

# SPECIFICATION FOR

EXPORT POWER LIMITATION

Ver1.0

Ningbo Ginlong Technologies Co., Ltd.

## © Copyrights

We reserve the rights to make technical changes or modify the contents of this document without prior notice. Ginlong technology does not accept any responsibility whatsoever for potential errors or possible lack of information in this document. We reserve all rights in this document and in the subject matter and illustrations contained herein. Any reproduction, disclosure to third parties or utilization of its contents in whole or in part is forbidden without prior consent of Ginlong technology.

# TABLE OF CONTENTS

| 1 | SCOPE AND APPLICATION | .4 |
|---|-----------------------|----|
| 2 | CT CHARACTERISTICS    | .4 |
| 3 | CT INSTALLATION       | .5 |
| 4 | INVERTER SETTINGS     | 6  |
| 5 | ЕРМ                   | 6  |

## **1. SCOPE AND APPLICATION**

This documentation described how to use the export power limitation function of solis inverters.

For Solis-Mini-(700-3600)-4G and Solis-1P(1-6)K-4G series inverters, it has been integrated an export power limitation function internal, to use this function, a CT (current transformer) or meter must be connected to the inverter, this function just single use (1pcs CT 1pcs inverter). For Solis other type inverters, an EPM (export power management) device can be used for the export power limitation. 1pcs EPM can control maximum 6pcs inverters.

# 2. CT CHARACTERISTICS

| Operating Environmental                      |                       |                         |             |  |  |  |  |
|--|-----------------------|-------------------------|-------------|--|--|--|--|
| Ambient temperature                          | -10°C~+50°C           | Storage temperature     | -20°C~+70°C |  |  |  |  |
| Relative humidity                            | ≤95%                  | Atmospheric pressure    | 70-106kpa   |  |  |  |  |
| <b>Electrical Characteristics</b>            |                       |                         |             |  |  |  |  |
| Primary rated current                        | 100A                  | Rated ratio error       | ±0.5%       |  |  |  |  |
| Secondary rated current                      | 33.33mA               | Rated phase error       | ≤60'        |  |  |  |  |
| Secondary load                               | 10Ω                   | Maximum current         | 120A        |  |  |  |  |
| power-frequency                              | 4000V/10S,1mA         | Operating frequency     | 50400HZ     |  |  |  |  |
| withstand voltage                            |                       |                         |             |  |  |  |  |
| Insulation independence                      | 100MΩ@500Vdc          | Authentication          | ROHS        |  |  |  |  |
| Linearity                                    | 0.5L(5A-120A)         | Open protective voltage | 6-8V        |  |  |  |  |
| Housing                                      | White, flame rating 9 | 94-V0                   |             |  |  |  |  |
| Secondary output cable HFZS-RVV2, length=10m |                       |                         |             |  |  |  |  |

#### CTSA16-100A/33.33Ma diagram



# 3. CT INSTALLATION

## **3.1 SAFETY INSTRUCTION**

- 1) The CT sensor installation must be executed by the qualified electrical technicians.
- 2) Be sure the power supply is off before the installation
- 3) Take protective equipment to avoid an electric shock
- 3.2 INSTALLATION

1) Open the CT



2) Clamp the CT on the live wire. Ensure that the maximum current of the power cable does not exceed the rated input current of CT, the arrow direction on the CT housing indicate to the grid side.





3) Re-fasten the CT, Fix the CT on the cable by ribbon to prevent slipping.



4) Connect the CT output cable to the inverter





CT cable length=10m

## 4. INVERTER SETTINGS

Solis-Mini-(700-3600)-4G and Solis-1P(1-6)K-4G series inverters have been integrated an export power limitation function internal, when use this function, the inverter settings as below.

| Advanced Settings 📫 Export Power Set 📫 Model Select 🚃 | OFF ON                                    |
|---|---|
|   | Meter in Load                             |
|   | Meter in Grid                             |
|   | Current Sensor 📥 CT Sampling Ratio 3000:1 |
| Set Backflow Power                                    | 5000W(for example)                        |
| Fail safe ON/OFF                                      |   |

#### 5. EPM

Ginlong EPM device can be used for single phase and 3 phases inverter's export power limitation controlling, solis-1PM1-2G is used for the single phase inverters, and solis-1PM2-2G is used for the 3 phases inverters.

EPM specifications please reference the EPM user manual.

5.1 EPM system diagram



#### 5.2 EPM RS485 daisy chain

1pcs EPM can through the RS485 bus control 6pcs same type inverters, RS485 daisy chain reference below diagram.



# 5.3 EPM CT connection

EPM CT connection reference CHARPTER 3 CT INSTALLATOIN. Difference is the CT arrow should indicate to the inverter as below.



# 5.4 EPM Settings

More information please reference EPM user manual.

| Advanced Settings 📫 | Set INV Num 01~06                     |
|---------------------|---------------------------------------|
| ⇒                   | Set Backflow Power 5000W(for example) |
| ⇒                   | Set CT Parameter 3000:1               |
| ⇒                   | Fail safe ON/OFF ON                   |
| ⇒                   | Backflow Work Mode 01 or 02           |
| ⇒                   | PELD ON/OFF ON                        |
|                     |                                       |

| REV | DATE       | NOTE          | EDITED BY   | VERIFIED BY |
|-----|------------|---------------|-------------|-------------|
| 1.0 | 2018/08/25 | First release | Daniel FANG |             |
|     |            |               |             |             |