



TEMPERATURE PROBES PT1000



INSTALLATION & OPERATING INSTRUCTIONS

01 - 082019

www.smartfox.at

DECLARATION SAFETY

INSTRUCTIONS

WARNING

Non-compliance can lead to damage to property and personal injury. The instructions given must therefore always be observed or implemented!

ATTENTION

Non-compliance can lead to malfunctions or damage to the unit. The instructions given must therefore always be followed or implemented!

NOTE

Useful tips to support you during commissioning. The instructions given are not mandatory.

General notes:

These operating instructions are part of the scope of delivery. They contain the information required for the intended use. They are intended for electrical engineering personnel or specialists who are familiar with the installation, assembly and commissioning of the product described here.

Installation:

When installing the temperature sensor, always ensure compliance with all locally applicable standards and regulations. During use, pay special attention to the measuring range, installation length, temperature range and installation location. When installing or removing, pay attention to any wiring or insulation defects that may have occurred. To reduce electromagnetic interference, the use of a shielded cable is recommended. The sensor cable should always be routed at a minimum distance of 15 cm and, if possible, not parallel to AC cables.

Safety and security measures:

The decision as to the suitability of the product for a particular purpose lies solely with the technician carrying out the work. The temperature sensor must not be used for safety-relevant tasks, e.g. for monitoring or protecting persons against danger or injury, as an emergency stop switch on machines, etc. Liability for damage caused by improper use of the temperature

The warranty does not cover any damage arising from the planning, operation or installation of the product.

TECHNICAL DATA

WARNING

The temperature sensor may only be connected to safety extra-low voltage (SELV) and in a de-energised state.

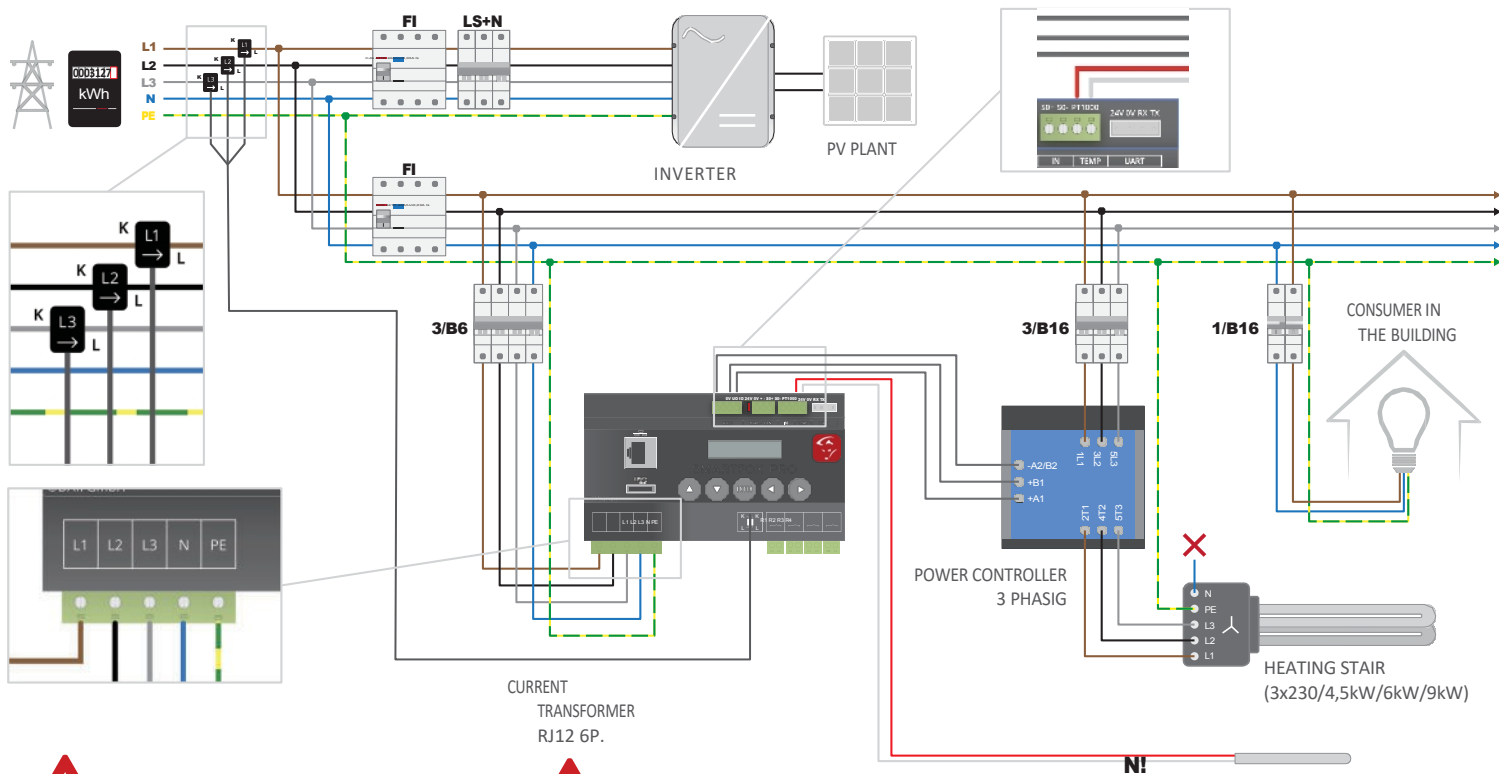
Technical data:

Temperature sensor	PT1000
Measuring range	-35°C - +105°C
Measuring current	approx. 1mA
Insulation resistance	at 20°C and 500VDC typ. 100 MOhm
Circuit type	2-wire
Connection cable	PVC cable
Cable length	5m
Connection	Wire end ferrule
Cable cross-section	2x0,25mm ²
Protective sleeve	Stainless steel
Mounting	Immersion sleeve
Protective sleeve length	50mm
Protection class	IP65

Resistance table:

Temp.	°C	-40	-30	-20	-10	0	10	20	25	30	40	
PT1000	Ohm	842,70	882,20	921,60	960,90	1000,00	1039,00	1077,90	1097,40	1116,70	1155,40	
	°C	50	60	70	80	90	100	110	120	130	140	150
	Ohm	1194,00	1232,40	1270,00	1308,90	1347,00	1385,00	1422,00	1460,60	1498,20	1532,80	1573,10

CONNECTION DIAGRAM POWER CONTROLLER & HEATING ELEMENT 3-PHASE INCL. PT1000 TEMPERATURE SENSOR



TEMPERATURE

**Current and voltage path
must always be the same!**

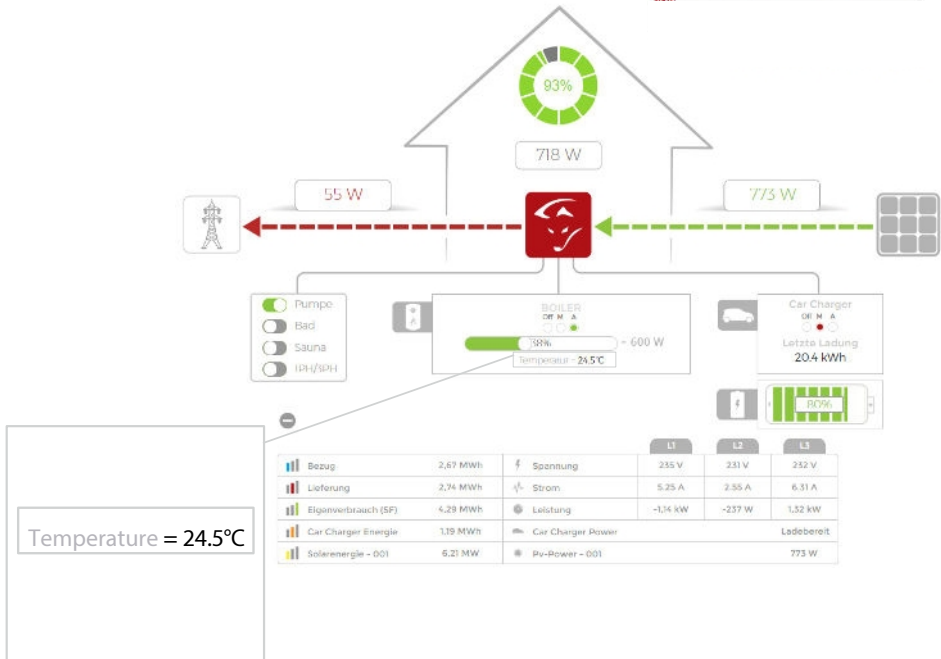
SENSOR PT1000

**Star connection required. NO NEUTRAL CONDUCTOR
AT STAR POINT ! Only balanced loads possible!**

APPLICATION WITH THE SMARTFOX PRO & SMARTFOX PRO LIGHT

Temperature display monitoring

The temperature sensor can be used to monitor the temperature of your boiler or buffer. If the sensor is connected to the SMARTFOX, the current temperature is displayed in the monitoring. A special parameterisation on the SMARTFOX is not necessary.

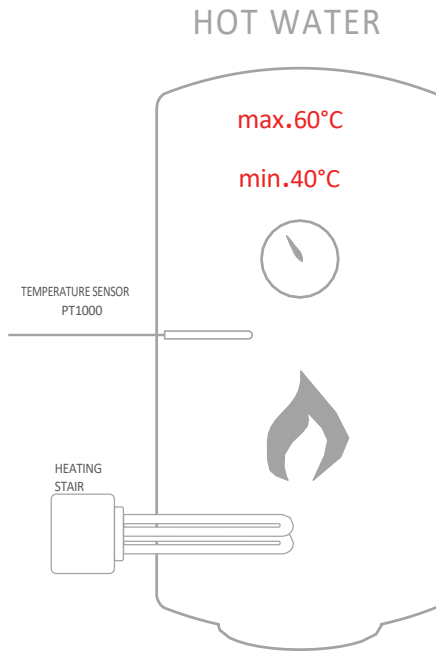


Minimum temperature maintenance at the analogue output

If the heating rod used for infinitely variable surplus control is the only source of heating, it may be necessary to maintain a minimum temperature via the mains in order to ensure the hot water supply even during periods of bad weather. The application shown in the example is ideal for this purpose.

The detailed instructions for minimum temperature maintenance you will find at www.smartfox.at/downloads





Temperature-dependent switching between two heating elements (e.g. boiler buffer)

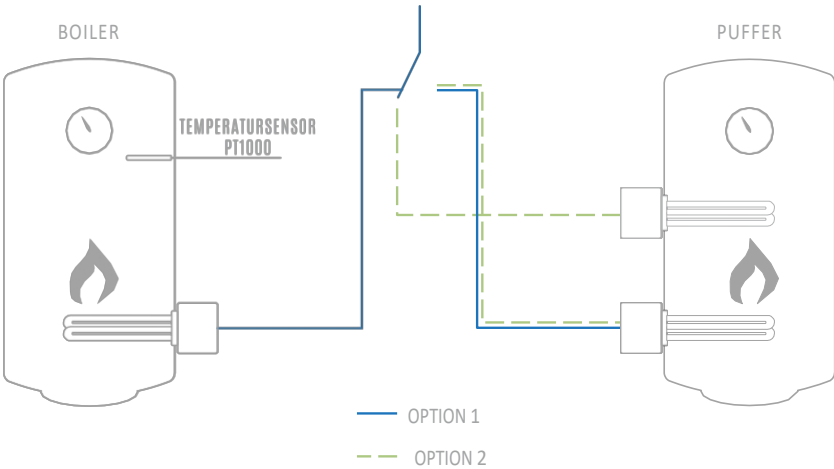
The temperature sensor can be used to operate two heating elements in series with the same power controller. This is ideal for switching between a heating rod in the boiler and a heating rod in the buffer (option 1). The same function can also be used to switch between heating elements at the top and bottom of the register (option 2).

The detailed instructions for the **"2nd heating rod function"** you will find at www.smartfox.at/downloads





POWER CONTROLLER



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