Product data sheet

Specifications

discrete output module, Modicon TM5, 12 DO, 24V 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
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

Product 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 IEC 61000-4-2
	Electrostatic discharge immunity test, 8 kV in air conforming to IEC 61000-4-2
	Susceptibility to electromagnetic fields, 1 V/m 2...2.7 GHz conforming to IEC 61000-4-3
	Susceptibility to electromagnetic fields, 10 V/m 80...2000 MHz conforming to IEC 61000-4-3
	Electrical fast transient/burst immunity test, 1 kV I/O conforming to IEC 61000-4-4
	Electrical fast transient/burst immunity test, 1 kV shielded cable conforming to IEC 61000-4-4
	Electrical fast transient/burst immunity test, 2 kV power lines conforming to IEC 61000-4-4
	1.2/50 μs shock waves immunity test, 0.5 kV differential mode conforming to IEC 61000-4-5
	1.2/50 μs shock waves immunity test, 1 kV common mode conforming to IEC 61000-4-5
	Conducted RF disturbances conforming to 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	2.000 cm

Package 1 Width	5.400 cm

Package 1 Length	10.500 cm

Package 1 Weight	39.000 g

Unit Type of Package 2	S02

Number of Units in Package 2	97
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	4.172 kg

Contractual warranty

Warranty	18 months

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing "Use Better, Use Longer, Use Again" campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Environmental Disclosure	**Product Environmental Profile**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**No**
Packaging without single use plastic	**Yes**
EU RoHS Directive	**Pro-active compliance (Product out of EU RoHS legal scope)**
REACh Regulation	**REACh Declaration**
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**
PVC free	**Yes**

Use Again

Repack and remanufacture

End of life manual availability	**End of Life Information**
Take-back	**No**
WEEE Label	**The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins**

Life Is On | Schneider Electric
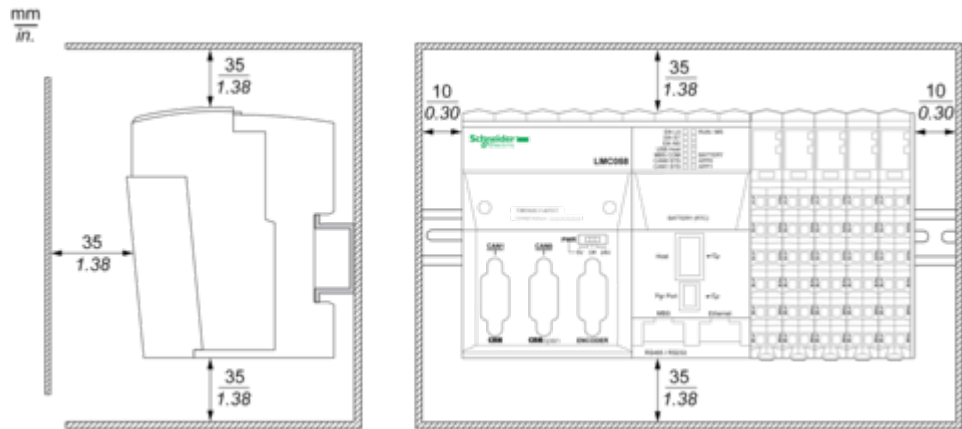
Dimensions Drawings

TM5 Slice
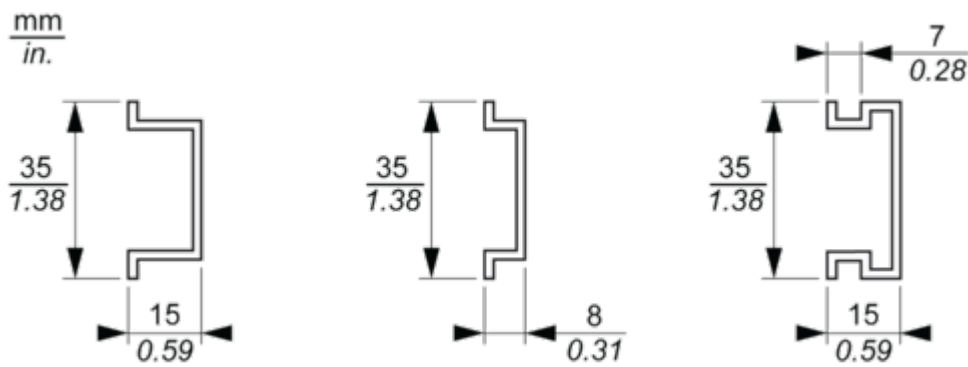
Dimensions

$\dfrac{mm}{in.}$

75
2.95

12,5
0.49

99
3.9
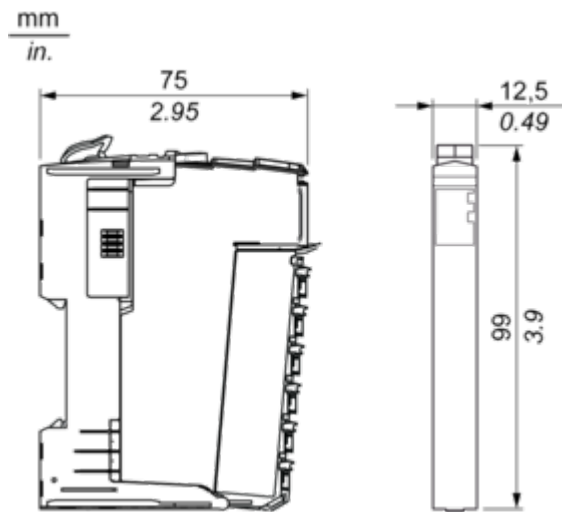
Mounting and Clearance

TM5 System

Spacing Requirements

Mounting on a DIN Rail

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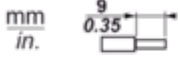
Connections and Schema

TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

| $\frac{mm}{in.}$ $\frac{9}{0.35}$				
mm²	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 12DO 24 Vdc Tr 0.5 A 1 Wire

Wiring Diagrams
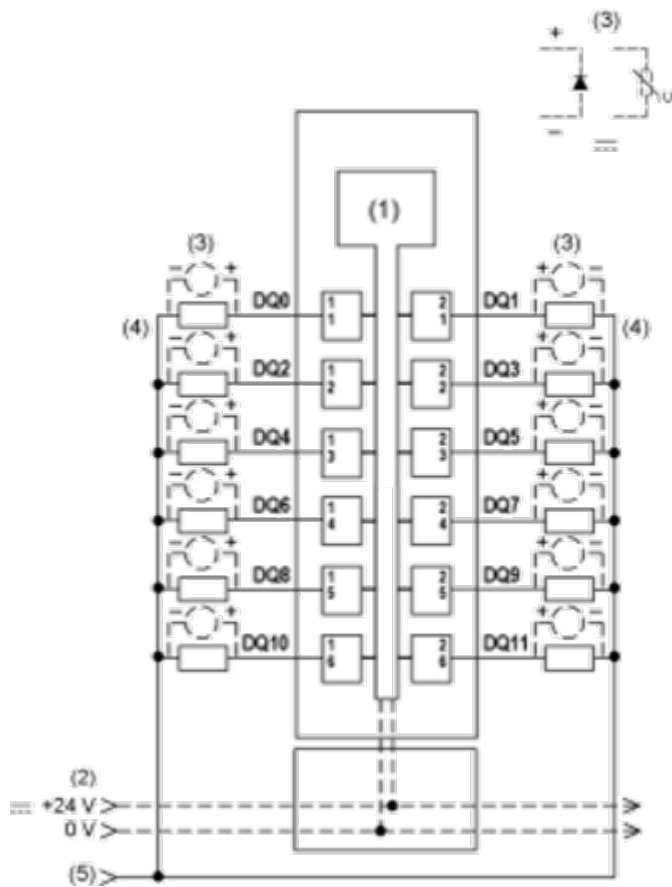
(1) Internal electronics
(2) 24 Vdc I/O power segment integrated into the bus bases
(3) Inductive load protection
(4) 2-wire load
(5) 0 Vdc I/O power segment by external connection
To connect 2-wire devices, you can add a TM5SPDG12F Common Distribution module:
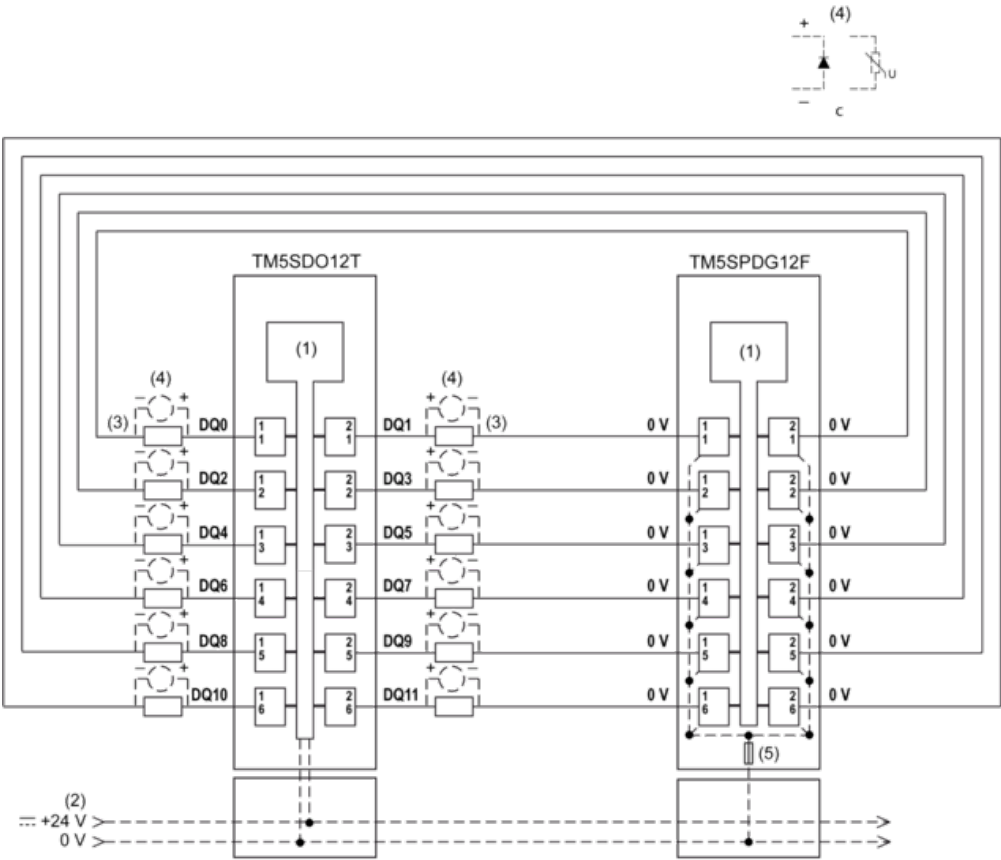
(1) Internal electronics
(2) 24 Vdc I/O power segment integrated into the bus bases
(3) 2-wire load
(4) Inductive load protection
(5) Integrated fuse type T slow-blow 6.3 A 250 V exchangeable