Miniature pilot valve for the VUVG to expand the MHA1 series

**Small and inexpensive**

Extremely small, fast, flexible and durable – that sums up the pilot valve of the VUVG. Its size makes it ideal in tight spaces and it comes complete with vacuum functions. Its reliability, even during 24-hour operation and with 100% duty cycles, is exemplary. It is used in medical devices as well as for liquid handling in laboratory automation.

**Proven technology**
The normally closed 3/2-way valve is really worth the money. Customers who already use the VUVG get double the benefit, as having E-boxes and cables that are identical to the VUVG further reduces their management and warehousing costs.

**Fast and miniaturised**
With switching times of approx. 5 ms and a flow rate of 10 l/min, the valve is both fast and small and can also easily accommodate vacuum functions. The 100% duty cycle and the three-shift operation guarantee maximum cost-effectiveness.

**Extremely versatile**
Individual valves can be linked via a pneumatic sub-base, with electrical connections horizontal, on top and with flying leads.

**Area of application**
It is used wherever a basic switching valve for gases is required. For example, it can be used in medical devices for switching pneumatically operated instruments or in laboratory automation to switch pressure on fluids.

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**Highlights**
- Proven technology
- Holding current reduction
- Can be used for gases
- Degree of protection IP40
- Suitable for vacuum
- Highly visible LED
- Supplied pre-assembled and tested on request
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to expand the MHA1 series

Configuration examples

Individual sub-base valve with
E-box VAVE-...-LR with holding
current reduction and LED in
IP40.

Individual valves, pre-mounted
on a PR manifold (individual
connection).

Range for E-boxes for the variant to IP40

Extremely versatile thanks to
electrical connections in three
different directions.

VAVE-L1-...-LR
E-Box with holding current reduction
...-1S2-LR
...-1H2-LR
...-1S3-LR
...-1H3-LR
...-1L1-LR
...-1L3-LR
...-1L2-LR
...-1L4-LR

VAVE-L1-...-LP
E-Box without holding current
reduction
...-1VS2-LP
...-1VH2-LP
...-1VS3-LP
...-1VH3-LP
...-1VL1-LP
...-1VL2-LP
...-1VL3-LP
...-1VL4-LP

Technical data

<table>
<thead>
<tr>
<th>Function</th>
<th>3/2 NC, manual override (push/lock)</th>
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<tbody>
<tr>
<td>Input pressure [bar]</td>
<td>0 … 8 (relative) vacuum on request</td>
</tr>
<tr>
<td>Bursting pressure [bar]</td>
<td>40</td>
</tr>
<tr>
<td>Pressure port 1 [mm DN]</td>
<td>0.65</td>
</tr>
<tr>
<td>Flow rate 1 → 2 [l/min]</td>
<td>10 l/min at 6 bar (ΔP = 1 bar), 4 l/min at 2 bar (ΔP = 1 bar)</td>
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<tr>
<td>Exhaust port 3 [mm DN]</td>
<td>0.7</td>
</tr>
<tr>
<td>Flow rate 2 → 3 [l/min]</td>
<td>11 at 6 bar (ΔP = 1 bar)</td>
</tr>
<tr>
<td>Electrical interface</td>
<td>24 V DC, 1.1 W (0.35 W with holding current reduction), 100% duty cycle</td>
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<tr>
<td>Other voltages as part of the MHA1 series</td>
<td></td>
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<tr>
<td>Switching time [ms]</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Max. switching frequency [Hz]</td>
<td>10</td>
</tr>
<tr>
<td>Leakage [l/h]</td>
<td>&lt;0.5</td>
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<tr>
<td>Media</td>
<td>Air, inert gases</td>
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<tr>
<td>Size with E-box [mm]</td>
<td>28.5 x 20 x 10</td>
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<tr>
<td>Protection class</td>
<td>IP40</td>
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