

### Main

Range of product	Modicon M171/M172
Product or component type	Programmable controllers
Product specific application	HVAC and pumping solution
Variant	Programmable
Number of inputs/outputs	42
Discrete input number	12
Discrete output number	2 for relay outputs SPST with same common 2 for relay outputs SPST with independent common 2 for relay outputs SPDT with same common 3 for relay outputs SPST with independent common
Discrete output current	1 A for relay SPDT 3 A for relay SPST
Analogue input number	12 configurable by pair

### Complementary

Number of port	1 CAN port - screw terminal block 1 USB type A - USB type A female 1 USB type mini B - USB device port Mini-B 2 RS485 - screw terminal block (Modbus serial link or BACnet MS/TP) 1 Ethernet - RJ45 (Modbus TCP and BACnet IP with webserver)
Input/Output number	12 analog input(s) 6 analog output(s) 12 digital input(s) 12 digital output(s)
Discrete input logic	Sink or source (positive/negative)
Discrete input voltage	24 V AC/DC
Discrete input current	2.5 mA
Input impedance	20 kOhm
Analogue input type	Direct input Impedance 0...1500 hOhm Impedance 0...300 daOhm Voltage 0...5 V (absolute or ratiometric)

	Temperature probe, PTC - 55...150 °C - resolution: 0.1 °C Temperature probe, NTC - 50...110 °C - resolution: 0.1 °C (extended) Temperature probe, NTC - 40...150 °C - resolution: 0.1 °C Temperature probe, Pt 1000 - 200...850 °C - resolution: 0.1 °C Voltage 0...10 V Current 0...20 mA/4...20 mA
Analogue output number	4 voltage, range: 0...10 V 2 voltage/current, range: 4...20 mA or 0...10 V or PWM (2 kHz)
Sensor power supply	5 V DC at 50 mA (supplied by the controller) 24 V DC at 150 mA (supplied by the controller)
[Us] rated supply voltage	24 V AC (+/- 10 %) 20...38 V DC
Power consumption in W	15 W at 24 V AC/DC
Realtime clock	Built-in realtime clock at -20...60 °C
Display type	Without display
Overvoltage category	II
Local signalling	1 LED red programmable 1 LED yellow programmable 1 LED green programmable 1 LED green power
Mounting support	DIN rail Panel mounting with accessory
Width	144 mm
Height	110 mm
Depth	60.5 mm
Product weight	0.385 kg

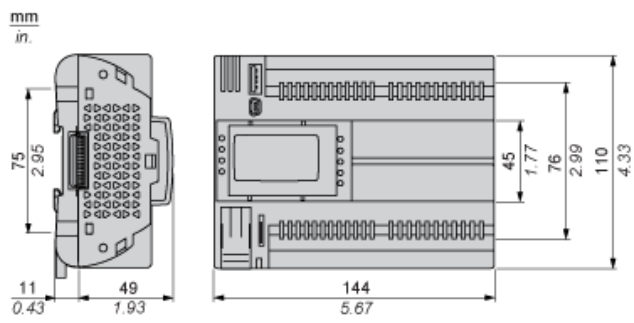
## Environment

Directives	2006/95/EC - low voltage directive 1907/2006/EC - REACH directive 2011/65/EU - RoHS directive 86/188/EEC - physical agents (noise) directive
Standards	EN/IEC 60730
Product certifications	CE CSA (pending) cURus (pending) EAC (pending)
Ambient air temperature for operation	-20...60 °C conforming to UL 60730-1 -20...65 °C with derating conforming to UL 60730-1
Ambient air temperature for storage	-30...70 °C
Relative humidity	5...95 % non-condensing
IP degree of protection	IP20
Pollution degree	2

## Offer Sustainability

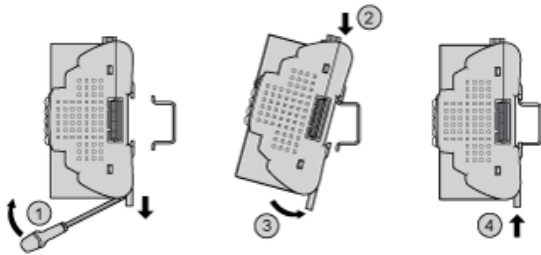
Sustainable offer status	Not Green Premium product
RoHS (date code: YYWW)	Compliant - since 1530 - Schneider Electric declaration of conformity <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold <a href="#">Reference not containing SVHC above the threshold</a>

Dimensions

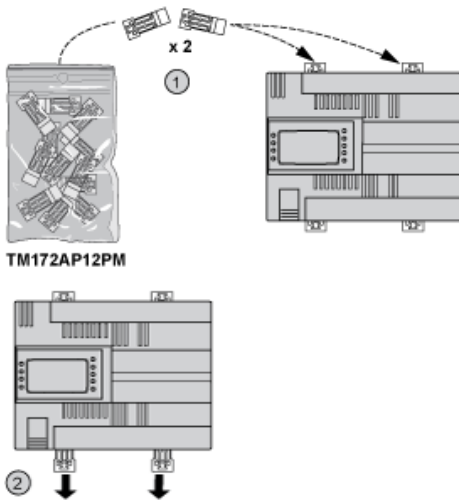


Mounting and Clearance

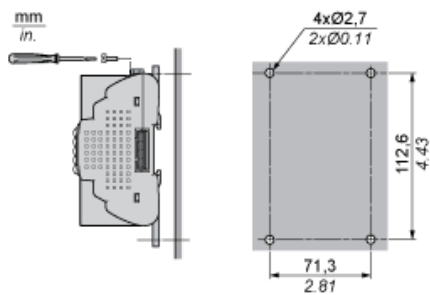
DIN Rail Mounting



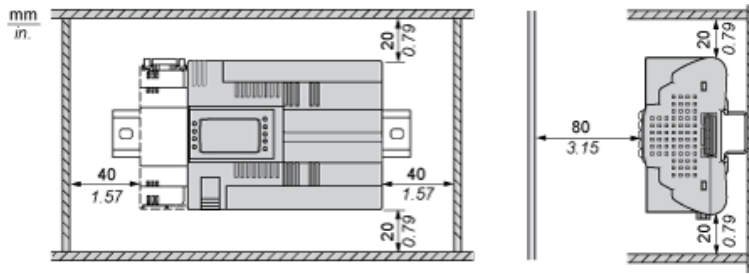
Clips for Panel Mounting



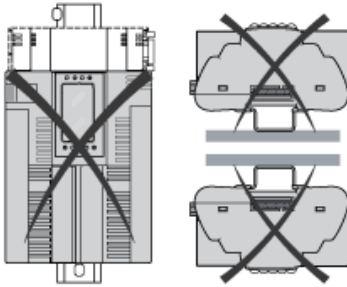
Panel Mounting



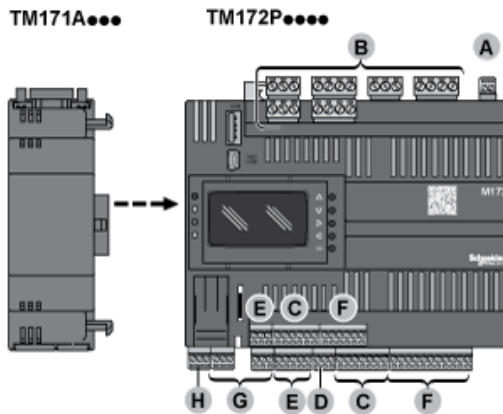
## Clearance



## Incorrect Mounting Position



## Assembling a Module



## Wiring Sections and Torque

A, C, D, E, F, G, H

mm in.								
mm <sup>2</sup>	0.14...1.5	0.14...1.5	0.25...1.5	0.25...0.5	2 x 0.08...0.5	2 x 0.08...0.75	2 x 0.25...0.34	2 x 0.5
AWG	26...16	26...16	22...16	22...20	2 x 28...20	2 x 28...20	2 x 24...22	2 x 20

 Ø 2.5 mm (0.1 in.)	 N·m 0.22...0.25 lb·in 1.95...2.21
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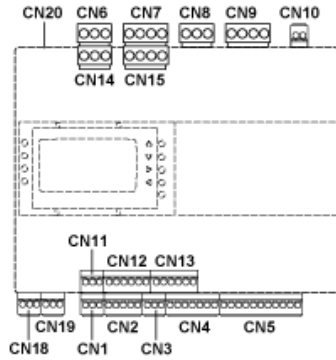
B

mm in.								
mm <sup>2</sup>	0.2...2.5	0.2...2.5	0.25...2.5	0.25...2.5	2 x 0.2...1	2 x 0.2...1.5	2 x 0.25...1	2 x 0.5...1.5
AWG	24...14	24...14	22...14	22...14	2 x 24...18	2 x 24...16	2 x 22...18	2 x 20...16

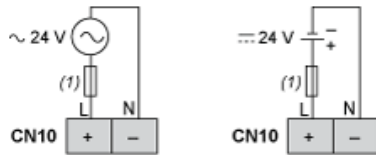
 Ø 3.5 mm (0.14 in.)	 N·m 0.5...0.6 lb·in 4.42...5.31
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Connections and Schema

Logic Controller Connectors

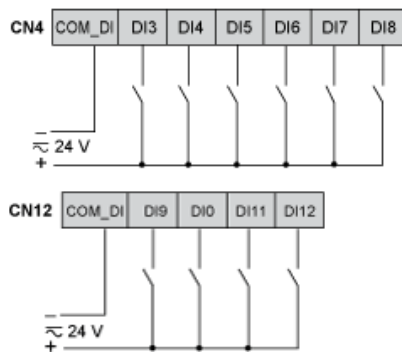


Power Supply



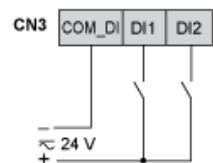
(1) Type T fuse 2 A

Digital Inputs



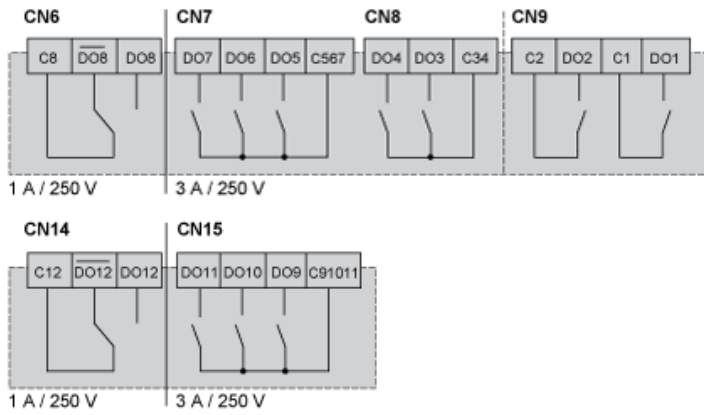
The COM\_DI terminals are not connected internally.

Fast Digital Inputs



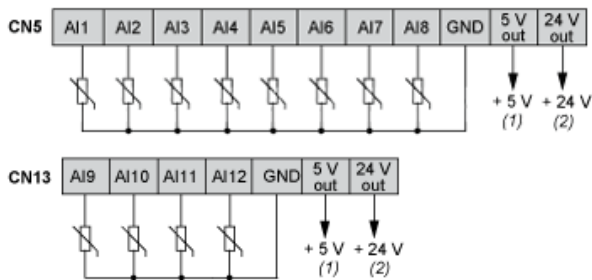
Pulse / Frequency counter up to 2 kHz.

## Digital Outputs



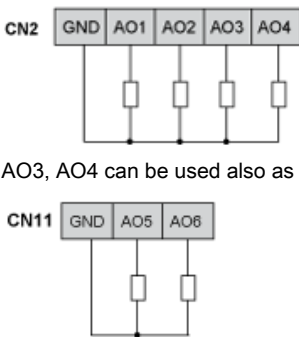
The Cx terminals are not connected internally.

## Analog Inputs



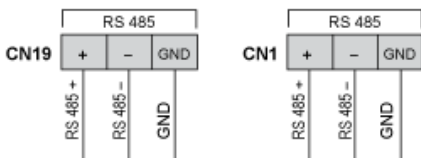
- (1) (CN5 + CN13) Max. current: 50 mA.
- (2) (CN5 + CN13) Max. current: 150 mA.

## Analog Outputs



AO3, AO4 can be used also as PWM generator, up to 2 kHz.

## RS 485 - Modbus SL or BACnet MS/TP



Apply 120 Ω terminal resistance.

# CAN Expansion Bus

