

### I-9017-15

100 KS/s, 14-bit, 30/15-channel  
Voltage/Current Input Module

### I-9017C-15

100 KS/s, 14-bit, 15-channel  
Current Input Module

## Features

- I-9017-15
  - 30 Single-ended/15 Differential Input Channels (jumper selectable)
  - Input Range:  $\pm 1.25$  V,  $\pm 2.5$  V,  $\pm 5$  V,  $\pm 10$  V,  $\pm 20$  mA
- I-9017C-15
  - 15 Differential Input Channels
  - Input Range:  $\pm 20$  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/I-9017C is a high performance Analog Input module with 14 bits of resolution and a sampling rate of up to 100 kS/s. The I-9017 provides up to 30 single-ended or 15 differential input channels, which is selectable via a jumper setting. The I-9017C 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

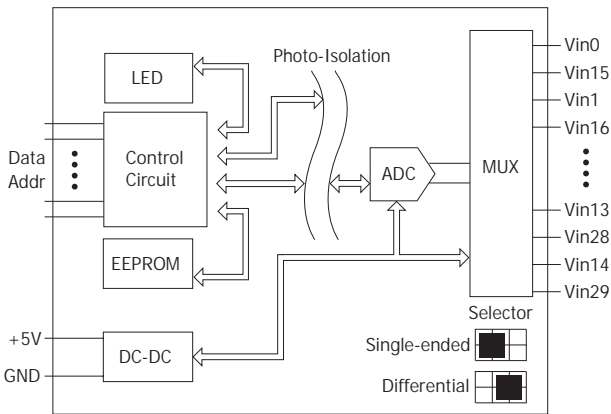
Model	I-9017-15	I-9017C-15
<b>LED Indicators/Display</b>		
System LED Indicator	1 LED as Power Indicator	
I/O LED Indicator	-	
<b>Isolation</b>		
Intra-module Isolation, Field-to-Logic	2500 Vrms	
<b>EMS Protection</b>		
ESD (IEC 61000-4-2)	$\pm 4$ kV Contact for each Terminal	
	$\pm 8$ kV Air for Random Point	
<b>Power</b>		
Power Consumption	2 W Max.	
<b>Mechanical</b>		
Dimensions (L x W x H)	144 mm x 30.3 mm x 134 mm	
<b>Environment</b>		
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

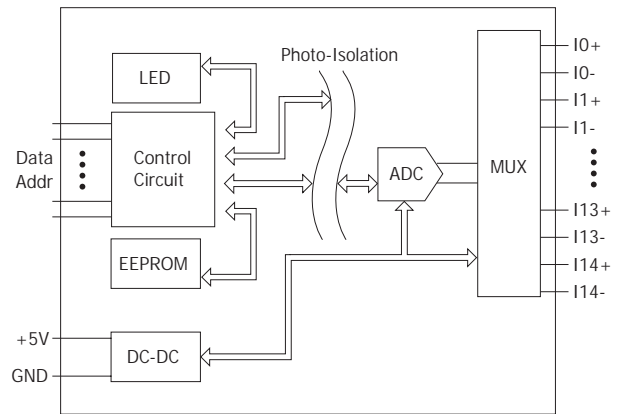
Model	I-9017-15	I-9017C-15
<b>Analog Input</b>		
Channels	30-ch Single-ended/ 15-ch Differential	15-ch Differential
Voltage Input Range	$\pm 1.25$ , $\pm 2.5$ , $\pm 5$ V, $\pm 10$ V	-
Current Input Range	$-20$ mA ~ $+20$ mA (Requires Optional External 125 $\Omega$ Resistor)	$-20$ mA ~ $+20$ mA
Resolution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

Internal I/O Structure

I-9017-15



I-9017C-15



Pin Assignments

I-9017-15

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

32-pin Connector

I-9017C-15

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

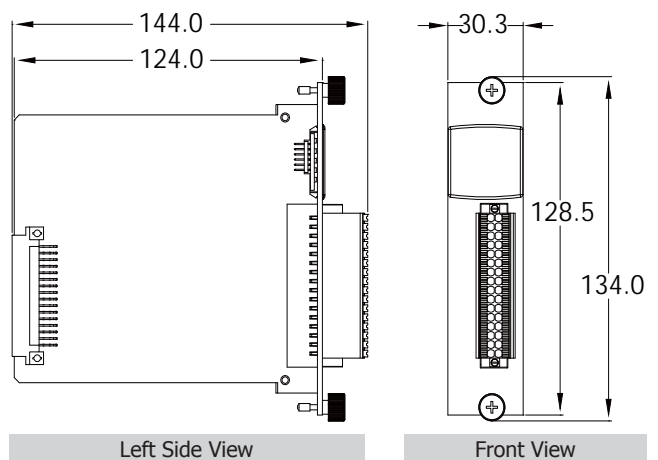
32-pin Connector

Wire Connections

I-9017-15	
<b>Input Type</b>	<b>Differential</b>
Voltage Input Wiring	
Current Input Wiring	
<b>Input Type</b>	<b>Single-ended</b>
Voltage Input Wiring	
Current Input Wiring	

I-9017C-15	
<b>Input Type</b>	<b>Differential</b>
Current Input Wiring	

Dimensions (Units: mm)



Ordering Information

<b>I-9017-15 CR</b>	14-bit, 100 K sampling rate, 30/15-channel analog input module (RoHS)
<b>I-9017C-15 CR</b>	14-bit, 100 K sampling rate, 15-channel analog input module (RoHS)