

HeatingRegulationProcessor HRP22

HeatingRegulationProcessor HRP22 M

Basic function

HeatingRegulationProcessor HRP22/HRP22 M
Designed for the regulation, control, optimization and monitoring of heating plants with boiler regulation or remote heating plants.

Bus and modem can be connected.

Maximum 2 Heating loop and precontrol is possible.

One-knob operation and a graphic, illuminated display for the input and query of all DDC data.

Extension of the Basic function by means of HRP software menus such as Optimization, Room Correction, Limitation, Stand by, Boiler Regulation, Domestic-hot-water Heater Tank Control , Circulation Pump, Operating Hours Counter, Heat Amounts Counter, Pump Blocking Protection.

In setting the plant macros, the HeatingRegulationProcessor HRP is completely configured, the accompanying HRP software menus are set, the parameters are configured, and the input and output signals are assigned.

The user is guided through the dialog with a plaintext menu system.

Input and query of the data in 4 priority levels can be accessed with code keys.

Week program and annual program. Trend value acquisition and display of important plant values.

8 HeatingRegulationProcessors HRPs are administered by means of the HRP LRP Bus System. Distance of 1000 m.

Communication of all bus participants with each other in the form of queries or the modification of all parameters, integrated constituent part of the HeatingRegulationProcessor HRP.

A direct connection to the BMS with the RS232 interface. For widely separated plants Data transmission for BMS per modem with the public telephone network.

Important messages can also be sent by modem to a cellular telephone (GSM SMS Service).

Unlimited data backup in case of power failure.

- SPS functions with markers, timer and time programs, freely programmable
- 6 analog inputs for active measuring element KP10
- 1 analog input 0..10 V
- 3 binary inputs
- 2 analog outputs 0..10 V
- 6 binary outputs max. 6 (3) A 230 V AC
- Plastic housing fire-resistant, for control panel mounting,
- Mains 230 V AC \pm 10 % 50..60 Hz

The HRP22 M also has an M-bus connection (DIN EN 1434 3) available for the connection of counters with an M-Bus interface. A maximum of four counters can be connected.



HRP22/HRP22-M HeatingRegulationProcessor**Device description****Technical data**

| | | |
|------------------------------|---|---|
| Inputs and outputs | 3 binary inputs BE | Zero-voltage contact two of these are impulse inputs 20 Hz |
| | 6 binary outputs BA | Relay contacts max. 6 (3) A; 230 V AC |
| | 6 analog inputs AE | KP10, active measuring element |
| | 1 analog input AE | 0..10 V continuous (remote setpoint setting) |
| | 2 analog outputs AA | 0..10 V; 5 mA at 10 V |
| | analog/digital conversion | 10 Bit |
| Interfaces | Serial RS232, switching possibilities to RS485 | Building Management System BMS, Modem, J-Bus |
| Bus connection | CAN Bus | Maximum 8 HRP / LRP to one bus system |
| Nominal voltage | 230 V AC \pm 10 %; 50..60 Hz; | |
| Nominal power | 18VA; current requirements 78 mA at 230 V AC | |
| Displays | Graphics display with backlighting, LED for error messages and manual operation | |
| diagnosis jack | Diagnosis/ data backup | |
| Operation | One-knob operation rotating knob, selection button [SET], backstep button [ESC] | |
| Fuse | Fuse S1 6, (T) for external switching Fuse S2 630 mA (T) for electronics Accessible from the rear | |
| Processor | 80C592 | |
| Memory | 64 kByte RAM; 512 kByte Flash PROM | |
| Operating system | Multitasking | |
| Mains failure data backup | Lithium battery, 5 years | |
| Mode of enclosure protection | IP20 | |
| Environmental temperature | 0..45°C | |
| Environmental humidity | In service: 20 – 80 % rF, non-condensing Out of service 5 – 90 % rF, non-condensing | |
| Housing | Plastic housing fire-resistant | |
| Measurements | W/H/D: 110.0 mm x 198.5 mm x 77.5 mm (with wall console W/HRP 15.0 mm deeper) | |
| Front panel cutout | 200.4 mm x 112.0 mm | |
| Weight | 1.2 kg | |
| Identifier | CE | |

Temperature ranges:

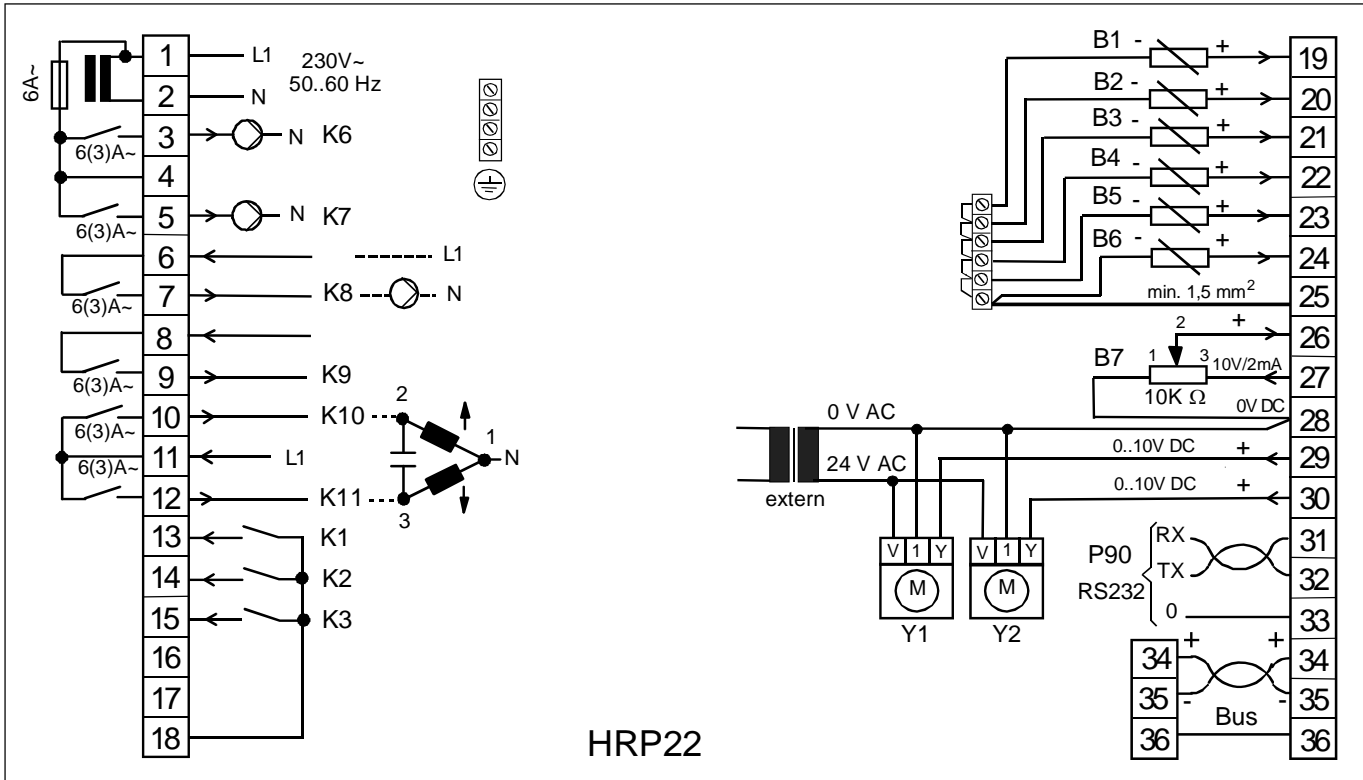
Please note the sensor ranges of the HRP when dealing with the **trend curves and the outside temperature assignment.**

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

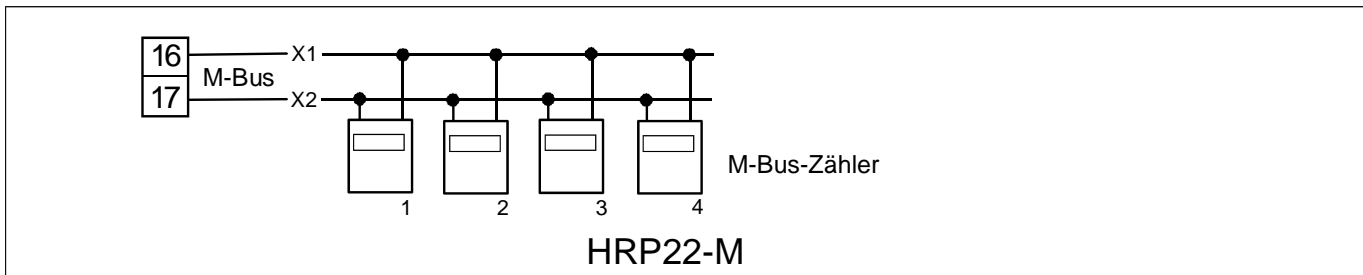
| Par.No.(P90) Techn. address | Par. Name | Lower limit | Upper limit | Base value | Units |
|---------------------------------------|-----------|-------------|--------------|--------------------|-------|
| b1 | outside | 50.0 | 70.0 | curr. val. (KP10) | °C |
| b2 | room | 0.0 | 120.0 | curr. val. (KP10)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

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

Wiring diagram



HRP22



HRP22-M

Device description

HRP22/HRP22-M HeatingRegulationProcessor

Related software menus

| Menu | No. | How often occurs | Comments |
|-----------------------------|-----|------------------|---|
| Basic menu (heating) | | 2x | Weather-oriented feed temperature regulation, switchable to fixed value regulation |
| Extensive control functions | | 1x | Free parameterization of the contact outputs – 16 markers – 8 timers |
| Remote control | 12 | 2x | Effects basic menu 1 |
| Operating hours | 18 | 2x | |
| Impulse counting | 19 | 2x | Effective with the contact inputs K2 and K3 (including power calculations) |
| Min/Max/Middle | 20 | 2x | |
| Limit values | 23 | 8x | |
| 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 |
| Chimneysweep | 49 | 1x | Effect in connection with the software menu boiler regulating |
| Legionnaire | 50 | 1x | Effect in connection with the software menu boiler regulating |
| Remote control | 51 | 2x | |
| Plant messages | 52 | 8x | |
| Double pumps | 53 | 1x | Effect in connection with basic menu 1 heating |

| Menu | No. | How often occurs | Comments |
|-----------------------|------------|-------------------------|---------------------------|
| Boiler regulation | 61 | 1x | |
| Precontrol | 62 | 1x | |
| Circulation | 63 | 1x | |
| Three-point operation | 64 | 2x | |
| Limitation | 65 | 2x | |
| M-Bus | 67 | 4x | Effective only at HRP22 M |
| Remote bus | | 1x | Effective only at HRP22 M |