

# Product datasheet

Specifications



## Modicon TM3 - 8 analog inputs (screw) 24Vdc

TM3AI8

EAN Code: 3606480648922

### Main

|                           |                                                              |
|---------------------------|--------------------------------------------------------------|
| Range of product          | Modicon TM3                                                  |
| Product or component type | Analog input module                                          |
| Range compatibility       | Modicon M221<br>Modicon M241<br>Modicon M251<br>Modicon M262 |
| Analogue input number     | 8                                                            |

### Complementary

|                                 |                                                                                                                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analogue input type             | Current 4...20 mA<br>Current 0...20 mA<br>Voltage 0...10 V<br>Voltage - 10...10 V                                                                                                                               |
| Analogue input resolution       | 12 bits<br>11 bits + sign                                                                                                                                                                                       |
| Permissible continuous overload | 13 V, analogue input type: voltage<br>40 mA, analogue input type: current                                                                                                                                       |
| Input impedance                 | <= 50 Ohm<br>>= 1 MOhm                                                                                                                                                                                          |
| Sampling duration               | 1 ms                                                                                                                                                                                                            |
| Conversion time                 | 1 ms + 1 ms per channel + 1 controller cycle time                                                                                                                                                               |
| Absolute accuracy error         | +/- 1 % of full scale<br>+/- 0.2 % of full scale at 25 °C                                                                                                                                                       |
| 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 mm <sup>2</sup> removable screw terminal block with pitch 3.81 mm adjustment for inputs and supply<br>10 x 1.5 mm <sup>2</sup> removable screw terminal block with pitch 3.81 mm adjustment for inputs |
| LSB value                       | 2.44 mV, 0...10 V<br>4.88 mV, - 10...10 V<br>4.88 µA, 0...20 mA<br>3.91 µA, 4...20 mA                                                                                                                           |
| Insulation                      | Between input and supply at 1500 V AC<br>Between input and internal logic at 500 V AC                                                                                                                           |
| Immunity to microbreaks         | 10 ms                                                                                                                                                                                                           |
| Temperature drift               | +/- 0.01 %FS/°C                                                                                                                                                                                                 |
| Non-linearity                   | +/- 0.2 %FS                                                                                                                                                                                                     |

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

|                             |                                                                                                                                           |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Typical current consumption | 40 mA at 5 V DC full load<br>35 mA at 5 V no load<br>30 mA at 24 V no load<br>40 mA at 24 V full load                                     |
| Local signalling            | 1 LED green for PWR                                                                                                                       |
| Mounting support            | Top hat type TH35-15 rail conforming to IEC 60715<br>Top hat type TH35-7.5 rail conforming to IEC 60715<br>plate or panel with fixing kit |
| Height                      | 90 mm                                                                                                                                     |
| Width                       | 23.6 mm                                                                                                                                   |
| Depth                       | 70 mm                                                                                                                                     |
| Product weight              | 0.11 kg                                                                                                                                   |

## Environment

|                                       |                                                                                                                                                                                                                  |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IP degree of protection               | IP20                                                                                                                                                                                                             |
| Marking                               | CE                                                                                                                                                                                                               |
| Product certifications                | CE<br>UKCA<br>RCM<br>EAC<br>CULus<br>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<br>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)<br>-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<br>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             | 7.368 cm  |
| Package 1 Width              | 10.513 cm |
| Package 1 Length             | 12.603 cm |
| Package 1 Weight             | 216.5 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             | 10.0 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             | 130 kg  |

## Logistical informations

|                   |    |
|-------------------|----|
| Country of origin | JP |
|-------------------|----|

## 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                       | 42 kg CO2 eq.                                 |
| Carbon footprint of the manufacturing phase [A1 to A3] | 14 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]     | 27 kg CO2 eq.                                 |
| Carbon footprint of the end-of-life phase [C1 to C4]   | 0.5 kg CO2 eq.                                |
| Environmental Disclosure                               | <a href="#">Product Environmental Profile</a> |

## 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                      | <a href="#">Compliant</a>                                                              |
| REACH Regulation                       | <a href="#">Reference contains Substances of Very High Concern above the threshold</a> |
| PVC free                               | Yes                                                                                    |

## Use Longer



### Lifetime extension

|        |    |
|--------|----|
| Repair | No |
|--------|----|

## Use Again

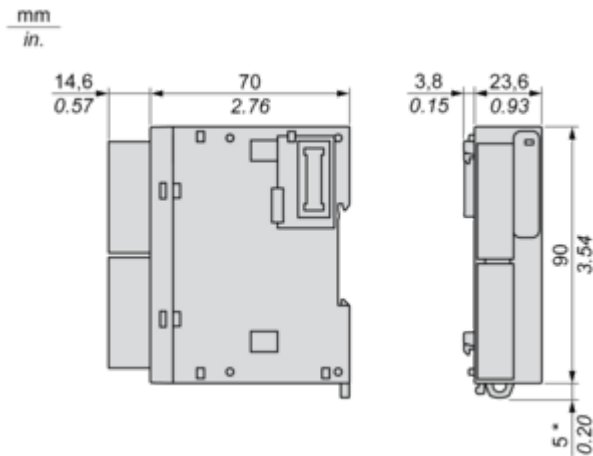


### Repack and remanufacture

|                                 |                                                                                                                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recyclability potential, in %   | 3                                                                                                                                                                                                               |
| End of life manual availability | <a href="#">End of Life Information</a>                                                                                                                                                                         |
| 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

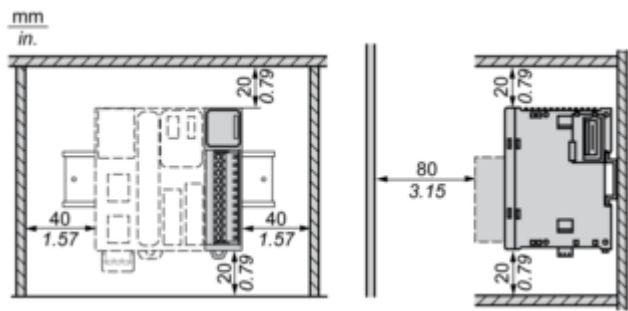
Dimensions



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

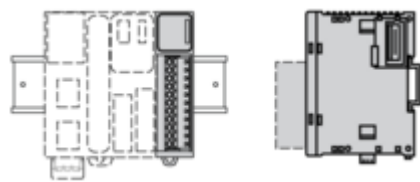
Mounting and Clearance

Spacing Requirements

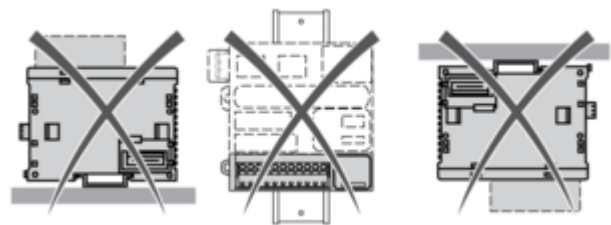


Mounting on a Rail

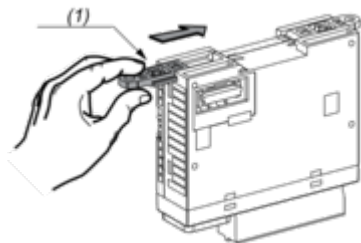
---



Incorrect Mounting

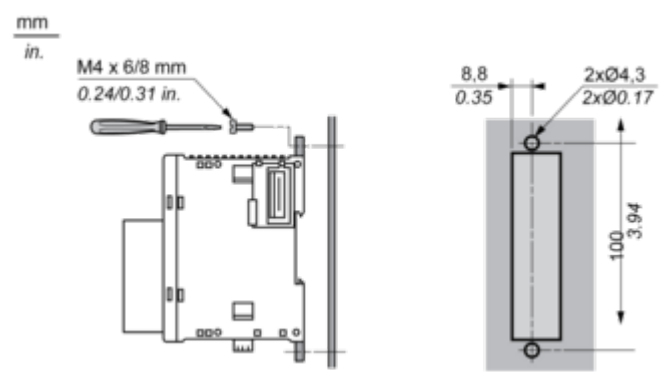


Mounting on a Panel Surface



(1) Install a mounting strip

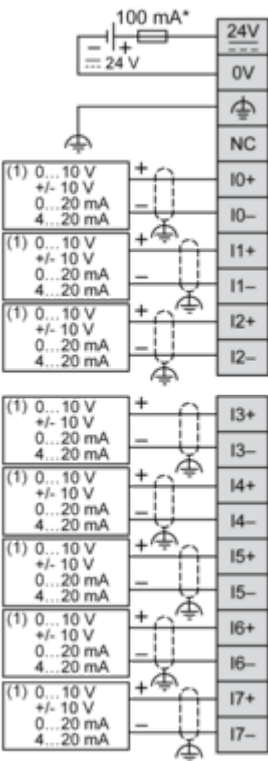
Mounting Hole Layout



Connections and Schema

Analogue Input Module

Wiring Diagram (Current / Voltage)



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