

# Electronic continuous-action controller

For surface installation – Design Berlin 2000


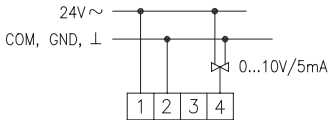

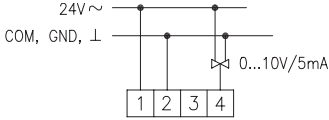

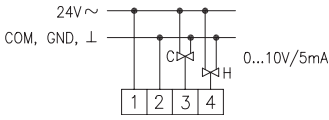


## Technical data

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


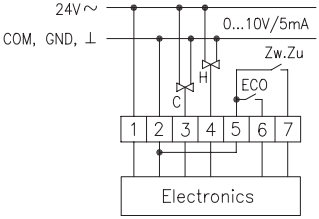

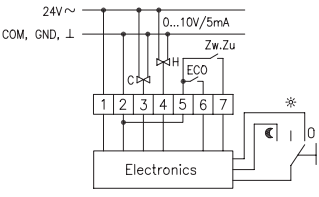

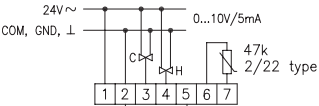
## Application

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
<b>KTRVB-048.100</b> <b>Art.-Nr.</b> DA 450000  Replaces PETA 75.500	<b>Setting range:</b> 5 ... 30°C <b>Output:</b> Analogue output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA, adjusted to 5 V (at set temperature) <b>Inputs:</b> Internal sensor NTC 47 kΩ <b>Indications:</b> Set value scale 5 ... 30°C <b>Functions:</b> Heating and cooling with adjustable p-band <b>Adjustments:</b> P-Band + 0.5 ... + 3 K (factory setting: 2 K) <b>Application:</b> Control of climates in mixing chambers by means of a proportionally actuated valve.		A
<b>KTRVB-048.200</b> <b>Art.-Nr.</b> DA 450100  Replaces PETA 75.502	<b>Setting range (turning knob):</b> 21°C ± 3 K The factory preset "zero" (21°C) can be changed internally by ± 5 K <b>Outputs:</b> Analogue output 0 ... 10 V or 10 ... 0 V, repluggable, 5 mA, adjusted to 5 V (at set temperature) <b>Inputs:</b> Internal sensor NTC 47 kΩ <b>Indications:</b> Relative scale (set value 21°C with "0" marking and swelling arrow "+" and "-" for warmer / colder) <b>Functions:</b> Heating and cooling with adjustable p-band <b>Adjustments:</b> P-Band 0.5 ... 3 K (factory setting: 2 K) <b>Application:</b> Control of climates in mixing chambers by means of a proportionally actuated valve.		A
<b>KTRVB-042.100</b> <b>Art.-Nr.</b> DA 451000  Replaces PETA 75.800 PETA 75.803	<b>Setting range:</b> 5 ... 30°C <b>Outputs:</b> Analogue <b>heating</b> output (0 ... 10 V or 10 ... 0 V), repluggable, 5 mA Analogue <b>cooling</b> output (0 ... 10 V or 10 ... 0 V), repluggable, 5 mA <b>Inputs:</b> Internal sensor NTC 47 kΩ <b>Indications:</b> Set value scale 5 ... 30°C <b>Functions:</b> Heating and cooling with adjustable neutral zone and adjustable p-band <b>Adjustments:</b> 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) <b>Application:</b> Control of climates in individual rooms, the conditioning of which is realised via 2-conduit systems (4-pipe systems) and proportionally actuated valves.		A


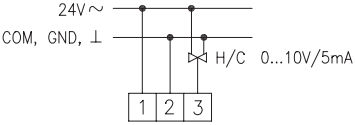
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Model / Picture	Equipment	Circuit diagram	PG
<p><b>KTRVB-042.205</b></p> <p>Art.-Nr. DA 451200</p>  <p>Replaces PETA 75.805</p>	<p><b>Setting range (turning knob):</b> 21°C ± 3 K, the factory preset "zero" (21°C) can be changed internally by ± 5 K.</p> <p><b>Outputs:</b> Analogue <b>heating</b> output 0 ... 10 V or 10 ... 0 V, reprogrammable, 5 mA, Analogue <b>cooling</b> output 0 ... 10 V or 10 ... 0 V, reprogrammable, 5 mA</p> <p><b>Inlets:</b> Internal sensor (NTC 47 kΩ), ECO contact, forced switch off contact</p> <p><b>Indications:</b> Relative scale (set value 21°C with "0" marking, swelling arrows "+" and "-" for warmer / colder)</p> <p><b>Functions:</b> 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><b>Adjustments:</b> 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><b>Application:</b> 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><b>KTRVB-042.206</b></p> <p>Art.-Nr. DA 451300</p>  <p>Replaces PETA 75.815</p>	<p><b>Setting range (turning knob):</b> 21°C ± 3 K, the factory preset "zero" (21°C) can be changed internally by ± 5 K.</p> <p><b>Outputs:</b> Analogue <b>heating</b> output 0 ... 10 V or 10 ... 0 V, reprogrammable, 5 mA Analogue <b>cooling</b> output 0 ... 10 V or 10 ... 0 V, reprogrammable, 5 mA</p> <p><b>Inputs:</b> Internal sensor (NTC 47 kΩ), ECO contact, forced switch off contact (prevalent as against the switch)</p> <p><b>Indications:</b> 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><b>Functions:</b> 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><b>Adjustments:</b> 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><b>Application:</b> 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><b>KTRVB-042.207</b></p> <p>Art.-Nr. DA 451400</p>  <p>Replaces PETA 75.833</p>	<p><b>Setting range (turning knob):</b> 21°C ± 3 K, the factory preset "zero" (21°C) can be adjusted internally by ± 5 K.</p> <p><b>Outlets:</b> Analogue <b>heating</b> output 0 ... 10 V oder 10 ... 0 V, reprogrammable, 5 mA, Analogue <b>cooling</b> output 0 ... 10 V oder 10 ... 0 V, reprogrammable, 5 mA</p> <p><b>Inlets:</b> External Sensor NTC 47 kΩ</p> <p><b>Indications:</b> Relative scale (set value 21°C with "0" marking, swelling arrows "+" and "-" for warmer / colder)</p> <p><b>Functions:</b> Heating and cooling with adjustable neutral zone and adjustable p-band</p> <p><b>Adjustments:</b> 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><b>Application:</b> 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><b>Sensor LF-22 must be ordered separately;</b> 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><b>KTRVB-040.209</b></p> <p><b>Art.-Nr.</b> DA 452200</p>  <p>Replaces PETA 75.910</p>	<p><b>Setting range (turning knob):</b> 21°C ± 3 K, the factory preset "zero" (21°C) can be changed internally by ± 5 K.</p> <p><b>Outputs:</b> 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><b>Inputs:</b> Internal sensor (NTC 47 kΩ)</p> <p><b>Indications:</b> Relative scale (set value 21°C with "0" marking, swelling arrows "+" and "-" for warmer / colder)</p> <p><b>Functions:</b> Heating or cooling with adjustable p-band</p> <p><b>Adjustments:</b> p-band heating or cooling +0.5 ... +3 K (factory setting 1 K)</p> <p><b>Application:</b> 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>		<p>A</p>

