

I-9017-15

90 kS/s, 14-bit, 30/15-channel
Voltage/Current Input Module

I-9017C-15

90 kS/s, 14-bit, 15-channel
Current Input Module

Features

- I-9017-15
 - 30 Single-ended/15 Differential Input Channels (jumper selectable)
 - Input Range: ± 1.25 V, ± 2.5 V, ± 5 V, ± 10 V, ± 20 mA
- I-9017C-15
 - 15 Differential Input Channels
 - Input Range: ± 20 mA
- 14-bit 100 KHz AD Converter
- A/D Trigger Mode: Polling, Interrupt
- 4 kV ESD Protection
- Wide Operating Temperature Range: -25 to $+75^{\circ}\text{C}$



Introduction

The I-9017-15/I-9017C-15 is a high performance Analog Input module with 14 bits of resolution and a sampling rate of up to 90 kS/s. The I-9017-15 provides up to 30 single-ended or 15 differential input channels, which is selectable via a jumper setting. The I-9017C-15 provides up to 15 differential input channels for current measurement. Both the two modules have qualification for 4 kV ESD protection as well as 2500 Vrms intra-module isolation.

Applications

- High speed data acquisition system
- Process monitor and control
- Vibration analysis
- Digital pattern generator from digital I/O port

System Specifications

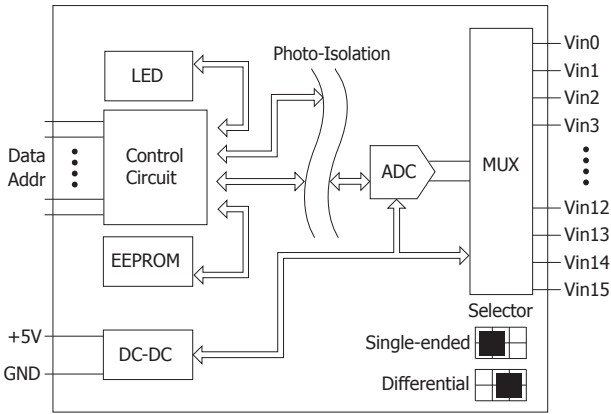
Model	I-9017-15	I-9017C-15
LED Indicators/Display		
System LED Indicator	1 LED as Power Indicator	
I/O LED Indicator	-	
Isolation		
Intra-module Isolation, Field-to-Logic	2500 Vrms	
EMS Protection		
ESD (IEC 61000-4-2)	± 4 kV Contact for each Terminal	
	± 8 kV Air for Random Point	
Power		
Power Consumption	2 W Max.	
Mechanical		
Dimensions (L x W x H)	144 mm x 30.3 mm x 134 mm	
Environment		
Operating Temperature	$-25 \sim +75^{\circ}\text{C}$	
Storage Temperature	$-40 \sim +85^{\circ}\text{C}$	
Humidity	10 ~ 90% RH, Non-condensing	

I/O Specifications

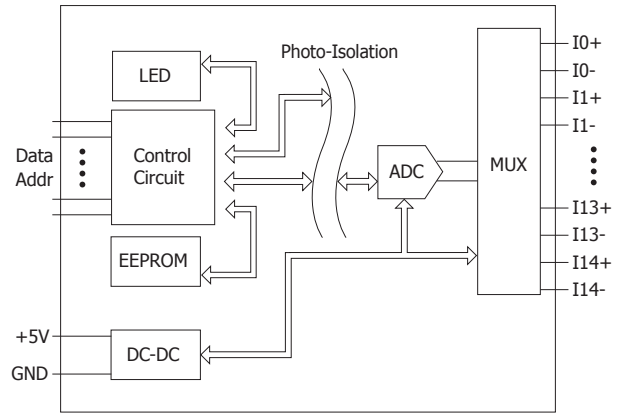
Model	I-9017-15	I-9017C-15
Analog Input		
Channels	30-ch Single-ended/ 15-ch Differential	15-ch Differential
Voltage Input Range	± 1.25 , ± 2.5 , ± 5 V, ± 10 V	-
Current Input Range	-20 mA ~ $+20$ mA (Requires Optional External 125 Ω Resistor)	-20 mA ~ $+20$ mA
Resolution	14-bit	
Accuracy	$\pm 0.1\%$ of FSR	
Sample Rate	Single Channel Polling Mode : 90 kS/s Single Channel Interrupt Mode: 50 kS/s 15-channel Scan Mode : 16 kS/s	
Input Bandwidth	100 KHz	
Zero Drift	± 0.1 $\mu\text{V}/^{\circ}\text{C}$	
Span Drift	± 10 ppm/ $^{\circ}\text{C}$	
Input Impedance	20 K, 200 K, 20 M (Jumper Selectable)	125 Ω

Internal I/O Structure

I-9017-15



I-9017C-15



Pin Assignments

I-9017-15

Pin Assignment	Terminal No.	Pin Assignment
V0+ Vin0	01	17 V0 - Vin15
V1+ Vin1	02	18 V1 - Vin16
V2+ Vin2	03	19 V2 - Vin17
V3+ Vin3	04	20 V3 - Vin18
V4+ Vin4	05	21 V4 - Vin19
V5+ Vin5	06	22 V5 - Vin20
V6+ Vin6	07	23 V6 - Vin21
V7+ Vin7	08	24 V7 - Vin22
V8+ Vin8	09	25 V8 - Vin23
V9+ Vin9	10	26 V9 - Vin24
V10+ Vin10	11	27 V10 - Vin25
V11+ Vin11	12	28 V11 - Vin26
V12+ Vin12	13	29 V12 - Vin27
V13+ Vin13	14	30 V13 - Vin28
V14+ Vin14	15	31 V14 - Vin29
AGND AGND	16	32 AGND AGND

32-pin Connector

I-9017C-15

Pin Assignment	Terminal No.	Pin Assignment
IO+	01	17 IO -
I1+	02	18 I1 -
I2+	03	19 I2 -
I3+	04	20 I3 -
I4+	05	21 I4 -
I5+	06	22 I5 -
I6+	07	23 I6 -
I7+	08	24 I7 -
I8+	09	25 I8 -
I9+	10	26 I9 -
I10+	11	27 I10 -
I11+	12	28 I11 -
I12+	13	29 I12 -
I13+	14	30 I13 -
I14+	15	31 I14 -
AGND	16	32 AGND

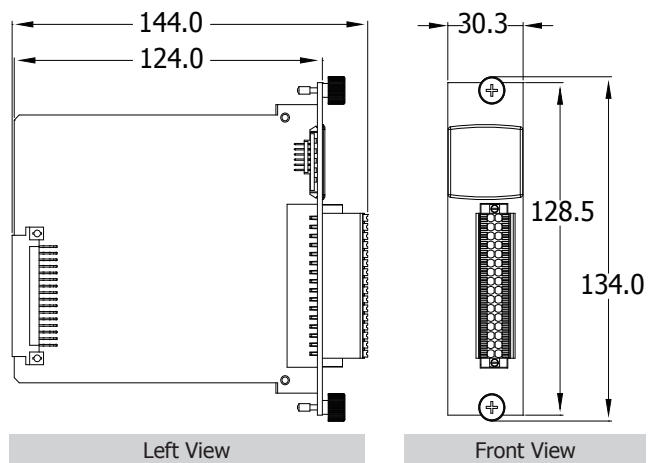
32-pin Connector

Wire Connections

I-9017-15	
Input Type	Differential
Voltage Input Wiring	
Current Input Wiring	
Input Type	Single-ended
Voltage Input Wiring	
Current Input Wiring	

I-9017C-15	
Input Type	Differential
Current Input Wiring	

Dimensions (Units: mm)



Ordering Information

I-9017-15 CR	14-bit, 90 K sampling rate, 30/15-channel analog input module (RoHS)
I-9017C-15 CR	14-bit, 90 K sampling rate, 15-channel analog input module (RoHS)