



### 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<br>3 relay outputs SPST with same common<br>2 relay outputs SPST with same common<br>2 relay outputs SPST with independent common |
| Discrete output current      | 3 A relay SPDT<br>3 A relay SPST   |
| Analogue input number        | 8 configurable by pair   |
| Analogue output number       | 2 voltage 0...10 V<br>2 voltage/current 4...20 mA or 0...10 V or PWM (2 kHz)   |

### Complementary

|                        |  |
|------------------------|--|
| Number of port         | 1 CAN port - screw terminal block<br>1 USB type A - USB type A female<br>1 USB type mini B - USB device port Mini-B<br>2 RS485 - screw terminal block Modbus serial link or BACnet MS/TP)<br>1 Ethernet - RJ45 Modbus TCP and BACnet IP with webserver)  |
| Input/output number    | 8 digital input<br>8 analog input<br>4 analog output<br>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        | 20 kOhm  |
| Analogue input type    | Impedance 0...1500 hOhm 1 hOhm 10 kOhm<br>Impedance 0...300 daOhm 1 daOhm 2 kOhm<br>NTC 103AT-2 Beta 3435 temperature probe - 50...110 °C 0.1 °C 10 kOhm<br>Voltage 0...10 V 1 digit > 10 kOhm<br>NTC NK103 Beta 3977 temperature probe - 40...137 °C 0.1 °C 10 kOhm extended)<br>Current 0...20 mA/4...20 mA 1 digit < 150 Ohm<br>PTC temperature probe - 55...150 °C 0.1 °C 2 kOhm<br>Voltage 0...5 V 1 digit > 20 kOhm absolute or ratiometric)<br>Pt 1000 temperature probe - 200...850 °C 0.1 °C 2 kOhm<br>Direct input > 10 kOhm |

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.

|                           |  |
|---------------------------|--|
| Measurement accuracy      | NTC NK103 Beta 3977 - 40...+110 °C +/- 1 °C<br>NTC NK103 Beta 3977 110...137 °C +/- 1.9 °C<br>NTC 103AT-2 Beta 3435 - 50...110 °C +/- 1 °C<br>PTC - 55...155 °C +/- 1.1 °C<br>Pt 1000 - 200...-100 °C +/- 10 °C<br>Pt 1000 - 100...-50 °C +/- 2.5 °C<br>Pt 1000 - 50...100 °C +/- 1.5 °C<br>Pt 1000 100...400 °C +/- 2.4 °C<br>Pt 1000 400...850 °C +/- 10 °C<br>0...20 mA 0...4 mA +/- 2 % of full scale +/- 1 digit<br>0...20 mA 4...20 mA +/- 1 % of full scale +/- 1 digit<br>4...20 mA +/- 1 % of full scale +/- 1 digit<br>0...10 V +/- 1 % of full scale +/- 1 digit<br>0...5 V +/- 1 % of full scale +/- 1 digit<br>HOhm 0...1500 hOhm +/- 8.5 hOhm<br>DaOhm 0...300 daOhm +/- 2.5 daOhm |
| Sensor power supply       | 5 V DC 50 mA supplied by the controller<br>24 V DC 150 mA supplied by the controller   |
| [Us] rated supply voltage | 24 V +/- 10 % AC<br>20...38 V DC   |
| Power consumption in W    | 12 W 24 V AC/DC  |
| Realtime clock            | Built-in <= 30 s/month -4...149 °F (-20...65 °C)   |
| Display type              | Backlit LCD - 128 x 64 pixels  |
| Overvoltage category      | II   |
| Local signalling          | For programmable 1 LED (red)<br>For programmable 1 LED (yellow)<br>For programmable 1 LED (green)<br>For power 1 LED (green)   |
| Mounting Support          | Panel mounting with accessory<br>DIN rail  |
| Width                     | 5.67 in (144 mm)   |
| Height                    | 4.33 in (110 mm)   |
| Depth                     | 2.38 in (60.5 mm)  |
| Net Weight                | 0.66 lb(US) (0.3 kg)   |

## Environment

|                                       |   |
|---------------------------------------|---|
| Directives                            | 2014/30/EU - electromagnetic compatibility<br>2014/35/EU - low voltage directive  |
| Standards                             | CAN/CSA-E60730-1<br>CSA E60730-2-9<br>EN 60068-2-27<br>EN 60068-2-6 Fc<br>EN 60730-1<br>EN 60730-2-9<br>UL 60730-1<br>UL 60730-2-9<br>IEC 61000-4-2<br>IEC 61000-4-3<br>IEC 61000-4-4<br>IEC 61000-4-5<br>IEC 61000-4-6<br>IEC 61000-4-11 |
| Product Certifications                | EAC<br>CE<br>CURus<br>CSA<br>RCM  |
| Ambient air temperature for operation | -4...149 °F (-20...65 °C) UL 60730-1<br>-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              | 22537-M171 / M172 HVAC CONTROLLERS |
| Discount Schedule     | PC12                               |
| GTIN                  | 3606489729493                      |
| Nbr. of units in pkg. | 1                                  |
| Package weight(Lbs)   | 14.32 oz (406.0 g)                 |
| Returnability         | Yes                                |

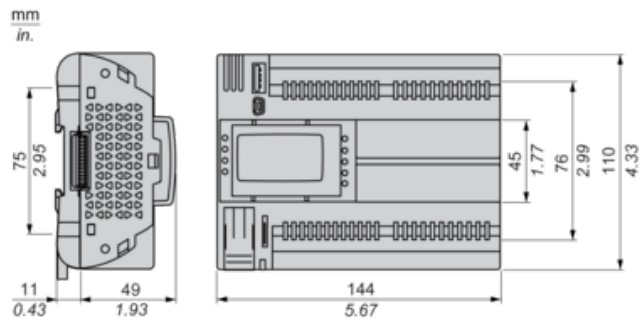
## Packing Units

|                              |                        |
|------------------------------|------------------------|
| Unit Type of Package 1       | PCE                    |
| Package 1 Height             | 5.31 in (13.5 cm)      |
| Package 1 width              | 3.54 in (9 cm)         |
| Package 1 Length             | 7.48 in (19 cm)        |
| Unit Type of Package 2       | S02                    |
| Number of Units in Package 2 | 6                      |
| Package 2 Weight             | 6.03 lb(US) (2.735 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

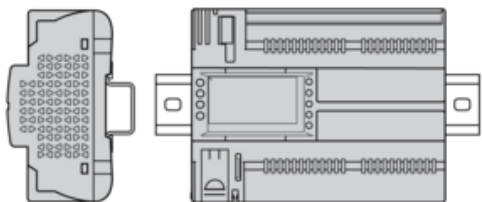
|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer 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



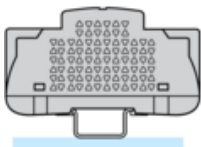
Mounting Positions

Correct Mounting Position

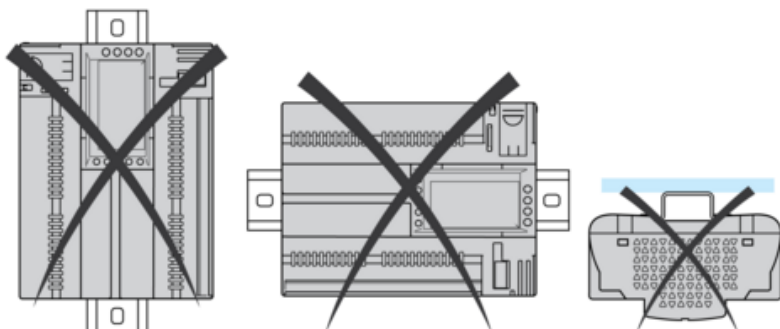


Acceptable Mounting Position

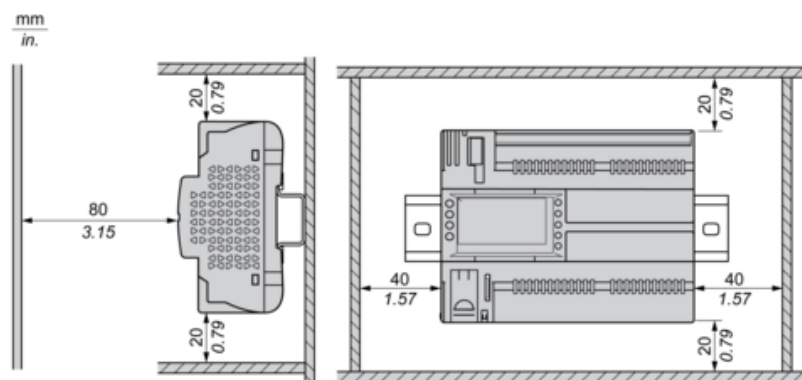
Controller can be mounted horizontally upward with a temperature derating (maximum ambient temperature: 60 °C (140 °F)).



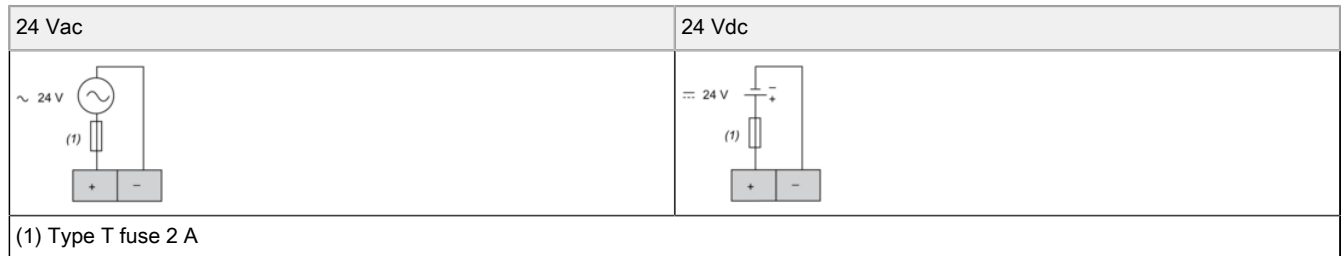
Incorrect Mounting Position



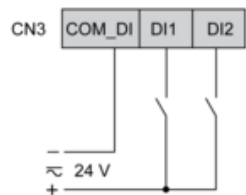
Clearance



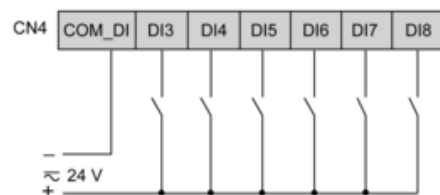
Power Supply



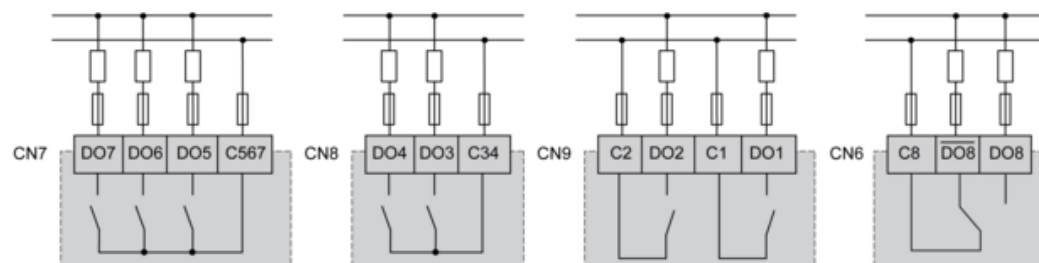
CN3 Fast Digital Inputs



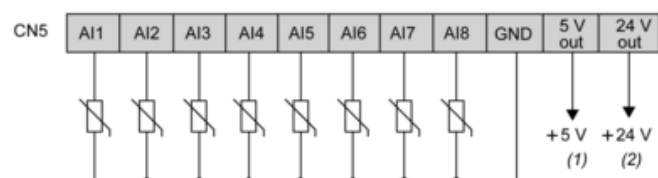
CN4 Digital Inputs



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



CN5 Analog Inputs

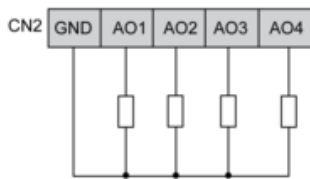


(1) Max. current : 50 mA.

(2) Max. current : 150 mA.

## CN2 Analog Outputs

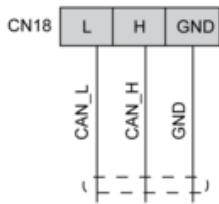
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AO3, AO4 can be used also as PWM generator, up to 2kHz.

## CN18 CAN Expansion Bus Port

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## CN19, CN1 CAN Expansion Bus Port

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