

I-87017ZW

10/20-channel Analog Input Module with High Voltage Protection

Features

- 10/20-channel Differential/Single-ended Inputs
- Jumper Selectable Voltage or Current Input
- 240 Vrms Overvoltage Protection
- Supports Fast Mode and Normal Mode
- Individual Channel Configuration
- 4 kV ESD and EFT Protection
- 3000 VDC Intra-module Isolation

Introduction

The I-87017ZW is an analog input module that includes 10 differential or 20 single-ended analog input channels. It provides a programmable input range on all analog inputs. (±150 mV, ±500 mV, ±1 V, ±5 V,±10 V, ±20 mA or 0 ~ +20 mA) Each analog input can be configured for an individual range that provides 240 Vrms high overvoltage protection and 50 mA overcurrent protection at 110 VDC/VAC. Voltage and current inputs are jumper selectable. The sampling rate of the I-87017ZW is adjustable and is available in either fast or normal mode. The module also features per-channel open wire detection for +4 ~ +20 mA inputs that provides 4 kV ESD protection as well as 3000 VDC intra-module isolation.

Applications

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

System Specifications

COM Port	
Ports	RS-485
Data Format	N, 8, 1
Baud Rate	1200 ~ 115200 bps
Protocol	DCON
CPU Module	
Dual Watchdog Timer	Module (1.6 Seconds), Communication (Programmable)
LED Indicators	
System LED Indicator	1 LED as Power Indicator
Isolation	
Intra-module Isolation, Field-to-Logic	3000 VDC
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for Each port, ±8 kV Air for Random Poin
EFT (IEC 61000-4-4)	±4 kV for Power
Power	
Consumption	2.0 W Max.
Mechanical	
Dimensions (W x L x H)	30 mm x 115 mm x 102 mm
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Humidity	10 ~ 95 % RH, Non-condensing

I/O Specifications

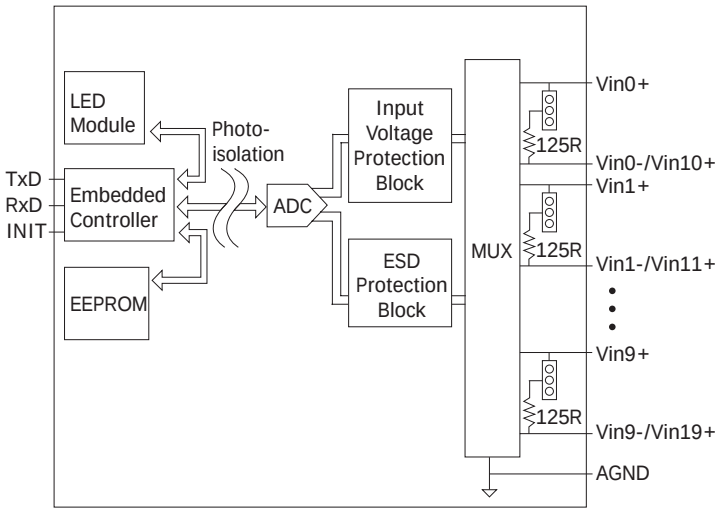
Analog Input			
Channels (Jumper Selectable)		10 Differential or 20 Single-ended (See Note)	
Range (Jumper Selectable)		±150 mV, ±500 mV, ±1 VDC, ±5 VDC, ±10 VDC, ±20 mA ,0 ~ +20 mA, +4 ~ +20 mA	
Resolution		16-bit	
Accuracy	Normal Mode	±0.1 % of FSR	
	Fast Mode	±0.5 % of FSR	
Sampling Rate	Normal Mode	10 Hz (Total)	
	Fast Mode	50 Hz (Total)	
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	Voltage	Differential	2 MΩ
		Single-ended	1 MΩ
	Current	125 Ω	
Overvoltage Protection	Differential	240 Vrms	
	Single-ended	150 Vrms	
Individual Channel Configuration		Yes	
Overcurrent Protection		50 mA Max. at 110 VDC/VAC Max.	

Note:

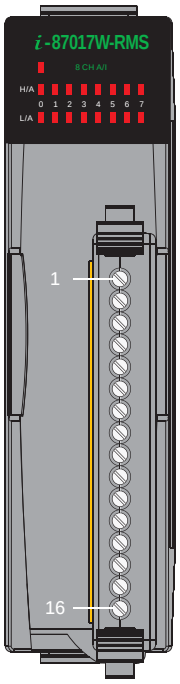
Differential mode can be used for either voltage input or current input.Single-Ended mode can only be used for voltage input.

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Internal I/O Structure



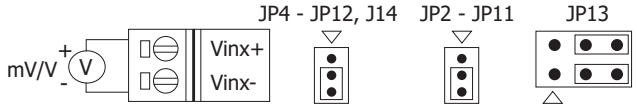
Pin Assignments



Terminal No.	Pin Assignment
01	Vin0+
02	Vin0-/Vin10+
03	Vin1+
04	Vin1-/Vin11+
05	Vin2+
06	Vin2-/Vin12+
07	Vin3+
08	Vin3-/Vin13+
09	Vin4+
10	Vin4-/Vin14+
11	Vin5+
12	Vin5-/Vin15+
13	Vin6+
14	Vin6-/Vin16+
15	Vin7+
16	Vin7-/Vin17+
17	Vin8+
18	Vin8-/Vin18+
19	Vin9+
20	Vin9-/Vin19+
21	AGND

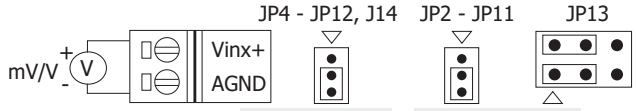
Wire Connections

Voltage Input (Differential Mode)



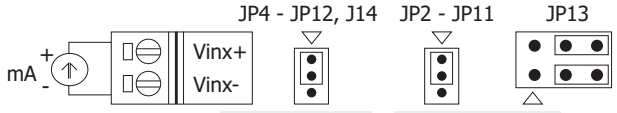
v1.60 and later | v1.40 and above

Voltage Input (Single-ended Mode)



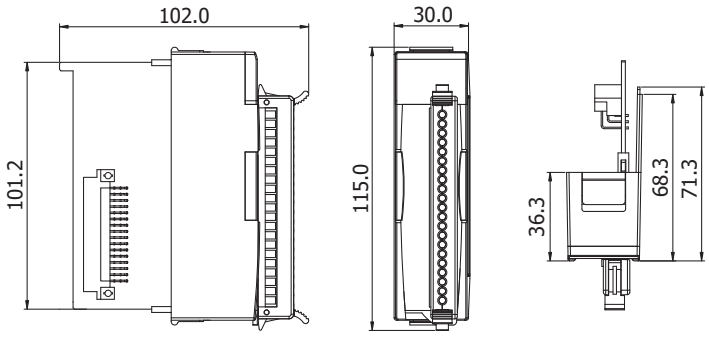
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Current Input (Differential Mode)



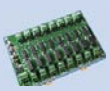
v1.60 and later | v1.40 and above

Dimensions (Unit: mm)



Left View | Front View | Top View

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)

SG-770 CR	
	7/14-channel Differential/Single-ended Surge Protector (RoHS)
SG-3000 Series	
	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Input Transformers

Ordering Information

I-87017ZW-G CR	10/20-channel Analog Input Module with High Voltage Protection (RoHS)

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