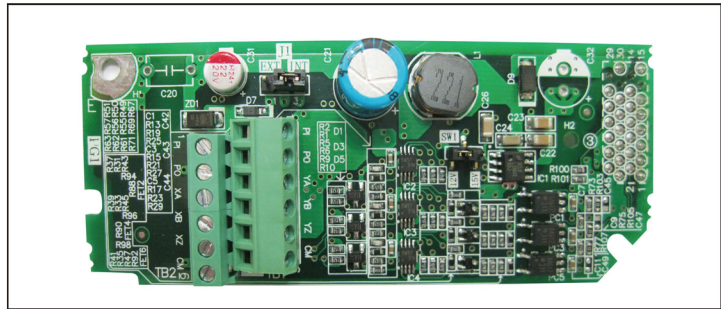


HP-PG-OC1(12V/15V open collector) S3800 series PG card
---Operation manual

Thank you to purchase SAVCH HP-PG-OC1 card . functions: input pulse train control and velocity feedback.

1. HP-PG-OC1 External view



2. Terminal instructions

| Terminal | Functions |
|----------|---|
| PI | External encoder input power supply. Input power source: DC +12V ±10%, or DC +15V ±10% (When Encoder loading current over 120mA, please select external power) |
| PO | Internal encoder output power supply (Output power source: DC +12V, 120mA, or DC +15V ±10%, 120mA) |
| DCM | Common port for power source and signal. |
| XA | Instruction side A input terminals. |
| XB | Instruction side B input terminals. |
| XZ | reserved (Instruction side Z input terminals). |
| YA | Feedback side A input terminals. |
| YB | Feedback side B input terminals. |
| YZ | Feedback side Z input terminals. |

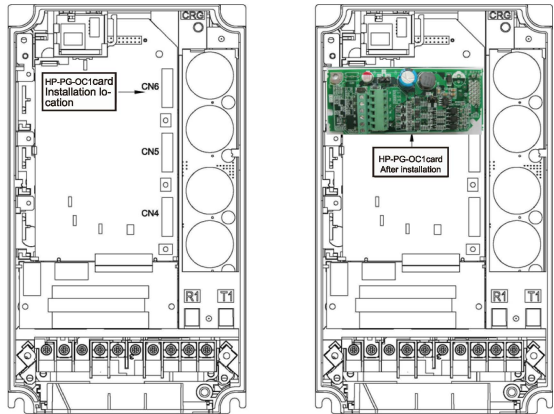
- Notes: 1. terminal use screw :M2, Cable:AWG16~24, Screw torque:0.22~0.25N.m.
2. After install the card, do not input the pulse train to the inverter terminals [MI7].
3. When Encoder loading current over 120mA, please select external power. And the switch J1's jumper put at (EXT) side.
4. for factory default, SW1 will be set up to [12V] mode.

3. Installation ,wiring

Danger

Before installation and wiring, The power has to be disconnected: under 22kw ,it needs to disconnect for more than 5 minutes, more than 30kw , it needs to disconnect for more than 10 minutes, confirm the keypad and the charge indicator has been extinguished, and then use the multimeter to check the voltage which in the main circuit terminal P (+) - N (-) between the DC bus ,it has fallen to a safe range below (DC + 25V),finally we can do installation and wiring.
Otherwise there is risk of electric shock.

- (1) For HP-PG-OC1 card ,Please installed it in the below panel CN6 shown in position, do not install in other locations.
(2) Use M3 screw which is kind of self-climbing with gasket to lock HP-PG-OC1 card.

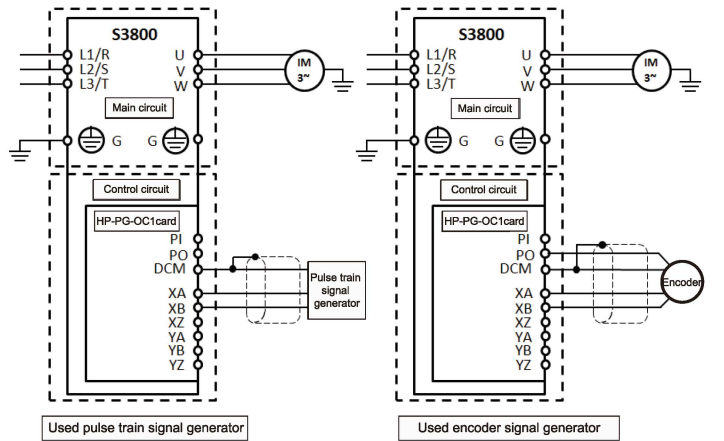


4. Applications

- 4-1 Drive the motor with encoder to control high precision speed
After installed on the motor encoder, can achieve closed-loop vector control. Frequency converter can realize high precision, high response speed control.
- 4-2 Control performance
The table below for the performance of vector control with velocity feedback.

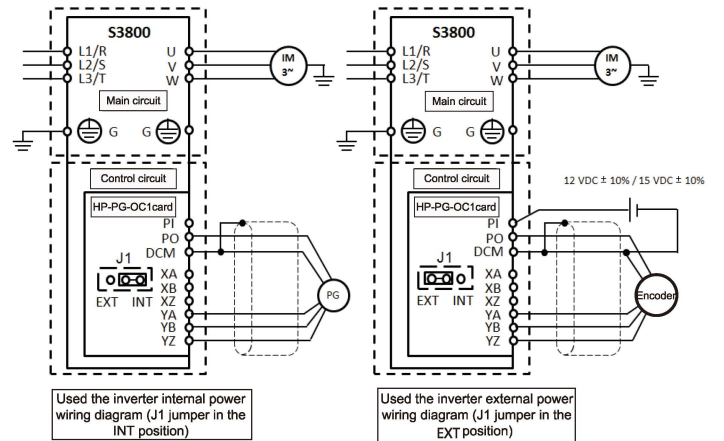
| Item | Performance | Remark |
|---------------------|------------------------|--|
| Control performance | Max.output Hz | 25~200Hz (More than 200Hz, the OS alarm will be happened) |
| | Speed control range | Min. speed: basic frequency=1:1500 (4 pole motor: 1~1500r/min) |
| | Speed control accuracy | Analog range : ±0.2% Max. frequency(15~35℃) Digital range: ±0.01% Max. frequency(-10~50℃) |

4-3 Pulse train input wiring Diagram



Remark:
The signal lines is susceptible by external noise, so for signal lines, please use the shielded wire, and wiring as short as possible (below 20 m). the shielding layer of shielding wire is recommended to disconnect on PG side (encoder) , make it as one wire to connect DCM on HP-PG-OC1 card .

4-4 Speed control wiring diagram (vector control with the encoder)



Remark:
(1) The signal lines is susceptible by external noise, so for signal lines, please use the shielded wire, and wiring as short as possible (below 20 m). the shielding layer of shielding wire is recommended to disconnect on PG side (encoder) , make it as one wire to connect DCM on HP-PG-OC1 card.
(2) [YZ] it's not use for control signal, actually if you can not find the cable which is for Z phase , so you don't need to connect.

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