

# Product datasheet

Specifications



## discrete output module, Modicon TM3, 8 relay outputs, screw, 24V DC

TM3DQ8R

### Main

|                           |                                                              |
|---------------------------|--------------------------------------------------------------|
| Range of product          | Modicon TM3                                                  |
| Product or component type | Discrete output module                                       |
| Range compatibility       | Modicon M241<br>Modicon M251<br>Modicon M221<br>Modicon M262 |
| 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                         |
| Discrete output current   | 2000 mA for relay output                                     |

### Complementary

|                                        |                                                                                                                                                                                                            |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Discrete I/O number                    | 8                                                                                                                                                                                                          |
| 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 off)<br>40 mA at 24 V DC via bus connector (at state on)<br>30 mA at 5 V DC via bus connector (at state on) |
| Response time                          | 10 ms (turn-on)<br>5 ms (turn-off)                                                                                                                                                                         |
| Mechanical durability                  | 20000000 cycles                                                                                                                                                                                            |
| Minimum load                           | 10 mA at 5 V DC for relay output                                                                                                                                                                           |
| Local signalling                       | 1 LED per channel (green) for output status                                                                                                                                                                |
| Electrical connection                  | 11 x 2.5 mm <sup>2</sup> removable screw terminal block with pitch 5.08 mm adjustment for outputs                                                                                                          |
| Maximum cable distance between devices | Unshielded cable: <30 m for relay output                                                                                                                                                                   |
| Insulation                             | Between output and internal logic at 2300 V AC<br>Between outputs at 750 V AC<br>Between output groups at 1500 V AC                                                                                        |
| 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                                                                                                                                                                                                    |

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

|                |         |
|----------------|---------|
| Product weight | 0.11 kg |
|----------------|---------|

## Environment

|                                       |                                                                                                                                                                                                                  |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                             | IEC 61131-2                                                                                                                                                                                                      |
| Product certifications                | CE<br>cULus<br>UKCA<br>RCM<br>EAC<br>cULus HazLoc                                                                                                                                                                |
| Resistance to electrostatic discharge | 8 kV in air conforming to IEC 61000-4-2<br>4 kV on contact conforming to IEC 61000-4-2                                                                                                                           |
| Resistance to electromagnetic fields  | 10 V/m 80 MHz...1 GHz conforming to IEC 61000-4-3<br>3 V/m 1.4 GHz...2 GHz conforming to IEC 61000-4-3<br>1 V/m 2 GHz...3 GHz conforming to IEC 61000-4-3                                                        |
| Resistance to magnetic fields         | 30 A/m 50/60 Hz conforming to IEC 61000-4-8                                                                                                                                                                      |
| Resistance to fast transients         | 2 kV for relay output conforming to IEC 61000-4-4                                                                                                                                                                |
| Surge withstand                       | 1 kV I/O common mode conforming to IEC 61000-4-5 DC                                                                                                                                                              |
| Resistance to conducted disturbances  | 10 V 0.15...80 MHz conforming to IEC 61000-4-6<br>3 V 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 class A ( 10 m) at 30...230 MHz conforming to IEC 55011<br>Radiated emissions - test level: 47 dBµV/m QP class A ( 10 m) at 230...1000 MHz conforming to IEC 55011 |
| Ambient air temperature for operation | -10...35 °C vertical installation<br>-10...55 °C horizontal 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 at 5...8.4 Hz on DIN rail<br>3 gn at 8.4...150 Hz on DIN rail<br>3.5 mm at 5...8.4 Hz on panel<br>3 gn at 8.4...150 Hz on panel                                                                           |
| Shock resistance                      | 15 gn for 11 ms                                                                                                                                                                                                  |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 7.519 cm  |
| Package 1 Width              | 10.487 cm |
| Package 1 Length             | 12.849 cm |
| Package 1 Weight             | 240.0 g   |
| Unit Type of Package 2       | CAR       |
| Number of Units in Package 2 | 42        |
| Package 2 Height             | 29.4 cm   |

|                              |          |
|------------------------------|----------|
| Package 2 Width              | 39.7 cm  |
| Package 2 Length             | 56.0 cm  |
| Package 2 Weight             | 10.95 kg |
| Unit Type of Package 3       | P12      |
| Number of Units in Package 3 | 504      |
| Package 3 Height             | 105 cm   |
| Package 3 Width              | 120 cm   |
| Package 3 Length             | 80 cm    |
| Package 3 Weight             | 130 kg   |

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

|  Environmental footprint |                                               |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Carbon footprint (kg.eq.CO2 per CR, Total Life cycle)                                                     | 52                                            |
| Environmental Disclosure                                                                                  | <a href="#">Product Environmental Profile</a> |

Use Better

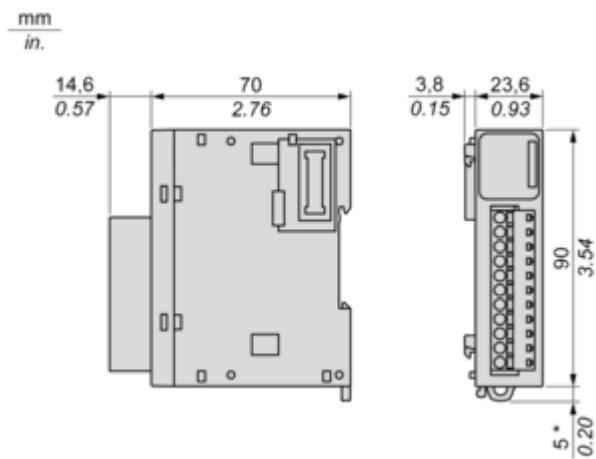
|  Materials and Substances |                                                            |
|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Packaging made with recycled cardboard                                                                     | Yes                                                        |
| Packaging without single use plastic                                                                       | Yes                                                        |
| <a href="#">EU RoHS Directive</a>                                                                          | Pro-active compliance (Product out of EU RoHS legal scope) |
| REACH Regulation                                                                                           | <a href="#">REACH Declaration</a>                          |
| PVC free                                                                                                   | Yes                                                        |

Use Again

|  Repack and remanufacture |                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Circularity Profile                                                                                          | <a href="#">End of Life Information</a>                                                                                                                                                                         |
| Take-back                                                                                                    | No                                                                                                                                                                                                              |
| WEEE                                                                                                         |  The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Dimensions Drawings

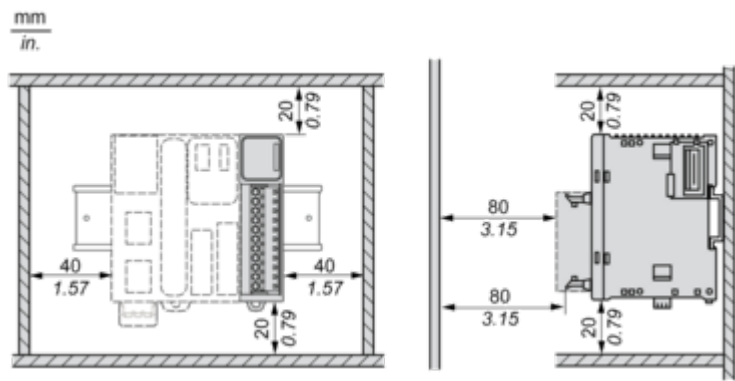
Dimensions



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

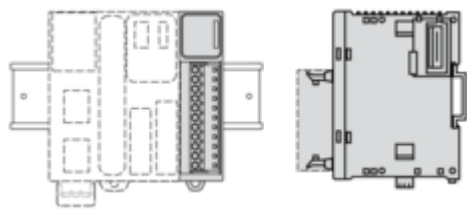
Mounting and Clearance

Spacing Requirements

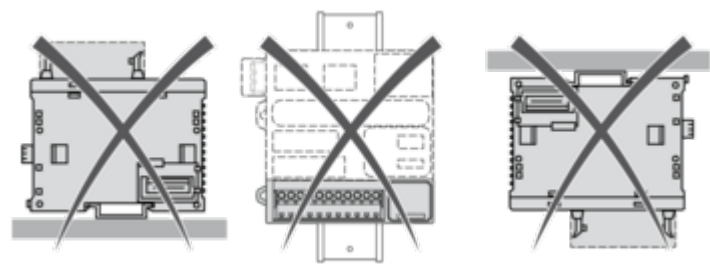


Mounting on a Rail

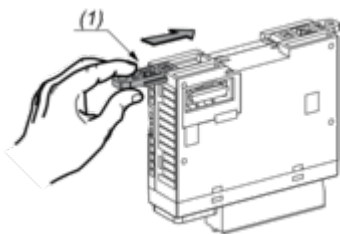
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Incorrect Mounting

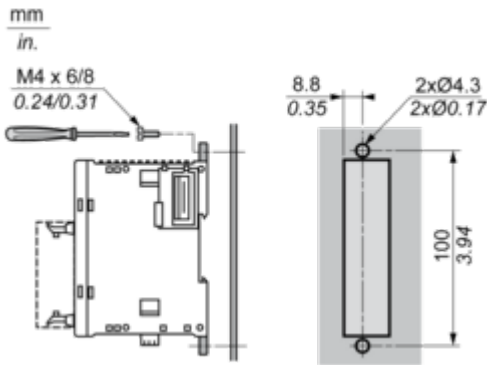


Mounting on a Panel Surface



(1) Install a mounting strip

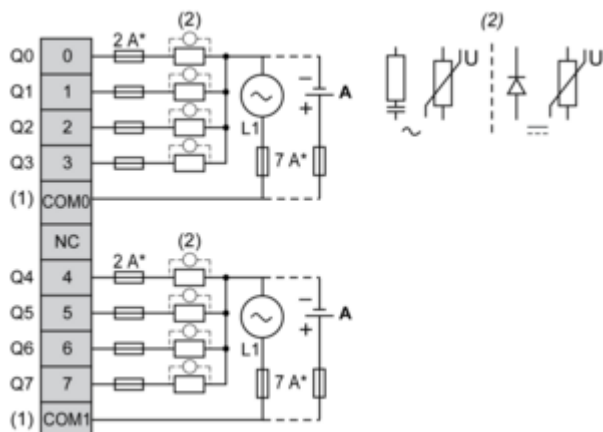
Mounting Hole Layout



## Connections and Schema

### Digital Relay Output Module (8-channel)

### Wiring Diagram (Positive Logic)



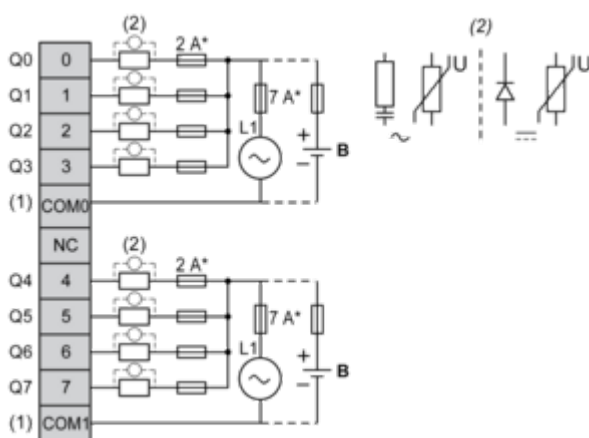
(\*) Type T Fuse

(1) The COM0 and COM1 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)** Source wiring (positive logic)

### Wiring Diagram (Negative Logic)



(\*) Type T fuse

(1) The COM0 and COM1 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) Sink wiring (negative logic)**