I-7033(D) M-7033(D)

3-channel RTD Input Module

Features

- RTD Inputs
- Lead Resistance Elimination for 3/4-wire Connection
- Open Wire Detection
- 4 kV ESD Protection
- 3000 VDC Intra-Module Isolation
- Dual Watchdog
- Wide Operating Temperature Range: -25 ~ +75°C

Introduction

I-7033 is used for measuring temperature by RTD and provide PT100, Ni120, PT1000 types. It supports 2/3/4 wire RTD and features open wire detection. Besides, I-7033 has qualification for 3000 VDC intra-module isolation and supports lead resistance elimination for 3/4-wire connection.

Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.

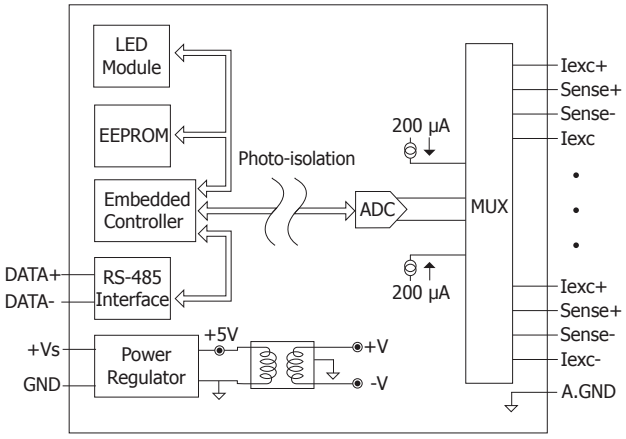
System Specifications

Models	I-7033	I-7033D	M-7033	M-7033D
Communication				
Interface	RS-485			
Format	(N, 8, 1) (N, 8, 2) (E, 8, 1) (O, 8, 1)			
Baud Rate	1200 ~ 115200 bps			
Protocol	DCON		Modbus RTU, DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)			
LED Indicator/Display				
System LED Indicator	Yes, 1 LED as Power/Communication Indicator			
I/O LED Indicator	-			
7-Segment LED Display	-	Yes	-	Yes
Isolation				
Intra-Module Isolation, Field-to-Logic	3000 VDC			
EMS Protection				
ESD (IEC 61000-4-2)	-			
EFT (IEC 61000-4-4)	-			
Power				
Reverse Polarity Protection	Yes			
Input Range	10 ~ 30 VDC			
Consumption	1.0 W	1.6 W	1.0 W	1.6 W
Mechanical				
Dimensions (W x L x H)	72 mm x 123 mm x 35 mm			
Installation	DIN-Rail or Wall Mounting			
Environment				
Operating Temperature	-25 ~ +75°C			
Storage Temperature	-40 ~ +85°C			
Humidity	10 ~ 95% RH, Non-condensing			

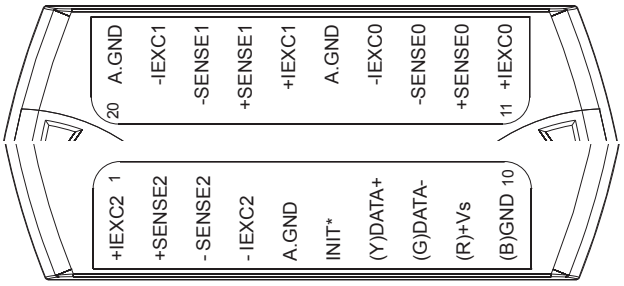
I/O Specifications

Models	I-7033	I-7033D	M-7033	M-7033D
RTD Input				
Channels	3			
Wiring	2/3/4 Wire			
Sensor Type	Pt100, Pt1000, Ni120			
Resolution	16-bit			
Accuracy	+/-0.1%			
Sampling Rate	15 Hz			
Individual Channel Configuration	-			
Overvoltage Protection	+/- 25 VDC			
Open Wire Detection	Yes			
3/4-wire RTD Lead Resistance Elimination	Yes			
Resistance Measurement	3.2 KΩ Max.			

Internal I/O Structure

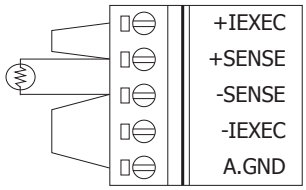


Pin Assignments

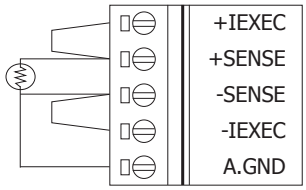


Wire Connections

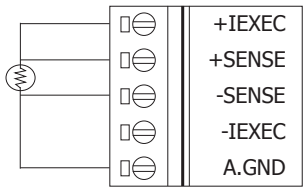
2-wire RTD Wire Connection



3-wire RTD Wire Connection



4-wire RTD Wire Connection



Ordering Information

I-7033 CR	3-channel RTD Input Module with DCON Protocol (Blue Cover) (RoHS)
I-7033D CR	I-7033 with 7-Segment LED Display (Blue Cover) (RoHS)
I-7033D-G CR	I-7033 with 7-Segment LED Display (Gray Cover) (RoHS)
M-7033-G CR	3-channel RTD Input Module with DCON and Modbus Protocol (Gray Cover) (RoHS)
M-7033D-G CR	M-7033 with 7-Segment LED Display (Gray Cover) (RoHS)

Accessories

 tM-7520U CR	RS-232 to RS-485 converter (RoHS)
 tM-7561 CR	USB to RS-485 converter (RoHS)
 tM-SG4 CR	RS-485 Pull-high/Pull-low and Termination Resistor Module (RoHS)
 I-7514U CR	4-channel RS-485 Hub (RoHS)
 SG-770 CR	7 channel differential or 14 channel single-ended surge protector (RoHS)
 SG-3000 series	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Inputs