



Main

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|---------------------------|---|
| Range of Product | Modicon TM3 |
| Product or Component Type | Input/output analog module |
| Range Compatibility | Modicon M221 Modicon M241 Modicon M251 Modicon M262 |
| Analogue input number | 4 |
| Analogue input type | Current 4...20 mA Current 0...20 mA Voltage 0...10 V Voltage - 10...10 V |
| Analogue output number | 2 |
| Analogue output type | Current 4...20 mA Current 0...20 mA Voltage 0...10 V Voltage - 10...10 V |

Complementary

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|---------------------------------|---|
| 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 |
| Analogue output resolution | 12 bits 11 bits + sign |
| 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 |
| Load type | Resistive |
| Load impedance ohmic | 1 kOhm voltage 300 Ohm current |
| Stabilisation time | 1 ms |
| Conversion time | 1 ms + 1 ms per channel + 1 controller cycle time |
| Sampling duration | 1 Ms 10 ms |
| Absolute accuracy error | +/- 1 % of full scale +/- 0.2 % of full scale 77 °F (25 °C) |
| Temperature drift | +/- 0.01 %FS/°C |
| Repeat accuracy | +/-0.5 %FS input +/-0.5 %FS output |
| Non-linearity | +/- 0.2 %FS |
| Output ripple | 20 mV |
| 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/output |
| Current consumption | 45 mA 5 V DC via bus connector no load 55 mA 5 V DC via bus connector full load 55 mA 24 V DC via external supply no load 100 mA 24 V DC via external supply full load |

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| Local signalling | For PWR 1 LED (green) |
| Electrical connection | 10 x 1.5 mm ² removable screw terminal block pitch 3.81 mm for inputs 10 x 1.5 mm ² removable screw terminal block pitch 3.81 mm for inputs, outputs and supply |
| Insulation | Between input and supply 1500 V AC Between input and internal logic 500 V AC Between output and supply 1500 V AC Between output 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 I/O common mode EN/IEC 61000-4-5 0.5 kV I/O differential 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

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|---------------------------------------|--|
| Standards | EN/IEC 61010-2-201 EN/IEC 61131-2 |
| 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 dB μ V/m QP class A 10 m)30...230 MHz EN/IEC 55011 Radiated emissions 47 dB μ V/m QP class A 10 m)230...1000 MHz EN/IEC 55011 |
| Immunity to microbreaks | 10 ms |
| Ambient Air Temperature for Operation | 14...131 °F (-10...55 °C) horizontal installation 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) 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

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|-----------------------|--------------------------------|
| Category | 22533 - M2XX PLC & ACCESSORIES |
| Discount Schedule | MSX |
| GTIN | 3606480648946 |
| Nbr. of units in pkg. | 1 |
| Package weight(Lbs) | 7.44 oz (211 g) |
| Returnability | Yes |
| Country of origin | JP |

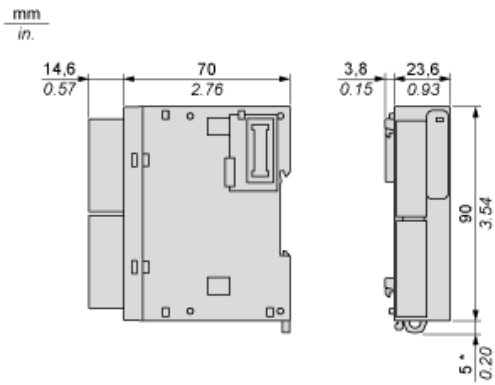
Packing Units

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|------------------------------|-------------------------|
| Unit Type of Package 1 | PCE |
| Package 1 Height | 4.13 in (10.5 cm) |
| Package 1 width | 4.92 in (12.5 cm) |
| Package 1 Length | 2.95 in (7.5 cm) |
| Unit Type of Package 2 | S04 |
| Number of Units in Package 2 | 42 |
| Package 2 Weight | 20.95 lb(US) (9.502 kg) |
| Package 2 Height | 11.81 in (30 cm) |
| Package 2 width | 15.75 in (40 cm) |
| Package 2 Length | 23.62 in (60 cm) |

Offer Sustainability

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| Sustainable offer status | Green Premium product |
| 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 |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS Declaration |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |
| PVC free | Yes |

Dimensions



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

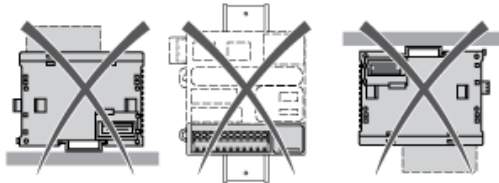
Spacing Requirements



Mounting on a Rail



Incorrect Mounting



Mounting on a Panel Surface



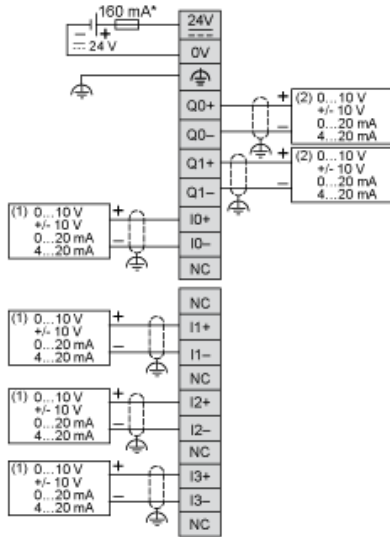
- (1) Install a mounting strip

Mounting Hole Layout



Analogue Mixed I/O Module

Wiring Diagram (Current / Voltage)



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