



## I-87017RCW

8-channel Current Input Module

### Features

- 8 Current Input Channels
- $\pm 200$  VDC Common Voltage Protection
- Supports both Fast and Normal Mode Sampling Rates
- Overcurrent Protection
- Built-in Resistor to simplify Current Measurement
- Open Wire Detection for  $+4 \sim +20$  mA input
- 3000 VDC Intra-module Isolation



### Introduction

The I-87017RCW is an 8-channel current input module that is specifically designed to measure current only. Its user-friendly design saves both time and effort when measuring a current thanks to a built-in resistor, meaning that current can now be measured directly. The I-87017RCW is much more suitable for critically harsh environments since it also has 4 kV ESD protection and  $\pm 200$  VDC common voltage as current input protection, and also features 3000 VDC intra-module isolation together with open wire detection for  $+4$  to  $+20$  mA input. The sampling rate for the I-87017RCW is adjustable, meaning that either fast mode or normal mode can be selected.

### System Specifications

COM Port	
Ports	RS-485
Data Format	N, 8, 1
Baud Rate	1200 ~ 115200 bps
Protocol	DCON
CPU Module	
Dual Watchdog Timer	Module (1.6 Seconds), Communication (Programmable)
LED Indicators	
System LED Indicator	1 LED as Power Indicator
I/O LED Indicator	16 as High/Low Alarm Signals
Isolation	
Intra-module Isolation, Field-to-Logic	3000 VDC
EMS Protection	
ESD (IEC 61000-4-2)	$\pm 4$ kV Contact for Each port, $\pm 8$ kV Air for Random Point
Power	
Consumption	1.3 W Max.
Mechanical	
Dimensions (W x L x H)	30 mm x 115 mm x 102 mm
Environment	
Operating Temperature	$-25 \sim +75$ °C
Storage Temperature	$-40 \sim +85$ °C
Humidity	10 ~ 95 % RH, Non-condensing

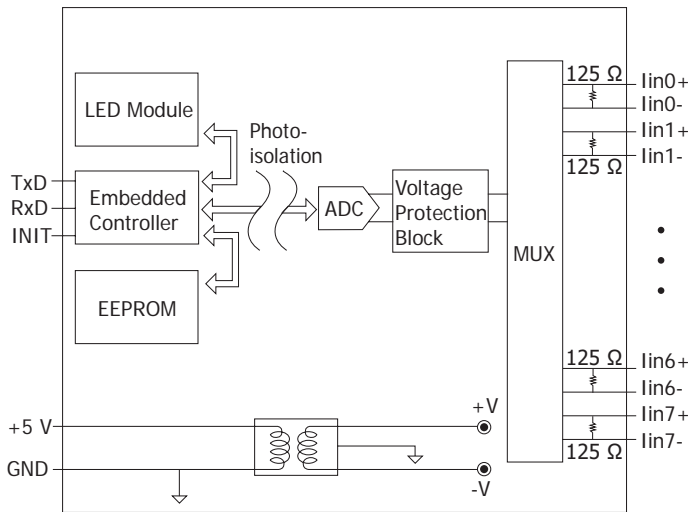
### I/O Specifications

Analog Input		
Channels	8	
Wiring	Differential	
Range	$\pm 20$ mA, $0 \sim +20$ mA, $+4 \sim +20$ mA (No external resistor required)	
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	
Common Mode Rejection	86 dB	
Normal Mode Rejection	100 dB	
Input Impedance	125 $\Omega$	
Overvoltage Protection	$\pm 200$ VDC	
Open Wire Detection	$+4 \sim +20$ mA	
Overcurrent Protection	50 mA at 100 VDC	

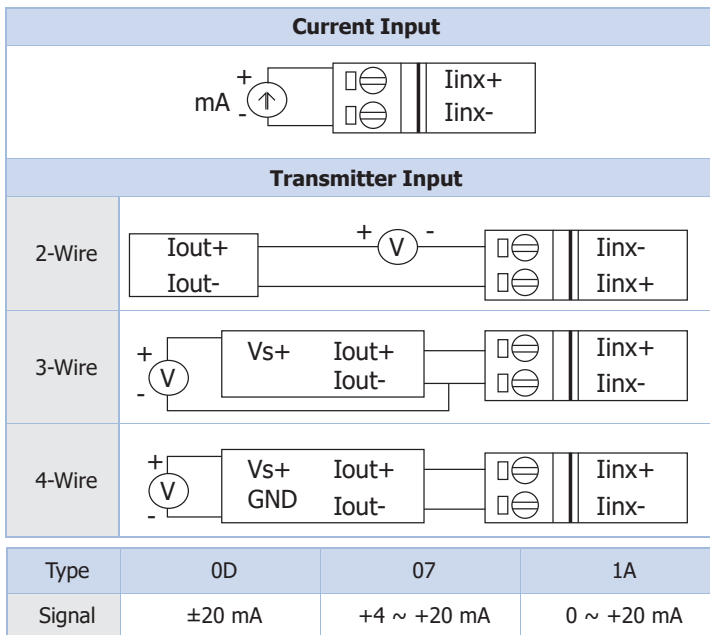
### Applications

- Current Measurement
- Voltage Measurement
- Environment Monitoring
- Tunnel Monitoring
- Building Monitoring

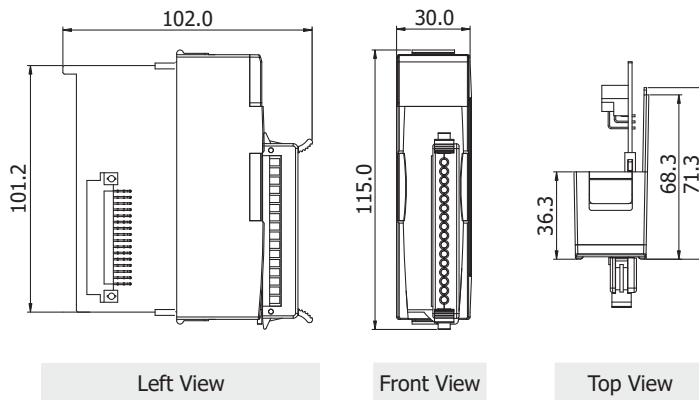
## Internal I/O Structure



## Wire Connections



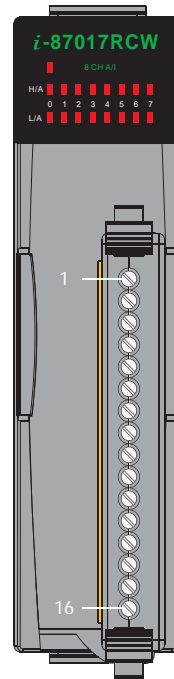
## Dimensions (Unit: mm)



## Ordering Information

<b>I-87017RCW-G CR</b>	8-channel Current Input Module with Overcurrent Protection using the DCON Protocol (RoHS)
------------------------	---

## Pin Assignments



Terminal No.	Pin Assignment
01	Iin0+
02	Iin0-
03	Iin1+
04	Iin1-
05	Iin2+
06	Iin2-
07	Iin3+
08	Iin3-
09	Iin4+
10	Iin4-
11	Iin5+
12	Iin5-
13	Iin6+
14	Iin6-
15	Iin7+
16	Iin7-

## Accessories

	<b>DN-843V-600V CR</b>	3-channel 600 V Voltage Attenuator (RoHS)
	<b>DN-848VI-80V CR</b>	8-channel 80 V Voltage Attenuator (RoHS)
	<b>DN-848VI-150V CR</b>	8-channel 150 V Voltage Attenuator (RoHS)
	<b>DN-843I-CT-1 CR</b>	3-channel 1 A Current Transformer (RoHS)
	<b>DN-843I-CT-50 CR</b>	3-channel 50 A Current Transformer (RoHS)

SG-770 CR	
	7/14-channel Differential/Single-ended Surge Protector (RoHS)
SG-3000 Series	
	Signal Conditioning Modules for Thermocouple, RTD, DC Voltage, DC Current and Power Input Transformers