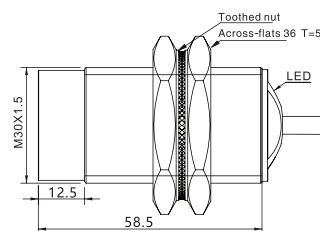


M30

TRF30-10□□



TRN30-15□□

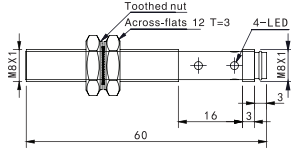


# Standard Distance

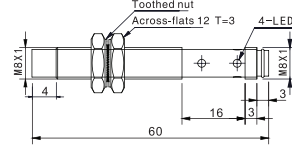
## Dimensions- Connector Type (Unit:mm)

### M8

TRF08-1.5□□-E1



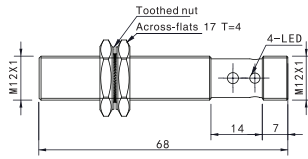
TRN08-02□□-E1



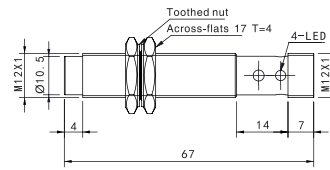
M8 3 Pin

### M12

TRF12-02□□-E2



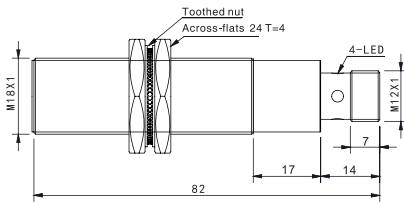
TRN12-04□□-E2



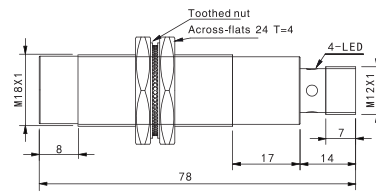
M12 4 Pin

### M18

TRF18-05□□-E2



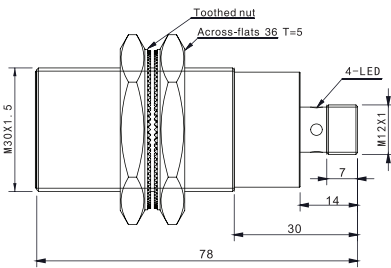
TRN18-08□□-E2



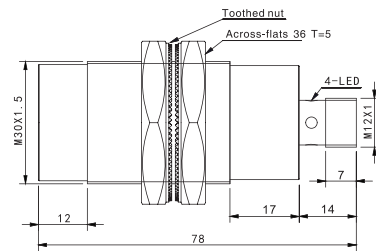
M12 4 Pin

### M30

TRF30-10□□-E2



TRN30-15□□-E2



M12 4 Pin