



I-97017Z

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

Features

- 10-channel Differential or 20-channel Single-ended Inputs
- Jumper Selectable Voltage or Current Input
- 240 Vrms Overvoltage Protection
- High Resolution: 16-bits
- Supports Fast Mode and Normal Mode
- 4 kV ESD Protection
- 3000 VDC Intra-module Isolation
- Individual Channel Configuration
- Dual Watchdog
- RoHS Compliance
- Wide Operating Temperature Range: -25 to +75 °C



Introduction

The I-97017Z 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 50mA overcurrent protection at 110 VDC/VAC. Voltage and current inputs are jumper selectable.

The sampling rate of the I-97017Z is adjustable and is available in either fast or normal mode. The module also features perchannel 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

Communication	
Interface	RS-485
Format	N, 8, 1
Baud Rate	1200 ~ 115200 bps
Protocol	DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
LED Display	
System LED Indicator	1 LED as Power/Communication Indicator
I/O LED Indicators	-
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
RS Immunity (IEC 61000-4-3)	±4 kV for Power
Power	
Power Consumption	0.5 W Max.
Mechanical	
Dimensions (W x L x H)	31 mm x 134 mm x 144 mm
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Humidity	10 ~ 90% RH, Non-condensing

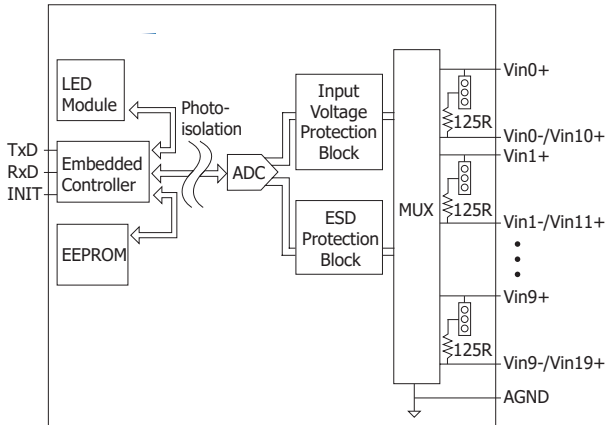
I/O Specifications

Analog Input			
Channels	10 Differential or 20 Single-ended (See Note 1), Jumper selectable		
Range	±150 mV, ±500 mV, ±1 VDC, ±5 VDC, ±10 VDC ±20 mA, 0 ~ +20 mA, +4 ~ +20 mA (jumper selectable)		
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)	
Band Width	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.		

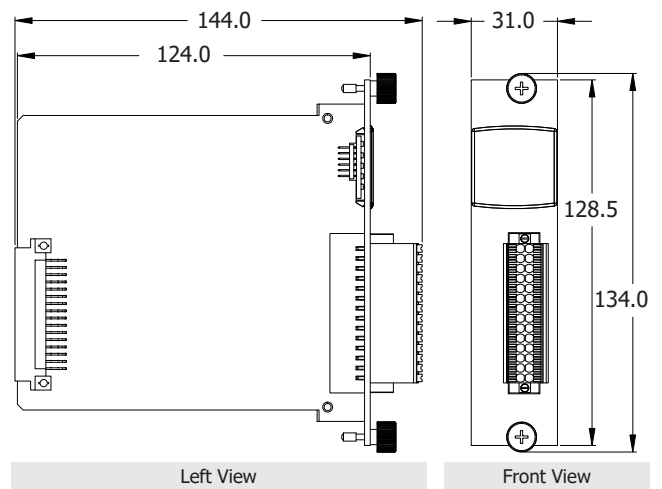
Note 1:

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

Internal I/O Structure



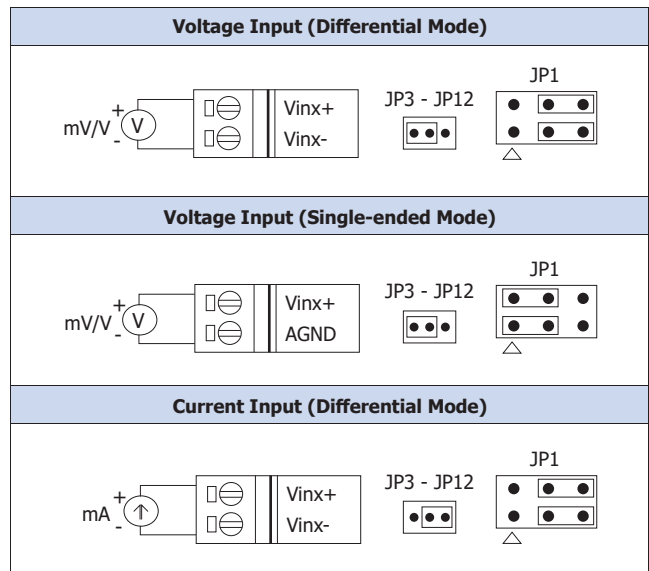
Dimensions (Units: mm)



Pin Assignments

Pin Assignment Vin	Terminal No.	Pin Assignment Vin
0+	01	15 0-/10+
1+	02	16 1-/11+
2+	03	17 2-/12+
3+	04	18 3-/13+
4+	05	19 4-/14+
5+	06	20 5-/15+
6+	07	21 6-/16+
7+	08	22 7-/17+
8+	09	23 8-/18+
9+	10	24 9-/19+
AGND	11	25 AGND
AGND	12	26 AGND
AGND	13	27 AGND
AGND	14	28 AGND


Wire Connections



Ordering Information

I-97017Z CR	10/20-channel Analog Input Module with High Voltage Protection (RoHS)
--------------------	---

Accessories

 SG-770 CR	7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)
--	--