Product data sheet
Characteristics

TM5SAI4PH
Analog input module, Modicon TM5, 4I, temperature probe PT100/PT1000, 16 bits

Main

Range of product	Modicon TM5
Product or component type	Analog input module
Analogue input number	4
Analogue input type	Pt 100/Pt 1000 temperature probe - 200...850 °C
Analogue input resolution	16 bits

Complementary

Range compatibility	Modicon LMC058 Modicon M258
Product compatibility	Logic controller Motion controller
Measurement resolution	0.1 °C
Colour	White
Measurement error	< 0.037 % of full scale - 200...850 °C Pt 100/Pt 1000 at 25 °C
Temperature coefficient	0.004 %FS/°C, analogue input type: temperature probe
Non-linearity	0.001 %FS, analogue input type: temperature probe
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	> 95 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	UL 508 CSA C22.2 No 213 IEC 61131-2 CSA C22.2 No 142
Product certifications	GOST-R CSA 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	41 g
Package 1 Height	2 cm
Package 1 width	6 cm
Package 1 Length	10.5 cm

Offer Sustainability

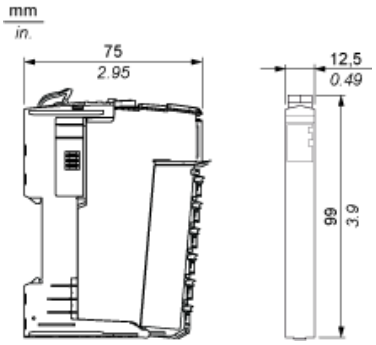
Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
REACh free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China 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

Contractual warranty

Warranty	18 months

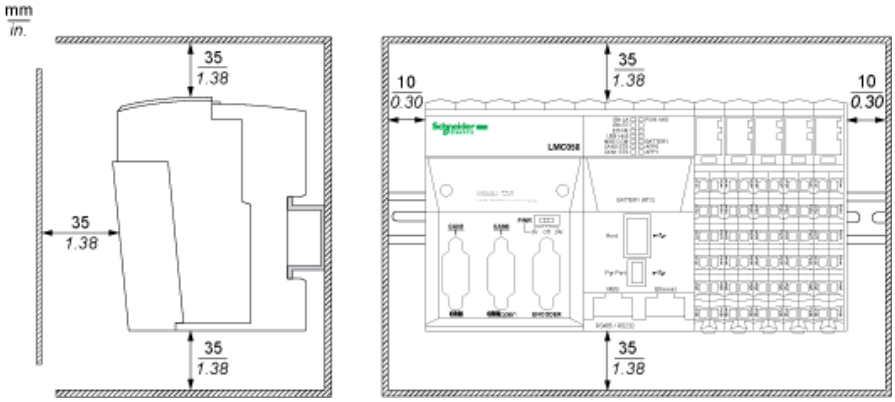
TM5 Slice

Dimensions

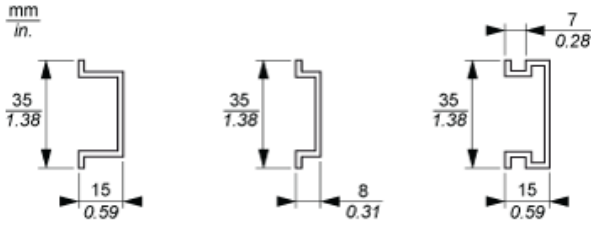


TM5 System

Spacing Requirements



Mounting on a DIN Rail



TM5 System Wiring Recommendations

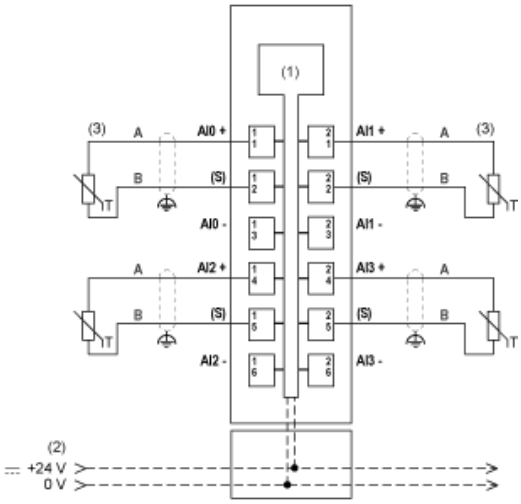
Wire Sizes to Use with the Removable Spring Terminal Blocks

mm / in.				
mm²	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 PT100/PT1000 16 Bits

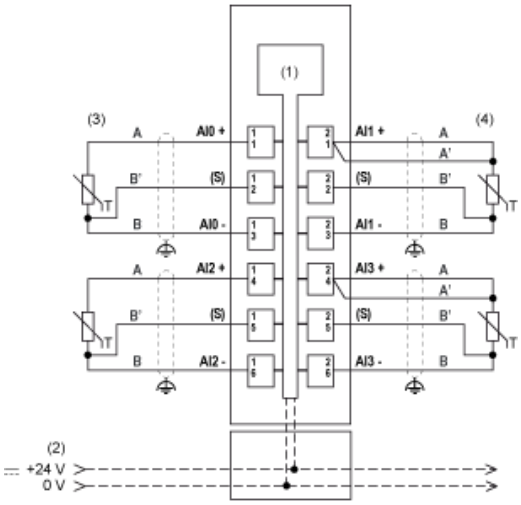
Wiring Diagrams

The following figure shows the 2-wire wiring diagram:



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

The following figure shows the 3-wire and 4-wire wiring diagram:



(1) Internal electronics
(2) 24 Vdc I/O power segment integrated into the bus bases
(3) 3-wire sensor
(4) 4-wire sensor
(S) Sensor