

Product data sheet

Specifications



Modicon M172 Optimized Display 28 I/Os

TM172ODM28R

Product availability: Non-Stock - Not normally stocked in distribution facility

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 mini B - USB device port Mini-B 2 RS485 - screw terminal block Modbus serial link or BACnet MS/TP)
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.

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

Measurement accuracy	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
Sensor power supply	5 V DC 50 mA supplied by the controller 24 V DC 150 mA supplied by the controller
[Us] rated supply voltage	24 V +/- 10 % AC 20...38 V DC
Power consumption in W	12 W 24 V AC/DC
Realtime clock	Built-in clock, clock drift <= 30 s/month at -4...149 °F (-20...65 °C)
Display type	Backlit LCD - 128 x 64 pixels
Overvoltage category	II
Local signalling	1 LED (red) for programmable 1 LED (yellow) for programmable 1 LED (green) for programmable 1 LED (green) for power
Mounting Support	Panel mounting with accessory DIN rail
Width	5.7 in (144 mm)
Height	4.3 in (110 mm)
Depth	2.4 in (60.5 mm)
Product Weight	0.7 lb(US) (0.3 kg)

Environment

Directives	2014/30/EU - electromagnetic compatibility 2014/35/EU - low voltage directive
Standards	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)
Product Certifications	EAC CE cURus CSA RCM
Ambient air temperature for operation	-4...149 °F (-20...65 °C) UL 60730-1 -4...140 °F (-20...60 °C) horizontal 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
Operating altitude	0...6561.68 ft (0...2000 m)

Ordering and shipping details

Category	US1PC1222537
Discount Schedule	PC12
GTIN	3606481390110
Returnability	Yes
Country of origin	IT

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	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 weight(Lbs)	13.9 oz (393.0 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	5.853 lb(US) (2.655 kg)

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	
Carbon footprint (kg CO2 eq, Total Life cycle)	548
Environmental Disclosure	Product Environmental Profile

Use Better

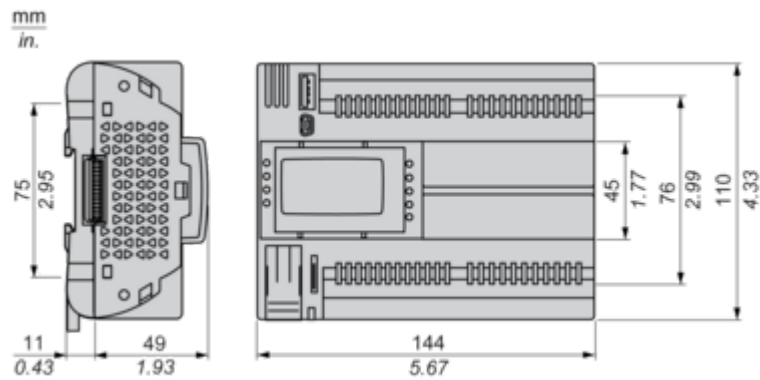
Materials and Substances	
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	97ae4e31-68fe-4973-9294-5dd5187cc9dc
REACH Regulation	REACH Declaration
California proposition 65	WARNING: 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

Use Again

Repack and remanufacture	
Circularity Profile	End of Life Information
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

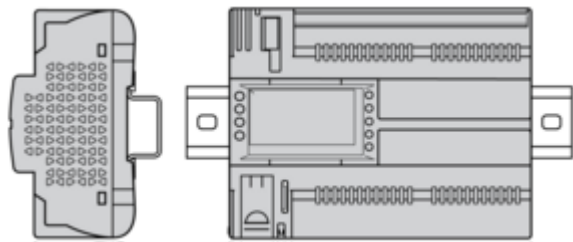
Dimensions



Mounting and Clearance

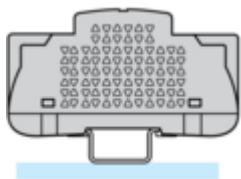
Mounting Positions

Correct Mounting Position

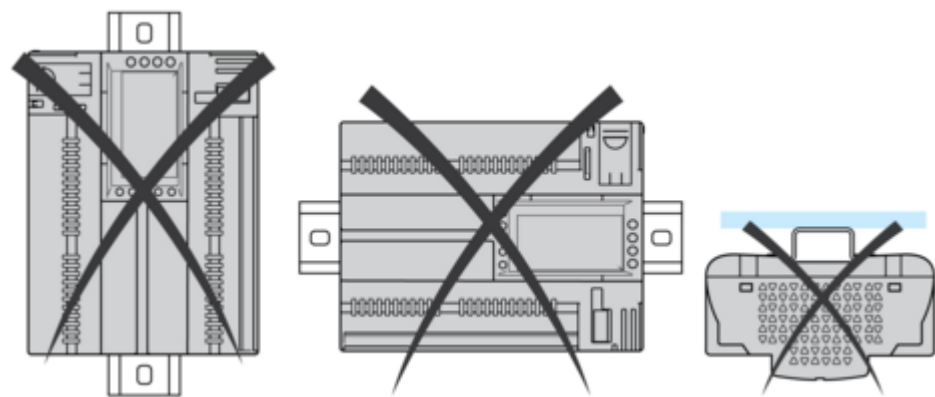


Acceptable Mounting Position

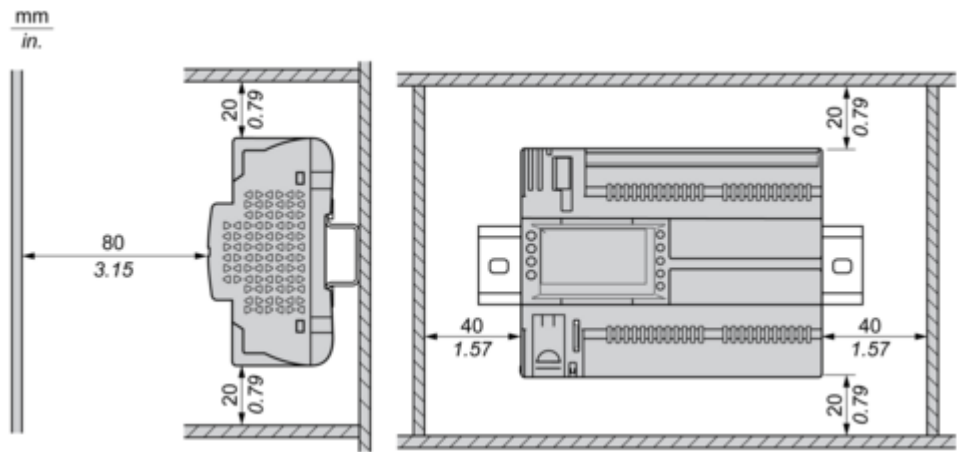
Controller can be mounted horizontally upward with a temperature derating (maximum ambient temperature: 60 °C (140 °F)).



Incorrect Mounting Position

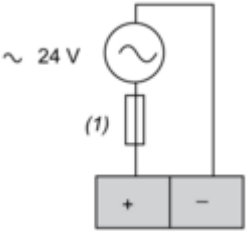
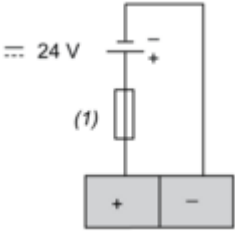


Clearance

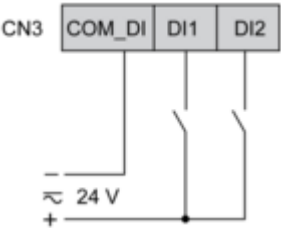


Connections and Schema

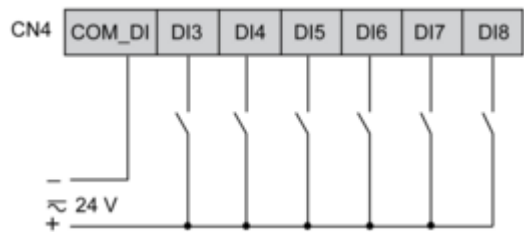
Power Supply

24 Vac	24 Vdc
	
(1) Type T fuse 2 A	

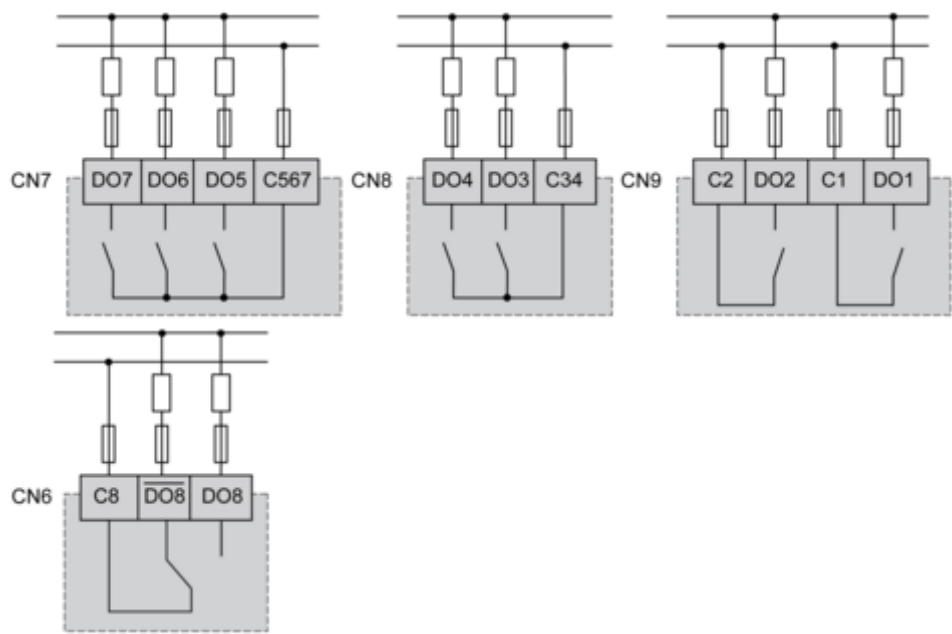
CN3 Fast Digital Inputs



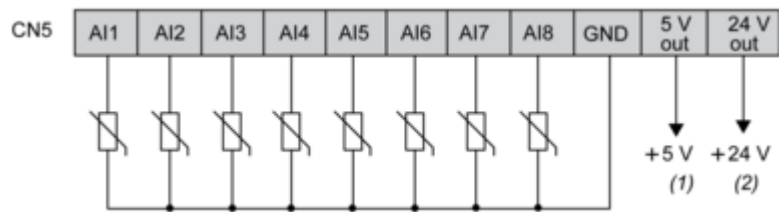
CN4 Digital Inputs



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

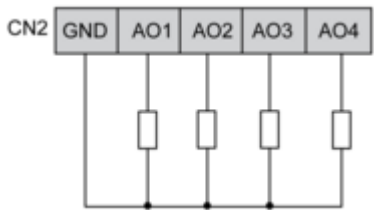


CN5 Analog Inputs



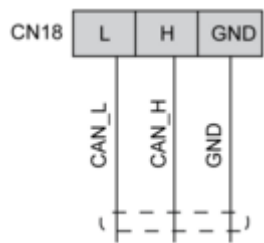
- (1) Max. current : 50 mA.
- (2) Max. current : 150 mA.

CN2 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

