

BOPV.mini – Supplementary manual for the **PLUS version**.

MINI Display for HUAWEI SUN2000 & LUNA2000

Manual Version May 2023 / Device Version P1.15



Foreword

This quick start guide only covers the addition of the PLUS functions. The normal functions are explained in the main manual.

With the PLUS version, you can use the PV surplus to control an electronic switch in order to switch on additional consumers.

Roland, developer and PV owner

Surplus control - what are the options:

1 Battery SOC dependent

Switch on from X percent and off again from Y percent. Control via the battery is the recommended option.

2 Smart meter dependent

Switch on from X kW grid feed-in and off again from Y kW grid feed-in. For those who don't have a battery but a smart meter.

3 DC power dependent

If the roof (incl. balcony / PV2) comes over X kW, then switch on. If the yield falls below X, turn it off again. For those who do not have a smart meter installed.

The following devices are supported as local switching actuators:

- * Shelly PLUG S
- * Shelly PLUS PLUG S
- * Shelly PRO 4 MP
- * myStrom switch

Functionality:

In the middle of the BOPV.mini display you can see if the circuit is activated by means of the "SWX" indicator. If the indicator is white, then the switch is switched off, if the indicator is green, then switched on.



Example "SW1" in white color:

Excess control configured via the battery, Shelly Plug off.



Example "SW3" in green color:

excess control configured via the DC power (incl. balcony power plant), Shelly Plug on.

Additional package contents:

In addition to the normal scope of delivery, there is also a Shelly PLUS Plug S Switch in the scope of delivery.



Configuration of the Shelly Plug:

Follow the instructions of the Shelly APP, which is available for Android and iOS. After integrating the Shelly plug into your WiFi network, you can use the Shelly APP or your router to read out the IP address of the Shelly plug. This is required for the configuration. Make sure that BOPV.mini and Shelly Plug are in the same WiFi network and that both can communicate unhindered (watch out for a firewall).

Configuration of the config.txt:

Add the following 5 parameters to your config.txt. To enable the parameters, remove the // in front of them.

```
// ** Optional switch logic for using surplus energy with Shelly and myStrom switches (BOPV.mini PLUS combi only)
// ** Optional SWITCHTYPE: 0: Shelly Plug S, Shelly PLUS Plug S and Shelly Pro 4 PM (channel 0) | 1: myStrom Switch
// ** Optional SWITCHIP: full local IP address of the switch (i.e. xxx.xxx.xxx.xxx)
// ** Optional WORKINGMODE: 0 = off | 1 = battery SOC (%) | 2 = smartmeter (kW) | 3 = DC power + Balcony Power (kw) | (dont use decimals!)
// ** Optional SWITCHON: Value from which the switch is switched on
// ** Optional SWITCHOFF: Value from which the switch is switched off again
```

```
//SWITCHIP=192.168.0.203
//SWITCHTYPE=0
//WORKINGMODE=1
//SWITCHON=100
//SWITCHOFF=90
```

```
// ** Optional switch logic for using surplus energy with Shelly and myStrom switches (BOPV.mini PLUS combi only)
// ** Optional SWITCHTYPE: 0: Shelly Plug S, Shelly PLUS Plug S and Shelly Pro 4 PM (channel 0) | 1: myStrom Switch
// ** Optional SWITCHIP: full local IP address of the switch (i.e. xxx.xxx.xxx.xxx)
// ** Optional WORKINGMODE: 0 = off | 1 = battery SOC (%) | 2 = smartmeter (kW) | 3 = DC power + Balcony Power (kw) | (dont use decimals!)
// ** Optional SWITCHON: Value from which the switch is switched on
// ** Optional SWITCHOFF: Value from which the switch is switched off again
//SWITCHIP=192.168.0.203
//SWITCHTYPE=0
//WORKINGMODE=1
//SWITCHON=100
//SWITCHOFF=90
```

Zeile 59, Spalte 28 100% Windows (CRLF) UTF-8

In this example, the Shelly Plug (SWITCHMODE=0) is controlled via the battery charge level (WORKINGMODE=1). As soon as the battery level has reached 100% (SWITCHON=100), the Shelly Plug switches on. As soon as the battery level is 90% or less (SWITCHOFF=90), the Shelly Plug switches off again.

```
SWITCHIP=192.168.0.203
SWITCHTYPE=0
WORKINGMODE=1
SWITCHON=100
SWITCHOFF=90
```

If you have activated the internal web server (IsServer=1), then you can use the address <http://xxx.xxx.xxx.xxx/switch> to query the set parameters and the switching status. Replace xxx.xxx.xxx.xxx with the IP address of your BOPV.mini.



Examples

Battery Mode Shelly Plug 100% = ON, 90% = OFF

```
//SWITCHIP=192.168.0.203  
//SWITCHTYPE=0  
//WORKINGMODE=1  
//SWITCHON=100  
//SWITCHOFF=90
```

SmartSensor Mode Shelly Plug 3kW or more output = ON, 1kW or less output = OFF

```
//SWITCHIP=192.168.0.203  
//SWITCHTYPE=0  
//WORKINGMODE=2  
//SWITCHON=3  
//SWITCHOFF=1
```

DC-Power Mode myStrom switch 1kW or more output = ON, 0kW or less output = OFF

```
//SWITCHIP=192.168.0.203  
//SWITCHTYPE=1  
//WORKINGMODE=2  
//SWITCHON=1  
//SWITCHOFF=0
```