

tM-AD2

2-channel Isolated Analog Input Module

Features

- 2-channel Single-ended Inputs
- Voltage Inputs and Current Inputs
- Adjustable Sampling Rate
- Dual Watchdog

Introduction

The tM-AD2 is an analog input module that includes 2 single-ended analog input channels and provides a programmable input range on all analog inputs (0 ~ 500 mV, 0 ~ 1 V, 0 ~ 2.5 V, 0 ~ 5 V, 0 ~ 10 V, 0 ~ 20 mA, 4 ~ 20 mA). It provides high overvoltage protection of 120 VDC. The sampling rate of the tM-AD2 is adjustable and is available in either fast or normal mode. It also provides 4 kV ESD protection as well as 2500 VDC intra-module isolation.

System Specifications

CPU Module	
Watchdog Timer	Module, Communication (Programmable)
Isolation	
Intra-module Isolation	2500 VDC
EMS Protection	
EFT (IEC 61000-4-4)	±4 kV for Power
ESD (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	10 ~ 30 VDC
Mechanical	
Dimensions (mm)	52 x 98 x 27 (W x L x H)
Installation	DIN-Rail Mounting
Environmental	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +75 °C
Humidity	10 ~ 95% RH, Non-condensing

Applications

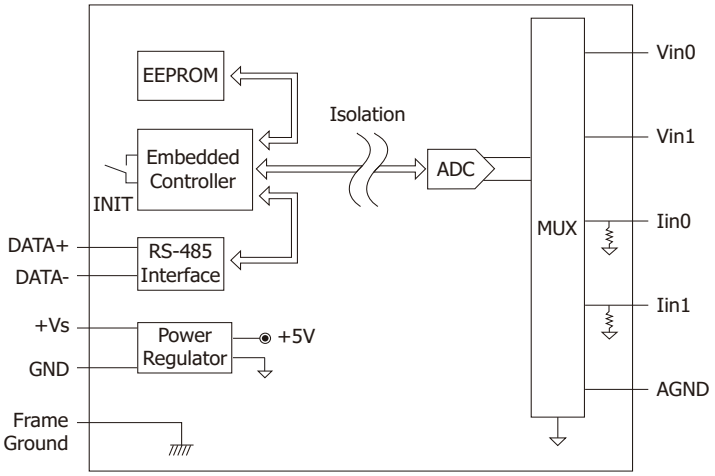
- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

I/O Specifications

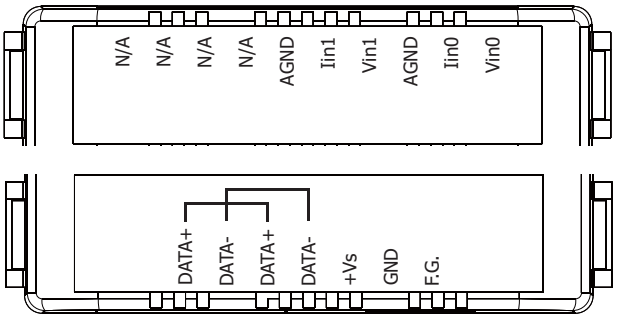
Analog Input		
Channels		2 Single-ended
Range	Voltage	0 ~ 500 mV, 0 ~ 1 V, 0 ~ 2.5 V, 0 ~ 5 V, 0 ~ 10 V
	Current	4 ~ 20 mA
Resolution	Normal Mode	14-bit
	Fast Mode	12-bit
Accuracy	Normal Mode	±0.1%
	Fast Mode	±0.5%
Sampling Rate	Normal Mode	10 Hz
	Fast Mode	200 Hz
Input Impedance	Voltage	10 MΩ
	Current	125 Ω
Overvoltage Protection		120 VDC
Overcurrent Protection		50 mA at 110 VDC
Individual Channel Configuration		Yes
Open Wire Detection		Yes

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Internal I/O Structure

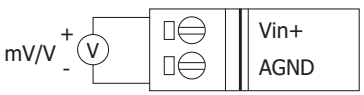


Pin Assignments

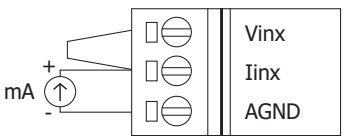


Wire Connections

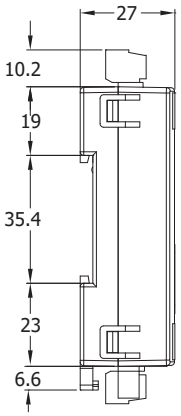
Voltage Input (Single-ended Mode)



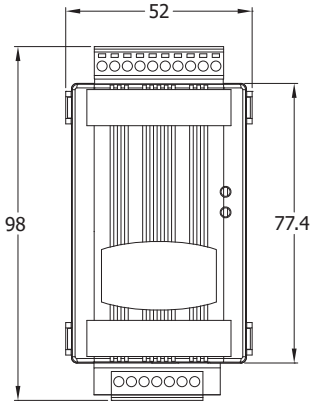
Current Input (Single-ended Mode)



Dimensions (Units: mm)



Left Side View



Front View

Ordering Information

tM-AD2 CR	2-channel Isolated Analog Input Module with High Voltage Protection (RoHS)

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