

I-9017 | I-9017-15 | I-9017C-15

14-bit, 90 kS/s Sampling Rate Analog Input Module

Features

- Input Type
  I-9017: 16 Single-ended/8 Differential input channels
  I-9017-15: 30 Single-ended/15 Differential input channels
  I-9017C-15: 15 Differential input channels
- Input Range
  I-9017/I-9017-15: ±1.25 V, ±2.5 V, ±5 V, ±10 V, -20 ~ +20 mA
  (I-9017-15 requires Optional External 125 Ω Resistor)
  I-9017C-15: -20 ~ +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 °C

Introduction

The I-9017 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 provides up to 16 single-ended or 8 differential input channels, which is selectable via a jumper setting.The I-9017 has qualification for 4 kV ESD protection as well as 2500 VDC intra-module isolation.

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 qualifi cation for 4 kV ESD protection as well as 2500 VDC 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	I-9017-15	I-9017C-15
LED Display			
System LED Indicator	1		
I/O LED Indicator	16		
Isolation			
Intra-module Isolation, Field-to-Logic	2500 VDC		
EMS Protection			
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal; ±8 kV Air for Random Point		
Power			
Consumption	2 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		

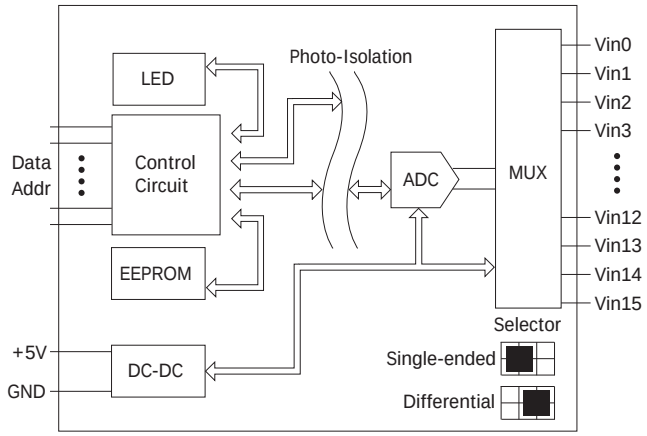
I/O Specifications

Model		I-9017	I-9017-15	I-9017C-15
Analog Input				
Channels		16, Single-ended/ 8, Differential	30, Single-ended/ 15, Differential	15, Differential
Range	Voltage	±1.25 V, ±2.5 V, ±5 V, ±10 V		-
	Current	-20 mA ~ +20 mA	-20 mA ~ +20 mA (Requires Optional External 125 Ω Resistor)	-20 mA ~ +20 mA
Resolution		14-bit		
Sample Rate		Single Channel Polling Mode: 90K S/s Single Channel Interrupt Mode: 50K S/s 16-channel Scan Mode: 16 K S/s	Single Channel Polling Mode: 90K S/s Single Channel Interrupt Mode: 50K S/s 15-channel Scan Mode: 16 K S/s	
Accuracy		0.01 % of FSR		
Bandwidth		100 kHz		
Zero Drift		± 0.1 uV/°C		
Span Drift		± 10 ppm/°C		
Input Impedance		20 K, 200 K, 20 M (Jumper Selectable)		125 Ω

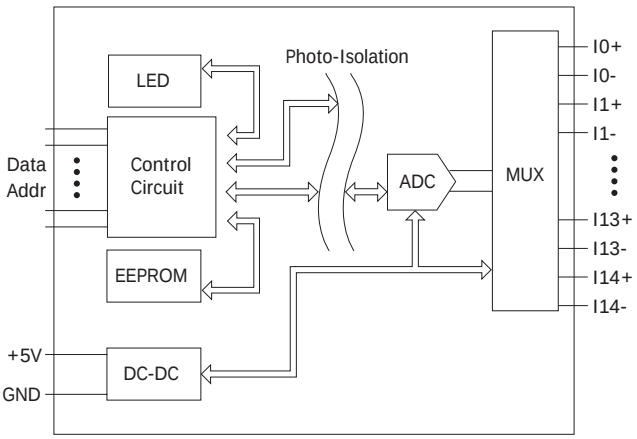
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Internal I/O Structure

I-9017/I-9017-15

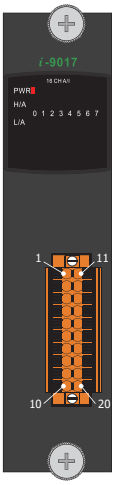


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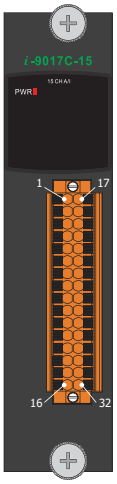
Pin Assignments

I-9017



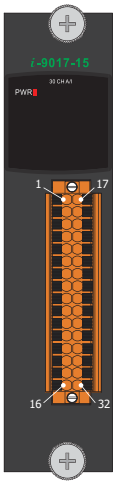
Pin Assignment		Terminal No.		Pin Assignment	
Differential	Single-ended			Single-ended	Differential
Trig+	Trig+	01	11	Trig-	Trig-
V0+(I0+)	Vin0	02	12	Vin8	V8+(I8+)
V1+(I1+)	Vin1	03	13	Vin9	V9+(I9+)
V2+(I2+)	Vin2	04	14	Vin10	V10+(I10+)
V3+(I3+)	Vin3	05	15	Vin11	V11+(I11+)
V4+(I4+)	Vin4	06	16	Vin12	V12+(I12+)
V5+(I5+)	Vin5	07	17	Vin13	V13+(I13+)
V6+(I6+)	Vin6	08	18	Vin14	V14+(I14+)
V7+(I7+)	Vin7	09	19	Vin15	V15+(I15+)
AGND	AGND	10	20	AGND	AGND

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Pin Assignment	Terminal No.		Pin Assignment
I0+	01	17	I0-
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

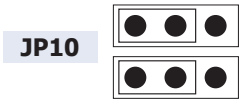
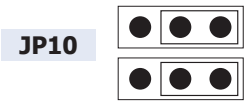
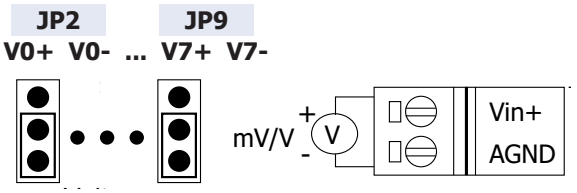
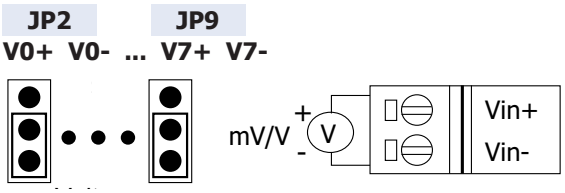
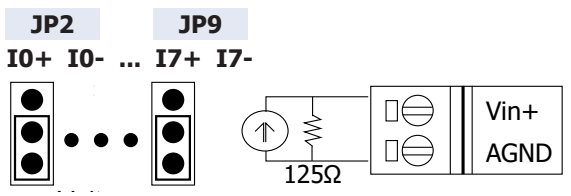
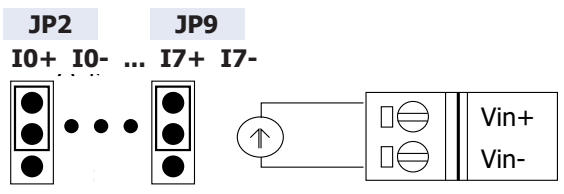
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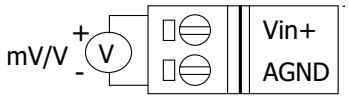
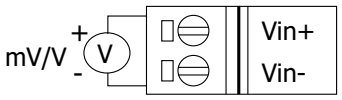
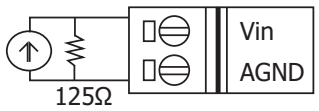
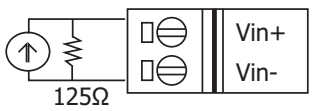
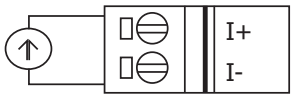


Pin Assignment		Terminal No.		Pin Assignment	
Differential	Single-ended			Single-ended	Differential
V0+	Vin0	01	17	Vin15	V0-
V1+	Vin1	02	18	Vin16	V1-
V2+	Vin2	03	19	Vin17	V2-
V3+	Vin3	04	20	Vin18	V3-
V4+	Vin4	05	21	Vin19	V4-
V5+	Vin5	06	22	Vin20	V5-
V6+	Vin6	07	23	Vin21	V6-
V7+	Vin7	08	24	Vin22	V7-
V8+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

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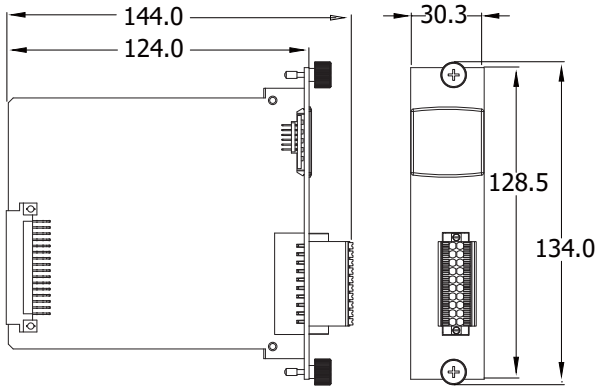
Wire Connections

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

I-9017-15			I-9017C-15
Input Type	**Single-ended**	**Differential**	**Differential**
Voltage			
Current			

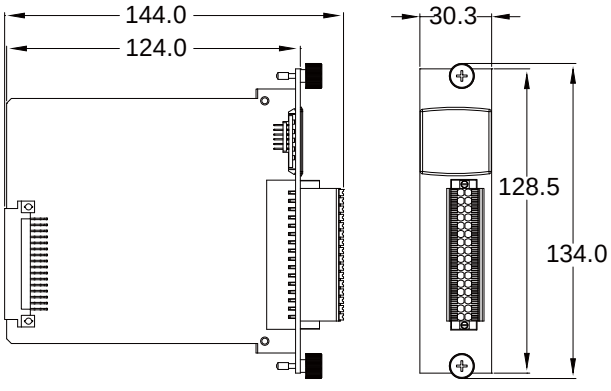
Dimensions (unit: mm)

I-9017



Left View | Front View

I-9017/I-9017-15



Left View | Front View

Ordering Information

I-9017 CR	14-bit, 90 K Sampling Rate, 16/8-Channel Analog Input Module (RoHS)
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, 8-Channel Analog Input Module (RoHS)

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