

RUP: Differential pressure controller/transducer, centair

How energy efficiency is improved

Efficient duct pressure control for optimum system operation

Features

- Conversion of measured differential pressures into a pneumatic standard signal 0.2...1.0 bar by a pressure sensor
- PI controller
- Easy to use, PI-controller not operational when used only as a transducer
- Differential pressure measuring range up to 500 Pa and 4000 Pa
- Front plate printed with circuit diagrams for easy identification of the controller functions
- Compressed-air connections with Rp $\frac{1}{8}$ " female thread
- Nozzle-ball system

Technical data

Parameters

Controllers	Supply pressure	1.3 bar \pm 0.1
	Air capacity	100 l _n /h
	Air consumption	50 l _n /h
Transducers	Supply pressure ¹⁾	1.3 bar \pm 0.1 (via ext. restrictor \varnothing 0.2 mm)
	Air consumption	33 l _n /h
	Air capacity	33 l _n /h
	Output pressure	0.2...1.0 bar
	P-band (fixed)	400%
	Setpoint	0...100%
	Integral action time	0.5...3 s
	Remote setpoint adjustment	0.2...1.0 bar
Linearity error	2%	
Hysteresis	0.5%	
Low-pressure connections	100 mbar (permissible pressure)	

Ambient conditions

Admissible ambient temperature	0...55 °C
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Construction

Housing material	Thermoplastic
Fitting	Wall/top-hat rail
Weight	0.15 kg

Overview of types

Type	Measuring range (Pa)
RUP105F001	0...500 Pa
RUP140F001	0...4000 Pa

Accessories

Type	Description
0297354000	Short screw-in connector R $\frac{1}{8}$ ", for soft plastic tubing \varnothing 4 mm (internal)
0296936000	Fixing brackets for rail: top-hat rail EN 60715, 35 × 7.5 mm and 35 × 15 mm

 0297354000: 3 pieces required

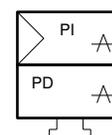
Additional information

Fitting instructions	MV 505658
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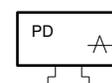
¹⁾ Restrictors (\varnothing 0.2 mm) are installed at inputs 3 and 4 on the RCP and RPP 20 controllers; for regulations concerning the quality of the air supply, particularly at low ambient temperatures, see www.sauter-controls.com/en/pneumatic_plants



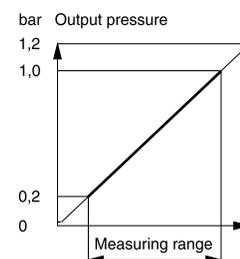
RUP1**F0001



RUP105F001



RUP140F001



Description of operation

Function as duct pressure controller

The pressure sensor converts the pressure difference to be measured into a standard signal (0.2...1.0 bar). This actual value signal is compared to the setpoint X_S . The PI controller compensates for the control deviations with no persistent error. The setpoint X_S can be adjusted externally via connection 6, with the set value becoming the minimum limitation.

Function as transducer

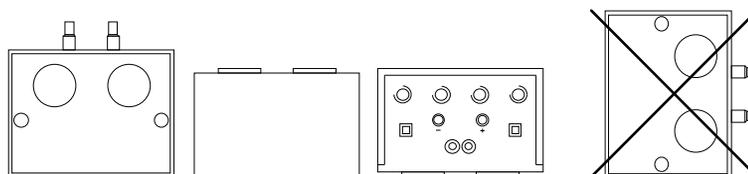
The pressure sensor converts the pressure difference to be measured into a standard signal (0.2...1.0 bar). The output signal at connection 3 is proportional to the pressure difference. As the pressure increases, so does the output pressure.

Intended use

This product is only suitable for the purpose intended by the manufacturer, as described in the "Description of operation" section. All related product documents must also be adhered to. Changing or converting the product is not admissible.

Engineering and fitting notes

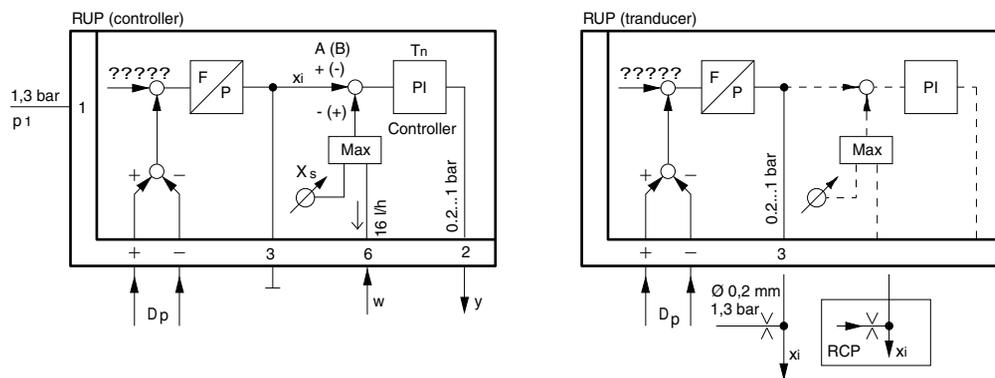
Upright mounting is not permitted.



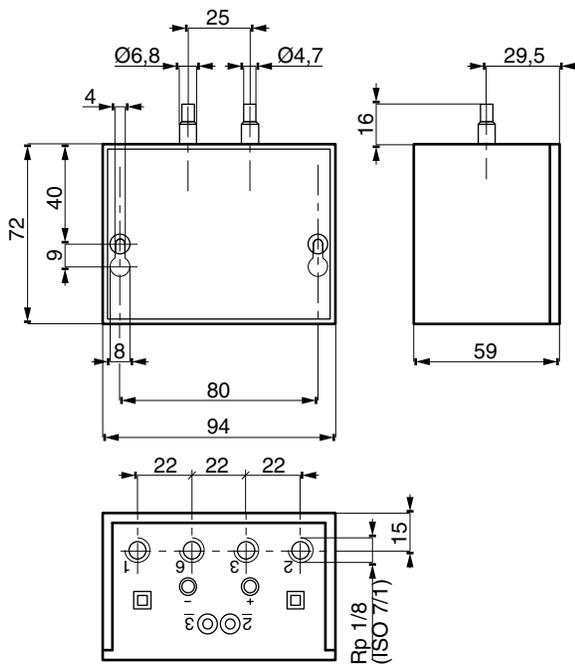
Disposal

When disposing of the product, observe the currently applicable local laws. More information on materials can be found in the Declaration on materials and the environment for this product.

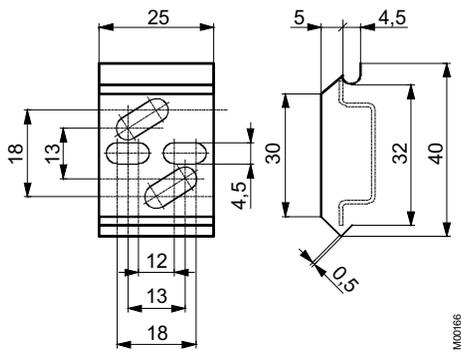
Connection diagram



Dimension drawing



Accessories



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