

# BLACKOUT? NO, THANKS!



POWER  
WHENEVER  
YOU NEED IT



**BLACK-START  
CAPABLE**



**ALWAYS  
AVAILABLE**



**LOWER  
COST**

**SUNGROW'S BACKUP FUNCTION - WATCHING  
SOCCER GAMES, NO MATTER THE CIRCUMSTANCES!**

Around 14,700 power outages are reported in a typical year in Europe.

But this is something you don't have to worry about anymore! During blackout, **the 3-phase Hybrid is capable of supplying selected house loads** with real 3-phase backup supply. Start-up currents and power factors must of course be taken into account.

The best thing about it? No external backup box is needed. **More power. More security. Less costs.**

Available with  
**SH 5.0 / 6.0 / 8.0 / 10 RT**

Switch time backup mode  
**< 20 ms**

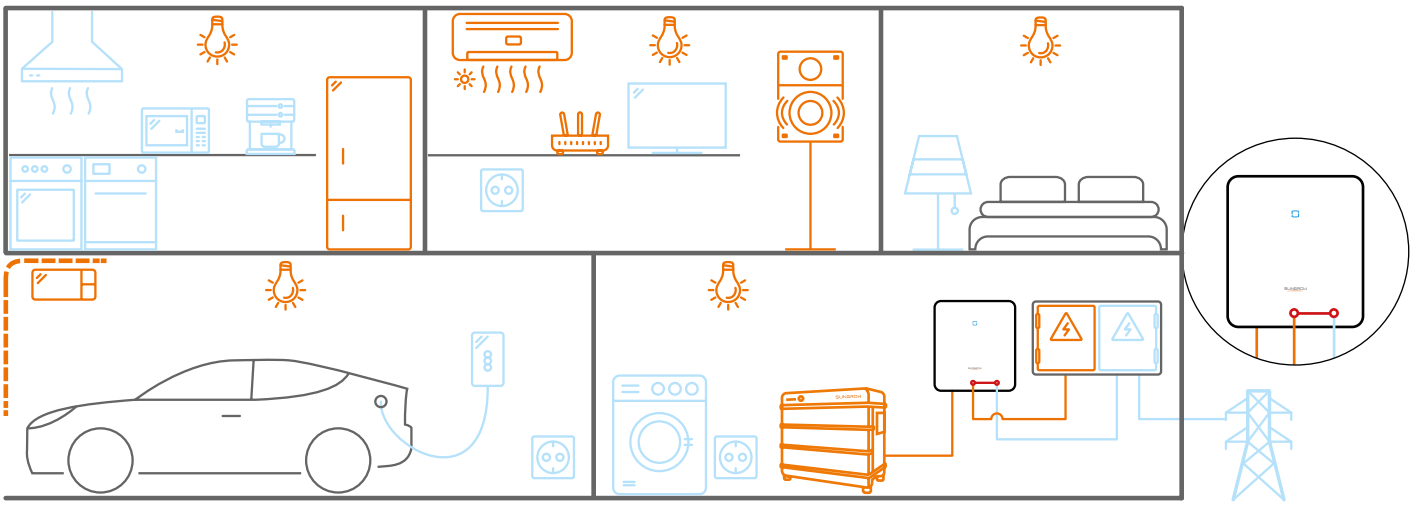
Energize loads  
**up to 3.3 kW / phase**

Less components needed  
**save up to 1000 €**

# BACKUP FUNCTION? YES WE CAN!

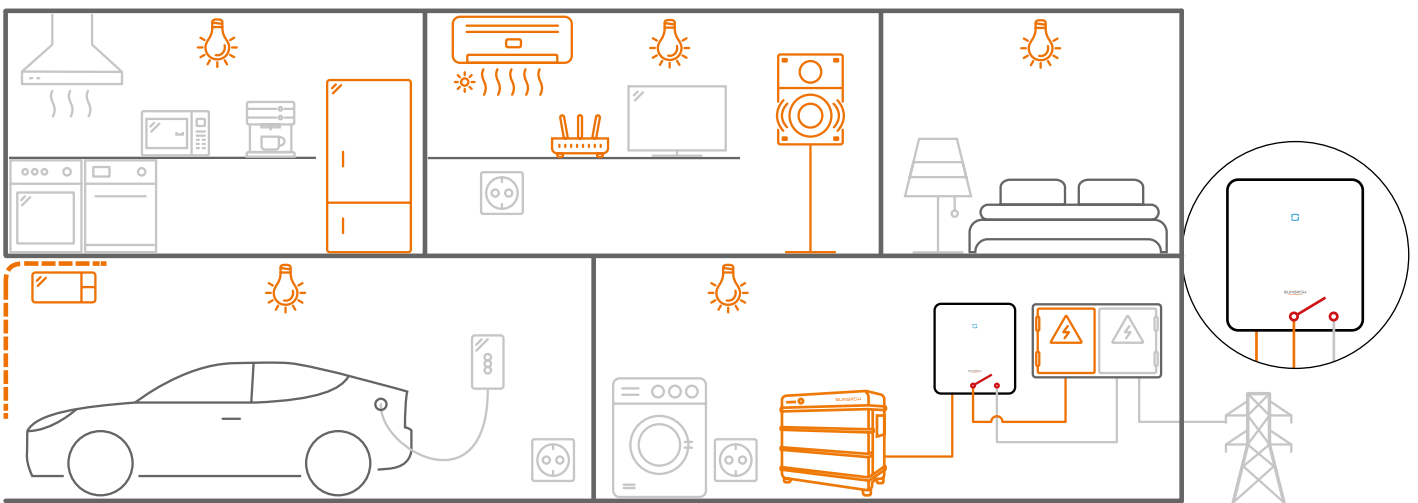
The **3-phase Hybrid can route up to 3.3 kVA per phase** from the grid to the backup port on a permanent basis. For regular grid-parallel operation, this allows the user to have all loads supplied by the grid, even the selected ones connected to the backup port.

## GRID PARALLEL OPERATION



The **bypass switch inside the inverter is closed**. Grid parallel loads (blue) as well as backup loads (orange) are powered by the grid. Both circuits can share the same distribution box but should be protected by their own AC circuit breaker and RCD.

## BACKUP MODE



In case of a grid failure the **bypass switch inside the 3-phase Hybrid opens** and **all loads connected to the backup port will get a seamless transition into backup mode**. Only loads not connected to the backup port experience the black out.

# REAL INDEPENDENCE REAL BENEFITS

## FULL COMPLIANCE

The 3-phase Hybrid fully complies with the **VDE-AR-E 2510-2** regulation. All required security standards for stationary electrical energy storage systems intended for connection to the low voltage grid are met completely.

## GRID FAILURE?

Nothing to worry about! In case of a blackout the **3-phase Hybrid will automatically switch into backup mode** - you won't even see the light flicker. Within **less than 20 ms** a bypass switch will open and up to 9.9 kW of loads connected to the backup port will be supplied by the battery and PV.

## RELIABLE & COST SAVING

Once the grid is back online the 3-phase Hybrid will reconnect safely and reliably. This **process of disconnecting and reconnecting doesn't require any external backup box or manual work**. The needed bypass switch is already included inside the inverter.

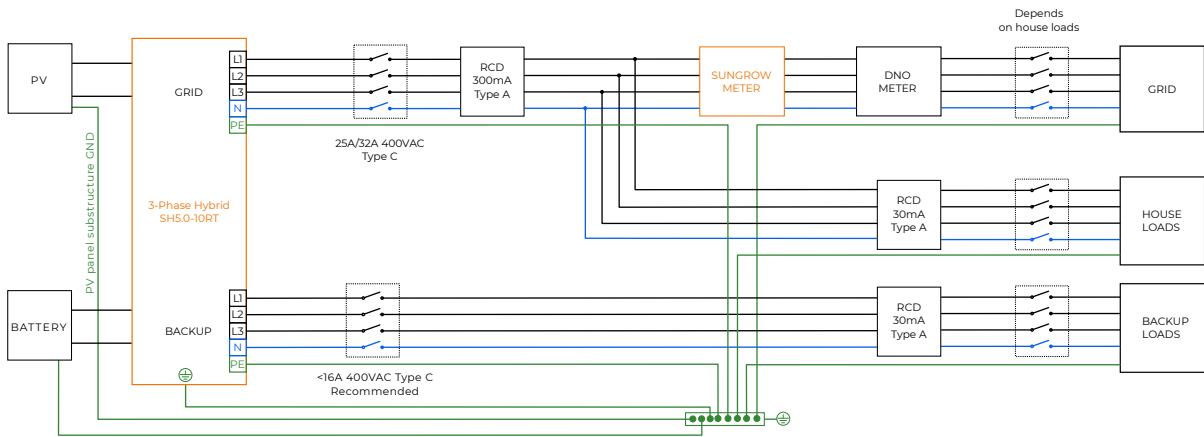
## BATTERY CHARGING IN BACKUP MODE?

During an outage, the 3-phase Hybrid will use excess PV energy to charge the battery.

After an overnight blackout with an empty battery in the morning, the 3-phase Hybrid will recharge the battery with the first beams of light. Ready for the next blackout.

## BACKUP FOR ALL - HOW DOES IT WORK?

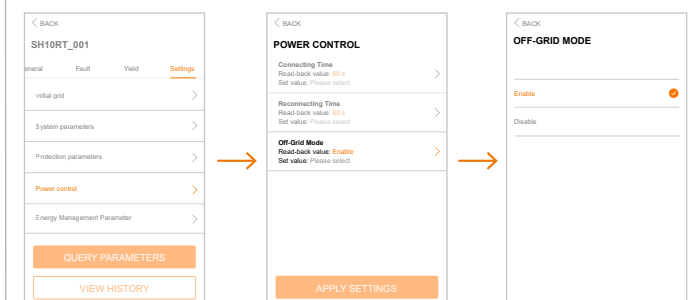
### 1 CONNECT BACKUP LOADS



### 2 OPEN ISOLARCLOUD APP



### 3 ACTIVATE OFF-GRID MODE



# MORE ANSWERS



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Product Manager Hybrid Solutions  
Sungrow Germany

**1 Are backup loads supplied by the grid during normal operation?**  
Yes, during normal grid parallel operation the backup port is directly bridged to the grid port. This way the backup loads are supplied by the grid just like the rest of the house loads.

**2 Is it possible to connect one single phase to the backup port?**  
Yes, one single phase up to 3.3 kW can be connected to the backup port like a single power socket. N and PE shall also be connected like in a normal circuit.

**3 Is a new distribution panel required to connect loads to the backup port?**  
No, the existing distribution box can be wired accordingly. Only a separate 30 mA RCD and a circuit breaker should be installed for the emergency power consumers. More details may be found in the operating manual.

**4 Which batteries are compatible with the 3-phase Hybrid?**  
The Sungrow Battery SBR is the perfect addition for the 3-phase Hybrid. Furthermore the following high voltage batteries are compatible: BYD Battery Box Premium HVM and HVS as well as BYD Battery Box HV.

**5 Will PV still be available during grid outage?**  
Yes, the PV will supply the backup loads, any excess PV will charge the battery. If the battery is full, the inverter will limit the production to match the load consumption.

**6 Is it possible to connect the whole house to the backup?**  
It's not recommended. It is advisable to connect, for example, three selected 16 A cables coming from the wiring closet. Some examples of loads that were tested in backup mode are described in our operating manual.

**7 Is it possible to set a reserve of battery SOC in case of grid outage?**  
Yes, using the iSolarCloud app, it can be configured how much battery percentage should be kept as reserve. This ensures backup load supply is always available in case you need it.

**8 Can the battery also be charged by the grid?**  
Yes, a forced charge of the battery can be scheduled in the iSolarCloud app. The scheduled battery charge will take energy from the grid. This supports variable electricity tariffs or keeps minimum SOC in winter for a possible power outage.