API Exclusive Features

❑ LoopTracker® LEDs

Variable intensity LEDs monitor I/O status and diagnose connection problems on all API transmitters.

As the process signal increases, the brightness of the LED increases, and as the signal decreases the LED brightness decreases. An open circuit cause the LED to go out. This allows you to diagnose I/O problems quickly and efficiently minimizing system down time.

Input *LoopTracker®* LED

Output *LoopTracker* LED

❑ Transmitter Functional Test Button

The API exclusive Push-to-Test button sends a test signal, independent of the process input, to the output allowing you to manually test your system.

This signal can be used to check loop status, downstream display operation, alarm operation, etc.

On many models this signal is adjustable from 0-100% of span by holding the Test button down and adjusting the Test potentiometer on the unit. On some models the test signal is fixed at 50% of output span.

Most APD series models have terminals to allow to connect your own output test button for remote testing or a manual over ride.

❑ Alarm Functional Test Button

Modules with alarm outputs use bicolor red/green LEDS to indicate an alarm condition.

The API exclusive Push-to-Test button will switch the relay(s) and LED(s) to the opposite state regardless of the input signal level. When released, the module will return to its normal operating state.

With the latching alarm mode or option, pressing the Test button allows the latched alarm to be reset, provided the alarm condition no longer exists for that setpoint.

The test button allows the technician to test the relays, and the operation of the device the relays are controlling.

❑ Isolation

Most API series modules offer 2000 V_{RMS}, 3-way isolation: power/input, power/output, input/output.

APD series modules offer 1200 V_{RMS}, 3-way isolation: power/input, power/output, input/output

❑ The Analog Advantage

- ✔ Continuous response—no stair-stepping
- ✔ Fast, real-time response
- ✔ Fast setup and customized ranges with no loss in performance.

❑ Hot Swappable Design

API plug-in modules can be quickly changed while under power. The socket with wire terminals mounts to your DIN rail and the module simply plugs in. This allows you to swap in a new module with minimal down time.

❑ Module Power

Standard on plug-in modules: 115 VAC ±10%, 50/60 Hz

A230: for plug-in modules: 230 VAC ±10%, 50/60 Hz

P: optional for plug-in modules, standard on APD series 60-265 VAC, 50/60 Hz or 85-300 VDC

D: 9-30 VDC or 10-32 VAC

❑ Fast Delivery

Most products ship one to three days after you place your order. Call us for specific lead times for larger quantities or customized products.

❑ Need a Special Signal Conditioner?

Most products can be customized for your specific requirements. In addition we can supply specialized signal conditioners from our partner companies. Products and applications include programmable temperature devices, LVDTs, speed sensing, pulse conversion, conductivity, salinity, pH and ORP.

❑ Customized Solutions

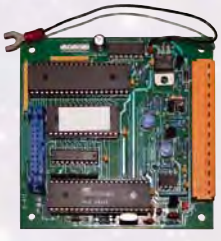
We offer customized and private label solutions for OEMs. We can modify existing designs or offer unique products based on your specifications. Product capabilities range from circuit boards through complete product lines.

Our engineering capabilities include all circuit design, microprocessor programming, software, printed circuit board layout, prototype assembly, qualification testing, and documentation.

Production capabilities include computer controlled SMT and wave soldering equipment allowing us to design and produce our own circuit boards.

We maintain NIST traceable electrical test equipment and pressure calibration systems for production. We are a UL and Factory Mutual inspected shop.

We are often able to quote projects involving as few as 100 units per year. Please contact us to discuss your OEM project.



Custom Circuit Board

Custom Valve Positioner

DuoPak® Two Channel Transmitters, Converters, Isolators

Two independent channels with full isolation in any I/O combination—save space and money!

- *Simultaneous Monitoring of 2 Parameters*
- *Convert/Isolate Dual Output Transmitters*
- *Sink Source mA I/O for Each Channel*

Model	Specify Channel 1 Input	Specify Channel 2 Input	Specify Channel 1 and 2 Outputs
APD 2000	mVDC, VDC or mA	mVDC, VDC or mA	2 independent outputs Specify type and range for each output channel **Channel 1** 0-1 V to 0-10 V, ±1 V to ±10 V, 0-1 mA to 0-25 mA, connect for sinking or 20 V sourcing mA **Channel 2** 0-1 V to 0-10 V, ±1 V to ±10 V, 0-1 mA to 0-25 mA, connect for sinking or 20 V sourcing mA
APD 2001	mVDC, VDC or mA	RTD Ω, curve, °F or °C	
APD 2003	mVDC, VDC or mA	Any full-range potentiometer	
APD 2005	mVDC, VDC or mA	mV/V, excitation voltage	
APD 2006	mVDC, VDC or mA	mVAC, VAC or mAAC	
APD 2007	mVDC, VDC or mA	Hz frequency	
APD 2011	RTD Ω, curve, °F or °C	RTD Ω, curve, °F or °C	
APD 2013	RTD Ω, curve, °F or °C	Any full-range potentiometer	
APD 2015	RTD Ω, curve, °F or °C	mV/V, excitation voltage	
APD 2016	RTD Ω, curve, °F or °C	mVAC, VAC or mAAC	
APD 2017	RTD Ω, curve, °F or °C	Hz frequency	
APD 2033	Any full-range potentiometer	Any full-range potentiometer	
APD 2035	Any full-range potentiometer	mV/V, excitation voltage	
APD 2036	Any full-range potentiometer	mVAC, VAC or mAAC	
APD 2037	Any full-range potentiometer	Hz frequency	
APD 2055	mV/V, excitation voltage	mV/V, excitation voltage	
APD 2056	mV/V, excitation voltage	mVAC, VAC or mAAC	
APD 2057	mV/V, excitation voltage	Hz frequency	
APD 2066	mVAC, VAC or mAAC	mVAC, VAC or mAAC	
APD 2067	mVAC, VAC or mAAC	Hz frequency	
APD 2077	Hz frequency	Hz frequency	

Input Ranges
Factory ranged, please specify for each input channel
mA inputs can be wired for sink our source
15 VDC ±10%, regulated, 25 mADC

Output Ranges
Factory ranged, please specify for each output channel

Output Zero and Span
Multi-turn potentiometers for each output
±15% of span adjustment range

Functional Test Button
Sets output to test level when pressed
Adjustable 0-100% of span

Response Time
70 milliseconds typical

Isolation
5-way isolation: input 1, input 2, output 1, output 2, power,

Info & Applications
api-usa.com/duopak

APD 2000
2 Channel DC to DC

APD 2077
2 Channel Frequency to DC

Free Factory I/O Setup!