

AccuPak

Plug-in Style Signal Conditioners and Alarms



- SIGNAL CONDITIONERS & ISOLATORS
- DUAL ALARM TRIP MODULES
- MATH FUNCTION MODULES
- INDUSTRY STANDARD DESIGNS
- SPECIAL RANGES AVAILABLE

PLUG-IN DESIGN

Industry Standard 8-pin and 11-pin Octal Socket mounting

100% COMPATIBILITY

Guaranteed Replacements for Action Instruments, API, Wilkerson, and others

WIDE RANGING

Field Configurable & Factory Configured Units Available

FULL ISOLATION

All Units provide greater than 1000VAC (rms) 3-way Isolation (Input/Output/Power)

HIGH ACCURACY

Overall Accuracy better than 0.1% of full scale. (Linearity $\pm 0.05\%$)

HIGH OUTPUT DRIVE

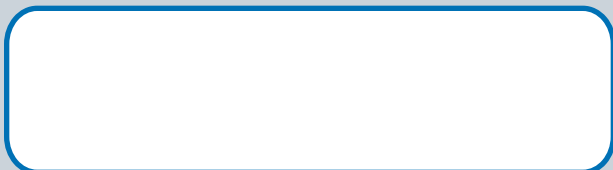
All Conditioners capable of driving a minimum of 1200 Ω (@ 20mA)

INDUSTRIAL SPECS

Operating Temperature Range: -10°C to +60°C

LIFETIME WARRANTY

Guaranteed no charge replacement under normal use



TECHNICAL SPECIFICATIONS

AccuPak Plug-in Style Signal Conditioners and Alarm Modules

AP4380-2000 DC-to-DC Conditioner (Wide Ranging)



Input Range (full scale): 10mV to 220V, 1mA to 100mA
 Output Ranges: 0-5V, 1-5V, 0-10V, 2-10V, 0-1mA, 0-20mA, and 4-20mA
 Linearity: 0.05% of span, or better
 Response Time: < 100mS
 Isolation (Vrms): Power: 1,500V, I/O: 1,000V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP4300 High Accuracy DC-to-DC Conditioner



Input Range (full scale): Voltage: $\pm 250V$ max.
 Current: $\pm 5A$ max.
 Output Ranges: Voltage: -10V to +15V max.
 Current: 0-25mA max.
 Adjustability: $\pm 15\%$ of factory set range
 Accuracy: 0.1% of span, or better
 Response Time: < 100mS
 Isolation (Vrms): Power: 1,500V, I/O: 1,000V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP7380 Frequency-to-DC Conditioner (Wide Ranging)



Input Range (full scale): 0-10Hz to 0-100,000 Hz
 Input Amplitude : 50mV to 350V peak
 Output Ranges: 0-1V, $\pm 1V$, 0-2V, 0-5V, 1-5V, 0-10V, $\pm 10V$, 0-1mA, 1-5mA, 0-10mA, 0-20mA, 4-20mA
 Linearity : 0.05% of span, or better
 Sensor Excitation : 18Vdc, unregulated
 Isolation (Vrms) : Power: 1,500V, I/O: 1000V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP4400 Math Function Modules



AP4400: Add/Subtract Module (specify 2 to 4 inputs)
 AP4410: 2-channel DC input Multiplier (A x B)
 AP4420: 2-channel DC input Divider (A / B)
 AP4430: 2-channel DC input Squarer (A²)
 AP4440: DC input Square Root Extractor
 Input Range (all units): $\pm 20V$ or $\pm 100mA$, max.
 Output Range (all units): -10V to +15V, 0-25mA, max.
 General Specifications of AP4300 apply to all modules

AP1090 DC Input Dual Limit Alarm (Wide Ranging)



Input Range (full scale): 0-5V, 0-10V, 4-20mA
 Relay Output(s): (2) SPST (5A@230VAC or 30VDC)
 HI/LO/FAILSAFE: Switch selectable
 Setpoint Adjustment: 0-100%
 Deadband Adjustment: 0.25% to 100%
 Response Time: < 100mS
 Isolation (Vrms): Power & Relay Contacts: 1,500V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP6010/6020 AC Voltage/Current-to-DC Conditioners



Input Range (full scale): Voltage (6010): 50mV to 250V
 Current (6020): 1mA to 5A
 Input Frequency: 40Hz to 1000Hz
 Output Ranges: Voltage: -10V to +15V max.
 Current: 0-25mA max.
 Adjustability: $\pm 15\%$ of factory set range
 Accuracy: 0.1% of span, or better
 Response Time: < 100mS
 Isolation (Vrms): Power: 1,500V, I/O: 1,000V

AP4001 RTD-to-DC Signal Conditioner



Input Range (full scale): any RTD from 10 Ω to 2000 Ω
 Output Ranges: (2, 3 or 4 wire configurations)
 Voltage: -10V to +15V max.
 Current: 0-25mA max.
 Adjustability: $\pm 15\%$ of factory set range
 Accuracy: 0.1% of span, or better
 Response Time: < 100mS
 Isolation (Vrms): Power: 1,500V, I/O: 1,000V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP1020 DC Input Dual Limit Alarm



Input Range (full scale): $\pm 250V$ or $\pm 5A$, max.
 Relay Output(s): (2) SPST (5A@230VAC or 30VDC)
 HI/LO/FAILSAFE: Switch selectable
 Setpoint Adjustment: 0-100%
 Deadband Adjustment: 0.25% to 100%
 Response Time: < 100mS
 Isolation (Vrms): Power & Relay Contacts: 1,500V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP4003 Potentiometer-to-DC Signal Conditioner



Input Range (full scale): any pot, 100 Ω to 100K Ω
 Output Ranges: Voltage: -10V to +15V max.
 Current: 0-25mA max.
 Adjustability: $\pm 15\%$ of factory set range
 Accuracy: 0.1% of span, or better
 Response Time: < 100mS
 Isolation (Vrms): Power: 1,500V, I/O: 1,000V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP1220 Thermocouple Input Dual Limit Alarm



Input Range (full scale): Any Standard TC type (consult)
 Relay Output(s): (2) SPST (5A@230VAC or 30VDC)
 HI/LO/FAILSAFE: Switch selectable
 Setpoint Adjustment: 0-100%
 Deadband Adjustment: 0.25% to 100%
 Response Time: < 100mS
 Isolation (Vrms): Power & Relay Contacts: 1,500V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP4051 Strain Gauge-to-DC Signal Conditioner



Input Range (full scale): 0.4mV/V to 1V/V (10V excitation)
 Excitation: 4V to 12VDC, 40mA max. load
 Output Ranges: Voltage: -10V to +15V max.
 Current: 0-25mA max.
 Adjustability: $\pm 15\%$ of factory set range
 Accuracy: 0.1% of span, or better
 Response Time: < 100mS
 Isolation (Vrms): Power: 1,500V, I/O: 1,000V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP1420 RTD Input Dual Limit Alarm



Input Range (full scale): Any 2,3 or 4-wire RTD (consult)
 Relay Output(s): (2) SPST (5A@230VAC or 30VDC)
 HI/LO/FAILSAFE: Switch selectable
 Setpoint Adjustment: 0-100%
 Deadband Adjustment: 0.25% to 100%
 Response Time: < 100mS
 Isolation (Vrms): Power & Relay Contacts: 1,500V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP4130 Thermocouple-to-DC Conditioner



Input (TC) Types: J,K,T,E,R,S,B or N
 Output Ranges: Voltage: -10V to +15V max.
 Current: 0-25mA max.
 Burnout Detection: Upscale/Downscale (jumper set)
 Adjustability: $\pm 15\%$ of factory set range
 Accuracy: 0.1% of span, or better
 Response Time: < 100mS
 Isolation (Vrms): Power: 1,500V, I/O: 1,000V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better

AP1620 AC Input Dual Limit Alarm



Input Range (full scale): 5250V or $\pm 5A$, max.
 Relay Output(s): (2) SPST (5A@230VAC or 30VDC)
 HI/LO/FAILSAFE: Switch selectable
 Setpoint Adjustment: 0-100%
 Deadband Adjustment: 0.25% to 100%
 Response Time: < 100mS
 Isolation (Vrms): Power & Relay Contacts: 1,500V
 Temperature Stability: $\pm 0.02\%$ of span/ $^{\circ}$ C, or better