



Pressure sensors for static measurement in conjunction with controllers VRP and VRP-STP

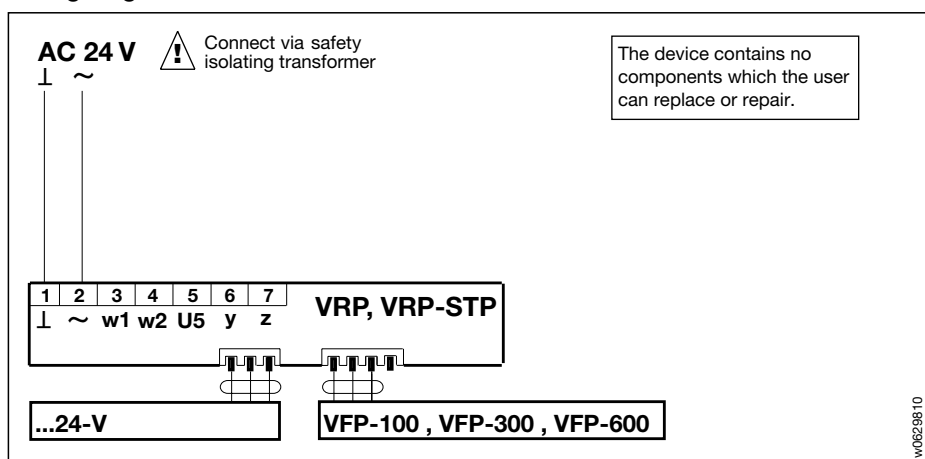
Application

The pressure sensors VFP-... are used for measurement of static differential pressure. The sensors form together with the controllers VRP or VRP-STP and the Belimo ...24-V actuators a closed control loop for the VAV resp. pressure control in air conditioning systems. The VFP...-sensors are also suitable for applications where contaminated or slightly aggressive air is present.

Mode of operation

The sensor uses a highly sophisticated metal membrane. The measured pressure produces a movement of the membrane which is detected by a sensing head and then converted into an output signal proportional to the pressure. The mounting position has an influence on the measuring signal which is a product of the weight of the membrane. The sensor is calibrated in vertical position (factory-fitted), but it can be readjusted on site if necessary.

Wiring diagram



Technical data	VFP-100	VFP-300	VFP-600
Nominal voltage	DC 15 V (from controller VRP...)		
Nominal voltage range	DC 13.5...16.5 V		
Measuring range	0...100 Pa	0...300 Pa	0...600 Pa
	(zero points adjustable)		
Overload-proof	up to 500 Pa	up to 5000 Pa	up to 3000 Pa
Measuring principle	Measurement of differ. pressure by membrane (inductive)		
Output signal	DC 0...10 V (proportional to pressure for controllers VRP...)		
Linearity	± 1% of end value (FS)		
Hysteresis	0.1% typ.		
Temperature dependence			
• Zero point	± 0.1%/K	± 0.05%/K	± 0.1%/K
• Measuring range	± 0.1%/K		
	t = + 10...+ 40 °C (reference temperature t ₀ = 25 °C)		
Mounting position	vertical (i.e. connection nozzles up, sideways or down)		
Position dependence	max. ± 4.5 Pa at 90° rotation on horizontal spindle		
Pressure connection	connection nozzles for pipe with internal ø 4...6 mm		
Electrical connection	Cable 1m long, fitted with 4 pole connectors for VRP...		
Protection class	III safety extra-low voltage		
Degree of protection	IP42		
Ambient temperature range	0... + 50 °C		
Storage temperature range	- 10... + 70 °C		
Humidity test	to EN 60730-1		
EMC	CE according to 89/336/EEC		
Mode of operation	Typ 1 (EN 60730-1)		
Weight	ca. 500 g	ca. 280 g	ca. 280 g

Dimensions

