



Main

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| Range of product | Modicon TM3 |
| Product or component type | Discrete I/O module |
| Range compatibility | Modicon M221 Modicon M241 Modicon M251 |
| Discrete input number | 16 input conforming to IEC 61131-2 Type 1 |
| Discrete input logic | Sink or source (positive/negative) |
| Discrete input voltage | 24 V |
| Discrete input current | 7 mA for input |
| Discrete output type | Relay normally open |
| Discrete output number | 8 |
| Discrete output logic | Positive or negative |
| Discrete output voltage | 240 V AC for relay output 24 V DC for relay output |
| Discrete output current | 2000 mA for relay output |

Complementary

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|-----------------------------|---|
| Discrete I/O number | 24 |
| Current consumption | 65 mA at 5 V DC via bus connector at state on 0 mA at 24 V DC via bus connector at state off 0 mA at 24 V DC via bus connector at state on 5 mA at 5 V DC via bus connector at state off |
| Discrete input voltage type | DC |
| Voltage state 1 guaranteed | 15...28.8 V for input |
| Current state 1 guaranteed | >= 2.5 mA for input |
| Voltage state 0 guaranteed | 0...5 V for input |
| Current state 0 guaranteed | <= 1 mA for input |
| Input impedance | 3.4 kOhm |
| Response time | 4 ms for turn-off 4 ms for turn-on |
| Current per output common | 7 A |
| Mechanical durability | 20000000 cycles |
| Minimum load | 10 mA at 5 V DC for relay output |
| Local signalling | 1 LED per channel green for I/O state |
| Electrical connection | Removable screw terminal block pitch 3.81 mm with 11 terminal(s) of 1.5 mm ² connection capacity for outputs Removable screw terminal block pitch 3.81 mm with 17 terminal(s) of 1.5 mm ² connection capacity for inputs |
| Cable length | <= 30 m unshielded cable for regular input |
| Insulation | Non-insulated between outputs 500 V AC between output and internal logic 750 V AC between open contact 1500 V AC between input groups and output groups Non-insulated between inputs 500 V AC between input and internal logic |
| Marking | CE |
| Mounting support | Plate or panel with fixing kit Top hat type TH35-7.5 rail conforming to IEC 60715 Top hat type TH35-15 rail conforming to IEC 60715 |
| Height | 90 mm |

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| Depth | 84.6 mm |
| Width | 42.9 mm |

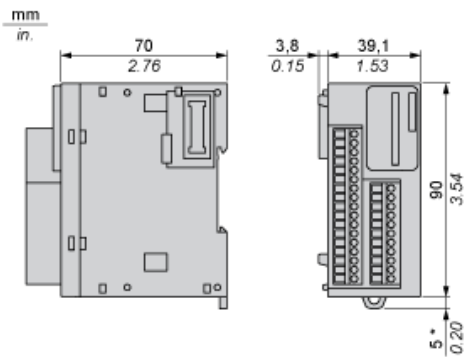
Environment

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|---|---|
| Standards | EN/IEC 61131-2 EN/IEC 61010-2-201 |
| Product certifications | C-Tick CULus |
| Resistance to electrostatic discharge | 4 kV (on contact) conforming to EN/IEC 61000-4-2 8 kV (in air) conforming to EN/IEC 61000-4-2 |
| Resistance to electromagnetic fields | 1 V/m at 2 GHz...3 GHz conforming to EN/IEC 61000-4-3 3 V/m at 1.4 GHz...2 GHz conforming to EN/IEC 61000-4-3 10 V/m at 80 MHz...1 GHz conforming to EN/IEC 61000-4-3 |
| Resistance to fast transients | 2 kV for relay output conforming to EN/IEC 61000-4-4 1 kV for I/O conforming to EN/IEC 61000-4-4 |
| Surge withstand | 1 kV for input in common mode conforming to EN/IEC 61000-4-5 2 kV for output in common mode conforming to EN/IEC 61000-4-5 |
| Resistance to conducted disturbances, induced by radio frequency fields | 3 Vrms 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) 10 Vrms at 0.15...80 MHz conforming to EN/IEC 61000-4-6 |
| Electromagnetic emission | Radiated emissions, test level: 47 dB μ V/m QP with class A, condition of test: 10 m (radio frequency: 230 MHz...1 GHz) conforming to EN/IEC 55011 Radiated emissions, test level: 40 dB μ V/m QP with class A, condition of test: 10 m (radio frequency: 30...230 MHz) conforming to EN/IEC 55011 |
| Ambient air temperature for operation | -10...55 °C for horizontal installation -10...35 °C for vertical installation |
| Ambient air temperature for storage | -25...70 °C |
| Relative humidity | 10...95 % without condensation in storage 10...95 % without condensation in operation |
| IP degree of protection | IP20 with protective cover in place |
| Pollution degree | 2 |
| Operating altitude | 0...2000 m |
| Storage altitude | 0...3000 m |
| Vibration resistance | 3 gn (vibration frequency: 8.4...150 Hz) on panel 3.5 mm (vibration frequency: 5...8.4 Hz) on panel 3 gn (vibration frequency: 8.4...150 Hz) on DIN rail 3.5 mm (vibration frequency: 5...8.4 Hz) on DIN rail |
| Shock resistance | 15 gn (test wave duration:11 ms) |

Offer Sustainability

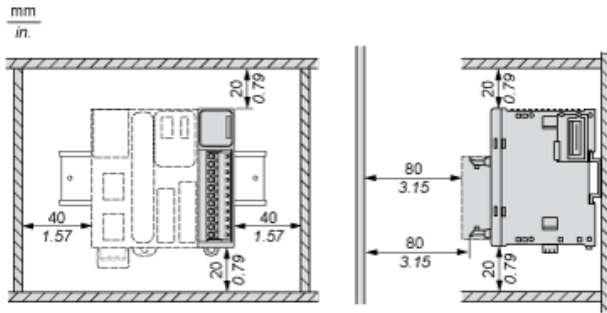
| | |
|----------------------------------|---|
| Sustainable offer status | Green Premium product |
| RoHS (date code: YYWW) | Compliant - since 1348 - Schneider Electric declaration of conformity |
| REACH | Reference not containing SVHC above the threshold |
| Product environmental profile | Available Download Product Environmental |
| Product end of life instructions | Available Download End Of Life Manual |

Dimensions

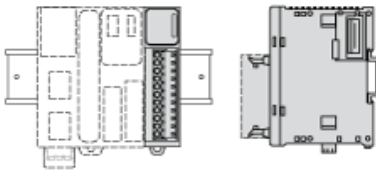


(*) 8.5 mm/0.33 in. when the clamp is pulled out.

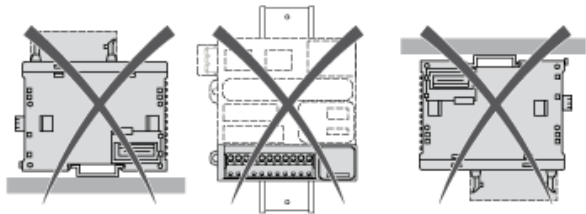
Spacing Requirements



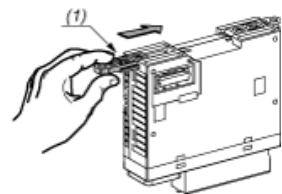
Mounting on a Rail



Incorrect Mounting

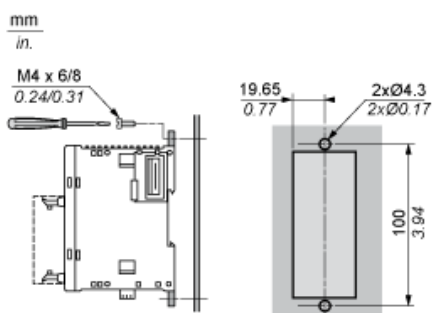


Mounting on a Panel Surface



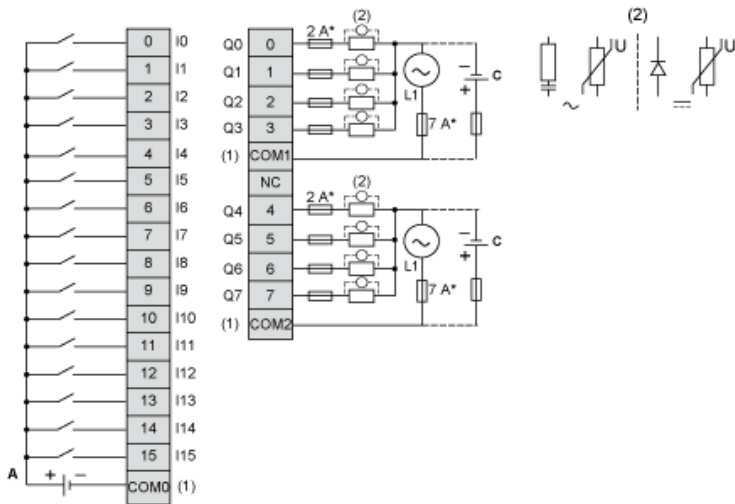
(1) Install a mounting strip

Mounting Hole Layout



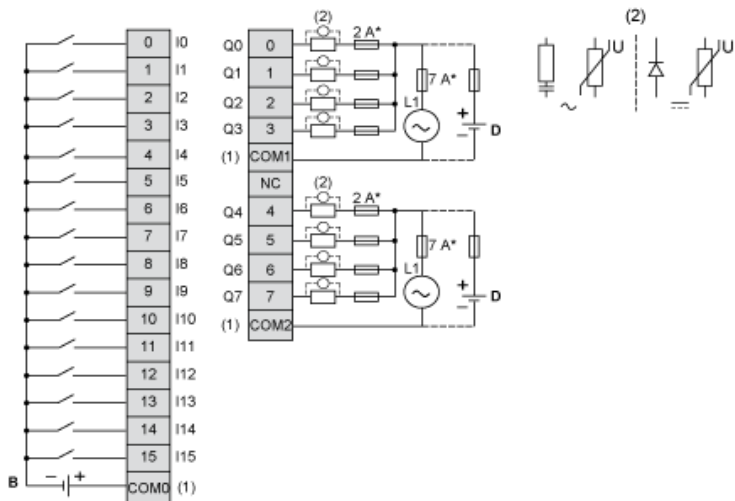
Digital Mixed I/O Module (24-channel)

Wiring Diagram (Source)



- (*) Type T fuse
- (1) The COM0, COM1 and COM2 terminals are not connected internally.
- (2) To improve the life time of the contacts, and to protect from potential inductive load damage, it is recommended to connect a free wheeling diode in parallel to each inductive DC load or an RC snubber in parallel of each inductive AC load.
- (A) Sink wiring (positive logic)
- (C) Source wiring (positive logic)

Wiring Diagram (Sink)



- (*) Type T fuse
- (1) The COM0, COM1 and COM2 terminals are not connected internally.
- (2) To improve the life time of the contacts, and to protect from potential inductive load damage, it is recommended to connect a free wheeling diode in parallel to each inductive DC load or an RC snubber in parallel of each inductive AC load.
- (B) Source wiring (negative logic)
- (D) Sink wiring (negative logic)