

# CERTIFICATE of Conformity

Registration No.: A3 50655356 0001

Report No.: CN240ZB7 001

Holder: Guangzhou Sanjing Electric Co., Ltd.  
No.9, Lizhishan Road, Science City,  
Guangzhou High-tech Zone,  
Guangdong  
P.R. China

Product: Energy Storage System  
(All-in-one Energy Storage System)

Identification: Type Designation: HS3-5K-T2-W-BX, HS3-5K-T2-W-PX,  
HS3-5K-T2-G-BX, HS3-5K-T2-G-PX, HS3-6K-T2-W-BX,  
HS3-6K-T2-W-PX, HS3-6K-T2-G-BX, HS3-6K-T2-G-PX,  
HS3-8K-T2-W-BX, HS3-8K-T2-W-PX, HS3-8K-T2-G-BX,  
HS3-8K-T2-G-PX, HS3-10K-T2-W-BX, HS3-10K-T2-W-PX,  
HS3-10K-T2-G-BX, HS3-10K-T2-G-PX, HS3-10K-T2-W-BX-BE,  
HS3-10K-T2-W-PX-BE, HS3-10K-T2-G-BX-BE,  
Continued on page 0002

Tested acc. to: NTS Version 2.1  
NTS Version 2.1-Correction 1.0  
UNE 217001:2020

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Date 09.12.2024

Durch die DAkkS nach  
DIN EN ISO/IEC 17065:2013  
akkreditierte Zertifizierungsstelle.  
Die Akkreditierung gilt nur für den in der  
Urkundenanlage D-ZE-14169-01-02  
aufgeführten Akkreditierungsumfang.

Certification Body

  
A. Chen

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

www.tuv.com

 **TÜVRheinland®**  
Precisely Right.

# CERTIFICATE of Conformity

Registration No.: A3 50655356 0002

Report No.: CN240ZB7 001

**Holder:** Guangzhou Sanjing Electric Co., Ltd.  
No.9, Lizhishan Road, Science City,  
Guangzhou High-tech Zone,  
Guangdong  
P.R. China

**Product:** Energy Storage System  
(All-in-one Energy Storage System)

**Identification:** as page 0001 continuation  
HS3-10K-T2-G-PX-BE, HS3-12K-T2-W-BX, HS3-12K-T2-W-PX,  
HS3-12K-T2-G-BX, HS3-12K-T2-G-PX, HS3-12K-T2-W-BX-IE,  
HS3-12K-T2-W-PX-IE, HS3-12K-T2-G-BX-IE, HS3-12K-T2-G-PX-IE  
(X=1,2,3,4,5,6,7,8(Number of battery modules))  
Firmware Version: V1.011  
Remark: Refer to test report CN240ZB7 001 for details.

**Tested acc. to:** NTS Version 2.1  
NTS Version 2.1-Correction 1.0  
UNE 217001:2020

The certificate of conformity refers to the above mentioned product. This is to certify that the specimen is in conformity with the assessment requirement mentioned above. This certificate does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.

Date 09.12.2024

Durch die DAkkS nach  
DIN EN ISO/IEC 17065:2013  
akkreditierte Zertifizierungsstelle.  
Die Akkreditierung gilt nur für den in der  
Urkundenanlage D-ZE-14169-01-02  
aufgeführten Akkreditierungsumfang.

Certification Body

  
A. Chen

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

www.tuv.com

 **TÜVRheinland®**  
Precisely Right.

Certificado no.: A3 50655356 0001

# Certificado De Conformidad

**Fabricante:**  
*Manufacturer:* Guangzhou Sanjing Electric Co., Ltd.  
No.9, Lizhishan Road, Science City, Guangzhou High-tech Zone, Guangdong,  
P.R. China

**Tipo de producto:**  
*Type of product:* ENERGY STORAGE SYSTEM  
(All-in-one Energy Storage System)

**Modelo:**  
*Model:* HS3-5K-T2-W-BX, HS3-5K-T2-W-PX, HS3-5K-T2-G-BX, HS3-5K-T2-G-PX, HS3-6K-T2-W-BX, HS3-6K-T2-W-PX, HS3-6K-T2-G-BX, HS3-6K-T2-G-PX, HS3-8K-T2-W-BX, HS3-8K-T2-W-PX, HS3-8K-T2-G-BX, HS3-8K-T2-G-PX, HS3-10K-T2-W-BX, HS3-10K-T2-W-PX, HS3-10K-T2-G-BX, HS3-10K-T2-G-PX, HS3-10K-T2-W-BX-BE, HS3-10K-T2-W-PX-BE, HS3-10K-T2-G-BX-BE, HS3-10K-T2-G-PX-BE, HS3-12K-T2-W-BX, HS3-12K-T2-W-PX, HS3-12K-T2-G-BX, HS3-12K-T2-G-PX, HS3-12K-T2-W-BX-IE, HS3-12K-T2-W-PX-IE, HS3-12K-T2-G-BX-IE, HS3-12K-T2-G-PX-IE (X=1,2,3,4,5,6,7,8(Number of battery modules))

**Versión de firmware:**  
*Firmware version:* V1.011

**Estándar:**  
*Standard:* NTS Version 2.1  
Norma técnica de supervisión de la conformidad de los módulos de generación de electricidad según el Reglamento UE 2016/631  
NTS Version 2.1-Correction 1.0  
Corrección de errores de la versión 2.1 (del 9/7/2021) de la Norma Técnica de Supervisión de la Conformidad de los Módulos de Generación de Electricidad según el Reglamento UE 2016/631  
UNE 217001:2020  
Ensayos para sistemas que eviten el vertido de energía a la red de distribución

**Reporte no.:**  
*Report No.:* CN240ZB7 001

**Fecha de emisión:**  
*Date of issue:* 09.12.2024

El certificado de conformidad hace referencia al producto mencionado anteriormente. Esto es para certificar que la muestra se encuentra en conformidad con el requisito de evaluación mencionado anteriormente. Este certificado no implica una evaluación de la producción del producto y no permite el uso de una marca de conformidad TÜV Rheinland.

*The verification of conformity refers to the above mentioned product. This is to verify that the specimen is in conformity with the assessment requirement mentioned above. This verification does not imply assessment of the production of the product and does not permit the use of a TÜV Rheinland mark of conformity.*



**A. Chen**  
Certificador

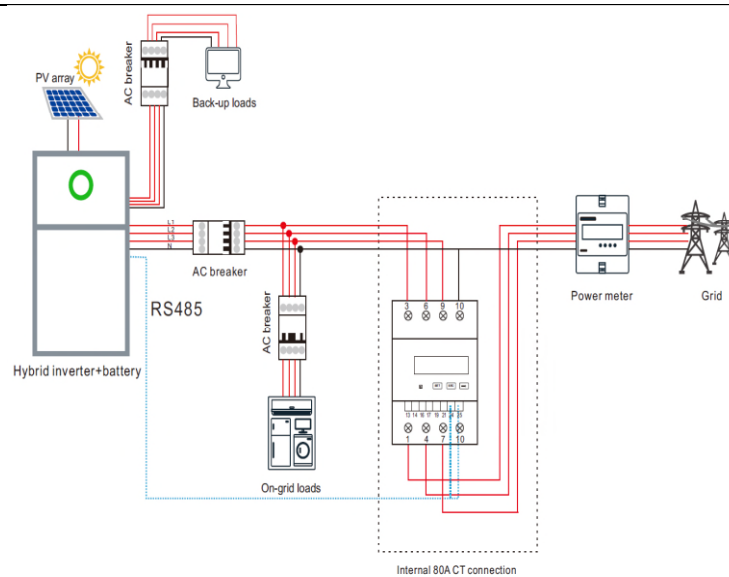
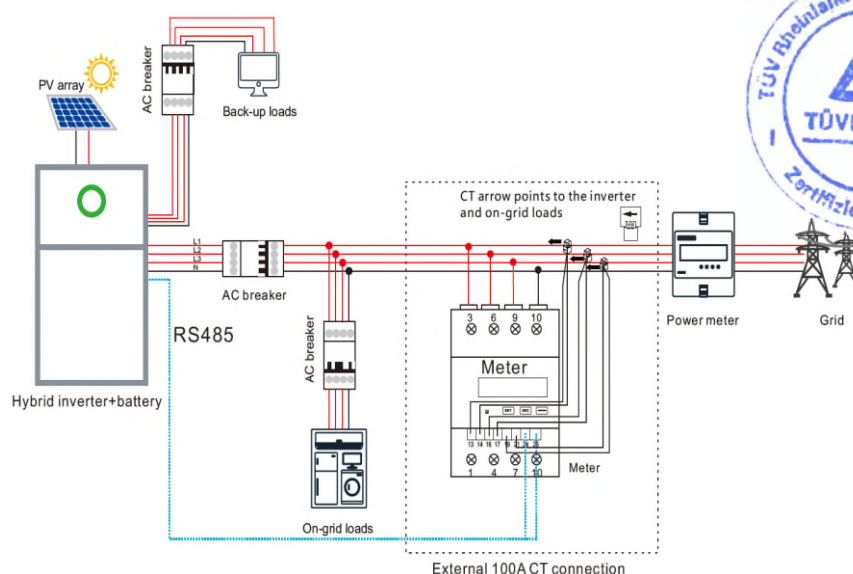
**Apéndice 1**
**Appendix 1**

Appendix 1

| Información del inversor<br>Inverter information                                                                                                       |                                   |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------------|-------------------------------------|-------------------------------------------|
| Modelo<br>Model                                                                                                                                        | HS3-3K-T2-W-BX;<br>HS3-3K-T2-G-BX | HS3-4K-T2-W-BX;<br>HS3-4K-T2-G-BX | HS3-5K-T2-W-BX;<br>HS3-5K-T2-G-BX | HS3-6K-T2-W-BX;<br>HS3-6K-T2-G-BX | HS3-8K-T2-W-BX;<br>HS3-8K-T2-G-BX | HS3-10K-T2-W-BX;<br>HS3-10K-T2-G-BX | HS3-10K-T2-W-BX-BE;<br>HS3-10K-T2-G-BX-BE | HS3-12K-T2-W-BX;<br>HS3-12K-T2-G-BX | HS3-12K-T2-W-BX-IE;<br>HS3-12K-T2-G-BX-IE |
| Potencia nominal CA<br>Nominal AC Power                                                                                                                | 3000                              | 4000                              | 5000                              | 6000                              | 8000                              | 10000                               | 10000                                     | 12000                               | 11000                                     |
| Tensión nominal CA<br>Nominal AC voltage                                                                                                               | 3+N+PE, 220/380, 230/400, 240/415 |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Corriente máxima CA<br>Maximal AC current                                                                                                              | 4.8                               | 6.4                               | 8.0                               | 9.6                               | 12.8                              | 15.9                                | 14.5                                      | 17.4                                | 15.9                                      |
| Frecuencia nominal<br>Nominal frequency                                                                                                                | 50/60                             |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Rango de tensión MPPT<br>MPPT voltage range                                                                                                            | 180-900                           |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Tensión CC máxima<br>Max. DC voltage                                                                                                                   | 1000                              |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Corriente DC máxima<br>Max. DC current                                                                                                                 | 16/16                             |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Elemento de control<br>Control device                                                                                                                  | Controller in Inverter            |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Tipo de dispositivo de control<br>Type of control device                                                                                               | Integrated                        |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Información general del transductor de corriente externo / medidor de potencia **)<br>General information of external current transductor/ power meter |                                   |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |

| Información del inversor<br>Inverter information                                                                                                       |                                   |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------------|-------------------------------------|-------------------------------------------|
| Modelo<br>Model                                                                                                                                        | HS3-3K-T2-W-PX;<br>HS3-3K-T2-G-PX | HS3-4K-T2-W-PX;<br>HS3-4K-T2-G-PX | HS3-5K-T2-W-PX;<br>HS3-5K-T2-G-PX | HS3-6K-T2-W-PX;<br>HS3-6K-T2-G-PX | HS3-8K-T2-W-PX;<br>HS3-8K-T2-G-PX | HS3-10K-T2-W-PX;<br>HS3-10K-T2-G-PX | HS3-10K-T2-W-PX-BE;<br>HS3-10K-T2-G-PX-BE | HS3-12K-T2-W-PX;<br>HS3-12K-T2-G-PX | HS3-12K-T2-W-PX-IE;<br>HS3-12K-T2-G-PX-IE |
| Potencia nominal CA<br>Nominal AC Power                                                                                                                | 3000                              | 4000                              | 5000                              | 6000                              | 8000                              | 10000                               | 10000                                     | 12000                               | 11000                                     |
| Tensión nominal CA<br>Nominal AC voltage                                                                                                               | 3+N+PE, 220/380, 230/400, 240/415 |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Corriente máxima CA<br>Maximal AC current                                                                                                              | 4.8                               | 6.4                               | 8.0                               | 9.6                               | 12.8                              | 15.9                                | 14.5                                      | 17.4                                | 15.9                                      |
| Frecuencia nominal<br>Nominal frequency                                                                                                                | 50/60                             |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Rango de tension MPPT<br>MPPT voltage range                                                                                                            | 180-900                           |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Tensión CC máxima<br>Max. DC voltage                                                                                                                   | 1000                              |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Corriente DC máxima<br>Max. DC current                                                                                                                 | 20/20                             |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Elemento de control<br>Control device                                                                                                                  | Controller in Inverter            |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Tipo de dispositivo de control<br>Type of control device                                                                                               | Integrated                        |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |
| Información general del transductor de corriente externo / medidor de potencia **)<br>General information of external current transductor/ power meter |                                   |                                   |                                   |                                   |                                   |                                     |                                           |                                     |                                           |

|                                                             | Single mode                                 | Parallel mode                      |
|-------------------------------------------------------------|---------------------------------------------|------------------------------------|
| <b>Fabricante</b><br><i>Manufacturer</i>                    | Zhejiang CHINT Instrument & Meter Co., Ltd. | GUANGZHOU SANJING ELECTRIC CO.,LTD |
| <b>Modelo</b><br><i>Model</i>                               | DTSU666                                     | eManager                           |
| <b>Aplicación</b><br><i>Application</i>                     | 3 phase                                     | 3 phases                           |
| <b>Tensión nominal</b><br><i>Nominal voltage</i>            | 230V                                        | 230V                               |
| <b>Corriente máxima</b><br><i>Max. current</i>              | 100A per line conductor                     | 63A per line conductor             |
| <b>Clase de precisión</b><br><i>Class of accuracy</i>       | I                                           | I                                  |
| <b>Tipo de comunicación</b><br><i>Type of communication</i> | RS485                                       | LAN                                |

**Esquema básico del sistema \*\*)**
*Basic system diagram*

**Figure 1. Single mode Internal CT connection( $\leq 80A$ )**

**Figure 2. Single mode External CT connection(<100A)**

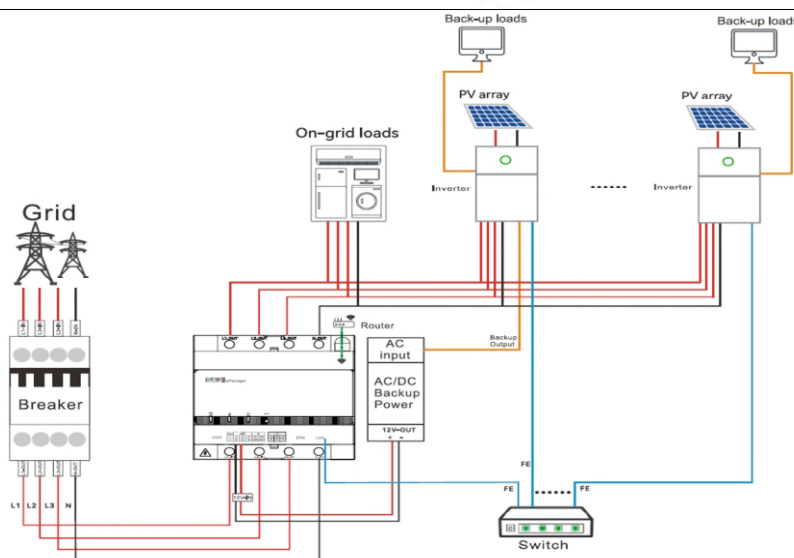


Figure 3. Parallel mode Internal CT connection(<63A)

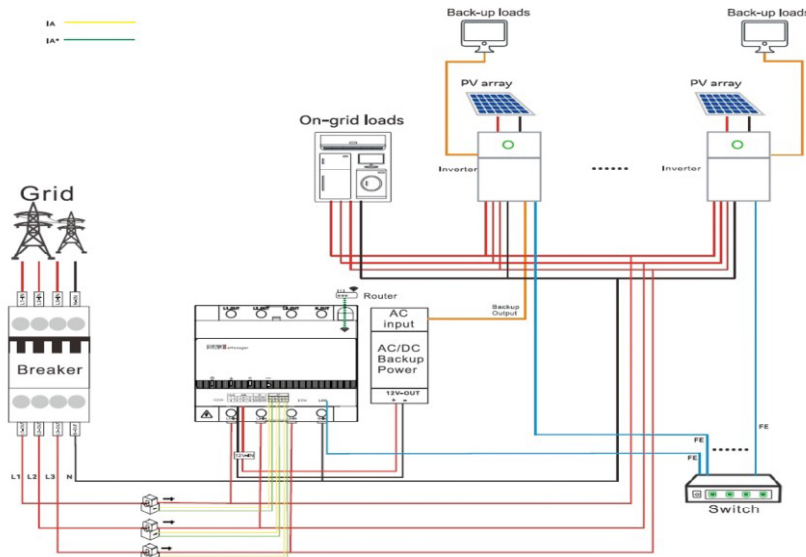


Figure 4. Parallel mode External CT connection(>63A)

**Nota : Pueden ser incluidos en la solución certificada modelos variantes de analizador de red (sin control) y transformadores de corriente y tensión siempre que cumplan con:**

**Note : Variant models of network analyzers (without control) and current and voltage transformers can be included in certified solutions, provided they comply with:**

- **Mismo régimen de conexión (monofásico o trifásico)**  
• *Same connection scheme (single-phase or three-phase)*
- **Misma tolerancia de medida**  
• *Same measurement tolerance*
- **Mismo tiempo de refresco o inferior**  
• *Same or shorter refresh time*
- **Mismo tipo de Comunicaciones**  
• *Communication of the same type*
- **En el caso de que se requieran transformadores de corriente o tensión adicionales, misma precisión del conjunto o superior.**  
• *If additional current or voltage transformers are required, the component accuracy shall be the same or higher.*



## Apéndice 2

### Appendix 2

| Condición de transferencia de potencia<br><i>Transfer of power condition</i> | Energía de la red a la carga (W)<br><i>Power from grid to load (W)</i> | Limitado Potencia de la red a la carga (W)<br><i>Limited Power from grid to load (W)</i> | Hora de inyección a la red [t <sub>1</sub> ]<br><i>Time of feed into grid [t<sub>1</sub>]</i> | Plazo(s)<br><i>Time limit(s)</i> |
|------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------|
| Generadores individuales<br><i>Single generators</i>                         |                                                                        |                                                                                          |                                                                                               |                                  |
| 100% (fase R)<br><i>100% (phase R)</i>                                       | 42.25                                                                  | >0                                                                                       | 0.550                                                                                         | 2                                |
| 33% (fase R)<br><i>33% (phase R)</i>                                         | 8.15                                                                   | >0                                                                                       |                                                                                               |                                  |
| 100% (fase S)<br><i>100% (phase S)</i>                                       | 35.27                                                                  | >0                                                                                       | 0.550                                                                                         |                                  |
| 33% (fase S)<br><i>33% (phase S)</i>                                         | 10.30                                                                  | >0                                                                                       |                                                                                               |                                  |
| 100% (fase T)<br><i>100% (phase T)</i>                                       | 33.88                                                                  | >0                                                                                       | 0.550                                                                                         |                                  |
| 33% (fase T)<br><i>33% (phase T)</i>                                         | 13.43                                                                  | >0                                                                                       |                                                                                               |                                  |
| Condición de transferencia de potencia<br><i>Transfer of power condition</i> | Energía de la red a la carga (W)<br><i>Power from grid to load (W)</i> | Limitado Potencia de la red a la carga (W)<br><i>Limited Power from grid to load (W)</i> | Hora de inyección a la red [t <sub>2</sub> ]<br><i>Time of feed into grid [t<sub>2</sub>]</i> | Plazo(s)<br><i>Time limit(s)</i> |
| único generador<br><i>Two generators</i>                                     |                                                                        |                                                                                          |                                                                                               |                                  |
| 100% (fase R)<br><i>100% (phase R)</i>                                       | 12.91                                                                  | >0                                                                                       | 0.650                                                                                         | 2                                |
| 33% (fase R)<br><i>33% (phase R)</i>                                         | 20.03                                                                  | >0                                                                                       |                                                                                               |                                  |
| 100% (fase S)<br><i>100% (phase S)</i>                                       | 19.09                                                                  | >0                                                                                       | 0.700                                                                                         |                                  |
| 33% (fase S)<br><i>33% (phase S)</i>                                         | 19.41                                                                  | >0                                                                                       |                                                                                               |                                  |
| 100% (fase T)<br><i>100% (phase T)</i>                                       | 21.04                                                                  | >0                                                                                       | 0.700                                                                                         |                                  |
| 33% (fase T)<br><i>33% (phase T)</i>                                         | 38.56                                                                  | >0                                                                                       |                                                                                               |                                  |

**P**

**t**

$t_1$   $t_r$

$t_1=1.64s$   
 $t_r=(1.68-1.64)=0.04s$   
 $N \leq (2-t_1)/t_r+1=[(2-1.64)/0.04]+1=10$

**el número máximo de generadores que es posible incluir en el sistema es de 10**  
*Maximum number of generators that can be included in the system is 10.*

**Note:**

$t_1 + t_r \cdot (N - 1) \leq 2s$   
 $N \leq \frac{2-t_1}{t_r} + 1$

**N** es el número máximo de generadores que es posible incluir en el sistema;  
**t<sub>1</sub>** es el tiempo de respuesta con un único generador. Se tomará el tiempo de respuesta máximo obtenido;  
**t<sub>r</sub>** es la diferencia entre el tiempo de respuesta máximo con uno y dos generadores;

**N** Maximum number of generators that can be included in the system;  
**t<sub>1</sub>** Response time with a single generator. the maximum response time obtained will be taken;  
**t<sub>r</sub>** Difference between the maximum response time with one and two generators

