

### Main

|                              |                                                                                                                                                                                                |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product             | Modicon M171/M172                                                                                                                                                                              |
| Product or component type    | Programmable controllers                                                                                                                                                                       |
| Product specific application | HVAC and pumping solution                                                                                                                                                                      |
| Variant                      | Programmable                                                                                                                                                                                   |
| Total inputs/outputs         | 28                                                                                                                                                                                             |
| Discrete input number        | 8                                                                                                                                                                                              |
| Discrete output number       | 1 for relay outputs SPDT with independent common<br>3 for relay outputs SPST with same common<br>2 for relay outputs SPST with same common<br>2 for relay outputs SPST with independent common |
| Discrete output current      | 1 A for relay SPDT<br>3 A for relay SPST                                                                                                                                                       |
| Analogue input number        | 8 configurable by pair                                                                                                                                                                         |
| Analogue output number       | 2 voltage, range: 0...10 V<br>2 voltage/current, range: 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(s)<br>8 analog input(s)<br>4 analog output(s)<br>8 digital output(s)                                                                                                                                                                                                                                                                                                                               |
| 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<br>Impedance 0...300 daOhm<br>NTC temperature probe - 50...110 °C - resolution: 0.1 °C (extended)<br>Voltage 0...10 V<br>NTC temperature probe - 40...150 °C - resolution: 0.1 °C<br>Current 0...20 mA/4...20 mA<br>PTC temperature probe - 55...150 °C - resolution: 0.1 °C<br>Voltage 0...5 V (absolute or ratiometric)<br>Pt 1000 temperature probe - 200...850 °C - resolution: 0.1 °C |
| Sensor power supply       | 5 V DC at 50 mA supplied by the controller<br>24 V DC at 150 mA supplied by the controller                                                                                                                                                                                                                                                                                                                         |
| [Us] rated supply voltage | 24 V +/- 10 % AC<br>20...38 V DC                                                                                                                                                                                                                                                                                                                                                                                   |
| Power consumption in W    | 15 W at 24 V AC/DC                                                                                                                                                                                                                                                                                                                                                                                                 |
| Realtime clock            | Built-in clock at -20...60 °C                                                                                                                                                                                                                                                                                                                                                                                      |
| Display type              | Without display                                                                                                                                                                                                                                                                                                                                                                                                    |
| Overvoltage category      | II                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Local signalling          | 1 LED (red) for programmable<br>1 LED (yellow) for programmable<br>1 LED (green) for programmable<br>1 LED (green) for power                                                                                                                                                                                                                                                                                       |

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.

|                  |                                           |
|------------------|-------------------------------------------|
| Mounting support | DIN rail<br>Panel mounting with accessory |
| Width            | 144 mm                                    |
| Height           | 110 mm                                    |
| Depth            | 60.5 mm                                   |
| Net weight       | 0.3 kg                                    |

## Environment

|                                       |                                                                                                                                                                                                                                                                 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Directives                            | 86/188/EEC - physical agents (noise) directive<br>2006/95/EC - low voltage directive                                                                                                                                                                            |
| Standards                             | IEC 61000-4-5<br>IEC 61000-4-3<br>IEC 61000-4-2<br>EN 60068-2-27<br>EN 60730-1<br>EN 60068-2-6 Fc<br>UL 60730-1<br>UL 60730-2-9<br>IEC 61000-4-4<br>CAN/CSA-E60730-1<br>IEC 61000-4-11<br>IEC 61000-4-6<br>CSA E60730-2-9<br>EN 60730-2-9<br>UL94 (material V0) |
| Product certifications                | CSA[RETURN]EAC[RETURN]RCM[RETURN]CE[RETURN]cURus                                                                                                                                                                                                                |
| Ambient air temperature for operation | -20...60 °C conforming to UL 60730-1<br>-20...65 °C with derating 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                                                                                                                                                                                                                                                               |
| Operating altitude                    | 0...2000 m                                                                                                                                                                                                                                                      |

## Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Height             | 13.200 cm |
| Package 1 Width              | 9.000 cm  |
| Package 1 Length             | 18.500 cm |
| Package 1 Weight             | 372.000 g |
| Unit Type of Package 2       | S02       |
| Number of Units in Package 2 | 6         |
| Package 2 Height             | 15.000 cm |
| Package 2 Width              | 30.000 cm |
| Package 2 Length             | 40.000 cm |
| Package 2 Weight             | 2.450 kg  |

## Offer Sustainability

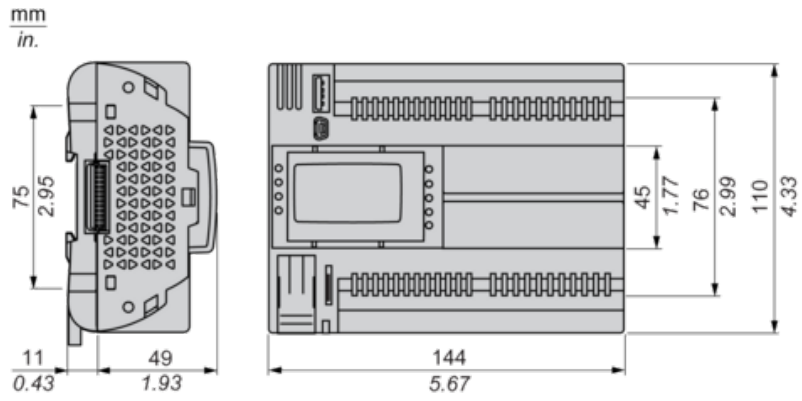
|                            |                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                             |
| REACH Regulation           |  <a href="#">REACH Declaration</a>             |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)                                                                        |
| Mercury free               | Yes                                                                                                                               |
| China RoHS Regulation      |  <a href="#">China RoHS Declaration</a>        |
| RoHS exemption information |  Yes                                           |
| Environmental Disclosure   |  <a href="#">Product Environmental Profile</a> |
| Circularity Profile        |  <a href="#">End Of Life Information</a>       |

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|                |                                                                                                                             |
|----------------|-----------------------------------------------------------------------------------------------------------------------------|
| WEEE           | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Upgradeability | Upgradeable through digital modules and upgraded components                                                                 |

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Dimensions

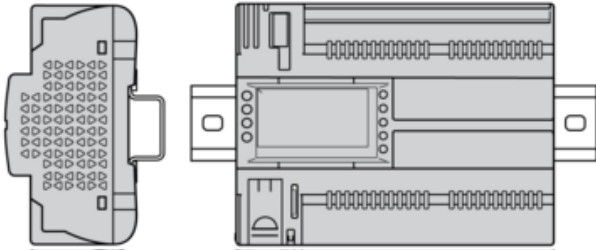


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Mounting Positions

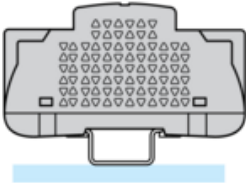
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Correct Mounting Position

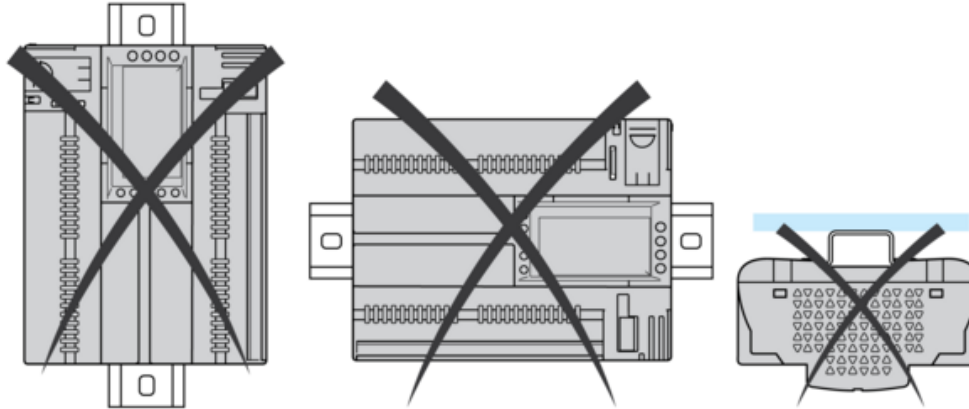


Acceptable Mounting Position

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



Incorrect Mounting Position

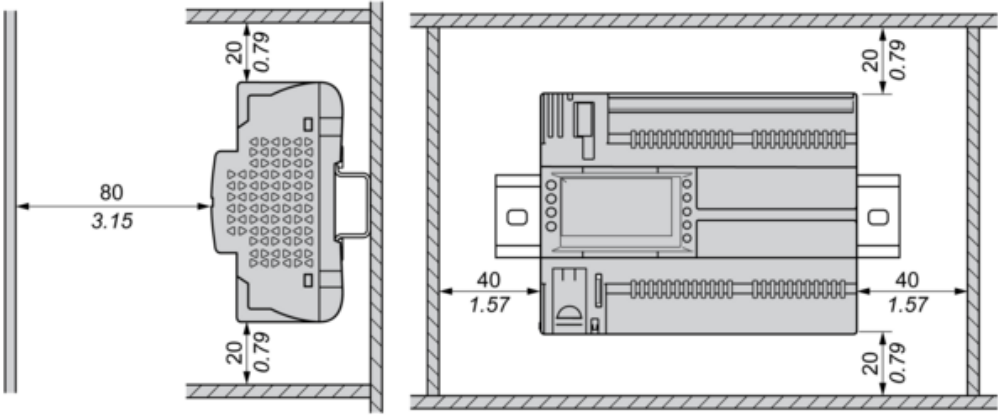


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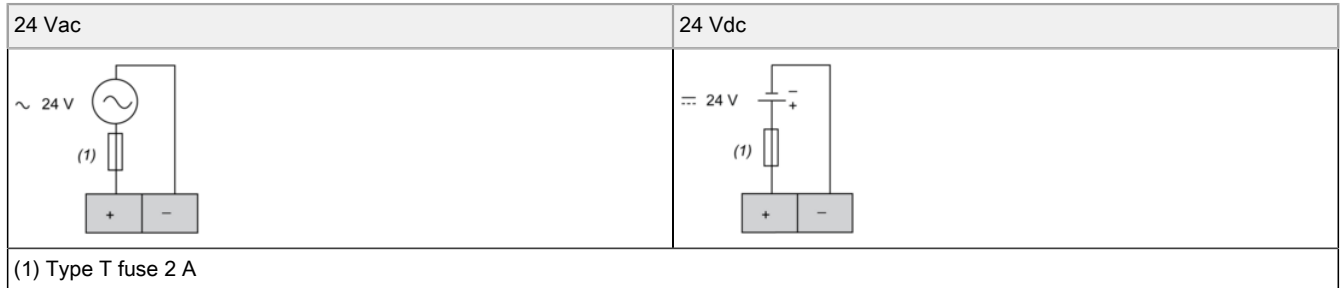
Clearance

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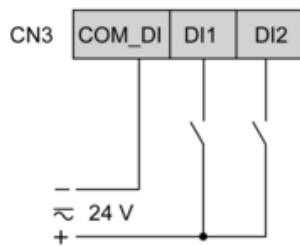
mm  
in.



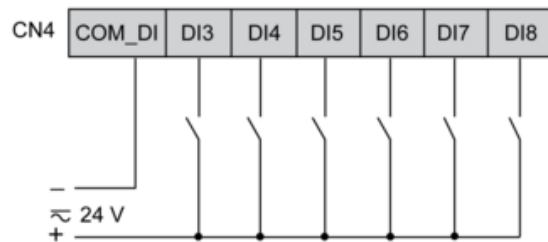
Power Supply



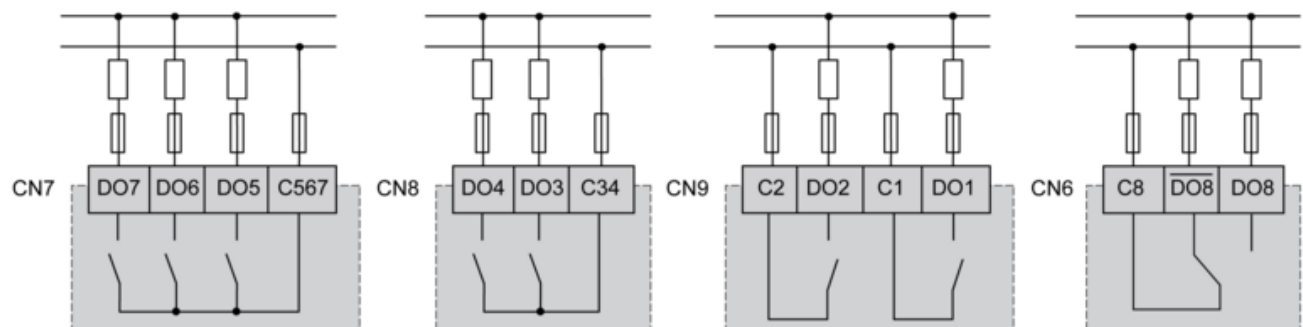
CN3 Fast Digital Inputs



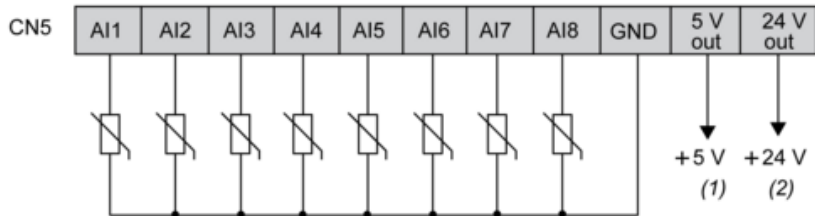
CN4 Digital Inputs



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

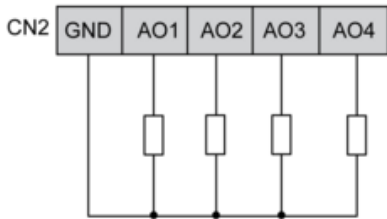


CN5 Analog Inputs



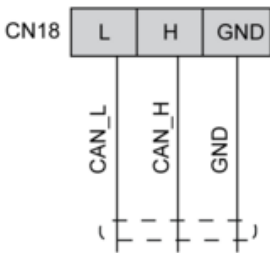
- (1) Max. current : 50 mA.
- (2) Max. current : 150 mA.

### CN2 Analog Outputs



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

### CN18 CAN Expansion Bus Port



### CN19, CN1 CAN Expansion Bus Port

