



I-97017Z

10/20-channel Analog Input Module

Features

- 10/20-channel Differential/Single-ended Inputs
- Jumper Selectable Voltage or Current Input
- 240 Vrms Overvoltage Protection
- High Resolution: 16-bit
- Supports Fast Mode and Normal Mode
- Individual Channel Configuration
- ± 4 kV ESD Protection
- 3000 VDC Intra-module Isolation



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 $0 \sim +20$ 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 $\pm 4 \sim +20$ mA inputs that provides 4 KV ESD protection as well as 3000 VDC intra-module isolation.

System Specifications

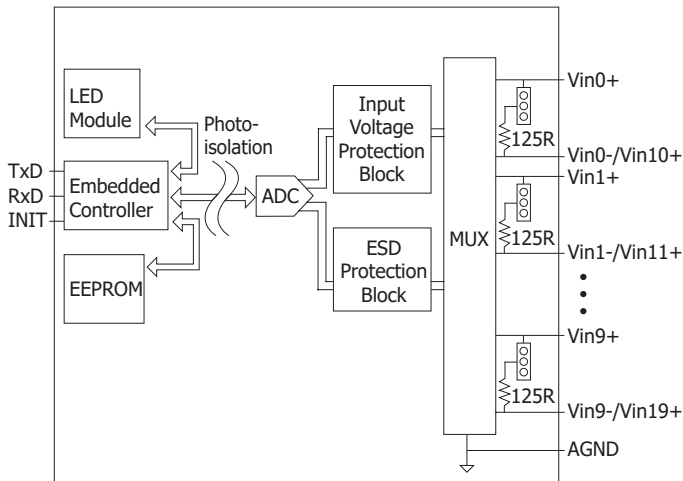
LED Display	
Status	1 x Power and Communication
Isolation	
Intra-module Isolation, Field-to-Logic	3000 VDC
EMS Protection	
ESD (IEC 61000-4-2)	± 4 kV Contact for Each Terminal ± 8 kV Air for Random Point
RS Immunity (IEC 61000-4-3)	± 4 kV for Power
COM Ports	
Ports	1 x RS-485
Baud Rate	1200 ~ 115200 bps
Data Format	N, 8, 1
Protocol	DCON
Power	
Consumption	0.5 W Max.
Mechanical	
Dimensions (W x L x H)	31 mm x 134 mm x 144 mm
Environment	
Operating Temperature	$-25 \sim +75$ °C
Storage Temperature	$-40 \sim +85$ °C
Humidity	10 ~ 90 % RH, Non-condensing

I/O Specifications

Analog Input	
Channels	10 Differential or 20 Single-ended
Range	± 150 mV, ± 500 mV, ± 1 VDC, ± 5 VDC, ± 10 VDC, ± 20 mA, $0 \sim +20$ mA, $+4 \sim +20$ mA
Resolution	16-bit
Accuracy	Normal Mode: $\pm 0.1\%$ of FSR Fast Mode: $\pm 0.5\%$ 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
Input Impedance	Voltage: 2 M Ω (Differential), 1 M Ω (Single-ended) Current: 125 Ω
Common Mode Rejection	86 dB
Normal Mode Rejection	100 dB
Overvoltage Protection	Differential: 240 Vrms Single-ended: 150 Vrms
Overcurrent Protection	50 mA Max. at 110 VDC/VAC Max.
Individual Channel Configuration	Yes
Zero Drift	± 20 μ V/°C
Span Drift	± 25 ppm/°C

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

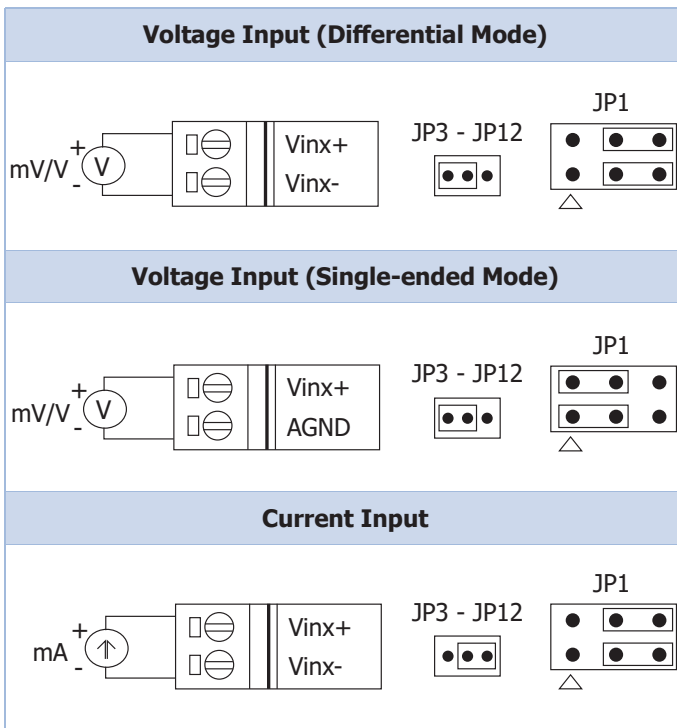
Internal I/O Structure



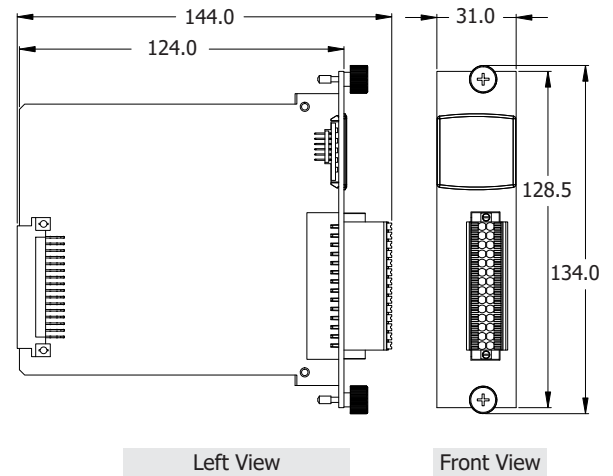
Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment
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



Dimensions (Units: mm)



Accessories

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

Ordering Information

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