



### 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	<= 2 LSB

### Complementary

Range compatibility	Advantys OTB Twido
Analogue input resolution	12 bits
Analogue output resolution	12 bits
LSB value	2.5 mV voltage 4 µA current
Permissible continuous overload	13 V voltage 40 mA current
Input impedance	<= 250 MOhm current >= 1 Ohm voltage
Load type	Resistive
Load impedance ohmic	<= 300 Ohm current >= 2000 Ohm voltage
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 25 °C +/- 0.5 % of full scale 4...20 mA 25 °C +/- 0.9 % of full scale 0...10 V 25 °C +/- 0.9 % of full scale 4...20 mA 25 °C
Temperature coefficient	+/- 0.02 %FS/°C 0...10 V +/- 0.02 %FS/°C 4...20 mA +/-0.015 %FS/°C 0...10 V 0...10 V +/-0.015 %FS/°C 4...20 mA 4...20 mA
Repeat accuracy	+/- 1 %FS output +/-0.5 %FS input
Non-linearity	+/- 0.4 %FS current +/- 0.4 %FS voltage +/- 0.5 %FS current +/- 0.5 %FS voltage
Output error	+/- 1 %FS
Output ripple	<= 1 LSB
Total error	+/- 1.5 %FS current +/- 1.5 %FS voltage +/-1 %FS current current +/-1 %FS voltage voltage
Type of cable	Shielded cable
Insulation between channel and internal logic	Photocoupler
Supply	External supply

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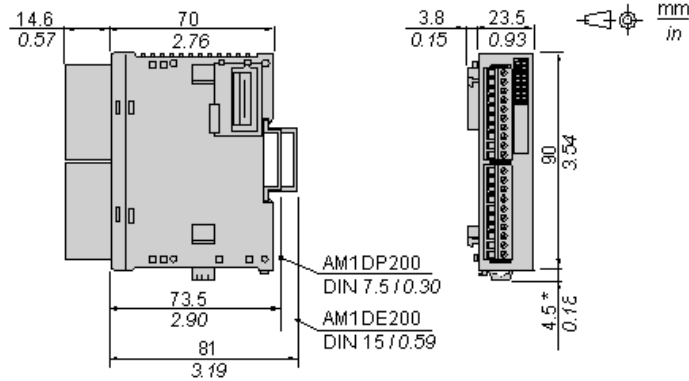
[Us] rated supply voltage	24 V DC
Supply voltage limits	19.2...30 V
Electrical connection	1 removable screw terminal block
Current consumption	60 mA 5 V DC internal 80 mA 24 V DC external
Product weight	0.085 kg

## 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
RoHS EUR status	Compliant
RoHS EUR conformity date	0910

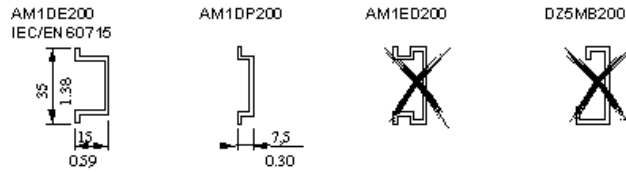
Analog Mixed I/O Module (6-channel, Voltage/Current)

Dimensions



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

DIN Rail Mounting

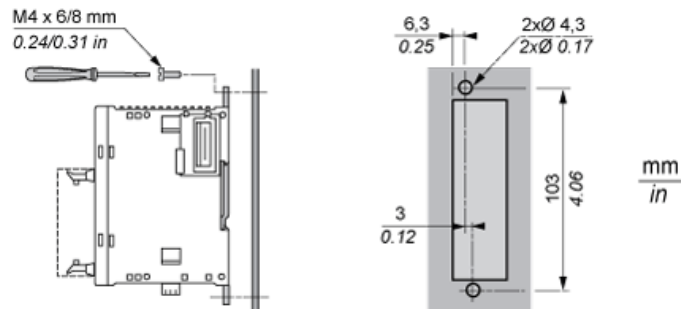


Rail depth	Catalogue part number
15 mm (0.59 in.)	AM1DE200
7,5 mm (0.30 in.)	AM1DP200

NOTE: Do not use AM1ED200 and DZ5MB200









Module Mounting on a Panel Surface

Mounting Hole Layout



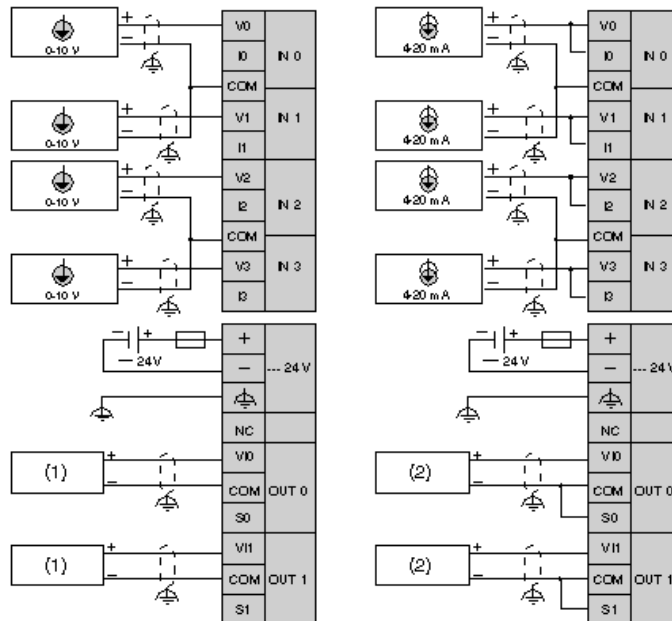
Wiring Requirements

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