

## HeatingRegulationProcessor HRP20-S

### Basic function

Heating Control Processor HRP20-S with 3-point output 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
- 1 3-point output for servodrive (2 binary outputs 230V AC or zero-voltage)
- 4 binary outputs max. 6(3)A; 230 V AC or zero-voltage, for pumps, boiler or pre-control
- plastic fire resistant housing, for switching cabinet mounting incl. Wall console
- mains 230 V AC  $\pm 10\%$  50..60 Hz



**HRP20-S HeatingRegulationProcessor**

**Device**

**description**

**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 3-point output for control device	2 relay contact zero-voltage max. 6 (3) A; 230 V AC
	6 analog inputs AE	KP10, active 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	HRP20-S: 12 VA, current requirements 52 mA at 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, 5 years	
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	

Device description

HRP20-S HeatingRegulationProcessor

Temperature ranges:

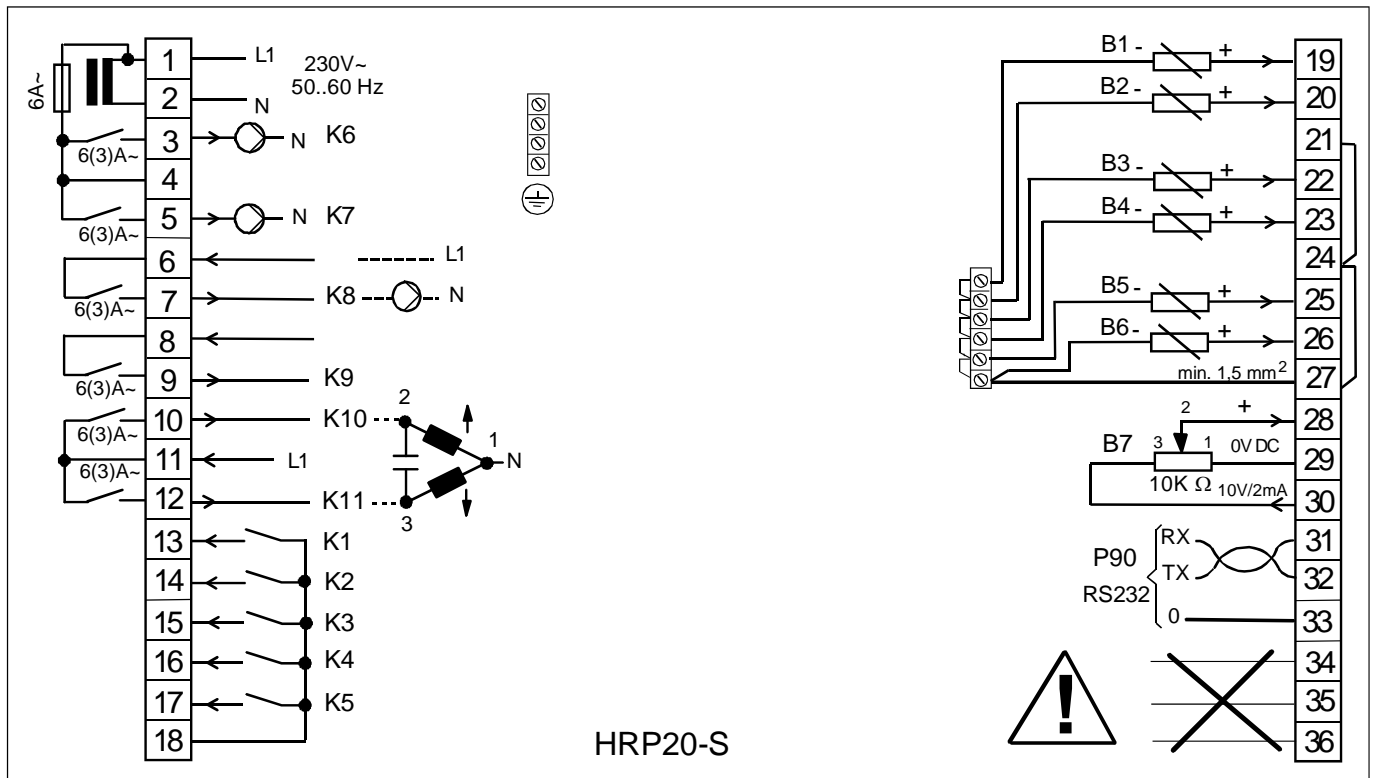
Please note the sensor ranges of the HRP when dealing with the **trend curves and the outside temperature assignment**.

For temperatures outside these limits, the value is represented as " " (invalid)!

Par.No.(P90) Techn. address	Par. Name	Lower limit	Upper limit	Base value	Units
b1	outside	<b>50.0</b>	<b>70.0</b>	curr. val. (KP10)	°C
b2	room	<b>0.0</b>	<b>120.0</b>	curr. val. (KP10)	°C
b3	feed	<b>0.0</b>	<b>120.0</b>	curr. val. (KP10)	°C
b4	sensor 4	<b>0.0</b>	<b>120.0</b>	curr. val. (KP10)	°C
b5	sensor 5	<b>0.0</b>	<b>120.0</b>	curr. val. (KP10)	°C
b6	sensor 6	<b>0.0</b>	<b>120.0</b>	curr. val. (KP10)	°C
b7	sensor 7	<b>0.0</b>	<b>100.0</b>	curr. val. (0 10V)	% *1)

\*1) b7 are scalable between -1000.0 and +1000.0.

Wiring diagram



HRP20-S

**HRP20-S HeatingRegulationProcessor  
description****Device****Related software menus**

<b>Menu</b>	<b>No.</b>	<b>How often occurs</b>	<b>Comments</b>
Basic menu (heating)		1x	Weather-oriented feed temperature regulation, switchable to fixed value regulation
Remote control	12	1x	Effects basic menu
Operating hours	18	2x	
Impulse counting	19	2x	Effective with the contact inputs K4 and K5 (including power calculations)
Min/Max/Middle	20	2x	
Scaling	25	1x	Scaling possibility for the input 0 10V (B7). Scaling is carried out by addressing the sensor
Usage time	26	3x	Per usage time, four switching times are available, furthermore, four special usage times which effect the first usage time
Vacation periods	27	1x	
Modem	28	1x	
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 potable water heating
Limitation	48	1x	
Chimneysweep	49	1x	Effect in connection with the software menu boiler regulation
Legionnaire	50	1x	Effect in connection with the software menu boiler regulating
Remote control	51	1x	
Plant messages	52	1x	
Double pumps	53	1x	Effect in connection with basic menu heating
Boiler regulation	61	1x	
Precontrol	62	1x	
Circulation	63	1x	
Three-point operation	64	2x	