

### Features

- M-7017
  - 8-channel Differential Analog Input
- I-7017 and I-7017F
  - 8-channel Differential or 6-channel Differential and 2-channel Single-ended Analog Input
- Voltage and Current Input
- ±35 Vdc Overvoltage Protection
- High Resolution: 16-bit
- Open Wire Detection for 4 ~ 20 mA
- 3000 Vdc Intra-module Isolation
- Dual Watchdog
- RoHS Compliant
- Wide Operating Temperature Range: -25 to +75°C



### 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
<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)	±2 kV Contact for each Terminal	±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		
<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		

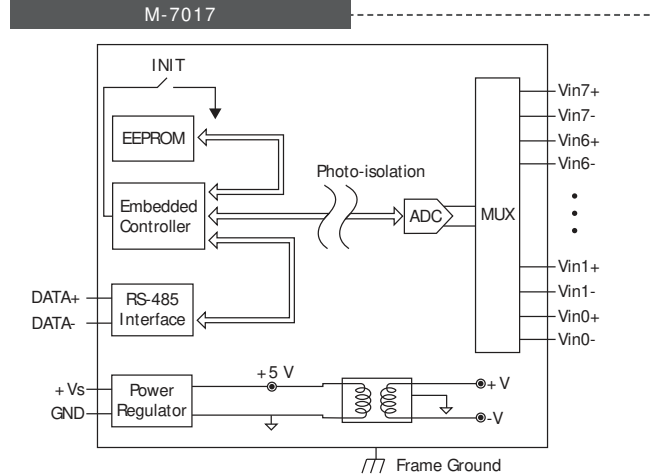
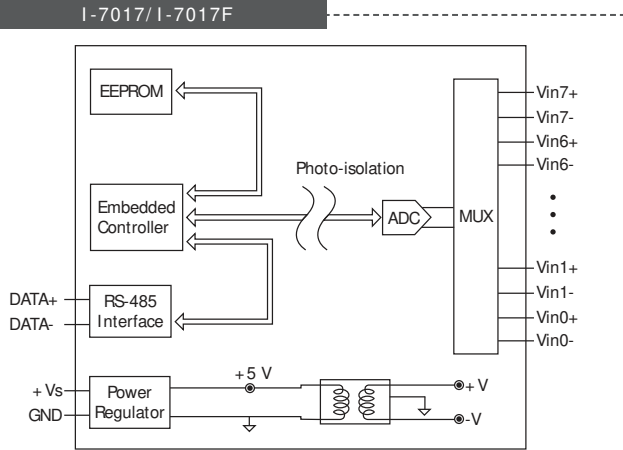
### Applications

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

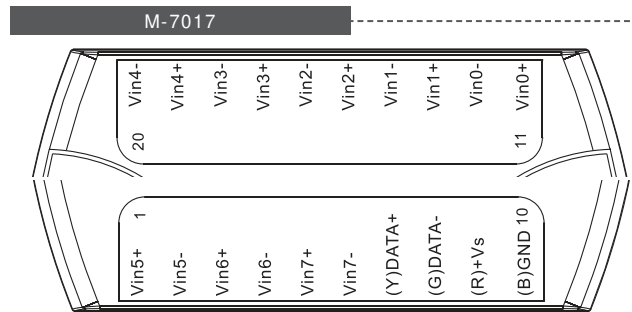
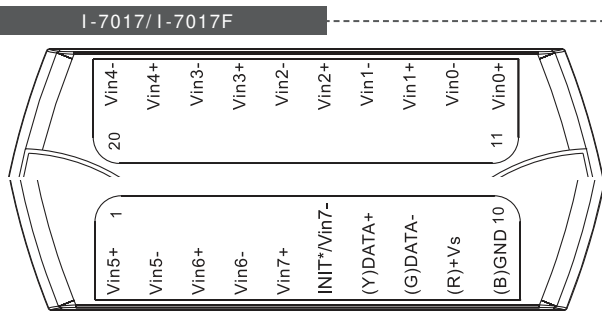
### I/O Specifications

Model	I-7017	I-7017F	M-7017
<b>Analog Input</b>			
Channels	8		
Wiring	6-channel Differential and 2-channel Single-ended, or 8-channel Differential.		8-channel Differential.
Input Range	Voltage	±150 mV, ±500 mV, ±1 V, ±5 V, ±10 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	20 MΩ		
Common Voltage Protection	±15 Vdc		
Individual Channel Configuration	-		
Overvoltage Protection	±35 Vdc		

Internal I/O Structure



Pin Assignments



Wire Connections

**I-7017/I-7017F**

**Analog Input for Wire Connection Channels 0 to 5**

Require an Optional External 125 Ω Resistor

**2-wire Transmitter Wire Connection**

Require an Optional External 125 Ω Resistor

**Analog Input for Digital Wire Connection Channels 6 and 7**

8-channel Mode	INIT* Mode
Require an Optional External 125 Ω Resistor	Require an Optional External 125 Ω Resistor

Ordering Information

I-7017 CR	8-channel Analog Input Module using the DCON Protocol (Blue Cover) (RoHS)
I-7017-G CR	8-channel Analog Input Module using the DCON Protocol (Gray Cover) (RoHS)
M-7017-G CR	8-channel Analog Input Module using the DCON and Modbus RTU Protocols (Gray Cover) (RoHS)
I-7017F CR	8-channel Analog Input Module using the DCON Protocol (Fast Sampling Version) (Blue Cover) (RoHS)
I-7017F-G CR	8-channel Analog Input Module using the DCON Protocol (Fast Sampling Version) (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

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RS-485 Remote I/O Modules

I-7017/I-7017F/M-7017