



Analog Input

RS-485 Remote I/O Modules



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.

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-87KW Series

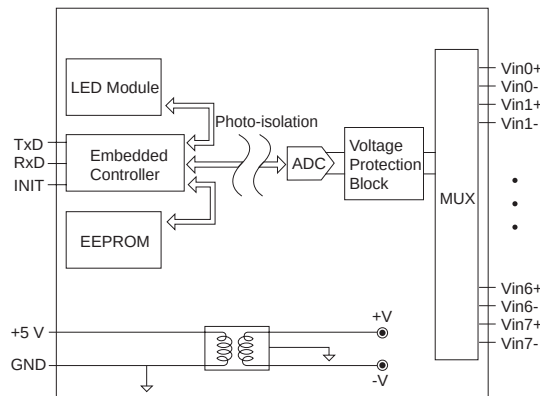
System Specifications

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 Indicator	1 LED as Power/Communication Indicator	
I/O LED Indicator	16 LEDs as High/Low Alarm Signals	
Isolation		
Intra-module Isolation, Field-to-Logic	3000 V _{DC}	
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 (W x L x H)	30 mm x 102 mm x 115 mm	
Environment		
Operating Temperature	-25 to +75°C	
Storage Temperature	-40 to +85°C	
Humidity	10 to 95% RH, Non-condensing	

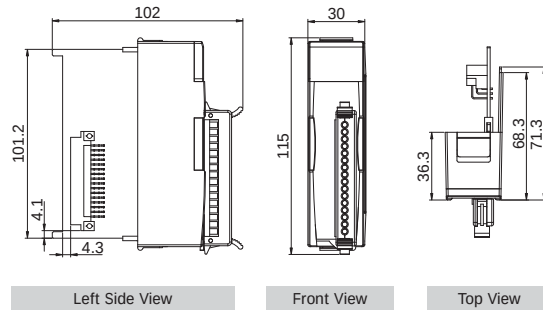
I/O Specifications

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

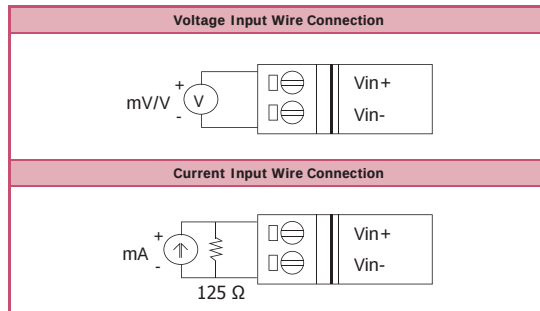
Internal I/O Structure



Dimensions (Units: mm)

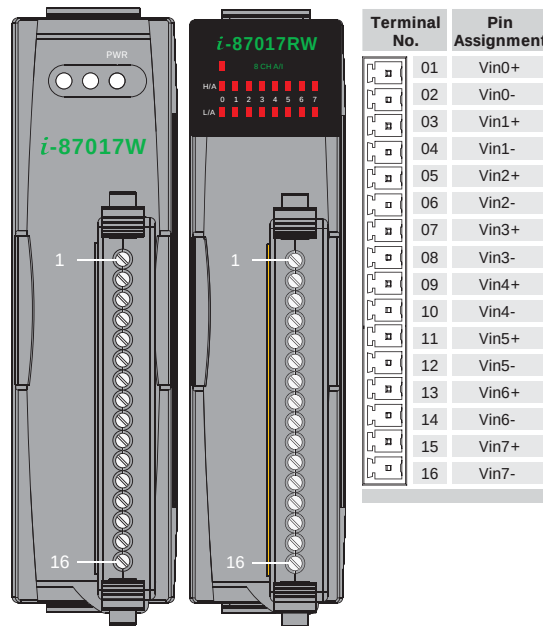


Wire Connections



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