

Input: -50-0 mV to 20-40 VDC, 0-200 µA to 10-50 mADC
Output: 0-1 V to ±10 VDC or 0-2 mA to 4-20 mA

Wide Ranging I/O
One Minute Setup!

- Non-Interactive Zero & Span
- One Minute Field Setup for Hundreds of I/O Ranges
- Full 2000 V Input/Output/Power Isolation
- Input and Output LoopTracker® LEDs
- Output Test Button
- Built-In Loop Power Supplies for Input and Output

Applications

- Convert, Boost, Rescale Process Signals
- One Model Covers Multiple Applications
- Interface Process Signals with Panel Meters, PLCs, Recorders, Data Acquisition, DCS, and SCADA Systems

DC Input Ranges

See table on other side for field selectable ranges. Consult factory for special ranges. System voltages must not exceed socket voltage rating

Voltage: -50-0 mVDC to 20-40 VDC
 Bipolar voltage: ±50 mVDC to ±10 VDC
 Current: 0-200 µADC to 10-50 mADC
 Offset: ±100% max., ±75% max. for 40 mA input

Input Impedance

Voltage: 1 MΩ minimum
 Current: 50 Ω typical
 Input voltage burden (current) 1 VDC at 20 mA

Common Mode Rejection

120 dB minimum

Input Loop Power Supply

18 VDC nom., unregulated, 25 mADC, max. ripple, <1.5 V_{p-p}
 May be selectively wired for sinking or sourcing mA input

LoopTracker

Variable brightness LEDs indicate I/O loop level and status

DC Output Ranges

See table on other side for field selectable ranges. Consult factory for special ranges. Internal jumper for output reversal

Voltage, 10 mA max.: 0-1 VDC to 0-10 VDC
 Bipolar voltage: ±1 VDC to ±10 VDC
 Current: 0-2 mADC to 0-20 mADC
 20 V compliance, 1000 Ω at 20 mA

Output Calibration

Non-interactive multi-turn zero and span potentiometers
 ±15% of span adjustment range typical

Output Loop Power Supply

20 VDC nominal, regulated, 25 mADC, max. ripple <10 mVRMS

Output Test

Sets output to test level when pressed. Adjustable 0-100% of span. Potentiometer factory set to approx. 50% of span.

Output Ripple and Noise

Less than 10 mVRMS

Linearity

Better than ±0.1% of span

Ambient Temperature Range and Stability

-10°C to +60°C operating ambient
 Better than ±0.02% of span per °C stability, calculated, not tested

Response Time

70 milliseconds typical
 DF option: 5 millisecond typical response time

Isolation

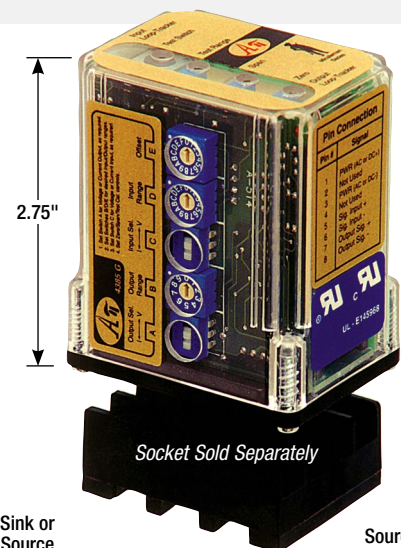
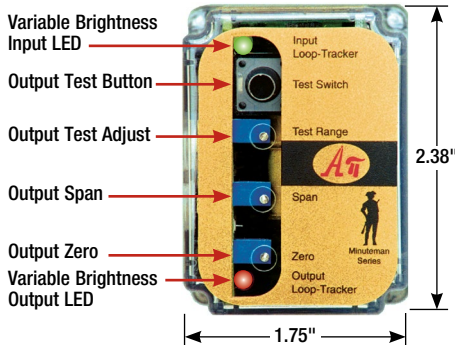
2000 VRMS minimum
 Full isolation: power to input, power to output, input to output

Installation Environment

IP 40, requires installation in panel or enclosure
 Use with API 008 or API 008 FS socket
 Socket mounts to 35 mm DIN rail or can be surface mounted
 UL 508C pollution degree 2 environments or better

Power

Standard: 115 VAC ±10%, 50/60 Hz, 2.5 W max.
 P option: 85-265 VAC 50/60 Hz, 60-300 VDC, 2.5 W
 A230 option: 230 VAC ±10%, 50/60 Hz, 2.5 W max.
 D option: 9-30 VDC, 2.5 W typical



Socket Sold Separately

Sink or Source mA Input

Hot Swappable Plug-In Design

Sourcing mA Output



Quick Link
api-usa.com/4385

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 module power supply is isolated, resulting in full 3-way (input, output, power) isolation.

The API 4385 G input, output and zero offset can be field-configured via external rotary and slide switches. Zero offset is adjustable in 15% increments to a maximum of ±100% of span. Common range settings are on the module label. Non-interactive zero and span adjustments simplifies calibration. Output reversal (4-20 mA input to 20-4 mA output) can be changed via an internal jumper.

The built-in 18 VDC unregulated loop excitation power supply can be used to power passive input devices.

LoopTracker

API exclusive features include two LoopTracker LEDs (green for input, red for output) that vary in intensity with changes in the process input and output signals. These provide a quick visual picture of your process loop at all times and can greatly aid in saving time during initial startup and/or troubleshooting.

Output Test



An API exclusive feature includes the Functional Test Button to provide a fixed output (independent of the input) when held depressed. The test output level can be set via a potentiometer from 0 to 100% of the output span.

The functional test button greatly aids in saving time during initial startup and/or troubleshooting.

Installation

The API 4385 G plug into an industry standard 8-pin octal socket sold separately. Sockets API 008 and finger-safe API 008 FS allow either DIN rail or panel mounting.

The plug-in design, 3-way isolation, and robust electronics allows the module to be quickly hot-swapped without removing the power or I/O signals.

Model	Input	Output	Power
API 4385 G	Field configurable Specify input range if factory is to set switches	Field configurable Specify output range if factory is to set switches	115 VAC 
API 4385 G A230			230 VAC 
API 4385 G P			85-265 VAC or 60-300 VDC
API 4385 G D			9-30 VDC

Free Factory Setup

Specify I/O ranges if factory is to set switches

Options—add to end of model number

- R** I/O reversal, such as 4-20 mA in to 20-4 mA out
- DF** 5 millisecond response time, or consult factory
 DF option will cause output noise levels to be greater than standard specifications.
- U** Conformal coating for moisture resistance

Accessories—order as separate line item

- API 008** 8-pin socket
- API 008 FS** 8-pin finger-safe socket
- API CLP1** Module hold-down spring for high vibration or mobile applications



API 008 FS
300 V Rating



API 008
600 V Rating



API CLP1

