



## **EXPORT POWER LIMITATION SOLUTION**

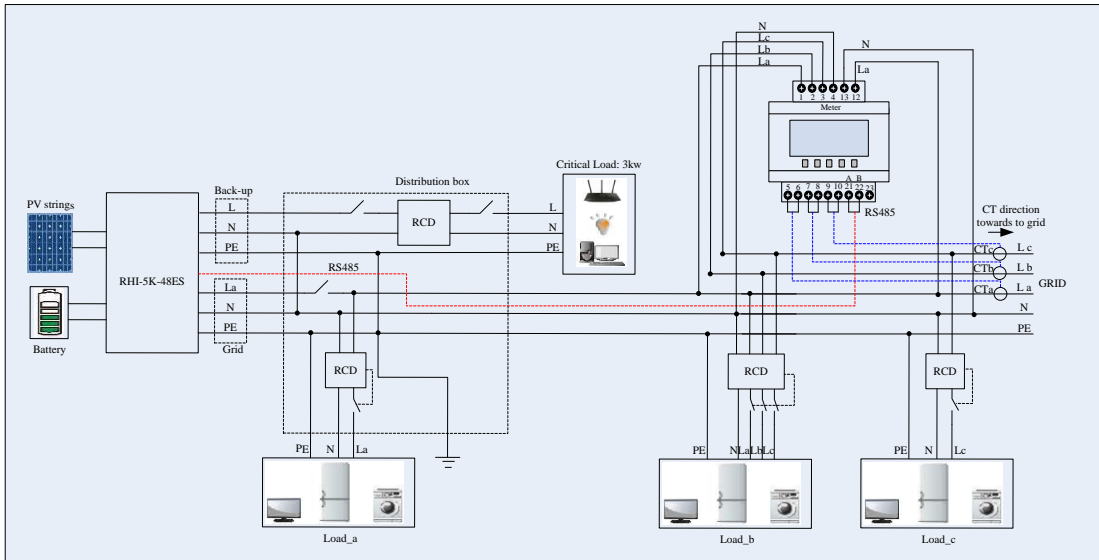
- FOR SOLIS RHI-(3-5K)-48ES INVERTER WITH 3-PHASE METER

Ver1.3

## 1. SCOPE

This documentation describes the application of RHI-(3-5K)-48ES series inverter with a 3-phase power meter in order to control the exported power of the inverter to the grid.

## 2. SYSTEM DIAGRAM



Function description:

- a) Collect electricity bill statistics

Normal function of a power meter: Total power equal to the sum of three phases' power.  $W_{Total} = W_a + W_b + W_c$

- b) Limit the export power of the whole system

Detect the load power of each phase with CT. Then, the hybrid inverter will automatically balance the power flow between PV inputs, battery and loads thus guaranteeing that no power or limited power is exported to the grid.

E.g.

If inverter output power > ( $W_a + W_b + W_c$ ), the remaining power will export to the grid in a normal situation. We can reduce the power feeding to the grid by either reducing the PV inputs or charging the battery.

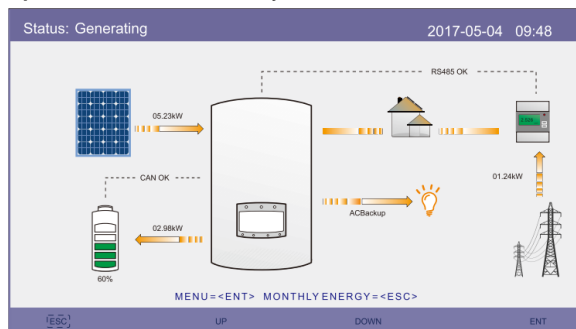
## 3. METER SELECTION SETTING

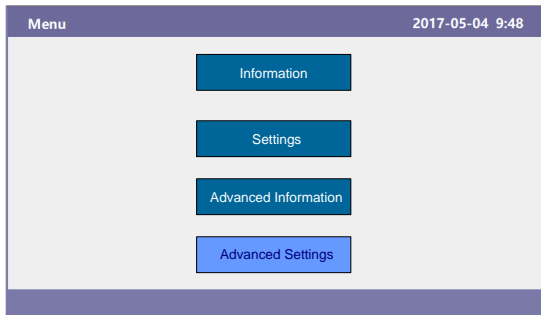
Please follow the steps below to select the 3-phase power meter. With more settings please refer the RHI hybrid inverter user manual.

Process:

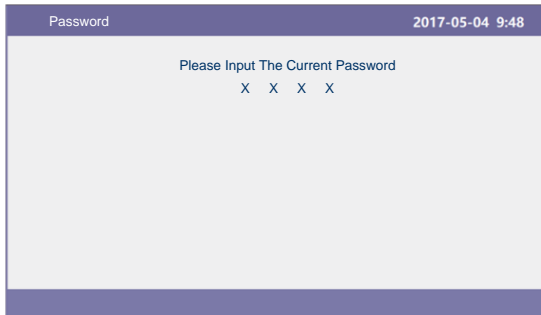
ENTER → 0010 → Advanced Settings → Storage Inverter Set → Meter Model → 3Ph Meter

- a) Press ENTER Key and select “Advanced Settings”

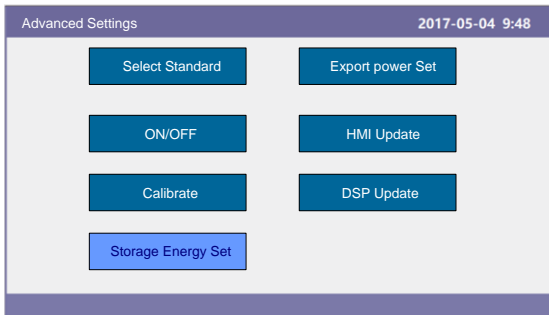




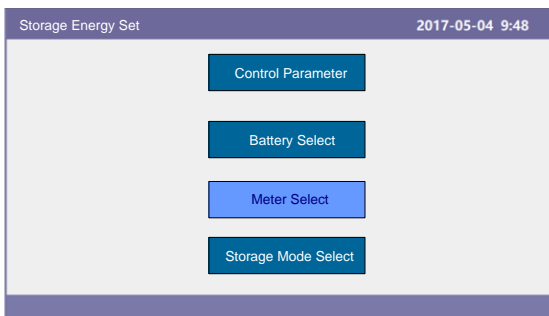
b) Password “0010”



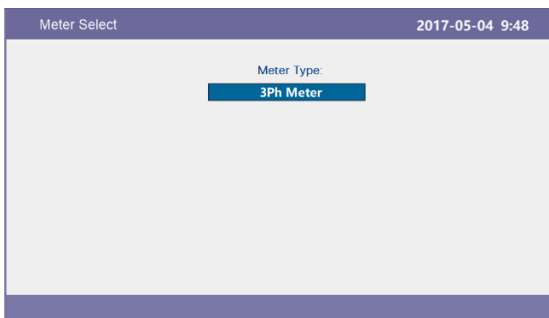
c) Select “Storage Energy Set”



d) Select “Meter Select”

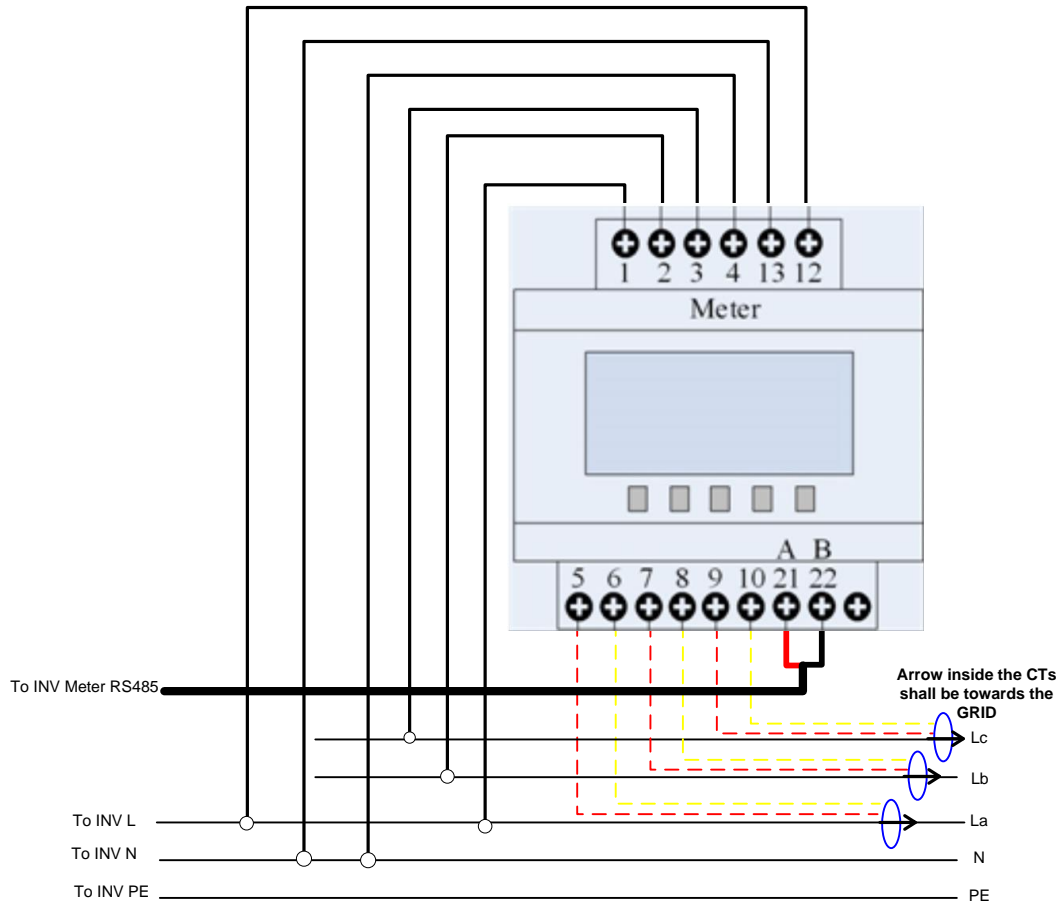


e) Select “3Ph Meter” and done



#### 4. DETAILED CABLE CONNECTION

The following figure illustrates how to connect the three-phase meter to a Solis Hybrid Inverter



5-6,7-8 and 9-10 are the CT cables. Please make sure the CTs are connected with the correct polarity and the corresponding grid phase. Also, please note the small arrow inside the CTs shall be towards the Grid (5-6 to La, 7-8 to Lb, 9-10 to Lc).

1,2,3 and 4 are the voltage detection ports. Please connect the ports with the corresponding grid phases (1 to La, 2 to Lb, 3 to Lc, 4 to N).

12 and 13 are the power source of the meter, 13 should be connected to the Neutral Wire(N) while the 12 can be connected to any active line (La or Lb or Lc)

**NOTE: Please refer to the nameplate of the meter for detailed connection diagram in case of any mistakes**

REV	DATE	NOTE	EDITED BY	VERIFIED BY
1.0	2018/11/02	First release	Daniel FANG	KUN
1.1	2018/11/02	Modified the diagram and settings	Daniel FANG	KUN
1.2	2018/11/03	Updated HMI Settings	Daniel FANG	KUN
1.3	2018/12/21	Add cable connection instruction	Jiduo Li	BaoSong Liu