

Product data sheet

Specifications



Analog input module, Modicon TM5, 4I, +/-10 V/0 to 20mA/4 to 20mA, 12bits

TM5SAI4L

Main

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

Complementary

Range compatibility	Modicon M258 Modicon LMC058
Product compatibility	Motion controller Logic 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	0.025 kg

Environment

Standards	CSA C22.2 No 213 IEC 61131-2 UL 508 CSA C22.2 No 142
Product certifications	CSA cULus GOST-R C-Tick
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

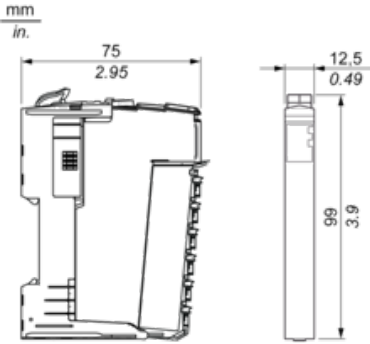
Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	41.0 g
Package 1 Height	2 cm
Package 1 width	6 cm
Package 1 Length	10.5 cm
Unit Type of Package 2	S02
Number of Units in Package 2	97
Package 2 Weight	3.977 kg
Package 2 Height	15 cm
Package 2 width	30 cm

Package 2 Length	40 cm
Offer Sustainability	
Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes
California proposition 65	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. For more information go to www.P65Warnings.ca.gov
Contractual warranty	
Warranty	18 months

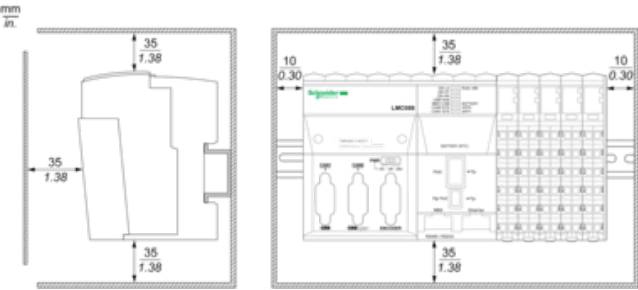
TM5 Slice

Dimensions

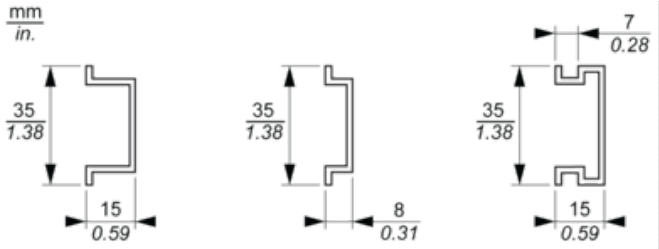


TM5 System

Spacing Requirements

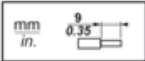


Mounting on a DIN Rail



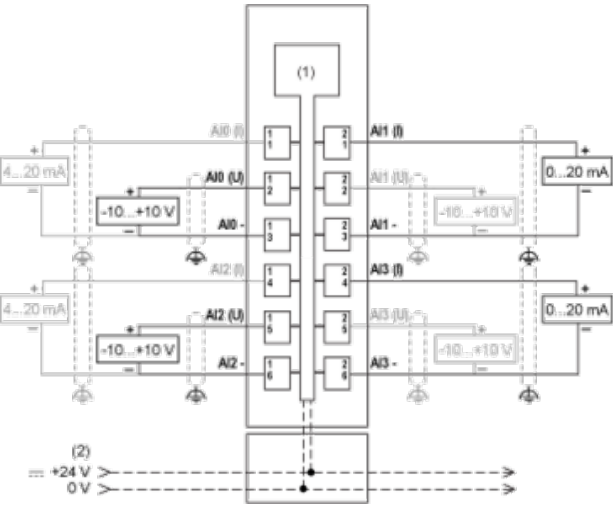
TM5 System Wiring Recommendations

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