# **Product datasheet**

Specification





# Compact I/O expansion block, Modicon TM5, 42 24 DI, 18 DO transistor

TM5C24D18T

#### Main

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

# Complementary

oompromentary				
Enclosure Material	Plastic			
Colour	White			
Input/Output Number	42			
For Enclosure Nominal Dimensions	24 I + 18 O			
Number Of Modules	Digital input: 2 module(s) x 12 Digital output: 3 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	18			
Discrete Output Type	Transistor			
Wiring Mode	1 wire for discrete input 2-wire for discrete output			
Output Voltage	24 V DC			
Output Voltage Limits	20.428.8 V DC			
Discrete Output Logic	Source			
Discrete Output Current	0.5 A per output			
Peak Output Current	9 A			
Voltage State 0 Guaranteed <= 5 V				
Voltage State 1 Guaranteed	>= 15 V			
Input Filtering <= 100 ms hardware <= 25 ms configurable by software				
Response Time	<= 300 μs from state 0 to state 1 for output <= 300 μs from state 1 to state 0 for output			

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Maximum Leakage Current	5 μA (when switched off) for output			
Isolation	500 Vrms AC insulation between channel and bus No insulation between channels			
Maximum Voltage Drop	<0.3 V at 500 mA for output			
Current Consumption	70 mA at 5 V DC bus 140 mA at 24 V DC input/output			
Max Current	9000 mA loads on I/O power segment			
Maximum Power Dissipation In W	3.71 W			
Local Signalling	5 LEDs (green) for power supply 5 LEDs (red) for power supply 24 LEDs (green) for input status 18 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			
Electromagnetic Compatibility EN/IEC 61000-4-6				
Disturbance Radiated/Conducted CISPR 11				
Environment				

Standards	IEC 61131-2 UL 508 CSA C22.2 No 213 CSA C22.2 No 142			
Product Certifications	C-Tick cULus GOST-R CSA			
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 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	0.24 kg			

# **Packing Units**

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	7.500 cm
Package 1 Width	9.000 cm
Package 1 Length	11.000 cm
Package 1 Weight	278.000 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	10.008 kg

# **Contractual warranty**

Warranty 12 months



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Transparency RoHS/REACh

#### Well-being performance

<b>②</b>	Toxic Heavy Metal Free	
<b>②</b>	Mercury Free	
<b>②</b>	Rohs Exemption Information	Yes
<b>⊘</b>	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 was collection and never end up in rubbish bins			
Circularity Profile	End of Life Information			

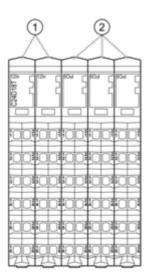
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# **Product datasheet**

# TM5C24D18T

Presentation

#### TM5 Compact I/O Module



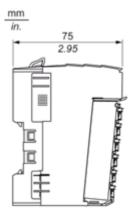
N°	Designation		
1	Input electronic module / 12 digital inputs		
2	Output electronic module / 6 digital outputs		

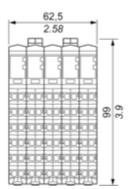
## TM5C24D18T

#### **Dimensions Drawings**

## Compact I/O Module

#### **Dimensions**





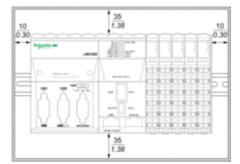
## TM5C24D18T

Mounting and Clearance

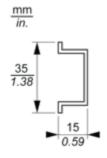
## TM5 System

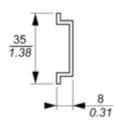
#### **Spacing Requirements**

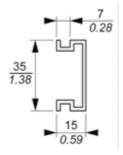




#### Mounting on a DIN Rail







# **Product datasheet**

## TM5C24D18T

Connections and Schema

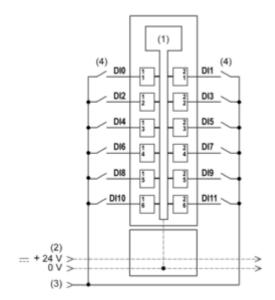
#### TM5 System Wiring Recommendations

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

mm in.	0.35		2		
	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

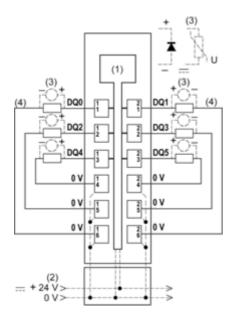
#### Wiring Diagram



- 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 6Out**

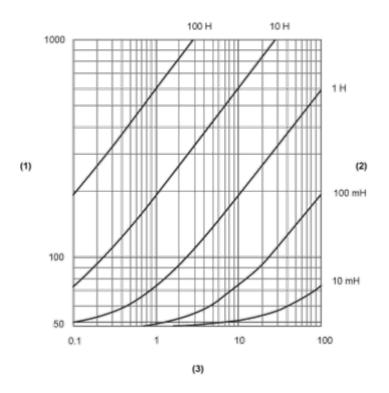
#### Wiring Diagram



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

#### Performance Curves

#### **Switching Inductive Load Characteristics**



- (1) Load resistance in  $\boldsymbol{\Omega}$
- (2) Load inductance in H
- (3) Max. operating cycles / second