



**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
- 4 kV ESD Protection
- 3000 Vdc 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 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>Communication</b>		
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)	
<b>LED Indicators/Display</b>		
System LED Indicator	Yes, 1 as Power/Communication Indicator	
I/O LED Indicators	-	
7-segment LED Display	-	
<b>Isolation</b>		
Intra-module Isolation, Field-to-Logic	3000 Vdc	
<b>EMS Protection</b>		
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	
<b>Power</b>		
Reverse Polarity Protection	Yes	
Input Range	+10 ~ +30 Vdc	
Consumption	1.3 W	1.6 W
<b>Mechanical</b>		
Dimensions (L x W x H)	123 mm x 72 mm x 35 mm	
Installation	DIN-Rail or Wall Mounting	
<b>Environment</b>		
Operating Temperature	-25 to +75°C	
Storage Temperature	-40 to +85°C	
Humidity	10 to 95% RH, Non-condensing	

## Applications

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

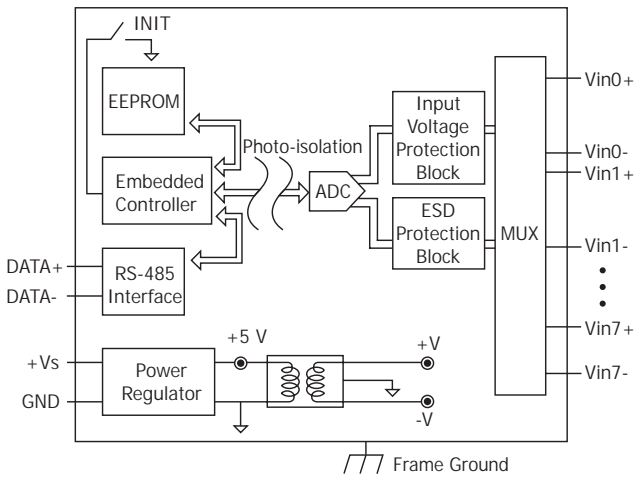
## I/O Specifications

Model	I-7017R	I-7017R-A5
	M-7017R	M-7017R-A5
<b>Analog Input</b>		
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
Input Impedance	Voltage	2 MΩ
	Current	290 kΩ
Common Voltage Protection	±200 Vdc	
Individual Channel Configuration	Yes (Note)	-
Overvoltage Protection	240 Vrms	±200 Vdc
Overcurrent Protection	-	
Virtual Channel to Channel Isolation	Yes, 400 Vdc	
Open Wire Detection for 4 ~ 20 mA	Yes	

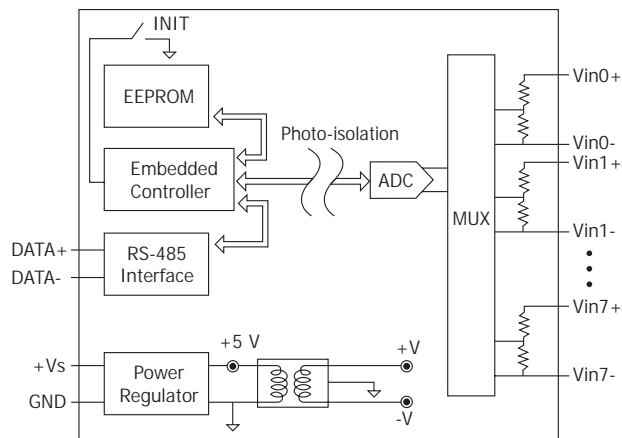
**Note:** Firmware version B3.9 or later.

## Internal I/O Structure

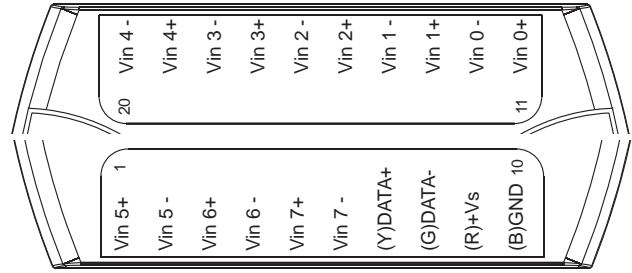
### I-7017R/M-7017R



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



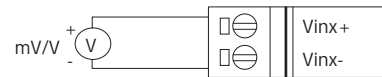
## Pin Assignments



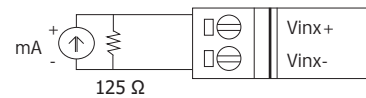
## Wire Connections

### I-7017R/M-7017R

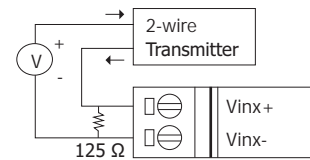
#### Voltage Input Wire Connection



#### Current Input Wire Connection

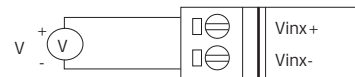


Require an Optional External 125  $\Omega$  Resistor



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

#### Voltage Input Wire Connection









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

## Ordering Information

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