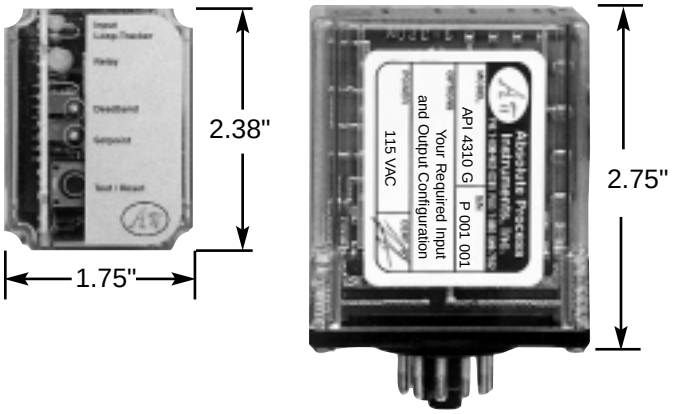
Plug-in Signal Conditioners
ISOLATED
DC to DC Transmitter
(Narrow Input Span)
API 4310 G

FEATURES

- **Low Drift Input Amplifier**
- **Full 2000VRMS Input/Output/Power Isolation**
- **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

Isolation
2000V RMS min.

Linearity
Better than .1% of Span

Response Time
70mSec. Typical

Zero/Span Control Range
+/-15% Typical

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

Common Mode Rejection
120dB minimum.

Output Ripple and Noise
Less than 10mV RMS.

Temperature Stability
Better than .04% of Span per °C.

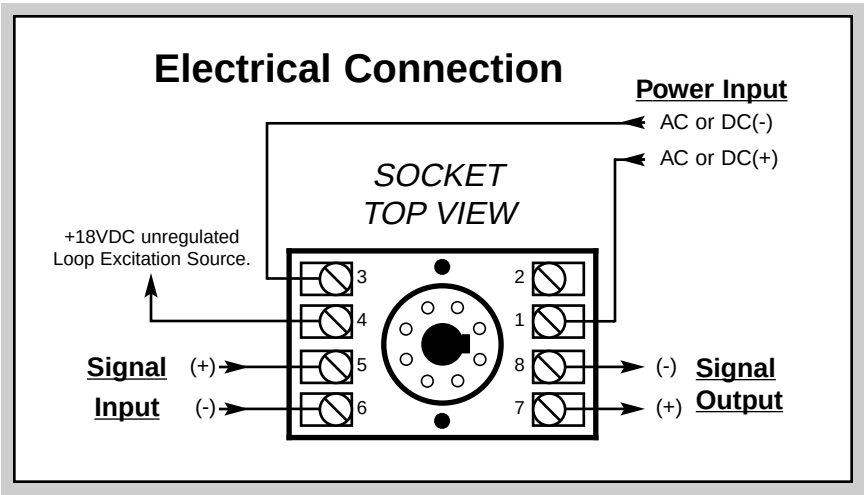
Ambient Temperature Range
-10 to +60 °C (Operating).

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.

ABSOLUTE PROCESS INSTRUMENTS, Inc.

Electrical Connection



FUNCTIONAL DESCRIPTION

The API 4310 G accepts a DC Voltage or Current Input and provides an Optically Isolated DC Voltage or Current Output that is linearly related to the input. The API 4310 G utilizes an ultra-stable input amplifier for reliable operation with input signals as low as 10mVDC. Typical applications include Signal Isolation, Signal Conversion, Signal Boosting or a combination of the three.

The Optical Isolation between Input and Output makes this module useful for Ground Loop Elimination, Common Mode Signal Rejection or Noise Pickup Reduction. The API 4310 G uses the latest technology in linear optical isolation for optimum noise immunity and complete freedom from AC artifacts in the Output. In addition, the module Power Supply is isolated, resulting in full 3-way (Input, Output, Power) Isolation. Standard power is 115VAC; options include 230VAC, 12/24 VDC/VAC or 10-30VDC.

API Exclusive Features include LoopTrackerTM LEDs (Green for Input; Red for Output) which vary in intensity with changes in the process signal and a Functional Test Pushbutton which provides a fixed output (independent of the input) when held depressed. The Test Output Level can be field-adjusted via a multiturn potentiometer. An +18VDC unregulated Loop Excitation Supply is available to power passive input devices.

The API 4310 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 4310 G is factory configured to your exact input and output requirements. The input is filtered, either amplified or attenuated as required, then passed through an opticoupler to the output stage. The +18VDC Loop Excitation Supply of the API 4310 G may be used in place of an additional external power source to power passive input devices.

CALIBRATION

The API 4310 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 4300 G
Same as API 4310 G, but Wider Input Spans

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

API maintains a constant effort to upgrade and improve its products; therefore, specifications are subject to change without notice. Consult factory for your specific requirements.

ABSOLUTE PROCESS INSTRUMENTS, Inc.

Proudly Represented By:

Mod-Tronic Instruments Limited Tel: 1 800 794-5883 Fax: 1 800 830-7122 www.mod-tronic.com