



p0041707

Pressure controller for static differential pressure sensor VFP...

Application

The VAV-Universal VRP-STP forms together with the static pressure sensor VFP-... and the ...-24-V actuators a closed pressure control loop. The VRP-STP controller is designed for use on variable pressure systems when the pressure is regulated linearly and not as function of volumetric flow.

Thanks to the static pressure sensor, the unit can also be used for the control of contaminated and slightly aggressive air. Since it can be combined with many different types of actuators, the VRP-STP can be used with different sizes of dampers.

Operation

In the VRP-STP controller, the pressure measured by the sensor VFP-... is compared with the setpoint. If there is any deviation between the two, the damper actuator ...-24-V adjusts the position of the damper until the setpoint is reached.

Adjustments

Of pressure setpoint at place of use:
The setpoint can be adjusted by means of the potentiometer $\Delta p\%$ within a range from 30 to 100%.

Of pressure setpoint from external:
The setpoint can be adjusted externally with a reference signal w1 of DC 0...10 V from an external setpoint transmitter (e. g. SG...24). Zero adjustment of sensor according to page 7.

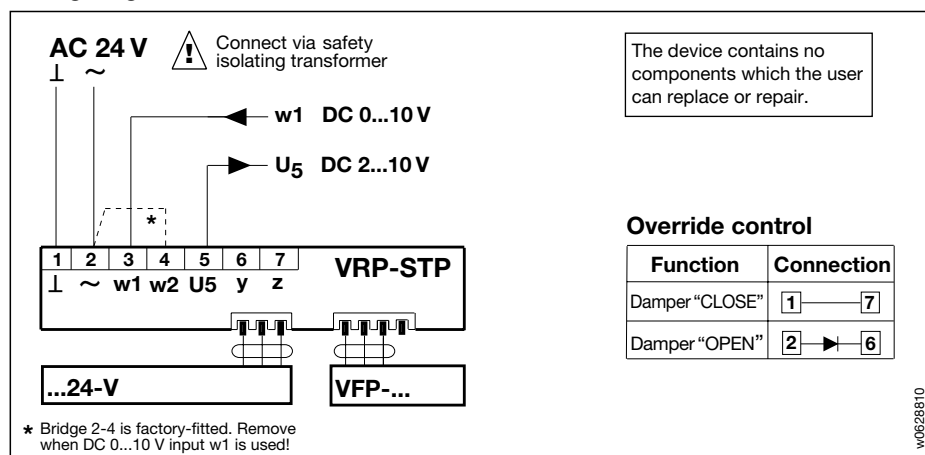
Static pressure sensors

VFP-100 (0...100 Pa), VFP-300 (0...300 Pa)
VFP-600 (0...600 Pa)

Damper actuators

NM24-V, SM24-V, AM24-V, GM24-V,
LF24-V, AF24-V

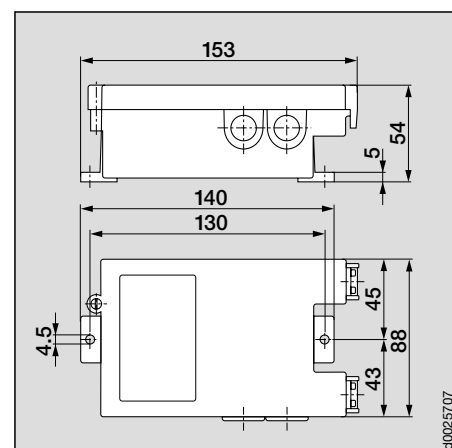
Wiring diagram



w0628810

Technical data	VRP-STP
Nominal voltage	AC 24 V 50/60 Hz
Nominal voltage range	AC 19.2...28.8 V
Power consumption	1.3 W (incl. sensor VFP-..., without damper actuator)
For wire sizing	2.6 VA (incl. sensor VFP-..., without damper actuator)
Reference value w1	DC 0...10 V @ input resistance 100 k Ω
Operating range	DC 2...10 V
Actual-value signal U5	DC 2...10 V @ max. 0.5 mA (Signal linear, corresponds to 0...100% Δp)
Adjusting ranges	
• Reference value	25...100% sensor reference signal (factory setting = 100%, e.g. VFP-300: 100% = 300 Pa)
• Setpoint	30...100% of reference value (Δp)
Connection	Screw terminals for 2 x 1.5 mm ²
Protection class	III safety extra-low voltage
Degree of protection	IP40
Ambient temperature range	0... +50 °C
Storage temperature range	-20... +80 °C
Humidity test	to EN 60730-1
EMC	CE according to 89/336/EEC
Mode of operation	Type 1 (EN 60730-1)
Weight	approx. 400 g (without pressure sensor)

Dimensions



d0025707