

# Product data sheet

Specifications



## Analog input/output module, Modicon M238 logic controller, 4 inputs voltage/current high level, 2 output

TM2AMM6HT

⚠ Discontinued - Service only

⚠ Discontinued on: 28 June 2019

⚠ To be end-of-service on: 30 June 2024

### Main

Range of product	Modicon M238 logic controller
Product or component type	Input/output analog 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	$\leq 2$ LSB

### Complementary

Range compatibility	Advantys OTB Twido
Analogue input resolution	12 bits
Analogue output resolution	12 bits
LSB value	2.5 mV voltage voltage 4 $\mu$ A current current
Permissible continuous overload	40 mA, analogue input type: current 13 V, analogue input type: voltage
Input impedance	$\geq 1$ Ohm voltage $\leq 250$ MOhm current
Load type	Resistive
Load impedance ohmic	$\geq 2000$ Ohm voltage $\leq 300$ 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

<b>Temperature coefficient</b>	+/- 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
<b>Repeat accuracy</b>	+/- 1 %FS for output +/-0.5 %FS for input
<b>Non-linearity</b>	+/- 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
<b>Output error</b>	+/- 1 %FS
<b>Output ripple</b>	<= 1 LSB
<b>Total error</b>	+/- 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
<b>Type of cable</b>	Shielded cable
<b>Insulation between channel and internal logic</b>	Photocoupler
<b>Supply</b>	External supply
<b>[Us] rated supply voltage</b>	24 V DC
<b>Supply voltage limits</b>	19.2...30 V
<b>Electrical connection</b>	1 removable screw terminal block
<b>Current consumption</b>	60 mA at 5 V DC internal 80 mA at 24 V DC external
<b>Net weight</b>	0.085 kg

## Environment

<b>Dielectric strength</b>	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
<b>Width</b>	23.5 mm
<b>Depth</b>	70 mm
<b>Height</b>	90 mm

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	7.446 cm
<b>Package 1 Width</b>	10.434 cm
<b>Package 1 Length</b>	12.419 cm
<b>Package 1 Weight</b>	170.5 g
<b>Unit Type of Package 2</b>	S03
<b>Number of Units in Package 2</b>	18
<b>Package 2 Height</b>	30.0 cm
<b>Package 2 Width</b>	30.0 cm
<b>Package 2 Length</b>	40.0 cm
<b>Package 2 Weight</b>	3.107 kg

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
---------------------------------	-----------------------

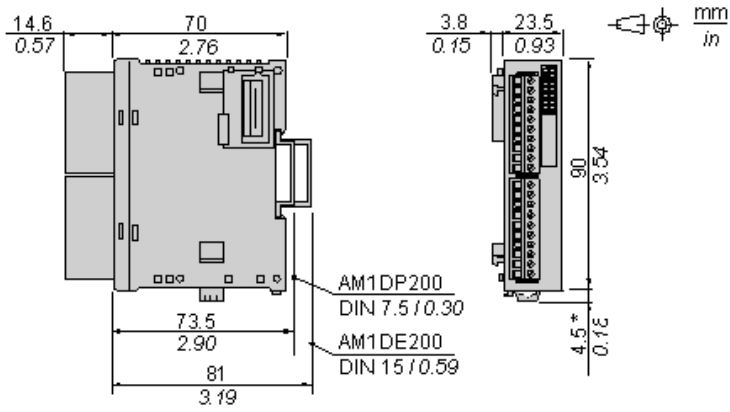
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
<b>Mercury free</b>	Yes
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<b>RoHS exemption information</b>	Yes
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>
<b>WEEE</b>	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
<b>PVC free</b>	Yes
<b>California proposition 65</b>	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

## Contractual warranty

<b>Warranty</b>	18 months
-----------------	-----------

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

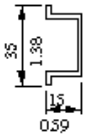
Dimensions



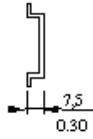
NOTE: \* 8.5 mm (0.33 in) when the clip-on lock is pulled out.

**DIN Rail Mounting**

AM1DE200  
 IEC/EN 60715



AM1DP200



AM1ED200



DZ5MB200

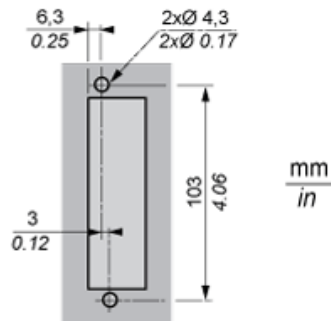
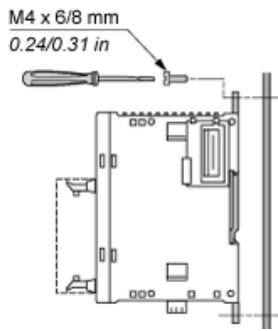


Rail depth	Catalogue part number
15 mm (0.59 in.)	AM1DE200
7,5 mm (0.30 in.)	AM1DP200

NOTE: Do not use AM1ED200 and DZ5MB200

Module Mounting on a Panel Surface

Mounting Hole Layout



**Wiring Requirements**

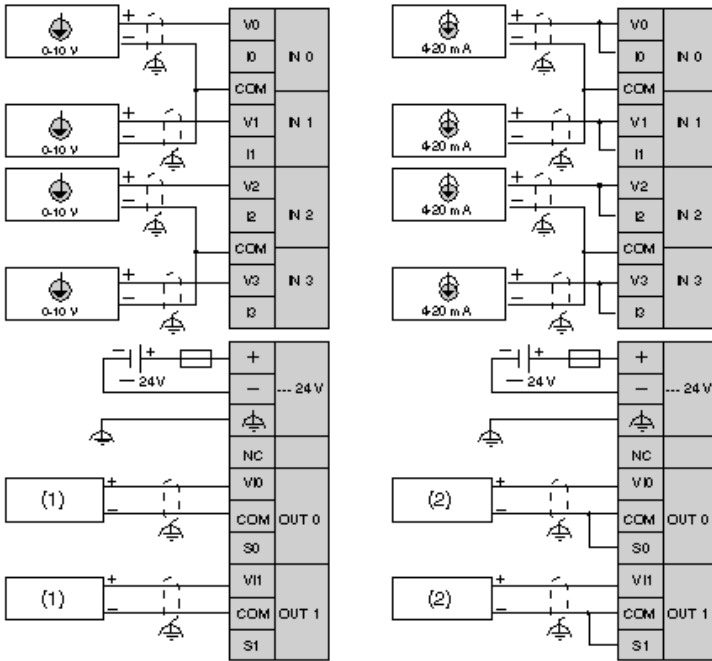
---

**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

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

**Wiring Diagram**



- (1) Voltage preactuator
- (2) Current preactuator

**Recommended replacement(s)**

TM2AMM6HT is replaced by the following product range:



**Modicon TM3**

Expansion I/O modules for Modicon M221, M241, M251 and M262

Products: 65