

Product data sheet

Specifications



Analog input module, Modicon TM5,
Composition kit of I/O(TM5SAI4L)
+ term. block(TM5ACTB12) + bus
base(TM5ACBM11)

TM5SAI4LK

Main

Range of product	Modicon TM5
Product or component type	Analog input module
Analogue input number	4
Analogue input type	current 0...20 mA/4...20 mA differential voltage +/- 10 V differential
Analogue input resolution	12 bits + sign +/- 10 V 12 bits 0...20 mA/4...20 mA

Complementary

Device composition	Bus sub-base TM5ACBM11 Terminal block TM5ACTB12 I/O module TM5SAI4L
Range compatibility	Modicon M258 Modicon LMC058
Product compatibility	Logic controller Motion controller
Measurement resolution	2.441 mV, +/- 10 V 4.883 µA, 0...20 mA/4...20 mA
Colour	White
Input impedance	>= 20 mOhm voltage
Load impedance ohmic	<= 400 Ohm (current)
Sampling duration	1 ms, analogue input type: all inputs with filtering 400 µs, analogue input type: all inputs without filtering
Measurement error	< 0.08 % of full scale +/- 10 V +/- 10 V at 25 °C < 0.08 % of full scale 0...20 mA/4...20 mA at 25 °C
Temperature coefficient	+/- 0.009 %FS/°C, analogue input type: current +/- 0.006 %FS/°C, analogue input type: voltage
Non-linearity	< 0.025 %FS, analogue input type: voltage < 0.05 %FS, analogue input type: current
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 %
Common mode rejection	> 70 dB
Local signalling	1 LED green for power supply 1 LED red for power supply

	4 LEDs green for input status
Current consumption	2 mA at 5 V DC bus 46 mA at 24 V DC input/output
Maximum power dissipation in W	1.11 W
Marking	CE
Net weight	0.065 kg

Environment

Standards	IEC 61131-2 CSA C22.2 No 213 CSA C22.2 No 142 UL 508
Product certifications	CSA GOST-R C-Tick cULus
Ambient air temperature for operation	0...55 °C without derating (horizontal installation) 0...60 °C with derating factor (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	1 gn at 8.4...150 Hz on DIN rail 3.5 mm at 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

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	118 g
Package 1 Height	7 cm
Package 1 width	9 cm
Package 1 Length	10 cm
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Weight	1.77 kg

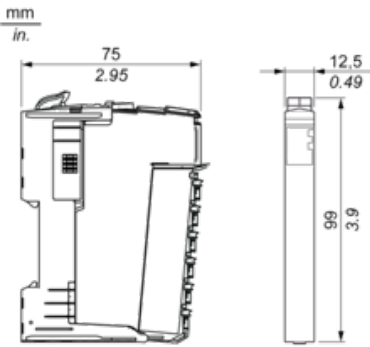
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm

Contractual warranty

Warranty	18 months
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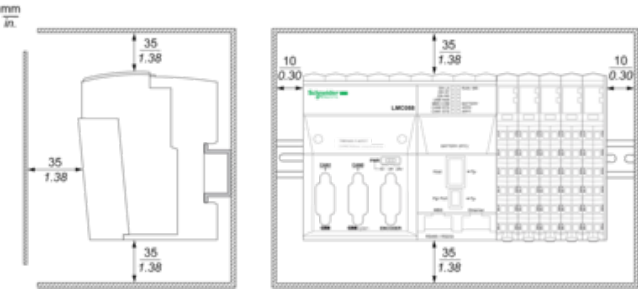
TM5 Slice

Dimensions

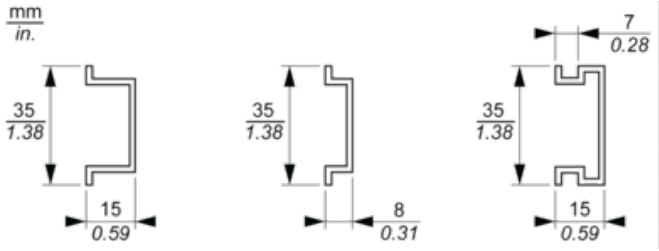


TM5 System

Spacing Requirements



Mounting on a DIN Rail



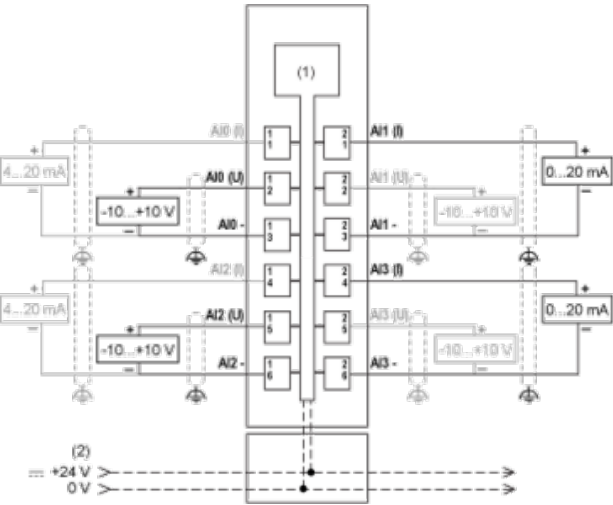
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

				
mm 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

Electronic Module 4AI ±10V/0-20mA/4-20mA 12 Bits

Wiring Diagram



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