



I-87015W | I-87015PW

7-channel RTD Input Module

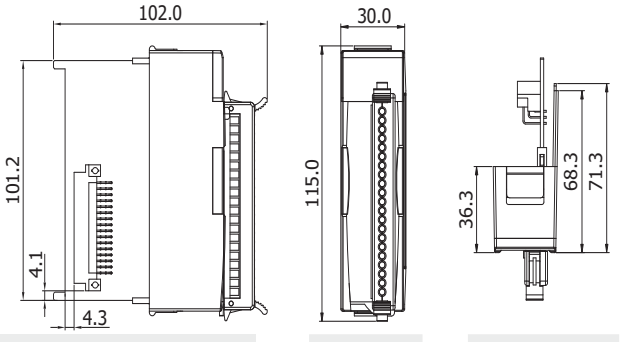
Features

- 7-channel RTD Input
- I-87015PW: 3-wire RTD Lead Resistance Elimination
- High Resolution: 16-bit
- Individual Channel Configuration
- Open Wire Detection
- Overvoltage Protection
- 3000 VDC Intra-module Isolation

Introduction

The I-87015W is a 7-channel RTD input module that is used for measuring temperature using RTD. Each channel can be connected to different kinds of RTD sensor.
The I-87015PW is specifically designed for long-distance RTD measurement, and features automatic compensation for three-wire RTD so that it can measure accurately regardless of the length of the wires. The I-87015PW offers 7 channels, each of which can be connected to different kinds of RTD sensor.
Also, the I-87015W and I-87015PW are fully RoHS-compliant and features 4 kV ESD protection as well as 3000 VDC intra-module isolation.

Dimensions



Left View | Front View | Top View

System Specifications

Model	I-87015W	I-87015PW
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	14 as High/Low Alarm Signals	
Isolation		
Intra-module Isolation, Field-to-Logic	3000 VDC	
EMS Protection		
ESD (IEC 61000-4-2)	±4 kV Contact for Each port, ±8 kV Air for Random Poin	
Power		
Consumption	1.0 W Max.	
Mechanical		
Dimensions (W x L x H)	30 mm x 115 mm x 102 mm	
Environment		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-40 ~ +85 °C	
Humidity	10 ~ 95 % RH, Non-condensing	

I/O Specifications

Model	I-87015W	I-87015PW
Analog Input		
Channels	7	
Wiring	2/3-Wire	
Sensor Typee	Pt100, Pt1000, Ni120, Cu50, Cu100, Cu1000	
Resolution	16-bit	
Accuracy	±0.05 % of FSR	
Sampling Rate	12 Hz (Total)	
-3dB Bandwidth	15.7 Hz	
Zero Drift	±0.5 μV/°C	
Span Drift	±20 ppm/°C	
Common Mode Rejection	150 dB	
Normal Mode Rejection	100 dB	
Input Impedance	> 1 MΩ	
Channel Configuration	Individual Channel Configuration	
3-wire RTD Lead Resistance Elimination	-	Yes
Resistance Measurement	3.2 kΩ	
Open Wire Detection	Yes	
Overvoltage Protection	±20 VDC	±120 VDC

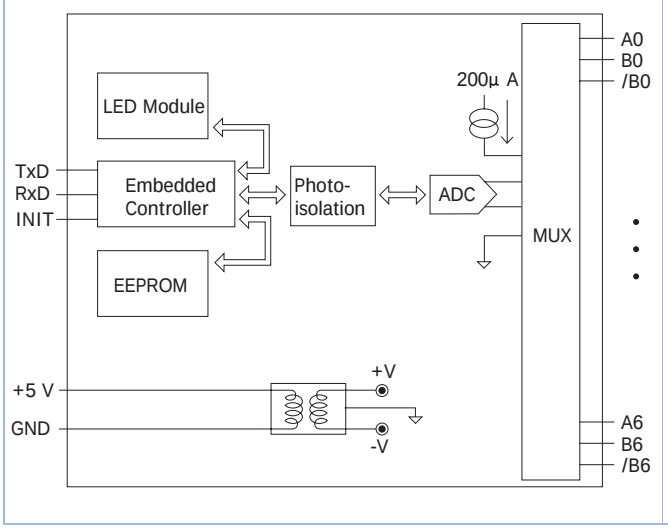
Applications

- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

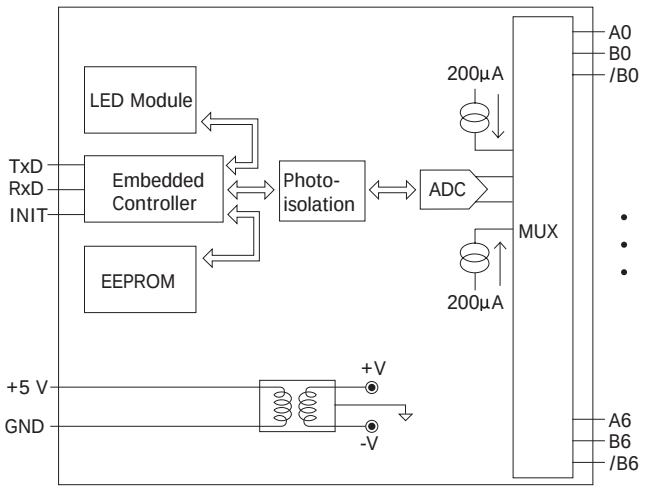
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Internal I/O Structure

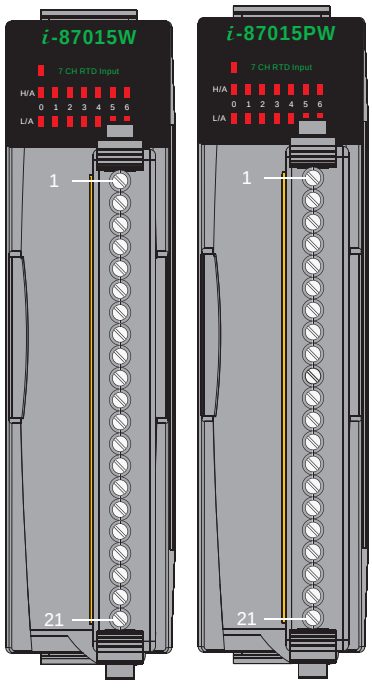
I-87015W



I-87015PW



Pin Assignments



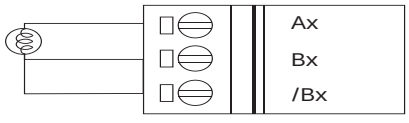
Terminal No.	Pin Assignment
01	A0
02	B0
03	/B0
04	A1
05	B1
06	/B1
07	A2
08	B2
09	/B2
10	A3
11	B3
12	/B3
13	A4
14	B4
15	/B4
16	A5
17	B5
18	/B5
19	A6
20	B6
21	/B6

RTD Type Settings (TT)

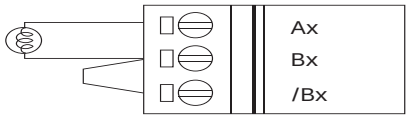
Type Code	RTD Type	Temperature Range
20	Platinum 100, a= 0.00385	-100 ~ + 100 °C
21	Platinum 100, a= 0.00385	0 ~ + 100 °C
22	Platinum 100, a= 0.00385	0 ~ + 200 °C
23	Platinum 100, a= 0.00385	0 ~ + 600 °C
24	Platinum 100, a= 0.003916	-100 ~ + 100 °C
25	Platinum 100, a= 0.003916	0 ~ + 100 °C
26	Platinum 100, a= 0.003916	0 ~ + 200 °C
27	Platinum 100, a= 0.003916	0 ~ + 600 °C
28	Nickel 120	-80 ~ + 100 °C
29	Nickel 120	0 ~ + 100 °C
2A	Platinum 1000, a= 0.00385	-200 ~ + 600 °C
2B	Cu 100 at 0 °C, a= 0.00421	-20 ~ + 150 °C
2C	Cu 100 at 25 °C, a= 0.00427	0 ~ + 200 °C
2D	Cu 1000 at 0 °C, a= 0.00421	-20 ~ + 150 °C
2E	Platinum 100, a= 0.00385	-200 ~ + 200 °C
2F	latinum 100, a= 0.003916	-200 ~ + 200 °C
80	Platinum 100, a= 0.00385	-200 ~ + 600 °C
81	latinum 100, a= 0.003916	-200 ~ + 600 °C
82	Cu 50 at 0 °C	-50 ~ + 150 °C
83	Nickel 100	-60 ~ + 180 °C

Wire Connections

3-Wire RTD Connection



2-Wire RTD Connection



Accessories



SG-770 CR	7/14-channel Differential/Single-ended Surge Protector (RoHS)

Ordering Information

I-87015W-G CR	7-channel RTD Input Module (RoHS)
I-87015PW-G CR	7-channel RTD Input Module with 3-wire Lead Resistance Elimination (RoHS)

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000