

Discontinuation Notice of Proximity Sensor

Model TL-T series

Product Discontinuation



Proximity Sensor
Model TL-T2E1
Model TL-T5ME1
Model TL-T5ME2

Model TL-T*(-*)

Excluding the above-mentioned



Recommended Replacement

Proximity Sensor
Model TL-Q2MC1
Model TL-Q5MC1
Model TL-Q5MC2

No Replacement

Discontinuation date : The end of March, 2012

Caution on recommended replacement

- 1) Differences are type of control output
TL-T:NPN
TL-Q: NPN open collector
- 2) Mounting dimensions
TL-T :16mm±0.2mm or 32mm±0.2×17mm±0.2mm
TL-Q2MC1:18.5mm±0.2mm
TL-Q5MC*:10.5mm±0.1mm
- 3) Response frequency
TL-T2*:800Hz min.
TL-T5M*:250Hz min.
TL-Q*:500Hz min.
- 4) Load current
TL-T*: 100mA max. (12VDC) 200mA max. (24VDC)
TL-Q2MC1: 100mA max. (12 to 24VDC)
TL-Q5MC1:50mA max. (12 to 24VDC)
- 5) Additionally, please refer to characteristics..

Difference from discontinued product

Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
TL-Q2MC1	--	--	--	--	*	*	-
TL-Q5MC1	--	--	--	--	--	--	-
TL-Q5MC2	--	--	--	--	--	--	-

** : Fully compatible

* : The change is a little / Almost compatible

-- : Not compatible

- : No corresponding specification

Product Discontinuation and recommended replacement

Product discontinuation	Recommended replacement
TL-T2E1 2M	TL-Q2MC1 2M
TL-T2E1 5M	TL-Q2MC1 2M
TL-T5ME1 2M	TL-Q5MC1 2M
TL-T5ME1 5M	TL-Q5MC1 2M
TL-T5ME2 2M	TL-Q5MC2 2M
TL-T5ME2 5M	TL-Q5MC2 2M
TL-T2E2 2M	No Replacement
TL-T2E2 5M	
TL-T5ME15 2M	
TL-T5ME25 2M	
TL-T2E15 2M	
TL-T2F15 2M	
TL-T2F25 2M	
TL-T2F15 5M	
TL-T2Y15 2M	
TL-T2F1 2M	
TL-T2F1 5M	
TL-T2F2 2M	
TL-T2F2 5M	
TL-T5MF1 2M	
TL-T5MF15 2M	
TL-T5MF2 2M	
TL-T5MF25 2M	
TL-T2E15 5M	
TL-T2Y1 2M	

TL-T2Y1 5M	No Replacement
TL-T2Y2 2M	
TL-T2Y2 5M	
TL-T5MY1 2M	
TL-T5MY1 5M	
TL-T5MY15 2M	
TL-T5MY15 5M	
TL-T5MY2 2M	
TL-T5MY25 2M	
TL-T5E1-7 2M	
TL-T5E1-7 3M	
TL-T5E1-7 5M	
TL-T5E2-7 2M	
TL-T5MF1 10M	

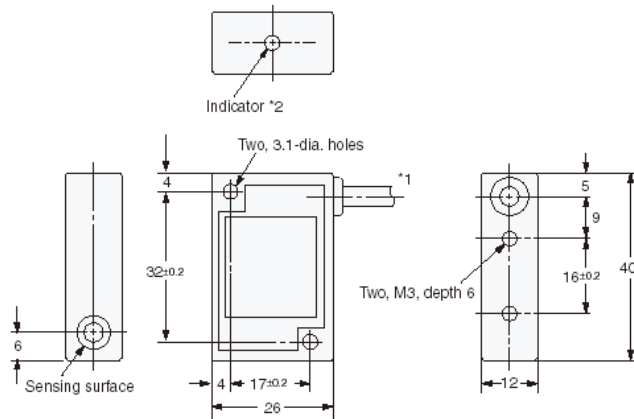
Body color

Product discontinuation	Recommended replacement
<TL-T*> Body: Black Cable: Dark gray	<TL-Q2MC1,TL-Q5MC*> Body: Yellow Cable: Dark gray(TL-Q2MC1) :Light gray(TL-Q5MC*)
<TL-T5E*-7> Sensing surface: Light gray Body: Yellow Cable: Dark gray	No Replacement

Dimensions

Product discontinuation

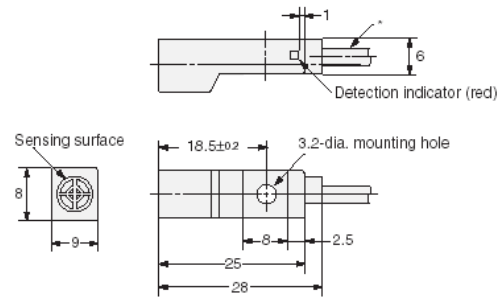
TL-T*



- *1. DC-switching model: 4.0-dia. vinyl-insulated round cable with 3 conductors (Conductor cross section: 0.2 mm², Insulator diameter: 1.2 mm), Standard length: 2 m
 AC-switching model: 4.0-dia. vinyl-insulated round cable with 2 conductors (Conductor cross section: 0.3 mm², Insulator diameter: 1.3 mm), Standard length: 2 m
- *2. Detection indicator (red)

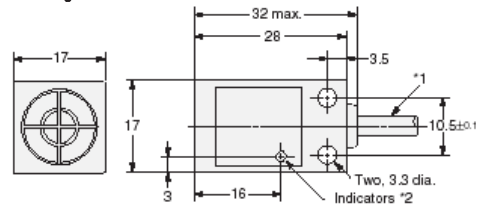
Recommended replacement

TL-Q2MC1



- * 2.9-dia. vinyl-insulated round cable with 3 conductors (Conductor cross section: 0.15 mm², Insulator diameter: 0.9 mm), Standard length: 2 m

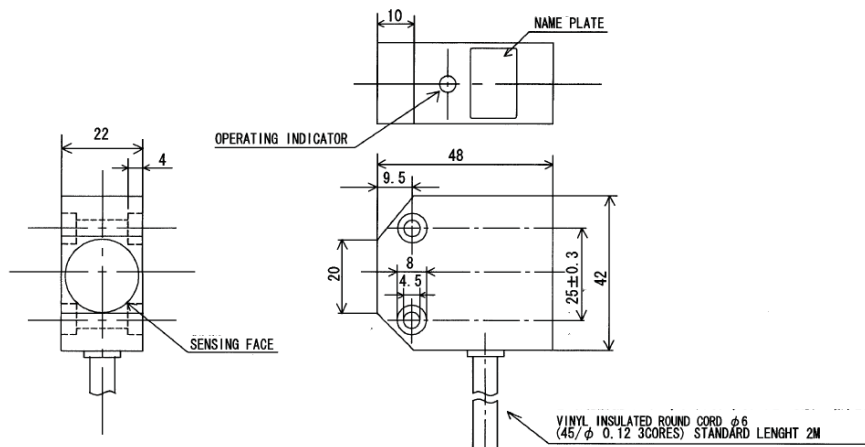
TL-Q5MC1



- *1. C Models: 4-dia. vinyl-insulated round cable with 3 conductors (Conductor cross section: 0.2 mm², Insulator diameter: 1.2 mm), Standard length: 2 m
 D Models: 4-dia. vinyl-insulated round cable with 2 conductors (Conductor cross section: 0.3 mm², Insulator diameter: 1.3 mm), Standard length: 2 m
- *2. C Models: Detection indicator (red)
 D Models: Operation indicator (red), Setting indicator (green)

Product discontinuation

TL-T5E*-7



VINYL INSULATED ROUND CORD $\phi 6$
 (45/ ϕ 0.12 3CORES) STANDARD LENGTH 2M

Wire Connection

<p align="center">Product discontinuation</p> <p align="center">Model TL-T2E*</p> <p align="center">Model TL-T5ME*</p>	<p align="center">Recommended replacement</p> <p align="center">Model TL-Q2MC1</p> <p align="center">Model TL-Q5MC*</p>
<p>1) Connection method Connector Models</p> <p>2) I/O circuit diagram</p> <p>*1. 200 mA (load current) *2. When a transistor is connected</p>	<p>1) Connection method Pre-wired Models</p> <p>2) I/O circuit diagram</p> <p>* Load current: 100 mA max., TL-Q2MC1 Load current: 50 mA max., TL-Q5MC1</p>

<p align="center">Product discontinuation</p> <p align="center">Model TL-T*(M)F*</p> <p align="center">Model TL-T*(M)Y*</p> <p align="center">Model TL-T5E*-7</p>	
<p>1) Connection method Pre-wired Models</p> <p>2) I/O circuit diagram</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="147 1291 487 1564"> <p>TL-T*(M)F*</p> <p>*1. 200 mA (load current) *2. When a transistor is connected</p> </div> <div data-bbox="568 1291 893 1501"> <p>TL-T*(M)Y*</p> </div> </div> <div style="margin-top: 20px;"> <p>TL-T5E*-7</p> <p>* 400 mA max. (sink current) ** Dotted line denotes the circuit when the load is a transistor circuit.</p> </div>	

Mounting dimensions

Product discontinuation	Recommended replacement
<p><TL-T*></p> <ol style="list-style-type: none">1) Mounting holes 16mm±0.2mm or 32mm±0.2×17mm±0.2mm2) Mounting screw 2-M3	<p><TL-Q2MC1,TL-Q5MC*></p> <ol style="list-style-type: none">1) Mounting holes TL-Q2MC1:18.5mm±0.2mm TL-Q5MC*:10.5mm±0.1mm2) Mounting screw TL-Q2MC1:1-M3 TL-Q5MC*:2-M3

Product discontinuation
<p><TL-T5E*-7*></p> <ol style="list-style-type: none">1) Mounting holes 25mm±0.3mm2) Mounting screw 2-M4

Characteristics

Item		Model	Product discontinuation TL-T2E1 TL-T2E2	Recommended replacement TL-Q2MC1 No Replacement
Sensing distance			2mm±10%	2mm±15%
Set distance			0 to 1.6mm	0 to 1.5mm
Differential travel			10% max. of sensing distance	
Standard sensing object			Iron, 12×12×1mm	Iron, 8×8×1mm
Response frequency			800Hz min.	500Hz min.
Power supply voltage (operating voltage range)			12 to 24VDC (10 to 30VDC), ripple (p-p):20%max.	12 to 24VDC (10 to 30VDC), ripple (p-p):10%max.
Current consumption			15mA max.	
Control output	Load current		NPN open collector 100mA max.(at 12VDC) 200mA max.(at 24VDC)	NPN open collector 100mA max. (30VDC max.)
	Residual voltage		1V max. (under load current of 100mA with cable length of 2m)	1V max. (under load current of 100mA with cable length of 2m)
Indicators			Detection indicator (red)	
Operation mode (with sensing object approaching)			E1:NO E2:NC	NO
Protection circuit			Reverse polarity protection, Surge suppressor	
Ambient temperature range			Operating/Storage: −25 to 70°C(with no icing or condensation)	Operating/Storage: −10 to 60°C(with no icing or condensation)
Ambient humidity range			Operating/strage:35% to 95% (with no condensation)	
Temperature influence			±10% max. of sensing distance at 23 °C in the temperature range of −25 to 70°C	±10% max. of sensing distance at 23 °C in the temperature range of −10 to 60°C
Voltage influence			±2.5% max. of sensing distance at rated voltage in the rated voltage ±15% range	±2.5% max. of sensing distance at rated voltage in the rated voltage ±10% range
Insulation resistance			50MΩmin.(at 500VDC) between current-carrying parts and case	
Dielectric strength			1000VAC, 50/60Hz for 1 minute between current-carrying parts and case	
Vibration resistance			Destruction:10 to 55Hz, 1.5-mm double amplitude for 2 hours each in X,Y and Z directions	
Shock resistance			Destruction:500m/s ² 10 times each in X,Y and Z directions	Destruction:1000m/s ² 10 times each in X,Y and Z directions
Degree of protection			IEC60529 IP67 in-house standards: oil-resistant	
Materials			Case/Cover: Heart-resistant ABS	

Model		Product discontinuation TL-T5ME1 TL-T5ME2	Recommended replacement TL-Q5MC1 TL-Q5MC2
Sensing distance		5mm±10%	5mm±15%
Set distance		0 to 4mm	0 to 4mm
Differential travel		10% max. of sensing distance	
Standard sensing object		Iron, 15×15×1mm	
Response frequency		250Hz min.	500Hz min.
Power supply voltage (operating voltage range)		12 to 24VDC (10 to 30VDC), ripple (p-p):20%max.	12 to 24VDC (10 to 30VDC), ripple (p-p):10%max.
Current consumption		15mA max.	10mA max.
Control output	Load current	NPN 100mA max.(at 12VDC) 200mA max.(at 24VDC)	NPN open collector 50mA max. (30VDC max.)
	Residual voltage	1V max. (under load current of 100mA with cable length of 2m)	1V max. (under load current of 100mA with cable length of 2m)
Indicators		Detection indicator (red)	
Operation mode (with sensing object approaching)		E1:NO E2:NC	C1:NO C2:NC
Protection circuit		Reverse polarity protection, Surge suppressor	
Ambient temperature range		Operating/Storage: −25 to 70°C(with no icing or condensation)	Operating/Storage: −25 to 70°C(with no icing or condensation)
Ambient humidity range		Operating/strage:35% to 95% (with no condensation)	
Temperature influence		±10% max. of sensing distance at 23 °C in the temperature range of −25 to 70°C	±20% max. of sensing distance at 23 °C in the temperature range of −25 to 70°C
Voltage influence		±2.5% max. of sensing distance at rated voltage in the rated voltage ±15% range	±2.5% max. of sensing distance at rated voltage in the rated voltage ±10% range
Insulation resistance		50MΩmin.(at 500VDC) between current-carrying parts and case	5MΩmin.(at 500VDC) between current-carrying parts and case
Dielectric strength		1000VAC, 50/60Hz for 1 minute between current-carrying parts and case	500VAC, 50/60Hz for 1 minute between current-carrying parts and case
Vibration resistance		Destruction:10 to 55Hz, 1.5-mm double amplitude for 2 hours each in X,Y and Z directions	
Shock resistance		Destruction:500m/s ² 10 times each in X,Y and Z directions	Destruction:200m/s ² 10 times each in X,Y and Z directions
Degree of protection		IEC60529 IP67 in-house standards: oil-resistant	IEC60529 IP67
Materials		Case/Cover: Heat-resistant ABS	

Item \ Model		Product discontinuation			
		TL-T2F*	TL-T5MF*	TL-T2Y*	TL-T5MY*
Sensing distance		2mm±10%	5mm±10%	2mm±10%	5mm±10%
Set distance		0 to 1.6mm	0 to 4mm	0 to 1.6mm	0 to 4mm
Differential travel		10% max. of sensing distance			
Standard sensing object		Iron, 12×12×1mm	Iron, 15×15×1mm	Iron, 12×12×1mm	Iron, 15×15×1mm
Response frequency		250Hz min.	800Hz min.	20Hz min.	
Power supply voltage (operating voltage range)		12 to 24VDC (10 to 30VDC), ripple (p-p):20%max.		100 to 220VAC (90 to 250VAC) 50/60Hz	
Current consumption		15mA max.		-	
Leakage current		-		2.5mA max.	
Control output	Load current	PNP 100mA max.(at 12VDC) 200mA max.(at 24VDC)		10 to 200mA	
	Residual voltage	1V max. (under load current of 100mA with cable length of 2m)		-	
Indicators		Detection indicator (red)		Operating indicator (red)	
Operation mode (with sensing object approaching)		F1:NO F2:NC		Y1:NO Y2:NC	
Protection circuit		Reverse polarity protection, Surge suppressor		Surge suppressor	
Ambient temperature range		Operating/Storage: -25 to 70°C (with no icing or condensation)			
Ambient humidity range		Operating/storage: 35% to 95% (with no condensation)			
Temperature influence		±10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C			
Voltage influence		±2.5% max. of sensing distance at rated voltage in the rated voltage ±15% range			
Insulation resistance		50MΩmin.(at 500VDC) between current-carrying parts and case			
Dielectric strength		1000VAC, 50/60Hz for 1 minute between current-carrying parts and case			
Vibration resistance		Destruction: 10 to 55Hz, 1.5-mm double amplitude for 2 hours each in X, Y and Z directions			
Shock resistance		Destruction: 500m/s ² 10 times each in X, Y and Z directions			
Degree of protection		IEC60529 IP67 in-house standards: oil-resistant			
Materials		Case/Cover: Heat-resistant ABS			

Item \ Model		Product discontinuation TL-T5E*-7
Sensing distance		5mm±10%
Set distance		0 to 4mm
Differential travel		10% max. of sensing distance
Standard sensing object		Iron, 20×20×1mm
Response frequency		400Hz min.
Power supply voltage (operating voltage range)		12 to 24VDC (10 to 30VDC), ripple (p-p):20%max.
Current consumption		20mA max.
Control output	Load current	NPN 400mA max.(at 24VDC)
	Residual voltage	1.5V max. (under load current of 400mA with cable length of 2m)
Indicators		Detection indicator (red)
Operation mode (with sensing object approaching)		E1:NO E2:NC
Protection circuit		Reverse polarity protection, Surge suppressor
Ambient temperature range		Operating/Storage: -25 to 70°C (with no icing or condensation)
Ambient humidity range		Operating/storage: 35% to 95% (with no condensation)
Temperature influence		±10% max. of sensing distance at 23°C in the temperature range of -25 to 70°C
Voltage influence		±2.5% max. of sensing distance at rated voltage in the rated voltage ±10% range
Insulation resistance		100MΩmin.(at 500VDC) between current-carrying parts and case
Dielectric strength		1000VAC, 50/60Hz for 1 minute between current-carrying parts and case
Vibration resistance		Destruction: 10 to 55Hz, 1.5-mm double amplitude for 2 hours each in X, Y and Z directions
Shock resistance		Destruction: 500m/s ² 10 times each in X, Y and Z directions
Degree of protection		IEC60529 IP67
Materials		Case: Diecast aluminum Sensing surface: Heart-resistant ABS