

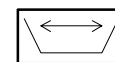
RXP 200: Dual-channel, VAV master controller

Used in conjunction with a room-temperature controller (TSP 80A F905) and a dual-channel VAV controller (RLP 100 F918) to form a 'heating-cooling' sequence that can be expanded at night and during very warm weather in order to save energy. Conforms to the regulations on pressure equipment (97/23/EG Art. 3.3).

Housing is made of thermoplastic; front plate with adjustment knobs for the minimum limitation of the volume flow and for the neutral zone; adjustments are made using a coin and a percentage scale. Suitable for fitting onto rails (C EN 50024 or EN 50022, see accessories) or walls. Compressed-air connections: Rp 1/8 female thread. Two stepped connectors for soft plastic tubing of 4 or 6 mm internal dia.



T05181



Y05261

Type	Description	Air consumption	Weight kg
RXP 200 F001	neutral zone, expansion	40 l _n /h	0.2
Supply pressure ¹⁾	1.3 bar ± 0.1	Neutral zone NZ	0...2 K (variable)
Input pressures		Air delivery	
Connector 3 (room)	0.2...1.0 bar	Connector 2, cooling	6.5 l _n /h
with overflow	0.08...1.16 bar	Connector –, heating	none
Connector 6 (master)		Air recovery	
night expansion	at 0 bar	Connector 2, cooling	none
summer shift	at 0.6...1.3 bar	Connector –, heating	100 l _n /h
Connector +	0.2...1.0 bar	Perm. ambient temp.	0...55 °C
with overflow	0...1.3 bar		
Output pressures		Connection diagram	A05257
Connector 2, cooling	0...1.0 bar	Dimension drawing	M297240
Connector –, heating	0...1.0 bar	Fitting instructions	MV 505398

Accessories

0296936 000* Bracket for rail EN 50022, 35 × 7,5 and 35 × 15

0297354 000* Short screw-in connector Rp 1/8 for soft plastic tubing of internal dia. 4 mm, four pieces required

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

¹⁾ For regulations on the quality of the air supply, especially at low ambient temperatures, see Section 60.

Operation

Together with a TSP 80A F905 controller, the master controller (P-band 10 K) forms a sequence (heating-cooling) with a variable neutral zone. The sequence is expanded (night mode and summer shift) via a command signal *w* and is fed as the setpoint to the RLP 100 F918 dual-channel VAV controller.

The \dot{V}_{\min} adjuster allows the minimum limitation of the volume flow (day mode) to be set. When the command signal *w* at connector 6 falls to 0 bar, the minimum limitation (night mode) that has been set on the RLP comes into force. At the same time, the heating-cooling sequence is expanded. With a pressure of between 1.3 and 0.6 bar at connector 6, only the 'cooling' characteristic is shifted (summer shift in relation to the outside temperature). To prevent the change-over between daytime and night-time modes from occurring abruptly, an XTP 2 delaying relay should be fitted to the RXP 200.

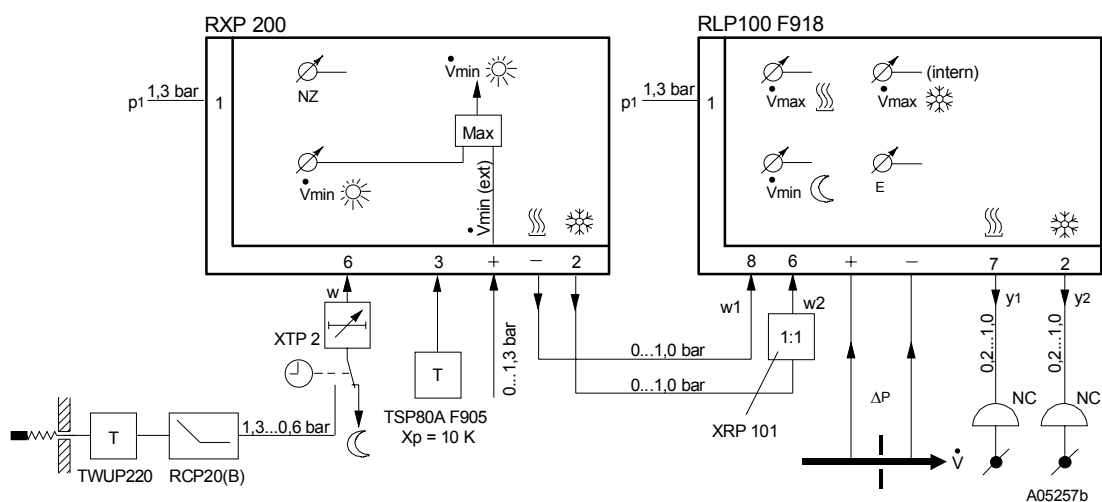
The NZ adjuster allows the neutral zone to be set. A setting of 100% produces NZ = 2 K; 90% produces NZ = 1 K; and 80% produces 0 K. Settings below 80% are inadmissible, since they would produce an overlap of heating and cooling.

Engineering and fitting notes

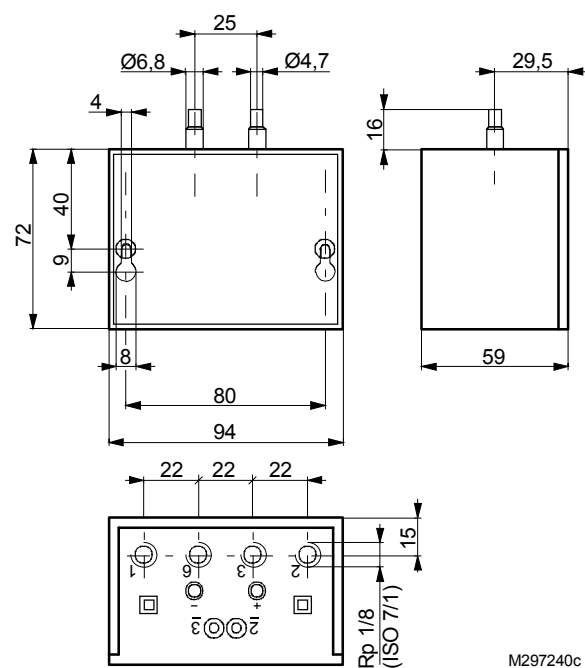
The command signal (which is dependent on the outside temperature) of 1.3...0.6 bar (at connector 6) for the summer shift can be fed simultaneously to ten RXP 200 s.

An external signal of 0...1.0 bar can be fed via the + connector; this signal lifts the set volume flow \dot{V}_{\min} (day mode). With a pressure of > 1.0 bar, the volume flow is raised with priority to the value \dot{V}_{\max} (cooling).

Connection diagram

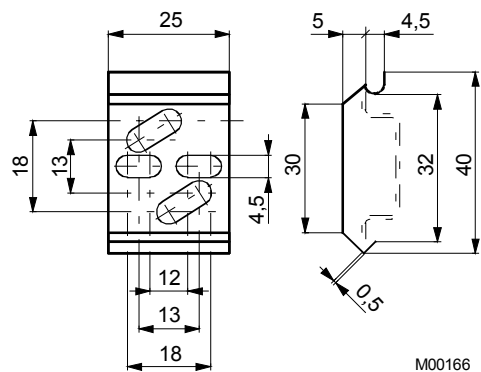


Dimension drawing

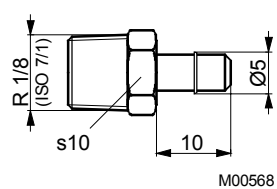


Accessories

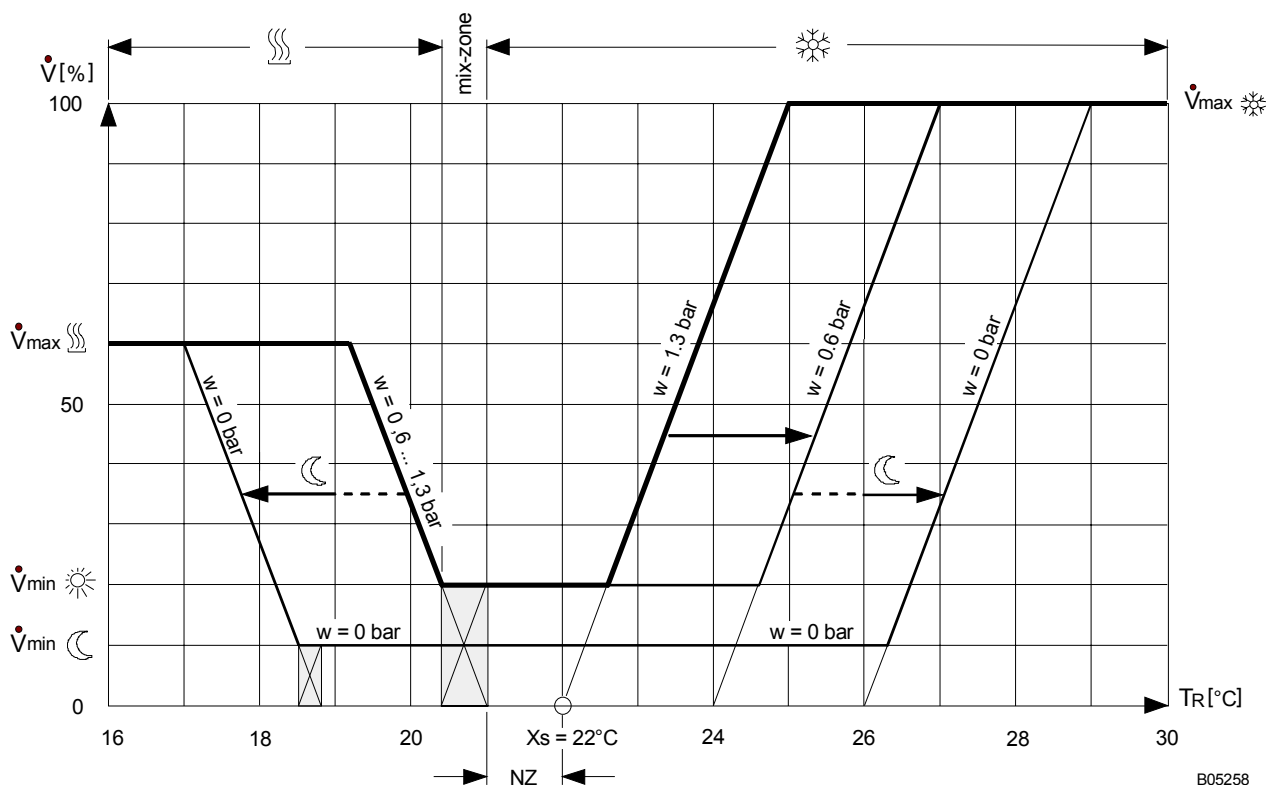
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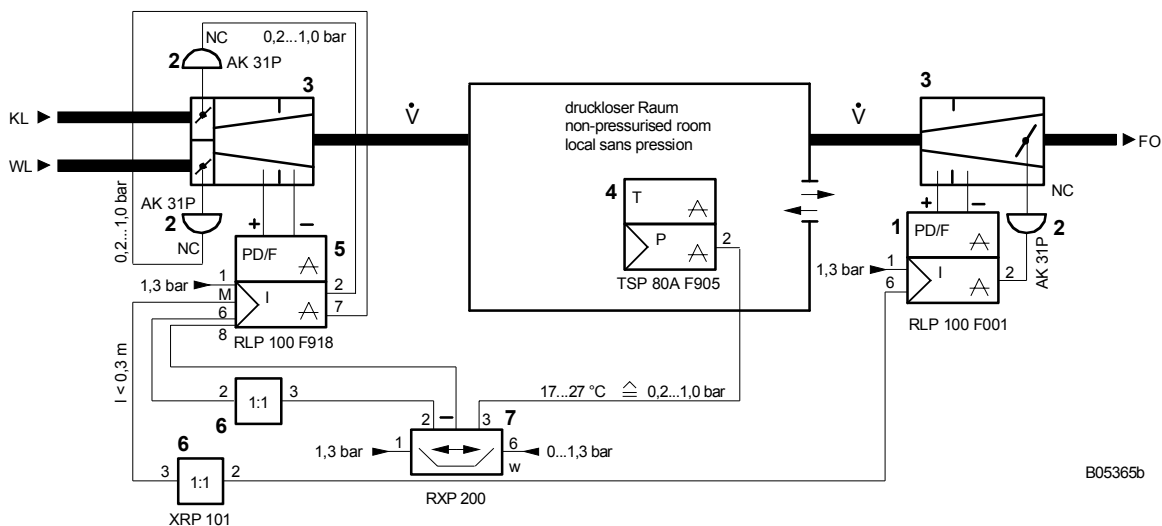
Example of use



$w = 1.3 \text{ bar}$ Normal characteristic
 $w = 1.3 \dots 0.6 \text{ bar}$ Summer shift
 $w = 0 \text{ bar}$ Night expansion
 NZ Neutral zone
 T_R Room temp.
 \dot{V} Volume flow
 X_s Setpoint, room-temperature controller

Example of use

Control facility for variable air volume for dual-channel system with dual-channel VAV master controller for forming a 'heating-cooling' sequence, dual-channel VAV controller and room-temperature controller.



1	Volume-flow controller	5	Dual-channel VAV controller	KL	= cold air
2	Damper drive	6	Interface relay	WL	= warm air
3	Reducing box	7	Dual-channel master controller	FO	= EA (exhaust air)
4	Room-temperature controller				