



A programmable system comprising a central control that is connected, using two wire cables, to various control modules. In addition, the system communicates with all hidros heat pumps and will manage the heating, cooling and domestic hot water production.

The basic system can control 6 independent zones taking information from temperature and humidity sensors and activating valves, pumps and supplementary heaters.

XWEB supervision software can be added enabling remote monitoring and control via internet or GSM modem.

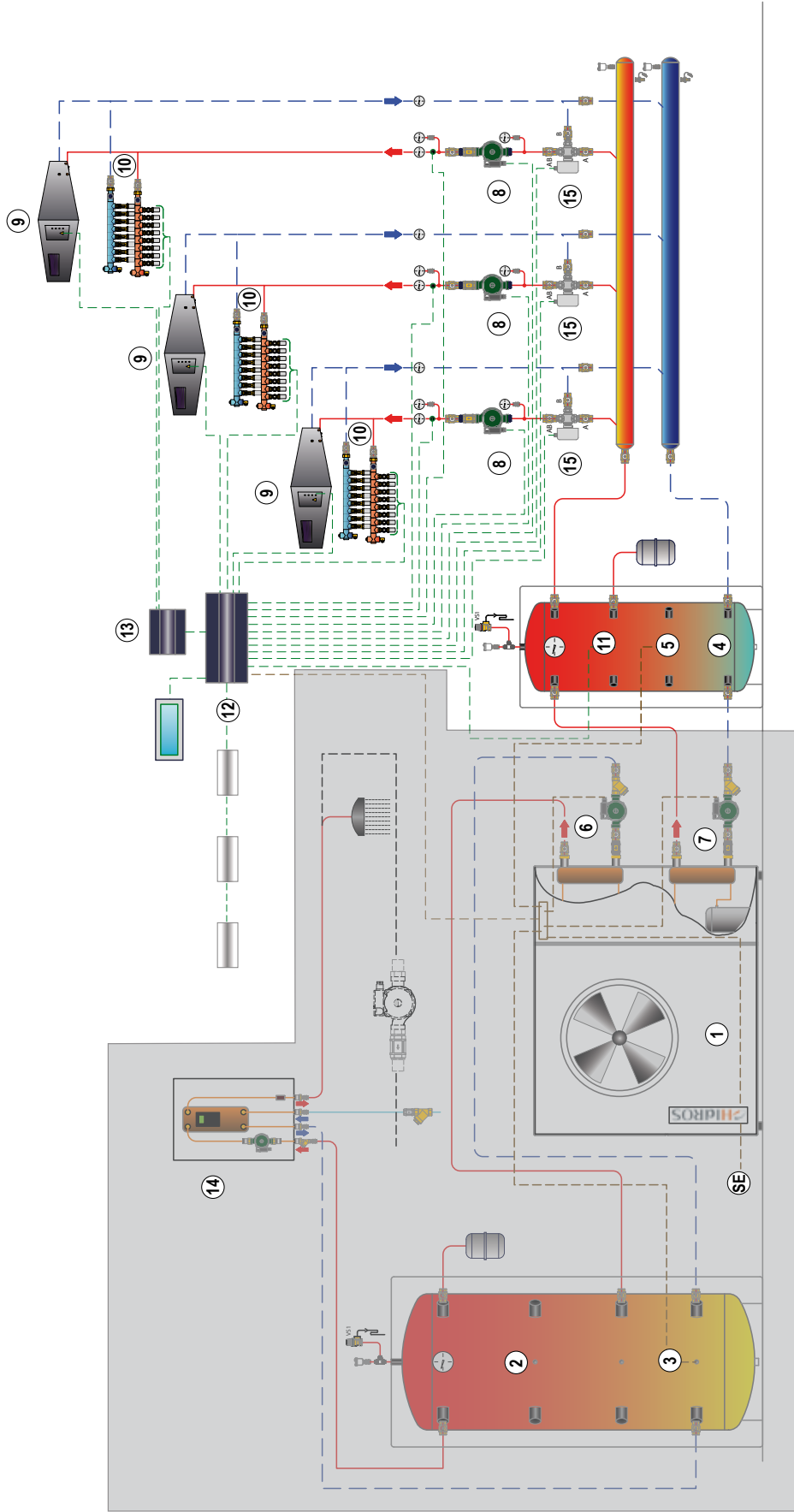
Mod-BUS protocol also enables integration of the system with other home automation products.

### Versions and accessories

- 3 Mixing valves and 3 water pumps;
- 6 Zones with independent humidity and temperature control and dew point checking;
- Expansion module with an additional 6 zones.

### Product specifications

- Dehumidification mode possible for 3 independent zones.
- Normal operation + set back temperature.
- Summer/winter change over.
- Control of supplementary heat.
- Cooling mode possible for 3 independent zones.
- Heat pump Alarm display.
- Serial interface port RS 485 (master and slave).
- Communication protocol Mod BUS-RTU.
- Connection to XWEB supervision systems or other open source applications.



Installation of a control system for an air to water heat pump, with DHW circuit priority, equipped with weather -compensated ambient sensor. The management of the system is done by temperature/humidity sensors, connected via BUS line, programmable PLC controller and graphic display for the visualization of all the parameters.

The software allows the control of the temperature and the humidity up to 32 zones, 3 mixing valves 0-10V, 3 dehumidifiers, 3 water pumps, boiler, water chiller and heat pump.

*The above scheme is for illustrative purposes only*

1	Heat Pump	4	Buffer Tank	7	Heating System Pump	10	Zone Manifold	13	Expansion Module
2	Hot Water Tank	5	Buffer Tank Sensor	8	Circulating Pump	11	System min Temp Sensor	14	Hot water Heat Station
3	Hot Water Sensor	6	Hot Water Pump	9	Dehumidifier	12	Central Controller	15	Mixing Valve



#### **RGAA.01 Programmable controller**

Plant programmable logic controller, able to manage: 6 independent zones in heating and cooling mode, 3 modulating valves and related water pumps, winter weather compensation set point, summer dew point control, 2 independent dehumidifiers with cooling integration, time zones set with 2 temperature levels, summer and winter working mode, heat pump remote start and stop, display of heat pump general alarm. The device is supplied with 2xRS485 serial output connection, (master and slave), standard communication protocol Mod BUS-RTU that allows the connection to the XWEB monitoring systems or existing applications. Power supply 24 Volt.



#### **RGBB.01 Graphic display**

Graphic keypad, with LCD display, 240x96 pixel, 8 buttons with easy-to-use interface, suitable for wall mounting installation, supplied with buzzer. The built-in keyboard allows the user to display and set the temperature and humidity parameters in the different zones, summer and winter heat pump working mode, display the heat pump general alarm and set the time zones.



#### **RGBB.02 Graphic display touch screen (HMI)**

Display TFT LCD 800x420 pixel, 262k colors with easy-to-use interface, suitable for wall mounting installation. The built-in keyboard allows the user to display and set the temperature and humidity parameters in the different zones, summer and winter heat pump working mode, display the heat pump general alarm and set the time zones.

- Microprocessor ARM9;
- Mass storage media: SD card.



#### **RGDD.01 Temperature and humidity sensor**

- Wall mounting electronic temperature+humidity sensor;
- ABS plastic box;
- Working range 0-95% R.H. +/- 0-50°C;
- 0-10V signal;
- Accuracy +/- 2% R.H.; +/- 0,25°C;
- Power supply 24 VAC.



#### **MICR.0540 Web server supervisor module**

- WEB SERVER for supervision of the parameters;
- Power supply: 230 V AC +/- 10%;
- Internal memory 48 MB;
- Communication protocol modBUS-RTU;
- Output: LAN: x1 - USB: x 2;
- Alarm relays: RS485 x 2, system x 1;
- Ports: RS232 for external modem - RS485 digital input;
- Internal modem: Optional (analogue or GSM);
- Sampling interval: 1 to 60 min;
- Alarm signalling: via fax, mail, SMS or relay output.