

1. Use of the power modules

The power modules are used for the external power supply of the PolluStat meter.

If the meter is supplied with power externally, the internal buffer battery is not used. In the event of a power outage, the buffer battery supplies the meter with power. Correct functioning of the meter is then maintained by the buffer battery.

The installable 24V power module features a multi-voltage input to EN1434 and can be operated with 12 to 42V direct voltage (DC) or 12 to 36V alternating voltage (AC). When using a supply voltage of 230V/50Hz (AC), the supplied external transformer module **must** be used. Never connect 230V directly to the power module. There is a risk of an electric shock and damage to the heat meter.

1.1. Connection diagram

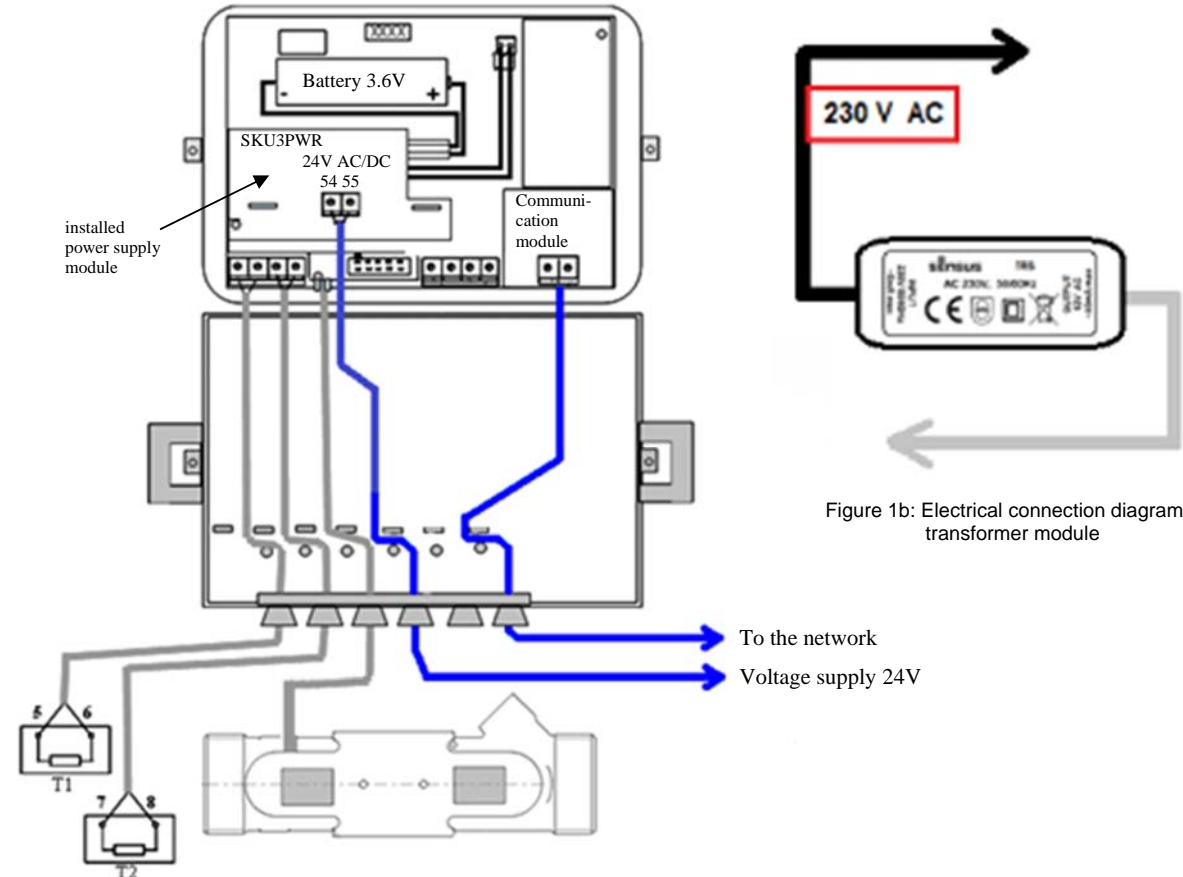


Figure 1a: Electrical connection diagram power supply module

Figure 1b: Electrical connection diagram transformer module

T1 – temperature sensor warmer pipe (supply pipe)
 T2 – temperature sensor colder pipe (return pipe)

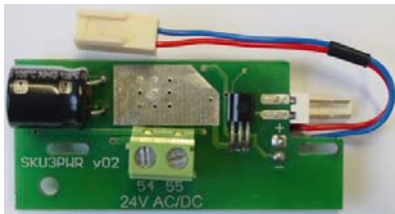


Figure 2: Power module



Figure 3: External transformer module



2. Safety instructions

- Only use the power modules for PolluStat, otherwise the modules or heat meters might be damaged.
- Installation of the power modules requires careful handling of the batteries. Batteries must not be charged, short circuited, come into contact with water or exposed to temperatures above 80 °C.
- **Do not connect the battery connector and the power module connector together to the main board of the heat meter!**
- The retrofittable power modules are provided as circuit boards. After removing them from the protective packaging, carefully hold them at the edges and insert them without interim storage into the respective PolluStat heat meter. Otherwise the components located on them might be damaged.
- Always dispose of batteries and electronic waste properly at suitable collection facilities.
- Only specifically trained and authorised staff should connect the power modules. Furthermore, observe the recognised standards of good engineering practice and, in particular, VDE 0100.
- Install a 6A fuse to secure the power module.
- Prior to replacing a power module, disconnect the existing power module from the power supply.
- If the power module is damaged, dispose and replace it with a new one.

3. Replacing the power module in the heat meter

The power module is installed at the bottom left in the opened meter.



Figure 3: Open the meter

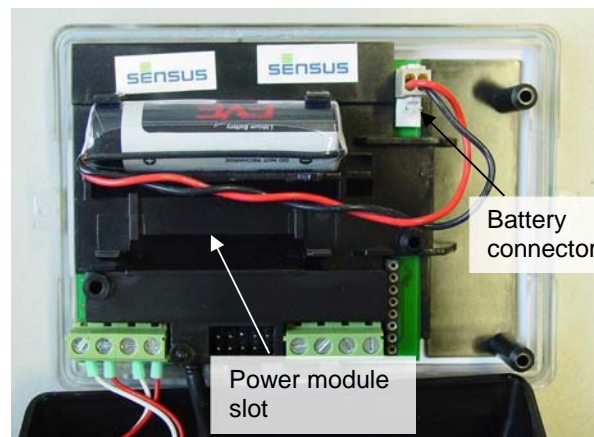


Figure 4: Slot for the power module

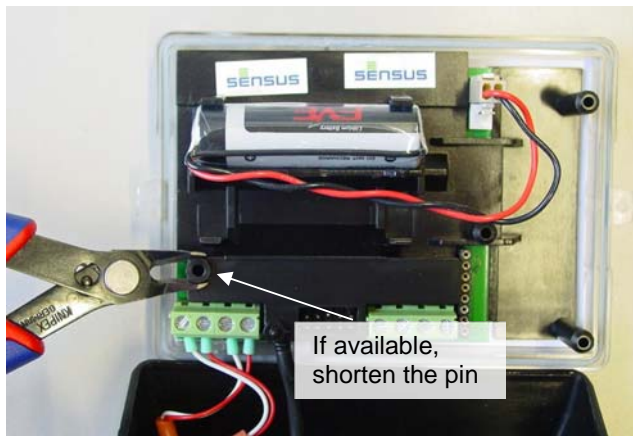


Figure 5: Installation preparation for the power module

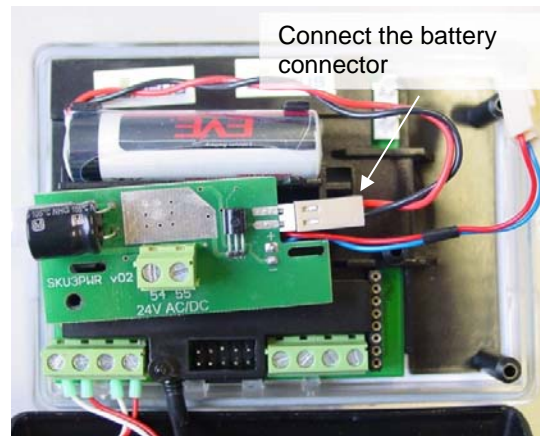


Figure 6: Plug the battery connector

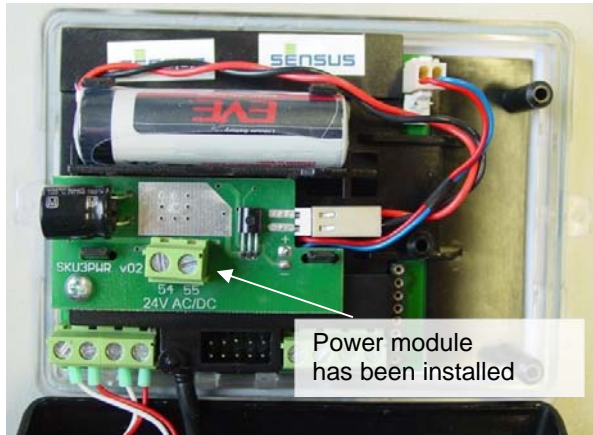


Figure 7: Installed power module



Figure 8: With connected voltage supply

- Remove the user seals at the housing.
- Open the housing cover by unlocking the two lateral, black plastic latches (Figure 3).
- With some versions, the fixing pin at the bottom left might have to be shortened (Figure 5).
- Disconnect the battery connector from the main board of the heat meter and connect it to the power module (Figure 6).
- **Caution: Never connect the battery connector and the power module connector together to the main board of the heat meter. The battery might be destroyed!**
- Install the power module at the bottom left as shown in Figure 7.
- Install the fixing screw.
- Connect the power module connector to the battery connector connection on the main board (Figure 8).
- Route the connection cable of the voltage supply at the heat meter through an available cable entry and ensure strain relief. Subsequently connect the wires to terminals 54 and 55. Polarity can be ignored.
- Close the cover and secure the housing using user seals.
- When using 230V mains voltage, have a fully trained and authorised expert connect the supplied transformer module to the supply voltage.
- A green LED indicates that the heat meter is supplied with external voltage.
- After correct installation, set the time and date.

4. Power modules and connections

4.1. 24V power module (68505143)

Use this power module to supply the meter externally with safety extra-low voltage. The input voltage may be 12 to 42V direct voltage (DC) or 12 to 36V alternating voltage (AC).

Connection takes place at the two connecting terminals 54 and 55. Polarity can be ignored.

4.2. 230V power module (68505144)

Use this power module to supply the meter externally with 230V / 50Hz alternating current.

Always ensure that the supplied external transformer module is used. Connect the power supply to the black cable labelled 230V. Insert the grey cable into the heat meter and connect it to the two connecting terminals 54 and 55.

Table: Numbering of the terminals

Calculator unit:

Terminal no.	Description
5	Temperature sensor warmer pipe (supply pipe), (T1)
6	Temperature sensor warmer pipe (supply pipe), (T1)
7	Temperature sensor colder pipe (return pipe), (T2)
8	Temperature sensor colder pipe (return pipe), (T2)
50	GND second additional pulse input or output
51	Second additional pulse input or output (In / Out2) (volume output for TEST mode)
52	GND first additional pulse input or output
53	First additional pulse input or output (In / Out1) (energy output for TEST mode)

24V power module:

Terminal no.	Description
54	Safety extra-low voltage input
55	Safety extra-low voltage input

230V transformer module:

Black cable	Description
brown	Supply voltage
blue	Supply voltage
Grey cable	Description
white	Safety extra-low voltage for internal power module
brown	Safety extra-low voltage for internal power module

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Technical details subject to change



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