



Glow-worm
The energy you need

System Manual

HYBRID COMPACT
HYBRID UNIVERSAL
STANDALONE
UNIVERSAL
BOILER



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1 Introduction

1.1 Summary of diagrams and available options

				Heating					Back-up for heating			Back-up for domestic hot water tank		
				Monozone	2 zone low temperature or high temperature heating (Z20)				electric			electric		
					3 zone low temperature or high temperature heating (Z30)			eBUS boiler		boiler				
					OEM UFH (UFH 1 zone)		On/Off 24 V boiler	On/Off 230 V boiler						
					OEM UFH + 1 GW (UFH 2 zones)									
Family	Diagram	Heat pump	Boiler											
Hybrid Compact	9	eBUS	eBUS	☺	☺	☺	☺	☺	--	☺	--	--	--	☺
Hybrid Universal	10	eBUS	eBUS	☺	☺	☺	☺	☺	--	☺	--	--	--	☺
	3	eBUS	On/Off 24 V	☺	☺	☺	☺	☺	--	--	☺	--	--	--
	13	eBUS	On/Off 230 V	☺	☺	☺	☺	☺	--	--	--	☺	--	--
	11	On/Off	eBUS	☺	☺	☺	☺	☺	--	☺	--	--	--	☺
	6	On/Off	On/Off 230 V	☺	☺	☺	☺	☺	--	--	--	☺	--	--
Standalone	4	eBUS	--	☺	☺	☺	☺	☺	☺	--	--	--	☺	--
	7	On/Off	--	☺	☺	☺	☺	☺	☺	--	--	--	☺	--
Boiler only	8	--	eBUS	☺	☺	☺	☺	☺	--	--	--	--	--	☺

Family	Diagram	Heat pump	Boiler	Heating					Back-up for heating			Back-up for domestic hot water tank		
				Monozone	2 zone low temperature or high temperature heating (Z20)	3 zone low temperature or high temperature heating (Z30)	OEM UFH (UFH 1 zone)	OEM UFH + 1 GW (UFH 2 zones)	electric	eBUS boiler	On/Off 24 V boiler	On/Off 230 V boiler	electric	boiler
Genia Universel	14	eBUS	--	☺	☺	☺	☺	☺	☺	--	--	--	☺	--
	14	eBUS	eBUS	☺	☺	☺	☺	☺	☺	☺	--	--	☺	☺
	14	eBUS	On/Off 24 V	☺	☺	☺	☺	☺	--	☺	--	--	☺	--
	14	eBUS	On/Off 230 V	☺	--	--	☺	--	--	--	--	☺	☺	--
	15	On/Off	--	☺	☺	☺	☺	☺	☺	--	--	--	☺	--
	15	On/Off	eBUS	☺	☺	☺	☺	☺	--	☺	--	--	☺	☺
	15	On/Off	On/Off 230 V	☺	--	--	☺	--	--	--	--	☺	☺	--

☺ : Options available

2 Hybrid compact



2.1 Hybrid Compact description

The HYBRID COMPACT system consists of the following components :

- A heat pump,
- A "Compact" hydraulic module,
- A boiler,
- The Systempro control unit,
- A wireless outdoor sensor,
- A wireless or wired room thermostat.

2.1.1 Operating principle of the system

The home's heat is generated by either the heat pump or the boiler. The heat emitters can also be low temperature (underfloor heating, ...) or high temperature (radiators...). In order to always provide the best compromise between comfort and economy, one of the two heat appliances supplies the heating installation with hot water at the temperature necessary to obtain the desired ambient temperature. This depends on the outside temperature measured by the wireless outside sensor continually corrected by the real temperature measured by the wired or wireless room thermostat.

The software in the Systempro control unit constantly monitors outdoor temperature, and the co-efficient of Performance (COP). When the outside temperature is mild and/or the heating water temperature is low, the COP is high and the heat pump is very efficient. However, the COP drops significantly when the outside temperature is cold and/or the heating temperature request is hotter. Thus, the electrical consumption of the heat pump can become significant in winter. It then becomes more advantageous to operate the boiler as its operating cost will be lower.

The changeover point between the heat pump and the boiler is managed automatically, depending on the outside and ambient temperatures. This continually guarantees the operation of the appliances with the best operating cost (boiler or heat pump alone). The appliances cannot operate simultaneously. Therefore, the system always uses the cheapest solution.

The switchover point must be determined in accordance with the respective energy costs (see the "Activation of control unit > Settings> Energy management" chapter).

2.1.2 Summary of installation diagrams

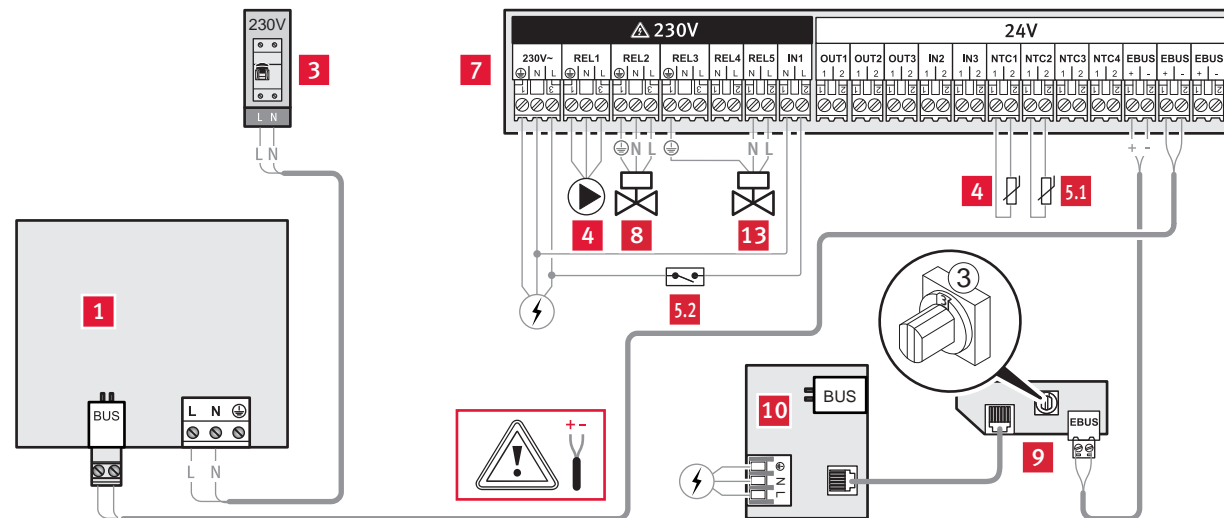
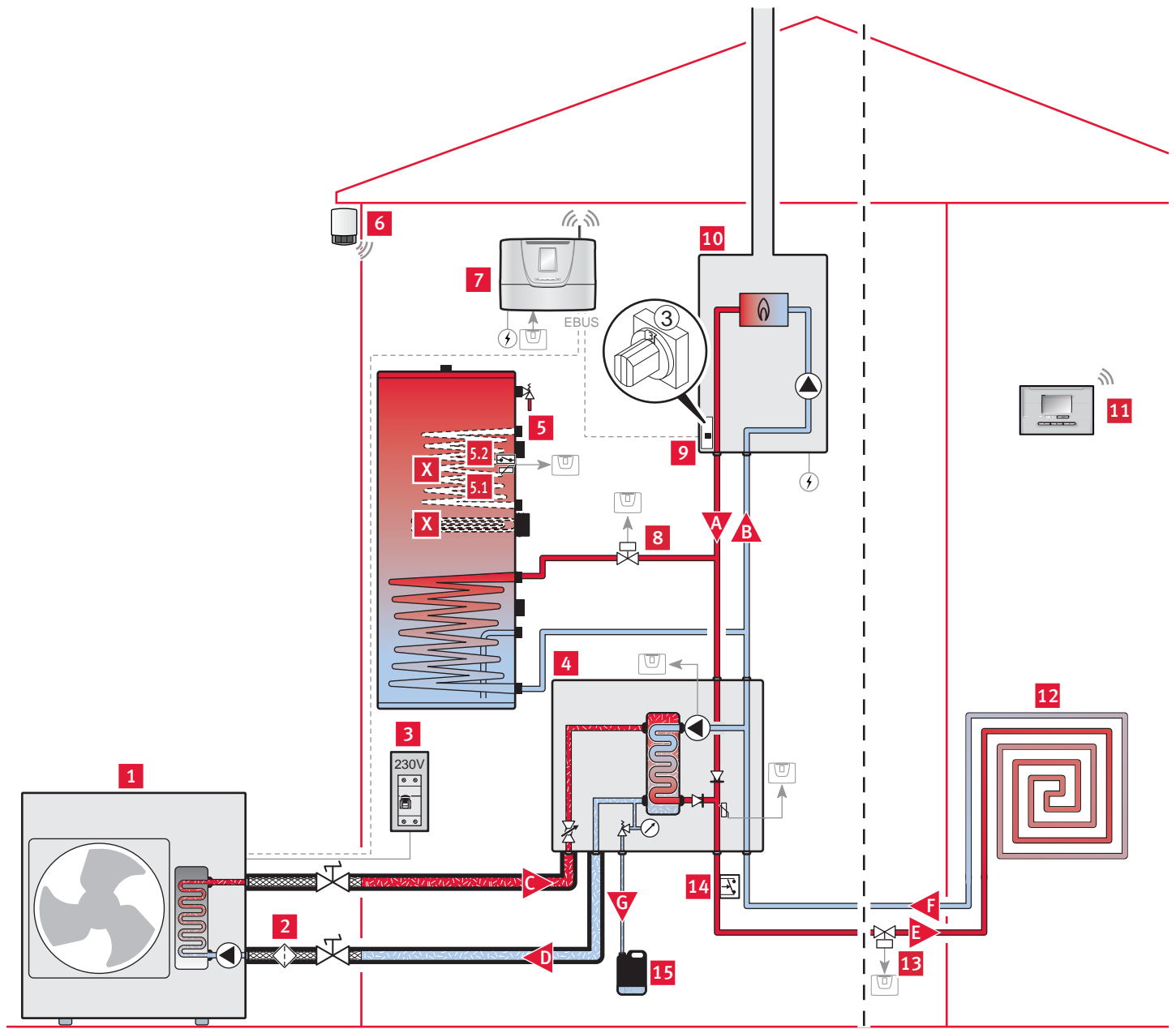
Hybrid Compact			
Heat pump		Boiler	Diagram
Envirosorb 5	eBUS	eBUS	9
Envirosorb ₃ 8			

2.1.3 Options compatible with the system

Heating					
	Monozone	2 zone low temperature or high temperature heating (Z20)		3 zone low temperature or high temperature heating (Z30)	
				OEM UFH (UFH 1 zone)	
				OEM UFH + 1 GW (UFH 2 zones)	
Swimming pool	☺	☺	☺	☺	☺
Management of electricity tariffs (day/night) by programme	☺	☺	☺	☺	☺

☺ : Options available

2.2 Example of installation with diagram 9 : eBUS
Heat pump, eBUS boiler, one heating zone



EN

Key

- 1 EBus heat pump
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 "Compact" hydraulic module
- 5 DHW Cylinder available as option, driven by NTC (5.1) or thermostat (5.2)
- 5.1 Temperature sensor 2K7 at 25°C
- 5.2 Thermostat
- 6 Wireless outdoor sensor
- 7 Systempro control unit
- 8 Domestic hot water option 2-way valve
- 9 e-BUS interface (e-BUS address "3")
- 10 EBUS boiler
- 11 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 12 Heating circuit (UFH shown, but can be underfloor or radiators)
- 13 Heating circuit 2 port valve
- 14 Overheating safety (if underfloor heating)
- 15 Glycol PRV discharge

- A Boiler circuit flow
- B Boiler circuit return
- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit flow
- F Heating circuit return
- G Heat pump circuit safety valve discharge
- X Not used

Application conditions

- The Systempro control unit manages the operation of the boiler, the heat pump and the module.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- The room thermostats compatible with the system are the Climapro₂ RF or the Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version.
- Installation must have a wireless outdoor sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- The installation consists of an e-BUS heat pump and boiler. An e-BUS interface must be connected between the boiler and the control box. It is only compatible with e-BUS boilers. Refer to the e-BUS interface documentation for the electrical connection and setting of the code wheel (e-BUS address "3").
- The hydraulic module has a plate heat exchanger for hydraulic decoupling. It is possible to have glycol water circulate only in the heat pump circuit.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- The installation can be performed with a low-temperature underfloor heating (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

Control unit settings

Description of main settings	Setting
Management by:	None NTC sensor (1NTC) Thermostat (1Therm)

3 Hybrid Universal



3.1 Hybrid Universal description

The HYBRID UNIVERSAL system consists of the following components:

- A heat pump,
- An hydraulic module,
- A boiler,
- A Systempro control unit,
- A wireless outdoor sensor,
- A wireless or wired room thermostat.

3.1.1 Operating principle of the system

The heating appliances consists of a heat pump and a hydraulic module. The heat emitters can also be low temperature (underfloor heating, ...) or medium temperature (radiators...). In order to always obtain the best comfort/economy trade-off, one of the two heat appliances supplies the heating installation with hot water at the temperature necessary to obtain the desired ambient temperature. This depends on the outside temperature measured by the wireless outside sensor continually corrected by the real temperature measured by the wired or wireless room thermostat.

When the heat pump power is not sufficient to provide heating but its operation remains economically advantageous, the boiler can operate simultaneously guaranteeing optimum usage of the heat pump and therefore the operating cost of the system. If the boiler installed in the system communicates by e-BUS (schemes "10" or "11"), you then have modulating control of your boiler in accordance with your system. In the case of a boiler operating in On/Off mode (schemes "3", "6" or "13"), you then have fixed control independent of your existing boiler (oil, wood, competitor...) without communication with your system (the boiler reacts to a fixed setting on its control panel).

The changeover point between the heat pump and the boiler is managed automatically, depending on the outside and ambient temperatures. This continually guarantees the operation of the appliances with the best operating cost (boiler alone, heat pump and boiler or heat pump alone). The appliances can operate simultaneously. Therefore, the system always uses the cheapest solution.

The switchover point must be determined in accordance with the respective energy costs (see the "Activation of control unit Settings> Energy management" chapter).

Hybrid Universal

Heat pump	Boiler	Diagram
Envirosorb ₃ 5 Envirosorb ₃ 8 Envirosorb ₃ 11	eBUS	10
	controlled by 24V on/off contact	3
	controlled by 230V signal	13
Envirosorb ₂ 7 Envirosorb ₂ 12	Controlled by eBUS	11
	On/Off contact	controlled by 230V signal 6

3.1.2 Options compatible with the system

Diagram 3

	Heating				
	Monozone	2 zone low temperature or high temperature heating (Z20)			
		3 zone low temperature or high temperature heating (Z30)			
		OEM UFH (UFH 1 zone)			
		OEM UFH + 1 GW (UFH 2 zones)			
Swimming pool	☺	☺	☺	☺	☺
Management of electricity tariffs (day/night) by electrical connection	☺	☺	☺	☺	☺
Management of electricity tariffs (day/night) by programme	☺	☺	☺	☺	☺

☺ : Options available

Diagrams 10, 11 and 6

	Heating				
	Monozone	2 zone low temperature or high temperature heating (Z20)			
		3 zone low temperature or high temperature heating (Z30)			
		OEM UFH (UFH 1 zone)			
		OEM UFH + 1 GW (UFH 2 zones)			
Swimming pool	☺	☺	☺	☺	☺
Management of electricity tariffs (day/night) by programme	☺	☺	☺	☺	☺

☺ : Options available

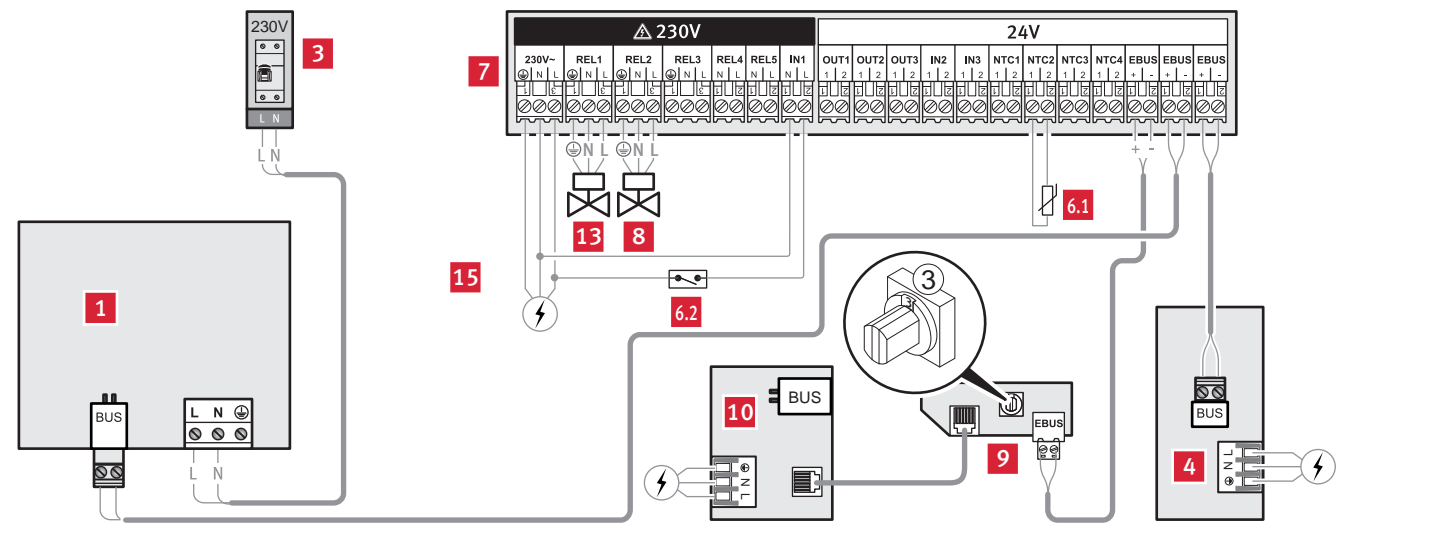
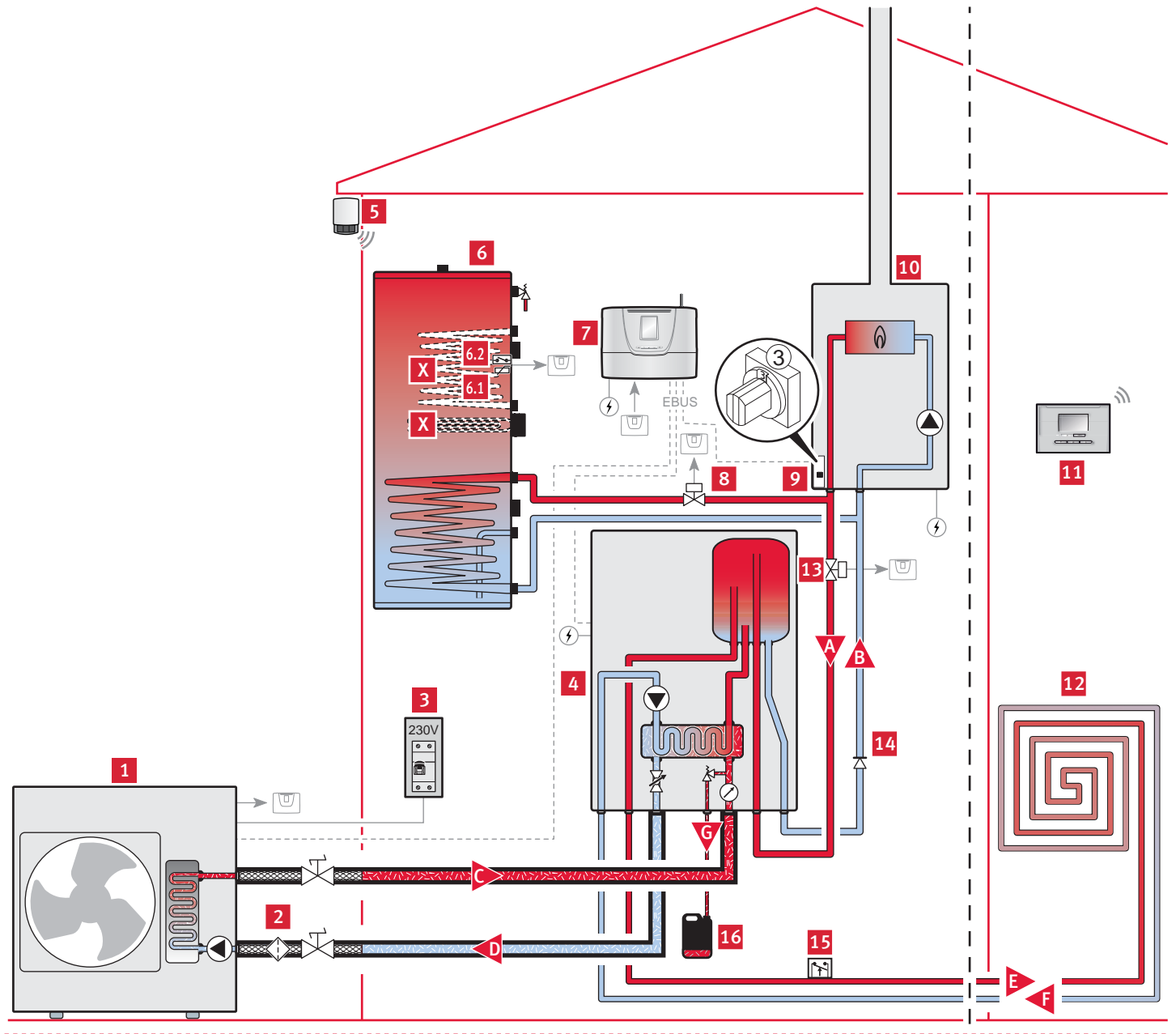
Diagram 13

	Heating				
	Monozone	2 zone low temperature or high temperature heating (Z20)			
		3 zone low temperature or high temperature heating (Z30)			
		OEM UFH (UFH 1 zone)			
		OEM UFH + 1 GW (UFH 2 zones)			
Swimming pool	☺	☺	☺	☺	☺
Management of electricity tariffs (day/night) by electrical connection	☺	☺	☺	☺	☺
Management of electricity tariffs (day/night) by programme	☺	☺	☺	☺	☺

☺ : Options available

- Refer to the “options” section to perform the various hydraulic and electrical connections necessary for the selected option.
- The installation of a domestic hot water tank remains possible for a diagram that does not have this option but that does have a system boiler. The domestic hot water tank will function in parallel and independently of the system managed by the Systempro control unit. The domestic hot water tank will be connected to, heated by and managed by the boiler (see the boiler installation manual).

3.2 Example of installation with diagram 10 : eBUS heat pump, eBus boiler, one heating zone



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Key

- 1 EBus heat pump
- 2 Heat pump circuit filter (not supplied)
- 3 Heat pump electrical supply + protection (This must have it's own single isolation)
- 4 Hydraulic module
- 5 Wireless outdoor sensor
- 6 DHW Cylinder available as option, driven by NTC (6.1) or thermostat (6.2)
- 6.1 Temperature sensor 2K7 at 25°C
- 6.2 Thermostat
- 7 Systempro control unit
- 8 2 port valve need with option "DHW cylinder"
- 9 e-BUS interface (e-BUS address "3")
- 10 eBUS boiler
- 11 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 12 Heating circuit (UFH shown, but can be underfloor or radiators)
- 13 2 port valve Hydraulic module
- 14 Non-return valve (recommended to prevent burner ignition triggered by thermo-siphoning)
- 15 Overheating safety (if underfloor heating)
- 16 Glycol PRV discharge

- A Boiler circuit flow
- B Boiler circuit return
- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit flow
- F Heating circuit return
- G Heat pump circuit safety valve discharge
- X Non utilisé

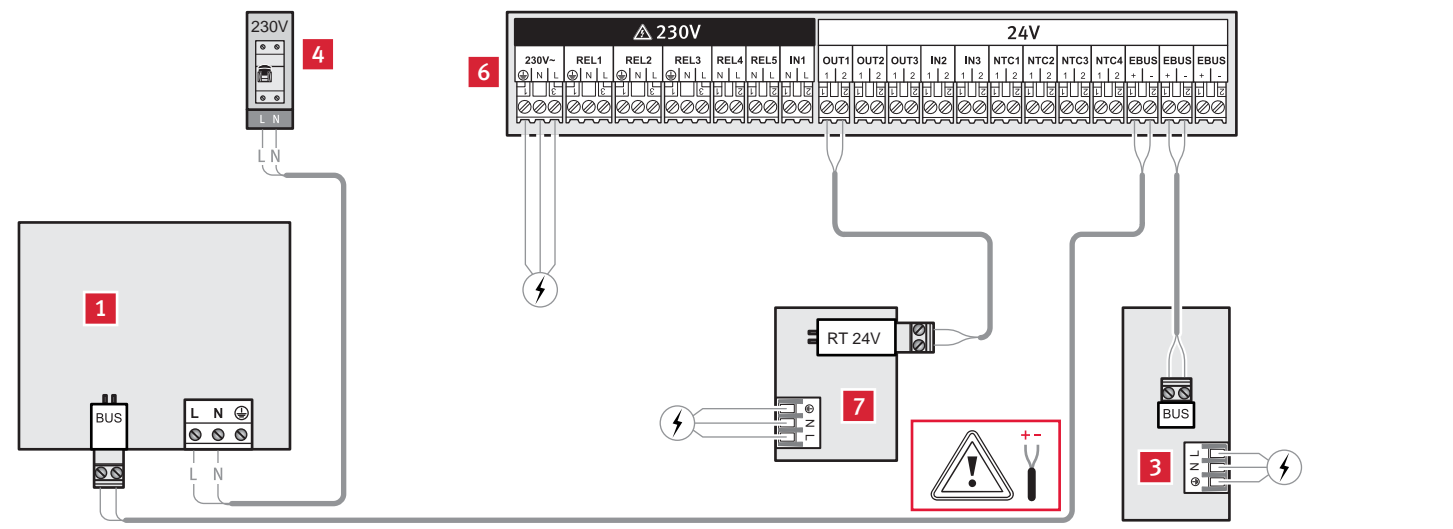
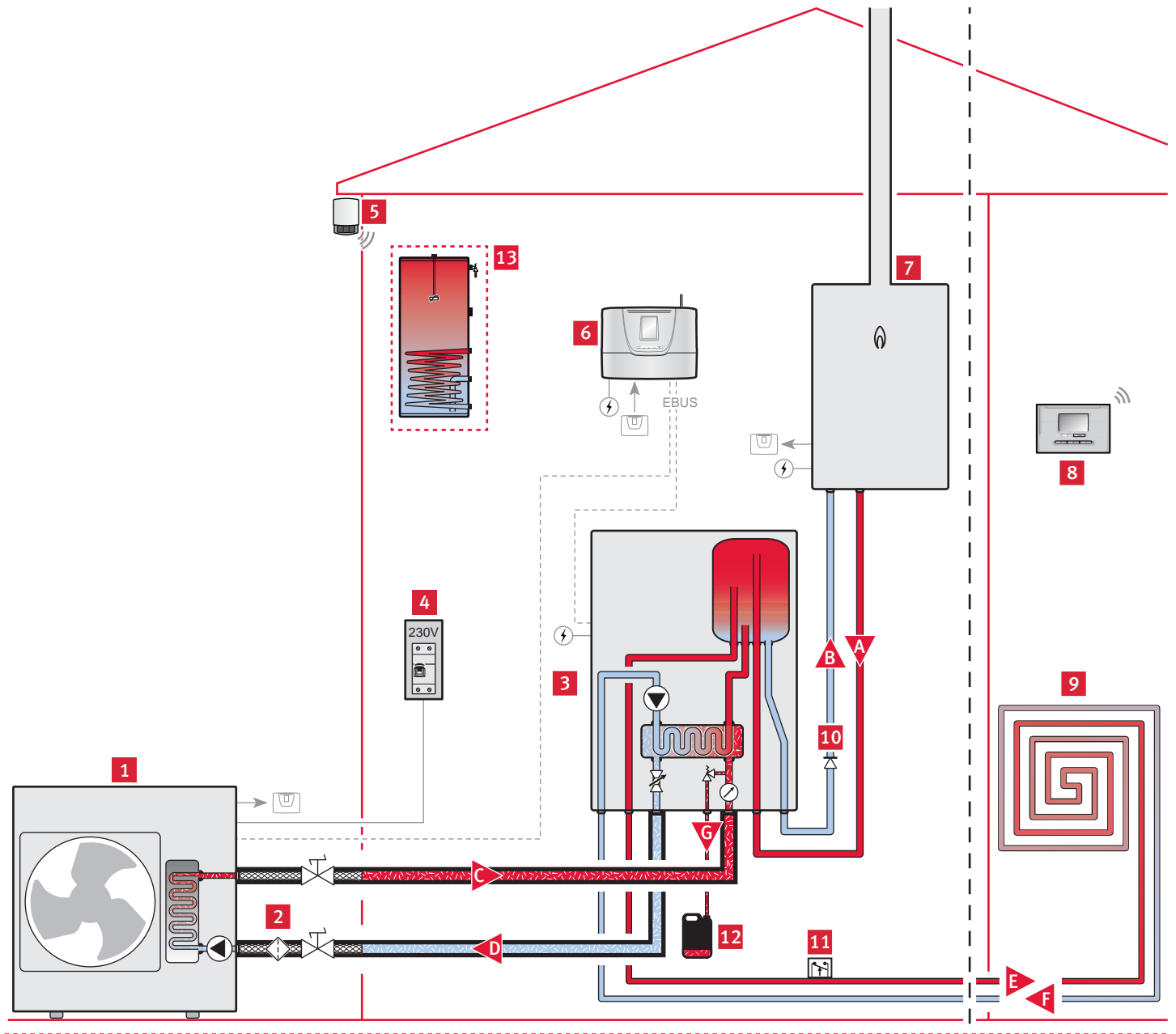
Application conditions

- The Systempro control unit manages the operation of the boiler, the heat pump and the module.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- The room thermostats compatible with the system are the Climapro₂ RF or the Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version. Installation must have a wireless outdoor sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- The installation consists of an e-BUS heat pump and boiler. An e-BUS interface must be connected between the boiler and the control box. It is only compatible with e-BUS boilers. Refer to the e-BUS interface documentation for the electrical connection and setting of the code wheel (e-BUS address "3").
- The hydraulic module has a plate heat exchanger for hydraulic decoupling. It is possible to have glycol water circulate only in the heat pump circuit.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- The installation can be performed with a low-temperature underfloor heating (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

Control unit settings

Description of main settings	Setting
Management by:	None NTC sensor (1NTC) Thermostat (1Therm)

3.3 Example of installation with diagram 3 : eBUS Heat pump, Heat pump controlled by On/Off contact 24V, one heating zone



EN

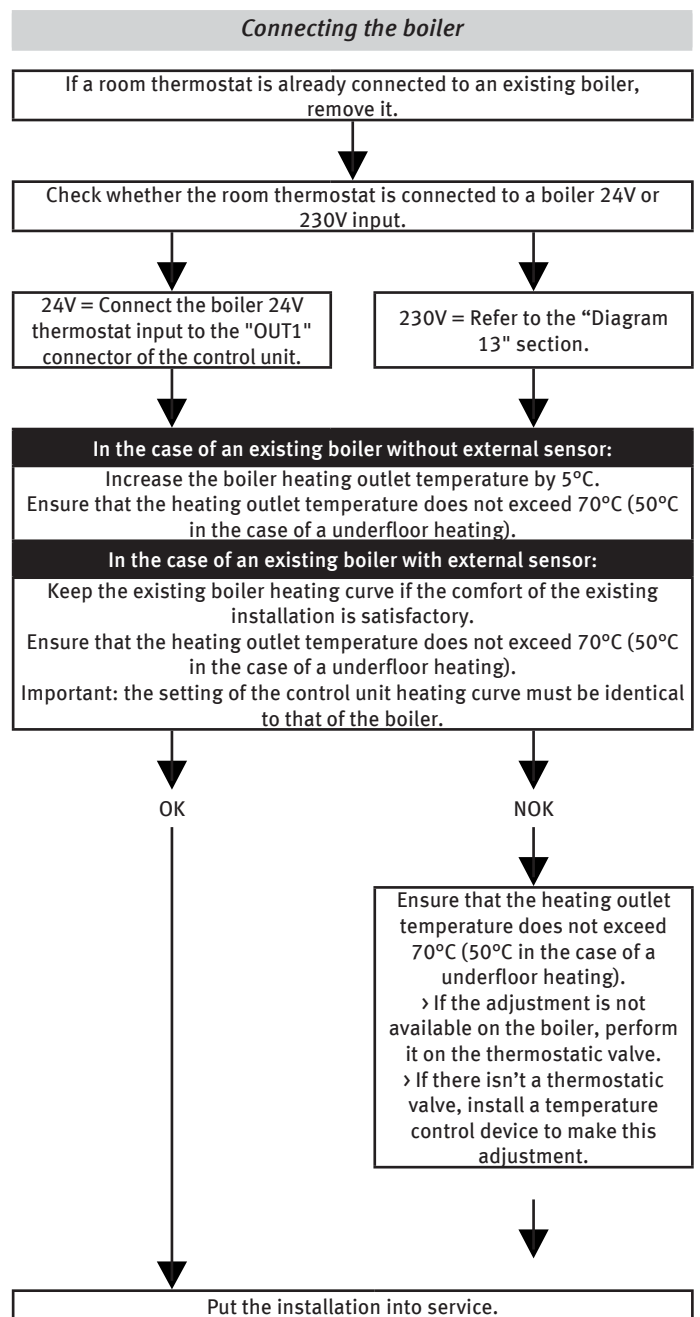
Key

- 1 eBUS heat pump
- 2 Heat pump circuit filter
- 3 Hydraulic module
- 4 Electrical power and protection of the heat pump
- 5 Wireless outdoor sensor
- 6 Systempro control unit
- 7 All brands of boiler controlled by 24V ON/OFF contact
- 8 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 9 Heating circuit (UFH shown, but can be underfloor or radiators)
- 10 Non-return valve (recommended to prevent burner ignition triggered by thermo-siphoning)
- 11 Overheating safety (if underfloor heating)
- 12 Glycol PRV discharge
- 13 Domestic hot water cylinder not managed by the Systempro

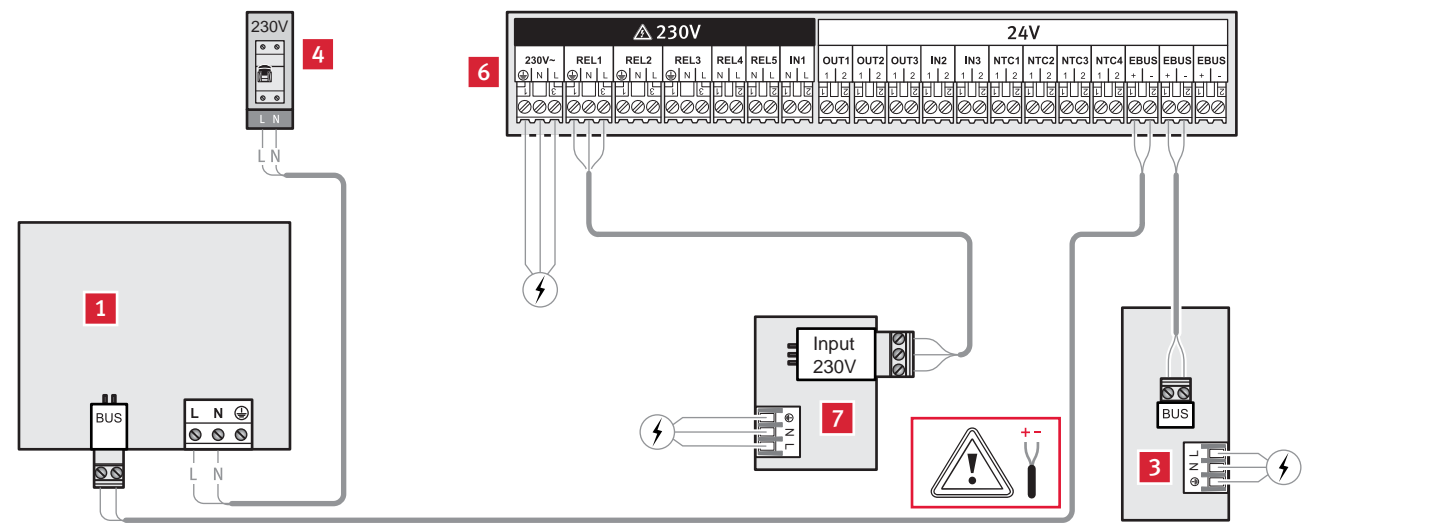
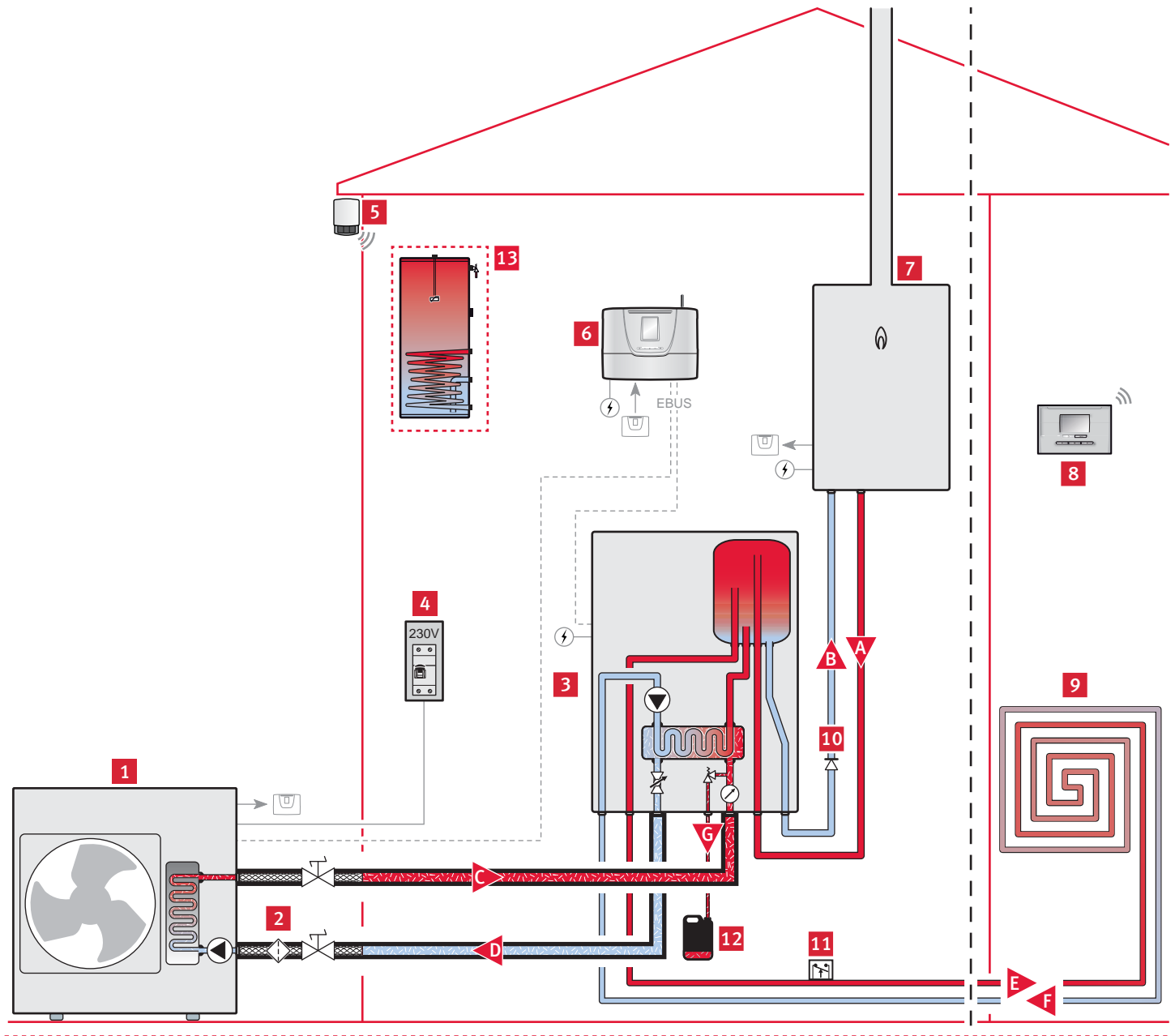
- A Heating circuit flow
- B Heating circuit return
- C Domestic hot water flow
- D Domestic hot water return
- E Heat pump circuit flow
- F Heat pump circuit return
- G Heat pump circuit safety valve discharge

Application conditions

- The Systempro control unit manages the operation of the boiler, the heat pump and the module.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- Boiler must have a 24V thermostat input.
- The room thermostats compatible with the system are the Climapro₂ RF or the Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- Connect the boiler directly to the control box.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).



3.4 Example of installation with diagram 13 : eBUS Heat pump, Boiler controlled by 230V signal, one heating zone



EN

Key

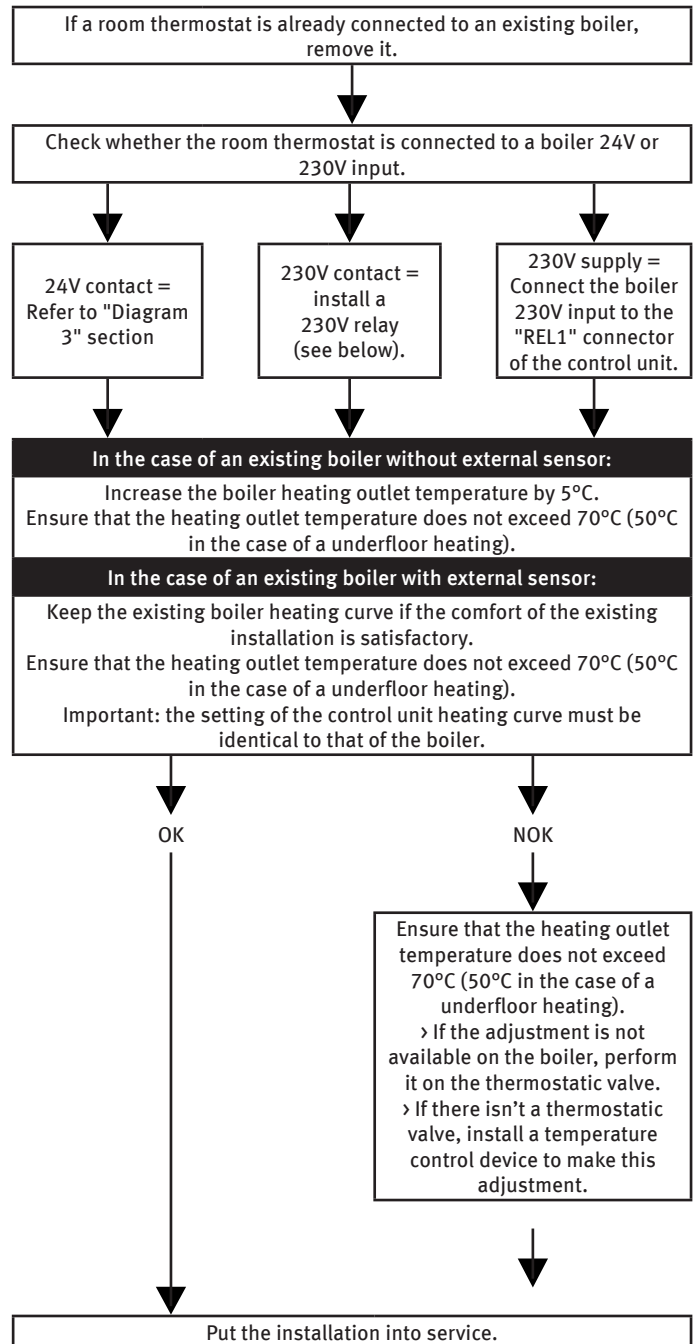
- 1 eBUS heat pump
- 2 Heat pump circuit filter
- 3 Hydraulic module
- 4 Electrical power and protection of the heat pump
- 5 Wireless outdoor sensor
- 6 Systempro control unit
- 7 All brands of boiler controlled by 230V signal
- 8 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 9 Heating circuit (UFH shown, but can be underfloor or radiators)
- 10 Non-return valve (recommended to prevent burner ignition triggered by thermo-siphoning)
- 11 Overheating safety (if underfloor heating)
- 12 Glycol PRV discharge
- 13 Domestic hot water cylinder not managed by the Systempro

- A Heating circuit flow
- B Heating circuit return
- C Domestic hot water flow
- D Domestic hot water return
- E Heat pump circuit flow
- F Heat pump circuit return
- G Heat pump circuit safety valve discharge

Application conditions

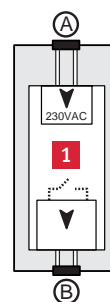
- The Systempro control unit manages the operation of the boiler, the heat pump and the module.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- The boiler must have a signal input or 230V contact.
- The room thermostats compatible with the system are the Climapro₂ RF or the Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- Connect the boiler directly to the control box.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

Connecting the boiler



Connection of a 230V relay (*) (not supplied)

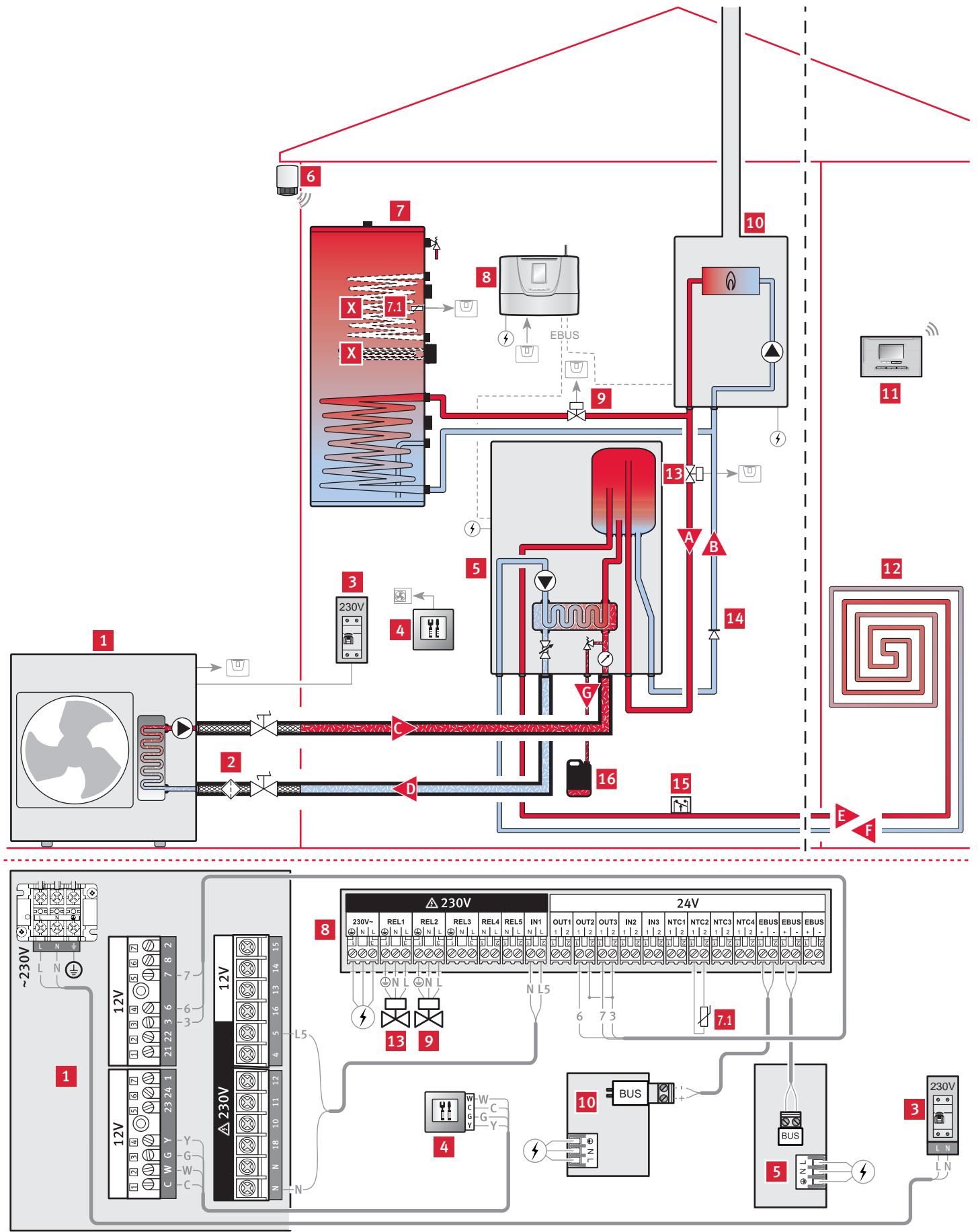
In the case of an On/Off boiler controlled by 230V contact.



Key

- 1 230V relay
- A Connection to control unit REL1 connector
- B Connection to the 230V thermostat connection of a boiler controlled by contact

3.5 Example of installation with diagram 11: Heat pump controlled by On/Off contact, eBus boiler, one heating zone



Key

- 1 Heat pump controlled by On/Off contact
- 2 Heat pump circuit filter (not supplied)
- 3 Heat pump electrical supply + protection (This must have it's own single isolation)
- 4 Heat pump control unit
- 5 Hydraulic module
- 6 Wireless outside sensor with solar panel
- 7 DHW Cylinder available as option, driven by 7thermostat (7.1)
- 7.1 Temperature sensor 2K7 at 25°C
- 8 Systempro control unit
- 9 2 port valve need with option "DHW cylinder"
- 10 EBus Boiler
- 11 Climapro2 RF programmable wireless room thermostat
- 12 Heating circuit (UFH shown, but can be underfloor or radiators)
- 13 2 port valve Hydraulic module need with option "DHW cylinder"
- 14 Non-return valve (recommended to prevent burner ignition triggered by thermo-siphoning)
- 15 Overheating safety (if underfloor heating)
- 16 Glycol PRV discharge

- A Boiler circuit flow
- B Boiler circuit return
- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit flow
- F Heating circuit return
- G Heat pump circuit safety valve discharge
- X Not used

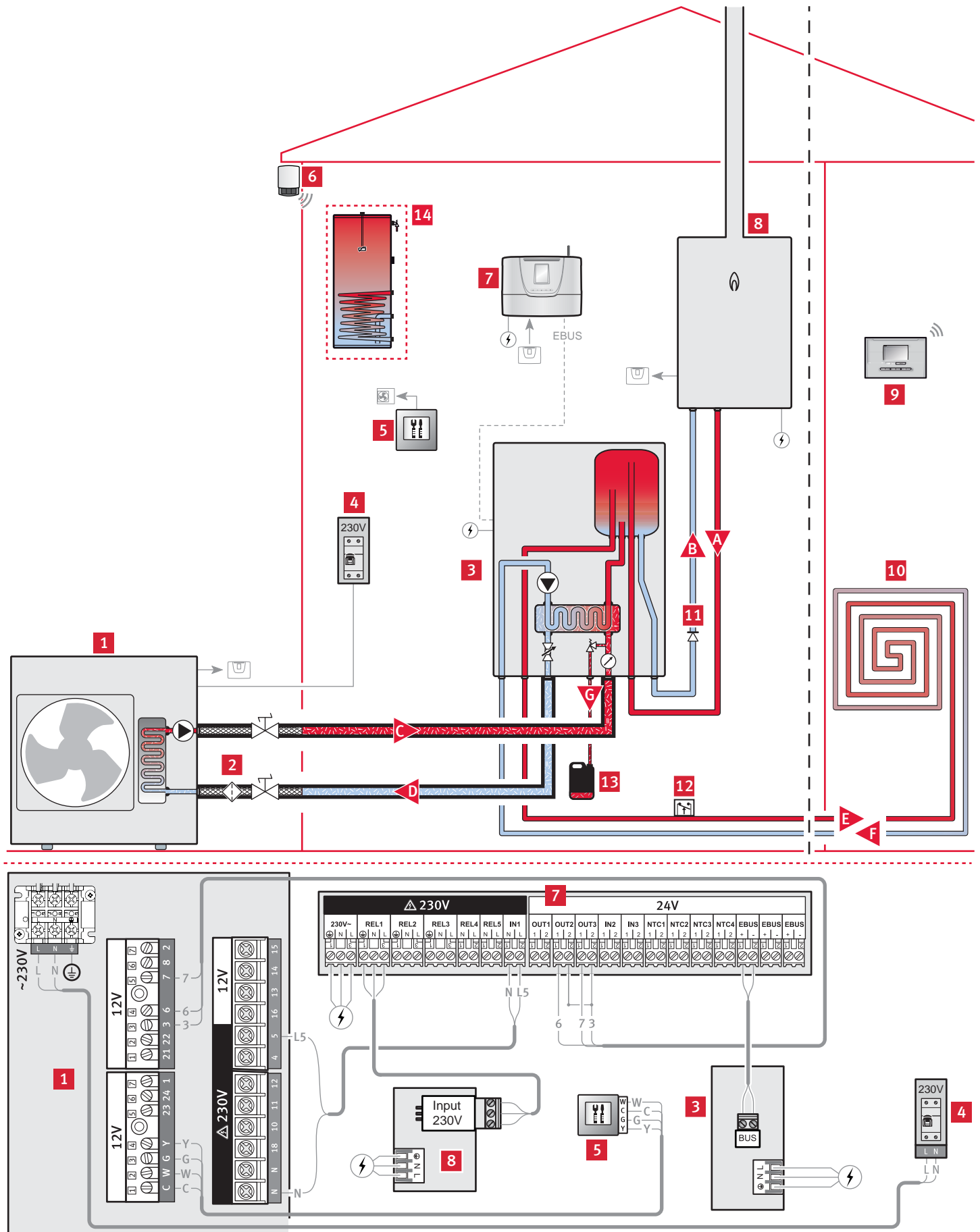
Application conditions

- The Systempro control unit manages the operation of the boiler, the heat pump and the module.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- The heat pump control unit is used as a setting tool.
- The room thermostats compatible with the system are the Exacontrol Climapro₂ RF or the Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- Installation must include a wireless outdoor sensor.
- Connect the heat pump e-BUS directly to the control box .
- Connect the boiler directly to the control box.
- The hydraulic module has a plate heat exchanger for hydraulic decoupling. It is possible to have glycol water circulate only in the heat pump circuit.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- The installation can be performed with a low-temperature underfloor heating (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

Control unit settings

Description of main settings	Setting
Management by:	None NTC sensor (1NTC) Thermostat (1Therm)

3.6 Example of installation with diagram 6 : Heat pump controlled by On/Off contact, boiler controlled by On/Off contact 230V, one heating zone



EN

- Key**
- 1 Heat pump controlled by On/Off contact
 - 2 Heat pump circuit filter
 - 3 Hydraulic module
 - 4 Electrical power and protection of the heat pump
 - 5 Heat pump control unit
 - 6 Wireless outdoor sensor
 - 7 Systempro control unit
 - 8 All brands of boiler controlled by 230V signal
 - 9 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
 - 10 Heating circuit (UFH shown, but can be underfloor or radiators)
 - 11 Non-return valve (recommended to prevent burner ignition triggered by thermo-siphoning)
 - 12 Overheating safety (if underfloor heating)
 - 13 Glycol PRV discharge
 - 14 Domestic hot water cylinder not managed by the Systempro

- A Heating circuit flow
- B Heating circuit return
- C Domestic hot water flow
- D Domestic hot water return
- E Heat pump circuit flow
- F Heat pump circuit return
- G Heat pump circuit safety valve discharge

Application conditions

- The Systempro control unit manages the operation of the boiler, the heat pump and the module.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- The heat pump command unit is used as a setting tool.
- The boiler must have a signal input or 230V contact.
- The room thermostats compatible with the system are the Climapro₂ RF or the Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- The installation must include a wireless outside sensor.
- Connect the heat pump On/Off directly to the control box.
- Connect the boiler directly to the control box.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

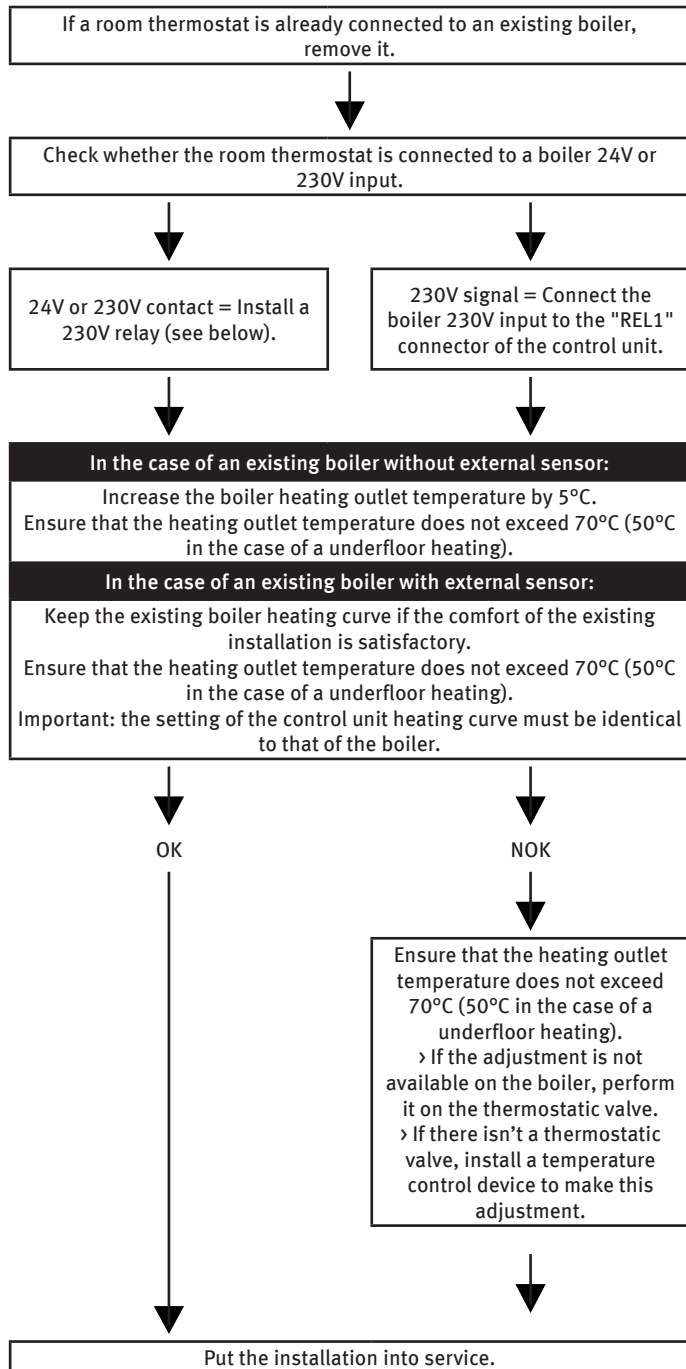
Heat pump control unit settings

- Refer to the heat pump installation notice to access the “after-sales” parameters listed below.

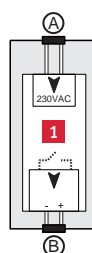
Menu	Name of the function	Setting
112	Heating curves (*)	7 - 12
114	ECO heating mode (*)	1 - 20°C

(*) Refer to the correspondence table in the “Settings > Heating” section.

Connecting the boiler



Connection of a 230V relay (not supplied)



- Key**
- 1 230V relay
 - A Connection to control unit REL1 connector
 - B Connection to the 24V or 230V thermostat connection of a boiler controlled by contact

4 Standalone



4.1 System Standalone description

The Standalone system consists of the following components:

- A Glow-worm Enviroorb heat pump,
- A "Standalone" hydraulic module,
- A staged back-up electric heater of 6kW max (inside Standalone module).
- A buffer tank,
- A Systempro control unit,
- A wireless outdoor sensor,
- A wireless or wired room thermostat.

4.1.1 Operating principle in heating

The heating appliance consists of a heat pump and a hydraulic module equipped with an electric heater. The heat emitters can also be low temperature (underfloor heating, ...) or (radiators...). In order to always obtain the best comfort/economy trade-off, the module heat pump and/or electric heater supply the heating installation with hot water at the temperature necessary to obtain the desired ambient temperature.

This depends on the outside temperature measured by the wireless outside sensor continually corrected by the real temperature measured by the wired or wireless room thermostat.

When the power of the heat pump is no longer adequate to ensure heating, the self-controlled electric heater in the hydraulic module can operate simultaneously in steps of 2 kW up to a power of 6 kW in the case of a heat pump ≤ 5 kW the back-up power is limited to 4 kW when the heat pump is operating. This guarantees optimal use of the heat pump while guaranteeing that the total electrical power consumption will never exceed 6kW (in order to optimise the electric subscription of the habitation). When the heat pump is not operating, the electric heater can reach a power level of 6kW independent of the outside temperature conditions.

The changeover point between the heat pump and the electric heater is managed automatically, depending on the outside and ambient temperatures. Thus, the system always optimises the use of the heat pump with respect to the electric back-up heater.



Avoid programmes with high temperature variations in the case of power sizing without a significant margin (based on a calculation with a stabilised temperature).

4.1.2 Operating principle of the domestic hot water system

The domestic hot water heating circuit consists of a heat pump, a 3-way valve and a FLUROCYL hot water tank equipped with an electric heater.

In order to always obtain the best comfort/economy trade-off, the heat pump and/or the FLUROCYL tank electric heater provide the energy needed to maintain the stored water at the required temperature.

The lower part of the tank is heated 3 times a day by the heat pump. In order to provide maximum economy, the electric heater heats the top part of the tank just to provide the comfort desired by the user.

- Operation with 1 temperature sensor on the tank allows 1 ignition maximum every 8 hours if the hot water programme is not activated.
- Operation with 2 sensors on the tank allows more intelligent management. The heat pump starts as a priority each time the temperature in the tank is cold. The electric back-up is used to reach the desired setting if this setting is higher than 50°C.

The lower the hot water temperature setting, the more the heat pump will provide energy and, therefore, more economic operation.

We recommend that you set a hot water setting of 50°C and allow the longest possible tank reheating via the hot water programme (at least 2 hours per programme time slot).

4.1.3 Summary of installation diagrams

Standalone		
Heat pump		Diagram
Enviroorb ₅ Enviroorb ₃ 8 Enviroorb ₃ 11	eBUS	4
Enviroorb ₂ 7 Enviroorb ₂ 12	Controlled by On/Off contact	7

4.1.4 Options compatible with the system

Diagram 4

	Heating				
	Monozone	2 zone low temperature or high temperature heating (Z20)		3 zone low temperature or high temperature heating (Z30)	
				OEM UFH (UFH 1 zone)	
				OEM UFH + 1 GW (UFH 2 zones)	
Domestic hot water cylinder	☺	☺	☺	☺	☺
Electric back-up for domestic hot water tank	☺	☺	☺	☺	☺
Swimming pool	☺	☺	--	☺	☺

☺ : Options available

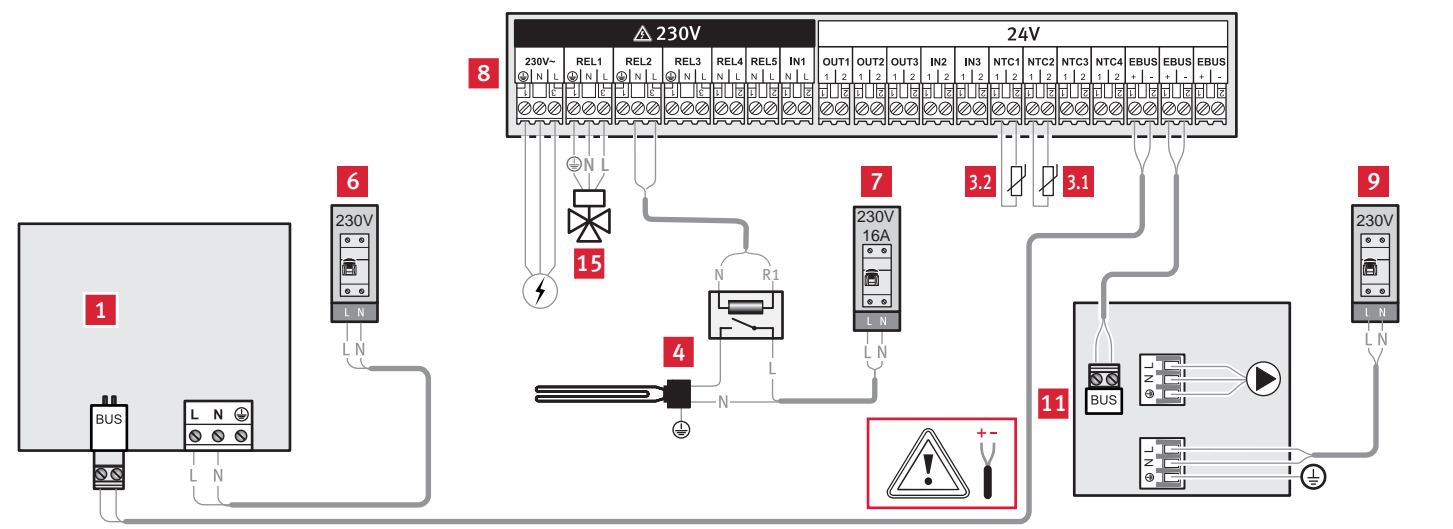
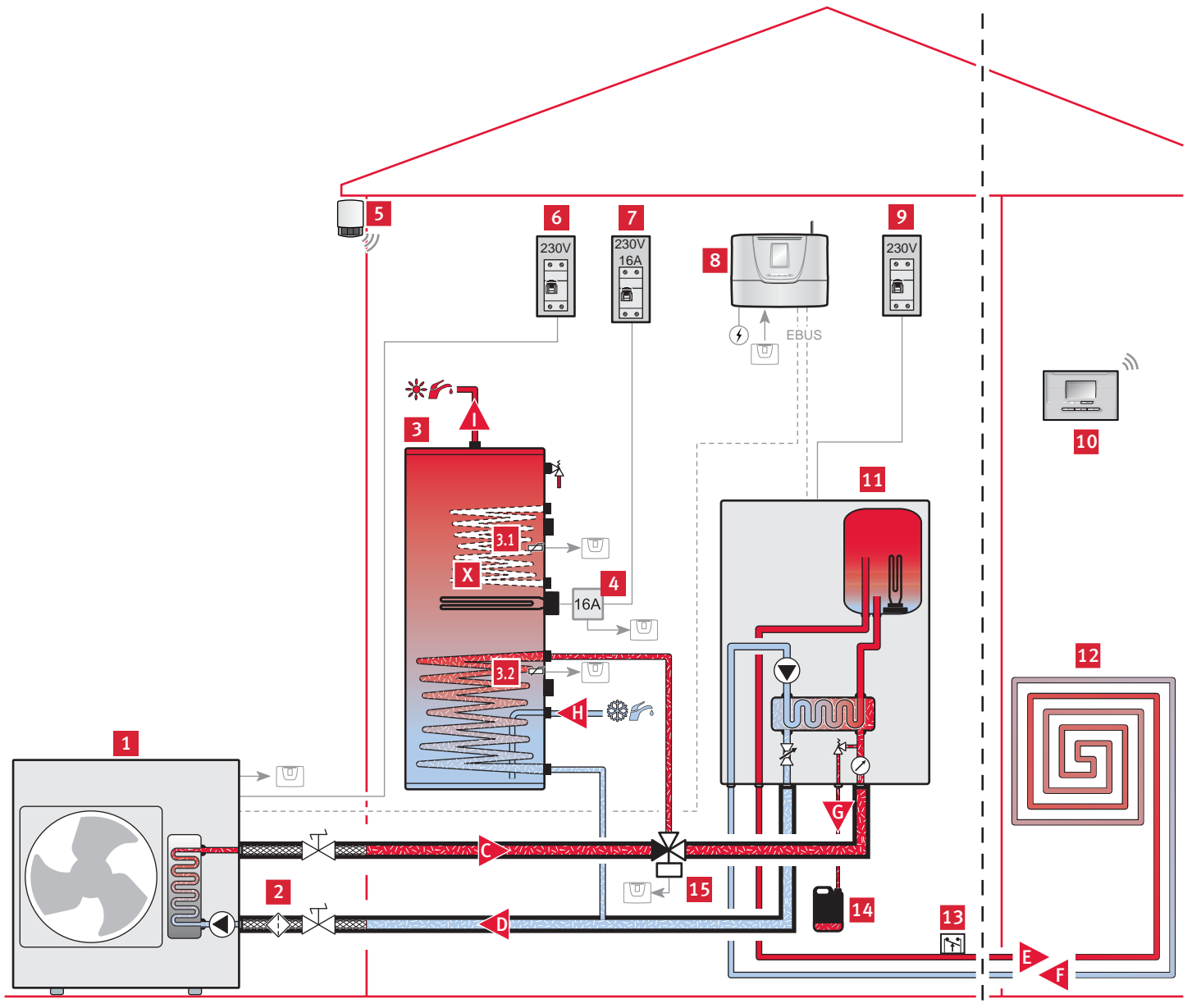
Diagram 7

	Heating				
	Monozone	2 zone low temperature or high temperature heating (Z20)		3 zone low temperature or high temperature heating (Z30)	
				OEM UFH (UFH 1 zone)	
				OEM UFH + 1 GW (UFH 2 zones)	
Domestic hot water cylinder	☺	☺	☺	☺	☺
Electric back-up for domestic hot water tank	☺	☺	☺	☺	☺
Swimming pool	☺	☺	--	☺	☺

☺ : Options available

- Refer to the “options” section to perform the various hydraulic and electrical connections necessary for the selected option.

4.2 Example of installation with diagram 4 : eBUS Heat pump, one heating zone



EN

Key

- 1 eBUS heat pump
- 2 Heat pump circuit filter
- 3 Cylinder
- 3.1 Temperature sensor 2K7 at 25°C (high position)
- 3.2 Temperature sensor 2K7 at 25°C (low position)
- 4 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 Electrical power and protection of the heat pump
- 7 Electrical power and protection of the back-up heater
- 8 Systempro control unit
- 9 Electrical power and protection of the module
- 10 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 11 Hydraulic module
- 12 Heating circuit (UFH shown, but can be underfloor or radiators)
- 13 Overheating safety (if underfloor heating)
- 14 Glycol PRV discharge
- 15 Domestic hot water option 3-way valve

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- G Heat pump circuit safety valve discharge
- H Cold water supply
- I Domestic hot water flow
- X Not used

Application conditions

- The Systempro control unit manages the operation of the boiler, the heat pump and the module.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- The installation can be performed with a low-temperature underfloor heating (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

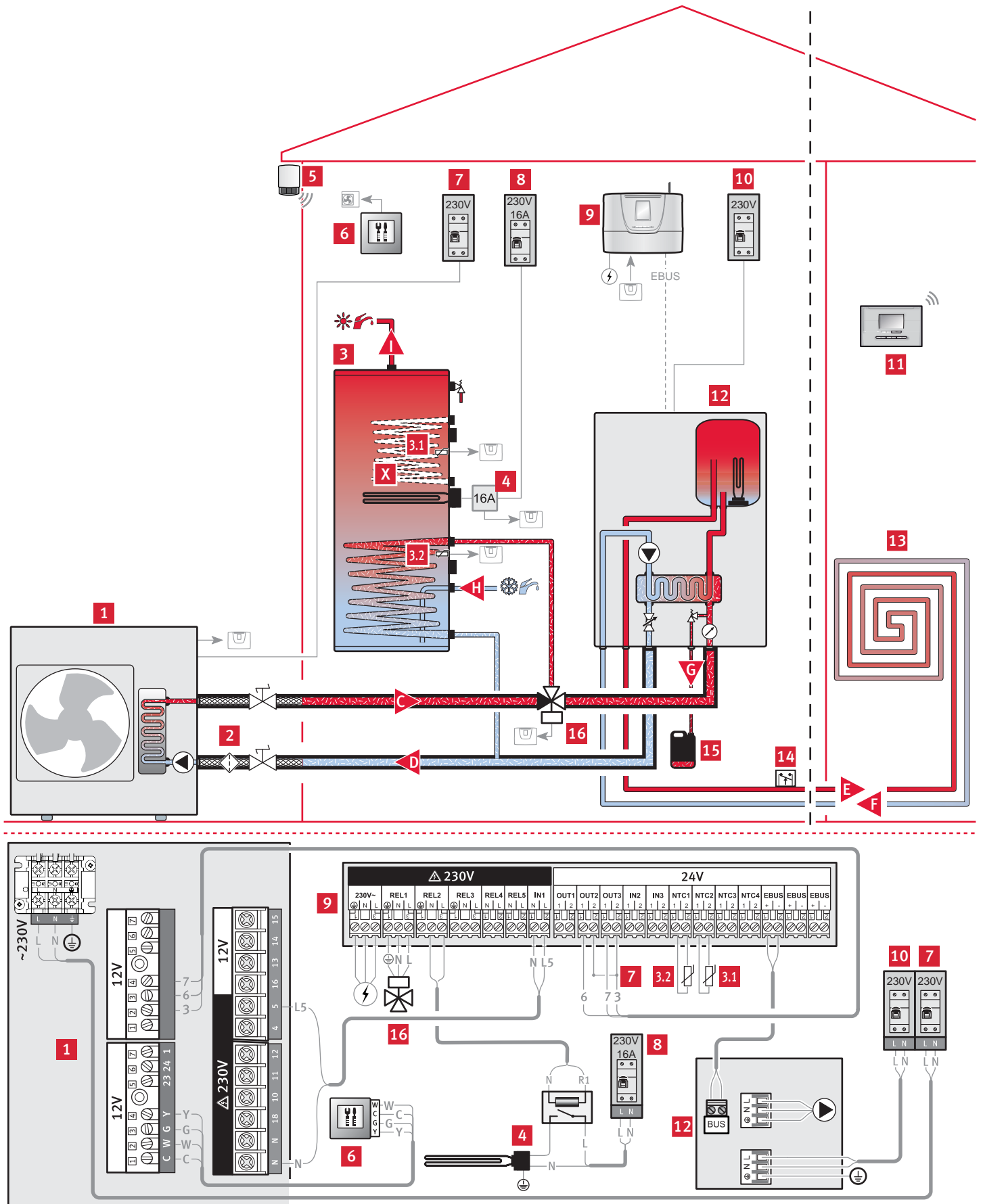
Domestic hot water

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Hot water tank option	1 sensor T° 2 sensors T°

4.3 Example of installation with diagram 7 : Heat pump controlled by On/Off contact, one heating zone



EN

Key

- 1 Heat pump controlled by On/Off contact
- 2 Heat pump circuit filter
- 3 Cylinder
- 3.1 Temperature sensor 2K7 at 25°C (high position)
- 3.2 Temperature sensor 2K7 at 25°C (low position)
- 4 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 Heat pump control unit
- 7 Electrical power and protection of the heat pump
- 8 Electrical power and protection of the back-up heater
- 9 Systempro control unit
- 10 Electrical power and protection of the module
- 11 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 12 Hydraulic module
- 13 Heating circuit (UFH shown, but can be underfloor or radiators)
- 14 Overheating safety (if underfloor heating)
- 15 Glycol PRV discharge
- 16 Domestic hot water option 3-way valve

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- G Heat pump circuit safety valve discharge
- H Cold water supply
- I Domestic hot water flow
- X Not used

Application conditions

- The Systempro control unit manages the operation of the boiler, the heat pump and the module.
- The heat pump command unit is used as a setting or diagnostic tool.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- The installation must include a wireless outside sensor.
- Connect the heat pump On/Off directly to the control box.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- The installation can be performed with a low-temperature underfloor heating (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Hot water tank option	2 sensors T°

Heat pump control unit settings

- Refer to the heat pump installation manual to access the “After-sales” parameters listed below.

Menu	Name of the function	Setting
112	Heating curves (*)	7 - 12
114	ECO heating mode (*)	1 - 20°C

- (*) Refer to the correspondence table in the “Settings > Heating” section.

5 Boiler only



5.1.1 Operating principle of the system

The heat appliance consists of a heat pump and a boiler. The heat emitters can also be low temperature (underfloor heating, ...) or medium temperature (radiators...).

The Systempro control unit controls a hydraulic assembly which can manage the heating zones independently. The system is completed by a room thermostat programmable by zone and a wireless or wired outside sensor which anticipates variations in outside temperature.

5.1.2 Summary of installation diagrams

Boiler	
Boiler	Diagram
eBUS/H2Bus	8

5.1 System boiler description

The system consists of the following components:

- A boiler,
- A Systempro control unit,
- A wireless or wired room thermostat,
- A wireless or wired outdoor sensor.

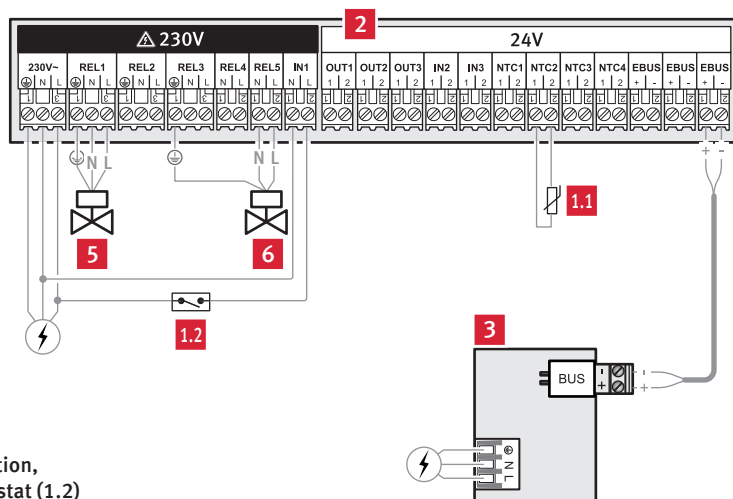
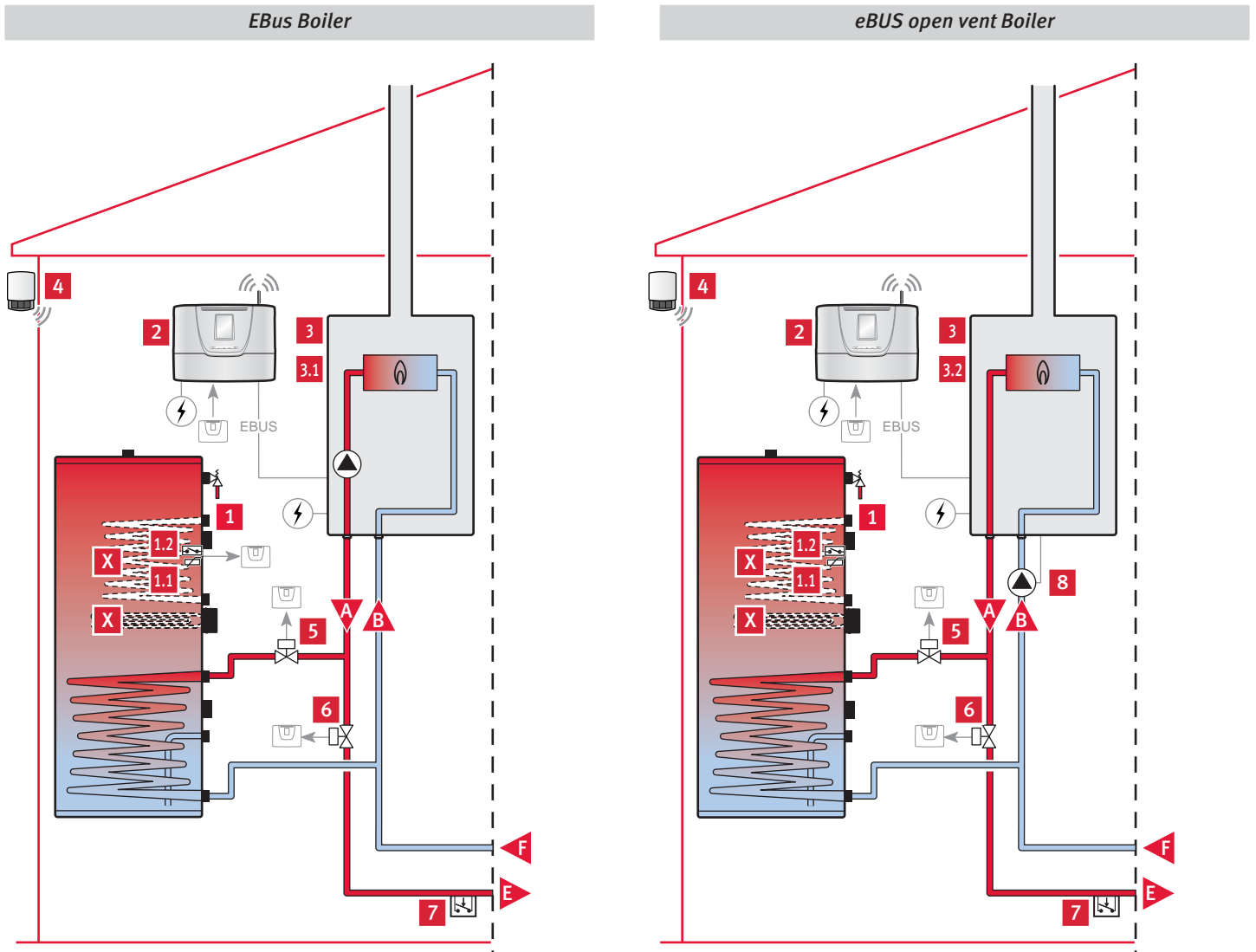
5.1.3 Options compatible with the system

	Heating				
	Monozone	2 zone low temperature or high temperature heating (Z20)			
			3 zone low temperature or high temperature heating (Z30)		
				OEM UFH (UFH 1 zone)	
					OEM UFH + 1 GW (UFH 2 zones)
Domestic hot water cylinder	☺	☺	☺	☺	☺
Boiler back-up for domestic hot water tank	☺	☺	☺	☺	☺

☺ : Options available

- Refer to the “options” section to perform the various hydraulic and electrical connections necessary for the selected option.

5.2 Example of installation with diagram 8 : eBUS boiler, one heating zone



Key

- 1 DHW Cylinder available as option, driven by NTC (1.1) or thermostat (1.2)
- 1.1 Temperature sensor 2K7 at 25°C
- 1.2 Thermostat
- 2 Systempro control unit
- 3 boiler
- 3.1 EBus boiler
- 3.2 EBus open vent boiler
- 4 Wireless outdoor sensor
- 5 2 port valve need with option "DHW cylinder"
- 6 Heating circuit 2 port valve (necessary for monozone heating)
- 7 Overheating safety (not supplied)

- A Boiler circuit flow
- B Boiler circuit return
- E Heating circuit flow
- F Heating circuit return
- X Not used

Application conditions

- If the boiler installed in the system communicates by e-BUS, connect it directly to the control box respecting the polarity (+/-).
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- The installation must include a wired or wireless outside sensor.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

6 Universal

6.1 Universal systems description

6.1.1 Operating principle of the system

The heating appliance consists of just a heat pump

The heat appliance consists of a heat pump. The heat emitters can also be low temperature (underfloor heating, ...) or medium temperature (radiators...). In order to always obtain the best comfort/economy trade-off, the heat pump supplies the heating installation with hot water at the temperature necessary to obtain the desired ambient temperature. This depends on the outside temperature measured by the wireless outside sensor continually corrected by the real temperature measured by the wired or wireless room thermostat.

The heating appliance consists of a heater with an electric back-up heater

The heating appliance consists of a heat pump and an electric back-up heater. The heat emitters can also be low temperature (underfloor heating, ...) or medium temperature (radiators...). In order to always obtain the best comfort/economy trade-off, the module heat pump and/or electric heater supply the heating installation with hot water at the temperature necessary to obtain the desired ambient temperature. This depends on the outside temperature measured by the wireless outside sensor continually corrected by the real temperature measured by the wired or wireless room thermostat.

When the power of the heat pump is no longer adequate to ensure heating, the self-controlled electric heater in the hydraulic module can operate simultaneously in steps of 2 kW up to a power of 6 kW in the case of a heat pump ≤ 5 kW the back-up power is limited to 4 kW when the heat pump is operating. This guarantees optimal use of the heat pump while guaranteeing that the total electrical power consumption will never exceed 6kW (in order to optimise energy useage). When the heat pump is not operating, the electric heater can reach a power level of 6kW independent of the outside temperature conditions.

The changeover point between the heat pump and the electric heater is managed automatically, depending on the outside and ambient temperatures. Thus, the system always optimises the use of the heat pump with respect to the electric back-up heater.

The heating appliance consists of a heat pump and back up boiler

The heating appliance consists of a heat pump and a boiler. The heat emitters can also be low temperature (underfloor heating, ...) or medium temperature (radiators...). In order to always obtain the best comfort/economy trade-off, one or the others heating appliances supply the heating installation with hot water at the temperature necessary to obtain the desired ambient temperature.

This depends on the outside temperature measured by the wireless outside sensor continually corrected by the real temperature measured by the wired or wireless room thermostat.

When the heat pump power is not sufficient to provide heating but its operation remains economically advantageous, the boiler can operate simultaneously guaranteeing optimum usage of the heat pump and therefore the operating cost of the system. If the boiler installed in the system communicates by e-BUS, you then have modulating control of your boiler in accordance with your system. In the case of a boiler operating in On/Off mode, you then have fixed control independent of your existing boiler (oil, wood, competitor...) without communication with your system (the boiler reacts to a fixed setting on its control panel).

The changeover point between the heat pump and the electric heater is managed automatically, depending on the outside and ambient temperatures. This continually guarantees the operation of the appliances with the best operating cost (boiler alone, heat pump and boiler or heat pump alone). The appliances can operate simultaneously. Therefore, the system always uses the cheapest solution. The switchover point must be determined in accordance with the respective energy costs (see the "Activation of control unit Settings> Energy management" chapter).

6.1.2 Summary of installation diagrams

Universal System

Heat pump	Boiler	Diagram
Envirosorb ₅ Envirosorb ₃ 8 Envirosorb ₃ 11	eBUS	14
	controlled by 24V on/off contact	
	controlled by 230V signal	
Envirosorb ₂ 7 Envirosorb ₂ 12 Envirosorb ₂ 15	Controlled by On/Off contact	15
	eBUS controlled by 230V signal	

Application conditions

- The hydraulic decoupling tank is essential with a back up boiler. The boiler must connect to the expansion board.
- The expansion board is essential with a hydraulic decoupling tank. The hydraulic decoupling tank must be connected to the expansion board.

6.1.3 Options compatible with the system

Diagram 14: PAC eBUS

	Heating				
	Monozone	2 zone low temperature or high temperature heating (Z20)			
			3 zone low temperature or high temperature heating (Z30)		
			OEM UFH (UFH 1 zone)	OEM UFH + 1 GW (UFH 2 zones)	
Domestic hot water cylinder	☺	☺	☺	☺	☺
Electric back-up for domestic hot water tank	☺	☺	☺	☺	☺
Back-up boiler for domestic hot water tank (only with e-BUS boiler)	☺	☺	☺	☺	☺
Swimming pool	☺	☺	--	☺	☺
Management of electricity tariffs (day/night) by electrical connection	☺	☺	☺	☺	☺
Management of electricity tariffs (day/night) by programme	☺	☺	☺	☺	☺

☺ : Options available

Diagram 15 : PAC Controlled by On/Off contact

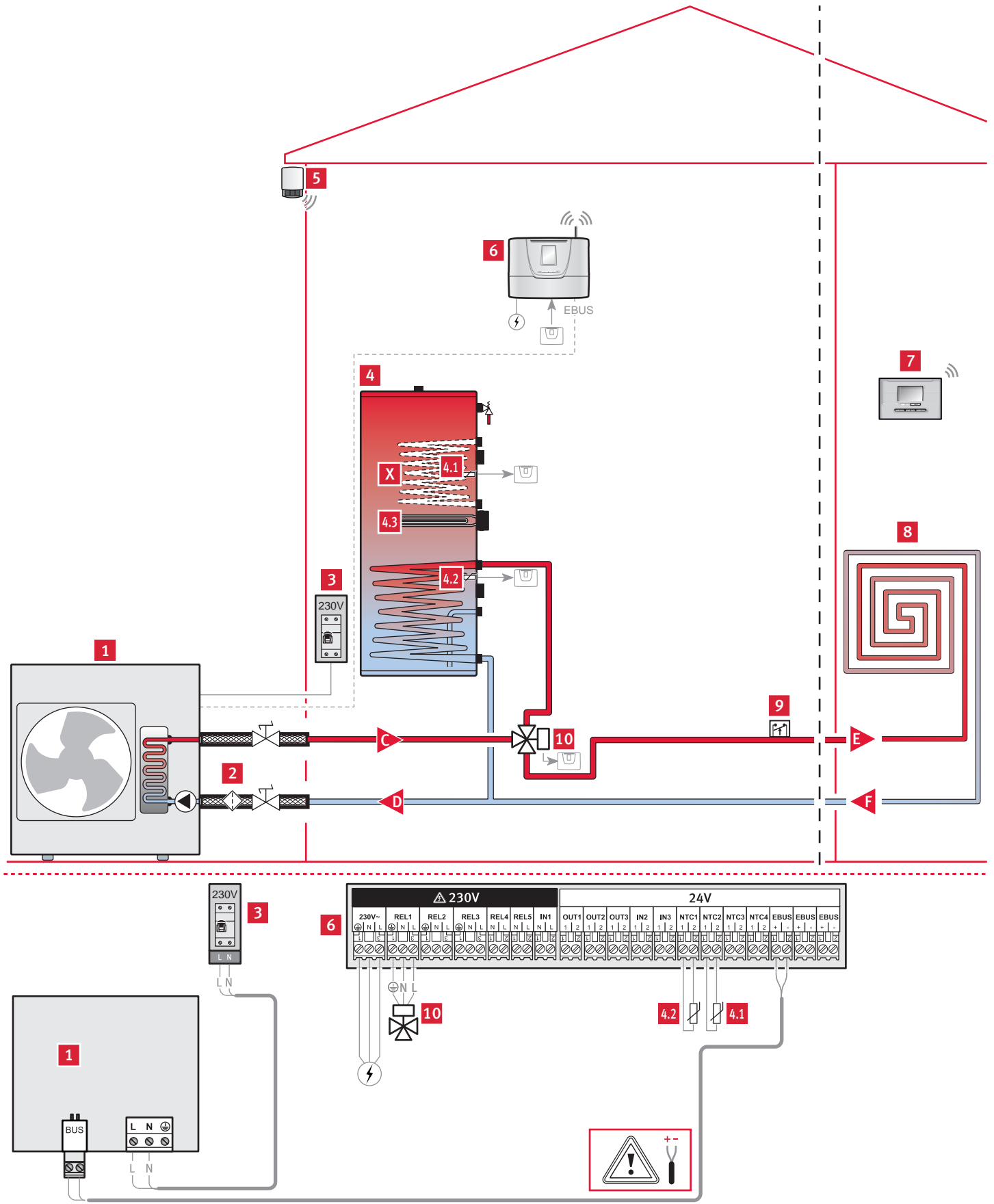
	Heating				
	Monozone	2 zone low temperature or high temperature heating (Z20)			
			3 zone low temperature or high temperature heating (Z30)		
			OEM UFH (UFH 1 zone)	OEM UFH + 1 GW (UFH 2 zones)	
Domestic hot water cylinder	☺	☺	☺	☺	☺
Electric back-up for domestic hot water tank	☺	☺	☺	☺	☺
Back-up boiler for domestic hot water tank (only with e-BUS boiler)	☺	☺	☺	☺	☺
Swimming pool	☺	☺	--	☺	☺
Management of electricity tariffs (day/night) by programme	☺	☺	☺	☺	☺

☺ : Options available

- Refer to the “options” section to perform the various hydraulic and electrical connections necessary for the selected option.

6.2 Example of installation with diagram 14 : eBUS Heat pump

6.2.1 eBUS Heat pump, directly to the heating installation, without back-up



EN

Key

- 1 eBUS heat pump
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 5 Wireless outdoor sensor
- 6 Systempro control unit
- 7 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 8 Heating circuit (UFH shown, but can be underfloor or radiators)
- 9 Overheating safety (if underfloor heating)
- 10 Domestic hot water option 3-way valve

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- The overheating safety must be connected according to the standards in force (on the circulation pump).
- A safety valve and an expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

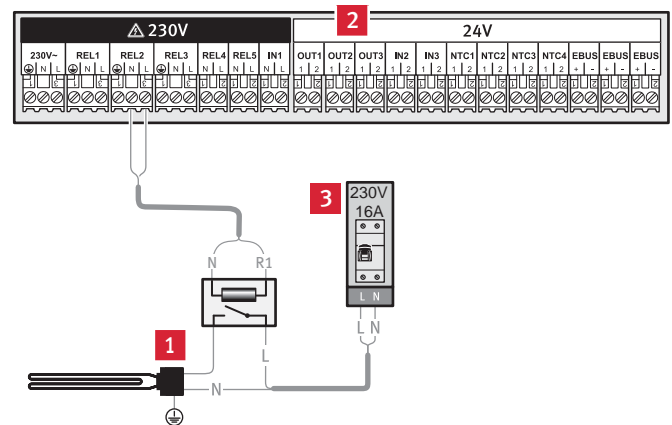
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	None Electric heater

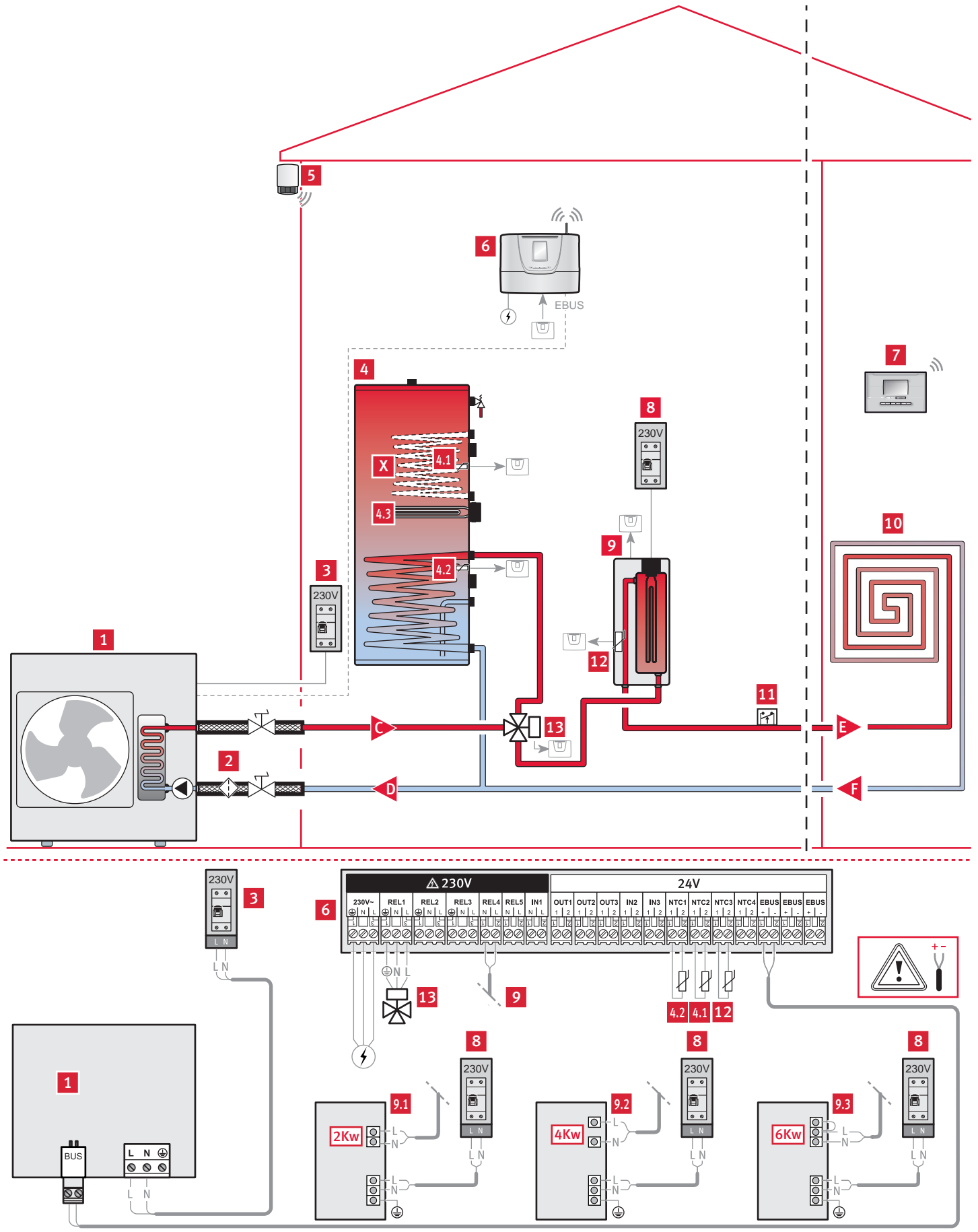
Electric domestic hot water back-up heater



Key

- 1 Electric domestic hot water back-up heater (option)
- 2 Systempro control unit
- 3 Electrical power and protection of the back-up heater

6.2.2 eBUS Heat pump, directly to the heating installation with electric back-up (2, 4, 6 kW)



EN

Key

- 1 eBUS heat pump
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 4.3 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 Systempro control unit
- 7 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 8 Electrical power and protection of the electric back-up module
- 9 Electric back-up module
- 9.1 with electric back-up 2 kw
- 9.2 with electric back-up 4 kw
- 9.3 with electric back-up 6 kw
- 10 Heating circuit (UFH shown, but can be underfloor or radiators)
- 11 Overheating safety (if underfloor heating)
- 12 CTN (2K7 à 25°C)
- 13 Domestic hot water option 3-way valve

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump and the electric back-up module.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- The overheating safety must be connected according to the standards in force (on the circulation pump).
- A safety valve and an expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

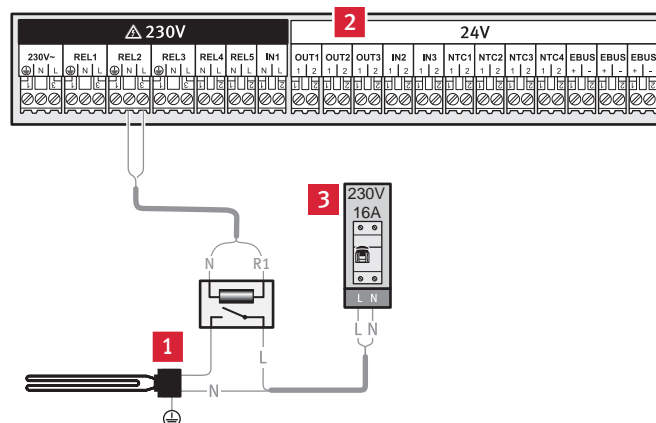
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	None Electric heater

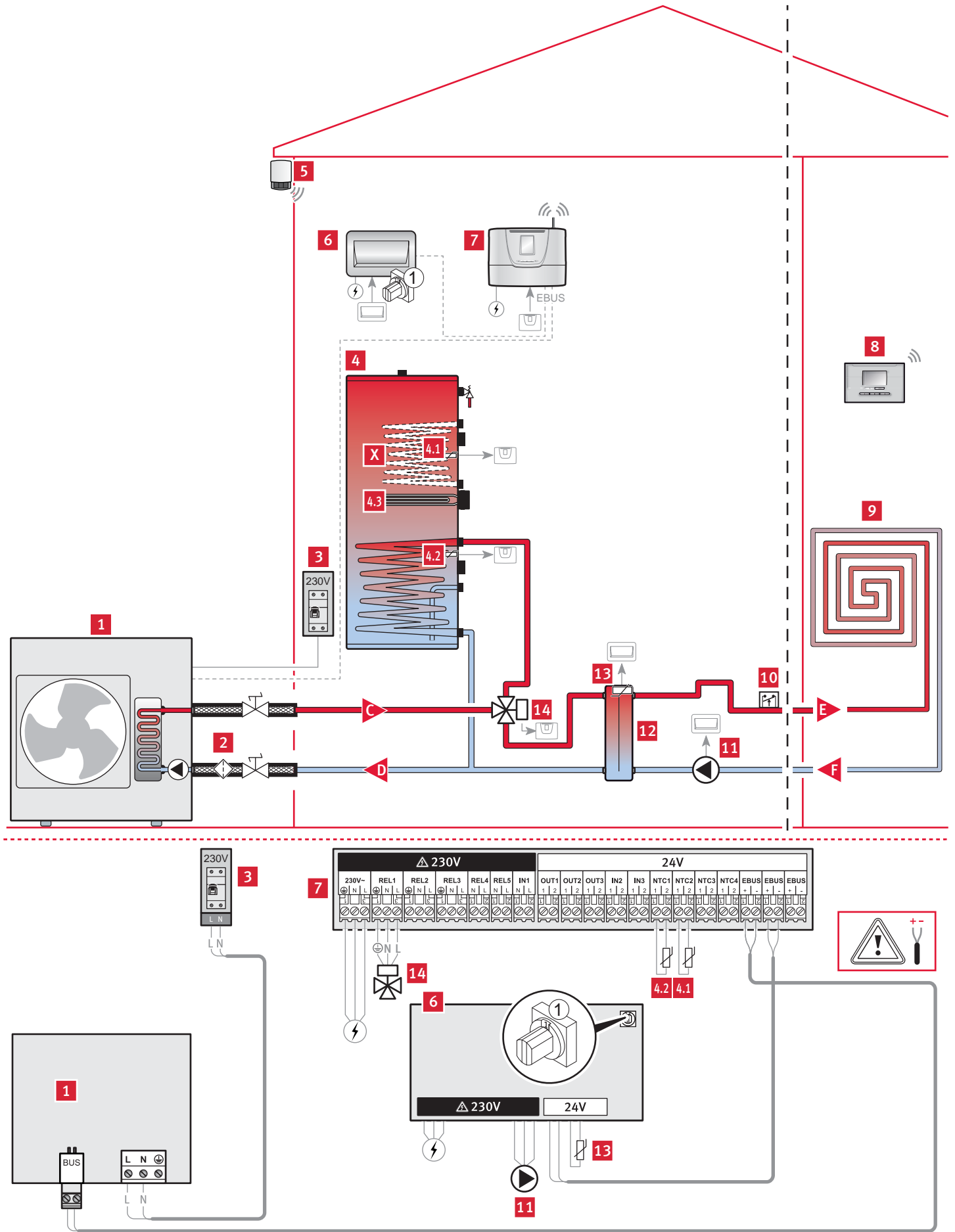
Electric domestic hot water back-up heater



Key

- 1 Electric domestic hot water back-up heater (option)
- 2 Systempro control unit
- 3 Electrical power and protection of the back-up heater

6.2.3 eBUS Heat pump, with decoupling on the heating installation, without back-up



EN

Key

- 1 eBUS heat pump
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 4.3 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 IN/OUT expansion board (e-BUS address "1")
- 7 Systempro control unit
- 8 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 9 Heating circuit (UFH shown, but can be underfloor or radiators)
- 10 Overheating safety (if underfloor heating)
- 11 Pump
- 12 Hydraulic decoupling tank
- 13 NTC (2K7 à 25°C)
- 14 Domestic hot water option 3-way valve
- X Not used

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump and the hydraulic decoupling tank.
- The NTC of the hydraulic decoupling tank and the heating circuit pump must be connected to expansion board.
- The room thermostats compatible with the system are the Climapro₂ RF or the Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- The overheating safety must be connected according to the standards in force (on the circulation pump).
- A safety valve and an expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

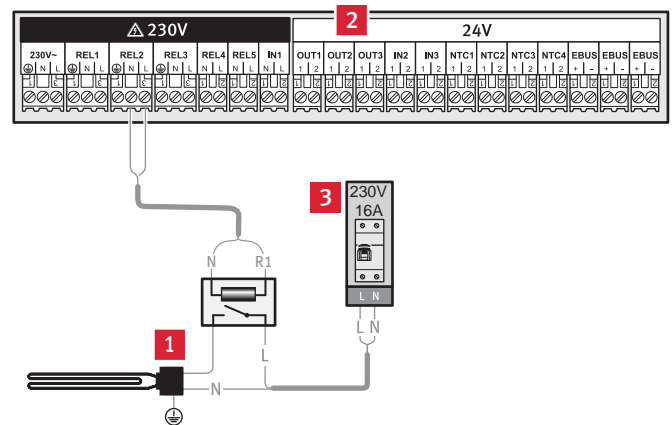
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	None Electric heater

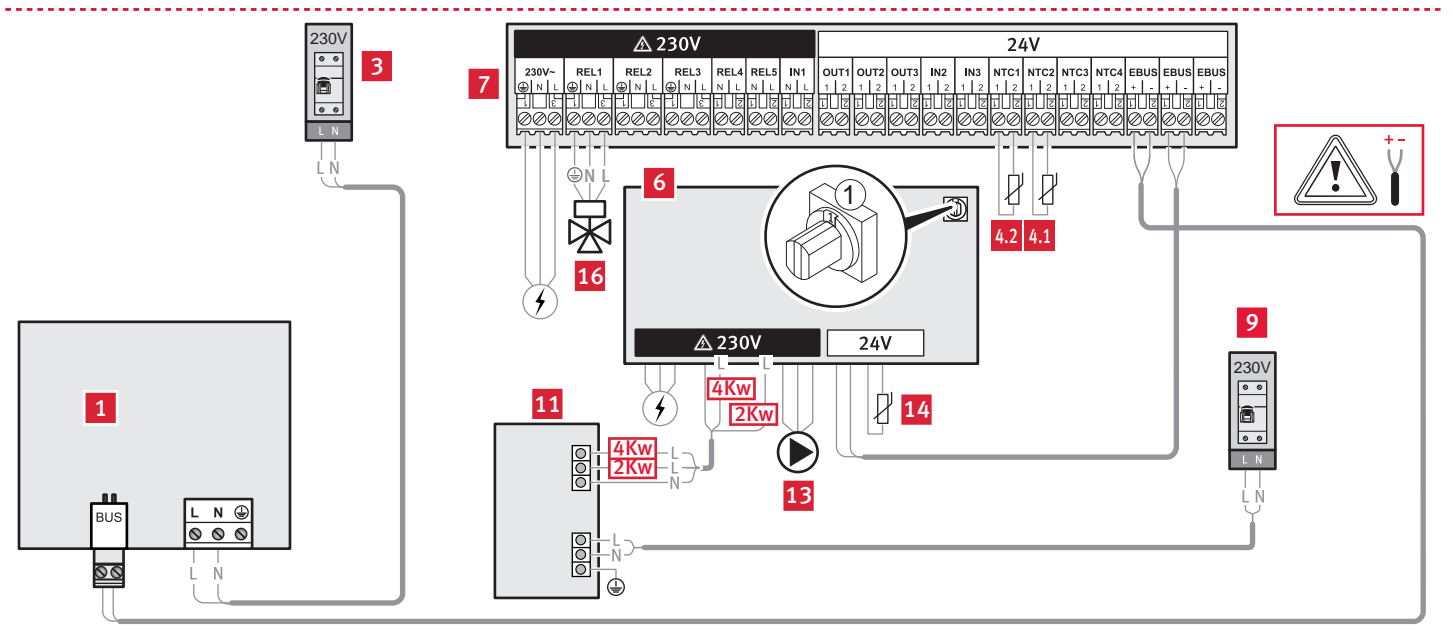
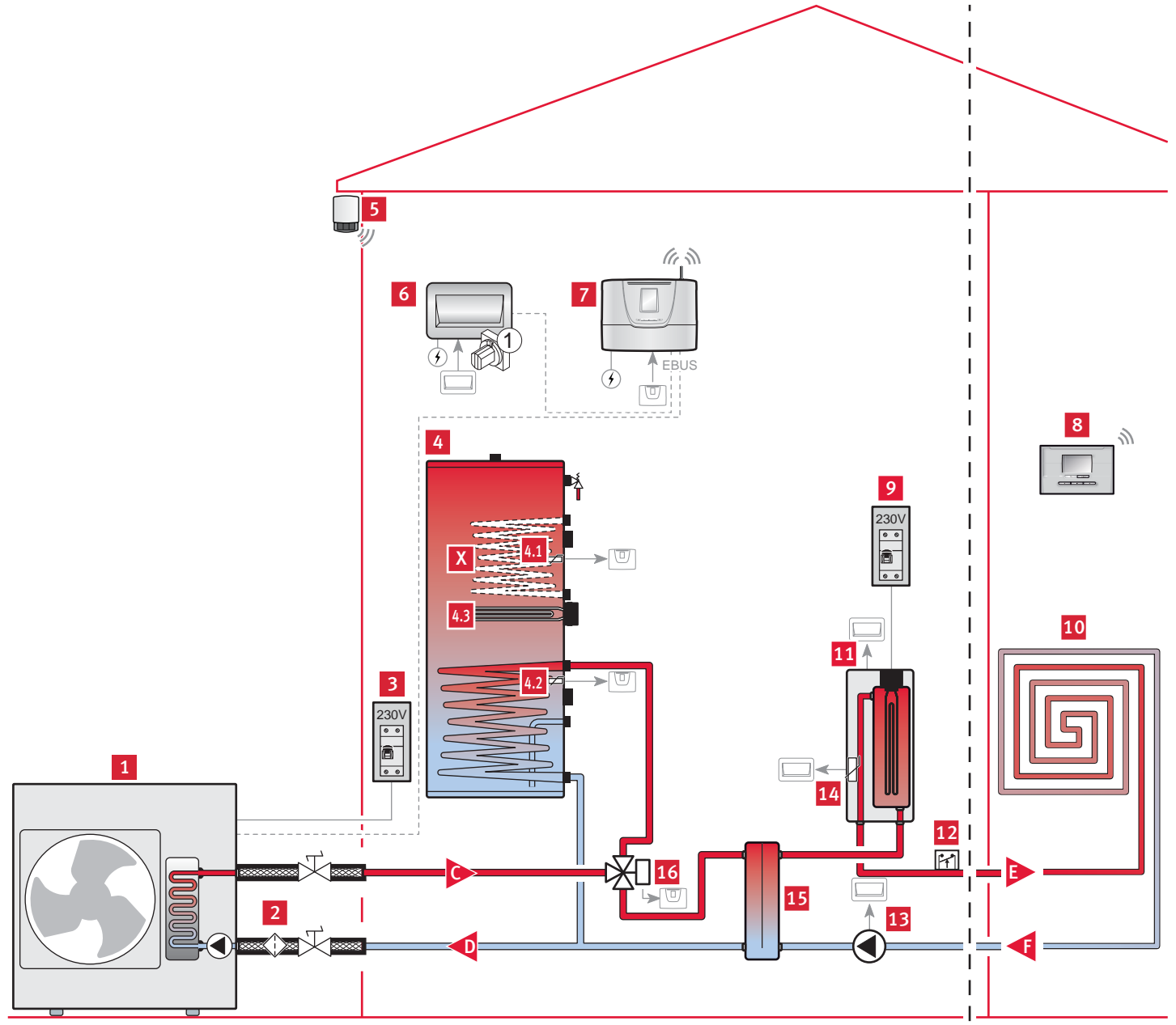
Electric domestic hot water back-up heater



Key

- 1 Electric domestic hot water back-up heater (option)
- 2 Systempro control unit
- 3 Electrical power and protection of the back-up heater

6.2.4 eBUS Heat pump, with decoupling from the heating installation, with electric back-up (2, 4, 6 kW)



EN

Key

- 1 eBUS heat pump
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 4.3 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 IN/OUT expansion board (e-BUS address "1")
- 7 Systempro control unit
- 8 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 9 Electrical power and protection of the electric back-up module
- 10 Heating circuit (UFH shown, but can be underfloor or radiators)
- 11 Electric back-up module
- 12 Overheating safety (if underfloor heating)
- 13 Pump
- 14 NTC (2K7 à 25°C)
- 15 Hydraulic decoupling tank
- 16 Domestic hot water option 3-way valve

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump, the hydraulic decoupling tank and electric back-up module.
- The NTC of the electric back-up module, the electric back-up module and the heating circuit pump must be connected to expansion board.
- The room thermostats compatible with the system are the Climapro₂ RF or the Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- A safety valve and an expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature underfloor heating (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

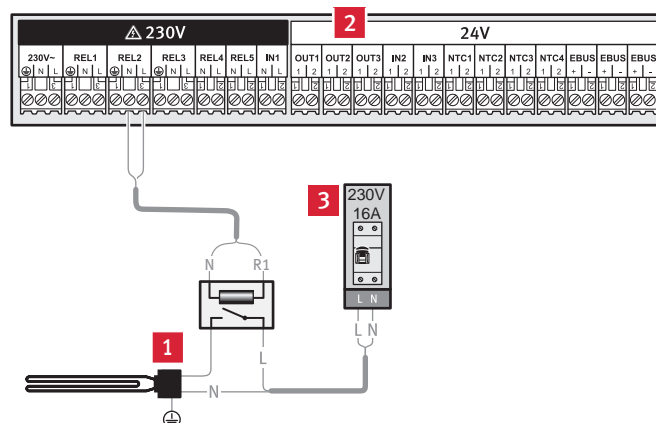
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	None Electric heater

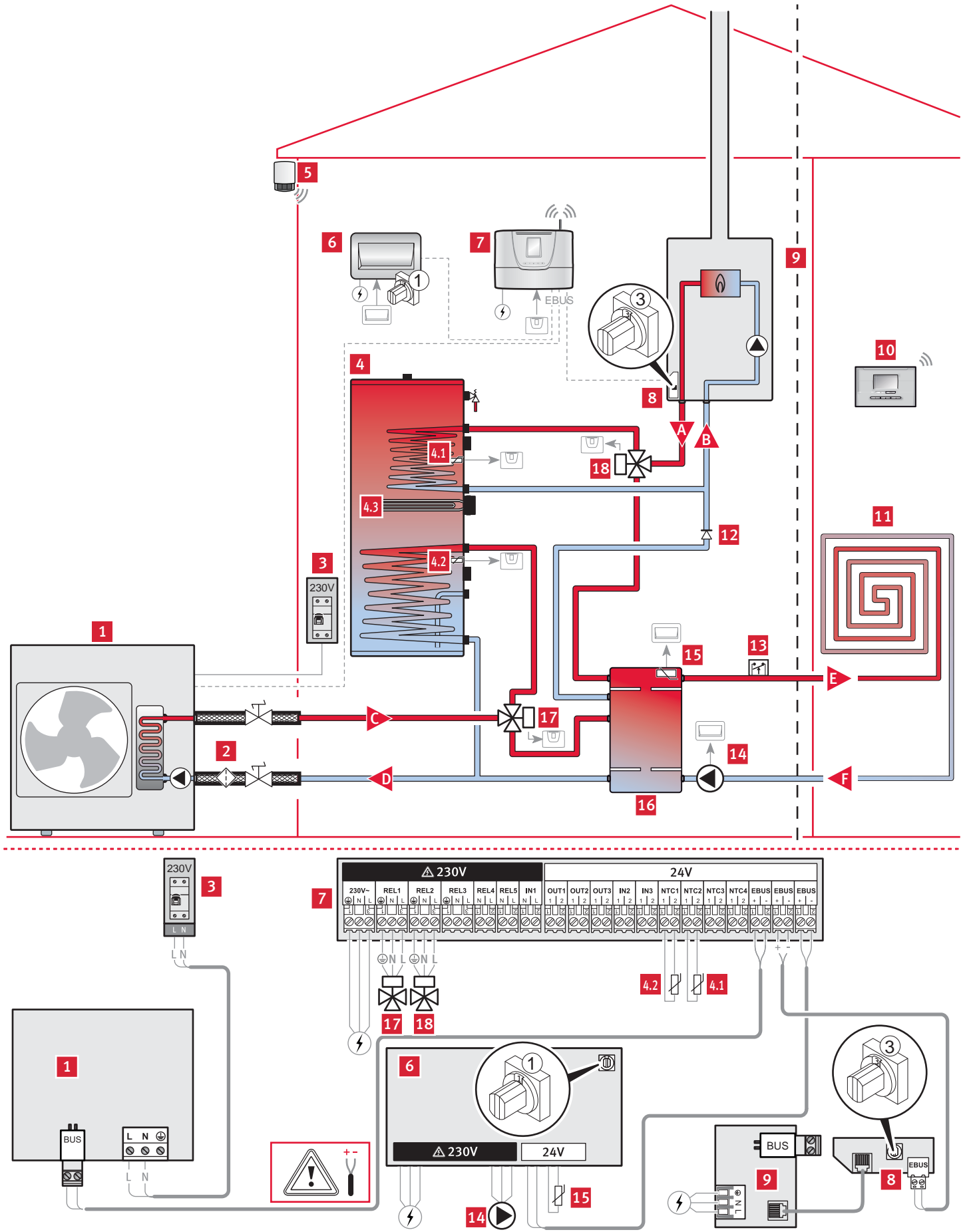
Electric domestic hot water back-up heater



Key

- 1 Electric domestic hot water back-up heater (option)
- 2 Systempro control unit
- 3 Electrical power and protection of the back-up heater

6.2.5 eBUS Heat pump, with decoupling from the heating installation, with e-BUS boiler back-up



EN

Key

- 1 eBUS heat pump
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 4.3 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 IN/OUT expansion board (e-BUS address "1")
- 7 Systempro control unit
- 8 E-BUS interface (e-BUS address "3")
- 9 EBUS boiler
- 10 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 11 Heating circuit (UFH shown, but can be underfloor or radiators)
- 12 Non-return valve (recommended to prevent burner ignition triggered by thermo-siphoning)
- 13 Overheating safety (if underfloor heating)
- 14 Pump
- 15 NTC (2K7 à 25°C)
- 16 Hydraulic decoupling tank
- 17 Domestic hot water option 3-way valve
- 18 3-way valve

- A Boiler circuit flow
- B Boiler circuit return
- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump and the hydraulic decoupling tank.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- The heating circuit pump must be installed according to the installation characteristics and the standards in force (heating circuit outlet or return).
- The NTC of the hydraulic decoupling tank, the electric back-up module and the heating circuit pump must be connected to expansion board.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- If the installation consists of an e-BUS heat pump and boiler, an e-BUS interface must be connected between the boiler and the control box. It is only compatible with e-BUS boilers. Refer to the e-BUS interface documentation for the electrical connection and setting of the code wheel (e-BUS address "3").
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- A safety valve and an expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

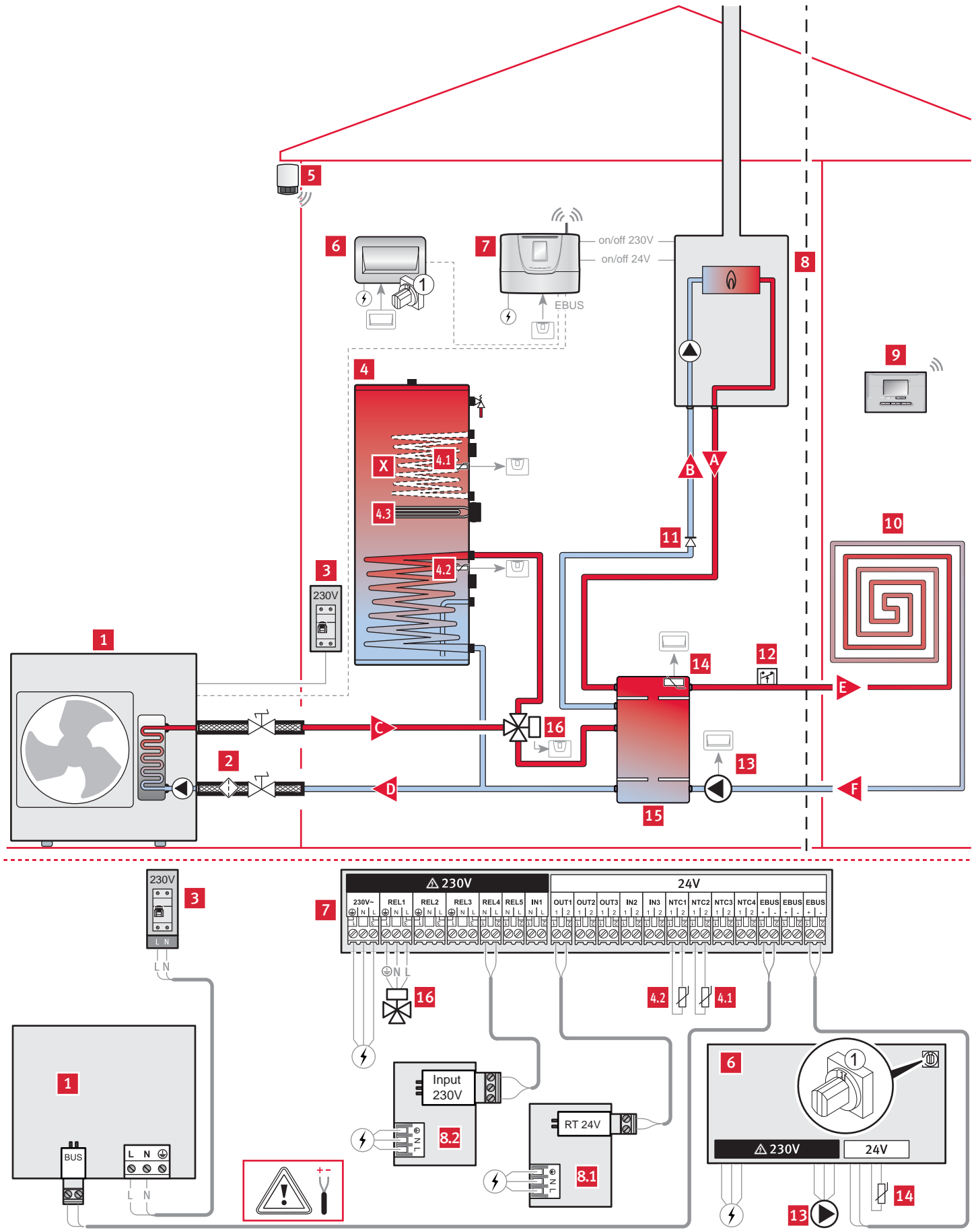
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	eBUS boiler

6.2.6 eBUS Heat pump, with decoupling from the heating installation, with boiler back-up controlled by On/Off contact



EN

Key

- 1 eBUS heat pump
 - 2 Heat pump circuit filter (not supplied)
 - 3 Electrical power and protection of the heat pump
 - 4 Cylinder
 - 4.1 Temperature sensor 2K7 at 25°C (high position)
 - 4.2 Temperature sensor 2K7 at 25°C (low position)
 - 4.3 Electric domestic hot water back-up heater
 - 5 Wireless outdoor sensor
 - 6 IN/OUT expansion board (e-BUS address "1")
 - 7 Systempro control unit
 - 8 Boiler
 - 8.1 On/Off 24 V boiler
 - 8.2 On/off 230V boiler
 - 9 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
 - 10 Heating circuit (UFH shown, but can be underfloor or radiators)
 - 11 Non-return valve (recommended to prevent burner ignition triggered by thermo-siphoning)
 - 12 Overheating safety (if underfloor heating)
 - 13 Pump
 - 14 NTC (2K7 à 25°C)
 - 15 Hydraulic decoupling tank
 - 16 Domestic hot water option 3-way valve
-
- A Boiler circuit flow
 - B Boiler circuit return
 - C Heat pump circuit flow
 - D Heat pump circuit return
 - E Heating circuit return
 - F Heating circuit flow
 - X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump and the hydraulic decoupling tank.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- The heating circuit pump must be installed according to the installation characteristics and the standards in force (heating circuit outlet or return).
- The NTC of the hydraulic decoupling tank, the electric back-up module and the heating circuit pump must be connected to expansion board.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box respecting the polarity (+/-).
- If the boiler is controlled by a 24V On/Off contact, it must have a 24V thermostat input.
- If the boiler is controlled by 230V signal, it must have a signal input or 230V contact.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- A safety valve and an expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

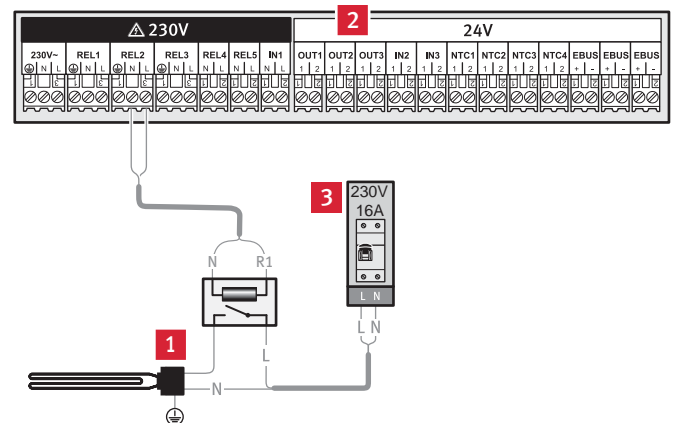
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	None Electric heater

Electric domestic hot water back-up heater

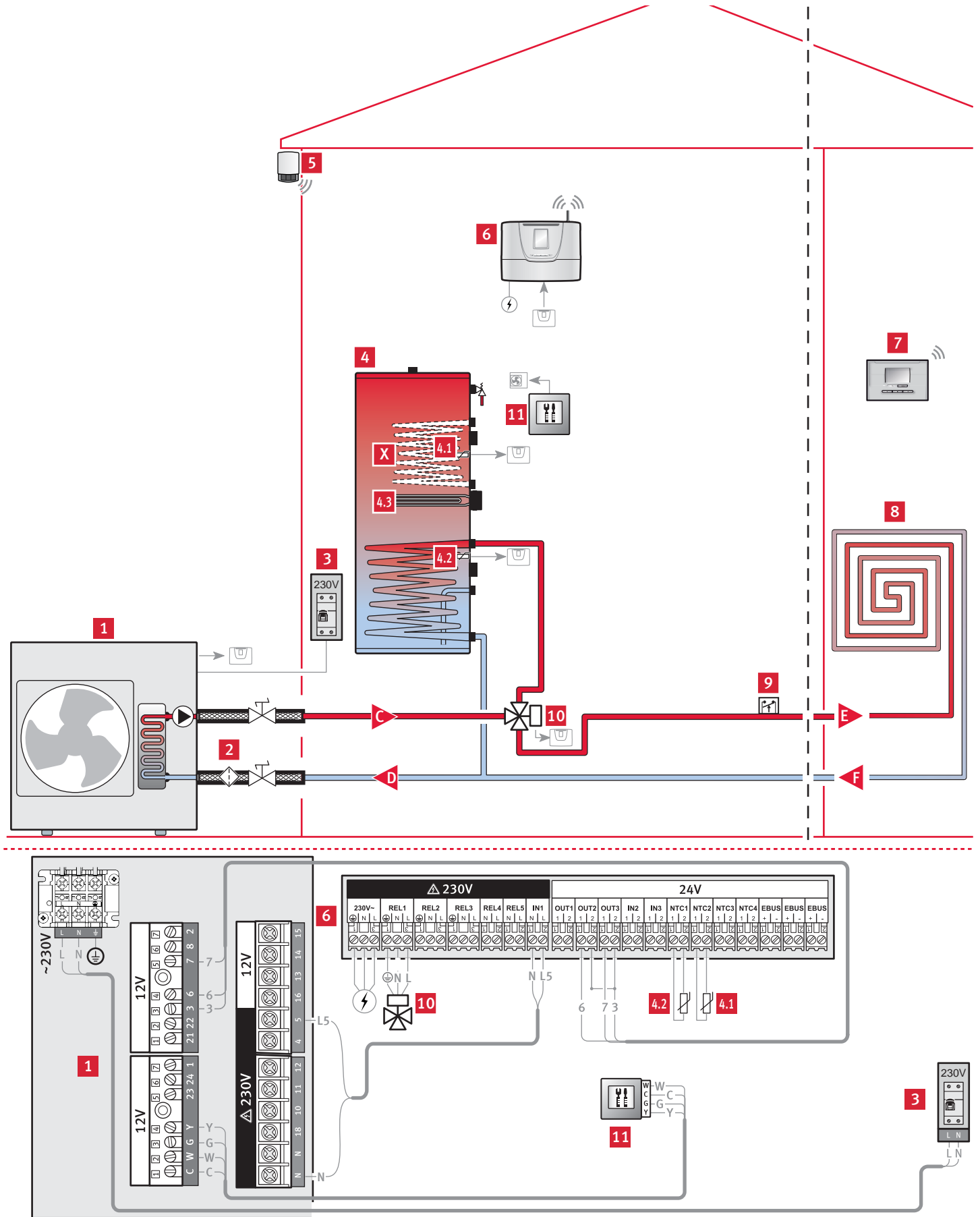


Key

- 1 Electric domestic hot water back-up heater (option)
- 2 Systempro control unit
- 3 Electrical power and protection of the back-up heater

6.3 Examples of installations with diagram 15: Heat pump controlled by On/Off contact

6.3.1 On/Off heat pump, directly connected to the heating installation, without back-up



EN

Key

- 1 Heat pump controlled by On/Off contact
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 4.3 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 Systempro control unit
- 7 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 8 Heating circuit (UFH shown, but can be underfloor or radiators)
- 9 Overheating safety (if underfloor heating)
- 10 Domestic hot water option 3-way valve
- 11 Heat pump control unit

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for “wireless” versions and the Climapro₁ for the “wired” version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box.
- The overheating safety must be connected according to the standards in force (on the circulation pump).
- An expansion vessel is essential in the heating circuit.
- The installation can be performed with a low-temperature underfloor heating (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

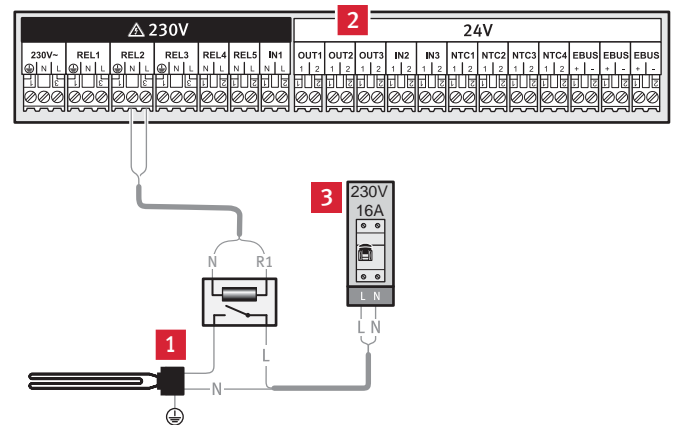
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	None Electric heater

Electric domestic hot water back-up heater



Key

- 1 Electric domestic hot water back-up heater (option)
- 2 Systempro control unit
- 3 Electrical power and protection of the back-up heater

Key

- 1 Heat pump controlled by On/Off contact
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 4.3 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 IN/OUT extension board (e-BUS address "1")
- 7 Systempro control unit
- 8 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 9 Heating circuit (UFH shown, but can be underfloor or radiators)
- 10 Overheating safety (if underfloor heating)
- 11 Pump
- 12 Hydraulic decoupling tank
- 13 NTC (2K7 à 25°C)
- 14 Domestic hot water option 3-way valve
- 15 Heat pump control unit

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump and the hydraulic decoupling tank.
- The heating circuit pump must be installed according to the installation characteristics and the standards in force (heating circuit outlet or return).
- The NTC of the hydraulic decoupling tank and the heating circuit pump must be connected to extension board.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version.
- The installation must include a wireless outside sensor.
- Connect the heat pump e-BUS directly to the control box.
- The overheating safety must be connected according to the standards in force (on the circulation pump).
- An expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

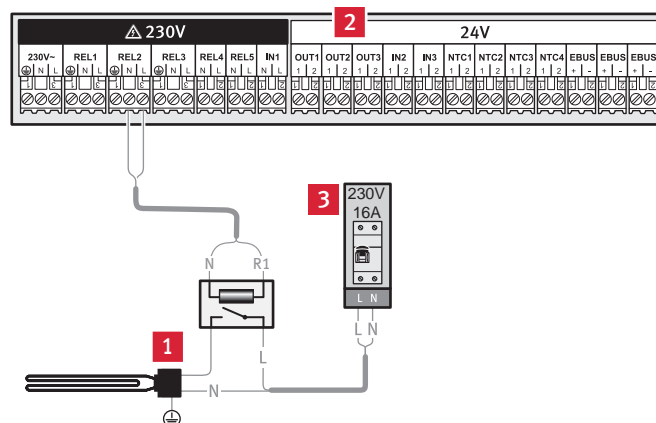
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	None Electric heater

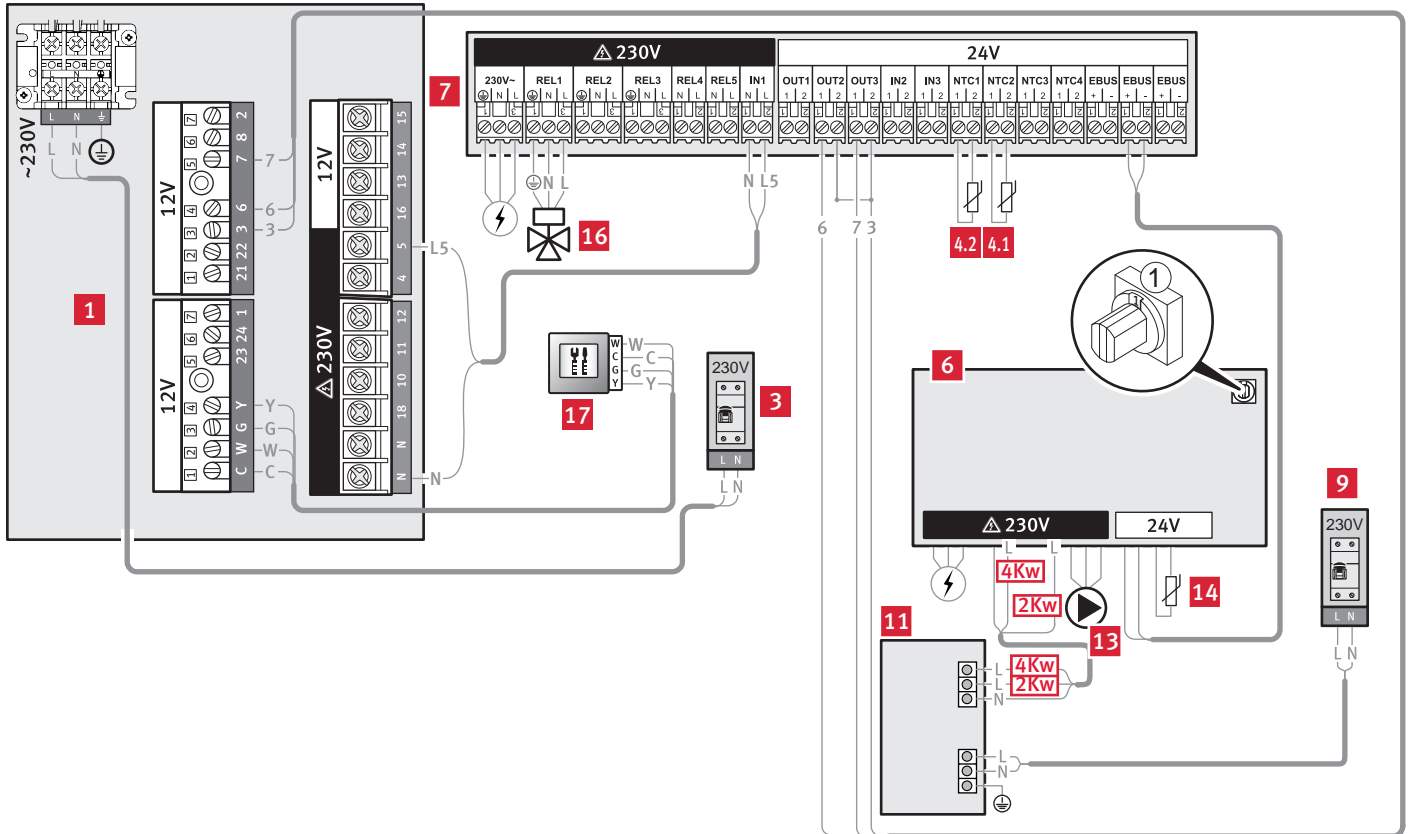
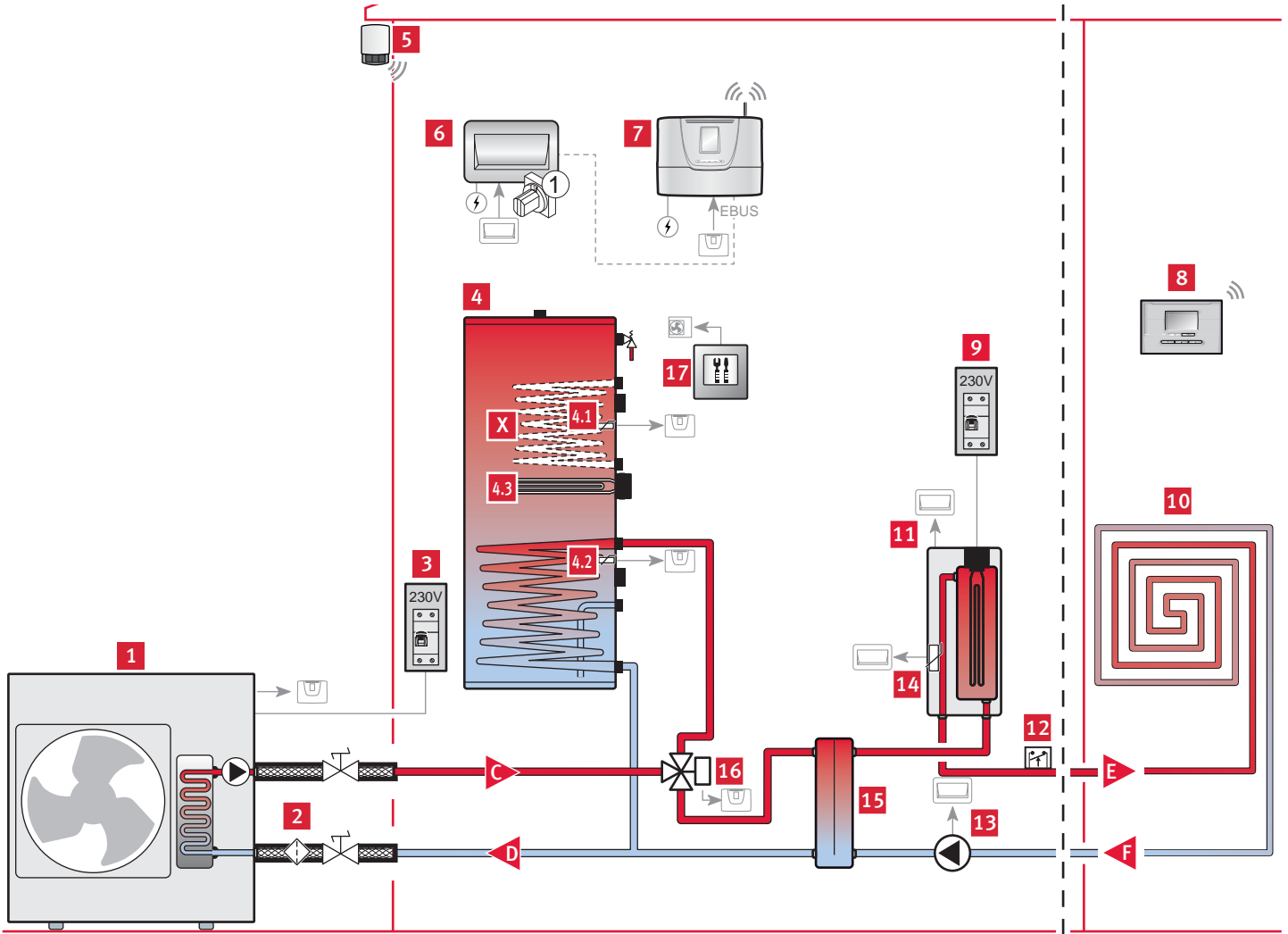
Electric domestic hot water back-up heater



Key

- 1 Electric domestic hot water back-up heater (option)
- 2 Systempro control unit
- 3 Electrical power and protection of the back-up heater

6.3.3 On/Off heat pump, with decoupling from the heating installation, with electric back-up (2, 4, 6 kW)



EN

Key

- 1 Heat pump controlled by On/Off contact
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 4.3 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 IN/OUT extension board (e-BUS address "1")
- 7 Systempro control unit
- 8 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 9 Electrical power and protection of the electric back-up module
- 10 Heating circuit (UFH shown, but can be underfloor or radiators)
- 11 Electric back-up module
- 12 Overheating safety (if underfloor heating)
- 13 Pump
- 14 NTC (2K7 à 25°C)
- 15 Hydraulic decoupling tank
- 16 Domestic hot water option 3-way valve
- 17 Heat pump control unit

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump, the hydraulic decoupling tank and electric back-up module.
- The heating circuit pump must be installed according to the installation characteristics and the standards in force (heating circuit outlet or return).
- The NTC of the electric back-up module, the electric back-up module and the heating circuit pump must be connected to expansion board.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version.
- The installation must include a wireless outside sensor.
- The overheating safety must be connected according to the standards in force (on the circulation pump).
- An expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

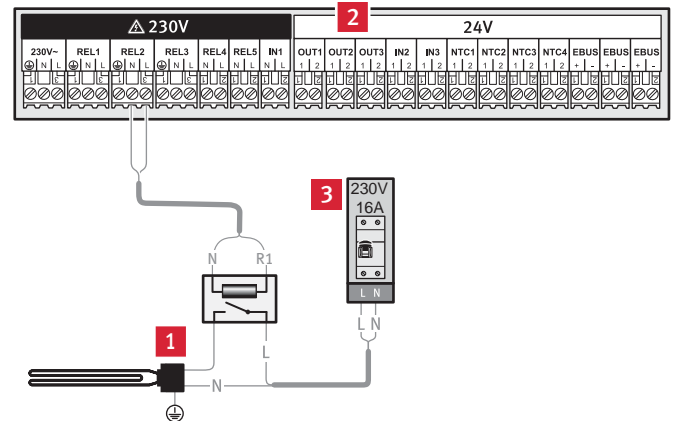
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	None Electric heater

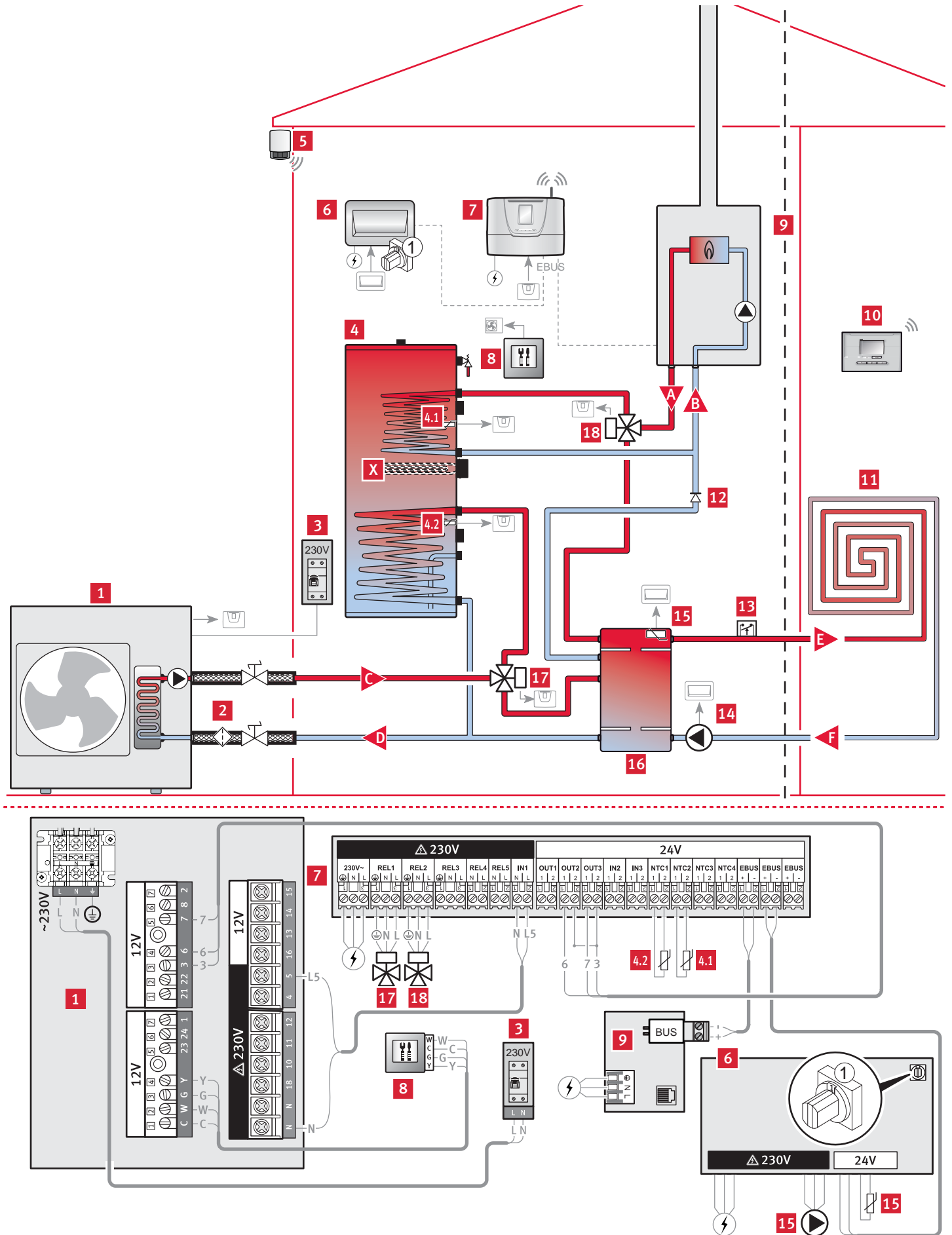
Electric domestic hot water back-up heater



Key

- 1 Electric domestic hot water back-up heater (option)
- 2 Systempro control unit
- 3 Electrical power and protection of the back-up heater

6.3.4 On/Off heat pump, with decoupling from the heating installation, with e-BUS boiler back-up



EN

Key

- 1 Heat pump controlled by On/Off contact
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 4.3 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 IN/OUT extension board (e-BUS address "1")
- 7 Systempro control unit
- 8 Heat pump control unit
- 9 eBUS boiler
- 10 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 11 Heating circuit (UFH shown, but can be underfloor or radiators)
- 12 Non-return valve (recommended to prevent burner ignition triggered by thermo-siphoning)
- 13 Overheating safety (if underfloor heating)
- 14 Pump
- 15 NTC (2K7 à 25°C)
- 16 Hydraulic decoupling tank
- 17 Domestic hot water option 3-way valve
- 18 3-way valve

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump and the hydraulic decoupling tank.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- The heating circuit pump must be installed according to the installation characteristics and the standards in force (heating circuit outlet or return).
- The NTC of the hydraulic decoupling tank and the heating circuit pump must be connected to expansion board.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version.
- The installation must include a wireless outside sensor.
- If the boiler is controlled by 230V signal, it must have a signal input or 230V contact.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- An expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature underfloor heating (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	eBUS boiler

Key

- 1 Heat pump controlled by On/Off contact
- 2 Heat pump circuit filter (not supplied)
- 3 Electrical power and protection of the heat pump
- 4 Cylinder
- 4.1 Temperature sensor 2K7 at 25°C (high position)
- 4.2 Temperature sensor 2K7 at 25°C (low position)
- 4.3 Electric domestic hot water back-up heater
- 5 Wireless outdoor sensor
- 6 IN/OUT extension board (e-BUS address "1")
- 7 Systempro control unit
- 8 Heat pump control unit
- 9 On/off 230V boiler
- 10 Climapro₁, Climapro₁ RF or Climapro₂ RF room thermostat
- 11 Heating circuit (UFH shown, but can be underfloor or radiators)
- 12 Non-return valve (recommended to prevent burner ignition triggered by thermo-siphoning)
- 13 Overheating safety (if underfloor heating)
- 14 Pump
- 15 NTC (2K7 à 25°C)
- 16 Hydraulic decoupling tank
- 17 Domestic hot water option 3-way valve

- C Heat pump circuit flow
- D Heat pump circuit return
- E Heating circuit return
- F Heating circuit flow
- X Not used

Application conditions

- The Systempro control unit controls the operation of the heat pump and the hydraulic decoupling tank.
- The hydraulic connections to the boiler must be suitable for its characteristics.
- The heating circuit pump must be installed according to the installation characteristics and the standards in force (heating circuit outlet or return).
- The NTC of the hydraulic decoupling tank and the heating circuit pump must be connected to expansion board.
- The room thermostats compatible with the system are the Climapro₂ RF or Climapro₁ RF for "wireless" versions and the Climapro₁ for the "wired" version.
- The installation must include a wireless outside sensor.
- If the boiler is controlled by 230V signal, it must have a signal input or 230V contact.
- The overheating safety must be connected according to the standards in force (on the boiler or the circulation pump).
- An expansion vessel are essential in the heating circuit.
- The installation can be performed with a low-temperature underfloor heating (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

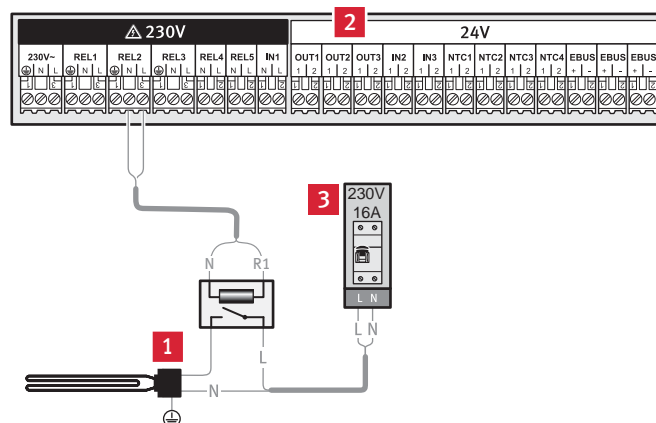
Domestic hot water:

- The Systempro control unit controls the 3-way valve and the domestic hot water temperature in the tank.
- The non-powered 3-way valve must leave the heating circuit open. With the valve powered, the heating circuit will be closed and the circuit to the domestic hot water tank will be open.

Control unit settings

Description of main settings	Setting
Management by:	2 sensors T°
Type of domestic hot water back-up	None Electric heater

Electric domestic hot water back-up heater



Key

- 1 Electric domestic hot water back-up heater (option)
- 2 Systempro control unit
- 3 Electrical power and protection of the back-up heater

7 Options

7.1 Multizones



7.1.1 Option description

Two zones (Z20)

The options are made up of the following elements:

- Two 2-way valves,
- A Systempro control unit,
- Two wired or wireless room thermostat,
- A wireless outdoor sensor.

Three zones (Z30)

The options are made up of the following elements:

- Three 2-way valves,
- A Systempro control unit,
- Three wired or wireless room thermostat,
- A wireless outdoor sensor.

ext. demand single zone (OEM UFH)

The options are made up of the following elements:

- A 2-way valve,
- A Systempro control unit,
- A wireless outdoor sensor,
- An OEM underfloor heating kit (not supplied).

ext. demand Two zone (OEM UFH + 1 GW)

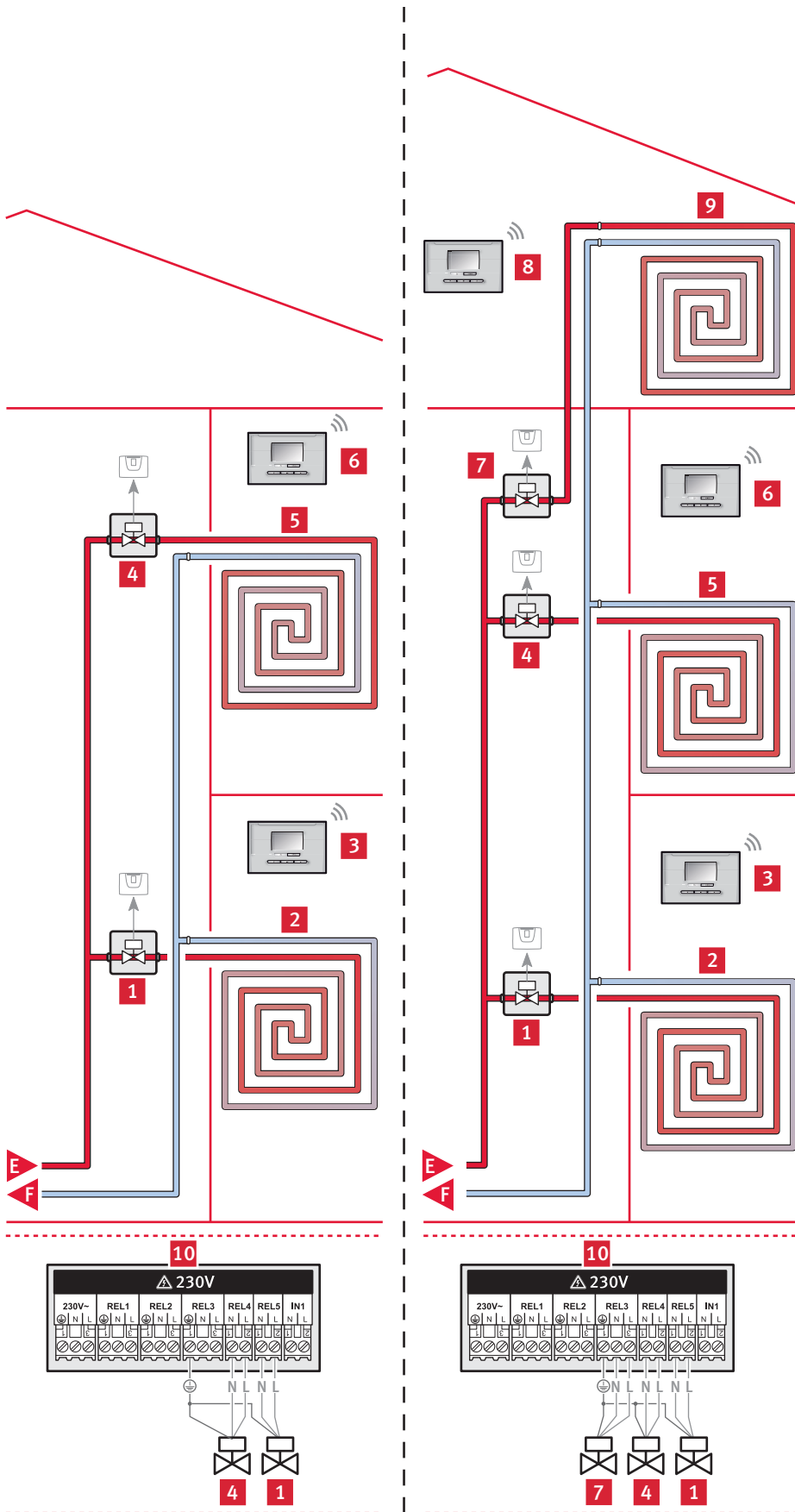
The options are made up of the following elements:

- Two 2-way valves,
- A Systempro control unit,
- A wireless or wired room thermostat,
- A wireless outdoor sensor,
- A OEM underfloor heating kit (not supplied).

7.1.2 Example installations

2 zone low temperature or high temperature heating for diagrams 3 to 11

3 zone low temperature or high temperature heating for diagrams 3 to 11

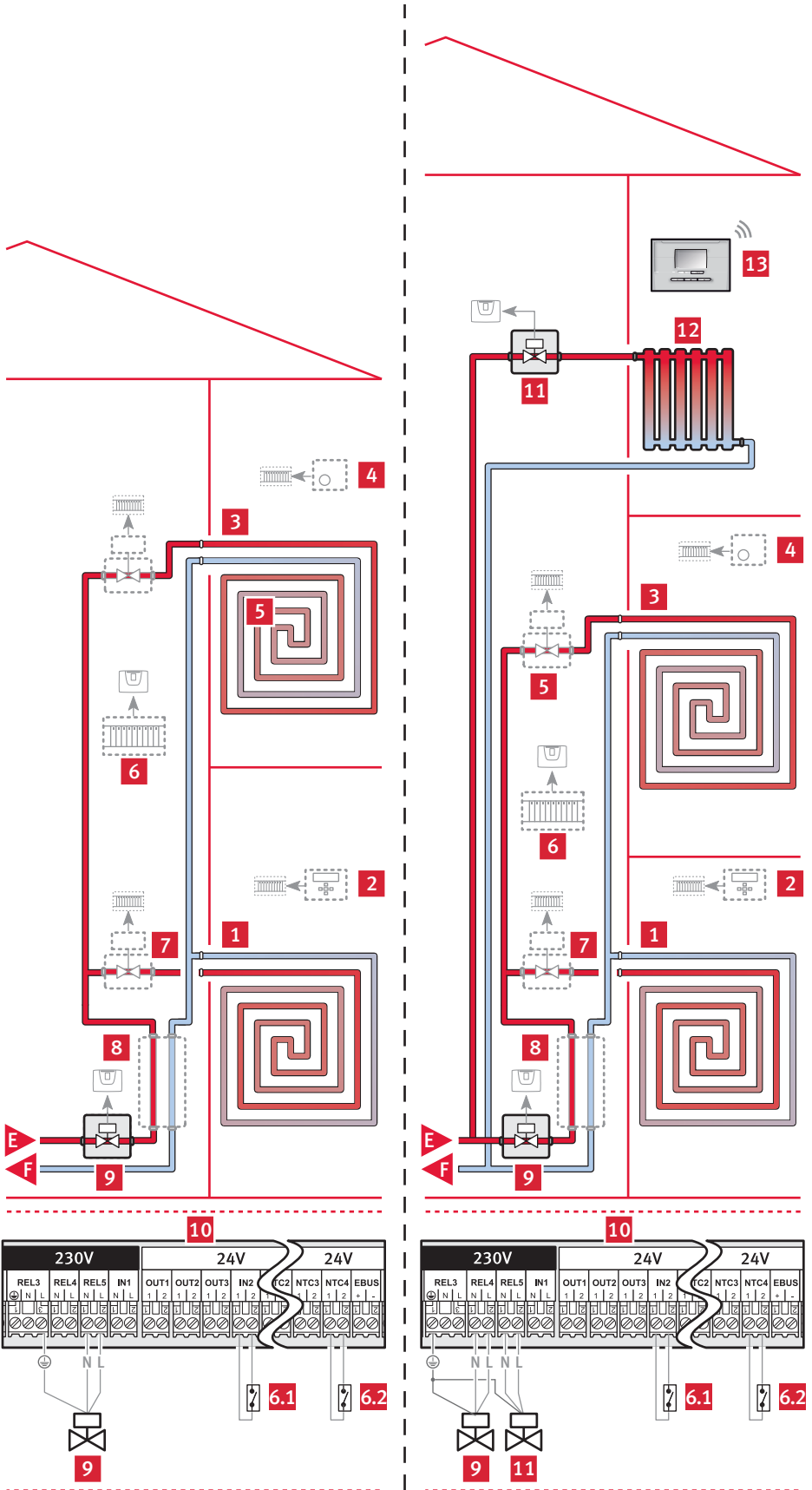


- Key
- 1 2 port valve "heating zone 1"
 - 2 Heating circuit zone 1
 - 3 Climapro₂ RF or Climapro₁ RF programmable wireless room thermostat "zone 1"
 - 4 2 port valve "heating zone 2"
 - 5 Heating circuit zone 2
 - 6 Climapro1 programmable wireless room thermostat "zone 2"
 - 7 2 port valve "heating zone 3"
 - 8 Climapro1 programmable wireless room thermostat "zone 3"
 - 9 Heating circuit zone 3
 - 10 Systempro control unit
- E Heating circuit flow
F Heating circuit return

EN

OEM UFH
 1 to 12 heating zones
 with OEM underfloor heating kit
 (not supplied)
 for diagrams 3 to 11

OEM UFH + 1 GW
 1 high temperature heating zone
 + 1 to 12 low temperature heating zones
 with OEM underfloor heating kit
 (not supplied) for diagrams 3 to 11



- Key**
- 1 Heating circuit of zone 2a
 - 2 Zone 2a room thermostat (*)
 - 3 Heating circuit of zone 2b
 - 4 Zone 2b room thermostat (*)
 - 5 2-port valve of zone 2b (*)
 - 6 OEM underfloor heating kit
 - 6.1 OEM underfloor heating kit request signal (low voltage contact)
 - 6.2 Heating (contact open) or cooling (contact closed) mode signal (low voltage contact)
 - 7 2-way port of zone 2a (*)
 - 8 Mixing and distribution module (*)
 - 9 Zone 2 low temperature 2-way valve
 - 10 Systempro control unit
 - 11 Zone 1 high temperature 2-way valve
 - 12 High temperature zone 1 heating circuit
 - 13 High temperature zone 1 room thermostat

(*) OEM underfloor heating kit (not supplied)

E Heating circuit flow
 F Heating circuit return

EN

Application conditions



The max. components connected Rel1 + Rel2 + Rel3 must not exceed 1 kW, each connector can support 500W max.

- The control box manages the operation of the boiler, the 2-way valves and the mixer module.
- The control box controls up to 3 heating zones.
- The Systempro control unit associated with a OEM underfloor heating kit(not supplied) controls zone 2 (zone 2a, zone 2b, up to 12 heating circuits).
- A room thermostat controls a heating zone or circuit. Take care to set the parameters of OEM underfloor heating kit in accordance with those of the control box.
- In the case of an individual installation which includes a low and high temperature heating zone. "Zone 1" must imperatively be allocated to a low temperature heating zone. The room thermostat in zone 1 has the "main thermostat" status.
- In the case of a multi-zone Z20, Z30, Z11 installation, fill the heating circuit using the "Filling" mode when commissioning the control box. "Filling" mode ensures filling by automatically opening all of the circuit.
- In the case of an installation containing a OEM underfloor heating kit(not supplied), perform filling and bleeding by forcing the opening of zones 2a, 2b...
- The installation can be performed with a low-temperature heated floor (heating outlet temperature < 50°C) or low temperature radiators (heating outlet temperature < 70°C).

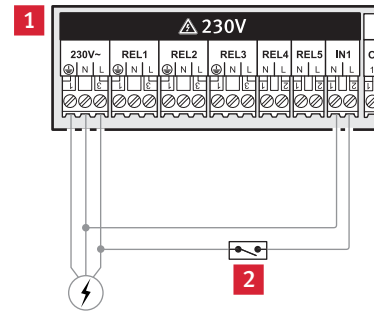
Electrical connection of the mixing module 3-way valve

- Connect the L+ cable (white).
- Connect the L- cable (brown).
- Connect the neutral N cable (blue).

Control unit settings

Description of main settings	Setting
Multizone kit	Yes
Type of kit multi-zone	2 heating zones low or high temperature (Z20)
	3 heating zones low or high temperature (Z30)
	OEM UFH (UFH 1 zone)
	OEM UFH + 1 GW (UFH 2 zones)

7.2 Day/night tariff



Key

- 1 Systempro control unit
- 2 230V contactor for day/night tariff

Application conditions

The Systempro control unit controls the system using the double tariff.

In the case of an installation with a heat pump controlled by an On/Off contact, the day/night tariff option is not available.

Control unit settings

Description of main settings	Setting
Electricity tariff	Connection by 230V contact

8 Commissioning an installation with just a boiler (diagram 8)

When connected for the first time, the installation assistant is displayed.

8.1 Installation assistant

- Enter the installer code into the Systempro control unit. To obtain the code, consult your supplier.
- Follow the instructions given by the installation assistant.
- Refer to the section “Summary of diagrams and available options” to obtain your diagram number.
- Select the options present in the installation.

Hot water tank option

- If the domestic hot water tank is heated by a system boiler and managed by the control box, choose this control type. The “anti-Legionella” and “recirculation” options will not be available.

Control unit settings	Setting
Management by:	None NTC sensor (1NTC) Thermostat (1Therm)

Checking the connections

- Check the connections you have made to the control box.

Turning on the appliances

- Turn on the appliance(s) and other appliances making up the installation (consult the installation manuals).

8.2 Installer menu

The availability of the menus described depends on the diagram and options chosen.

- Finalise the installation in the installer menu.

8.3 Thermostat / sensor



This function is used to put the control box into pairing mode in order to establish the connection with the room thermostat(s) and the outside sensor.

Perform the recognition procedures one after another.

If a wired outside sensor is connected to the boiler, it will be detected and the outside temperature will be displayed on the sensor menu.

8.4 Self check

The automatic test allows you to check EBUS inputs, NTC inputs, the RF connection with the room thermostat, the outdoor sensor radio connection.



Danger !

- Do not modify the cables when connected to the mains.

If the connection is not correct, the message "Not OK" appears opposite the component. In this case, check the connections (wired and wireless).



The other connections are not tested and should be visually inspected during installation or configuration modifications.

8.5 Settings



Set the following parameters:

- Heating
- Domestic hot water
- Management

8.5.1 Heating

Max. heating flow temperature

- Ensure that the heating flow setting is compatible with the installation.

Control unit settings	Setting
Max. heating flow temperature for the low temperature zone	$T \leq 50^{\circ}\text{C}$
Max. heating flow temperature for the high temperature zone	$T \leq 70^{\circ}\text{C}$

Min. heating flow temperature

- Ensure that the heating flow setting is compatible with the installation.

Control unit settings	Setting
Min. heating flow temperature for the low temperature zone	$T \geq 20^{\circ}\text{C}$
Min. heating flow temperature for the high temperature zone	$T \geq 20^{\circ}\text{C}$

Heating curve

The automatic heating curve function continually and automatically seeks the most suitable value to ensure your comfort and the efficiency of your heating system. The optimum value is obtained approximately 24 hours after the system is started. It is recommended to activate this function.

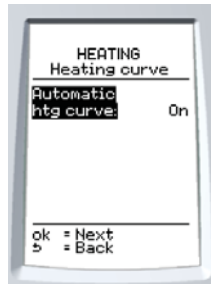
If the water law function is deactivated or not available, please set the value according to the table below:

Control unit settings	Setting
Heating water law curves for the low temperature zone	0.1 - 0.6
Heating water law curves for the high temperature zone	0.6 - 4.0

A With Automatic htg curve activated.



B With the Automatic htg curve deactivated, you must choose a heating curve.



Pre heating

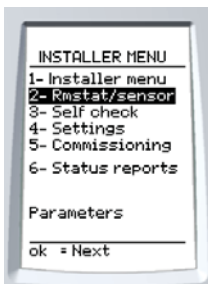
The control unit manages the heating by anticipating the change in temperature setting between two programmed time ranges. This function allows it to reach the programmed temperature more rapidly (factory setting: deactivated). It acts at the first morning setting change for each zone.

8.5.2 Domestic hot water

- Set the installation maximum hot water temperature.

8.6 Commissioning

Commissioning must be performed with all elements connected and switched on!



This menu is used to perform the necessary operations on the appliances during installation:

- Filling the heating circuit
- Venting the heating circuit
- Anti-Legionella procedure
- Coating drying procedure

Filling the heating circuit



The filling function must only be used if the installation contains zone valves in order to open them to prepare the system for filling.

- Open all hydraulic circuit shutoff valves.
- Refer to the boiler instructions for filling the boiler.

Venting the heating circuit

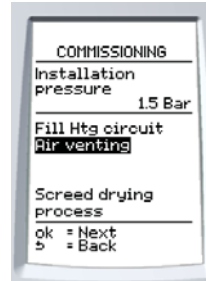


The control box bleeding function opens the valves of each zone to prepare the system and start the bleeding routine for 15 minute.

Venting of the heating circuit enables the purging of any air in the heating circuit.

- Open the various automatic bleeding valves in the heating circuit.

1 Select Air venting on the screen.



2 Select Vent heating circuit on the screen.



- Manipulate the bleed valves until the installation is completely bled.
- Top up the fill and repeat the operation if necessary.

Anti-Legionella procedure



The cycle can be performed manually while commissioning the installation.

Coating drying procedure



This function is used to “heat dry” a layer of freshly poured concrete in compliance with construction rules. When the layer drying is active, all of the selected operating modes are interrupted. The control box sets the system outlet temperature according to a predefined programme for 29 days, independent of the outside temperature (see table below).

Procedure time (days)	Heating outlet temperature (°C)
1	25
2	30
3	35
4	40
5	45
6-12	45
13	40
14	35
15	30
16	25
17-23	10
24	30
25	35
26	40
27	45
28	35
29	25

- Set the procedure start date.
- If the installation has several heating zones, close the heating zones not concerned by the procedure by manually closing the 2-way valves on the heating outlet.

When starting the function, the actual start time is recorded. The day change occurs at this time.

In the case of switch off/on, the concrete drying starts at the last active day.

The function stops automatically at the end of the last temperature profile day (day 29).

9 Commissioning an installation containing a heat pump

When connected for the first time, the installation assistant is displayed.

9.1 Installation assistant

- Enter the installer code into the Systempro control unit. To obtain the code, consult your supplier.
- Follow the instructions given by the installation assistant.
- Refer to the section “Summary of diagrams and available options” to obtain your diagram number.
- Select the options present in the installation.

Checking the connections

- Check the connections you have made to the control box.

Turning on the appliances

- Turn on the appliance(s) and other appliances making up the installation (consult the installation manuals).

9.2 Installer menu

The availability of the menus described depends on the diagram and options chosen.

- Finalise the installation in the installer menu.

9.3 Thermostat / sensor



This function is used to put the control box into pairing mode in order to establish the connection with the room thermostat(s) and the outside sensor.

Perform the recognition procedures one after another.

If a wired outside sensor is connected to the boiler, it will be detected and the outside temperature will be displayed on the sensor menu.

9.4 Self check



The automatic test allows you to check EBUS inputs, NTC inputs, the RF connection with the room thermostat, the outdoor sensor radio connection.



Danger !

- Do not modify the cables when connected to the mains.

If the connection is not correct, the message "Not OK" appears opposite the component. In this case, check the connections (wired and wireless).



The other connections are not tested and should be visually inspected during installation or configuration modifications.

9.5 Settings



Set the following parameters:

- Heating
- Cooling
- Domestic hot water
- Energy management
- Heat pump management

9.5.1 Heating

Max. heating flow temperature

- Ensure that the heating flow setting is compatible with the installation.

Control unit settings	Setting
Max. heating flow temperature for the low temperature zone	$T \leq 50^{\circ}\text{C}$
Max. heating flow temperature for the high temperature zone	$T \leq 70^{\circ}\text{C}$

Min. heating flow temperature

- Ensure that the heating flow setting is compatible with the installation.

Control unit settings	Setting
Min. heating flow temperature for the low temperature zone	$T \geq 20^{\circ}\text{C}$
Min. heating flow temperature for the high temperature zone	$T \geq 20^{\circ}\text{C}$

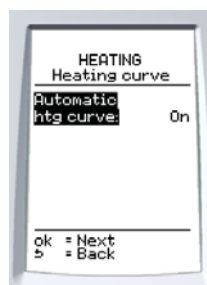
Heating curve

The automatic heating curve function continually and automatically seeks the most suitable value to ensure your comfort and the efficiency of your heating system. The optimum value is obtained approximately 24 hours after the system is started. It is recommended to activate this function.

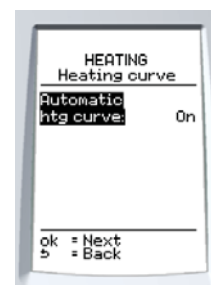
If the water law function is deactivated or not available, please set the value according to the table below:

Control unit settings	Setting
Heating water law curves for the low temperature zone	0.1 - 0.6
Heating water law curves for the high temperature zone	0.6 - 4.0

A With Automatic htg curve activated.



B With the Automatic htg curve deactivated, you must choose a heating curve.



Case of a heat pump controlled by On/Off contact

- Refer to the heat pump installation manual to access the “after-sales” parameters listed below.
- Set the heat pump heating curves complying with the correspondences with the Systempro control unit heating curves (see table below).



Attention !

- Incorrectly setting these parameters may significantly impact the system efficiency.

- Setting of the heat pump parameter 112:

Heating curve of the Systempro control unit	Heating curve of the heat pump
0.1 ▶ 0.2	7
0.3 ▶ 0.4	8
0.5 ▶ 0.7	9
0.8 ▶ 0.9	10
1.0 ▶ 1.2	11
1.3 ▶ Max.	12

- Setting of the heat pump parameter 114:

	Heating curve of the high temperature zone				
	0.5 ▶ 0.7	0.8 ▶ 0.9	1.0 ▶ 1.2	1.3 ▶ Max	
Heating curve of the low temperature zone	0.1 ▶ 0.2	7	8	10	10
	0.3 ▶ 0.4	5	7	8	10
	0.5 ▶ 0.7	X	5	7	8
	0.8 ▶ 0.9	X	X	5	7
	1.0 ▶ 1.2	X	X	X	5

	Heating curve setting summary	
	On the control box	on the heat pump
Z20 or Z30	0.5 (factory setting)	Parameter 112

Example:

- Setting of the heat pump parameter 112:

Heating curve of the Systempro control unit	Heating curve of the heat pump
0.1 ▶ 0.2	7
0.3 ▶ 0.4	8
0.5 ▶ 0.7	9
0.8 ▶ 0.9	10
1.0 ▶ 1.2	11
1.3 ▶ Max.	12

In the case where the Multizone Z20 or Z30 option is installed: if the curve setting is "1.2" on the control box, the curve setting will be "11" for heat pump parameter 112.

		Heating curve of the high temperature zone			
		0.5 ▶ 0.7	0.8 ▶ 0.9	1.0 ▶ 1.2	1.3 ▶ Max
Heating curve of the low temperature zone	0.1 ▶ 0.2	7	8	10	10
	0.3 ▶ 0.4	5	7	8	10
	0.5 ▶ 0.7	X	5	7	8
	0.8 ▶ 0.9	X	X	5	7
	1.0 ▶ 1.2	X	X	X	5

- If the low temperature zone curve is "0.6", heat pump parameter 114 will be "7".

Advance heating

The heating system anticipates the first programmed setting change in the morning. This function allows it to reach the programmed temperature rapidly (the function is available and independent for each zone).

Electrical back-up setting

This function is used to limit the power of the electric back-up depending on the installation. The maximum power for the electric back-up is settable to 3 power levels:

- 2 kw
- 4 kw
- 6 kw (factory setting)

9.5.2 Cooling

Function not active for the UK.

9.5.3 Domestic hot water

- Set the installation maximum hot water temperature.

9.5.4 Heat pump management

This menu is used to set the outside temperature from which the heat pump must turn off (value adjustable from -20°C to 20°C).

To get full use out of the heat pump, we recommend that you set:

- "-3°C" for the 5kW heat pump as it cannot operate below -3°C,
- "-20°C" for the other heat pumps.

9.6 Commissioning

Commissioning must be performed with all elements connected and switched on!



Refer to the hydraulic module instructions for filling the heating and glycol water circuits.



This menu is used to perform the necessary operations on the appliances during installation:

- Filling the heating circuit
- Venting the heating circuit
- Venting the HP circuit
- Adjustment of HP circuit flow

Filling the heating circuit



The filling function must only be used if the installation contains zone valves in order to open them to prepare the system for filling.

- Open all hydraulic circuit shutoff valves.
- Fill the installation until the management box shows 1.5 bar of pressure.
- In the case of an installation with a module without a pressure sensor, filling must be performed using a pressure gauge to check the pressure.

Venting the heating circuit



This function is unavailable on diagrams with a heat pump alone or connected directly to the heating installation.

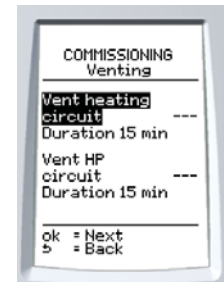
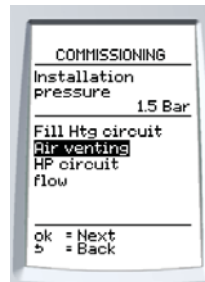
The control box bleeding function opens the valves of each zone to prepare the system and start the bleeding routine for 15 minute.

Venting of the heating circuit enables the purging of any air in the heating circuit.

- Open the various automatic bleeding valves in the heating circuit.

1 Select Air venting on the screen.

2 Select Vent heating circuit on the screen.



- Manipulate the bleed valves until the installation is completely bled.
- Top up the fill and repeat the operation if necessary.



Attention !

- When bleeding is complete, close the various bleed valves in the heating circuit.

Venting the HP circuit

The venting of the HP circuit allows you to purge any air in the HP circuit.

After filling the heat pump circuit with glycol water (following the instructions of the hydraulic module and heat pump installation manuals), you can start the heat pump bleeding function.

Adjustment of HP circuit flow

This function can only be activated for an eBus heat pump. The flow rate setting is not possible for an on/off heat pump. In the case of an On/Off heat pump, perform this operation with the parameterisation tool supplied with the heat pump.

This function is used to limit the maximum flow rate of the heat pump in heating/cooling and in domestic hot water tank heating. The pressure can be set to obtain a flow rate in accordance with the heat pump instructions (see documentation).

Domestic hot water

- Set the installation maximum hot water temperature.

Energy management

Energy management is obtained via an electrical signal on the installation power supply or by programming on the control box.



In the case of an installation with a heat pump controlled by an On/Off contact, the day/night tariff option by electrical signal is not available.

The energy efficiency coefficient determines the switching point between two energies (gas, electricity), in accordance with their respective costs.



The systempro makes a selection in accordance with the energy efficiency coefficient. An incorrect setting will adversely affect the system efficiency.

Energy management by programming requires activation of the programme and the definition of a time slot.

The adjustment requires certain information that can be easily found in home owners energy bills (electricity and gas).



Accurate price information is key to the correct operation of the hybrid system. Always use the most recent energy prices from your energy provider.

- Depending on your installation, obtain:
 - the price exc VAT per kWh for electricity and natural gas,
 - the price exc VAT per ton of propane gas.
 - the price exc VAT per litre of heating oil.
- Enter the information and the values in the tables below.

Consult the electricity bill

- Find and note down the unit price per kWh, excluding VAT.

Unit price per kWh excluding VAT:

Consult the natural gas bill

- Find and note down the unit price per ton excluding VAT.

Unit price per kWh excluding VAT (customer invoice):

Consult the propane gas bill

- Find and note down the unit price per ton excluding VAT.

Unit price per ton excluding VAT:

Consult the heating oil bill

- Find and note down the unit price per litre excluding VAT.

D Unit price per litre excluding VAT:

Determine the energy efficiency ratio

- Choose the table corresponding to the type of gas used by your installation.
- Look for the column which corresponds to the price paid for electricity.
- Now, on the same table, find the price band that corresponds to the gas price paid, and where the 2 intersect determines the energy ratio.

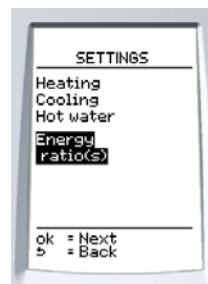


If the values you noted down do not correspond to the values shown in the tables opposite, this means that there is probably an error. Contact the energy providers for confirmation of prices excluding VAT.

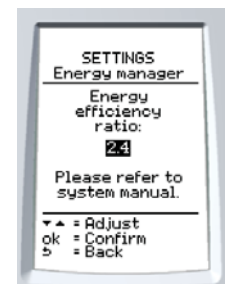
- Please note the result (s) in the table below

Energy efficiency coefficient =

- 1** Select Energy ratio(s) on the screen.



- 2** Set the Energy efficiency ratio.



In the case of dual tariffs, indicate the 2 energy efficiency coefficients.

10 Appendix

10.1 Energy ratio definition table

NATURAL GAS with electricity (* Not recommended)

		Price (GBP) of electricity per kWh excluding VAT												
		0,080 to 0,090	0,091 to 0,100	0,101 to 0,110	0,111 to 0,120	0,121 to 0,130	0,131 to 0,140	0,141 to 0,150	0,151 to 0,160	0,161 to 0,170	0,171 to 0,180	0,181 to 0,190	0,191 to 0,200	
price excluding VAT (GBP) of natural gas in kWh	0,0200 to 0,0225	4,0	4,5*	5,0*	5,4*	5,9*	6,4*	6,8*	7,3*	7,8*	8,3*	8,7*	9,2*	
	0,0226 to 0,0250	3,6	4,0	4,4*	4,9*	5,3*	5,7*	6,1*	6,5*	7,0*	7,4*	7,8*	8,2*	
	0,0251 to 0,0275	3,2	3,6	4,0	4,4*	4,8*	5,2*	5,5*	5,9*	6,3*	6,7*	7,1*	7,4*	
	0,0276 to 0,0300	3,0	3,3	3,7	4,0	4,4*	4,7*	5,1*	5,4*	5,7*	6,1*	6,4*	6,8*	
	0,0301 to 0,0325	2,7	3,1	3,4	3,7	4,0	4,3*	4,6*	5,0*	5,3*	5,6*	5,9*	6,2*	
	0,0326 to 0,0350	2,5	2,8	3,1	3,4	3,7	4,0	4,3*	4,6*	4,9*	5,2*	5,5*	5,8*	
	0,0351 to 0,0375	2,3	2,6	2,9	3,2	3,5	3,7	4,0	4,3*	4,6*	4,8*	5,1*	5,4*	
	0,0376 to 0,0400	2,2	2,5	2,7	3,0	3,2	3,5	3,8	4,0	4,3*	4,5*	4,8*	5,0*	
	0,0401 to 0,0425	2,1	2,3	2,6	2,8	3,0	3,3	3,5	3,8	4,0	4,2*	4,5*	4,7*	
	0,0426 to 0,0450	1,9	2,2	2,4	2,6	2,9	3,1	3,3	3,6	3,8	4,0	4,2*	4,5*	
	0,0451 to 0,0475	1,8	2,1	2,3	2,5	2,7	2,9	3,1	3,4	3,6	3,8	4,0	4,2*	
	0,0476 to 0,0500	1,7	2,0	2,2	2,4	2,6	2,8	3,0	3,2	3,4	3,6	3,8	4,0	
	0,0501 to 0,0525	1,7	1,9	2,1	2,3	2,4	2,6	2,8	3,0	3,2	3,4	3,6	3,8	
	0,0526 to 0,0550	1,6	1,8	2,0	2,1	2,3	2,5	2,7	2,9	3,1	3,3	3,4	3,6	
	0,0551 to 0,0575	1,5	1,7	1,9	2,1	2,2	2,4	2,6	2,8	2,9	3,1	3,3	3,5	
	0,0576 to 0,0600	1,4	1,6	1,8	2,0	2,1	2,3	2,5	2,6	2,8	3,0	3,2	3,3	
	0,0601 to 0,0625	1,4	1,6	1,7	1,9	2,0	2,2	2,4	2,5	2,7	2,9	3,0	3,2	
	0,0626 to 0,0650	1,3	1,5	1,7	1,8	2,0	2,1	2,3	2,4	2,6	2,8	2,9	3,1	
0,0651 to 0,0675	1,3	1,4	1,6	1,7	1,9	2,0	2,2	2,3	2,5	2,6	2,8	2,9		
0,0676 to 0,0700	1,2	1,4	1,5	1,7	1,8	2,0	2,1	2,3	2,4	2,6	2,7	2,8		

Heating oil with electricity

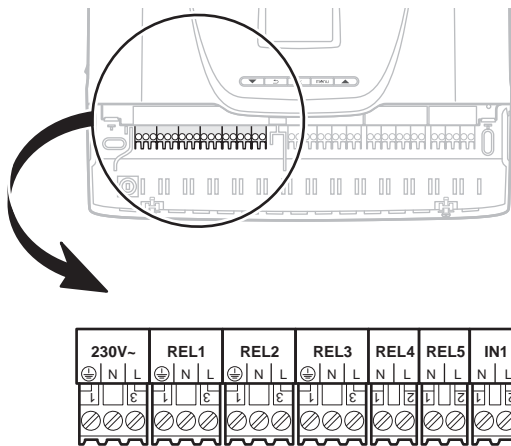
		Price (GBP) of electricity per kWh excluding VAT											
		8.00 to 9.00	9.10 to 10.00	10.10 to 11.00	11.10 to 12.00	12.10 to 13.00	13.10 to 14.00	14.10 to 15.00	15.10 to 16.00	16.10 to 17.00	17.10 to 18.00	18.10 to 19.00	19.10 to 20.00
price excluding VAT (GBP) of heating oil per litre	40,00 to 42,50	2,1	2,3	2,6	2,8	3,0	3,3	3,5	3,8	4,0	4,3	4,5	4,7
	42,60 to 45,00	1,9	2,2	2,4	2,6	2,9	3,1	3,3	3,6	3,8	4,0	4,2	4,5
	45,10 to 47,50	1,8	2,1	2,3	2,5	2,7	2,9	3,1	3,4	3,6	3,8	4,0	4,2
	47,60 to 50,00	1,7	2,0	2,2	2,4	2,6	2,8	3,0	3,2	3,4	3,6	3,8	4,0
	50,10 to 52,50	1,7	1,9	2,1	2,3	2,4	2,6	2,8	3,0	3,2	3,4	3,6	3,8
	52,60 to 55,00	1,6	1,8	2,0	2,1	2,3	2,5	2,7	2,9	3,1	3,3	3,4	3,6
	55,10 to 57,50	1,5	1,7	1,9	2,1	2,2	2,4	2,6	2,8	2,9	3,1	3,3	3,5
	57,60 to 60,00	1,4	1,6	1,8	2,0	2,1	2,3	2,5	2,6	2,8	3,0	3,2	3,3
	60,10 to 62,50	1,4	1,6	1,7	1,9	2,0	2,2	2,4	2,5	2,7	2,9	3,0	3,2
	62,60 to 65,00	1,3	1,5	1,7	1,8	2,0	2,1	2,3	2,4	2,6	2,8	2,9	3,1
	65,10 to 67,50	1,3	1,4	1,6	1,7	1,9	2,0	2,2	2,3	2,5	2,6	2,8	2,9
	67,60 to 70,00	1,2	1,4	1,5	1,7	1,8	2,0	2,1	2,3	2,4	2,6	2,7	2,8
	70,10 to 72,50	1,2	1,3	1,5	1,6	1,8	1,9	2,0	2,2	2,3	2,5	2,6	2,7
	72,60 to 75,00	1,2	1,3	1,4	1,6	1,7	1,8	2,0	2,1	2,2	2,4	2,5	2,6
	75,10 to 77,50	1,1	1,3	1,4	1,5	1,6	1,8	1,9	2,0	2,2	2,3	2,4	2,6
	77,60 to 80,00	1,1	1,2	1,3	1,5	1,6	1,7	1,8	2,0	2,1	2,2	2,4	2,5
	80,10 to 80,25	1,0	1,2	1,3	1,4	1,5	1,7	1,8	1,9	2,0	2,2	2,3	2,4
	82,60 to 85,00	1,0	1,1	1,3	1,4	1,5	1,6	1,7	1,9	2,0	2,1	2,2	2,3

PROPANE GAS with electricity

		Price (GBP) of electricity per kWh excluding VAT												
		0,080 to 0,090	0,091 to 0,100	0,101 to 0,110	0,111 to 0,120	0,121 to 0,130	0,131 to 0,140	0,141 to 0,150	0,151 to 0,160	0,161 to 0,170	0,171 to 0,180	0,181 to 0,190	0,191 to 0,200	
price excluding VAT (GBP) of LPG per litre	0,0350 to 0,0375	1,5	1,7	1,9	2,1	2,3	2,5	2,6	2,8	3,0	3,2	3,4	3,6	
	0,0376 to 0,0400	1,4	1,6	1,8	2,0	2,1	2,3	2,5	2,6	2,8	3,0	3,2	3,3	
	0,0401 to 0,0425	1,4	1,5	1,7	1,8	2,0	2,2	2,3	2,5	2,6	2,8	3,0	3,1	
	0,0426 to 0,0450	1,3	1,4	1,6	1,7	1,9	2,0	2,2	2,3	2,5	2,6	2,8	2,9	
	0,0451 to 0,0475	1,2	1,4	1,5	1,6	1,8	1,9	2,1	2,2	2,4	2,5	2,6	2,8	
	0,0476 to 0,0500	1,1	1,3	1,4	1,6	1,7	1,8	2,0	2,1	2,2	2,4	2,5	2,6	
	0,0501 to 0,0525	1,1	1,2	1,4	1,5	1,6	1,7	1,9	2,0	2,1	2,3	2,4	2,5	
	0,0526 to 0,0550	1,0	1,2	1,3	1,4	1,5	1,7	1,8	1,9	2,0	2,2	2,3	2,4	
	0,0551 to 0,0575	1,0	1,1	1,2	1,4	1,5	1,6	1,7	1,8	1,9	2,1	2,2	2,3	
	0,0576 to 0,0600	1,0	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,9	2,0	2,1	2,2	
	0,0601 to 0,0625	0,9	1,0	1,1	1,2	1,4	1,5	1,6	1,7	1,8	1,9	2,0	2,1	
	0,0626 to 0,0650	0,9	1,0	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	2,0	
	0,0651 to 0,0675	0,8	1,0	1,1	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	
	0,0676 to 0,0700	0,8	0,9	1,0	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,8	1,9	
	0,0701 to 0,0725	0,8	0,9	1,0	1,1	1,2	1,3	1,3	1,4	1,5	1,6	1,7	1,8	
	0,0726 to 0,0750	0,8	0,9	0,9	1,0	1,1	1,2	1,3	1,4	1,5	1,6	1,7	1,7	
0,0751 to 0,0775	0,7	0,8	0,9	1,0	1,1	1,2	1,3	1,3	1,4	1,5	1,6	1,7		
0,0776 to 0,0800	0,7	0,8	0,9	1,0	1,1	1,1	1,2	1,3	1,4	1,5	1,6	1,6		

10.2 Summary table of control box connections

Connecteurs 230V



Connecteurs 24V

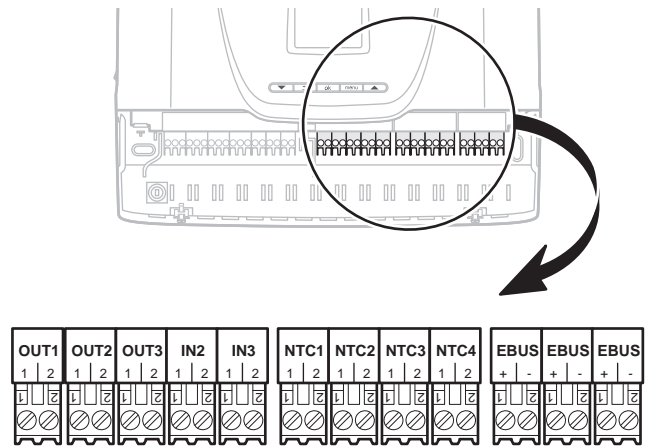


Diagram	Zone	230 V										24 V						
		230V- N L L	REL1 N L L	REL2 N L L	REL3 N L L	REL4 N L L	REL5 N L L	IN1 N L L	OUT1 1 1 2	OUT2 1 1 2	OUT3 1 1 2	IN2 1 1 2	IN3 1 1 2	NTC1 1 1 2	NTC2 1 1 2	NTC3 1 1 2	NTC4 1 1 2	EBUS + -
3	Mono	X	Swimming Pool					Day/night energy price	Boiler On/Off									HP H. Modul
	Z20	X	Swimming Pool				Z20 - EV1	Day/night energy price	Boiler On/Off									HP H. Modul
	Z30	X	Swimming Pool			Z30 - EV3	Z30 - EV2	Day/night energy price	Boiler On/Off									HP H. Modul
	OEM UFH	X	Swimming Pool				Z10 - EV1	Day/night energy price	Boiler On/Off		External Demand	Swimming Pool						Heating / Cooling H. Modul
	OEM UFH + 1 GW	X	Swimming Pool				Z20 - EV2	Day/night energy price	Boiler On/Off		External Demand	Swimming Pool						Heating / Cooling H. Modul
4	Mono	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool							DHW tank coil [2K7]	DHW tank top [2K7]				HP H. Modul	
	Z20	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool		Z20 - EV1					DHW tank coil [2K7]	DHW tank top [2K7]				HP H. Modul	
	Z30	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool	Z30 - EV3	Z30 - EV2					DHW tank coil [2K7]	DHW tank top [2K7]				HP H. Modul	
	OEM UFH	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool		Z10 - EV1				External Demand	Swimming Pool	DHW tank temp 2	DHW tank temp 1				Heating / Cooling H. Modul
	OEM UFH + 1 GW	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool		Z20 - EV2				External Demand	Swimming Pool	DHW tank temp 2	DHW tank temp 1				Heating / Cooling H. Modul
6	Monozone	X	Boiler On/Off	Swimming Pool				HP status	HP DHW/SP	HP On/Off							H. Modul	
	Z20	X	Boiler On/Off	Swimming Pool			Z20 - EV1	HP status	HP DHW/SP	HP On/Off							H. Modul	
	Z30	X	Boiler On/Off	Swimming Pool	Z30 - EV3	Z30 - EV2	Z30 - EV1	HP status	HP DHW/SP	HP On/Off							H. Modul	
	OEM UFH	X	Boiler On/Off	Swimming Pool			Z10 - EV1	HP status	HP DHW/SP	HP On/Off	External Demand	Swimming Pool						Heating / Cooling H. Modul
	OEM UFH + 1 GW	X	Boiler On/Off	Swimming Pool			Z20 - EV2	HP status	HP DHW/SP	HP On/Off	External Demand	Swimming Pool						Heating / Cooling H. Modul
7	Monozone	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool			HP status	HP DHW/SP	HP On/Off			DHW tank coil [2K7]	DHW tank top [2K7]			H. Modul	
	Z20	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool		Z20 - EV1	HP status	HP DHW/SP	HP On/Off			DHW tank coil [2K7]	DHW tank top [2K7]			H. Modul	
	Z30	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool	Z30 - EV3	Z30 - EV2	HP status	HP DHW/SP	HP On/Off			DHW tank coil [2K7]	DHW tank top [2K7]			H. Modul	
	OEM UFH	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool		Z10 - EV1	HP status	HP DHW/SP	HP On/Off	External Demand	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]				Heating / Cooling H. Modul
	OEM UFH + 1 GW	X	DHW tank 3kW	DHW Electrical heater	Swimming Pool		Z20 - EV2	HP status	HP DHW/SP	HP On/Off	External Demand	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]				Heating / Cooling H. Modul
8	Monozone	X	2kW DHW					DHW tank					Heating flow [2K7]	DHW tank top [2K7]			Boiler	
	Z20	X	2kW DHW				Z20 - EV1	DHW tank					Heating flow [2K7]	DHW tank top [2K7]			Boiler	
	Z30	X	2kW DHW			Z30 - EV3	Z30 - EV2	DHW tank					Heating flow [2K7]	DHW tank top [2K7]			Boiler	
	OEM UFH	X	2kW DHW				Z10 - EV1	DHW tank			External Demand		Heating flow [2K7]	DHW tank temp			Boiler	
	OEM UFH + 1 GW	X	2kW DHW				Z20 - EV2	DHW tank			External Demand		Heating flow [2K7]	DHW tank temp			Boiler	

Diagram	Zone	230 V										24 V						
		230V~ ⊕ N L	REL1 ⊕ N L	REL2 ⊕ N L	REL3 ⊕ N L	REL4 N L	REL5 N L	IN1 N L	OUT1 1 2	OUT2 1 2	OUT3 1 2	IN2 1 2	IN3 1 2	NTC1 1 2	NTC2 1 2	NTC3 1 2	NTC4 1 2	EEBUS + -
9	Monozone	X	C.-Heating pump	2WV DHW		EV1	DHW tank						Heating flow [10K]	DHW tank top [2K7]				HP Boiler
	Z20	X	C.-Heating pump	2WV DHW		Z20 - EV2	DHW tank"						Heating flow [10K]	DHW tank top [2K7]				HP Boiler
	Z30	X	C.-Heating pump	2WV DHW	Z30 - EV3	Z30 - EV1	DHW tank"						Heating flow [10K]	DHW tank top [2K7]				HP Boiler
	OEM UFH	X	C.-Heating pump	2WV DHW		Z10 - EV1	DHW tank"				External Demand		Heating flow	DHW tank temp			Heating / Cooling	HP Boiler
	OEM UFH + 1 GW	X	C.-Heating pump	2WV DHW		Z20 - EV 2	DHW tank"				External Demand		Heating flow	DHW tank temp			Heating / Cooling	HP Boiler
10	Monozone	X	2WV Modul	2WV DHW			"							DHW tank top [2K7]				HP Boiler H. Modul
	Z20	X	2WV Modul	2WV DHW		Z20 - EV2	"							DHW tank top [2K7]				HP Boiler H. Modul
	Z30	X	2WV Modul	2WV DHW	Z30 - EV3	Z30 - EV1	"							DHW tank top [2K7]				HP Boiler H. Modul
	OEM UFH	X	2WV Modul	2WV DHW			DHW tank"				External Demand			DHW tank temp			Heating / Cooling	HP Boiler H. Modul
	OEM UFH + 1 GW	X	2WV Modul	2WV DHW		Z20 - EV 2	"				External Demand			DHW tank temp			Heating / Cooling	HP Boiler H. Modul
13	Monozone	X	Boiler On/Off	Swimming Pool			Day/night energy price											HP H. Modul
	Z20	X	Boiler On/Off	Swimming Pool		Z20 - EV 2	Day/night energy price											HP H. Modul
	Z30	X	Boiler On/Off	Swimming Pool	Z30 - EV3	Z30 - EV1	Day/night energy price											HP H. Modul
	OEM UFH	X	Boiler On/Off	Swimming Pool		Z10 - EV1	Day/night energy price				External Demand							HP H. Modul
	OEM UFH + 1 GW	X	Boiler On/Off	Swimming Pool		Z20 - EV 2	Day/night energy price				External Demand							HP H. Modul
11	Monozone	X	2WV Modul	2WV DHW			HP status							DHW tank top [2K7]				Boiler H. Modul
	Z20	X	2WV Modul	2WV DHW		Z20 - EV2	HP status							DHW tank top [2K7]				Boiler H. Modul
	Z30	X	2WV Modul	2WV DHW	Z30 - EV3	Z30 - EV1	HP status							DHW tank top [2K7]				Boiler H. Modul
	OEM UFH	X	2WV Modul	2WV DHW		Z10 - EV1	HP status				External Demand			DHW tank top [2K7]			Heating / Cooling	Boiler H. Modul
	OEM UFH + 1 GW	X	2WV Modul	2WV DHW		Z20 - EV 2	HP status				External Demand			DHW tank top [2K7]			Heating / Cooling	Boiler H. Modul

Diagram	Zone	230 V										24 V						
		230V~	REL1	REL2	REL3	REL4	REL5	IN1	OUT1	OUT2	OUT3	IN2	IN3	NTC1	NTC2	NTC3	NTC4	EBUS
14	Monozone	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Swimming Pool 3kW	backup heating (elec or gas On/ Off)	Z10 - EV1	Day/night energy price	Htg Backup (gas On/Off)	info demand (On/Off)	HP Heating/ Cooling mode	switch off CH (NO)	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]	Heating flow elec heater [2K7]		Heat pump boiler eBUS H. modul I/O board
	Z20	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Swimming Pool 3kW	Z20 - EV 2	Day/night energy price	Heating Backup (boiler)	info demand (On/Off)	info: Heating/ Cooling mode	info: Heating/ Cooling mode	switch off CH (NO)	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]		Heat pump boiler eBUS H. modul I/O board	
	Z30	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Z30 - EV3	Z30 - EV 2	Day/night energy price	Heating Backup (boiler)	info demand (On/Off)	info: Heating/ Cooling mode	info: Heating/ Cooling mode	switch off CH (NO)		DHW tank coil [2K7]	DHW tank top [2K7]		Heat pump boiler eBUS H. modul I/O board	
	OEM UFH	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Swimming Pool 3kW	backup heating (elec or gas On/ Off)	Z10 - EV1	Day/night energy price	Heating Backup (boiler)	info demand (On/Off)	info: Heating/ Cooling mode	External Demand Z1	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]	Heating flow elec heater [2K7]	Heating / Cooling	Heat pump boiler eBUS H. modul I/O board
	OEM UFH + 1 GW	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Swimming Pool 3kW	Z20 - EV 2	Day/night energy price	Heating Backup (boiler)	info demand (On/Off)	info: Heating/ Cooling mode	info: Heating/ Cooling mode	External Demand Z1	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]		Heating / Cooling	Heat pump boiler eBUS H. modul I/O board
15	Monozone	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Swimming Pool 3kW	backup heating (elec or gas On/ Off)	Z10 - EV1	HP status	"HP DHW/SP"	HP On/Off	HP Heating/ Cooling	switch off CH (NO)	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]	Heating flow elec heater [2K7]		boiler eBUS H. modul or I/O board
	Z20 (no available with On/Off boiler back-up)	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Swimming Pool 3kW	Z20 - EV 2	HP status	HP DHW/SP	HP On/Off	HP On/Off	HP Heating/ Cooling	switch off CH (NO)	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]		boiler eBUS H. modul or I/O board	
	Z30 (no available with On/Off boiler back-up)	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Z30 - EV3	Z30 - EV 2	HP status	HP DHW/SP	HP On/Off	HP On/Off	HP Heating/ Cooling	switch off CH (NO)		DHW tank coil [2K7]	DHW tank top [2K7]		boiler eBUS H. modul or I/O board	
	OEM UFH	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Swimming Pool 3kW	backup heating (elec or gas On/ Off)	Z10 - EV1	HP status	"HP DHW/SP"	HP On/Off	HP Heating/ Cooling	External Demand Z1	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]	Heating flow elec heater [2K7]	Heating / Cooling	boiler eBUS H. modul or I/O board
	OEM UFH + 1 GW (no available with On/Off boiler back-up)	X	DHW tank 3kW	DHW Electrical heater / boiler 3kW	Swimming Pool 3kW	Z20 - EV 2	HP status	HP DHW/SP"	HP On/Off	HP On/Off	HP Heating/ Cooling	External Demand Z1	Swimming Pool	DHW tank coil [2K7]	DHW tank top [2K7]		Heating / Cooling	boiler eBUS H. modul or I/O board

2703454 REV1



Subject to engineering changes

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