TM3AI8
module TM3 - 8 analog inputs

Product availability: Stock - Normally stocked in distribution facility

Price**: 239.00 USD

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**Main**

- **Range of product**: Modicon TM3
- **Product or component type**: Analog input module
- **Range compatibility**: Modicon M251, Modicon M241, Modicon M221
- **Analogue input number**: 8
- **Analogue input type**:
  - current 4...20 mA
  - current 0...20 mA
  - voltage 0...10 V
  - voltage -10...10 V

**Complementary**

- **Analogue input resolution**: 12 bits
  - 11 bits + sign
- **Permissible continuous overload**: 13 V voltage, 40 mA current
- **Input impedance**:
  - <= 50 Ohm current
  - >= 1 MOhm voltage
- **LSB value**:
  - 2.44 mV 0...10 V voltage
  - 4.88 mV -10...10 V voltage
  - 4.88 µA 0...20 mA current
  - 3.91 µA 4...20 mA current
- **Conversion time**: 1 ms + 1 ms per channel + 1 controller cycle time
- **Sampling duration**: 1 ms
- **Absolute accuracy error**: +/- 1 % of full scale
  - +/- 0.2 % of full scale 77 °F (25 °C)
- **Temperature drift**: +/- 0.01 %/°C
- **Repeat accuracy**: +/- 0.5 %FS
- **Non-linearity**: +/- 0.2 %FS
- **Cross talk**: <= 1 LSB
- **[Us] rated supply voltage**: 24 V DC

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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.

Jan 8, 2020
### Supply Voltage Limits
- 20.4…28.8 V

### Type of Cable
- Twisted shielded pairs cable <98.43 ft (30 m) input

### Current Consumption
- 40 mA 5 V DC via bus connector full load
- 35 mA 5 V DC via bus connector no load
- 30 mA 24 V DC via external supply no load
- 40 mA 24 V DC via external supply full load

### Local Signalling
- PWR 1 LED green

### Electrical Connection
- 10 x 1.5 mm² removable screw terminal block pitch 3.81 mm for inputs and supply
- 10 x 1.5 mm² removable screw terminal block pitch 3.81 mm for inputs

### Insulation
- Between input and supply: 1500 V AC
- Between input and internal logic: 500 V AC

### Marking
- CE

### Surge Withstand
- 1 kV power supply common mode EN/IEC 61000-4-5
- 0.5 kV power supply differential mode EN/IEC 61000-4-5
- 1 kV input common mode EN/IEC 61000-4-5

### Mounting Support
- Top hat type TH35-15 rail IEC 60715
- Top hat type TH35-7.5 rail IEC 60715
- 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
- EN/IEC 61131-2
- EN/IEC 61010-2-201

#### Resistance to Electrostatic Discharge
- 8 kV in air EN/IEC 61000-4-2
- 4 kV on contact EN/IEC 61000-4-2

#### Resistance to Electromagnetic Fields
- 9.14 V/m (10 V/m) 80 MHz...1 GHz EN/IEC 61000-4-3
- 2.74 V/m (3 V/m) 1.4 GHz...2 GHz EN/IEC 61000-4-3
- 0.91 V/m (1 V/m) 2 GHz...3 GHz EN/IEC 61000-4-3

#### Resistance to Magnetic Fields
- 98.43 A/m (30 A/m) EN/IEC 61000-4-8

#### Resistance to Fast Transients
- 1 kV EN/IEC 61000-4-4 I/O

#### Resistance to Conducted Disturbances
- 10 V 0.15…80 MHz EN/IEC 61000-4-6
- 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 EN/IEC 55011
- Radiated emissions 47 dBμV/m QP class A 10 m)230…1000 MHz EN/IEC 55011

#### Immunity to Microbreaks
- 10 ms

#### Ambient Temperature for Operation
- 14…131 °F (-10…55 °C) horizontal installation
- 14…95 °F (-10…35 °C) vertical installation

#### Ambient Temperature for Storage
- -13…158 °F (-25…70 °C)

#### Relative Humidity
- 10…95 %, without condensation in operation
- 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
- 3 gn 8.4…150 Hz DIN rail

#### Shock Resistance
- 15 gn 11 ms

### Ordering and Shipping Details

#### Category
- 22533 - M2XX PLC & ACCESSORIES

#### Discount Schedule
- MSX

#### GTIN
- 00785901334088

#### Package Weight (Lbs)
- 0.21 kg (0.46 lb(US))

#### Returnability
- Yes
### Offer Sustainability

<table>
<thead>
<tr>
<th>Country of origin</th>
<th>JP</th>
</tr>
</thead>
</table>

**Offer Sustainability**

<table>
<thead>
<tr>
<th>Sustainable offer status</th>
<th>Green Premium product</th>
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<tbody>
<tr>
<td>California proposition 65</td>
<td>WARNING: This product can expose you to chemicals including: Lead and lead compounds which is known to the State of California to cause Carcinogen &amp; Reproductive harm. For more information go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a></td>
</tr>
<tr>
<td>REACh Regulation</td>
<td>REACh Declaration</td>
</tr>
<tr>
<td>REACh free of SVHC</td>
<td>Yes</td>
</tr>
<tr>
<td>EU RoHS Directive</td>
<td>Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration</td>
</tr>
<tr>
<td>Toxic heavy metal free</td>
<td>Yes</td>
</tr>
<tr>
<td>Mercury free</td>
<td>Yes</td>
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<tr>
<td>RoHS exemption information</td>
<td>Yes</td>
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<tr>
<td>China RoHS Regulation</td>
<td>China RoHS declaration</td>
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<tr>
<td>Environmental Disclosure</td>
<td>Product Environmental Profile</td>
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<tr>
<td>Circularity Profile</td>
<td>End of Life Information</td>
</tr>
<tr>
<td>WEEE</td>
<td>The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.</td>
</tr>
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Dimensions

(*) 8.5 mm/0.33 in when the clamp is pulled out.
Spacing Requirements
Mounting and Clearance

Mounting on a Rail

Incorrect Mounting
Mounting and Clearance

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