

# Product datasheet

Specifications



## Modicon TM3 - 4 analog / temperature inputs (screw) 24Vdc

TM3TI4

EAN Code: 3606480649004

### Main

Range Of Product	Modicon TM3
Product Or Component Type	Analog input module
Range Compatibility	Modicon M221 Modicon M241 Modicon M251 Modicon M262
Analogue Input Number	4
Analogue Input Type	current 4...20 mA current 0...20 mA voltage 0...10 V voltage - 10...10 V thermocouple - 200...1000 °C with thermocouple J thermocouple - 200...1300 °C with thermocouple K thermocouple 0...1760 °C with thermocouple R thermocouple 0...1760 °C with thermocouple S thermocouple 0...1820 °C with thermocouple B thermocouple - 200...400 °C with thermocouple T thermocouple - 200...1300 °C with thermocouple N thermocouple - 200...800 °C with thermocouple E thermocouple 0...2315 °C with thermocouple C Ni 100/Ni 1000 temperature probe - 60...180 °C Pt 100 temperature probe - 200...850 °C Pt 1000 temperature probe - 200...600 °C

### Complementary

Analogue Input Resolution	16 bits 15 bits + sign
Permissible Continuous Overload	13 V, analogue input type: voltage 40 mA, analogue input type: current
Input Impedance	<= 50 Ohm current >= 1 MOhm voltage >= 1 MOhm thermocouple >= 1 MOhm temperature probe
Lsb Value	2.44 mV 0...10 Vvoltage 4.88 mV - 10...10 Vvoltage 4.88 µA 0...20 mAcurrent 3.91 µA 4...20 mAcurrent 0.1 °Ctemperature probe 0.1 °Cthermocouple
Conversion Time	100 ms + 100 ms per channel + 1 controller cycle time for analogue input thermocouple 100 ms + 100 ms per channel + 1 controller cycle time for analogue input temperature probe 10 ms + 10 ms per channel + 1 controller cycle time for analogue input voltage/ current
Sampling Duration	10 ms, analogue input type: voltage/current 100 ms, analogue input type: voltage/current 100 ms, analogue input type: thermocouple 100 ms, analogue input type: temperature probe

<b>Absolute Accuracy Error</b>	+/- 0.2 % of full scale at 25 °C for analogue input voltage/current +/- 0.2 % of full scale at 25 °C for Pt 100/Pt 1000, Ni 100/ Ni 1000 temperature probe +/- 0.2 % of full scale at 25 °C for thermocouple C 0...2315 °C +/- 6 °C at 25 °C for thermocouple R, S 0...200 °C +/- 0.2 % of full scale at 25 °C for thermocouple R, S 200...1760 °C +/- 0.2 % of full scale at 25 °C for thermocouple B 300...1820 °C +/- 0.4 % of full scale at 25 °C for thermocouple K - 200...0 °C +/- 0.2 % of full scale at 25 °C for thermocouple K 0...1300 °C +/- 0.4 % of full scale at 25 °C for thermocouple J - 200...0 °C +/- 0.2 % of full scale at 25 °C for thermocouple J 0...1000 °C +/- 0.4 % of full scale at 25 °C for thermocouple E - 200...0 °C +/- 0.2 % of full scale at 25 °C for thermocouple E 0...800 °C +/- 0.4 % of full scale at 25 °C for thermocouple T - 200...0 °C +/- 0.2 % of full scale at 25 °C for thermocouple T 0...400 °C +/- 0.4 % of full scale at 25 °C for thermocouple N - 200...0 °C +/- 0.2 % of full scale at 25 °C for thermocouple N 0...1300 °C
<b>Temperature Drift</b>	+/- 0.01 %FS/°C
<b>Repeat Accuracy</b>	+/-0.5 %FS
<b>Non-Linearity</b>	+/- 0.2 %FS
<b>Cross Talk</b>	<= 1 LSB
<b>[Us] Rated Supply Voltage</b>	24 V DC
<b>Supply Voltage Limits</b>	20.4...28.8 V
<b>Type Of Cable</b>	Twisted shielded pairs cable <30 m for input circuit
<b>Current Consumption</b>	45 mA at 5 V DC via bus connector 50 mA at 5 V DC via bus connector 35 mA at 24 V DC via external supply 40 mA at 24 V DC via external supply
<b>Local Signalling</b>	1 LED (green) for PWR
<b>Electrical Connection</b>	10 x 1.5 mm <sup>2</sup> removable screw terminal block with pitch 3.81 mm adjustment for inputs and supply 10 x 1.5 mm <sup>2</sup> removable screw terminal block with pitch 3.81 mm adjustment for inputs
<b>Insulation</b>	Between input and supply at 1500 V AC Between input and internal logic at 500 V AC
<b>Marking</b>	CE
<b>Surge Withstand</b>	1 kV power supply common mode conforming to IEC 61000-4-5 0.5 kV power supply differential mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5
<b>Mounting Support</b>	Top hat type TH35-15 rail conforming to IEC 60715 Top hat type TH35-7.5 rail conforming to IEC 60715 plate or panel with fixing kit
<b>Height</b>	90 mm
<b>Depth</b>	70 mm
<b>Width</b>	23.6 mm
<b>Net Weight</b>	0.11 kg

## Environment

<b>Standards</b>	IEC 61131-2
<b>Product Certifications</b>	CE UKCA RCM EAC cULus cULus HazLoc
<b>Resistance To Electrostatic Discharge</b>	8 kV in air conforming to IEC 61000-4-2 4 kV on contact conforming to IEC 61000-4-2

<b>Resistance To Electromagnetic Fields</b>	10 V/m 80 MHz...1 GHz conforming to IEC 61000-4-3 3 V/m 1.4 GHz...2 GHz conforming to IEC 61000-4-3 1 V/m 2 GHz...3 GHz conforming to IEC 61000-4-3
<b>Resistance To Magnetic Fields</b>	30 A/m conforming to IEC 61000-4-8
<b>Resistance To Fast Transients</b>	1 kV (I/O) conforming to IEC 61000-4-4
<b>Resistance To Conducted Disturbances</b>	10 V 0.15...80 MHz conforming to IEC 61000-4-6 3 V spot frequency (2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz) conforming to Marine specification (LR, ABS, DNV, GL)
<b>Electromagnetic Emission</b>	Radiated emissions - test level: 40 dBµV/m QP class A ( 10 m) at 30...230 MHz conforming to IEC 55011 Radiated emissions - test level: 47 dBµV/m QP class A ( 10 m) at 230...1000 MHz conforming to IEC 55011
<b>Immunity To Microbreaks</b>	10 ms
<b>Ambient Air Temperature For Operation</b>	-10...55 °C horizontal installation -10...35 °C vertical installation
<b>Ambient Air Temperature For Storage</b>	-25...70 °C
<b>Relative Humidity</b>	10...95 %, without condensation (in operation) 10...95 %, without condensation (in storage)
<b>Ip Degree Of Protection</b>	IP20
<b>Pollution Degree</b>	2
<b>Operating Altitude</b>	0...2000 m
<b>Storage Altitude</b>	0...3000 m
<b>Vibration Resistance</b>	3.5 mm at 5...8.4 Hz on DIN rail 3 gn at 8.4...150 Hz on DIN rail
<b>Shock Resistance</b>	15 gn for 11 ms

## Packing Units

<b>Unit Type Of Package 1</b>	PCE
<b>Number Of Units In Package 1</b>	1
<b>Package 1 Height</b>	7.576 cm
<b>Package 1 Width</b>	10.748 cm
<b>Package 1 Length</b>	12.673 cm
<b>Package 1 Weight</b>	220.0 g
<b>Unit Type Of Package 2</b>	S02
<b>Number Of Units In Package 2</b>	9
<b>Package 2 Height</b>	15 cm
<b>Package 2 Width</b>	30 cm
<b>Package 2 Length</b>	40 cm
<b>Package 2 Weight</b>	2.391 kg
<b>Unit Type Of Package 3</b>	P06
<b>Number Of Units In Package 3</b>	432
<b>Package 3 Height</b>	105 cm
<b>Package 3 Width</b>	120 cm
<b>Package 3 Length</b>	80 cm
<b>Package 3 Weight</b>	122 kg

# Contractual warranty

---

Warranty

18 months

## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

## Well-being performance

Toxic Heavy Metal Free

Mercury Free

Rohs Exemption Information Yes

Pvc Free

## Certifications & Standards

**Reach Regulation**

[REACH Declaration](#)

**Eu Rohs Directive**

Pro-active compliance (Product out of EU RoHS legal scope)

[EU RoHS Declaration](#)

**China Rohs Regulation**

[China RoHS declaration](#)

**Environmental Disclosure**

[Product Environmental Profile](#)

**Weee**

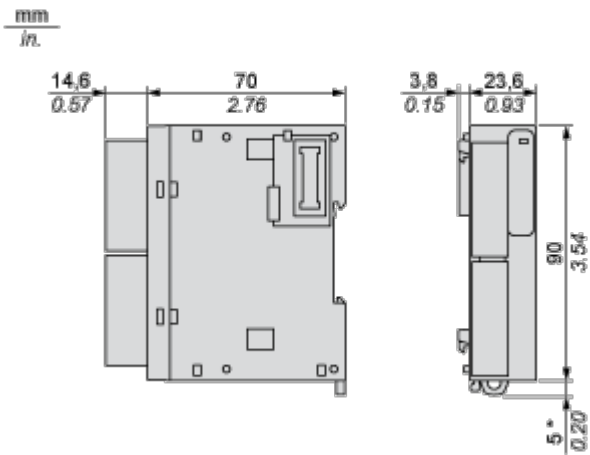
The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

**Circularity Profile**

[End of Life Information](#)

### Dimensions

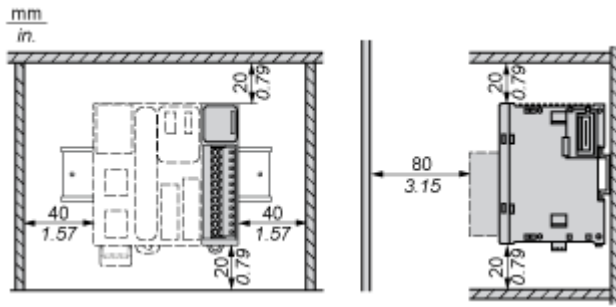
---



(\*) 8.5 mm/0.33 in when the clamp is pulled out.

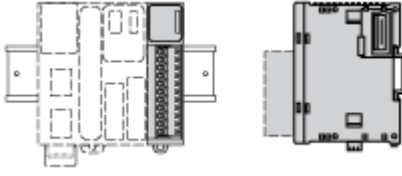
### Spacing Requirements

---



Mounting on a Rail

---



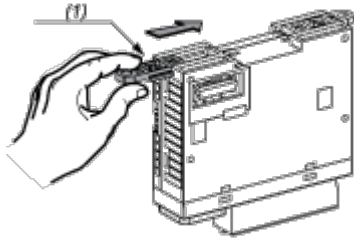
**Incorrect Mounting**





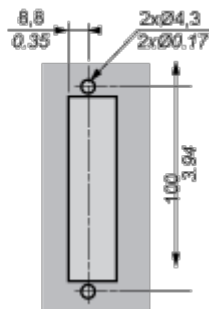
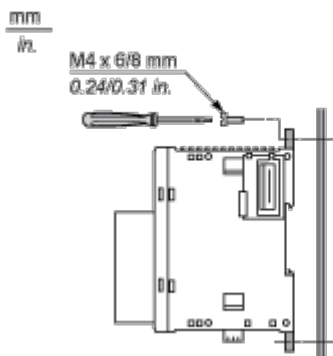
**Mounting on a Panel Surface**

---



- (1) Install a mounting strip

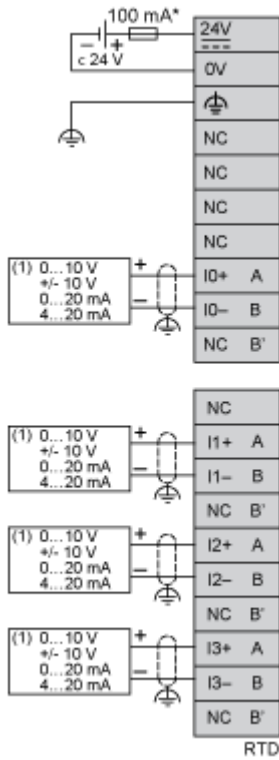
**Mounting Hole Layout**



Analogue Input Module

---

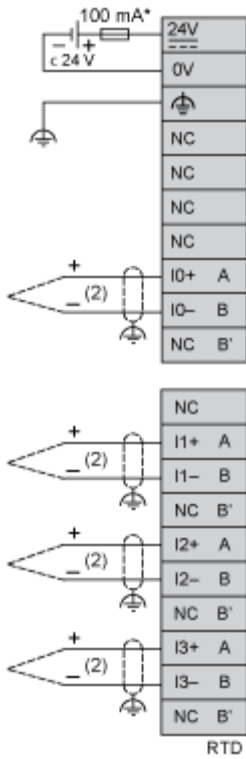
Wiring Diagram (Current/Voltage type)



(\*) Type T fuse

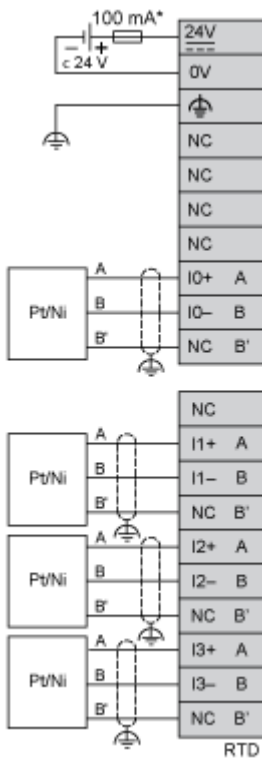
(1) Current/Voltage analog output device

Wiring Diagram (Thermocouple input type)



- (\*) Type T fuse
- (2) Thermocouple

Wiring Diagram (Temperature probe input type)



- (\*) Type T fuse

