

# 4-20 mA Input Alarm Trips with Loop Power Supply

**API 1005 G**  
**API 1025 G**



**Input:** 4-20 mA  
**Outputs:** One DPDT Relay or Two SPDT Relays

- Built-In 4-20 mA Loop Power Supply
- Field Adjustable Setpoints
- High Capacity 7 Amp Relay Contacts
- Input LoopTracker® & Alarm Status LEDs
- Alarm Test/Reset Pushbutton

## Applications

- Process Limit Backup Alarm
- Tank Level Alarm
- Over, Under, Out-of-Range Alarm

## Specifications

### Input

4 to 20 mADC

### Input Voltage Burden (Current)

1.25 VDC maximum

### Input Protection, Common Mode

750 VDC or 750 VAC<sub>p</sub>  
System voltages should not exceed socket voltage rating

### Input Loop Power Supply

18 VDC nominal, unregulated, 25 mADC  
Maximum ripple, less than 1.5 V<sub>p-p</sub>

### LoopTracker®

Variable brightness LED indicates input loop level and status

### Relay Output

Factory Configured—See Options for other relay configurations

**API 1005 G** One DPDT contact  
HI alarm, normal action (failsafe), non-latching standard  
7 A @ 240 VAC resistive load  
3.5 A @ 240 VAC inductive load

**API 1025 G** Two SPDT contacts  
HI/LO, normal action (failsafe), non-latching standard  
7 A @ 240 VAC resistive load  
3.5 A @ 240 VAC inductive load

**CAUTION:** Socket voltage rating may limit system rating.  
External contact protection such as an RC snubber is recommended for inductive loads.

### Alarm Setpoint

12 turn potentiometer, field adjustable from 0 to 100% of span

### Deadband

**API 1005 G** 1.0 to 100% of span, 12 turn potentiometer. Alarm trip and reset window are adjusted symmetrically about the setpoint.

**API 1025 G** Fixed at 1% of span, standard

**API 1025 GA** 1.0 to 100% of span, 1 turn potentiometer

### Functional Test/Reset Button

Toggles relay(s) to opposite state when pressed  
Resets latching relay with HT option, available on 1005 G only

### Response Time

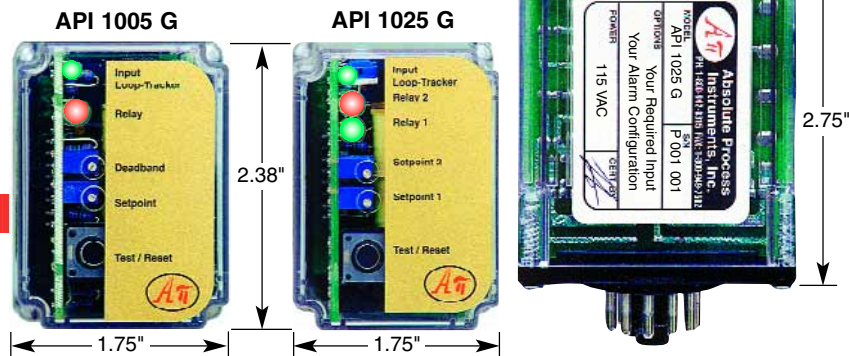
70 milliseconds typical

### Ambient Temperature Range and Temperature Stability

-10°C to +60°C operating ambient  
Better than ±0.02% of span per °C temperature stability

### 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, 2.5 W typical



## Description and Features

The **API 1005 G** and **API 1025 G** are factory configured for 4-20 mADC input and provide alarm contact outputs. These modules include an unregulated 18 VDC loop excitation supply that can be used to power an external loop-powered transmitter or other passive input device eliminating the need for an additional DC loop supply. Heavy duty relay contacts allow the module to directly control high capacity loads.

API exclusive features include a **LoopTracker** LED which varies in intensity with changes in the process signal, alarm status LEDs for each alarm, and a **Functional Test Pushbutton** to toggle the relays independent of the input.

The **API 1005 G** provides a single setpoint adjustment and DPDT relay contacts. The alarm output can be factory configured for HI or LO operation, non-latching or latching, normal (fail-safe) or reverse (non-fail-safe) acting.

The **API 1025 G** contains two independent setpoints with two SPDT relay contact outputs. The alarm output can be factory configured for HI/LO, LO/LO or LO/LO operation, normal acting (fail-safe) or reverse acting (non-fail-safe).

## Models, Options & Accessories

Factory Configured—Please specify input range and options

**API 1005 G** DC input, DPDT HI alarm, normal action, non-latching, 115 VAC

**API 1025 G** DC input, 2 SPDT, HI/LO, normal action, non-latching, 115 VAC

Options—Add to end of model number

- A230** Powered by 230 VAC, 50/60 Hz
- D** Powered by 9-30 VDC
- R** Reverse-acting alarms (non-failsafe)
- L** Low trip (on decreasing signal) for 1005 G
- HT** Latching alarm with pushbutton reset, API 1005 G only
- HP** Latching alarm with power-off reset, API 1005 G only
- A** Adjustable deadbands for 1025 G
- HH** High/High trip for 1025 G instead of High/Low
- LL** Low/Low trip for 1025 G instead of High/Low
- U** Conformal coating for moisture resistance

Accessories—Order as a separate line item

- API 011** 11-pin socket
- API 011 FS** 11-pin finger safe socket
- API TK36** DIN rail, 35 mm W x 39" L, aluminum



1 Delta Park Blvd #12  
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