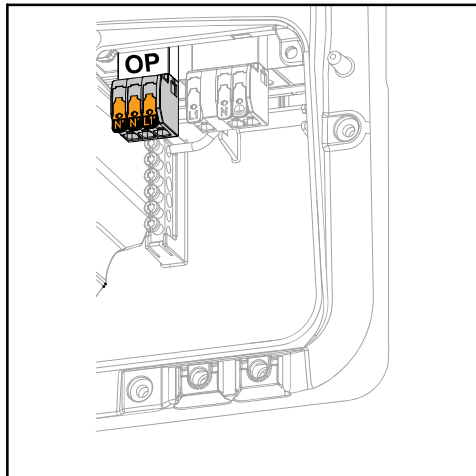


## PV Point (OP)

### IMPORTANT!

If several backup power variants are available, please note that only one backup power variant may be installed and configured.



With the PV Point, in the event of a failure of the public grid, electrical devices can be connected to the Opportunity Power (OP) terminal and supplied with a maximum power of 3 kW, if enough power is available from the PV modules or an optional battery. In grid-connected operation, the OP terminal is not supplied with voltage, therefore the connected loads will not be supplied with power in this operating mode.

### IMPORTANT!

A relay-based network switching setup is not possible.

## Explanation - PV Point (OP)

The inverter can provide 220 - 240 V at the PV Point. A corresponding configuration must be set up during commissioning.

At 220 - 240 V output voltage, max. 13 A AC continuous current is available.

### Example:

$$220 \text{ V} * 13 \text{ A} = 2860 \text{ W}$$

$$230 \text{ V} * 13 \text{ A} = \text{max. } 3 \text{ kW}$$

In backup power mode, some electrical appliances cannot function properly as starting currents are too high (for example, fridges and freezers). It is recommended to switch off non-essential loads during backup power mode. Overload capacity of 35% is possible for a duration of 5 seconds, depending on the capacity of the PV modules and/or the battery at that moment in time.

There is a brief interruption when switching from grid-connected mode to backup power mode. For this reason, the backup power function cannot be used as an uninterruptible power supply, for example for computers.

If no energy from the battery or the PV modules is available in backup power mode, backup power mode ends automatically. If sufficient energy becomes available from the PV modules once again, backup power mode starts again automatically.

In the event of excessive consumption, backup power mode is stopped and the "backup power overload" status code is displayed on the inverter's LED status indicator. The maximum power in backup power mode according to the technical data must be observed.

# Connecting backup power - PV Point (OP)

## Safety

### **WARNING!**

#### **Danger from incorrect installation, commissioning, operation or incorrect use.**

This can result in serious injury and damage to property.

- ▶ Only trained and qualified personnel are authorised to install and commission the system, and only within the scope of the technical regulations.
- ▶ The Installation and Operating Instructions must be read carefully prior to use.
- ▶ If anything is unclear, contact your vendor immediately.

### **WARNING!**

#### **Danger due to damaged and/or contaminated terminals.**

This can result in serious injury and damage to property.

- ▶ Before making any connections, check the terminals for damage and contamination.
- ▶ Remove contamination in the de-energized state.
- ▶ Have defective terminals repaired by an authorised specialist.

### **NOTE!**

#### **The continuous supply via the PV Point depends on the available PV power.**

If the solar modules are not supplying enough power, interruptions may occur.

- ▶ Do not connect any loads that require an interruption-free supply.

### **IMPORTANT!**

The valid national laws, standards and provisions, as well as the specifications of the relevant grid operator are to be taken into account and applied.

It is highly recommended that the specific installation be agreed with the grid operator and explicitly approved by this operator. This obligation applies to system constructors in particular (e.g. installers).

## Installation

### **NOTE!**

#### **All loads that have to be supplied via the OP terminal must be protected by means of a residual-current circuit breaker.**

In order to ensure the residual-current circuit breaker operates properly, a connection must be established between the neutral conductor N' (OP) and earth.

For the Circuit Diagram recommended by Fronius, see [Circuit Diagram - PV Point \(OP\)](#) on page 187.



<b>DC input data battery</b>	
Max. voltage	455 V
Min. voltage	150 V
Max. current	22 A
Max. output	8000 W
DC inputs	1

<b>AC input/output data</b>	
Nominal output power ( $P_{nom}$ )	8000 W
Max. output power	8000 W
Rated apparent power	8000 W
Nominal grid voltage	1 ~ NPE 220V / 230V / 240 V
Min. grid voltage	155 V <sup>1)</sup>
Max. grid voltage	270 V <sup>1)</sup>
Max. output current	45.45 A
Current (inrush) <sup>6)</sup>	20 A / 1.3 ms
Nominal frequency	50 / 60 Hz <sup>1)</sup>
Nominal frequency for Full Backup	53 / 63 Hz <sup>1)</sup>
Initial short circuit alternating current / phase $I_K$	45.5 A
Total harmonic distortion	< 3%
Power factor cos phi <sup>2)</sup>	0.8 - 1 (adjustable)
Max. permitted mains impedance $Z_{max}$ at PCC <sup>4)</sup>	None
Maximum output fault current / duration	29 A / 3 ms

<b>AC output data PV Point</b>	
Max. output power	4133 W (for 5 s)
Rated power	3000 W
Nominal output current	13 A
Nominal grid voltage	1 ~ NPE 220 V / 230 V / 240 V
Nominal frequency	53 / 63 Hz <sup>1)</sup>
Switching time	< 90 s
Power factor cos phi <sup>2)</sup>	0 - 1

<b>AC output data Full Backup</b>	
Max. output power	11,024 W (for 5 s)
Rated power	8000 W
Nominal output current	34.8 A



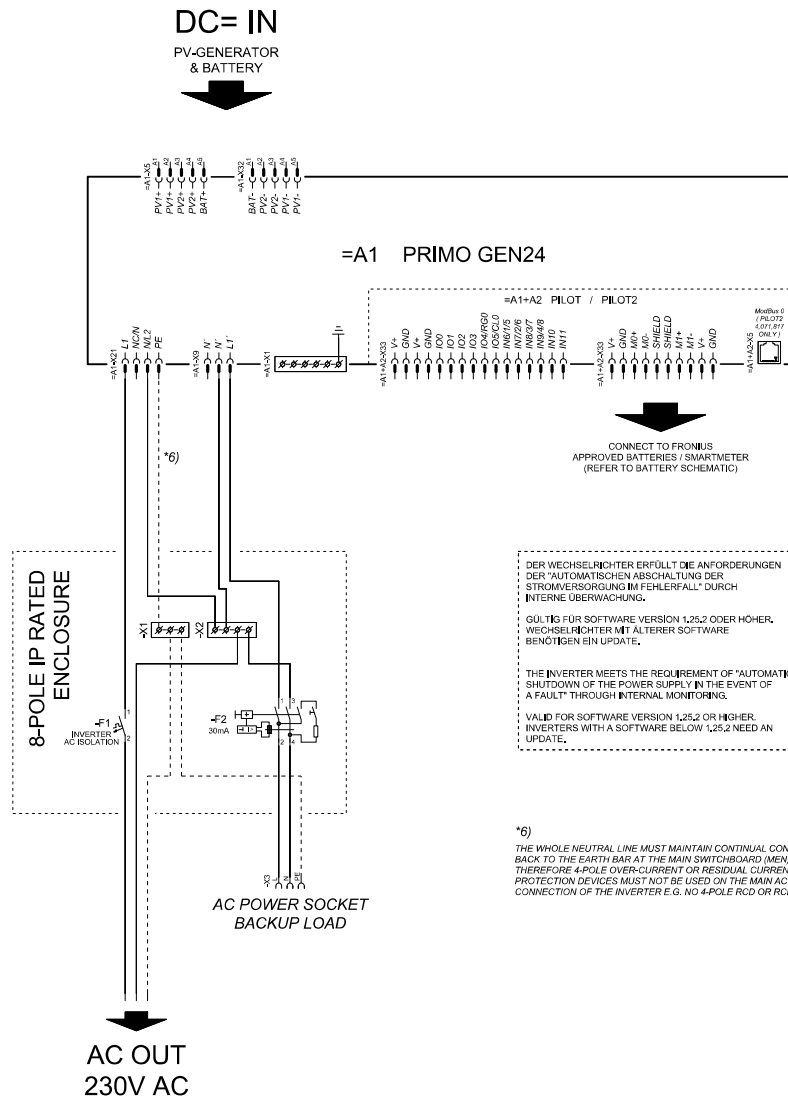
<b>AC input/output data</b>	
Nominal frequency for Full Backup	53 / 63 Hz <sup>1)</sup>
Initial short circuit alternating current / phase $I_K$	45.5 A
Total harmonic distortion	< 3%
Power factor $\cos \phi$ <sup>2)</sup>	0.8 - 1 (adjustable)
Max. permitted mains impedance $Z_{max}$ at PCC <sup>4)</sup>	None
Maximum output fault current / duration	29 A / 3 ms

<b>AC output data PV Point</b>	
Max. output power	4133 W (for 5 s)
Rated power	3000 W
Nominal output current	13 A
Nominal grid voltage	1 ~ NPE 220 V / 230 V / 240 V
Nominal frequency	53 / 63 Hz <sup>1)</sup>
Switching time	< 90 s
Power factor $\cos \phi$ <sup>2)</sup>	0 - 1

<b>AC output data Full Backup</b>	
Max. output power	13,780 W (for 5 s)
Rated power	10,000 W
Nominal output current	43.5 A
Nominal grid voltage	1 ~ NPE 220 V 1 ~ NPE 230 V 1 ~ NPE 240 V
Nominal frequency for Full Backup	53 / 63 Hz <sup>1)</sup>
Switching time	< 90 s
Power factor $\cos \phi$ <sup>2)</sup>	0 - 1

<b>General data</b>	
Maximum efficiency	97.3%
European efficiency ( $U_{mpp \text{ nom}}$ )	97%
European efficiency ( $U_{mpp \text{ max}}$ )	96.5%
European efficiency ( $U_{mpp \text{ min}}$ )	96.6%
Self-consumption at night	9 W
Cooling	Controlled forced-air ventilation
Protection class	IP 66
Dimensions H x W x D	595 x 529 x 180 mm
Weight	23.5 kg

# Circuit Diagram - PV Point (OP) Australia



# Backup power terminal - PV Point (OP) manual changeover

