SG-3016 Isolated Strain Gauge Input Module User's Manual

Introduction

The SG-3016 is a voltage input to voltage or current output signal conditioning module. It has 1000 VDC three-way isolation for input, output and power. And can change the input/output range via internal configuration switches.

The SG-3016 has an LED display to show whether the SG-3016 is functioning correctly and has three VRs (Zero, Span, Exci) to calibrate the input/output range accuracy.

The bandwidth of the SG-3016 is typically 600 Hz. It's easy to mount the SG-3016 on a standard DIN rail and can operate in environments with wide temperature range.

Specifications

Voltage Specifications:

- Electrical input: ±10 mV, ±20 mV, ±30 mV, ±50 mV, ±100 mV
- Excitation voltage: 1 ~10 VDC (20 mA max.)

Voltage output:

Bipolar: ±5 VDC, ±10 VDC
 Unipolar: 0 ~ 5 VDC, 0 ~ 10 VDC
 Output impedance: < 5 0Ω

Current output:

■ Current: 0 ~ 20 mA

Current load resistor:0~500 Ω (Source)

General

Three-way isolation: 1000 VDC
Accuracy: ±0.1 % of full range
Bandwidth: 600 Hz (typical)@-3 dB

■ Operation temperature range:-25 °C ~ 75 °C

Storage temperature range:-25 °C ∼ 75 °C
 Storage temperature range:-30 °C ∼ 85 °C

Supply Voltage

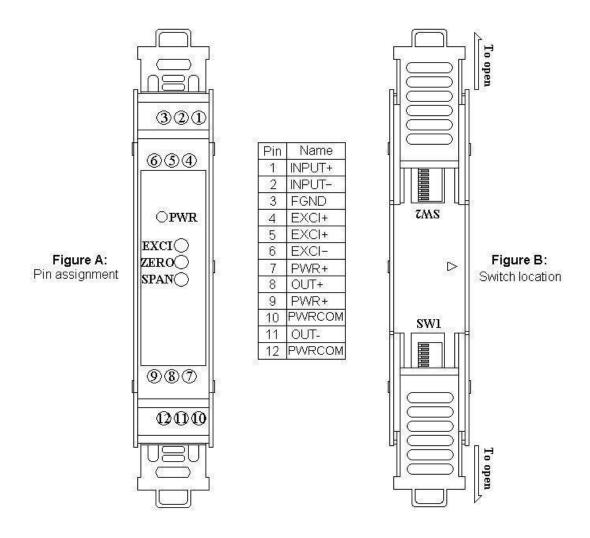
■ Input Range: 10 ~ 30 VDC

Consumption: 1.44 W (voltage output)
 1.74 W (current output)

Configure

The terminal wiring for the SG-3016 is shown in Figure A. Positive power terminals pin's 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-3016 uses a power input range of $10 \sim 30 \text{ Vpc}$.

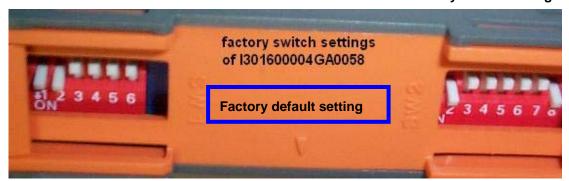
Table 1 and table 2 show the switch positions used to configure the input and output range. The I/O configuration switches are located inside the module. And can be accessed by removing the DIN-rail bracket covers by sliding them in the direction shown in Figure B.



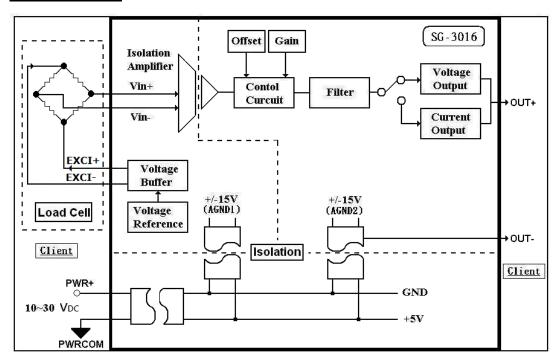
Factory default setting and label

Switch setting:														
SG3016	(SW1)						(SW2)							
Configuration	1	2	3	4	5	6	1	2	3	4	5	6	7	8
(INPUT) ±10mV	0						•							
* ±20mV														
±30mV														
±50mV														
±100mV														
(OUTPUT) * ±0~10V	•	•					0							•
±0~5V														
0~10V														
0~5V														
0~20mA														

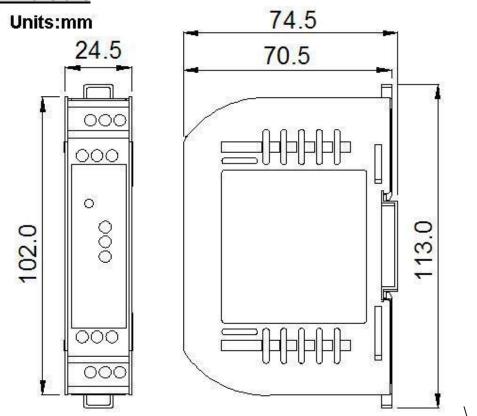
* Factory default setting



Block Diagram



Dimensions



Technical Service:

Please E-mail your problem description to service@icpdas.com if you have any questions.

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