EP5 Electropneumatic positioner

Product Information
**EP5 Electropneumatic Positioner**

**EP5**

- Modular, sturdy, simple, reliable design.
- Tapped exhaust port.
- Easy to add on Feedback Unit F5.
- Simple calibration, external zero adjustment.
- High gain pilot valve.
- Built in gauge ports.
- Bright visible indicator, flat or Dome style.
- Stainless steel cam.

1. Gauge ports
2. Filter plug
3. Spool valve (High performance or Normal Gain)
4. Simple calibration of span & zero
5. IP converter
6. Simple cam locking
7. Stainless cam
### Technical data

**Deadband**

< 0.15%

**Input signal**

4–20 mA

**Linearity**

< 1%*

**Hysteresis**

< 0.75%*

**Repeatability**

< 0.5%*

**Air supply**

Max. 1 MPa/150 Psi, oil, water and dust free

Min. 0.14 MPa/21 Psi

**Connector threads**

1/4" NPT or G (BSP)

**Gauge threads**

1/8" NPT or G (BSP)

**Conduit entry**

1/2" NPT or M20 x 1.5

**Terminals**

2.5 mm² (AWG 14) Screw terminals

**Gain factor at: 600 KPa/87 Psi**

<table>
<thead>
<tr>
<th>High Performance Version</th>
<th>Normal Gain Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min: 1000 KPa/KPa</td>
<td>Min: 450 KPa/KPa</td>
</tr>
<tr>
<td>Min: 66%/% ISA S75.13-1989</td>
<td>Min: 30%/%</td>
</tr>
</tbody>
</table>

**Max. air consumption at supply pressure:**

<table>
<thead>
<tr>
<th>Supply Pressure</th>
<th>High Performance Version</th>
<th>Normal Gain Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 MPa/29 Psi</td>
<td>6.1 nl/min (0.22 SCFM)</td>
<td>2.7 nl/min (0.1 SCFM)</td>
</tr>
<tr>
<td>0.4 MPa/58 Psi</td>
<td>13.6 nl/min (0.48 SCFM)</td>
<td>6.1 nl/min (0.21 SCFM)</td>
</tr>
<tr>
<td>0.6 MPa/87 Psi</td>
<td>22 nl/min (0.78 SCFM)</td>
<td>9.9 nl/min (0.35 SCFM)</td>
</tr>
<tr>
<td>0.8 MPa/116 Psi</td>
<td>30.5 nl/min (1.08 SCFM)</td>
<td>13.7 nl/min (0.48 SCFM)</td>
</tr>
<tr>
<td>1 MPa/145 Psi</td>
<td>39 nl/min (1.38 SCFM)</td>
<td>17.5 nl/min (0.62 SCFM)</td>
</tr>
</tbody>
</table>

**Min. air delivery at supply pressure:**

<table>
<thead>
<tr>
<th>Supply Pressure</th>
<th>High Performance Version</th>
<th>Normal Gain Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 MPa/29 Psi</td>
<td>200 nl/min (6.9 SCFM)</td>
<td>154 nl/min (5.5 SCFM)</td>
</tr>
<tr>
<td>0.4 MPa/58 Psi</td>
<td>370 nl/min (12.8 SCFM)</td>
<td>288 nl/min (10.1 SCFM)</td>
</tr>
<tr>
<td>0.6 MPa/87 Psi</td>
<td>540 nl/min (18.8 SCFM)</td>
<td>421 nl/min (14.8 SCFM)</td>
</tr>
<tr>
<td>0.8 MPa/116 Psi</td>
<td>710 nl/min (24.7 SCFM)</td>
<td>553 nl/min (19.4 SCFM)</td>
</tr>
<tr>
<td>1 MPa/145 Psi</td>
<td>880 nl/min (30.6 SCFM)</td>
<td>686 nl/min (24 SCFM)</td>
</tr>
</tbody>
</table>

**Input impedance**

170–260 Ohms at 20°C (71°F)

**RFI influence**

Negligible

**Position sensitivity**

None

**Supply pressure effect**

0.5%/0.1 MPa (15 Psi)

**Temperature range**

–20°C to +85°C (–4°F to +185°F)

**Low temp option**

–40°C to +85°C (–40°F to +185°F)

**Weight**

1.5 kg/3.4 lbs

**Housing**

Die cast aluminum

**Surface treatment**

ED Epoxy paint, black

**Fasteners**

A2/A4 Stainless

**Ingress protection**

IP 66/NEMA 4

**Approvals**

<table>
<thead>
<tr>
<th>ATEX</th>
<th>Intrinsically safe</th>
<th>EEX ia IIC T4–T6 (II 1 G)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flameproof</strong></td>
<td>EEX d IIB+H2 T4–T6 (II 2 G)</td>
<td>Non-electrical device PS (II 1 G)</td>
</tr>
<tr>
<td>FM</td>
<td>Intrinsically safe</td>
<td>Div.1, Class 1 Group ABCD</td>
</tr>
<tr>
<td><strong>Explosion proof</strong></td>
<td>Div.1, Class 1 Group BCD</td>
<td></td>
</tr>
<tr>
<td>CSA</td>
<td>Intrinsically safe</td>
<td>Div.1, Class 1 Group ABCD</td>
</tr>
<tr>
<td><strong>Explosion proof</strong></td>
<td>Div.1, Class 1,2,3 Group BCDEFG</td>
<td></td>
</tr>
</tbody>
</table>

* Percent of full scale

** UP in round housing
Modular

- EP5 For all normal applications
- EP5-EX Explosion proof
- EP5-FS Fail freeze
- EP5-IS Intrinsically safe

EP5 Series Coding

**Model**
- EPSXX EP5 Double acting pneumatic
- EPSFS Fail freeze function
- EPSIS Intrinsically safe, ATEX, FM, CSA
- EPSEX Explosion proof ATEX

**Spool valve**
- HP High performance
- LB Normal Gain

**Connections**
- N NPT ¼"-, EI ½" NPT
- G ¼" air, M20 x 1.5 electric
- M NPT ¼" air, M20 x 1.5 electric

**Surface treatment**
- U Epoxy coating
- M Tufram

**Spindle**
- 01, 23 etc 01 to 39. See dwg SPNLS_P5

**Cam**
- K01, K08 etc K01 to K34

**Front cover**
- PV9DA* 90°, Direct, arrow indicator

**Input signal**
- 4 4-20 mA input

**Temperature**
- N Nitrile seals –20°C to +85°C
- Q Silicon seals –40°C to +85°C

*For 30, 45, 60 deg rotation, change PV9 to PV3, PV4 or PV6

**Example**
- EPSXXX-HPN6-23K01-PV9DA-4Z

Cams

K1

K3

K8
Spindles

Dimensions drawings (mm)
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Hazardous Locations

Intrinsically safe:
ATEX EEX ia IIC, T4–T6    II 1 G CSA, FM Class 1, Div 1, Group ABD

Explosion proof:
ATEX EEX d IIB+H2, T4–T6     II 2 G CSA, FM Div 1, Class 1, 2 & 3 Group ACDEFG

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