

TM3AI2HG

module TM3 - 2 analog inputs high resolution
spring



Main

Range of product	Modicon TM3
Product or component type	Analog input module
Range compatibility	Modicon M241 Modicon M251 Modicon M221
Analogue input number	2
Analogue input type	Current, analogue input range: 4...20 mA Current, analogue input range: 0...20 mA Voltage, analogue input range: 0...10 V Voltage, analogue input range: - 10...10 V

Complementary

Analogue input resolution	15 bits + sign 16 bits
Permissible continuous overload	13 V voltage 40 mA current
Input impedance	≤ 50 Ohm current ≥ 1 MOhm voltage
LSB value	2.44 mV, analogue input: 0...10 V voltage 4.88 mV, analogue input: - 10...10 V voltage 4.88 μ A, analogue input: 0...20 mA current 3.91 μ A, analogue input: 4...20 mA current
Conversion time	1 ms + 1 ms per channel + 1 controller cycle time
Sampling duration	≤ 1 ms
Absolute accuracy error	+/- 0.1 % of full scale at 25 °C +/- 1 % of full scale
Temperature drift	+/- 0.006 %FS/°C
Repeat accuracy	+/-0.5 %FS
Non-linearity	+/- 0.01 %FS
Cross talk	≤ 1 LSB
[Us] rated supply voltage	24 V DC

Supply voltage limits	20.4...28.8 V
Type of cable	<= 30 m twisted shielded pairs cable for input circuit
Current consumption	30 mA at 5 V DC (no load) via bus connector 40 mA at 5 V DC (full load) via bus connector 25 mA at 24 V DC via external supply
Local signalling	1 LED green for PWR
Electrical connection	11 x 2.5 mm ² removable spring terminal block with pitch 5.08 mm adjustment for inputs and supply
Insulation	500 V AC between input and internal logic 1500 V AC between input and supply
Marking	CE
Surge withstand	1 kV for power supply with common mode protection conforming to EN/IEC 61000-4-5 0.5 kV for power supply with differential mode protection conforming to EN/IEC 61000-4-5 1 kV for input with common mode protection conforming to EN/IEC 61000-4-5
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	70 mm
Width	23.6 mm
Product weight	0.1 kg

Environment

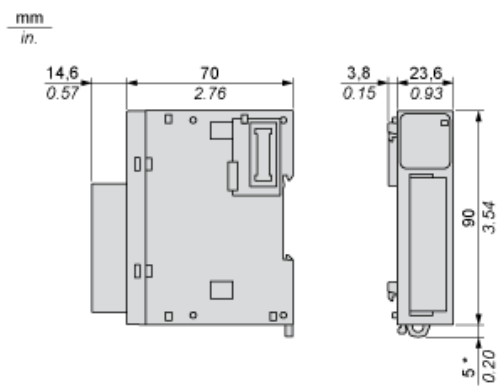
Standards	EN/IEC 61010-2-201 EN/IEC 61131-2
Resistance to electrostatic discharge	4 kV on contact conforming to EN/IEC 61000-4-2 8 kV in air conforming to EN/IEC 61000-4-2
Resistance to electromagnetic fields	10 V/m at 80 MHz...1 GHz conforming to EN/IEC 61000-4-3 3 V/m at 1.4 GHz...2 GHz conforming 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 I/O conforming to EN/IEC 61000-4-4
Resistance to conducted disturbances, induced by radio frequency fields	10 V at 0.15...80 MHz conforming to EN/IEC 61000-4-6 3 V 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 class A (10 m at 30...230 MHz) conforming to EN/IEC 55011 Radiated emissions, test level: 47 dBμV/m QP class A (10 m at 230 MHz...1 GHz) conforming to EN/IEC 55011
Immunity to microbreaks	10 ms
Ambient air temperature for operation	-10...55 °C (horizontal installation) -10...35 °C (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
Pollution degree	2
Operating altitude	0...2000 m
Storage altitude	0...3000 m
Vibration resistance	3.5 mm at 5...8.4 Hz with DIN rail mounting support 3 gn at 8.4...150 Hz with DIN rail mounting support
Shock resistance	15 gn during 11 ms

Offer Sustainability

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1415 - Schneider Electric declaration of conformity  Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold Reference not containing SVHC above the threshold

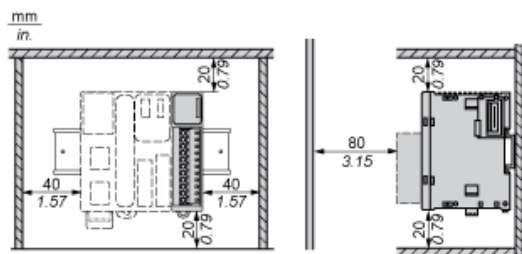
Product environmental profile	Available  Product environmental
Product end of life instructions	Available  End of life manual

Dimensions

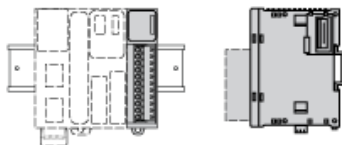


(*) 8.5 mm/0.33 in when the clamp is pulled out.

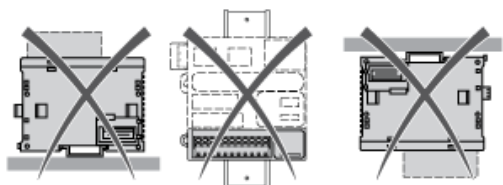
Spacing Requirements



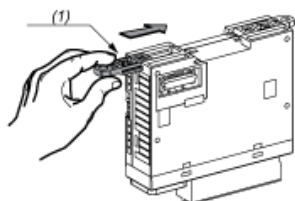
Mounting on a Rail



Incorrect Mounting

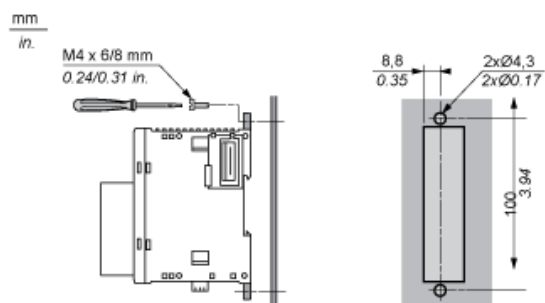


Mounting on a Panel Surface



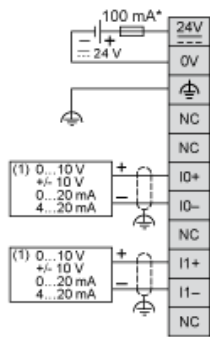
- (1) Install a mounting strip

Mounting Hole Layout



Analogue Input Module

Wiring Diagram (Current / Voltage)



- (*) Type T fuse
- (1) Current/Voltage analog output device