SG-3071 Isolated Voltage Input/Output Module
User's Manual

Introduction

The SG-3071 is a voltage input to voltage or current output signal conditioning module. It has 1000 V**DC** three-way isolation for input, output and power. And can change the input/output range via internal configuration switches.

The SG-3071 has an LED display to show whether the SG-3071 is functioning correctly and has two VRs (Zero, Span) to calibrate the input/output range accuracy.

The bandwidth of the SG-3071 is typically 1 kHz. It's easy to mount the SG-3071 on a standard DIN rail and can operate in environments with wide temperature range.

Specifications

Voltage input:

- Bipolar: ±5 VDC, ±10 VDC
- Unipolar: 0 ~ 5 VDC, 0 ~ 10 VDC
- Input impedance: 2 MΩ
- Input bandwidth: 1 kHz (typical) @ -3 dB

Voltage output:

- Bipolar: ±5 VDC, ±10 VDC
- Drive: 10 mA (max.)
- Output impedance: < 50 Ω

Current Output:

- Current: 0 ~ 20 mA, 4 ~ 20 mA
- Current load resistor: 0 ~ 500 Ω (Source)

General

- Three-way isolation: 1000 VDC
- Accuracy: ±0.1% of full range (typical)
- Operation temperature range:-25 ˚C ~ 75 ˚C
- Storage temperature range:-30 ˚C ~ 85 ˚C
- Operation bandwidth: 1 kHz
- Weight: 94 gram

Supply Voltage

- Input Range: 10 ~ 30 VDC @ 24 VDC (Typical)
- Consumption: 1.80 W (voltage output)
  2.30 W (current output)

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Configuration

The terminal wiring for the SG-3071 is shown in Figure A. Positive power terminals pins 7 and 9 are internally connected, as are negative pins 10 and 12. Power can be connected through the adjacent modules, making wiring much easier. The SG-3071 uses a power input range of 10 ~ 30 V**DC**.

Table 1 shows the switch positions used to configure the input and output range.

The I/O configuration switches are located inside the module. And can be accessed by removing the DIN-rail bracket covers by sliding them in the direction shown in Figure B.

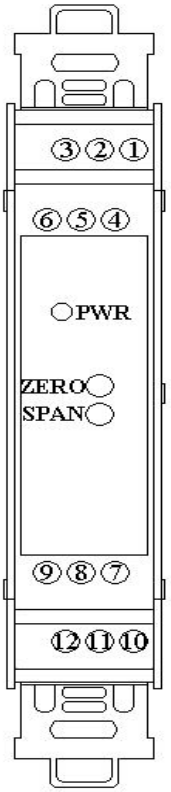


Figure A:
Pin assignment

Pin	Name
1	INPUT+
2	INPUT-
3	FGND
4	Reserve
5	Reserve
6	Reserve
7	VCC.
8	OUT+
9	VCC.
10	GND
11	OUT-
12	GND

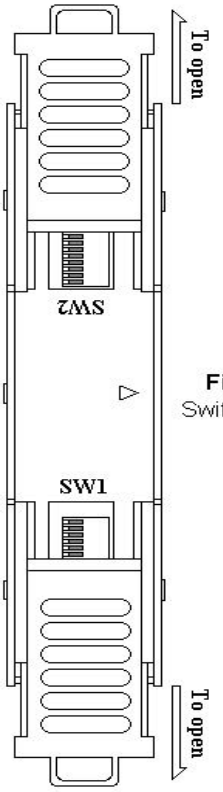


Figure B:
Switch location

Switch setting : ■ ON □ OFF

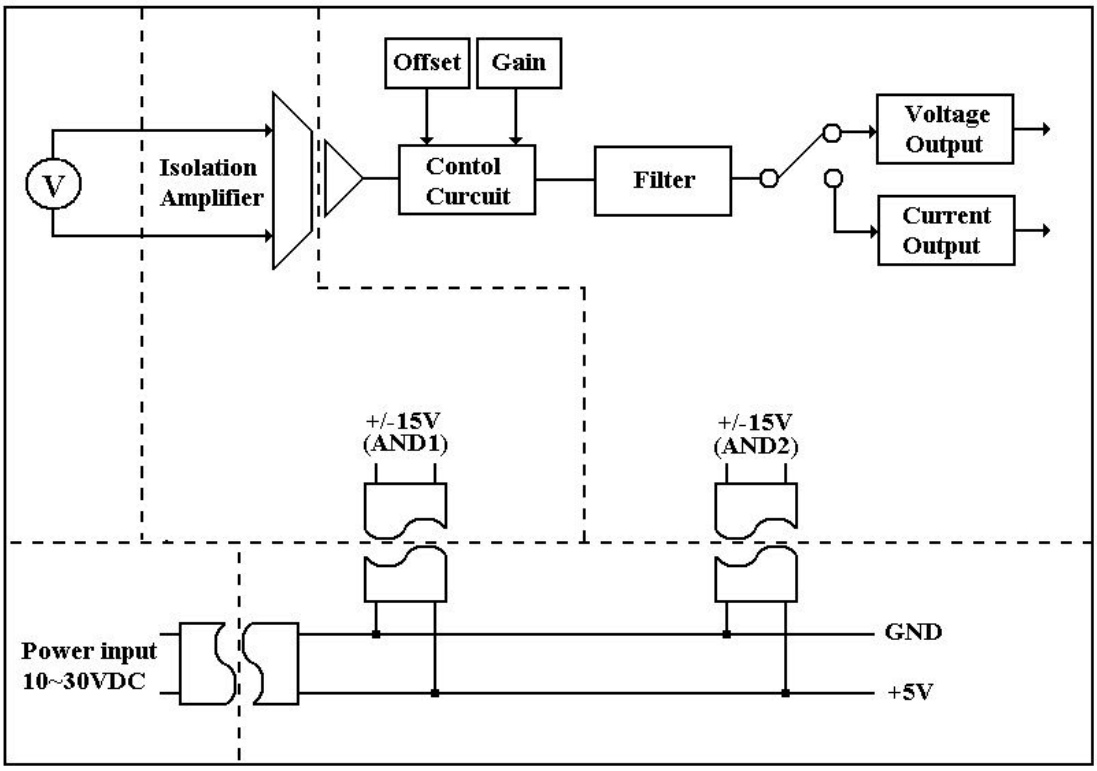
SG3071 Configuration		(SW1) 1	2	3	4	5	(SW2) 1	2	3	4	5
(INPUT)	(OUTPUT)										
±10V	±10V	□	■	■	□	□	□	■	□	□	□
±10V	±5V	□	■	■	□	□	■	□	□	□	□
＊ ±5V	±5V	□	■	■	□	□	□	■	□	□	□
±5V	±10V	□	■	■	□	□	□	□	■	□	□
0~10V	4~20mA	■	□	□	■	■	□	■	□	■	□
0~10V	0~20mA	□	□	□	■	■	■	□	□	□	■
0~5V	4~20mA	■	□	□	■	■	□	□	■	■	□
0~5V	0~20mA	□	□	□	■	■	□	■	□	□	■

Table 1: Input to output range (SW1、2)

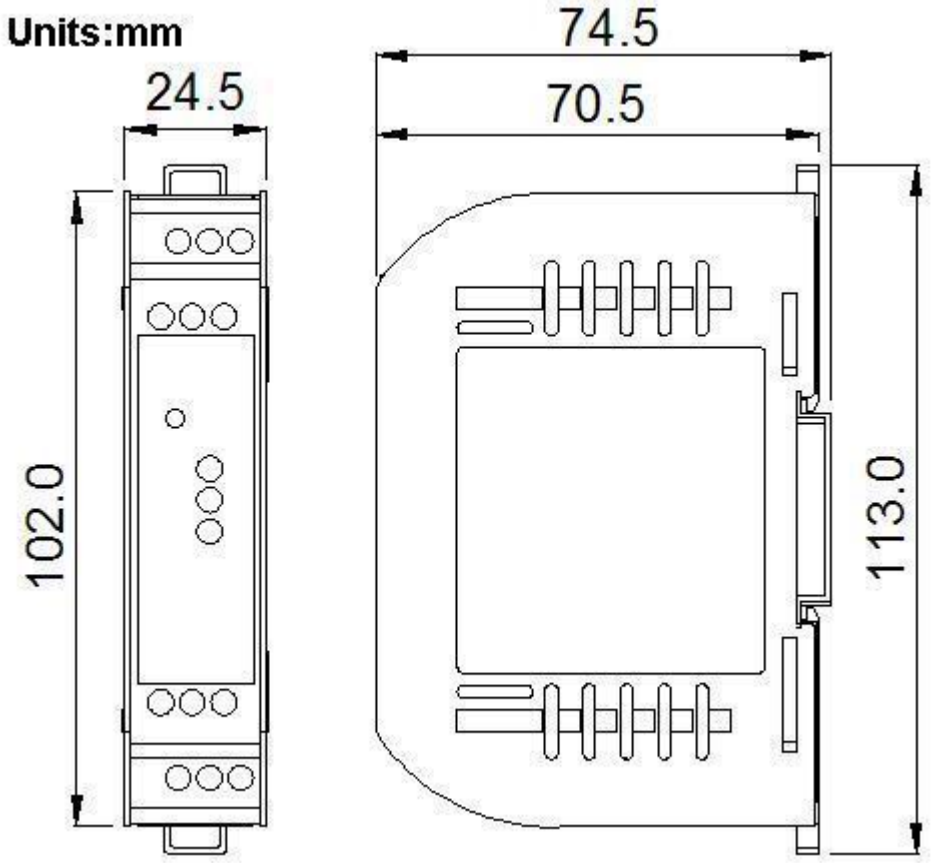
＊**Factory default setting**

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Block Diagram



Dimensions



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