



SUNGROW
Clean power for all

Product Introduction SH15-25T & SBH100-400



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Product Overview

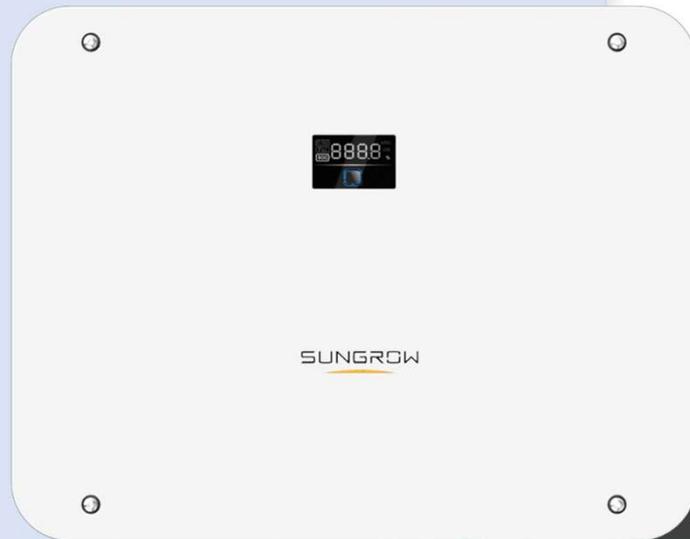
SH15/20/25T and SBH100-400

EXPERIENCE POWER FREEDOM

High-power inverters and large-capacity batteries

SH15/20/25T

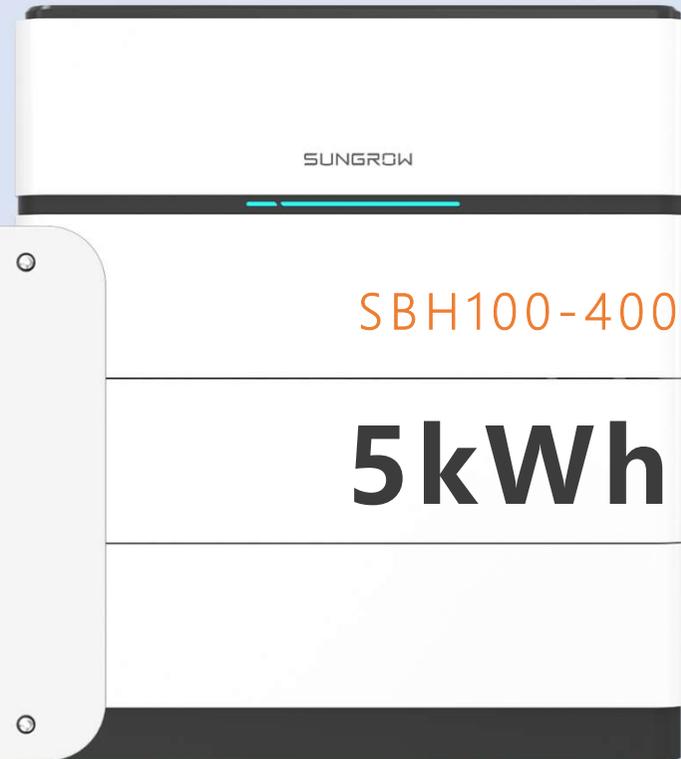
Up to **25kW**



SBH100-400

5kWh

per module



SUNGROW

Compatible with more and larger panels

Up to 25kW

200%DC/AC ratio

Connect twice as many panels to ensure maximum generation, especially with shadow.



SUNGROW

Freely compatible with more and larger panels, super solar energy conversion

Enjoy the freedom to choose solar panels

The Sungrow inverter accommodates a 16A string input current and is compatible with a wide range of mainstream solar panels.



Jinko *Solar*

13.5A
590Wp

JA SOLAR

14.45A
590Wp

LONGI

13.51A
585Wp

SUNGROW

LET' S EXPLORE HOW WE DO FREEDOM

- 1** Harness solar energy to meet the needs of your whole home
- 2** Uninterrupted clean power Backup for your whole home
- 3** Perfect synergy and versatility that makes the whole system smarter

Discover how effortlessly these cutting-edge energy devices can be integrated into various applications, opening up a world of possibilities.

Power everything

Strong overload capacity

Support whole-house load
and power multiple appliances at the same time

Experience unrivaled power with a maximum of **36.5kW startup power** for 10s during grid failures. Enables the seamless startup of up to **6 air conditioners** simultaneously, ensuring your comfort even in the most challenging conditions.

The whole house can be connected to the backup, with a **pass-through power** between grid and backup of up to **43kVA**.

36.5kW Backup

X

6 air-con

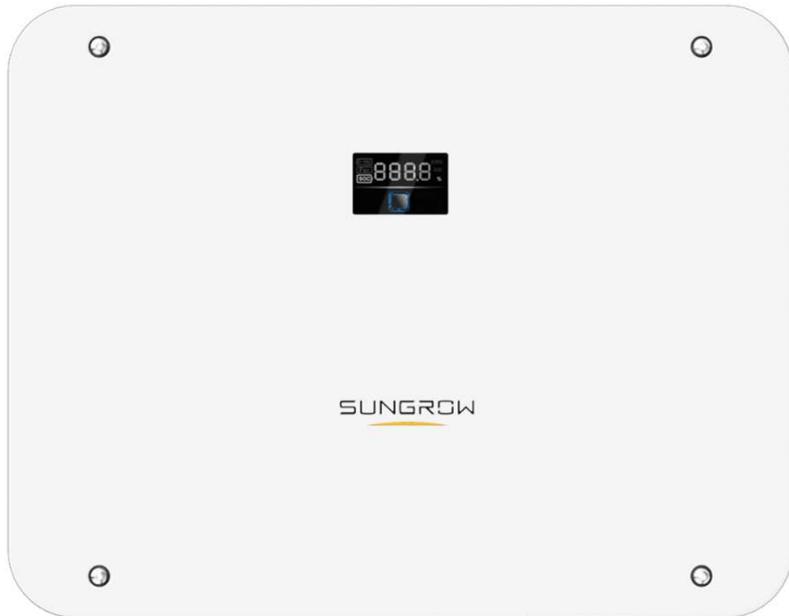


SH15-25T

15-25kW 200kW

Single inverter

Connect to Logger1000



Performance at a glance.

Generate more, up to 3MPPT with 5 strings and 16A string current

Start earlier, stop later, work longer time with a wider range from 40-560V.

PID ZERO, maintain the best performance of your PV panels

Uninterrupted backup mode, seamless switch within 10ms.

AFCI 2.0, Quickly shut down within 0.2 seconds in the event of a short circuit

Suitable for outdoor. IP65, C5, water/dust/ corrosion resistant

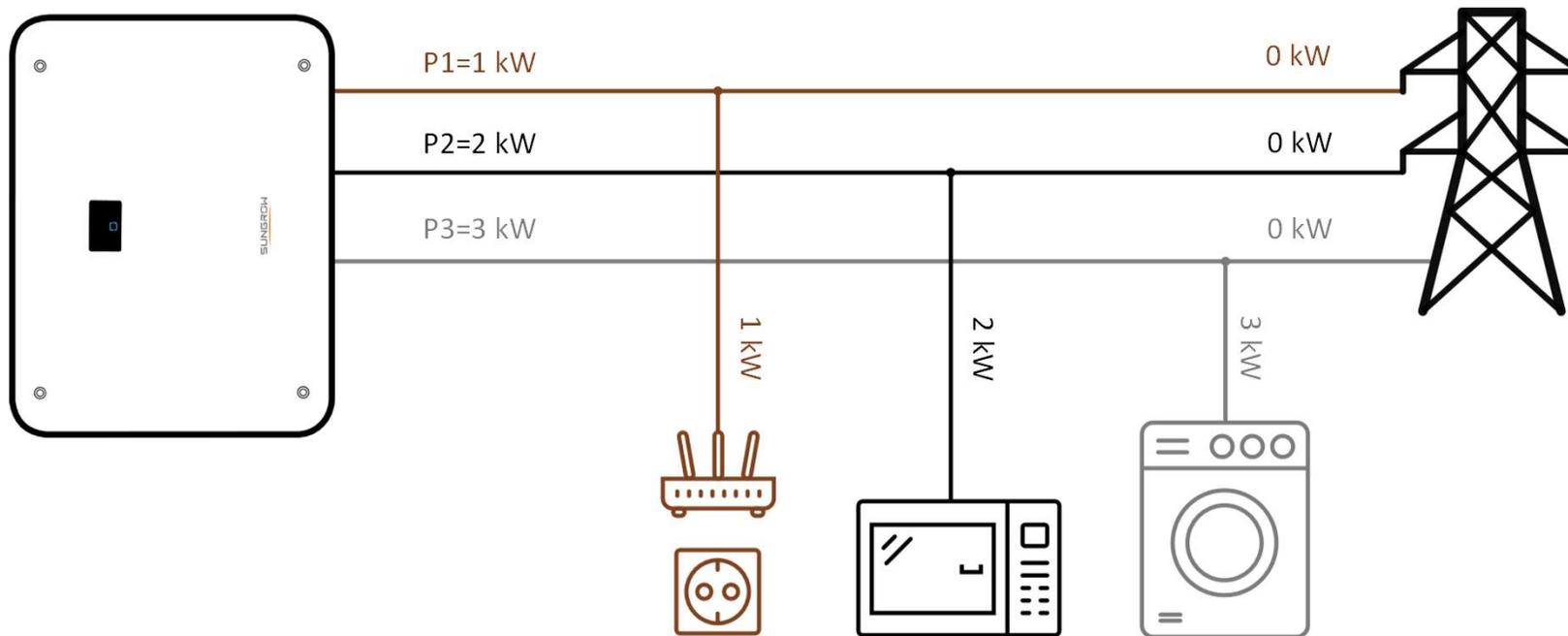
Suitable for both SBH and SBR Series

SUNGROW

THE NEW SH15-25T

Unbalanced AC output: Phase by phase self consumption and feed-in limitation – update to latest FW version at least v32

Max unbalance: 16A total unbalance or 1/3 of nominal power



UNBALANCED Phase by phase 0 Feed-in

Unbalance below 30%

A small number of 1-phase loads are used in three-phase systems

Control accuracy within **10W**



Unbalance of 30-50%

Some 1-phase loads are connected sporadically to two of the three phases.

Control accuracy within **50W**



Unbalance of 50-100%:

All single-phase loads are optionally mixed with three-phase loads in the same system

Control accuracy within **100W**





SBH100-400

**UNINTERRUPTED
CLEAN POWER
FOR WHOLE-HOME
BACKUP**

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NEW DESIGN

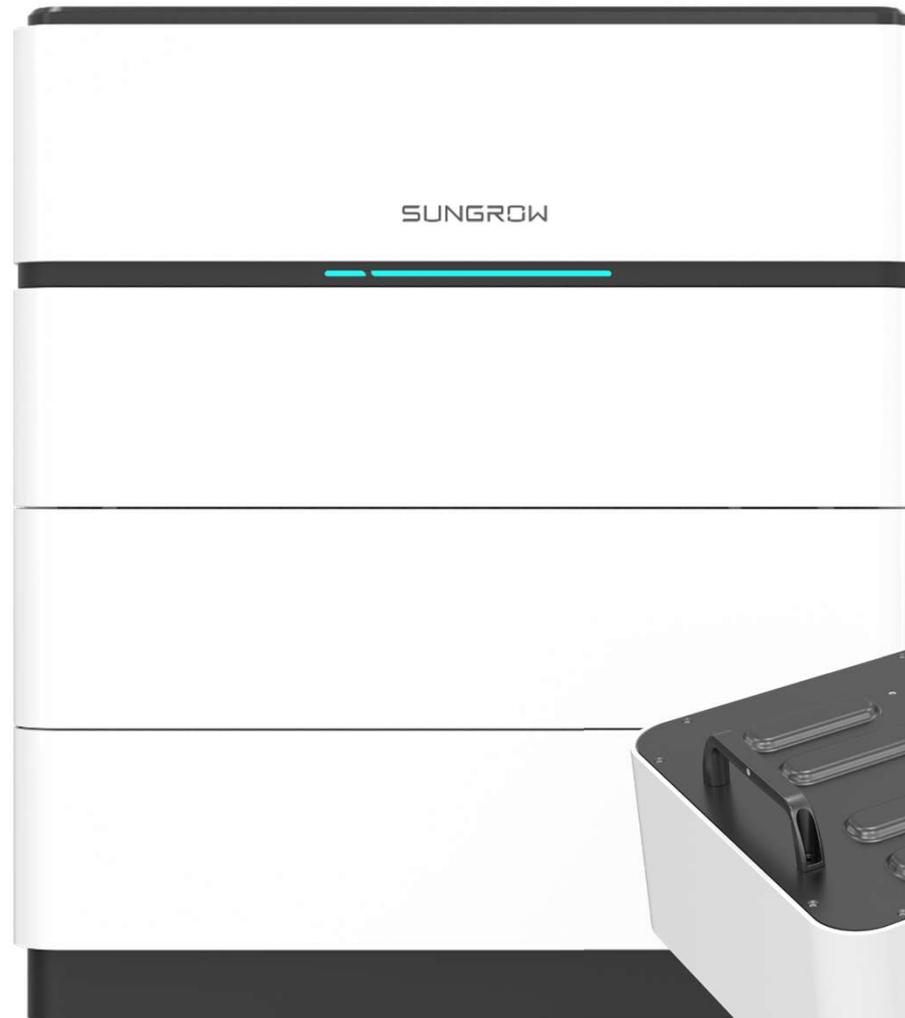
Esthetics meet functionality
with our elegant design

Clean & White

Continuing our tradition of minimalist design, SHT&SBH features a clean, white color. This timeless design language integrates effortlessly into any environment.

Modular stackable

The modular stackable design of SBH offers practical benefits. It allows for easy installation, maintenance, and scalability. With its modular structure, you can easily expand your energy storage capacity as needed.



Rounded edges

Drawing inspiration from natural elements, SBH features gentle curves, blending seamlessly with the home

Energy bar

Breathing LED strips showcase the battery power within.



SUNGROW

Hassle-free installation. Get it done in just one hour!

Efficient Installation: With our plug-and-play design and streamlined installation process, we take the hassle out of installation. The installer will have everything up and running within a day, allowing you to start enjoying the benefits of our products as quickly as possible.



Modular stackable

Easy maintenance and module replacement

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More available capacity

SBH Supports 2-8 modules per unit; up to 2 identical units can be connected in parallel with Y connector to the same SHT inverter.

5 kWh

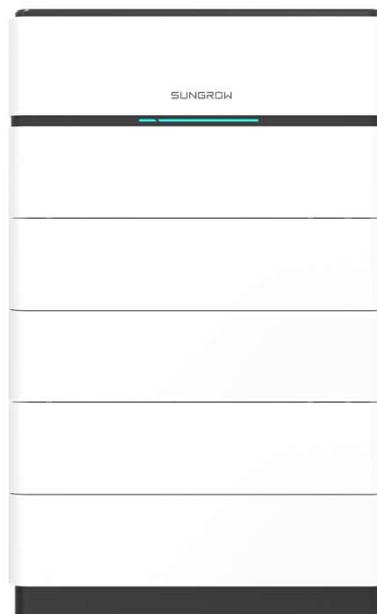
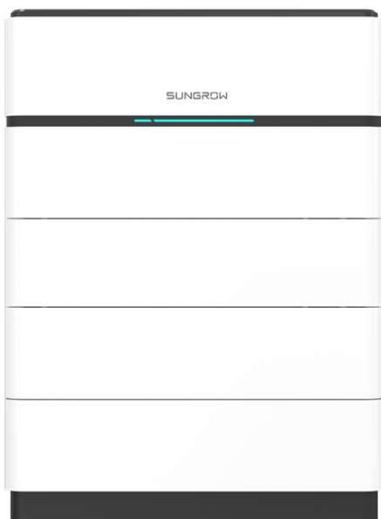
per module

10-40 kWh

2-8 battery modules

80 kWh

2x SHT with Y connector



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SBH100-400

10-40 kWh

Performance at a glance.

5kWh / Module, Modular and flexible design

Max. charging/discharging current: 50A (continuous)

Battery type: LiFePO₄, Prismatic Cell

Charge temp: 0 to 50°C, Discharge temp: -20 to 50°C

Suitable for outdoor. IP55, C5, water/dust/ corrosion resistant

Easy installation with Wireless design, Weight: 5.0kWh, 45kg

Multiple redundant safety layers

SUNGROW

A man with a beard, wearing a blue suit and tie, is sitting on a concrete ledge outdoors. He is smiling and looking at a laptop computer on his lap. The background is a blurred city street with buildings and a bright sky. An orange rectangular box is overlaid on the left side of the image, containing the word "COMPATIBILITY" in white, bold, uppercase letters.

COMPATIBILITY

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BATTERY COMPATIBILITY

SHT is compatible with:

- SBR096-256 (3 to 8 modules) all versions of modules and accessory box – **recommended SBR160**
- SBH100-400 (2 to 8 modules) **recommended SBH150**

Keep in mind the charge/discharge power depends on the model and is lower than max value on datasheet



COMPATIBILITY FACTSHEET

COMPATIBILITY LIST

PUBLIC



SH15-25T Compatibility Overview



Communication

| | Part of delivery | Max. Support | Features / Comment |
|--------------------------------------|------------------|---|-----------------------------------|
| WiNet-S2 | yes | max. 1 device | 10 sec. refresh, WiFi or Ethernet |
| EyeS4-EU | no | max. 1 device | 10 sec. refresh, 4G |
| Logger1000 COM100E | no | max. 8 SHT and 5 CX or CX-P2 devices | |
| Logger1000A-EU COM100D-EU | no | max. 8 SHT and 5 CX or CX-P2 devices | |

Energy Meters

| | Part of delivery | Feed-in limitation | Features / Comment |
|------------------------|------------------|--------------------------|--|
| DTSU666 5(80)A* | no | yes, 1 per host inverter | |
| DTSU666-20* | yes | yes, 1 per host inverter | 3x 100 A / 333 mV CT included, 3x 250 A / 333 mV CT to be purchased separately |
| DTSI352-CT* | no | yes, 1 per host inverter | 3x 5A secondary CT to be purchased separately |

* only with meter version bought from Sungrow

Y-Connector Compatibility

| | Part of delivery | Features / Comment |
|-------------------|------------------|--|
| SBR096-256 | no | 2 battery towers in parallel (same capacity, up to 51.2 kWh) – Not for DACH region |
| SBH100-400 | no | 2 battery towers in parallel (same capacity up to 80 kWh) |

2025 | VERSION 3.3

9



COMPATIBILITY FACTSHEET

iHomeManager Compatibility Overview



iHM is now compatible with up to 5x SHT inverters of different sizes.

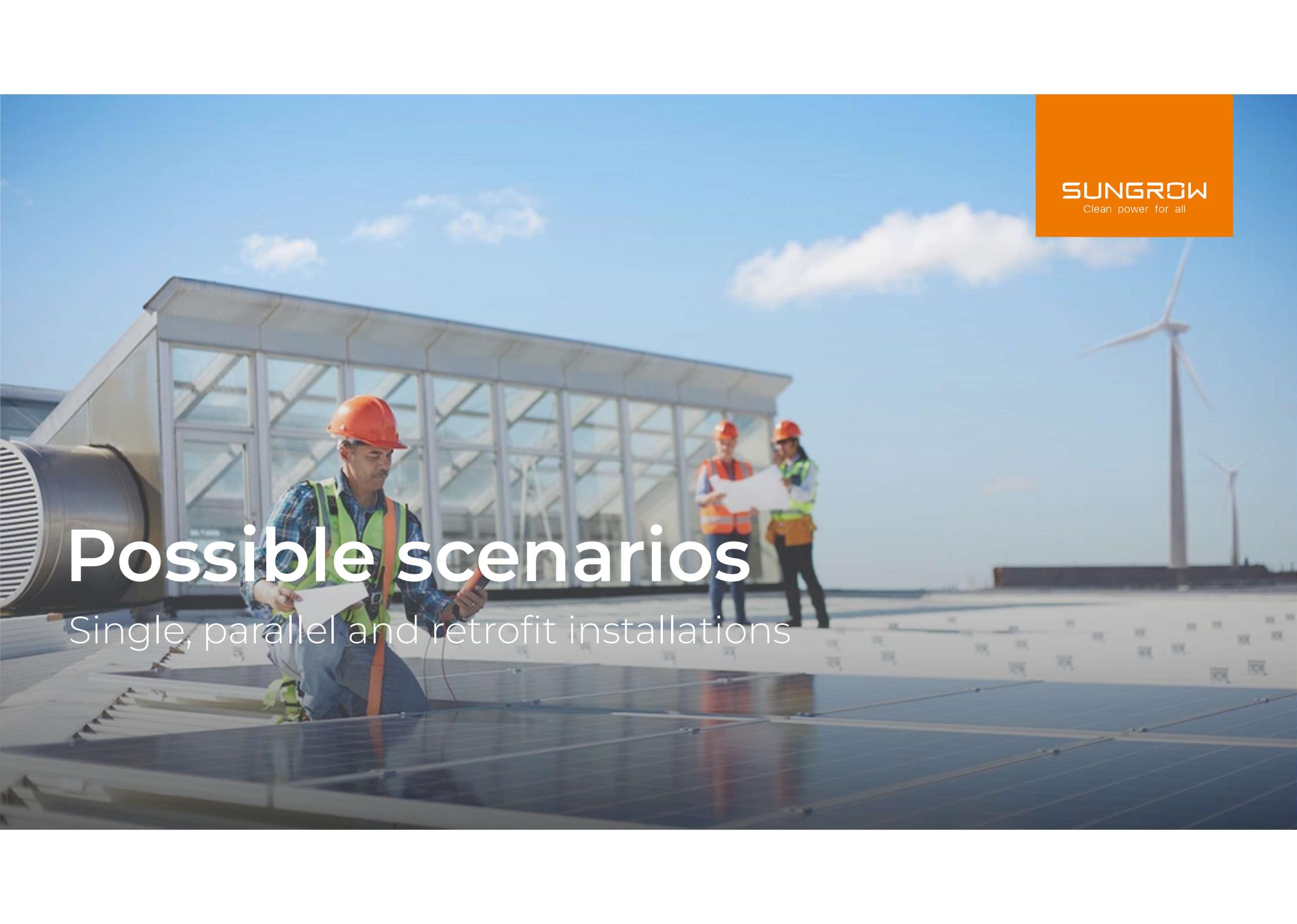
AC22E-01 EV charger is only possible to use with SHT via iHM connection
Check iHM presentations

| Inverter | Max. Devices | Communication Device | Battery | AC Charger | Max. AC Chargers | iHM |
|---|--------------|----------------------|---------------|---------------|------------------|------------|
| SG5.0-20RT | up to 5 | Winet-S | Not supported | AC22E-01 | 1 | Compulsory |
| SH5.0-10RT-20 SH5.0-10RT (V11, V12) | up to 5 | Winet-S | SBR | AC22E-01 | 1 | Optional |
| SH5.0-25T | up to 5 | Winet-S2 | SBR/SBH | AC22E-01* | 1 | Compulsory |
| S450S** S800S** S1600S** | up to 15 | iHomeManager | Not supported | Not supported | / | Optional |

*Please note that the combination of AC22E-01 and SHT Hybrid inverter can only be used together with the iHomeManager

** Only for metering purposes to monitor the consumption in iSolarCloud



The image shows a construction site on a rooftop. In the foreground, a worker in a blue plaid shirt, orange hard hat, and yellow safety vest is kneeling and working on solar panels. In the background, two other workers in orange hard hats and safety vests are standing and looking at a set of plans. The rooftop is covered with solar panels, and a large glass-enclosed structure is visible in the mid-ground. In the far background, several wind turbines are visible against a clear blue sky with a few clouds. The overall scene is bright and sunny.

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Possible scenarios

Single, parallel and retrofit installations

POSSIBLE SCENARIOS

SINGLE SHT

| Scenario | PV | Battery | Meter | WiNet-S2 | Ext EMS |
|---------------------|----------|---------|-------------|----------|----------|
| Self-consumption | Optional | Yes | Yes | Yes | Optional |
| Partial backup | Optional | Yes | Yes | Yes | Optional |
| Whole home backup | Optional | Yes | Optional | Yes | Optional |
| Retrofit/AC coupled | Optional | Yes | Yes (2 CTs) | Yes | Optional |



POSSIBLE SCENARIOS

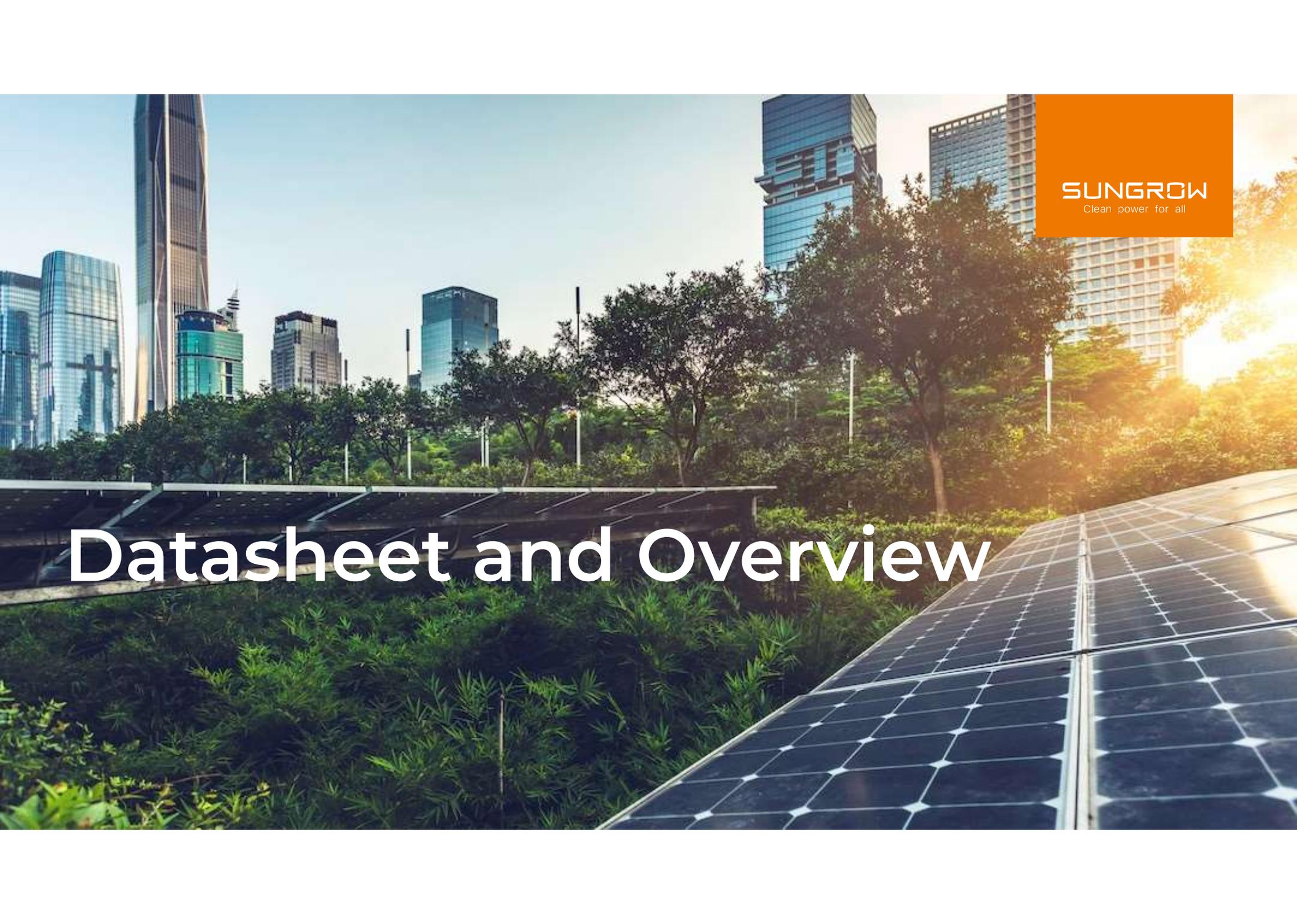
MULTIPLE SHT

| Scenario | Timeline/Comments |
|---------------------------------------|-------------------|
| Self-consumption Parallel up to 4x | Approved |
| Separate backup up to 4x | Approved |
| Retrofit + parallel up to 4x | Approved |
| Logger1000B + 8x SHT and 5x CX | Approved |





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Datasheet and Overview

SH15/20/25T Hybrid Datasheet

| Type designation | SH15T | SH20T | SH25T |
|---|---|------------------------------|-----------------------------|
| Input (DC) | | | |
| Recommended max. PV input power | 30000 Wp | 40000 Wp | 50000 Wp |
| Max. PV input voltage * | | 1000 V | |
| Min. PV input voltage / Startup input voltage | | 150 V / 180 V | |
| Rated PV input voltage | | 600 V | |
| MPPT operating voltage range ** | | 150 V - 950 V | |
| No. of independent MPP trackers | | 3 | |
| No. of PV strings per MPPT | | 2 / 2 / 1 | |
| Max. PV input current | | 80 A (32 A / 32 A / 16 A) | |
| Max. DC short-circuit current | | 100 A (40 A / 40 A / 20 A) | |
| Max. current for input connector | | 30 A | |
| Battery data | | | |
| Battery type | | Li-ion battery | |
| Battery voltage range | | 100 V - 700 V | |
| Max. charge / discharge current *** | | 50 A / 50 A | |
| Max. charge / discharge power | 30000 W / 15000 W | 30000 W / 20000 W | 30000 W / 25000 W |
| Input and Output (AC) | | | |
| Max. AC power from grid **** | | 43000 VA | |
| Rated AC output power | 15000 W | 20000 W | 25000 W |
| Max. AC output apparent power | 15000 VA | 20000 VA | 25000 VA |
| Max. AC output current | 22.8 A | 30.4 A | 37.9 A |
| Rated AC voltage | 3 / N / PE, 220 V / 380 V ; 230 V / 400 V; 240 V / 415 V | | |
| AC voltage range | 270 V - 480 V | | |
| Rated grid frequency | 50 Hz / 60 Hz | | |
| Grid frequency range | 45 Hz - 55 Hz / 55 Hz - 65 Hz | | |
| Harmonic (THD) | < 3 % (of rated power) | | |
| Power factor at rated power / Adjustable power factor | > 0.99 / 0.8 leading to 0.8 lagging | | |
| Feed-in phases / connection phases | 3 / 3-N-PE | | |
| Backup data(on grid mode) | | | |
| Max. output power for backup load **** | | 43000 W | |
| Max. output current for backup load | | 3 * 63 A | |
| Backup data(off-grid mode) | | | |
| Rated voltage | 3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V (± 2 %) | | |
| Rated frequency | 50 Hz / 60 Hz (± 0.2 %) | | |
| THDV (@Linear load) | 2 % | | |
| Backup switch time | < 10 ms | | |
| Rated output power | 15000 W / 15000 VA | 20000 W / 20000 VA | 25000 W / 25000 VA |
| Peak output power ***** | 25500 W / 25500 VA ,10 s | 32000 W / 32000 VA ,10 s | 36500 W / 36500 VA ,10 s |

← High DC/AC ratio

← Ideally, 2-3 panels remain above min and below max design limits

← 3 MPPT

← 2 with double PV input

← Impv jewells max. 32A/16A pro MPPT

← Isc WR 40A/20A, Panel@STC max. 34,8A/17,4A

← PV plug load max. 30A Isc

← 1-2 SBRxxx battery tower can be connected or 1-2 SBHxxx battery tower

← 43kVA max. reference power battery share of this is limited)

← 43kVA possible for consumers

Theoretically permanent or short-term
 ← can be supplied in the event of a power failure, provided that
 ← enough power of PV+battery



SH15/20/25T Hybrid Datasheet

| | | |
|---|---|-----------------|
| Efficiency | | |
| Max. efficiency / European efficiency | 98.1 % / 97.6 % | 98.2 % / 97.8 % |
| Protection & Function | | |
| Grid monitoring | Yes | |
| DC reverse polarity protection | Yes | |
| AC short-circuit protection | Yes | |
| Leakage current protection | Yes | |
| DC switch (solar) | Yes | |
| Surge protection | DC Type II / AC Type II | |
| PID zero | Yes | |
| Battery input reverse polarity protection | Yes | |
| General data | | |
| Topology (solar / battery) | Transformerless / Transformerless | |
| Degree of protection | IP65 | |
| Dimensions (W * H * D) | 620 mm * 480 mm * 245 mm | |
| Weight | 38 kg | 40 kg |
| Mounting method | Wall-mounting bracket | |
| Operating ambient temperature range | -25 °C to 60 °C | |
| Allowable relative humidity range(Non-condensing) | 0 % - 100 % | |
| Cooling method | Natural convection | Fan cooling |
| Max. operating altitude | 2000 m | |
| Noise(Typical) | 35 dB (A) | 50 dB (A) |
| Display | LED | |
| Communication | RS485, WLAN, Ethernet, CAN | |
| DI / DO | DI * 4 / DO * 2 / DRM0 | |
| DC connection type | MC4 compatible connector (PV,Max.6 mm ²) /Plug and play connector (battery, Max.10 mm ²) | |
| AC connection type | Plug and play connector (Max.16 mm ²) | |
| Compliance | IEC / EN 62109, IEC 61000-6, EN 62477-1, IEC 61727, IEC 62116, IEC 62920, EN 55011, CISPR 11, VDE-AR-N-4105, EN 50549-1, NRS 097, AS/NZS 4777.2:2020, TOR Type A, R25, CEI 0-21 | |

← Batteries cannot be charged below 0°
(charging power limited 0°C-14°C)

← SH25T Higher noise level due to external fan

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection

** Please refer to the user manual for the full load MPPT voltage range

*** Depending on the connected battery

**** Please refer to the user manual and modify the settings based on actual load power

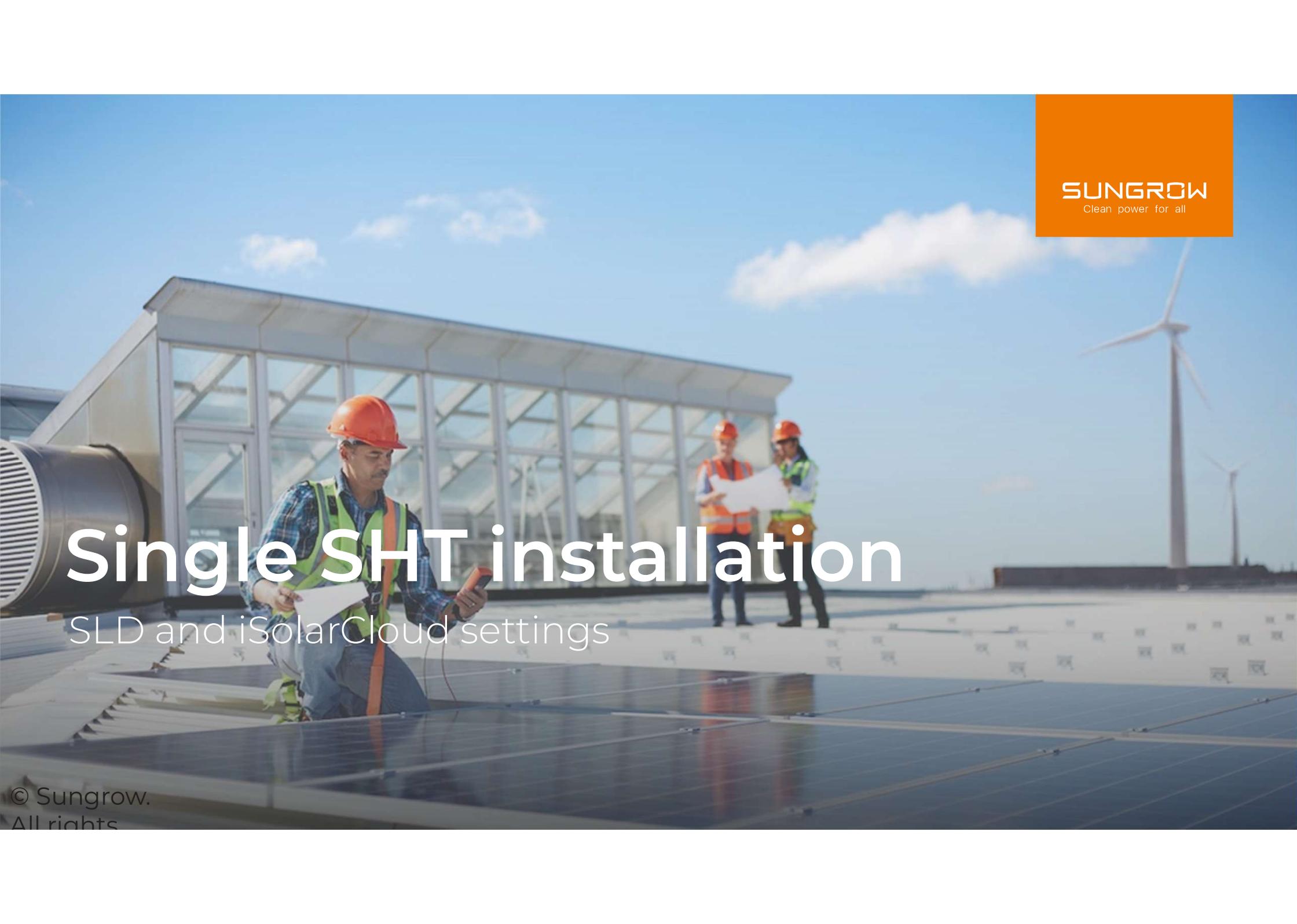
***** Can be reached only if PV and battery power is sufficient





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SHT System Solution

The image shows a construction site on a rooftop. In the foreground, a worker in an orange hard hat and a high-visibility vest is kneeling and working on solar panels. In the background, two other workers in similar safety gear are standing and looking at a set of plans. The rooftop is covered with solar panels, and a large industrial unit is visible on the left. In the distance, several wind turbines are visible against a clear blue sky with some light clouds. The overall scene is bright and clear, suggesting a sunny day.

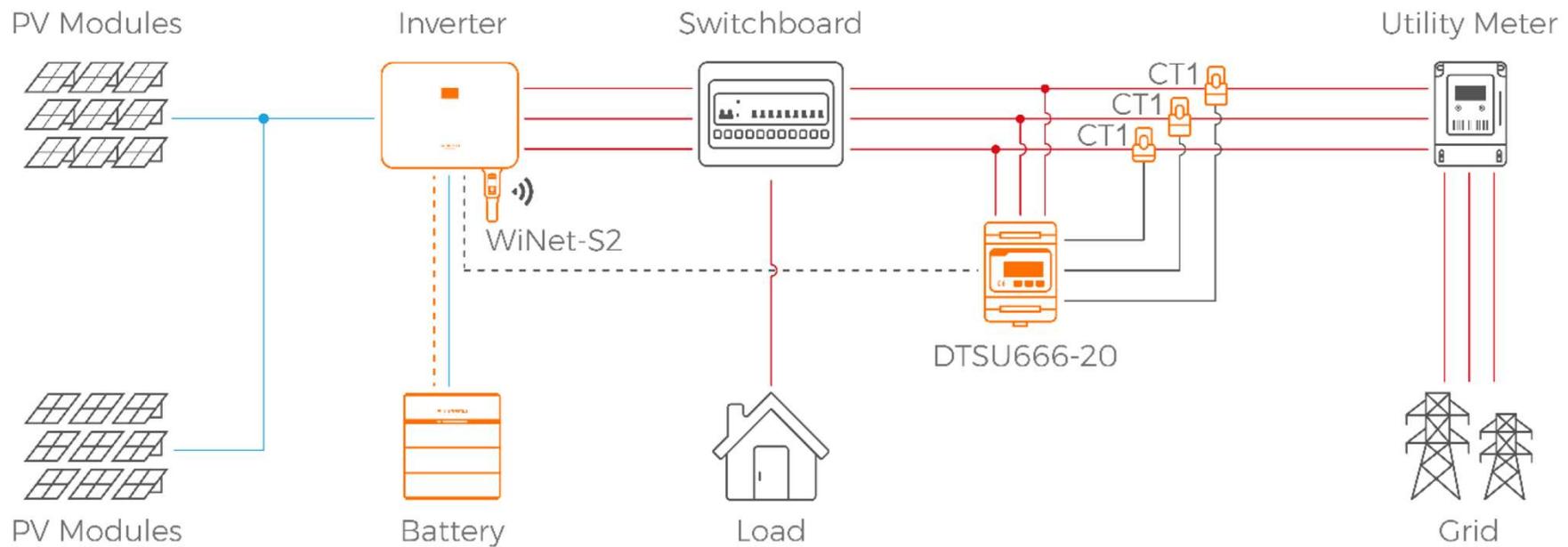
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Single SHT installation

SLD and iSolarCloud settings

SINGLE SHT

NO BACKUP



— DC — AC - - - CAN - - - RS485 — Analog signal ʘ Wi-Fi



SINGLE SHT

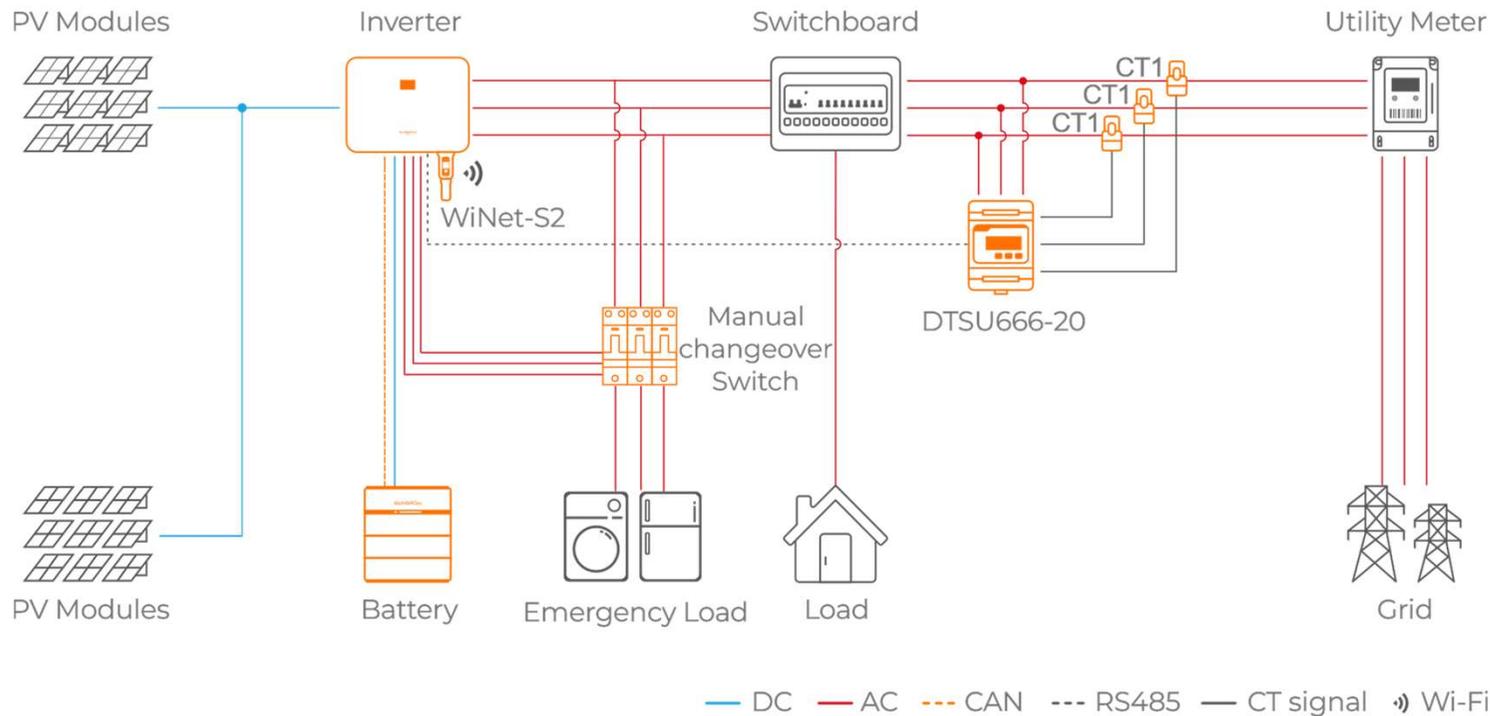
PARTIAL BACKUP



Router



iSolar Cloud



In any backup installation

- manual switch recommended
- purchased by installer
- With leading/lagging N function

Max 50m meter cable

Max 10m battery cable

Use 6m included CT cables



SINGLE SHT

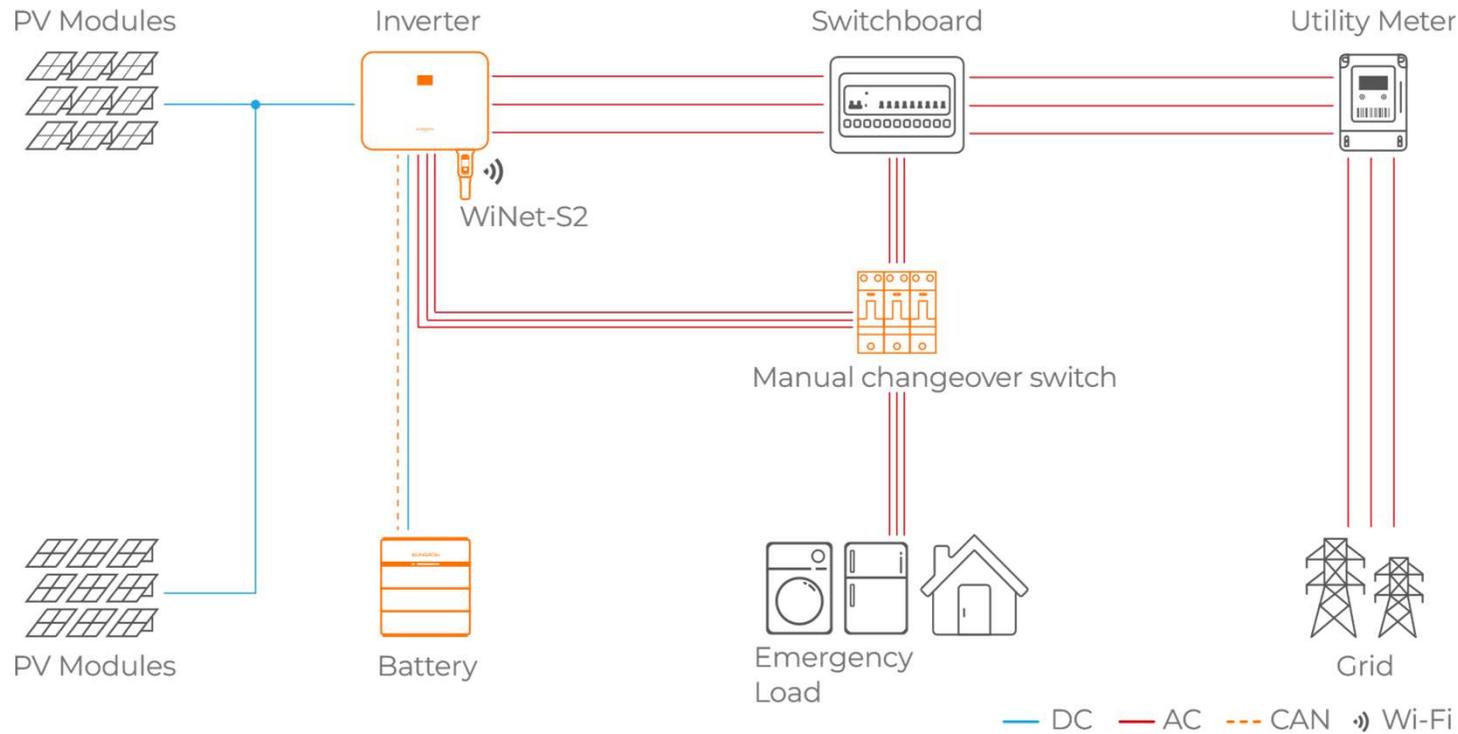
WHOLE HOME BACKUP



Router



iSolar Cloud



Energy meter not needed (disable in iSC settings)

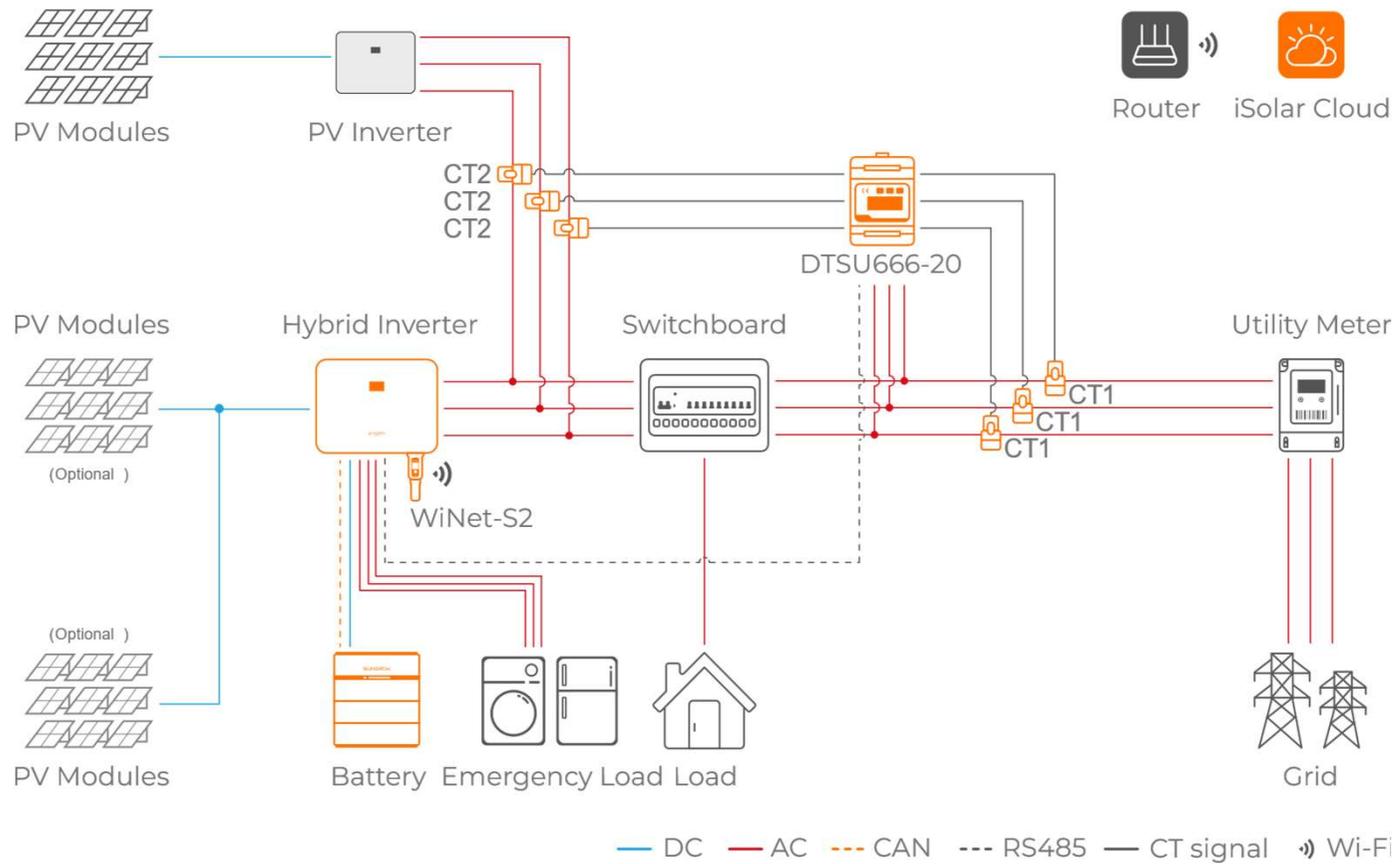
Manual switch purchased by installer 63A/400V regardless of inverter model
[Example from Hager](#)

With leading/lagging N function



SINGLE SHT

RETROFIT OR AC COUPLED



SHT also without PV, will charge battery from external PV inverter

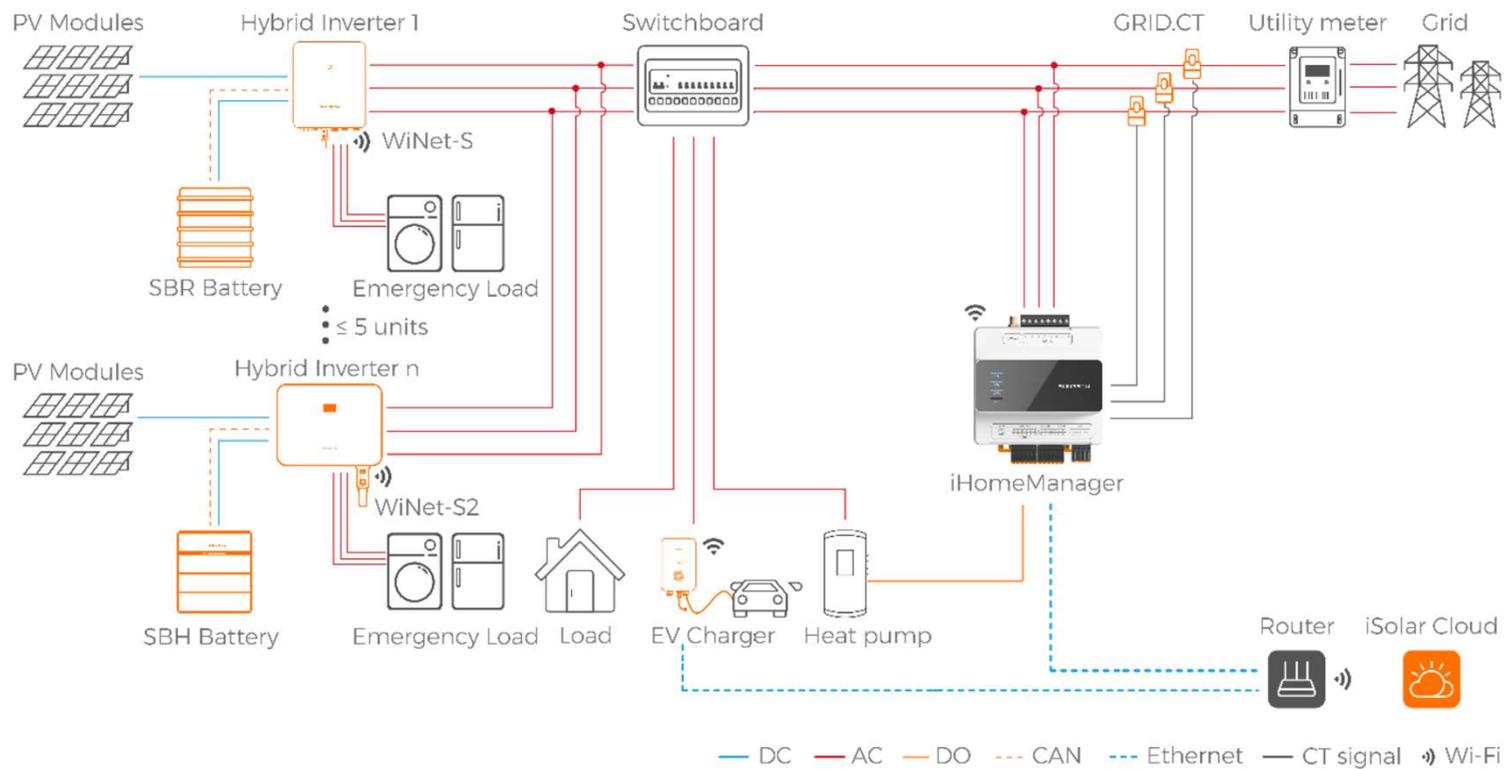


SHT+iHomeManager

Installation and iSC settings

IHOMEMANAGER + SHT

UP TO 5 INVERTER AND BATTERIES + EV CHARGING AND HEAT PUMP



See iHM System Application Manual for more information!



IHOMEMANAGER + SHT

COMPATIBILITY

| Component | Model | Quantity | Remarks |
|----------------------|--|--|--|
| Hybrid inverter | SH5-25T SH5-10RT V112 SH5-10RT-20 | Up to 5 | Different inverter models can be combined |
| String inverter | SG3-20RTall versions | | Different inverter models can be combined |
| Battery | SBR064-256 SBH100-400 | 1 per SHRT 2 per SHT with Y connector | Check inverter compatibility |
| Communication Device | WiNet-S or WiNet-S2 | 1 per inverter | Check inverter compatibility |
| EV charger | AC22E-01 | 1 | Connected with same WLAN, managed by iHM |
| Heat pump | SG-Ready | 1 | DO connection between heat pump and iHM is established, and the start/stop of the heat pump is controlled by the DO dry contact signal |
| CT | 100A/333mV | 3 | Delivered with iHM |
| Home router | Router supporting IEEE 802.11 b/g/n, 2.4 GHz | 1 | Connected with inverter, EV charger, iHM via WLAN or Ethernet |



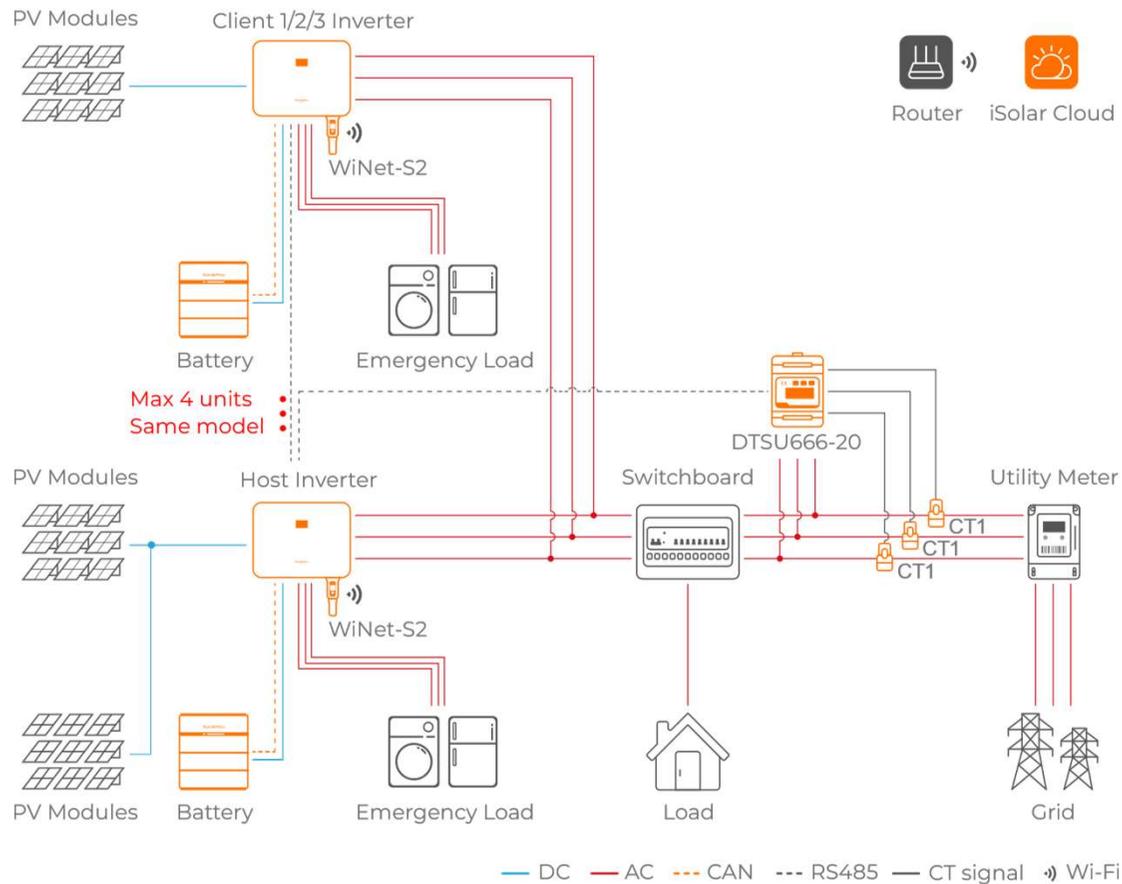


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SHT Multi-Hybrid System Solution

4X SHT IN PARALLEL

SEPARATE BACKUP



SHT must be the same model for all 4 inverters

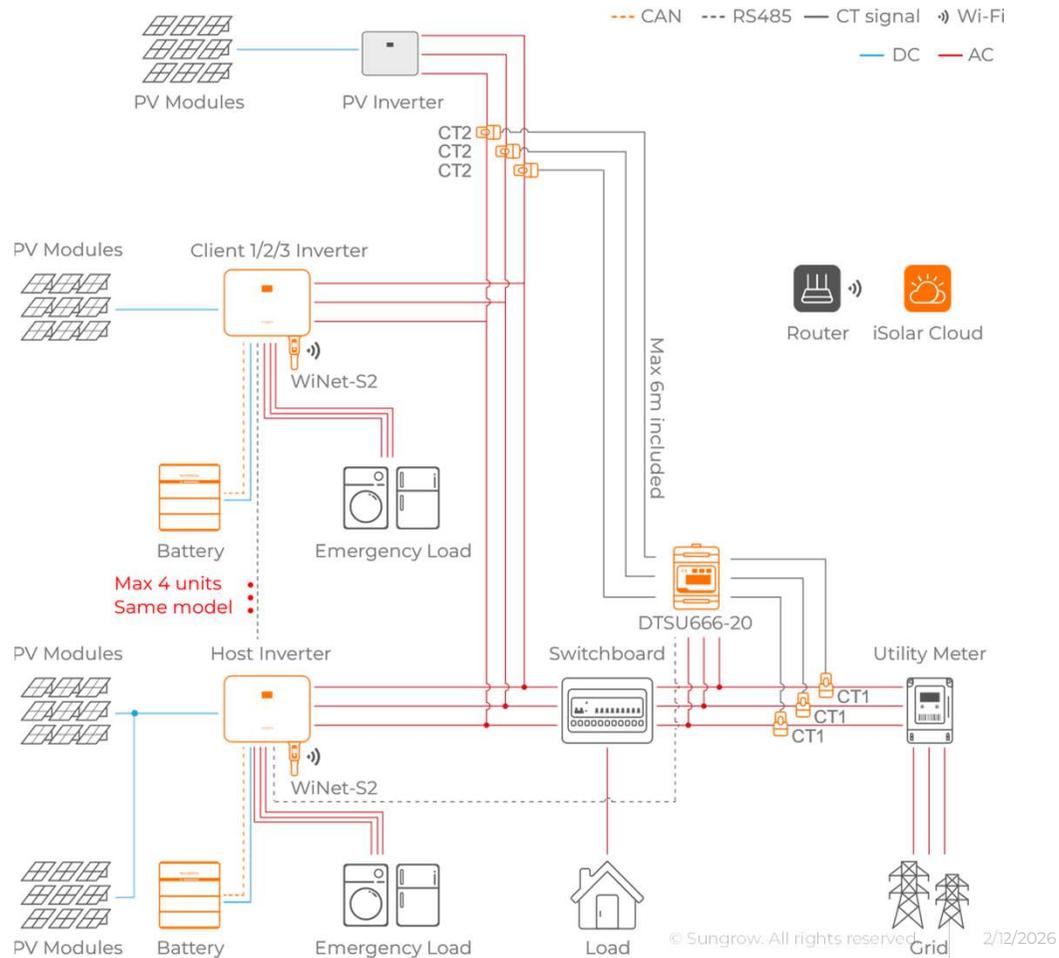
Depending on local country regulation (RCR, NS protection etc)

Max 10m RS485 cable between inverters



4X SHT IN PARALLEL

RETROFIT INVERTER



Use CT2 only for third party inverter. For Sungrow inverter make sure they are in the same iSC plant as SHT

Possible scenarios:

- **Scenario 1:**
Host and Client1 with Battery but no PV
Client2 and Client3 with PV but no battery
- **Scenario 2:**
All with PV and battery
CX inverter in the same plant with WiNet



Y connector for SHT

Y CONNECTOR FOR SHT

DOUBLE THE BATTERY CAPACITY

- For customers who want more battery capacity for each inverter
- 2x SBH (same model and size) for max 80kWh DC
- With 4x SHT in parallel, max size 100kW AC, 320kWh DC



SHT + Y CONNECTOR

COMPATIBILITY WITH SHT INVERTER ONLY



SH5.0-25T



SH5.0-10RT V11/V12/-20



SH3.0-6.0RS



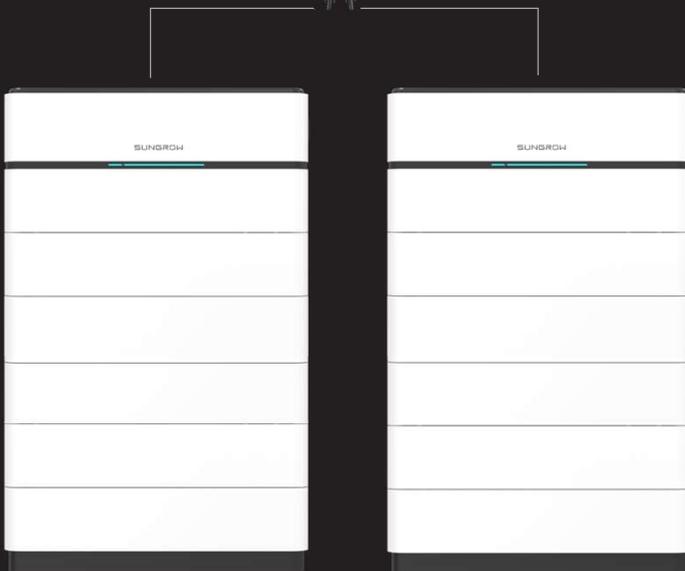
Approved: Parallel with different battery models



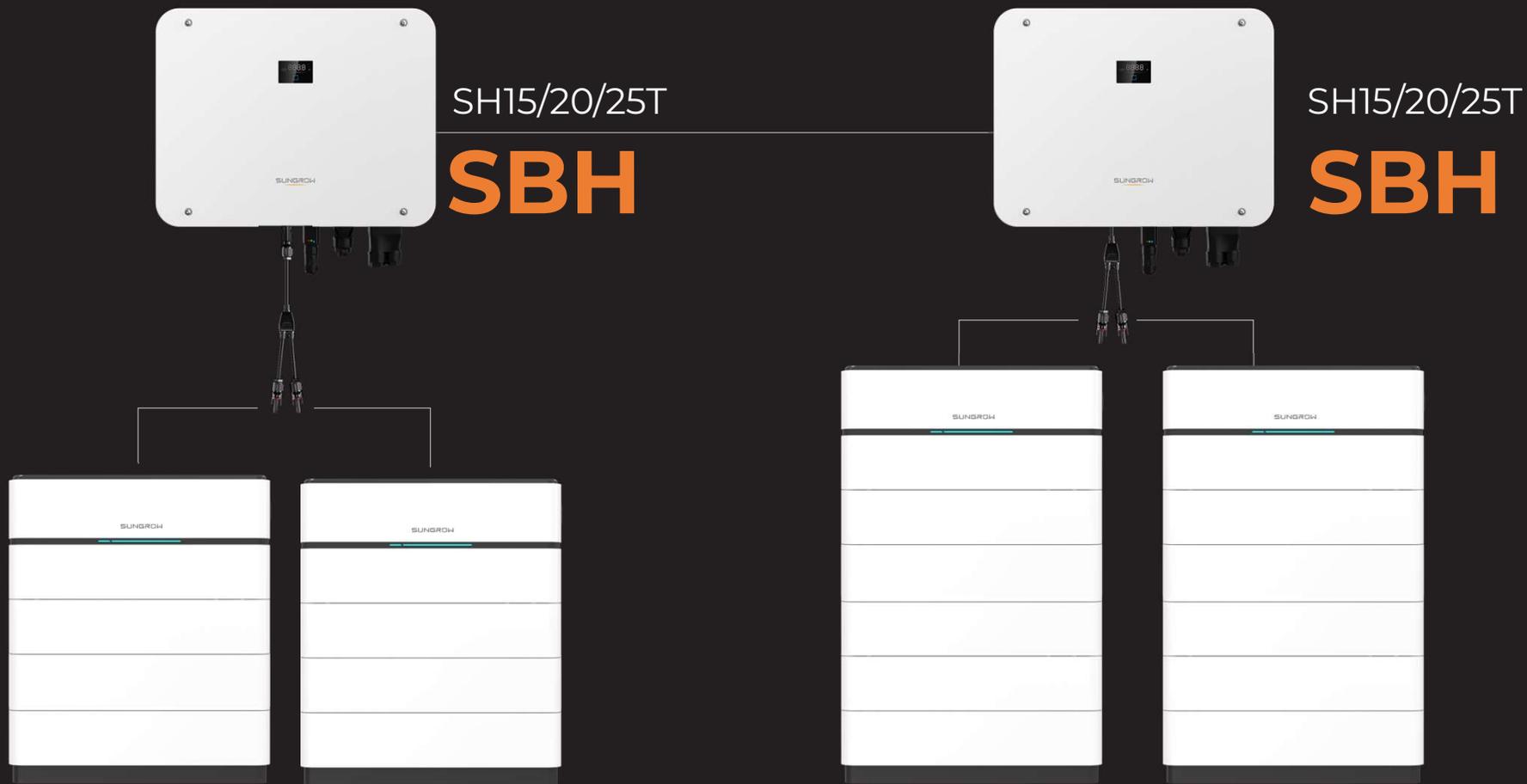
SH15/20/25T
SBH



SH15/20/25T
SBR



Approved: Parallel with different battery models

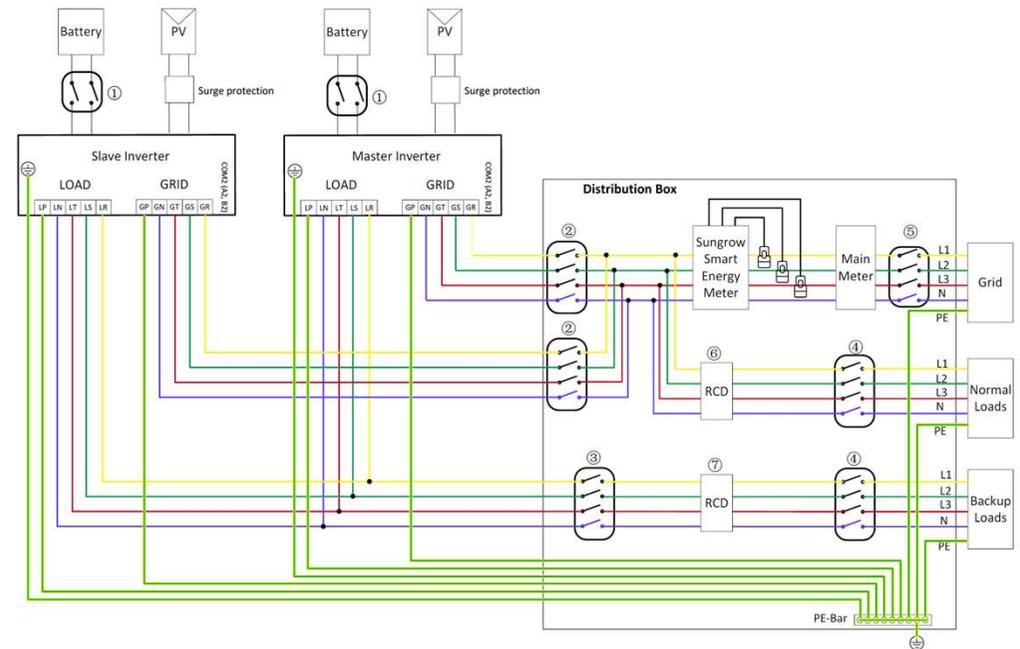
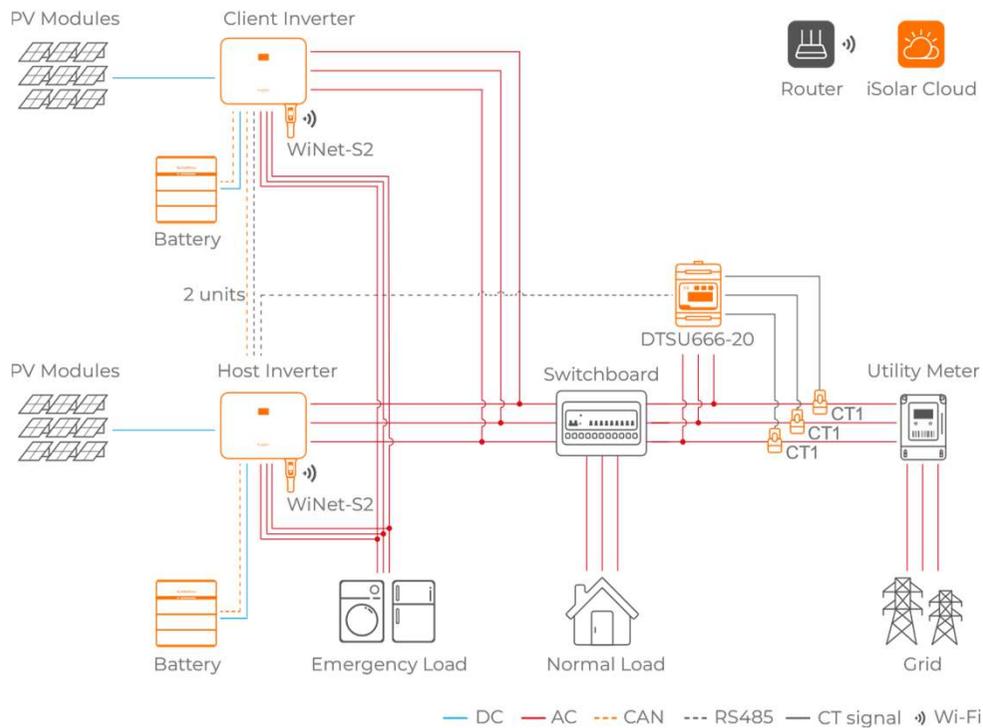


Backup Parallel SHT

2x Backup connected to the same load

2X SHT IN PARALLEL

2X BACKUP CONNECTED TO THE SAME LOAD



Grounding and protection like this

CAN H/L also on COM1 between inverters

