



## SG-3013-G

RTD Input Signal Conditioner

### Features

- Three-way Isolation: 1000 VDC
- Accuracy:  $\pm 0.1\%$  of full range
- Flexible DIN-rail



### Introduction

The SG-3013 is a RTD input to voltage or current output signal conditioning module. It has 1000 Vdc three-way isolation for input, output and power. It also can change the input/output range via internal configuration switches.

It's easy to mount the SG-3013 on a standard DIN rail and can operate in environments with wide temperature range.

### Thermocouple Type

| Type            | $\alpha$           | Temperature Range (°C) |
|-----------------|--------------------|------------------------|
| Pt100           | 0.00385            | -200 ~ 600             |
| Pt100           | 0.003916           | -200 ~ 600             |
| Pt1000          | 0.00385            | -200 ~ 600             |
| Ni 120          |                    | -80 ~ 300              |
| Cu 100 at 0 °C  | $\alpha = 0.00421$ | -20 ~ 150              |
| Cu 100 at 25 °C | $\alpha = 0.00427$ | 0 ~ 200                |
| Cu 1000 at 0 °C | $\alpha = 0.00421$ | -20 ~ 150              |

### Applications

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

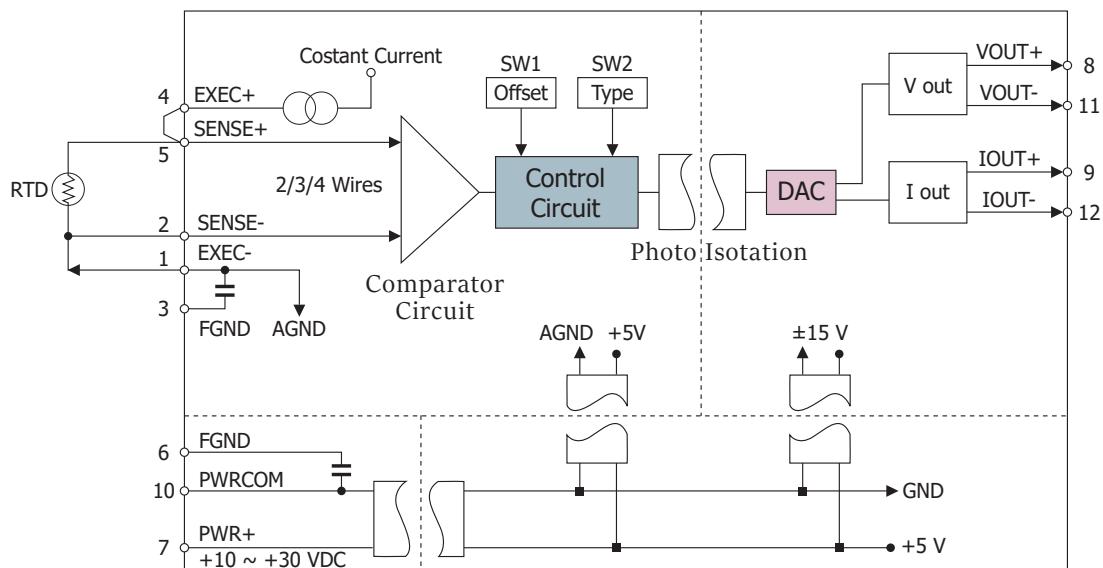
### System Specifications

| Isolation                   |                            |
|-----------------------------|----------------------------|
| Three-way Isolation         | 1000 VDC                   |
| Power                       |                            |
| Reverse Polarity Protection | Yes                        |
| Input Range                 | +10 ~ +30 VDC              |
| Consumption                 | 1.2 W                      |
| Mechanical                  |                            |
| Dimensions (W x L x H)      | 25 mm x 114 mm x 70 mm     |
| Environment                 |                            |
| Operating Temperature       | -25 ~ +75 °C               |
| Storage Temperature         | -30 ~ +75 °C               |
| Humidity                    | 5 ~ 95% RH, Non-condensing |

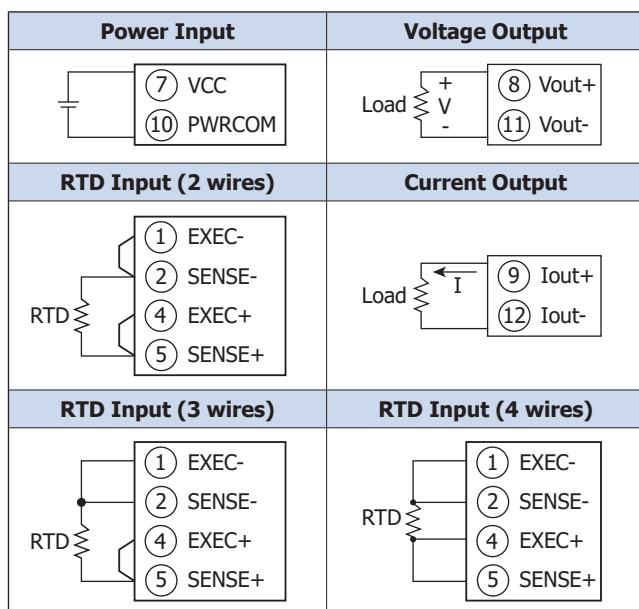
### I/O Specifications

| Analog Input            |                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------|
| Channels                | 1                                                                                            |
| Type                    | Pt100 $\alpha = 0.00385$<br>Pt100 $\alpha = 0.003916$<br>Ni 120<br>Pt1000 $\alpha = 0.00385$ |
| Accuracy                | $\pm 0.1\%$ of FSR                                                                           |
| Response Time           | 100 ms                                                                                       |
| Analog Output           |                                                                                              |
| Channels                | 1                                                                                            |
| Range                   | Current: 0 ~ 20 mA, 4 ~ 20 mA                                                                |
| Current Load Resistance | 0 ~ 500 $\Omega$ (Source)                                                                    |

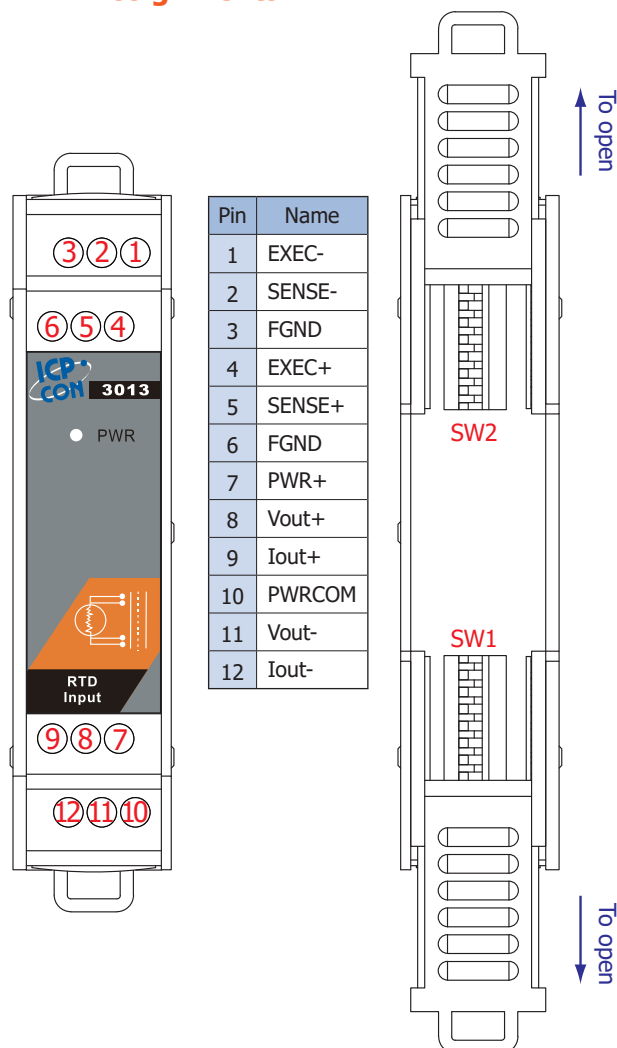
## Internal I/O Structure



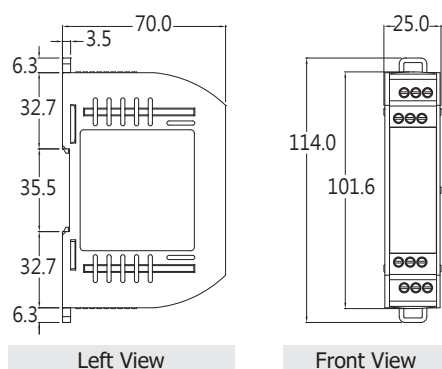
## Wire Connections



## PIN Assignments



## Dimensions (Units: mm)



## Ordering Information

**SG-3013-G CR** RTD Input Signal Conditioner (RoHS)