Proximity Sensors

- Non-contact involved, strong abrasive resistance, high stability.
- Highly sensitive / intense accuracy; life span lasts more than 8 years.
- Variety of popular materials, from stainless steel, nickle plated brass, to plastic; as well as teflon coating.
- Includes a complete range of specifications, and sizes.
- IP67/ premium degree of protection, 100% waterproof, and includes oil resistance features.

NEW!

Upgraded type(TJ series)

- Tail using a one–time injection molding technology, stable performance.
- Transparent tail cap design, the indicator is clearly visible.
- IP 68 protection degree,suitable for most industrial occasions

P.E-20

Standard Distance(TR series)

- Classical cylindrical look,high stability
- Adaptive to different occasions,top–notch quality,low price
- Customizable cables & connectors at your request

P.E-22

HOT

Extended Distance(TL series)

- 1 time longer distance than standard sensors
- Save installing space effectively
- Customizable cables & connectors at your request

P.E-25

Long Distance(TY series)

- Longer than 40mm sensing distance
- Avoid any attenuation caused by the material of detected objects
- IP67 high protection degree

P.E-28

Square(TQ series)

- Kidney –shaped hole,easy installation
- 8mm,Longest sensing distance
- Plastic housing, protection degree IP67

P.E-31

Mini-square(TE series)

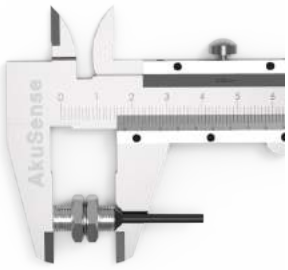
- 6mm (extral small) ,built–in amplifier
- 8mm sensing distance,the longest sensing distance in the industry
- Sensing surface on the top and at the front to suit your needs

P.E-32

Mini-cylindrical(TX series)

- Highly stablized detection in narrow space
- Shield type,can be embeded in detecting objects
- Φ3/3.4/4/,M4/5,various models for you to choose from

P.E-34



Short-body(TSS/TS series)

- Compared with similar sensors,the length can be shortened 1/3
- 18mm body length can perfectly fit into narrow space
- Epoxy resin fillings exhibit excellent shock resistance

P.E-36

Ring-type(TH series)

- 2mm thickness,the thinnest one in the industry
- Stainless steel casing;strong impact resistance
- Flexible sensitivity adjustment with knobs

P.E-39

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance

Rule of Compilation

Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires

Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Developing

Metal Factor-1 (TB series)

- All metal factors are 1
- Same sensing distace as Iron's
- Detecting nonmagnetic metals such as, Aluminum, Brass and Stainless steel

P.E-40

Developing

Ferrous Detection (TF series)

- Detect magnetic objects only,such as Fe
- Immune to nonmagnetic objects
- stainless steel casing;strong impact resistance

P.E-41

Developing

Aluminum Detection (TV series)

- Detect nonmagnetic metals such as alum–inum,brass and stainless steel
- Cannot detect megnetic metals,such as Iron and Nickle
- M8, M12 to M30, various diameters to choose from

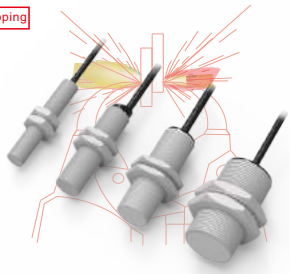
P.E-42

Metal Face (TM series)

- Stainless steel face,with great impact resistance
- 1000PSI/High pressure resistance
- Wonderful thermal shock and chemical resistance

P.E-43

Developing



Weld Field Immune (TW series)

- Teflon coatings,superior in weld field
- The longest sensing distance can reach 15mm
- M8/12/18/30,various diameters to choose from

P.E-45

Developing

High-sealing (TC series)

- Plastic casing,equiped with high–sealing cables
- High pressure resistance,reaches up to IP69K of protection degree
- M8/12/18/30,various diameters to choose from

P.E-46

Temperature (TG/TZ series)

- Extended temperature varies from –40 ℃ to 220℃
- Degree of protection up to IP67
- Reverse polarity protection and surge protection

P.E-47

High pressure (TP series)

- Pressure resistance can rise up to 500bar
- Classical diameter of M12
- Feature with lead wire style and connector style

P.E-50

NAMUR (TN series)

- Operating voltage from 6v to 12v DC
- Selectable Sensing distance from 1~10mm
- M8/12/18/30,various diameters to choose from

P.E-51

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
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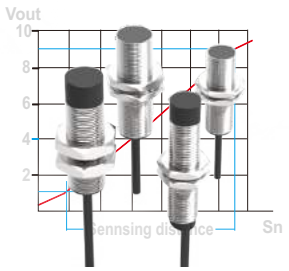
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection



Analog Output(TA series)

- First choice of short distance and non–contact detection
- Analog output 0~20mA and 0~10v
- Output PNP–Analog

P.E-52

DC 2-wires(TD series)

- Nonpolarized specifications,easy wiring method
- With smallest sensing surface M8
- 10~30V DC and 10~60V DC ,two voltages

P.E-53

Cylinderical(CK/CR series)

- Detect metal,plastic and liquid,ect
- With reverse polarity, short circuit, surge and many other protection functions
- Metal and plastic casing to choose from

P.E-53

NEW!

Corrosion Resistant Type (CWF Series)

- Up to 20 turns sensitivity adjustment
- Teflon coatings ensure superior corrosion
- resistance
  Widely used in detection on metals, water, oil, glasses, plastic and water, etc

P.E-58

Flat Type(CQ series)

- 7mm of thickness only for saving space
- Enjoy stablility;comparable to world famous brands
- Offer different kinds of detecing distance of 5mm, 6mm, 7mm and 10mm, etc

P.E-59

HOT

Level detection(CE series)

- Free from influence of liquid color in pipe lines
- Suitable for pipe line diameter from Φ8mm to Φ11mm, Φ12mm to Φ26 mm
- With built–in amplifier to save installing space

P.E-60

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance

Rule of Compilation

Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires

Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Guidance

Type 1	Type 2	Series	
Inductive Sensors	Cylinderical	Upgraded type	TJ Series
		Standard Distance	TR Series
		Extended Distance	TL Series
		Long Distance	TY Series
		Mini–cylindrical	TX Series
		Short–body	TSS/TS Series
		Analog Output	TA Series
		DC 2–wires	TD Series
	Square	Standard Square	TQ Series
		Mini–square	TE Series
	Special Applications	Ring–type	TH Series
		Metal Factor–1	TB Series
		Ferrous Detection	TF Series
		Aluminum Detection	TV Series
		Metal Face	TM Series
		Weld Field Immune	TW Series
		High–sealing	TC Series
		Temperature	TG/TZ Series
		High Pressure	TP Series
		NAMUR	TN Series
Capacitive Sensors	Cylinderical	Plastic Shells	CK Series
		Metal Shells	CR Series
	Corrosion resistant	Teflon Shells	CWF Series
	Flat Type	Plastic Shells	CQ Series
	Special Applications	Pipe Line Detecion	CE Series

Fiber Optic
Slot Type
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Guidance
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Inductive Sensors
Upgraded Type
Standard Distance
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Mini Square
Mini-Cylindrical
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Metal Factor-1
Ferrous Detection
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Metal Face
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Temperature
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NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

DC 3-wires Upgraded Type

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded		M8*45	1.5mm	TJF08-1.5NO	TJF08-1.5NC	E-20
				2mm	TJF08-02NO	TJF08-02NC	
			M12*50	2mm	TJF12-02NO	TJF12-02NC	
				4mm	TJF12-04NO	TJF12-04NC	
			M18*55	5mm	TJF18-05NO	TJF18-05NC	
				8mm	TJF18-08NO	TJF18-08NC	
			M30*55	10mm	TJF30-10NO	TJF30-10NC	
				16mm	TJF30-16NO	TJF30-16NC	
	Unshielded		M8*45	2mm	TJN08-02NO	TJN08-02NC	
				4mm	TJN08-04NO	TJN08-04NC	
			M12*50	4mm	TJN12-04NO	TJN12-04NC	
				8mm	TJN12-08NO	TJN12-08NC	
			M18*55	8mm	TJN18-08NO	TJN18-08NC	
				16mm	TJN18-16NO	TJN18-16NC	
			M30*55	15mm	TJN30-15NO	TJN30-15NC	
				25mm	TJN30-25NO	TJN30-25NC	

Noted:Model numbers ended with "PO/""PO-E1/""PO-E2" are PNP normally open ;model numbers ended with"PC/"PC-E1/""PC-E2" are PNP normally closed.

DC 3-wires Standard Distance

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded		ϕ6.5*45	1.5mm	TRF6.5-1.5NO	TRF6.5-1.5NC	F-22
			M8*45	1.5mm	TRF08-1.5NO	TRF08-1.5NC	
			M12*45	2mm	TRF12-02NO	TRF12-02NC	
			M18*54	5mm	TRF18-05NO	TRF18-05NC	
			M30*54	10mm	TRF30-10NO	TRF30-10NC	
	Unshielded		ϕ6.5*44	2mm	TRN6.5-02NO	TRN6.5-02NC	
			M8*44	2mm	TRN08-02NO HOT	TRN08-02NC	
			M12*44	4mm	TRN12-04NO HOT	TRN12-04NC	
			M18*54	8mm	TRN18-08NO	TRN18-08NC	
			M30*58	15mm	TRN30-15NO	TRN30-15NC	
Connector Style	Shielded		M8*60	1.5mm	TRF08-1.5NO-E1	TRF08-1.5NC-E1	
			M12*68	2mm	TRF12-02NO-E2	TRF12-02NC-E2	
			M18*82	5mm	TRF18-05NO-E2	TRF18-05NC-E2	
			M30*78	10mm	TRF30-10NO-E2	TRF30-10NC-E2	
	Unshielded		M8*60	2mm	TRN08-02NO-E1	TRN08-02NC-E1	
			M12*67	4mm	TRN12-04NO-E2	TRN12-04NC-E2	
			M18*78	8mm	TRN18-08NO-E2	TRN18-08NC-E2	
			M30*78	15mm	TRN30-15NO-E2	TRN30-15NC-E2	

Noted:Model numbers ended with "PO/""PO-E1/""PO-E2" are PNP normally open ;model numbers ended with"PC/"PC-E1/""PC-E2" are PNP normally closed.

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
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Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Guidance

Extended Distance DC 3-wires

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded		ϕ6.5*45	2mm	TLF6.5-02NO	TLF6.5-02NC	F-25
			M8*45	2mm	TLF08-02NO	TLF08-02NC	
			M12*45	4mm	TLF12-04NO	TLF12-04NC	
			M18*54	8mm	TLF18-08NO	TLF18-08NC	
			M30*54	16mm	TLF30-16NO	TLF30-16NC	
	Unshielded		ϕ6.5*44	4mm	TLN6.5-04NO	TLN6.5-04NC	
			M8*44	4mm	TLN08-04NO HOT	TLN08-04NC	
			M12*53	8mm	TLN12-08NO HOT	TLN12-08NC	
			M18*58	16mm	TLN18-16NO	TLN18-16NC	
			M30*61	25mm	TLN30-25NO	TLN30-25NC	
Connector Style	Shielded		M8*60	2mm	TLF08-02NO-E1	TLF08-02NC-E1	
			M12*68	4mm	TLF12-04NO-E2	TLF12-04NC-E2	
			M18*82	8mm	TLF18-08NO-E2	TLF18-08NC-E2	
			M30*78	16mm	TLF30-16NO-E2	TLF30-16NC-E2	
	Unshielded		M8*60	4mm	TLN08-04NO-E1	TLN08-04NC-E1	
			M12*71	8mm	TLN12-08NO-E2	TLN12-08NC-E2	
			M18*82	16mm	TLN18-16NO-E2	TLN18-16NC-E2	
			M30*81	25mm	TLN30-25NO-E2	TLN30-25NC-E2	

Noted:Model numbers ended with "PO/""PO-E1/""PO-E2" are PNP normally open ;model numbers ended with"PC/"PC-E1/""PC-E2" are PNP normally closed.

Long Distance DC 3-wires

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded		ϕ6.5*45	3mm	TYF6.5-03NO	TYF6.5-03NC	F-28
			M8*45	3mm	TYF08-03NO	TYF08-03NC	
			M12*45	6mm	TYF12-06NO	TYF12-06NC	
			M18*54	12mm	TYF18-12NO	TYF18-12NC	
			M30*54	22mm	TYF30-22NO	TYF30-22NC	
	Unshielded		ϕ6.5*44	6mm	TYN6.5-06NO	TYN6.5-06NC	
			M8*44	6mm	TYN08-06NO	TYN08-06NC	
			M12*53	10mm	TYN12-10NO	TYN12-10NC	
			M18*58	20mm	TYN18-20NO	TYN18-20NC	
			M30*61	40mm	TYN30-40NO	TYN30-40NC	
Connector Style	Shielded		M8*60	3mm	TYF08-03NO-E1	TYF08-03NC-E1	
			M12*68	6mm	TYF12-06NO-E2	TYF12-06NC-E2	
			M18*82	12mm	TYF18-12NO-E2	TYF18-12NC-E2	
			M30*78	22mm	TYF30-22NO-E2	TYF30-22NC-E2	
	Unshielded		M8*60	6mm	TYN08-06NO-E1	TYN08-06NC-E1	
			M12*71	10mm	TYN12-10NO-E2	TYN12-10NC-E2	
			M18*82	20mm	TYN18-20NO-E2	TYN18-20NC-E2	
			M30*81	40mm	TYN30-40NO-E2	TYN30-40NC-E2	

Noted:Model numbers ended with "PO/""PO-E1/""PO-E2" are PNP normally open ;model numbers ended with"PC/"PC-E1/""PC-E2" are PNP normally closed.

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
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Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
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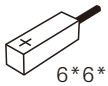
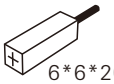
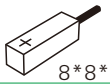
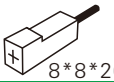
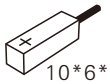
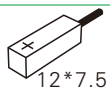
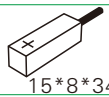
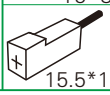
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

DC 3-wires **Square**

Type	Appearance			Sensing distance	Model numbers		Pages
	Unit: mm				NPN Normally open	NPN Normally closed	
Cable Style	17*17*27	Q17	Shielded	5mm	TQF17-05NO	TQF17-05NC	F-31
			Unshielded	8mm	TQN17-08NO	TQN17-08NC	
	18*18*34	Q18	Shielded	5mm	TQF18-05NO HOT	TQF18-05NC	
			Unshielded	8mm	TQN18-08NO	TQN18-08NC	
	18*10*30.5	Q18C	Shielded	5mm	TQF18C-05NO	TQF18C-05NC	
			Unshielded	8mm	TQN18C-08NO	TQN18C-08NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

DC 3-wires **Mini Square**

Type	Appearance		Sensing distance	Model numbers		Pages
	Unit: mm			NPN Normally open	NPN Normally closed	
Cable Style	Unshielded	 6*6*20	E06	1.5mm	TEN06-1.5NO	TEN06-1.5NC	F-32
		 6*6*20	E07	1.5mm	TEN07-1.5NO	TEN07-1.5NC	
		 8*8*23	E08	2.5mm	TEN08-2.5NO HOT	TEN08-2.5NC	
		 8*8*26	E09	2.5mm	TEN09-2.5NO HOT	TEN09-2.5NC	
		 10*6*30	E10	2.5mm	TEN10-2.5NO	TEN10-2.5NC	
				4mm	TEN10-04NO	TEN10-04NC	
		 12*7.5*30	E12	2.5mm	TEN12-2.5NO	TEN12-2.5NC	
				4mm	TEN12-04NO	TEN12-04NC	
		 15*8*34.5	E15	5mm	TEN15-05NO	TEN15-05NC	
				8mm	TEN15-08NO	TEN15-08NC	
		 15.5*15*34.5	E16	5mm	TEN16-05NO	TEN16-05NC	
				8mm	TEN16-08NO	TEN16-08NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

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Corrosion Resistant
Flat Type
Level Detection

Guidance

Mini-cylindrical DC 3-wires

Type		Appearance		Sensing distance	Model numbers		Pages
			Unit: mm		NPN Normally open	NPN Normally closed	
Cable Style	Shielded		ϕ3*25	0.6mm	TXF03-0.6NO	TXF03-0.6NC	E-34
				0.8mm	TXF03-0.8NO	TXF03-0.8NC	
				1.0mm	TXF03-01NO	TXF03-01NC	
			ϕ4*25	0.8mm	TXF04-0.8NO	TXF04-0.8NC	
				1.0mm	TXF04-01NO	TXF04-01NC	
				1.2mm	TXF04-1.2NO	TXF04-1.2NC	
				1.5mm	TXF04-1.5NO	TXF04-1.5NC	
			M4*25	0.6mm	TXFM4-0.6NO	TXFM4-0.6NC	
				0.8mm	TXFM4-0.8NO	TXFM4-0.8NC	
				1.0mm	TXFM4-01NO	TXFM4-01NC	
			M5*25	0.8mm	TXF05-0.8NO	TXF05-0.8NC	
				1.0mm	TXF05-01NO	TXF05-01NC	
				1.2mm	TXF05-1.2NO	TXF05-1.2NC	
				1.5mm	TXF05-1.5NO	TXF05-1.5NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

Ultra-short body DC 3-wires

Type		Appearance		Sensing distance	Model numbers		Pages
			Unit: mm		NPN Normally open	NPN Normally closed	
Cable Style	Shielded		ϕ6.5*18	1mm	TSSF6.5-01NO	TSSF6.5-01NC	E-36
				2mm	TSSF6.5-02NO	TSSF6.5-02NC	
				3mm	TSSF6.5-03NO	TSSF6.5-03NC	
			ϕ6.5Y*18	1mm	TSSF6.5Y-01NO	TSSF6.5Y-01NC	
				2mm	TSSF6.5Y-02NO	TSSF6.5Y-02NC	
				3mm	TSSF6.5Y-03NO	TSSF6.5Y-03NC	
			M8*18	1mm	TSSF08-01NO	TSSF08-01NC	
				2mm	TSSF08-02NO 荐	TSSF08-02NC	
				3mm	TSSF08-03NO	TSSF08-03NC	
			M12*22	2mm	TSSF12-02NO	TSSF12-02NC	
				4mm	TSSF12-04NO	TSSF12-04NC	
				6mm	TSSF12-06NO	TSSF12-06NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

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Upgraded Type
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Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
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NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

DC 3-wires **Short-body**

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded		M8*35	1mm	TSF08-01NO	TSF08-01NC	F-36
			M12*35	2mm	TSF12-02NO	TSF12-02NC	
			M18*35	5mm	TSF18-05NO	TSF18-05NC	
			M30*35	10mm	TSF30-10NO	TSF30-10NC	
	Unshielded		M8*35	2mm	TSN08-02NO	TSN08-02NC	
			M12*35	4mm	TSN12-04NO	TSN12-04NC	
			M18*43	8mm	TSN18-08NO	TSN18-08NC	
			M30*47	15mm	TSN30-15NO	TSN30-15NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

DC 3-wires **Ring-type**

Type	Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style		H10 Hole height:20	10.5mm	TH10-20NO	TH10-20NC	F-39
		H15 Hole height:20	15.5mm	TH15-20NO	TH15-20NC	
		H21 Hole height:20	22.5mm	TH21-20NO	TH21-20NC	
		H43 Hole height:20	43.5mm	TH43-20NO	TH43-20NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

DC 3-wires **Metal Factor-1**

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded	Developing	M12*45	2mm	TBF12-02NO	TBF12-02NC	F-40
			M18*54	5mm	TBF18-05NO	TBF18-05NC	
			M30*54	10mm	TBF30-10NO	TBF30-10NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

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Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
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Metal Face
Weld Field Immune
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Ferrous Detection DC 3-wires

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded	Developing	M12*45	2mm	TFF12-02NO	TFF12-02NC	F-41
			M18*54	5mm	TFF18-05NO	TFF18-05NC	
			M30*54	10mm	TFF30-10NO	TFF30-10NC	
	Unshielded	Developing	M12*44	4mm	TFN12-04NO	TFN12-04NC	
			M18*54	8mm	TFN18-08NO	TFN18-08NC	
			M30*58	15mm	TFN30-15NO	TFN30-15NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

Aluminum Detection DC 3-wires

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded	Developing	M12*45	2mm	TVF12-02NO	TVF12-02NC	F-42
			M18*54	4mm	TVF18-04NO	TVF18-04NC	
			M30*54	8mm	TVF30-08NO	TVF30-08NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

Metal Face DC 3-wires

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded		M8*45	1mm	TMF08-01NO	TMF08-01NC	F-43
			M12*45	2mm	TMF12-02NO	TMF12-02NC	
			M18*54	5mm	TMF18-05NO	TMF18-05NC	
			M30*54	10mm	TMF30-10NO	TMF30-10NC	
	Unshielded		M8*49	2mm	TMN08-02NO	TMN08-02NC	
			M12*54	4mm	TMN12-04NO	TMN12-04NC	
			M18*62	8mm	TMN18-08NO	TMN18-08NC	
			M30*66	15mm	TMN30-15NO	TMN30-15NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

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Short-Body
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Ferrous Detection
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DC 3-wires Weld Field Immune

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded	Developing	M12*45	2mm	TWF12-02NO	TWF12-02NC	F-45
			M18*54	5mm	TWF18-05NO	TWF18-05NC	
			M30*54	10mm	TWF30-10NO	TWF30-10NC	
	Unshielded	Developing	M12*44	4mm	TWN12-04NO	TWN12-04NC	
			M18*54	8mm	TWN18-08NO	TWN18-08NC	
			M30*58	15mm	TWN30-15NO	TWN30-15NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

DC 3-wires High-sealing

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Cable Style	Shielded	Developing	M12*50	2mm	TCF12-02NO	TCF12-02NC	F-46
			M18*52	5mm	TCF18-05NO	TCF18-05NC	
			M30*52	10mm	TCF30-10NO	TCF30-10NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

DC 3-wires Temperature

Type			Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
High temperature resistant	120℃	Shielded		M12*45	2mm	TGF12-02NO	TGF12-02NC	F-47
				M18*54	5mm	TGF18-05NO	TGF18-05NC	
				M30*54	10mm	TGF30-10NO	TGF30-10NC	
		Unshielded		M12*44	4mm	TGN12-04NO	TGN12-04NC	
				M18*54	8mm	TGN18-08NO HOT	TGN18-08NC	
				M30*58	15mm	TGN30-15NO	TGN30-15NC	
	220℃	Shielded		M12*55	2mm	TGF12-02NO2	TGF12-02NC2	
				M18*55	5mm	TGF18-05NO2	TGF18-05NC2	
				M30*54	10mm	TGF30-10NO2	TGF30-10NC2	
Low temperature resistant		Shielded		M12*45	2mm	TZF12-02NO	TZF12-02NC	
				M18*54	5mm	TZF18-05NO	TZF18-05NC	
				M30*54	10mm	TZF30-10NO	TZF30-10NC	
		Unshielded		M12*44	4mm	TZN12-04NO	TZN12-04NC	
				M18*54	8mm	TZN18-08NO	TZN18-08NC	
				M30*58	15mm	TZN30-15NO	TZN30-15NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

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Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
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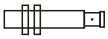
High Pressure DC 3-wires

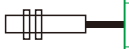
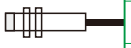
Type		Appearance	Sensing distance		Model numbers		Pages
			Unit: mm		NPN Normally open	NPN Normally closed	
Shielded	Cable Style		M12*69	1.5mm	TPF12-1.5NO	TPF12-1.5NC	F-50
				2mm	TPF12-02NO	TPF12-02NC	
	Connector Style		M12*78	1.5mm	TPF12-1.5NO-E2	TPF12-1.5NC-E2	
				2mm	TPF12-02NO-E2	TPF12-02NC-E2	

Noted:Model numbers ended with "PO/""PO-E1/""PO-E2" are PNP normally open ;model numbers ended with"PC/"PC-E1/""PC-E2" are PNP normally closed.

NAMUR DC 2-wires

Type		Appearance	Sensing distance		Model numbers	Pages
			Unit: mm			
Cable Style	Shielded		M8*35	1mm	TNF08-01NM	F-51
			M12*35	2mm	TNF12-02NM	
			M18*35	5mm	TNF18-05NM	
			M30*35	10mm	TNF30-10NM	

Analog Output DC 3-wires

Type		Appearance	Sensing distance		Model numbers		Pages
			Unit: mm		PNP Current output	PNP Volage output	
Cable Style	Shielded		M12*45	3mm	TAF12-03PA	TAF12-03PV	F-52
			M18*54	4mm	TAF18-04PA	TAF18-04PV	
			M30*54	10mm	TAF30-10PA	TAF30-10PV	
	Unshielded		M12*44	4mm	TAN12-04PA	TAN12-04PV	
			M18*54	7mm	TAN18-07PA	TAN18-07PV	
			M30*58	14mm	TAN30-14PA	TAN30-14PV	

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Ferrous Detection
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Weld Field Immune
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DC 2-Wires

Type		Appearance		Sensing distance	Model numbers		Pages
			Unit: mm		Normally open	Normally closed	
Cable Style	Shielded		ϕ6.5*45	1mm	TDF6.5-01HO	TDF6.5-01HC	F-53
				2mm	TDF6.5-02HO	TDF6.5-02HC	
			M8*45	1mm	TDF08-01HO	TDF08-01HC	
				2mm	TDF08-02HO	TDF08-02HC	
			M12*45	2mm	TDF12-02HO	TDF12-02HC	
				4mm	TDF12-04HO	TDF12-04HC	
			M18*54	5mm	TDF18-05HO	TDF18-05HC	
				8mm	TDF18-08HO	TDF18-08HC	
			M30*54	10mm	TDF30-10HO	TDF30-10HC	
				16mm	TDF30-16HO	TDF30-16HC	
	Unshielded		ϕ6.5*44	2mm	TDN6.5-02HO	TDN6.5-02HC	
				4mm	TDN6.5-04HO	TDN6.5-04HC	
			M8*44	2mm	TDN08-02HO	TDN08-02HC	
				4mm	TDN08-04HO	TDN08-04HC	
			M12*44	4mm	TDN12-04HO	TDN12-04HC	
				8mm	TDN12-08HO	TDN12-08HC	
			M18*54	8mm	TDN18-08HO	TDN18-08HC	
				16mm	TDN18-16HO	TDN18-16HC	
			M30*58	15mm	TDN30-15HO	TDN30-15HC	
				25mm	TDN30-25HO	TDN30-25HC	

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Level Detection

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Cylinderical DC 3-wires

Type		Appearance	Sensing distance (Unit: mm)		Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Plastic Shells	Shielded		M12*55	3mm	CKF12-03NO	CKF12-03NC	F-55
			M18*70	8mm	CKF18-08NO	CKF18-08NC	
			M30*80	20mm	CKF30-20NO	CKF30-20NC	
	Unshielded		M12*59	6mm	CKN12-06NO	CKN12-06NC	
			M18*73	15mm	CKN18-15NO	CKN18-15NC	
			M30*82	30mm	CKN30-30NO	CKN30-30NC	
Metal Shells	Shielded		M8*45	1mm	CRF08-01NO	CRF08-01NC	
			M12*58	3mm	CRF12-03NO	CRF12-03NC	
			M18*68	8mm	CRF18-08NO	CRF18-08NC	
			M30*79	20mm	CRF30-20NO	CRF30-20NC	
	Unshielded		M8*44	2mm	CRN08-02NO	CRN08-02NC	
			M12*62	6mm	CRN12-06NO	CRN12-06NC	
			M18*76	15mm	CRN18-15NO	CRN18-15NC	
			M30*91	30mm	CRN30-30NO	CRN30-30NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

Corrosion Resistant Type DC 4-wires

Type	Appearance	Sensing distance (Unit: mm)		Model numbers NPN PNP Normally open/Normally closed	Pages
Teflon casing Shielded		M18*66	10mm	CWF18-10NP	E-58

Flat Type DC 3-wires

Appearance	Sensing distance	Model numbers NPN Normally open	Model numbers NPN Normally closed	Model numbers PNP Normally open	Pages
	5mm	CQ07-05NO			F-59
	6mm	CQ07-06NO			
	7mm		CQ07-07NC	CQ07-07PO	
	10mm		CQ07-10NC	CQ07-10PO	

Level Detection DC 3-wires

Type	Appearance	Exterior diameter of pipes	Model numbers NPN Normally open	Model numbers NPN Normally closed	Pages
Unshielded		ϕ8~ϕ11	CE15-13NO	CE15-13NC	F-60
		ϕ12~ϕ26	CE30-26NO HOT	CE30-26NC	

Noted:Model numbers ended with "PO" are PNP normally open ;model numbers ended with"PC" are PNP normally closed.

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Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
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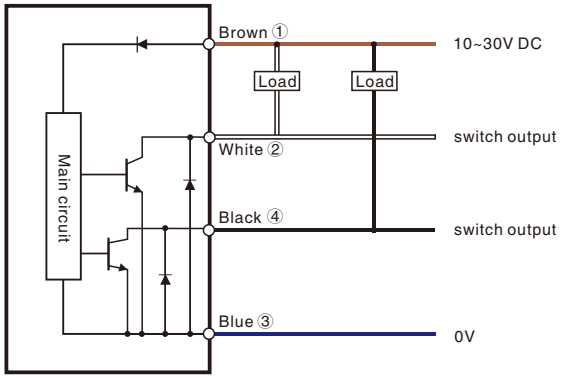
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

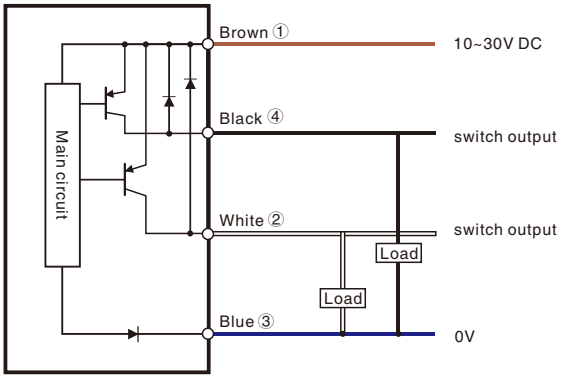
Input/Output circuit

DC 4-Wires

NPN

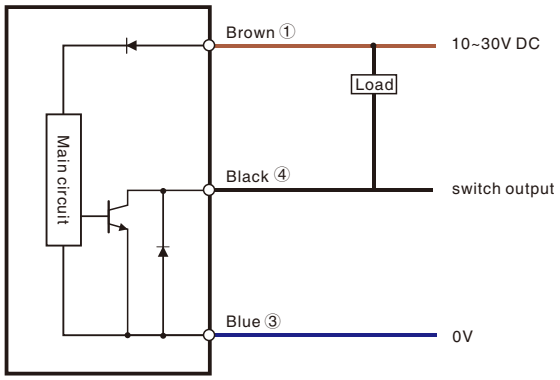


PNP

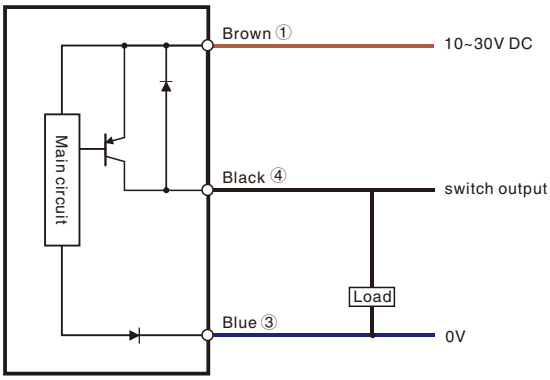


DC 3-Wires

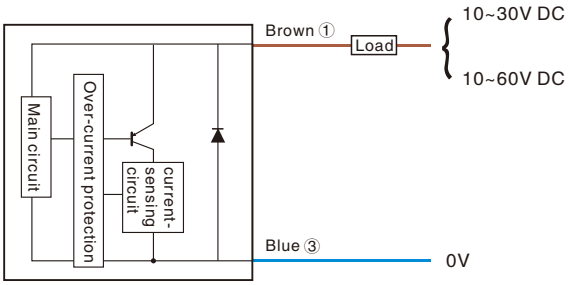
NPN



PNP

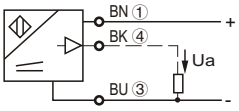
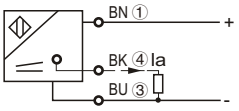
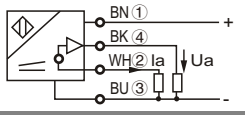


DC 2-Wires



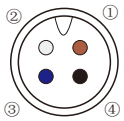
*Load (can be connected between blue wire and negative power supply.)
With M8 connector models, there is no output reverse polarity protection diode or current–detecting circuit. Connector models' terminals display in diagram 1 and 4.

Analog

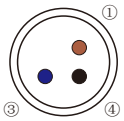
3-wires Voltage output	
3-wires Current output	
4-wires Voltage/current output	

Connector models'pin arrangement

Note:Terminal 1 and 4 are used in connector models



M12 4 pin



M8 3 pin

Fiber Optic
Slot Type
Photoelectric
Laser
Laser Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation

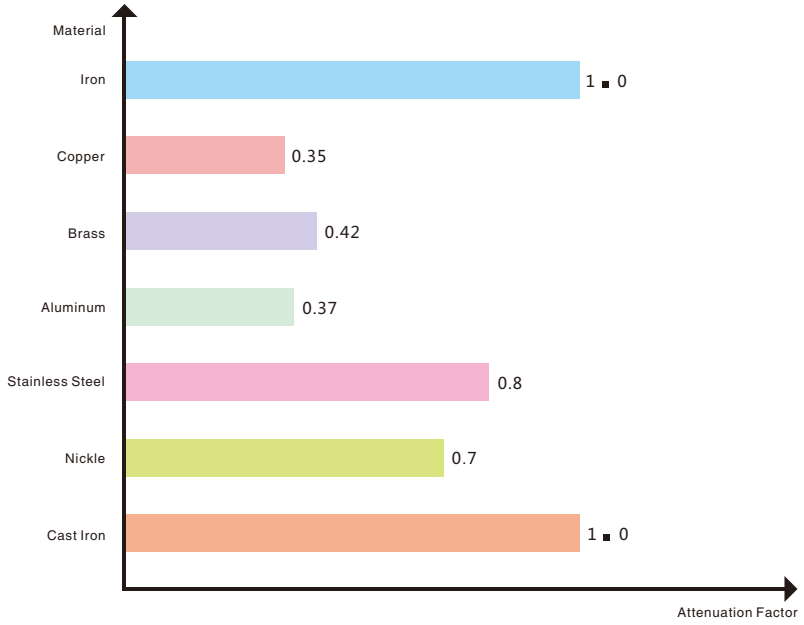
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires

Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Guidance

Inductance attenuation coefficient

Sensing distance=Nominal sensing distance*Attenuation factor



Noted:

1.Proper installation:shield or unshiled
2.Specifcations
3.Sensing distance
4.Feature of detecting objects(material and size)

Capacitive Sensors Dielectric Constant

For capacitive sensors,its detecting objects with different dielectric constant have different sensing distance and sentivity.
The bigger dielectric constant,the longer sensing distance it can get.

Dielectric Constant chart

Material	Dielectric Constant
Air	1
Wood	2~7
Paper	2.3
Polypropylene	2.3
Rubber,neoprene	2.5
Porcelain	4.4
Glass,pyrex	5
Water	80

Fiber Optic
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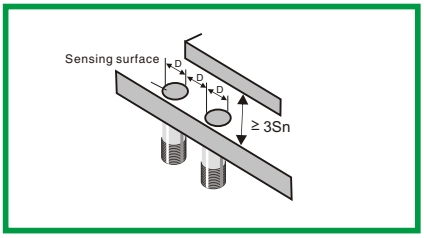
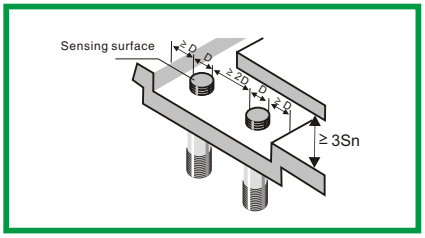
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Mounting Method-Shielded,unshielded



Shielded mounting proximity sensors

Sensing surface must be flush with metal surface



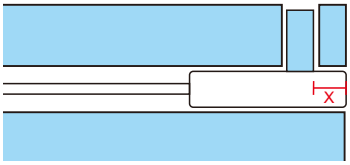
Unshielded mounting proximity sensors

The distance between sensing surface to surrounding metals must be more than 2 times sensing distance

Mounting Torque

Cylinderical

1.φ3/3.4/4:Fix the sensing head with a screw at 7mm where it is near the pointed part ;
2.φ6.5 Shielded mounting: Fix the sensing head with a screw at 8mm where it is near the pointed part ;
3.φ6.5 Unshielded moounting:Fix the sensing head with a screw at 12mm where it is near the pointed part.



φ3/φ3.4/φ4 : X=7mm φ6.5 : X=8~12mm

Thead Type

When installing threaded sensors,please don't exceed more torque than what have listed below.

Model No.	Tightening torque N
M4*0.5	1.5
M5*0.5	1.5
M8*1	3.5
M12*1	16
M18*1	28
M30*1.5	150

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance

Rule of Compilation

Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires

Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Rule of Compilation Capacitive Sensors

T ① ② ③ — ④ ⑤ ⑥ — ⑦

No.	Classification	Explantion of model numbers
①	Series	A:Analog Output B:Metal Factor–1 C:High–sealing D:DC 2–wires E:Mini Square F:Ferrous Detection G:High–temperature H:Ring–type J:Upgraded type L:Extended Distance M:Metal Face N:NAMUR P:High Pressure Q:Square R:Standard Distance S:Short–body SS:Extra Short Outer Casing V:Aluminum Detection W:Weld Field Immune 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–Wires NM:NAMUR
⑥	Output status	O:Normally open C:Normally closed A:Current output V:Voltage output
⑦	Connection	Null:Cable Style E1:M8 3Pin Connector E2： M12 4Pin Connector

Rule of Compilation Capacitive Sensors

C ① ② ③ — ④ ⑤ ⑥ — ⑦

No.	Classification	Explantion of model numbers
①	Series	E:Level Detection K:Plastic Shells Q:Flat Type W:Corrosion resistant R:Metal Shells
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–Wires
⑥	Output status	O:Normally open C:Normally closed
⑦	Connection	Null:Cable Style E1:M8 3Pin Connector E2： M12 4Pin Connector

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester
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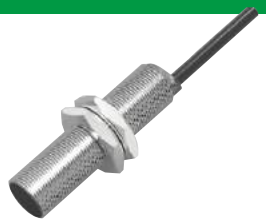
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Cable Style



Appearance								
Mounting	Shielded							
Housing size	M8		M12		M18		M30	
Sensing distance	1.5mm±10%	2mm±10%	2mm±10%	4mm±10%	5mm±10%	8mm±10%	10mm±10%	16mm±10%
Housing material	Stainless steel		Nickle plated brass					
Operating voltage	10~30V DC							
Voltage drop	<2.0V							
Load Current	100mA		200mA					
No-load supply current	<10mA(24V)							
Switch frequency	3KHz						300Hz	
Repeat accuracy	<1.0%(Sr)							
Hysteresis	<15%(Sr)							
Sensing surface material	POM		PBT					
Operating temperature	-25~70℃							
Degree of protection	IP68							
Interface	PVC Cable/2m;3*0.14mm²		PVC Cable/2m;3*0.34mm²					
Model No. NPN Normally open	TJF08-1.5NO	TJF08-02NO	TJF12-02NO	TJF12-04NO	TJF18-05NO	TJF18-08NO	TJF30-10NO	TJF30-16NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed							

Appearance								
Mounting	Unshielded							
Housing size	M8		M12		M18		M30	
Sensing distance	2mm±10%	4mm±10%	4mm±10%	8mm±10%	8mm±10%	16mm±10%	15mm±10%	25mm±10%
Housing material	Stainless steel		Nickle plated brass					
Operating voltage	10~30V DC							
Voltage drop	<2.0V							
Load Current	100mA		200mA					
No-load supply current	<10mA(24V)							
Switch frequency	1KHz/500Hz		500Hz/400Hz		500Hz/400Hz		300Hz/300Hz/100Hz	
Repeat accuracy	<1.0%(Sr)							
Hysteresis	<15%(Sr)							
Sensing surface material	POM		PBT					
Operating temperature	-25~70℃							
Degree of protection	IP68							
Interface	PVC Cable/2m;3*0.14mm²		PVC Cable/2m;3*0.34mm²					
Model No. NPN Normally open	TJN08-02NO	TJN08-04NO	TJN12-04NO	TJN12-08NO	TJN18-08NO	TJN18-16NO	TJN30-15NO	TJN30-25NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed							

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
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Contact
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Ultrasonic
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Tester

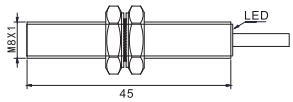
Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Upgraded Type

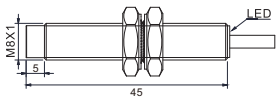
Dimensions- Cable Style (Unit:mm)

M8

TJF08-1.5/02□□

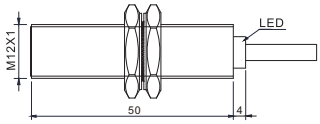


TJN08-02/04□□

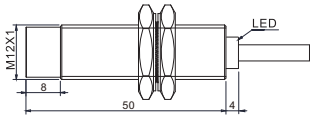


M12

TJF12-02/04□□

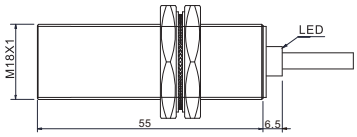


TJN12-04/08□□

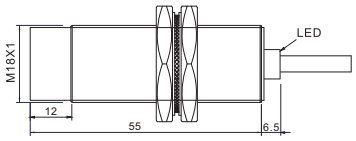


M18

TJF18-05/08□□

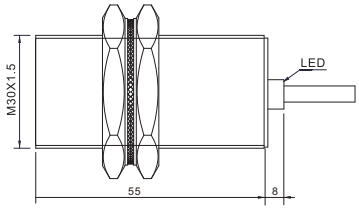


TJN18-08/16□□

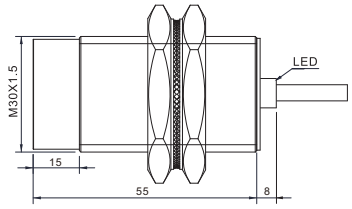


M30

TJF30-10/16□□



TJN30-15/25□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
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Square
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Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Cable Style

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		Nickle plated brass			Stainless steel		Nickle plated brass		
Operating voltage	10~30V DC(Ripple < 10%)									
Voltage drop	< 1.5V									
Load Current , Max	150mA									
No-load supply current	< 10mA					< 10mA		< 20mA		
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℃~+70℃									
Protective circuit	Short circuit									
Degree of protection	IP67									
Over-load trip	12V									
Model No. NPN Normally open	TRF6.5-1.5NO	TRF08-1.5NO	TRF12-02NO	TRF18-05NO	TRF30-10NO	TRN6.5-02NO	TRN08-02NO HOT	TRN12-04NO HOT	TRN18-08NO	TRN30-15NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed									

Connector Style

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	Nickle plated brass			Stainless steel	Nickle plated brass		
Operating voltage	10~30V DC(Ripple < 10%)							
Voltage drop	< 1.5V							
Load Current , Max	150mA							
No-load supply current	< 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℃~+70℃							
Protective circuit	Short circuit							
Degree of protection	IP67							
Over-load trip	180mA							
Model No. NPN Normally open	TRF08-1.5NO-E1	TRF12-02NO-E2	TRF18-05NO-E2	TRF30-10NO-E2	TRN08-02NO-E1	TRN12-04NO-E2	TRN18-08NO-E2	TRN30-15NO-E2
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed							

Fiber Optic
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Temperature
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NAMUR
Analog Output
DC 2 Wires

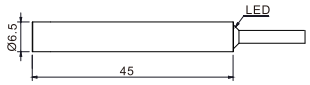
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Standard Distance

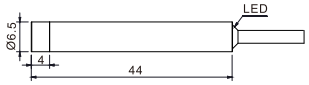
Dimensions- Cable Style (Unit:mm)

ϕ6.5

TRF6.5-1.5□□

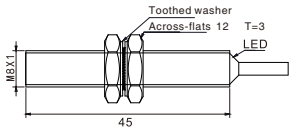


TRN6.5-02□□

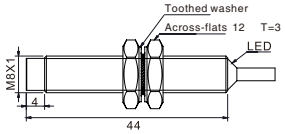


M8

TRF08-1.5□□

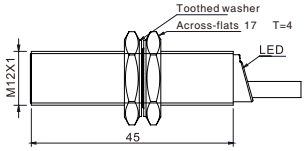


TRN08-02□□

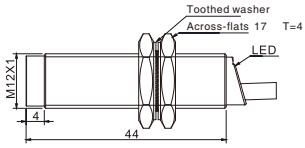


M12

TRF12-02□□

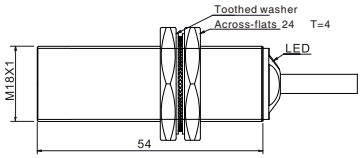


TRN12-04□□

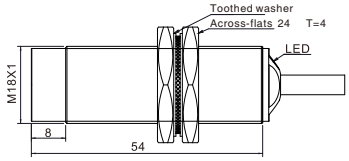


M18

TRF18-05□□

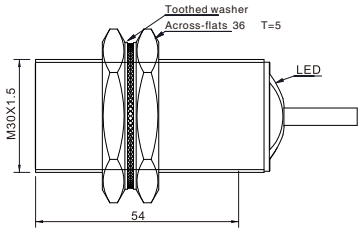


TRN18-08□□

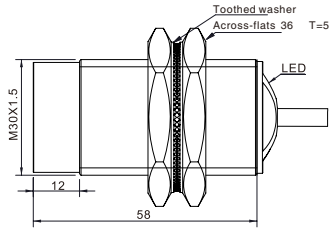


M30

TRF30-10□□



TRN30-15□□



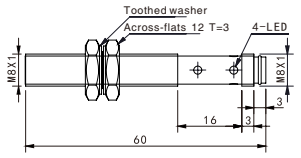
Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

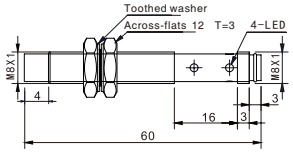
Dimensions- Connector Style (Unit:mm)

M8

TRF08-□□-E1

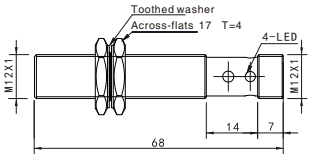


TRN08-□□-E1

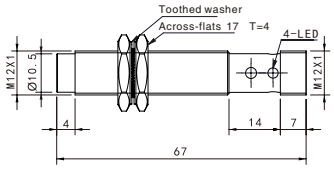


M12

TRF12-□□-E2

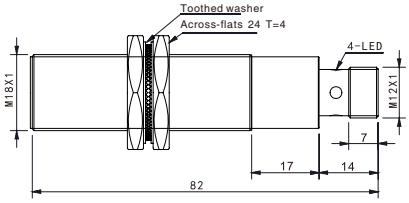


TRN12-□□-E2

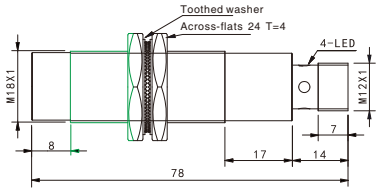


M18

TRF18-□□-E2

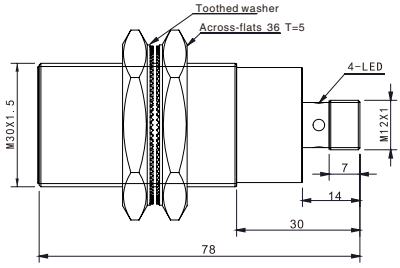


TRN18-□□-E2

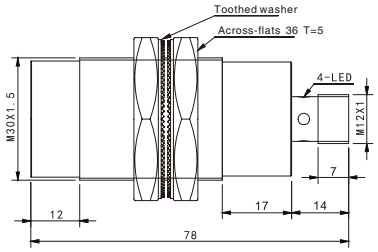


M30

TRF30-□□-E2



TRN30-□□-E2



Extended Distance

Cable Style

Appearance										
Mounting	Shielded	?	Shielded			Unshielded	Unshielded			
Housing size	ϕ6.5	M8	M12	M18	M30	ϕ6.5	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		Nickle plated brass			Stainless steel		Nickle plated brass		
Operating voltage	10~30V DC(Ripple < 10%)									
Voltage drop	< 1.5V									
Load Current , Max	150mA									
No-load supply current	< 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℃~+70℃									
Protective circuit	Short circuit									
Degree of protection	IP67									
Over-load trip	180mA									
Model No. NPN Normally open	TLF6.5-02NO	TLF08-02NO	TLF12-04NO	TLF18-08NO	TLF30-16NO	TLN6.5-04NO	TLN08-04NO HOT	TLN12-08NO HOT	TLN18-16NO	TLN30-25NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed									

Connector Style

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	Nickle plated brass			Stainless steel	Nickle plated brass		
Operating voltage	10~30V DC(Ripple < 10%)							
Voltage drop	< 1.5V							
Load Current , Max	150mA							
No-load supply current	< 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℃~+70℃							
Protective circuit	Short circuit							
Degree of protection	IP67							
Over-load trip	180mA							
Model No. NPN Normally open	TLF08-02NO-E1	TLF12-04NO-E2	TLF18-08NO-E2	TLF30-16NO-E2	TLN08-04NO-E1	TLN12-08NO-E2	TLN18-16NO-E2	TLN30-25NO-E2
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed							

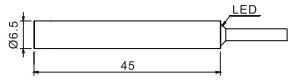
Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

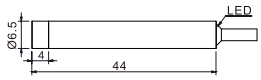
Dimensions- Cable Style (Unit:mm)

φ6.5

TLF6.5-02□□

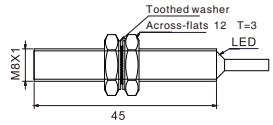


TLN6.5-04□□

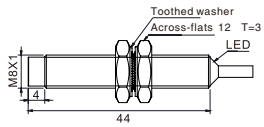


M8

TLF08-02□□

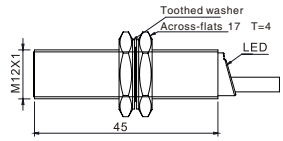


TLN08-04□□

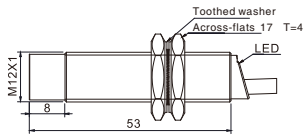


M12

TLF12-04□□

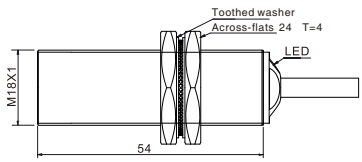


TLN12-08□□

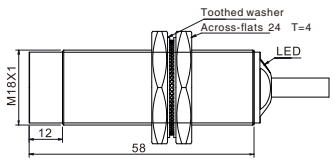


M18

TLF18-08□□

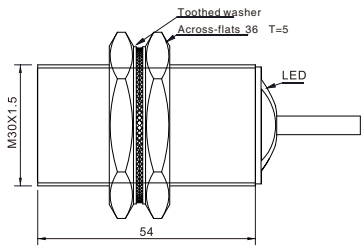


TLN18-16□□

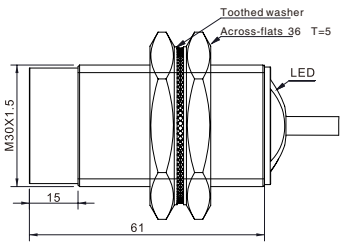


M30

TLF30-16□□



TLN30-25□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

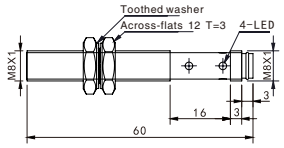
Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Extended Distance

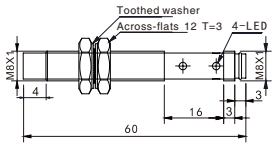
Dimensions- Connector Style (Unit:mm)

M8

TLF08-02□□-E1



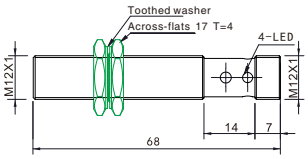
TLN08-04□□-E1



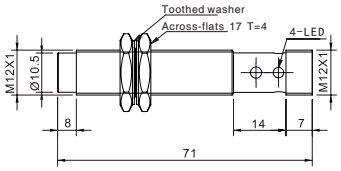
M8 3 Pin

M12

TLF12-04□□-E2



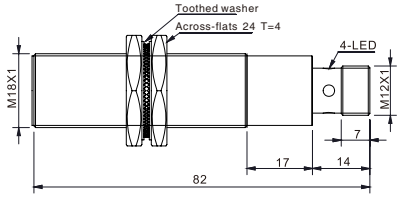
TLN12-08□□-E2



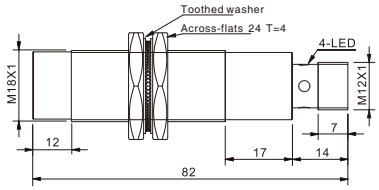
M12 4 Pin

M18

TLF18-08□□-E2



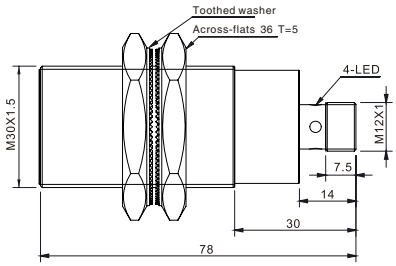
TLN18-16□□-E2



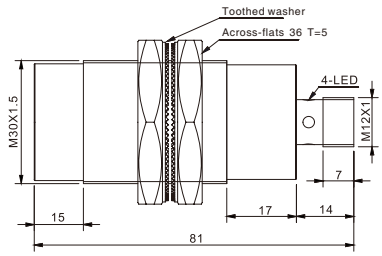
M12 4 Pin

M30

TLF30-16□□-E2



TLN30-25□□-E2



M12 4 Pin

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation

Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires

Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Cable Style

Appearance										
Mounting	Shielded	Shielded				Unshielded	Unshielded			
Housing size	ϕ6.5	M8	M12	M18	M30	ϕ6.5	M8	M12	M18	M30
Sensing distance	3mm ± 10%	3mm ± 10%	6mm ± 10%	12mm ± 10%	22mm ± 10%	6mm ± 10%	6mm ± 10%	10mm ± 10%	20mm ± 10%	40mm ± 10%
Housing material	Stainless steel		Nickle plated brass			Stainless steel		Nickle plated brass		
Operating voltage	10~30V DC(Ripple < 10%)									
Voltage drop	< 1.5V									
Load Current , Max	150mA									
No-load supply current	< 10mA									
Leakage current	< 0.01mA									
Switch frequency	1KHz		800Hz	300Hz	150Hz	500Hz		400Hz	100Hz	
Repeat accuracy	< 1.0%(Sr)	< 2.0%(Sr)				< 1.0%(Sr)	< 2.0%(Sr)			
Hysteresis	< 15%(Sr)									
Sensing surface material	PBT									
Operating Temperature	−25℃~+70℃									
Protective circuit	Short circuit									
Degree of protection	IP67									
Over-load trip	180mA									
Model No. NPN Normally open	TYF6.5-03NO	TYF08-03NO	TYF12-06NO	TYF18-12NO	TYF30-22NO	TYN6.5-06NO	TYN08-06NO	TYN12-10NO	TYN18-20NO	TYN30-40NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed									

Connector Style

Appearance								
Mounting	Shielded				Unshielded			
Housing size	M8	M12	M18	M30	M8	M12	M18	M30
Sensing distance	3mm ± 10%	6mm ± 10%	12mm ± 10%	22mm ± 10%	6mm ± 10%	10mm ± 10%	20mm ± 10%	40mm ± 10%
Housing material	Stainless steel	Nickle plated brass			Stainless steel	Nickle plated brass		
Operating voltage	10~30V DC(Ripple < 10%)							
Voltage drop	< 1.5V							
Load Current , Max	150mA							
No-load supply current	< 10mA							
Leakage current	< 0.01mA							
Switch frequency	1KHz	800Hz	300Hz	150Hz	500Hz	400Hz	100Hz	
Repeat accuracy	< 2.0%(Sr)							
Hysteresis	< 15%(Sr)							
Sensing surface material	PBT							
Operating Temperature	−25℃~+70℃							
Protective circuit	Short circuit							
Degree of protection	IP67							
Over-load trip	180mA							
Model No. NPN Normally open	TYF08-03NO-E1	TYF12-06NO-E2	TYF18-12NO-E2	TYF30-22NO-E2	TYN08-06NO-E1	TYN12-10NO-E2	TYN18-20NO-E2	TYN30-40NO-E2
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed							

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

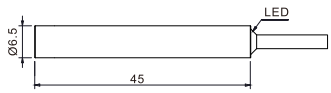
Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Long Distance

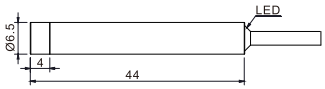
Dimensions- Cable Style (Unit:mm)

φ6.5

TYF6.5-03□□

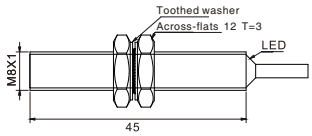


TYN6.5-06□□

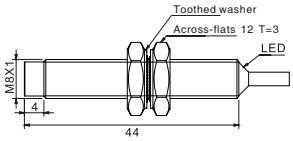


M8

TYF08-03□□

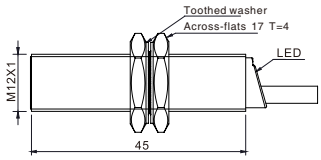


TYN08-06□□

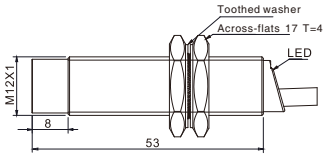


M12

TYF12-06□□

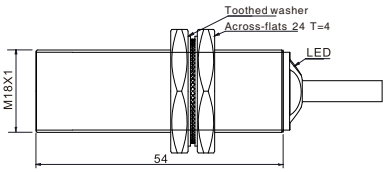


TYN12-10□□

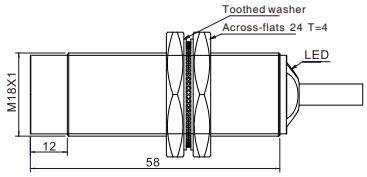


M18

TYF18-12□□

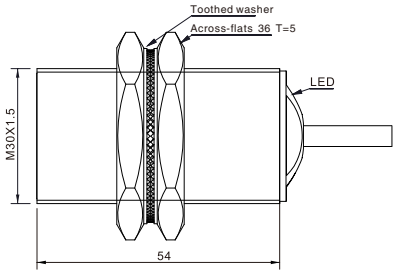


TYN18-20□□

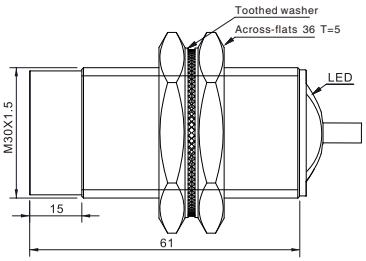


M30

TYF30-22□□



TYN30-40□□



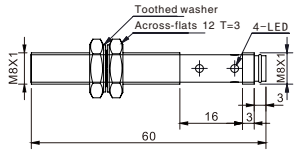
Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

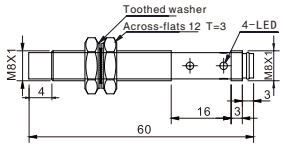
Dimensions- Connector Style (Unit:mm)

M8

TYF08-03□□-E1

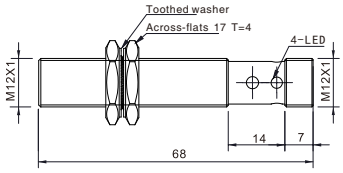


TYN08-06□□-E1

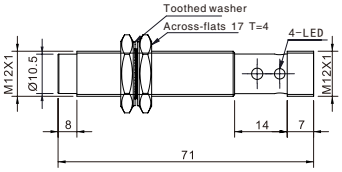


M12

TYF12-06□□-E2

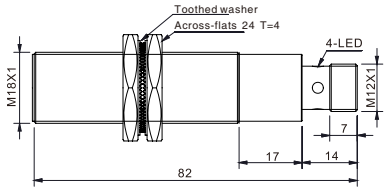


TYN12-10□□-E2

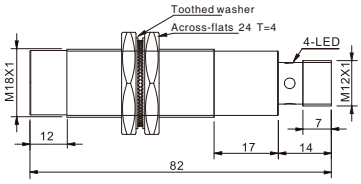


M18

TYF18-12□□-E2

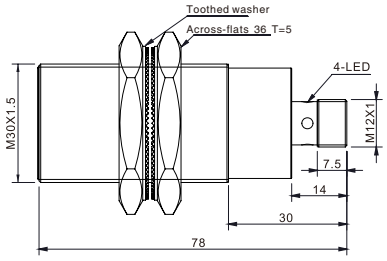


TYN18-20□□-E2

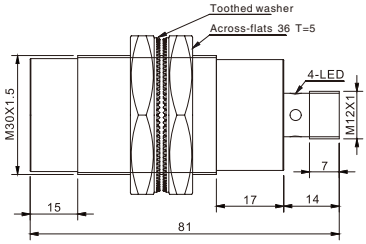


M30

TYF30-22□□-E2



TYN30-40□□-E2



Square

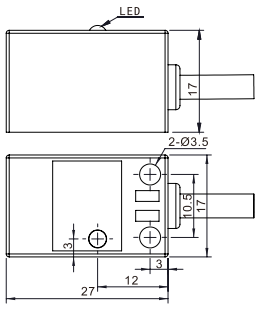
Cable Style

Appearance						
Mounting	Shielded	Unshielded	Shielded	Unshield	Shielded	Unshielded
Housing size	Q17		Q18		Q18C	
Sensing distance	5mm ± 10%	8mm ± 10%	5mm ± 10%	8mm ± 10%	5mm ± 10%	8mm ± 10%
Housing material	Plastic					
Operating voltage	10~30V DC					
Voltage drop	< 1.5V					
Load Current , Max	150mA					
No-load supply current	< 10mA					
Leakage current	< 0.01mA					
Switch frequency	1KHz	500Hz	1KHz	500Hz	1KHz	500Hz
Repeat accuracy	< 1.0% (Sr)					
Hysteresis	< 15% (Sr)					
Sensing surface material	ABS					
Operating Temperature	−25℃~+70℃					
Protective circuit	Short circuit					
Degree of protection	IP67					
Over-load trip	180mA					
Model No. NPN Normally open	TQF17-05NO	TQN17-08NO	TQF18-05NO HOT	TQN18-08NO	TQF18C-05NO	TQN18C-08NO
Model No. Others	NO:NPN Normally open	NC:NPN Normally closed	PO:PNP Normally open	PC:PNP Normally closed		

Dimensions (Unit:mm)

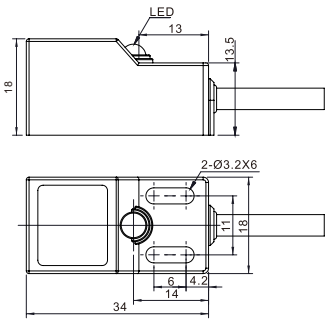
Q17

TQF17-05□□
TQN17-08□□



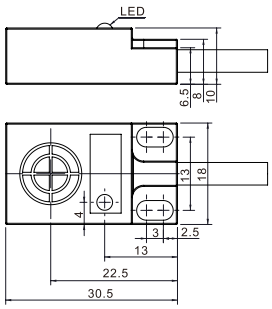
Q18

TQF18-05□□
TQN18-08□□



Q18C

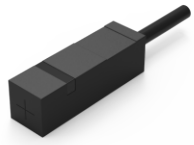
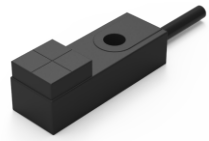
TQF18C-05□□
TQN18C-08□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

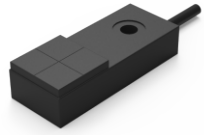
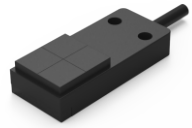
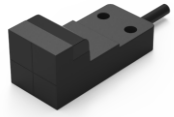
Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Cable Style

Appearance				
Mounting	Unshielded	Unshielded	Unshielded	Unshielded
Housing size	E06	E07	E08	E09
Sensing distance	1.5mm ± 10%	1.5mm ± 10%	2.5mm ± 10%	2.5mm ± 10%
Housing material	Plastic			
Operating voltage	10~30V DC(Ripple < 10%)			
Voltage drop	< 1.5V			
Load Current , Max	150mA			
No-load supply current	< 10mA			
Leakage current	< 0.01mA			
Switch frequency	2KHz			
Repeat accuracy	0.04mm			
Hysteresis	< 15% (Sr)			
Sensing surface material	PC			
Operating Temperature	−25℃~+70℃			
Protective circuit	Short circuit			
Degree of protection	IP67			
Over-load trip	180mA			
Model No. NPN Normally open	TEN06-1.5NO/TEN06-02NO	TEN07-1.5NO/TEN07-02NO	TEN08-2.5NO/TEN08-03NO HOT	TEN09-2.5NO/TEN09-03NO HOT
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed			

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

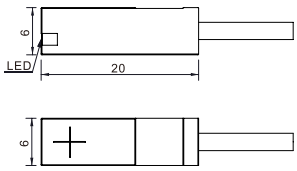
Appearance				
Mounting	Unshielded	Unshielded	Unshielded	Unshielded
Housing size	E10	E12	E15	E16
Sensing distance	2.5mm/4mm ± 10%	2.5mm/4mm ± 10%	5mm/8mm ± 10%	5mm/8mm ± 10%
Housing material	Plastic			
Operating voltage	10~30V DC(Ripple < 10%)			
Voltage drop	< 1.5V			
Load Current , Max	150mA			
No-load supply current	< 10mA			
Leakage current	< 0.01mA			
Switch frequency	1KHz			
Repeat accuracy	0.04mm			
Hysteresis	< 15% (Sr)			
Sensing surface material	PC			
Operating Temperature	−25℃~+70℃			
Protective circuit	Short circuit			
Degree of protection	IP67			
Over-load trip	180mA			
Model No. NPN Normally open	TEN10-2.5NO/TEN10-04NO	TEN12-2.5NO/TEN12-04NO	TEN15-05NO/TEN15-08NO	TEN16-05NO/TEN16-08NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed			

Mini-square

Dimensions (Unit:mm)

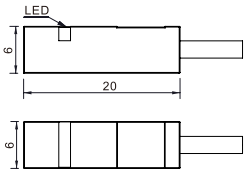
E06

TEN06-1.5 □□



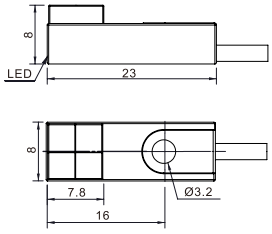
E07

TEN07-1.5 □□



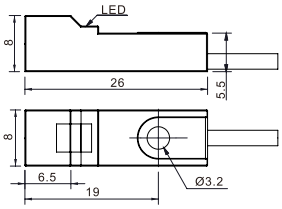
E08

TEN08-2.5 □□



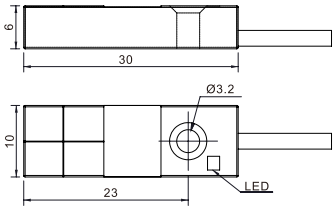
E09

TEN09-2.5 □□



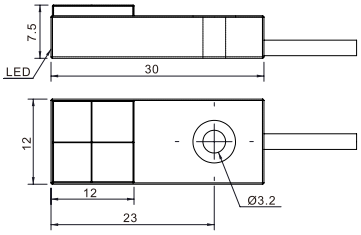
E10

TEN10-2.5/04□□



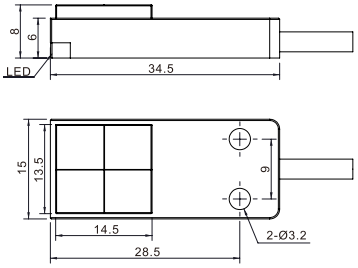
E12

TEN12-2.5/04□□



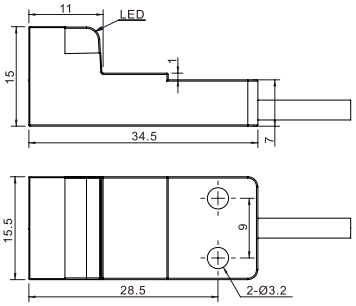
E15

TEN15-05/08□□



E16

TEN16-05/08□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation

Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires

Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Cable Style

Appearance			
Mounting	Shielded		
Housing size	ϕ3	ϕ4	
Sensing distance	0.6mm/0.8mm±10%	0.8mm/1.0mm±10%	
Housing material	Stainless steel		
Operating voltage	10~30V DC(Ripple<10%)		
Voltage drop	<1.5V		
Load Current，Max	100mA	150mA	
No-load supply current	<10mA		
Leakage current	<0.01mA		
Switch frequency	2KHz		
Repeat accuracy	<1.0%(Sr)		
Hysteresis	<15%(Sr)		
Sensing surface material	PA66		
Operating Temperature	−25℃~+70℃		
Degree of protection	IP67		
Over-load trip	120mA	180mA	
Model No. NPN Normally open	TXF03-0.6NO/TXF03-0.8NO	TXF04-0.8NO/TXF04-01NO	
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed		

Appearance			
Mounting	Shielded		
Housing size	M4	M5	
Sensing distance	0.6mm/0.8mm±10%	0.8mm/1.0mm±10%	
Housing material	Stainless steel		
Operating voltage	10~30V DC(Ripple<10%)		
Voltage drop	<1.5V		
Load Current，Max	100mA	150mA	
No-load supply current	<10mA		
Leakage current	<0.01mA		
Switch frequency	2KHz		
Repeat accuracy	<1.0%(Sr)		
Hysteresis	<15%(Sr)		
Sensing surface material	PA66		
Operating Temperature	−25℃~+70℃		
Degree of protection	IP67		
Over-load trip	120mA	180mA	
Model No. NPN Normally open	TXFM4-0.6NO / TXFM4-0.8NO	TXF05-0.8NO / TXF05-01NO	
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed		

Fiber Optic
Slot Type
Photoelectric
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Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

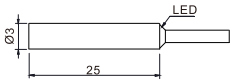
Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Mini-cylindrical

Dimensions (Unit:mm)

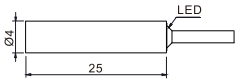
ϕ3

TXF03-0.6/0.8 □□



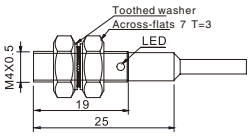
ϕ4

TXF04-0.8/01□□



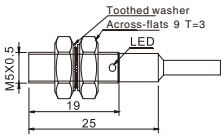
M4

TXFM4-0.6/0.8 □□



M5

TXF05-0.8/01□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Extra Shot Outer Casing

Appearance		
Mounting	Shielded	
Housing size	ϕ6.5	ϕ6.5Y
Sensing distance	1mm ± 10%	1mm ± 10%
Housing material	Stainless steel	
Operating voltage	10~30V DC(Ripple < 10%)	
Voltage drop	< 1.5V	
Load Current , Max	150mA	
No-load supply current	< 10mA	
Leakage current	< 0.01mA	
Switch frequency	2KHz	
Repeat accuracy	< 1.0%(Sr)	
Hysteresis	< 15%(Sr)	
Sensing surface material	PBT	
Operating Temperature	−25℃~+70℃	
Protective circuit	Short circuit	
Degree of protection	IP67	
Over-load trip	180mA	
Model No. NPN Normally open	TSSF6.5-01NO	TSSF6.5Y-01NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed	

Appearance		
Mounting	Shielded	
Housing size	M8	M12
Sensing distance	1mm ± 10%	2mm ± 10%
Housing material	Stainless steel	
Operating voltage	10~30V DC(Ripple < 10%)	
Voltage drop	< 1.5V	
Load Current , Max	150mA	
No-load supply current	< 10mA	
Leakage current	< 0.01mA	
Switch frequency	2KHz	
Repeat accuracy	< 1.0%(Sr)	
Hysteresis	< 15%(Sr)	
Sensing surface material	PBT	
Operating Temperature	−25℃~+70℃	
Protective circuit	Short circuit	
Degree of protection	IP67	
Over-load trip	180mA	
Model No. NPN Normally open	TSSF08-01NO	TSSF12-02NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed	

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Short-body

General

Appearance				
Mounting	Shielded			
Housing size	M8	M12	M18	M30
Sensing distance	1mm ± 10%	2mm ± 10%	5mm ± 10%	10mm ± 10%
Housing material	Stainless steel			
Operating voltage	10~30V DC(Ripple < 10%)			
Voltage drop	< 1.5V			
Load Current , Max	150mA			
No-load supply current	< 10mA			
Leakage current	< 0.01mA			
Switch frequency	2KHz	2KHz	1KHz	300Hz
Repeat accuracy	< 1.0%(Sr)			
Hysteresis	< 15%(Sr)			
Sensing surface material	PBT			
Operating Temperature	−25℃~+70℃			
Protective circuit	Short circuit			
Degree of protection	IP67			
Over-load trip	180mA			
Model No. NPN Normally open	TSF08-01NO	TSF12-02NO	TSF18-05NO	TSF30-10NO
Model No. Others	NO:NPN Normally open	NC:NPN Normally closed	PO:PNP Normally open	PC:PNP Normally closed

Appearance				
Mounting	Unshielded			
Housing size	M8	M12	M18	M30
Sensing distance	2mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%
Housing material	Stainless steel	Nickle plated brass		
Operating voltage	10~30V DC(Ripple < 10%)			
Voltage drop	< 1.5V			
Load Current , Max	150mA			
No-load supply current	< 10mA	< 20mA		
Leakage current	< 0.01mA			
Switch frequency	2KHz	1KHz	500Hz	150Hz
Repeat accuracy	< 1.0%(Sr)			
Hysteresis	< 15%(Sr)			
Sensing surface material	PBT			
Operating Temperature	−25℃~+70℃			
Protective circuit	Short circuit			
Degree of protection	IP67			
Over-load trip	180mA			
Model No. NPN Normally open	TSN08-02NO	TSN12-04NO	TSN18-08NO	TSN30-15NO
Model No. Others	NO:NPN Normally open	NC:NPN Normally closed	PO:PNP Normally open	PC:PNP Normally closed

Fiber Optic
Slot Type
Photoelectric
Laser
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Displacement
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Contact
Light Curtains
Ultrasonic
Connectivities
Tester

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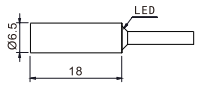
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Extra Shot Outer Casing-Dimensions (Unit:mm)

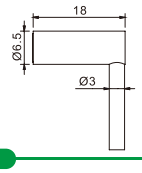
ϕ6.5

TSSF6.5-01□□



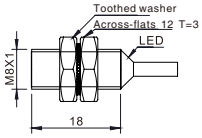
ϕ6.5Y

TSSF6.5Y-01 □□



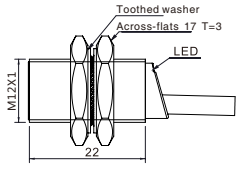
M8

TSSF08-01□□



M12

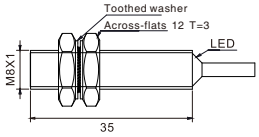
TSSF12-02 □□



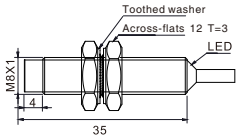
General-Dimensions (Unit:mm)

M8

TSF08-01□□

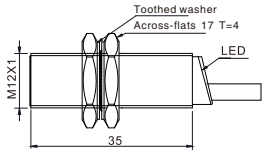


TSN08-02□□

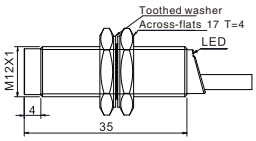


M12

TSF12-02□□

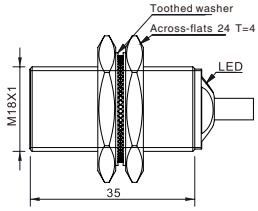


TSN12-04□□

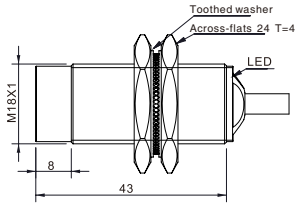


M18

TSF18-05□□

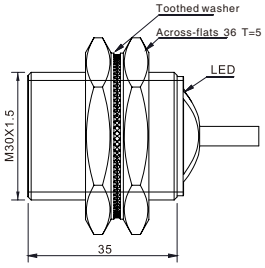


TSN18-08□□

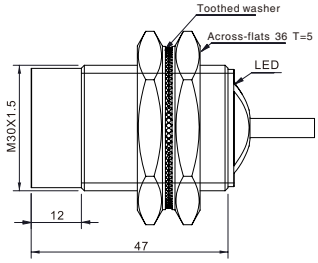


M30

TSF30-10□□



TSN30-15□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation

Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires

Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Ring-type

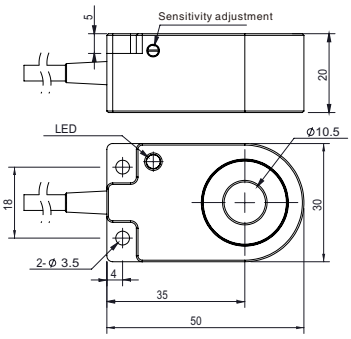
Cable Style

Appearance				
Housing size	H10	H15	H21	H43
Hole diameter	10.5mm	15.5mm	22.5mm	43.5mm
Hole height	20mm			
Housing material	ABS			
Operating voltage	10~30V DC(Ripple＜10%)			
Voltage drop	＜1.5V			
Load Current , Max	150mA			
No-load supply current	＜15mA			
Leakage current	＜10mA			
Switch frequency	2KHz	1.5KHz	1KHz	500Hz
Min.detectable object	D=2.5mm;L=4mm	D=3mm;L=6mm	D=6mm;L=12mm	D=9mm;L=18mm
Repeat accuracy	＜2.0%(Sr)			
Hysteresis	＜15%(Sr)			
Sensing surface material	PBT			
Operating Temperature	−25℃~+70℃			
Protective circuit	Short circuit/Reverse polarity			
Degree of protection	IP67			
Over-load trip	180mA			
Model No.	TH10-20NO	TH15-20NO	TH21-20NO	TH43-20NO
	NO:NPN Normally open	NC:NPN Normally closed	PO:PNP Normally open	PC:PNP Normally closed

Dimensions (Unit:mm)

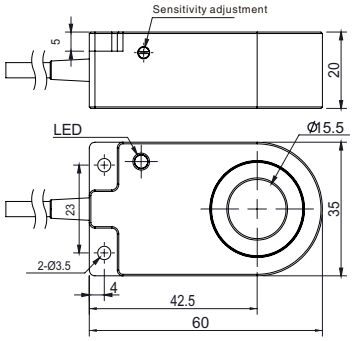
H10

TH10-20□□



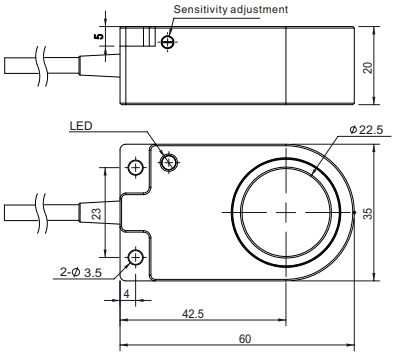
H15

TH15-20□□



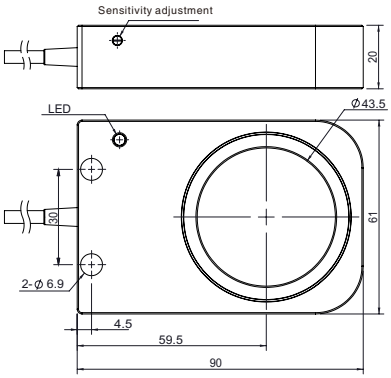
H21

TH21-20□□



H43

TH43-20□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

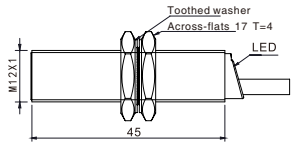
Cable Style

Appearance		Developing		
Mounting		Shielded		
Housing size		M12	M18	M30
Sensing distance		2mm±10%	5mm±10%	10mm±10%
Set distance		0~1.4mm	0~3.5mm	0~7mm
Hysteresis		<10%		
Housing material		Nickle plated brass		
Detected objects		Magnetic metal、Nonmagnetic metal		
Standard detected objects		Aluminum12*12*1mm	Aluminum 18*18*1mm	Aluminum 30*30*1mm
Response frequency		150Hz	70Hz	
Operating voltage		10~30V DC(Ripple<10%)		
No-load supply current		<15mA		
Output type		NPN Open-connector output 100mA(DC30v)		
Voltage drop		≤2v(Load current 100mA,2m cable)		
Indicator		Red LED		
Protective circuit		Reverse polarity、Short circuit、surge protection		
Ambient temperature		Operating temp(sorage temp): -10~+55℃		
Ambient humidity		Operating humidity(storage humidity): 35~95%RH		
Degree of protection		IP67		
Connection		2m,PVC Cable		
Model No.	NPN Normally open	TBF12-02NO	TBF18-05NO	TBF30-10NO
	NPN Normally closed	TBF12-02NC	TBF18-05NC	TBF30-10NC

Dimensions (Unit:mm)

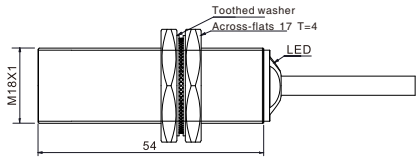
M12

TBF12-02□□



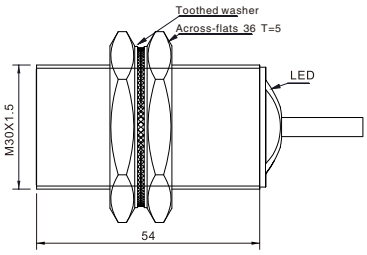
M18

TBF18-05□□



M30

TBF30-10□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Ferrous Detection

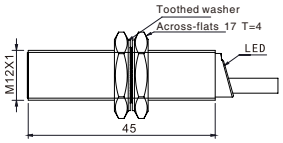
Cable Style

Appearance	Developing			Developing		
Mounting	Shielded			Unshielded		
Housing size	M12	M18	M30	M12	M18	M30
Sensing distance	2mm ± 10%	5mm ± 10%	10mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%
Detected objects	Magnetic objects,such as Iron					
Housing material	Stainless steel					
Operating voltage	10~30V DC(Ripple < 10%)					
Voltage drop	< 1.5V					
Load Current , Max	150mA					
No-load supply current	< 10mA					
Leakage current	< 0.01mA					
Switch frequency	2KHz	1KHz	300Hz	1KHz	500Hz	150Hz
Repeat accuracy	< 1.0%(Sr)					
Hysteresis	< 15%(Sr)					
Sensing surface material	Stainless steel					
Operating Temperature	−25℃~+70℃					
Protective circuit	Short circuit					
Degree of protection	IP67					
Over-load trip	180mA					
Model No. NPN Normally open	TFF12-02NO	TFF18-05NO	TFF30-10NO	TFN12-04NO	TFN18-08NO	TFN30-15NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed					

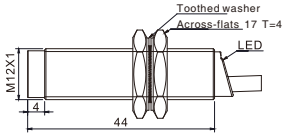
Dimensions (Unit:mm)

M12

TFF12-02□□

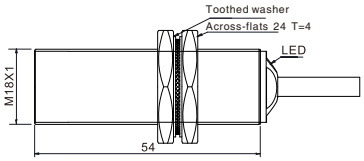


TFN12-04□□

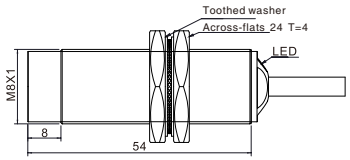


M18

TFF18-05□□

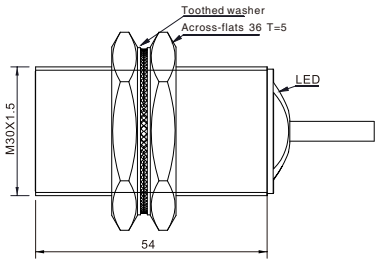


TFN18-08□□

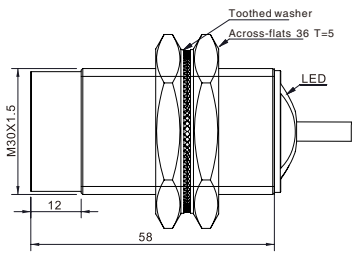


M30

TFF30-10□□



TFN30-15□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

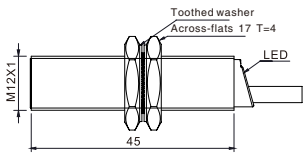
Cable Style

Appearance		Developing		
Mounting		Shielded		
Housing size		M12	M18	M30
Sensing distance		2mm ± 10%	4mm ± 10%	8mm ± 10%
Set distance		0~1.4mm	0~2.8mm	0~5.6mm
Hysteresis		< 20%		
Detected objects		Nonmagnetic metal		
Detected objects		12*12*1mm	18*18*1mm	30*30*1mm
Response frequency		150Hz	70Hz	
Operating voltage		10~30V DC(Ripple < 10%)		
No-load supply current		< 20mA		
Output type		NPN Open-connector output 100mA(DC30v)		
Voltage drop		≤2v(Load current 100mA,2m cable)		
Indicator		Red LED		
Protective circuit		Reverse polarity/Short circuit/Surge protection		
Ambient Temperature		Operating temp(sorage temp) : -10~+55℃		
Ambient humidity		Operating humidity(storage humidity): 35~95%		
Degree of protection		IP67		
Connection		2m,PVC Cable		
Housing material		Nickle plated brass		
Model No.	NPN Normally open	TVF12-02NO	TVF18-04NO	TVF30-08NO
	NPN Normally closed	TVF12-02NC	TVF18-04NC	TVF30-08NC

Dimensions (Unit:mm)

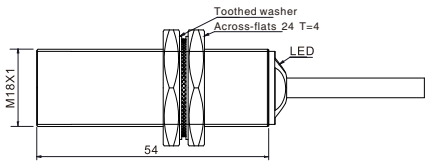
M12

TVF12-02□□



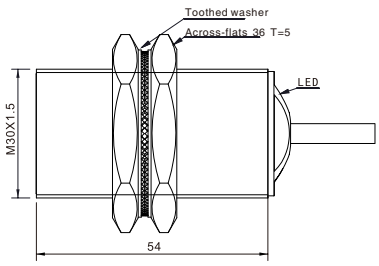
M18

TVF18-04□□



M30

TVF30-08□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
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High-sealing
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Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Metal Face

Cable Style

Appearance				
Mounting	Shielded			
Housing size	M8	M12	M18	M30
Sensing distance	1mm ± 10%	2mm ± 10%	5mm ± 10%	10mm ± 10%
Housing material	Stainless steel			
Operating voltage	10~30V DC(Ripple < 10%)			
Voltage drop	< 1.5V			
Load Current , Max	150mA			
No-load supply current	< 10mA			
Leakage current	< 0.01mA			
Switch frequency	2KHz		1KHz	300Hz
Repeat accuracy	< 1.0%(Sr)			
Hysteresis	< 15%(Sr)			
Sensing surface material	Stainless steel			
Operating Temperature	−25℃~+70℃			
Protective circuit	Short circuit			
Degree of protection	IP67			
Over-load trip	180mA			
Model No. NPN Normally open	TMF08-01NO	TMF12-02NO	TMF18-05NO	TMF30-10NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed			

Appearance				
Mounting	Unshielded			
Housing size	M8	M12	M18	M30
Sensing distance	2mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%
Housing material	Stainless steel			
Operating voltage	10~30V DC(Ripple < 10%)			
Voltage drop	< 1.5V			
Load Current , Max	150mA			
No-load supply current	< 10mA			
Leakage current	< 0.01mA			
Switch frequency	2KHz	1KHz	500Hz	150Hz
Repeat accuracy	< 1.0%(Sr)			
Hysteresis	< 15%(Sr)			
Sensing surface material	Stainless steel			
Operating Temperature	−25℃~+70℃			
Protective circuit	Short circuit			
Degree of protection	IP67			
Over-load trip	180mA			
Model No. NPN Normally open	TMN08-02NO	TMN12-04NO	TMN18-08NO	TMN30-15NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed			

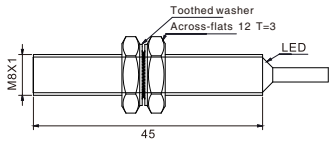
Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

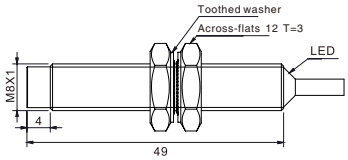
Dimensions (Unit:mm)

M8

TMF08-01□□

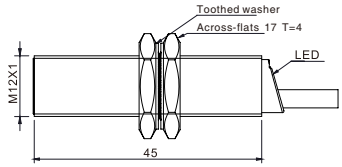


TMN08-02□□

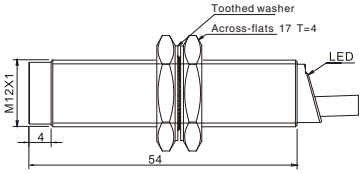


M12

TMF12-02 □□

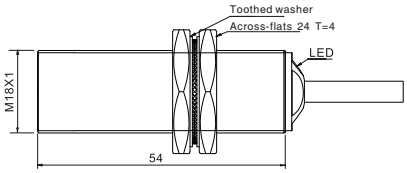


TMN12-04 □□

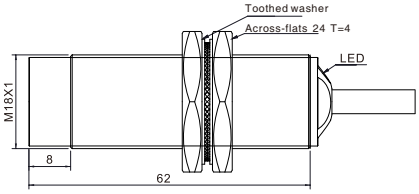


M18

TMF18-05 □□

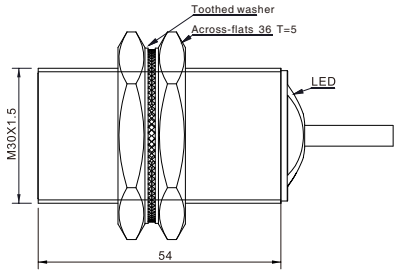


TMN18-08 □□

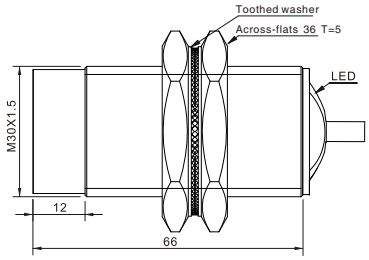


M30

TMF30-10 □□



TMN30-15 □□



Weld Field Immune

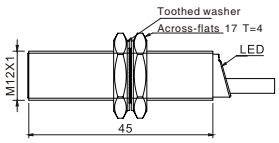
Cable Style

Appearance	Developing			Developing		
Mounting	Shielded			Unshielded		
Housing size	M12	M18	M30	M12	M18	M30
Sensing distance	2mm ± 10%	5mm ± 10%	10mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%
Housing material	Nickle plated brass+Teflon coating					
Operating voltage	10~30V DC(Ripple < 10%)					
Voltage drop	< 1.5V					
Load Current , Max	150mA					
No-load supply current	< 10mA					
Leakage current	< 0.01mA					
Switch frequency	1KHz	500Hz	400Hz	1KHz	500Hz	400Hz
Repeat accuracy	< 1.0%(Sr)					
Hysteresis	< 15%(Sr)					
Sensing surface material	Teflon coating					
Operating Temperature	−25℃~+70℃					
Protective circuit	Short circuit					
Degree of protection	IP67					
Over-load trip	180mA					
Model No. NPN Normally open	TWF12-02NO	TWF18-05NO	TWF30-10NO	TWN12-04NO	TWN18-08NO	TWN30-15NO
Model No. Others	NO:NPN Normally open	NC:NPN Normally closed	PO:PNP Normally open	PC:PNP Normally closed		

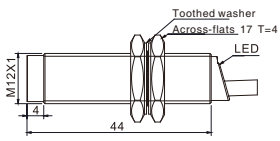
Dimensions (Unit:mm)

M12

TWF12-02□□

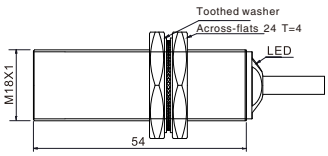


TWN12-04□□

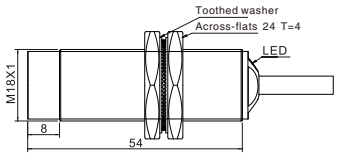


M18

TWF18-05□□

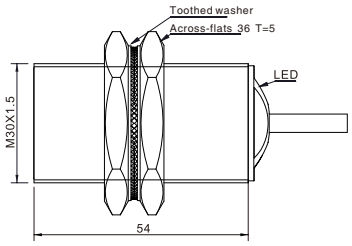


TWN18-08□□

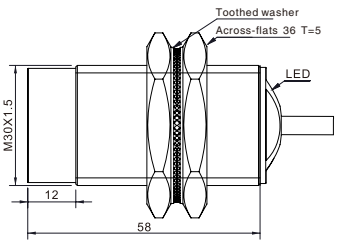


M30

TWF30-10□□



TWN30-15□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

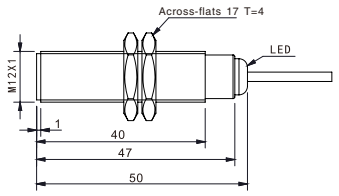
Cable Style

Appearance			Developing	
Mounting		Shielded		
Housing size		M12	M18	M30
Sensing distance		2mm ± 10%	5mm ± 10%	10mm ± 10%
Set distance		0~1.6mm	0~4mm	0~8mm
Operating voltage		10~30V		
Switch frequency		1500Hz	1000Hz	200Hz
Protective circuit		Reverse polarity/Short circuit		
Voltage drop		≤3V		
Load Current , Max		200mA		
Leakage current		0~0.5mA		
No-load supply current		≤17mA	≤15mA	≤20mA
Indicator		Yellow LED		
Ambient Temperature		−25℃~70℃		
Connection		2m, PVC Cable		
Cable sectional area		0.14mm²	0.34mm²	
Housing material		PBT		
Degree of protection		IP68/IP69K		
Model No.	NPN Normally open	TCF12-02NO	TCF18-05NO	TCF30-10NO
	NPN Normally closed	TCF12-02NC	TCF18-05NC	TCF30-10NC

Dimensions (Unit:mm)

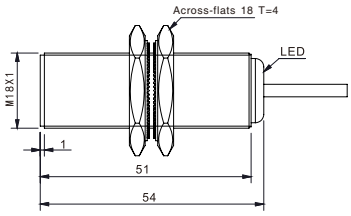
M12

TCF12-02□□



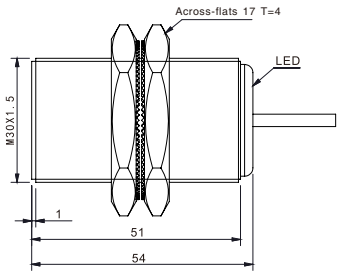
M18

TCF18-05□□



M30

TCF30-10□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Temperature

High Temperature Resistance-Cable Style-120℃

Appearance						
Mounting	Shielded			Unshielded		
Housing size	M12	M18	M30	M12	M18	M30
Sensing distance	2mm ± 10%	5mm ± 10%	10mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%
Housing material	Nickle plated brass					
Operating voltage	10~30V DC(Ripple < 10%)					
Voltage drop	< 2.5V					
Load Current , Max	100mA					
No-load supply current	< 15mA					
Hysteresis	1~20%					
Repeat accuracy	< 5%					
Response frequency	1500Hz	1000Hz	500Hz	1000Hz	800Hz	300Hz
Indicator	Yellow LED					
Ambient temperature	−25℃~+120℃					
Ambient humidity	35~95%RH					
Protective circuit	Reverse polarity/Surge protection					
Degree of protection	IP67					
Model No. NPN Normally open	TGF12-02NO	TGF18-05NO	TGF30-10NO	TGN12-04NO	TGN18-08NO HOT	TGN30-15NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed					

High Temperature Resistance-Cable Style-220℃

Appearance			
Mounting	Shielded		
Housing size	M12	M18	M30
Sensing distance	2mm ± 10%	5mm ± 10%	10mm ± 10%
Housing material	Nickle plated brass		
Operating voltage	10~30V DC		
Voltage drop	< 1.8V		
Load current	External		
No-load supply current	< 3mA(24V)		
Switch frequency	500Hz/220℃	500Hz/220℃	200Hz/220℃
Repeat accuracy	< 3.0%(Sr)		
Hysteresis	3~15%(Sr)		
Sensing face material	PBT		
Ambient temperature	−25~+220℃		
Degree of protection	IP66		
Interface	PTFE Cable/2m;3*0.34mm²		
Model No. NPN Normally open	TGF12-02NO2	TGF18-05NO2	TGF30-10NO2
Model No. Others	NO:NPN 常开 NC:NPN 常闭 PO:PNP 常开 PC:PNP 常闭		

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Low Temperature Resistance-Cable Style

Appearance						
Mounting	Shielded			Unshielded		
Housing size	M12	M18	M30	M12	M18	M30
Sensing distance	2mm ± 10%	5mm ± 10%	10mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%
Housing material	Nickle plated brass					
Operating voltage	10~30V DC(Ripple < 10%)					
Voltage drop	< 2.5V					
Load Current , Max	<200mA					
No-load supply current	< 15mA					
Hysteresis	1~20%					
Repeat accuracy	< 3%					
Response frequency	1500Hz	1000Hz	500Hz	1000Hz	800Hz	300Hz
Indicator	Yellow LED					
Ambient temperature	−40℃~+70℃					
Ambient humidity	35~95%RH					
Protective circuit	Reverse polarity/Short circuit/Surge protection					
Degree of protection	IP67					
Model No. NPN Normally open	TZF12-02NO	TZF18-05NO	TZF30-10NO	TZN12-04NO	TZN18-08NO	TZN30-15NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed					

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation

Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires

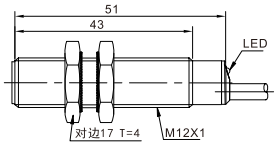
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Temperature

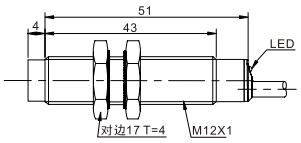
Dimensions (Unit:mm)

M12

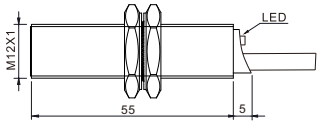
TGF12-02□□ TZF12-02□□



TGN12-04□□ TZN12-04□□

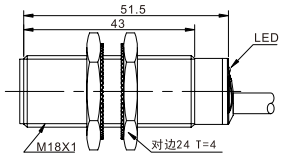


TGF12-02□□2

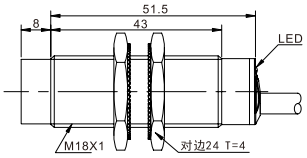


M18

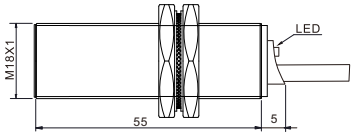
TGF18-05□□ TZF18-05□□



TGN18-08□□ TZN18-08□□

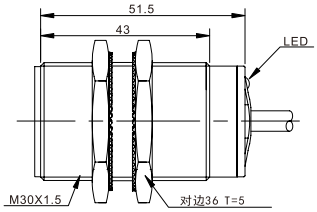


TGF18-05□□2

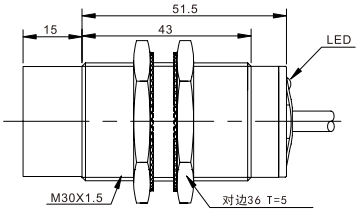


M30

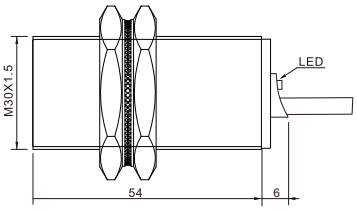
TGF30-10□□ TZF30-10□□



TGN30-15□□ TZN30-15□□



TGF30-10□□2



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

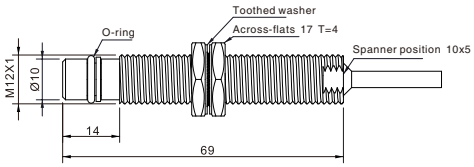
Cable Style / Connector Style

Appearance	Developing	Developing
Mounting	Shielded	
Housing size	M12	
Sensing distance	1.5mm ± 10%	1.5mm ± 10%
Housing material	Stainless steel	
Operating voltage	10~30V DC(Ripple < 10%)	
No-load current	<10mA	
Load Current , Max	150mA	
Leakage current	< 0.01mA	
Voltage drop	< 1.5V	
Switch frequency	600Hz	
Hysteresis	< 15%Sr	
Repeat accuracy	< 1.0%Sr	
Degree of protection	IP68	
Operating Temperature	−25℃~+70℃	
Temperature drift	< 10%Sr	
Protective circuit	Short circuit	
Overload current protection	180mA	
Max.pressure	500 bar	
Model No. NPN Normally open	TPF12-1.5NO	TPF12-1.5NO-E2
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed	

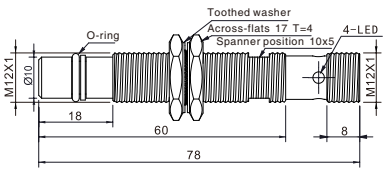
Dimensions (Unit:mm)

M12

TPF12-1.5□□



TPF12-1.5□□-E2



M12 4Pin

Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

NAMUR

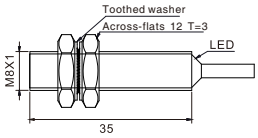
Cable Style

Appearance	Developing			
Mounting	Shielded			
Housing size	M8	M12	M18	M30
Sensing distance	1mm ± 10%	2mm ± 10%	5mm ± 10%	10mm ± 10%
Housing material	Nickle plated brass			
Operating voltage	6~12V DC			
No-load supply current	> 2.2mA(OFF) < 1.1mA(ON)			
Switch frequency	2KHz	1KHz	500Hz	300Hz
Hysteresis	< 15%(Sr)			
Degree of protection	IP67			
Operating Temperature	−25℃~+70℃			
Temperature drift	< 2.0%(Sr)			
Start-up delay	< 10ms			
Sensing surface material	PA66			
Model No.	TNF08-01NM	TNF12-02NM	TNF18-05NM	TNF30-10NM

Dimensions (Unit:mm)

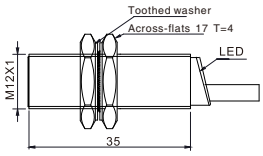
M08

TNF08-01NM



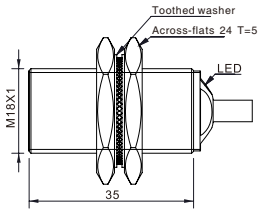
M12

TNF12-02NM



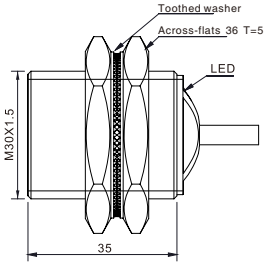
M18

TNF18-05NM



M30

TNF30-10NM



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

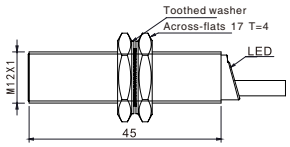
Cable Style

Appearance						
Mounting	Shielded			Unshielded		
Housing size	M12	M18	M30	M12	M18	M30
Sensing distance	0.1~3mm ± 10%	1~4mm ± 10%	5~10mm ± 10%	0.1~4mm ± 10%	1~7mm ± 10%	7~14mm ± 10%
Housing material	Nickle plated brass					
Operating voltage	18~30V DC(Ripple < 10%)					
No-load supply current	< 15mA					
Linear	< 5%					
Switch frequency	100Hz					
Repeat accuracy	0.02mm					
Current output	4~20mA/≤200Ω	0~20mA/≤200Ω		4~20mA/≤400Ω	0~20mA/≤200Ω	
Volage output	0~10VDC/≥4.7KΩ					
Output type	PNP–ANALOG					
Sensing surface material	PBT					
Ambient temperature	–25℃~+70℃					
Protective circuit	Reverse polarity					
Degree of protection	IP67					
Model No. Current output	TAF12-03PA	TAF18-04PA	TAF30-10PA	TAN12-04PA	TAN18-07PA	TAN30-14PA
Model No. Volage output	TAF12-03PV	TAF18-04PV	TAF30-10PV	TAN12-04PV	TAN18-07PV	TAN30-14PV

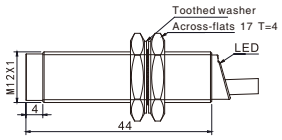
Dimensions (Unit:mm)

M12

TAF12-03□□

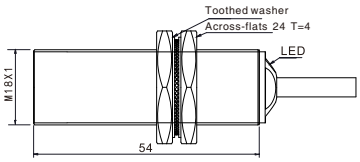


TAN12-04□□

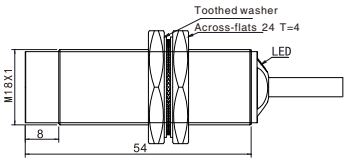


M18

TAF18-04□□

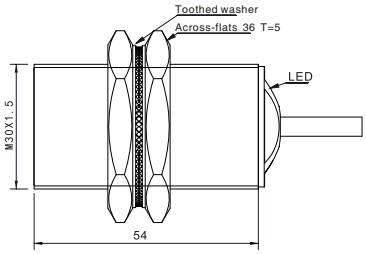


TAN18-07□□

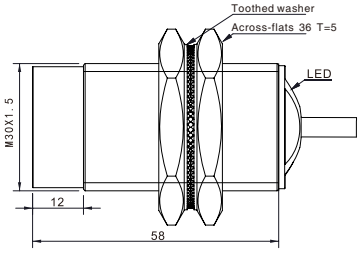


M30

TAF30-10□□



TAN30-14□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

DC 2-wires

Cable Style

Appearance					
Mounting	Shielded				
Housing size	ϕ6.5	M8	M12	M18	M30
Sensing distance	1mm/2mm±10%	1mm/2mm±10%	2mm/4mm±10%	5mm/8mm±10%	10mm/16mm±10%
Housing material	Stainless steel		Nickle plated brass		
Operating voltage	10~30V DC(Ripple<10%)		10~60V DC(Ripple<10%)		
Operating current	3~100mA				
Leakage current	<0.8mA				
Voltage drop	<6V/<4V				
Protective circuit	Short circuit				
Over-load current	>120mA				
Switch frequency	2KHz		1KHz		500Hz
Hysteresis	15%				
Temperature drift	10%				
Repeat accuracy	<2%				
Operating Temperature	−25℃~+70℃				
Sensing surface material	PBT				
Model No. Normally open	TDF6.5-01HO/TDF6.5-02HO	TDF08-01HO/TDF08-02HO	TDF12-02HO/TDF12-04HO	TDF18-05HO/TDF18-08HO	TDF30-10HO/TDF30-16HO
Model No. Normally close	TDF6.5-01HC/TDF6.5-02HC	TDF08-01HC/TDF08-02HC	TDF12-02HC/TDF12-04HC	TDF18-05HC/TDF18-08HC	TDF30-10HC/TDF30-16HC

Appearance					
Mounting	Unshielded				
Housing size	ϕ6.5	M8	M12	M18	M30
Sensing distance	2mm/4mm±10%	2mm/4mm±10%	4mm/8mm±10%	8mm/16mm±10%	15mm/25mm±10%
Housing material	Stainless steel		Nickle plated brass		
Operating voltage	10~30V DC(Ripple<10%)		10~60V DC(Ripple<10%)		
Operating current	3~100mA				
Leakage current	<0.8mA				
voltage drop	<6V/<4V				
Protective circuit	Short circuit				
Over-load current	>120mA				
Switch frequency	2KHz		1KHz	500Hz	200Hz
Hysteresis	15%				
Temperature drift	10%				
Repeat accuracy	<2%				
Operating Temperature	−25℃~+70℃				
Sensing surface material	PBT				
Model No. Normally open	TDN6.5-02HO/TDN6.5-04HO	TDN08-02HO/TDN08-04HO	TDN12-04HO/TDN12-08HO	TDN18-08HO/TDN18-16HO	TDN30-15HO/TDN30-25HO
Model No. Normally close	TDN6.5-02HC/TDN6.5-04HC	TDN08-02HC/TDN08-04HC	TDN12-04HC/TDN12-08HC	TDN18-08HC/TDN18-16HC	TDN30-15HC/TDN30-25HC

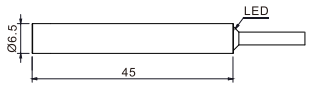
Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

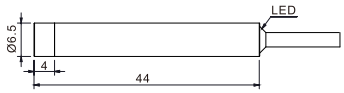
Dimensions (Unit:mm)

ϕ6.5

TDF6.5-01/02□□

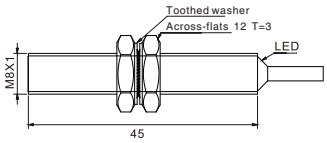


TDN6.5-02/04□□

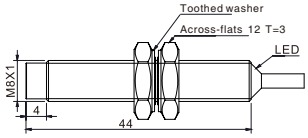


M8

TDF08-01/02□□

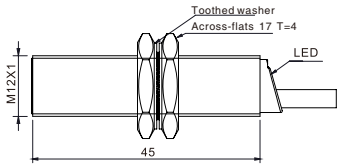


TDN08-02/04□□

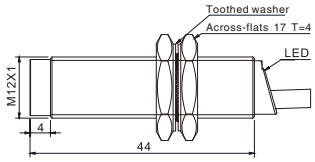


M12

TDF12-02/04□□

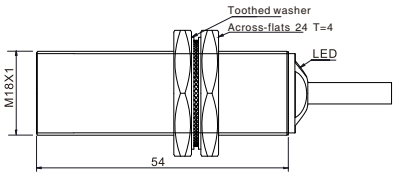


TDN12-04/08□□

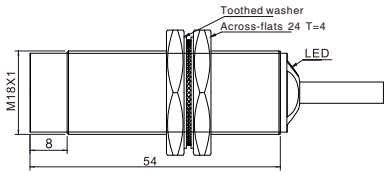


M18

TDF18-05/08□□

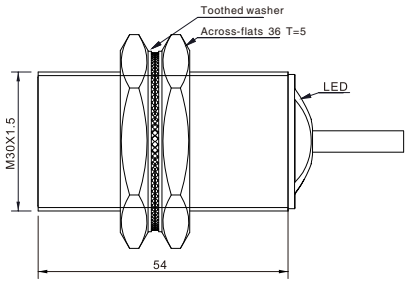


TDN18-08/16□□

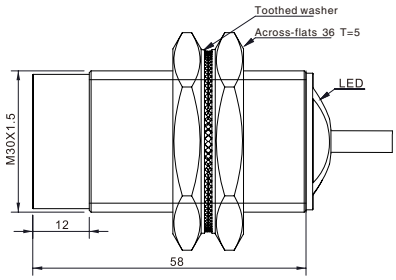


M30

TDF30-10/16□□



TDN30-15/25□□



Cylinderical

Plastic Shells

Appearance						
Mounting	Shielded			Unshielded		
Housing size	M12	M18	M30	M12	M18	M30
Sensing distance	1~3mm Modulated	2~8mm Modulated	2~20mm Modulated	1~6mm Modulated	2~15mm Modulated	2~30mm Modulated
Housing material	PBT					
Operating voltage	10~30V DC(Ripple < 10%)					
Voltage drop	< 2V					
Load Current , Max	150mA	300mA		150mA	300mA	
No-load supply current	< 10mA					
Leakage current	<0.01mA					
Switch frequency	100Hz					
Repeat accuracy	< 5% (Sr)					
Hysteresis	< 15% (Sr)					
Sensing surface material	PBT					
Operating Temperature	−25℃~+70℃					
Protective circuit	Short circuit					
Degree of protection	IP67					
Over-load trip	180mA	350mA		180mA	350mA	
Model No. NPN Normally open	CKF12-03NO	CKF18-08NO	CKF30-20NO	CKN12-06NO	CKN18-15NO	CKN30-30NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed					

Metal Shells

Appearance								
Mounting	Shielded				Unshielded			
Housing size	M8	M12	M18	M30	M8	M12	M18	M30
Sensing distance	1mm	1~3mm Modulated	2~8mm Modulated	2~20mm Modulated	2mm	1~6mm Modulated	2~15mm Modulated	2~30mm Modulated
Housing material	Stainless steel	Nickle plated brass			Stainless steel	Nickle plated brass		
Operating voltage	10~30V DC(Ripple < 10%)							
Voltage drop	< 2V							
Load Current , Max	150mA		300mA		150mA		300mA	
No-load supply current	< 10mA							
Leakage current	< 0.01mA							
Switch frequency	100Hz							
Repeat accuracy	< 5%(Sr)							
Hysteresis	< 15%(Sr)							
Sensing surface material	PBT							
Operating Temperature	−25℃~+70℃							
Protective circuit	Short circuit							
Degree of protection	IP67							
Over-load trip	180mA	220mA	350mA		180mA		350mA	
Model No. NPN Normally open	CRF08-01NO	CRF12-03NO	CRF18-08NO	CRF30-20NO	CRN08-02NO	CRN12-06NO	CRN18-15NO	CRN30-30NO
Model No. Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed							

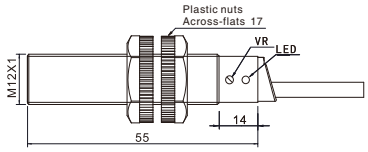
Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
Ultrasonic
Connectivities
Tester

Guidance
Rule of Compilation
Inductive Sensors
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

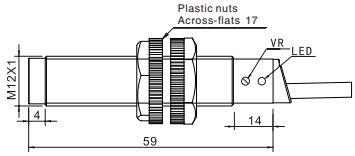
Dimensions-Plastic Shells (Unit:mm)

M12

CKF12-03□□

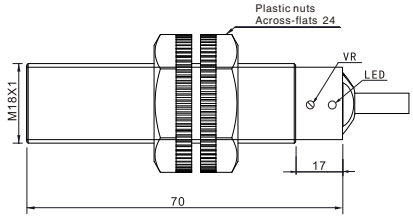


CKN12-06□□

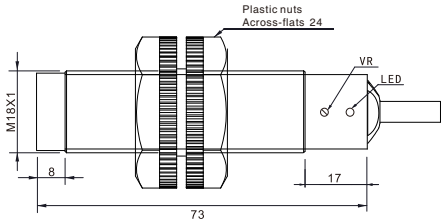


M18

CKF18-08□□

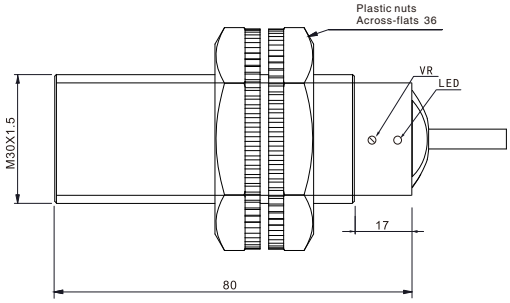


CKN18-15□□

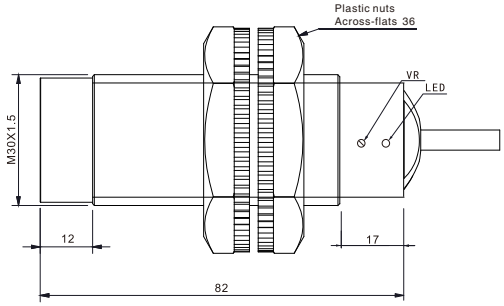


M30

CKF30-20□□



CKN30-30□□

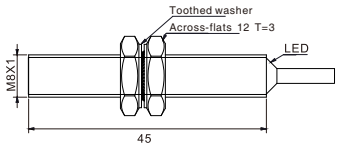


Cylinderical

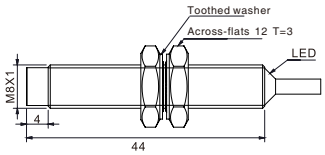
Dimensions-Metal Shells (Unit:mm)

M8

CRF08-01□□

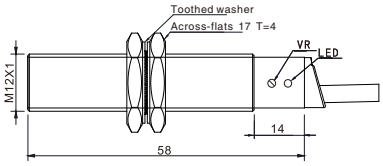


CRN08-02□□

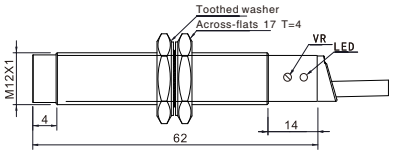


M12

CRF12-03□□

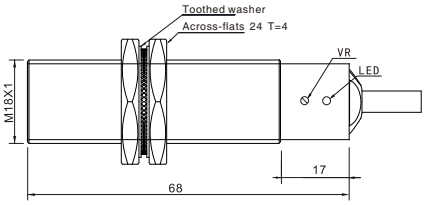


CRN12-06□□

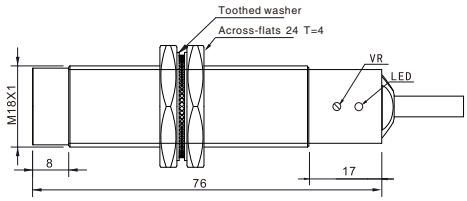


M18

CRF18-08□□

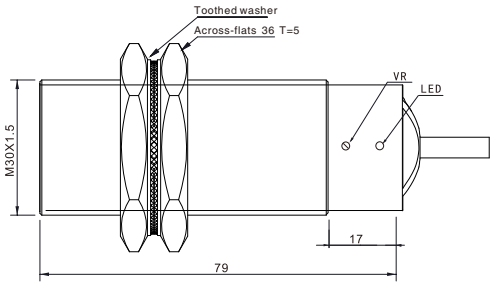


CRN18-15□□

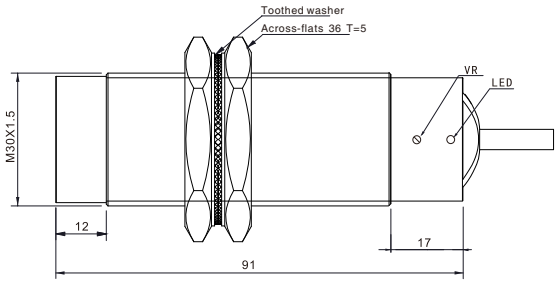


M30

CRF30-20□□



CRN30-30□□



Fiber Optic
Slot Type
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Light Curtains
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Guidance
Rule of Compilation
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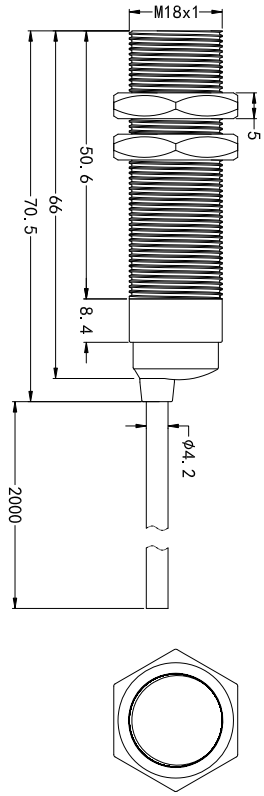
Upgraded Type
Standard Distance
Extended Distance
Long Distance
Square
Mini Square
Mini-Cylindrical
Short-Body
Ring-Type
Metal Factor-1
Ferrous Detection
Aluminum Detection
Metal Face
Weld Field Immune
High-sealing
Temperature
High Pressure
NAMUR
Analog Output
DC 2 Wires
Capacitive Sensors
Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Corrosion resistance

Appearance	
Mounting	Shielded
Housing size	M18
Sensing distance	1~10mm Modulated
Detectable objects	Metal、Water、Oil、Glass、Plastic、Paper
Operating voltage	12~24V DC(Ripple＜10%)
Voltage drop	＜1.5V
Load Current，Max	100mA
No-load supply current	＜22mA
Leakage current	＜1.1mA
Response time	≤14ms
Isolation impedance	≥20MΩ（500V DC）
Hysteresis	＜10%（Sr）
Insulation resistance	AC 1000V 60Hz lasts 60 Sec
Operating temperature	-20℃~+60℃
Degree of protection	IP66
Connection	ϕ4.2X2m 4 core cable
Weight	≈78g
Model No.	CWF18-10NP (NPN NO/NC PNP NC/NO)

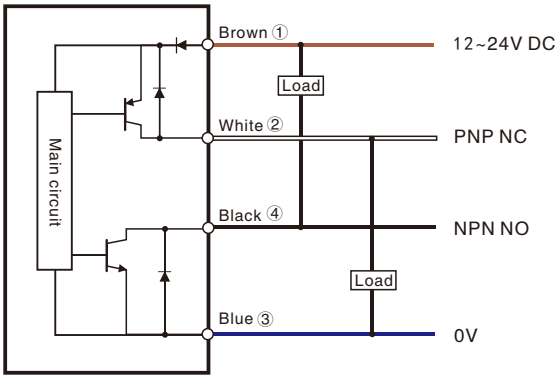
Dimensions

Unit:mm

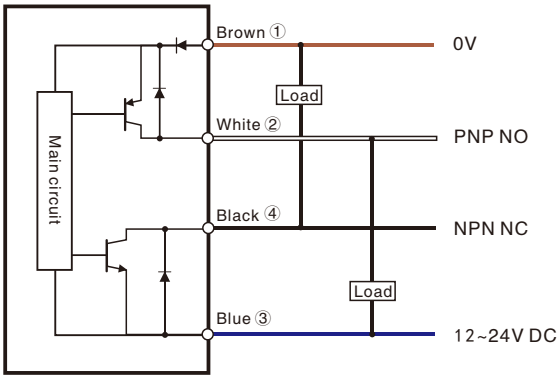


Circuit diagram

Method 1:



Method 2:



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Cylinderical
Corrosion Resistant
Flat Type
Level Detection

Flat Type

Cable Style

Appearance				
Sensing distance	5mm	6mm	7mm	10mm
Housing material	Plastic			
Operating voltage	5V DC(Ripple < 10%)	10~30V DC(Ripple < 10%)		
Voltage drop	≤15V@1L=50mA			
Output	NPN or PNP –NO/NC			
Load Current , Max	≤50mA			
No-load supply current	≤10mA			
Switch frequency	10Hz			
Repeat accuracy	< 5%			
Operating Temperature	0℃~+60℃			
Storage temperature	–30℃~+75℃			
Temperature drift	≤20%			
Protective circuit	Reverse polarity,Over voltage pulse protection,Short circuit			
Degree of protection	IP67			
Model No. NPN Normally open	CQ07-05NO	CQ07-06NO		
Model No. NPN Normally close			CQ07-07NC	CQ07-10NC
Model No. PNP Normally open			CQ07-07PO	CQ07-10PO

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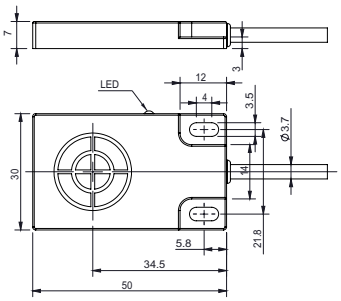
Dimensions (Unit:mm)



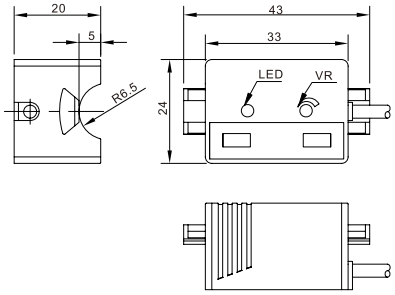
Cable Style

Appearance			
Mounting		Unshielded	
Operating voltage		10~30V DC	
Load Current , Max		<200mA	
Voltage drop		<2.5V	
No-load supply current		<15mA	
Hysteresis		3~20%	
Repeat accuracy		<3%	
Switch frequency		20Hz	
Indicator		Yellow LED	
Pipeline	Material	Nonmetal	
	External diameter	ϕ8~ϕ11	ϕ12~ϕ26
	Wall thickness	<1mm	
Protective circuit		Reverse polarity/Short circuit	
Ambient temperature		−25℃~+70℃	
Degree of protection		IP67	
Housing material		PBT	
Connection		2mPVC Cable	
Model No.	NPN Normally open	CE15-13NO	CE30-26NO HOT
	Others	NO:NPN Normally open NC:NPN Normally closed PO:PNP Normally open PC:PNP Normally closed	

Dimensions (Unit:mm)

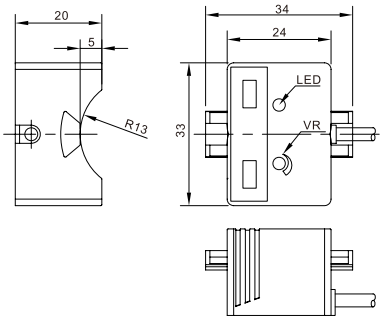
CE15

CE15-13□□



CE30

CE30-26□□



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