Product data sheet

Specifications

analog input module, Modicon TM5, 4I, +/-10V, 0 to 20mA, 16bits

TM5SAI4H

Product availability: Stock - Normally stocked in distribution facility

Main

Range of Product	Modicon TM5
Product or Component Type	Analog input module
Analogue input number	4
Analogue input type	current 0...20 mA differential voltage +/- 10 V differential
Analogue input resolution	15 bits + sign +/- 10 V 15 bits 0...20 mA

Complementary

Range Compatibility	Modicon LMC058 Modicon M258
Product Compatibility	Motion controller Logic controller
Measurement resolution	305 µV, +/- 10 V 610 nA, 0...20 mA
Color	White
Input impedance	>= 20 mOhm voltage
Load impedance ohmic	<= 400 Ohm current)
Sampling duration	50 µs
Measurement error	< 0.08 % of full scale +/- 10 V +/- 10 V 25 °C < 0.08 % of full scale 0...20 mA 0...20 mA 25 °C
Temperature coefficient	0.01 %FS/°C
Non-linearity	< 0.01 %FS voltage < 0.015 %FS current
Type of Cable	Shielded cable
Isolation	500 Vrms AC insulation between channel and bus No insulation between channels
Supply	Internal
[Us] rated supply voltage	24 V DC -15...20 %
EMI/RFI Noise rejection (100 kHz to 10 MHz)	> 70 dB
Local signalling	1 LED green power supply 1 LED red power supply 4 LEDs green input status
Current consumption	2 mA 5 V DC bus 63 mA 24 V DC input/output
Maximum power dissipation in W	1.51 W

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Marking	CE
Net Weight	0.055 lb(US) (0.025 kg)

Environment

Standards	CSA C22.2 No 213 IEC 61131-2 CSA C22.2 No 142 UL 508
Product Certifications	CSA C-tick GOST-R cULus
Ambient air temperature for operation	32…131 °F (0…55 °C) without derating horizontal installation) 32…140 °F (0…60 °C) with derating factor horizontal installation) 32…122 °F (0…50 °C) vertical installation)
Ambient Air Temperature for Storage	-13…158 °F (-25…70 °C)
Relative humidity	5…95 % without condensation
IP degree of protection	IP20IEC 61131-2
Pollution degree	2 IEC 60664
Operating altitude	0...6561.68 ft (0...2000 m)
Storage altitude	0…9842.5 ft (0…3000 m)
Vibration resistance	1 gn 8.4…150 Hz DIN rail 3.5 mm 5…8.4 Hz DIN rail
Shock resistance	15 gn 11 ms
Resistance to electrostatic discharge	4 kV on contact IEC 61000-4-2 8 kV in air IEC 61000-4-2
Resistance to electromagnetic fields	0.9 V/m (1 V/m) 2...2.7 GHz IEC 61000-4-3 9.1 V/m (10 V/m) 80...2000 MHz IEC 61000-4-3
Resistance to fast transients	1 kV IEC 61000-4-4 I/O) 1 kV IEC 61000-4-4 shielded cable) 2 kV IEC 61000-4-4 power lines)
Surge withstand	0.5 kV differential mode IEC 61000-4-5 1 kV common mode IEC 61000-4-5
Electromagnetic compatibility	EN/IEC 61000-4-6
Disturbance radiated/conducted	CISPR 11

Ordering and shipping details

Category	US1PC1222532
Discount Schedule	PC12
GTIN	3595864074740
Returnability	Yes
Country of origin	AT

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	0.787 in (2.000 cm)
Package 1 Width	2.362 in (6.000 cm)

Package 1 Length	4.134 in (10.500 cm)
Package weight(Lbs)	1.446 oz (41.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	97
Package 2 Height	5.906 in (15.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	9.502 lb(US) (4.310 kg)

Contractual warranty

Warranty	18 months

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	No
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
REACh Regulation	REACh Declaration
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
PVC free	Yes

Use Again

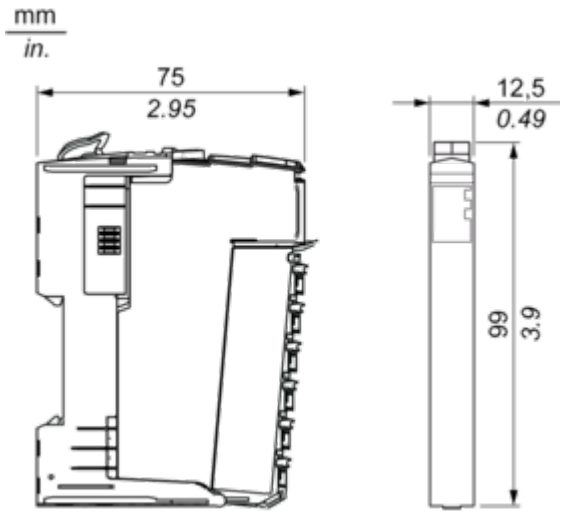
Repack and remanufacture

Circularity Profile	End of Life Information
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

Dimensions Drawings

TM5 Slice

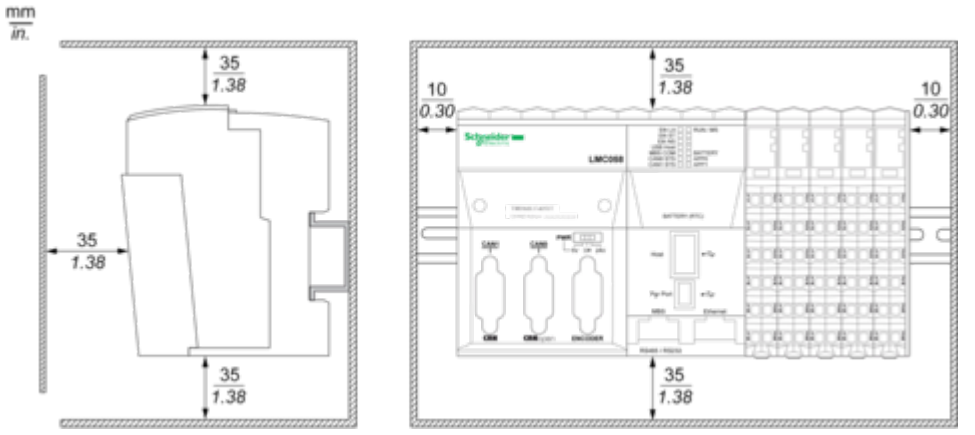
Dimensions



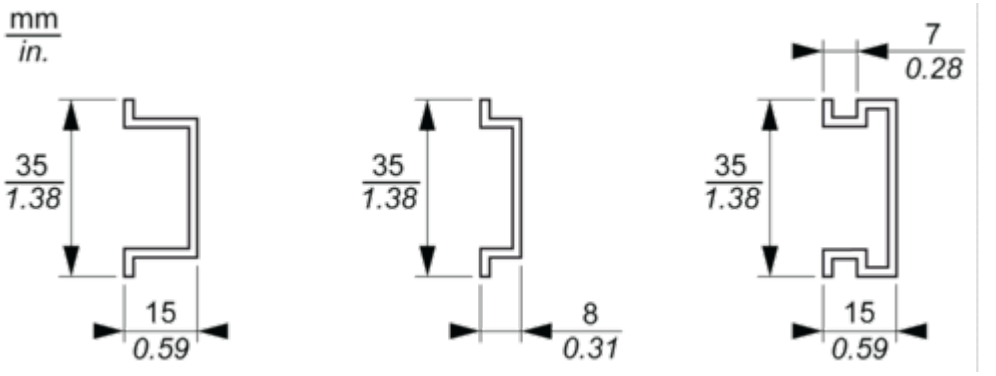
Mounting and Clearance

TM5 System

Spacing Requirements



Mounting on a DIN Rail



Connections and Schema

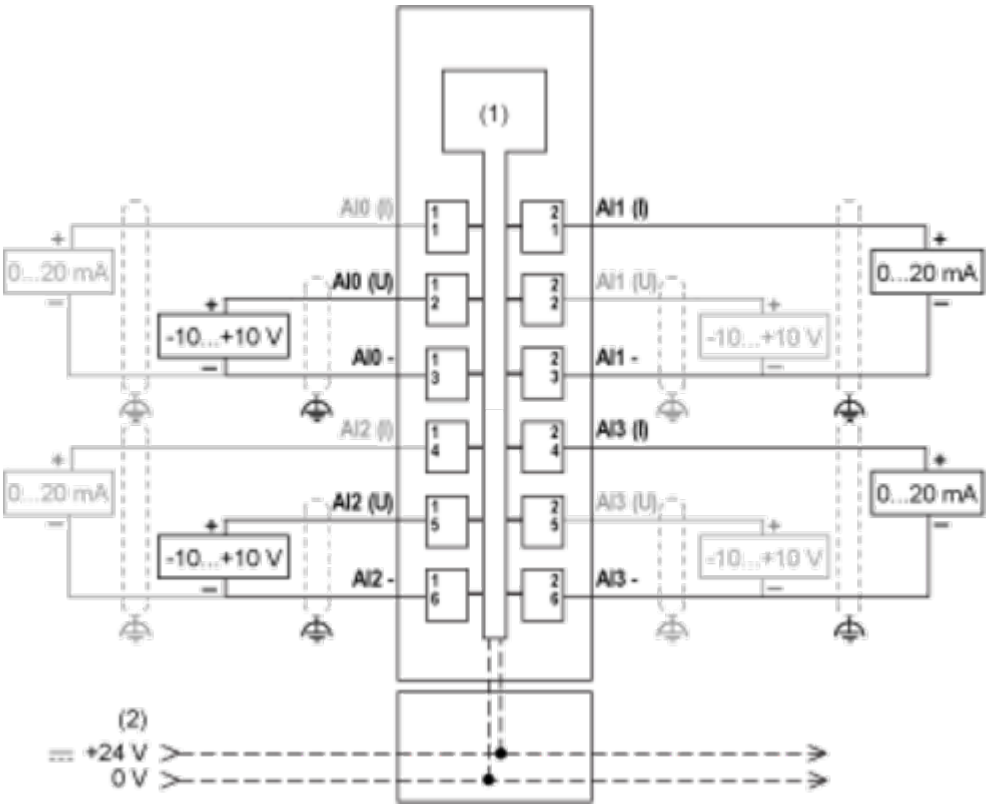
TM5 System Wiring Recommendations

Wire Sizes to Use with the Removable Spring Terminal Blocks

mm / in. 9 / 0.35				
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 16 Bits

Wiring Diagram



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

Condition of Installation

Do not place 16-bit analog input modules side-by-side because their electromagnetic characteristics may lead to mutual interference and possible unintended equipment operation. Further, other types of equipments can generate similar electromagnetic interference affecting the conversion accuracy of the modules. In the physical configuration, a single slice of non-interfering equipment is sufficient to avoid this type of disturbance. Separate the 16-bit analog modules from each other and from the following equipment:

- TM5SBER2 Bus receiver
- TM5SPS2 and TM5SPS2F Power Distribution Modules
- TM258••• and LMC058••• Controllers