

# Product datasheet

Specifications



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

TM3AI4

EAN Code: 3606480648908

### 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

### Complementary

Analogue input resolution	12 bits 11 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	2.44 mV 0...10 Vvoltage 4.88 mV - 10...10 Vvoltage 4.88 µA 0...20 mAcurrent 3.91 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	+/- 0.2 %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	35 mA at 5 V DC via bus connector no load 45 mA at 5 V DC via bus connector full load 30 mA at 24 V DC via external supply
Local signalling	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 dB $\mu$ V/m QP class A ( 10 m) at 30...230 MHz conforming to IEC 55011 Radiated emissions - test level: 47 dB $\mu$ V/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

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Shock resistance	15 gn for 11 ms
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## Packing Units

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Unit Type of Package 1	PCE
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Number of Units in Package 1	1
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Package 1 Height	7.585 cm
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Package 1 Width	10.598 cm
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Package 1 Length	12.814 cm
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Package 1 Weight	210.0 g
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Unit Type of Package 2	S04
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Number of Units in Package 2	42
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Package 2 Height	30 cm
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Package 2 Width	40 cm
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Package 2 Length	60 cm
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Package 2 Weight	10.08 kg
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Unit Type of Package 3	P12
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Number of Units in Package 3	504
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Package 3 Height	105 cm
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Package 3 Width	120 cm
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Package 3 Length	80 cm
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Package 3 Weight	132 kg
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## Contractual warranty

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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

## 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](#)

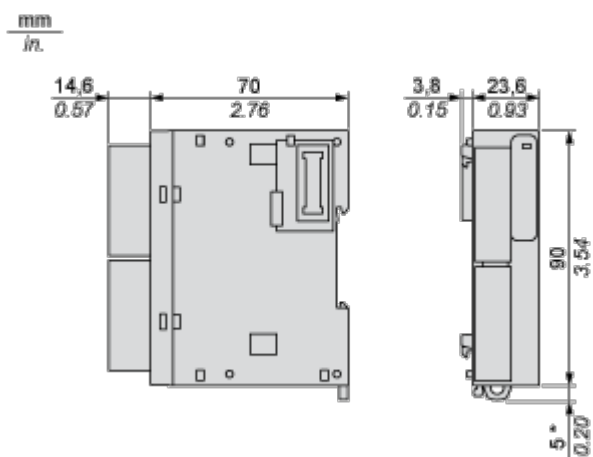
Weee The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Circularity Profile [End of Life Information](#)

## Dimensions Drawings

### Dimensions

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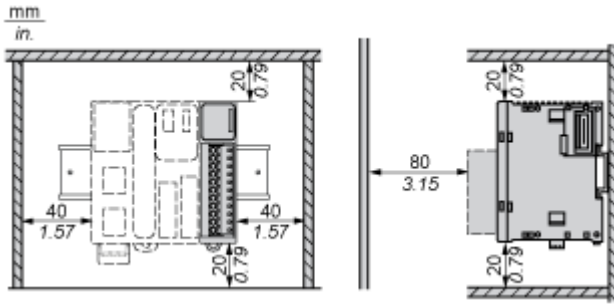


(\*) 8.5 mm/0.33 in when the clamp is pulled out.

Mounting and Clearance

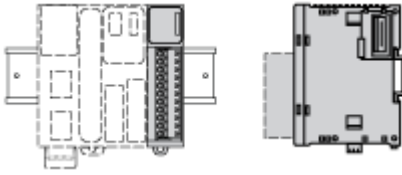
Spacing Requirements

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Mounting on a Rail

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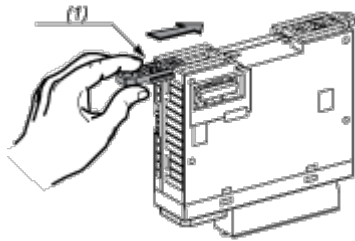


**Incorrect Mounting**



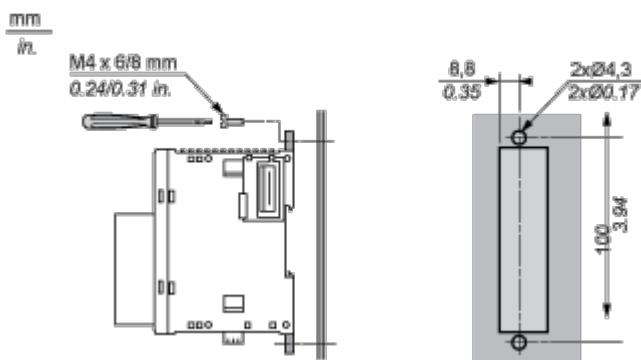
**Mounting on a Panel Surface**

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- (1) Install a mounting strip

**Mounting Hole Layout**



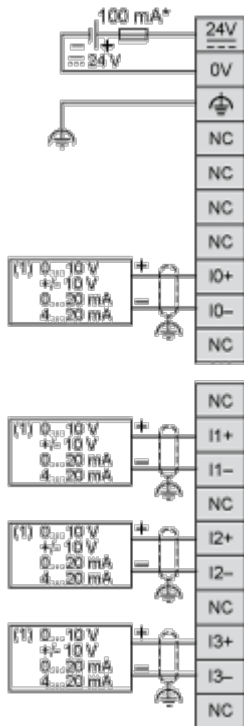


Connections and Schema

Analogue Input Module

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Wiring Diagram (Current / Voltage)



(\*) Type T fuse

(1) Current/Voltage analog output device