



Main

Range of product	Modicon TM3
Product or component type	Discrete I/O module
Range compatibility	Modicon M221 Modicon M241 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 state 1 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 mm ² connection capacity for inputs Removable screw terminal block pitch 3.81 mm with 11 terminal(s) of 1.5 mm ² 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

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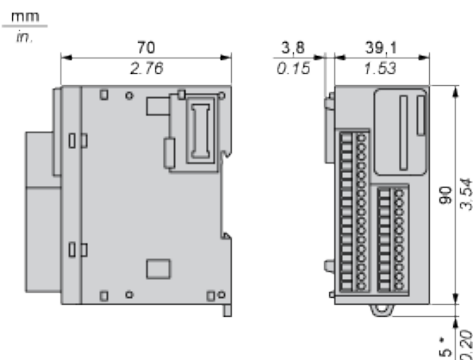
Environment

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	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

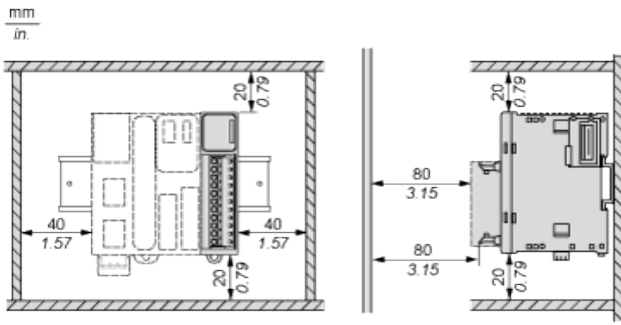
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1348 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

Dimensions

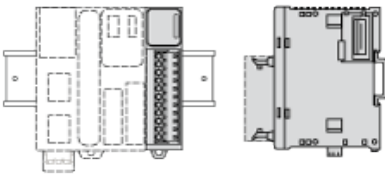


(*) 8.5 mm/0.33 in. when the clamp is pulled out.

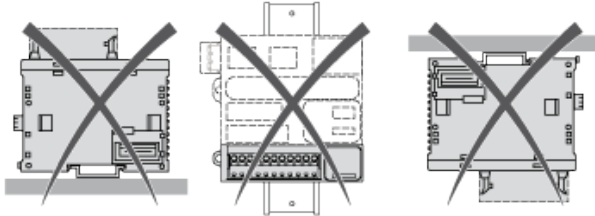
Spacing Requirements



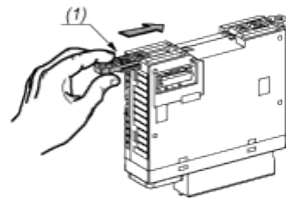
Mounting on a Rail



Incorrect Mounting

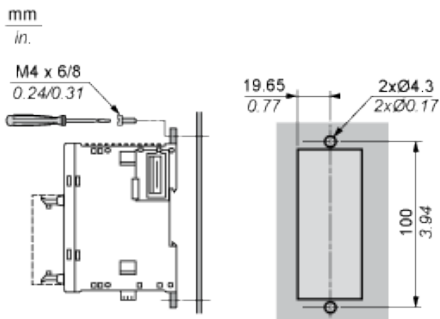


Mounting on a Panel Surface



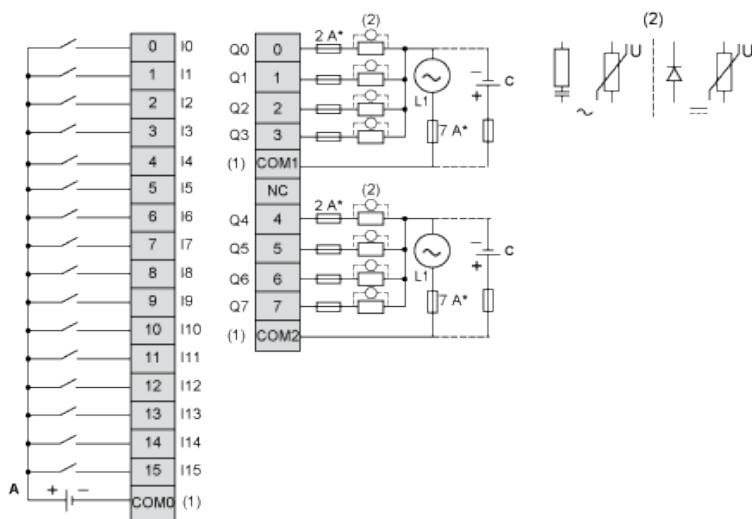
(1) Install a mounting strip

Mounting Hole Layout



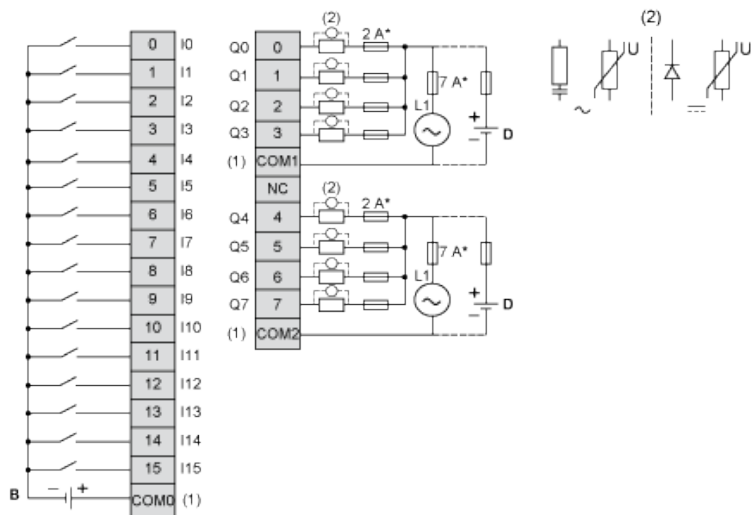
Digital Mixed I/O Module (24-channel)

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)