

# TM3TI8T

## Analog input module, Modicon TM3, 8 temperature inputs (screw) 24 VDC



Product availability: Non-Stock - Not normally stocked in distribution facility

Price\*: 249.00 USD



### 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	8
Analogue input type	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 NTC 10k thermistor -90...150 °C PTC thermistor 100...10000 Ohm thermocouple - 200...1000 °C

### Complementary

Analogue input resolution	16 bits 15 bits + sign
Input impedance	>= 1 MOhm thermocouple >= 1 MOhm temperature probe >= 1 MOhm thermistor
LSB value	0.1 °C thermocouple 0.1 °C NTC 1 Ohm PTC/NTC
Conversion time	100 ms + 100 ms per channel + 1 controller cycle time
Sampling duration	100 Ms

Absolute accuracy error	+/- 0.2 % of full scale 77 °F (25 °C) thermocouple C 0...2315 °C +/- 6 °C 77 °F (25 °C) thermocouple R, S 0...200 °C +/- 0.2 % of full scale 77 °F (25 °C) thermocouple R, S 200...1760 °C +/- 0.2 % of full scale 77 °F (25 °C) thermocouple B 300...1820 °C +/- 0.4 % of full scale 77 °F (25 °C) thermocouple K - 200...0 °C +/- 0.2 % of full scale 77 °F (25 °C) thermocouple K 0...1300 °C +/- 0.4 % of full scale 77 °F (25 °C) thermocouple J - 200...0 °C +/- 0.2 % of full scale 77 °F (25 °C) thermocouple J 0...1000 °C +/- 0.4 % of full scale 77 °F (25 °C) thermocouple E - 200...0 °C +/- 0.2 % of full scale 77 °F (25 °C) thermocouple E 0...800 °C +/- 0.4 % of full scale 77 °F (25 °C) thermocouple T - 200...0 °C +/- 0.2 % of full scale 77 °F (25 °C) thermocouple T 0...400 °C +/- 0.4 % of full scale 77 °F (25 °C) thermocouple N - 200...0 °C +/- 0.2 % of full scale 77 °F (25 °C) thermocouple N 0...1300 °C
Temperature drift	+/- 0.01 %FS/°C
Repeat accuracy	+/-0.5 %FS
Non-linearity	+/- 0.2 %FS
Cross talk	<= 1 LSB
[Us] rated supply voltage	24 V DC
Supply voltage limits	20.4...28.8 V
Type of cable	Twisted shielded pairs cable <30 m for input circuit
Current consumption	30 mA 24 V DC via external supply 45 mA at 5 V DC via bus connector 40 mA 5 V DC via bus connector
Local signalling	For PWR 1 LED (green)
Electrical connection	10 x 1.5 mm <sup>2</sup> removable screw terminal block pitch 3.81 mm for inputs and supply 10 x 1.5 mm <sup>2</sup> removable screw terminal block pitch 3.81 mm for inputs
Insulation	Between input and supply 1500 V AC Between input and internal logic 500 V AC
Marking	CE
Surge withstand	1 KV power supply common mode EN/IEC 61000-4-5 0.5 KV power supply differential mode EN/IEC 61000-4-5 1 KV input common mode EN/IEC 61000-4-5
Mounting support	Top hat type TH35-15 rail IEC 60715 Top hat type TH35-7.5 rail IEC 60715 plate or panel with fixing kit
Height	3.54 In (90 mm)
Depth	2.76 In (70 mm)
Width	0.93 In (23.6 mm)
Net Weight	0.24 Lb(US) (0.11 kg)

## Environment

Standards	EN/IEC 61010-2-201 EN/IEC 61131-2
Resistance to electrostatic discharge	8 KV in air EN/IEC 61000-4-2 4 KV on contact EN/IEC 61000-4-2
Resistance to electromagnetic fields	9.14 V/M (10 V/m) 80 MHz...1 GHz EN/IEC 61000-4-3 2.74 V/M (3 V/m) 1.4 GHz...2 GHz EN/IEC 61000-4-3 0.91 V/M (1 V/m) 2 GHz...3 GHz EN/IEC 61000-4-3
Resistance to magnetic fields	98.43 A/M (30 A/m) EN/IEC 61000-4-8
Resistance to fast transients	1 KV EN/IEC 61000-4-4 I/O)
Resistance to conducted disturbances	10 V 0.15...80 MHz EN/IEC 61000-4-6 3 V spot frequency (2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz) Marine specification (LR, ABS, DNV, GL)
Electromagnetic emission	Radiated emissions 40 dBµV/m QP class A 10 m)30...230 MHz EN/IEC 55011 Radiated emissions 47 dBµV/m QP class A 10 m)230...1000 MHz EN/IEC 55011
Immunity to microbreaks	10 Ms
Ambient air temperature for operation	14...131 °F (-10...55 °C) horizontal installation 14...95 °F (-10...35 °C) vertical installation
Ambient air temperature for storage	-13...158 °F (-25...70 °C)

Relative humidity	10...95 %, without condensation in operation) 10...95 %, without condensation in storage)
IP degree of protection	IP20
Pollution degree	2
Operating altitude	0...6561.68 ft (0...2000 m)
Storage altitude	0.00...9842.52 Ft (0...3000 m)
Vibration resistance	3.5 mm 5...8.4 Hz DIN rail 3 gn 8.4...150 Hz DIN rail
Shock resistance	15 gn 11 ms

### Ordering and shipping details

Category	22533 - M2XX PLC & ACCESSORIES
Discount Schedule	MSX
GTIN	03606480649028
Nbr. of units in pkg.	1
Package weight(Lbs)	1 Lb(US) (0.45 kg)
Returnability	Yes
Country of origin	JP

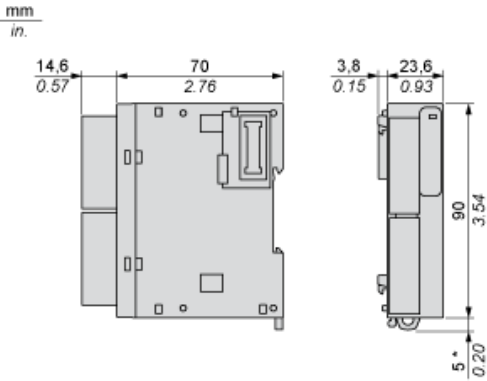
### Packing Units

Unit Type of Package 1	PCE
Package 1 Height	2.96 In (7.516 cm)
Package 1 width	4.21 In (10.685 cm)
Package 1 Length	5.02 In (12.739 cm)

### Offer Sustainability

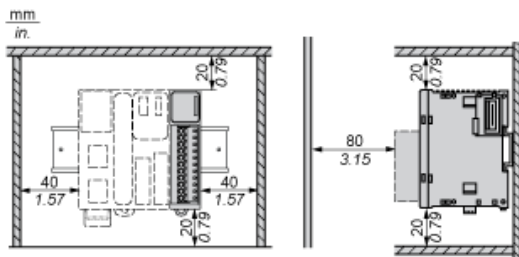
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
PVC free	Yes

Dimensions

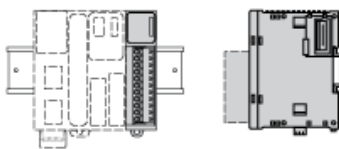


(\*) 8.5 mm/0.33 in when the clamp is pulled out.

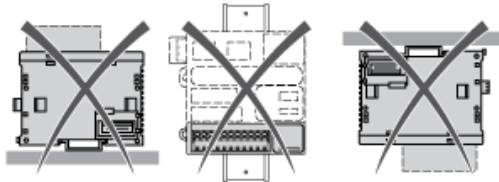
Spacing Requirements



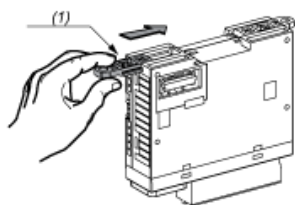
Mounting on a Rail



Incorrect Mounting

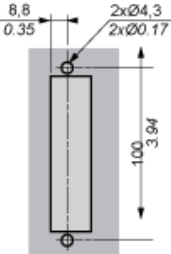
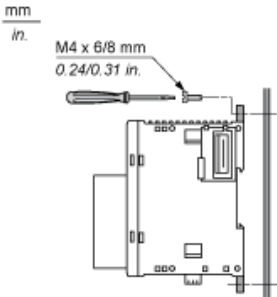


Mounting on a Panel Surface



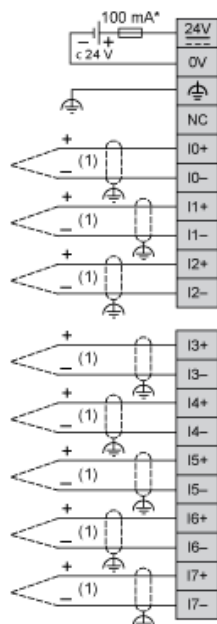
- (1) Install a mounting strip

# Mounting Hole Layout



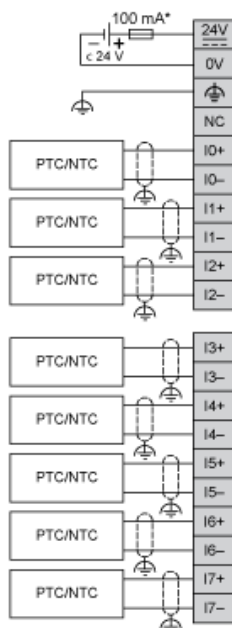
Analogue Input Module

Wiring Diagram (Thermocouple Input Type)



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

Wiring Diagram (Temperature Probe Input Type)



- (\*) Type T fuse

Product Life Status : Commercialised