

tM-TH8

8-channel Isolated Thermistor Input Module

Features

- 8-channel Thermistor Input
- User-defined Thermistor Types
- Dual Watchdog

Introduction

The tM-TH8 is an 8-channel isolated thermistor input module that can be used for measuring temperatures via a thermistor. Many types of thermistors are supported and user-defined types can be added by specifying the Steinhart coefficients, if necessary. The added 2500 VDC intra-module isolation and 120 VDC overvoltage protection for the thermistor on the tM-TH8 ensure that the module will operate with higher reliability.

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	1 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

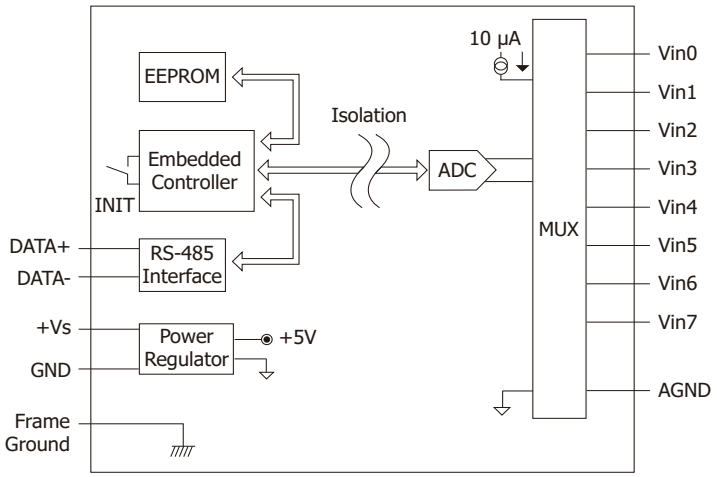
- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

I/O Specifications

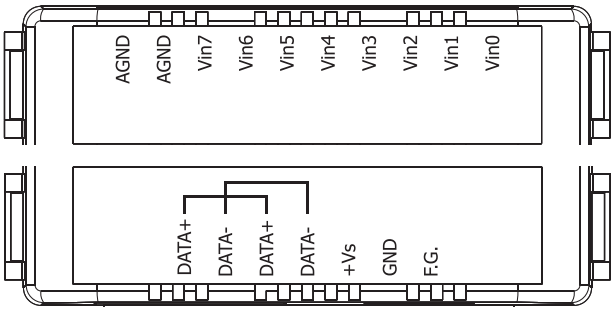
Analog Input	
Channels	8
Type	Thermistor
Range	0 ~ 20 mA, 4 ~ 20 mA
Sensor Type	Precon ST-A3, Fenwell U, YSI L100, YSI L300, YSI L1000, YSI B2252, YSI B3000, YSI B5000, YSI B6000, YSI B10000, YSI H10000, YSI H30000, User-defined
Resolution	16-bit
Accuracy	±1%
Sampling Rate	8 Hz total
Overvoltage Protection	120 VDC
Individual Channel Configuration	Yes
Open Wire Detection	Yes

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Internal I/O Structure



Pin Assignments

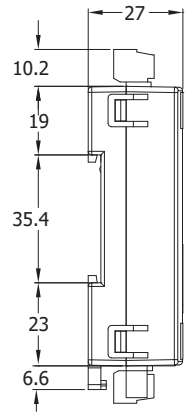


Wire Connections

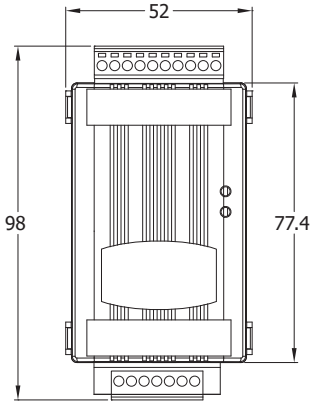
Thermistor Input



Dimensions (Units: mm)



Left Side View



Front View

Ordering Information

tM-TH8 CR	8-channel Isolation Thermistor Input Module with High Voltage Protection (RoHS)

Accessories

CA-TM-P100-L020 CR	NTC Thermistor, Epoxy Resin Cable, 2M (-40 °C ~ +80 °C) (RoHS)
CA-TM-P100-L050 CR	NTC Thermistor, Epoxy Resin Cable, 5M (-40 °C ~ +80 °C) (RoHS)

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