



### Main

|                           |   |
|---------------------------|---|
| Range of product          | Modicon TM3   |
| Product or component type | Analog input module   |
| Range compatibility       | Modicon M251<br>Modicon M241<br>Modicon M221  |
| Analogue input number     | 2   |
| Analogue input type       | Current, analogue input range: 4...20 mA<br>Current, analogue input range: 0...20 mA<br>Voltage, analogue input range: 0...10 V<br>Voltage, analogue input range: - 10...10 V |

### Complementary


|                                 |   |
|---------------------------------|---|
| Analogue input resolution       | 15 bits + sign<br>16 bits   |
| Permissible continuous overload | 13 V voltage<br>40 mA current   |
| Input impedance                 | <= 50 Ohm current<br>>= 1 MOhm voltage  |
| LSB value                       | 2.44 mV, analogue input: 0...10 V voltage<br>4.88 mV, analogue input: - 10...10 V voltage<br>4.88 µA, analogue input: 0...20 mA current<br>3.91 µA, analogue input: 4...20 mA current |
| 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<br>+/- 1 % of full scale   |
| Temperature drift               | +/- 0.006 %FS/°C  |
| Repeat accuracy                 | +/-0.5 %FS  |
| Non-linearity                   | +/- 0.01 %FS  |
| Cross talk                      | <= 1 LSB  |
| [Us] rated supply voltage       | 24 V DC   |
| Supply voltage limits           | 20.4...28.8 V   |

|                       |   |
|-----------------------|---|
| Type of cable         | <= 30 m twisted shielded pairs cable for input circuit  |
| Current consumption   | 30 mA at 5 V DC (no load) via bus connector<br>40 mA at 5 V DC (full load) via bus connector<br>25 mA at 24 V DC via external supply  |
| Local signalling      | 1 LED green for PWR   |
| Electrical connection | 11 x 2.5 mm <sup>2</sup> removable screw terminal block with pitch 5.08 mm adjustment for inputs and supply   |
| Insulation            | 500 V AC between input and internal logic<br>1500 V AC between input and supply   |
| Marking               | CE  |
| Surge withstand       | 1 kV for power supply with common mode protection conforming to EN/IEC 61000-4-5<br>0.5 kV for power supply with differential mode protection conforming to EN/IEC 61000-4-5<br>1 kV for input with common mode protection conforming to EN/IEC 61000-4-5 |
| 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   |
| Depth                 | 70 mm   |
| Width                 | 23.6 mm   |
| Product weight        | 0.115 kg  |

## Environment

|   |   |
|---|---|
| Standards   | EN/IEC 61131-2<br>EN/IEC 61010-2-201  |
| Resistance to electrostatic discharge                                   | 4 kV on contact conforming to EN/IEC 61000-4-2<br>8 kV in air conforming to EN/IEC 61000-4-2  |
| Resistance to electromagnetic fields                                    | 10 V/m at 80 MHz...1 GHz conforming to EN/IEC 61000-4-3<br>3 V/m at 1.4 GHz...2 GHz conforming to EN/IEC 61000-4-3<br>1 V/m at 2 GHz...3 GHz conforming to EN/IEC 61000-4-3   |
| Resistance to magnetic fields   | 30 A/m at 50...60 Hz conforming to EN/IEC 61000-4-8   |
| Resistance to fast transients   | 1 kV I/O conforming to EN/IEC 61000-4-4   |
| Resistance to conducted disturbances, induced by radio frequency fields | 10 V at 0.15...80 MHz conforming to EN/IEC 61000-4-6<br>3 V at 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 30...230 MHz) conforming to EN/IEC 55011<br>Radiated emissions, test level: 47 dB $\mu$ V/m QP class A (10 m at 230 MHz...1 GHz) conforming to EN/IEC 55011 |
| Immunity to microbreaks   | 10 ms   |
| 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 in operation<br>10...95 % without condensation in storage  |
| IP degree of protection   | IP20  |
| Pollution degree  | 2   |
| Operating altitude  | 0...2000 m  |
| Storage altitude  | 0...3000 m  |
| Vibration resistance  | 3.5 mm at 5...8.4 Hz with DIN rail mounting support<br>3 gn at 8.4...150 Hz with DIN rail mounting support  |
| Shock resistance  | 15 gn during 11 ms  |

## Offer Sustainability

|                               |   |
|-------------------------------|---|
| Sustainable offer status      | Green Premium product   |
| RoHS (date code: YYWW)        | Compliant - since 1415 - Schneider Electric declaration of conformity<br> <a href="#">Schneider Electric declaration of conformity</a> |
| REACH                         | Reference not containing SVHC above the threshold<br><a href="#">Reference not containing SVHC above the threshold</a>  |
| Product environmental profile | Available   |

 Product environmental

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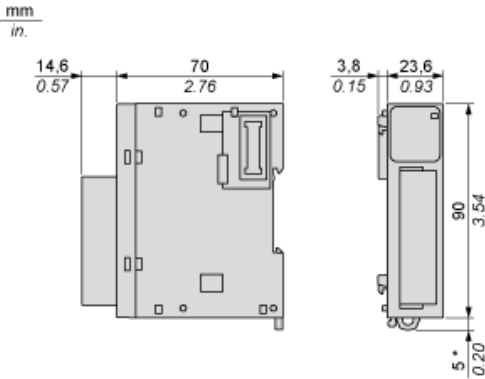
Product end of life instructions

Available

 End of life manual

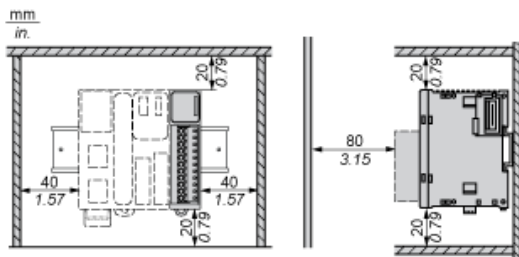
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Dimensions



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

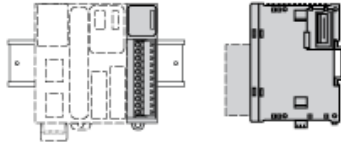
Spacing Requirements



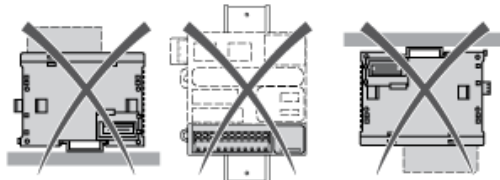
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Mounting on a Rail

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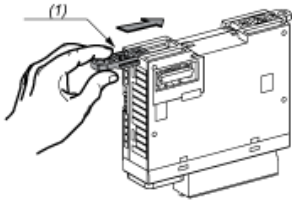
Incorrect Mounting



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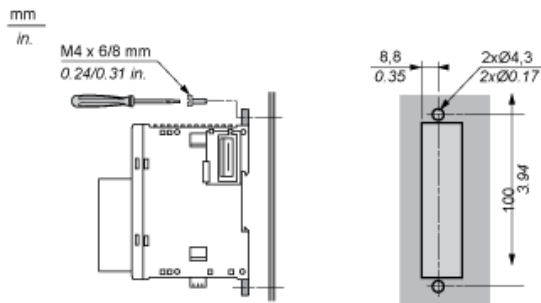
Mounting on a Panel Surface

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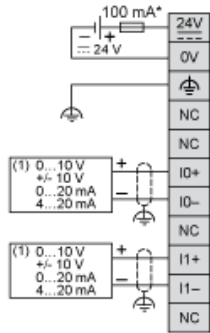
(1) Install a mounting strip

Mounting Hole Layout



## Analogue Input Module

### Wiring Diagram (Current / Voltage)



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