



I-87013

I-87013-G

4-ch RTD Input Module

Features

- 4-channel RTD Input
- Open Wire Detection
- 3000 V_{DC} Intra-module Isolation



Introduction

The I-87013 is a 4-channel RTD input module that is used for measuring temperature using RTD. The module supports 2/3/4-wire RTD sensor and features open wire detection. The I-87013 also provides 3000 V_{DC} intra-module isolation.

Applications

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

System Specifications

CPU Module	
Watchdog Timer	Yes, Module (1.6 Seconds), Communication (Programmable)
Isolation	
Intra-module Isolation	3000 V _{DC}
LED Indicators	
Status	1 x Power and Communication 8 x I/O
COM Ports	
Baud Rate	115200 bps
Data Format	N, 8, 1
Protocol	DCON
Power	
Power Consumption	1.1 W Max.
Mechanical	
Dimensions (W x L x H)	31 mm x 116 mm x 88 mm
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +75 °C
Humidity	5 ~ 95% RH, Non-condensing

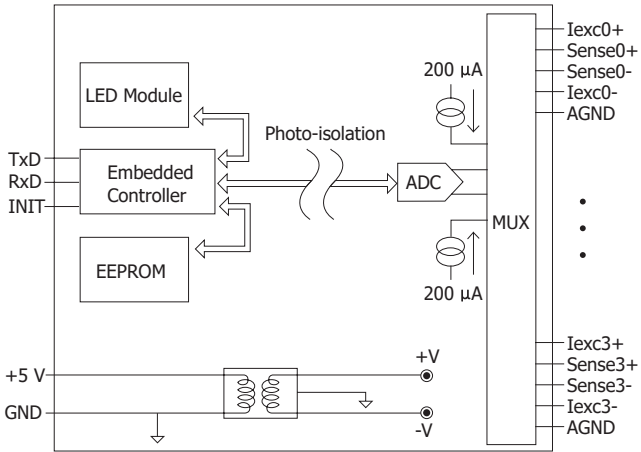
I/O Specifications

Analog Input	
Channels	4
Type	RTD
Sensor Type	Pt100, Pt1000, Cu50, Ni120
Resolution	16-bit
Accuracy	±0.1% of FSR
Sampling Rate	10 Hz (Total)
Common Mode Rejection	150 dB min
Normal Mode Rejection	100 dB
Overvoltage Protection	±25 V _{DC}
Open Wire Detection	Yes
3-wire RTD Lead Resistance Elimination	Yes

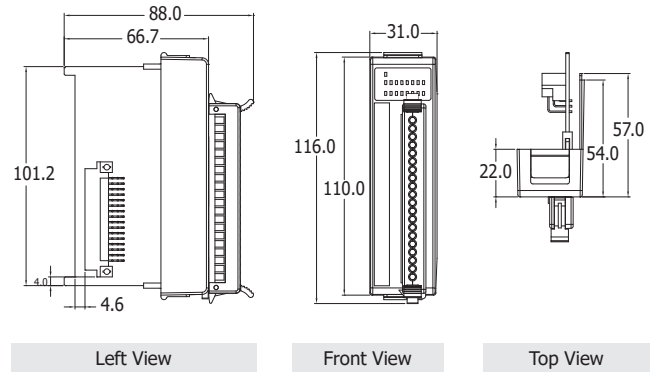
RTD Type Settings (TT)

Type Code	RTD Type	Temperature Range
20	Platinum 100, α= 0.00385	-100 ~ +100 °C
21	Platinum 100, α= 0.00385	0 ~ +100 °C
22	Platinum 100, α= 0.00385	0 ~ +200 °C
23	Platinum 100, α= 0.00385	0 ~ +600 °C
24	Platinum 100, α= 0.003916	-100 ~ +100 °C
25	Platinum 100, α= 0.003916	0 ~ +100 °C
26	Platinum 100, α= 0.003916	0 ~ +200 °C
27	Platinum 100, α= 0.003916	0 ~ +600 °C
28	Nickel 120	-80 ~ +100 °C
29	Nickel 120	0 ~ +100 °C
2A	Platinum 1000, α= 0.00385	-200 ~ +600 °C

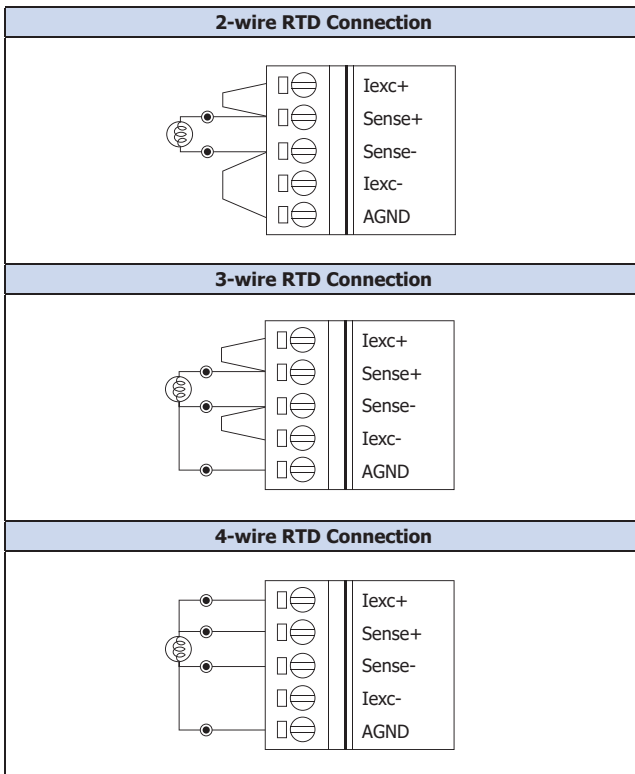
Internal I/O Structure



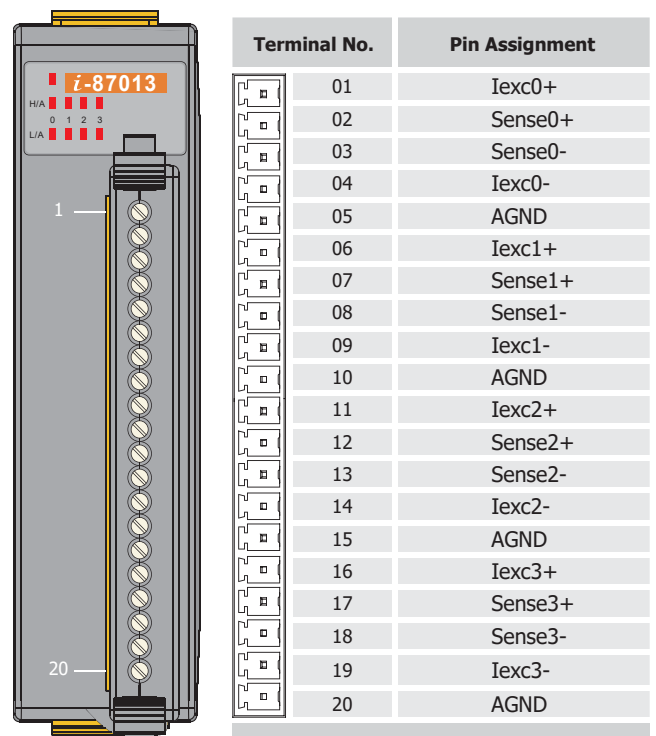
Dimensions (Units: mm)



Wire Connections



Pin Assignments



Ordering Information

I-87013 CR	4-ch RTD Input Module (Blue Cover) (RoHS)
I-87013-G CR	4-ch RTD Input Module (Gray Cover) (RoHS)