



I-87017W I-87017RW
8-channel Analog Input Module

Introduction

The I-87017RW is an analog input module with an extremely high-quality protection mechanism where the overvoltage protection can be as high as 240 Vrms. The input type can be set to either voltage or current. The I-87017RW is an upgraded version of I-87017W, with the only differences being that the I-87017RW is more suitable for critically harsh environment. The sampling rate for the I-87017RW is can be adjusted to either fast mode or normal mode depending on individual requirements. The I-87017RW also provides 4 kV ESD protection as well as 3000 VDC intra-module isolation.

System Specifications

| Model | I-87017W | I-87017RW |
|--|---|-----------|
| Communication | | |
| Interface | RS-485 | |
| Format | N, 8, 1 | |
| Baud Rate | 1200 to 115200 bps | |
| Protocol | DCON | |
| Dual Watchdog | Yes, Module (1.6 Seconds), Communication (Programmable) | |
| LED Indicators/Display | | |
| System LED Indicators | Yes, 1 as Power/Communication Indicator | |
| I/O LED Indicators | 16 as High/Low Alarm Signals | |
| Isolation | | |
| Intra-module Isolation, Field-to-Logic | 3000 Vdc | |
| EMS Protection | | |
| ESD (IEC 61000-4-2) | ±4 kV Contact for each Terminal | |
| | ±8 kV Air for Random Point | |
| Power | | |
| Power Consumption | 1.3 W Max. | |
| Mechanical | | |
| Dimensions (L × W × H) | 115 mm × 30 mm × 102 mm | |
| Environment | | |
| Operating Temperature | -25 to +75°C | |
| Storage Temperature | -40 to +85°C | |
| Humidity | 10 to 95% RH, Non-condensing | |

Features

- 8-channel Analog Input
- Voltage or Current Input
- 240 Vrms Overvoltage Protection
- Adjustable Sampling Rate
- 4 kV ESD Protection
- 3000 VDC Intra-module Isolation
- RoHS Compliant
- Wide Operating Temperature Range: -25 to +75°C



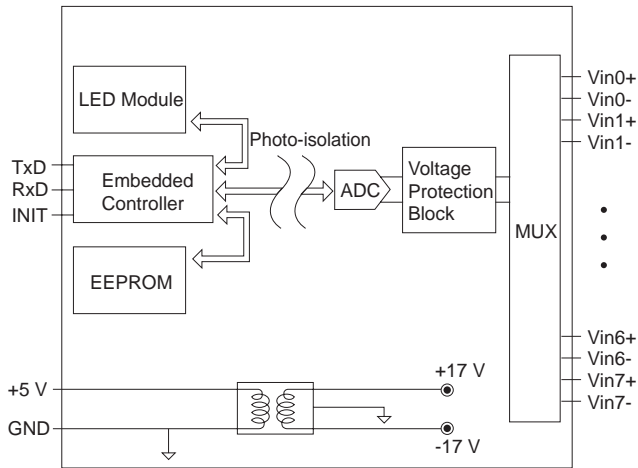
Applications

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

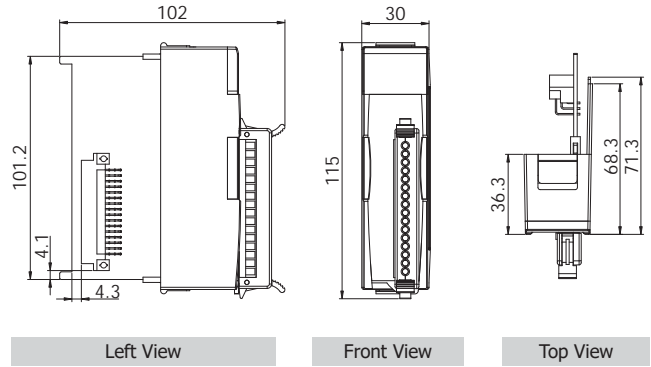
I/O Specifications

| Model | I-87017W | I-87017RW |
|------------------------|--|---------------|
| Analog Input | | |
| Channels | 8 | |
| Wiring | Differential | |
| Range | ±10 VDC, ±5 VDC, ±1 VDC ±500 mV, ±150 mV 0 ~ +20 mA, +4 ~ +20 mA, -20 mA ~ +20 mA (Requires Optional External 125 Ω Resistor) | |
| Resolution | 16-bit | |
| Accuracy | Normal Mode | ±0.1% of FSR |
| | Fast Mode | ±0.5% of FSR |
| Sampling Rate | Normal Mode | 10 Hz (Total) |
| | Fast Mode | 50 Hz (Total) |
| -3dB Bandwidth | Normal Mode | 15.7 Hz |
| | Fast Mode | 78.7 Hz |
| Zero Drift | ±20 μV/°C | |
| Span Drift | ±25 ppm/°C | |
| Common Mode Rejection | 86 dB | |
| Normal Mode Rejection | 100 dB | |
| Input Impedance | 20 MΩ | >2 MΩ |
| Overvoltage Protection | -35 VDC ~ +35 VDC | 240 Vrms |

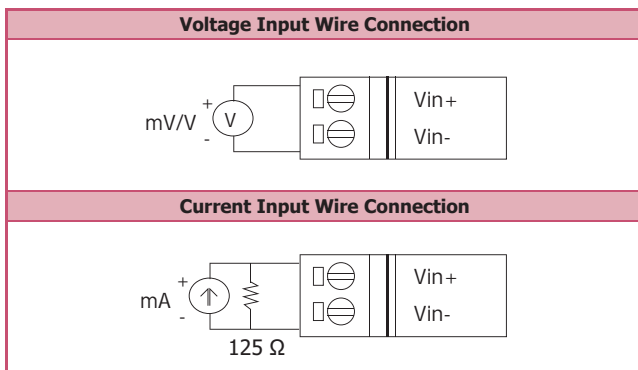
Internal I/O Structure



Dimensions (Units: mm)

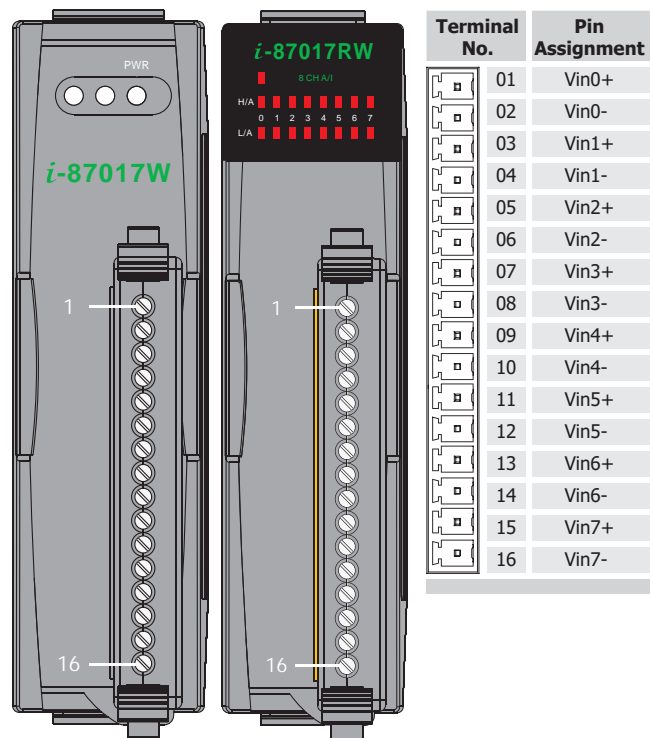


Wire Connections



Note: When connecting to a current source, an optional external 125 Ω resistor is required.

Pin Assignments



Ordering Information

| | |
|-----------------------|--|
| I-87017W-G CR | 8-channel Analog Input Module (Gray Cover) (RoHS) |
| I-87017RW-G CR | 8-channel Analog Input Module with High Overvoltage Protection (Gray Cover) (RoHS) |

Accessories

| | |
|------------------|---|
| DN-843V-600V CR | 3-channel 600 V Voltage Attenuator (RoHS) |
| DN-848VI-80V CR | 8-channel 80 V Voltage Attenuator (RoHS) |
| DN-848VI-150V CR | 8-channel 150 V Voltage Attenuator (RoHS) |
| DN-843I-CT-1 CR | 3-channel 1 A Current Transformer (RoHS) |

| | |
|--------------------------|---|
| DN-843I-CT-50 CR | 3-channel 50 A Current Transformer (RoHS) |
| 125Ω, 0.1% DIP Resistors | Resistor used for Current Type I-87017/ I-87018 Series Modules |
| SG-770 CR | 7-channel Differential or 14-channel Single-ended Surge Protector (RoHS) |
| SG-3000 series | Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Input |

I-87017W/I-87017RW