

Electronic continuous-action controller

For surface installation – Design Berlin 2000

Technical data

Operating voltage: Sensor:	24 V~ / = approx. 1 VA safety extra low voltage
Sensor:	internal – NTC 47 kΩ (type KTRVB-042.207 for external NTC 47 kΩ)
Setting ranges:	5 ... 30°C; 21° ± 8°C; (see "Equipment")
Proportional band:	0.5 ... 3 K (see "Equipment")
Degree of protection:	IP 30
Protection class:	III
General equipment:	mechanical range suppression
Indication (LED):	with model KTRVB-042.206 only
Switch:	see "Equipment"
Admissible air moisture:	max. 95 %, non condensing
Storage temperature:	-20 ... +70°C
Radio interference suppression:	acc. to EN 60730
Ambient temperature:	0 ... 50°C
Housing colour:	pure white, similar to RAL 9010
Housing material:	plastic (ABS)
Mounting / installation:	surface / wall installation
Weight:	approx. 130 g / sensor approx. 160 g
Electrical connections:	terminal screws

Application

Room temperature controller for the permanent valve drives. Controller for the control of 2-pipe systems (1 conduit), 4-pipe systems (2 conduits) and mixing chambers.



Model / Picture

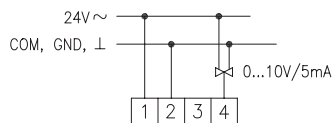
Equipment

Circuit diagram

PG

KTRVB-048.100

Setting range: 5 ... 30°C
Output: Analogue output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA, adjusted to 5 V (at set temperature)
Inputs: Internal sensor NTC 47 kΩ
Indications: Set value scale 5 ... 30°C
Functions: Heating and cooling with adjustable p-band
Adjustments: P-Band + 0.5 ... + 3 K (factory setting: 2 K)
Application: Control of climates in mixing chambers by means of a proportionally actuated valve.



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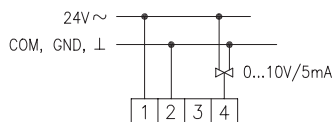
Art.-Nr. DA 450000



Replaces
PETA 75.500

KTRVB-048.200

Setting range (turning knob): 21°C ± 3 K The factory preset "zero" (21°C) can be changed internally by ± 5 K
Outputs: Analogue output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA, adjusted to 5 V (at set temperature)
Inputs: Internal sensor NTC 47 kΩ
Indications: Relative scale (set value 21°C with "0" marking and swelling arrow "+" and "-" for warmer / colder)
Functions: Heating and cooling with adjustable p-band
Adjustments: P-Band 0.5 ... 3 K (factory setting: 2 K)
Application: Control of climates in mixing chambers by means of a proportionally actuated valve.



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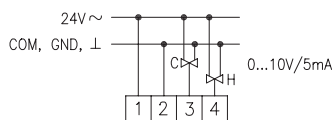
Art.-Nr. DA 450100



Replaces
PETA 75.502

KTRVB-042.100

Setting range: 5 ... 30°C
Outputs:
 Analogue heating output (0 ... 10 V or 10 ... 0 V), repluggable, 5 mA
 Analogue cooling output (0 ... 10 V or 10 ... 0 V), repluggable, 5 mA
Inputs: Internal sensor NTC 47 kΩ
Indications: Set value scale 5 ... 30°C
Functions: Heating and cooling with adjustable neutral zone and adjustable p-band
Adjustments: Neutral zone -1 ... +5 K (factory setting: 1 K)
 P-band "heating" 0.5 ... 3 K (factory setting: 1 K)
 P-band "cooling" 0.5 ... 3 K (factory setting: 2 K)
Application: Control of climates in individual rooms, the conditioning of which is realised via 2-conduit systems (4-pipe systems) and proportionally actuated valves.



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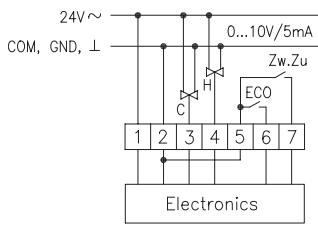

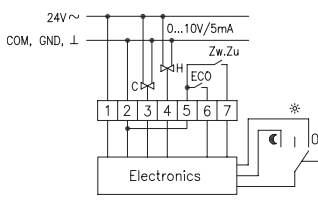

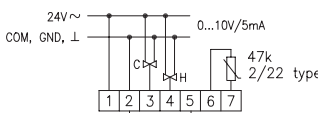
Art.-Nr. DA 451000



Replaces
PETA 75.800
PETA 75.803


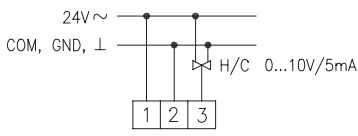
Electronic continuous-action controllers

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Model / Picture	Equipment	Circuit diagram	PG
<p>KTRVB-042.205</p> <p>Art.-Nr. DA 451200</p>  <p>Replaces PETA 75.805</p>	<p>Setting range (turning knob): 21°C ± 3 K, the factory preset "zero" (21°C) can be changed internally by ± 5 K.</p> <p>Outputs: Analogue heating output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA, Analogue cooling output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA</p> <p>Inlets: Internal sensor (NTC 47 kΩ), ECO contact, forced switch off contact</p> <p>Indications: Relative scale (set value 21°C with "0" marking, swelling arrows "+" and "-" for warmer / colder)</p> <p>Functions: Heating and cooling with adjustable neutral zone and adjustable p-band. ECO mode operation can be activated via an external contact (= neutral zone broadened through ECO zone). Forced switch off function (frost protection monitoring of rooms at approx. 5°C)</p> <p>Adjustments: Neutral zone from - 1 ... + 5 K, (factory setting 1 K), p-band heating 0.5 ... 3 K (factory setting 1 K), p-band cooling 0.5 ... 3 K (factory setting 2 K)</p> <p>Application: Control of climates in individual rooms, the conditioning of which is realised via 2-conduit systems (4-pipe systems) and proportionally actuated valves.</p>		A
<p>KTRVB-042.206</p> <p>Art.-Nr. DA 451300</p>  <p>Replaces PETA 75.815</p>	<p>Setting range (turning knob): 21°C ± 3 K, the factory preset "zero" (21°C) can be changed internally by ± 5 K.</p> <p>Outputs: Analogue heating output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA Analogue cooling output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA</p> <p>Inputs: Internal sensor (NTC 47 kΩ), ECO contact, forced switch off contact (prevalent as against the switch)</p> <p>Indications: Relative scale (set value 21°C with "0" marking, swelling arrows "+" and "-" for warmer / colder), yellow LED indicator for "ON" and green LED indicator for "ECO"</p> <p>Functions: Heating and cooling with adjustable neutral zone and adjustable band. ECO mode can be activated via external contact or switch (= neutral zone broadened by the ECO zone). Forced switch off function (frost protection monitoring of rooms at approx. 5°C). Switch: "Off (forced switch off = room frost protection) / Day / ECO"</p> <p>Adjustments: Neutral zone - 1 ... + 5 K (factory setting 1 K) ECO-Zone 1 ... 5 K (factory setting 3 K) p-band heating 0.5 ... 3 K (factory setting 1 K) p-band cooling 0.5 ... 3 K (factory setting 2 K)</p> <p>Application: Control of climates in individual rooms, the conditioning of which is realised via 2-conduit systems (4-pipe systems) and proportionally actuated valves.</p>		A
<p>KTRVB-042.207</p> <p>Art.-Nr. DA 451400</p>  <p>Replaces PETA 75.833</p>	<p>Setting range (turning knob): 21°C ± 3 K, the factory preset "zero" (21°C) can be adjusted internally by ± 5 K.</p> <p>Outlets: Analogue heating output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA, Analogue cooling output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA</p> <p>Inputs: External Sensor NTC 47 kΩ</p> <p>Indications: Relative scale (set value 21°C with "0" marking, swelling arrows "+" and "-" for warmer / colder)</p> <p>Functions: Heating and cooling with adjustable neutral zone and adjustable p-band</p> <p>Adjustments: Neutral zone - 1 ... + 5 K (factory setting 1 K) p-band heating 0.5 ... 3 K (factory setting 1 K) p-band cooling 0.5 ... 3 K (factory setting 2 K)</p> <p>Application: Control of climates in individual rooms, the conditioning of which is realised via 2-conduit systems (4-pipe systems) and proportionally actuated valves.</p> <p>Sensor LF-22 must be ordered separately; other sensors of the 2 / 22 type series (e.g. RF-2, HF-2) can be applied too (regarding sensors, see page 99)</p>		A

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Model / Picture	Equipment	Circuit diagram	PG
<p>KTRVB-040.209</p> <p>Art.-Nr. DA 452200</p> 	<p>Setting range (turning knob): 21°C ± 3 K, the factory preset "zero" (21°C) can be changed internally by ± 5 K.</p> <p>Outputs: Analogue heating or cooling output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA, changeover between heating / cooling operation by means of a switch</p> <p>Inputs: Internal sensor (NTC 47 kΩ)</p> <p>Indications: Relative scale (set value 21°C with "0" marking, swelling arrows "+" and "-" for warmer / colder)</p> <p>Functions: Heating or cooling with adjustable p-band</p> <p>Adjustments: p-band heating or cooling +0.5 ... +3 K (factory setting 1 K)</p> <p>Application: Control of climates in individual rooms, the conditioning of which is realised via 1-conduit systems (2-pipe systems) and a proportionally actuated valve.</p>		A
<p>Replaces PETA 75.910</p>			

