

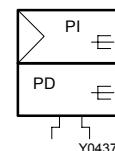
RLE 150 F100: Room-pressure controller

Proportional-integral controller for controlling the over- and/or under-pressure in sealed and relatively-sealed rooms. Using the output signal of $5 \pm 5 \text{ V}$, the setpoint of the VAV controller (RLE 152 F0..) is corrected in input 14/15 in relation to the pressure.

Baseplate of glass-fibre-reinforced plastic with high-sensitivity pressure sensor; plastic front plate with adjusting knobs and sealable snap-on lid of transparent plastic; electrical connection via screw terminals for cable of up to 2.5 mm^2 ; cable inlet with grommet for cable of up to $\text{Ø } 8 \text{ mm}$; two-step push-on connector for the two low-pressure connections (+/-), using soft plastic tubing of 4 or 6 mm internal diameter; suitable for mounting vertically onto either walls or top-hat rails as per EN 50022.



T07271



Type	Setting range span = 100% ¹⁾	Voltage	Weight [kg]
RLE 150 F100	-50...+50 Pa	24 V~	0.8
Supply voltage	24 V~	Max. over-pressure	$\pm 5 \text{ kPa}$
Power consumption	2 VA	Operating pressure p_{stat}	$\pm 3 \text{ kPa}$
P-band	50...700%	Permissible ambient temp.	0...40 °C
Reset time	0.5...8 min	Permissible ambient humidity	< 90 %rh
Measuring span	40...100% Δp	Degree of protection	IP 44 (EN 60529)
Linearity	2% of 10 V-	Wiring diagrams	A04330
Remote setpoint adjustment	$5 \pm 5 \text{ V-}$, $R_i = 100 \text{ k}\Omega$	Dimension drawing	M01104
Outputs ²⁾		Fitting instructions	MV 505118
Actual-value signal	$5 \pm 5 \text{ V-}$, load > 5 k Ω		
Command signal $w_3 \text{ A}$, $w_3 \text{ B}$	$5 \pm 5 \text{ V-}$, load > 5 k Ω		

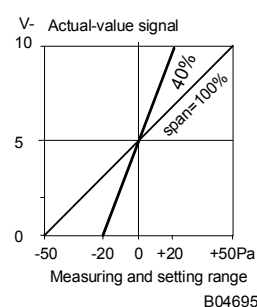
Accessories

0297867 001* Reference pressure container

¹⁾ Dimension drawing or wiring diagram are available under the same number

¹⁾ Using the adjuster, the span can be reduced to -20...+20 Pa.

²⁾ Protected against short-circuits and over-voltage up to 24 V~.



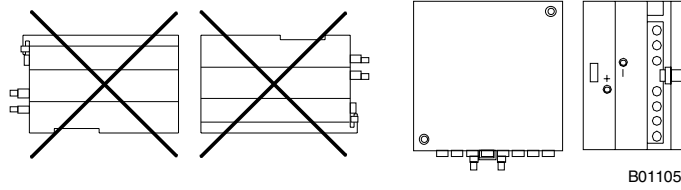
Operation

The pressure difference Δp is converted by a pressure sensor into a linear signal and can be indicated at connection no. 3. Using the *span* adjuster, the measuring range can be reduced from -50...+50 Pa to -20...+20 Pa. Using the zero adjuster, the zero point of the pressure sensor can be set. The actual value x_i is compared with the setpoint X_s and the difference is fed to the PI-controller as the control deviation. The setting range of the setpoint adjuster is 0...10 V- and is, therefore, always the same size as the pressure sensor's measuring range. The setpoint can also be set via an external voltage of 0...10 V- at connection no. 7. The internal setpoint adjuster then acts as a minimum limiter.

N.B.: The room pressure should always be connected at the '+' connection (even in the case of under-pressure control). The change from over- to under-pressure control occurs exclusively as a result of the level of the setpoint.

Engineering and fitting notes

The controller should be fitted on vertical walls only.

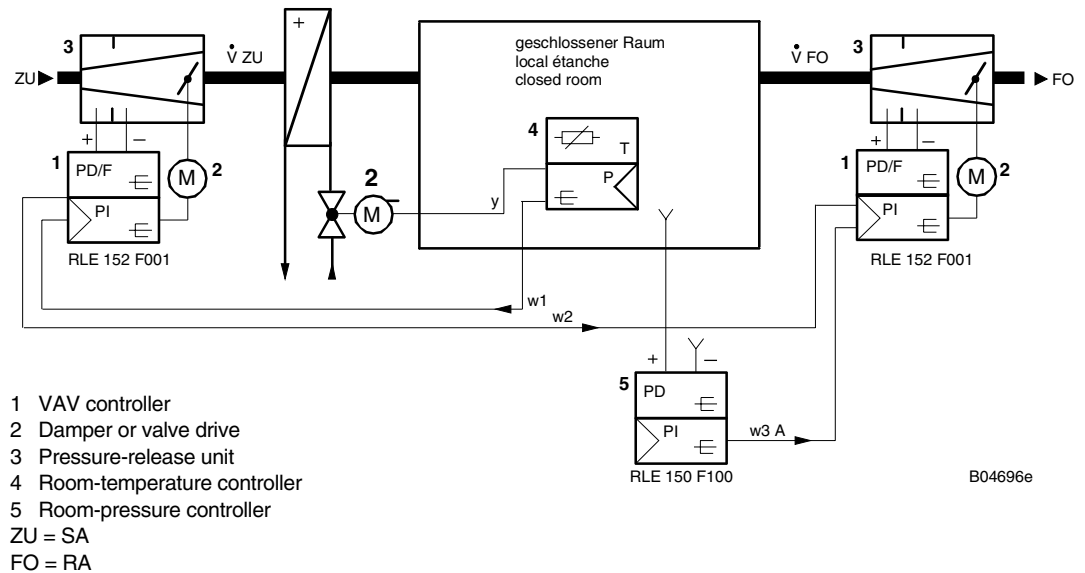


Additional technical data

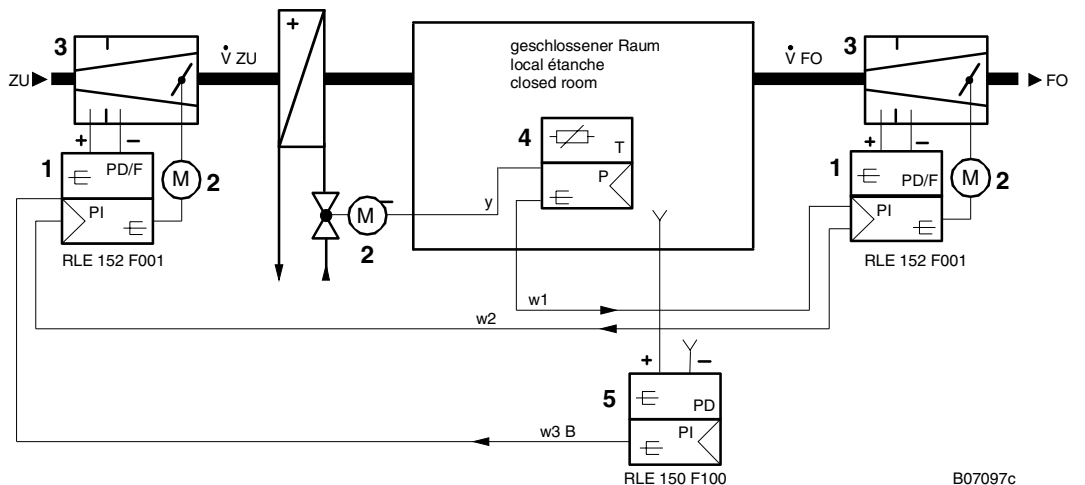
Complies with:-	
EMC directive 89/336/EEC	EN 61000-6-1/ EN 61000-6-3 EN 61000-6-4

Examples of use

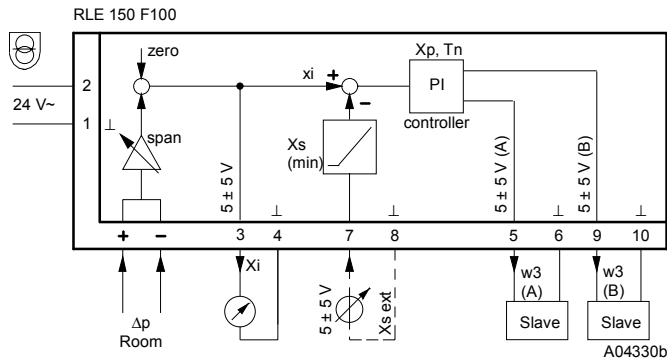
Control facility for variable air volume, with re-heater, for closed rooms. The over- and/or under-pressure is controlled so as to affect the supply-air controller (slave). The room pressure can be set at the pressure controller. The room-pressure controller has control action A.



Control facility for variable air volume, with re-heater, for closed rooms. The over- and/or under-pressure is controlled so as to affect the return-air controller (slave). The room pressure can be set at the pressure controller. The room-pressure controller has control action B.

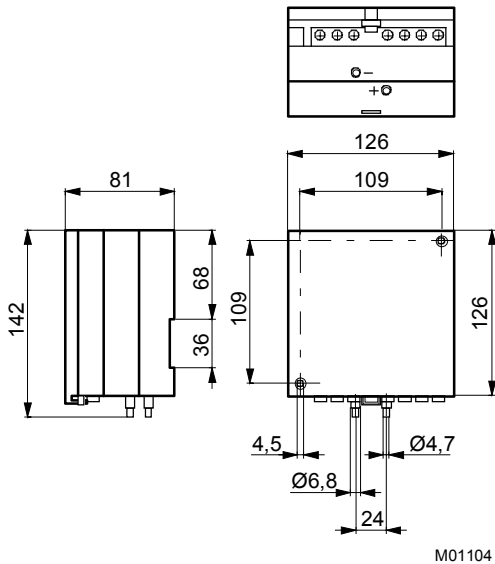


Wiring diagrams



- w_3 setpoint shift to the VAV controller
RLE 150 F01 . (slave)
- Δp room pressure difference
- x_i actual value
- X_s setpoint
- (A) Control action A
- (B) Control action B

Dimension drawing



Accessories

