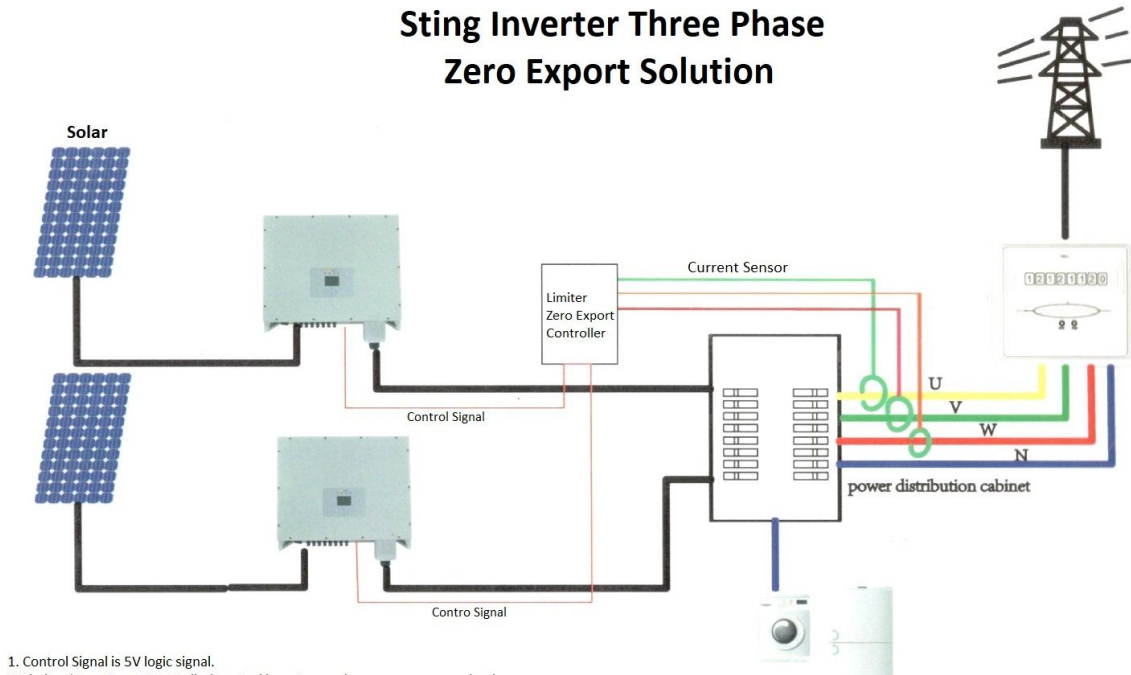


# ZERO EXPORT KIT - REVERSE POWER LIMITER

## (User Manual)

### Sting Inverter Three Phase Zero Export Solution



1. Control Signal is 5V logic signal.
2. Limiter (Zero Export Controller) control inverter produce same power as load and detect current export to the grid.
3. 300A  $\phi$  20mm current sensor.

### Zero Export Kit

## 1. Appearance Introduction

Three-phase external limiter can collect counter-current power to control the output power of the inverter, so that the power of inverter and load can be offset, and the excess power will not be fed back to the grid.

Its appearance is shown as below. Carefully observe the bottom of the Limiter, you can see corresponding line mark next to the green interface. The green terminals on the left are the interface of three-phase AC line (L1, L2, L3) and N Line (N), and the right are the interface between three sets of current sensor and one set of control terminals. Limiter will collect voltage and current from these interfaces and send control signals to the inverter.



**Pic 1-1 Front View**

After you receive the Limiter, please check if the accessories are complete.

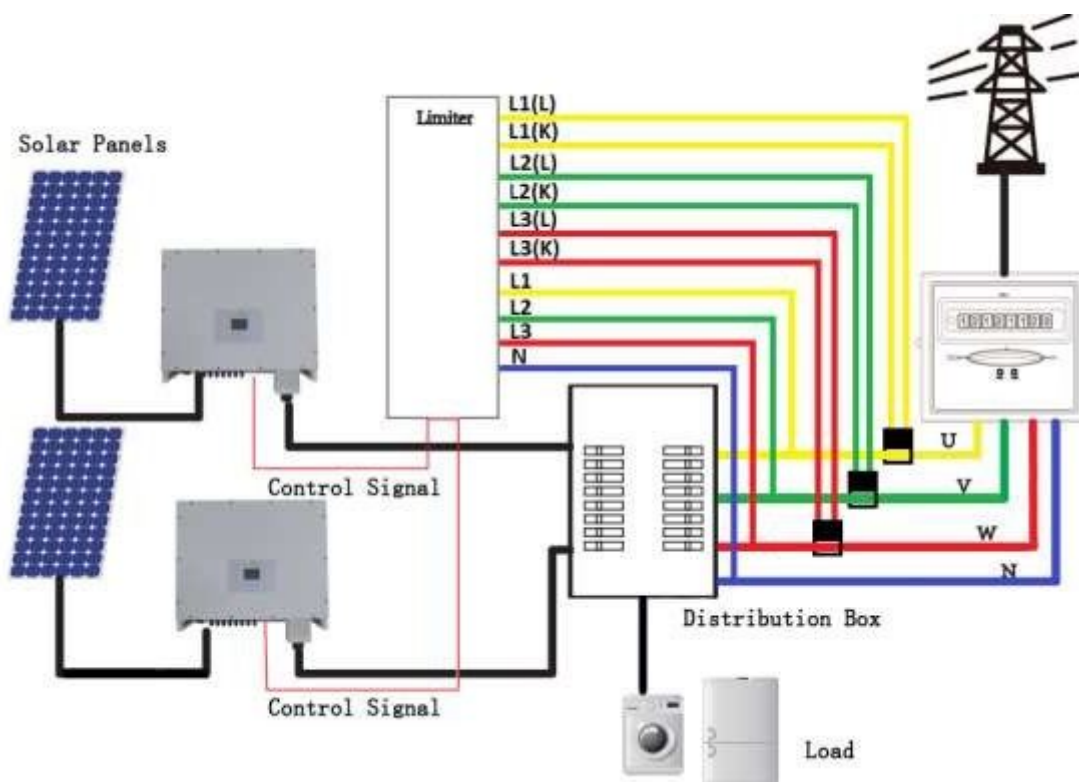
Accessories required to install Limiter include a Limiter, a 5V power adapter, three current transformers, and a waterproof terminal. A four-core AC connection (L1, L2, L3, N), a two-core control line and a suitable slotted screwdriver are also required.

**Pic2-1 Current Sensor and Waterproof Terminal**



## 2. Install limiter

After you have prepared the accessories, you can start installing the Limiter by referring to the figure below.



**Pic 3-1 Wiring Diagram**

The limiter will measure the voltage and current of three phases separately, and this manual only introduces the installation steps of one phase, the other two phases are the same. The specific installation steps are as follows:

- (1) Connect limiter to the grid. Connect to the grid is to measure the voltage of grid. Before connecting to the grid, please turn off the switch to avoid the risk of electric shock. Choose one wire from the bottom of the three-phase DC switch (any phase of U,V,W) to connect with L1 terminal, then tighten the line with a screwdriver.

(2) Connect limiter to clamp sensor. Clamp sensor can measure the current of the AC side, it should be connected to the front side of the load (domestic appliance ect.) to achieve this function. Only when the limiter collects the voltage and current of the same phase can it judge the power of the phase. So the clamp sensor should be connected to the same phase as the before. Open the side buckle of the clamp sensor, then clamp the sensor to the AC line on the DC switch, the arrow direction on the sensor should towards that of the load. The clamp sensor has two lines (shown as below), and the white line corresponds to K terminal, black line corresponds to L terminal. Connect the white line to the L1(L) and L1(K) terminal refer to the line mark of the limiter and tighten the line with screwdriver. This is the whole installation process of one phase.

3)



Pic 3-1 Current Sensor

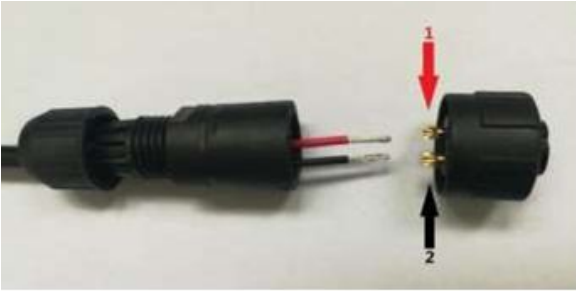


Pic 3-2 Limiter Arrow

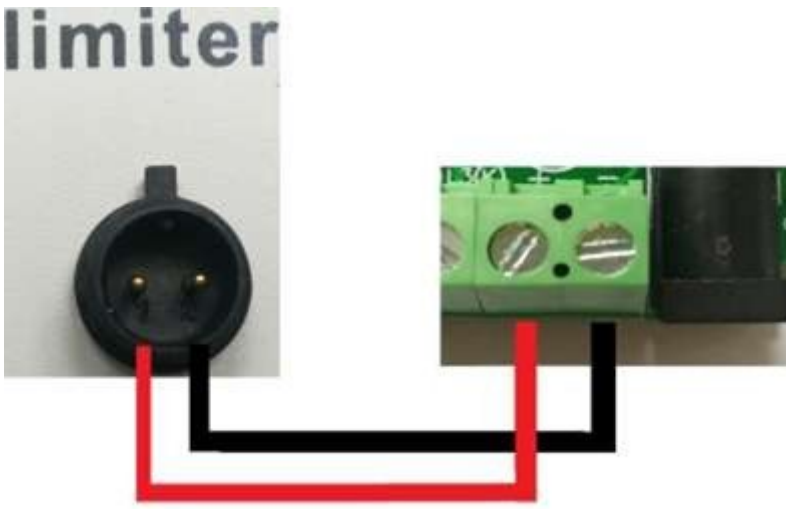
(4) After you finish the installation in process 1 and 2, connect the N line

(N) to the N terminal of the limiter and tighten the line'

Connect the control line. There are two numbers 1 and 2 on the interface of limiter, and the same on the waterproof terminal of the inverter. Twist the waterproof terminal and connect the red line to number 1 and black line to number 2 shown as the picture. After that connect the terminal to the interface of the limiter.



The other side of the line should be connected to the control terminal.



### 3. Debugging Limiter

Turn on the anti-backflow function of the inverter refer to the manual, then turn on the Limiter's power supply, next close the DC switch, and last turn on the inverter.



| MENU >> Setup >> Run Param |        |          |        |
|----------------------------|--------|----------|--------|
| ActiveP                    | 0%     | Island   | OFF    |
| Reactive                   | 0%     | Fun_GFDI | OFF    |
| PF                         | -1.000 | Limiter  | OFF    |
| Fun_ISO                    | OFF    | PowerWh  |        |
| Fun_RCD                    | OFF    | Factor   | 0.00   |
| SelfCheck                  | OS     | MPPT Num | 0      |
|                            | OK     |          | Cancel |

Press the button of the limiter to the setting interface. Long press the button to switch the anti-backflow mode. Limiter has two anti-backflow modes, the minimum



mode and the average mode. In the minimum mode, limiter will control the power of the inverter according to the phase with the lowest power to ensure that no reverse current will occur in each phase. In average mode, limiter controls the output of the inverter according to the average of the total power of the three-phase load, which may cause single backflow. The controller is produced in the minimum mode to ensure no anti-backflow happens to the customers.