

RUP: Differential-pressure controller/transducer

How energy efficiency is improved

Efficient control of the duct pressure for optimised system operation.

Areas of application

Measurement and/or control of differential pressures in positive-pressure or negative-pressure areas, e.g. in air ducts in combination with pneumatic control equipment (Centair) or with air-volume controllers in air-conditioning systems.

Features

- Part of the Centair family of systems
- Conversion of pressure differentials into standard 0.2 to 1.0 bar signal by a pressure sensor
- PI controller
- Easy to use as PI controller is not in operation if the application is only as a transducer
- Ranges up to 500 and 4000 Pa
- Controller front panel is printed with circuit diagram for rapid identification of function
- Thermoplastic housing suitable for wall or top-hat rail mounting
- Compressed-air connections with Rp 1/8" female thread
- Complies with directive 97/23/EC Art. 3.3 on pressure equipment

Technical description

- Supply pressure 1.3 bar \pm 0.1
- Nozzle/ball system
- Linearity of output signal 2%
- Hysteresis of output signal 0.5%

Type	Measuring range Pa	Output pressure bar	Weight kg
RUP 105 F001	0...500	0,2...1,0	0,15
RUP 140 F001	0...4000	0,2...1,0	0,15

Supply pressure	1,3 \pm 0,1 bar	Linearity	2%
Transducer via ext. restrictor \varnothing 0,2 mm ¹⁾		Hysteresis	0,5%
Air capacity	100 l _n /h	Max. pressure (low-press. connections)	100 mbar
Air consumption	50 l _n /h	Permissible ambient temp.	0...55 °C
Transducer: air capacity, air consumption	33 l _n /h		
P-band	400% (fixed)	Wiring diagram	A08789
Setpoint	0...100%	Dimension drawing	M297240
Integral action time	0,5...3 s	Fitting instructions	MV 505658
Setpoint remote adjustment	0,2...1,0 bar		

Accessories

0297354 000* Short R 1/8 connector for soft plastic tubing, internal \varnothing 4 mm.

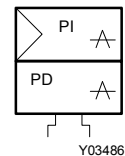
0296936 000* Bracket for EN 60715, 35 \times 7,5 and 35 \times 15 rails

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

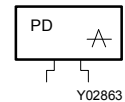
1) In the RCP and RPP 20/RPJP 80 controllers, the restrictors (\varnothing 0,2 mm) are fitted at inputs 3 and 4.
See Section 60 on regulations concerning the quality of supply air, especially at low ambient temperatures.



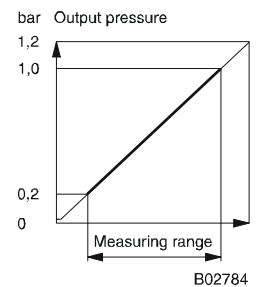
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Y02863



B02784

When used as a duct-pressure controller

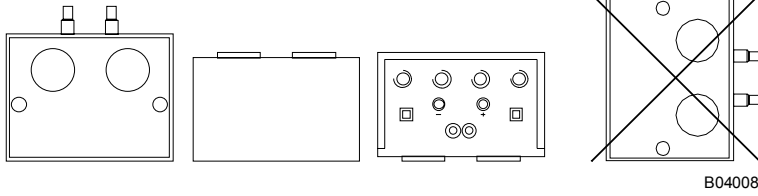
The pressure difference is converted by the pressure sensor into a standard signal (0,2...1,0 bar). This actual-value signal is compared to the setpoint X_s . The control deviation is compensated without permanent error by the PI controller. The setpoint X_s can be adjusted externally via connector 6, in which case the set value becomes the minimum limit.

When used as a transducer

The pressure difference is converted by the pressure sensor into a standard signal (0,2...1,0 bar). The output signal at connector 3 is proportional to the pressure difference. When the pressure is rising, the output pressure also rises.

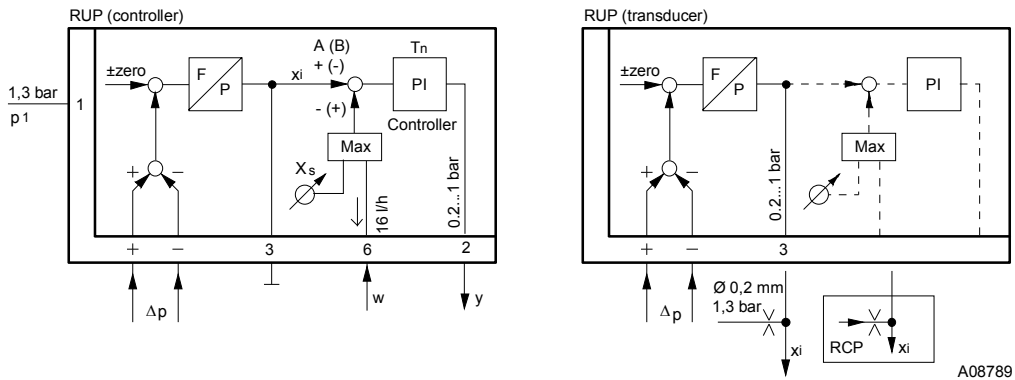
Engineering and fitting instructions

Should not be fitted on its side.



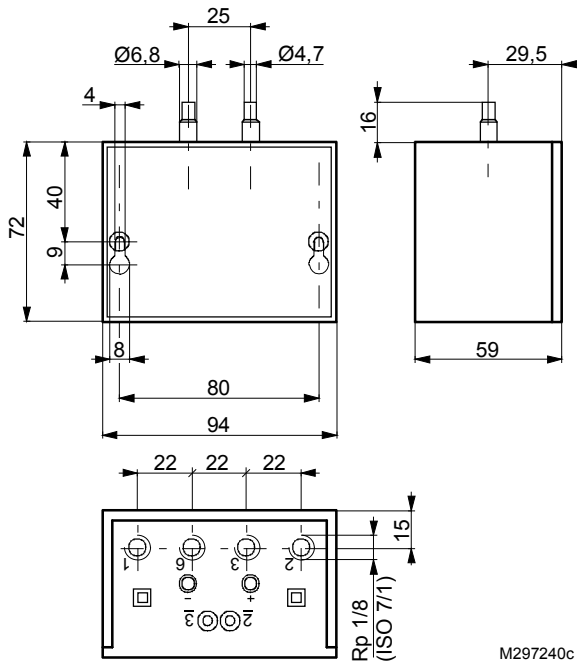
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Connection diagram



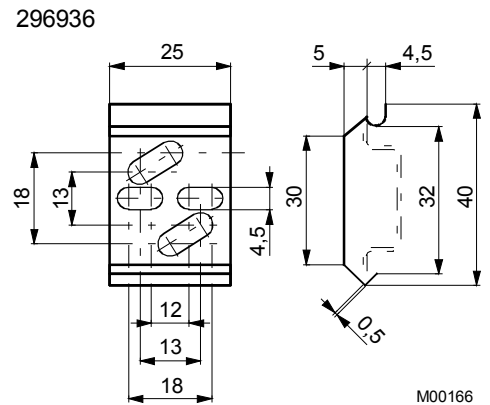
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Dimension drawing

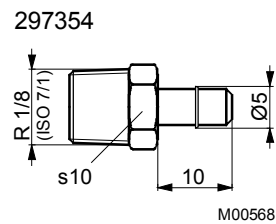


M297240c

Accessories



M00166



M00568