



Main

Range of product	Modicon M171/M172
Product or component type	Programmable controllers
Product specific application	HVAC and pumping solution
Variant	Programmable
Total inputs/outputs	42
Discrete input number	12
Discrete output number	2 for relay outputs SPST with same common 2 for solid state, isolated SSR with independent common 2 for relay outputs SPDT with same common 3 for relay outputs SPST with independent common
Discrete output current	0.5 A for solid state, isolated 1 A for relay SPDT 3 A for relay SPST
Analogue input number	12 configurable by pair
Analogue output number	4 voltage, range: 0...10 V 2 voltage/current, range: 4...20 mA or 0...10 V or PWM (2 kHz)

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

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

Analogue input type	impedance 0...1500 hOhm impedance 0...300 daOhm direct input NTC temperature probe - 50...110 °C - resolution: 0.1 °C (extended) voltage 0...10 V NTC temperature probe - 40...150 °C - resolution: 0.1 °C current 0...20 mA/4...20 mA PTC temperature probe - 55...150 °C - resolution: 0.1 °C voltage 0...5 V (absolute or ratiometric) Pt 1000 temperature probe - 200...850 °C - resolution: 0.1 °C
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 +/- 10 % AC 20...38 V DC
Power consumption in W	15 W at 24 V AC/DC
Realtime clock	Built-in clock at -20...55 °C
Display type	Backlit LCD - 128 x 64 pixels
Overvoltage category	II
Local signalling	1 LED (red)programmable: 1 LED (yellow)programmable: 1 LED (green)programmable: 1 LED (green)power:
Mounting support	Panel mounting with accessory DIN rail
Width	144 mm
Height	110 mm
Depth	60.5 mm
Net weight	0.385 kg

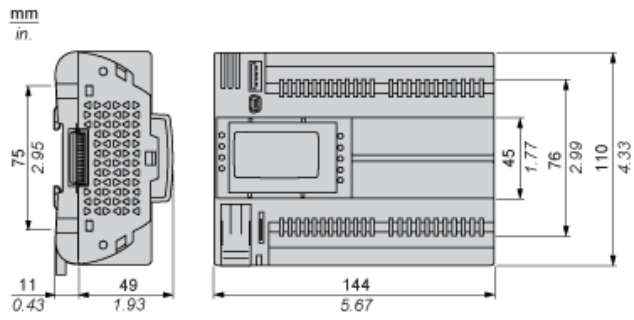
Environment

Directives	1907/2006/EC - REACH directive 2006/95/EC - low voltage directive 86/188/EEC - physical agents (noise) directive 2011/65/EU - RoHS directive
Standards	EN/IEC 60730
Product certifications	CURus (pending) CSA (pending) CE EAC (pending)
Ambient air temperature for operation	-20...55 °C 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

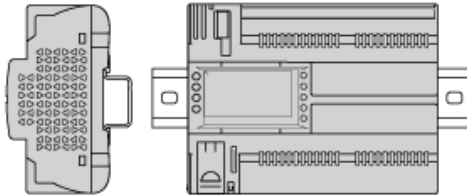
Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Dimensions



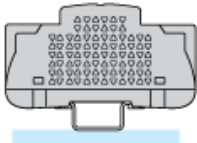
Mounting Positions

Correct Mounting Position

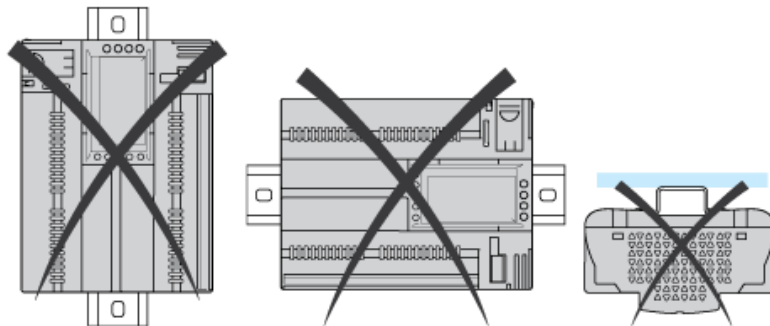


Acceptable Mounting Position

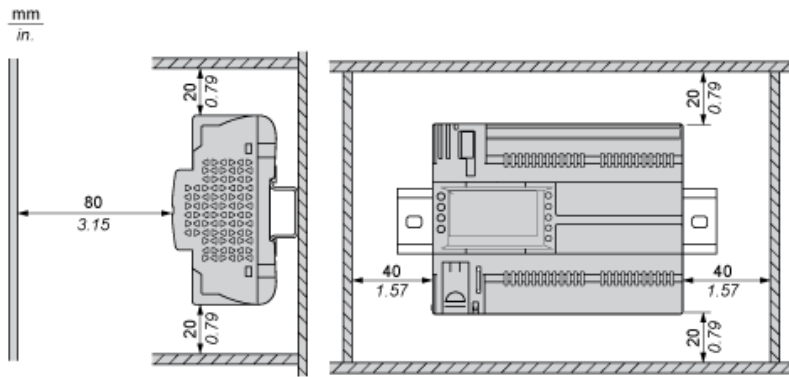
Controller can be mounted horizontally upward with a temperature derating (maximum ambient temperature: 60 °C (140 °F)).



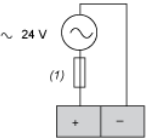
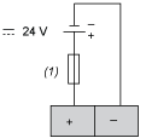
Incorrect Mounting Position



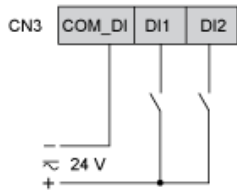
Clearance



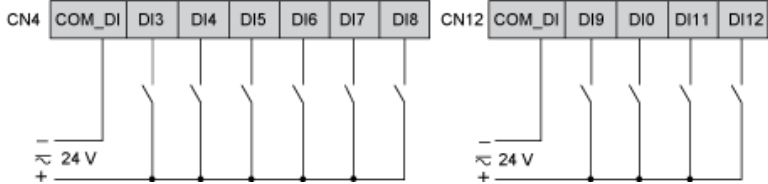
Power Supply

24 Vac	24 Vdc
	

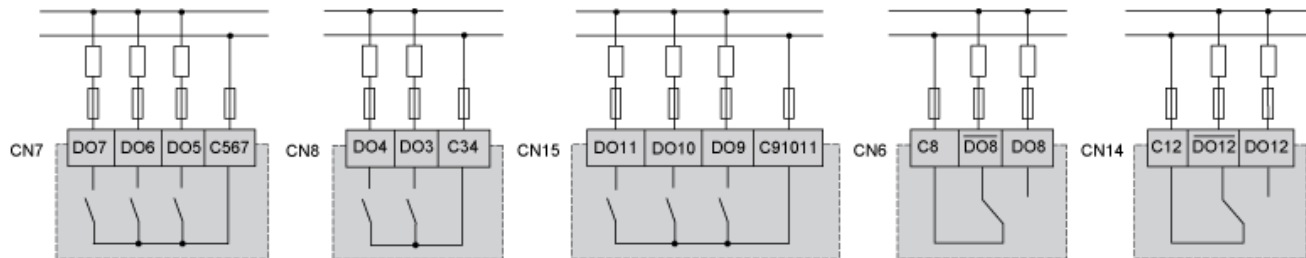
CN3 Fast Digital Inputs



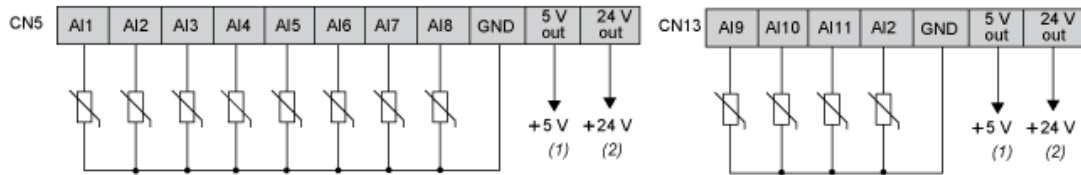
CN4, CN12 Digital Inputs



CN7, CN8, CN15, CN6, CN14 High Voltage Relay SPST Digital Output



CN5, CN13 Analog Inputs



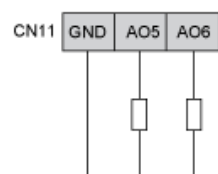
(1) (CN5 + CN13) Max. current : 50 mA.

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

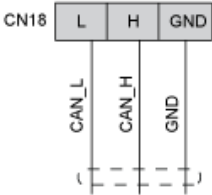
CN2, CN11 Analog Outputs



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



CN18 CAN Expansion Bus Port



CN19, CN1 CAN Expansion Bus Port

