STIEBEL ELTRON

Commissioning Guide:
Step by Step for Heat Pumps using WPM System

11 | 2021

Contents

Definitions

Code/s	Definition
WP	Heat Pump (Wärmpumpe)
WPM	Heat Pump Manager
ISG	Internet Service Gateway
HK	Heating Circuit (Heizkreis)
I/O	Input/Output
IWS	Control Board in the Heat Pump (Steuerung)
WPE	Heat Pump Extension module
DHC	Emergency Booster Heater (inside Heat Pump)
BGC/FCR	Immersion Heater
EVU	Terminal that allows EU electricity suppliers to centrally cut power. In AUS 230V constant supply required.

Visual Legend page 22 →

Picture Glossary

Heat Pump Manager

Heat Pump Extension

Internet Service Gateway

FET Room Controller

WPL/Outdoor Unit

WPKI HK-E/M-E Distribution pump (Secondary Circuit)

Circulation pump UP 25/7.5 PCV (Primary Circuit)

Fundamentals - Important

1 Not every setting covered in this guide will be applicable to your system. The heat pump manager's (WPM) menu structure adapts to the heat pump and sensors connected. By way of example, if the heat pump install does not integrate domestic hot water, no DHW settings will be visible.

2 The DIP switches on the heat pump's IWS board (refer to the Operation and Installation Guide) must only be adjusted if an external second heat generator is connected to the system. If no external heat source is connected, or if the internal DHC will be used, you do not have to change the factory settings.

3 In cascade operation (two heat pumps or more), it is not possible to use the built-in DHC element as a second heat generator. In such case, emergency/booster heating should be ensured via a threaded or flanged immersion element Alternatively, conventional heat generators can also be used in most system configurations. Any secondary heat source must be connected back to and controlled by the WPM.

4 The WPM works with a pump kick; this activates all relay outputs that have not been used within the last 24 hours for one minute. This should prevent pumps and diverter valves from damage due to inactivity or freezing.

5 Frost protection in WPL machines has nothing to do with the "Frost protection" setting in the controller. WPL machines are protected with an additional sensor located on the condenser. If the temperature detected at this sensor falls below 10 °C, the charging pump is activated. Water is then drawn from the heating circuit or buffer until the temperature at the sensor rises above 11 °C. The pump is then deactivated again. With the new inverter WPL, this function will rarely be used, as these WPLs normally run constantly at temperatures below 0 °C.

6 When a cascade is initialised, the WPM assigns bus addresses to the individual subscribers. A connected MSM/WPE is always assigned bus address 7. Heat pumps must be declared to the WPM one after the other. The first HP is assigned number 1, the second number 2, and so on (required for the DHW and cooling stages)

7 In heat pump cascades, the WPM monitors and documents the hours run.
Every night, the WPM reads the hours run meters of the individual heat pumps, and makes the HP with the lowest number of hours the start machine for the next day

8 For heat pump system solutions integrating a domestic hot water tank SBB, HSBC or SBS, it is imperative that:

8.1 The DHC (refer to page 5) in Heat Pump or HMS Trend is supplied with at least 3 kW of power to enable Emergency Operation.

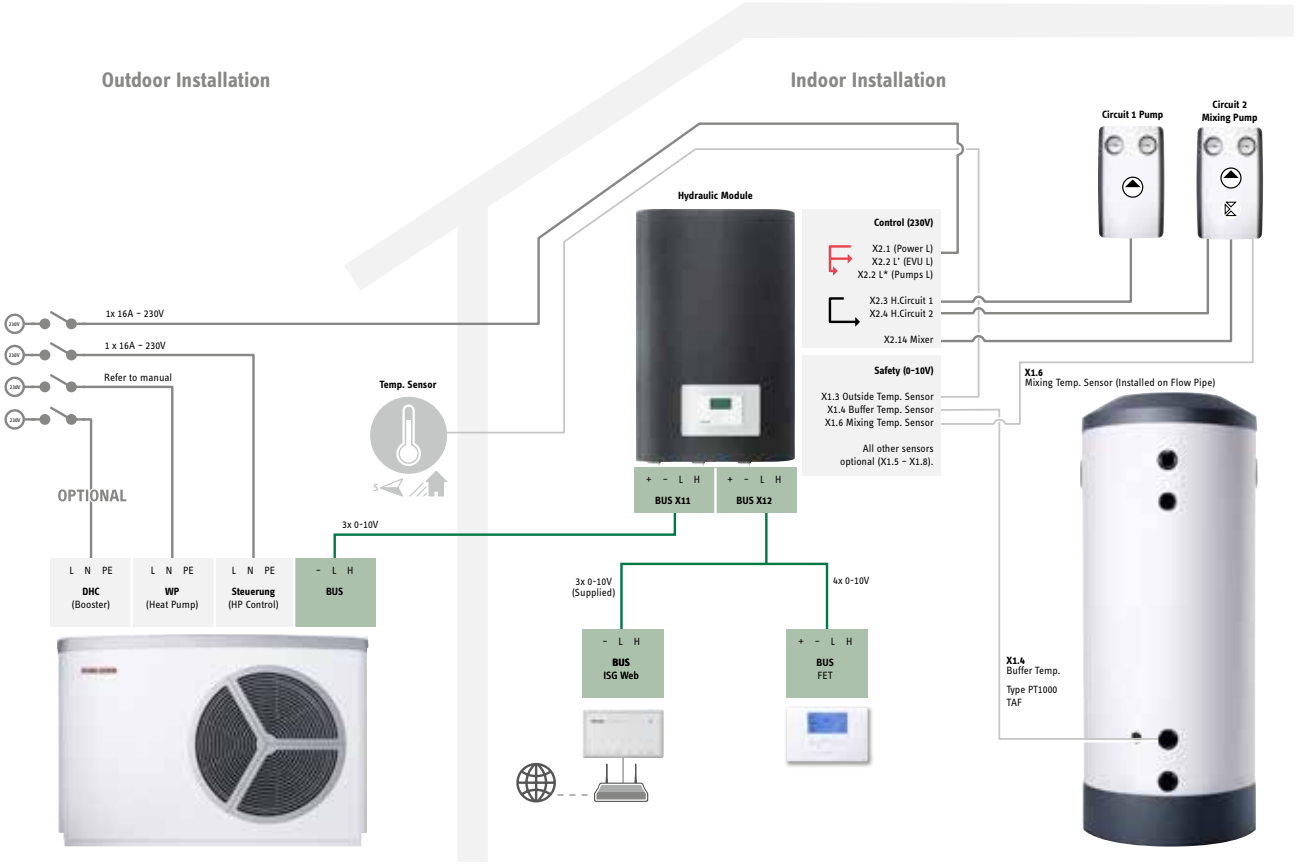
8.2 STIEBEL ELTRON is consulted if a ring main (circulation line) is going to be connected to the domestic hot water tank. Additional planning may be necessary.

9 Any third-party tank used must be compatible with STIEBEL ELTRON heat pumps.

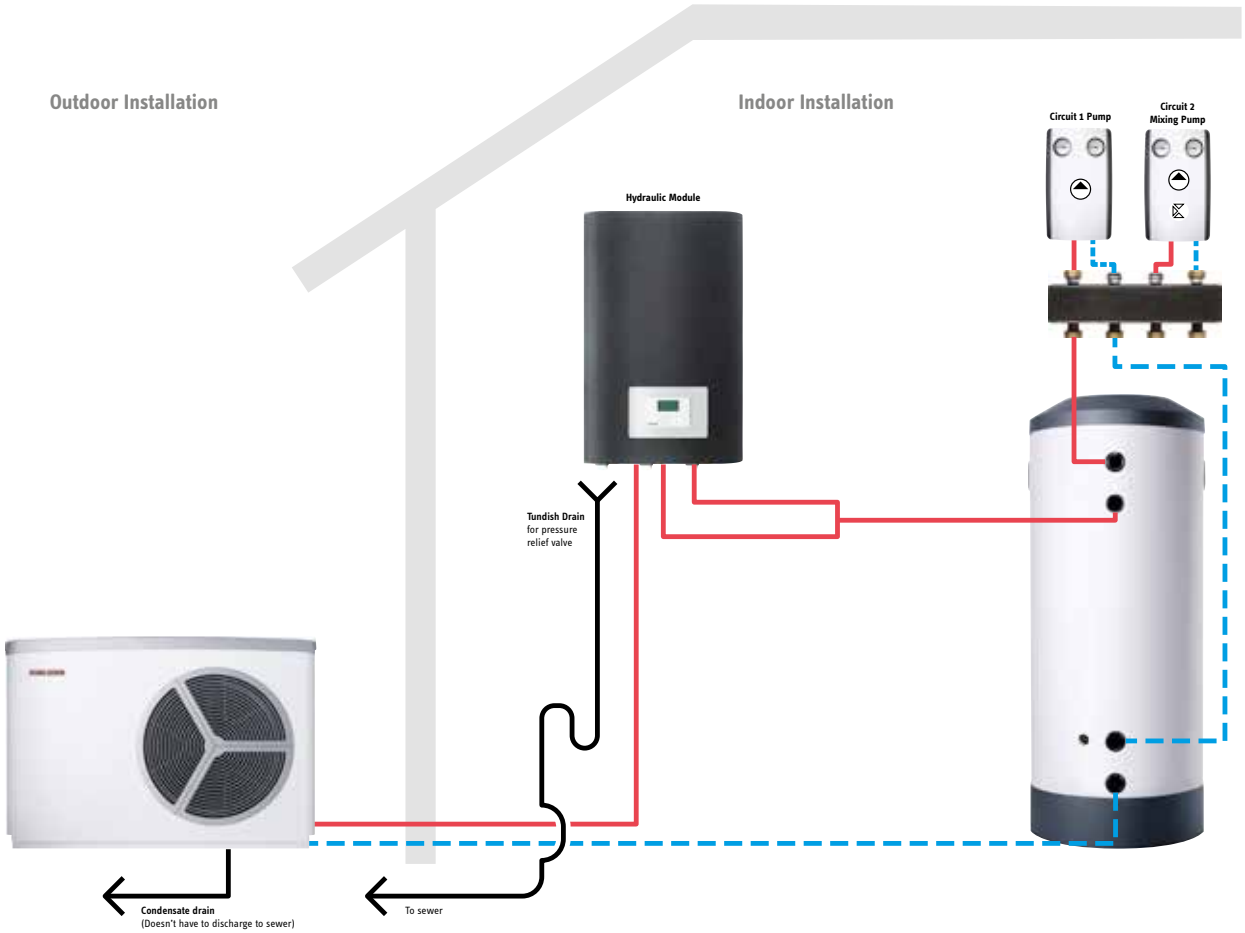
10 An automatic filling valve can be connected and used as filling point for the heating system but must be disconnected or non-permanent after the initial fill up. The system must not be topped up constantly.

1 Setup

Follow the specific Hydraulic and Electrical schematics provided with the supplied system.
If this is not available, please contact **1800 153 351** prior to commencing, to ensure a functional mechanical and electrical solution. See below image for guidance on a typical system layout.



Electrical Installation



Hydraulic Installation

TIPS

If not using a hydraulic module as depicted above. Relief valve and expansion cylinder needs to be teed into any one of the return pipes.

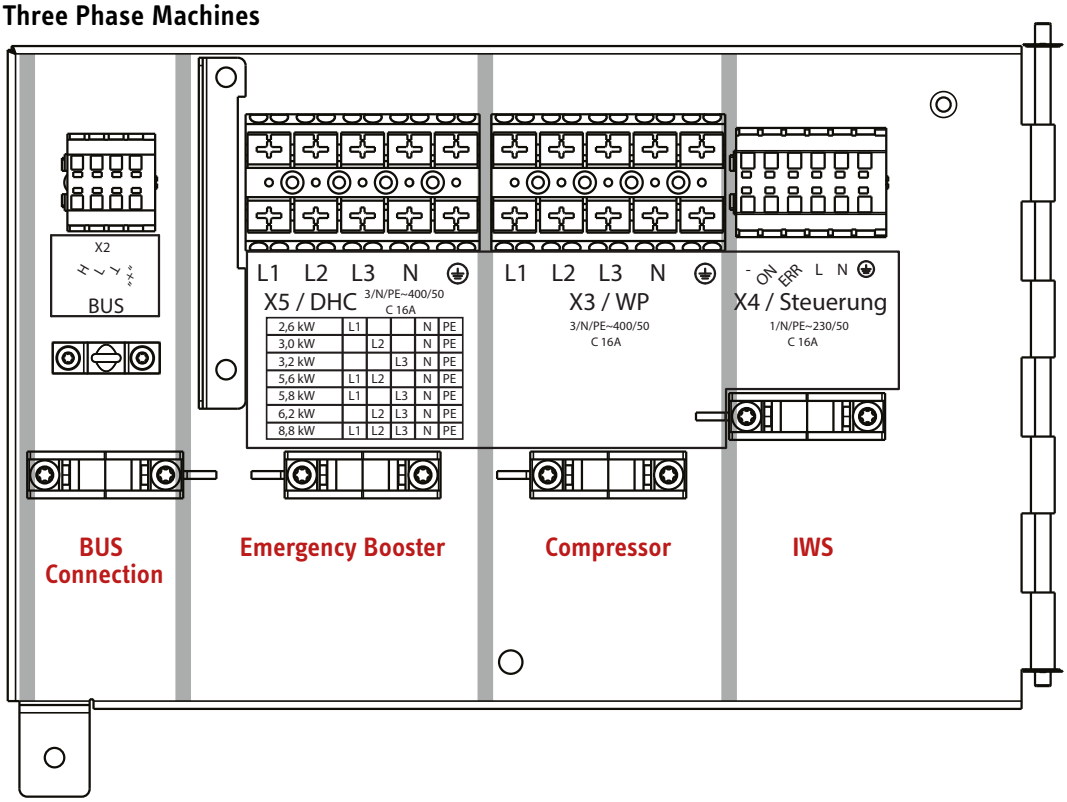
1.1 Wiring

a. Outdoor Unit

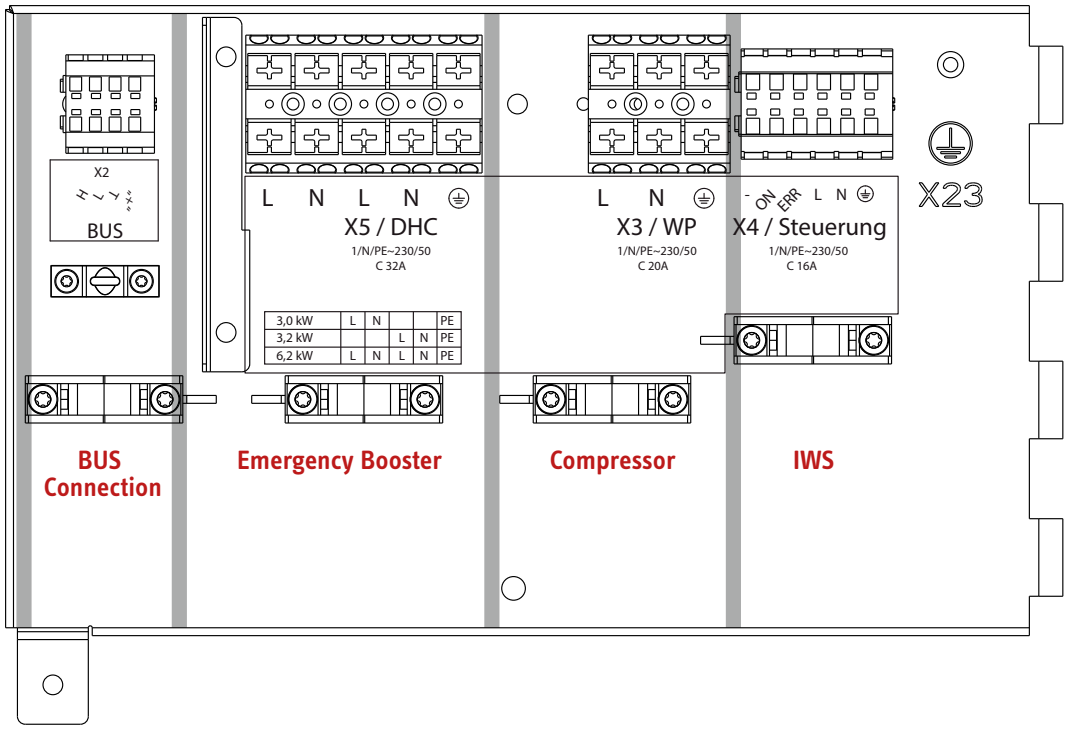
Ensure there is 1 x Power supply to the Compressor (WP), 1 x Power supply to the IWS/Controller (Steuerung) and 1 x 3 Core BUS cable (low voltage). On the outdoor unit, Bus connection showing “nc” or “+” are not connected to the bus circuit.

DHC is the Emergency/Booster element and should only be connected if specified in the wiring diagram.

Three Phase Machines



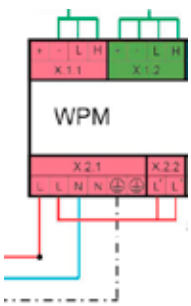
Single Phase Machines



b. WPM – Quick Reference Guide

Tip: Highlight the relevant functions to ensure all connections are made

V	Terminal	Connections	Input Output	Function	What connects to it
230V	X2.1	L,L,N,N,PE,PE	I	Mains Power Supply	230V Mains Power
	X2.2	L',L*	I	EVU and Pump Power Supply	Bridge from X2.1
	X2.3	L,N,PE	O	Heating Circuit Pump 1	WPKI HK E or Circulation pump
	X2.4	L,N,PE	O	Heating Circuit Pump 2	WPKI HKM E or Circulation pump w/mixer
	X2.5	L,N,PE	O	Heating Circuit Pump 3	WPKI HKM E or Circulation pump w/mixer
	X2.6	L,N,PE	O	Buffer Loading Pump 1	Circulation Pump
	X2.7	L,N,PE	O	Buffer Loading Pump 2	Circulation Pump
	X2.8	L,N,PE	O	DHW Pump	Circulation Pump
	X2.9	L,N,PE	O	Source Pump	Brine Circulation Pump
	X2.10	L,N,PE	O	Fault Output	Supply 240v to external signal
	X2.11	L,N,PE	O	DHW Recirculation Pump	DHW Pump
	X2.12	L,N,PE	O	Second Heat Source	Circulation Pump
	X2.13	L,N,PE	O	Cooling	Circulation Pump
	X2.14	^,N,PE,v	O	Mixer Control – Heating Circuit 2	WPKI HKM-E or External Mixer
	X2.15	^,N,PE,v	O	Mixer Control – Heating Circuit 3	WPKI HKM-E or External Mixer
Low Voltage	X1.1	-, H, L	I/O	CAN A – Bus Connection	WPL or WPE (Extension Module)
	X1.2	+, -, H, L	I/O	CAN B – Bus Accessories	FET Controller or Internet Service Gateway (ISG)
	X1.3	1,2	I	Outdoor Temperature Sensor	AF PT Outside Temperature Sensor
	X1.4	1,3	I	Buffer Tank Sensor	TAF PT immersion/contact sensor
	X1.5	1,4	I	Flow Temperature Sensor	TAF PT immersion/contact sensor
	X1.6	1,5	I	Mixer Sensor – Heating Circuit 2	TAF PT immersion/contact sensor
	X1.7	1,6	I	Mixer Sensor – Heating Circuit 3	TAF PT immersion/contact sensor
	X1.8	1,7	I	DHW Sensor	TAF PT immersion/contact sensor
	X1.9	1,8	I	Source Sensor	TAF PT immersion/contact sensor
	X1.10	1,9	I	Second Heat Source Sensor	TAF PT immersion/contact sensor
	X1.11	1,10	I	Cooling Sensor	TAF PT immersion/contact sensor
	X1.12	1,11	I	DHW Recirculation Sensor	TAF PT immersion/contact sensor
	X1.13	1,2,3	I	SG Ready	Supply from programable inverter
	X1.14	+,IN,⊥	I	0–10V Input	Analogue input (Off/Heat/Cool)
	X1.15	+,IN,⊥	I	0–10V Input	Analogue input (temperature)
	X1.16	1,2	O	PWM / 0–10V output 1	PWM output/speed control pump
	X1.17	1,2	O	PWM / 0–10V output 2	PWM output/speed control pump
	X1.18	+, -, H, L	I/O	CAN B – Bus Accessories	FET Controller or Internet Service Gateway (ISG)
	X1.19	-, H, L	I/O	CAN A – Bus Connection	WPL or WPE (Extension Module)



TIPS

WPM (Heat Pump Manager) – Ensure there is a 230V supply into X2.1, and that bridges have been made to X2.2' and X2.2*

1.2 Hydraulic

a. Ensure the primary circuit has been filled and Buffer Loading pump 1 has been connected to X2.6

b. Air in system... If you can hear your pumps, it's probably air, make sure the all bleeders and pumps have been bled effectively. Some noise may still be present at this stage but should settle out over time.

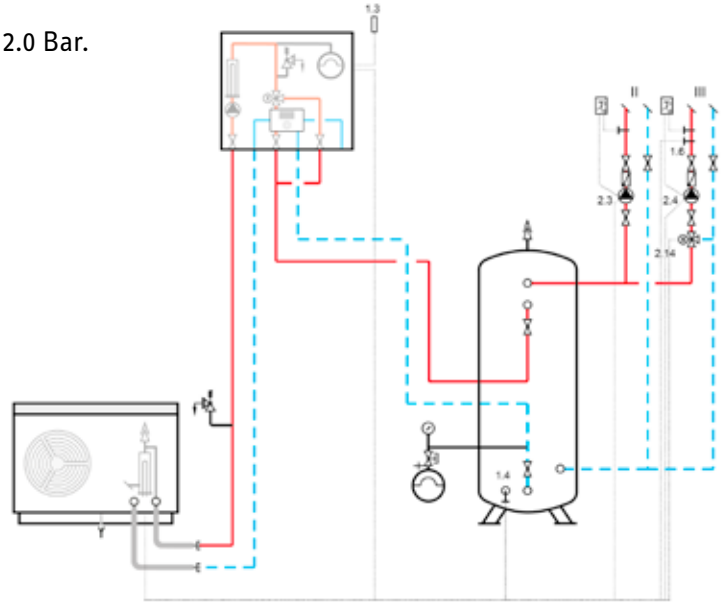
c. Have you added corrosion inhibitor to the system? If not, add it now.

d. Check flow through heat pump (found in INFO > HEAT PUMP > PROCESS DATA > WP WATER FLOW RATE). Do you have the rated flow through the heat pump as found in the installation instructions?

e. Use the relay tests (found in diagnosis menu). You can run all the pumps separately and check for flow/air.

f. Check and repair any leaks or drips.

g. Check and top up system pressure if necessary, 1.5 – 2.0 Bar.



WPL Hydraulic Module

2 Start-up

2.1 Sequence for Initialising the Heat Pumps via BUS connection

2.1 Sequence for Initialising the Heat Pumps via BUS connection

For the BUS connection it is essential that you carry out the steps below in the order described:

a. Connect the WPM to the mains voltage.

b. Connect the WPE (if installed) to the mains voltage.

c. Connect the internal heat pump controller (IWS) to the mains voltage.

d. Leave the mains voltage to the compressor and emergency/booster heater switched off, so that the heat pump does not start up uncontrolled during initialisation.

2.2 Verifying Initialisation

a. In the DIAGNOSIS / SYSTEM menu, check all connected BUS subscribers and their respective software versions are shown under BUS SUBSCRIBER.
MENU>DIAGNOSIS>SYSTEM>BUS SUBSCRIBER
The Screen will show the following
- WPM4
- FES
- FET (multiple, if connected)
- WP1 (multiple, if cascaded)

b. After completing initialisation of the heat pump, check the DIAGNOSIS / SYSTEM menu under HEAT PUMP TYPES to check that all connected heat pumps are being displayed. MENU>DIAGNOSIS>SYSTEM>HEAT PUMP TYPES

If the Heat Pump(s) do not successfully subscribe, please refer to the Section – “Reinitialising the IWS” in the WPM Commissioning Booklet.

If the WPL displays in the Subscriber List and matches the Heat Pump type, move to Step 3 – Commissioning.

TIPS

- The control panel for each heat pump provides space for the connection of two 3-core BUS cables, i.e. the BUS cable between the heat pumps is wired in parallel.
- In a cascade, heat pumps designed to heat DHW must always be initialised first. The remaining heat pumps can then be connected in any order.
- All necessary sensors must be connected before the voltage is connected to the WPM. Any sensors connected later will not be recognised by the WPM. Solution: Turn the power off to the WPM, then turn back on.
- If incorrectly initialised, all IWS (internal heat pump controllers) must be reset and reinitialised (see chapter “Reset options / Reinitialising the IWS” in the WPM Commissioning booklet).
- The entire heat pump system will be shut down if the BUS cable between the WPM and the heat pump is interrupted.

3 Commissioning

3.1 Operating Modes

1. Standby mode – the HP is in frost protection mode; room temperature is lowered to 5 °C and DHW temperature to 10 °C.
2. Programmed operation – applies to heating mode only; alternates between comfort and eco temperatures set in Settings>Heating>Heating Circuit>Comfort/Eco Temperature. DHW program operates independently of this.
3. Comfort mode – Heat Pump will constantly work to achieve the set comfort temperature point setting. DHW program not affected by this.
4. Eco mode – Heat Pump will constantly work to achieve the set eco temperature point setting. DHW program not affected by this.
5. DHW mode – only DHW heating is still ensured, according to its program. The HP is in frost protection mode
6. Emergency operation – heating and DHW heating are transferred to the second eat generator, DHC or second external heat generator

3.2 Parameters

HEATING					
Menu item/parameter	**Options**	**Unit**	**Min.**	**Max.**	**Standard**
PROGRAMS					
PARTY PROGRAM					
HOURS		h	0	24	
HEAT-UP PROGRAM					
SETTINGS					
LOW END TEMPERATURE			20	40	25
DURATION BASE TEMP			0	5	2
MAXIMUM TEMPERATURE			20	50	40
MAX TEMPERATURE DURATION			0	5	0
RISE PER DAY			1	10	1
SETTINGS					
GENERAL					
CONTRAST			1	5	5
BRIGHTNESS		%	0	100	50
TOUCH SENSITIVITY			1	10	4
TOUCH ACCELERATION			1	10	6

HEATING	Options	Unit	Min.	Max.	Standard
HEATING CIRCUIT 1					
COMFORT TEMPERATURE		°C	5	30	20
ECO TEMPERATURE		°C	5	30	20
MINIMUM TEMPERATURE	OFF	°C	10	30	OFF
ROOM INFLUENCE		%	0	100	
HEATING CURVE RISE			0.2	3	0.6
HEATING CIRCUIT 2 / 3 / 4 / 5					
COMFORT TEMPERATURE		°C	5	30	20°C
ECO TEMPERATURE		°C	5	30	20°C
MINIMUM TEMPERATURE	OFF	°C	10	30	OFF
MAXIMUM TEMPERATURE		°C	20	90	50°C
MIXER DYNAMICS			30	240	100
ROOM INFLUENCE		%	0	100	
HEATING CURVE RISE			0.2	3	0.2
STANDARD SETTING					
VIEW HEATING CURVE					
BASIC SETTING					
BUFFER OPERATION	OFF | ON				
SUMMER MODE	OFF | ON				ON
OUTSIDE TEMPERATURE		°C	10	30	20°C
BUILDING HEAT BUFFER			0	3	1
FLOW PROP HEATING CIRC		%	0	100	
MAXIMUM RETURN TEMP		°C	20	65	65°C
MAXIMUM FLOW TEMPERATURE		°C	20	75	75°C
FIXED VALUE OPERATION	OFF	°C	20	70	OFF
HEATING CIRCUIT OPTIMAL	OFF		0.01	0.1	
FROST PROTECTION		°C	-10	10	4°C
REMOTE CONTROL FE7					
ROOM INFLUENCE	OFF		0	20	5
ROOM CORRECTION		K	-5	5	0
PUMP CYCLES	OFF | ON				
EXTERNAL HEAT SOURCE					
EXTERNAL HEAT SOURCE					
OFF	OFF | ON				
THREADED IMMERSION HEATER	OFF | ON				
BOILER	OFF | ON				
HZG PWM	OFF | ON				
HZG 0 – 10V	OFF | ON				
HEATING CURVE GAP		K	1	15	3K
SET BOILER TEMPERATURE		°C	35	90	
BLOCKING TIME EVU	OFF	h	1	10	
LOWER APP LIMIT HZG	OFF	°C	-19.5	40	-19,5°C
DUAL MODE TEMP HZG		°C	-20	40	-20°C

HZG PWM		K min	10	100	
HZG 0 – 10V		K min	10	100	
ELECTRIC REHEATING					
LOWER APP LIMIT HZG	OFF	°C	-20	40	-20°C
DUAL MODE TEMP HZG		°C	-20	40	-20°C
NUMBER OF STAGES			0	3	3
DELAY		min	1	60	60 min
HOT WATER					
DHW TEMPERATURES 1 / 2					
COMFORT TEMPERATURE		°C	10	60	50°C
ECO TEMPERATURE		°C	10	60	50°C
STANDARD SETTING					
DHW HYSTERESIS		K	1	10	5K
DHW STAGES			1	6	1
AUTOMATIC DHW CONTROL	OFF | ON				OFF
OUTSIDE TEMPERATURE					
WW LEARNING FUNCTION	OFF | ON				OFF
COMBI CYLINDER	OFF | ON				OFF
WW OUTPUT WP					
WW OUTPUT SUMMER		kW	5	15	10 kW
WW OUTPUT WINTER		kW	5	15	10 kW
MAXIMUM FLOW TEMPERATURE		°C	20	75	75 °C
PASTEURISATION	OFF | ON				OFF
TEMPERATURE		°C	60	65	
ELECTRIC REHEATING					
DUAL MODE TEMP WW		°C	-20	40	-20
LOWER APP LIMIT WW	OFF	°C	-20	40	-20
EXTERNAL HEAT SOURCE					
EXTERNAL HEAT SOURCE					
OFF					
SUPPORTED	OFF | ON				
ALONE	OFF | ON				
INDEPENDENT	OFF | ON				
DUAL MODE TEMP WW		°C	-20	40	-20°C
LOWER APP LIMIT WW	OFF	°C	-19.5	40	-19,5
WW PWM	OFF | ON	%	0	100	
WW 0 – 10V			0	10	
DHW CIRCULATION					
DEMAND	OFF | ON				
PROGRAM	OFF | ON				
PROGRAM + INPUT	OFF | ON				
PROGRAM + SENSOR	OFF | ON				
SET TEMPERATURE		°C	35	60	
HYSTERESIS		K	0.5	5	

COOLING	Options	Unit	Min.	Max.	Standard
COOLING (WITH FE7)	OFF | ON				OFF
COOLING MODE					
PASSIVE COOLING	OFF | ON				OFF
ACTIVE COOLING	OFF | ON				OFF
STANDARD SETTING					
COOLING STAGES			1	6	6
COOLING LIMIT		°C	15	40	20°C
COOLING CAPACITY		kW	3	10	8kW
ACTIVE COOLING	OFF | ON				
AREA COOLING	OFF | ON				OFF
SET FLOW TEMPERATURE		°C	7	25	15°C
FLOW TEMP HYSTERESIS		K	1	5	5K
SET ROOM TEMPERATURE		°C	20	30	25°C
DYNAMICS ACTIVE			1	10	10
DYNAMICS PASSIVE			0	10	
FAN COOLING	OFF | ON				OFF
FLOW SET POINT TEMPERATURE		°C	7	25	15°C
HYSTERESIS FLOW TEMPERATURE		K	1	5	5K
ROOM SETPOINT TEMPERATURE		°C	20	30	25°C
DYNAMICS ACTIVE			1	10	10
DYNAMICS LIABILITIES			0	10	
PASSIVE COOLING	OFF | ON				
AREA COOLING	OFF | ON				OFF
SET FLOW TEMPERATURE		°C	7	25	15°C
FLOW TEMP HYSTERESIS		K	3	10	5K
SET ROOM TEMPERATURE		°C	20	30	25°C
DYNAMICS PASSIVE			1	10	
FAN COOLING	OFF | ON				OFF
SET FLOW TEMPERATURE		°C	7	25	15°C
FLOW TEMP HYSTERESIS		K	3	10	5K
SET ROOM TEMPERATURE		°C	20	30	25°C
DYNAMICS PASSIVE			1	10	
COOLING (WITH FET)	OFF | ON				
COOLING MODE					
PASSIVE COOLING	OFF | ON				
ACTIVE COOLING	OFF | ON				

STANDARD SETTING					
COOLING STAGES			1	6	
COOLING LIMIT		°C	15	40	
COOLING CAPACITY		kW	3	10	
FLOW TEMP HYSTERESIS		K	3	10	
DYNAMICS ACTIVE			1	10	
DYNAMICS PASSIVE			0	10	
COOLING CIRCUIT 1	OFF | ON				
SET FLOW TEMPERATURE		°C	7	25	
SET ROOM TEMPERATURE		K	20	30	
COOLING TYPE					
COOLING CIRCUIT 2	OFF | ON				
SET FLOW TEMPERATURE		°C	7	25	
SET ROOM TEMPERATURE		K	20	30	
COOLING TYPE					
COOLING CIRCUIT 3	OFF | ON				
SET FLOW TEMPERATURE		°C	7	25	
SET ROOM TEMPERATURE		K	20	30	
COOLING TYPE					
COOLING CIRCUIT 4	OFF | ON				
SET FLOW TEMPERATURE		°C	7	25	
SET ROOM TEMPERATURE		K	20	30	
COOLING TYPE					
COOLING CIRCUIT 5	OFF | ON				
SET FLOW TEMPERATURE		°C	7	25	
SET ROOM TEMPERATURE		K	20	30	
COOLING TYPE					

SWIMMING POOL	Options	Unit	Min.	Max.	Standard
SWIMMING POOL	OFF | ON				
DEMAND					
230 V INPUT					
SENSOR INPUT					
SET TEMPERATURE		°C	10	35	
HYSTERESIS		K	0.5	3	
BUFFER OPERATION	OFF | ON				
FIXED VALUE		°C	20	55	

DIFFERENTIAL CONTROLLER 1 / 2					
DIFFERENTIAL CONTROLLER 1 / 2	OFF | ON				
START DIFFERENTIAL		K	1	20	
HYSTERESIS		K	0.5	10	
MINIMUM TEMPERATURE	OFF | ON	°C	30	70	
MAXIMUM TEMPERATURE		°C	20	90	
AUSSCHALTVERZÖGERUNG		MIN	0	10	
DIFFERENZREGLER 2					
DIFFERENZREGLER 2	OFF | ON				
EINSCHALTDIFFERENZ		K	1	20	
HYSTERESE		K	0.5	10	
MINMALTEMPERATUR	OFF | ON	°C	30	70	
MAXIMALTEMPERATUR		°C	20	90	
STOP DELAY		MIN	0	10	

THERMOSTAT FUNCTION 1 / 2					
THERMOSTAT FUNCTION 1 / 2	OFF | ON				
SET TEMPERATURE		°C	10	75	
HYSTERESIS		K	1	10	
THERMOSTATFUNKTION 2					
THERMOSTATFUNKTION 2	OFF | ON				
SET TEMPERATURE		°C	10	75	
HYSTERESIS		K	1	10	

COMMISSIONING					
SOURCE					
MIN SOURCE TEMPERATURE	OFF	°C	-10	10	-9°C

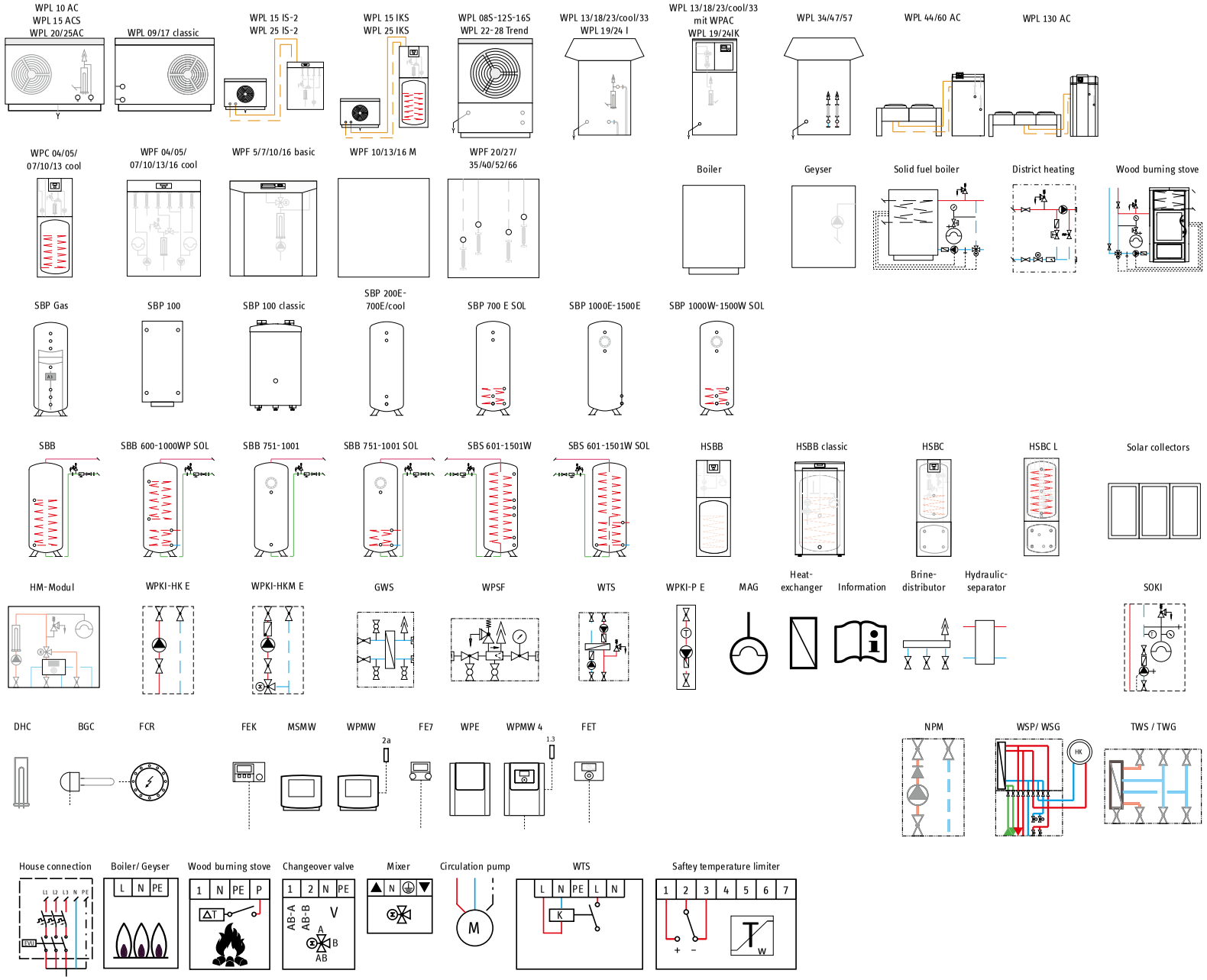
HEATING					
CONTROLLER DYNAMICS		K	1	500	100
HYSTERESIS		K	1	10	1
SPREAD CONTROL					
SET SPREAD		K	3	12	
MAXIMUM PUMP RATE		%	50	100	
STANDBY PUMP RATE			20	100	
HEATING CIRC PUMP RATE		%	20	100	
DHW					
DHW PUMP RATE		%	20	100	
COMPRESSOR					
MINIMUM DEFROST TIME		MIN	1	20	1
START DEFROST	OFF | ON				OFF
IDLE TIME		MIN	1	120	20 min
MAXIMUM CURRENT		Strom	10	30	30 A
MINIMUM RUNTIME		MIN	0	30	10 min
POWER DEFROST	OFF | ON		0	20	OFF
HEATING SYSTEM SIZING					
DESIGN TEMPERATURE		°C	-20	0	-15°C
HEAT DEMAND		kW	5	20	15 kW
CONSTANT OUTPUT		kW	5	20	10 kW
CONDENSATE RIBBON HEATER					
OUTSIDE TEMPERATURE		°C	-10	5	5 °C
QUICK START	OFF | ON				OFF
SILENT MODE					
FAN REDUCTION	OFF | ON				OFF
OUTPUT REDUCTION	OFF | ON				OFF
OUTPUT		%	70	100	100%
FAN		%	70	100	100%
HEAT PUMP OFF	OFF | ON				OFF

I/O CONFIGURATION	Options	Unit	Min.	Max.	Standard
INPUT X1.13					
...TELEPHONE REMOTE SWITCH	OFF | ON				
HEATING CURVE OPTIMISATION	OFF | ON				
SG READY	OFF | ON				
INPUT X1.14					
HEATING	OFF | ON				
COOLING	OFF | ON				
INPUT X1.15					
...HEATING	OFF | ON				
PRESET TEMPERATURE 1V		°C	10	60	
PRESET TEMPERATURE 10 V		°C	10	60	
COOLING	OFF | ON				
...PRESET TEMPERATURE 1 V		°C	9	20	
.....PRESET TEMPERATURE 10 V		°C	9	20	
...OUTPUT X1.16/X1.17					
PWM 1	OFF | ON				
PWM 2	OFF | ON				
...0 – 10V	OFF | ON				
OUTPUT					
BUFFER CHARGING PUMP 1	OFF | ON				
BUFFER CHARGING PUMP 2					
HK PUMP 1					
HK PUMP 2					
HK PUMP 3					
DHW CHARGING PUMP					
...SOURCE PUMP					
...OUTPUT					
...PWM		%	10	100	
...0 – 10V		V	1	10	
OUTPUT					
FATAL ERROR	OFF | ON				
GENERAL ERROR					
OUTPUT					
PWM 1	OFF | ON				
PWM 2					
0 – 10V					
.....OUTPUT					
POOL PUMP, PRIMARY OFF	OFF				
...POOL PUMP, SECONDARY					
BUFFER CHARGING PUMP 3					
BUFFER CHARGING PUMP 4					
BUFFER CHARGING PUMP 5					
BUFFER CHARGING PUMP 6					

DHW CHARGING PUMP 2					
HK PUMP 4					
HK PUMP 5					
OUTPUT					
PWM		%	10	100	
...0 – 10V		V	1	10	

EMERGENCY OPERATION	**OFF | ON**				**OFF**
RESET					
HEAT PUMP	OFF | ON				OFF
...NOTIFICATION LIST	OFF | ON				OFF
.....SYSTEM	OFF | ON				OFF
...FET	OFF | ON				
...WPE	OFF | ON				

Visual Legend



- Pressure indicator
- Filter
- Volume flow meter
- Brine pressure monitor
- Saftey valve
- Fill&Drain valve
- Contact temp. sensor
- Mixing valve
- Changeover valve (HUV)
- Vibration dampers
- Circulation pump
- Gravity brake
- Air vent
- Shut-off valve

- Heating flow
- Heating return
- Electrical cable
- Bus cable
- DHW outlet
- Cold water inlet
- Refrigerant line
- L - Live conductor
- N - Neutral conductor
- Earthing

STIEBEL ELTRON

Your local trade partner:

Have we sparked your interest? For further information visit www.stiebel-eltron.com.au or call our service team on 1800 153 351.

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Issue 11_21 | Product Catalogue | Errors excepted. Subject to changes.