



## 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 differential/16-channel single-ended analog input module. The analog input range is software selectable and supports  $\pm 10$  V,  $\pm 5$  V,  $\pm 1$  V,  $\pm 500$  mV,  $\pm 150$  mV,  $0 \sim +20$  mA,  $+4 \sim +20$  mA, and  $\pm 20$  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

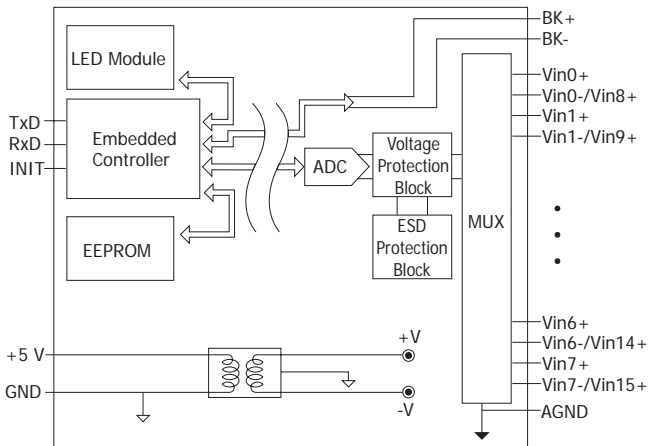
COM Port	
Ports	RS-485
Format	N, 8, 1
Baud Rate	1200 ~ 115200 bps
Protocol	DCON
CPU Module	
Dual Watchdog	Module (1.6 Seconds), Communication (Programmable)
LED Indicators/Display	
System LED Indicators	Power/Communication x 1
Isolation	
Intra-module Isolation, Field-to-Logic	3000 VDC
EMS Protection	
ESD (IEC 61000-4-2)	$\pm 4$ 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

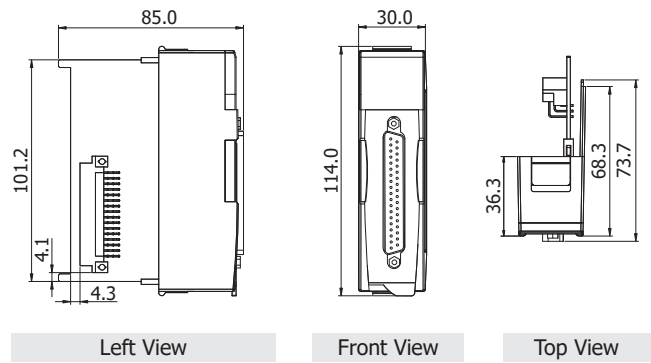
Analog Input		
Channels	8 Differential/16 Single-Ended	
Range	$\pm 10$ VDC, $\pm 5$ VDC, $\pm 1$ VDC, $\pm 500$ mV, $\pm 150$ mV, $0 \sim +20$ mA, $+4 \sim +20$ mA, $-20$ mA $\sim +20$ mA (Requires Optional External 125 $\Omega$ Resistor)	
Resolution	16-bit	
Accuracy	Normal Mode	$\pm 0.1$ % of FSR
	Fast Mode	$\pm 0.5$ % of FSR
Sampling Rate	Normal Mode	10 Hz (Total)
	Fast Mode	60 Hz (Total)
-3dB Bandwidth	15.7 Hz	
Zero Drift	$\pm 20$ $\mu$ V/°C	
Span Drift	$\pm 25$ ppm/°C	
Input Impedance	Differential	> 2 M $\Omega$
	Single-Ended	> 1 M $\Omega$
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)



## 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, 90°, 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, 90°, 1 M)
	CA-3705A CR	DB37 Male to Female Cable, 90°, 0.5 M/1 M/1.5 M (RoHS)
	CA-3710A CR	
	CA-3715A CR	
	CA-3710AM CR	DB37 Male to Female, with Molded Cable, 45°, 1 M/2 M/3 M/5 M/10 M (RoHS)
	CA-3720AM CR	
	CA-3730AM CR	
	CA-3750AM CR	
	CA-37100AM CR	
	CA-37100AM CR	

## Ordering Information

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