

# Product datasheet

Specifications



## discrete input module, Modicon TM3, 16 inputs, screw, 24V DC

TM3DI16

### Main

|                           |                                                              |
|---------------------------|--------------------------------------------------------------|
| Range of product          | Modicon TM3                                                  |
| Product or component type | Discrete input module                                        |
| Range compatibility       | Modicon M241<br>Modicon M251<br>Modicon M221<br>Modicon M262 |
| Discrete input number     | 16 for 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                    | 40 mA at 5 V DC via bus connector (at state on)<br>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) |
| Discrete input voltage type            | DC                                                                                                                                                                                                        |
| Voltage state 1 guaranteed             | 15...28.8 V for input                                                                                                                                                                                     |
| Current state 1 guaranteed             | >= 2.5 mA (input)                                                                                                                                                                                         |
| Voltage state 0 guaranteed             | 0...5 V for input                                                                                                                                                                                         |
| Current state 0 guaranteed             | <= 1 mA (input)                                                                                                                                                                                           |
| Input impedance                        | 3.4 kOhm                                                                                                                                                                                                  |
| Response time                          | 4 ms (turn-on)<br>4 ms (turn-off)                                                                                                                                                                         |
| Local signalling                       | 1 LED per channel (green) for input status                                                                                                                                                                |
| Electrical connection                  | 10 x 1.5 mm <sup>2</sup> removable screw terminal block with pitch 3.81 mm adjustment for inputs                                                                                                          |
| Maximum cable distance between devices | Unshielded cable: <50 m for regular input                                                                                                                                                                 |
| Insulation                             | Between input and internal logic at 500 V AC<br>Non-insulated between inputs                                                                                                                              |
| 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                                                                                                                                                                                                     |

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

|            |         |
|------------|---------|
| Depth      | 84.6 mm |
| Width      | 27.4 mm |
| Net weight | 0.1 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         | 1 kV for I/O 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             | 7.345 cm  |
| Package 1 Width              | 10.498 cm |
| Package 1 Length             | 12.471 cm |
| Package 1 Weight             | 210.8 g   |
| Unit Type of Package 2       | S04       |

|                              |         |
|------------------------------|---------|
| Number of Units in Package 2 | 42      |
| Package 2 Height             | 30 cm   |
| Package 2 Width              | 40 cm   |
| Package 2 Length             | 60 cm   |
| Package 2 Weight             | 10.5 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             | 132 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) | 20                                            |
| Environmental Disclosure                              | <a href="#">Product Environmental Profile</a> |

Use Better

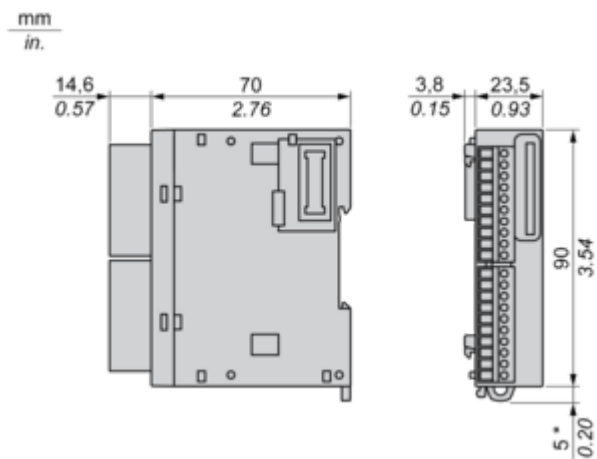
| Materials and Substances          |                                                            |
|-----------------------------------|------------------------------------------------------------|
| <a href="#">EU RoHS Directive</a> | Pro-active compliance (Product out of EU RoHS legal scope) |
| REACH Regulation                  | <a href="#">REACH Declaration</a>                          |
| PVC free                          | Yes                                                        |

Use Again

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

Dimensions Drawings

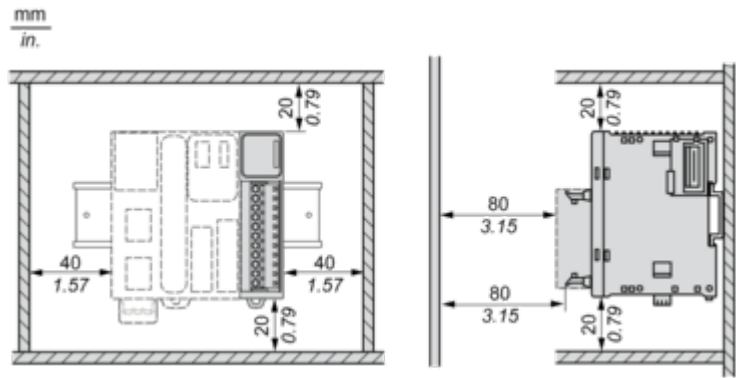
Dimensions



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

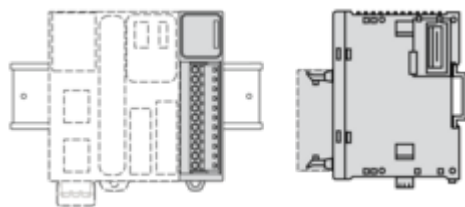
Mounting and Clearance

Spacing Requirements

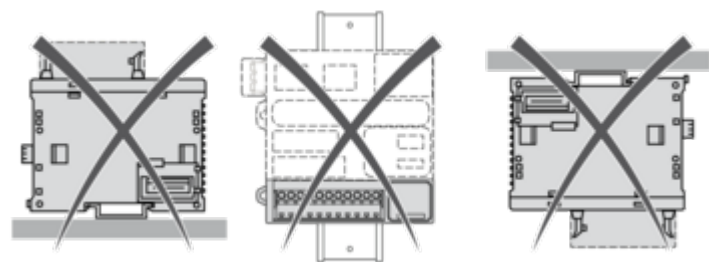


Mounting on a Rail

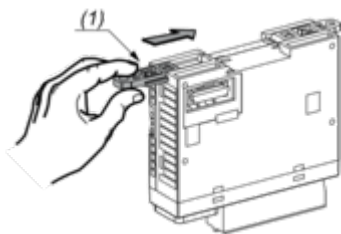
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Incorrect Mounting

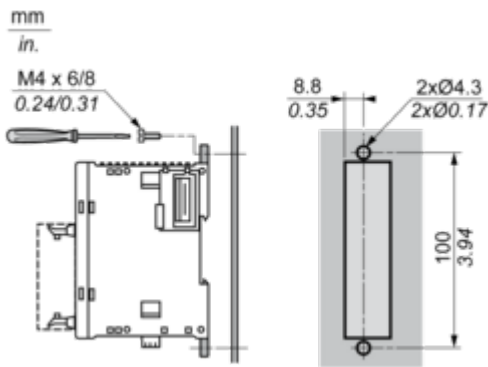


Mounting on a Panel Surface



(1) Install a mounting strip

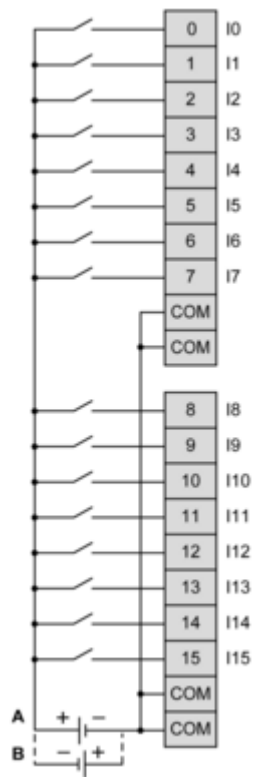
Mounting Hole Layout



Connections and Schema

Digital 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)