I-87017DW

8/16-channel Differential/Single-Ended
Analog Input Module with High Voltage Protection

Features

- 8/16-channel Differential/Single-ended Analog Input
- D-Sub 37-Pin Connector
- 4 kV ESD Protection
- Dual Watchdog
- 240 Vrms Overvoltage Protection
- Individual Channel Configurable
- 3000 VDC Intra-module Isolation, Field-to-Logic
- Open Daughter Board Detection

Introduction

The I-87017DW is a 8-channel diff erential/16-channel single-ended analog input module. The analog input range is software selectable and supports ±10 V, ±5 V, ±1 V, ±500 mV, ±150 mV, 0 ~ +20 mA, +4 ~ +20 mA, and ±20 mA. And all channels support 240 Vrms overvoltage protection in differential mode. Differential mode and single-ended mode is selected via jumper selectable jumpers.

I-87024DW, I-87017DW with DN-37-381-A and DB37 Male to Female Cable (Optional)

System Specifications

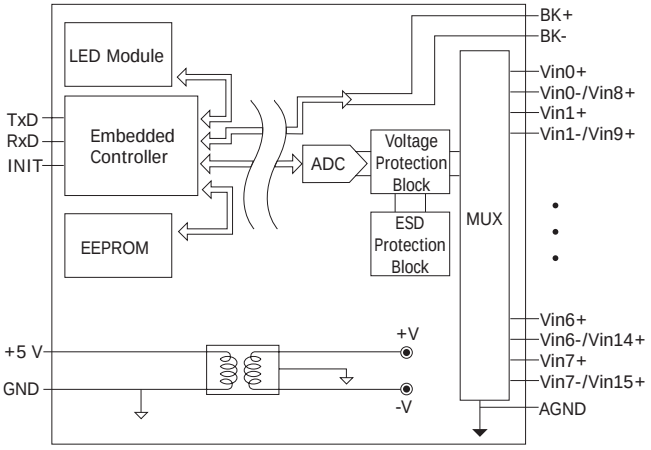
COM Port	
Ports	RS-485
Format	N, 8, 1
Baud Rate	1200 ~ 115200 bps
Protocol	DCON
CPU Module	
Dual Watchdog	Module (1.6 Seconds), Communication (Programmable)
LED Indicators/Display	
System LED Indictors	Power/Communication x 1
Isolation	
Intra-module Isolation, Field-to-Logic	3000 VDC
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
Power	
Consumption	1.3 W Max.
Mechanical	
Dimensions (W × L × H)	30 mm × 115 mm × 85 mm
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +85 °C
Humidity	10 ~ 90 % RH, Non-condensing

I/O Specifications

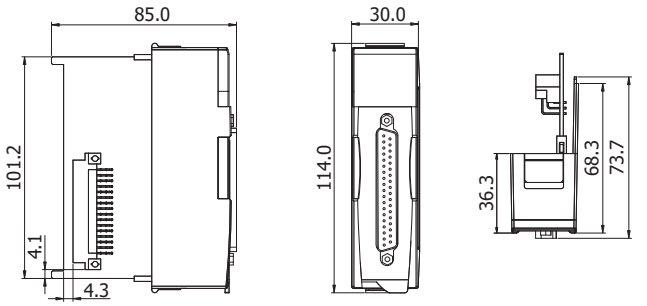
Analog Input		
Channels		8 Differential/16 Single-Ended
Range		±10 VDC, ±5 VDC, ±1 VDC, ±500 mV, ±150 mV, 0 ~ +20 mA, +4 ~ +20 mA, -20 mA ~ +20 mA (Requires Optional External 125 Ω Resistor)
Resolution		16-bit
Accuracy	Normal Mode	±0.1 % of FSR
	Fast Mode	±0.5 % of FSR
Sampling Rate	Normal Mode	10 Hz (Total)
	Fast Mode	60 Hz (Total)
-3dB Bandwidth		15.7 Hz
Zero Drift		±20 μV/°C
Span Drift		±25 ppm/°C
Input Impedance	Differential	> 2 MΩ
	Single-Ended	> 1 MΩ
Overvoltage Protection	Differential	240 Vrms
	Single-Ended	> 120 Vrms
Overcurrent Protection		50mA max at 110 VDC/VAC max
Common Mode Rejection		86 dB
Normal Mode Rejection		100 dB
Individual Channel Configurable		Yes
Open Daughter Board Detection		Yes

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

Internal I/O Structure

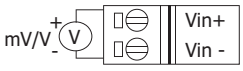
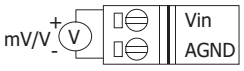
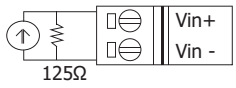
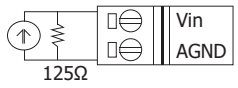


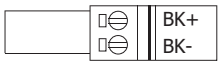
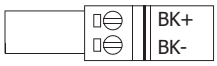
Dimensions (Units: mm)



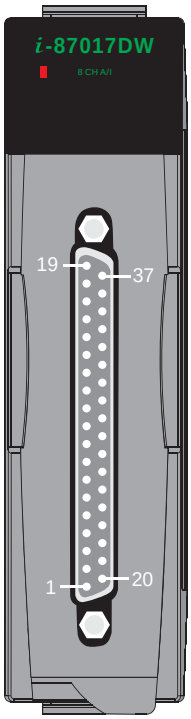
Left View | Front View | Top View

Wire Connections

Input Type	Differential	Single-ended
JP4 Jumper		
Voltage Input Wiring		
Current Input Wiring		

Daughter Board Detection	
Connect	Open
	

Pin Assignments



Pin Assignment	Terminal No.		Pin Assignment
AGND	19	37	BK+
AGND	18	36	N/A
V7-/V15+	17	35	N/A
V7+	16	34	N/A
V6-/V14+	15	33	N/A
V6+	14	32	N/A
V5-/V13+	13	31	N/A
V5+	12	30	N/A
V4-/V12+	11	29	N/A
V4+	10	28	N/A
V3-/V11+	09	27	N/A
V3+	08	26	N/A
V2-/V10+	07	25	N/A
V2+	06	24	N/A
V1-/V9+	05	23	N/A
V1+	04	22	N/A
V0-/V8+	03	21	N/A
V0+	02	20	N/A
BK-	01		

37-pin Male D-Sub Connector

Accessories

	DN-37-A CR	Female DB37 to Screw Terminal Board (Pitch= 5.08 mm) with DIN-rail Mounting (RoHS) Include: CA-3710A (DB37 Male to Female Cable, 90º, 1 M)
	DN-37-381-A CR	Female DB37 to Screw Terminal Board (Pitch=3.81 mm) with DIN-rail Mounting (RoHS) Include: CA-3710A (DB37 Male to Female Cable, 90º, 1 M)
	CA-3705A CR CA-3710A CR CA-3715A CR	DB37 Male to Female Cable, 90º, 0.5 M/1 M/1.5 M (RoHS)
	CA-3710AM CR CA-3720AM CR CA-3730AM CR CA-3750AM CR CA-37100AM CR	DB37 Male to Female, with Molded Cable, 45º, 1 M/2 M/3 M/5 M/10 M (RoHS)

Ordering Information

I-87017DW-G CR	8/16-ch AI Module with High Overvoltage Protection (RoHS)