



## Main

|                                |                                |
|--------------------------------|--------------------------------|
| Range of Product               | Modicon TM7                    |
| Product or Component Type      | Discrete I/O expansion block   |
| Range Compatibility            | Modicon LMC058<br>Modicon M258 |
| Enclosure Material             | Plastic                        |
| Bus type                       | TM7 bus                        |
| [Ue] rated operational voltage | 24 V DC                        |
| Input/output number            | 16                             |
| Input/output number of block   | 16 I                           |

## Complementary

|                             |   |
|-----------------------------|---|
| Discrete input number       | 16  |
| Discrete input voltage      | 24 V  |
| Discrete input voltage type | DC  |
| Discrete input current      | 7 mA  |
| Discrete input logic        | Positive  |
| Sensor power supply         | 24 V, 500 mA for all channels overload, short-circuit and reverse polarity protection   |
| Electrical connection       | 1 male connector M12 - B coding - 4 ways bus IN<br>1 female connector M12 - B coding - 4 ways bus OUT<br>1 male connector M8 - 4 ways power IN<br>1 female connector M8 - 4 ways power OUT<br>16 female connectors M8 - 3 ways sensor |
| Local signalling            | For bus diagnostic 2 LEDs<br>For sensor power supply diagnostics 2 LEDs   |
| Operating position          | Any position  |
| Fixing Mode                 | By 2 screws   |
| Net Weight                  | 0.71 lb(US) (0.32 kg)   |

## Environment

|                                       |  |
|---------------------------------------|--|
| Standards                             | IEC 61131-2  |
| Product Certifications                | GOST-R<br>C-tick<br>CURus<br>ATEX II 3g EEx nA II T5   |
| Marking                               | CE   |
| Ambient air temperature for operation | 14...140 °F (-10...60 °C)  |
| Ambient Air Temperature for Storage   | -13...185 °F (-25...85 °C)   |
| Relative humidity                     | 5...95 % without condensation or dripping water  |
| Pollution degree                      | 2 IEC 60664  |
| IP degree of protection               | IP67 conforming to IEC 61131-2   |
| Operating altitude                    | 0...6561.68 ft (0...2000 m)  |
| Storage altitude                      | 0.00...9842.52 ft (0...3000 m)   |
| Vibration resistance                  | 7.5 mm constant amplitude 2...8 Hz)IEC 60721-3-5 Class 5M3<br>2 gn constant acceleration 8...200 Hz)IEC 60721-3-5 Class 5M3<br>4 gn constant acceleration 200...500 Hz)IEC 60721-3-5 Class 5M3 |

|                               |  |
|-------------------------------|--|
| Shock resistance              | 30 gn 11 ms IEC 60721-3-5 Class 5M3  |
| Electromagnetic compatibility | <p>Electrostatic discharge immunity test, 4 kV on contact EN/IEC 61000-4-2</p> <p>Electrostatic discharge immunity test, 8 kV in air EN/IEC 61000-4-2</p> <p>Susceptibility to electromagnetic fields, 1 V/m 2...2.7 GHz EN/IEC 61000-4-3</p> <p>Susceptibility to electromagnetic fields, 10 V/m 80...2000 MHz EN/IEC 61000-4-3</p> <p>Electrical fast transient/burst immunity test, 2 kV power supply EN/IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test, 1 kV input/output EN/IEC 61000-4-4</p> <p>Electrical fast transient/burst immunity test, 1 kV shielded cable EN/IEC 61000-4-4</p> <p>1.2/50 µs shock waves immunity test, 0.5 kV power supply (common mode) EN/IEC 61000-4-5</p> <p>1.2/50 µs shock waves immunity test, 1 kV power supply (differential mode) EN/IEC 61000-4-5</p> <p>1.2/50 µs shock waves immunity test, 0.5 kV unshielded links (common mode) EN/IEC 61000-4-5</p> <p>1.2/50 µs shock waves immunity test, 1 kV unshielded links (differential mode) EN/IEC 61000-4-5</p> <p>1.2/50 µs shock waves immunity test, 0.5 kV shielded links (common mode) EN/IEC 61000-4-5</p> <p>1.2/50 µs shock waves immunity test, 1 kV shielded links (differential mode) EN/IEC 61000-4-5</p> <p>Conducted RF disturbances EN/IEC 61000-4-6</p> <p>Conducted and radiated emissions CISPR 11</p> |

## Ordering and shipping details

|                       |                  |
|-----------------------|------------------|
| Category              | 22532 - M258 PLC |
| Discount Schedule     | PC12             |
| GTIN                  | 3595864093055    |
| Nbr. of units in pkg. | 1                |
| Package weight(Lbs)   | 12.49 oz (354 g) |
| Returnability         | No               |
| Country of origin     | AT               |

## Packing Units

|                        |                   |
|------------------------|-------------------|
| Unit Type of Package 1 | PCE               |
| Package 1 Height       | 1.77 in (4.5 cm)  |
| Package 1 width        | 2.17 in (5.5 cm)  |
| Package 1 Length       | 6.89 in (17.5 cm) |

## Offer Sustainability

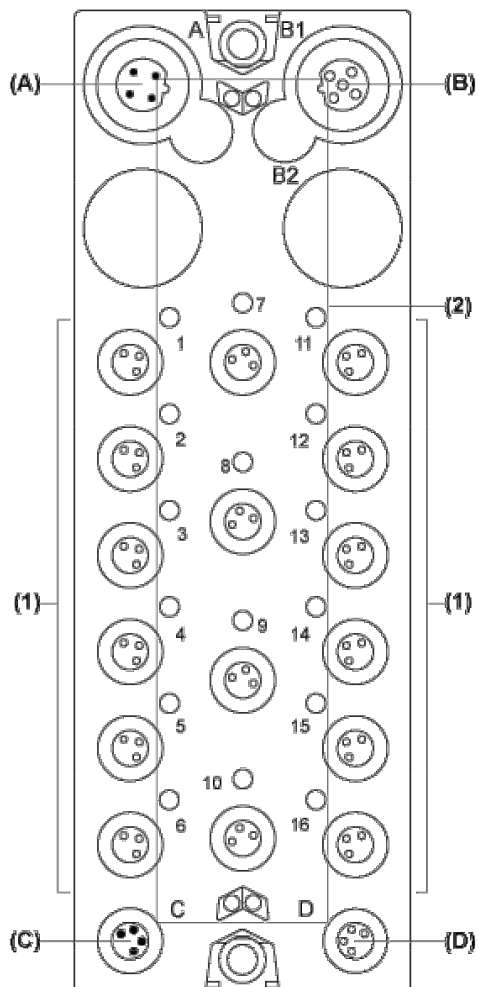
|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer 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>   |
| REACH free of SVHC         | Yes   |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>  |
| Toxic heavy metal free     | Yes   |
| 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.  |
| PVC free                   | Yes   |

## Contractual warranty

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

Digital Input Block

Description



- (A) TM7 bus IN connector
- (B) TM7 bus OUT connector
- (C) 24 Vdc power IN connector
- (D) 24 Vdc power OUT connector
- (1) Input connectors
- (2) Status LEDs

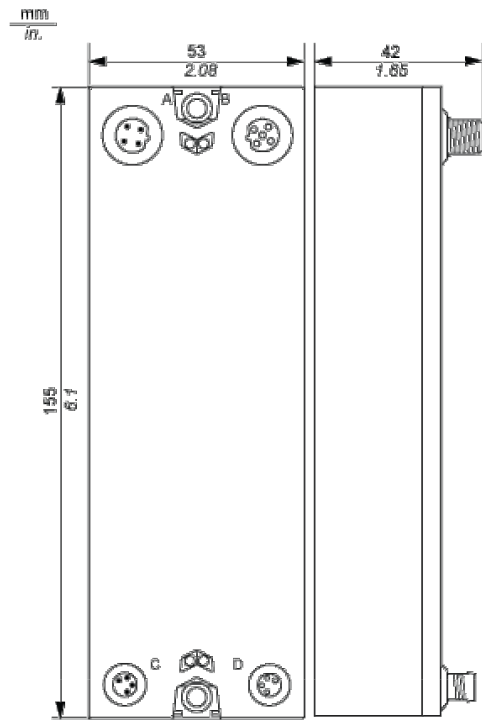
Connector and Channel Assignments

| Input connectors | Channel type | Channels |
|------------------|--------------|----------|
| 1                | Input        | 10       |
| 2                | Input        | 11       |
| 3                | Input        | 12       |
| 4                | Input        | 13       |
| 5                | Input        | 14       |
| 6                | Input        | 15       |
| 7                | Input        | 16       |
| 8                | Input        | 17       |
| 9                | Input        | 18       |

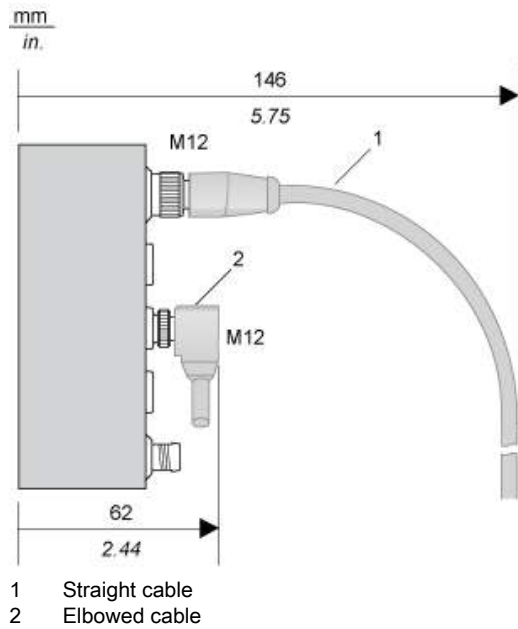
| Input connectors | Channel type | Channels |
|------------------|--------------|----------|
| 10               | Input        | I9       |
| 11               | Input        | I10      |
| 12               | Input        | I11      |
| 13               | Input        | I12      |
| 14               | Input        | I13      |
| 15               | Input        | I14      |
| 16               | Input        | I15      |

TM7 Block, Size 2

Dimensions

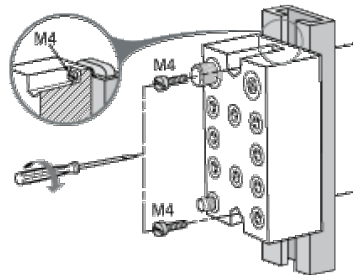


Spacing Requirements



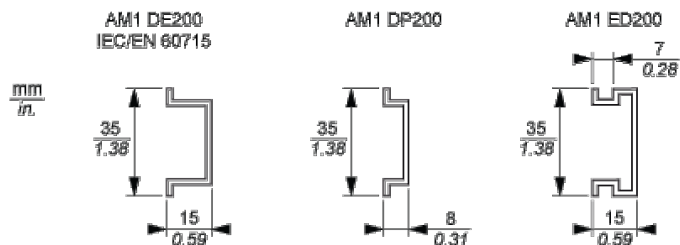
Installation Guidelines

TM7 Block on an Aluminium Frame



NOTE: Maximum torque to fasten the required M4 screws is 0.6 N.m (5.3 lbf-in).

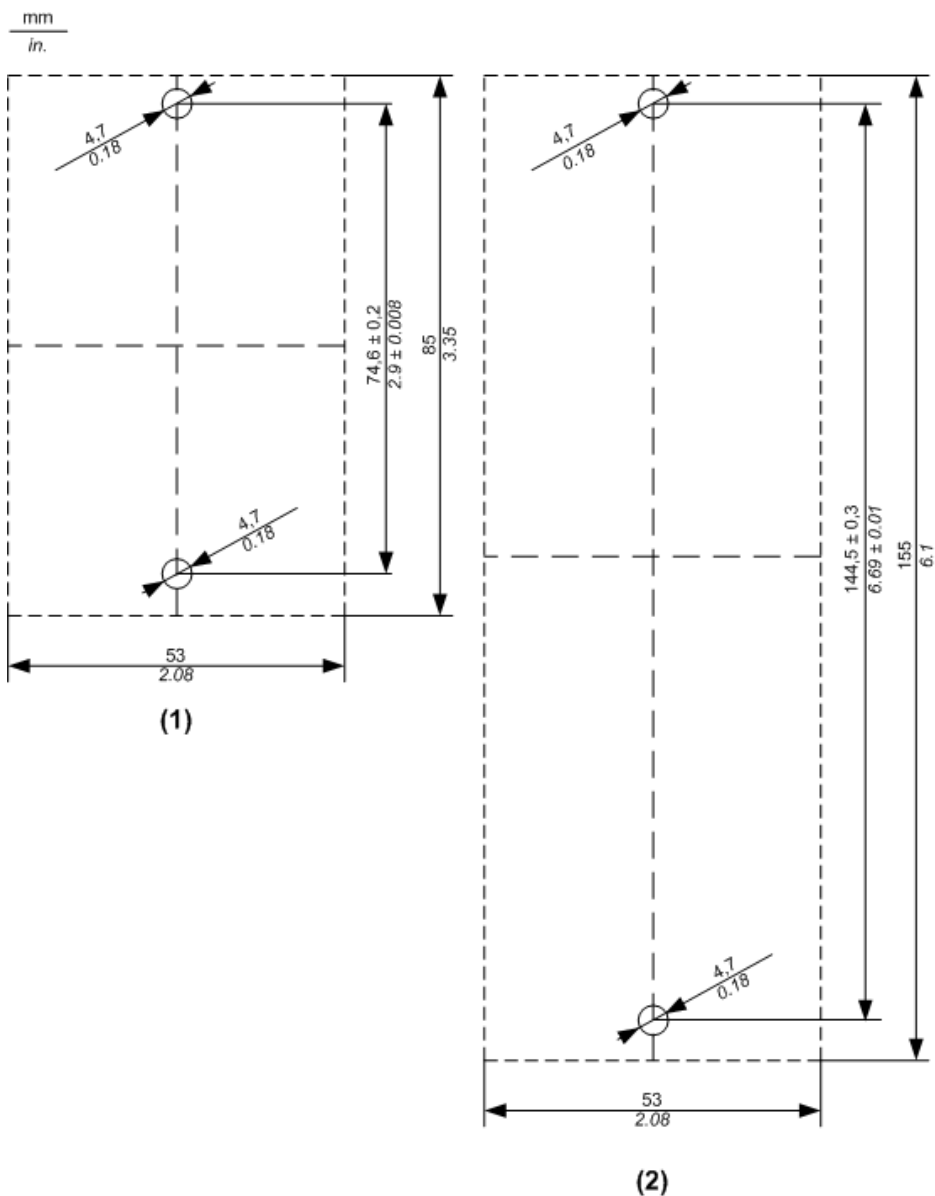
TM7 Block on a DIN Rail



NOTE: Only size 1 (smallest) blocks can be installed on DIN rail with the TM7ACMP mounting plate.

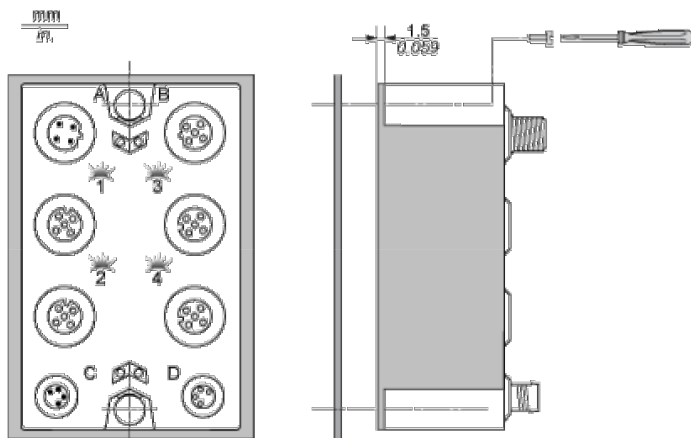
## TM7 Block Directly on the Machine

Drilling template of the block:



- (1) Size 1
- (2) Size 2

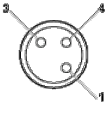
The thickness of the base plate should be taken into consideration when defining the screw length.



NOTE: Maximum torque to fasten the required M4 screws is 0.6 N.m (5.3 lbf-in).

Wiring Diagram

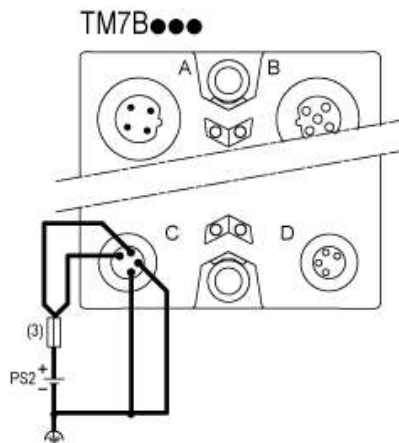
Pin Assignments for Input Connectors

| Connection  | Pin              | M8 Input             |
|---|------------------|----------------------|
|  | 1                | 24 Vdc sensor supply |
| 3   | 0 Vdc            |                      |
| 4   | DI: input signal |                      |

Wiring the Power Supply

When you provide power to a TM7 I/O block using the 24 VDC Power OUT connector of the preceding I/O block, both blocks occupy the same 24 Vdc I/O power segment. However, if you connect an external isolated power supply to the 24 Vdc Power IN connector of a TM7 I/O block, you establish a new 24 Vdc I/O power segment beginning with that I/O block.

I/O block wired with one external 24 Vdc power supply:



- (3) External fuse, Type T slow-blow, 8 A max., 250 V
- PS2 External isolated I/O power supply, 24 Vdc