Product data sheet
Characteristics

TM3TI8T
module TM3 - 8 inputs temperature

Product availability: Stock - Normally stocked in distribution facility

Main

Range of product	Modicon TM3
Product or component type	Analog input module
Range compatibility	Modicon M251 Modicon M241 Modicon M221
Analogue input number	8
Analogue input type	Thermocouple, analogue input range: - 200...1000 °C with thermocouple J Thermocouple, analogue input range: - 200...1300 °C with thermocouple K Thermocouple, analogue input range: 0...1760 °C with thermocouple R Thermocouple, analogue input range: 0...1760 °C with thermocouple S Thermocouple, analogue input range: 0...1820 °C with thermocouple B Thermocouple, analogue input range: - 200...400 °C with thermocouple T Thermocouple, analogue input range: - 200...1300 °C with thermocouple N Thermocouple, analogue input range: - 200...800 °C with thermocouple E Thermocouple, analogue input range: 0...2315 °C with thermocouple C NTC 10k thermistor, analogue input range: -90...150 °C PTC thermistor, analogue input range: 100...10000 Ohm Thermocouple, analogue input range: - 200...1000 °C

Complementary

Analogue input resolution	15 bits + sign 16 bits
Input impedance	>= 1 MOhm temperature probe >= 1 MOhm thermistor >= 1 MOhm thermocouple
LSB value	0.1 °C with NTC probe 1 Ohm with PTC/NTC probe 0.1 °C thermocouple
Conversion time	100 ms + 100 ms per channel + 1 controller cycle time
Sampling duration	100 ms
Absolute accuracy error	+/- 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
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 at 24 V DC via external supply 45 mA at 5 V DC via bus connector 40 mA at 5 V DC via bus connector
Local signalling	1 LED green PWR
Electrical connection	10 x 1.5 mm² removable screw terminal block with pitch 3.81 mm adjustment for inputs and supply 10 x 1.5 mm² removable screw terminal block with pitch 3.81 mm adjustment for inputs
Insulation	500 V AC between input and internal logic 1500 V AC between input and supply
Marking	CE
Surge withstand	1 kV for power supply with common mode protection conforming to EN/IEC 61000-4-5 0.5 kV for power supply with differential mode protection conforming to EN/IEC 61000-4-5 1 kV for input with common mode protection conforming to EN/IEC 61000-4-5
Mounting support	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
Height	3.54 in (90 mm)
Depth	2.76 in (70 mm)
Width	0.93 in (23.6 mm)
Product weight	0.24 lb(US) (0.11 kg)

Environment

Standards	EN/IEC 61010-2-201 EN/IEC 61131-2
Resistance to electrostatic discharge	4 kV on contact conforming to EN/IEC 61000-4-2 8 kV in air conforming to EN/IEC 61000-4-2
Resistance to electromagnetic fields	9.14 V/yd (10 V/m) at 80 MHz...1 GHz conforming to EN/IEC 61000-4-3 2.74 V/yd (3 V/m) at 1.4 GHz...2 GHz conforming to EN/IEC 61000-4-3 0.91 V/yd (1 V/m) at 2 GHz...3 GHz conforming to EN/IEC 61000-4-3
Resistance to magnetic fields	30 A/m conforming to EN/IEC 61000-4-8
Resistance to fast transients	1 kV I/O conforming to EN/IEC 61000-4-4
Resistance to conducted disturbances	10 V at 0.15...80 MHz conforming to EN/IEC 61000-4-6 3 V at 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)
Electromagnetic emission	Radiated emissions, test level: 40 dBµV/m QP class A (10 m at 30...230 MHz) conforming to EN/IEC 55011 Radiated emissions, test level: 47 dBµV/m QP class A (10 m at 230...1000 MHz) conforming to EN/IEC 55011
Immunity to microbreaks	10 ms
Ambient air temperature for operation	14...131 °F (-10...55 °C) (horizontal installation) -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...9842.52 ft (0...3000 m)
Vibration resistance	3.5 mm at 5...8.4 Hz with DIN rail mounting support 3 gn at 8.4...150 Hz with DIN rail mounting support
Shock resistance	15 gn during 11 ms

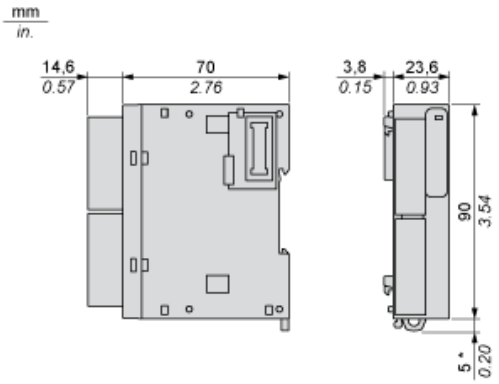
Ordering and shipping details

Category	22533 - M2XX PLC & ACCESSORIES
Discount Schedule	MSX
GTIN	00785901981701
Nbr. of units in pkg.	1
Package weight(Lbs)	0.47000000000000003
Returnability	Y
Country of origin	JP

Offer Sustainability

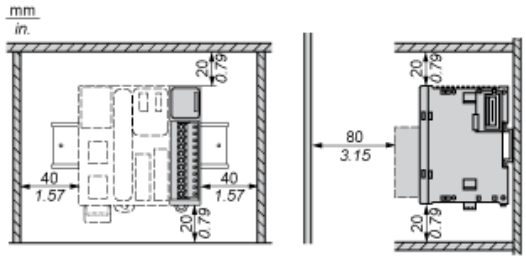
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1415 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available
California proposition 65	WARNING: This product can expose you to chemicals including:
- - - - - - - Substance 1	Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm.
- - - - - - - More information	For more information go to www.p65warnings.ca.gov

Dimensions

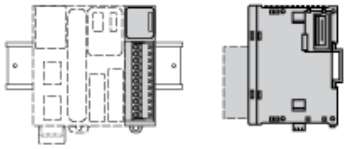


(*) 8.5 mm/0.33 in when the clamp is pulled out.

Spacing Requirements

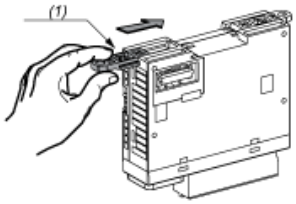


Mounting on a Rail



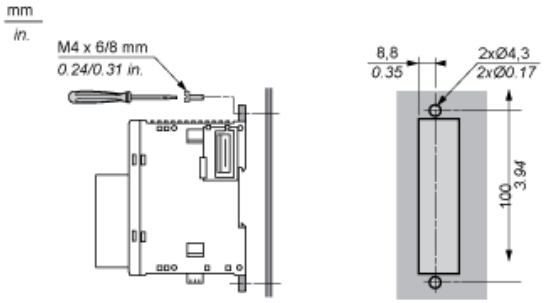
Incorrect Mounting

Mounting on a Panel Surface



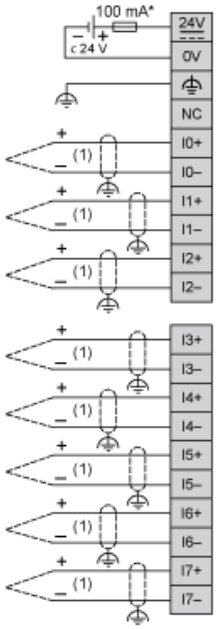
(1) Install a mounting strip

Mounting Hole Layout



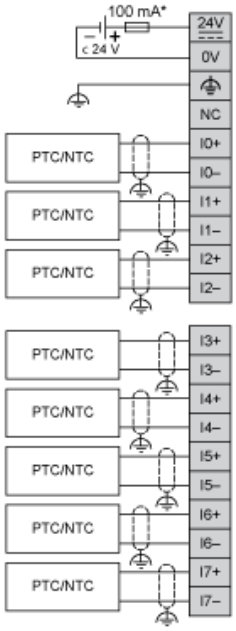
Analogue Input Module

Wiring Diagram (Thermocouple Input Type)



(*) Type T fuse
(1) Thermocouple

Wiring Diagram (Temperature Probe Input Type)



(*) Type T fuse

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Authorized Distributor

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Schneider Electric:

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