VPPC10 - 3-way proportional valve pressure controlled
Electronic closed loop control

> Nominal diameter 6 ,
> Flange version G1/4
> Compact and lightweight design
> Control from 0 bar
> Free of self heating
> Indirect controlled 3-way proportional pressure control valve
> Visual function display in scope of delivery
> Field bus capable as part of a valve island
> Variable connection block technology
> RoHS compliant

Technical features

Medium:
Filtered (30 µm min), un lubricated and condensate-free compressed air

Ambient:
Valve series is designed for indoor use at normal industrial ambient

Operating pressure:
P1 max.: 11 bar (159 psi)
P2: 0 ... 10 bar (0 ... 145 psi)

Connection:
Flange version with connecting plate G1/4

Flow:
Max. 1600 Nl/min.
Flowrate see characteristics

Air consumption:
< 1.5 N l/min

Linearity:
< 2.5 %

Control accuracy:
< 0.1 %

Repeat accuracy:
< 0.2 % (p2 max.)

Hysteresis:
< 0.2 %

Degree of protection:
IP 65 with connected plug

Ambient/Media temperature:
-5°C ... +50°C (+23 ... +122°F)

(Compressed air)

(Condensed permitted)

0°C ... +50°C (+32 ... +122°F)

(Ambient)

Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

Materials:
Valve housing:
Anodized aluminium and plastic

Fluid affected parts: Brass, plastic spring steel, elastomer

Note:
After the supply voltage is switched off, the output pressure set last is vented to 0 bar

Electromagnetic compatibility: (EMV):
Immunity EN 61000-6-2
Emission EN 61000-6-4

Technical data, standard models

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Outlet pressure (bar)</th>
<th>Set point input</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 ... 10</td>
<td>0 ... 10 V</td>
<td>VPPC10BC111KE000</td>
</tr>
<tr>
<td></td>
<td>0 ... 10</td>
<td>4 ... 20 mA</td>
<td>VPPC10BC411KE000</td>
</tr>
</tbody>
</table>

Option selector

<table>
<thead>
<tr>
<th>Set point</th>
<th>Substitute</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ... 10 V d.c</td>
<td>1</td>
</tr>
<tr>
<td>4 ... 20 mA</td>
<td>4</td>
</tr>
</tbody>
</table>
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**Electrical parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply voltage</td>
<td>24 V d.c. ± 10 %</td>
</tr>
<tr>
<td>Residual ripple</td>
<td>10 % max.</td>
</tr>
<tr>
<td>Current consumption</td>
<td>30 mA</td>
</tr>
<tr>
<td>Nominal power</td>
<td>0.7 W max.</td>
</tr>
</tbody>
</table>

**Pneumatic parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet pressure p₁ max.</td>
<td>11 bar</td>
</tr>
<tr>
<td>Outlet pressure p₂ max.</td>
<td>10 bar</td>
</tr>
<tr>
<td>Flow</td>
<td>see characteristics</td>
</tr>
</tbody>
</table>

**Inputs (signal) ‘w’**

- Voltage signal UE: 0 ... 10 V d.c.
- Input resistance RE: > 55 kΩ
- Current signal IE: 4 ... 20 mA
- Burden: 500 Ω
- Max. input voltage: 11 V d.c.

**Outputs (signal) ‘x’**

- Voltage signal of pneumatic output pressure UA: 0 ... 10 V d.c. = 0 ... p₂ max
- Output current max. IA: 1 mA

**Connection plates and Accessories**

- Single connection plate: 0252624
- Mounting kit: 0252626

**Connecting plugs**

- Straight connector M12 x 1: 0252622 (5-pin, A coded, 5 m cable, 5 x 0.34 mm²)
- 90° connector M12 x 1: 0250081 (5-pin, A coded, 5 m cable, 5 x 0.34 mm²)
- 0252563 (5-pin, A coded, wireable, straight)
- 0250472 (5-pin, A coded, 10 m cable, 5 x 0.34 mm²)
- 0252543 (5-pin, A coded, wireable)

**Electrical diagram**

- Proportional pressure with electronic closed loop control
- Pin-No. | Function   |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>+UB</td>
</tr>
<tr>
<td>2</td>
<td>w</td>
</tr>
<tr>
<td>3</td>
<td>SGnd</td>
</tr>
<tr>
<td>4</td>
<td>PGnd</td>
</tr>
<tr>
<td>5</td>
<td>x</td>
</tr>
</tbody>
</table>

- Chassis (earth) | Protective ground
Pneumatic characteristic curves
Static characteristics

Characteristic curves
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Basic dimensions

Single connection plate (option to use as a manifold sub-base)
Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under "Technical features/data".

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.