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Product data sheet

Specifications



Discrete output module, Modicon TM5, digital 12O, 24 V DC, 0,5 A, 1 wire

TM5SDO12T

Main

Range of product	Modicon TM5
Product or component type	Discrete output module
Discrete output number	12
Discrete output type	Transistor

Complementary

Range compatibility	PacDrive LMC motion controller Modicon LMC058 Modicon M258
Product compatibility	PacDrive LMC Eco PacDrive LMC Pro 2 PacDrive LMC Pro Motion controller Logic controller
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	6 A
Colour	White
Peak output current	12 A
Switching frequency	<= 500 Hz resistive load
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 Overload protection Short-circuit protection
Isolation	500 Vrms AC insulation between channel and bus No insulation between channels
Maximum voltage drop	<0.3 V at 500 mA for output <2 V at 500 mA for sensor supply
Maximum supply current for sensors	500 mA
Current consumption	52 mA at 5 V DC bus 48 mA at 24 V DC input/output

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

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Maximum power dissipation in W	2.04 W
Local signalling	1 LED green for power supply 1 LED red for power supply 12 LEDs yellow for output status
Electrical connection	1 wire
Marking	CE
Net weight	0.025 kg

Environment

Standards	CSA C22.2 No 213 UL 508 CSA C22.2 No 142 IEC 61131-2
Product certifications	GOST-R CSA cULus C-Tick
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	40.0 g
Package 1 Height	2 cm
Package 1 width	5.4 cm
Package 1 Length	10.5 cm
Unit Type of Package 2	S02
Number of Units in Package 2	97
Package 2 Weight	4.7 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm

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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
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

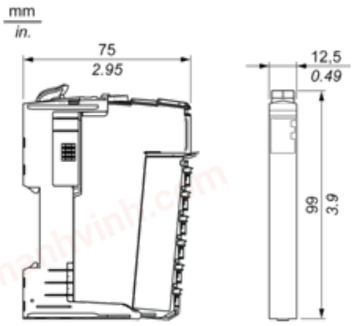
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Product data sheet TM5SDO12T

Dimensions Drawings

TM5 Slice

Dimensions



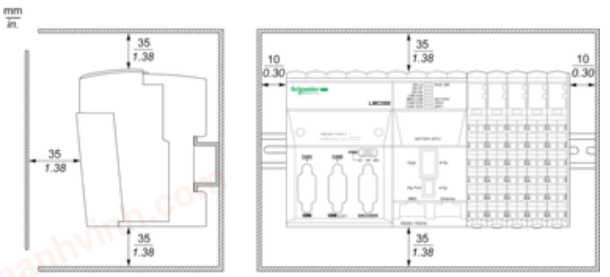
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Product data sheet TM5SDO12T

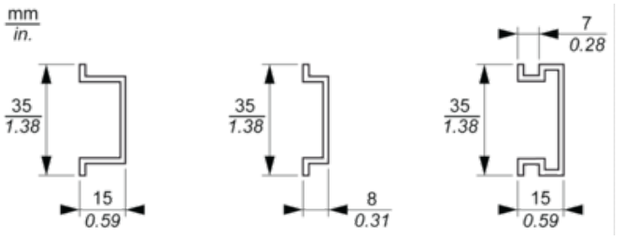
Mounting and Clearance

TM5 System

Spacing Requirements



Mounting on a DIN Rail



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Product data sheet TM5SDO12T

Connections and Schema

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

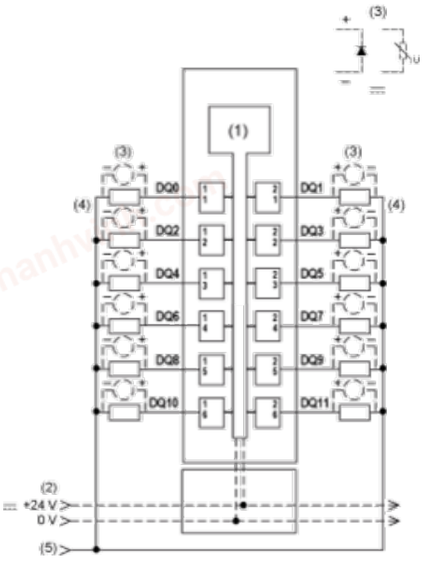
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Product data sheet TM5SDO12T

Connections and Schema

Electronic Module 12DO 24 Vdc Tr 0.5 A 1 Wire

Wiring Diagrams



(1) Internal electronics

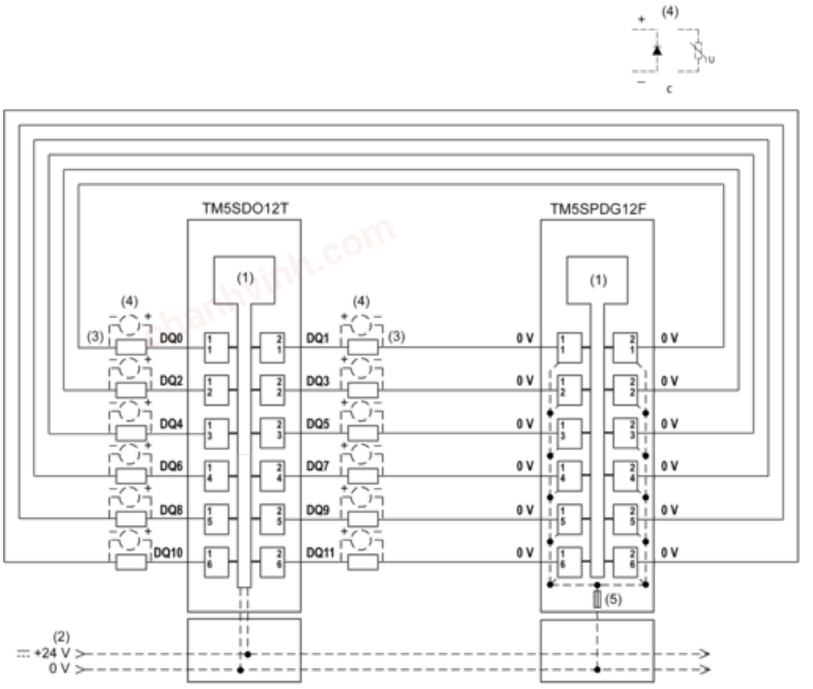
(2) 24 Vdc I/O power segment integrated into the bus bases

(3) Inductive load protection

(4) 2-wire load

(5) 0 Vdc I/O power segment by external connection

To connect 2-wire devices, you can add a TM5SPDG12F Common Distribution module:



(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