I-7017 **I-7017F** **M-7017**

8-ch AI Module

Features

- M-7017
  - 8 Differential Analog Inputs
- I-7017 and I-7017F
  - 8 Differential, or 6 Differential and 2 Single-ended Analog Inputs
- Voltage and Current Inputs
- High Resolution: 16-bit
- Open Wire Detection for 4 ~ 20 mA
- Built-in Dual Watchdog

Introduction

The I-7017 and I-7017F are analog input modules that provide either 8 differential input channels, or 6 differential input channels and 2 single-ended input channels, selectable via a jumper. The input type includes both voltage and current, and all channels are available for the same input range. An optional external 125 Ω resistor is required for current input. The modules also feature 3000 VDC intra-module isolation, as well as ±35 VDC overvoltage protection. The sampling rate for the I-7017F is adjustable, meaning that either fast mode or normal mode can be selected. The M-7017 supports both the Modbus RTU and DCON protocols, which can be configured via software, and provides 8 differential analog input channels. Other hardware specifications are the same as the I-7017.

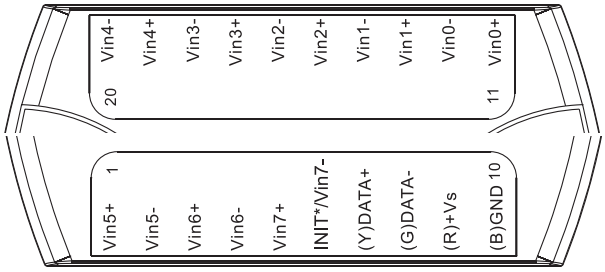
System Specifications

Model		I-7017	I-7017F	M-7017
CPU Module				
Watchdog Timer		Module, Communication (Programmable)		
Isolation				
Intra-module Isolation		3000 VDC		
EMS Protection				
ESD (IEC 61000-4-2)		±2 kV		±4 kV
		Contact for Each Terminal		
EFT (IEC 61000-4-4)		±4 kV for Power Line		
LED Indicators				
Status		1 x Power and Communication		
Analog Input				
Channels		8 Differential		
		6 Differential and 2 Single-ended		-
Type		Voltage, Current		
Range		±150 mV, ±500 mV, ±1V, ±5 V, ±10 V, ±20 mA, 0 ~ 20 mA, 4 ~ 20 mA (requires optional external 125 Ω resistor)		
Resolution		16-bit		
Accuracy	Normal Mode	±0.1% of FSR		
	Fast Mode	-	±0.5%	-
Sampling Rate	Normal Mode	10 Hz		
	Fast Mode	-	60 Hz	-
Input Impedance		20 MΩ		
Common Voltage Protection		±15 VDC		
Overvoltage Protection		±120 VDC		
COM Ports				
Ports		1 x RS-485		
Baud Rate		1200 ~ 115200 bps		
Data Format		(N, 8, 1)		(N, 8, 1), (N, 8, 2), (E, 8, 1), (O, 8, 1)
Protocol		DCON		Modbus RTU, DCON

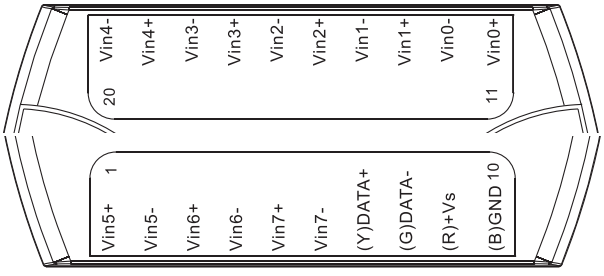
Power	
Reverse Polarity Protection	Yes
Input Range	+10 ~ +30 VDC
Consumption	1.3 W
Mechanical	
Dimensions (mm)	72 x 123 x 35 (W x L x H)
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Humidity	10 ~ 95% RH, Non-condensing

Pin Assignments

I-7017/I-7017F

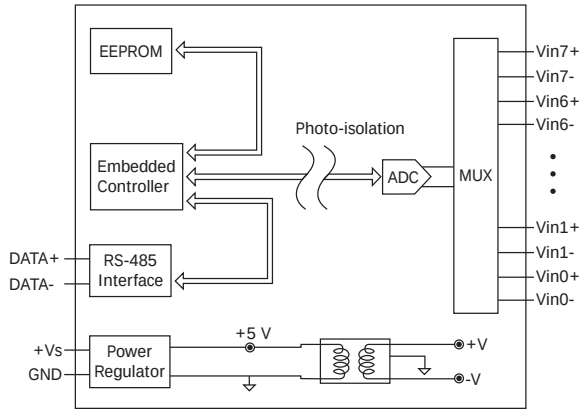


M-7017

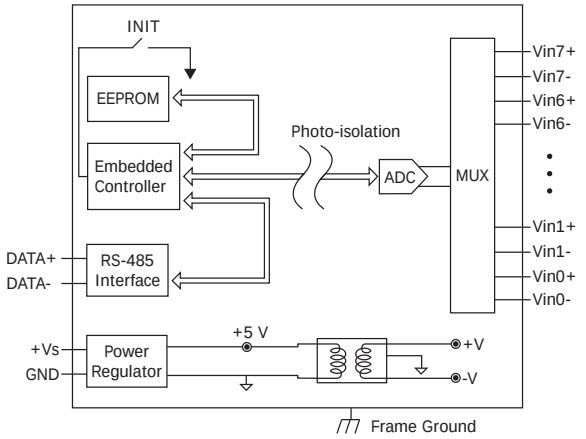


Internal I/O Structure

I-7017/I-7017F



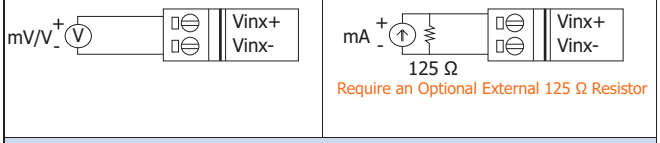
M-7017



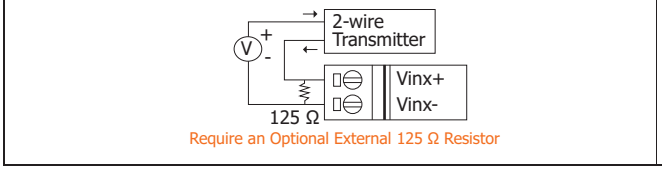
Wire Connections

I-7017/I-7017F

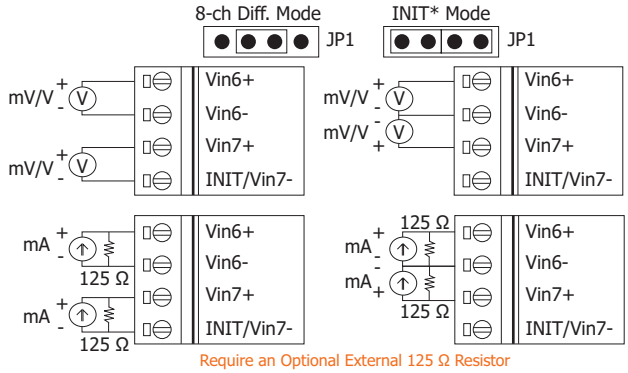
Analog Input (Channels 0 ~ 5)



2-wire Transmitter



Analog Input (Channels 6 ~ 7)



Applications

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

M-7017

Analog Input

Ordering Information

I-7017 CR	8-ch AI Module using DCON Protocol (Blue Cover) (RoHS)
I-7017-G CR	8-ch AI Module using DCON Protocol (Gray Cover) (RoHS)
M-7017-G CR	8-ch AI Module using DCON and Modbus Protocols (Gray Cover) (RoHS)
I-7017F CR	8-ch AI (Fast Sampling Version) Module using DCON Protocol (Blue Cover) (RoHS)
I-7017F-G CR	8-ch AI (Fast Sampling Version) Module using DCON Protocol (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)

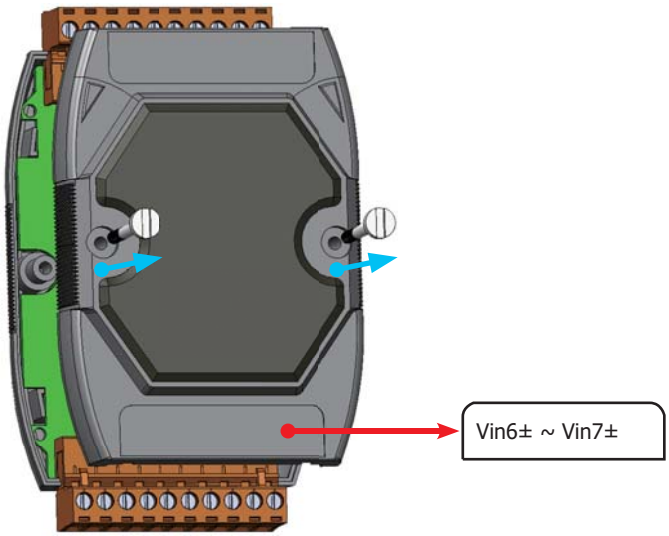
I-7514U CR 	Isolated 4-channel RS-485 Repeater/Hub/ Splitter (Gray Cover) (RoHS)
SG-770 CR 	7 or 14-channel Surge Protector (RoHS)
2AB125R CR 	DIP Resistor, 125 ohm, 0.1%, 1/4W, MF, 50 ppm/°C (1PCS) (RoHS)

Jumper

Notice:

1. Remove the top cover of the module before adjusting the jumper. Additionally, some modules may have two screws on the back cover.

I-7017, I-7017F



2. Users can locate the Jx/JPx jumpers on the board by checking the I/O labels on the cover.

Channel	Vin6±	Vin7±
Jumper	JP1	

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