ICP DAS

I-7017R   M-7017R

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

8-channel Analog Input Module

Features

- I-7017R and M-7017R
  - 240 Vrms Overvoltage Protection
  - Voltage and Current Input
- I-7017R-A5 and M-7017R-A5
  - High Voltage Input
- Adjustable Sampling Rate
- Dual Watchdog

CE UKCA FC RoHS

Introduction

The I-7017R is an 8-channel analog input module with an extremely high quality protection mechanism where the overvoltage protection is 240 Vrms. 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
CPU Module		
Watchdog Timer	Yes, Module (1.6 Seconds), Communication (Programmable)	
Isolation		
Intra-module Isolation	3000 VDC	
EMS Protection		
EFT (IEC 61000-4-4)	±4 kV to Power Line	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal	
Surge (IEC 61000-4-5)	±0.5 kV for Power Line	
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	
Protocol	DCON	
Power		
Reverse Polarity Protection	Yes	
Input Range	+10 ~ +30 V$_{DC}$	
Consumption	1.3 W	1.6 W
Mechanical		
Dimensions (mm)	123 x 72 x 35 (W x L x H)	
Installation	DIN-Rail	
Environment		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +85 °C	
Humidity	10 ~ 95% RH, Non-condensing	

Applications

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

I/O Specifications

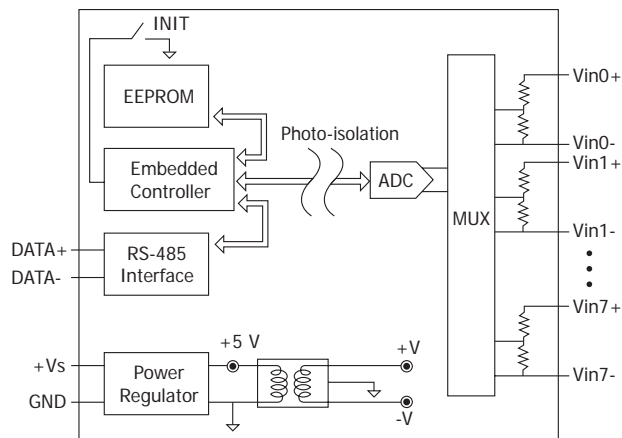| Model		I-7017R	I-7017R-A5
		M-7017R	M-7017R-A5
Analog Input			
Channels		8 Differential	
Type		Voltage Current	Voltage
Range		±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V,±20 mA, 0 ~ 20 mA, 4 ~ 20 mA (requires an optional external 125 Ω resistor)	±50 V, ±150 V
Resolution		16-bit	
Accuracy	Normal Mode	0.1 %	
	Fast Mode	0.5 %	
Sampling Rate	Normal Mode	10 Hz	
	Fast Mode	60 Hz	50 Hz
Input Impedance	Voltage	2 MΩ	290 kΩ
Common Voltage Protection		±200 VDC	
Overvoltage Protection		240 Vrms	±200 VDC
Individual Channel Configuration		Yes (Note)	-

Note: Firmware version B3.9 or later

■ Internal I/O Structure

I-7017R/M-7017R
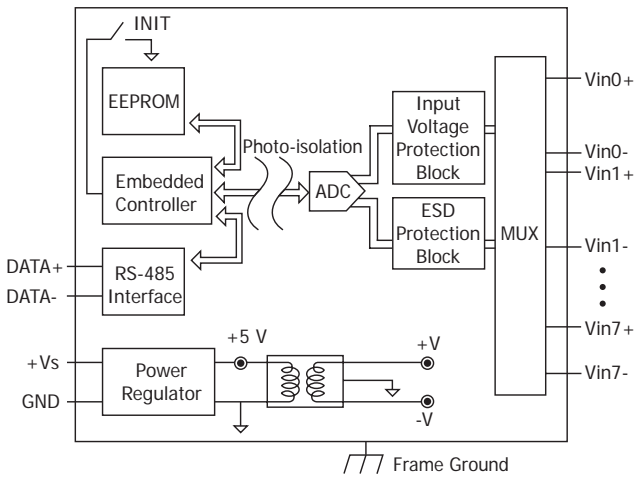
I-7017R-A5/M-7017R-A5

■ Pin Assignments

Top row (20→11): Vin 4 - | Vin 4+ | Vin 3 - | Vin 3+ | Vin 2 - | Vin 2+ | Vin 1 - | Vin 1+ | Vin 0 - | Vin 0+

Bottom row (1→10): Vin 5+ | Vin 5 - | Vin 6+ | Vin 6 - | Vin 7+ | Vin 7 - | (Y)DATA+ | (G)DATA- | (R)+Vs | (B)GND
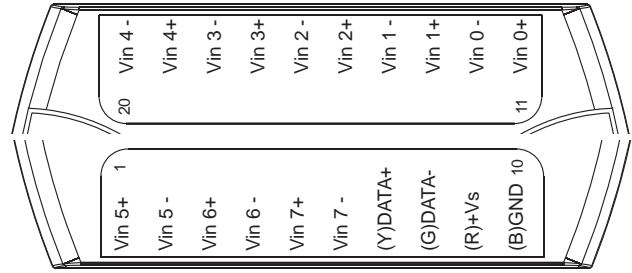
■ Wire Connections

I-7017R/M-7017R
Voltage Input Wire Connection
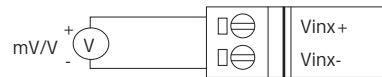
Current Input Wire Connection

125 Ω
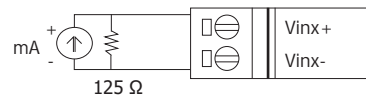
Require an Optional External 125 Ω Resistor

2-wire Transmitter · 125 Ω
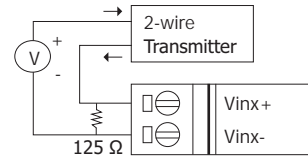
I-7017R-A5/M-7017R-A5
Voltage Input Wire Connection
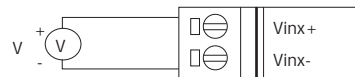
TYPE	SIGNAL
1B	±150 V
1C	±50 V

■ Ordering Information

I-7017R CR	8-ch AI Module with High Voltage Protection using DCON Protocol (Blue Cover) (RoHS)
I-7017R-G CR	8-ch AI Module with High Voltage Protection using DCON Protocol (Gray Cover) (RoHS)
M-7017R-G CR	8-ch AI Module with High Voltage Protection using DCON and Modbus Protocols (Gray Cover) (RoHS)
I-7017R-A5-G CR	8-ch High Voltage (±50 V, ±150 V) AI Module with High Voltage Protection using DCON Protocol (Gray Cover) (RoHS)
M-7017R-A5-G CR	8-ch High Voltage (±50 V, ±150 V) AI Module with High Voltage Protection using DCON and Modbus Protocols (Gray Cover) (RoHS)

■ Accessories

tM-7520U CR	Tiny Isolated RS-232 to RS-485 Converter (RoHS)	
tM-7561 CR	Tiny USB to Isolated RS-485 Converter with CA-USB18 Cable (RoHS)	
tM-SG4 CR	RS-485 Pull-high/Pull-low and Termination Resistor Module (RoHS)	
I-7514U CR	Isolated 4-channel RS-485 Repeater/Hub/Splitter (Gray Cover) (RoHS)	
SG-770 CR	7/14 channel Surge Protector (RoHS)	
2AB125R CR	DIP Resistor, 125 ohm, 0.1%, 1/4W, MF, 50 ppm/°C (1PCS) (RoHS)	