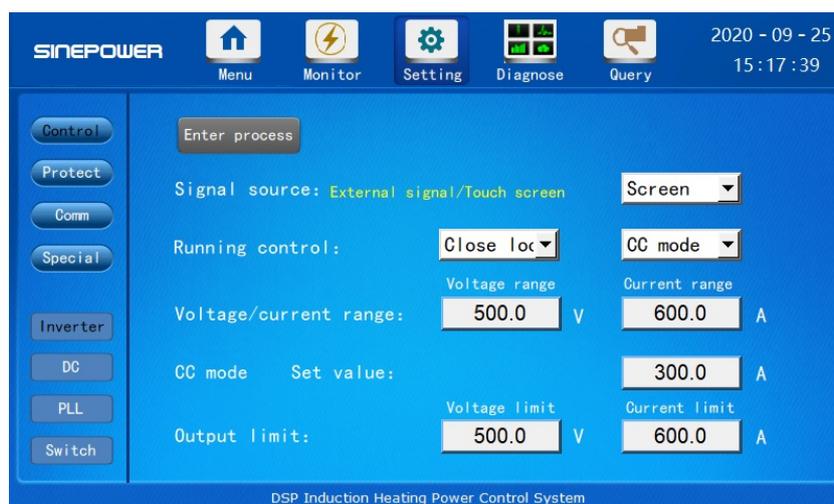


SD300 Fast Debugging

Steps:

1. After the main control board connected with wires and power on, pls check if there is a system abnormal indicate, if yes, pls eliminate before next step.
2. After power on and no fault, system normal, pls press the pull in switch. The 3 phase AC380V main circuit rectified DC voltage will slowly pass through the Snubber Resistance RP and charge the capacitance (Directly charged by Snubber Resistance RP without control, or charge by charger contactor with control) , when capacitance charge time is up, the main control board will control the main contactor to pull in, and then, the green light of the main circuit on the touch screen will be on, if there is a fault, the main contactor will pull out automatically.
3. **When the main circuit pull in and light on, pls do according step 4 and 5**, and confirm the wires and parameter setting before the first output operation, to prevent damaging of component from wrong output.
4. Before normal output, pls enter the test mode, to see if the IGBTs are connected correct, to see if the output waveform is correct.
5. Pls set the basic parameters according to the different adjust mode (**pls note the Red underline words**), pls don't turn on the system protection function parameter before everything is ok (Such as voltage current, over voltage, under current, over temperature and so on).
6. After basic parameter setting, pls run the normal output.

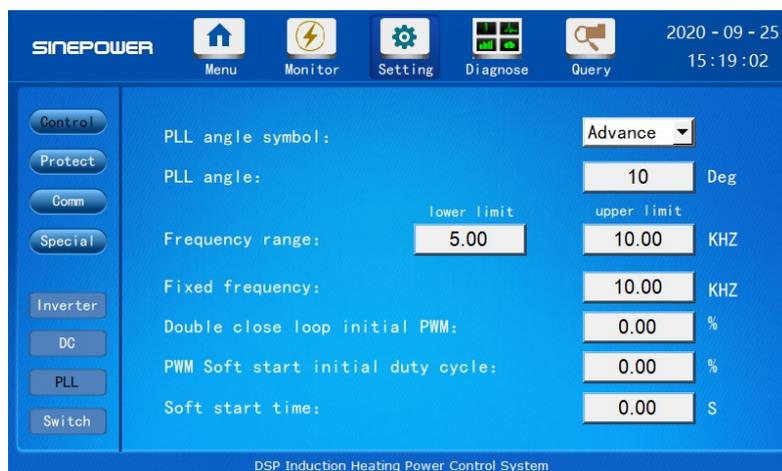
A. **Parameter setting in Inverter frequency shift power adjustment PSM**



- 1、 **This interface is for inverter frequency shift power adjust (PSM) use, for setting the related parameters;**
“DC ” interface is for DC terminal power adjust use, don't need to be set if you are using PSM.
- 2、 Input signal source: **Choose the signal:** Directly set by touch screen interface or by external signal, or

adjust by potentiometer.

- 3、 Running control method: **Choose the mode:** CC (constant current) mode, CV (constant voltage) mode and CP (constant power) mode.
- 4、 Voltage/ current range set: **The range must be set:** Total range, set according to the max output of voltage and current, the sensor full range is related to the feedback side AC/DC5V, the value Of constant voltage, over voltage, under voltage, constant current, over current and under current are all set based on voltage and current total range; For example, if the current transducer is 500:1, then set the range as 500A.
- 5、 Output value set: **Set the related output value:** set voltage, current and power, they are the actual out value.
- 6、 Output limit set: **Set as the total range, easy for debugging.** In case there is a too high output voltage or output current which will damage the load, the board has limited the running of the actual output voltage or current value by limiting the maximum running voltage or current.
- 7、 *If needed: the actual value of DC voltage and current on the main display interface, pls enter the “DC” interface, to set the DC output total range of voltage and current.*
- 8、 *For input signal resource and running control methods parameter setting, you can find both in “Inverter” and “DC” interface, same content.*

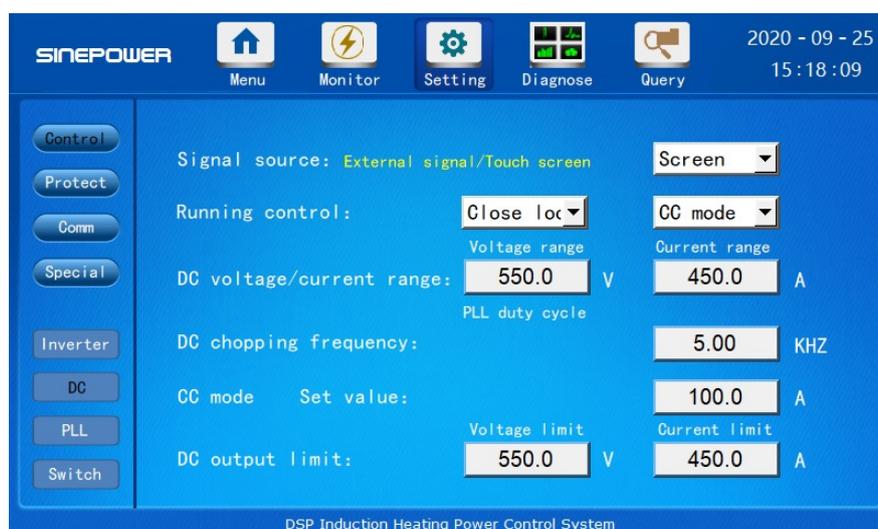


- 1、 PLL frequency position (frequency angle) set: **Only for display, don't need adjust.**
- 2、 PLL angle: **adjust when you do the running debugging,** it will auto track the resonance frequency, and it is the PLL frequency lock angle when running the frequency tracking. Adjust this parameter will let

the load work at its best performance. It has been set when it is out of factory, usually don't need to set.

- 3、 Frequency range: **must to be set, pls note the limit frequency, do not set it too low**,set the lower and upper limit of the working frequency when the machine in PLL frequency lock.
- 4、 Fixed frequency only **works when the version of control board is fixed version**, don't need to set.
- 5、 Double close loop Initial PWM: **Set according to the actual situation**, the set value is the initial duty cycle value at the time of running operation, **default is 10.0%**
- 6、 PWM Soft tart initial duty cycle and Soft start time: **Valid when in DC chopper power adjustment, set accordingly**. THE initial value is set as the first PWM value when running; The output gradually increases from a small value to the set value after starting, to eliminate the impact on the power grid and its own capacitance. The soft start time can be set to 0.00-10.00 seconds

B. Parameter setting in DC chopper power adjustment



1. This interface is for DC chopper power adjustment (BCM) use, for setting the related parameters; "Inverter" interface don't need to be set if you are using BCM.
2. Input signal source: **Choose the signal**: Directly set by touch screen interface or by external signal, or adjust by potentiometer.
3. Running control method: **Choose the mode**: CC (constant current) mode, CV (constant voltage) mode and CP (constant power) mode.
4. DC Voltage/ current range set: **The range must be set**: Total range, set according to the max output of voltage and current, the sensor full range is related to the feedback side DC5V, the value Of constant

voltage, over voltage, under voltage, constant current, over current and under current are all set based on voltage and current total range; For example, if the current transducer is 500:1, then set the range as 500A

5. DC chopping frequency set: **Can used the default value**, usually is around 10khz.

6. Set value: **To set the related output value**, the set value of voltage, current and power is the actual running output.

7. DC output limit: **Can set same as the total range, easy for debugging**, in case there is a too high output voltage or output current which will damage the load, the board has limited the running of the actual output voltage or current value by limiting the maximum running voltage or current

8. If needed: the actual value of Inverter voltage and current on the main display interface, pls enter the "Inverter" interface, to set the inverter output total range of voltage and current.

9. The PLL setting of DC chopper power adjustment, is same as 2nd page.

Pls note: The switch set interface, system protection interface, communication interface are user self-customize parameter section, pls set accordingly after debugging to prevent the debugging from much more complex.