

An aerial photograph of a vast, flat, snow-covered landscape. In the center, a large number of people, dressed in red, are standing in formation to create a large 'X' shape. The background shows snow-covered mountains under a blue sky with scattered white clouds.

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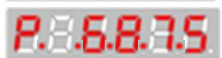
HSV-180AD and S190 Servo Drive Test Run 2017_03

Notice:

1. How to save parameters ?

Set PA34=2003, modify parameters accordingly, set PA34=1230, switch to the auxiliary menu “”, press “S”, after “” appears, power off the drive until there's nothing showed on LED panel, power on again.

2. Parameter value:

- a. If it's like “”, it means the value is positive, +6875
- b. If it's like “”, it means the value is negative, -6875
(there's dot between each two characters).

Test Procedure

1. In case of no parameter settings chaos, firstly switch to “**888-PR**” to default all parameters, press “**S**”, then set PA34=1230, switch to “**888-PR**”, press “**S**”, after “**888-PR**” appears, power off the drive until there's nothing showed on LED panel, power on again.
2. Firstly set PA34=2003; STA0=0

Take S190-4-048M15 as an example:

| Model | Rated torque N·m | Max torque N·m | Rated Speed rpm | Max Speed rpm | Rated power kW | Rated voltage Vac | Rated current A | Rotor inertia kg.cm2 | Pole pair | Weight kg | Length mm |
|---------------|---------------------|-------------------|--------------------|------------------|-------------------|----------------------|--------------------|-------------------------|-----------|--------------|--------------|
| S190-4-048M15 | 48 | 144 | 1500 | 2000 | 7.5 | 380 | 17 | 54 | 5 | 24 | 256 |

PA43: according to drive model

HSV-180AD-035: 1

HSV-180AD-050: 102

HSV-180AD-075: 203

HSV-180AD-100: 304

HSV-180AD-150: 405

HSV-180AD-200: 505

Set below parameters according to motor type:

PA17: 1600 Maximum speed limit usually higher then rated speed

PA24: 5 Magnetic logarithm of servo motor

PA25: 2 Servo motor encoder type

PA26: 0 Encoder zero offset

PA27: 1500 During test run, decrease this value, then modify it accordingly after test run finished

PB42: 1700 Motor rated current unit: 0.01A

PB43: 1500 Rated motor speed

Then set PA34=1230, switch to “**888-PR**” to save parameters, power off the drive.

Test Procedure

3、Power on drive. Manual rotary motor, observe “**000000**” 和 “**00000H**” to check the actual position pulse feedback, if correct, restart drive. If not correct, please double check the encoder cable.

4、Confirmation weather phase sequence of the servo motor is correct.

Make sure the motor shaft end not connect any load, wiring to servo drive according to the original U - V - W phase sequence. Confirm STA-6=0, ensure the motor shaft can rotate freely, if motor was brake, please loosen it. Then switch to “**000000**”, press **S**, **FEALSH** appears, set STA-6=1, the green enable lamp (EN) is light, and motor start to running in a certain direction at this time (if the machine did not move or became shaken, increase PB 48 until the motor rotation), check if the “**000000**” is a positive value, if yes, the motor phase sequence is correct. Otherwise, you need to change the power line phase sequence of U - W - V, test again. After confirm power line phase sequence is correct, restart the drive.

5. Confirmation the encoder zero offset PA-26

(1) If the servo motor encoder is incremental type.

Must guarantee the motor shaft not connect any load, set PA34=2003, set PA-23=7, PA-26=0, then set PA34=1230, switch to “**EE-YPB**” to save parameters, power off.

Power on again, set STA-6=0, ensure that the motor shaft can rotate freely, if there is submitted to the brake motor, please release the brake. Observe the value of “**BP-AB5**”, it should be zero at this moment, rotate the motor shaft forward three rounds manually. The value of “**BP-AB5**” should be changed from 0 to 10000 three times, make sure “**BP-AB5**” is zero or within ± 2 when stopped.

Switch to “**EE-AB**”, press **S**, after “**FLASH**” appears, set STA6=1, the green enable lamp (EN) is light. Normally the motor shaft will stopped after rotate a certain angle, and shaft will be locked after every 5s (How to confirm the shaft is locked: Close to the motor shaft, you can hear the sound of the motor locked every few seconds, and you can't rotate the motor shaft with a smaller force by hand).


If the motor shaft never stopped, or even if it stopped, but you can't hear the lock sound, please increases PA20 gradually until the motor shaft locked finally (PA20 must less than 5). Then rotate the motor shaft forward with a small angle during unlock status, the shaft should be rotate back to it's locked position.





Remember the values of “**BP-AB5**” when motor in excitation condition, then set STA6=0.

Set PA34=2003, set the “**BP-AB5**” value to PA26, set PA23=3, PA20=0, then set PA34=1230, switch to “**EE-YPB**” to save parameters, power off the drive.

Test Procedure

(2) If the servo motor encoder is absolute type



Make sure the motor shaft end not connect any load, power on drive unit, power on drive, set PA34=2003, set PA-23=7, PA-26=0, then PA34=1230, switch to “” to save parameters, restart the drive.

Confirm STA6=0, ensure that the motor shaft can rotate freely, if there is submitted to the brake motor must make the brake release. switch to “”, press “S”, after “” appears, set STA - 6 = 1 to enable the drive, then view the value of “”, remember the values of “” when motor in excitation condition.

Set PA34=2003, set the “” value to PA26, set PA23=3, PA20=0, then set PA34=1230, switch to “” to save parameters, power off the drive.

Test Procedure

6. Make sure the motor shaft end not connect any load, power on drive unit, power on drive, switch to “JOG” mode to test the motor preliminary


Set STA6=1, the green enable lamp (EN) is light. Switch to “” menu, press **S**, “” appears. Keep pressing \blacktriangle , the motor runs forward at the JOG speed, release \blacktriangle , and then the motor stops and enters the zero-speed state; Keep pressing \blacktriangledown , the motor runs reverse at the JOG speed, release \blacktriangledown , and then the motor stops and enters the zero-speed state.

7. After the motor works well in JOG mode, then test the internal speed mode:


Set the movement parameter to a nonzero value PA-20 (internal speed unit is 0.1rpm). Press “**S**” to confirm, and then the motor will run at the specified speed.

For safety, set a smaller value of PA20, for example: PA20=1000(100rpm), press “**S**” to confirm, and then the motor will run at the speed of 100rpm. Then increase PA20 to it's rated value gradually.

Take rated speed is 1500rpm as an example:

Set PA20=15000, press “**S**” and then motor will run at the forward speed of 1500rpm, remember the values of “”.

Set PA20=-15000, press “**S**” and then motor will run at the reverse speed of 1500rpm, remember the values of “”.

If these two “” are same or very close, and they're all less than 10(1A), it means the test run is successful and finished.

If not, please back to step 5 and test again until successful !!!

Thanks for your attention!

