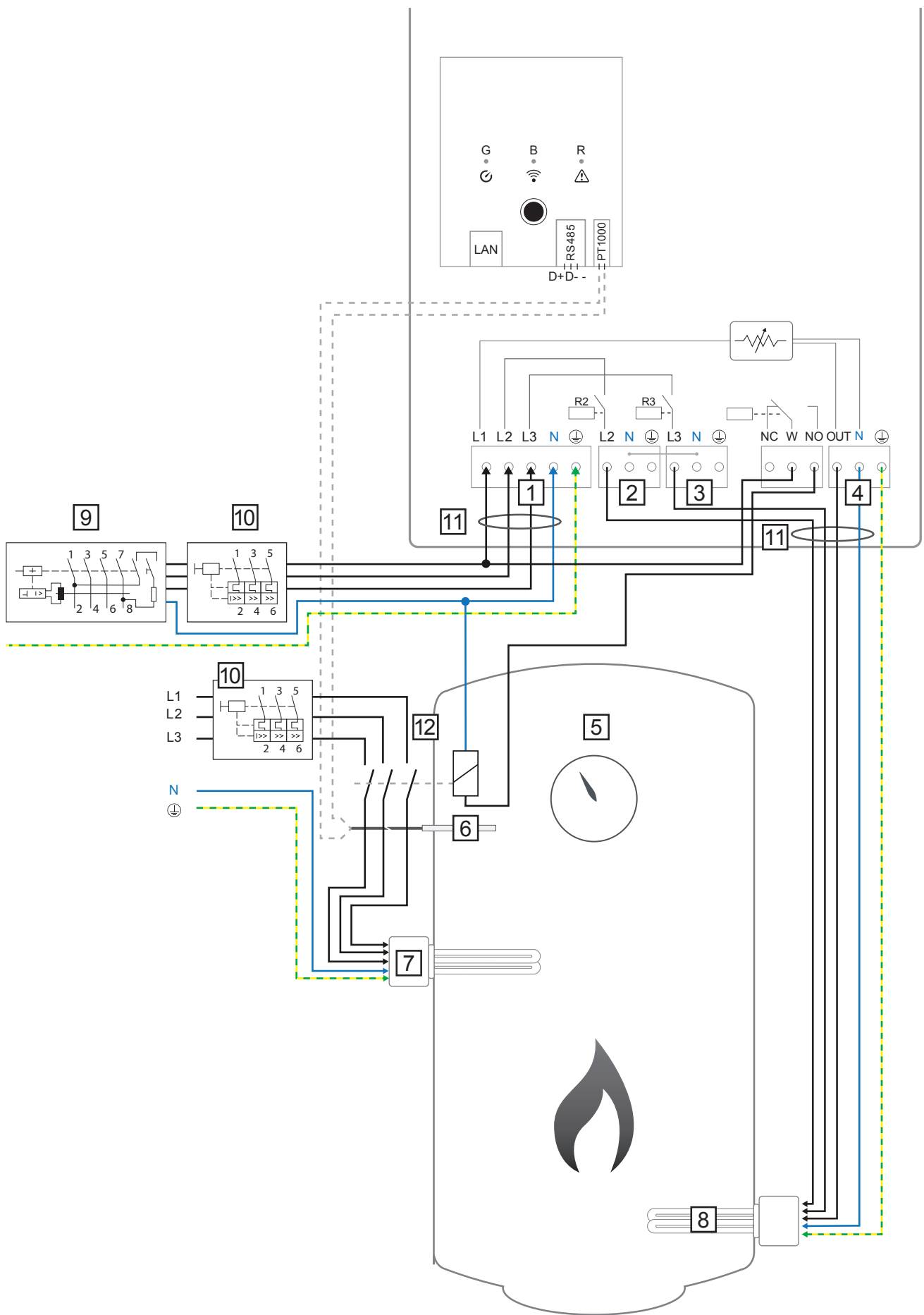# Continuous Control up to 18kW

1	INPUT - grid supply 3x 230 V Spring balancer 1.5 - 2.5 mm²	7	Heating element 2
☞	**NOTE!** Phase and neutral conductors must not be mixed up. Residual current-operated circuit breaker is triggered.	8	Heating element 1 (max. 9 kW)
2	OUTPUT - L2 heating element	9	Residual-current circuit breaker
3	OUTPUT - L3 heating element	10	Circuit breaker max. B16A
4	OUTPUT up to 3 kW variable, max. 13 A resistive load Spring balancer 1.5 - 2.5 mm2	11	Ferrite (included in delivery)
5	Buffer	12	Contactor
6	PT1000 temperature sensor		

Functional Description

If the PV system is larger than 9 kWp, two 9kW heating elements can be used to achieve continuous control up to 18kW.

☞ **NOTE!** In Solar Web only the continuous heating element will be shown as Ohmpilot consumption. Since the power path of the second heating element is not connected via the Ohmpilot, it is displayed as direct consumption.

The Fronius Smart Meter records the current power at the feed-in point and transfers the data to the Datamanager. By controlling the Ohmpilot, the Datamanager adjusts any surplus energy that is available to zero. In detail, this takes place by continuously adjusting the heating element connected to the Ohmpilot.

For this application, two heating elements are installed, the heating element 1 (8) is continuously controlled to the set switch-on threshold. Only when the switch-on threshold is reached, the heating element 2 (7) is activated via a contactor. The remaining energy is then consumed via the heating element 1 (8). This results in continuous control from 0 to max.18kW when two 9kW heating elements are used.

☞ **NOTE**! Even if the thermostat switches off the heating element 1 (8), the heating element 2 (7) is only activated from the set threshold, so there is no energy sourced from the grid, but energy is fed into the grid up to the set threshold.

If no temperature sensor is installed, an external source (e.g. gas-fired heating) must ensure the minimum temperature. As an alternative, the Ohmpilot can also ensure the minimum temperature. This may result in electricity being sourced from the grid. The maximum temperature must be set on the heating element thermostat. If heating element 1 (8) does not have a thermostat, the Ohmpilot can also carry out this task as an alternative (see "Optional settings" section). However, it is imperative that heating element 2 (7) has a thermostat.

☞ **NOTE!** Since the Ohmpilot must be fused with B16 max. it is necessary that the heating rod 2 (7) is fused with an extra circuit breaker.

1. The section "Establishing the Data Connection" describes how you can access the Ohmpilot website.

2. Under HEATING 2, select "SG Ready heat pump" as the consumer.

3. Under Starting threshold, select "Feed-in" and enter the desired output in watts from which heating element 2 (7) is to be switched on.

4. Under Switch off threshold, select between "Consume" and "Feed-in" and enter the output in watts above which the heat pump is to be switched off.

Example 1:
If you have selected "Consume" under the switch-off threshold and set power to 500 W, the heating element 2 (7) is switched off as soon as consumption exceeds 500 W.

Example 2:
If you have selected „Feed-in" under the switch-off threshold and set power to 500 W, the heating element 2 (7) is switched off as soon as the feed-in is less than 500 W.

NOTE! To avoid frequent switching of the contactor, a hysteresis should be entered. For example, a turn-on threshold of 9400 watts and a turn-off threshold of 100 watts results in a hysteresis of 500 watts for a 9 kW heating element.