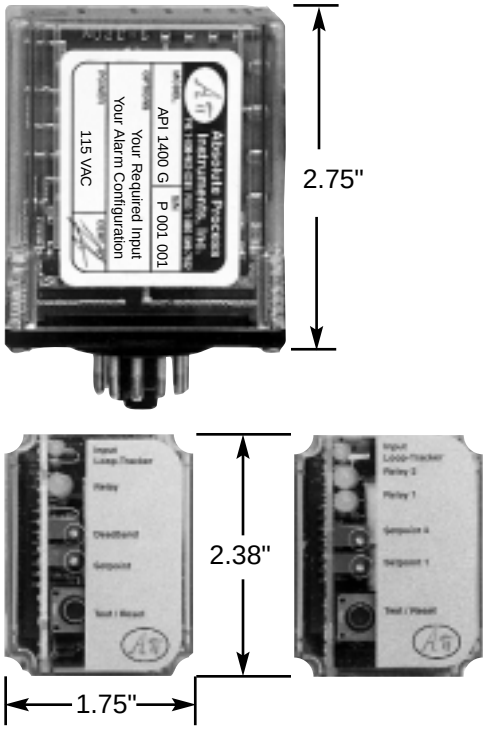
Plug-in Signal Conditioners
RTD Input
API 1400 G
Single Alarm Trip
API 1420 G
Dual Alarm trip

FEATURES

- **Wide Range of RTD Types with Automatic Leadwire Compensation**
- **Two Fully Independent Setpoints on API 1420 G**
- **Input LoopTracker™ LED**
- **Alarm Status LED's**
- **High Capacity Relay Contacts**
- **LIFETIME WARRANTY**

CASE DIMENSIONS



Specifications

RTD Resistance (Factory Configured)
10 Ohm to 2000 Ohm.

RTD Excitation Current
10mA (10 Ohm)
5mA (100 Ohm)
0.5mA (1000 Ohm)
0.2mA (2000 Ohm)

Leadwire Compensation
Less than .05% of Span per 1 Ohm change in leadwire resistance.

Setpoint
12 Turn, Adjustable over 0 to 100% of Span.

Deadband
Api 1400 G Adjustable over 1.0 to 100% of Span. 12 Turn
Api 1420 G Adjustable over 1.0 to 100% of Span. 1 Turn

Response Time
70mSec. typical.

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

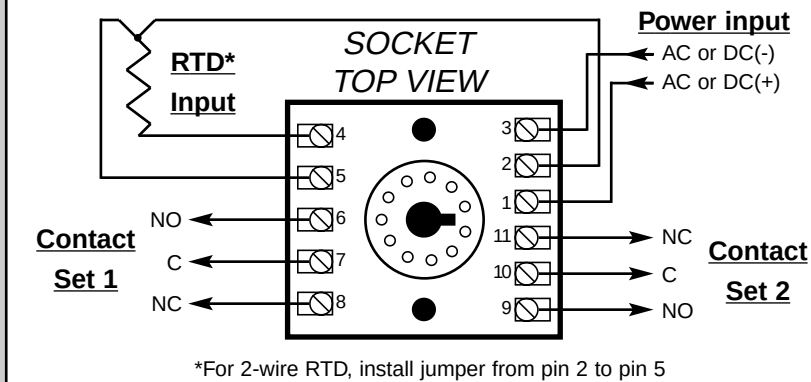
Ambient Temperature Range
-10 to +60 °C (Operating).

Relay
Dual SPDT, 7A contacts @ 240VAC (resistive load), 3.5A contacts @ 240VAC (inductive load) (CAUTION: Socket contacts may limit system rating, and external contact protection is recommended for inductive loads).

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.

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Electrical Connection



*For 2-wire RTD, install jumper from pin 2 to pin 5

FUNCTIONAL DESCRIPTION

The API 1400 G and API 1420 G are factory configured for an RTD or Thermistor Input. The API 1400 G provides a single setpoint adjustment, a visual alarm indication via a bi-color LED and an alarm output via relay contacts (DPDT) when the input exceeds (HI Alarm) or falls below (LO Alarm) a preset level. The API 1420 G contains two independent setpoints with corresponding bi-color LEDs and relay contact outputs (SPDT for each setpoint). The modules can be factory configured for virtually all RTD and Thermistor types and related temperature spans. Consult the factory for assistance with your specific application.

The Alarm Output(s) can be factory configured for HI or LO operation on the API 1400 G and HI/HI, HI/LO, LO/HI or LO/LO operation on the API 1420 G. Non-Latching and Normal Mode (Fail-Safe) operation is standard. However, Latching and/or Reverse Sense (Non-Fail-Safe) options are available. Heavy-duty relay contacts (7A @240VAC, resistive load) allow the module to directly control high capacity loads without a secondary device. Standard module power is 115VAC; options include 230VAC, 12/24 VDC/VAC or 9-30VDC.

A top-accessible, multi-turn potentiometer is available to adjust the alarm setpoint (one for each setpoint on the API 1420 G) from 0-100% of the calibrated input span. The API 1400 G comes standard with a multi-turn deadband potentiometer which allows the alarm "trip & reset" window to be adjusted symmetrically about the setpoint from 1 to 100% of the span. The deadband is fixed at 1% for each setpoint on the API 1420 G. However, independent adjustable deadbands are available as an option. Deadband is typically used to eliminate false trips or alarm "chatter" caused by rapid fluctuations in the process input.

The API-1400 G and API 1420 G plug into an industry standard 11-Pin socket (purchased separately). The socket provided by API (part #API-011) allows for either DIN rail or panel mounting.

UNIQUE FEATURES

API Exclusive Features include a ***LoopTracker™ LED*** which varies in intensity with changes in the process signal, a ***Bi-Color Alarm Status LED*** (Red=Alarm; Green=Normal) (one for each setpoint on the API 1420 G), and a Functional Test Pushbutton which toggles the alarm status independent of the input when depressed. The ***Functional Test Pushbutton*** verifies the alarm and system operation and also provides the additional function of unlatching the alarm if the Latching option was specified.

OPERATION

For a standard configuration, (Normal Mode, Non-latching) the alarm will activate when the process signal (Input) exceeds the setpoint (HI alarm) or falls below the setpoint (LO alarm), then automatically reset when the alarm condition no longer exists. It is important to note that in the Normal (Fail-Safe) mode, the relay coil is *energized* in the *safe* condition and *de-energized* in the *alarm* condition. In the Reverse Sense (Non-Fail-Safe) mode, the relay coil is *de-energized* in the *safe* condition and *energized* in the *alarm* condition. (The Alarm Status LED will always be Green in the non-alarm condition and Red in the alarm condition.) If configured as Latching, it will be necessary to push the Functional Test Pushbutton or remove power from the module to reset the alarm. (Note: the alarm will only reset if the alarm condition no longer exists.)

RELATED PRODUCTS

The following products are also available for use with a RTD Input. Refer to the appropriate data sheets in this section for details.

API 4000 G
T/C or RTD Input to DC Voltage or Current Output. Field Rangeable for Sensor Type, Low & High Temperature Ranges, Deg C or F, DC Voltage or DC Current Outputs.

API 1200 G
Same as API 1400 G, but Thermocouple Input.

API 1220 G
Same as API 1420 G, but Thermocouple Input.

ABSOLUTE PROCESS INSTRUMENTS, Inc.

Proudly Represented By:

MOD-TRONIC INSTRUMENTS LIMITED
48 Haggert Ave N
Brampton, ON L6X 1Y3
Tel: 905 457-6322
Fax: 905 457-4716
Toll Free: 800 794-5883