

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

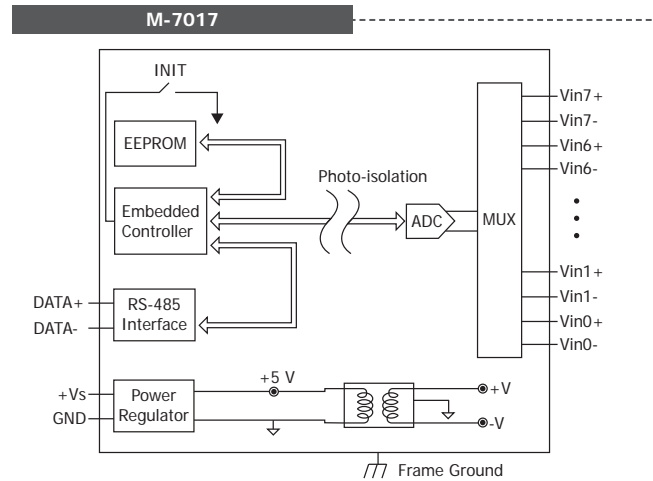
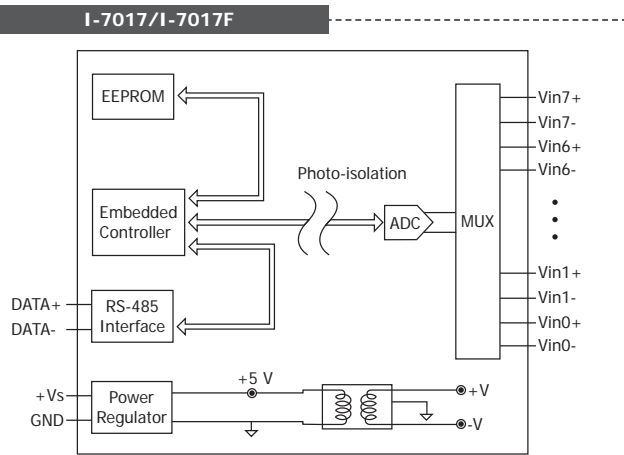
Applications

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

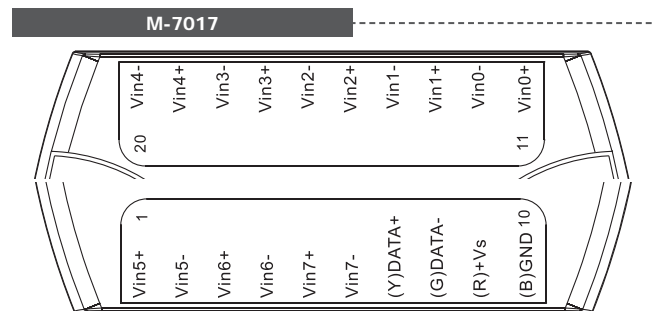
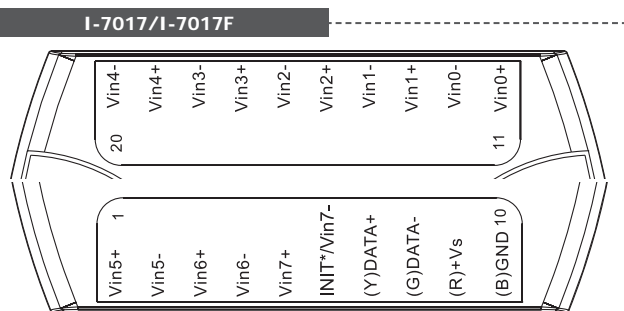
I/O Specifications

| Model | I-7017 | I-7017F | M-7017 |
|----------------------------------|---|--|-------------------------|
| Analog Input | | | |
| 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

2-wire Transmitter Wire Connection

Analog Input for Digital Wire Connection Channels 6 and 7

| 8-channel Mode | INIT* Mode |
|----------------|------------|
| | |
| | |
| | |

Require an Optional External 125 Ohm Resistor

M-7017

Analog Input Wire Connection

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 Ohm, 0.1% DIP Resistor | 125 Ohm 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