



tM-AD5

5-channel Isolated Analog Input Module

Features

- 5-channel Differential Inputs
- Voltage Inputs
- 120 VDC Overvoltage Protection
- Resolution: 14/12 bits
- Adjustable Sampling Rate
- 4 kV ESD and EFT Protection
- 3 kV Surge Protection
- Dual Watchdog
- 2500 VDC Intra-module Isolation
- Cost-effective



Introduction

The tM-AD5 is an analog input module that includes 5 differential analog input channels and provides a programmable input range on all analog inputs (± 1 V, ± 2.5 V, ± 5 V, ± 10 V). It provides a high overvoltage protection of 120 VDC. The sampling rate of the tM-AD5 is adjustable and is available in either fast or normal mode and It also provides 4 KV ESD protection as well as 2500 Vrms intra-module isolation.

System Specifications

CPU Module	
Watchdog Timer	Yes, Module (2.3 seconds), Communication (Programmable)
Isolation	
Intra-module Isolation	2500 Vdc
EMS Protection	
EFT (IEC 61000-4-4)	± 4 kV for Power
EFT (IEC 61000-4-2)	± 4 kV Contact for Each Terminal ± 8 kV Air for Random Point
LED Indicators	
Status	1 x Power and Communication
COM Ports	
Ports	1 x RS-485
Baud Rate	1200 ~ 115200 bps
Data Format	(N, 8, 1), (N, 8, 2), (O, 8, 1), (E, 8, 1)
Protocol	DCON, Modbus/RTU, Modbus/ASCII
Power	
Reverse Polarity Protection	Yes
Consumption	0.7 W Max.
Powered from Terminal Block	Yes, 10 ~ 30 Vdc
Mechanical	
Dimensions (W x L x H)	52 mm x 98 mm x 27 mm
Installation	DIN-Rail Mounting
Environmental	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +75 °C
Humidity	10 ~ 95% RH, Non-condensing

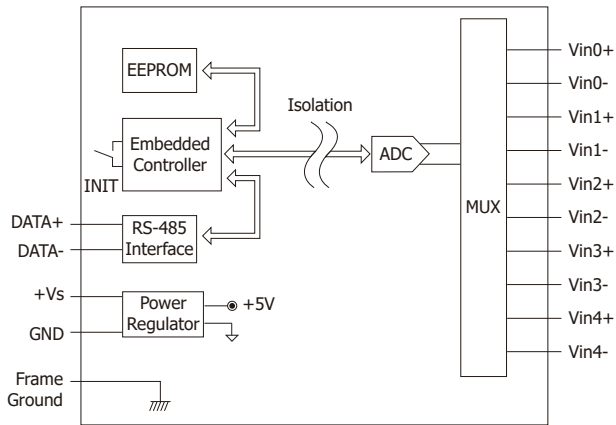
Applications

- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

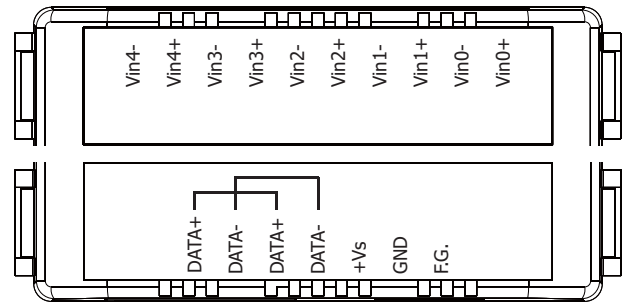
I/O Specifications

Analog Input	
Channels	5 Differential
Type	Voltage
Range	± 1 V, ± 2.5 V, ± 5 V, ± 10 V
Resolution	Normal Mode: 14-bit Fast Mode: 12-bit
Accuracy	Normal Mode: $\pm 0.1\%$ Fast Mode: $\pm 0.5\%$
Sampling Rate	Normal Mode: 10 Hz Fast Mode: 200 Hz
Input Impedance	20 M Ω
Overvoltage Protection	120 VDC
Individual Channel Configuration	-
Zero Drift	± 20 μ V/°C
Span Drift	± 25 ppm/°C

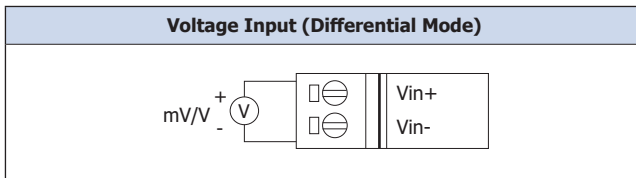
Internal I/O Structure



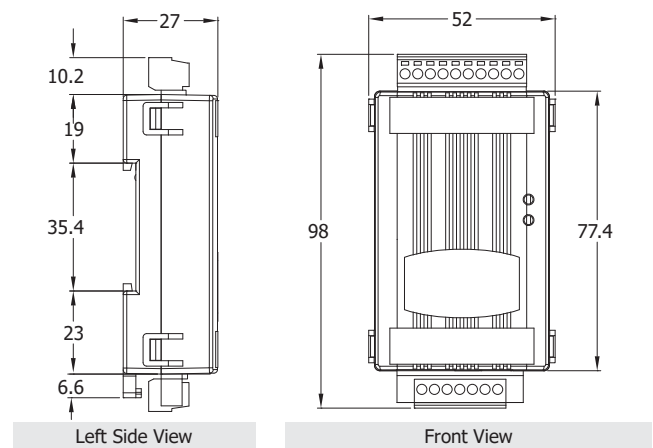
Pin Assignments



Wire Connections



Dimensions (Units: mm)



Ordering Information

tM-AD5 CR	5-channel Isolation Analog Input Module with High Voltage Protection (RoHS)
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