

Product data sheet

Specifications



Discrete I/O module, Modicon TM5, digital 8I, 4O, 24 V DC, 1 wire

TM5SDM12DT

Main

Range of product	Modicon TM5
Product or component type	Discrete I/O module
Discrete input number	8
Discrete input voltage	24 V
Discrete output number	4
Discrete output type	Transistor

Complementary

Range compatibility	Modicon M258 Modicon LMC058 PacDrive LMC motion controller
Product compatibility	PacDrive LMC Pro 2 Motion controller PacDrive LMC Pro PacDrive LMC Eco Logic controller
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
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	White
Peak output current	12 A
Switching frequency	<= 500 Hz resistive load
Voltage state 0 guaranteed	<= 5 V
Voltage state 1 guaranteed	>= 15 V
Input filtering	<= 25 ms configurable by software

	<= 100 ms hardware
Response time	<= 300 µs from state 0 to state 1 for output <= 300 µs from state 1 to state 0 for output
Maximum leakage current	5 µA when switched off
Protection type	Reverse polarity protection Short-circuit protection Overload protection
Isolation	No insulation between channels 500 Vrms AC insulation between channel and bus
Maximum voltage drop	<0.3 V at 500 mA for output
Current consumption	42 mA at 5 V DC bus 21 mA at 24 V DC all inputs On
Maximum power dissipation in W	1.52 W
Local signalling	1 LED green for power supply 1 LED red for power supply 4 LEDs yellow for output status 8 LEDs green for input status
Electrical connection	1 wire
Marking	CE
Net weight	0.025 kg

Environment

Standards	CSA C22.2 No 142 UL 508 CSA C22.2 No 213 IEC 61131-2
Product certifications	GOST-R cULus C-Tick 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 Height	2 cm

Package 1 Width	6 cm
Package 1 Length	11 cm
Package 1 Weight	38 g
Unit Type of Package 2	S02
Number of Units in Package 2	97
Package 2 Height	15 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	4.04 kg

Offer Sustainability

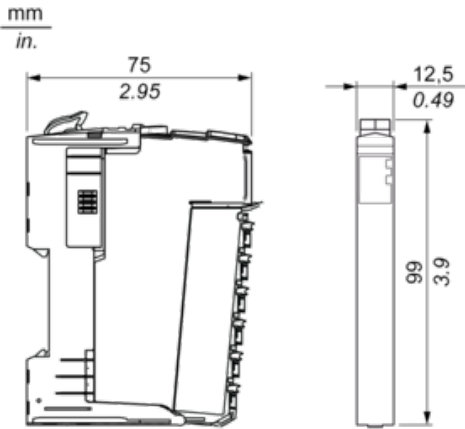
Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	China RoHS declaration
RoHS exemption information	Yes
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
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 www.P65Warnings.ca.gov

Contractual warranty

Warranty	18 months
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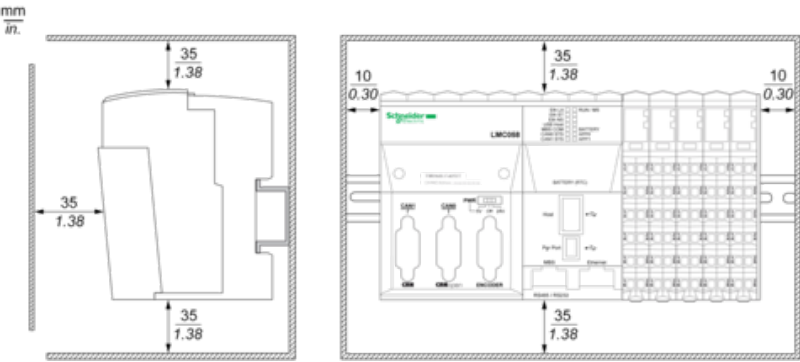
TM5 Slice

Dimensions

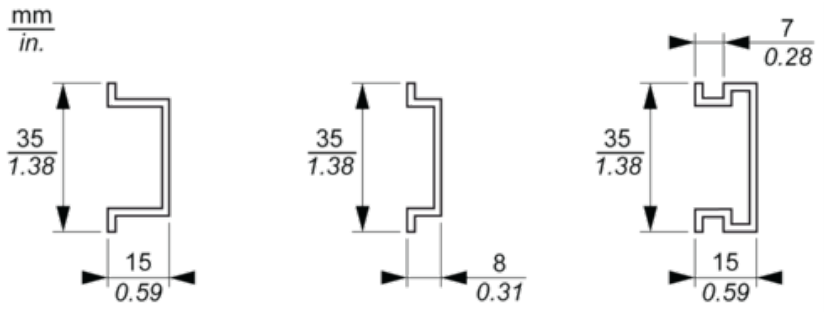


TM5 System

Spacing Requirements







Mounting on a DIN Rail



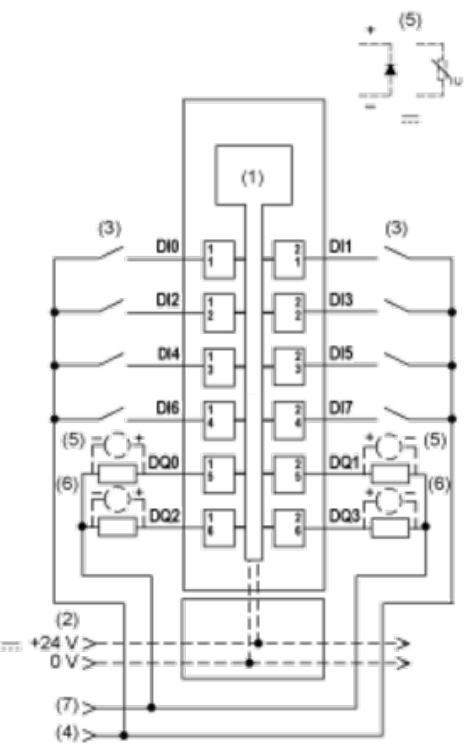
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

<div><div>mm</div><div>in.</div></div> <div><div><div>9</div><div>0.35</div></div><div><div></div><div></div></div></div>				
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

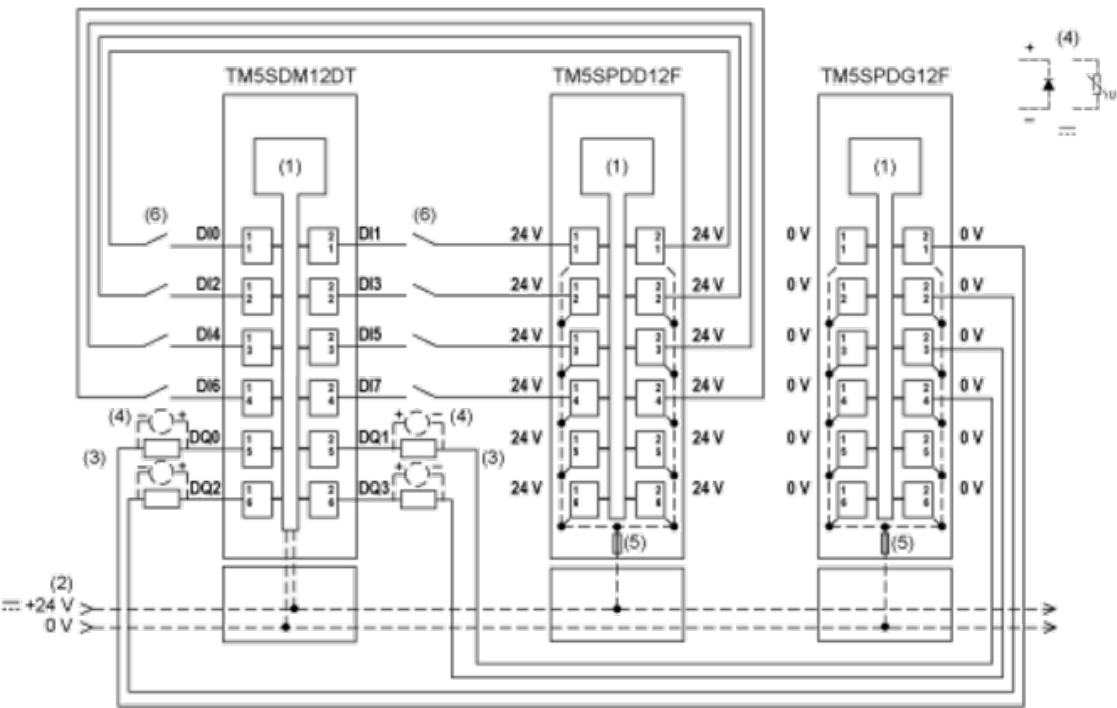
Electronic Module 8DI/4DO Tr 1 Wire

Wiring Diagram



- (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
- (5) Inductive load protection
- (6) 2-wire load
- (7) 0 Vdc I/O power segment by external connection

To connect 2-wire devices, you can add TM5SPDD12F and TM5SPDG12F Common Distribution modules:



- (1) Internal electronics
- (2) 24 Vdc I/O power segment integrated into the bus bases
- (3) 2-wire load
- (4) Inductive load protection
- (5) Integrated fuse type T slow-blow 6.3 A 250 V exchangeable
- (6) 2-wire sensor

Recommended replacement(s)