

# Product datasheet

Specifications



## Modicon TM3 - 2 analog inputs high resolution (screw) 24Vdc

TM3AI2H

EAN Code: 3606480648885

### 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	2
Analogue Input Type	current 4...20 mA current 0...20 mA voltage 0...10 V voltage - 10...10 V

### 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
Lsb Value	0.153 mV 0...10 Vvoltage 0.305 mV - 10...10 Vvoltage 0.305 µA 0...20 mAcurrent 0.244 µA 4...20 mAcurrent
Conversion Time	1 ms + 1 ms per channel + 1 controller cycle time
Sampling Duration	1 ms
Absolute Accuracy Error	+/- 0.1 % of full scale at 25 °C +/- 1 % of full scale
Temperature Drift	+/- 0.006 %FS/°C
Repeat Accuracy	+/-0.5 %FS
Non-Linearity	+/- 0.01 %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 5 V DC via bus connector no load 40 mA at 5 V DC via bus connector full load 25 mA at 24 V DC via external supply
Local Signalling	1 LED (green) for PWR

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

Electrical Connection	11 x 2.5 mm² removable screw terminal block with pitch 5.08 mm adjustment for inputs and supply
Insulation	Between input and supply at 1500 V AC Between input and internal logic at 500 V AC
Marking	CE
Surge Withstand	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
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
Depth	70 mm
Width	23.6 mm
Net Weight	0.115 kg

## Environment

Standards	IEC 61131-2
Product Certifications	CE UKCA RCM EAC cULus cULus HazLoc
Resistance To Electrostatic Discharge	8 kV in air conforming to IEC 61000-4-2 4 kV on contact conforming to IEC 61000-4-2
Resistance To Electromagnetic Fields	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
Resistance To Magnetic Fields	30 A/m conforming to IEC 61000-4-8
Resistance To Fast Transients	1 kV (I/O) conforming to IEC 61000-4-4
Resistance To Conducted Disturbances	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)
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
Immunity To Microbreaks	10 ms
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 (in operation) 10...95 %, without condensation (in storage)
Ip Degree Of Protection	IP20
Pollution Degree	2
Operating Altitude	0...2000 m
Storage Altitude	0...3000 m
Vibration Resistance	3.5 mm at 5...8.4 Hz on DIN rail 3 gn at 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	7.46 cm
Package 1 Width	10.645 cm
Package 1 Length	12.707 cm
Package 1 Weight	220.0 g
Unit Type Of Package 2	S04
Number Of Units In Package 2	42
Package 2 Height	30 cm
Package 2 Width	40 cm
Package 2 Length	60 cm
Package 2 Weight	10.341 kg
Unit Type Of Package 3	P12
Number Of Units In Package 3	504
Package 3 Height	105 cm
Package 3 Width	120 cm
Package 3 Length	80 cm
Package 3 Weight	134 kg

## Contractual warranty

Warranty	18 months
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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

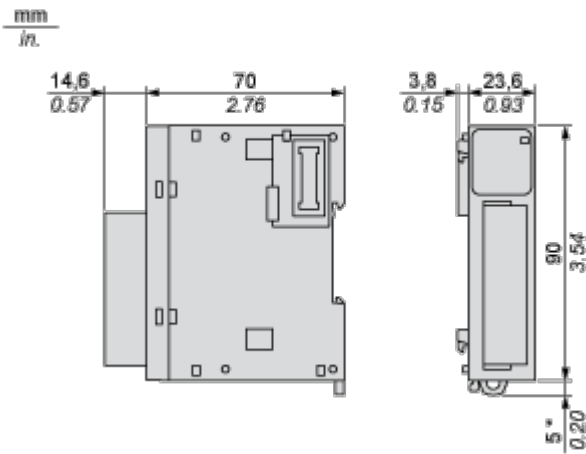
✓ Toxic Heavy Metal Free	
✓ Mercury Free	
✓ Rohs Exemption Information	Yes
✓ Pvc Free	

## Certifications & Standards

Reach Regulation	<a href="#">REACH Declaration</a>
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
China Rohs Regulation	<a href="#">China RoHS declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	<a href="#">End of Life Information</a>

Dimensions Drawings

Dimensions

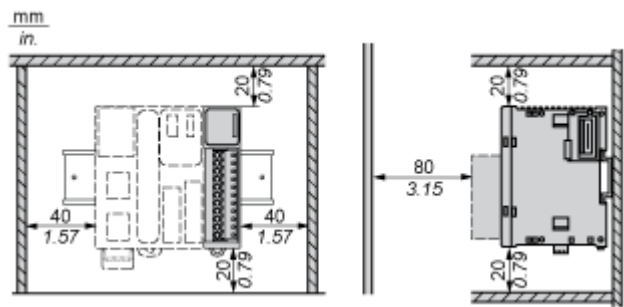


(\*) 8.5 mm/0.33 in when the clamp is pulled out.

Mounting and Clearance

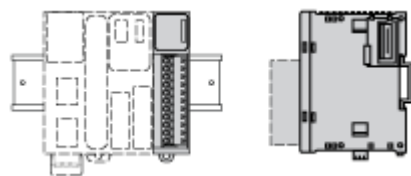
Spacing Requirements

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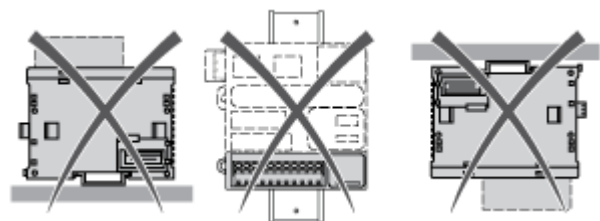


Mounting on a Rail

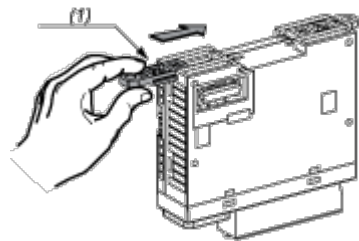
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Incorrect Mounting

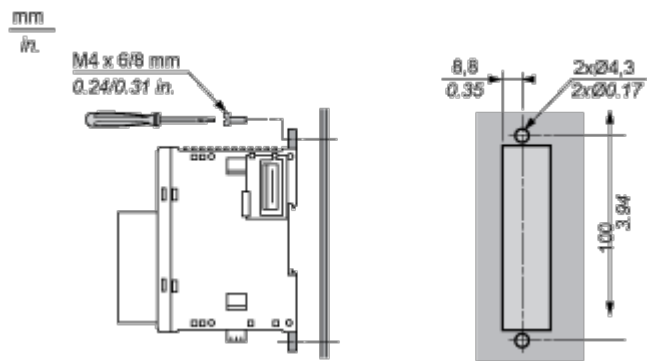


Mounting on a Panel Surface



- (1) Install a mounting strip

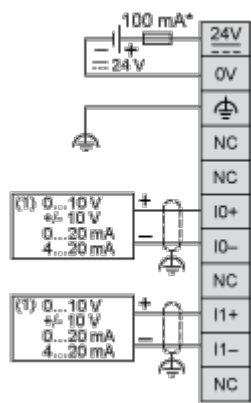
Mounting Hole Layout



Connections and Schema

Analogue Input Module

Wiring Diagram (Current / Voltage)



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