

## Description of Controls

1. **Input LED.** This GREEN Light provides a visual indication that a signal is being sensed by the input circuitry of the module. It also indicates the input signal strength by changing in intensity as the process changes from minimum to maximum. Note: If the LED fails to illuminate, or fails to change in intensity as the process changes, this may indicate a problem with module power or Signal Input Wiring.

2. **Test Pushbutton** When held depressed, will generate a continuous Output Signal independent of the Input Signal. When released, the Output will return to normal. This Output is field adjustable from 0 to 100% of the calibrated Output range via the "Test Range Adjustment" pot. This feature can be used as a system diagnostic aid during initial start-up or during troubleshooting

**EXAMPLE:** If your module is configured for a 4-20 mA DC Input and a 0-1000 Hz Output, pressing the "Test Pushbutton" will generate an output between 0 and 1000 Hz. This Output is independent of the Input and is adjustable via the "Test Range Adjustment" potentiometer. This signal is normally factory set to 50% of the actual Output range.

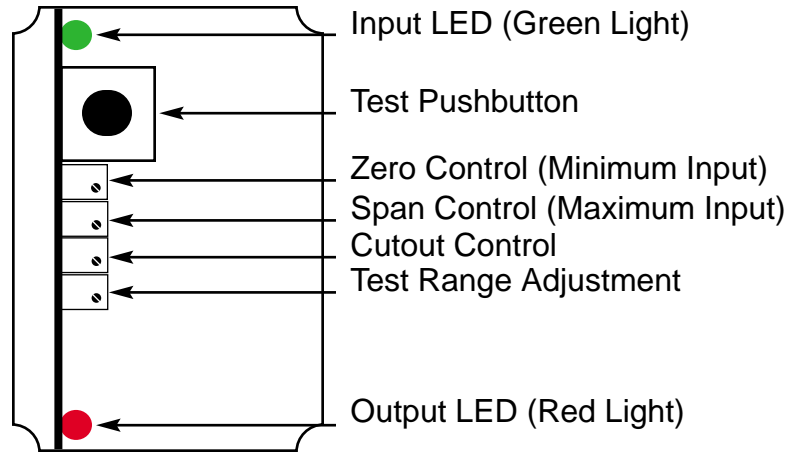


Figure 2

## API 7500 G

3. **Zero Control** Allows for fine adjustments of the **Minimum** Output Signal. The Zero Control should only be adjusted when the Input Signal is at it's minimum potential. This will produce the corresponding minimum Output Signal from your API unit.

**Example:** If you desire a 0-1000 Hz Output Signal, the Zero Control will provide adjustment for the 0 Hz signal.

4. **Span Control** Allows for fine adjustments of the **Maximum** Output Signal. The Span Control should only be adjusted when the Input Signal is at it's maximum potential. This will produce the corresponding maximum Output Signal from your API unit. **Example:** If you desire a 0-1000 Hz Output Signal, the Span Control will provide adjustment for the 1000 Hz signal.

5. **Cutout Control** This multi-turn potentiometer provides the user with a Threshold adjustment. The Input signal must overcome this setting to produce an Output from the unit.

6. **Test Range Adjust** Turning this Multi-turn Potentiometer while holding the Test Pushbutton depressed varies the Output Signal from 0 to 100% of the calibrated Output Range.

7. **Output LED** This RED Light provides a visual indication that a signal is being sensed by the units output circuitry. It also indicates the signal strength by changing in intensity as the input changes from minimum to maximum.

## Ranging Switches

Located on the side of your API unit are three rotary switches and two slide switches which are used to select your desired Input and Output Ranges. There is NEVER a need to open the case. In addition, the module contains Range Tables and Labels designed to assist you in ranging your module.

1. **Input Selector Slide Switch.** This slide switch is the first step in ranging your unit. It allows the operator to select either a Voltage or Current Input. **Example:** If a Current Input is required, the Input selector is placed in the "I" position. If a Voltage Input is needed the switch would be placed in the "V" position.

2. **Output Range Slide Switch.** This slide switch allows the operator to select either HI or LO range. Refer to the frequency output table to determine the correct position for your desired output.

3. **Rotary Range Selector Switches** These switches will provide the selected amount of amplification or attenuation to accomplish the desired range. **Example:** We will set the switches for a 4-20 mA Input and a 0-2 KHz output. Set the Input selector slide switch to the "I" position. Place the output range slide switch to the "HI" position. Locate the desired range from the chart on the side of the unit. Our desired switch code is "3D1". Now rotate switch B(Input Range) to the 3 position, switch C(Input Offset) to the D position and switch D(Output Range 1) to the 1 position. The initial ranging process is now complete and the unit is ready for final Calibration and Installation.

## Range Selection Switches

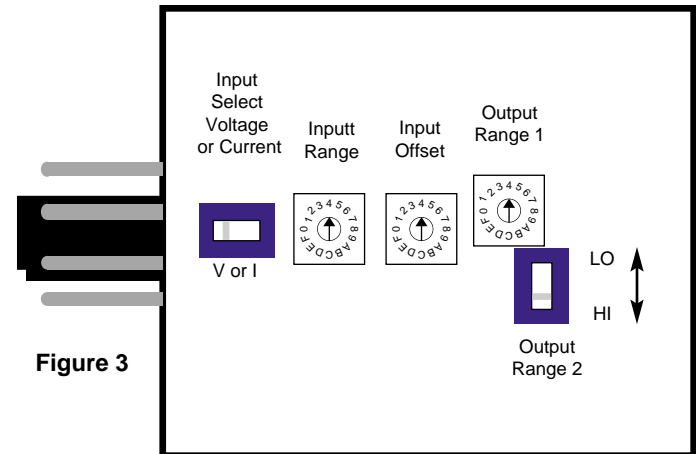


Figure 3

# Electrical Connection

All of us at Absolute Process Instruments place the highest importance on Electrical Safety. To ensure the safety of our customers and their satisfaction with our products, we suggest that all wiring be performed by qualified personnel only. The Electrical Connections are referenced to an Industry standard 8-pin octal socket.

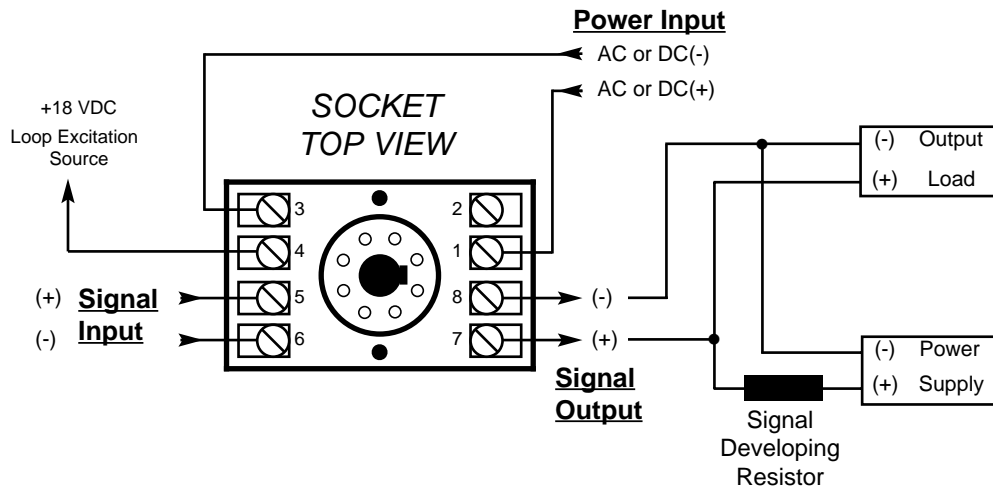
**Power Input Terminals.** Terminals 1 and 3 are wired with the desired AC or DC Power. The white label on the side of your API unit will have the power requirements listed as specified on your purchase order. If your API unit is configured with a 12 or 24 VDC power supply, care must be taken when applying power. Polarity **MUST** be observed when using a DC supply. The positive (+) is applied to terminal 1 and the negative (-) is applied to terminal 3.

**Signal Input Terminals.** Terminals 5 and 6 provide connections for the appropriate Input Signal. Polarity must be observed when connecting the Signal Input. The Positive connection (+) is applied to terminal 5 and the Negative (-) is applied to terminal 6.

**Signal Output Terminals.** Terminals 7 and 8 provide connections for the appropriate Output Signal. Polarity must be observed when connecting the Signal Output to the load. The Positive connection (+) is connected to terminal 7 and the Negative (-) is connected to terminal 8. These are the minimum connections required for the API unit to function correctly.

**NOTE:** As an added standard feature, this module contains an 18 Volt DC Supply that can be used to power a passive Input device such as a Speed Sensor, Proximity Switch, etc.  
**If a Passive Device is not being utilized, Terminal 4 requires no connection.**

## API 7500 G Connections

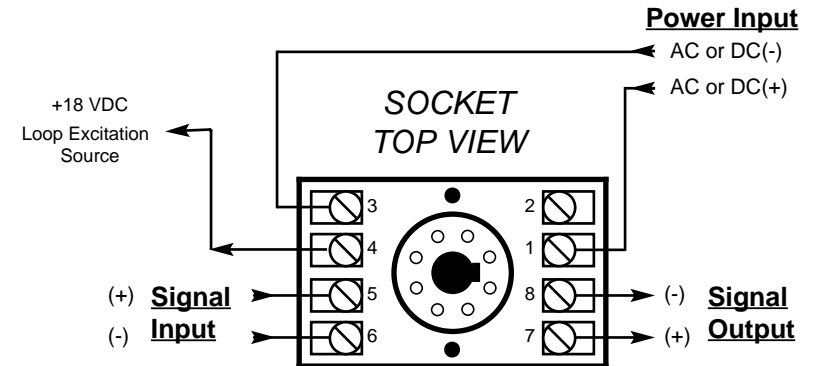


The API 7500G has an open Collector Output, and will require the use of an External Power Supply and a Signal developing resistor. If you are using a 5 VDC power supply, we recommend that you use a 1K ohm resistor. For a 12 VDC power supply, a 2.2K ohm resistor should be used. For a 24 VDC power supply, a 3.3K ohm resistor is required.

### General Calibration:

After the appropriate Range has been selected and the ranging switches have been set, apply the **minimum** input signal and adjust the **Zero** control for the desired output. Apply the **maximum** input signal and adjust the **Span** control for the desired output.

## API 7500 G M02 Connections



The API 7500G M02 is a self contained unit and requires no external power supply or signal developing resistor. This unit will provide a Frequency output with a fixed amplitude of 9 VDC peak to peak.

This output has a maximum current drive capability of 10 mA.

### General Calibration:

After the appropriate Range has been selected and the ranging switches have been set, apply the **minimum** input signal and adjust the **Zero** control for the desired output. Apply the **maximum** input signal and adjust the **Span** control for the desired output.

# Absolute Process Instruments

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