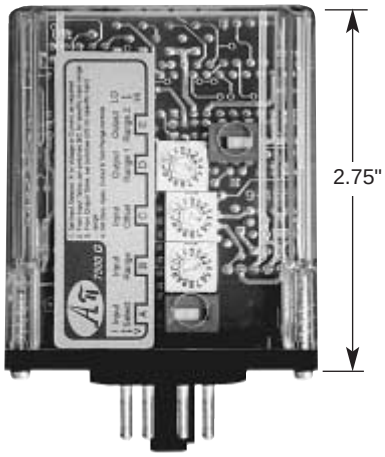
API 7500 G

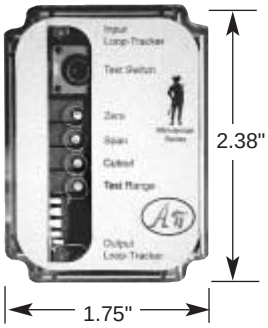
DC to Frequency Transmitter, Isolated

Field Selectable
One Minute Setup!

Input: 0-50 mV to ±10 VDC, 0-1 mA to 4-20 mADC
Output: 0-100 Hz to 0-30 kHz MOSFET or TTL

- *24 Selectable Inputs & 30 Selectable Outputs*
- *Setup via Rotary Switches & Easy-to-use Tables*
- *2000 V Full Isolation Input/Output/Power*
- *Adjustable Low Frequency Cutout*
- *Input and Output LoopTracker® LEDs*
- *Functional Test Pushbutton*





LIFETIME WARRANTY

Free Factory Input & Output Calibration!

Applications

- **Analog to Frequency for Totalizers & Counters**
- **Use With API 7010 G for Remote Monitoring**

Specifications

Input Ranges
Voltage: 0-50 mVDC to ±10 VDC
Current: 0-1 mADC to 0-20 mADC including 4-20 mA
Consult factory for other ranges
System voltages must not exceed socket voltage rating

Input Impedance
Voltage: 1 MΩ minimum Current: 50 Ω typical

Input Loop Power Supply
18 VDC nom., unregulated, 25 mADC, max. ripple, less than 1.5 V_{p-p}

LoopTracker®
Variable brightness LEDs indicate input/output loop level and status

Output Ranges

	Minimum	Maximum	Range Increments
Low range:	0-100 Hz	0-1500 Hz	100 Hz
High range:	0-2 kHz	0-30 kHz	2 kHz

Output Driver
Open drain MOSFET, 24 VDC maximum
I_{sink} 50 mA maximum
V_{on} 0.6 V maximum at 50 mA I_{sink}
Optional 9 V_{p-p} TTL output, specify **M02** option

Output Linearity
Better than ±0.4% of span

Cutout Control
Disables output when input falls below preset level. Adjustable from 2% to 25% of range using top accessible, multi-turn potentiometer.

Output Zero and Span
Multiturn potentiometers to compensate for load and lead variations ±15% of span adjustment range typical

Functional Test Button
Sets output to test level when pressed. Potentiometer factory set to approximately 50% of span, adjustable 2% to 100% of span

Response Time
70 milliseconds typical, consult factory for faster response times

Isolation
2000 V_{RMS} minimum
Full isolation: power to input, power to output, input to output

Ambient Temperature Range
–10°C to +60°C operating

Temperature Stability
Better than ±0.02% of span per °C

Power
Standard: 115 VAC ±10%, 50/60 Hz, 2.5 W max.
A230 option: 230 VAC ±10%, 50/60 Hz, 2.5 W max.
D option: 9-30 VDC, 1.5 W typical

Models and Options

API 7500 G Field rangeable DC to frequency transmitter, isolated, with loop power supply, 115 VAC

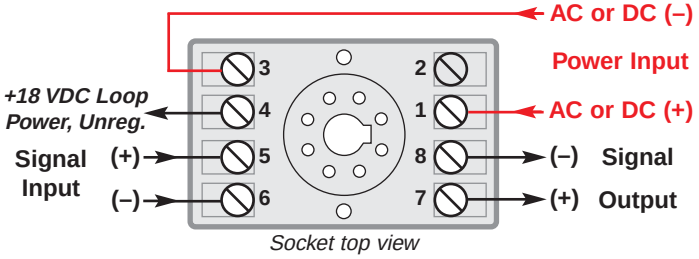
Options—Specify on Order

A230	Powered by 230 VAC, 50/60 Hz
D	Powered by 9-30 VDC
M02	TTL 9 V_{p-p} powered output instead of MOSFET output
U	Conformal coating for moisture resistance

Accessories—See other side

Electrical Connections

*Order **API 008** or **API 008 FS** socket separately*



Socket top view

ABSOLUTE PROCESS INSTRUMENTS, Inc.
Mod-tronic Instruments Limited
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Toll Free: 800 794-5883
www.mod-tronic.com

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API 7500 G Frequency to DC Transmitter

FUNCTIONAL DESCRIPTION

The API 7500 G accepts a DC voltage or current input and provides an optically isolated frequency output that is directly proportional to the input.

Common applications include pulse counting or totalization of DC process signals from devices such as flow transmitters, analog signal transmission over long lines such as telephone wires, or analog inputs into PLCs that accept only discreet inputs.

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 7500 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.

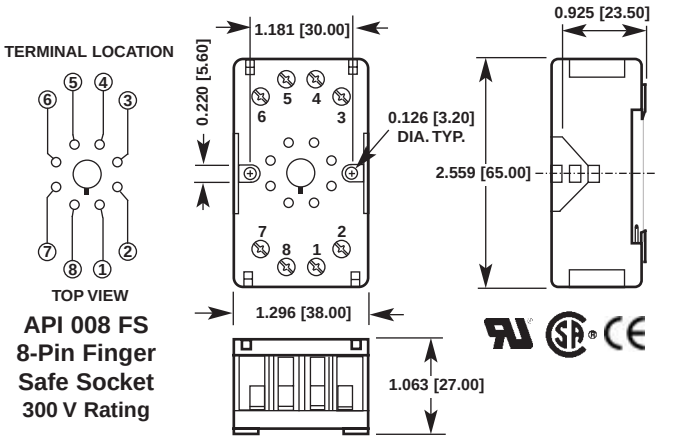
Standard power is 115 VAC. Options include 230 VAC or 9-30 VDC.

The API 7500 G has an open drain MOSFET (open collector) output which requires a user supplied external power supply and pull-up resistor allowing the module to be interfaced with a wide variety of devices. For a 9 V_{p-p} powered output, refer to model API 7500 G M02.

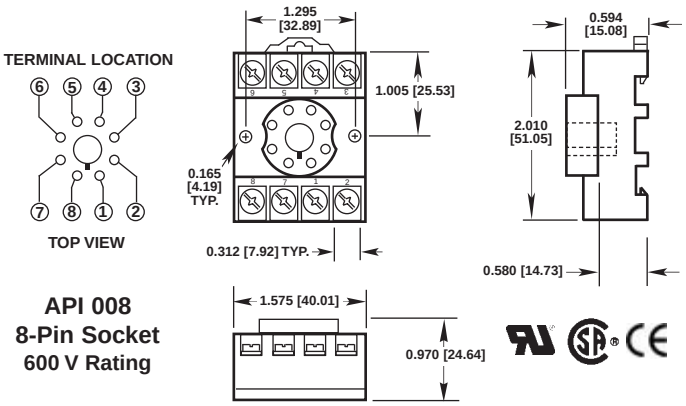
A low frequency cutout potentiometer can be adjusted to disable the output when the input falls below a pre-determined level.

The API 7500 G distinguishes itself from other similar products in that both its input and output can be field-configured without opening the case via external rotary and slide switches. The more common ranges can be selected from the table on the module, however, virtually unlimited combinations are possible. Consult the factory for assistance with special ranges.

The API 7500 G plugs into an industry standard 8-pin socket sold separately. Sockets API 008 and finger-safe API 008 FS allow either DIN rail or panel mounting.



API 008 FS
8-Pin Finger Safe Socket
300 V Rating



API 008
8-Pin Socket
600 V Rating

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 frequency input 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 multiturn potentiometer.

Both the LoopTracker LEDs and functional test pushbutton greatly aid in saving time during initial startup and/or troubleshooting.

An 18 VDC unregulated loop excitation power supply is standard and can be used to power passive input devices.

OPERATION

The API 7500 G input select slide switch determines the input impedance for the module, typically 50 Ω for current inputs and 1 MΩ or greater for voltage inputs.

Depending on the Input Range and Input Offset switch positions, the input is filtered, either amplified or attenuated as required, then passed through an optical isolation circuit to the output stage.

The Output Range 1 and Output Range 2 switches determine the exact frequency available to the user.

RELATED PRODUCTS

The following products are also available. Refer to the appropriate data sheets for details.

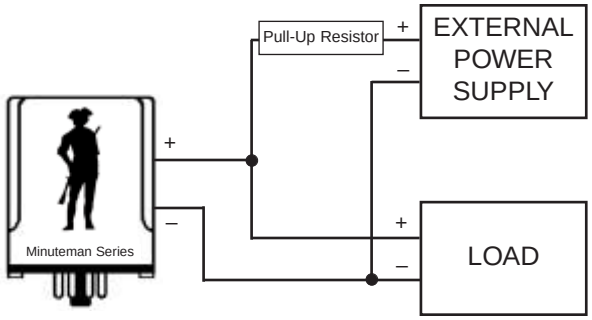
API 7500 G M02
Same as API 7500 G, but 9 V_{p-p} powered output.

API 7500 G SS
Same as API 7500 G, but low frequency outputs.

API 7580 G
Frequency to DC isolating transmitter

ACCESSORIES

API 008	8-pin socket
API 008 FS	8-pin finger safe socket
API TK36	DIN rail, 35 mm W x 39" L, aluminum



The API 7500 G has an open drain MOSFET (open collector) output. requiring a user supplied external power supply and pull-up resistor.

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

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