Product datasheet

Specification





compact I/O expansion block, Modicon TM5, 36 IO, 24 DI, 12 DO relay

TM5C24D12R

Main

Range Of Product	Modicon TM5	
Product Or Component Type	Compact I/O expansion block	

Complementary

, , , , , , , , ,				
Enclosure Material	Plastic			
Colour	White			
Input/Output Number	36			
For Enclosure Nominal Dimensions	24 I + 12 O			
Number Of Modules	Digital input: 2 module(s) x 12 Relay output: 2 module(s) x 6			
Discrete Input Number	24			
Discrete Input Voltage	24 V			
Discrete Input Voltage Type	DC			
Input Voltage Limits	20.428.8 V			
Discrete Input Logic	Sink			
Discrete Input Current	3.75 mA			
Input Impedance	6.4 kOhm			
Analogue Input Number	0			
Discrete Output Number	12			
Discrete Output Type	Relay			
Wiring Mode	1 wire for discrete input			
Output Voltage	30 V DC 240 V AC			
Output Voltage Limits	2436 V DC 184276 V AC			
Discrete Output Function	ut Function 1 NO			
Discrete Output Logic	Source or sink			
Discrete Output Current	2 A per output			
Voltage State 0 Guaranteed	<= 5 V			
Voltage State 1 Guaranteed	>= 15 V			
Input Filtering	<= 100 ms hardware <= 25 ms configurable by software			

Response Time	<= 12 ms from state 0 to state 1 for output <= 10 ms from state 1 to state 0 for output			
Minimum Switching Current	10 mA at 5 V DC			
Isolation	500 Vrms AC insulation between channel and bus No insulation between channels			
Mechanical Durability	20000000 cycles			
Current Consumption	68 mA at 5 V DC bus 165 mA at 24 V DC input/output			
laximum Power Dissipation In W 4.3 W				
Local Signalling	24 LEDs (green) for input status 4 LEDs (green) for power supply 4 LEDs (red) for power supply 12 LEDs (yellow) for output status			
Electrical Connection	Removable spring terminal block			
Marking	CE			
urge Withstand 0.5 kV differential mode 24 V DC conforming to IEC 61000-4-5 1 kV common mode 24 V DC conforming to IEC 61000-4-5 1 kV differential mode 230 V AC conforming to IEC 61000-4-5 2 kV common mode 230 V AC conforming to IEC 61000-4-5				
Electromagnetic Compatibility	EN/IEC 61000-4-6			
Disturbance Radiated/Conducted	d CISPR 11			

Environment

Standards	CSA C22.2 No 213 CSA C22.2 No 142 IEC 61131-2 UL 508				
Product Certifications	cULus GOST-R CSA C-Tick				
Ambient Air Temperature For Operation	-1050 °C (vertical installation) -1060 °C (horizontal installation)				
Ambient Air Temperature For Storage	-4070 °C				
Relative Humidity	595 % without condensation				
Ip Degree Of Protection	IP20 conforming to IEC 61131-2				
Pollution Degree	2 conforming to IEC 60664				
Operating Altitude	02000 m				
Storage Altitude	03000 m				
Vibration Resistance	1 gn at 8.4150 Hz on DIN rail 3.5 mm at 58.4 Hz on DIN rail				
Shock Resistance	15 gn for 11 ms				
Resistance To Electrostatic 4 kV on contact conforming to IEC 61000-4-2 bischarge 8 kV in air conforming to IEC 61000-4-2					
Resistance To Electromagnetic Fields	1 V/m 22.7 GHz conforming to IEC 61000-4-3 10 V/m 802000 MHz conforming to IEC 61000-4-3				
Resistance To Fast Transients	1 kV (I/O) conforming to IEC 61000-4-4 1 kV (shielded cable) conforming to IEC 61000-4-4 2 kV (power lines) conforming to IEC 61000-4-4				
Mounting Support	DIN rail				
Net Weight	0.26 kg				

Packing Units

•	
Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	6.900 cm
Package 1 Width	9.200 cm
Package 1 Length	11.000 cm
Package 1 Weight	289.000 g
Unit Type Of Package 2	S03
Number Of Units In Package 2	36
Package 2 Height	30.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	10.821 kg

Contractual warranty

Warranty 18 months



Green PremiumTM label is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >





Transparency RoHS/REACh

Well-being performance

②	Toxic Heavy Metal Free	
②	Mercury Free	
②	Rohs Exemption Information	Yes
⊘	Pvc Free	

Certifications & Standards

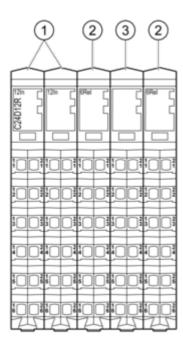
Reach Regulation	REACh Declaration				
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)				
China Rohs Regulation	China RoHS declaration				
Environmental Disclosure	Product Environmental Profile				
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins				
Circularity Profile	End of Life Information				

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TM5C24D12R

Presentation

TM5 Compact I/O Module



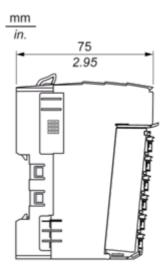
N°	Designation	
1	Input electronic module / 12 digital inputs	
2	Relay output electronic module / 6 relay outputs	
3	Dummy module	

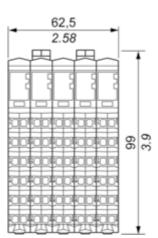
TM5C24D12R

Dimensions Drawings

Compact I/O Module

Dimensions



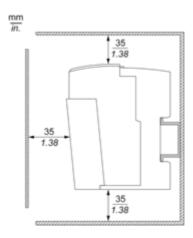


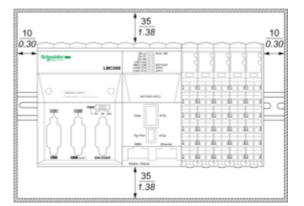
TM5C24D12R

Mounting and Clearance

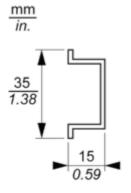
TM5 System

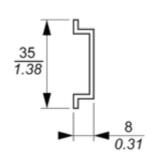
Spacing Requirements

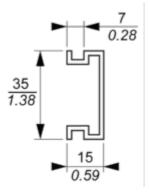




Mounting on a DIN Rail







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Connections and Schema

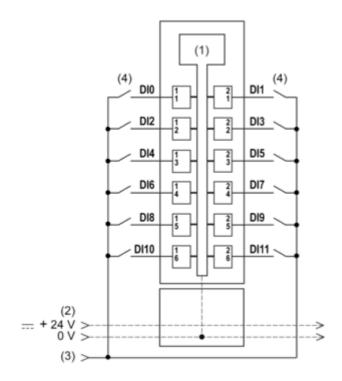
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm in.	0.35		Ω		8D -
	mm²	0,082,5	0,252,5	0,251,5	2 x 0,252 x 0,75
	AWG	2814	2414	2416	2 x 242 x 18

Digital Input 12In

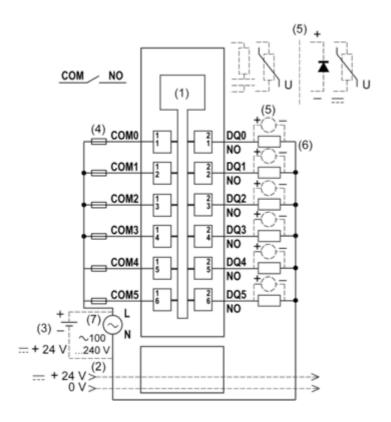
Wiring Diagram



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

Digital Output Relay 6Rel

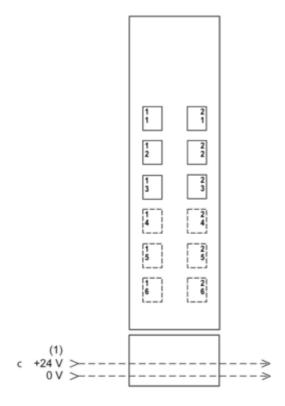
Wiring Diagram



- 1 Internal electronics
- 2 24 Vdc I/O power segment integrated into the bus bases
- 3 External isolated power supply 24 Vdc
- 4 External fuse type T slow-blow 2 A 250 V
- 5 Inductive load protection
- 6 2-wire load
- 7 External power supply 100...240 Vac

Dummy Module

Wiring Diagram

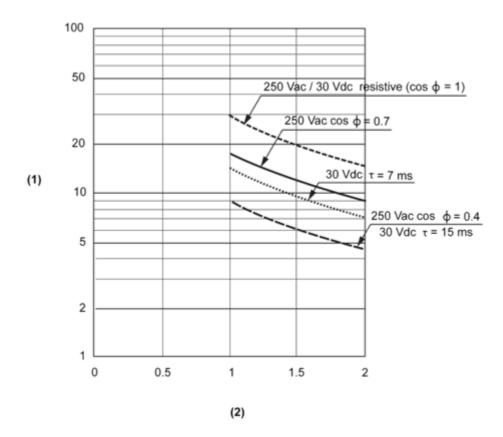


1 24 Vdc I/O power segment integrated into the bus bases

Performance Curves

Digital Output Relay Electronic Module

Electric Durability



- 1 Switching procedures (x10⁴)
- 2 Switching current in A