

# Schneider Series Service Manual

## TM3DI16

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### 1. Description

Schneider Electric. TM3DI16 - Discrete input module, Modicon TM3, 16 inputs (screw) 24 VDC.

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### 3. Product Information

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Schneider Electric. TM3DI16 - Discrete input module, Modicon TM3, 16 inputs (screw) 24 VDC.

Main

Range of product Modicon TM3

Product or component type Discrete input module

Range compatibility Modicon M221

Modicon M241

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

0 mA at 24 V DC via bus connector at state on

0 mA at 24 V DC via bus connector at state off

40 mA at 5 V DC via bus connector at state on

Discrete input voltage type DC

Voltage state1 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

4 ms for turn-off

Local signalling 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>

connection capacity for inputs

Cable length  $\leq 50$  m unshielded cable for regular input

Insulation Non-insulated between inputs

500 V AC between input and internal logic

Marking CE

Mounting support 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

Height 90 mm

Depth 84.6 mm

Width 27.4 mm

Product weight 0.1 kg

Environment

standards EN/IEC 61131-2

EN/IEC 61010-2-201

product certifications C-Tick

CULus

resistance to electrostatic discharge 4 kV (on contact) conforming to EN/IEC 61000-4-2

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

3 V/m at 1.4 GHz...2 GHz conforming to EN/IEC 61000-4-3

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 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, induced by radio

frequency fields

10 Vrms at 0.15...80 MHz conforming to EN/IEC 61000-4-6

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

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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

-10...35 °C for vertical installation

ambient air temperature for storage -25...70 °C

relative humidity 10...95 % without condensation in operation

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

3 gn (vibration frequency: 8.4...150 Hz) on DIN rail

3.5 mm (vibration frequency: 5...8.4 Hz) on panel

3 gn (vibration frequency: 8.4...150 Hz) on panel

shock resistance 15 gn (test wave duration:11 ms)

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