Product datasheet

Specifications



module TM3 - 4 inputs temperature spring

TM3TI4G

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

Complementary

Analogue input type	Current 4...20 mA Current 0...20 mA Voltage 0...10 V Voltage - 10...10 V Thermocouple - 200...1000 °C thermocouple J Thermocouple - 200...1300 °C thermocouple K Thermocouple 0...1760 °C thermocouple R Thermocouple 0...1760 °C thermocouple S Thermocouple 0...1820 °C thermocouple B Thermocouple - 200...400 °C thermocouple T Thermocouple - 200...1300 °C thermocouple N Thermocouple - 200...800 °C thermocouple E Thermocouple 0...2315 °C thermocouple C Temperature probe - 200...850 °C Pt 100 Temperature probe - 200...600 °C Pt 1000
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 >= 1 MOhm
Sampling duration	10 ms
Conversion time	100 ms + 100 ms per channel + 1 controller cycle time for analogue input thermocouple
Absolute accuracy error	+/- 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

Excluding VAT, FCA Jabal Ali & are subject to change – check with your local distributor.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Repeat accuracy	+/-0.5 %FS
Cross talk	<= 1 LSB
Type of cable	Twisted shielded pairs cable <30 m for input circuit
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
LSB value	2.44 mV, 0...10 V 4.88 mV, - 10...10 V 4.88 µA, 0...20 mA 3.91 µA, 4...20 mA 0.1 °C
Insulation	Between output and supply at 1500 V AC Between output and internal logic at 500 V AC
Immunity to microbreaks	10 ms
Temperature drift	+/- 0.01 %FS/°C
Non-linearity	+/- 0.2 %FS
Typical current consumption	45 mA at 5 V DC 50 mA at 5 V DC 35 mA at 24 V DC 40 mA at 24 V DC
Local signalling	1 LED green for PWR
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	90 mm
Width	23.6 mm
Depth	70 mm
Net weight	0.1 kg

Environment

IP degree of protection	IP20
Marking	CE
Product certifications	CE UKCA RCM EAC CULus CULus HazLoc
Standards	IEC 61131-2
Electromagnetic emission	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
Ambient air temperature for operation	-10…55 °C (horizontal installation) -10…35 °C (vertical installation)
Ambient air temperature for storage	-25…70 °C
Relative humidity	10…95 % without condensation
Operating altitude	0...2000 m
Pollution degree	2
Vibration resistance	3.5 mm (f = 5…8.4 Hz) on DIN rail 3 gn (f = 8.4…150 Hz) on DIN rail

Shock resistance	15 gn for 11 ms

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	7.5 cm
Package 1 Width	12.5 cm
Package 1 Length	10.5 cm
Package 1 Weight	201.0 g
Unit Type of Package 2	S02
Number of Units in Package 2	9
Package 2 Height	15 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	2.273 kg
Unit Type of Package 3	P12
Number of Units in Package 3	432
Package 3 Height	80 cm
Package 3 Width	105 cm
Package 3 Length	125 cm
Package 3 Weight	111.832 kg

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Total lifecycle Carbon footprint	**82 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**13 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**68 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**0.5 kg CO2 eq.**
Environmental Disclosure	**Product Environmental Profile**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**Yes**
SCIP Number	**7cc01735-94b8-432b-9a81-f9da4dd7709d**
EU RoHS Directive	**Compliant**
REACh Regulation	**Reference contains Substances of Very High Concern above the threshold**
PVC free	**Yes**

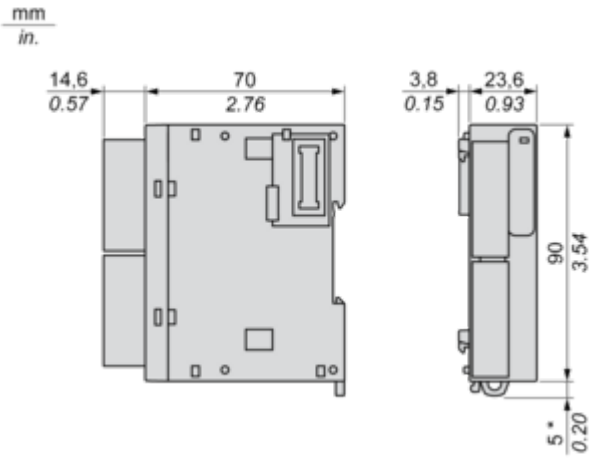
Use Again

Repack and remanufacture

Recyclability potential, in %	**3**
End of life manual availability	**End of Life Information**
Take-back	**No**
WEEE Label	**The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins**

Dimensions Drawings

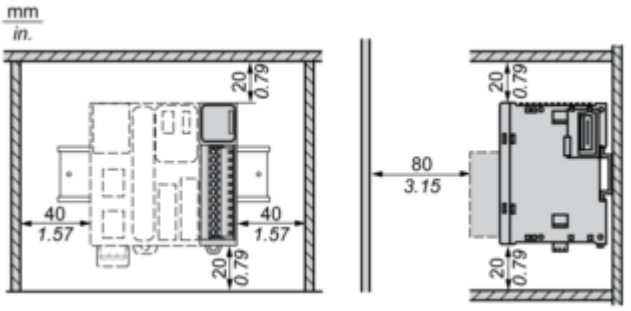
Dimensions



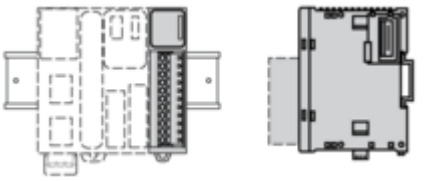
(*) 8.5 mm/0.33 in when the clamp is pulled out.

Mounting and Clearance

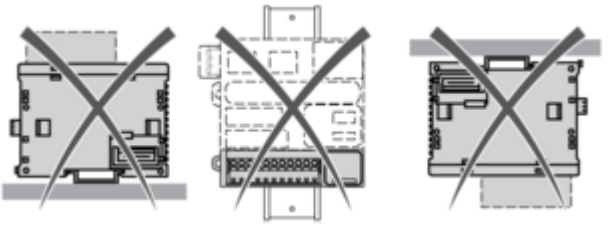
Spacing Requirements



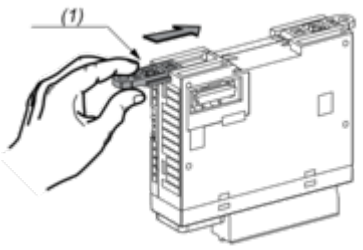
Mounting on a Rail



Incorrect Mounting

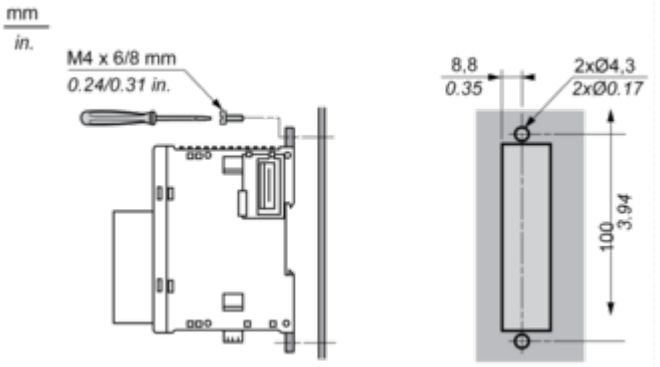


Mounting on a Panel Surface



(1) Install a mounting strip

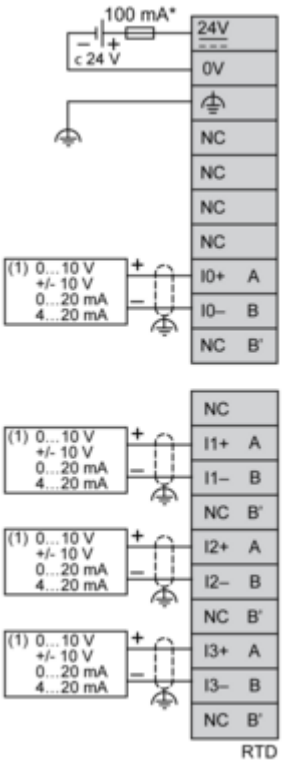
Mounting Hole Layout



Connections and Schema

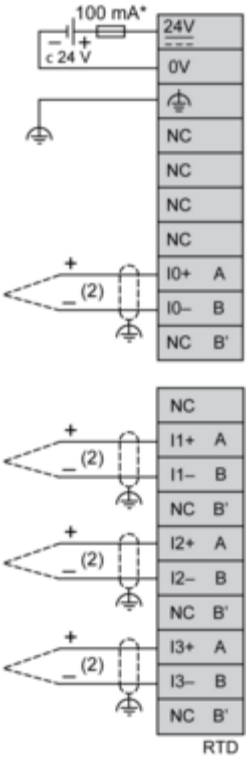
Analogue Input Module

Wiring Diagram (Current/Voltage type)



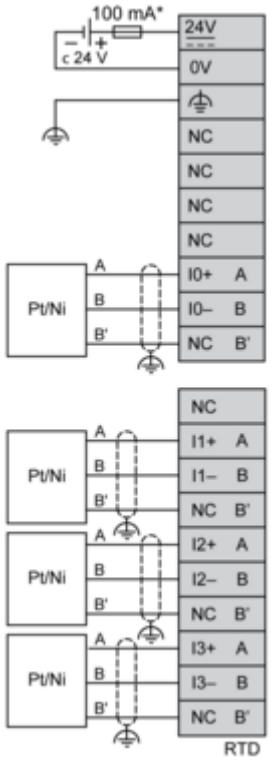
(*) Type T fuse
(1) Current/Voltage analog output device

Wiring Diagram (Thermocouple input type)



(*) Type T fuse
(2) Thermocouple

Wiring Diagram (Temperature probe input type)



(*) Type T fuse