

# Product data sheet

Specifications



## Controller, Modicon M171/M172/ M173, performance, blind, 28 IO, Ethernet, isolated

TM172PBG28RI

**Product availability: Stock - Normally stocked in distribution facility**

**Price\*: 335.00 USD**

### Main

Range Of Product	Modicon M171/M172
Product Or Component Type	Programmable controllers
Product Specific Application	HVAC control
Variant	Programmable
Total Inputs/Outputs	28
Discrete Input Number	8
Discrete Output Number	1 relay outputs SPDT with independent common 3 relay outputs SPST with same common 2 relay outputs SPST with same common 2 relay outputs SPST with independent common
Discrete Output Current	3 A relay SPDT 3 A relay SPST
Analogue Input Number	8 configurable by pair
Analogue Output Number	2 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	8 digital input 8 analog input 4 analog output 8 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 1 hOhm 10 kOhm impedance 0...300 daOhm 1 daOhm 2 kOhm NTC 103AT-2 Beta 3435 temperature probe - 50...110 °C 0.1 °C 10 kOhm voltage 0...10 V 1 digit > 10 kOhm NTC NK103 Beta 3977 temperature probe - 40...137 °C 0.1 °C 10 kOhm extended) current 0...20 mA/4...20 mA 1 digit < 150 Ohm PTC temperature probe - 55...150 °C 0.1 °C 2 kOhm voltage 0...5 V 1 digit > 20 kOhm absolute or ratiometric) Pt 1000 temperature probe - 200...850 °C 0.1 °C 2 kOhm direct input > 10 kOhm

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

<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 50 mA supplied by the controller 24 V DC 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>	12 W 24 V AC/DC
<b>Realtime Clock</b>	Built-in clock, clock drift <= 30 s/month at -4...149 °F (-20...65 °C)
<b>Display Type</b>	Without Display
<b>Overvoltage Category</b>	II
<b>Local Signalling</b>	for programmable 1 LED (red) for programmable 1 LED (yellow) for programmable 1 LED (green) for power 1 LED (green)
<b>Mounting Support</b>	DIN rail Panel mounting with accessory
<b>Width</b>	5.67 in (144 mm)
<b>Height</b>	4.33 in (110 mm)
<b>Depth</b>	2.38 in (60.5 mm)
<b>Net Weight</b>	0.66 lb(US) (0.3 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>	-4...149 °F (-20...65 °C) UL 60730-1 -4...140 °F (-20...60 °C) horizontal UL 60730-1
<b>Ambient Air Temperature For Storage</b>	-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	3606489729486
Returnability	Yes
Country Of Origin	US

## Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	5.31 in (13.5 cm)
Package 1 Width	3.54 in (9.0 cm)
Package 1 Length	7.48 in (19.0 cm)
Package 1 Weight	13.40 oz (380.0 g)
Unit Type Of Package 2	S02
Number Of Units In Package 2	6
Package 2 Height	5.91 in (15.0 cm)
Package 2 Width	11.81 in (30.0 cm)
Package 2 Length	15.75 in (40.0 cm)
Package 2 Weight	5.69 lb(US) (2.58 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.

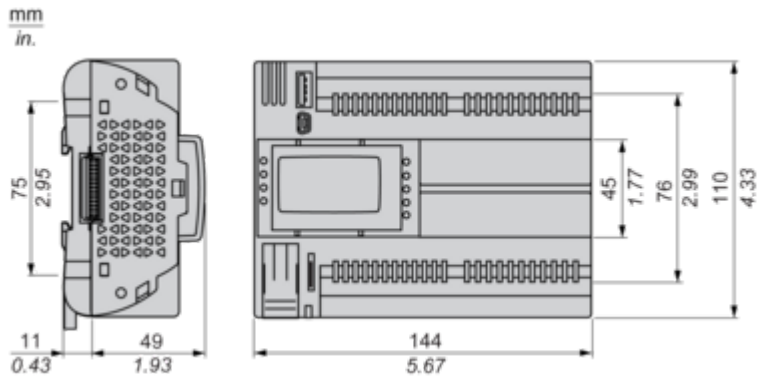
**Circularity Profile** [End of Life Information](#)

**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](http://www.P65Warnings.ca.gov)

Dimensions Drawings

Dimensions

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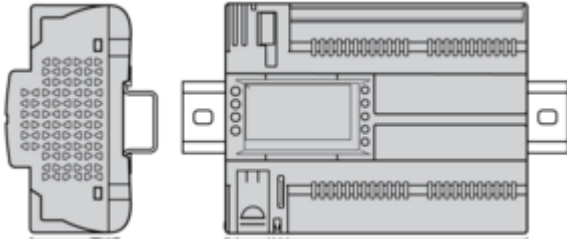


Mounting and Clearance

Mounting Positions

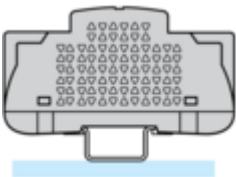
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Correct Mounting Position

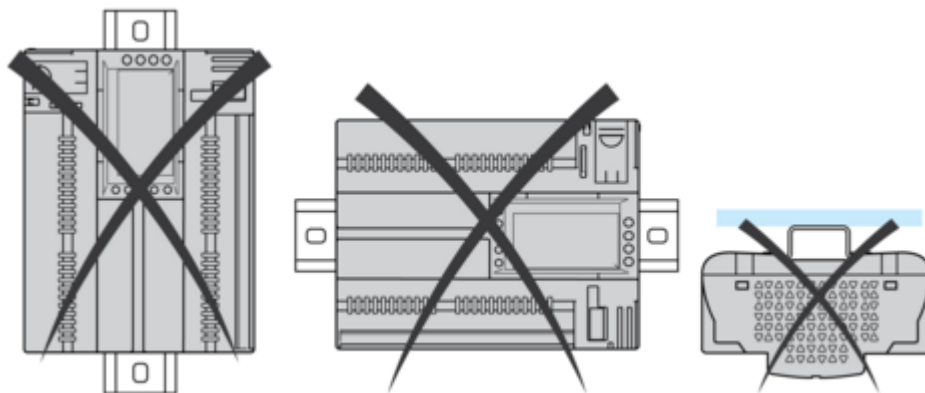


Acceptable Mounting Position

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

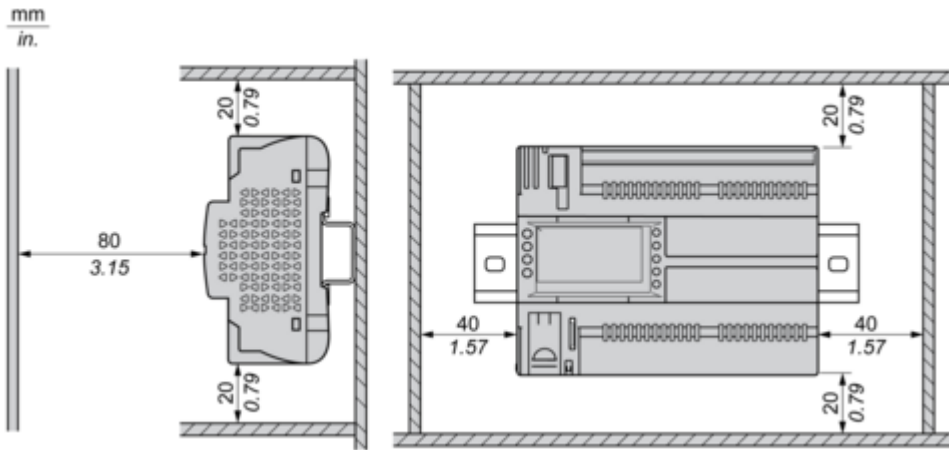


Incorrect Mounting Position



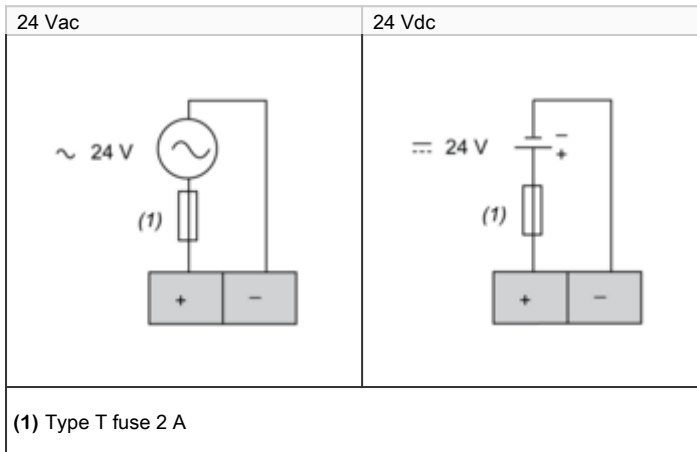
Clearance

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Connections and Schema

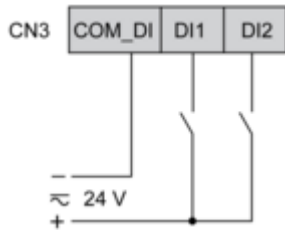
Power Supply





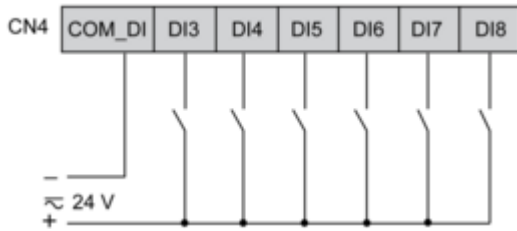
CN3 Fast Digital Inputs

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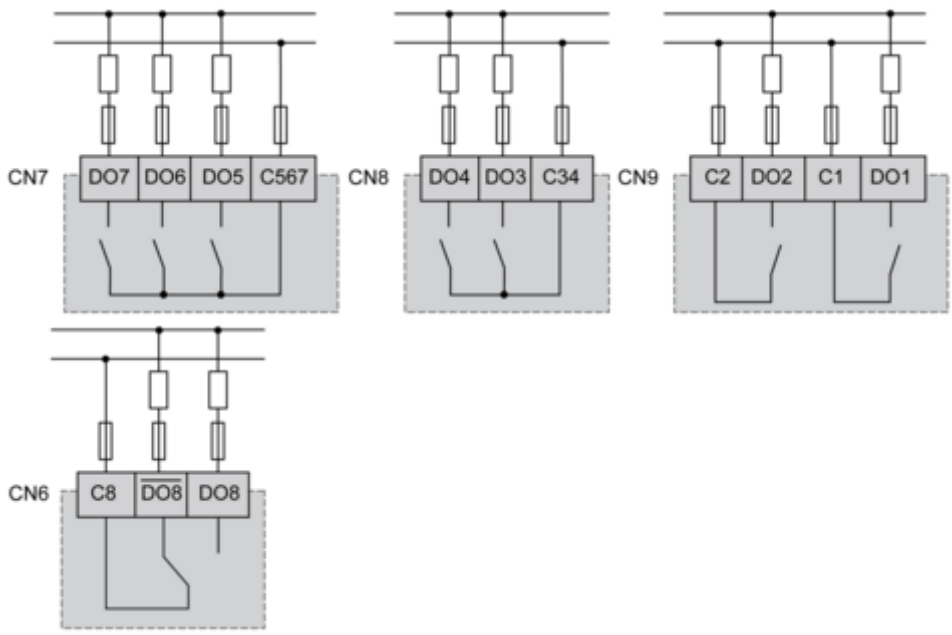


CN4 Digital Inputs

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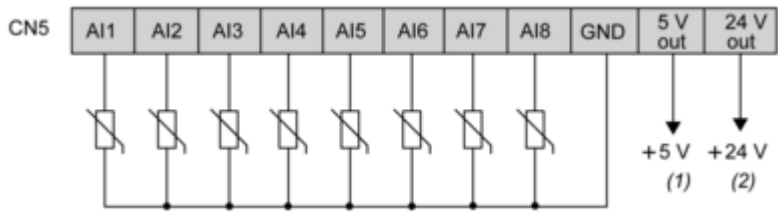


CN7, CN8, CN9, CN6 High Voltage Relay SPST Digital Output



CN5 Analog Inputs

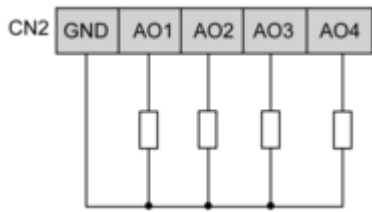
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- (1) Max. current : 50 mA.
- (2) Max. current : 150 mA.

CN2 Analog Outputs

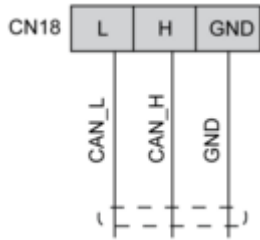
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AO3, AO4 can be used also as PWM generator, up to 2kHz.

CN18 CAN Expansion Bus Port

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CN19, CN1 CAN Expansion Bus Port

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