Product data sheet

Specifications

Controller, Modicon M171/M172/ M173, Modicon M172, performance, display, 42 IO, Ethernet, Modbus

TM172PDG42R

Product availability: Non-Stock - Not normally stocked in distribution facility

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 relay outputs SPST with same common 2 relay outputs SPST with independent common 2 relay outputs SPDT with same common 3 relay outputs SPST with independent common 3 relay outputs SPST with same common
Discrete output current	1 A relay SPDT 3 A relay SPST
Analogue input number	12 configurable by pair
Analogue output number	4 voltage 0...10 V 2 voltage/current 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 6 analog output 12 digital input 12 digital output
Discrete input logic	Sink or source (positive/negative)
Discrete input voltage	24 V AC/DC
Discrete input current	2.5 mA
Input impedance	10 kOhm
Analogue input type	impedance 0...1500 hOhm impedance 0...300 daOhm direct input NTC temperature probe - 50...110 °C 0.1 °C extended) voltage 0...10 V NTC temperature probe - 40...150 °C 0.1 °C current 0...20 mA/4...20 mA PTC temperature probe - 55...150 °C 0.1 °C voltage 0...5 V absolute or ratiometric) Pt 1000 temperature probe - 200...850 °C 0.1 °C
Sensor power supply	5 V DC 50 mA supplied by the controller 24 V DC 150 mA supplied by the controller

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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

[Us] rated supply voltage	24 V +/- 10 % AC 20...38 V DC
Power consumption in W	15 W 24 V AC/DC
Realtime clock	Built-in clock at -4…140 °F (-20…60 °C)
Display type	Backlit LCD - 128 x 64 pixels
Overvoltage category	II
Local signalling	1 LED (red) for programmable 1 LED (yellow) for programmable 1 LED (green) for programmable 1 LED (green) for power
Mounting Support	Panel mounting with accessory DIN rail
Width	5.7 in (144 mm)
Height	4.3 in (110 mm)
Depth	2.4 in (60.5 mm)
Product Weight	0.849 lb(US) (0.385 kg)

Environment

Directives	2006/95/EC - low voltage directive 86/188/EEC - physical agents (noise) directive
Standards	EN/IEC 60730 UL94 (material V0)
Product Certifications	CE EAC CSA cURus
Ambient air temperature for operation	-4…140 °F (-20…60 °C) UL 60730-1 -4…149 °F (-20…65 °C) with derating UL 60730-1
Ambient Air Temperature for Storage	-22…158 °F (-30…70 °C)
Relative humidity	5…95 % non-condensing
IP degree of protection	IP20
Pollution degree	2
Operating altitude	0...6561.68 ft (0...2000 m)

Ordering and shipping details

Category	US1PC1222537
Discount Schedule	PC12
GTIN	3606480894886
Returnability	No
Country of origin	IT

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	5.197 in (13.200 cm)
Package 1 Width	3.543 in (9.000 cm)
Package 1 Length	7.323 in (18.600 cm)

Package weight(Lbs)	14.850 oz (421.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	6
Package 2 Height	5.906 in (15.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	6.003 lb(US) (2.723 kg)

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained

How we assess product sustainability

Environmental footprint

Total lifecycle Carbon footprint	**660 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**37 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0.2 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**622 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**1 kg CO2 eq.**
Environmental Disclosure	**Product Environmental Profile**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**No**
SCIP Number	**57c874b5-a29e-477a-8453-548b74a04548**
EU RoHS Directive	**Compliant By Exemption**
REACh Regulation	**Reference contains Substances of Very High Concern above the threshold**
California proposition 65	**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 www.P65Warnings.ca.gov**

Use Longer

Lifetime extension

Repair	**No**
Upgradeability	**Yes**

Use Again

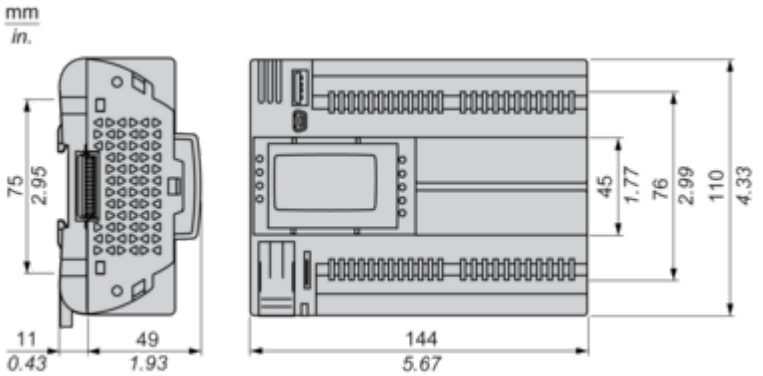
Repack and remanufacture

Recyclability potential, in %	**0**
Circularity Profile	**End of Life Information**
Removable battery	**Yes**
Take-back	**No**

WEEE Label	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

Dimensions Drawings

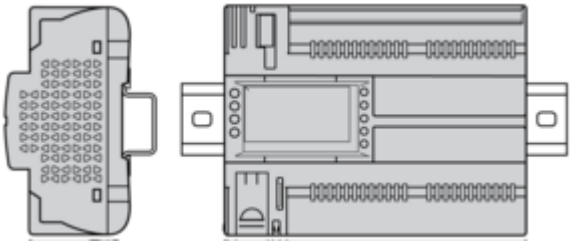
Dimensions



Mounting and Clearance

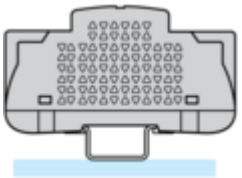
Mounting Positions

Correct Mounting Position

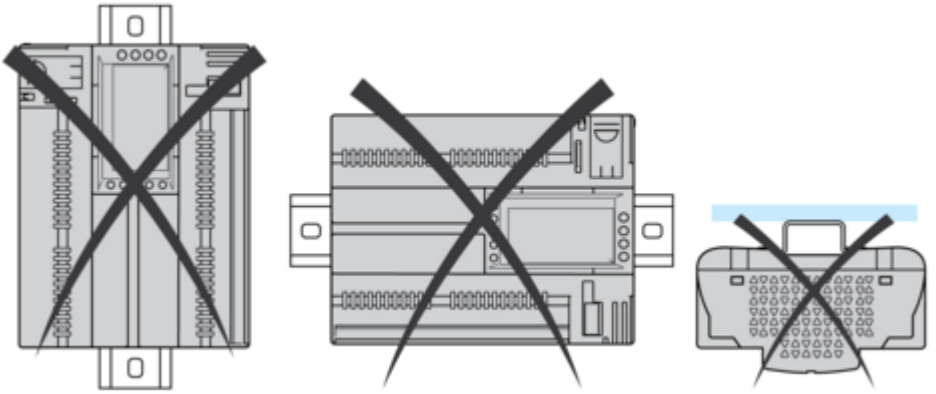


Acceptable Mounting Position

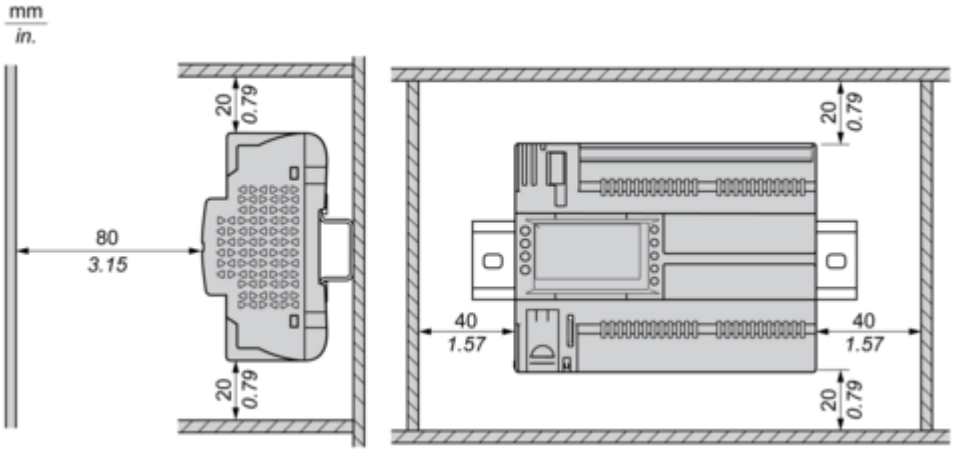
Controller can be mounted horizontally upward with a temperature derating (maximum ambient temperature: 60 °C (140 °F)).



Incorrect Mounting Position

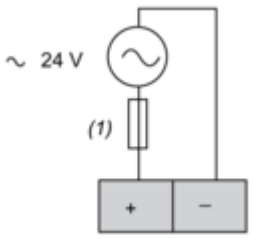
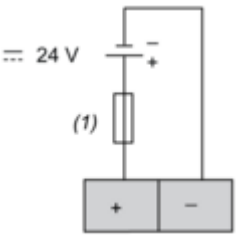


Clearance

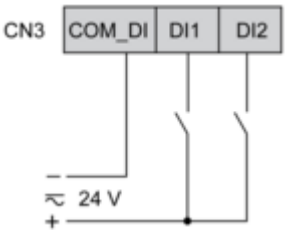


Connections and Schema

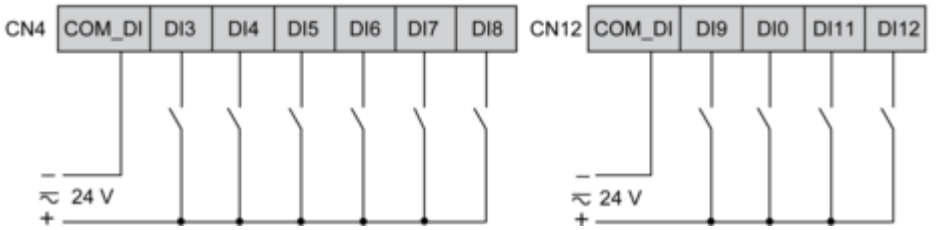
Power Supply

24 Vac	24 Vdc
	
(1) Type T fuse 2 A	

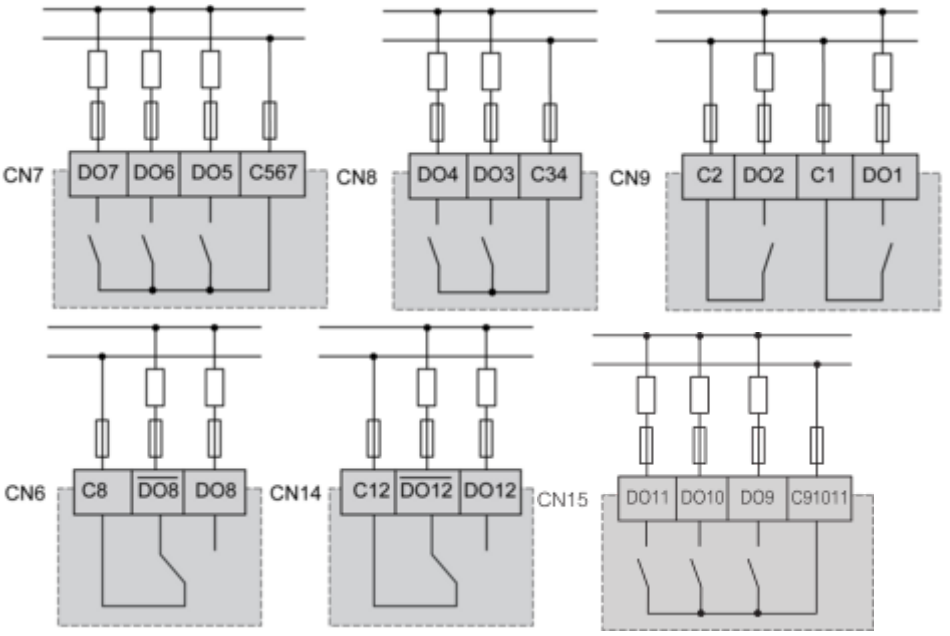
CN3 Fast Digital Inputs



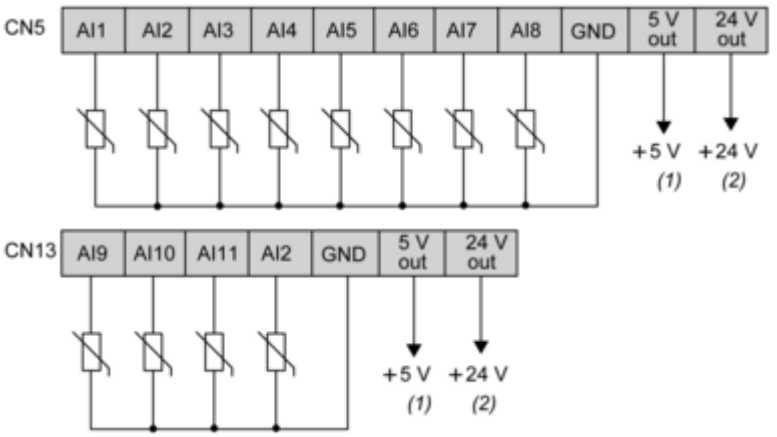
CN4, CN12 Digital Inputs



CN7, CN8, CN9, CN6, CN14, CN15 High Voltage Relay SPST Digital Output

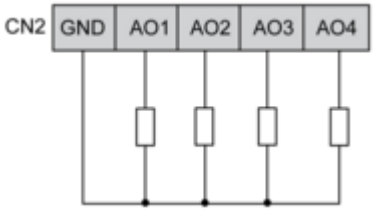


CN5, CN13 Analog Inputs

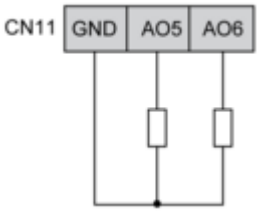


(1) (CN5 + CN13) Max. current : 50 mA.
(2) (CN5 + CN13) Max. current : 150 mA.

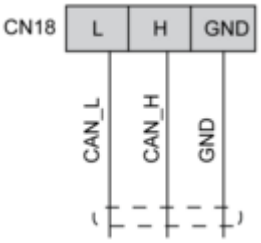
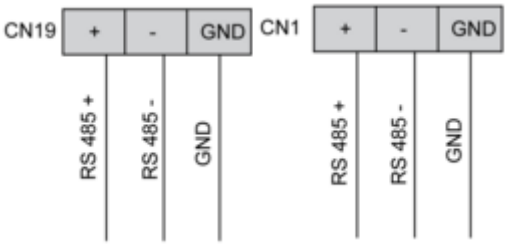
CN2, CN11 Analog Outputs



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



CN18 CAN Expansion Bus Port



CN19, CN1 CAN Expansion Bus Port