

Extended Distance-TL Series

Pre-wired Type



Basic Features	Working principle	Inductive sensor										
	Housing	Cylindrical										
	Installation type	Flush					Non-flush					
	Sensing distance	2.0mm ± 10%		4.0mm ± 10%	8.0mm ± 10%	16mm ± 10%	4.0mm ± 10%		8.0mm ± 10%	16mm ± 10%	25mm ± 10%	
	Thread size	φ6.5	M8	M12	M18	M30	φ6.5	M8	M12	M18	M30	
	Sensing surface material	PBT										
	Detected objects	Metal										
	Indicator	Operation Status: LED										
	Sensing range adjustment	None										
Electrical data	Switching output	Normally Open or Normally Closed										
	Output mode	NPN or PNP Open Collector										
	External input	None										
	Switching frequency	2.0kHz	1.0kHz	0.3kHz	0.5kHz	0.15kHz	1.0kHz	0.8kHz	0.5kHz	0.15kHz	0.1kHz	
	Repeatability	1%		5%	1%			5%		1%		
	Hysteresis	≤15%										
	Operating Voltage	10~30V DC±10%										
	Current consumption	≤10mA										
	Residual Voltage	≤1.5V	≤2.0V				≤1.5V	≤2.0V				
	Load current	150mA										
	Leakage current	<0.01mA										
	Insulation resistance	≥50MΩ with 500V DC between power terminals and enclosure										
	Dielectric strength	1,000 VAC, 50/60 Hz for 1 min between power terminals and enclosure										<40V
	Vibration resistance	10 to 55 Hz, 1.5 mm double amplitude, 2 hours for each X, Y, and Z directions										
	Circuit Protection	Short circuit protection										
Environmental conditions	Operating Temperature	-25~+75℃										
	Operating Humidity	35~85%										
	Enclosure rating	IP67										
Mechanical data	Connection type	2m/3-core Cable										
	Dimension	Ø6.5x45.5mm	M8x46.7mm	M12x49.7mm	M18x63.0mm	M30x55.6mm	Ø6.5x45.0mm	M8x50.7mm	M12x54.6mm	M18x63.1mm	M30x58.5mm	
	Material	Stainless steel+PBT		Copper-nickel alloy+PBT			Stainless steel+PBT		Copper-nickel alloy+PBT			
	Weight	0.009kg	0.012kg	0.05kg	0.08kg	0.12kg	0.009kg	0.012kg	0.05kg	0.08kg	0.12kg	
	Accessories	—	Nut M8x1	Nut M12x1	Nut M18x1	Nut M30x1.5	—	Nut M8x1	Nut M12x1	Nut M18x1	Nut M30x1.5	
	Model	NPN NO	TLF6.5-02[NIO]	TLF08-02[NIO]	TLF12-04[NIO]	TLF18-08[NIO]	TLF30-16[NIO]	TLN6.5-04[NIO]	TLN08-04[NIO]	TLN12-08[NIO]	TLN18-16[NIO]	TLN30-25[NIO]
	Others	[NIO]:NPN Normally open [NC]:NPN Normally closed [PIO]:PNP Normally open [PC]:PNP Normally closed										



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	Housing	Cylindrical							
	Installation type	Flush				Non-flush			
	Sensing distance	2.0mm ± 10%	4.0mm ± 10%	8.0mm ± 10%	16mm ± 10%	4.0mm ± 10%	8.0mm ± 10%	16mm ± 10%	25mm ± 10%
	Thread size	M8	M12	M18	M30	M8	M12	M18	M30
	Sensing surface material	PBT							
	Detected objects	Metal							
	Indicator	Operation Status: LED							
	Sensing range adjustment	None							
Electrical data	Switching output	Normally Open or Normally Closed							
	Output mode	NPN or PNP Open Collector							
	External input	None							
	Switching frequency	1kHz		0.5kHz	0.15kHz	0.8kHz	0.5kHz	0.15kHz	0.1kHz
	Repeatability	1%							
	Hysteresis	≤15%							
	Operating Voltage	10~30V DC±10%							
	Current consumption	≤10mA							
	Residual Voltage	≤1.5V							
	Load current	150mA							
	Leakage current	<0.01mA							
	Insulation resistance	≥50MΩ with 500V DC between power terminals and enclosure							
	Dielectric strength	1,000 VAC, 50/60 Hz for 1 min between power terminals and enclosure						<40V	
	Vibration resistance	10 to 55 Hz, 1.5 mm double amplitude, 2 hours for each X, Y, and Z directions							
	Circuit Protection	Short circuit protection							
Environmental conditions	Operating Temperature	-25~+75℃							
	Operating Humidity	35~85%							
	Enclosure rating	IP67							
Mechanical data	Connection type	M8/3-pin Connector	M12/4-pin Connector			M8/3-pin Connector	M12/4-pin Connector		
	Dimension	M8x60.0mm	M12x68.0mm	M18x82.0mm	M30x78.0mm	M8x60.0mm	M12x71.0mm	M18x82.0mm	M30x81.0mm
	Material	Stainless steel+PBT	Copper-nickel alloy+PBT			Stainless steel+PBT	Copper-nickel alloy+PBT		
	Weight	0.012kg	0.05kg	0.08kg	0.12kg	0.012kg	0.05kg	0.08kg	0.012kg
	Accessories	Nut M8x1	Nut M12x1	Nut M18x1	Nut M30x1.5	Nut M8x1	Nut M12x1	Nut M18x1	Nut M30x1.5
Model	NPN NO	TLF08-02[NO]-E1	TLF12-04[NO]-E2	TLF18-08[NO]-E2	TLF30-16[NO]-E2	TLN08-04[NO]-E1	TLN12-08[NO]-E2	TLN18-16[NO]-E2	TLN30-25[NO]-E2
	Others	[NO]:NPN Normally open [NC]:NPN Normally closed [PO]:PNP Normally open [PC]:PNP Normally closed							

Fiber Optic

Slot Sensors

Photoelectric

Laser

Proximity

Displacement

Magnetic

Contact

Area

Ultrasonic

AI Image

Code Readers

Vibration

Temperature

RFID

Safety door lock

Pressure Switch

Communication

Accessories

Guidance

Inductive sensors

Standard distance

Extended distance

Long distance

Square

Mini square

Mini-cylindrical

Short-body

Ring-type

Metal face

Temperature

resistance type

IP69K high protection

Anti-Slag

Analog output

DC 2 wires

Capacitive sensors

Cylindrical

Correction

resistance type

Flat type

Level detection

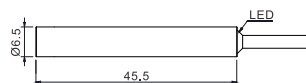
Extended Distance-TL Series

Dimensions-Pre-wired Type

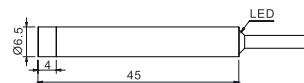
Unit:mm

 $\phi 6.5$

TLF6.5-02□□

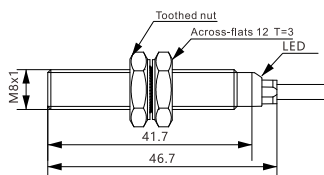


TLN6.5-04□□

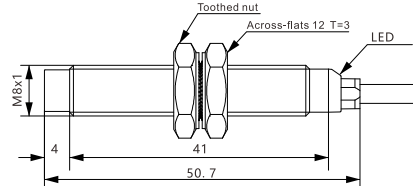


M8

TLF08-02□□

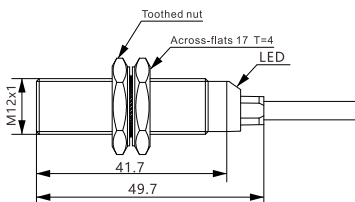


TLN08-04□□

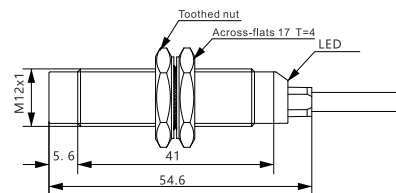


M12

TLF12-04□□

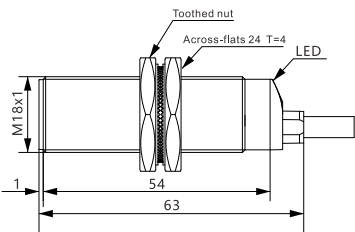


TLN12-08□□

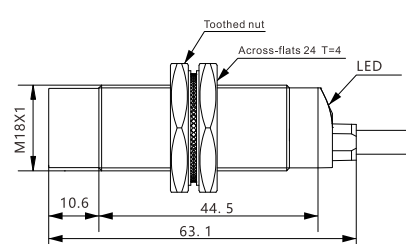


M18

TLF18-08□□

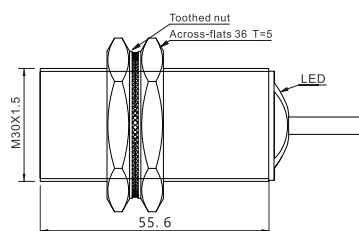


TLN18-16□□

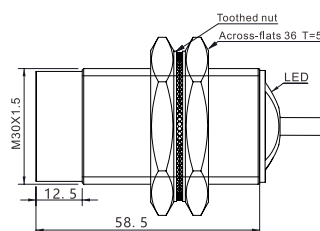


M30

TLF30-16□□



TLN30-25□□

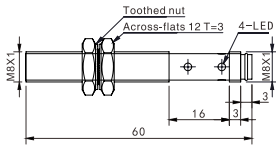


Unit:mm

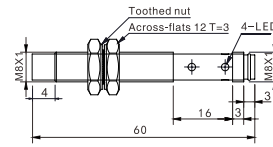
Dimensions- Connector Type

M8

TLF08-02□□-E1



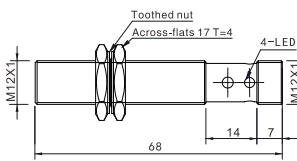
TLN08-04□□-E1



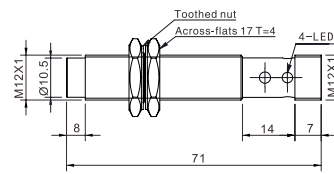
M8 3PIN

M12

TLF12-04□□-E2



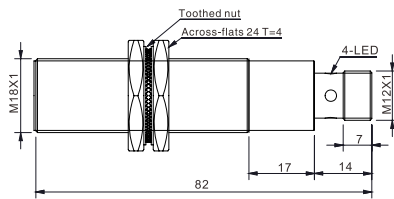
TLN12-08□□-E2



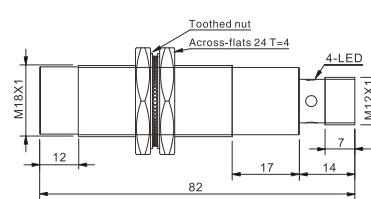
M12 4PIN

M18

TLF18-08□□-E2



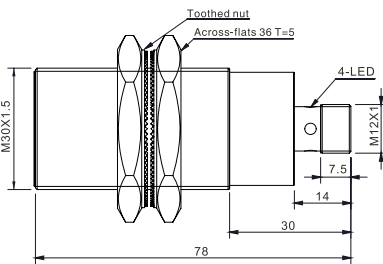
TLN18-16□□-E2



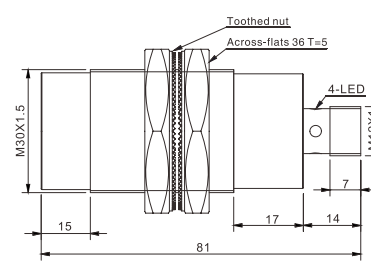
M12 4PIN

M30

TLF30-16□□-E2



TLN30-25□□-E2



M12 4PIN

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic
- AI Image
- Code Readers
- Vibration
- Temperature
- RFID
- Safety doorlock
- Pressure Switch
- Communication
- Accessories

Guidance

Inductive sensors

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

Capacitive sensors

- Cylindrical
- Correction resistant type
- Flat type
- Level detection