

# Product data sheet

Specifications



analog input module, Modicon  
TM3, 4 temperature inputs, screw,  
24V DC

TM3TI4

Product availability: Stock - Normally stocked in distribution facility

Price\*: 263.00 USD

## 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     | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Analogue Input Type       | current 4...20 mA<br>current 0...20 mA<br>voltage 0...10 V<br>voltage - 10...10 V<br>thermocouple - 200...1000 °C thermocouple J<br>thermocouple - 200...1300 °C thermocouple K<br>thermocouple 0...1760 °C thermocouple R<br>thermocouple 0...1760 °C thermocouple S<br>thermocouple 0...1820 °C thermocouple B<br>thermocouple - 200...400 °C thermocouple T<br>thermocouple - 200...1300 °C thermocouple N<br>thermocouple - 200...800 °C thermocouple E<br>thermocouple 0...2315 °C thermocouple C<br>Ni 100/Ni 1000 temperature probe - 60...180 °C<br>Pt 100 temperature probe - 200...850 °C<br>Pt 1000 temperature probe - 200...600 °C |

## Complementary

|                                 |                                                                                                                                                                                                                      |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analogue Input Resolution       | 16 bits<br>15 bits + sign                                                                                                                                                                                            |
| Permissible Continuous Overload | 13 V voltage<br>40 mA current                                                                                                                                                                                        |
| Input Impedance                 | <= 50 Ohm current<br>>= 1 MOhm voltage<br>>= 1 MOhm thermocouple<br>>= 1 MOhm temperature probe                                                                                                                      |
| Lsb Value                       | 2.44 mV 0...10 V voltage<br>4.88 mV - 10...10 V voltage<br>4.88 µA 0...20 mA current<br>3.91 µA 4...20 mA current<br>0.1 °C temperature probe<br>0.1 °C thermocouple                                                 |
| Conversion Time                 | 100 ms + 100 ms per channel + 1 controller cycle time thermocouple<br>100 ms + 100 ms per channel + 1 controller cycle time temperature probe<br>10 ms + 10 ms per channel + 1 controller cycle time voltage/current |
| Sampling Duration               | 10 ms voltage/current<br>100 ms voltage/current<br>100 ms thermocouple<br>100 ms temperature probe                                                                                                                   |

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

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Absolute Accuracy Error   | +/- 0.2 % of full scale at 77 °F (25 °C) for analogue input voltage/current<br>+/- 0.2 % of full scale at 77 °F (25 °C) for Pt 100/Pt 1000, Ni 100/ Ni 1000 temperature probe<br>+/- 0.2 % of full scale at 77 °F (25 °C) for thermocouple C 0...2315 °C<br>+/- 6 °C at 77 °F (25 °C) for thermocouple R, S 0...200 °C<br>+/- 0.2 % of full scale at 77 °F (25 °C) for thermocouple R, S 200...1760 °C<br>+/- 0.2 % of full scale at 77 °F (25 °C) for thermocouple B 300...1820 °C<br>+/- 0.4 % of full scale at 77 °F (25 °C) for thermocouple K - 200...0 °C<br>+/- 0.2 % of full scale at 77 °F (25 °C) for thermocouple K 0...1300 °C<br>+/- 0.4 % of full scale at 77 °F (25 °C) for thermocouple J - 200...0 °C<br>+/- 0.2 % of full scale at 77 °F (25 °C) for thermocouple J 0...1000 °C<br>+/- 0.4 % of full scale at 77 °F (25 °C) for thermocouple E - 200...0 °C<br>+/- 0.2 % of full scale at 77 °F (25 °C) for thermocouple E 0...800 °C<br>+/- 0.4 % of full scale at 77 °F (25 °C) for thermocouple T - 200...0 °C<br>+/- 0.2 % of full scale at 77 °F (25 °C) for thermocouple T 0...400 °C<br>+/- 0.4 % of full scale at 77 °F (25 °C) for thermocouple N - 200...0 °C<br>+/- 0.2 % of full scale at 77 °F (25 °C) for thermocouple N 0...1300 °C |
| Temperature Drift         | +/- 0.01 %FS/°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Repeat Accuracy           | +/-0.5 %FS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Non-Linearity             | +/- 0.2 %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 <98.43 ft (30 m) input                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Current Consumption       | 45 mA 5 V DC via bus connector<br>50 mA 5 V DC via bus connector<br>35 mA 24 V DC via external supply<br>40 mA 24 V DC via external supply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Local Signalling          | for PWR 1 LED (green)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Electrical Connection     | 10 x 1.5 mm² removable screw terminal block pitch 3.81 mm for inputs and supply<br>10 x 1.5 mm² removable screw terminal block pitch 3.81 mm for inputs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Insulation                | Between input and supply 1500 V AC<br>Between input and internal logic 500 V AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Marking                   | CE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Surge Withstand           | 1 kV power supply common mode IEC 61000-4-5<br>0.5 kV power supply differential mode IEC 61000-4-5<br>1 kV input common mode IEC 61000-4-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 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                    | 3.54 in (90 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Depth                     | 2.76 in (70 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Width                     | 0.93 in (23.6 mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Net Weight                | 0.24 lb(US) (0.11 kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Environment

|                                       |                                                            |
|---------------------------------------|------------------------------------------------------------|
| Standards                             | IEC 61131-2                                                |
| Product Certifications                | CE<br>UKCA<br>RCM<br>EAC<br>cULus<br>cULus HazLoc          |
| Resistance To Electrostatic Discharge | 8 kV in air IEC 61000-4-2<br>4 kV on contact IEC 61000-4-2 |

|                                       |                                                                                                                                                  |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Resistance To Electromagnetic Fields  | 9.14 V/m (10 V/m) 80 MHz...1 GHz IEC 61000-4-3<br>2.74 V/m (3 V/m) 1.4 GHz...2 GHz IEC 61000-4-3<br>0.91 V/m (1 V/m) 2 GHz...3 GHz IEC 61000-4-3 |
| Resistance To Magnetic Fields         | 98.43 A/m (30 A/m) IEC 61000-4-8                                                                                                                 |
| Resistance To Fast Transients         | 1 kV IEC 61000-4-4 I/O)                                                                                                                          |
| Resistance To Conducted Disturbances  | 10 V 0.15...80 MHz IEC 61000-4-6<br>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) |
| 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     |
| Immunity To Microbreaks               | 10 ms                                                                                                                                            |
| 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 in operation)<br>10...95 %, without condensation in storage)                                                     |
| Ip Degree Of Protection               | IP20                                                                                                                                             |
| Pollution Degree                      | 2                                                                                                                                                |
| Operating Altitude                    | 0...6561.68 ft (0...2000 m)                                                                                                                      |
| Storage Altitude                      | 0.00...9842.52 ft (0...3000 m)                                                                                                                   |
| Vibration Resistance                  | 3.5 mm 5...8.4 Hz DIN rail<br>3 gn 8.4...150 Hz DIN rail                                                                                         |
| Shock Resistance                      | 15 gn 11 ms                                                                                                                                      |

## Ordering and shipping details

|                   |               |
|-------------------|---------------|
| Category          | US10MSX22533  |
| Discount Schedule | 0MSX          |
| Gtin              | 3606480649004 |
| Returnability     | Yes           |
| Country Of Origin | JP            |

## Packing Units

|                              |                        |
|------------------------------|------------------------|
| Unit Type Of Package 1       | PCE                    |
| Number Of Units In Package 1 | 1                      |
| Package 1 Height             | 2.95 in (7.500 cm)     |
| Package 1 Width              | 4.13 in (10.500 cm)    |
| Package 1 Length             | 4.92 in (12.500 cm)    |
| Package 1 Weight             | 7.58 oz (215.000 g)    |
| Unit Type Of Package 2       | S02                    |
| Number Of Units In Package 2 | 9                      |
| Package 2 Height             | 5.91 in (15.000 cm)    |
| Package 2 Width              | 11.81 in (30.000 cm)   |
| Package 2 Length             | 15.75 in (40.000 cm)   |
| Package 2 Weight             | 5.14 lb(US) (2.330 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

 Mercury Free

 Rohs Exemption Information   [Yes](#)

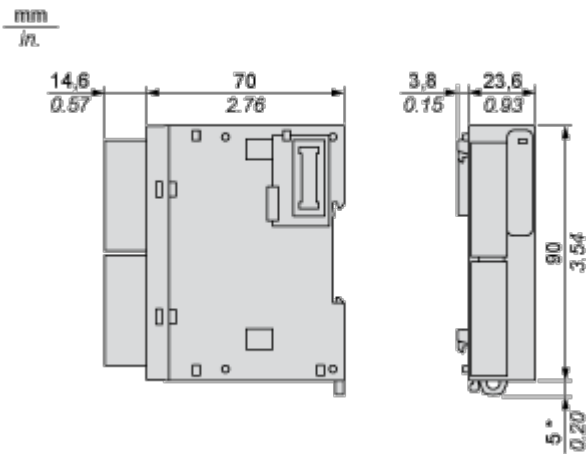
 Pvc Free

Certifications & Standards

|                           |                                                                                                                                                                                                                                                                 |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reach Regulation          | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                               |
| Eu Rohs Directive         | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a>                                                                                                                                                               |
| China Rohs Regulation     | <a href="#">China RoHS declaration</a>                                                                                                                                                                                                                          |
| Environmental Disclosure  | <a href="#">Product Environmental Profile</a>                                                                                                                                                                                                                   |
| Weee                      | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.                                                                                                                                    |
| Circularity Profile       | <a href="#">End of Life Information</a>                                                                                                                                                                                                                         |
| 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 <a href="#">www.P65Warnings.ca.gov</a> |

Dimensions Drawings

Dimensions

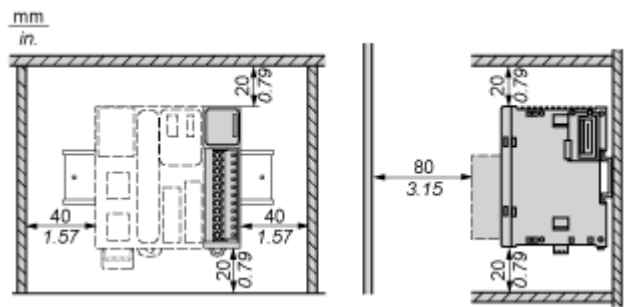


(\*) 8.5 mm/0.33 in when the clamp is pulled out.

Mounting and Clearance

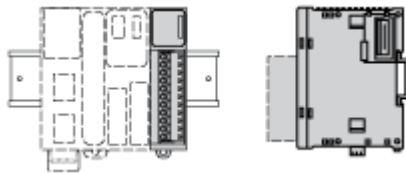
Spacing Requirements

---

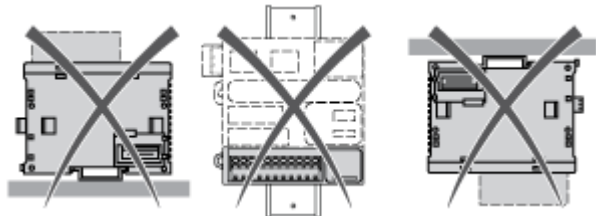


Mounting on a Rail

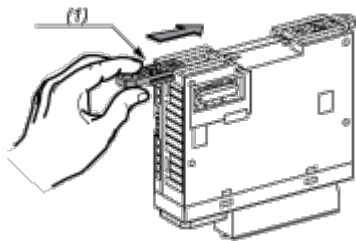
---



Incorrect Mounting

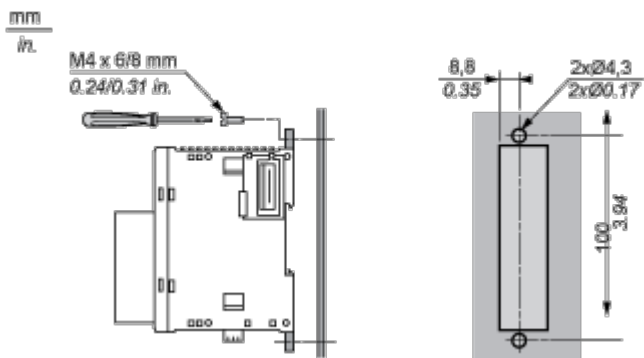


Mounting on a Panel Surface



- (1) Install a mounting strip

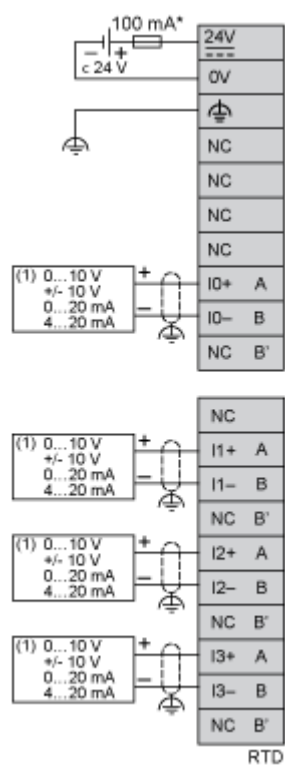
Mounting Hole Layout



Connections and Schema

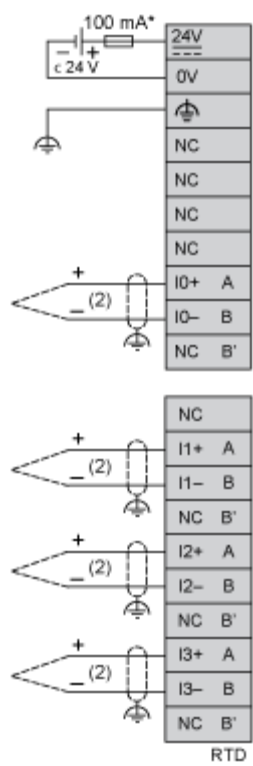
Analogue Input Module

Wiring Diagram (Current/Voltage type)



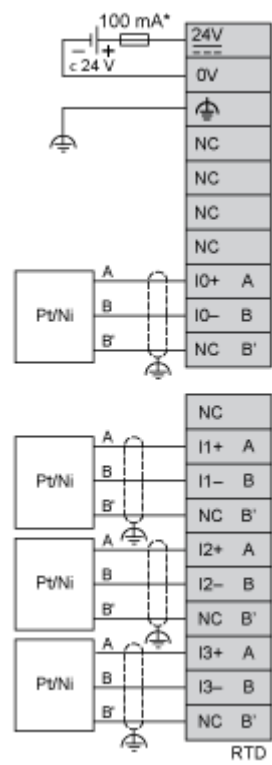
- (\*) Type T fuse
- (1) Current/Voltage analog output device

Wiring Diagram (Thermocouple input type)



- (\*) Type T fuse
- (2) Thermocouple

Wiring Diagram (Temperature probe input type)



- (\*) Type T fuse

