



**I-7017R**



**M-7017R**



**I-7017R-A5**



**M-7017R-A5**

8-ch AI Module with High Voltage Protection

### Features

- I-7017R and M-7017R
  - Voltage and Current Inputs
- I-7017R-A5 and M-7017R-A5
  - High Voltage Input
- High Over-voltage Input Protection
- High Common Voltage Protection
- Adjustable Sampling Rate (Fast/Normal Mode)
- Built-in Dual Watchdog



### 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 VDC 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
<b>CPU Module</b>		
Watchdog Timer	Module, Communication (Programmable)	
<b>Isolation</b>		
Intra-module Isolation	3000 VDC	
<b>EMS Protection</b>		
EFT (IEC 61000-4-4)	±4 kV for Power Line	
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal	
Surge (IEC 61000-4-5)	±0.5 kV for Power Line	
<b>LED Indicators</b>		
Status	1 x Power and Communication	
<b>COM Ports</b>		
Ports	1 x RS-485	
Baud Rate	1200 ~ 115200 bps	
Data Format	(N, 8, 1)	
Protocol	DCON Modbus RTU, DCON	
<b>Power</b>		
Reverse Polarity Protection	Yes	
Input Range	+10 ~ +30 VDC	
Consumption	1.3 W	1.6 W
<b>Mechanical</b>		
Dimensions (mm)	72 x 123 x 35 (W x L x H)	
Installation	DIN-Rail Mounting	
<b>Environment</b>		
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

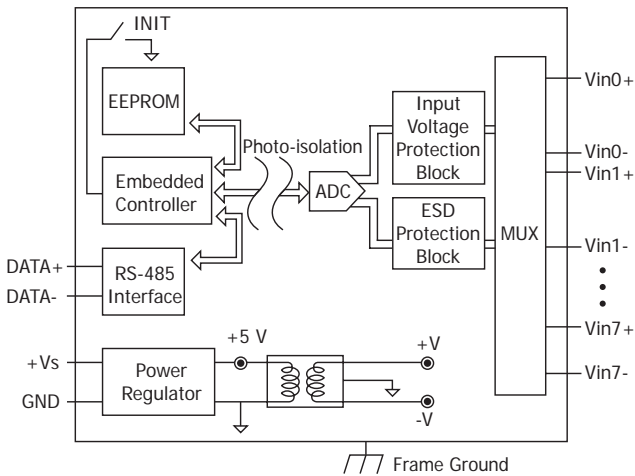
### I/O Specifications

Model	I-7017R	I-7017R-A5
	M-7017R	M-7017R-A5
<b>Analog Input</b>		
Channels	8 Differential	
Type	Voltage, Current   Voltage	
Range	<b>I-7017R, M-7017R:</b> ±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) <b>I-7017R-A5, M-7017R-A5:</b> ±50 V, ±150 V	
Resolution	16-bit	
Accuracy	Normal Mode	±0.1% of FSR
	Fast Mode	±0.5% of FSR
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 (*Note1)	-
Open Wire Detection (For 4 ~ 20 mA Only)	Yes	-

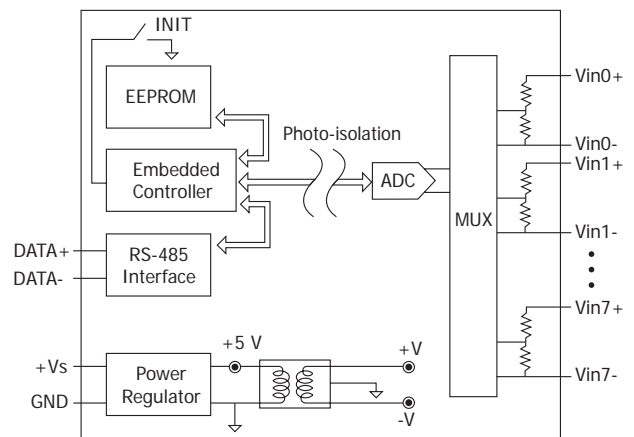
Note1: Firmware version B3.9 or later

## Internal I/O Structure

I-7017R/M-7017R



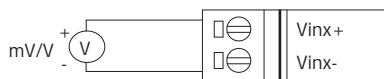
I-7017R-A5/M-7017R-A5



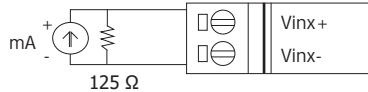
## Wire Connections

I-7017R/M-7017R

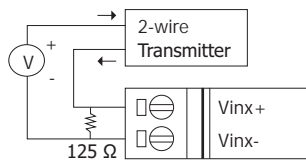
### Voltage Input



### Current Input

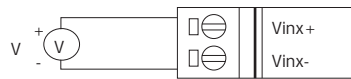


Require an Optional External 125  $\Omega$  Resistor



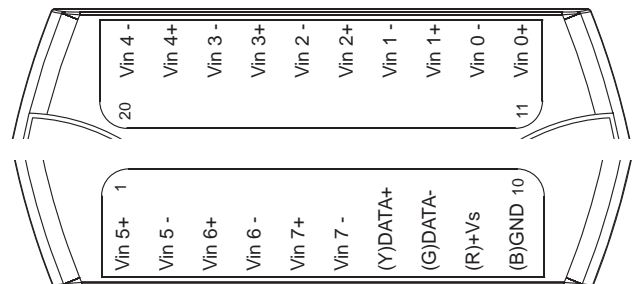
I-7017R-A5/M-7017R-A5

### Voltage Input



TYPE	SIGNAL
1B	$\pm 150$ V
1C	$\pm 50$ V

## Pin Assignments



## Ordering Information

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

## Accessories

<b>tM-7520U CR</b>	Tiny Isolated RS-232 to RS-485 Converter (RoHS)
<b>tM-7561 CR</b>	Tiny USB to Isolated RS-485 Converter with CA-USB18 Cable (RoHS)
<b>tM-SG4 CR</b>	RS-485 Pull-high/Pull-low and Termination Resistor Module (RoHS)

<b>I-7514U CR</b>	Isolated 4-channel RS-485 Repeater/Hub/Splitter (Gray Cover) (RoHS)
<b>SG-770 CR</b>	7/14 channel Surge Protector (RoHS)
<b>2AB125R CR</b>	DIP Resistor, 125 ohm, 0.1%, 1/4W, MF, 50 ppm/°C (1PCS) (RoHS)