Product datasheet
Characteristics

TM5SDM12DT
digital I/O module - 8I - 4O - 24V DC - 1 wire

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 LMC058 Modicon M258 PacDrive LMC motion controller
Product compatibility	Motion controller Logic controller PacDrive LMC Pro PacDrive LMC Eco PacDrive LMC Pro 2
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
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
Leakage current	5 µA when switched off
Protection type	Overload protection Reverse polarity protection Short-circuit protection
Isolation	No insulation between channels 500 Vrms AC insulation between channel and bus
Voltage drop	<= 0.3 V at 500 mA for output
Current consumption	42 mA 5 V DC bus 21 mA 24 V DC all inputs On
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
Product weight	0.025 kg

Environment

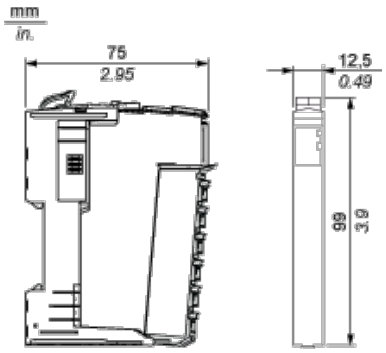
standards	CSA C22.2 No 142 IEC 61131-2 UL 508 CSA C22.2 No 213
product certifications	CSA C-Tick CULus GOST-R
ambient air temperature for operation	-10...50 °C vertical installation -10...60 °C with derating factor horizontal installation -10...55 °C without derating factor horizontal installation
ambient 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 (f = 8.4...150 Hz) DIN rail 3.5 mm (f = 5...8.4 Hz) DIN rail
shock resistance	15 gn for 11 ms
electromagnetic compatibility	Conducted and radiated emissions conforming to CISPR 11 Conducted RF disturbances conforming to EN/IEC 61000-4-6 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

Offer Sustainability

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

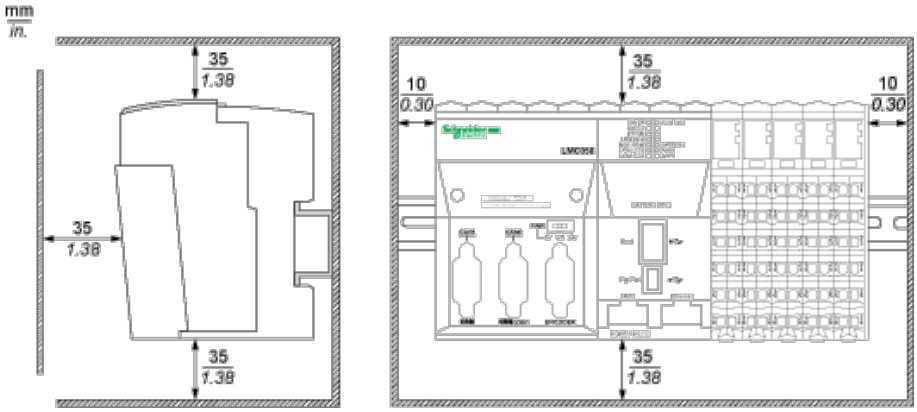
TM5 Slice

Dimensions

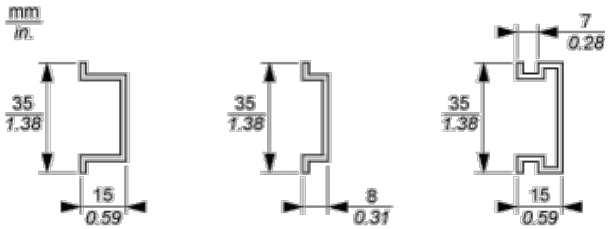


TM5 System

Spacing Requirements



Mounting on a DIN Rail



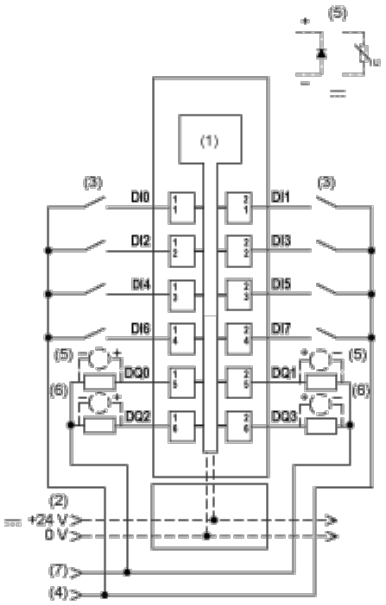
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm / in. (9 / 0.35)				
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

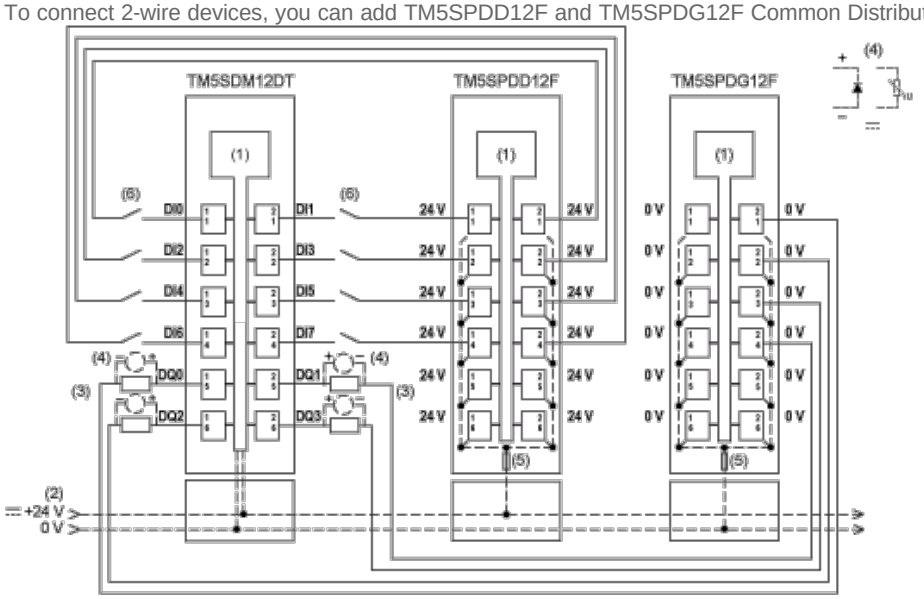
(4) 24 Vdc I/O power segment by external connection

(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