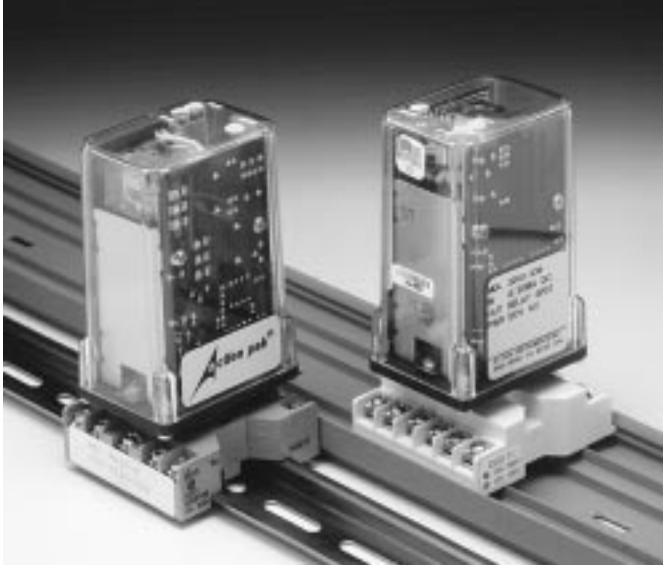


# Action Pak

## Valve-Positioner/Controller

### Model AP3200



#### Positions a motorized valve relative to a slidewire or DC feedback input

- 100 ohm through 100K ohm slidewires
- SPDT Center-Off Relay Contact Output
- Adjustable Differential
- Flow Control Applications
- Easy Plug-in Installation/Low Mean-Time-to-Repair
- AC Line Powered
- Three Year Warranty

#### APPLICATION

The AP3200 is useful in controlling a motorized valve, damper or any other electrical equipment that requires feedback On/Off control. The constant voltage excitation of the AP3200 allows use with feedback potentiometers or slidewires with total resistances from 100 to 100K ohms. DC feedback ranges, such as 4-20mA, are available. Consult factory.

#### OPTION

**U** Urethane coating of internal circuitry for protection from corrosive atmospheres

#### CALIBRATION

Top-accessed screwdriver adjustments provides typical  $\pm 10\%$  zero and span adjustability. Calibration is referred to input and the adjustments are to correct for input/sensor variations. Zero is adjusted to position the valve fully closed

with the control signal input at its minimum. Span is adjusted to position the valve fully open with the control signal input at its maximum.

*Differential.* Differential is top-accessed and is typically adjustable from 1 to 25% of span. To adjust the differential, begin with the Diff adjustment fully CW. Apply a mid-range control signal input and allow the valve position to stabilize.

Adjust Diff CCW until the valve begins to oscillate, then turn Diff CW until the oscillations just stop.

*Factory Assistance.* For additional information on calibration, operation and installation please contact Action's Technical Services Group. Call:

703-669-1318

#### RELAY PROTECTION

For maximum relay life with inductive loads, external contact protection is required. For DC inductive loads, place a diode across the load (1N4006 or equivalent) with cathode to (+) and anode to (-) (see Figure A). For AC inductive loads, place a varistor across the load along with AC rated 240VAC 0.1uf film capacitor in series with 1/2W 47 ohm resistor (see Figure B), or a MOV.

## INPUT RANGES

**Table 1: 3200 Standard Inputs**

0-1V	1-5V	4-20mA
0-5V	0-10V	10-50mA

**Table 2: 3200 Input Limits**

Minimum Span		Maximum Input	
Voltage	Current	Voltage	Current
100mV	1mA	250V	1A

## SPECIFICATIONS

### Input Impedance (Control)

Voltage Input  
100K, minimum  
Current Input  
20ohms, max.

### Slidewire Resistance (End-to-End)

100ohms to 100K ohms

### Slidewire Excitation

500mV, typical

### Stability

Less than 1% of span over rated temperature range

### Differential (Deadband)

Adjustable, 1 to 25% of span

### Response Time (To Relay Closure)

150 milliseconds, typical

### Relay Contacts

Isolated SPDT center-off contacts  
Current Rating (resistive)

120VAC: 5A  
240VAC: 2.5A  
28VDC: 5A

Material: Silver-Cadmium Oxide  
Electrical Life: 10<sup>5</sup> operations  
rated load

Note: External protection is required for use with non-resistive loads. See text.

### Temperature Range

Operating: 0 to 60 °C (32 to 140°F)  
Storage: -20 to 85 °C (-4 to 185°F)

### Power

Consumption: 3W typical, 5W maximum  
Standard: 120VAC ±10%, 50 to 400Hz

Optional: 100VAC, 220VAC, 240VAC

## PIN CONNECTIONS

AP3200

1. AC Power (Hot)
2. Shield (Gnd)
3. AC Power (Neu)
4. Control Input (+)
5. Control Input (-)
6. Pot CCW/(-)(close)
7. Pot W/(+)
8. Pot CW/(Vref) (open)
9. Common Relay Contacts
10. 'Close' Relay Contacts
11. 'Open' Relay Contacts

## MOUNTING

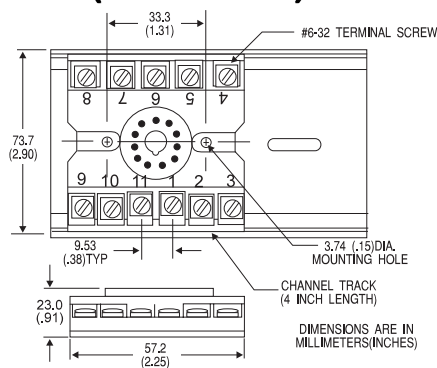
Model AP3200 uses an 11-pin base. All Action Paks feature plug-in installation, using either molded socket (M011) or DIN rail socket (MD11).

## ORDERING INFORMATION

### Specify:

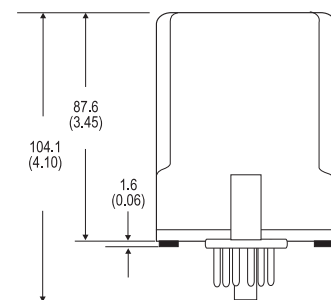
1. Model AP3200
  2. Input Range, see Tables 1, 2
  3. Option: U, see text
  4. Line Power, see specifications.
- (All power supplies are transformer-isolated from the internal circuitry.)

### M011 (Track/Surface)

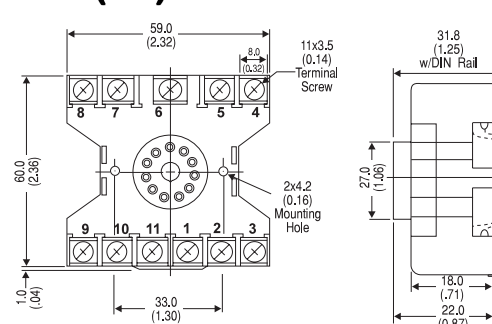


## DIMENSIONS

Dimensions in millimeters (inches)



### MD11 (DIN)



All Prices and Specifications subject to change without notice

For order entry, applications or customer service assistance, call 703-669-1318

### United States

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FAX: 703-669-1300

721-0093-00-N 1/08

  
**ACTION INSTRUMENTS**  
...the Industrial I/O Company