

### Main

|                           |                                              |
|---------------------------|----------------------------------------------|
| Range of product          | Modicon TM3                                  |
| Product or component type | Discrete input module                        |
| Range compatibility       | Modicon M221<br>Modicon M241<br>Modicon M251 |
| Discrete input number     | 16 input conforming to IEC 61131-2 type 3    |
| Discrete input logic      | Sink or source (positive/negative)           |
| Discrete input voltage    | 24 V                                         |
| Discrete input current    | 7 mA for input                               |

### Complementary

|                                |                                                                                                                                                                                                   |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Discrete I/O number            | 16                                                                                                                                                                                                |
| 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>40 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     | >= 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-on<br>4 ms for turn-off                                                                                                                                                             |
| Local signalling               | 1 LED per channel green for input status                                                                                                                                                          |
| Electrical connection          | Removable screw terminal block pitch 3.81 mm with 10 terminal(s) of 1.5 mm <sup>2</sup><br>connection capacity for inputs                                                                         |
| Cable distance between devices | Unshielded cable: 50 m for regular input                                                                                                                                                          |
| Insulation                     | Non-insulated between inputs<br>500 V AC between input and internal logic                                                                                                                         |
| 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                          | 27.4 mm                                                                                                                                                                                           |
| Product weight                 | 0.1 kg                                                                                                                                                                                            |

### Environment

|                                       |                                                                                                                                                                             |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| standards                             | EN/IEC 61131-2<br>EN/IEC 61010-2-201                                                                                                                                        |
| 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 50/60 Hz conforming to EN/IEC 61000-4-8                                                                                                                              |

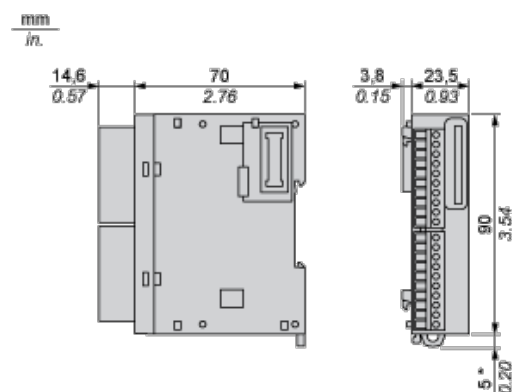
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|                                       |                                                                                                                                                                                                                                                                                                  |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| resistance to fast transients         | 1 kV for I/O conforming to EN/IEC 61000-4-4                                                                                                                                                                                                                                                      |
| surge withstand                       | 1 kV for I/O (DC) in common mode conforming to EN/IEC 61000-4-5                                                                                                                                                                                                                                  |
| resistance to conducted disturbances  | 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...1000 MHz) 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

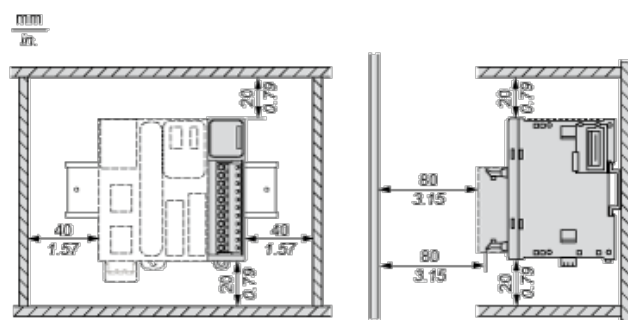
|                                  |                                                                       |
|----------------------------------|-----------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                        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

## Dimensions

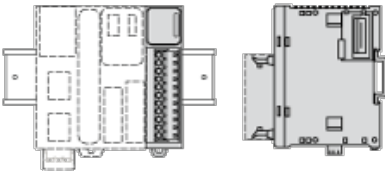


(\*) 8.5 mm/0.33 in. when the clamp is pulled out.

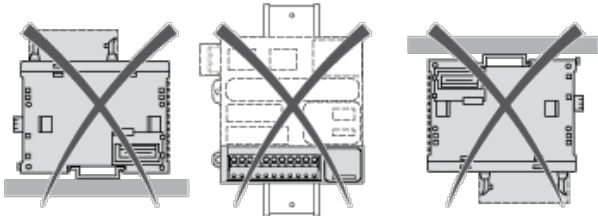
## Spacing Requirements



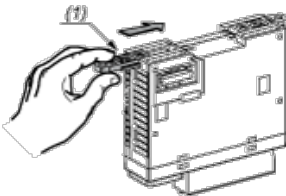
Mounting on a Rail



Incorrect Mounting

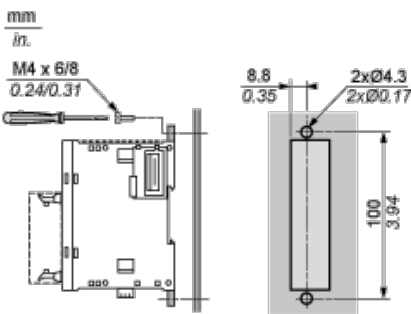


Mounting on a Panel Surface



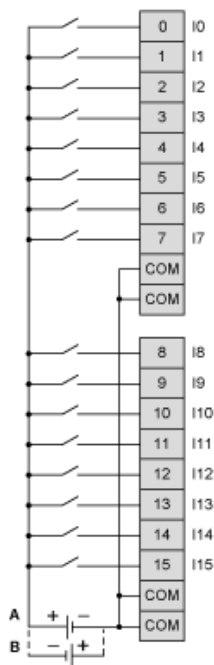
- (1) Install a mounting strip

Mounting Hole Layout



Digital Input Module (16-channel, 24 Vdc)

Wiring Diagrams



The 4 COM terminals are connected internally

- (A) Sink wiring (positive logic)
- (B) Source wiring (negative logic)