FIELD SELECTABLE ISOLATED DC to DC Transmitter

API 4385 G

Specifications

Input/Output Ranges
See Table Below:

Input Impedance
(Voltage) 1 meg ohm min.
(Current) 50 ohm typical
Input Voltage Burden (Current) 1VDC @ 20mA

Output Capability
(Voltage) +/-10VDC, +/-10mA max.
(Current) 25mADC, 20V Compliance @ 20mA

Isolation
2000V RMS min.

Linearity
Better than .1% of Span.

Response Time
(Standard Unit) 70mSec. typical
(High Speed Unit) 5mSec. typical

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

Zero/Span Control Range
+/-15% typical.

Functional Test Pushbutton
Adjustable from 0 to 100% of Span.
Factory set @ 50% of Span, +/-1.5%.

Output Ripple and Noise
Less than 10mV RMS.

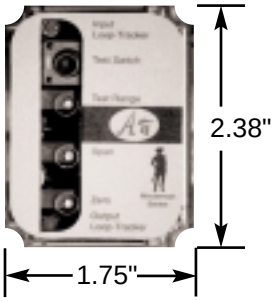
Ambient Temperature Range
-10 to +60 Deg. C (Operating)

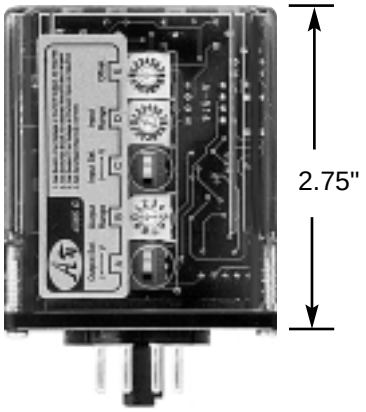
Power
Standard: 115VAC +/-10%, 50/60Hz, 2.5W max.
Optional: 230VAC +/-10%, 50/60Hz, 2.5W max.
* 12VAC +/-10%, 50/60Hz, 2.5W max.
* 24VAC +/-10%, 50/60Hz, 2.5W max.
* 12VDC +/-5%, 125mA max.
* 24VDC +/-5%, 65mA max.
* 9-30VDC @1.5W max.

FEATURES

- **Non-Interactive Zero/Span Controls**
- **Wide Range of Input/Output Parameters**
- **Set-up via Rotary Switches and Easy-to-use Tables without Opening the Case**
- **Reverse Output Capable**
- **2000VRMS Isolation Input/Output/Power**
- **Input/Output LoopTracker™ LED's**
- **Functional Test Pushbutton**
- **LIFETIME WARRANTY**

CASE DIMENSIONS





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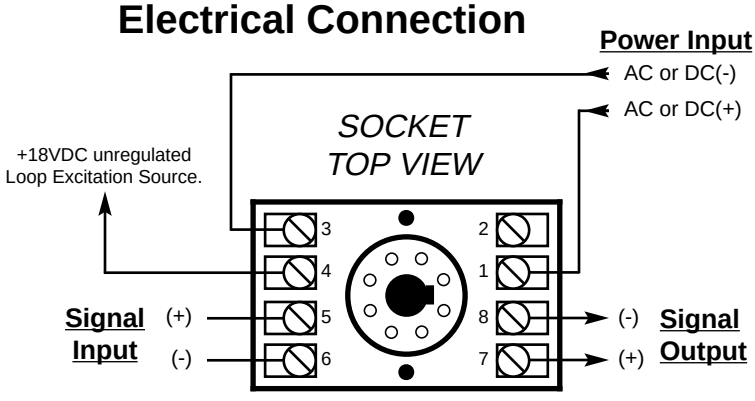
Chart of Common Ranges

Input

Voltage
Min. Span: 50mV
Max. Span: 20V

Current
Min. Span: 200uA
Max. Span: 40mA *

Electrical Connection



* Note: Maximum allowable Offset is 75% (10-50mA is acceptable)

Output

Voltage
Min.: 0 to 1V
Max.: +/- 10V

Current
Min.: 0 to 2mA
Max.: 0 to 20mA

FUNCTIONAL DESCRIPTION

The API 4385 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. 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 4385 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 9-30VDC.

The API 4385 G distinguishes itself from other similar products in that it's Input, Output and Zero Offset can be field-configured (without requiring the case to be opened) via external rotary & slide switches. Zero Offset is adjustable in 15% increments to a maximum of +/-100% of the Span selected. The more common ranges are available from easy to use tables on the module labels; however, virtually unlimited combinations are possible. Once configured, fine-tuning is greatly simplified due to the user-accessible, NON-interactive Zero and Span Adjustments. In addition, output reversals (ie. 4-20mADC In and 20-4mADC out) are possible by changing an internal jumper.

The API 4385 G plugs into an industry standard octal (8-Pin) socket (sold separately). The socket provided by API (part #API-008) allows for either DIN rail or panel mounting.

UNIQUE FEATURES

In addition to the Zero Offset and NON-Interactive Zero & Span Adjustments mentioned above, 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. The Functional Test Pushbutton provides a fixed output (independent of the input) when held depressed. The Test Output level can be field-adjusted via a top-accessible multiturn pot to any value from 0 to 100% of the calibrated range. Both the ***LoopTracker™ LEDs*** and ***Functional Test Pushbutton*** greatly aid in the reduction of time during initial startup and/or troubleshooting.

Also available on the API 4385 G is an unregulated Loop Excitation Supply (+18VDC). This supply can be used to power passive input devices, possibly eliminating the need for an additional external power supply (refer to specs for maximum current drive).

OPERATION

The API 4385 G Input Selector switch determines the input impedance for the module, typically 50 Ohms for current inputs and 1 MegOhms or greater for voltage inputs. Depending on the rotary switch settings, the input is filtered, either amplified or attenuated as required, then passed through an optical isolation circuit to the output stage. The rotary switch settings and Output Selector switch determine the exact DC Voltage or Current Output available to the user.

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 4380 G
Field Rangeable DC to DC Isolating Transmitter.

API 4380 G DF
Same as API 4380 G, 100uSec Response Time.

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

API 4380 G HV
Same as API 4380 G, but High Voltage Inputs up to -/+200VDC.

API 4300 G
Factory ranged DC to DC Isolating Transmitter. Used in applications requiring special offsets and ranges.

API 7500 G
Field Selectable DC to Frequency Isolating Transmitter.

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 Range needs.

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