

Product datasheet

Specifications



digital input module - 12I - 24V DC sink - 1 wire

TM5SDI12D

Training Objectives : Compliant

Main

| | |
|---------------------------|-----------------------|
| Range of product | Modicon TM5 |
| Product or component type | Discrete input module |
| Discrete input number | 12 |
| Discrete input voltage | 24 V |

Complementary

| | |
|--------------------------------|---|
| Range compatibility | PacDrive LMC motion controller Modicon M258 Modicon LMC058 |
| Product compatibility | Motion controller PacDrive LMC Pro PacDrive LMC Pro 2 Logic controller PacDrive LMC Eco |
| 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 |
| Colour | White |
| Voltage state 0 guaranteed | ≤ 5 V |
| Voltage state 1 guaranteed | ≥ 15 V |
| Input filtering | ≤ 25 ms configurable by software ≤ 100 ms hardware |
| Isolation | 500 Vrms AC insulation between channel and bus No insulation between channels |
| Current consumption | 36 mA at 5 V DC bus 73 mA at 24 V DC all inputs On |
| Maximum power dissipation in W | 1.93 W |
| Local signalling | 1 LED green for power supply 1 LED red for power supply 12 LEDs green for input status |
| Electrical connection | 1 wire |
| Marking | CE |
| Net weight | 0.025 kg |

Environment

| | |
|--|---|
| Standards | CSA C22.2 No 213 IEC 61131-2 UL 508 CSA C22.2 No 142 |
| Product certifications | cULus C-Tick GOST-R CSA |
| Ambient air temperature for operation | -10...55 °C without derating (horizontal installation) -10...60 °C with derating factor (horizontal installation) -10...50 °C (vertical installation) |
| Ambient air temperature for storage | -40...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...2000 m |
| Storage altitude | 0...3000 m |
| Vibration resistance | 1 gn at 8.4...150 Hz on DIN rail 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 Electrostatic discharge immunity test, 8 kV in air conforming to EN/IEC 61000-4-2 Susceptibility to electromagnetic fields, 1 V/m 2...2.7 GHz conforming to EN/IEC 61000-4-3 Susceptibility to electromagnetic fields, 10 V/m 80...2000 MHz conforming to EN/IEC 61000-4-3 Electrical fast transient/burst immunity test, 1 kV I/O conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test, 1 kV shielded cable conforming to EN/IEC 61000-4-4 Electrical fast transient/burst immunity test, 2 kV power lines conforming to EN/IEC 61000-4-4 1.2/50 µs shock waves immunity test, 0.5 kV differential mode conforming to EN/IEC 61000-4-5 1.2/50 µs shock waves immunity test, 1 kV common mode conforming to EN/IEC 61000-4-5 Conducted RF disturbances conforming to EN/IEC 61000-4-6 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 | 36.0 g |
| Package 1 Height | 2 cm |
| Package 1 width | 6 cm |
| Package 1 Length | 10.5 cm |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 97 |
| Package 2 Weight | 3.698 kg |
| Package 2 Height | 15 cm |
| Package 2 width | 30 cm |
| Package 2 Length | 40 cm |

Offer Sustainability

| | |
|---------------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| REACH free of SVHC | Yes |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |

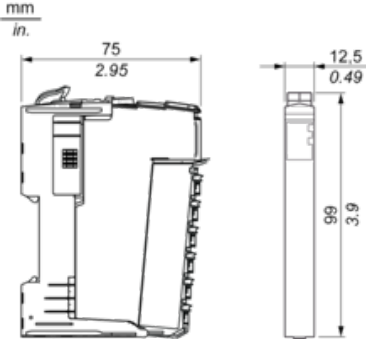
| | |
|-----------------------------------|---|
| Toxic heavy metal free | Yes |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS declaration |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End of Life Information |
| 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 |
|-----------------|-----------|

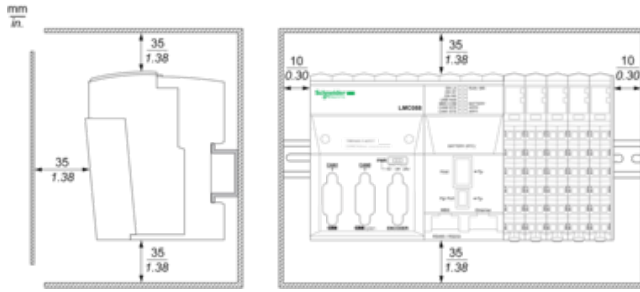
TM5 Slice

Dimensions

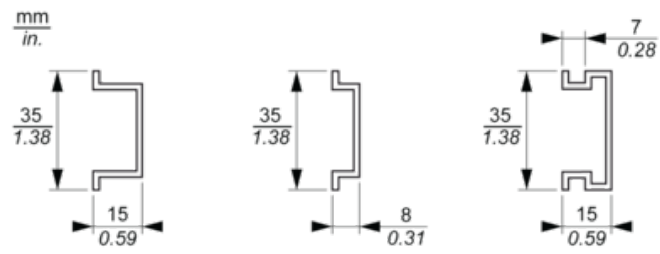


TM5 System

Spacing Requirements

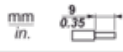






Mounting on a DIN Rail



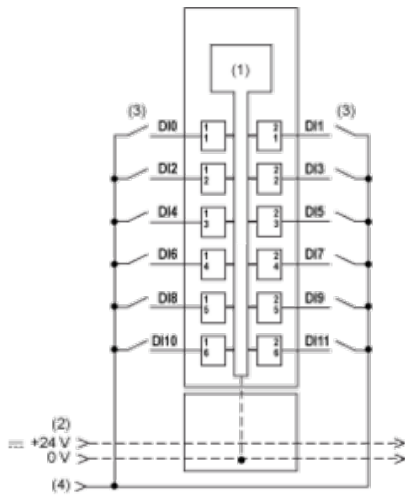
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

|  |  |  |  |  |
|---|---|---|---|---|
| mm in. | | | | |
| 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 |

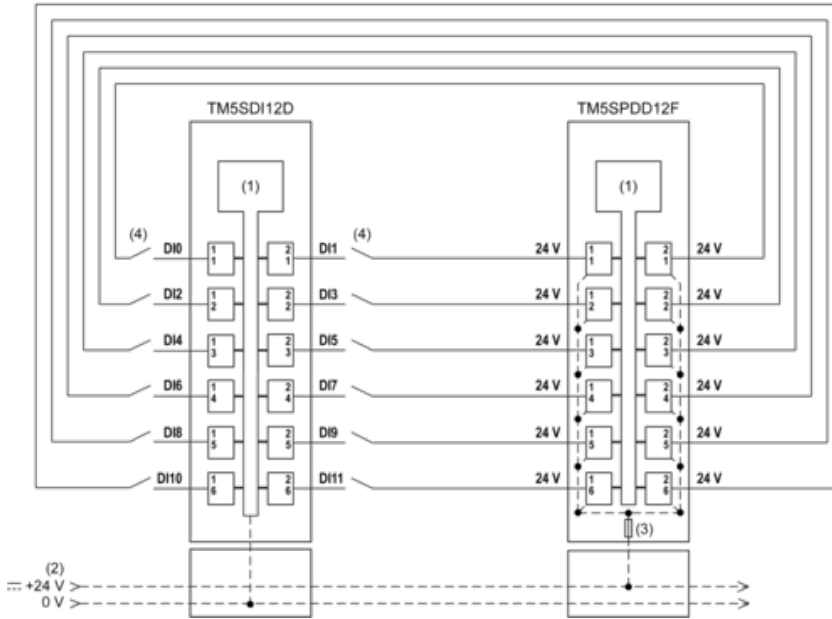
Electronic Module 12DI 24 Vdc Sink 1 Wire

Wiring Diagrams



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

To connect 2-wire devices, you can add a TM5SPDD12F Common Distribution module:



- (1) Internal electronics
- (2) 24 Vdc I/O power segment integrated into the bus bases
- (3) Integrated fuse type T slow-blow 6.3 A 250 V exchangeable
- (4) 2 wire-sensor