

# Certificate of Conformity

No. ESY 121060 0013 Rev. 00

**Holder of Certificate:** **MASTER BATTERY, S.L.**  
PASEO DE EXTREMADURA, 39  
28935 MOSTOLES  
SPAIN

**Product:** **Converter**  
**(Hybrid Inverter)**

**Model(s):** **MF-GREENE-8K3P, MF-GREENE-10K3P**  
**MF-GREENE-12K3P**

**Parameters:** See page 3-4

**Applicable standards:** UNE 217001:2020

This Certificate of Conformity confirms the compliance with the above listed standards on a voluntary basis. It refers only to the sample submitted to TÜV SÜD Product Service GmbH and does not certify the quality or safety of the serial products. It was issued according to TÜV SÜD Product Service certification program Photovoltaics and Grid Integration. For details see: [www.tuvsud.com/ps-cert](http://www.tuvsud.com/ps-cert)

**Test report no.:** 64290233042601

**Date,** 2023-07-04



( Billy Qiu )

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Certification Body TÜV SÜD Product Service GmbH performed assessment of the products listed below:

|   |   |
|---|---|
| Test requirement                              | The certification complies with the requirements of the following documents:<br><br><b>UNE 217001:2020</b> , Tests for systems that avoid energy discharge to the distribution network. |
| Manufacturer                                  | MASTER BATTERY, S.L.<br>PASEO DE EXTREMADURA, 39, 28935 MOSTOLES, SPAIN   |
| Product types used in power generation system | Inverter: Three-phase inverter<br>Network analyzer/ Current transformer   |
| Model and Technical Data                      | See page 3-6  |
| Software version                              | Inverter: ARM: V1.0.0, DSP: V1.0.0.<br>Network analyzer: 1.27   |
| Test Report                                   | 64.290.23.30426.01  |
| Issued by                                     | Testing lab:<br>TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch  |
| Accreditation No.                             | D-PL-19065-01-01  |
| Accreditation body ref.                       | DAkkS   |
| Reference of the certification body           |   |
| Certification Body                            | TÜV SÜD Product Service GmbH<br><br>DAKKS accreditation certificate D-ZE-11321-01-00 according to DIN EN ISO/IEC 17065:2013   |

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## Inverter Parameters:

| Model:  | MF-GREENE-8K3P   | MF-GREENE-10K3P | MF-GREENE-12K3P |
|---|--|-----------------|-----------------|
| <b>PV input parameter</b>   |  |                 |                 |
| Maximum input voltage   | 1100 Vd.c.   |                 |                 |
| MPPT voltage range  | 140~1000 Vd.c.   |                 |                 |
| MPPT voltage range (full load)                                      | 380~850 Vd.c.  | 420~850 Vd.c.   | 480~850 Vd.c.   |
| Maximum input current   | 2*15 Ad.c.   |                 |                 |
| PV I <sub>sc</sub>  | 2*20 Ad.c.   |                 |                 |
| <b>Battery input/output parameter</b>                               |  |                 |                 |
| Battery type  | Lithium or lead-acid   |                 |                 |
| Input voltage range   | 44~58 Vd.c.  |                 |                 |
| Maximum input/output voltage  | 58 Vd.c.   |                 |                 |
| Maximum charging current  | 160 Ad.c.  |                 |                 |
| Maximum charging power  | 8000 W   |                 |                 |
| Maximum discharging current   | 160 Ad.c.  | 200 Ad.c.       |                 |
| Maximum discharging power   | 8000 W   | 10000 W         |                 |
| <b>Grid parameter</b>   |  |                 |                 |
| Rated input/output voltage  | 3/N/PE, 230/400 Va.c.  |                 |                 |
| Rated input/output frequency  | 50 Hz  |                 |                 |
| Maximum input current   | 25 Aa.c.   |                 |                 |
| Maximum input active power  | 16000 W  | 17800 W         |                 |
| Maximum input apparent power  | 16000 VA   | 17800 VA        |                 |
| Maximum input active power from grid to battery                     | 8600 W   |                 |                 |
| Rated output current  | 11.6 Aa.c.   | 14.5 Aa.c.      | 17.4 Aa.c.      |
| Maximum continuous output current                                   | 12.8 Aa.c.   | 16.0 Aa.c.      | 19.2 Aa.c.      |
| Rated output active power   | 8000 W   | 10000 W         | 12000 W         |
| Maximum output active power   | 8000 W   | 10000 W         | 12000 W         |
| Maximum output apparent power                                       | 8800 VA  | 11000 VA        | 13200 VA        |
| Maximum output active power from battery to grid (without PV input) | 7500 W   | 9300 W          |                 |
| Power factor  | 0.9 inductive(under-excited) to 0.9 capacitive(over-excited) |                 |                 |

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## Network analyzer Parameters(Meter 1):

|   |                           |
|---|---------------------------|
| Model   | SDM630MCT                 |
| Electrical parameter                                  |                           |
| Voltage connect type                                  | 230/400 Va.c. 3W+N+PE     |
| Rated Frequency                                       | 50 Hz                     |
| Current specification                                 | 120A/40mA                 |
| Energy consumption                                    | ≤2 W                      |
| Type  | Through transformer       |
| Precision parameter                                   |                           |
| Maximum error limit percentage of various instruments | ±1.0                      |
| Precision class                                       | Active Power class 1      |
| Communications  |                           |
| Communication type                                    | RS485 ModBus RTU Protocol |
| Refresh time  | ≤100 ms                   |

## Current transformer Parameters:

|                            |           |
|----------------------------|-----------|
| Model                      | ESCT-TA16 |
| Rated primary current      | 120 Aa.c. |
| Rated transformation ratio | 3000:1    |
| Rated load                 | 10 Ω      |
| Rated Frequency            | 50 Hz     |
| Accuracy                   | ±0.5%     |

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## Network analyzer Parameters(Meter 2):

|   |                           |
|---|---------------------------|
| Model   | ADW300W                   |
| Electrical parameter                                  |                           |
| Voltage connect type                                  | 230/400 Va.c. 3W+N+PE     |
| Rated Frequency                                       | 50 Hz                     |
| Current specification                                 | 120A/30mA                 |
| Energy consumption                                    | <2 W                      |
| Type  | Through transformer       |
| Precision parameter                                   |                           |
| Maximum error limit percentage of various instruments | ±1.0                      |
| Precision class                                       | Active Power class 1      |
| Communications  |                           |
| Communication type                                    | RS485 ModBus RTU Protocol |
| Refresh time  | ≤1 s                      |

## Current transformer Parameters:

|                            |              |
|----------------------------|--------------|
| Model                      | HCT16K-FJ-A2 |
| Rated primary current      | 120 Aa.c.    |
| Rated transformation ratio | 4000:1       |
| Rated load                 | 20 Ω         |
| Rated Frequency            | 50 Hz        |
| Accuracy                   | ±0.5%        |

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## Network analyzer Parameters(Meter 3):

|   |                           |
|---|---------------------------|
| Model   | YDS60-C24                 |
| Electrical parameter                                  |                           |
| Voltage connect type                                  | 230/400Va.c. 3W+N+PE      |
| Rated Frequency                                       | 50 Hz                     |
| Current specification                                 | 100A/50mA                 |
| Energy consumption                                    | ≤1.5 W                    |
| Type  | Through transformer       |
| Precision parameter                                   |                           |
| Maximum error limit percentage of various instruments | ±1.0                      |
| Precision class                                       | Active Power class 1      |
| Communications  |                           |
| Communication type                                    | RS485 ModBus RTU Protocol |
| Refresh time  | ≤200 ms                   |

## Current transformer Parameters:

|                            |               |
|----------------------------|---------------|
| Model                      | CTF16L-2k-100 |
| Rated primary current      | 100 Aa.c.     |
| Rated transformation ratio | 2000:1        |
| Rated load                 | 20 Ω          |
| Rated Frequency            | 50 Hz         |
| Accuracy                   | ±0.5%         |

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## Electrical schematic diagram:

- The following figures show the operating diagram of single generator. SDM630MCT/ ADW300W/ YDS60-C24(Meter) communicates with the inverter through RS485, receives the grid connection point current collected by the CT current sensor, remote control inverter output active power to prevent energy from being injected into the grid.

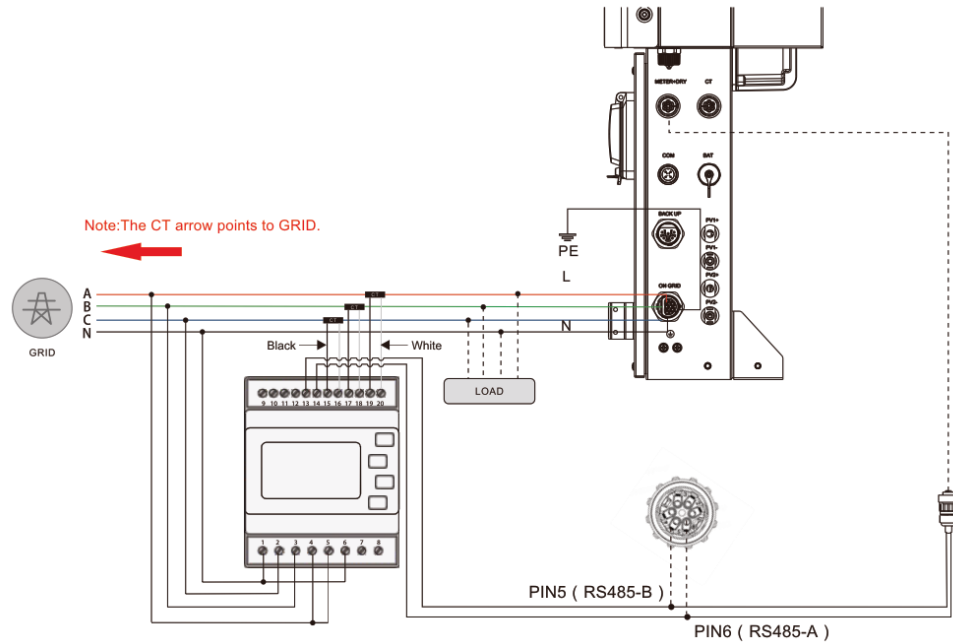


Figure 1 – SDM630MCT(Meter) with ESCT-TA16(CT current sensor) Wiring Connection

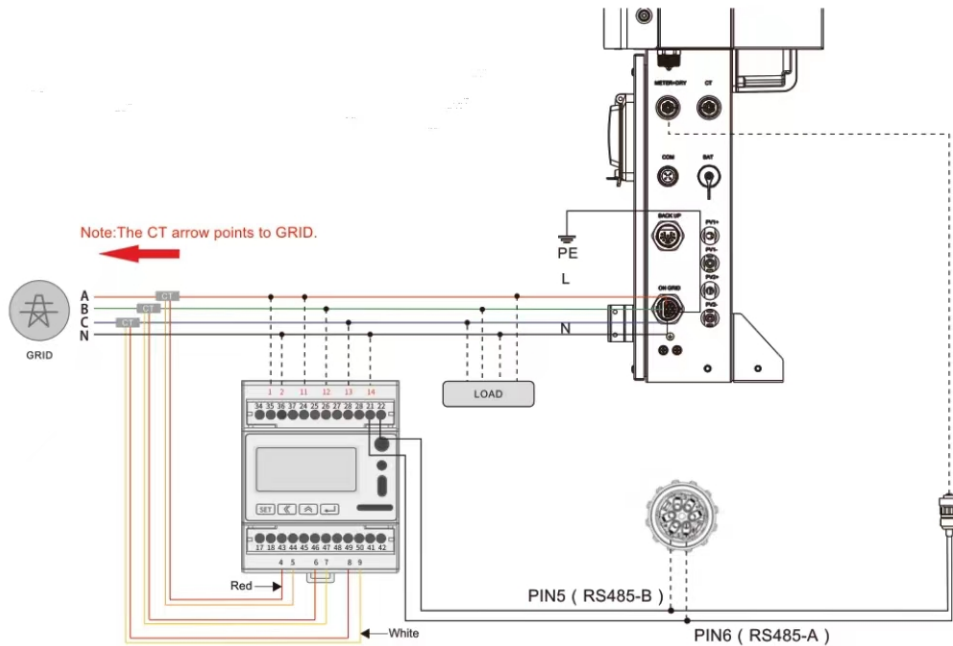


Figure 2 – ADW300W(Meter) with HCT16K-FJ-A2(CT current sensor) Wiring Connection

