

Main

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

Complementary

Enclosure material	Plastic
Color	White
Input/output number	24
Input/output number of splitter box	16 I + 8 O
Number of modules	2 modules with 6 digital input 1 modules with 6 digital output 1 modules with 4 analog input 1 modules with 2 analog output
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 + sign voltage 12 bits current
Discrete output number	6
Discrete output type	Transistor
Wiring mode	2-wire discrete output 2-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
Analogue output number	2
Analogue output type	Voltage/current
Analogue output range	+/- 10 V 0...20 mA
Analogue output resolution	12 bits + sign voltage 12 bits current
Peak output current	<= 3 A
Voltage state 0 guaranteed	<= 5 V
Voltage state 1 guaranteed	>= 15 V

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Input filtering	<= 25 ms configurable by software <= 100 ms hardware
Response time	<= 300 µs from state 0 to state 1 output <= 300 µs from state 1 to state 0 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	69 mA 5 V DC bus 290 mA 24 V DC
Max current	3000 mA loads on I/O power segment
Power dissipation in W	<= 7.3 W
Local signalling	16 LEDs green input status 5 LEDs green power supply 5 LEDs red power supply 8 LEDs yellow output status
Electrical connection	Removable spring terminal block
Marking	CE
Surge withstand	0.5 kV differential mode 24 V DC EN/IEC 61000-4-5 1 kV common mode 24 V DC EN/IEC 61000-4-5
Electromagnetic compatibility	EN/IEC 61000-4-6
Disturbance radiated/conducted	CISPR 11

Environment

standards	CSA C22.2 No 142 IEC 61131-2 UL 508 CSA C22.2 No 213
product certifications	CSA C-Tick CULus GOST-R
ambient air temperature for operation	14...122 °F (-10...50 °C) vertical installation 14...140 °F (-10...60 °C) horizontal installation
ambient air temperature for storage	-40...158 °F (-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...6561.68 ft (0...2000 m)
storage altitude	0...9842.52 ft (0...3000 m)
vibration resistance	1 gn 8.4...150 Hz DIN rail 3.5 mm 5...8.4 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	0.91 V/yd (1 V/m) 2...2.7 GHz EN/IEC 61000-4-3 9.14 V/yd (10 V/m) 80...2000 MHz EN/IEC 61000-4-3
resistance to fast transients	1 kV I/O EN/IEC 61000-4-4 1 kV shielded cable EN/IEC 61000-4-4 2 kV power lines EN/IEC 61000-4-4
mounting support	DIN rail
product weight	0.55 lb(US) (0.25 kg)

Offer Sustainability

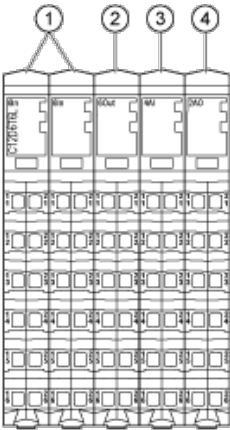
Green Premium product	Green Premium product
Compliant - since 1039 - Schneider Electric declaration of conformity	Compliant - since 1039 - Schneider Electric declaration of conformity
Reference not containing SVHC above the threshold	Reference not containing SVHC above the threshold
Available	Available
Available	Available

WARNING: This product can expose you to chemicals including:	WARNING: This product can expose you to chemicals including:
Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm.	Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm.
For more information go to www.p65warnings.ca.gov	For more information go to www.p65warnings.ca.gov

Contractual warranty

Warranty period	18 months
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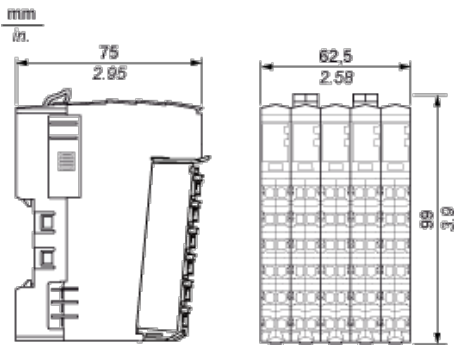
TM5 Compact I/O Module



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

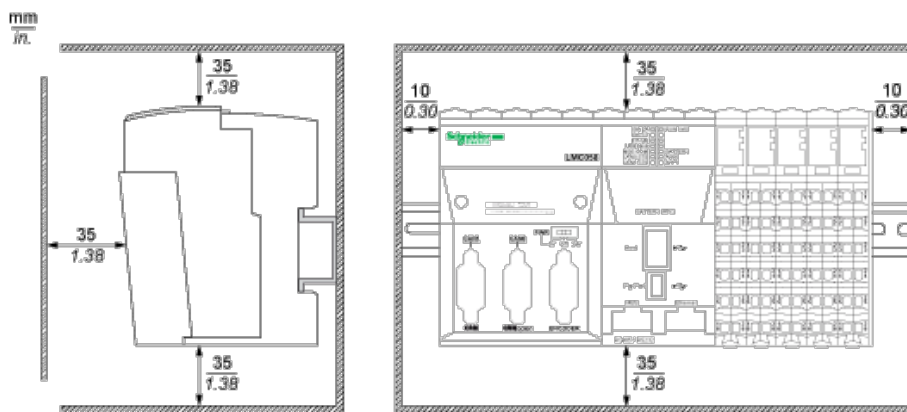
Compact I/O Module

Dimensions

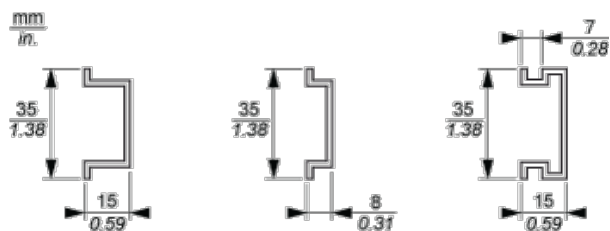


TM5 System

Spacing Requirements



Mounting on a DIN Rail



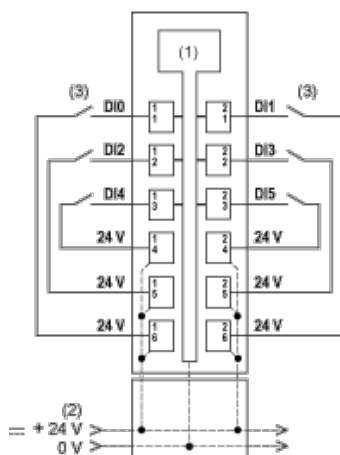
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm in.	9 0.35	10 0.39	12 0.47	16 0.63
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 6In

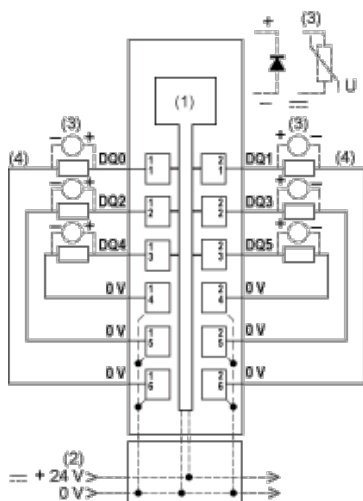
Wiring Diagram



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

Digital Output 6Out

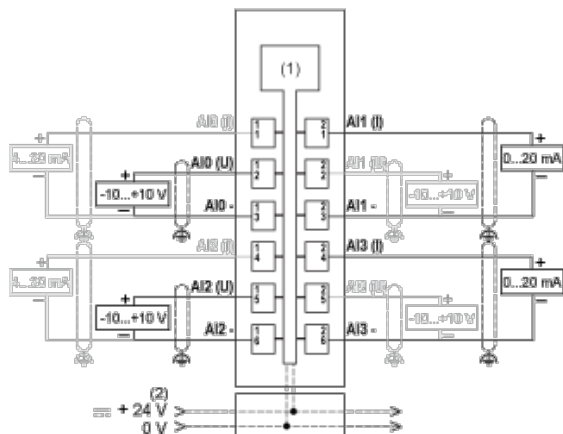
Wiring Diagram



- 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

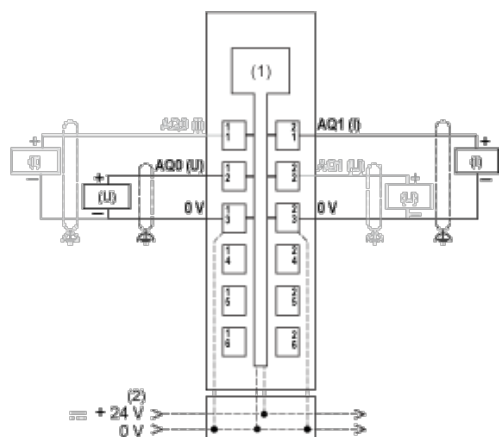
Wiring Diagram



- 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

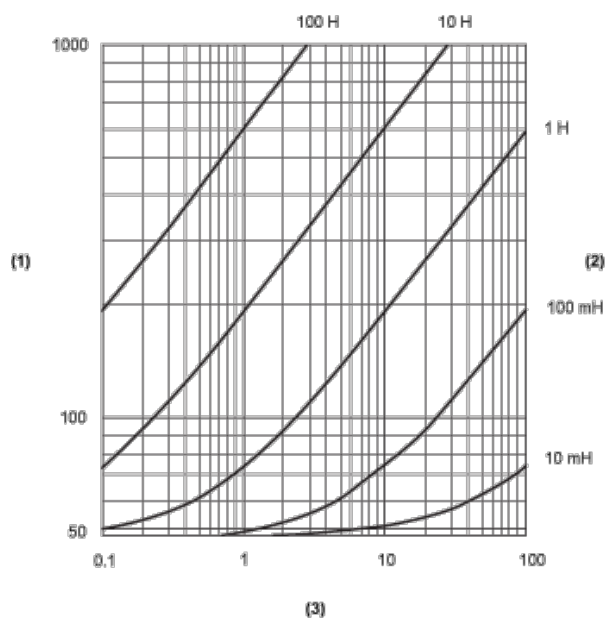
Wiring Diagram



- 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