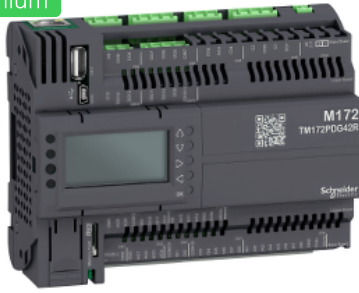


# Product datasheet

Specifications



## Modicon M172 Performance Display 42 I/Os, Ethernet, Modbus

TM172PDG42R

### 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 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
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
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

<b>[Us] rated supply voltage</b>	24 V +/- 10 % AC 20...38 V DC
<b>Power consumption in W</b>	15 W at 24 V AC/DC
<b>Realtime clock</b>	Built-in clock at -20...60 °C
<b>Display type</b>	Backlit LCD - 128 x 64 pixels
<b>Overvoltage category</b>	II
<b>Local signalling</b>	1 LED (red) for programmable 1 LED (yellow) for programmable 1 LED (green) for programmable 1 LED (green) for power
<b>Mounting support</b>	Panel mounting with accessory DIN rail
<b>Width</b>	144 mm
<b>Height</b>	110 mm
<b>Depth</b>	60.5 mm
<b>Net weight</b>	0.385 kg

## Environment

<b>Directives</b>	2006/95/EC - low voltage directive 86/188/EEC - physical agents (noise) directive
<b>Standards</b>	EN/IEC 60730
<b>Product certifications</b>	CE EAC (pending) CSA (pending) cURus (pending)
<b>Ambient air temperature for operation</b>	-20...60 °C conforming to UL 60730-1 -20...65 °C with derating conforming to UL 60730-1
<b>Ambient air temperature for storage</b>	-30...70 °C
<b>Relative humidity</b>	5...95 % non-condensing
<b>IP degree of protection</b>	IP20
<b>Pollution degree</b>	2
<b>Operating altitude</b>	0...2000 m

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Weight</b>	446.0 g
<b>Package 1 Height</b>	13.2 cm
<b>Package 1 width</b>	9 cm
<b>Package 1 Length</b>	18.6 cm
<b>Unit Type of Package 2</b>	S02
<b>Number of Units in Package 2</b>	6
<b>Package 2 Weight</b>	2.973 kg
<b>Package 2 Height</b>	15 cm
<b>Package 2 width</b>	30 cm
<b>Package 2 Length</b>	40 cm

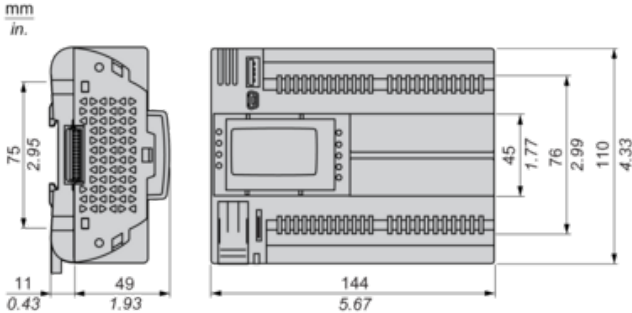
## Offer Sustainability

<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>RoHS exemption information</b>	Yes
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<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

## Contractual warranty

<b>Warranty</b>	18 months
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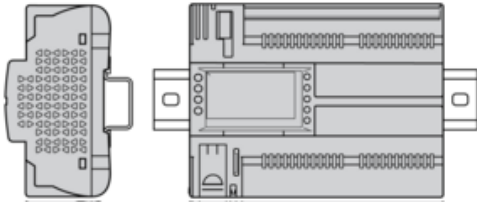
Dimensions



**Mounting Positions**

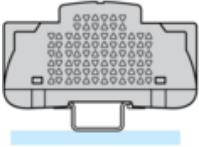
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**Correct Mounting Position**

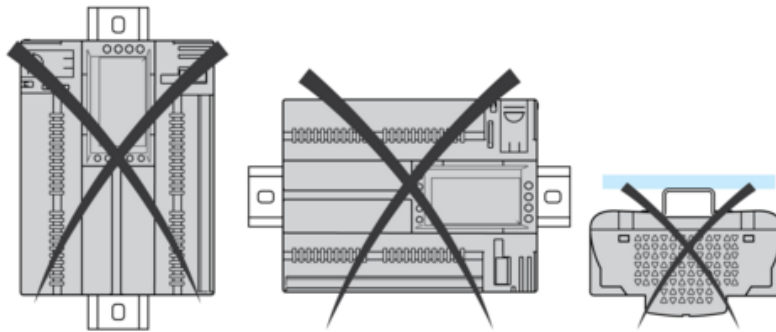


**Acceptable Mounting Position**

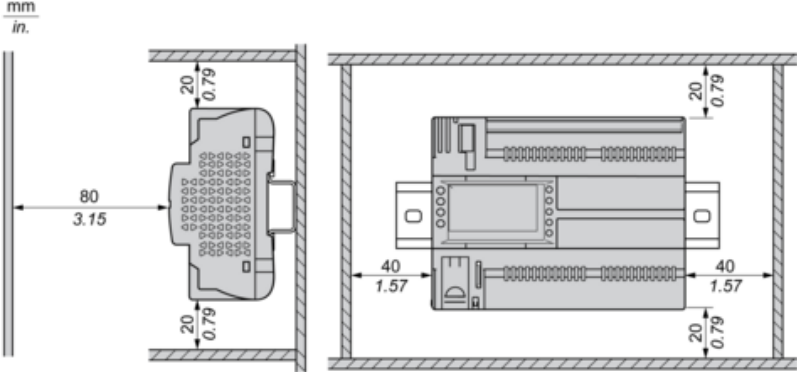
Controller can be mounted horizontally upward with a temperature derating (maximum ambient temperature: 60 °C (140 °F)).





**Incorrect Mounting Position**



Clearance

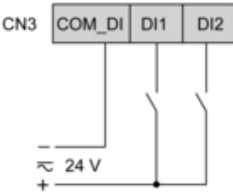


**Power Supply**

24 Vac	24 Vdc
	
<p>(1) Type T fuse 2 A</p>	

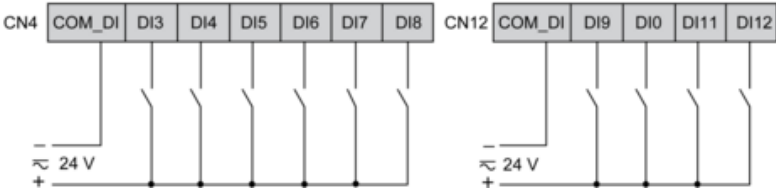
**CN3 Fast Digital Inputs**

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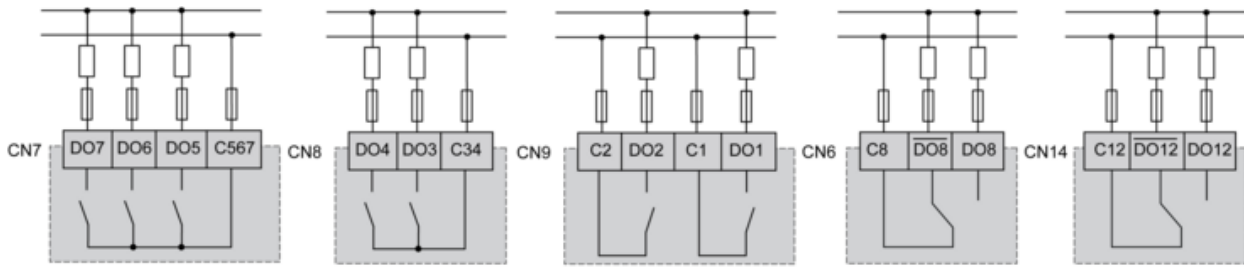
**CN4, CN12 Digital Inputs**

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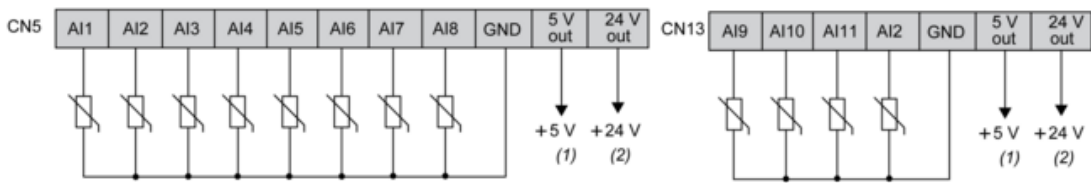
## CN7, CN8, CN9, CN6, CN14 High Voltage Relay SPST Digital Output

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CN5, CN13 Analog Inputs

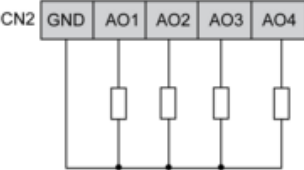
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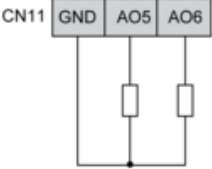
- (1) (CN5 + CN13) Max. current : 50 mA.
- (2) (CN5 + CN13) Max. current : 150 mA.

**CN2, CN11 Analog Outputs**

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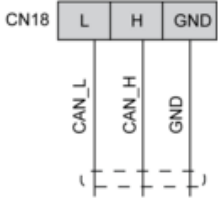


AO3, AO4 can be used also as PWM generator, up to 2kHz.



**CN18 CAN Expansion Bus Port**

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**CN19, CN1 CAN Expansion Bus Port**

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