

# Bảng thông số sản phẩm

Thông số kỹ thuật



discrete IO module, Modicon TM3,  
24 IO, 16 inputs, 8 relay outputs,  
screw, 24V DC

TM3DM24R

## Main

Range of product	Modicon TM3
product or component type	Discrete I/O module
Range compatibility	Modicon M241 Modicon M251 Modicon M221 Modicon M262
Discrete input number	16 for 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 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) 0 mA at 24 V DC via bus connector (at state on) 0 mA at 24 V DC via bus connector (at state off) 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 (input)
Voltage state 0 guaranteed	0...5 V for input
Current state 0 guaranteed	$\leq 1$ mA (input)
Input impedance	3.4 kOhm
Response time	4 ms (turn-on) 4 ms (turn-off)
Maximum 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

<b>Electrical connection</b>	17 x 1.5 mm <sup>2</sup> removable screw terminal block with pitch 3.81 mm adjustment for inputs 11 x 1.5 mm <sup>2</sup> removable screw terminal block with pitch 3.81 mm adjustment for outputs
<b>Maximum cable distance between devices</b>	Unshielded cable: <30 m for regular input
<b>Insulation</b>	Between input and internal logic at 500 V AC Non-insulated between inputs Between input groups and output groups at 1500 V AC Between open contact at 750 V AC Between output and internal logic at 500 V AC Non-insulated between outputs
<b>marking</b>	CE
<b>Mounting support</b>	Top hat type TH35-15 rail conforming to IEC 60715 Top hat type TH35-7.5 rail conforming to IEC 60715 plate or panel with fixing kit
<b>Height</b>	90 mm
<b>Depth</b>	84.6 mm
<b>Width</b>	42.9 mm

## Environment

<b>Standards</b>	IEC 61131-2
<b>Product certifications</b>	cULus CE UKCA RCM EAC cULus HazLoc
<b>Resistance to electrostatic discharge</b>	8 kV in air conforming to IEC 61000-4-2 4 kV on contact conforming to IEC 61000-4-2
<b>Resistance to electromagnetic fields</b>	10 V/m 80 MHz...1 GHz conforming to IEC 61000-4-3 3 V/m 1.4 GHz...2 GHz conforming to IEC 61000-4-3 1 V/m 2 GHz...3 GHz conforming to IEC 61000-4-3
<b>Resistance to magnetic fields</b>	30 A/m 50/60 Hz conforming to IEC 61000-4-8
<b>Resistance to fast transients</b>	1 kV for I/O conforming to IEC 61000-4-4 2 kV for relay output conforming to IEC 61000-4-4
<b>Surge withstand</b>	2 kV output common mode conforming to IEC 61000-4-5 1 kV input common mode conforming to IEC 61000-4-5
<b>Resistance to conducted disturbances</b>	10 V 0.15...80 MHz conforming to IEC 61000-4-6 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)
<b>Electromagnetic emission</b>	Radiated emissions - test level: 40 dB $\mu$ V/m QP class A (10 m) at 30...230 MHz conforming to IEC 55011 Radiated emissions - test level: 47 dB $\mu$ V/m QP class A (10 m) at 230...1000 MHz conforming to IEC 55011
<b>Ambient air temperature for operation</b>	-10...35 °C vertical installation -10...55 °C horizontal installation
<b>Ambient air temperature for storage</b>	-25...70 °C
<b>Relative humidity</b>	10...95 %, without condensation (in operation) 10...95 %, without condensation (in storage)
<b>IP degree of protection</b>	IP20 with protective cover in place
<b>Pollution degree</b>	2
<b>Operating altitude</b>	0...2000 m
<b>Storage altitude</b>	0...3000 m

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<b>Vibration resistance</b>	3.5 mm at 5...8.4 Hz on DIN rail 3 gn at 8.4...150 Hz on DIN rail 3.5 mm at 5...8.4 Hz on panel 3 gn at 8.4...150 Hz on panel
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<b>Shock resistance</b>	15 gn for 11 ms
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## Packing Units

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<b>Unit Type of Package 1</b>	PCE
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<b>Number of Units in Package 1</b>	1
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<b>Package 1 Height</b>	7.551 cm
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<b>Package 1 Width</b>	10.686 cm
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<b>Package 1 Length</b>	12.849 cm
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<b>Package 1 Weight</b>	281.0 g
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<b>Unit Type of Package 2</b>	CAR
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<b>Number of Units in Package 2</b>	42
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<b>Package 2 Height</b>	30.6 cm
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<b>Package 2 Width</b>	40.1 cm
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<b>Package 2 Length</b>	57.6 cm
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<b>Package 2 Weight</b>	12.61 kg
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<b>Unit Type of Package 3</b>	P12
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<b>Number of Units in Package 3</b>	504
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<b>Package 3 Height</b>	105 cm
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<b>Package 3 Width</b>	120 cm
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<b>Package 3 Length</b>	80 cm
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<b>Package 3 Weight</b>	144 kg
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## Bền vững

Nhãn **Green Premium™** là cam kết của Schneider Electric trong việc cung cấp sản phẩm với hiệu suất môi trường tốt nhất. Green Premium cam kết tuân thủ các quy định mới nhất, minh bạch về tác động môi trường, cũng như các sản phẩm tuần hoàn và CO<sub>2</sub> thấp.

**Hướng dẫn đánh giá tính bền vững của sản phẩm** là tài liệu kỹ thuật phổ thông giúp làm rõ các tiêu chuẩn nhân sinh thái toàn cầu và cách diễn giải việc khai báo môi trường.

[Tìm hiểu thêm về Green Premium >](#)

[Hướng dẫn đánh giá về sự bền vững của sản phẩm >](#)



Minh bạch [RoHS/REACH](#)

## Hiệu suất sức khỏe

Reach Free Of Svhc

Toxic Heavy Metal Free

Mercury Free

Rohs Exemption Information [Yes](#)

Pvc Free

## Chứng nhận & Tiêu chuẩn

**Reach Regulation**

[REACH Declaration](#)

**Eu Rohs Directive**

Pro-active compliance (Product out of EU RoHS legal scope)

[EU RoHS Declaration](#)

**China Rohs Regulation**

[China RoHS declaration](#)

**Environmental Disclosure**

[Product Environmental Profile](#)

**Weee**

The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

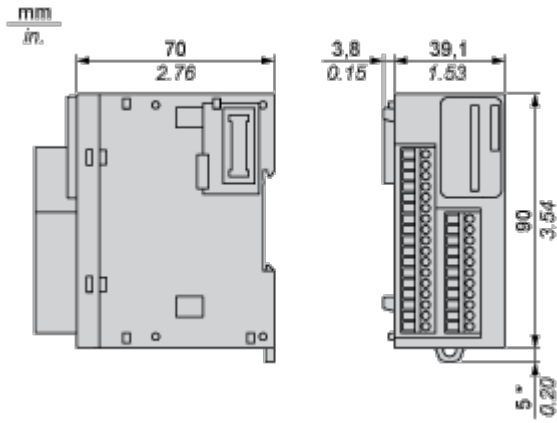
**Circularity Profile**

[End of Life Information](#)

## Dimensions Drawings

### Dimensions

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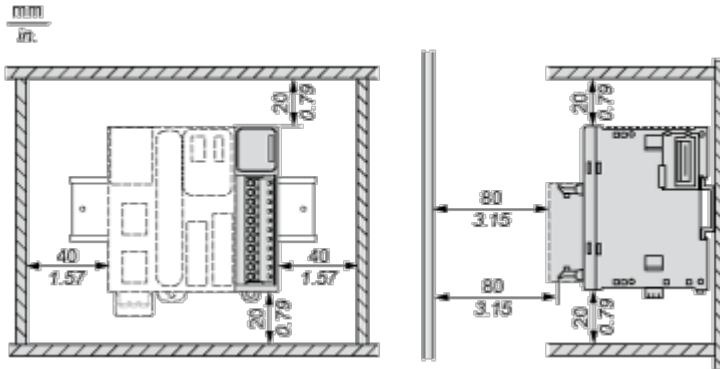


(\*) 8.5 mm/0.33 in. when the clamp is pulled out.

## Mounting and Clearance

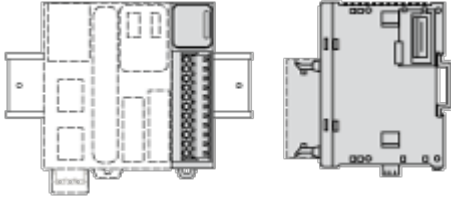
### Spacing Requirements

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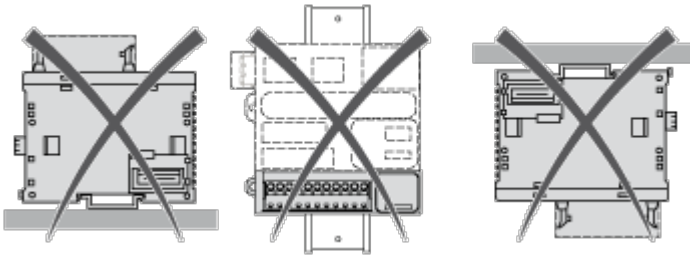


Mounting on a Rail

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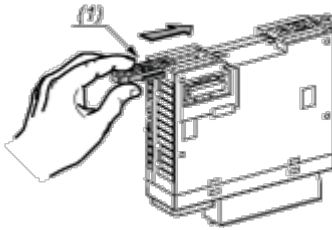


Incorrect Mounting



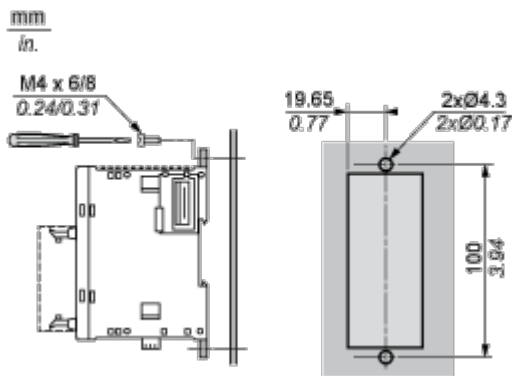
## Mounting on a Panel Surface

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- (1) Install a mounting strip

## Mounting Hole Layout

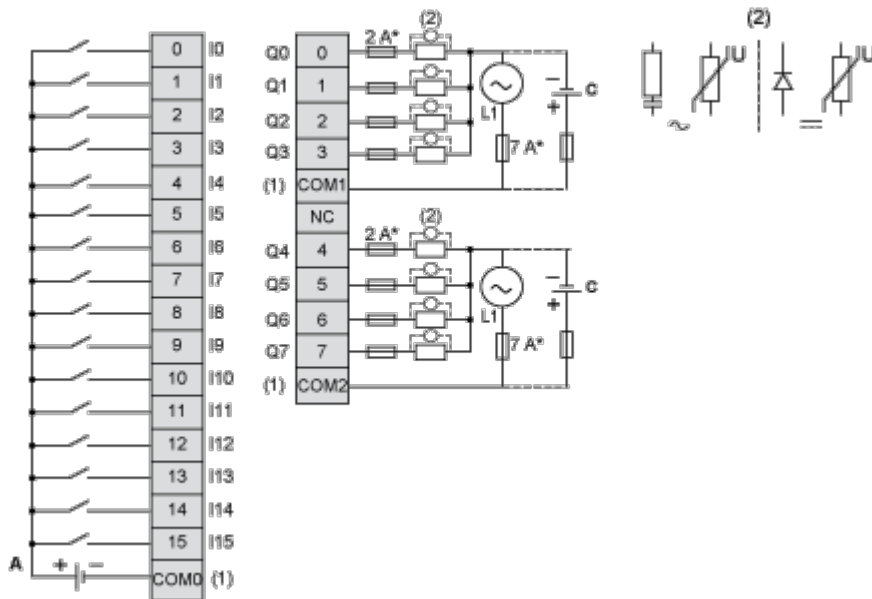




## Connections and Schema

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

#### Wiring Diagram (Source)



(\*) Type T fuse

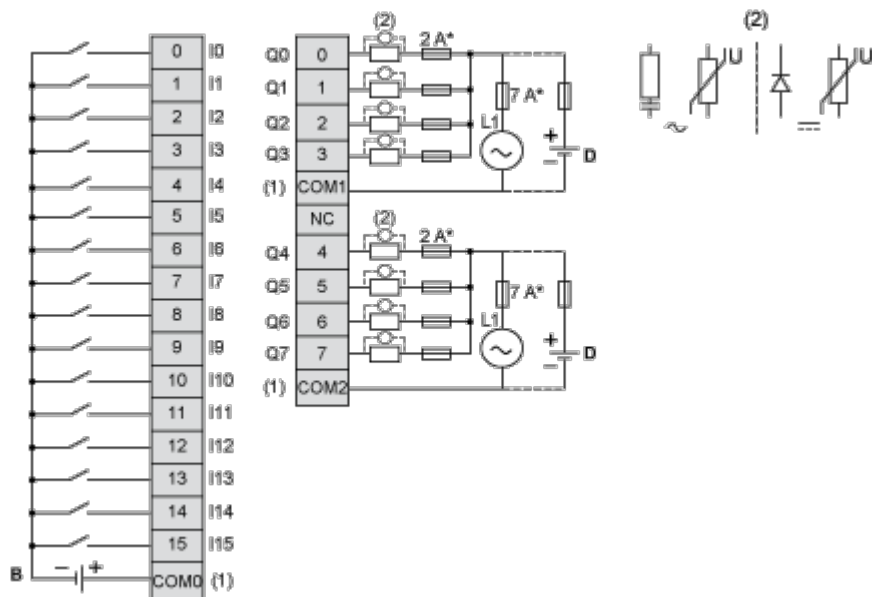
(1) The COM0, COM1 and COM2 terminals are **not** connected internally.

(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)