



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	<= 2 µs (hardware) 1 ms (by default) <= 25 ms (configurable by software)
Analogue input number	1
Analogue input type	Voltage +/- 10 V Current 0...20 mA/4...20 mA
Analogue input resolution	12 bits + sign for voltage 12 bits for current
Common mode rejection	70 dB DC for analog input 70 dB 50 Hz 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	<= 1 A <= 0.5 A per output
Peak output current	<= 14 A
Leakage current	5 µA (when switched off) for digital output
Switching frequency	100 Hz, resistive for digital output
Analogue output number	1
Analogue output type	Voltage : +/- 10 V Current : 0...20 mA
Conversion time	300 µs for analog output
Analogue output resolution	12 bits + sign, +/- 10 V 12 bits, 0...20 mA
Measurement resolution	2.441 mV, +/- 10 V, +/- 10 V 4.883 µA, 0...20 mA/4...20 mA, 0...20 mA
Colour	White
Response time	<= 250 µs (from state 0 to state 1) for digital output <= 250 µs (from state 1 to state 0) for digital output

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	1 ms for analog output
Input impedance	7.18 kOhm digital ≥ 1 MOhm analog, +/- 10 V
Output impedance	≥ 1 kOhm, +/- 10 V at 0...55 °C ≥ 10 kOhm, +/- 10 V at 55...60 °C
Load impedance ohmic	≤ 400 Ohm (output: 0...20 mA) at 0...55 °C ≤ 300 Ohm (output: 0...20 mA) at 55...60 °C ≤ 300 Ohm (input: 0...20 mA/4...20 mA)
Sampling duration	300 µs for analog input
Measurement error	< 0.08 % of full scale (input: +/- 10 V) at 25 °C < 0.08 % of full scale (input: 0...20 mA/4...20 mA) at 25 °C < 0.15 % of full scale (output: +/- 10 V) at 25 °C < 0.15 % of full scale (output: 0...20 mA) at 25 °C
Temperature coefficient	+/- 0.009 %FS/°C (input: 0...20 mA/4...20 mA) +/- 0.006 %FS/°C (input: +/- 10 V) +/- 0.02 %FS/°C (output: 0...20 mA) +/- 0.02 %FS/°C (output: +/- 10 V)
Non-linearity	+/- 0.02 %FS (input: 0...20 mA/4...20 mA) +/- 0.02 %FS (input: +/- 10 V) +/- 0.1 %FS (output: 0...20 mA) +/- 0.1 %FS (output: +/- 10 V)
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 (green) for power supply (ON) 1 LED (red) for power supply (OFF) 4 LEDs (green) for digital input status 2 LEDs (orange) for digital output status 1 LED (orange)
Wiring mode	1 wire for digital input/output
Current consumption	2 mA at 5 V DC for bus 73 mA at 24 V DC for inputs/outputs
Power dissipation in W	≤ 1.75 W
Protection type	Against reverse polarity for digital output Against short-circuits for digital output Thermal overload protection for digital output Against short-circuits for analog 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	0...50 °C (vertical installation) 0...55 °C without derating (horizontal installation) 55...60 °C with derating factor (horizontal 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	1 gn (f=8.4...150 Hz) on DIN rail 3.5 mm (f=5...8.4 Hz) on DIN rail
shock resistance	15 gn for 11 ms
resistance to electrostatic discharge	4 kV (on contact) conforming to EN/IEC 61000-4-2

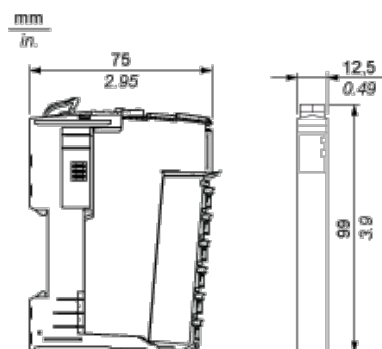
	8 kV (in air) conforming to EN/IEC 61000-4-2
resistance to electromagnetic fields	1 V/m (2...2.7 GHz) conforming to EN/IEC 61000-4-3 10 V/m (80...2000 MHz) conforming to EN/IEC 61000-4-3
resistance to fast transients	1 kV (I/O) conforming to EN/IEC 61000-4-4 1 kV (shielded cable) conforming to EN/IEC 61000-4-4 2 kV (power lines) conforming to EN/IEC 61000-4-4
surge withstand	0.5 kV (differential mode) conforming to EN/IEC 61000-4-5 1 kV (common 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	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1152 - Schneider Electric declaration of conformity
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

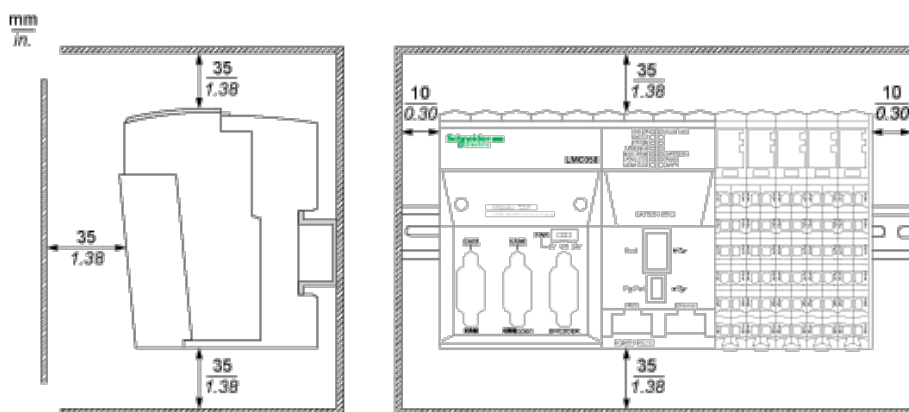
TM5 Slice

Dimensions

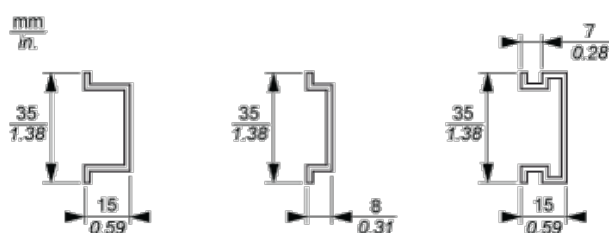


TM5 System

Spacing Requirements



Mounting on a DIN Rail

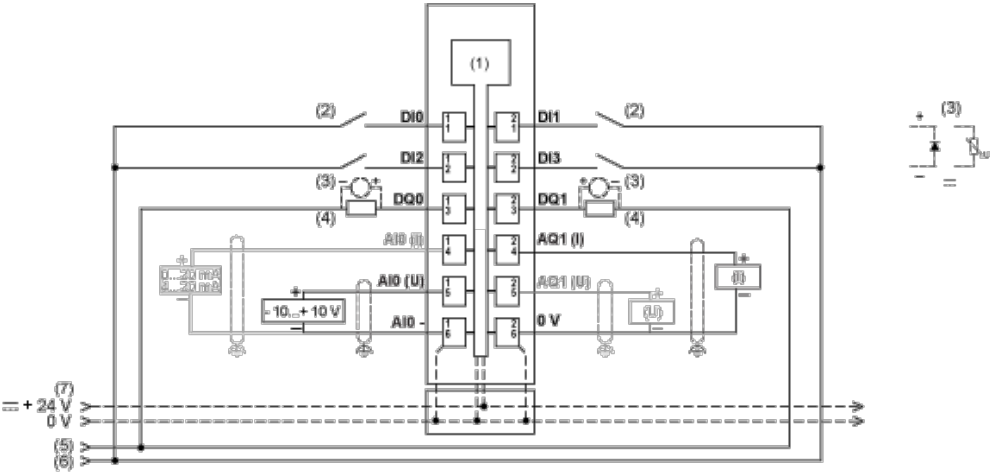


TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

$\frac{mm}{in.}$				
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