Schneider Service Manual

TM3DM24R

1. Description

TM3DM24R

3. Product Information

TM3DM24R

module TM3 - 24 IO relays

Main

Range of product Modicon TM3

Product or component type Discrete I/O module

Range compatibility Modicon M241

Modicon M221

Modicon M251

Discrete input number 16 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 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

Current per output common 7 A

Mechanical durability 20000000 cycles

Minimum load 10 mA at 5 V DC for relay output

Local signalling Green for I/O state

Electrical connection Removable screw terminal block pitch 3.81 mm with 17 terminal(s) of 1.5 mm² connection capacity

for inputs

Removable screw terminal block pitch 3.81 mm with 11 terminal(s) of 1.5 mm² connection capacity

for outputs

Cable length <= 30 m unshielded cable for regular input

Insulation Non-insulated between inputs

500 V AC between output and internal logic

Non-insulated between outputs

500 V AC between input and internal logic

1500 V AC between input groups and output groups

750 V AC between open contact

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 42.9 mm

Environment

Standards EN/IEC 61010-2-201

EN/IEC 61131-2

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 2 kV for relay output conforming to EN/IEC 61000-4-4

1 kV for I/O conforming to EN/IEC 61000-4-4

Surge withstand 1 kV for input in common mode conforming to EN/IEC 61000-4-5

2 kV for output 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

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)

Offer Sustainability

Sustainable offer status Green Premium product

RoHS (date code: YYWW) Compliant - since 1348 - Schneider Electric declaration of conformity