

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 ~ +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.

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 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Humidity	10 ~ 90 % RH, Non-condensing

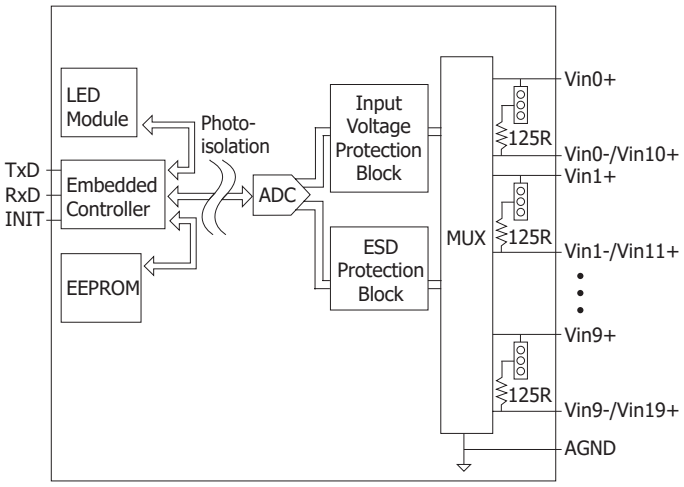
I/O Specifications

Analog Input	
Channels	10 Differential or 20 Single-ended
Range	±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
Input Impedance	Voltage: 2 MΩ(Differential), 1 MΩ (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 μV/°C
Span Drift	±25 ppm/° C

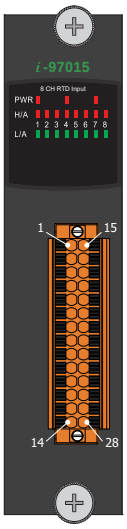
Note: Differential mode can be used for either voltage input or current input. Single-Ended mode can only be used for voltage input.

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Internal I/O Structure



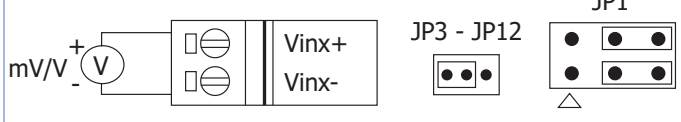
Pin Assignments



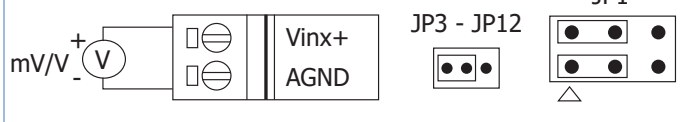
Pin Assignment	Terminal No.		Terminal No.	Pin Assignment
0+	01		15	0-/10+
1+	02		16	1-/11+
2+	03		17	2-/12+
3+	04		18	3-/13+
4+	05		19	4-/14+
5+	06		20	5-/15+
6+	07		21	6-/16+
7+	08		22	7-/17+
8+	09		23	8-/18+
9+	10		24	9-/19+
AGND	11		25	AGND
AGND	12		26	AGND
AGND	13		27	AGND
AGND	14		28	AGND

Wire Connections

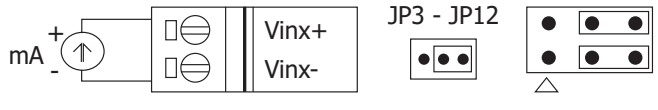
Voltage Input (Differential Mode)



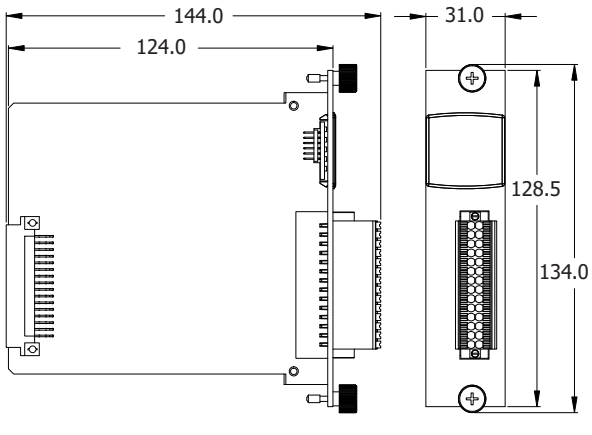
Voltage Input (Single-ended Mode)



Current Input



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)

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