



Main

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

Complementary

Enclosure material	Plastic
Colour	White
Input/Output number	20
For enclosure nominal dimensions	12 I + 8 O
Number of modules	2 modules with 4 digital output 3 modules with 4 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	0
Discrete output number	8
Discrete output type	Transistor
Wiring mode	3-wire discrete output 3-wire discrete input
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
Peak output current	<= 4 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	80 mA 24 V DC input/output 68 mA 5 V DC bus
Power dissipation in W	<= 2.36 W

Local signalling	8 LEDs yellow output status 12 LEDs green input status 5 LEDs red power supply 5 LEDs green power supply
Sensor power supply	24 V 500 mA for all channels overload, short-circuit and reverse polarity protection
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	0.24 kg

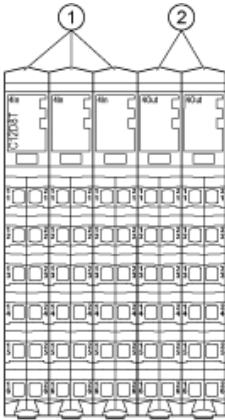
Not classified

Max current	4000 mA loads on I/O power segment 1500 mA actuator supply 1000 mA sensor supply
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Offer Sustainability

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

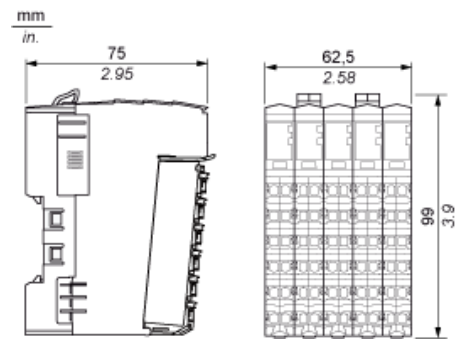
TM5 Compact I/O Module



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

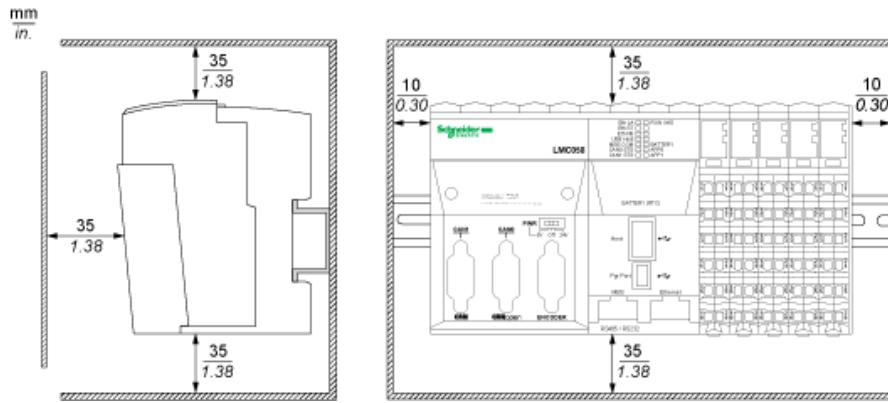
Compact I/O Module

Dimensions

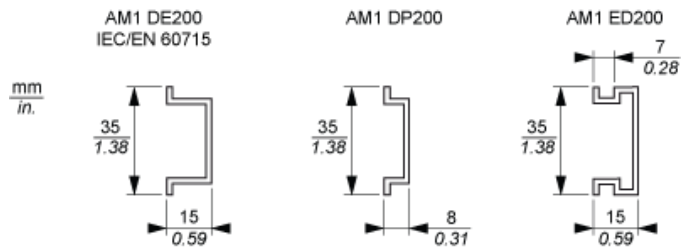


TM5 System

Spacing Requirements







Mounting on a DIN Rail



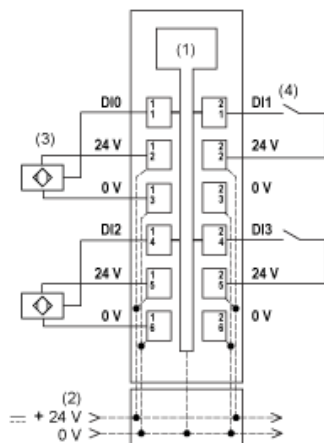
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm in.				
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

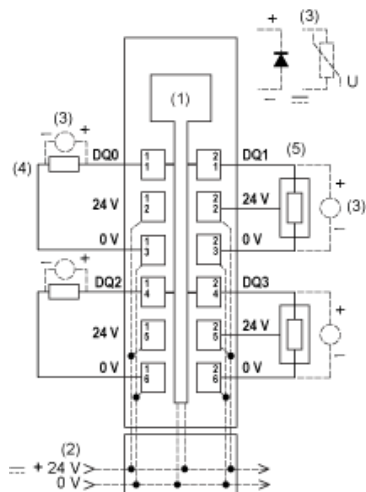
Wiring Diagram



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

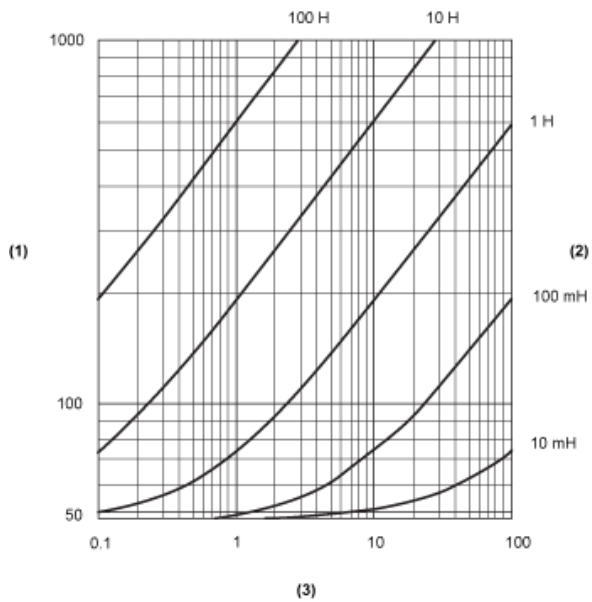
Digital Output 4Out

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

Switching Inductive Load Characteristics



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