ICP DAS

I-7017R   **M-7017R**

I-7017R-A5   **M-7017R-A5**

8-channel Analog Input Module

Features

- I-7017R and M-7017R
  - 240 V$_{rms}$ Overvoltage Protection
  - Voltage and Current Input
- I-7017R-A5 and M-7017R-A5
  - High Voltage Input
- Adjustable Sampling Rate
- 4 kV ESD Protection
- 3000 V$_{DC}$ Intra-module Isolation
- Dual Watchdog
- RoHS Compliance
- Wide Operating Temperature Range: -25 to +75°C

Introduction

The I-7017R is an 8-channel analog input module with an extremely high quality protection mechanism where the overvoltage protection is 240 V$_{rms}$. The input type includes both voltage and current. The I-7017R is an upgraded version of the I-7017, with the only difference being that the I-7017R is much more suitable for critically harsh environments. The sampling rate of the I-7017R is adjustable, meaning that either fast mode or normal mode can be selected. The I-7017R also has 4 kV ESD protection as well as 3000 V$_{DC}$ intra-module isolation. The I-7017R-A5 is an 8-channel analog input module that is especially designed for high voltage input, and has an input range of between -50 V ~ +50 V or -150 V ~ +150 V. The M-7017R and M-7017R-A5 has the same specifications as the I-7017R and I-7017R-A5, but provides additional support for the Modbus RTU protocol as well as the DCON protocol.

System Specifications

Model	I-7017R	I-7017R-A5
	M-7017R	M-7017R-A5
Communication		
Interface	RS-485	
Bias Resistor	No (Usually supplied by the RS-485 Master. Alternatively, add a tM-SG4 or SG-785.)	
Format	(N, 8, 1)	
Baud Rate	1200 to 115200 bps	
Protocol	DCON	
	Modbus RTU, DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)	
LED Indicators/Display		
System LED Indicator	Yes, 1 as Power/Communication Indicator	
I/O LED Indicators	-	
7-segment LED Display	-	
Isolation		
Intra-module Isolation, Field-to-Logic	3000 V$_{DC}$	
EMS Protection		
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal	
EFT (IEC 61000-4-4)	±4 kV for Power Line	
Surge (IEC 61000-4-5)	±0.5 kV for Power Line	
Power		
Reverse Polarity Protection	Yes	
Input Range	+10 ~ +30 V$_{DC}$	
Consumption	1.3 W	1.6 W
Mechanical		
Dimensions (L x W x H)	123 mm x 72 mm x 35 mm	
Installation	DIN-Rail or Wall Mounting	
Environment		
Operating Temperature	-25 to +75°C	
Storage Temperature	-40 to +85°C	
Humidity	10 to 95% RH, Non-condensing	

Applications

- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

I/O Specifications

Model		I-7017R	I-7017R-A5
		M-7017R	M-7017R-A5
Analog Input			
Channels		8	
Wiring		Differential	
Input Range	Voltage	±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V,	±50 V, ±150 V
	Current	±20 mA, 0 ~ 20 mA, 4 ~ 20 mA (require an optional external 125 Ω resistor)	-
Resolution		16-bit	
Accuracy	Normal Mode	0.1 %	
	Fast Mode	0.5 %	
Sampling Rate	Normal Mode	10 Hz	
	Fast Mode	60 Hz	50 Hz
Input Impedance	Voltage	2 MΩ	290 kΩ
	Current	-	
Common Voltage Protection		±200 V$_{DC}$	
Individual Channel Configuration		-	
Overvoltage Protection		240 V$_{rms}$	±200 V$_{DC}$
Overcurrent Protection		-	
Virtual Channel to Channel Isolation		Yes, 400 V$_{DC}$	
Open Wire Detection for 4 ~ 20 mA		Yes	

■ Internal I/O Structure

I-7017R/M-7017R
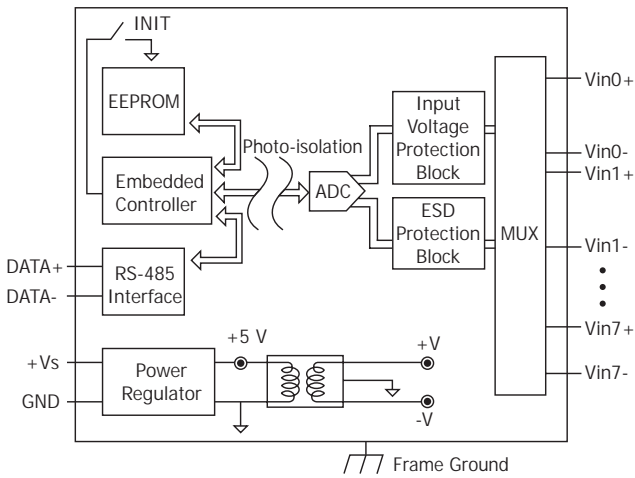
I-7017R-A5/M-7017R-A5
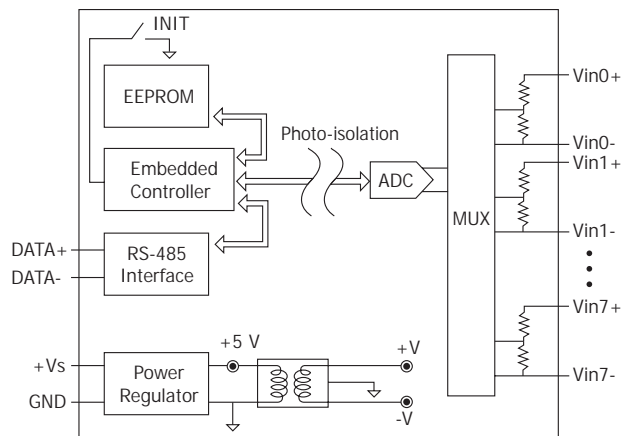
■ Pin Assignments
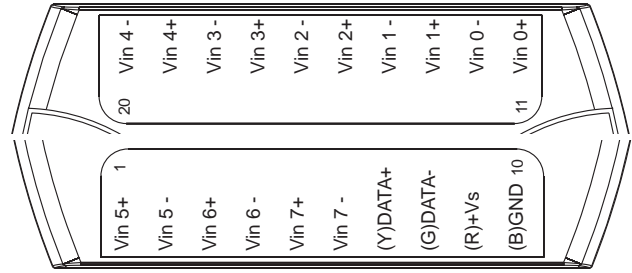
■ Wire Connections

I-7017R/M-7017R
Voltage Input Wire Connection
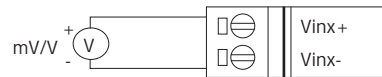
Current Input Wire Connection
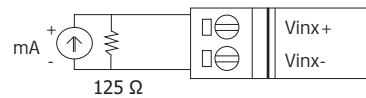
Require an Optional External 125 Ω Resistor
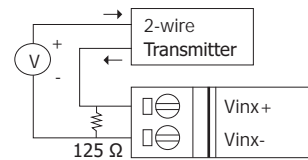
I-7017R-A5/M-7017R-A5
Voltage Input Wire Connection
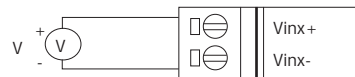
TYPE	SIGNAL
1B	±150 V
1C	±50 V

■ Ordering Information

I-7017R CR	8-channel Analog Input Module using the DCON Protocol (Blue Cover) (RoHS)
I-7017R-G CR	8-channel Analog Input Module using the DCON Protocol (Gray Cover) (RoHS)
M-7017R-G CR	8-channel Analog Input Module using the DCON and Modbus RTU Protocol (Gray Cover) (RoHS)
I-7017R-A5-G CR	8-channel Analog Input Module using the DCON Protocol (Gray Cover) (RoHS)
M-7017R-A5-G CR	8-channel Analog Input Module using the DCON and Modbus RTU 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 Bias 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)
	125 Ω, 0.1% DIP Resistor	125 Ω External Resistor for use with Current input on I-7011/I-7012/I-7017/I-7018 series modules