SG-3016(-80) User's Manual
Isolated Strain Gauge Input Module

Introduction

The SG-3016(-80) 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(-80) has an LED display to show whether the SG-3016(-80) 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, SG-3016-80 is 80 Hz. It's easy to mount the SG-3016(-80) 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: < 50 Ω

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: 80 Hz (typical)@-3 dB-------SG-3016-80
  600 Hz (typical)@-3 dB------SG-3016
- Operation 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(-80) 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(-80) uses a power input range of 10 ~ 30 VDC.
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.

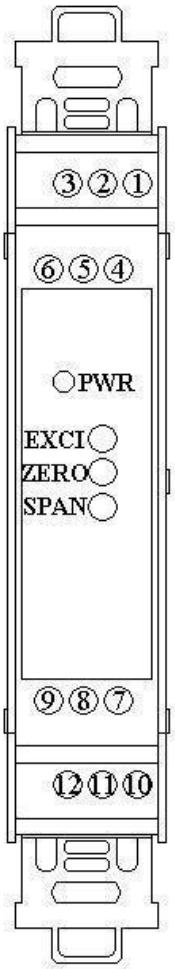


Figure A:
Pin assignment

Pin	Name
1	INPUT+
2	INPUT-
3	FGND
4	EXCI+
5	EXCI+
6	EXCI-
7	PWR+
8	OUT+
9	PWR+
10	PWRCOM
11	OUT-
12	PWRCOM

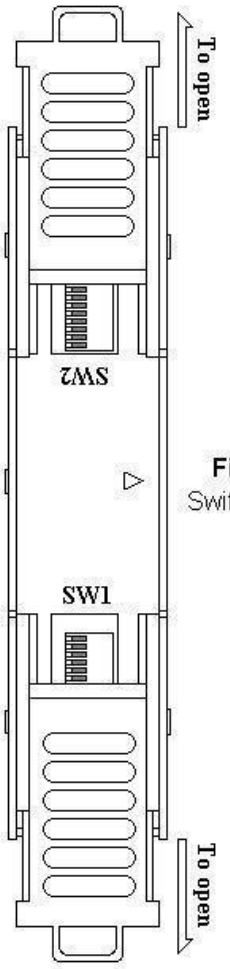
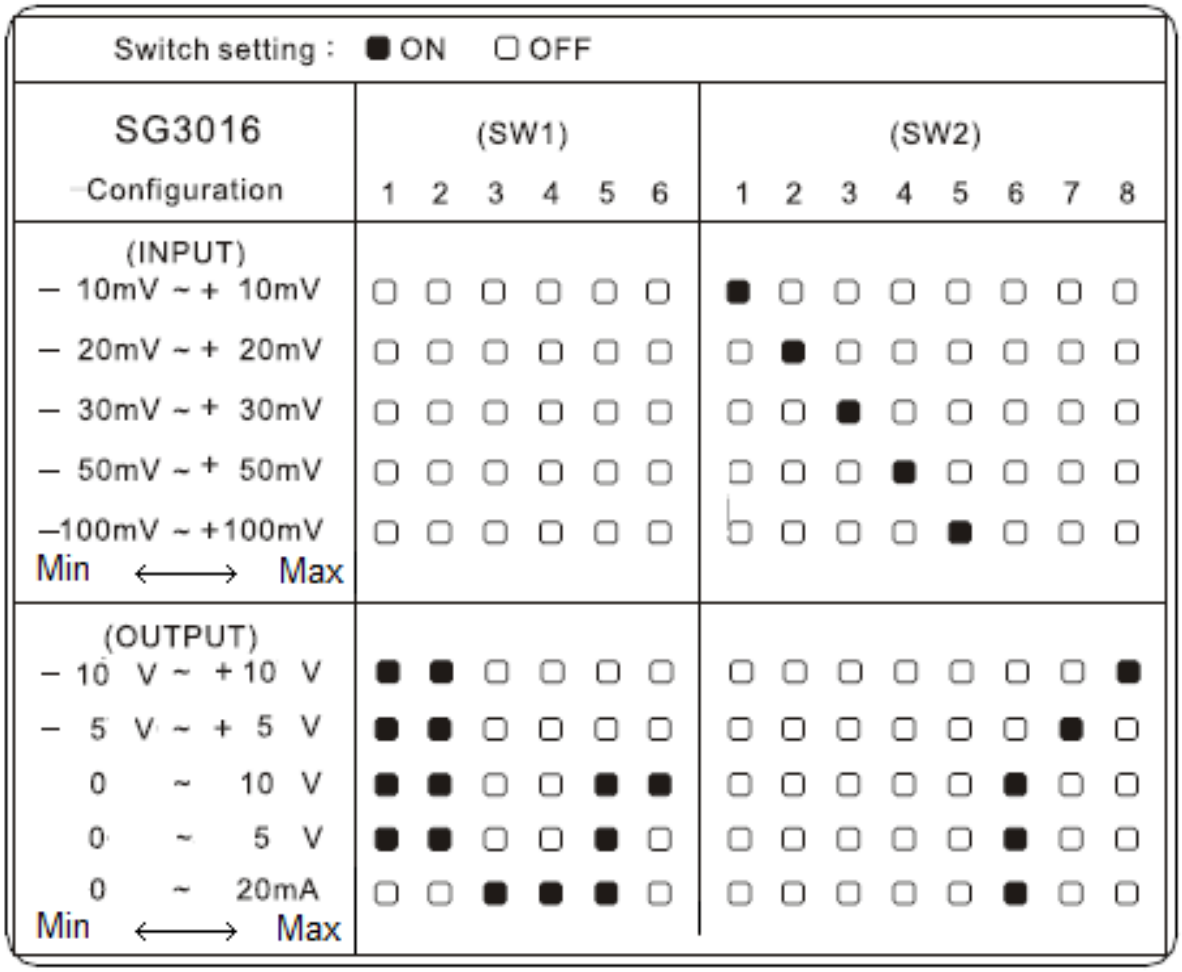


Figure B:
Switch location

Factory default setting and Configuration



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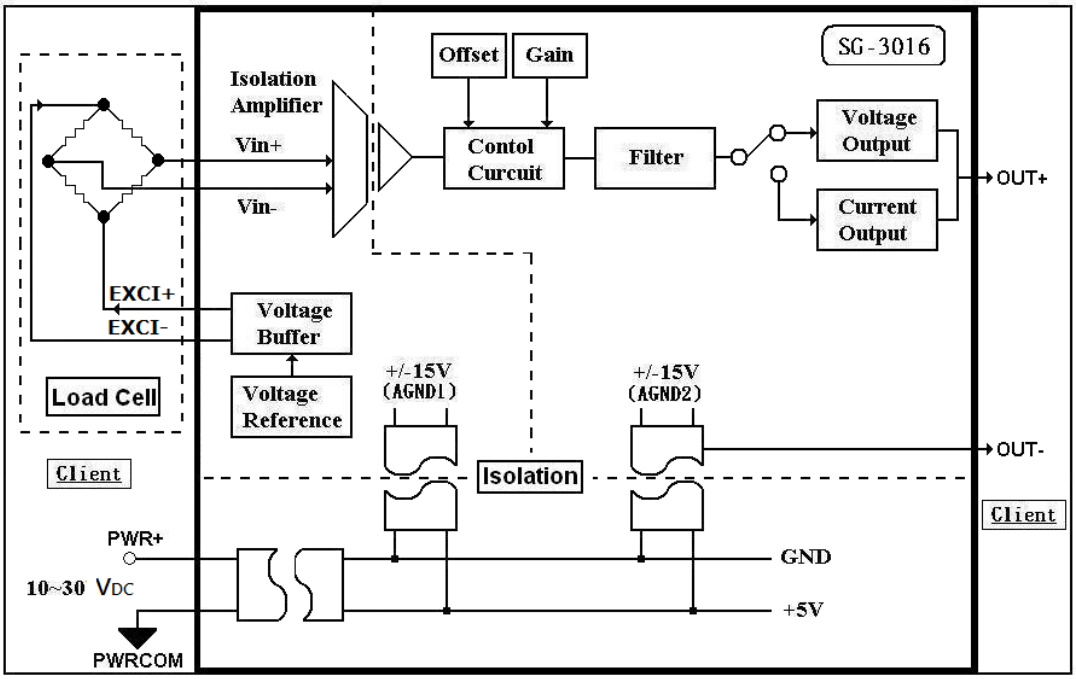
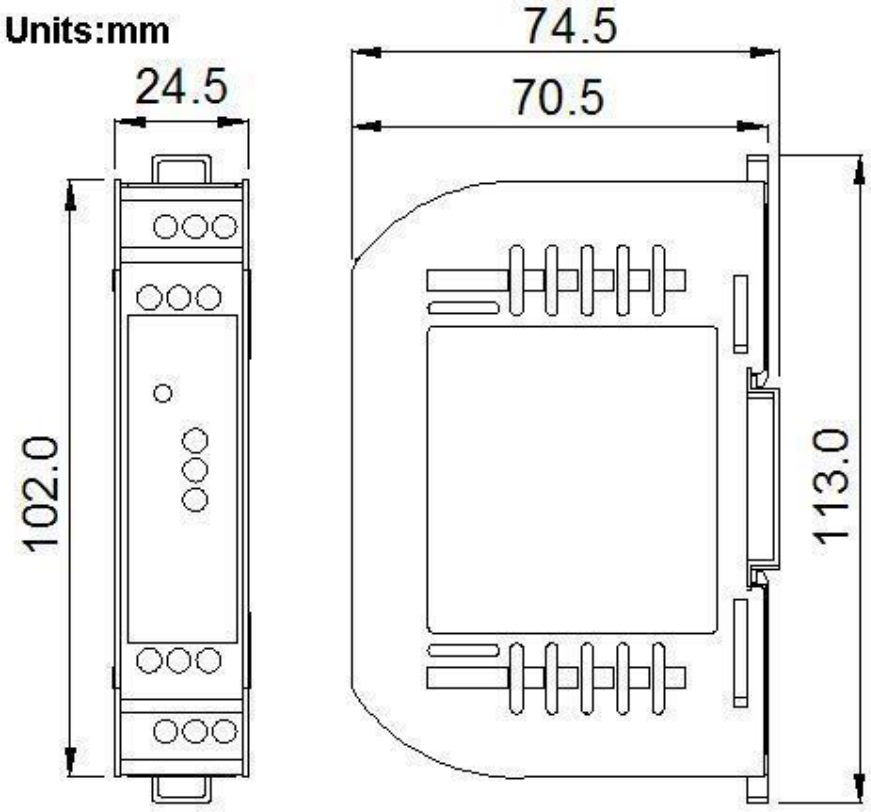
＊**Factory default setting**

Block Diagram



Dimensions



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