

# Product datasheet

Specifications



## Modicon M172 Performance Display 42 I/Os, Eth, Isolated

TM172PDG42RI

EAN Code: 3606489729523

### Main

Range of product	Modicon M171/M172
Product or component type	Programmable controllers
Product specific application	HVAC control
Variant	Programmable
Total inputs/outputs	42
Discrete input number	12
Discrete output number	2 for relay outputs SPDT with independent common 3 for relay outputs SPST with same common 5 for relay outputs SPST with same common 2 for relay outputs SPST with independent common
Discrete output current	3 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	10 kOhm
Analogue input type	impedance 0...1500 hOhm - resolution: 1 hOhm at 10 kOhm impedance 0...300 daOhm - resolution: 1 daOhm at 2 kOhm NTC 103AT-2 Beta 3435 temperature probe - 50...110 °C - resolution: 0.1 °C at 10 kOhm voltage 0...10 V - resolution: 1 digit at > 10 kOhm NTC NK103 Beta 3977 temperature probe - 40...137 °C - resolution: 0.1 °C at 10 kOhm (extended) current 0...20 mA/4...20 mA - resolution: 1 digit at < 150 Ohm PTC temperature probe - 55...150 °C - resolution: 0.1 °C at 2 kOhm voltage 0...5 V - resolution: 1 digit at > 20 kOhm (absolute or ratiometric) Pt 1000 temperature probe - 200...850 °C - resolution: 0.1 °C at 2 kOhm direct input at > 10 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

<b>Measurement accuracy</b>	NTC NK103 Beta 3977 - 40...+110 °C +/- 1 °C NTC NK103 Beta 3977 110...137 °C +/- 1.9 °C NTC 103AT-2 Beta 3435 - 50...110 °C +/- 1 °C PTC - 55...155 °C +/- 1.1 °C Pt 1000 - 200...-100 °C +/- 10 °C Pt 1000 - 100...-50 °C +/- 2.5 °C Pt 1000 - 50...100 °C +/- 1.5 °C Pt 1000 100...400 °C +/- 2.4 °C Pt 1000 400...850 °C +/- 10 °C 0...20 mA 0...4 mA +/- 2 % of full scale +/- 1 digit 0...20 mA 4...20 mA +/- 1 % of full scale +/- 1 digit 4...20 mA +/- 1 % of full scale +/- 1 digit 0...10 V +/- 1 % of full scale +/- 1 digit 0...5 V +/- 1 % of full scale +/- 1 digit HOhm 0...1500 hOhm +/- 8.5 hOhm DaOhm 0...300 daOhm +/- 2.5 daOhm
<b>Sensor power supply</b>	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>	14 W at 24 V AC/DC
<b>Realtime clock</b>	Built-in clock, clock drift <= 30 s/month at -20...65 °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>	2014/30/EU - electromagnetic compatibility 2014/35/EU - low voltage directive
<b>Standards</b>	CAN/CSA-E60730-1 CSA E60730-2-9 EN 60068-2-27 EN 60068-2-6 Fc EN 60730-1 EN 60730-2-9 UL 60730-1 UL 60730-2-9 IEC 61000-4-2 IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-5 IEC 61000-4-6 IEC 61000-4-11 UL94 (material V0)
<b>Product certifications</b>	EAC CE cURus CSA RCM
<b>Ambient air temperature for operation</b>	-20...65 °C conforming to UL 60730-1 -20...60 °C horizontal conforming to UL 60730-1
<b>Ambient air temperature for storage</b>	-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	13.500 cm
Package 1 Width	9.000 cm
Package 1 Length	19.000 cm
Package 1 Weight	450.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	6
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	2.960 kg
Unit Type of Package 3	P06
Number of Units in Package 3	96
Package 3 Height	75.000 cm
Package 3 Width	60.000 cm
Package 3 Length	80.000 cm
Package 3 Weight	57.360 kg

---

## Logistical informations

---

Country of origin	IT
-------------------	----

---

## Contractual warranty

---

Warranty	18 months
----------	-----------

---



## 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 621

Environmental Disclosure [Product Environmental Profile](#)

## Use Better

### Materials and Substances

Packaging made with recycled cardboard Yes

Packaging without single use plastic No

[EU RoHS Directive](#) Pro-active compliance (Product out of EU RoHS legal scope)

SCIP Number 8f4c3df8-131d-4e1b-95f3-4db4a374d0c1

REACH Regulation [REACH Declaration](#)

## Use Longer

### Lifetime extension

Updatability Yes

## Use Again

### Repack and remanufacture

Recyclability potential, in % 0

End of life manual availability [End of Life Information](#)

Removable battery Yes

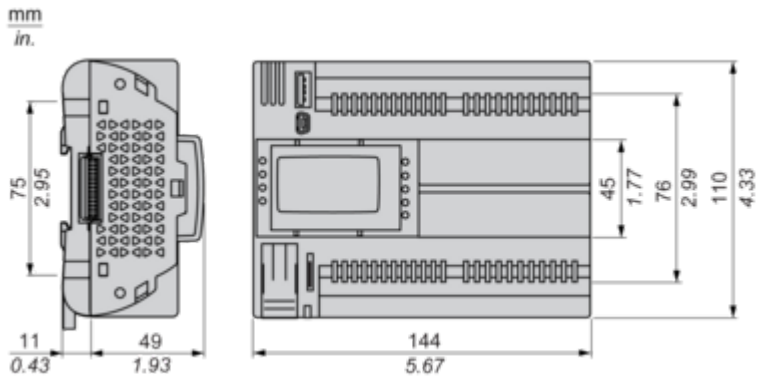
Take-back No

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

---

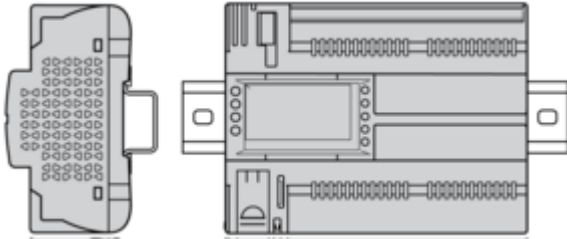


Mounting and Clearance

Mounting Positions

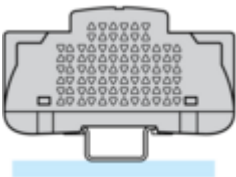
---

Correct Mounting Position

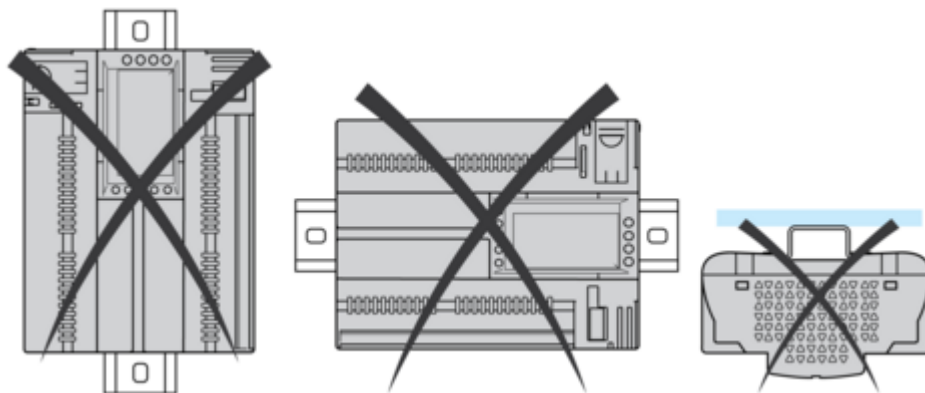


Acceptable Mounting Position

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

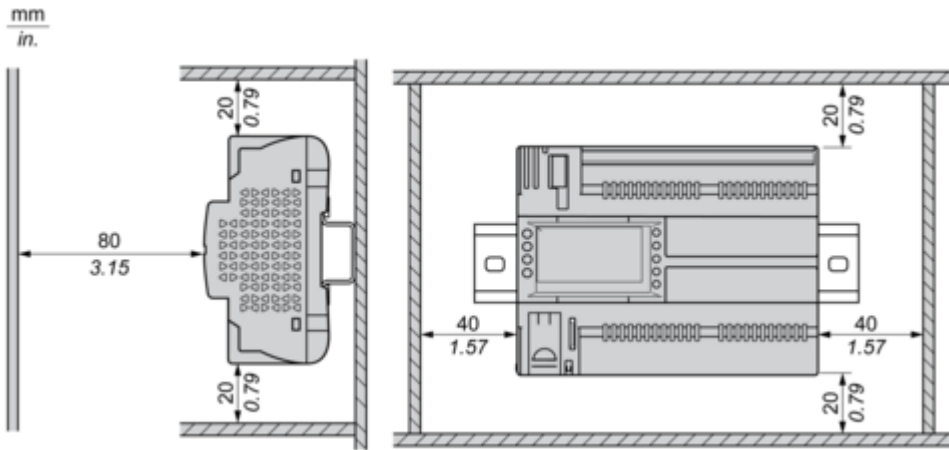


Incorrect Mounting Position



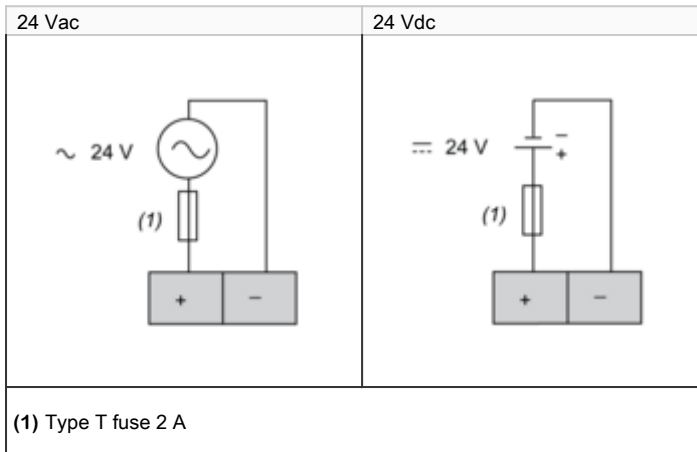
Clearance

---



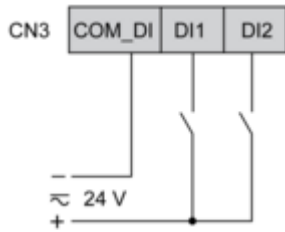
Connections and Schema

Power Supply



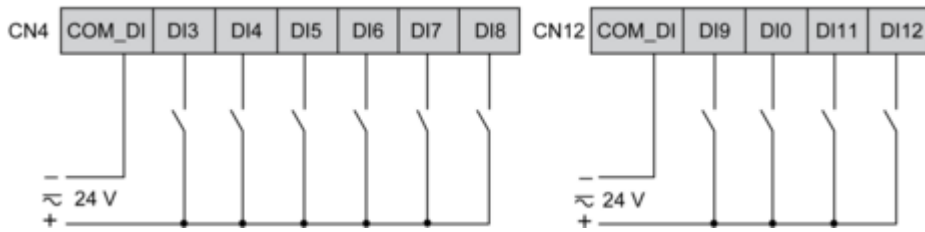
CN3 Fast Digital Inputs

---

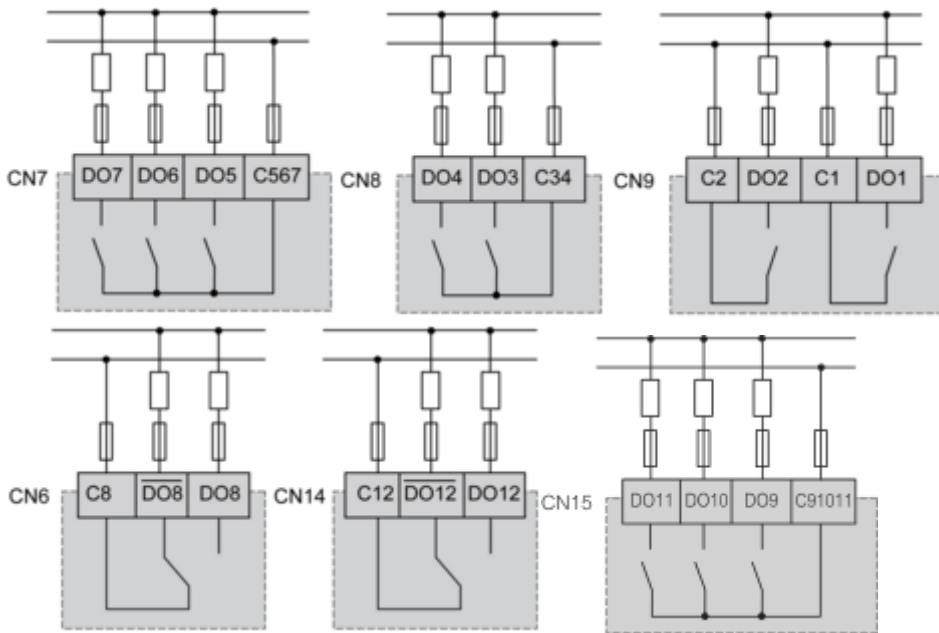


CN4, CN12 Digital Inputs

---

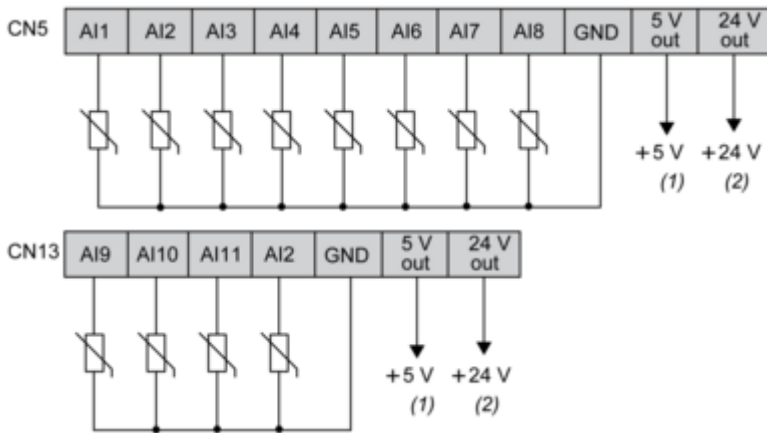


CN7, CN8, CN9, CN6, CN14, CN15 High Voltage Relay SPST Digital Output



**CN5, CN13 Analog Inputs**

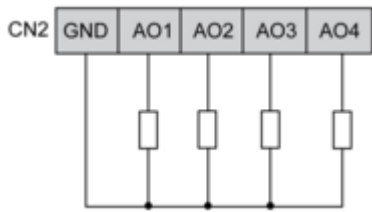
---



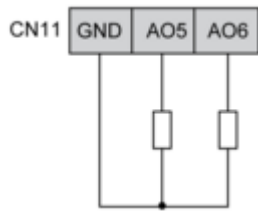
- (1) (CN5 + CN13) Max. current : 50 mA.
- (2) (CN5 + CN13) Max. current : 150 mA.

CN2, CN11 Analog Outputs

---

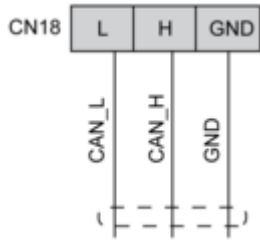


AO3, AO4 can be used also as PWM generator, up to 2kHz.



CN18 CAN Expansion Bus Port

---



CN19, CN1 CAN Expansion Bus Port

---

