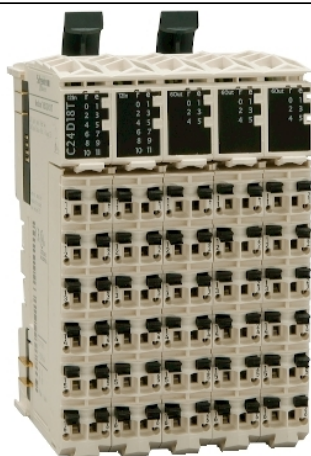


Product availability: Non-Stock - Not normally stocked in distribution facility



## Main

|                           |                             |
|---------------------------|-----------------------------|
| Range of product          | Modicon TM5                 |
| Product or component type | Compact I/O expansion block |

## Complementary

|                                  |                                                                                      |
|----------------------------------|--------------------------------------------------------------------------------------|
| Enclosure material               | Plastic                                                                              |
| Color                            | White                                                                                |
| Input/output number              | 20                                                                                   |
| For enclosure nominal dimensions | 12 I + 8 O                                                                           |
| Number of modules                | 3 modules with 4 digital input<br>2 modules with 4 digital output                    |
| Discrete input number            | 12                                                                                   |
| 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           | 3.75 mA                                                                              |
| Input impedance                  | 6.4 kOhm                                                                             |
| Analogue input number            | 0                                                                                    |
| Discrete output number           | 8                                                                                    |
| Discrete output type             | Transistor                                                                           |
| Wiring mode                      | 3-wire discrete input<br>3-wire discrete output                                      |
| Output voltage                   | 24 V DC                                                                              |
| Output voltage limits            | 20.4...28.8 V DC                                                                     |
| Discrete output logic            | Source                                                                               |
| Discrete output current          | 0.5 A per output                                                                     |
| Peak output current              | <= 4 A                                                                               |
| Voltage state 0 guaranteed       | <= 5 V                                                                               |
| Voltage state 1 guaranteed       | >= 15 V                                                                              |
| Input filtering                  | <= 25 ms configurable by software<br><= 100 ms hardware                              |
| Response time                    | <= 300 µs from state 0 to state 1 output<br><= 300 µs from state 1 to state 0 output |
| Leakage current                  | 5 µA when switched off output                                                        |
| Isolation                        | No insulation between channels<br>500 Vrms AC insulation between channel and bus     |
| Voltage drop                     | <= 0.3 V at 500 mA output                                                            |
| Current consumption              | 68 mA 5 V DC bus<br>80 mA 24 V DC input/output                                       |

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.

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Max current                    | 1000 mA sensor supply<br>1500 mA actuator supply<br>4000 mA loads on I/O power segment                            |
| Power dissipation in W         | <= 2.36 W                                                                                                         |
| Local signalling               | 5 LEDs green power supply<br>5 LEDs red power supply<br>12 LEDs green input status<br>8 LEDs yellow output status |
| Sensor power supply            | 24 V 500 mA for all channels overload, short-circuit and reverse polarity protection                              |
| Electrical connection          | Removable spring terminal block                                                                                   |
| Marking                        | CE                                                                                                                |
| Surge withstand                | 0.5 kV differential mode 24 V DC EN/IEC 61000-4-5<br>1 kV common mode 24 V DC EN/IEC 61000-4-5                    |
| Electromagnetic compatibility  | EN/IEC 61000-4-6                                                                                                  |
| Disturbance radiated/conducted | CISPR 11                                                                                                          |

## 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 | 14...122 °F (-10...50 °C) vertical installation<br>14...140 °F (-10...60 °C) horizontal installation   |
| Ambient air temperature for storage   | -40...158 °F (-40...70 °C)                                                                             |
| Relative humidity                     | 5...95 % without condensation                                                                          |
| IP degree of protection               | IP20 IEC 61131-2                                                                                       |
| Pollution degree                      | 2 IEC 60664                                                                                            |
| Operating altitude                    | 0...6561.68 ft (0...2000 m)                                                                            |
| Storage altitude                      | 0...9842.52 ft (0...3000 m)                                                                            |
| Vibration resistance                  | 1 gn 8.4...150 Hz DIN rail<br>3.5 mm 5...8.4 Hz DIN rail                                               |
| Shock resistance                      | 15 gn 11 ms                                                                                            |
| Resistance to electrostatic discharge | 8 kV in air EN/IEC 61000-4-2<br>4 kV on contact EN/IEC 61000-4-2                                       |
| Resistance to electromagnetic fields  | 0.91 V/yd (1 V/m) 2...2.7 GHz EN/IEC 61000-4-3<br>9.14 V/yd (10 V/m) 80...2000 MHz EN/IEC 61000-4-3    |
| Resistance to fast transients         | 1 kV I/O EN/IEC 61000-4-4<br>1 kV shielded cable EN/IEC 61000-4-4<br>2 kV power lines EN/IEC 61000-4-4 |
| Mounting support                      | DIN rail                                                                                               |
| Product weight                        | 0.53 lb(US) (0.24 kg)                                                                                  |

## Ordering and shipping details

|                       |                    |
|-----------------------|--------------------|
| Category              | 22532 - M258 PLC   |
| Discount Schedule     | PC12               |
| GTIN                  | 00785901940814     |
| Nbr. of units in pkg. | 1                  |
| Package weight(Lbs)   | 0.6099999999999999 |
| Returnability         | N                  |
| Country of origin     | AT                 |

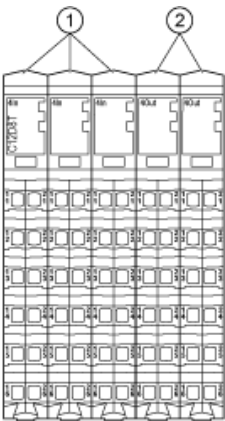
## Offer Sustainability

|                                  |                                                                                                                                                                                                        |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                                                                                                                                                                                  |
| RoHS (date code: YYWW)           | Compliant - since 1039 - Schneider Electric declaration of conformity  Schneider Electric declaration of conformity |
| REACH                            | Reference not containing SVHC above the threshold                                                                                                                                                      |
| Product environmental profile    | Available                                                                                                                                                                                              |
| Product end of life instructions | Available                                                                                                                                                                                              |
| 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 |
|-----------------|-----------|

TM5 Compact I/O Module



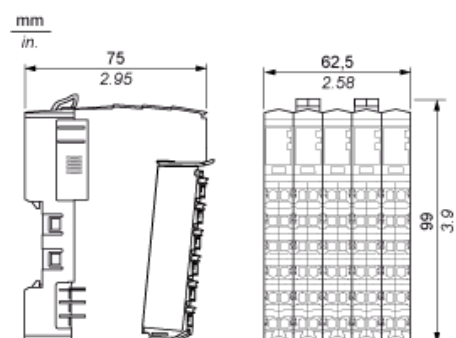
| N° | Designation                                  |
|----|----------------------------------------------|
| 1  | Input electronic module / 4 digital inputs   |
| 2  | Output electronic module / 4 digital outputs |

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Compact I/O Module

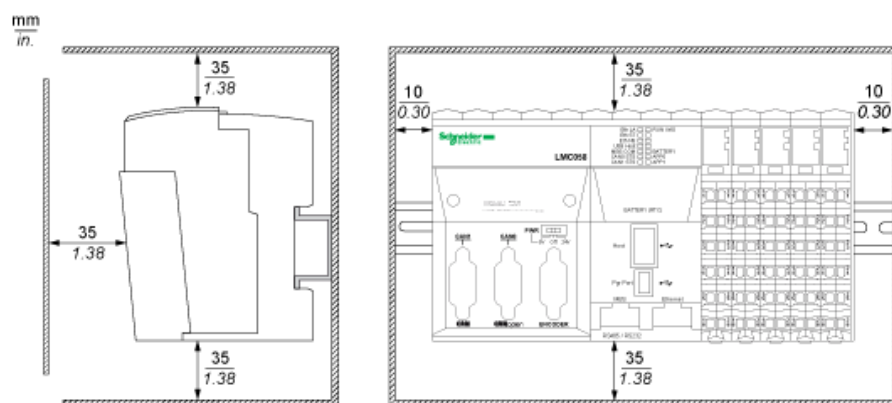
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Dimensions

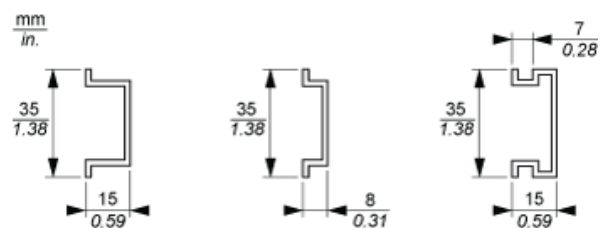


## TM5 System

### Spacing Requirements



### Mounting on a DIN Rail



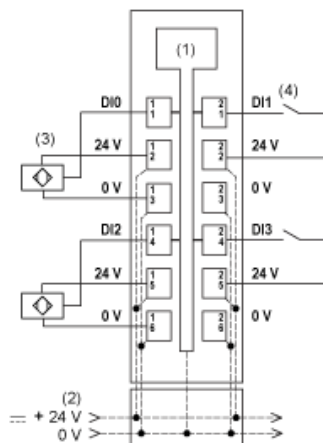
## TM5 System Wiring Recommendations

### 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                                                                   |

## Digital Input 4In

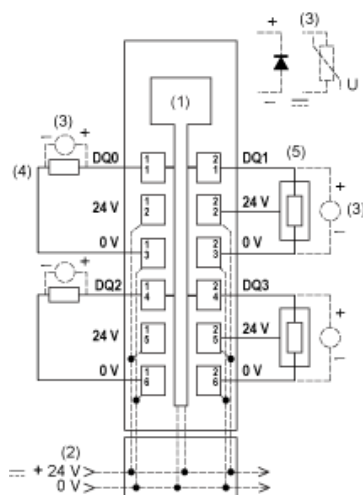
### Wiring Diagram



- 1 Internal electronics
- 2 24 Vdc I/O power segment integrated into the bus bases
- 3 3-wire sensor
- 4 2-wire sensor

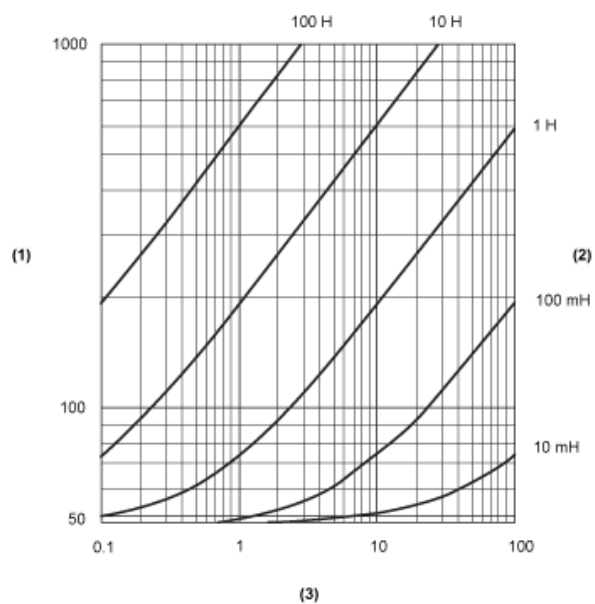
## Digital Output 4Out

### Wiring Diagram



- 1 Internal electronics
- 2 24 Vdc I/O power segment integrated into the bus bases
- 3 Inductive load protection
- 4 2-wire load
- 5 3-wire load

### Switching Inductive Load Characteristics



- (1) Load resistance in  $\Omega$
- (2) Load inductance in H
- (3) Max. operating cycles / second

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