



### Main

|                           |   |
|---------------------------|---|
| Range of product          | Modicon TM3   |
| Product or component type | Discrete I/O module                                   |
| Range compatibility       | Modicon M241<br>Modicon M221<br>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   | 24 V DC for relay output<br>240 V AC for relay output |
| Discrete output current   | 2000 mA for relay output                              |

### Complementary

|                             |   |
|-----------------------------|---|
| Discrete I/O number         | 24  |
| Current consumption         | 5 mA at 5 V DC via bus connector at state off<br>0 mA at 24 V DC via bus connector at state on<br>0 mA at 24 V DC via bus connector at state off<br>65 mA at 5 V DC via bus connector at state on |
| Discrete input voltage type | DC  |
| Voltage state 1 guaranteed  | 15...28.8 V for input   |
| Current state 1 guaranteed  | $\geq 2.5$ mA for input   |
| Voltage state 0 guaranteed  | 0...5 V for input   |
| Current state 0 guaranteed  | $\leq 1$ mA for input   |
| Input impedance             | 3.4 kOhm  |
| Response time               | 4 ms for turn-on<br>4 ms for turn-off   |

|                           |   |
|---------------------------|---|
| Current per output common | 7 A   |
| Mechanical durability     | 20000000 cycles   |
| Minimum load              | 10 mA at 5 V DC for relay output  |
| Local signalling          | Green for I/O state   |
| Electrical connection     | Removable screw terminal block pitch 3.81 mm with 17 terminal(s) of 1.5 mm <sup>2</sup> connection capacity for inputs<br>Removable screw terminal block pitch 3.81 mm with 11 terminal(s) of 1.5 mm <sup>2</sup> connection capacity for outputs |
| Cable length              | <= 30 m unshielded cable for regular input  |
| Insulation                | Non-insulated between inputs<br>500 V AC between output and internal logic<br>Non-insulated between outputs<br>500 V AC between input and internal logic<br>1500 V AC between input groups and output groups<br>750 V AC between open contact     |
| Marking                   | CE  |
| 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                     | 84.6 mm   |
| Width                     | 42.9 mm   |

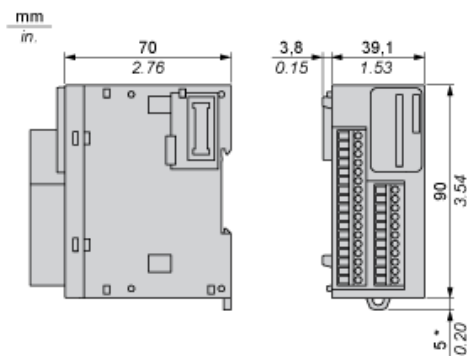
## Environment

|   |   |
|---|---|
| Standards   | EN/IEC 61010-2-201<br>EN/IEC 61131-2  |
| Product certifications  | C-Tick<br>cULus   |
| 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 at 50...60 Hz conforming to EN/IEC 61000-4-8   |
| Resistance to fast transients   | 2 kV for relay output conforming to EN/IEC 61000-4-4<br>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<br>2 kV for output in common mode conforming to EN/IEC 61000-4-5   |
| Resistance to conducted disturbances, induced by radio frequency fields | 10 Vrms at 0.15...80 MHz conforming to EN/IEC 61000-4-6<br>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)   |
| Electromagnetic emission  | Radiated emissions, test level: 40 dBμV/m QP with class A, condition of test: 10 m (radio frequency: 30...230 MHz) conforming to EN/IEC 55011<br>Radiated emissions, test level: 47 dBμV/m QP with class A, condition of test: 10 m (radio frequency: 230 MHz...1 GHz) conforming to EN/IEC 55011 |
| Ambient air temperature for operation                                   | -10...55 °C for horizontal installation<br>-10...35 °C for 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 with protective cover in place   |
| Pollution degree  | 2   |
| Operating altitude  | 0...2000 m  |
| Storage altitude  | 0...3000 m  |
| Vibration resistance  | 3.5 mm (vibration frequency: 5...8.4 Hz) on DIN rail<br>3 gn (vibration frequency: 8.4...150 Hz) on DIN rail<br>3.5 mm (vibration frequency: 5...8.4 Hz) on panel<br>3 gn (vibration frequency: 8.4...150 Hz) on panel  |
| Shock resistance  | 15 gn (test wave duration: 11 ms)   |

## Offer Sustainability

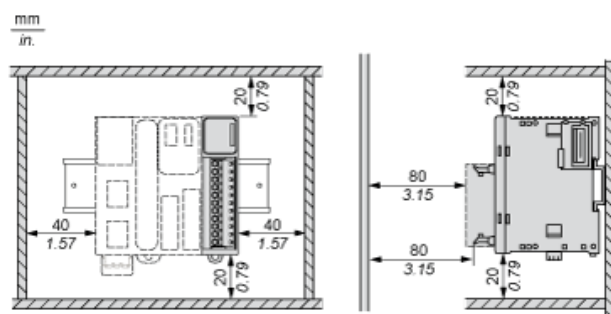
|                                  |   |
|----------------------------------|---|
| Sustainable offer status         | Green Premium product   |
| RoHS (date code: YYWW)           | Compliant - since 1348 - Schneider Electric declaration of conformity<br><a href="#">Schneider Electric declaration of conformity</a> |
| REACH                            | Reference not containing SVHC above the threshold<br><a href="#">Reference not containing SVHC above the threshold</a>                |
| Product environmental profile    | Available<br><a href="#">Product environmental</a>  |
| Product end of life instructions | Available<br><a href="#">End of life manual</a>   |

Dimensions

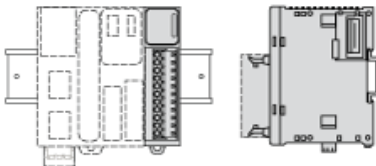


(\*) 8.5 mm/0.33 in. when the clamp is pulled out.

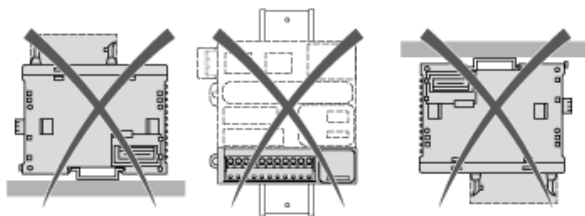
## Spacing Requirements



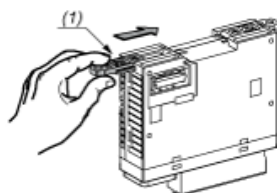
Mounting on a Rail



Incorrect Mounting

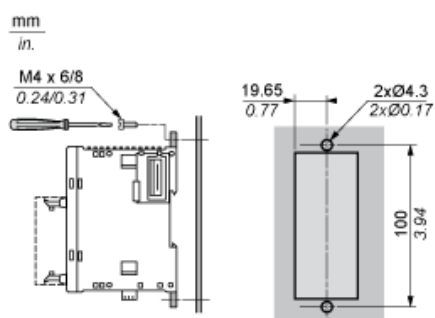


## Mounting on a Panel Surface



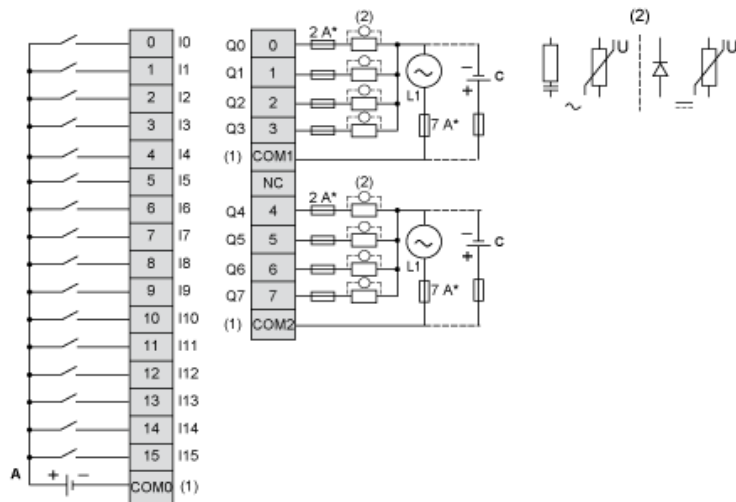
- (1) Install a mounting strip

## Mounting Hole Layout



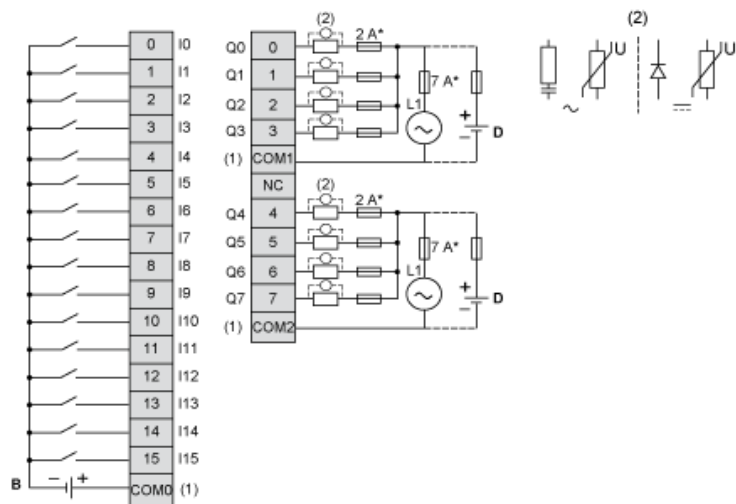
## Digital Mixed I/O Module (24-channel)

### 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
- (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
- (B) Source wiring (negative logic)
- (D) Sink wiring (negative logic)