

## RLP 10 F902: Pneumatic volume-flow transducer

Used in conjunction with an orifice plate or a dynamic pressure sensor for registering the actual value of the air volume, e.g. the output signal of the transducer in the exhaust air is used as the command variable of a volume-flow controller in the supply air. Conforms to the regulations on pressure equipment (97/23/EG Art. 3.3).

Baseplate of thermoplastic; front plate uninscribed; control action A; suitable for mounting onto walls or rails (C-EN 50024 and EN 50022, accessory). Must not be fitted standing on its side. Compressed-air connection Rp 1/8 with female thread. Low-pressure connections: 2 stepped push-on connectors for soft plastic tubing (internal Ø 4 and 6 mm).

Type	Description	Measuring range Volume flow % $\dot{V}$	Measuring range Pressure diff. <sup>1)</sup> Pa	Weight kg
<b>RLP 10 F902</b>	–	20...100	10...250	0.2
Output pressure	0.2...1.0 bar	Response sensitivity		0.1 Pa
Usable range $p_{stat}$	0...3 kPa	Linearity; accuracy of root extraction <sup>2)</sup>		2%
Permissible pressure (low-pressure connections)	10 kPa			
Supply pressure <sup>3)</sup>	1.3 bar $\pm$ 0.1	Permissible amb. temp.		0...55 °C
Air capacity	330 l <sub>n</sub> /h	Connection diagram		<a href="#">A02889</a>
Air consumption	19 l <sub>n</sub> /h	Dimension drawing		<a href="#">M297240</a>
		Fitting instructions		<a href="#">MV 505678</a>

### Accessories

**0297354 000\*** Short screw-type connector (Rp 1/8) for soft plastic tubing, internal Ø 4 mm; 2 pcs required

**0296936 000\*** Fixing bracket for rail EN 50022, 35 × 7.5 and 35 × 15

<sup>\*)</sup> Dimension drawing or wiring diagram are available under the same number

1) Factory setting 10...250 Pa. Using the XYP 3 test unit, the range can be altered from 5...125 Pa (E = 0.7) to 20...500 Pa (E = 1.4).

2) The percentages refer to 100% air volume.

3) See Section 60 on regulations concerning the quality of supply air, especially at low ambient temperatures.

### Operation

The pressure difference (10...250 Pa) created at the orifice plate of dynamic pressure sensor is converted by the root-extracting transducer into a fluidic-linear standard signal (0.2...1.0 bar). The output signal at connection 2 is, therefore, proportional to either the air volume or the air speed.

### Technical information

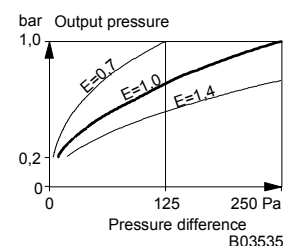
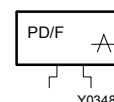
Technical manual: VAV 7 000 621 003

### Engineering and fitting notes

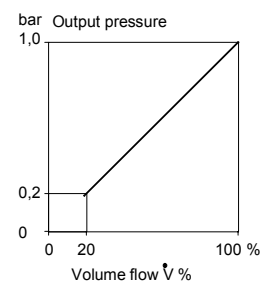
The unit should not be fitted standing on its side.



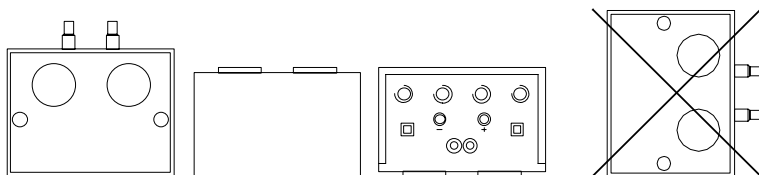
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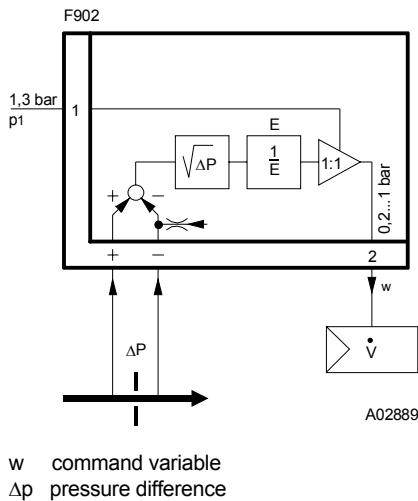


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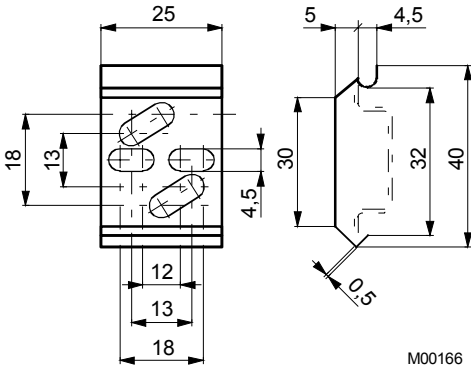
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Connection diagram



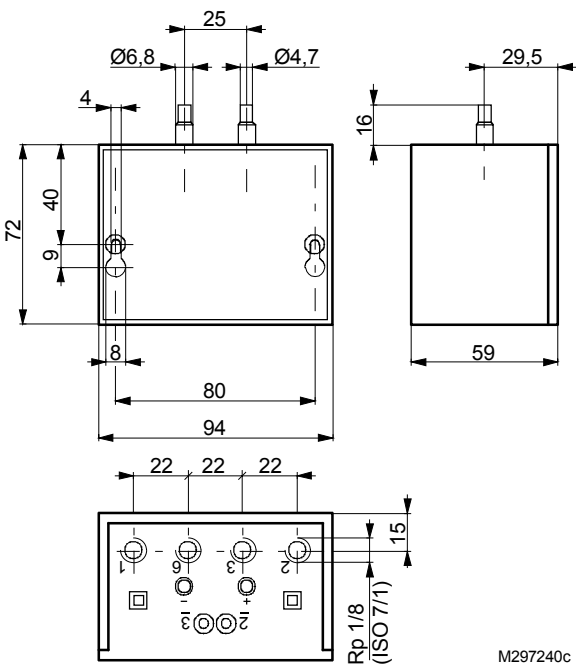
Accessories

296936



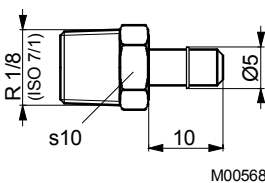
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Dimension drawing



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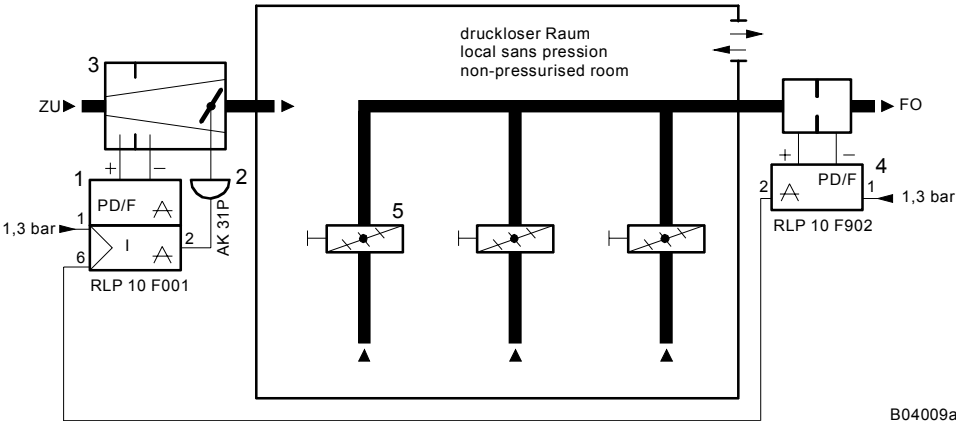
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Example of use

Control facility for variable air volume with transducer for 'open' rooms. The output signal of the transducer in the return air is used as the command signal for the VAV controller in the supply air.



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- |   |                        |
|---|------------------------|
| 1 | Volume-flow controller |
| 2 | Damper drive           |
| 3 | Pressure-release unit  |

- |    |                        |
|----|------------------------|
| 4  | Volume-flow transducer |
| 5  | Manual damper          |
| FO | EA (exhaust air)       |
| ZU | SA ( supply air)       |