

### Pre-wired Type

Appearance										
Mounting	Shielded		Shielded			Unshielded		Unshielded		
Housing size	φ 6.5	M8	M12	M18	M30	φ 6.5	M8	M12	M18	M30
Sensing distance	2mm ± 10%	2mm ± 10%	4mm ± 10%	8mm ± 10%	16mm ± 10%	4mm ± 10%	4mm ± 10%	8mm ± 10%	16mm ± 10%	25mm ± 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									
Leakage current	< 0.01mA									
Switch frequency	2KHz	1KHz	800Hz	500Hz	150Hz	1KHz	800Hz	300Hz	150Hz	100Hz
Repeat accuracy	< 1.0% (Sr)		< 5.0% (Sr)		< 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		NPN Normally closed			PNP Normally open		PNP Normally closed		
Others	TLF6.5-02[N]O		TLF08-02[N]O		TLF12-04[N]O		TLF18-08[N]O		TLF30-16[N]O	
	TLN6.5-04[N]O		TLN08-04[N]O		TLN12-08[N]O		TLN18-16[N]O		TLN30-25[N]O	

### Connector Type

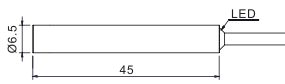
Appearance								
Mounting	Shielded				Unshielded			
Housing size	M8	M12	M18	M30	M8	M12	M18	M30
Sensing distance	2mm ± 10%	4mm ± 10%	8mm ± 10%	16mm ± 10%	4mm ± 10%	8mm ± 10%	16mm ± 10%	25mm ± 10%
Housing material	Stainless steel	Nickel copper alloy			Stainless steel	Nickel copper alloy		
Operating voltage	10~30V DC(Ripple < 10%)							
Voltage drop	< 1.5V							
Load Current, Max	150mA							
Current consumption	< 10mA							
Leakage current	< 0.01mA							
Switch frequency	2KHz	1KHz	500Hz	150Hz	1KHz	500Hz	150Hz	100Hz
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		NPN Normally closed		PNP Normally open		PNP Normally closed	
Others	TLF08-02[N]O-E1		TLF12-04[N]O-E2		TLF18-08[N]O-E2		TLF30-16[N]O-E2	
	TLN08-04[N]O-E1		TLN12-08[N]O-E2		TLN18-16[N]O-E2		TLN30-25[N]O-E2	

# Extended Distance

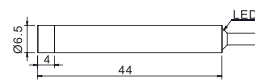
## Dimensions-Pre-wired Type (Unit:mm)

φ6.5

TLF6.5-02□□

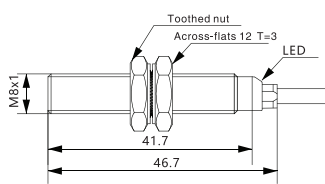


TLN6.5-04□□

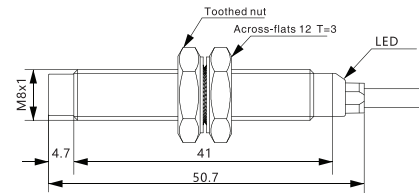


M8

TLF08-02□□

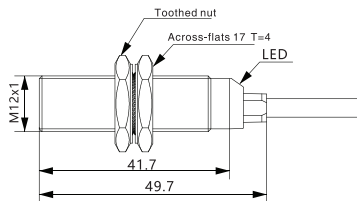


TLN08-04□□

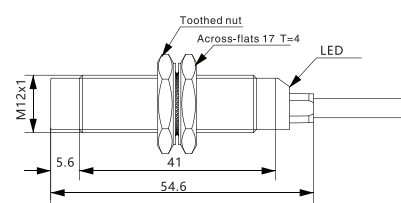


M12

TLF12-04□□

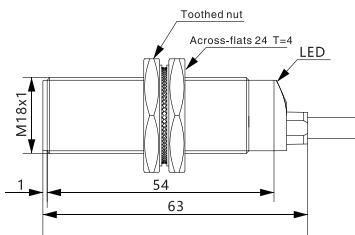


TLN12-08□□

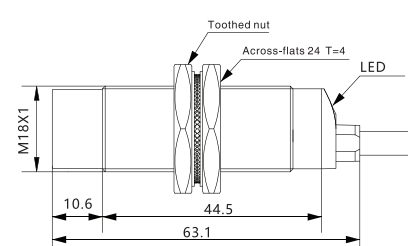


M18

TLF18-08□□

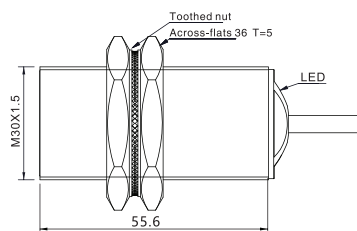


TLN18-16□□

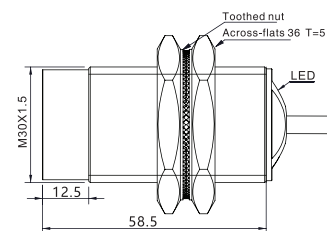


M30

TLF30-16□□



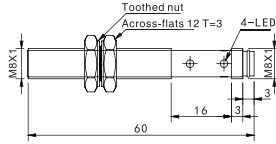
TLN30-25□□



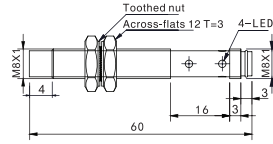
## Dimensions- Connector Type (Unit:mm)

M8

TLF08-02□□-E1



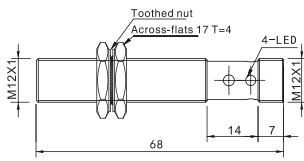
TLN08-04□□-E1



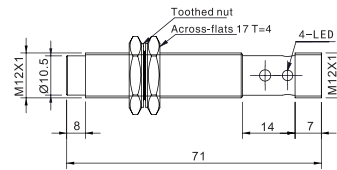
M8 3 Pin

M12

TLF12-04□□-E2



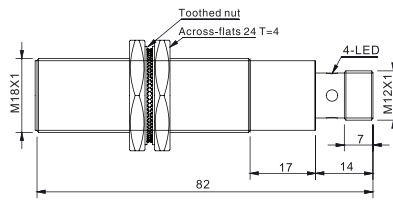
TLN12-08□□-E2



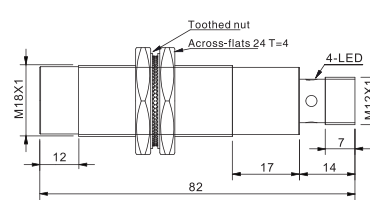
M12 4 Pin

M18

TLF18-08□□-E2



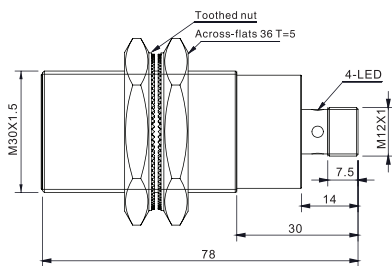
TLN18-16□□-E2



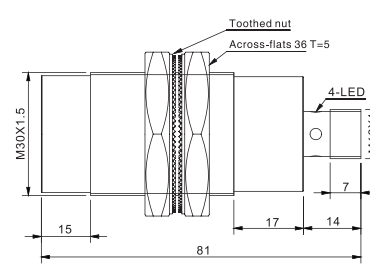
M12 4 Pin

M30

TLF30-16□□-E2



TLN30-25□□-E2



M12 4 Pin