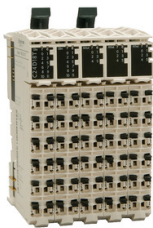


Product data sheet

Specifications



compact IO expansion block,
Modicon TM5, 20 IO, 12 DI, 8 DO,
transistor

TM5C12D8T

Product availability: Non-Stock - Not normally stocked in distribution facility

Main

Range of Product	Modicon TM5
Product or Component Type	Compact I/O expansion block
Discrete input number	12
Discrete input voltage	24 V DC 20.4...28.8 V)
Discrete input logic	Sink
Discrete output number	8
Discrete output logic	Source
Discrete output voltage	24 V DC 20.4...28.8 V)

Complementary

Enclosure Material	Plastic
Color	White
Input/output number	20
Input/output number of splitter box	12 I + 8 O
Number of modules	Digital input 3 x 4 Digital output 2 x 4
Discrete output function	1 NO
Response time	<= 300 µs from state 0 to state 1 output <= 300 µs from state 1 to state 0 output
Minimum switching current	10 mA 5 V DC
Max current	1000 mA sensor supply 1500 mA actuator supply 4000 mA loads on I/O power segment
Sensor power supply	24 V, 500 mA for all channels overload, short-circuit and reverse polarity protection
Discrete input compatibility	12 at 24 V DC
Discrete input current	3.75 mA at 24 V DC
Voltage state 1 guaranteed	>= 15 V
Voltage state 0 guaranteed	<= 5 V
Input impedance	6.4 kOhm
Input filtering	<= 100 ms hardware <= 25 ms configurable by software
Discrete output number	8 transistor at 24 V DC
Discrete output current	0.5 A per output
Maximum leakage current	5 µA when switched off

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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

Maximum voltage drop	<0.3 V at 500 mA output
Typical current consumption	68 mA 5 V DC 80 mA 24 V DC for inputs/outputs
Electrical Connection	Removable spring terminal block
Power dissipation in W	2.36 W
Isolation between channels	None
Isolation between channels and bus	500 Vrms AC
Local signalling	5 LEDs (green) for power supply 5 LEDs (red) for power supply 12 LEDs (green) for input status 8 LEDs (yellow) for output status
Mounting support	DIN rail
Height	3.9 in (99 mm)
Width	0.5 in (12.5 mm)
Depth	3.0 in (75 mm)
Product Weight	0.53 lb(US) (0.24 kg)

Environment

IP Degree of Protection	IP20
Marking	CE
Product certifications	C-tick GOST-R CSA CULus
Standards	IEC 61131-2 UL 508 CSA C22.2 No 213 CSA C22.2 No 142
Ambient air temperature for operation	14...122 °F (-10...50 °C) vertical installation) 14...140 °F (-10...60 °C) horizontal installation)
Ambient air temperature for storage	-40...158 °F (-40...70 °C)
Relative humidity	5...95 % without condensation
Operating altitude	0...6561.68 ft (0...2000 m)
Pollution degree	2
Vibration resistance	1 gn 8.4...150 Hz) on DIN rail 3.5 mm 5...8.4 Hz) on DIN rail
Shock resistance	15 gn 11 ms

Ordering and shipping details

Category	US1PC1222532
Discount Schedule	PC12
GTIN	3595864074368
Returnability	No
Country of origin	AT

Packing Units

Unit Type of Package 1	PCE
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Nbr. of units in pkg.	1
Package 1 Height	2.756 in (7.000 cm)
Package 1 Width	3.583 in (9.100 cm)
Package 1 Length	4.331 in (11.000 cm)
Package weight(Lbs)	9.630 oz (273.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	36
Package 2 Height	11.811 in (30.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	22.423 lb(US) (10.171 kg)

Contractual warranty

Warranty (in months)	18
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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

Total lifecycle Carbon footprint	79 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	1 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	78 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0 kg CO2 eq.

Use Better



Materials and Substances

Packaging made with recycled cardboard	No
Packaging without single use plastic	Yes
EU RoHS Directive	Compliant
REACH Regulation	Free of Substances of Very High Concern above the threshold
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 Longer



Lifetime extension

Repair	No
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Use Again

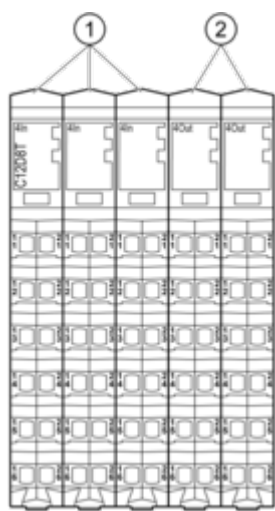


Repack and remanufacture

Recyclability potential, in %	1
Circularity Profile	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.

Presentation

TM5 Compact I/O Module

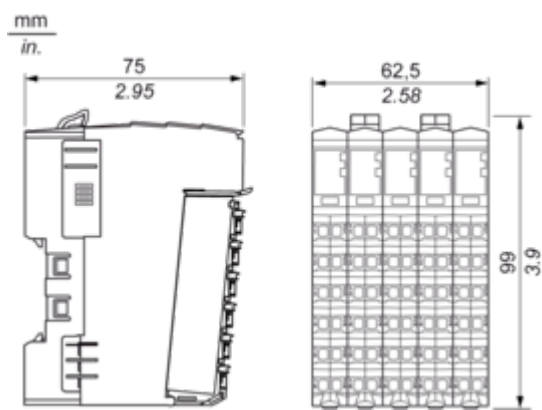


N°	Designation
1	Input electronic module / 4 digital inputs
2	Output electronic module / 4 digital outputs

Dimensions Drawings

Compact I/O Module

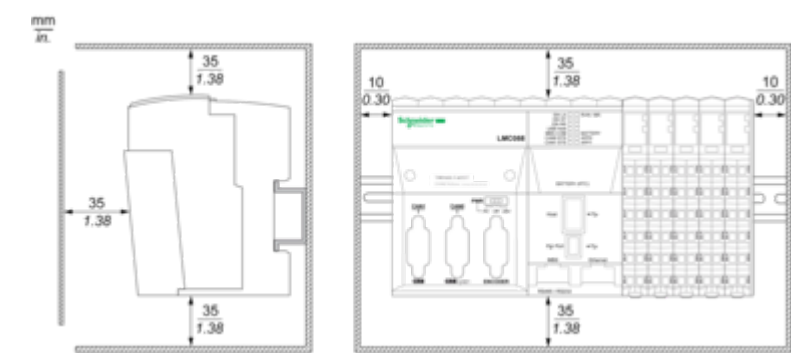
Dimensions



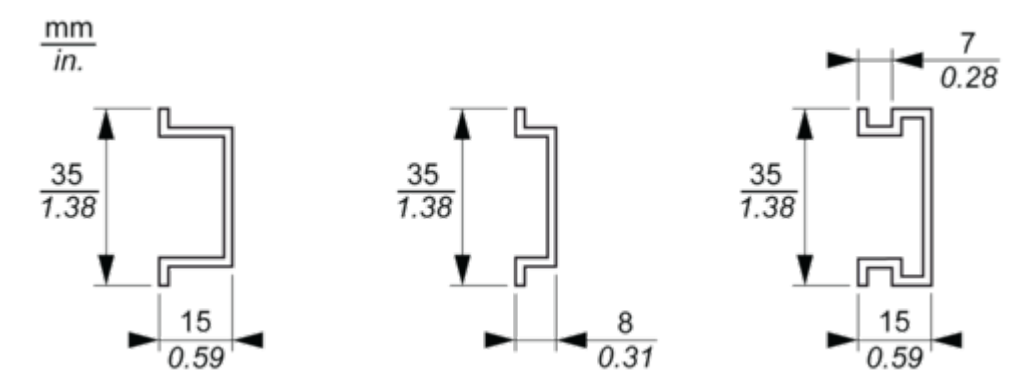
Mounting and Clearance

TM5 System

Spacing Requirements



Mounting on a DIN Rail



Connections and Schema

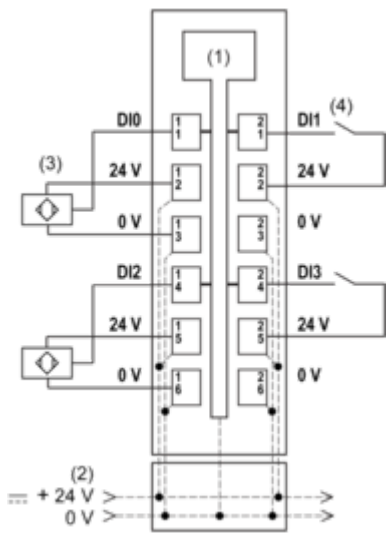
TM5 System Wiring Recommendations

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

Digital Input 4In

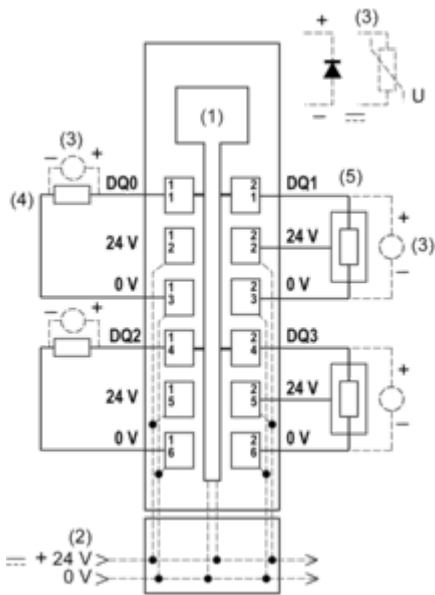
Wiring Diagram



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

Digital Output 4Out

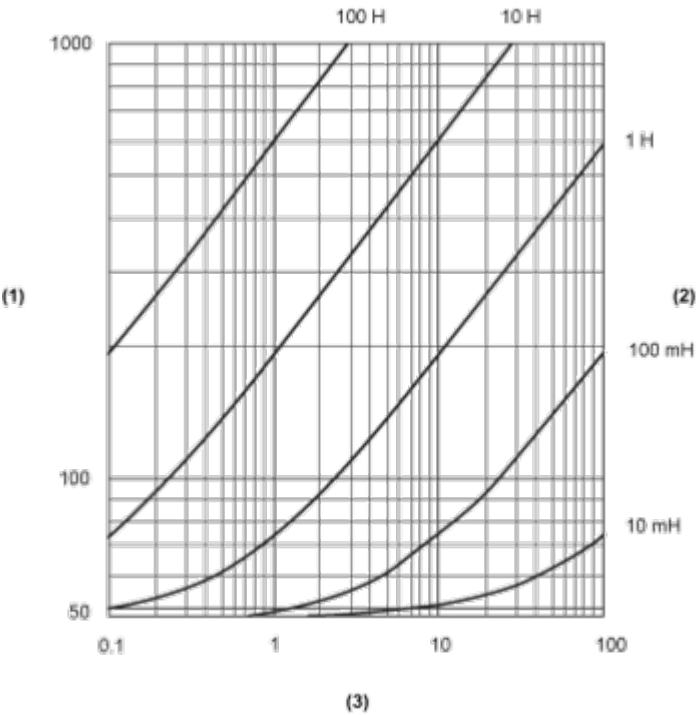
Wiring Diagram



- 1 Internal electronics
- 2 24 Vdc I/O power segment integrated into the bus bases
- 3 Inductive load protection
- 4 2-wire load
- 5 3-wire load

Performance Curves

Switching Inductive Load Characteristics



- (1) Load resistance in Ω
- (2) Load inductance in H
- (3) Max. operating cycles / second