



Main

Range of product	Modicon TM5
Product or component type	Mixed I/O module
Range compatibility	Modicon LMC058 Modicon M258
Product compatibility	Motion controller Logic controller

Complementary

Discrete input number	4
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	3.3 mA
Voltage state 0 guaranteed	≤ 5 V
Voltage state 1 guaranteed	≥ 15 V
Input filtering	0...25 ms (configurable by software) 1 ms (by default) ≤ 2 μ s (hardware)
Analogue input number	1
Analogue input type	Current 0...20 mA/4...20 mA Voltage ± 10 V
Analogue input resolution	12 bits for current 12 bits + sign for voltage
Common mode rejection	70 dB 50 Hz for analog input 70 dB DC for analog input
Discrete output number	2
Discrete output type	Transistor
Output voltage	24 V DC
Output voltage limits	20.4...28.8 V
Discrete output logic	Source
Discrete output current	≤ 0.5 A per output ≤ 1 A
Peak output current	≤ 14 A
Leakage current	5 μ A (when switched off) for digital output
Switching frequency	100 Hz, resistive for digital output
Analogue output number	1
Analogue output type	Current: 0...20 mA Voltage: ± 10 V
Conversion time	300 μ s for analog output
Analogue output resolution	12 bits, 0...20 mA 12 bits + sign, ± 10 V
Measurement resolution	4.883 μ A, 0...20 mA/4...20 mA, 0...20 mA 2.441 mV, ± 10 V, ± 10 V
Colour	White

Response time	1 ms for analog output ≤ 250 μs (from state 1 to state 0) for digital output ≤ 250 μs (from state 0 to state 1) for digital output
Input impedance	≥ 1 MOhm analog, +/- 10 V 7.18 kOhm digital
Output impedance	≥ 10 kOhm, +/- 10 V at 55...60 °C ≥ 1 kOhm, +/- 10 V at 0...55 °C
Load impedance ohmic	≤ 300 Ohm (input: 0...20 mA/4...20 mA) ≤ 300 Ohm (output: 0...20 mA) at 55...60 °C ≤ 400 Ohm (output: 0...20 mA) at 0...55 °C
Sampling duration	300 μs for analog input
Measurement error	< 0.15 % of full scale (output: 0...20 mA) at 25 °C < 0.15 % of full scale (output: +/- 10 V) at 25 °C < 0.08 % of full scale (input: 0...20 mA/4...20 mA) at 25 °C < 0.08 % of full scale (input: +/- 10 V) at 25 °C
Temperature coefficient	+/- 0.02 %FS/°C (output: +/- 10 V) +/- 0.02 %FS/°C (output: 0...20 mA) +/- 0.006 %FS/°C (input: +/- 10 V) +/- 0.009 %FS/°C (input: 0...20 mA/4...20 mA)
Non-linearity	+/- 0.1 %FS (output: +/- 10 V) +/- 0.1 %FS (output: 0...20 mA) +/- 0.02 %FS (input: +/- 10 V) +/- 0.02 %FS (input: 0...20 mA/4...20 mA)
Type of cable	Shielded cable
Isolation	No insulation between channels 500 Vrms AC insulation between channel and bus
Supply	Internal
[Us] rated supply voltage	24 V DC, -15...20 %
Local signalling	1 LED (green) 1 LED (orange) 2 LEDs (orange) for digital output status 4 LEDs (green) for digital input status 1 LED (red) for power supply (OFF) 1 LED (green) for power supply (ON)
Wiring mode	1 wire for digital input/output
Current consumption	73 mA at 24 V DC for inputs/outputs 2 mA at 5 V DC for bus
Power dissipation in W	≤ 1.75 W
Protection type	Against short-circuits for analog output Thermal overload protection for digital output Against short-circuits for digital output Against reverse polarity for digital output
Marking	CE
Product weight	0.025 kg

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	55...60 °C with derating factor (horizontal installation) 0...55 °C without derating (horizontal installation) 0...50 °C (vertical installation)
Ambient air temperature for storage	-25...70 °C
Relative humidity	5...95 % (without condensation)
IP degree of protection	IP20 conforming to IEC 61131-2
Pollution degree	2 conforming to IEC 60664
Operating altitude	0...2000 m
Storage altitude	0...3000 m
Vibration resistance	3.5 mm (f=5...8.4 Hz) on DIN rail 1 gn (f=8.4...150 Hz) on DIN rail
Shock resistance	15 gn for 11 ms

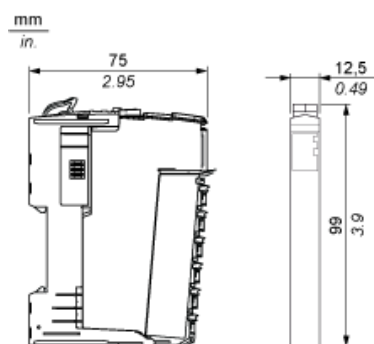
Resistance to electrostatic discharge	8 kV (in air) conforming to EN/IEC 61000-4-2 4 kV (on contact) conforming to EN/IEC 61000-4-2
Resistance to electromagnetic fields	10 V/m (80...2000 MHz) conforming to EN/IEC 61000-4-3 1 V/m (2...2.7 GHz) conforming to EN/IEC 61000-4-3
Resistance to fast transients	2 kV (power lines) conforming to EN/IEC 61000-4-4 1 kV (shielded cable) conforming to EN/IEC 61000-4-4 1 kV (I/O) conforming to EN/IEC 61000-4-4
Surge withstand	1 kV (common mode) conforming to EN/IEC 61000-4-5 0.5 kV (differential mode) conforming to EN/IEC 61000-4-5
Electromagnetic compatibility	EN/IEC 61000-4-6
Disturbance radiated/conducted	CISPR 11

Offer Sustainability

Sustainable offer status	Not Green Premium product
RoHS (date code: YYWW)	Compliant - since 1152 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold

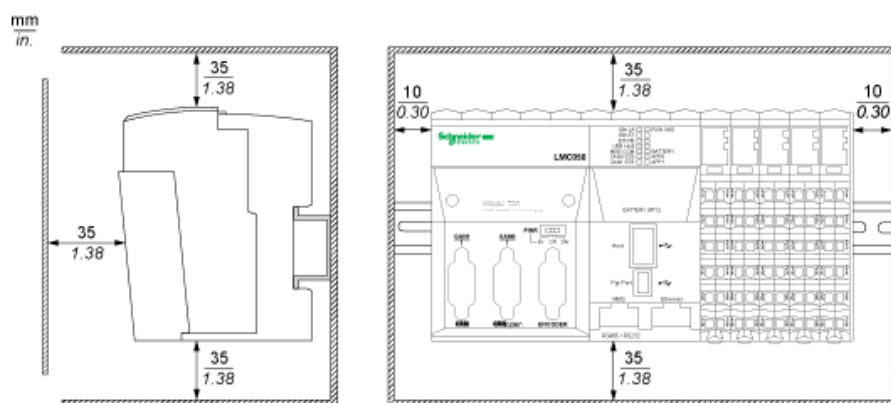
TM5 Slice

Dimensions

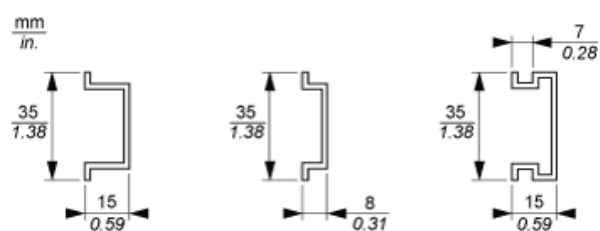


TM5 System

Spacing Requirements



Mounting on a DIN Rail

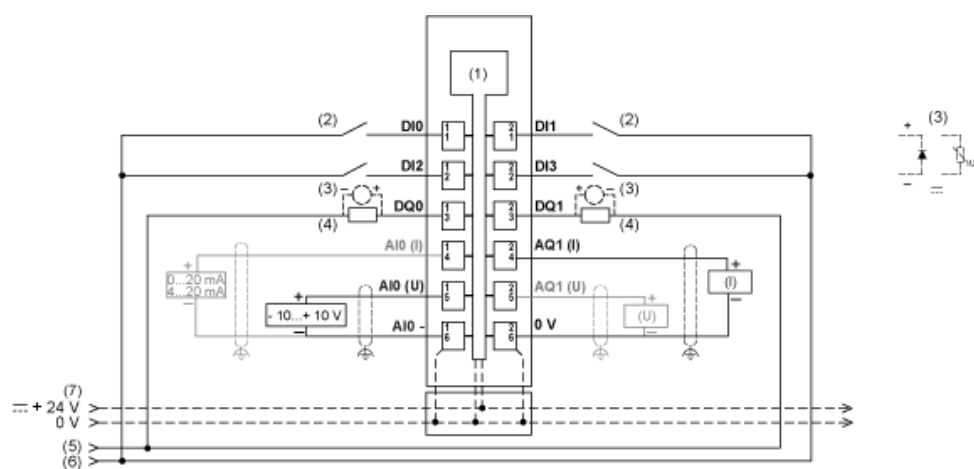


TM5 System Wiring Recommendations

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

Wiring Diagram



- 1 internal electronics
- 2 2-wire sensor
- 3 inductive load protection
- 4 2-wire load
- 5 0 Vdc I/O power segment by external connection
- 6 24 Vdc I/O power segment by external connection
- 7 24 Vdc I/O power segment integrated into the bus bases
- I current
- U voltage