

# TM172E28R

## Modicon M172 Optimized and Performance expansion 28 I/Os



### Main

Range of Product	Modicon M171/M172
Product or Component Type	Additional I/O module
Product Specific Application	HVAC control
Total inputs/outputs	28
Discrete input number	2 4
Discrete output number	3 relay outputs SPST with same common 2 relay outputs SPST with same common
Discrete output current	3 A relay SPST
Analogue input number	10 configurable by pair
Analogue output number	2 programmable

### Complementary

Number of port	1 CAN port - screw terminal block
Input/output number	2 analog output 6 digital input 10 analog input 10 digital output
Discrete input logic	2 positive logic (sink) up to 2 kHz 4 positive logic (sink)
Discrete input voltage	24 V AC/DC
Discrete input current	2.5 mA AC/DC
Input impedance	20 kOhm
Analogue input type	NTC NK103 Beta 3977 temperature probe - 40...137 °C 0.1 °C 10 kOhm at 25 °C) NTC 103AT-2 Beta 3435 temperature probe - 50...110 °C 0.1 °C 10 kOhm at 25 °C) Current 0...20 mA 1 digit < 150 Ohm Current 4...20 mA 1 digit < 150 Ohm Voltage 0...10 V 1 digit > 10 kOhm Voltage 0...5 V 1 digit > 20 kOhm absolute or ratiometric) Impedance 0...1500 hOhm 1 hOhm 10 kOhm Impedance 0...300 daOhm 1 daOhm 2 kOhm Direct input 1 digit Dry contact) PTC - 55...150 °C 0.1 °C 2 kOhm Pt 1000 temperature probe - 200...850 °C 0.1 °C 2 kOhm
Measurement accuracy	NTC NK103 - 40...+110 °C +/- 1 °C NTC NK103 110...137 °C +/- 1.9 °C NTC 103AT-2 - 50...110 °C +/- 1 °C PTC - 55...+135 °C +/- 1.1 °C PTC - 150...135 °C +/- 3.1 °C Pt 1000 - 200...-100 °C +/- 5 °C Pt 1000 - 100...-50 °C +/- 3 °C Pt 1000 - 50...+200 °C +/- 1.5 °C Pt 1000 200...600 °C +/- 15 °C Pt 1000 600...850 °C +/- 30 °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...700 hOhm +/- 10 hOhm hOhm 700 hOhm...1200 hOhm +/- 25 hOhm hOhm 1200 hOhm...1500 hOhm +/- 60 hOhm DaOhm 0...300 daOhm +/- 2.5 daOhm

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. 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. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Sensor power supply	5 V DC 50 mA 24 V DC 125 mA
[Us] rated supply voltage	24 V +/- 10 % AC 20...38 V DC
Power consumption in W	24 VA 24 V AC 15 W 24 V DC
Realtime clock	Without
Display type	Without Display
Overvoltage category	II
Mounting Support	DIN rail Panel mounting with accessory
Width	2.83 in (72 mm)
Height	4.33 in (110 mm)
Depth	2.32 in (59 mm)
Net Weight	0.42 lb(US) (0.19 kg)

## Environment

Directives	2014/35/EU - low voltage directive 2014/30/EU - electromagnetic compatibility
Standards	IEC 61000-4-4 EN 60068-2-27 CSA E60730-2-9 IEC 61000-4-11 CAN/CSA-E60730-1 UL 60730-2-9 EN 60730-2-9 EN 60730-1 IEC 61000-4-5 IEC 61000-4-3 EN 60068-2-6 Fc IEC 61000-4-2
Product Certifications	CURus EAC CE RCM CSA
Ambient air temperature for operation	-4...149 °F (-20...65 °C) 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

## Ordering and shipping details

Category	22537-M171 / M172 HVAC CONTROLLERS
Discount Schedule	PC12
GTIN	3606481267627
Nbr. of units in pkg.	1
Package weight(Lbs)	9.52 oz (270.0 g)
Returnability	Yes

## Packing Units

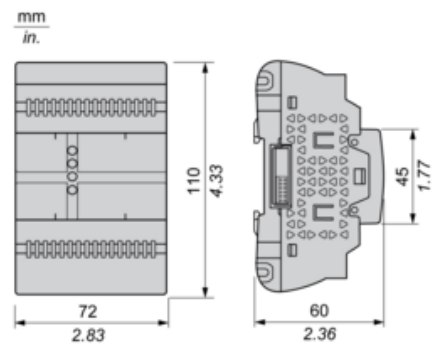
Unit Type of Package 1	PCE
Package 1 Height	3.54 in (9 cm)
Package 1 width	5.00 in (12.7 cm)
Package 1 Length	5.31 in (13.5 cm)
Unit Type of Package 2	S02
Number of Units in Package 2	8
Package 2 Weight	5.45 lb(US) (2.471 kg)
Package 2 Height	5.91 in (15 cm)
Package 2 width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)

## Offer Sustainability

Sustainable offer status	Green Premium product
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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

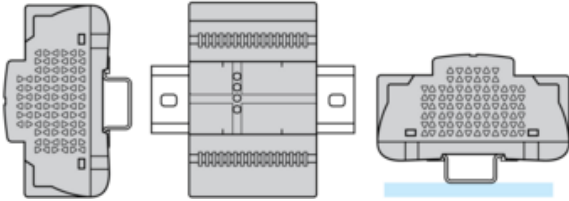
Dimensions Drawings

Dimensions

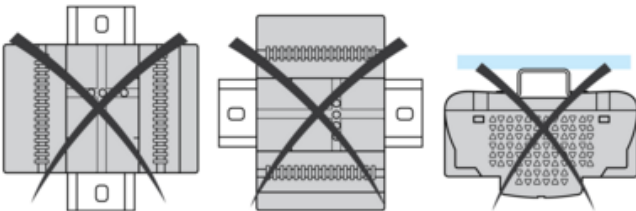


Mounting Positions

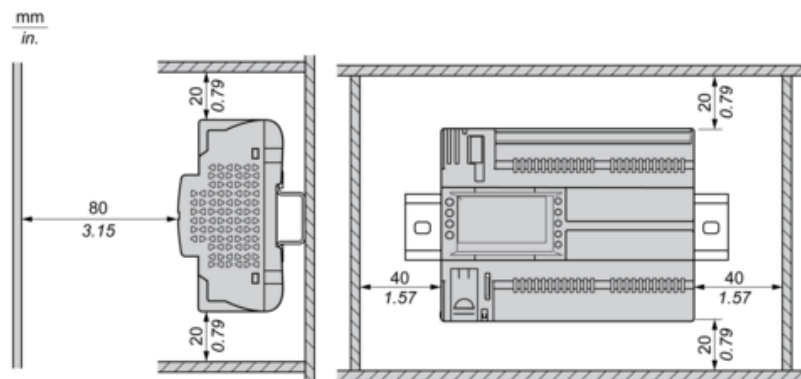
Correct Mounting Position



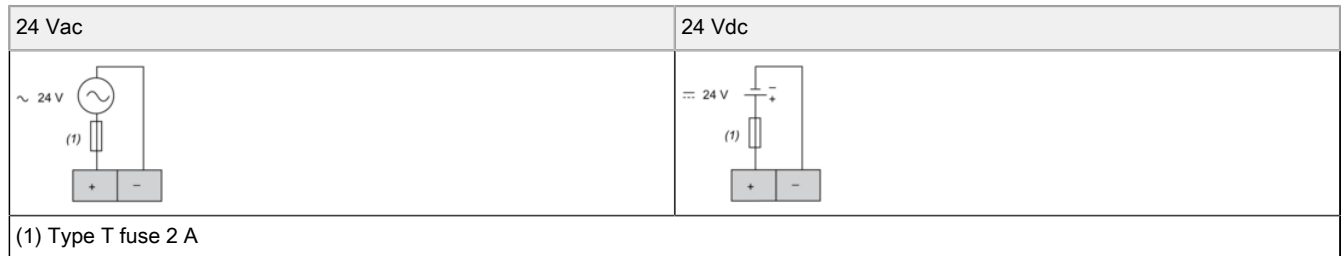
Incorrect Mounting Position



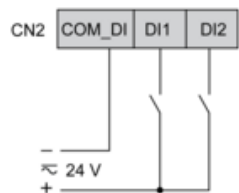
Clearance



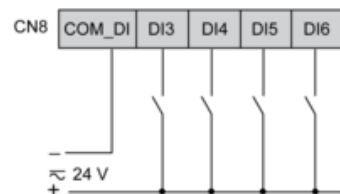
Power Supply



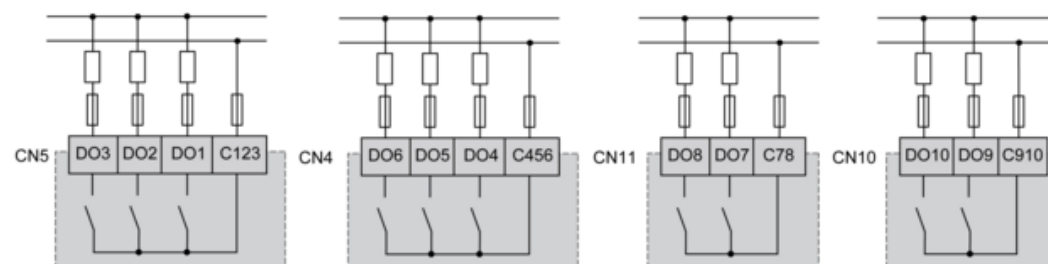
CN2 Fast Digital Inputs



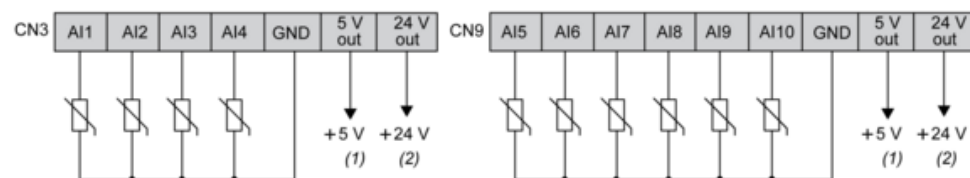
CN8 Digital Inputs



CN5, CN4, CN11, CN10 High Voltage Relay SPST Digital Output



CN3, CN9 Analog Inputs

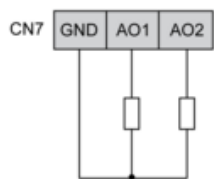


(1) (CN3 + CN9) Max. current : 50 mA.

(2) (CN3 + CN9) Max. current : 125 mA.

## CN7 Analog Outputs

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

## CN1 CAN Expansion Bus Port

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