

Schneider Series Service Manual

TM3DI16

1. Description

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

3. Product Information

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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 ≥ 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

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 mm²

connection capacity for inputs

Cable length ≤ 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 dB μ V/m QP with class A, condition of test: 10 m

(radio frequency: 30...230 MHz) conforming to EN/IEC 55011

Radiated emissions, test level: 47 dB μ V/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)