API Universal Isolated Transmitters, Field Configurable

TEMPERATURE to DC

- Suports Thermocouple, RTDs and Thermistors
- Zero & Span for Output
- 1200V Isolation
- Input Loop Tracker LED
- 20VDC Supply for Sink/Source Output
- Made in USA, Lifetime Warranty

APD4000

The APD4000 provides an optically isolated & linearized DC voltage or current output. Sensor type, temperature range and output range are field configurable. Linearization uses 41-55 segments or up to a 14th order polynomial. Full 3-way isolation (input, output, power) make this module useful for ground loop elimination, common mode signal rejection, and noise pickup reduction. The low noise 18 bit analog output is isolated and can be set up for common voltage and milliamp output types. A 20 VDC loop excitation supply for the milliamp output can be selectively wired for sinking or sourcing allowing use with a powered or unpowered milliamp device.

SPECIFICATIONS

LoopTracker®:	Variable brightness green LED indicate input level
Test Button:	Front push button switch enables/disables test level output. Adjustable 0-100% of span via front buttons
Response Time:	300 msec typical
Accuracy:	±0.1°C accuracy; 0.001°C resolution (18 bit)
Isolation:	1200 Vrms power/input, power/output, input/output 600 VACp or 600 VDC common mode protection
Temperature:	-10°C to +60°C operating
Power:	85-265 VAC (50/60 Hz), 60-300 VDC standard (3W max); 9-30 VDC,10-32 VAC optional
Dimensions:	0.89" W x 4.62" H x 4.81" D (22.5x117x122 mm)
Thermocouple Input:	J, K, T, E, R, S, N, B, C, D, G, M, P Full ANSI temperature ranges with Automatic CJC
T/C burnout:	Upscale, downscale or last valid output
RTD Input:	2, 3, or 4 wire, 10Ω to 8000Ω RTDs, (4 wire with/without current rotation) Cu-10, Cu-100, Ni-100, Ni-120, Ni-Fe-500, Ni-Fe-1000, Ni-Fe-2000, Pt-10, Pt-25, Pt-50, Pt-100, Pt-200, Pt-470, Pt-500, Pt-1000
Thermistor Input:	44004/44033 2.252kΩ at 25°C 44005/44030 3.000kΩ at 25°C 44007/44034 5.000kΩ at 25°C 44006/44031 10.00kΩ at 25°C 44008/44032 30.00kΩ at 25°C YSI 400 2.252kΩ at 25°C Spectrum 1003k 1kΩ
DC Output:	Voltage: 0-1 V, 0-2 V, 0-4 V, 0-5 V, 1-5 V, 0-8 V, 0-10 V, 2-10 V, ±5 VDC, ±10 VDC Current: 0-2 mA, 0-4 mA, 0-8 mA, 0-10 mA, 2-10 mA, 0-16 mA, 0-20 mA, 4-20 mA 20 V compliance, 1000Ω at 20 mA
Output Adjust:	Zero & span adjustable ±10% via front panel buttons
Output Loop Supply:	20 VDC nom., regulated, 25 mA max.

ORDERING INFORMATION

APD4000	Temperature to DC Transmitter, 85-265VAC/60-300VDC
APD4000D	Temeprature to DC Transmitter, 9-30VDC/10-32VAC
OPTIONS—add to end of model number	
U	Conformal coating for moisture resistance
R	Reverse acting output (factory set only)
NC5	5 point NIST traceable calibration
NC11	11 point NIST traceable calibration
ACCESSORIES—order as a separate line item	
API BP4	Spare removable 4 terminal plug
API TK36	DIN rail, 35 mm W x 39" L, aluminum

PROCESS & TEMPERATURE to DC

- One Model for All Common Sensors
- Zero & Span for Output
- 1200V Isolation
- Input Loop Tracker LED
- Output Test Function
- Loop Supply for Sink/Source Output
- Made in USA, Lifetime Warranty

APD8000

The APD 8000 accepts a DC, potentiometer, thermocouple, RTD or thermistor input and provides an optically isolated & linearized DC voltage or current output. Sensor type, temperature range and output range are field configurable. Linearization uses 41-55 segments or up to a 14th order polynomial. Full 3-way isolation (input, output, power) make this module useful for ground loop elimination, common mode signal rejection, and noise pickup reduction. The low noise 18 bit analog output is isolated and can be set up for common voltage and milliamp output types. A 20 VDC loop excitation supply for the milliamp output can be selectively wired for sinking or sourcing allowing use with a powered or unpowered milliamp device. An API exclusive feature includes a green LoopTracker LED that varies in intensity with the process input signal.

SPECIFICATIONS

LoopTracker®:	Variable brightness green LED indicate input level
Test Button:	Front push button switch enables/disables test level output. Adjustable 0-100% of span via front buttons
Response Time:	300 msec typical
Accuracy:	Temperature In: ±0.1°C accuracy; 0.001°C resolution (18 bit) DC or Pot. Inputs: ±0.1% span accuracy (18 bit resolution)
Isolation:	1200 Vrms power/input, power/output, input/output 600 VACp or 600 VDC common mode protection
Temperature:	-10°C to +60°C operating
Power:	85-265 VAC (50/60 Hz), 60-300 VDC standard (3W max); 9-30 VDC,10-32 VAC optional
Dimensions:	0.89" W x 4.62" H x 4.81" D (22.5x117x122 mm)
DC Volts Input:	35 ranges from ±25 mVDC to ±10 VDC
DC mA Input:	20 ranges from ±0.5 mADC to ±20 mADC
Potentiometer In:	100Ω to 1 MΩ; 1, 2, or 4 volt excitation
Thermocouple Input:	J, K, T, E, R, S, N, B, C, D, G, M, P Full ANSI temperature ranges with Automatic CJC
T/C burnout:	Upscale, downscale or last valid output
RTD Input:	2, 3, or 4 wire, 10Ω to 8000Ω RTDs, (4 wire with/without current rotation) Cu-10, Cu-100, Ni-100, Ni-120, Ni-Fe-500, Ni-Fe-1000, Ni-Fe-2000, Pt-10, Pt-25, Pt-50, Pt-100, Pt-200, Pt-470, Pt-500, Pt-1000
Thermistor Input:	44004/44033 2.252kΩ at 25°C 44005/44030 3.000kΩ at 25°C 44007/44034 5.000kΩ at 25°C 44006/44031 10.00kΩ at 25°C 44008/44032 30.00kΩ at 25°C YSI 400 2.252kΩ at 25°C Spectrum 1003k 1kΩ
DC Output:	Voltage: 0-1 V, 0-2 V, 0-4 V, 0-5 V, 1-5 V, 0-8 V, 0-10 V, 2-10 V, ±5 VDC, ±10 VDC Current: 0-2 mA, 0-4 mA, 0-8 mA, 0-10 mA, 2-10 mA, 0-16 mA, 0-20 mA, 4-20 mA 20 V compliance, 1000Ω at 20 mA
Output Adjust:	Zero & span adjustable ±10% via front panel buttons
Output Loop Supply:	20 VDC nom., regulated, 25 mA max.

ORDERING INFORMATION

APD8000	Universal Input to DC Transmitter, 85-265VAC/60-300VDC
APD8000D	Universal Input to DC Transmitter, 9-30VDC/10-32VAC
Options & Accessories - See API4000 Ordering Information	