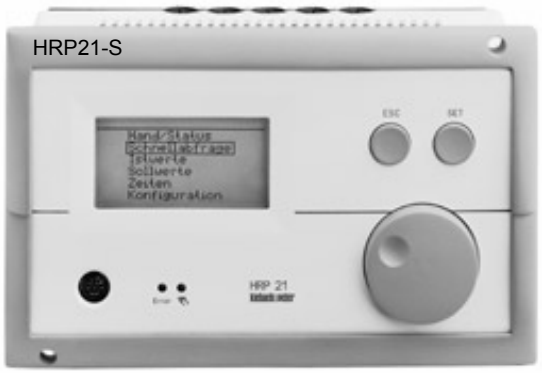
Heating Control Processor HRP21-S



Basic function

Heating Control Processor HRP21-S with continuous output 0-10V for control device.

For the control, management, optimization and monitoring of heating plants with boiler control or for a remote heating plant.

Modem capable.

One heating cycle and pre-control is possible.

Single knob operation and graphics, illuminated display for the entry and query of all DDC data.

Extensions of the basic function with HRP software menus such as optimization, room correction, limit, Stand-by, boiler control, circulation pump, operating hours, heat amounts counting, pump blocking protection.

With the inclusion of plant macros, the Heating Control Processor HRP is completely configured, the accompanying HRP software menus are set, the parameters are adjusted and the inputs and output signals are assigned as well.

the dialog guides the user through the plaintext-oriented menu technology.

Entry and query of the data in four priority levels by means of a code key.

Week and Annual program. trend value acquisition and display of important plant values.

Direct connection to the BMS on the RS232 interface. For plants that are distantly removed from each other, data transmission to the BMS by modem on the public telephone network is possible.

Important messages can also be sent to a mobile telephone with a modem (GSM-SMS-Service).

Unlimited data backup on power failure.

- 6 analog inputs for active measuring element KP10
- 1 analog input 0..10 V
- 5 binary inputs
- 4 binary outputs max. 6(3) A; 230 V AC or zero-voltage, for pumps, boiler or pre-control
- 1 analog output 0..10 V
- plastic fire resistant housing, for switching cabinet mounting incl. wall console
- mains 230 V AC ± 10 % 50..60 Hz

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Technical data

Inputs and outputs	5 binary inputs BE	zero-voltage contact of these, two are pulse inputs 20 Hz
	4 binary outputs BA	relay contact zero-voltage max. 6 (3) A; 230 V AC
	1 analog output AA for control device	0..10 V; 5 mA; 24 V AC
	6 analog inputs AE	KP10, actives measuring element
	1 analog input AE	0..10 V continuous (setpoint remote setter)
	analog/digital conversion	10 Bit
Interface	serial RS232	building management system BMS, modem
Nominal voltage	230 V AC ± 10 %; 50..60 Hz; 12 VA; 52 mA	
Nominal power	HRP21-S: 12 VA, current requirements 78 mA bei 230 V AC	
Display	back-lighted graphic display HRP20-S, LED for error message and manual operation	
Diagnostic jack	diagnosis/data backup	
Operating HRP20-S	single knob operation turning knob, selection key [SET], back step key [ESC]	
Fuse	fuse S1 6 A (T) for external switching fuse S2 630 mA (T) for electronics accessible from the reverse side	
Processor	80C592	
Memory	32 kByte RAM; 240 kByte flash PROM	
Operating system	multitasking	
Power failure data backup	Lithium battery, unlimited	
Degree of electrical protection	IP20	
Ambient temperature	0..45°C	
Ambient humidity	in operation: 20 – 80 % rF, not condensing out of operation 5 – 90 % rF, not condensing	
Housing	plastic housing fire-resistant	
Measurements	HRP20-S (W/H/D), 198.5 mm x 110.0 mm x 92.5 mm	
Front panel cut-out	200.4 mm x 112.0 mm	
Weight	1.2 kg	
Designation	CE	

Temperature range:

For the **trend curves and of the outside temperature assignment** please take into account the sensor range of the HRP.
For temperatures outside this range, these values will be represented as "---" (invalid)!

Par.No.(P90) Technical Address	Par.Name	Lower limit	Upper limit	Basis value	Unit
b1	outside	**-50.0**	**70.0**	cur V. (KP10)	°C
b2	room	**0.0**	**120.0**	cur V. (KP10)	°C
b3	feed	**0.0**	**120.0**	cur W. (KP10)	°C
b4	sensor 4	**0.0**	**120.0**	cur V. (KP10)	°C
b5	sensor 5	**0.0**	**120.0**	cur V. (KP10)	°C
b6	sensor 6	**0.0**	**120.0**	cur V. (KP10)	°C
b7	sensor 7	**0.0**	**100.0**	cur V. (0-10V)	% *1)

*1) b7 is scalable between –1000.0 and +1000.0.

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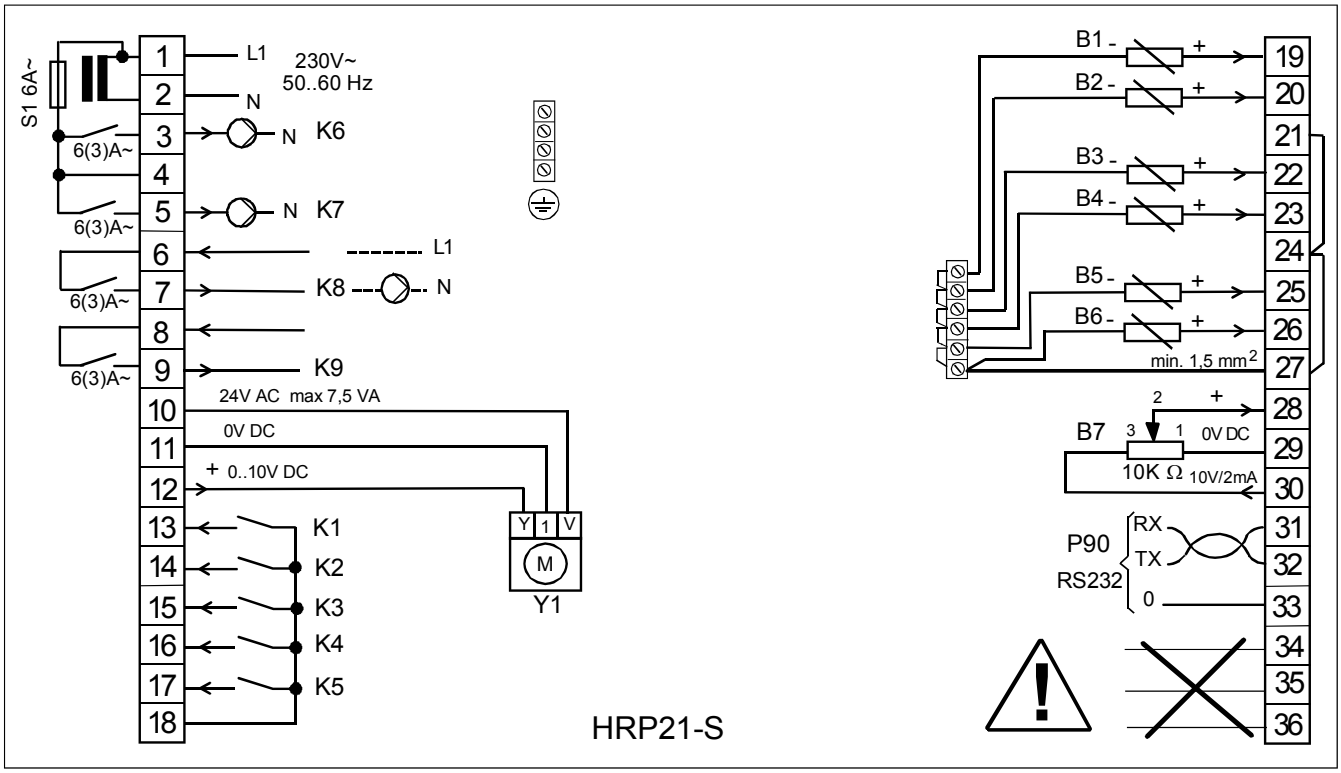
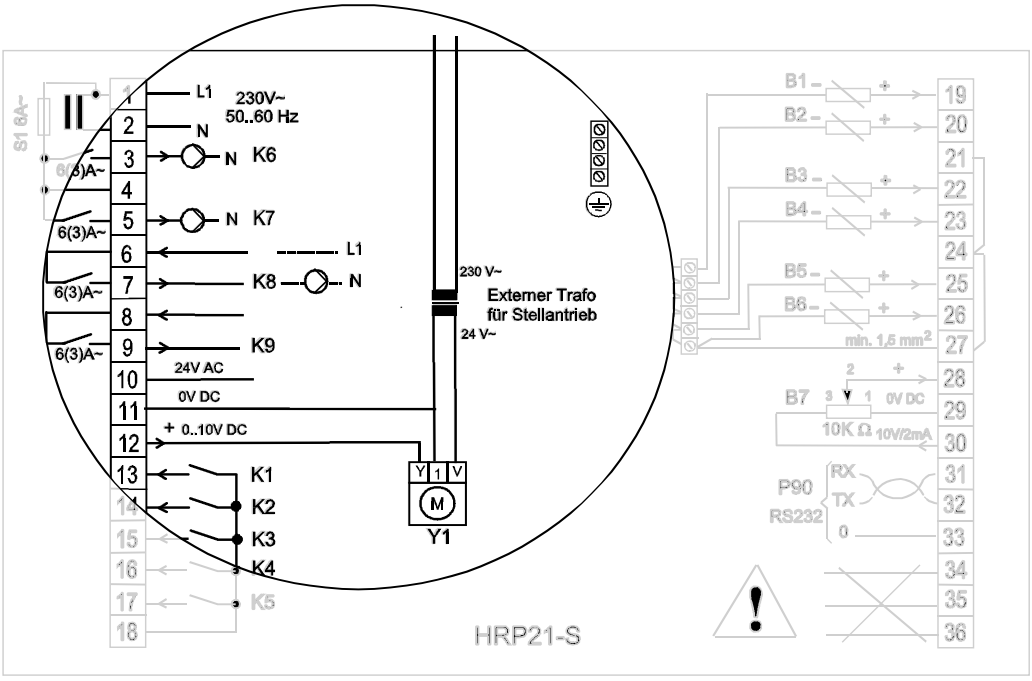
Connection figure



Notice

If the supply voltage 24 V~ for the servodrives is provided by an **external transformer**, then **no connection** may be made to the internal 24 V~ of the HRP21 or HRP24!



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Software menus included

Menu	No.	How often available	Comment
Basic menu (Heating)		1x	weather sensor feed temperature control, switchable to fixed setpoint control
SW remote setter	12	1x	has an effect on basic menu
Hours-run	18	2x	
Pulse counting	19	2x	effect on the contact inputs K4 and K5 (including power calculation
Min/Max/Average	20	2x	
Scaling	25	1x	scaling possibility for the input 0-10V (B7). The scaling is carried out by accessing the sensor
Utilization time	26	3x	four switching times are available for each utilization time, an additional 4 special utilization times exist with effect on the first utilization time
Holiday periods	27	1x	
Modem	28	1x	
GSM-SMS	29	1x	
Minitel	30	1x	
J-Bus	31	1x	
Room correction	41	1x	
Stand-by	42	1x	
Optimization	43	1x	
Boiler regulation	46	1x	for heating drinking water
Limit	48	1x	
Chimney sweep	49	1x	effect in connection with the software menu Boiler control
Legionel	50	1x	effect in connection with the software menu Boiler control
Remote operation	51	1x	
Plant message	52	8x	
Double pumps	53	1x	effect in connection with basic menu Heating
Boiler regulation	61	1x	
Pre-regulation	62	1x	
Circulation	63	1x	
3-point	64	2x	

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