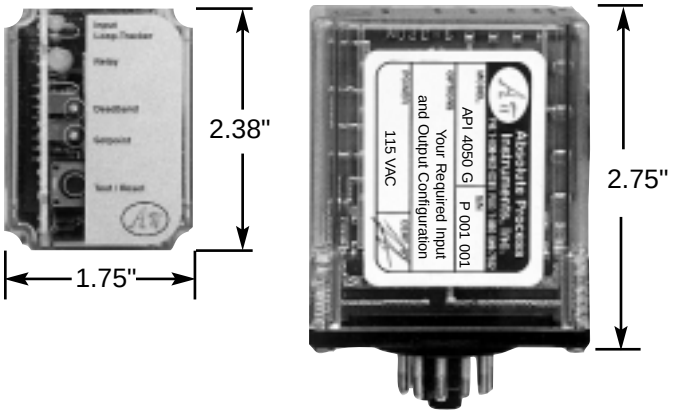
# Plug-in Signal Conditioners
# NON-ISOLATED
# DC to DC Transmitter
# (Narrow Input Span)
# API 4050 G

## *FEATURES*

- **Low Drift Input Amplifier**
- **Wide Range of Input/Output Parameters**
- **Input/Output LoopTracker™ LED's**
- **Functional Test Pushbutton**
- **LIFETIME WARRANTY**

## CASE DIMENSIONS




## Specifications

### Input Ranges

| | Minimum | Maximum |
|---|---|---|
| Current | 100uADC | 1mADC |
| Voltage | 10mVDC | 100mVDC |

### Input Impedance (Voltage)
200K Ohm minimum

### Input Voltage Burden (Current)
1.25 VDC Maximum

### Output Capability
Voltage: +/-10VDC, +/-10mA max.
Current: 20mADC, 20V Compliance

### Linearity
Better than .01% of Span

### Response Time
70mSec. Typical

### Zero/Span Control Range
+/-15% Typical

### Functional Test Pushbutton
50% of Span, (+/-1.5%) of Span when pressed.

### Temperature Stability
Better than .02% of Span per °C.

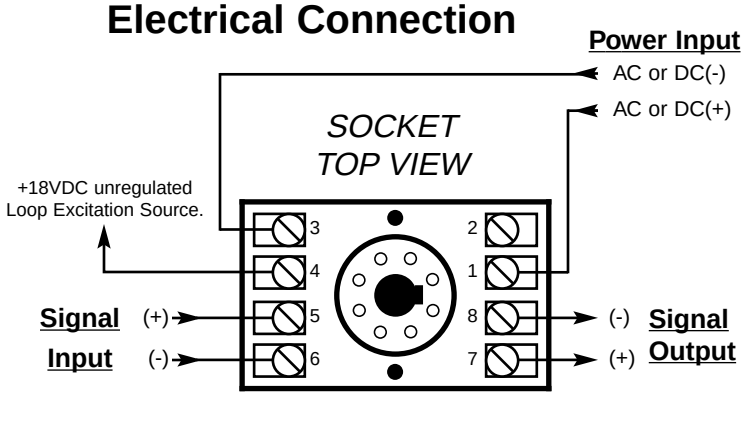
### Ambient Temperature Range
-10 to +60 °C (Operating).

### Power

| | |
|---|---|
| Standard: | 115VAC +/-10%, 50/60Hz, 2.5W max. |
| Optional: | 230VAC +/-10%, 50/60Hz, 2.5W max. |
| * | 12VAC +/-10%, 50/60Hz, 2.5W max. |
| * | 24VAC +/-10%, 50/60Hz, 2.5W max. |
| * | 12VDC +/-5%, 125mA max. |
| * | 24VDC +/-5%, 65mA max. |
| * | 9-30VDC @2.5W Typical. |

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## Electrical Connection



## FUNCTIONAL DESCRIPTION

The API 4050 G accepts a DC Voltage or Current Input and provides a Non-Isolated DC Voltage or Current Output that is linearly related to the input. The API 4050 G utilizes an ultra-stable input amplifier for reliable operation with input signals as low as 10mVDC. Typical applications include Signal Scaling, Signal Conversion, Signal Boosting or a combination of the three. The module Power Supply is transformer isolated from the Input and Output. Standard power is 115VAC; options include 230VAC, 12/24 VDC/VAC or 10-30VDC.

The API 4050 G plugs into an industry standard octal (8-Pin) socket (purchased separately). The socket provided by API (part #API-008) allows for either DIN rail or panel mounting.

## OPERATION

The API 4050 G is factory configured to your exact input and output requirements. The input is filtered, either amplified or attenuated as required, then passed through to the output stage. The +18VDC Loop Excitation Supply of the API 4050 G may be used in place of an additional external power source to power passive input devices.

## CALIBRATION

The API 4050 G is pre-configured at the factory to the input and output ranges specified when purchased. Top-mounted, multi-turn Zero and Span potentiometers are available should fine-tuning be necessary; however, major range changes will require factory modification. If fine-tuning is necessary, apply the appropriate power to the module and allow a minimum 20 minute warm up time. Using an accurate calibration source, provide an input to the module equal to the minimum required for the application. Using an accurate measurement device for the output, adjust the Zero potentiometer for the exact minimum output desired. Next, set the Input at maximum, then adjust the Span pot for the exact maximum output desired. Repeat adjustments for maximum accuracy. Finally, the Test Pushbutton range may be set to provide the desired Output when depressed.

## UNIQUE FEATURES

API Exclusive Features include two ***LoopTracker™ LEDs*** and a ***Functional Test Pushbutton***. The LoopTracker™ LEDs (Green for Input; Red for Output) vary in intensity with changes in the Input (process) signal. Monitoring the state of these LEDs can provide a quick visual picture of your process loop at all times. When held depressed, the Functional Test Pushbutton will provide a fixed output (independent of the input) factory set to approximately 50% of the calibrated output range. Both the ***LoopTracker™ LEDs*** and ***Functional Test Pushbutton*** greatly aid in the reduction of time during initial startup and/or troubleshooting.

## RELATED PRODUCTS

The following products are also available for use with a DC Voltage or Current Input. Refer to the appropriate data sheets in this section for details.

**API 4010 G**
Same as API 4050 G, but Larger Input Spans

**API 4310 G**
Same as API 4050 G, but Optically Isolated Input to Output

**API 4300 G**
Same as API 4010 G, but Optically Isolated Input to Output

**API 4380 G**
Same as API 4300 G, but Field Selectable Inputs and Outputs

**API 4380 DIN**
Same as API 4380 G, but DIN Style Case; Universal Power 48-300VDC or 80-265VAC

**API 4380 DD**
Same as API 4380 DIN, but 9-30VDC Power

Various DC Input Single & Dual Setpoint Alarms.

**ABSOLUTE PROCESS INSTRUMENTS, Inc.**

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