

RXP 200: Dual-channel, VAV master controller

How energy efficiency is improved

Spreading the heating-cooling sequence during night mode and in the case of higher outside temperatures to save energy

Areas of application

Creating a heating-cooling sequence with adjustable zone in combination with a room temperature controller, type TSP 80A, as well as a dual-channel volume flow controller, type RLP 100 F918.

Features

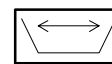
- Controller front panel is printed with circuit diagram for rapid identification of function
- Thermoplastic housing suitable for wall or top-hat rail mounting (rail EN 60715)
- Compressed-air connections with Rp 1/8" female thread
- Low-pressure connections in form of stepped nipples for flexible plastic hose (internal Ø 4 and 6 mm)
- Complies with directive 97/23/EC Art. 3.3 on pressure equipment

Technical description

- Supply pressure 1.3 bar ± 0.1
- Three inputs for:
 - outside temperature
 - room temperature
 - setpoint adjustment: 2 outputs for heating and cooling



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 60715, 35 × 7,5 and 35 × 15

0297354 000* Short screw-in connector R 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 nighttime 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.

Архангельск (8182)63-90-72

Астана +7(7172)727-132

Белгород (4722)40-23-64

Брянск (4832)59-03-52

Владивосток (423)249-28-31

Волгоград (844)278-03-48

Вологда (8172)26-41-59

Воронеж (473)204-51-73

Екатеринбург (343)384-55-89

Иваново (4932)77-34-06

Ижевск (3412)26-03-58

Казань (843)206-01-48

Калининград (4012)72-03-81

Калуга (4842)92-23-67

Кемерово (3842)65-04-62

Киров (8332)68-02-04

Краснодар (861)203-40-90

Красноярск (391)204-63-61

Курск (4712)77-13-04

Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13

Москва (495)268-04-70

Мурманск (8152)59-64-93

Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12

Новокузнецк (3843)20-46-81

Новосибирск (383)227-86-73

Орел (4862)44-53-42

Оренбург (3532)37-68-04

Пенза (8412)22-31-16

Пермь (342)205-81-47

Ростов-на-Дону (863)308-18-15

Рязань (4912)46-61-64

Самара (846)206-03-16

Санкт-Петербург (812)309-46-40

Саратов (845)249-38-78

Смоленск (4812)29-41-54

Сочи (862)225-72-31

Ставрополь (8652)20-65-13

Тверь (4822)63-31-35

Томск (3822)98-41-53

Тула (4872)74-02-29

Тюмень (3452)66-21-18

Ульяновск (8422)24-23-59

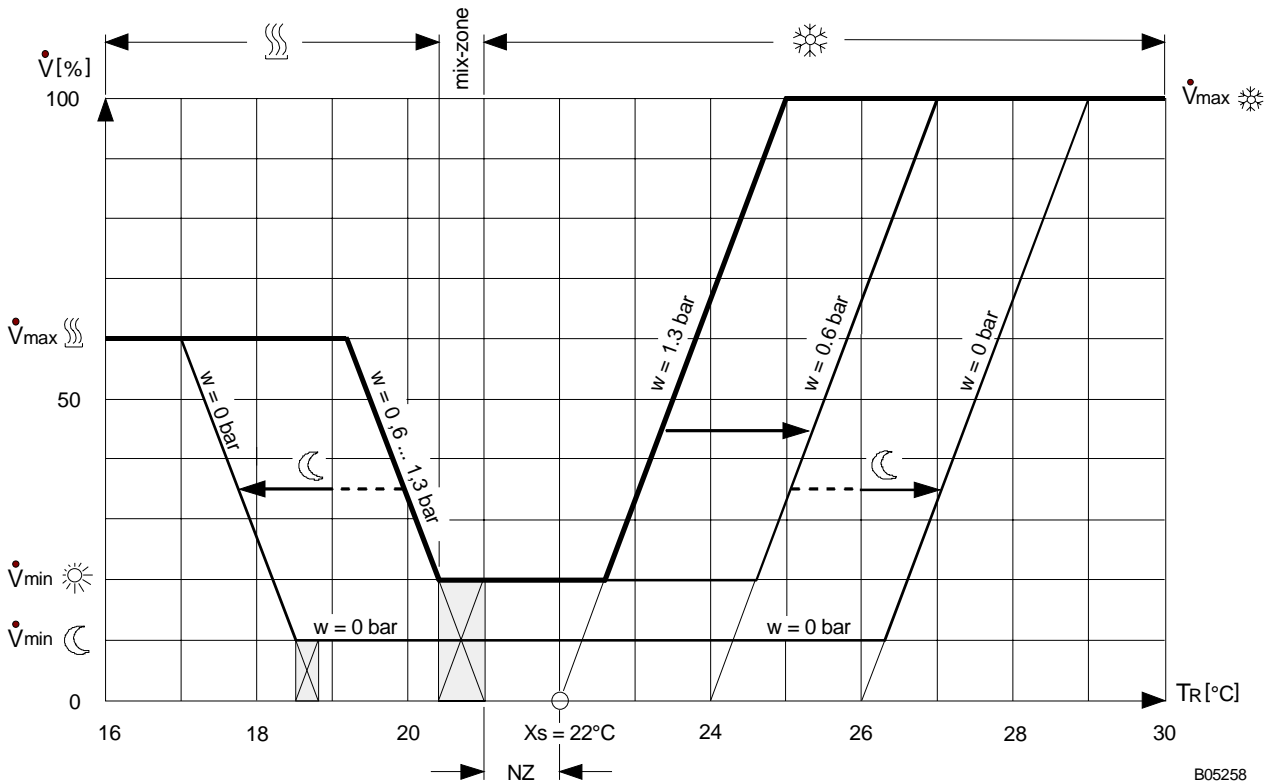
Уфа (347)229-48-12

Челябинск (351)202-03-61

Череповец (8202)49-02-64

Ярославль (4852)69-52-93

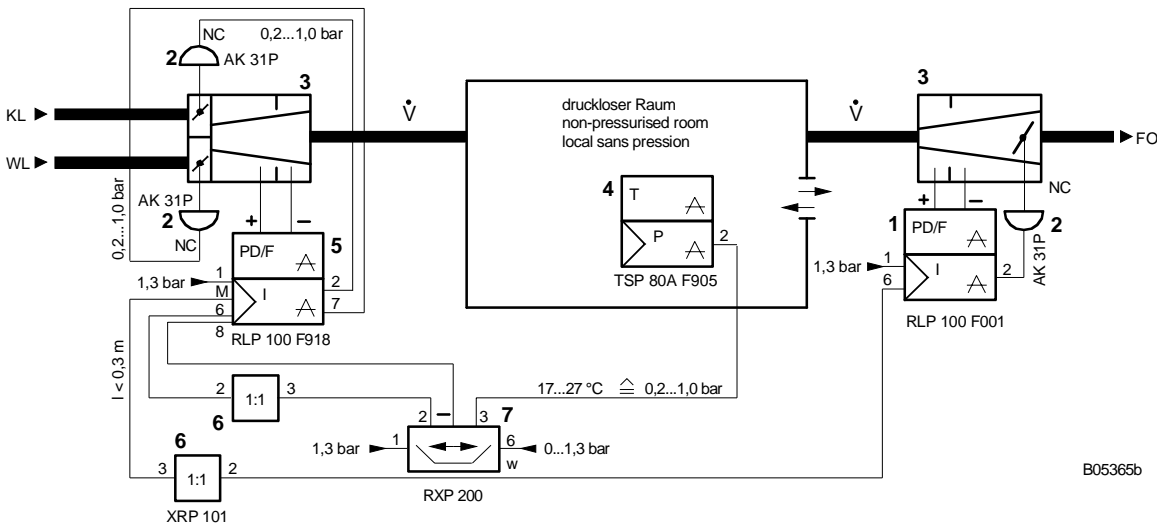
Example of use



$w = 1,3$ bar Normal characteristic
 $w = 1,3 \dots 0,6$ bar Summer shift
 $w = 0$ 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				

- | | | | |
|-----------------------------|---------------------------------|--------------------------------|---------------------------|
| Архангельск (8182)63-90-72 | Калининград (4012)72-03-81 | Нижний Новгород (831)429-08-12 | Смоленск (4812)29-41-54 |
| Астана +7(7172)727-132 | Калуга (4842)92-23-67 | Новокузнецк (3843)20-46-81 | Сочи (862)225-72-31 |
| Белгород (4722)40-23-64 | Кемерово (3842)65-04-62 | Новосибирск (383)227-86-73 | Ставрополь (8652)20-65-13 |
| Брянск (4832)59-03-52 | Киров (8332)68-02-04 | Орел (4862)44-53-42 | Тверь (4822)63-31-35 |
| Владивосток (423)249-28-31 | Краснодар (861)203-40-90 | Оренбург (3532)37-68-04 | Томск (3822)98-41-53 |
| Волгоград (844)278-03-48 | Красноярск (391)204-63-61 | Пенза (8412)22-31-16 | Тула (4872)74-02-29 |
| Вологда (8172)26-41-59 | Курск (4712)77-13-04 | Пермь (342)205-81-47 | Тюмень (3452)66-21-18 |
| Воронеж (473)204-51-73 | Липецк (4742)52-20-81 | Ростов-на-Дону (863)308-18-15 | Ульяновск (8422)24-23-59 |
| Екатеринбург (343)384-55-89 | Магнитогорск (3519)55-03-13 | Рязань (4912)46-61-64 | Уфа (347)229-48-12 |
| Иваново (4932)77-34-06 | Москва (495)268-04-70 | Самара (846)206-03-16 | Челябинск (351)202-03-61 |
| Ижевск (3412)26-03-58 | Мурманск (8152)59-64-93 | Санкт-Петербург (812)309-46-40 | Череповец (8202)49-02-64 |
| Казань (843)206-01-48 | Набережные Челны (8552)20-53-41 | Саратов (845)249-38-78 | Ярославль (4852)69-52-93 |