# **Product datasheet**

Specification





# analog input module, Modicon TM3, 4 inputs, screw, 24V DC

TM3AI4

#### 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 420 mA	
- · · · · · · · · · · · · · · · · · · ·	current 020 mA	
	voltage 010 V	
	voltage - 1010 V	

#### Complementary

oompromentary	
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 010 Vvoltage
	4.88 mV - 1010 Vvoltage
	4.88 μA 020 mAcurrent
	3.91 µA 420 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	20.428.8 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

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	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	0.11 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 MHz1 GHz conforming to IEC 61000-4-3 3 V/m 1.4 GHz2 GHz conforming to IEC 61000-4-3 1 V/m 2 GHz3 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 0.1580 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 dB $\mu$ V/m QP class A ( 10 m) at 30230 MHz conforming to IEC 55011 Radiated emissions - test level: 47 dB $\mu$ V/m QP class A ( 10 m) at 2301000 MHz conforming to IEC 55011	
Immunity To Microbreaks 10 ms		
Ambient Air Temperature For Operation	-1055 °C horizontal installation -1035 °C vertical installation	
Ambient Air Temperature For Storage	-2570 °C	
Relative Humidity	1095 %, without condensation (in operation) 1095 %, without condensation (in storage)	
Ip Degree Of Protection	IP20	
Pollution Degree	2	
Operating Altitude	02000 m	
Storage Altitude	03000 m	
Vibration Resistance	3.5 mm at 58.4 Hz on DIN rail 3 gn at 8.4150 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	7.585 cm
Package 1 Width	10.598 cm
Package 1 Length	12.814 cm
Package 1 Weight	210.0 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	10.08 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	132 kg



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**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

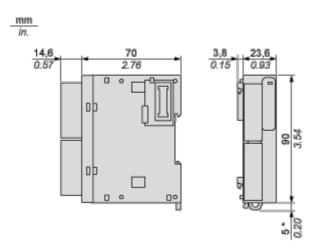
<b>Ø</b>	Toxic Heavy Metal Free	
	Mercury Free	
<b>Ø</b>	Rohs Exemption Information	Yes
	Pvc Free	

#### **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
<b>Environmental Disclosure</b>	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**

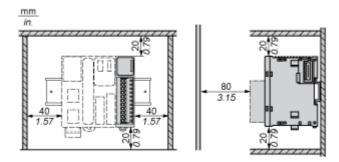


(\*) 8.5 mm/0.33 in when the clamp is pulled out.

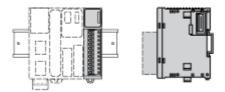
#### **TM3AI4**

Mounting and Clearance

#### **Spacing Requirements**



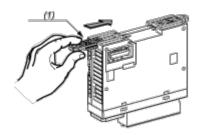
#### Mounting on a Rail



#### **Incorrect Mounting**

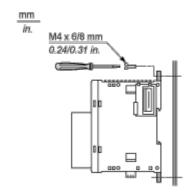


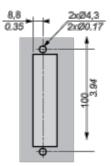
#### Mounting on a Panel Surface



(1) Install a mounting strip

#### **Mounting Hole Layout**

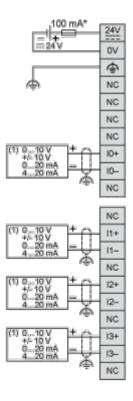




Connections and Schema

#### Analogue Input Module

#### Wiring Diagram (Current / Voltage)



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