Product datasheet

Specifications

analog input/output module M238 - 4 inputs voltage/current high level - 2 output

TM2AMM6HT

Discontinued on: Jul 7, 2021

To be end-of-service on: Jun 30, 2024

Discontinued - Service only

Price: 6,097,300.00 IDR

Main

Range Of Product	Modicon M238 logic controller
Product Or Component Type	I/O expansion module
Analogue Input Number	4
Input Level	High level
Analogue Input Type	current 4...20 mA non differential voltage 0...10 V non differential
Analogue Output Number	2
Analogue Output Type	Current: 4...20 mA Voltage: 0...10 V
Cross Talk	<= 2 LSB

Complementary

Range Compatibility	Twido Advantys OTB
Analogue Input Resolution	12 bits
Analogue Output Resolution	12 bits
Lsb Value	2.5 mV voltage voltage 4 µA current current
Permissible Continuous Overload	40 mA, analogue input type: current 13 V, analogue input type: voltage
Input Impedance	>= 1 Ohm voltage <= 250 MOhm 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	16 ms
Acquisition Period	16 ms per channel + 1 controller cycle time
Measurement Error	+/- 0.5 % of full scale 0...10 V at 25 °C +/- 0.5 % of full scale 4...20 mA at 25 °C +/- 0.9 % of full scale 0...10 V at 25 °C +/- 0.9 % of full scale 4...20 mA at 25 °C

Disclaimer: 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

Temperature Coefficient	+/- 0.02 %FS/°C, analogue output type: 0...10 V +/- 0.02 %FS/°C, analogue output type: 4...20 mA +/-0.015 %FS/°C, analogue input type: 0...10 V, analogue output type: 0...10 V +/-0.015 %FS/°C, analogue input type: 4...20 mA, analogue output type: 4...20 mA
Repeat Accuracy	+/- 1 %FS for output +/-0.5 %FS for input
Non-Linearity	+/- 0.4 %FS, analogue input type: current +/- 0.4 %FS, analogue input type: voltage +/- 0.5 %FS, analogue output type: current +/- 0.5 %FS, analogue output type: voltage
Output Error	+/- 1 %FS
Output Ripple	<= 1 LSB
Total Error	+/- 1.5 %FS, analogue output type: current +/- 1.5 %FS, analogue output type: voltage +/-1 %FS, analogue input type: current, analogue output type: current +/-1 %FS, analogue input type: voltage, analogue output type: voltage
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
Current Consumption	60 mA at 5 V DC internal 80 mA at 24 V DC external
Net Weight	0.085 kg

Environment

Dielectric Strength	1500 V between the I/O and the external supply circuit 800 V between I/O channel 800 V between the I/O and internal logic
Width	23.5 mm
Depth	70 mm
Height	90 mm

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	7.446 cm
Package 1 Width	10.434 cm
Package 1 Length	12.419 cm
Package 1 Weight	170.5 g
Unit Type Of Package 2	S03
Number Of Units In Package 2	18
Package 2 Height	30.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	3.107 kg

Contractual warranty

Warranty	18 months

Sustainability

Green Premium^{TM} label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO_2 products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >

Transparency

RoHS/REACh

Well-being performance

Mercury Free	
Rohs Exemption Information	Yes
Pvc Free	

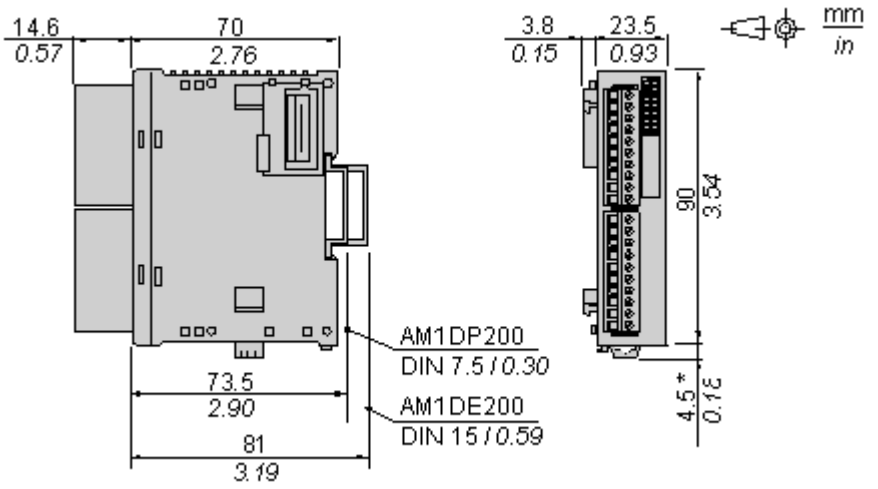
Certifications & Standards

Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information

Dimensions Drawings

Analog Mixed I/O Module (6-channel, Voltage/Current)

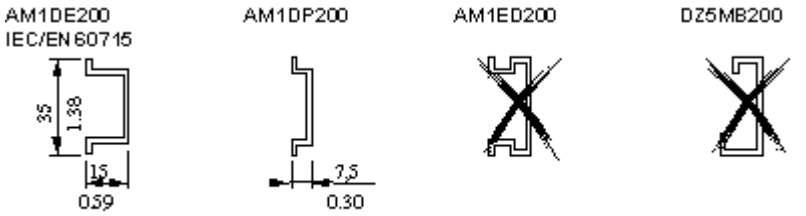
Dimensions



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

Mounting and Clearance

DIN Rail Mounting

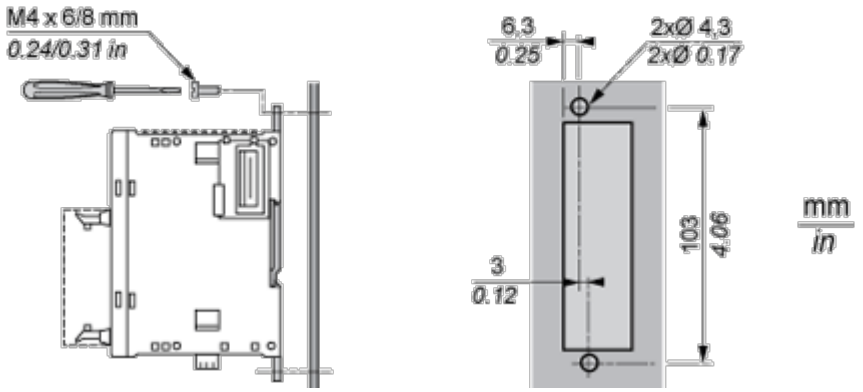


Rail depth	Catalogue part number
15 mm (0.59 in.)	AM1DE200
7,5 mm (0.30 in.)	AM1DP200

NOTE: Do not use AM1ED200 and DZ5MB200

Module Mounting on a Panel Surface

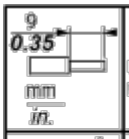
Mounting Hole Layout



Connections and Schema

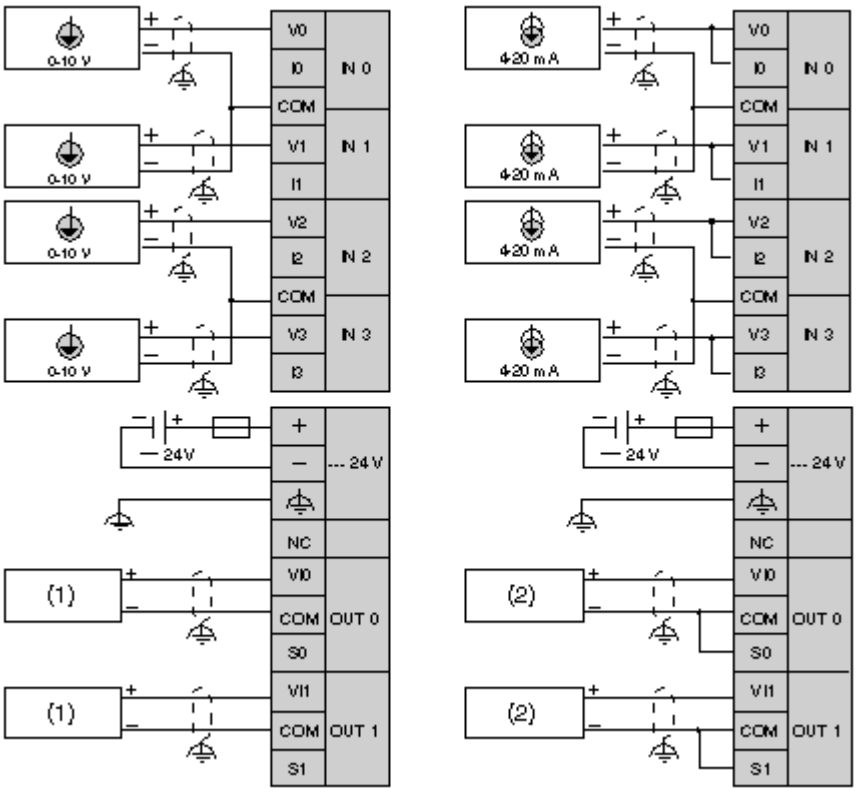
Wiring Requirements

Cable Types and Wire Sizes for Removable Screw Terminal Block

							
mm ^{2}	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

Analog Mixed I/O Module (6-channel, Voltage/Current)

Wiring Diagram



(1) Voltage preactuator

(2) Current preactuator