Rectangular Standard Proximity Sensor TL-N/TL-Q/TL-G

A Wealth of Models for All Types of **Applications**

- Easy installation, high-speed pulse generator, high-speed rotation control, and more.
- Direct mounted to metal (-N Models).
- A wealth of models ideal for limit control, counting control, and other applications (-N Models).



Proximity Sensors

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Guide

Be sure to read Safety Precautions on page 832.

Ordering Information Cylindrical

Models Sensors Rectangular DC 2-Wire Models

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Separate Amp/ Pre-wired Connector Models	Appear	Appearance		sing di	stance	-	Mo Operatio NO	
Capacitive Models		17 × 17	5 r	nm			TL-Q5MD1	TL-Q5MD2
Others	Unshielded	25 imes 25	7	mm			TL-N7MD1	TL-N7MD2
Derinherel		30 ×30		12 m	m		TL-N12MD1	TL-N12MD2
Peripheral Devices		40 × 40			20 mm		TL-N20MD1	TL-N20MD2

General Information

TL-W TL-N/TL-Q /TL-G TL-M

Note: Models with a different frequency are available to prevent mutual interference. The model numbers are TL-NIMDIS and TL-Q5MDIS (e.g., TL-N7MD15).

DC 3-Wire and AC 2-Wire Models

	Appearance		Sensing distance		Output configuration	Model Operation mode	
Appear							
						NO	NC
	8 × 9	2 mm	ו		DC 3-wire, NPN	TL-Q2MC1	
	17 × 17	5 r	nm			TL-Q5MC1 *2	TL-Q5MC2
	25 × 25	5 m			DC 3-wire, NPN	*1 TL-N5ME1 *2	TL-N5ME2 ^{*1}
Unshielded		5 m	rirri		AC 2-wire	TL-N5MY1	TL-N5MY2
	30 × 30 40 × 40		10		DC 3-wire, NPN	*1 TL-N10ME1 *2	TL-N10ME2 *1
			10 mm		AC 2-wire	TL-N10MY1	TL-N10MY2
				00	DC 3-wire, NPN	*1 TL-N20ME1 *2	TL-N20ME2
				20 mm	AC 2-wire	TL-N20MY1	TL-N20MY2
	Grooved	7	7.5 mm		DC 3-wire, NPN	TL-G3D-3	

Note: Models with a different frequency are available to prevent mutual interference. Models numbers for Sensors with different frequencies are TL-00005 (example: TL-N5ME15).

*1. Models are also available with 5-m cables. Add the cable length to the model number (example: TL-N5ME1 5M).

*2. Models with robotics cables are also available. Add -R to the end of the model number (example: TL-N5ME1-R).

Proximity

Accessories (Order Separately) **Mounting Brackets**

Туре	Model	Applicable Sensors			
Туре	Model	Provided with these Sensors	Order separately		
	Y92E-C5	TL-N5ME , TL-N7MD	TL-N5MY		
Mounting Brackets	Y92E-C10	TL-N10ME , TL-N12MD	TL-N10MY		
	Y92E-C20	TL-N20ME , TL-N20MD	TL-N20MY		
Mounting Brackets for Conduits	Y92E-N5C15		TL-N5ME, TL-N5MY		
Mounting Brackets for Conduits	Y92E-N10C15		TL-N10ME , TL-N10MY		

Ratings and Specifications

DC 2-Wire Models

Inter Model TL-QSMD TL-NYMD TL-N12MD TL-N20MD Sensing distance 5 nm ±10% 7 nm ±10% 12 nm ±10% 20 nm ±10% 20 nm ±10% Set distance 0 to 4 nm 0 to 5.6 nm 0 to 9.8 nm 0 to 18 nm 0 to 18 nm Set distance Terms distance Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to Engineering Data on page 828.) Standard sensing distance 300 Hz Standard sensing 500 Hz 500 Hz 300 Hz 300 Hz 300 Hz Prover supply voltage (apper sing the complex sensing distance for the senserature for the senserature for the sensing distanc	Sensors
Set distance 0 to 4 mm 0 to 5.6 mm 0 to 9.6 mm 0 to 9.6 mm 0 to 16 mm Differential travel 10% max. of sensing distance Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to Engineering Data on page 828.) Image 100 mm Image 1	
Differential travel 10% max. of sensing distance decreases with non-ferrous metal. Refer to Engineering Data on page 828.) Standard sensing tron, 18 × 18 × 1 mm iron, 30 × 30 × 1 mm iron, 40 × 40 × 1 mm iron, 50 × 50 × 1 mm 300 Hz Standard sensing tron, 18 × 18 × 1 mm iron, 30 × 30 × 1 mm iron, 40 × 40 × 1 mm iron, 50 × 50 × 1 mm 300 Hz Standard sensing to Hz Standard sensing distance at rated voltage in the rated voltage ±15% range Standard sensing distance at rated voltage in the rated voltage ±15% range Standard sensing distance at rated voltage in the rated voltage ±15% range Standard sensing distance at rated voltage in the rated voltage ±15% range Standard sensing distance at rated voltage in the rated voltage ±15% range Standard sensing distance at rated voltage in the rated voltage ±15% range Standard sensing distance at rated voltage in the rated voltage ±15% range Standard sensing distance at rated voltage in the rated voltage ±15% range Standard sensing distance at rated voltage in the rated voltage ±15% range Standard sensing distance at rated voltage in the rated voltage ±15% range Standa	•
Sensing object Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to Engineering Data on page 828.) Standard sensing Iron, 18 × 18 × 1 mm Iron, 30 × 30 × 1 mm Iron, 40 × 40 × 1 mm Iron, 50 × 50 × 1 mm Response requency So0 Hz So0 Hz So0 Hz So0 Hz So0 Hz Power supply volt age (npertify colt age (npertify colt age (npertify colt) 12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max. so0 Hz so0 Hz Camp out Carent Residual 3 to 100 mA Sol 100 mA. Sol 100 mA Sol 100 mA Residual put 3 to 100 mA Sol 100 mA. Cable length: 2 m) Sol 20 mm Sol 100 mA Residual put 3 to 100 mA Sol 100 mA Cable length: 2 m) Sol 100 mA Sol 100 mA Residual put 3 to 100 mA Sol 100 mA Sol 100 mA Sol 100 mA Sol 100 mA Residual put Sol 10 Md8: Operation indicator (red). Setting indicator (green) Sol 100 mA Sol 100 mA Residual put Indicator Ferror (red). Setting indicator (green) Sol 100 m/S to 200 MD Sol 100 MD Sol Marce Corent Settin mode Settretinon mode (with sensing ob- Settretion mode (with se	Consing
Standard sensing Object Iron, 18 × 18 × 1 mm Iron, 30 × 30 × 1 mm Iron, 40 × 40 × 1 mm Iron, 50 × 50 × 1 mm Besponse Frequency 500 Hz 300 Hz 300 Hz 300 Hz Power upply volt- age range) 12 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max. 300 Hz 300 Hz Leakage current 0.8 mA max. 0.8 mA max.	- Sensing Guide
bilect version of the start stress of the st	-
frequery 300 H2 300 H2 300 H2 Power supply odd age range 2 to 24 VDC (10 to 30 VDC), ripple (p-p): 10% max. Pawer supply odd age range 0.8 mA max. Con- trong by Rescurrent 0.8 mA max. Con- trong by Load current 3 to 100 mA Rescurrent 3.3 V max. (Load current: 100 mA, Cable length: 2 m) Diddels: Operation indicator (red). Setting indicator (green) 2 Operation D1 Models: Operation indicator (red). Setting indicator (green) Operation D2 Models: Operation indicator (red). Setting indicator (green) Deddels: NC D1 Models: NO Refer to the timing charts under <i>I/O Circuit Diagrams</i> on page 830 for details. Protection Load short-circuit protection, Surge suppressor Protection Operating/Storage: -25 to 70°C (with no icing or condensation) Protection 10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C Voltage 10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C Voltage: 10.00 VAC for 1 min between current-carrying parts and case Voltage: 10.00 VAC for 1 min between current-carrying parts and case Voltage: Destructions: 10 to 55 Hz, 1.5-mu Voltage: Destructions: 10.00 m/s ² 3 times Destructions: 500 m/s ² 3 times Destructions: 1.000 m/s ² 1 times euclin: X, and Z di	Cylindrical Models
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Vibration resistance Destruction: 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions Shock resistance Destruction: 500 m/s² 3 times each in X, Y, and Z directions Destruction: 1,000 m/s² 10 times each in X, Y, and Z directions Degree of protection IEC 60529 IP67 IEC 60529 IP67 Weight (packed state) Approx. 45 g Approx. 145 g Approx. 170 g Approx. 240 g	_
resistance Destruction: 10 to 55 H2, 1.5-fill double amplitude for 2 nours each in X, Y, and 2 directions Shock resistance Destruction: 500 m/s ² 3 times each in X, Y, and Z directions Destruction: 1,000 m/s ² 10 times each in X, Y, and Z directions Degree of protection IEC 60529 IP67 IEC 60529 IP67 Weight (packed state) Approx. 45 g Approx. 145 g Approx. 170 g Approx. 240 g	_
Shock resistance each in X, Y, and Z directions Destruction: 1,000 m/se 10 times each in X, Y, and Z directions Degree of protection IEC 60529 IP67 Connection method Pre-wired Models (Standard cable length: 2 m) Weight (packed state) Approx. 45 g Approx. 145 g Approx. 170 g Approx. 240 g	<u> </u>
protection IEC 00329 IP07 Connection method Pre-wired Models (Standard cable length: 2 m) Weight (packed) Approx. 45 g Approx. 145 g Approx. 170 g Approx. 240 g Mate Case	E2S
Weight (packed state) Approx. 45 g Approx. 145 g Approx. 170 g Approx. 240 g Mate Case	TL-W
state) Approx. 45 g Approx. 145 g Approx. 170 g Approx. 240 g Mate. Case	/TL-G
Mate	TL-M
Sensing surface Heat-resistant ABS	
Accessories Instruction manual Mounting Bracket, Instruction manual	-

* The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard sensing object, and a set distance of half the sensing distance.

DC 3-Wire Models

	Model	TL-Q2MC1	TL-Q5MC	TL-G3D-3					
Sensin distanc	•	2 mm ±15%	5 mm ±10%	7.5±0.5mm					
Set dis	tance	0 to 1.5 mm	0 to 4 mm	10 mm					
Differe	ntial travel	10% max. of sensing distance	·						
Sensin	g object	Ferrous metal (The sensing distance dee	Ferrous metal (The sensing distance decreases with non-ferrous metal. Refer to Engineering Data on page 829.)						
Standa sensing	rd g object			Iron, $10 \times 5 \times 0.5$ mm					
Respor	nse time		2 ms max.	1 ms max.					
Respoi requei			500 Hz						
Power	supply (operat-	12 to 24 VDC (10 to 30 VDC), ripple (p-p	o): 10% max.	12 to 24 VDC, ripple (p-p): 5% max.					
urren umpti	t con- on	15 mA max. at 24 VDC (no-load)	10 mA max. at 24 VDC	2 mA max. at 24 VDC (no-load)					
Con- rol	Load current	NPN open collector 100 mA max. at 30 VDC max.	NPN open collector 50 mA max. at 30 VDC max.	NPN transistor output 20 mA max.					
out- out	Residual voltage	1 V max. (under load current of 100 mA with cable length of 2 m)	1 V max. (under load current of 50 mA with cable length of 2 m)						
ndicat	ors	Detection indicator (red)	-						
with se	ion mode ensing ob-	NO	C1 Models: NO C2 Models: NC	NO					
ect ap ng)	proach-	Refer to the timing charts under I/O Circ	Refer to the timing charts under I/O Circuit Diagrams on page 830 for details.						
Protect circuits		everse polarity protection, Surge suppressor		Surge suppressor					
Ambier temper		Operating/Storage: -10 to 60°C (with no icing or condensation)							
Ambier numidi		Operating/Storage: 35% to 95% (with no condensation)							
⁻ empe nfluen		$\pm 10\%$ max. of sensing distance at 23°C in the temperature range of -10 to $60^\circ C$	$\pm 20\%$ max. of sensing distance at 23°C in the temperature range of –25 to 70°C	$\pm 10\%$ max. of sensing distance at 23°C in the temperature range of –10 to 55°C					
/oltage nfluen		$\pm 2.5\%$ max. of sensing distance at rated	rated voltage in rated voltage $\pm 10\%$ range						
nsulat esista		50 $\mbox{M}\Omega$ min. (at 500 VDC) between current-carrying parts and case	5 M Ω min. (at 500 VDC) between curren	t-carrying parts and case					
Dielect strengt		1,000 VAC for 1 min between current- carrying parts and case	500 VAC, 50/60 Hz for 1 min between cu	urrent-carrying parts and case					
Vibration resistance Shock resistance		Destruction: 10 to 55 Hz, 1.5-mm double	e amplitude for 2 hours each in X, Y, and Z	Z directions					
		Destruction: 1,000 m/s 2 10 times each in X, Y, and Z directions	Destruction: 200 m/s ² 10 times each in λ	K, Y, and Z directions					
Degree protect		IEC 60529 IP67	IEC 60529 IP67	IEC 60529 IP67					
Connection method		Pre-wired Models (Standard cable length	n: 2 m)						
Weight (packed state)		Approx. 30 g	Approx. 60 g	Approx. 30 g					
Mate- rials	Case Sensing	Heat-resistant ABS	·	РРО					
rials Sensing surface									

* The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard sensing object, and a set distance of half the sensing distance.

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E2S
    TL-W
TL-N/TL-Q
/TL-G
    TL-M
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Item	Model	TL-N5ME , TL-N5MY	TL-N10ME , TL-N10MY	TL-N20ME , TL-N20MY			
Sensing distanc	•	5 mm ±10%	10 mm ±10%	20 mm ±10%			
Set dist	-	0 to 4 mm	0 to 8 mm	0 to 16 mm			
Differe	ntial travel	15% max. of sensing distance					
Sensin	g object	Ferrous metal (The sensing distance dec	creases with non-ferrous metal. Refer to	Engineering Data on pages 829 and 830.)			
	g object	Iron, $30 \times 30 \times 1 \text{ mm}$	Iron, $40 \times 40 \times 1 \text{ mm}$	Iron, $50 \times 50 \times 1 \text{ mm}$			
Respor	ncy *1	E Models: 500 Hz Y Models: 10 Hz		E Models: 40 Hz Y Models: 10 Hz			
voltage operat age ran	ing volt- ige)	E Models: 12 to 24 VDC (10 to 30 VDC), Y Models: 100 to 220 VAC (90 to 250 VA			Proxin Senso		
Current	nption	E Models: 8 mA max. at 12 VDC, 15 mA					
_eakag	e current	Y Models: Refer to Engineering Data on	1 0				
Con- rol	Load current						
out- out	Residual voltage	E Models: 1 V max. (load current: 200 mA) Y Models: Refer to <i>Engineering Data</i> on page 828.					
ndicate		E Models: Detection indicator (red) Y Models: Operation indicator (red)					
with se	ion mode ensing ob-	E1/Y1 Models: NO E2/Y2 Models: NC					
ect app ng)	proach-	Refer to the timing charts under I/O Circuit Diagrams on page 831 for details.					
Protect circuits		E Models: Reverse polarity protection, Surge suppressor Y Models: Surge suppressor					
Ambier emper	-	Operating/Storage: -25 to 70°C (with no icing or condensation)					
Ambier numidi		Operating/Storage: 35% to 95% (with no	condensation)		Others		
lemper nfluen		$\pm 10\%$ max. of sensing distance at 23°C	in the temperature range of -25 to 70°C		Periphe Devices		
Voltage		E Models: $\pm 2.5\%$ max. of sensing distan Y Models: $\pm 1\%$ max. of sensing distance			Genera Informa		
nsulati resista	-	50 M Ω min. (at 500 VDC) between curre	nt-carrying parts and case				
Dielect strengt		E Models: 1,000 VAC, 50/60 Hz for 1 mi Y Models: 2,000 VAC, 50/60 Hz for 1 mi					
Vibratio resista		Destruction: 10 to 55 Hz, 1.5-mm double	amplitude for 2 hours each in X, Y, and	Z directions			
Shock resista		Destruction: 500 m/s ² 10 times each in λ	ζ, Y, and Z directions				
Degree protect		IEC 60529 IP67					
Conneo method		Pre-wired Models (Standard cable length: 2 m)					
Weight (packe	d state)	Approx. 145 g Approx. 170 g Approx. 240 g					
Mate- rials	Case Sensing surface	Heat-resistant ABS					
Access		E Models: Mounting Bracket, Instruction Y Models: Instruction manual	manual				

*1. The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard sensing object, and a set distance of half the sensing distance.
 *2. E Models: A full-wave rectification power supply of 24 VDC ±10% (average value) can be used.

Sensing Area TL-Q2MC1

TL-N MD

TL-N20MD

TL-N12MD

TL-N7MD

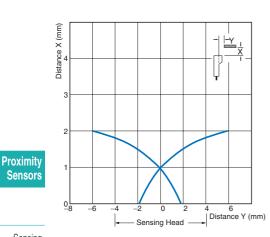
Distance X (mm)

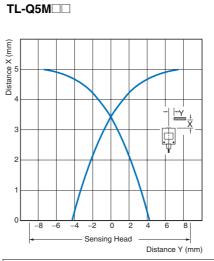
15

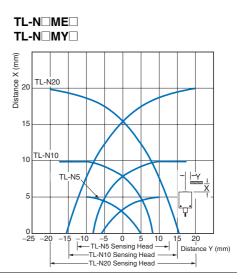
10

5

0l -25







Sensing Guide Cylindrical Models

Rectangular Models Separate Amp/ Pre-wired Connector Models Capacitive Models Others Peripheral

General Information

E2S

TL-W

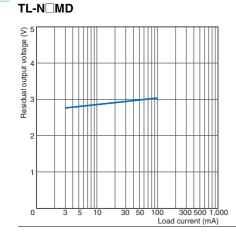
/TL-G

TL-M

TL-N/TL-Q

Devices

Residual Output Voltage

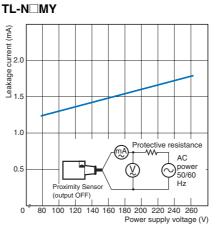


Leakage Current

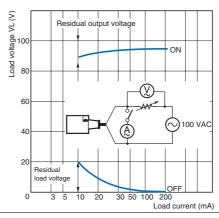
÷Υ

-10 -5 0 5 10 15 20 |→ TL-N7MD□ Sensing Head → Distance Y (mm) - TL-N12MD□ Sensing Head → |

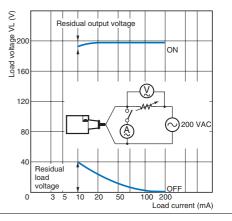
TL-N20MD Sensing Head -



TL-N MY at 100 VAC

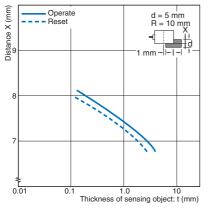


TL-N MY at 200 VAC

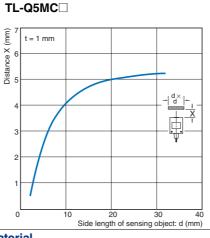


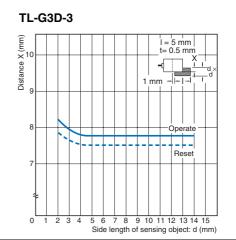
Thickness of Sensing Object vs. Sensing Distance

TL-G3D-3



Sensing Object Size vs. Sensing Distance

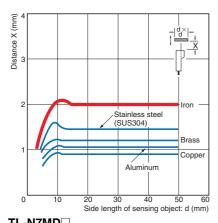


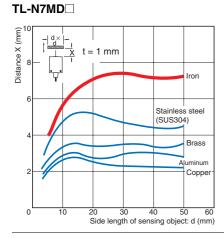


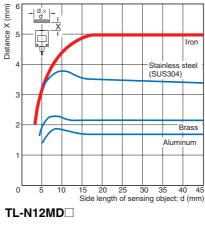
Proximity Sensors

Influence of Sensing Object Size and Material

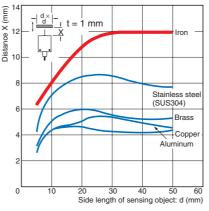
TL-Q2MC1



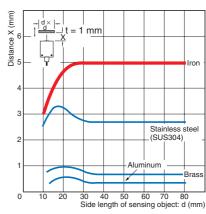




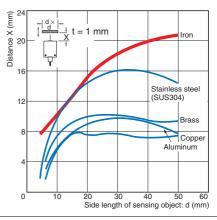
TL-Q5M







TL-N20MD



Sensing Guide

Cylindrical Models

Rectangular Models

Separate Amp/ Pre-wired Connector Models

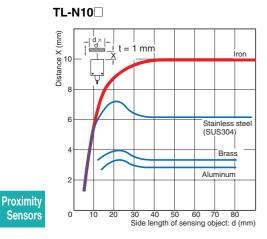
Capacitive Models

Others

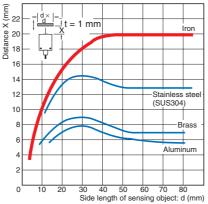
Peripheral Devices

General Information

E2S	
TL-W	
TL-N/TL-Q /TL-G	
TL-M	
	_

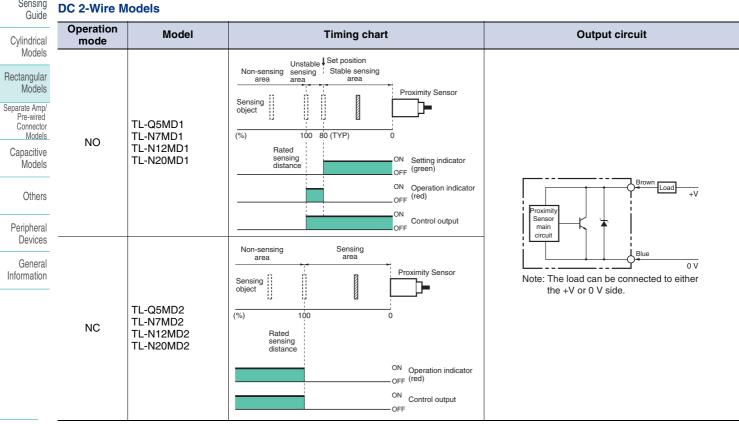






I/O Circuit Diagrams

Sensing



E2S TL-W TL-N/TL-Q /TL-G

TL-M

DC	3-1	Wire	Models
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Operation mode	Model	Timing chart	Output circuit	
NO	TL-Q2MC1 TL-Q5MC1	Sensing object Present Not present Output transistor ON (load) OFF Detection indicator ON (red) OFF	Proximity Black - Hoad	
NC	TL-Q5MC2	Sensing object Present Not present Output transistor (load) OFF Detection indicator (red) OFF	*1. Load current: 100 mA max., TL-Q2MC1 Load current: 50 mA max., TL-Q5MC1	Proximity Sensors
NO	TL-N5ME1 TL-N10ME1 TL-N20ME1	Sensing object Present Not present Load (between brown and black leads) Operate Reset Output voltage (between black and blue leads) High Low Detection indicator (red) ON OFF	Proximity Sensor main 22 Q Q cuturb	- Sensing Guide Cylindrical Models Rectangular Models Separate Amp/ Pre-wired
NC	TL-N5ME2 TL-N10ME2 TL-N20ME2	Sensing object Present Not present Load (between brown and black leads) Operate Reset Output voltage (between black and blue leads) High Low Detection indicator (red) ON OFF	*1. Load current: 200 mA max. *2. When a transistor is connected.	Connector Models Capacitive Models Others Peripheral
Transistor output	TL-G3D-3	Sensing object Present Not present Output transistor ON (load) OFF	Proximity Sensor main circuit * Load current: 20 mA max.	General Information

AC 2-Wire Models

Operation mode	Model	Timing chart	Output circuit
NO	TL-N5MY1 TL-N10MY1 TL-N20MY1	Sensing object Present Not present Load Operate Reset Operation indicator (red) OFF	Proximity
NC	TL-N5MY2 TL-N10MY2 TL-N20MY2	Sensing object Present Not present Load Operate Reset Operation indicator (red) OFF	Provinity Sensor circuit Blue

Safety Precautions

Refer to Warranty and Limitations of Liability on page F-2.

WARNING

This product is not designed or rated for ensuring safety of persons. Do not use it for such purposes.

- Do not short-circuit the load, otherwise the Sensor may be damaged.

otherwise the Sensor may be damaged. Applicable Models: AC 2-Wire Models



(Unit: mm)

В

20

35

40

60

23

30

(Unit: mm)

В

3

• Do not supply power to the Sensor with no load,

TI -O

Α '

20

40

50

70

20

40

A

12

Precautions for Correct Use

Do not use this product under ambient conditions that exceed the ratings.

Design

Influence of Surrounding Metal

Influence of Surrounding Metal

When mounting the Sensor within a metal panel, ensure that the clearances given in the following table are maintained. Failure to maintain these distances may cause deterioration in the performance of the Sensor.

Cylindrical **Rectangular Models TL-N**

Model

Model

TL-Q2MC1

TL-Q5M

TL-N7MD

TL-N12MD

TL-N20MD

TL-N5ME , TL-N5MY

TL-N10ME , TL-N10MY

Models

Sensina

Guide

Proximity

Sensors

Rectangular Models Separate Amp

Pre-wired Connector Models Capacitive

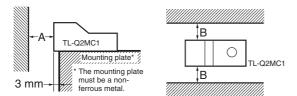
Models

Others

Peripheral Devices

General Information

TL-N20ME , TL-N20MY 80 45 * The figure is applicable for one metal object. (The figure must be multiplied by the number of metal objects.)

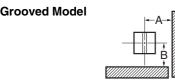


Distance

Distance

Influence of Surrounding Metal

TL-W TL-N/TL-Q /TL-G TL-M



Influence of Surrounding Metal (Unit: mm) Model Distance Α В TL-G3D-3 11 17

Mutual Interference

When installing Sensors face-to-face or side-by-side, ensure that the minimum distances given in the following table are maintained.

Parallel

Face-to-face

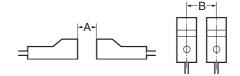
Mutual Interference

(Unit: mm)

(Unit: mm)

		,
Model Distance	Α*	В*
TL-Q5MC	60 (17)	120 (60)
TL-Q5MD	60 (30)	120 (80)
TL-N7MD	100 (50)	120 (60)
TL-N12MD	120 (60)	200 (100)
TL-N20MD	200 (100)	200 (100)
TL-N5ME	80 (40)	80 (40)
TL-N5MY	80 (40)	90 (40)
TL-N10ME, TL-N10MY	120 (60)	120 (60)
TL-N20ME, TL-N20MY	200 (100)	120 (60)

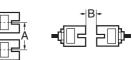
Note: Values in parentheses apply to Sensors operating at different frequencies



Mutual Interference

Model	Distance	Α	В
TL-Q2MC1		30 (8)	90 (45)

Grooved Model

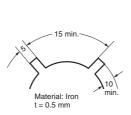


Mutual Interference (Unit: mm) Model Distance В Α TL-G3D-3 31 25

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Designing the Sensing Object for TL-G3D-3 Grooved Model

For high-speed response to a toothed metal plate, the sensing objects must be at least the size of the standard sensing object and there must be sufficient distance between sensing objects. The response frequency for a toothed wheel like the one shown at the right is 1 kHz min. The response frequency will be reduced if the wheel is smaller or the width of the teeth or the distance between the teeth is reduced.



Sensing surface

_q

Mounting

When tightening the mounting screws, do not exceed the torque in the following table.

Model	Torque	
TL-Q2MC1	0.59 N⋅m	
TL-Q5M		
TL-NOMOO	0.9 to 1.5 N·m	
TL-G3D-3	2 N⋅m	

Dimensions

Sensors

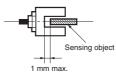
TL-Q2MC1

NDMDD	0.9 to 1.5 N⋅m
G3D-3	2 N·m

Adjustment

Sensing Object Passing Position for the TL-G3D-3 **Grooved Model**

The gap between the sensing object and the bottom of the groove must be 1 mm or less.



Proximity Sensors

Sensing Guide

Cylindrical Models Rectangular

(Unit: mm)

CAD data

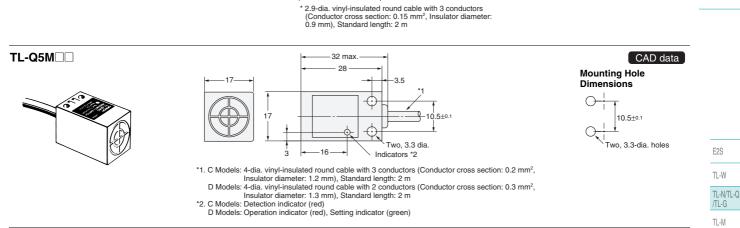
Models Separate Amp Pre-wired Connector Models

Capacitive Models

Others

Peripheral Devices

General Information



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⊷ 18.5±0.2 →

-8

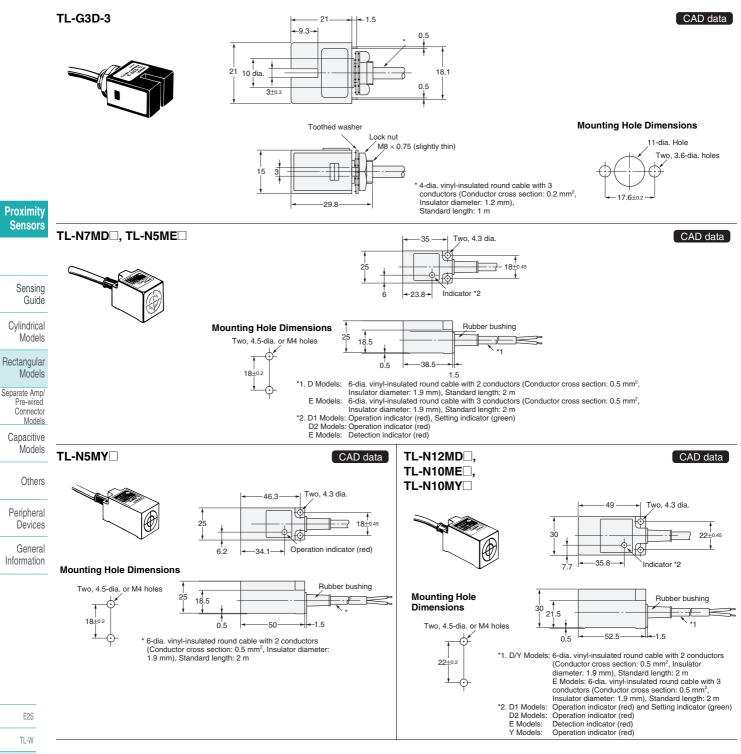
-25

-28

6

Detection indicator (red)

3.2-dia. mounting hole



TL-N/TL-Q /TL-G TL-M

CAD data

Sensing

E2S

TL-W

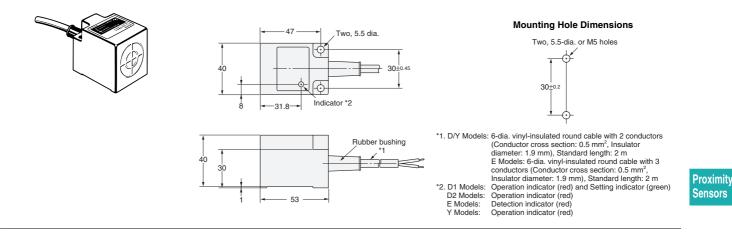
/TL-G

TL-M

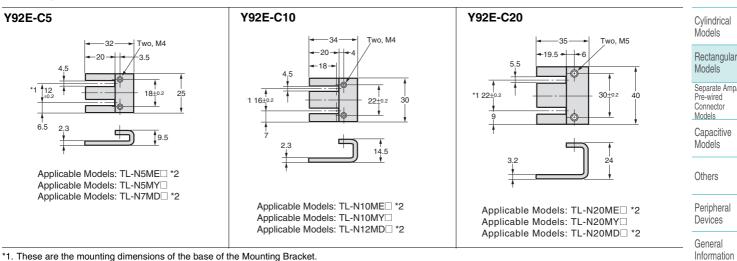
TL-N/TL-Q

Guide

TL-N20MD, TL-N20ME, TL-N20MY



Accessories (Order Separately) **Mounting Bracket**



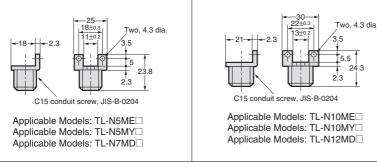
*1. These are the mounting dimensions of the base of the Mounting Bracket.

*2. Provided with the product.

Mounting Brackets for Wiring Conduit Use (Sold Separately)

Y92E-N5C15

Y92E-N10C15



Cat. No. D811-E1-01

In the interest of product improvement, specifications are subject to change without notice.

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