# Product data sheet

Specifications



## analog input module, Modicon TM3, 2 inputs high resolution, screw, 24V DC

TM3AI2H

**Product availability: Stock - Normally stocked in distribution facility**

## 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** | 2 |

## 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** | 16 bits<br>15 bits + sign |
| **Permissible continuous overload** | 13 V voltage<br>40 mA 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** | +/- 0.1 % of full scale at 77 °F (25 °C)<br>+/- 1 % of full scale |
| **Repeat accuracy** | +/-0.5 %FS |
| **Cross talk** | <= 1 LSB |
| **Type of cable** | Twisted shielded pairs cable <98.4 ft (30 m) input |
| **Electrical connection** | 11 x 2.5 mm² removable screw terminal block with pitch 5.08 mm adjustment for inputs and supply |
| **LSB value** | 0.153 mV, 0...10 V<br>0.305 mV, - 10...10 V<br>0.305 µA, 0...20 mA<br>0.244 µA, 4...20 mA |
| **Insulation** | Between input and supply 1500 V AC<br>Between input and internal logic 500 V AC |
| **Immunity to microbreaks** | 10 ms |
| **Temperature drift** | +/- 0.006 %FS/°C |
| **Non-linearity** | +/- 0.01 %FS |
| **Typical current consumption** | 30 mA 5 V DC no load<br>40 mA 5 V DC full load<br>25 mA 24 V DC |

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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

| | |
|---|---|
| **Local signalling** | 1 LED green PWR |
| **Mounting support** | Top hat type TH35-15 rail IEC 60715<br>Top hat type TH35-7.5 rail IEC 60715<br>plate or panel with fixing kit |
| **Height** | 3.5 in (90 mm) |
| **Width** | 0.9 in (23.6 mm) |
| **Depth** | 2.8 in (70 mm) |
| **Net Weight** | 0.254 lb(US) (0.115 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 40 dBµV/m QP class A 10 m)30…230 MHz IEC 55011<br>Radiated emissions 47 dBµV/m QP class A 10 m)230…1000 MHz IEC 55011 |
| **Ambient air temperature for operation** | 14…131 °F (-10…55 °C) horizontal installation)<br>14…95 °F (-10…35 °C) vertical installation) |
| **Ambient air temperature for storage** | -13…158 °F (-25…70 °C) |
| **Relative humidity** | 10…95 % without condensation |
| **Operating altitude** | 0...6561.68 ft (0...2000 m) |
| **Pollution degree** | 2 |
| **Vibration resistance** | 3.5 mm 5…8.4 Hz) on DIN rail<br>3 gn 8.4…150 Hz) on DIN rail |
| **Shock resistance** | 15 gn 11 ms |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US10MSX22533 |
| **Discount Schedule** | 0MSX |
| **GTIN** | 3606480648885 |
| **Returnability** | Yes |
| **Country of origin** | JP |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Nbr. of units in pkg.** | 1 |
| **Package 1 Height** | 2.94 in (7.46 cm) |
| **Package 1 Width** | 4.191 in (10.645 cm) |
| **Package 1 Length** | 5.003 in (12.707 cm) |
| **Package weight(Lbs)** | 7.8 oz (220.0 g) |
| **Unit Type of Package 2** | S04 |

| | |
|---|---|
| **Number of Units in Package 2** | 42 |
| **Package 2 Height** | 11.8 in (30 cm) |
| **Package 2 Width** | 15.7 in (40 cm) |
| **Package 2 Length** | 23.6 in (60 cm) |
| **Package 2 Weight** | 22.798 lb(US) (10.341 kg) |
| **Unit Type of Package 3** | P12 |
| **Number of Units in Package 3** | 504 |
| **Package 3 Height** | 41.3 in (105 cm) |
| **Package 3 Width** | 47.2 in (120 cm) |
| **Package 3 Length** | 31.5 in (80 cm) |
| **Package 3 Weight** | 295.4 lb(US) (134 kg) |

## 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 | **38 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] | **23 kg CO2 eq.** |
| Carbon footprint of the end-of-life phase [C1 to C4] | **0.5 kg CO2 eq.** |
| Environmental Disclosure | **Product Environmental Profile** |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | **Yes** |
| Packaging without single use plastic | **Yes** |
| EU RoHS Directive | **Compliant** |
| REACh Regulation | **Reference contains Substances of Very High Concern above the threshold** |
| California proposition 65 | **WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov** |
| PVC free | **Yes** |

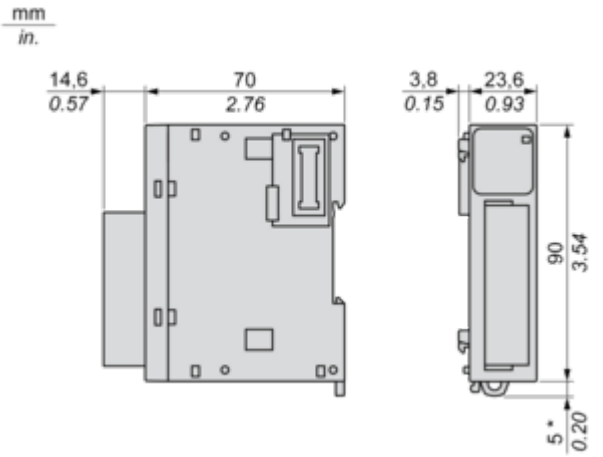
## Use Again

### Repack and remanufacture

| | |
|---|---|
| Recyclability potential, in % | **3** |
| Circularity Profile | **End of Life Information** |
| 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

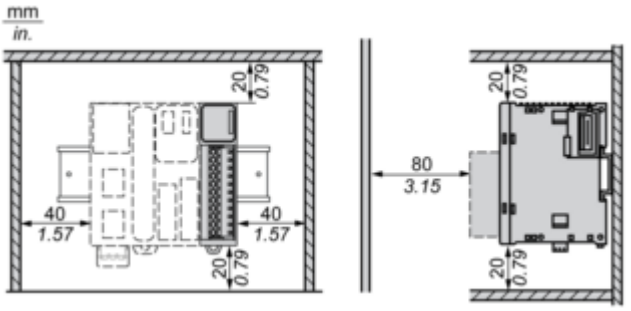
## Dimensions



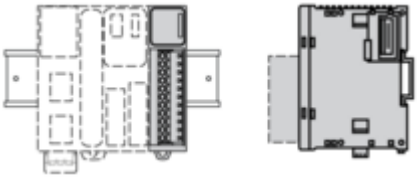

**(*)** 8.5 mm/0.33 in when the clamp is pulled out.

Mounting and Clearance

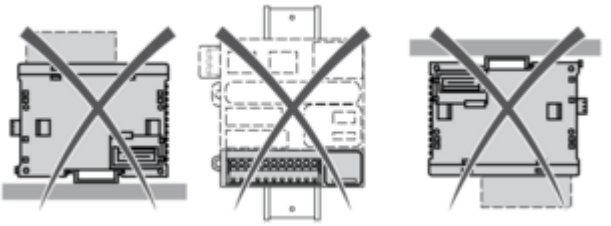
## Spacing Requirements



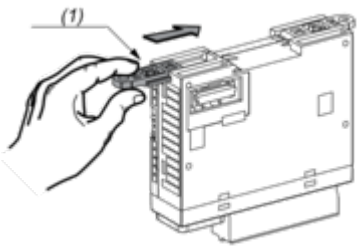
## Mounting on a Rail



## Incorrect Mounting

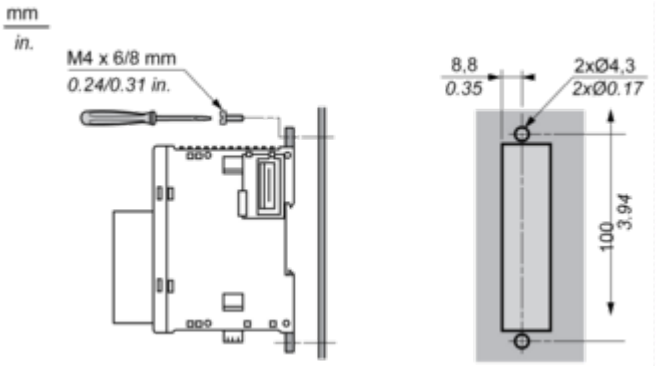


## Mounting on a Panel Surface




**(1)** Install a mounting strip

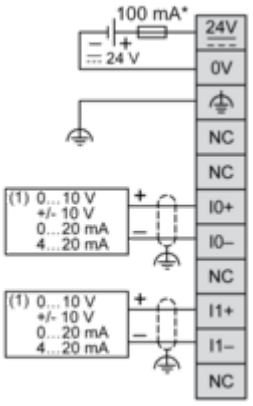
### Mounting Hole Layout



Connections and Schema

## Analogue Input Module

### Wiring Diagram (Current / Voltage)




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