

# Product data sheet

Specifications



## analog output module, Modicon TM3, 2 outputs, screw, 24V DC

TM3AQ2

### Main

Range Of Product	Modicon TM3
Product Or Component Type	Analog output module
Range Compatibility	Modicon M221 Modicon M241 Modicon M251 Modicon M262
Analogue Output Number	2
Analogue Output Type	Current 4...20 mA Current 0...20 mA Voltage 0...10 V Voltage - 10...10 V

### Complementary

Analogue Output Resolution	11 bits + sign 12 bits
Lsb Value	2.44 mV 0...10 V voltage 4.88 mV - 10...10 V voltage 4.88 $\mu$ A 0...20 mA current 3.91 $\mu$ A 4...20 mA current
Load Type	Resistive
Load Impedance Ohmic	1 kOhm voltage 300 Ohm current
Stabilisation Time	1 ms
Conversion Time	1 ms + 1 ms per channel + 1 controller cycle time
Absolute Accuracy Error	+/- 0.1 % of full scale at 77 °F (25 °C) +/- 1 % of full scale
Temperature Drift	+/- 0.006 %FS/°C
Repeat Accuracy	+/- 0.4 %FS
Non-Linearity	+/- 0.01 %FS
Output Ripple	20 mV
Cross Talk	$\leq$ 1 LSB
[Us] Rated Supply Voltage	24 V DC
Supply Voltage Limits	20.4...28.8 V
Type Of Cable	Twisted shielded pairs cable $\leq$ 98.43 ft (30 m) output
Current Consumption	40 mA 5 V DC via bus connector full load 35 mA 5 V DC via bus connector no load 30 mA 24 V DC via external supply no load 70 mA 24 V DC via external supply full load
Local Signalling	PWR 1 LED green)

<b>Electrical Connection</b>	11 x 2.5 mm <sup>2</sup> removable screw terminal block pitch 5.08 mm for outputs and supply
<b>Insulation</b>	Between output and supply 1500 V AC Between output and internal logic 500 V AC
<b>Marking</b>	CE
<b>Surge Withstand</b>	1 kV power supply common mode IEC 61000-4-5 0.5 kV power supply differential mode IEC 61000-4-5 1 kV output common mode IEC 61000-4-5
<b>Mounting Support</b>	Top hat type TH35-15 rail IEC 60715 Top hat type TH35-7.5 rail IEC 60715 plate or panel with fixing kit
<b>Height</b>	3.54 in (90 mm)
<b>Depth</b>	2.76 in (70 mm)
<b>Width</b>	0.93 in (23.6 mm)
<b>Net Weight</b>	0.25 lb(US) (0.115 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 IEC 61000-4-2 4 kV on contact IEC 61000-4-2
<b>Resistance To Electromagnetic Fields</b>	9.14 V/yd (10 V/m) 80 MHz...1 GHz IEC 61000-4-3 2.74 V/yd (3 V/m) 1.4 GHz...2 GHz IEC 61000-4-3 0.91 V/yd (1 V/m) 2 GHz...3 GHz IEC 61000-4-3
<b>Resistance To Magnetic Fields</b>	98.43 A/ft (30 A/m) IEC 61000-4-8
<b>Resistance To Fast Transients</b>	1 kV IEC 61000-4-4 I/O)
<b>Resistance To Conducted Disturbances</b>	10 V 0.15...80 MHz IEC 61000-4-6 3 V spot frequency (2, 3, 4, 6.2, 8.2, 12.6, 16.5, 18.8, 22, 25 MHz) Marine specification (LR, ABS, DNV, GL)
<b>Electromagnetic Emission</b>	Radiated emissions 40 dB $\mu$ V/m QP class A 10 m)30...230 MHz IEC 55011 Radiated emissions 47 dB $\mu$ V/m QP class A 10 m)230...1000 MHz IEC 55011
<b>Immunity To Microbreaks</b>	10 ms
<b>Ambient Air Temperature For Operation</b>	14...131 °F (-10...55 °C) horizontal installation 14...95 °F (-10...35 °C) vertical installation
<b>Ambient Air Temperature For Storage</b>	-13...158 °F (-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>	0.00...9842.52 ft (0...3000 m)
<b>Vibration Resistance</b>	3.5 mm 5...8.4 Hz DIN rail 3 gn 8.4...150 Hz DIN rail
<b>Shock Resistance</b>	15 gn 11 ms

## Packing Units

<b>Unit Type Of Package 1</b>	PCE
<b>Number Of Units In Package 1</b>	1
<b>Package 1 Height</b>	2.98 in (7.566 cm)
<b>Package 1 Width</b>	4.18 in (10.629 cm)
<b>Package 1 Length</b>	5.00 in (12.698 cm)
<b>Package 1 Weight</b>	7.76 oz (220.0 g)
<b>Unit Type Of Package 2</b>	S04
<b>Number Of Units In Package 2</b>	42
<b>Package 2 Height</b>	11.81 in (30 cm)
<b>Package 2 Width</b>	15.75 in (40 cm)
<b>Package 2 Length</b>	23.62 in (60 cm)
<b>Package 2 Weight</b>	22.75 lb(US) (10.32 kg)
<b>Unit Type Of Package 3</b>	P12
<b>Number Of Units In Package 3</b>	336
<b>Package 3 Height</b>	29.53 in (75 cm)
<b>Package 3 Width</b>	47.24 in (120 cm)
<b>Package 3 Length</b>	31.50 in (80 cm)
<b>Package 3 Weight</b>	207.23 lb(US) (94 kg)

## 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

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✓ Mercury Free

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✓ Rohs Exemption Information Yes

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✓ Pvc Free

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## Certifications & Standards

**Reach Regulation**

[REACH Declaration](#)

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**Eu Rohs Directive**

Pro-active compliance (Product out of EU RoHS legal scope)

[EU RoHS Declaration](#)

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**China Rohs Regulation**

[China RoHS declaration](#)

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**Environmental Disclosure**

[Product Environmental Profile](#)

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**Weee**

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

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**Circularity Profile**

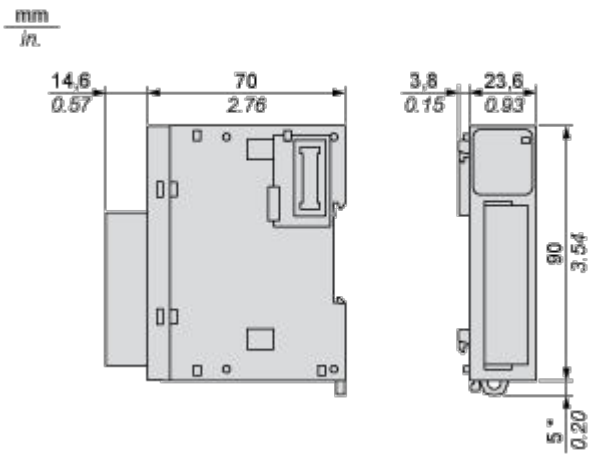
[End of Life Information](#)

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## Dimensions Drawings

### Dimensions

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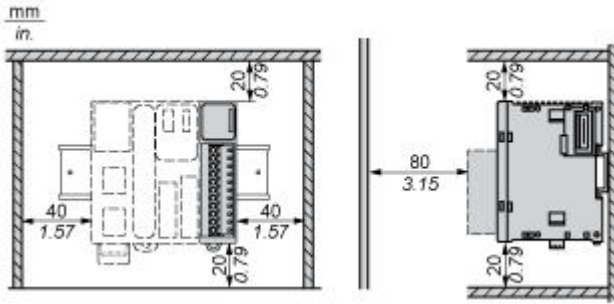


(\*) 8.5 mm/0.33 in when the clamp is pulled out.

Mounting and Clearance

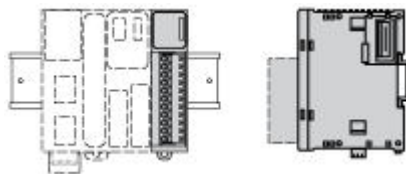
Spacing Requirements

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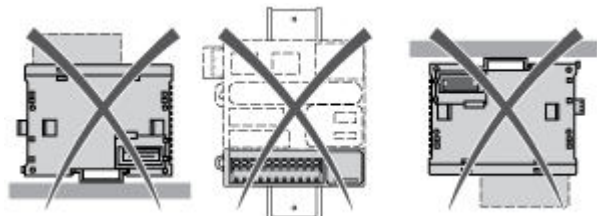


Mounting on a Rail

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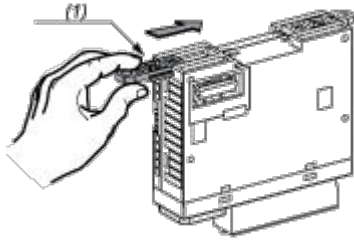


**Incorrect Mounting**



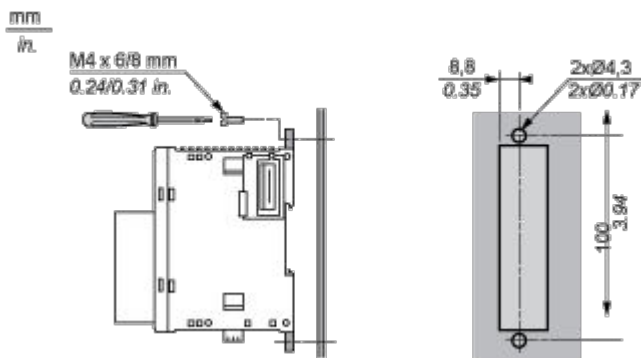
**Mounting on a Panel Surface**

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- (1) Install a mounting strip

**Mounting Hole Layout**

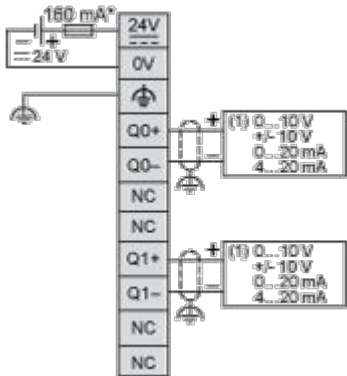


Connections and Schema

Analogue Output Module

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Wiring Diagram (Current / Voltage)



(\*) Type T fuse

(1) Voltage/current pre-actuator