

Product datasheet

Specifications



Controller, Modicon M171/M172/ M173, performance display 28 IO, Modbus, solid state relay

TM172PDG28S

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	28
Discrete input number	8
Discrete output number	1 for relay outputs SPDT with independent common 3 for relay outputs SPST with same common 2 for relay outputs SPST with same common 2 for solid state, isolated SSR 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	8 configurable by pair
Analogue output number	2 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	8 digital input(s) 8 analog input(s) 4 analog output(s) 8 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	10 kOhm
Analogue input type	impedance 0...1500 hOhm impedance 0...300 daOhm 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

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 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) for programmable 1 LED (yellow) for programmable 1 LED (green) for programmable 1 LED (green) for power
Mounting support	DIN rail Panel mounting with accessory
Width	144 mm
Height	110 mm
Depth	60.5 mm
Product weight	0.3 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	EAC cURus CSA CE
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
Operating altitude	0...2000 m

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	9.0 cm
Package 1 Width	13.5 cm
Package 1 Length	18.6 cm
Package 1 Weight	392.0 g
Unit Type of Package 2	S02
Number of Units in Package 2	6
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	2.755 kg

Contractual warranty

Warranty (in months)	18
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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	2c365b3a-5b0a-48fd-acc7-751c89a723a2
EU RoHS Directive	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold

Use Longer



Lifetime extension

Repair	No
Updatability	Yes

Use Again

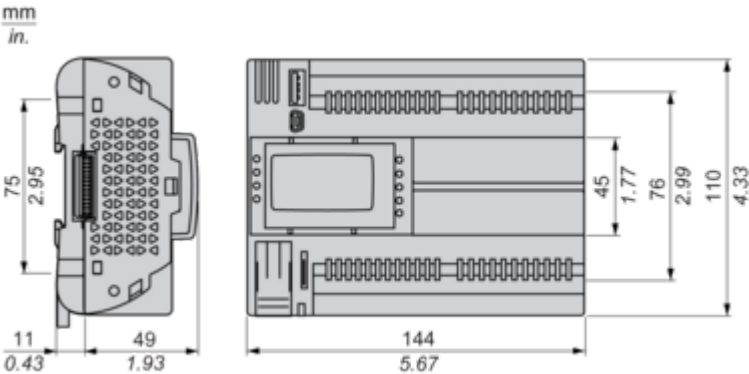


Repack and remanufacture

Recyclability potential, in %	0
End of life manual availability	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

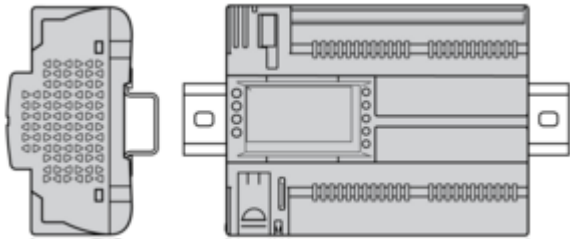
Dimensions



Mounting and Clearance

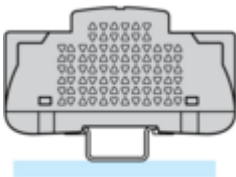
Mounting Positions

Correct Mounting Position

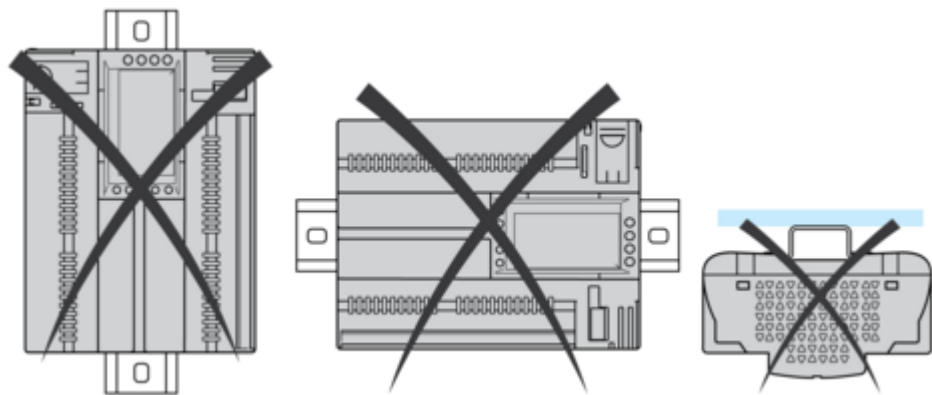


Acceptable Mounting Position

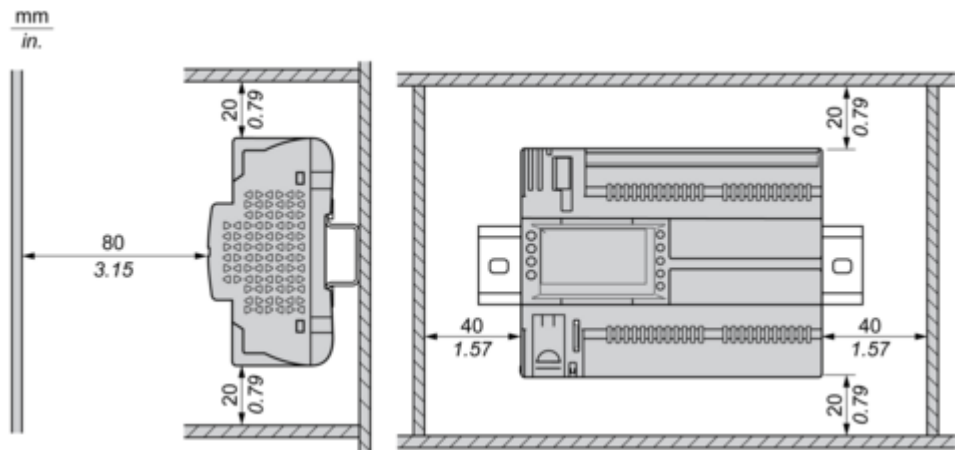
Controller can be mounted horizontally upward with a temperature derating (maximum ambient temperature: 60 °C (140 °F)).



Incorrect Mounting Position

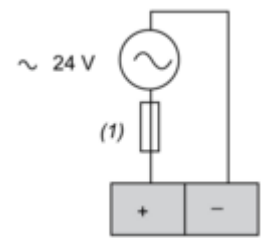
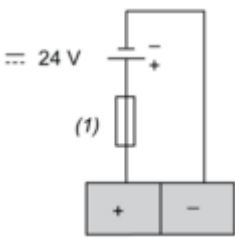


Clearance

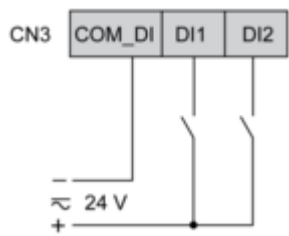


Connections and Schema

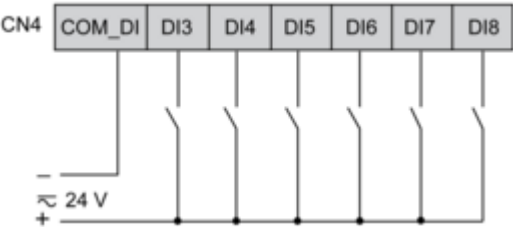
Power Supply

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

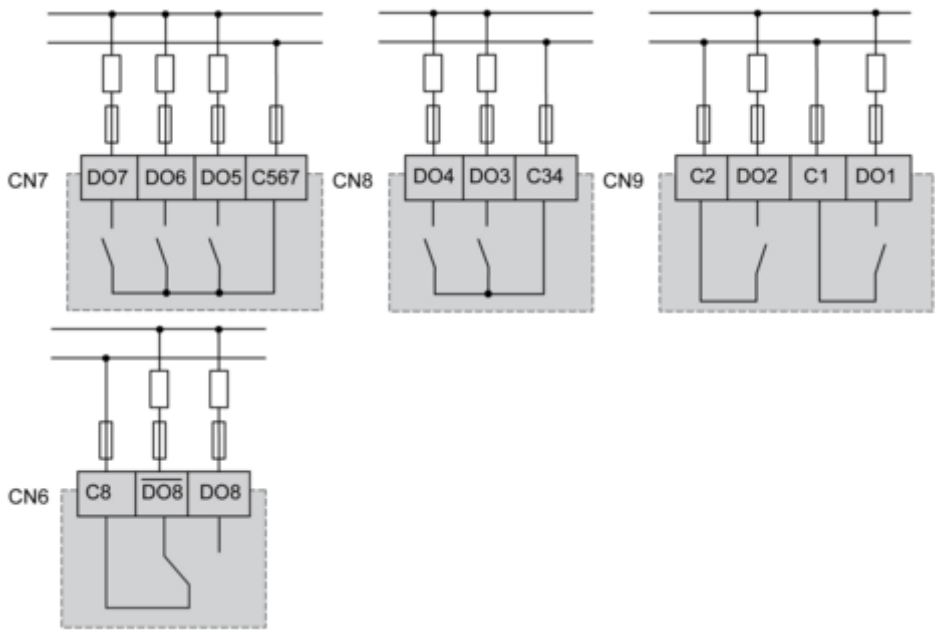
CN3 Fast Digital Inputs



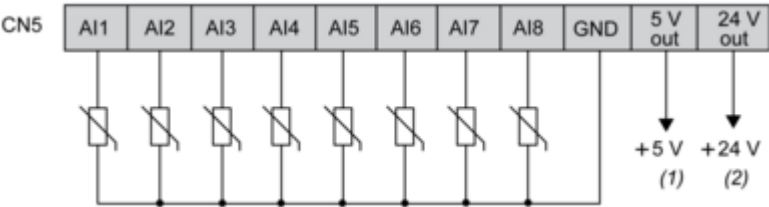
CN4 Digital Inputs



CN7, CN8, CN9, CN6 High Voltage Relay SPST / Solid-State Relay Digital Outputs

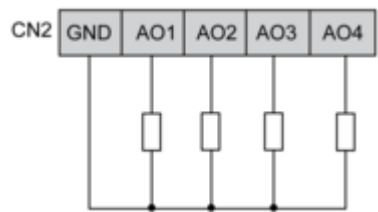


CN5 Analog Inputs



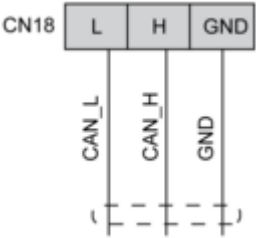
- (1) Max. current : 50 mA.
(2) Max. current : 150 mA.

CN2 Analog Outputs

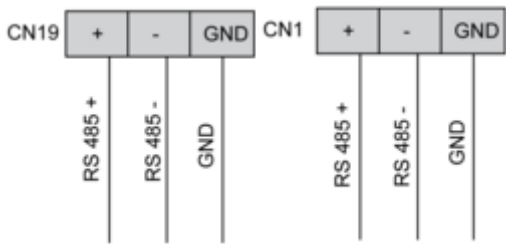


AO3, AO4 can be used also as PWM generator, up to 2kHz.

CN18 CAN Expansion Bus Port



CN19, CN1 CAN Expansion Bus Port



Technical Illustration

Dimensions

