Specifications





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

TM5C24D12R

#### Main

Main					
Range Of Product	Modicon TM5				
Product Or Component Type	Compact I/O expansion block				
Complementary					
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	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	2000000 cycles			
Current Consumption	68 mA at 5 V DC bus 165 mA at 24 V DC input/output			
Maximum 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			
Surge 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	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			
p 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 Discharge	4 kV on contact conforming to IEC 61000-4-2 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

# Sustainability Screen Premium

**Green Premium<sup>TM</sup> 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-CO<sub>2</sub> 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

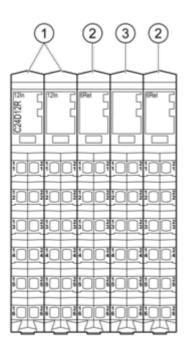
Toxic Heavy Metal Free
Mercury Free
Rohs Exemption Information Yes
Pvc Free

### **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		

#### Presentation

#### TM5 Compact I/O Module

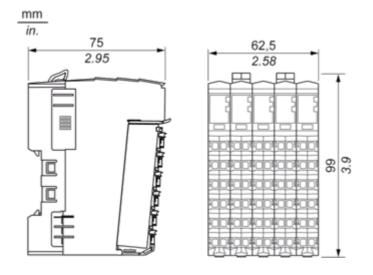


N°	Designation
1	Input electronic module / 12 digital inputs
2	Relay output electronic module / 6 relay outputs
3	Dummy module

#### **Dimensions Drawings**

#### Compact I/O Module

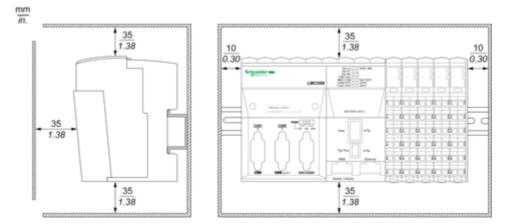
#### Dimensions



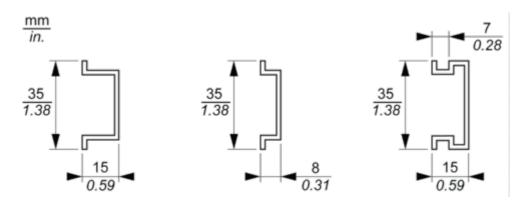
Mounting and Clearance

#### TM5 System

#### **Spacing Requirements**



#### Mounting on a DIN Rail



Connections and Schema

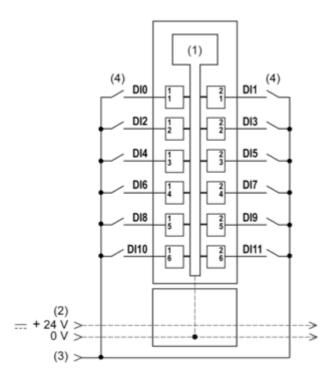
#### TM5 System Wiring Recommendations

#### Wire Sizes to Use with the Removable Spring Terminal Blocks

mm in.	9 0.35		å		æ
	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

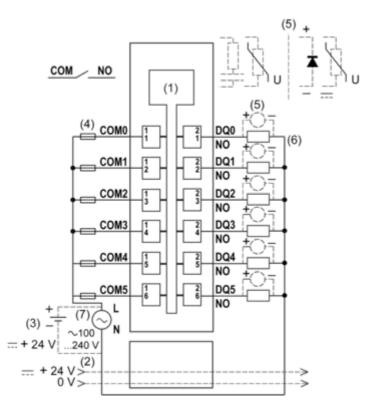
2 24 Vdc I/O power segment integrated into the bus bases

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

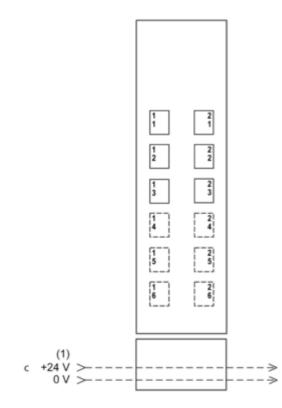
5 Inductive load protection

6 2-wire load

7 External power supply 100...240 Vac

#### Dummy Module

#### Wiring Diagram

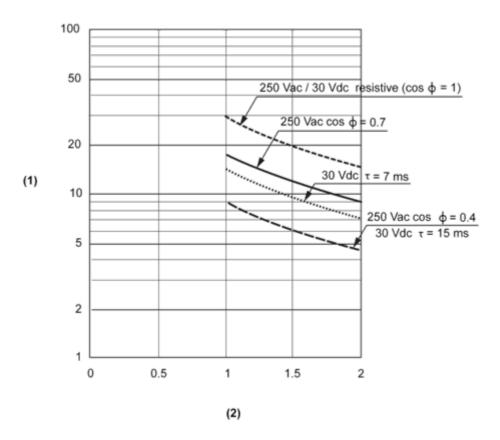


1 24 Vdc I/O power segment integrated into the bus bases

#### Performance Curves

#### Digital Output Relay Electronic Module

#### **Electric Durability**



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**1** Switching procedures (x10<sup>4</sup>)

2 Switching current in A

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