



## Main

|                           |                                  |
|---------------------------|----------------------------------|
| Range of product          | Modicon TM5                      |
| Product or component type | Safety dc discrete output module |
| Discrete output number    | 4                                |
| Discrete output type      | Solid state                      |

## Complementary

|                                   |                                                                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Range compatibility               | PacDrive LMC motion controller                                                                                                    |
| Product compatibility             | PacDrive LMC Pro 2<br>PacDrive LMC Pro<br>PacDrive LMC Eco                                                                        |
| Output voltage                    | 24 V DC                                                                                                                           |
| Output voltage limits             | 20.4...28.8 V                                                                                                                     |
| Discrete output logic             | Source                                                                                                                            |
| Current per channel               | 0.5 A                                                                                                                             |
| Maximum current per output common | 2 A                                                                                                                               |
| Colour                            | Red                                                                                                                               |
| Peak output current               | 12 A                                                                                                                              |
| Switching frequency               | <= 500 Hz resistive load                                                                                                          |
| Maximum leakage current           | 10 µA when switched off                                                                                                           |
| Protection type                   | Short-circuit protection<br>Overload protection                                                                                   |
| Isolation                         | 500 Vrms AC insulation between channel and bus<br>No insulation between channels                                                  |
| Maximum power consumption in W    | 0.25 W for bus<br>1.3 W for internal                                                                                              |
| Local signalling                  | 1 LED green for power supply<br>1 LED red for power supply<br>2 LEDs red for safety status<br>4 LEDs red/orange for output status |
| Electrical connection             | 2 wires                                                                                                                           |
| Marking                           | CE                                                                                                                                |
| Safety level                      | SIL 3 conforming to IEC 61508<br>SIL 3 conforming to IEC 62061<br>PL = e conforming to EN 13849-1                                 |
| Safety reliability data           | MTTFd > 100 years<br>PFD < 1E-5<br>PFH < 1E-9                                                                                     |
| Net weight                        | 0.025 kg                                                                                                                          |

## Environment

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                             | IEC 61131-2<br>IEC 61508<br>IEC 62061<br>UL 508<br>CSA C22.2 No 142<br>EN 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Product certifications                | GOST-R<br>CSA<br>CULus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Ambient air temperature for operation | -10...50 °C (vertical installation)<br>-10...55 °C (horizontal installation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Ambient air temperature for storage   | -40...70 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Relative humidity                     | 5...95 % without condensation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| IP degree of protection               | IP20 conforming to EN 60529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Pollution degree                      | 2 conforming to IEC 60664                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Operating altitude                    | 0...2000 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Storage altitude                      | 0...3000 m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Vibration resistance                  | 1 gn at 8.4...150 Hz on DIN rail<br>3.5 mm at 5...8.4 Hz on DIN rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Shock resistance                      | 15 gn for 11 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Electromagnetic compatibility         | Electrostatic discharge immunity test, 4 kV on contact conforming to EN/IEC 61000-4-2<br>Electrostatic discharge immunity test, 8 kV in air conforming to EN/IEC 61000-4-2<br>Susceptibility to electromagnetic fields, 10 V/m 80...2000 MHz conforming to EN/IEC 61000-4-3<br>Electrical fast transient/burst immunity test, 1 kV I/O conforming to EN/IEC 61000-4-4<br>Electrical fast transient/burst immunity test, 1 kV shielded cable conforming to EN/IEC 61000-4-4<br>Electrical fast transient/burst immunity test, 2 kV power lines conforming to EN/IEC 61000-4-4<br>1.2/50 µs shock waves immunity test, 0.5 kV differential mode conforming to EN/IEC 61000-4-5<br>1.2/50 µs shock waves immunity test, 1 kV common mode conforming to EN/IEC 61000-4-5<br>Conducted RF disturbances conforming to EN/IEC 61000-4-6<br>Conducted and radiated emissions conforming to CISPR 11 |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Weight             | 73 g    |
| Package 1 Height             | 3 cm    |
| Package 1 width              | 6 cm    |
| Package 1 Length             | 10.5 cm |

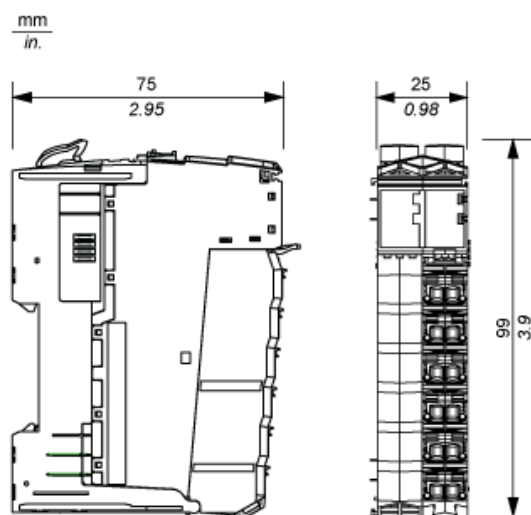
## Offer Sustainability

|                            |                                                                                                                                                                                      |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                |
| 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                                                                                                                         |
| <b>Contractual warranty</b> |                                                                                                                             |
| Warranty                    | 18 months                                                                                                                   |

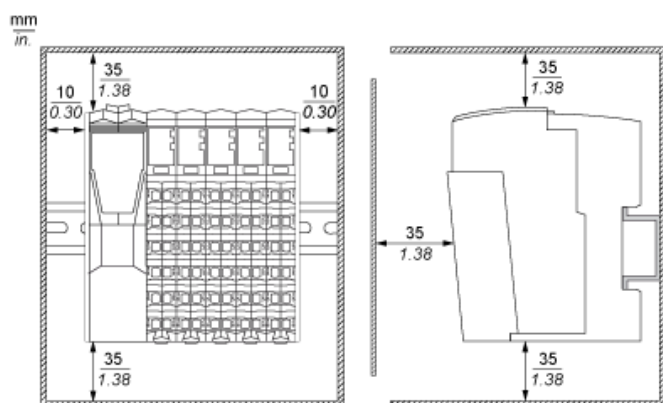
## TM5 Slice

### Dimensions

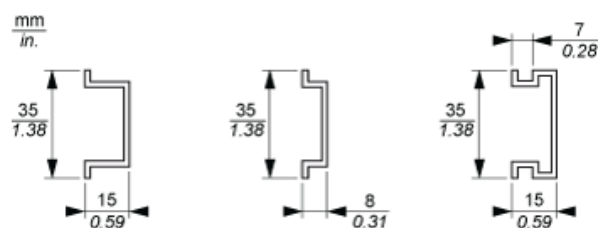


## TM5 Safety System

### Spacing Requirements



### Mounting on a DIN Rail



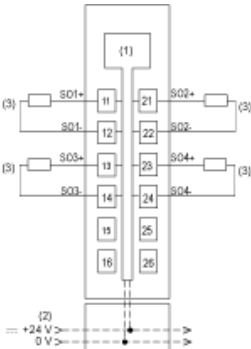
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

| $\frac{\text{mm}}{\text{in.}}$<br> |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| $\text{mm}^2$                                                                                                       | 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                                                                   |

Electronic Module 4DO 24 Vdc Tr 0.5 A 2 Wires

Wiring Diagram



- (1) Internal electronics
- (2) 24 Vdc I/O power segment integrated into the bus bases
- (3) Actuator 24 Vdc, max. 0.5A, residual current 2.0A