

# Product datasheet

Specifications



## Modicon M172 Performance Display 18 I/Os, Ethernet, Modbus, Solid State Relay

TM172PDG18S

### Main

Range Of Product	Modicon M171/M172
Product Or Component Type	Programmable controllers
Product Specific Application	HVAC
Variant	Programmable
Total Inputs/Outputs	18
Discrete Input Number	2
Discrete Output Number	1 for relay outputs SPDT with independent common 2 for relay outputs SPST with same common 2 for solid state, isolated SSR with independent common 1 for relay outputs SPST with independent common
Discrete Output Current	3 A for relay SPST 3 A for relay SPDT 0.2 A for solid state, isolated
Analogue Input Number	8 configurable by pair
Analogue Output Number	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	2 analog output(s) 6 digital output(s) 8 analog input(s) 2 digital input(s)
Discrete Input Logic	Sink or source (positive/negative) up to 2 kHz
Discrete Input Voltage	24 V AC/DC
Discrete Input Current	5 mA AC/DC
Input Impedance	10 kOhm
Analogue Input Type	NTC NK103 Beta 3977 temperature probe - 40...137 °C - resolution: 0.1 °C at 10 kOhm (at 25 °C) NTC 103AT-2 Beta 3435 temperature probe - 50...110 °C - resolution: 0.1 °C at 10 kOhm (at 25 °C) voltage 0...10 V - resolution: 1 digit at > 10 kOhm voltage 0...5 V - resolution: 1 digit at > 20 kOhm (absolute or ratiometric) impedance 0...1500 hOhm - resolution: 1 hOhm at 10 kOhm impedance 0...300 daOhm - resolution: 1 daOhm at 1500 Ohm PTC temperature probe - 55...150 °C - resolution: 0.1 °C at 1500 Ohm Pt 1000 temperature probe - 200...850 °C - resolution: 0.1 °C at 1500 Ohm current 0...20 mA/4...20 mA - resolution: 1 digit at < 150 Ohm direct input at 10 kOhm (Dry contact)

<b>Measurement Accuracy</b>	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 DaOhm 0...300 daOhm +/- 2.5 daOhm 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 HOhm 0...750 hOhm +/- 8.5 hOhm HOhm 750 hOhm...1500 hOhm +/- 24 hOhm
<b>Sensor Power Supply</b>	5 V DC at 40 mA supplied by the controller 24 V DC at 100 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>	11 W at 24 V AC/DC
<b>Realtime Clock</b>	Built-in clock, clock drift <= 30 s/month 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>	72 mm
<b>Height</b>	110 mm
<b>Depth</b>	60.5 mm
<b>Net Weight</b>	0.225 kg

## Environment

<b>Directives</b>	2014/35/EU - low voltage directive 2014/30/EU - electromagnetic compatibility
<b>Standards</b>	EN 60730-2-9 EN 60068-2-27 IEC 61000-4-3 UL 60730-1 IEC 61000-4-2 CAN/CSA-E60730-1 EN 60068-2-6 Fc IEC 61000-4-11 IEC 61000-4-5 IEC 61000-4-6 CSA E60730-2-9 UL 60730-2-9 EN 60730-1 IEC 61000-4-4 UL94 (material V0)
<b>Product Certifications</b>	RCM CSA cURus EAC CE
<b>Ambient Air Temperature For Operation</b>	-20...60 °C
<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 Height</b>	13.5 cm
<b>Package 1 Width</b>	9.5 cm
<b>Package 1 Length</b>	7.5 cm
<b>Package 1 Weight</b>	278 g
<b>Unit Type Of Package 2</b>	S02
<b>Number Of Units In Package 2</b>	15
<b>Package 2 Height</b>	15 cm
<b>Package 2 Width</b>	30 cm
<b>Package 2 Length</b>	40 cm
<b>Package 2 Weight</b>	4.481 kg

## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

## Resource performance

✓ Upgradeable Through Digital Modules  
And Upgraded Components

## Well-being performance

✓ Mercury Free

✓ Rohs Exemption Information Yes

## Certifications & Standards

**Reach Regulation** [REACH Declaration](#)

**Eu Rohs Directive** Pro-active compliance (Product out of EU RoHS legal scope)

**China Rohs Regulation** [China RoHS declaration](#)

**Environmental Disclosure** [Product Environmental Profile](#)

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

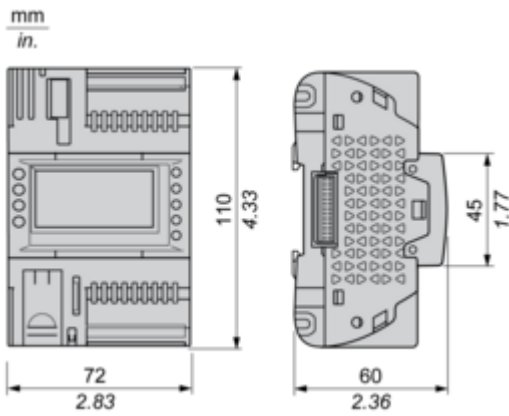
**Circularity Profile** [End of Life Information](#)

Dimensions Drawings

Dimensions Drawings

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Dimensions

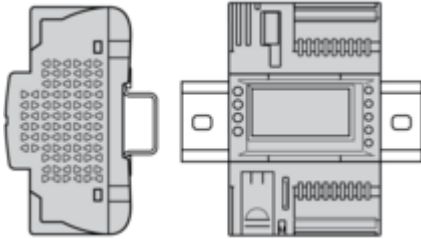


Mounting and Clearance

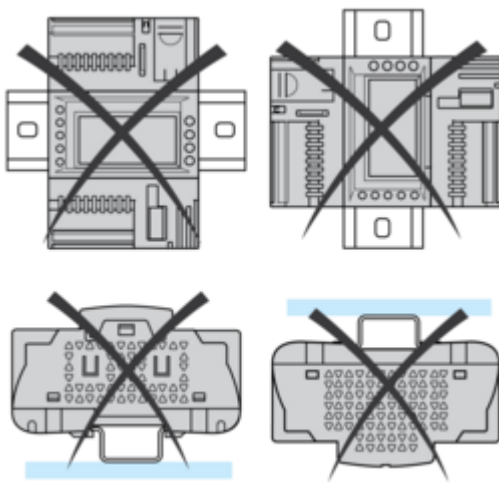
**Mounting Positions**

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**Correct Mounting Position**

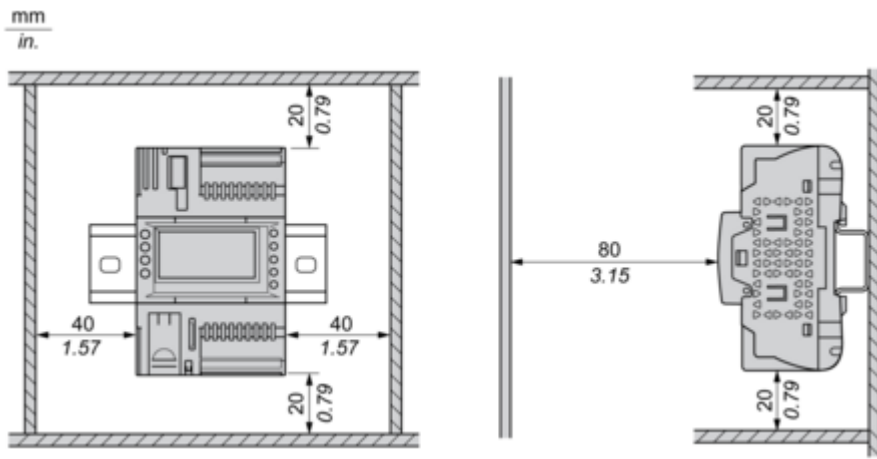


**Incorrect Mounting Position**



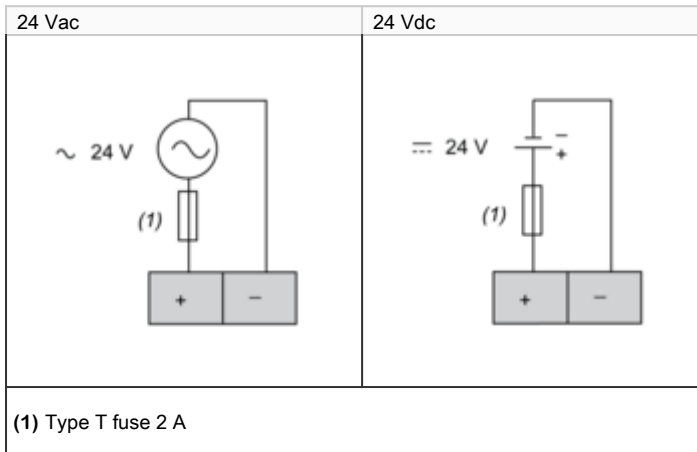
Clearance

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Connections and Schema

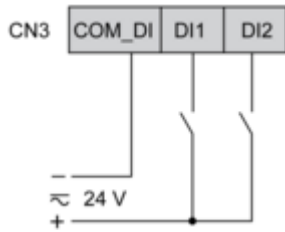
Power Supply





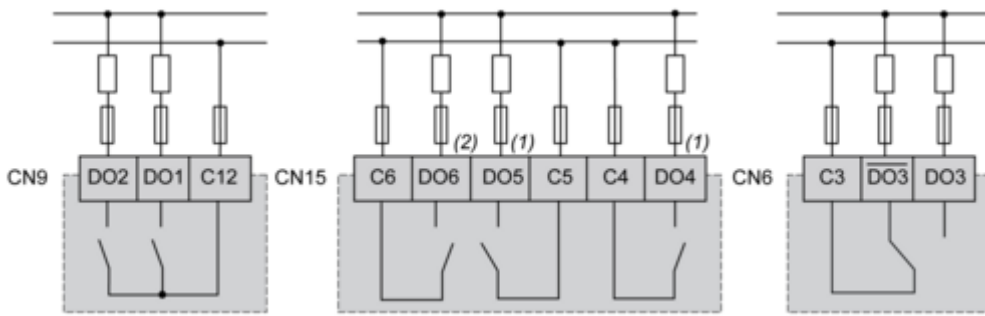
CN3 Fast Digital Inputs

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**CN9, CN15, CN6 High Voltage Relay SPST Digital Output**

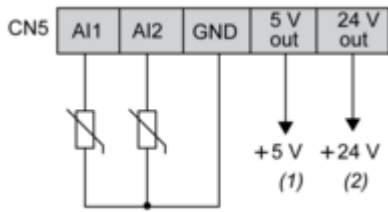
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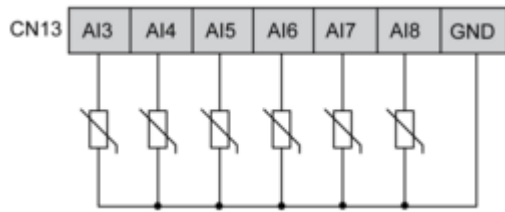
- (1) :DO4 and DO5 are SSR outputs
- (2) :DO6 is not an SSR output

**CN5, CN13 Analog Inputs**

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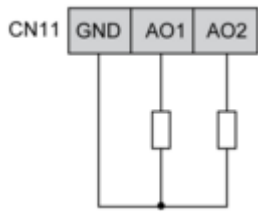


- (1) Max. current : 40 mA.
- (2) Max. current : 100 mA.



CN11 Analog Outputs

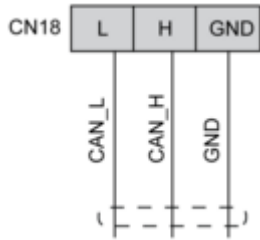
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AO1, AO2 can be used also as PWM generator, up to 2kHz.

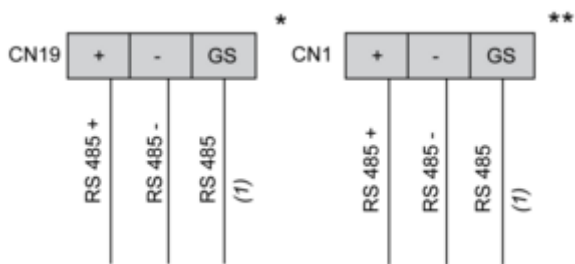
CN18 CAN Expansion Bus Port

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CN19, CN1 RS485 Bus Port

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(1) Signal reference

\* RS485-1 Modbus SL

\*\* RS485-2 Modbus SL or BACnet MS/TP