I-7015(P)   M-7015(P)

6-channel Analog Input Module

Features

- 3-wire RTD Input with Lead Resistance Elimination
- RTD Input
- High Resolution: 16-bit
- Individual Channel Configuration
- Open Wire Detection
- 4 kV ESD Protection
- EFT Protection
- 3000 V_{DC} Intra-Module Isolation
- Dual Watchdog
- Wide Operating Temperature Range: -25 ~ +75°C

Introduction

I-7015 is used for measuring temperature by RTD. I-7015 offers 6 channels, each of which could be connected with different kinds of RTD. Also, I-7015 is fully RoHS-compliant and has qualification for 4 KV ESD protection as well as 3000 V_{DC} intra-module isolation.

The "P" version is another milestone in the development of I-7015 and a testament to excellence by ICP DAS R&D team. I-7015P is specifically designed for long-distance RTD measurement. It features automatic compensation for three-wire RTD so that it can measure right regardless of the length of wires. I-7015P offers 6 channels, each of which could be connected with different kinds of RTD. Also, I-7015P is fully RoHS-compliant and has qualification for 4 KV ESD protection as well as 3000 V_{DC} intra-module isolation.

Applications

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

System Specifications

Models	I-7015	I-7015P	M-7015	M-7015P
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	-			
Isolation				
Intra-Module Isolation, Field-to-Logic	3000 V_{DC}			
EMS Protection				
ESD (IEC 61000-4-2)	+/-4 kV			
EFT (IEC 61000-4-4)	+/-4 kV			
Power				
Reverse Polarity Protection	Yes			
Input Range	10 ~ 30 V_{DC}			
Consumption	1.1 W	1.2 W	1.1 W	1.2 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-7015	I-7015P	M-7015	M-7015P
Analog Input				
Channels	6			
Wiring	2/3 Wire			
Sensor Type	Pt100, Pt1000, Ni120, Cu100, Cu1000			
Resolution	16-bit			
Accuracy	+/-0.05%			
Sampling Rate	12 Hz			
Individual Channel Configuration	Yes			
Overvoltage Protection	120 V_{DC}			
Open Wire Detection	Yes			
3-wire RTD Lead Resistance Elimination	-			
Resistance Measurement	3.2 KΩ Max.			

◪ Internal I/O Structure
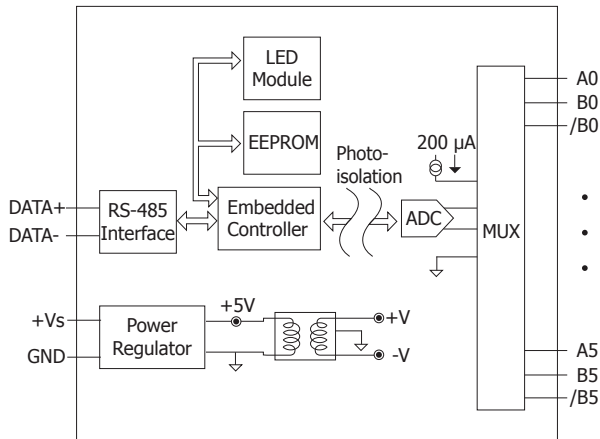
◪ Pin Assignments
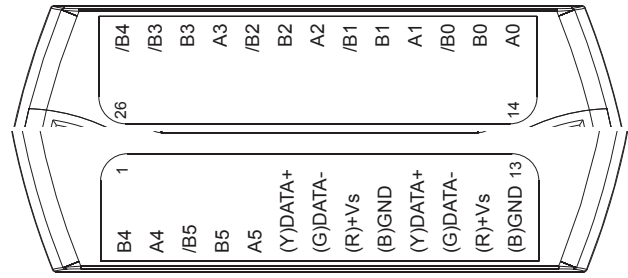
◪ Wire Connections

2-wire RTD Wire Connection	3-wire RTD Wire Connection

◪ Ordering Information

I-7015 CR	6-channel RTD Input Module with DCON Protocol (Blue Cover) (RoHS)
I-7015-G CR	6-channel RTD Input Module with DCON Protocol (Gray Cover) (RoHS)
I-7015P-G CR	6-channel Analog Input Module with DCON Protocol (Gray Cover) (RoHS)
M-7015-G CR	6-channel RTD Input Module with DCON and Modbus Protocol (Gray Cover) (RoHS)
M-7015P-G CR	6-channel Analog Input Module with DCON and Modbus Protocol (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