

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 for relay outputs SPST with same common 2 for relay outputs SPST with same common
Discrete output current	3 A for 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(s) 6 digital input(s) 10 analog input(s) 10 digital output(s)
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 - 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) Current 0...20 mA - resolution: 1 digit at < 150 Ohm Current 4...20 mA - resolution: 1 digit at < 150 Ohm 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 2 kOhm Direct input - resolution: 1 digit (Dry contact) PTC - 55...150 °C - resolution: 0.1 °C at 2 kOhm Pt 1000 temperature probe - 200...850 °C - resolution: 0.1 °C at 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

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Sensor power supply	5 V DC at 50 mA 24 V DC at 125 mA
[Us] rated supply voltage	24 V +/- 10 % AC 20...38 V DC
Power consumption in W	24 VA at 24 V AC 15 W at 24 V DC
Realtime clock	Without clock
Display type	Without display
Overvoltage category	II
Mounting support	DIN rail Panel mounting with accessory
Width	72 mm
Height	110 mm
Depth	59 mm
Net weight	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	-20...65 °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

Packing Units

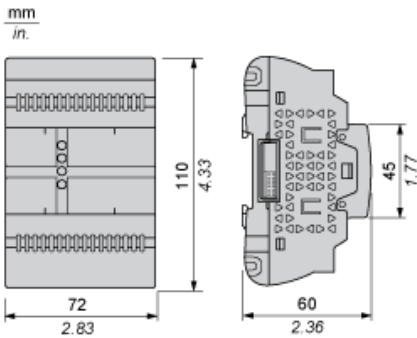
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	270 g
Package 1 Height	9 cm
Package 1 width	12.7 cm
Package 1 Length	13.5 cm
Unit Type of Package 2	S02
Number of Units in Package 2	8
Package 2 Weight	2.429 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

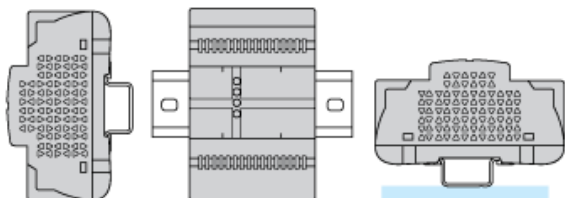
Dimensions Drawings

Dimensions

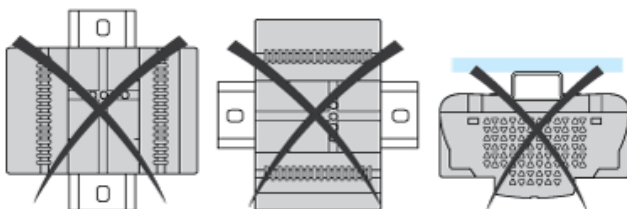


Mounting Positions

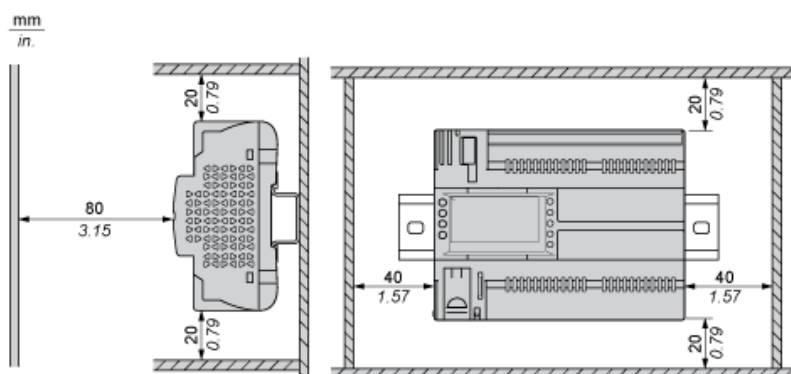
Correct Mounting Position



Incorrect Mounting Position



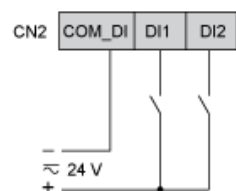
Clearance



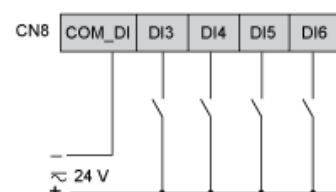
Power Supply

24 Vac	24 Vdc

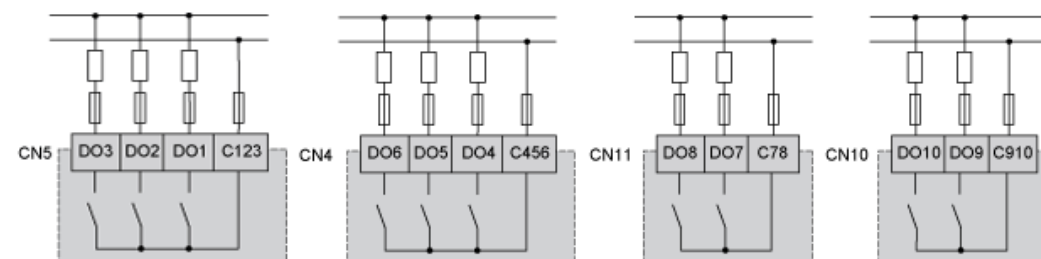
CN2 Fast Digital Inputs



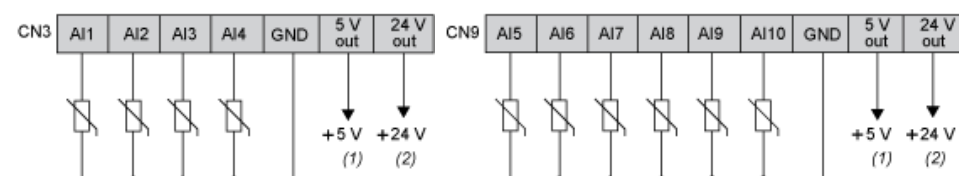
CN8 Digital Inputs



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



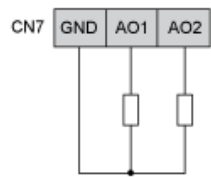
CN3, CN9 Analog Inputs



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

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

CN7 Analog Outputs



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

CN1 CAN Expansion Bus Port

