

# TM2AMM3HT

analog input/output module M238 - 2 inputs  
voltage/current high level - 1 output



## Main

Range of product	Modicon M238 logic controller
Product or component type	Input/Output analog module
Analogue input number	2
Input level	High level
Analogue input type	Voltage 0...10 V non differential Current 4...20 mA non differential
Analogue output number	1
Analogue output type	Voltage 0...10 V Current 4...20 mA
Cross talk	<= 2 LSB

## Complementary

Range compatibility	Advantys OTB Twido
Analogue input resolution	12 bits
Analogue output resolution	12 bits
LSB value	4.8 $\mu$ A current current 2.5 mV voltage voltage
Permissible continuous overload	40 mA current 13 V voltage
Input impedance	>= 1 MOhm voltage >= 10 Ohm current
Load type	Resistive
Load impedance ohmic	>= 2000 Ohm voltage <= 300 Ohm current
Stabilisation time	20 ms
Conversion time	20 ms + 1 controller cycle time
Sampling duration	<= 10 ms
Acquisition period	60 ms per channel + 1 controller cycle time
Measurement error	+/- 0.2 % of full scale 4...20 mA 4...20 mA 25 °C +/- 0.2 % of full scale 0...10 V 0...10 V 25 °C
Temperature coefficient	+/-0.015 %FS/°C 4...20 mA 4...20 mA +/-0.015 %FS/°C 0...10 V 0...10 V +/-0.006 %FS/°C 4...20 mA +/-0.006 %FS/°C 0...10 V
Repeat accuracy	+/-0.5 %FS input/output
Non-linearity	+/- 0.2 %FS voltage voltage +/- 0.2 %FS current current
Output error	+/- 1 %FS
Output ripple	<= 1 LSB
Total error	+/-1 %FS voltage voltage +/-1 %FS current current
Type of cable	Shielded cable
Insulation between channel and internal logic	Photocoupler
Supply	External supply
[Us] rated supply voltage	24 V DC
Supply voltage limits	19.2...30 V
Electrical connection	1 removable screw terminal block

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Current consumption	50 mA 5 V DC internal 50 mA 24 V DC external
Product weight	0.085 kg

## Environment

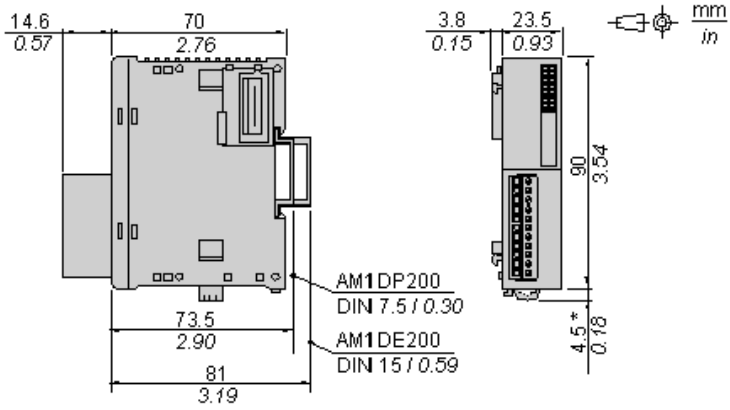
Dielectric strength	500 V between the I/O and the external supply circuit 500 V between the I/O and internal logic 500 V between I/O channel
Width	23.5 mm
Depth	70 mm
Height	90 mm

## Offer Sustainability

Sustainable offer status	Not Green Premium product
Product environmental profile	Available  <a href="#">Download Product Environmental</a>

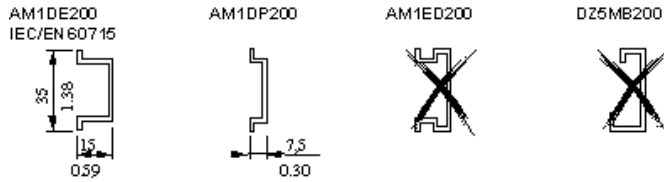
Analog Mixed I/O Module (3-channel, Voltage/Current)

Dimensions



NOTE: \* 8.5 mm (0.33 in) when the clip-on lock is pulled out.

DIN Rail Mounting

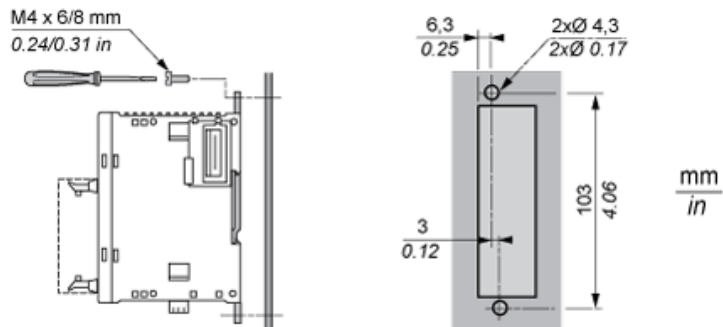


Rail depth	Catalogue part number
15 mm (0.59 in.)	AM1DE200
7,5 mm (0.30 in.)	AM1DP200

NOTE: Do not use AM1ED200 and DZ5MB200

Module Mounting on a Panel Surface

Mounting Hole Layout



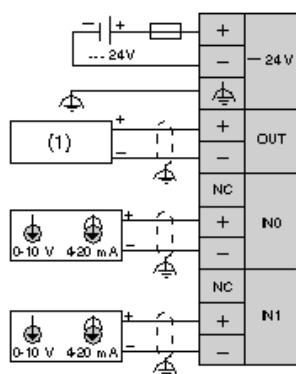
Wiring Requirements

Cable Types and Wire Sizes for Removable Screw Terminal Block

	mm <sup>2</sup>	0,14...1,5	0,25...0,5	0,25...1,5	0,14...0,5	0,14...0,75	0,25...0,34	0,5
	AWG	26...16	24...20	24...16	26...20	26...18	24...22	20

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Wiring Diagram



(1) Voltage/current preactuator

The (-) poles of inputs IN0 and IN1 are connected internally.