

RUP: Differential-pressure controller/transducer

Controller/transducer for measuring and regulating (or merely for measuring) the differential pressure in over- or under-pressure situations, e.g. in ventilation ducts, in conjunction with pneumatic control systems or with VAV controllers in air-conditioning systems.

Housing of thermoplastic. When used as a duct-pressure controller: front plate with adjusters for setpoint and integral action time (set using a coin); control action can be transposed (factory setting is control action A). When used as a transducer (control action A), the adjusters do not function. Suitable for mounting on walls or top-hat rails: rail C-EN 50024/EN 50022 (accessories). Should not be fitted on its side. Compressed-air connection Rp 1/8 female thread. Low-pressure connections: 2 stepped connectors for soft plastic tubing (internal Ø 4 and 6 mm).

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 ± 0.1 bar	Linearity	2%
Transducer via ext. restrictor Ø 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 Ø 4 mm.

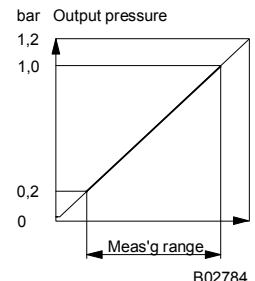
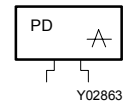
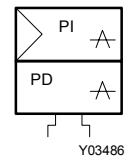
0296936 000* Bracket for EN 50022, 35 × 7.5 and 35 × 15 rails

^{*)} Dibujo medidas y accesorios disponibles con el mismo número

¹⁾ In the RCP and RPP 20/RPJP 80 controllers, the restrictors (Ø 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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When used as a duct-pressure controller

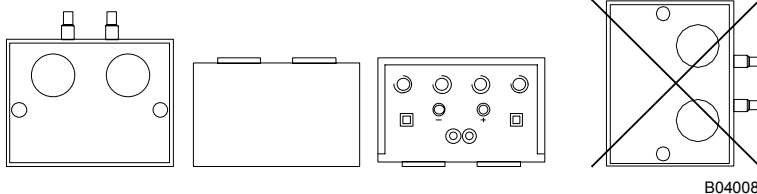
The pressure difference is converted by the pressure sensor into a standard signal (0.2...1.0 bar). This actual-value signal is compared to the setpoint X_s . The control deviation is compensated without permanent error by the PI controller. The setpoint X_s can be adjusted externally via connector 6, 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.

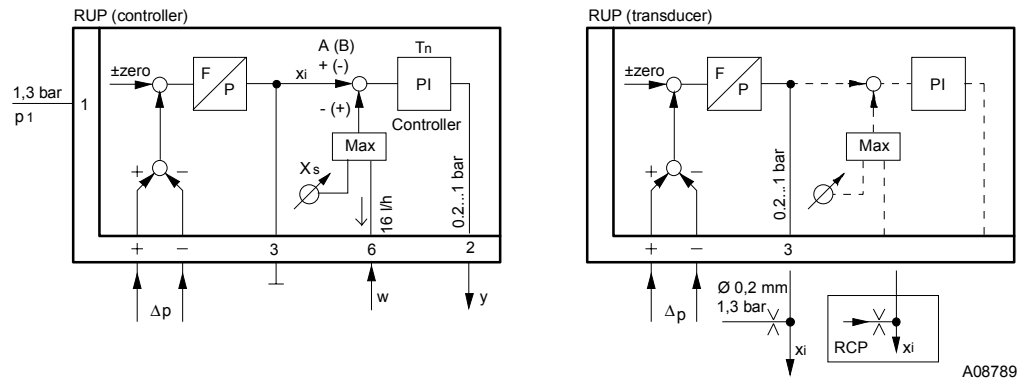
Engineering and fitting instructions

Should not be fitted on its side.

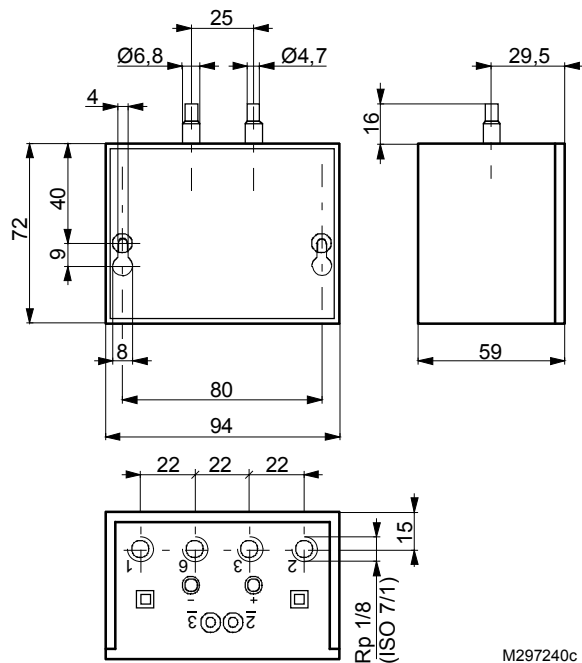


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Connection diagram



Dimension drawing



Accessories

