

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



### Main

|                           |                                       |
|---------------------------|---------------------------------------|
| Range of product          | Modicon TM5                           |
| Product or component type | Mixed I/O module                      |
| Range compatibility       | Modicon LMC058<br>Modicon M258        |
| Product compatibility     | Motion controller<br>Logic controller |

### Complementary

|                             |                                                                                             |
|-----------------------------|---------------------------------------------------------------------------------------------|
| Discrete input number       | 4                                                                                           |
| Discrete input voltage      | 24 V                                                                                        |
| Discrete input voltage type | DC                                                                                          |
| Input voltage limits        | 20.4...28.8 V                                                                               |
| Discrete input logic        | Sink                                                                                        |
| Discrete input current      | 3.3 mA                                                                                      |
| Voltage state 0 guaranteed  | $\leq 5$ V                                                                                  |
| Voltage state 1 guaranteed  | $\geq 15$ V                                                                                 |
| Input filtering             | $\leq 2$ $\mu$ s (hardware)<br>1 ms (by default)<br>$\leq 25$ ms (configurable by software) |
| Analogue input number       | 1                                                                                           |
| Analogue input type         | Voltage $\pm 10$ V<br>Current 0...20 mA/4...20 mA                                           |
| Analogue input resolution   | 12 bits + sign voltage<br>12 bits current                                                   |
| Common mode rejection       | 70 dB DC for analog input<br>70 dB 50 Hz for analog input                                   |
| Discrete output number      | 2                                                                                           |
| Discrete output type        | Transistor                                                                                  |
| Output voltage              | 24 V DC                                                                                     |
| Output voltage limits       | 20.4...28.8 V                                                                               |
| Discrete output logic       | Source                                                                                      |
| Discrete output current     | $\leq 1$ A<br>$\leq 0.5$ A per output                                                       |
| Peak output current         | $\leq 14$ A                                                                                 |
| Leakage current             | 5 $\mu$ A (when switched off) digital output                                                |
| Switching frequency         | 100 Hz, resistive digital output                                                            |
| Analogue output number      | 1                                                                                           |
| Analogue output type        | Voltage : $\pm 10$ V<br>Current : 0...20 mA                                                 |
| Conversion time             | 300 $\mu$ s analog output                                                                   |
| Analogue output resolution  | 12 bits + sign, $\pm 10$ V<br>12 bits, 0...20 mA                                            |
| Measurement resolution      | 2.441 mV, $\pm 10$ V, $\pm 10$ V<br>4.883 $\mu$ A, 0...20 mA/4...20 mA, 0...20 mA           |
| Color                       | White                                                                                       |

|                           |                                                                                                                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Response time             | <= 250 µs (from state 0 to state 1) digital output<br><= 250 µs (from state 1 to state 0) digital output<br>1 ms analog output                                                                                                 |
| Input impedance           | 7.18 kOhm digital<br>>= 1 MOhm analog, +/- 10 V                                                                                                                                                                                |
| Output impedance          | >= 1 kOhm, +/- 10 V at 32...131 °F (0...55 °C)<br>>= 10 kOhm, +/- 10 V at 131...140 °F (55...60 °C)                                                                                                                            |
| Load impedance ohmic      | <= 400 Ohm (output: 0...20 mA) at 32...131 °F (0...55 °C)<br><= 300 Ohm (output: 0...20 mA) at 131...140 °F (55...60 °C)<br><= 300 Ohm (input: 0...20 mA/4...20 mA)                                                            |
| Sampling duration         | 300 µs analog input                                                                                                                                                                                                            |
| Measurement error         | < 0.08 % of full scale (input: +/- 10 V) at 25 °C<br>< 0.08 % of full scale (input: 0...20 mA/4...20 mA) at 25 °C<br>< 0.15 % of full scale (output: +/- 10 V) at 25 °C<br>< 0.15 % of full scale (output: 0...20 mA) at 25 °C |
| Temperature coefficient   | +/- 0.009 %FS/°C (input: 0...20 mA/4...20 mA)<br>+/- 0.006 %FS/°C (input: +/- 10 V)<br>+/- 0.02 %FS/°C (output: 0...20 mA)<br>+/- 0.02 %FS/°C (output: +/- 10 V)                                                               |
| Non-linearity             | +/- 0.02 %FS (input: 0...20 mA/4...20 mA)<br>+/- 0.02 %FS (input: +/- 10 V)<br>+/- 0.1 %FS (output: 0...20 mA)<br>+/- 0.1 %FS (output: +/- 10 V)                                                                               |
| Type of cable             | Shielded cable                                                                                                                                                                                                                 |
| Isolation                 | No insulation between channels<br>500 Vrms AC insulation between channel and bus                                                                                                                                               |
| Supply                    | Internal                                                                                                                                                                                                                       |
| [Us] rated supply voltage | 24 V DC, -15...20 %                                                                                                                                                                                                            |
| Local signalling          | 1 LED (green)<br>1 LED (green) power supply (ON)<br>1 LED (red) power supply (OFF)<br>4 LEDs (green) digital input status<br>2 LEDs (orange) digital output status<br>1 LED (orange)                                           |
| Wiring mode               | 1 wire digital input/output                                                                                                                                                                                                    |
| Current consumption       | 2 mA at 5 V DC for bus<br>73 mA at 24 V DC for inputs/outputs                                                                                                                                                                  |
| Power dissipation in W    | <= 1.75 W                                                                                                                                                                                                                      |
| Protection type           | Against reverse polarity digital output<br>Against short-circuits digital output<br>Thermal overload protection digital output<br>Against short-circuits analog output                                                         |
| Marking                   | CE                                                                                                                                                                                                                             |
| Product weight            | 0.06 lb(US) (0.025 kg)                                                                                                                                                                                                         |

## Environment

|                                       |                                                                                                                                                                                                   |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                             | CSA C22.2 No 142<br>IEC 61131-2<br>UL 508<br>CSA C22.2 No 213                                                                                                                                     |
| Product certifications                | CSA<br>C-Tick<br>CULus<br>GOST-R                                                                                                                                                                  |
| Ambient air temperature for operation | 32...122 °F (0...50 °C) (vertical installation)<br>32...131 °F (0...55 °C) without derating (horizontal installation)<br>131...140 °F (55...60 °C) with derating factor (horizontal installation) |
| Ambient air temperature for storage   | -13...158 °F (-25...70 °C)                                                                                                                                                                        |
| Relative humidity                     | 5...95 % (without condensation)                                                                                                                                                                   |
| IP degree of protection               | IP20 conforming to IEC 61131-2                                                                                                                                                                    |
| Pollution degree                      | 2 conforming to IEC 60664                                                                                                                                                                         |
| Operating altitude                    | 0...6561.68 ft (0...2000 m)                                                                                                                                                                       |
| Storage altitude                      | 0...9842.52 ft (0...3000 m)                                                                                                                                                                       |
| Vibration resistance                  | 1 gn (f=8.4...150 Hz) on DIN rail<br>3.5 mm (f=5...8.4 Hz) on DIN rail                                                                                                                            |
| Shock resistance                      | 15 gn 11 ms                                                                                                                                                                                       |

|                                       |                                                                                                                                                        |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Resistance to electrostatic discharge | 4 kV (on contact) conforming to EN/IEC 61000-4-2<br>8 kV (in air) conforming to EN/IEC 61000-4-2                                                       |
| Resistance to electromagnetic fields  | 0.91 V/yd (1 V/m) (2...2.7 GHz) conforming to EN/IEC 61000-4-3<br>9.14 V/yd (10 V/m) (80...2000 MHz) conforming to EN/IEC 61000-4-3                    |
| Resistance to fast transients         | 1 kV (I/O) conforming to EN/IEC 61000-4-4<br>1 kV (shielded cable) conforming to EN/IEC 61000-4-4<br>2 kV (power lines) conforming to EN/IEC 61000-4-4 |
| Surge withstand                       | 0.5 kV (differential mode) conforming to EN/IEC 61000-4-5<br>1 kV (common mode) conforming to EN/IEC 61000-4-5                                         |
| Electromagnetic compatibility         | EN/IEC 61000-4-6                                                                                                                                       |
| Disturbance radiated/conducted        | CISPR 11                                                                                                                                               |

### Ordering and shipping details

|                       |                     |
|-----------------------|---------------------|
| Category              | 22532 - M258 PLC    |
| Discount Schedule     | PC12                |
| GTIN                  | 00785901373537      |
| Nbr. of units in pkg. | 1                   |
| Package weight(Lbs)   | 0.10000000000000001 |
| Returnability         | N                   |
| Country of origin     | AT                  |

### Offer Sustainability

|                                  |                                                                                                                                    |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                                                                                                              |
| RoHS (date code: YYWW)           | Compliant - since 1152 - Schneider Electric declaration of conformity <a href="#">Schneider Electric declaration of conformity</a> |
| REACH                            | Reference not containing SVHC above the threshold                                                                                  |
| Product environmental profile    | Available <a href="#">Product Environmental Profile</a>                                                                            |
| Product end of life instructions | Available <a href="#">End Of Life Information</a>                                                                                  |
| California proposition 65        | WARNING: This product can expose you to chemicals including:                                                                       |
| - - - - - Substance 1            | Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm.   |
| - - - - - More information       | For more information go to <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a>                                      |

### Contractual warranty

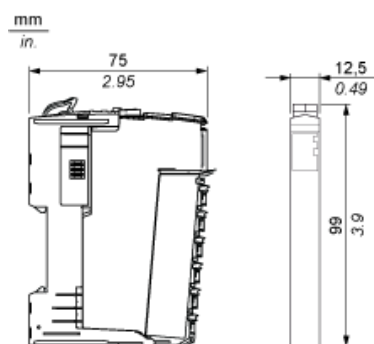
|                 |           |
|-----------------|-----------|
| Warranty period | 18 months |
|-----------------|-----------|

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TM5 Slice

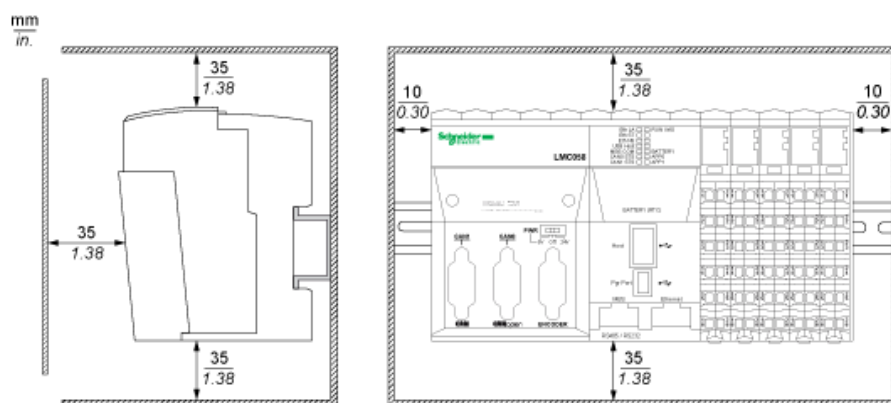
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Dimensions

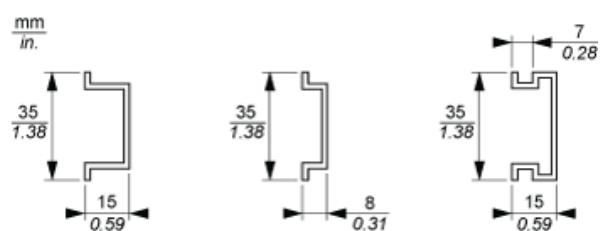


## TM5 System

### Spacing Requirements



### Mounting on a DIN Rail

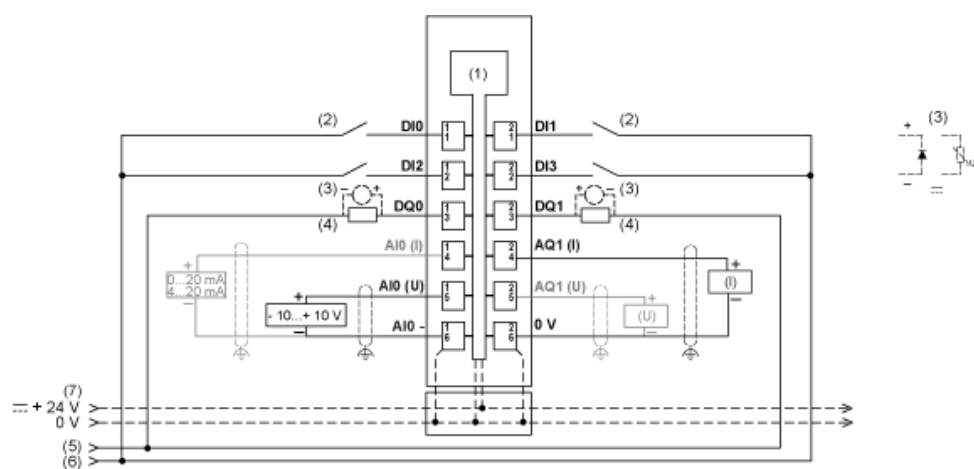


## TM5 System Wiring Recommendations

### Wire Sizes to Use with the Removable Spring Terminal Blocks

| mm<br>in.       |  |  |  |  |
|-----------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| mm <sup>2</sup> | 0,08...2,5                                                                        | 0,25...2,5                                                                        | 0,25...1,5                                                                        | 2 x 0,25...2 x 0,75                                                               |
| AWG             | 28...14                                                                           | 24...14                                                                           | 24...16                                                                           | 2 x 24...2 x 18                                                                   |

## Wiring Diagram



- 1 internal electronics
- 2 2-wire sensor
- 3 inductive load protection
- 4 2-wire load
- 5 0 Vdc I/O power segment by external connection
- 6 24 Vdc I/O power segment by external connection
- 7 24 Vdc I/O power segment integrated into the bus bases
- I current
- U voltage

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