

## 43AP Series Pneumatic Indicating Controllers

43AP

- **Wide Selection of Direct Connected Measurement Elements**
- **Broad Choice of Control Modes**
  - On/off, proportional, proportional plus derivative, proportional plus integral (reset), proportional plus integral (reset) plus derivative, differential gap, and automatic shutdown
- **Internal Bumpless Auto/Manual Transfer**
  - Smooth internal switching
- **Weatherproof**
  - Glass-fiber reinforced case, gasketed door
  - NEMA Type 3 protection
- **Accuracy Unaffected by Mounting**
  - Measurement element and control unit mounted on rigid steel plate



The 43AP Series Pneumatic Indicating Controllers continuously indicate and control pressure, vacuum, temperature, or flow.

For complete specifications, refer to Product Specification Sheet PSS 3-1B3 A.

### Functional Specifications

**Control Modes:**

See "HOW TO ORDER."

**Measurement Elements:**

See "HOW TO ORDER."

**Output Gauge:**

0 to 200 kPa, 0 to 30 psi, or 0 to 2 bar or kg/cm<sup>2</sup>, as specified.

**Set Point Adjustment:**

By means of a knob mounted inside the case.

**Controller Action:**

Output signal either increases or decreases with increasing measurement, as specified; action is reversible in the field.

**Supply Pressure:**

140 kPa, 20 psi, 1.4 bar or kg/cm<sup>2</sup>.

**Output Signal:**

See "HOW TO ORDER."

**Ambient Temperature Limits:**

-40 and +80°C (-40 and +180°F).

### Performance Specifications

**Accuracy** (When used with the elements as listed under "HOW TO ORDER"):  $\pm 0.5\%$  of calibrated span.

**Repeatability:**

0.2% of calibrated span.

### Physical Specifications

**Mounting:**

Panel, surface, pipe, or yoke. Panel: Flush in a panel up to 16 mm (0.6 in) thick.

Surface: suitable for all controllers having internally mounted elements. This mounting is not available with heavy duty helical elements. (These elements extend through the back of the case.)

Pipe: a kit of parts to fit a DN 50 or 2 in vertical pipe.

Yoke: a kit of parts to fit a vertical DN 50 or 2 in pipe stub. This mounting scheme is designed specifically for controllers having rear-mounted differential pressure elements.

## Physical Specifications (continued)

**Enclosure:**

The case and door are glass-fiber reinforced polyester moldings, compounded for superior corrosion resistance. The door has a shatterproof polycarbonate window, ultraviolet-resistant. The overall construction is weatherproof, meets IEC IP53, and provides the environmental protection of NEMA Type 3.

**Scale:**

Black markings on a white background, sector-shaped with nominal effective length of 150 mm (6 in). Refer to Chart and Dial Catalog 600 for available ranges.

## Optional Features

**Integral Air Supply Set.**

**Type 70 Contacts:**

For electrical contact output. Refer to Page 57.

**Control Valve Mounting.**

**External Connection to Integral (Reset) Bellows (ECRB) .**

**External Set Point.**

**Batch:**

For batch control.

**Vent Connection.**

**External Phenolic Nameplate.**

**Glass Window in Door.**

**Stainless Steel Data Plate.**

**Tamperproof Door Knob.**

## How to Order

**1) SPECIFY MODEL NUMBER: 43AP-**

**Mounting:**

Field (pipe or yoke)..... F  
 Panel or surface..... P

**Control:**

On/Off..... A1  
 Proportional 4 to 400% ..... A2  
 Proportional plus derivative 0.05 to 50 minutes..... A3  
 Proportional plus integral (reset) 0.01 to 50 minutes per repeat..... A4  
 Proportional plus integral (reset) plus derivative ..... A5  
 Differential gap 1 to 100%..... A7  
 Automatic shutdown..... A8

**Output Signal and Gauge:**

20 to 100 kPa signal, 200 kPa gauge ..... 5  
 3 to 15 psi signal, 30 psi gauge ..... 2  
 0.2 to 1.0 bar signal, 2 bar gauge ..... 6  
 0.2 to 1.0 kg/cm<sup>2</sup> signal, 2 kg/cm<sup>2</sup> gauge..... 4

**Automatic/Manual Internal Transfer Switching:**

None ..... N  
 Bumpless with 2-position switch, balance gauge, regulator ..... C  
 2-position nozzle seal switch for manual control..... D

**Optional Suffix:**

Remote pneumatic set point (not available with pressure element codes PA-CA, PA-CC, PB-CA, PB-GA, PB-PF; servo element code E; Type 70 Contacts; or options ECRB and "BATCH")..... P

HOW TO ORDER Continued on Next Page.

## How to Order (continued)

**1) SPECIFY MODEL NUMBER: 43AP-**

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**Elements:** (Refer to Pages 48-56 for Element Descriptions)

Type 37 (43AP-F only) .....	DE-A, B
Absolute pressure bellows .....	PA-CA, CC
Absolute pressure double spiral.....	PA-MA
Pressure helical.....	PB-AA
Pressure spiral .....	PB-BA
Pressure bellows .....	PB-CA, CC
Diaphragm .....	PB-DF, PF
Stainless long helical (43AP-F only).....	PB-GA
Receiver .....	PC
Temperature .....	TA-1A, 2A, 2B, 3B
Electronic servo .....	E

**2) SPECIFY CONTROLLER ACTION** \_\_\_\_\_

**3) SPECIFY OPTIONAL FEATURES** \_\_\_\_\_

**4) SPECIFY INFORMATION FOR INSTRUMENT TAG AND APPLICATION** \_\_\_\_\_