



### Main

|                              |                                                                                                                                                                                                |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product             | Modicon M171/M172                                                                                                                                                                              |
| Product or component type    | Programmable controllers                                                                                                                                                                       |
| Product specific application | HVAC control                                                                                                                                                                                   |
| Variant                      | Programmable                                                                                                                                                                                   |
| Number of inputs/outputs     | 42                                                                                                                                                                                             |
| Discrete input number        | 12                                                                                                                                                                                             |
| Discrete output number       | 2 for relay outputs SPDT with independent common<br>3 for relay outputs SPST with same common<br>5 for relay outputs SPST with same common<br>2 for relay outputs SPST with independent common |
| Discrete output current      | 3 A for relay SPDT<br>3 A for relay SPST                                                                                                                                                       |
| Analogue input number        | 12 configurable by pair                                                                                                                                                                        |
| Analogue output number       | 4 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 mini B - USB device port Mini-B<br>2 RS485 - screw terminal block (Modbus serial link or BACnet MS/TP) |
| Input/output number    | 12 analog input(s)<br>6 analog output(s)<br>12 digital input(s)<br>12 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 - resolution: 1 hOhm at 10 kOhm<br>Impedance 0...300 daOhm - resolution: 1 daOhm at 2 kOhm<br>NTC 103AT-2 Beta 3435 temperature probe - 50...110 °C - resolution: 0.1 °C at 10 kOhm<br>Voltage 0...10 V - resolution: 1 digit at > 10 kOhm<br>NTC NK103 Beta 3977 temperature probe - 40...137 °C - resolution: 0.1 °C at 10 kOhm (extended)<br>Current 0...20 mA/4...20 mA - resolution: 1 digit at < 150 Ohm<br>PTC temperature probe - 55...150 °C - resolution: 0.1 °C at 2 kOhm<br>Voltage 0...5 V - resolution: 1 digit at > 20 kOhm (absolute or ratiometric)<br>Pt 1000 temperature probe - 200...850 °C - resolution: 0.1 °C at 2 kOhm<br>direct input at > 10 kOhm |
| 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 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    | 14 W at 24 V AC/DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Realtime clock            | Built-in clock, clock drift <= 30 s/month at -20...65 °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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Mounting support          | Panel mounting with accessory<br>DIN rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Width                     | 144 Mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Height                    | 110 Mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Depth                     | 60.5 Mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Product weight            | 0.385 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<br>UL94 (material V0) |
| Product certifications                | EAC[RETURN]CE[RETURN]cURus[RETURN]CSA[RETURN]RCM                                                                                                                                                                                                                |
| Ambient air temperature for operation | -20...65 °C conforming to UL 60730-1<br>-20...60 °C horizontal 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                                                                                                                                                                                                                                                      |

## Ordering and shipping details

|                   |               |
|-------------------|---------------|
| Category          | US1PC1222537  |
| Discount Schedule | PC12          |
| GTIN              | 3606481390127 |
| Returnability     | Yes           |
| Country of origin | IT            |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Height             | 13.5 Cm  |
| Package 1 Width              | 9.0 Cm   |
| Package 1 Length             | 19.0 Cm  |
| Package 1 Weight             | 416.0 G  |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 6        |
| Package 2 Height             | 15.0 Cm  |
| Package 2 Width              | 30.0 Cm  |
| Package 2 Length             | 40.0 Cm  |
| Package 2 Weight             | 2.835 Kg |

## Offer Sustainability

|                                                        |                                                                                             |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Recyclability potential, in %                          | 0                                                                                           |
| California proposition 65                              | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which |
| Total lifecycle Carbon footprint                       | 618 kg CO2 eq.                                                                              |
| Carbon footprint of the manufacturing phase [A1 to A3] | 36.62483531268194                                                                           |
| Carbon footprint of the manufacturing phase [A1 to A3] | 37 kg CO2 eq.                                                                               |
| Carbon footprint of the distribution phase [A4]        | 0.1546205326353318                                                                          |

|                                                      |                                                                                                      |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Carbon footprint of the distribution phase [A4]      | 0.2 kg CO2 eq.                                                                                       |
| Carbon footprint of the installation phase [A5]      | 0.029447833169526507                                                                                 |
| Carbon footprint of the installation phase [A5]      | 0 kg CO2 eq.                                                                                         |
| Carbon footprint of the use phase [B2, B3, B4, B6]   | 580.288796655941                                                                                     |
| Carbon footprint of the use phase [B2, B3, B4, B6]   | 580 kg CO2 eq.                                                                                       |
| Mercury free                                         | Yes                                                                                                  |
| Sustainable packaging                                | No                                                                                                   |
| Carbon footprint of the end-of-life phase [C1 to C4] | 1.0259939897946944                                                                                   |
| Carbon footprint of the end-of-life phase [C1 to C4] | 1 kg CO2 eq.                                                                                         |
| Environmental Disclosure                             | <a href="#">Product Environmental Profile</a>                                                        |
| Total lifecycle Carbon footprint                     | 618                                                                                                  |
| Packaging made with recycled cardboard               | Yes                                                                                                  |
| Packaging without single use plastic                 | No                                                                                                   |
| SCIP Number                                          | E656ff92-3a6a-4d6c-92e4-b21d59588e3f                                                                 |
| REACH Regulation                                     | Reference contains Substances of Very High Concern above the threshold <a href="#">↗</a>             |
| EU RoHS Directive                                    | Compliant By Exemption <a href="#">↗</a>                                                             |
| Updatability                                         | Yes                                                                                                  |
| End of life manual availability                      | <a href="#">End Of Life Information</a>                                                              |
| Removable battery                                    | Yes                                                                                                  |
| Take-back                                            | No                                                                                                   |
| WEEE Label                                           | The product must be disposed on European Union markets following specific waste collection and never |

### Contractual warranty

|                      |    |
|----------------------|----|
| Warranty (in months) | 18 |
|----------------------|----|

Product Life Status : **Commercialised**