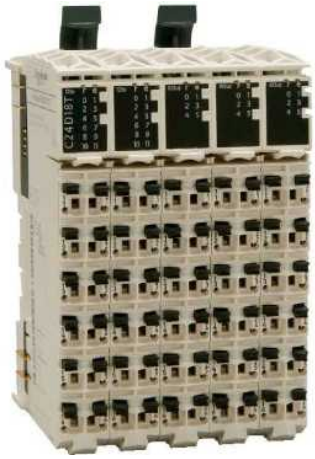
Product data sheet
Characteristics

TM5C12D6T6L
compact I/O expansion block TM5 - 24 I/0 - 12 DI - 6 DO transistor - 4 AI - 2 AO



Main

Range of product	Modicon TM5
Product or component type	Compact I/O expansion block

Complementary

Enclosure material	Plastic
Colour	White
Input/Output number	24
For enclosure nominal dimensions	16 I + 8 O
Number of modules	1 modules with 2 analog output 1 modules with 4 analog input 1 modules with 6 digital output 2 modules with 6 digital input
Discrete input number	12
Discrete input voltage	24 V
Discrete input voltage type	DC
Input voltage limits	20.4...28.8 V
Discrete input logic	Sink
Discrete input current	3.75 mA
Input impedance	6.4 kOhm
Analogue input number	4
Analogue input type	Voltage/Current
Analogue input range	+/- 10 V 0...20 mA 4...20 mA
Analogue input resolution	12 bits current 12 bits + sign voltage
Discrete output number	6
Discrete output type	Transistor
Wiring mode	2-wire discrete input 2-wire discrete output
Output voltage	24 V DC
Output voltage limits	20.4...28.8 V DC
Discrete output logic	Source
Discrete output current	0.5 A per output
Analogue output number	2
Analogue output type	Voltage/Current
Analogue output range	+/- 10 V 0...20 mA
Analogue output resolution	12 bits current 12 bits + sign voltage
Peak output current	<= 3 A

Voltage state 0 guaranteed	<= 5 V
Voltage state 1 guaranteed	>= 15 V
Input filtering	0...25 ms configurable by software <= 100 µs hardware
Response time	<= 300 µs from state 1 to state 0 output <= 300 µs from state 0 to state 1 output
Leakage current	5 µA when switched off output
Isolation	No insulation between channels 500 Vrms AC insulation between channel and bus
Voltage drop	<= 0.3 V at 500 mA output
Current consumption	290 mA 24 V DC 69 mA 5 V DC bus
Power dissipation in W	<= 7.3 W
Local signalling	16 LEDs green input status 8 LEDs yellow output status 5 LEDs red power supply 5 LEDs green power supply
Electrical connection	Removable spring terminal block
Marking	CE
Surge withstand	1 kV common mode 24 V DC EN/IEC 61000-4-5 0.5 kV differential mode 24 V DC EN/IEC 61000-4-5
Electromagnetic compatibility	EN/IEC 61000-4-6
Disturbance radiated/conducted	CISPR11

Environment

Standards	CSA 22-2 No 142 IEC 61131-2 UL 508 CSA 22-2 No 213
Product certifications	CSA C-Tick CULus GOST-R
Ambient air temperature for operation	-10...60 °C 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 IEC 61131-2
Pollution degree	2 IEC 60664
Operating altitude	0...2000 m
Storage altitude	0...3000 m
Vibration resistance	3.5 mm 5...8.4 Hz DIN rail 1 gn 8.4...150 Hz DIN rail
Shock resistance	15 gn 11 ms
Resistance to electrostatic discharge	8 kV in air EN/IEC 61000-4-2 4 kV on contact EN/IEC 61000-4-2
Resistance to electromagnetic fields	10 V/m 80...2000 MHz EN/IEC 61000-4-3 1 V/m 2...2.7 GHz EN/IEC 61000-4-3
Resistance to fast transients	2 kV power lines EN/IEC 61000-4-4 1 kV shielded cable EN/IEC 61000-4-4 1 kV I/O EN/IEC 61000-4-4
Mounting support	DIN rail
Product weight	0.25 kg

Not classified

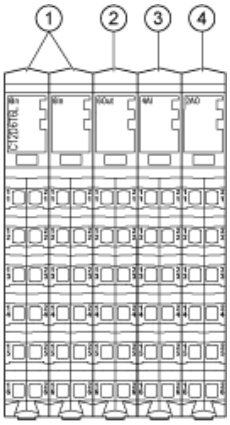
Max current	3000 mA loads on I/O power segment

Offer Sustainability

Sustainable offer status	Not Green Premium product
RoHS	Compliant - since 1039 - Schneider Electric declaration of conformity download declaration of conformity

Presentation

TM5 Compact I/O Module

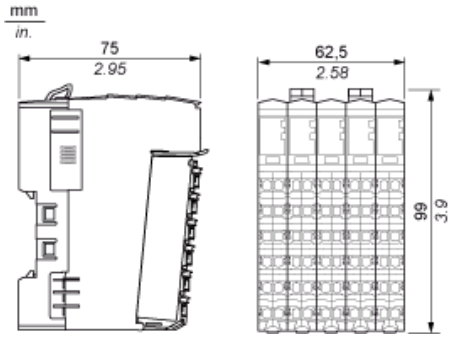


N°	Designation
1	Input electronic module / 6 digital inputs
2	Output electronic module / 6 digital outputs
3	Analog Input electronic module / 4 analog inputs
4	Analog Output electronic module / 2 analog outputs

TM5C12D6T6L

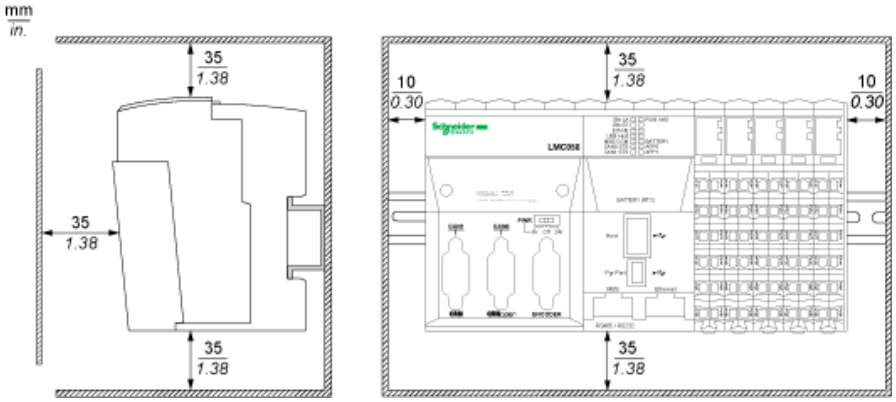
Compact I/O Module

Dimensions

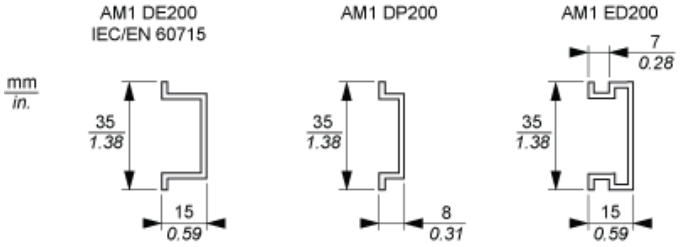


TM5 System

Spacing Requirements



Mounting on a DIN Rail



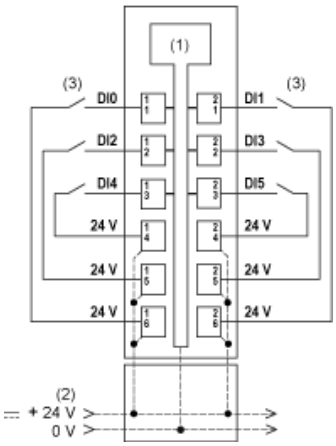
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm / in.				
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

Digital Input 6In

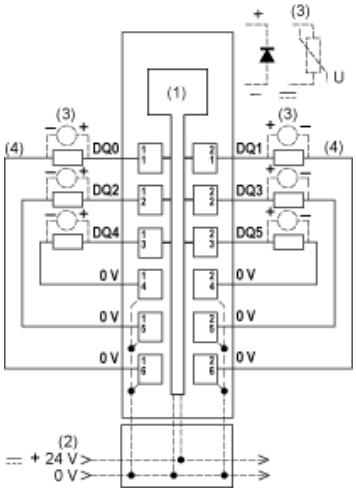
Wiring Diagram



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

Digital Output 6Out

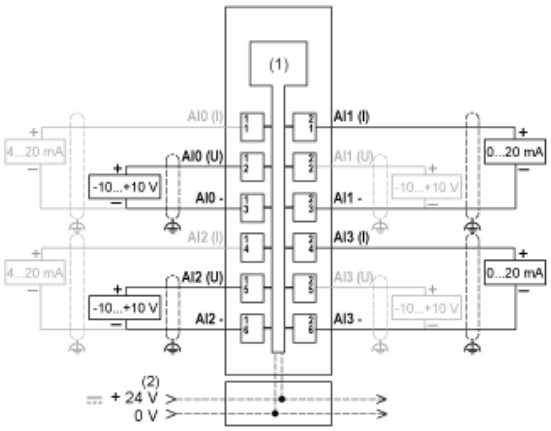
Wiring Diagram



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

Analog Input 4AI ±10 V / 0-20 mA / 4-20 mA

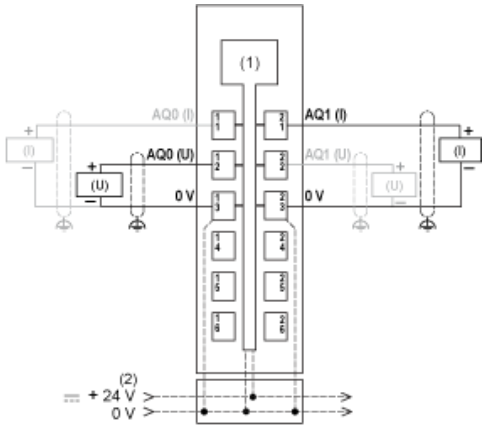
Wiring Diagram



1 Internal electronics
2 24 Vdc I/O power segment integrated into the bus bases
I Current
U Voltage

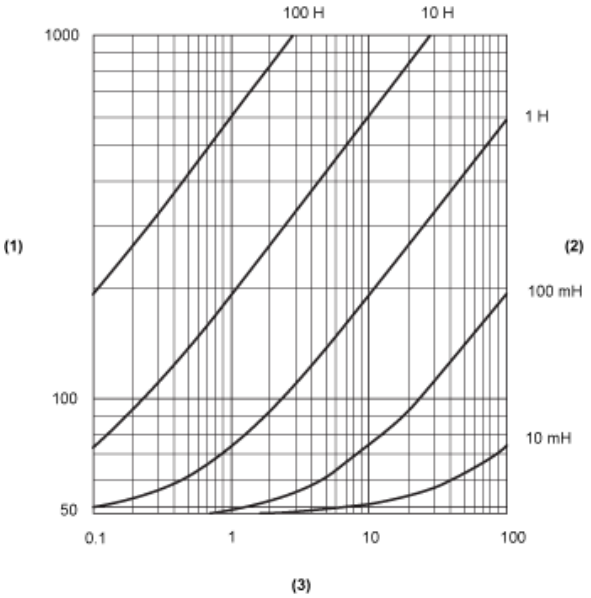
Analog Output 2AO ±10 V / 0-20 mA

Wiring Diagram



1 Internal electronics
2 24 Vdc I/O power segment integrated into the bus bases
I Current
U Voltage

Switching Inductive Load Characteristics



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