



### Main

|                           |                                                                                                                                                                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product          | Modicon TM3                                                                                                                                                                   |
| Product or component type | Analog input module                                                                                                                                                           |
| Range compatibility       | Modicon M221<br>Modicon M241<br>Modicon M251                                                                                                                                  |
| Analogue input number     | 4                                                                                                                                                                             |
| 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       | 12 bits<br>11 bits + sign                                                                                                                                                                                                                                 |
| Permissible continuous overload | 13 V voltage<br>40 mA current                                                                                                                                                                                                                             |
| Input impedance                 | >= 1 MOhm voltage<br><= 50 Ohm current                                                                                                                                                                                                                    |
| 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                   | Twisted shielded pairs cable 30 m for input circuit                                                                                                                                                                                                       |
| Current consumption             | 35 mA at 5 V DC (no load) via bus connector<br>45 mA at 5 V DC (full load) via bus connector<br>30 mA at 24 V DC via external supply                                                                                                                      |
| Local signalling                | 1 LED green for PWR                                                                                                                                                                                                                                       |
| Electrical connection           | 10 x 1.5 mm² removable spring terminal block with pitch 3.81 mm adjustment for inputs and supply<br>10 x 1.5 mm² removable spring terminal block with pitch 3.81 mm adjustment for inputs                                                                 |
| 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 | 0.1 kg  |

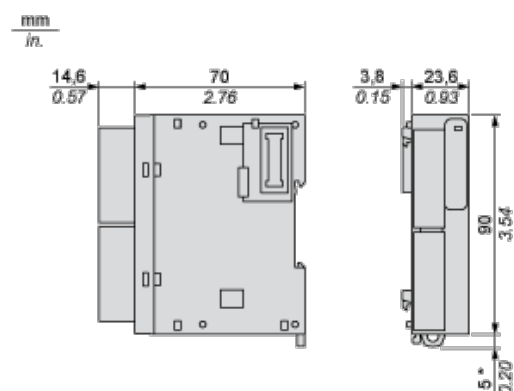
## Environment

|                                       |                                                                                                                                                                                                                                |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 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  | 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...1000 MHz) 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

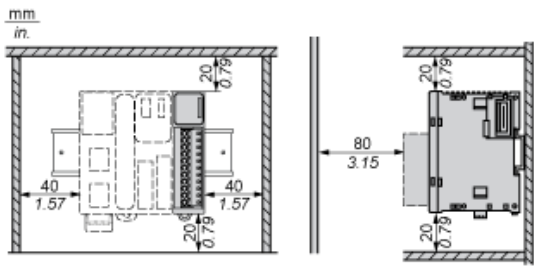
|                                  |                                                                       |
|----------------------------------|-----------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                                                 |
| RoHS (date code: YYWW)           | Compliant - since 1415 - Schneider Electric declaration of conformity |
| REACH                            | Reference not containing SVHC above the threshold                     |
| Product environmental profile    | Available                                                             |
| Product end of life instructions | Available                                                             |

## Dimensions

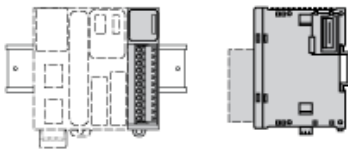


(\*) 8.5 mm/0.33 in when the clamp is pulled out.

Spacing Requirements



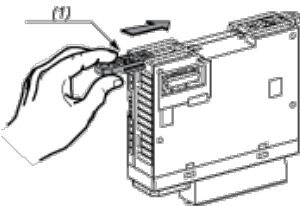
Mounting on a Rail



Incorrect Mounting

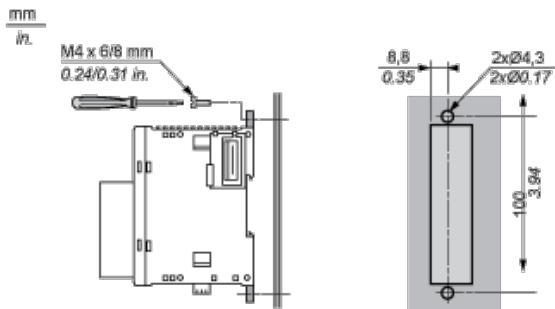


Mounting on a Panel Surface



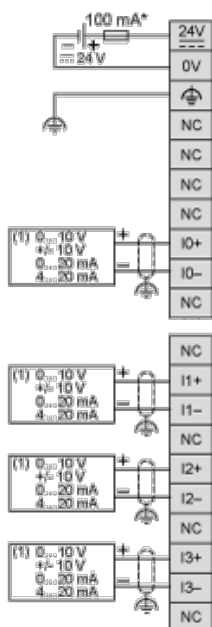
- (1) Install a mounting strip

Mounting Hole Layout



Analogue Input Module

Wiring Diagram (Current / Voltage)



(\*) Type T fuse

(1) Current/Voltage analog output device