EHD200A
AC Brushless Speed Controller User Manual

- High torque at low speed
- Wide speed setting range
- Simple operation
- Quick start & response
- High efficiency and AC input

EHD200A is a high cost performance AC brushless speed controller newly developed by BGM company. It is for brushless motors 200W and lower power.

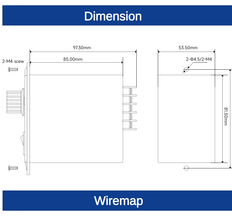
Features :

1. Display of motor speed, gearbox output speed or alarm code and etc.
2. Support speed setting by knob or through PWM/frequency signals from the external PLC.
3. Support alarm output or speed output to the PLC.
4. ACC/DEC time setting knob (0s~15s).

Electrical parameters

Parameters	Typical1	Typical2
Input voltage	AC220V	AC110V
Rated current (Bus input)	2A（MAX）	2A（MAX）
Peak current (Bus input)	4A（MAX）	4A（MAX）
Matched brushless motor power	MAX 200W	MAX 100W
Motor speed control mode	1.By knob 2.By PWM 3.By pulse frequency 4.By serial port	1.By knob 2.By PWM 3.By pulse frequency 4.By serial port

Dimension



Wiremap

1	2	3	4	5	6	7	8
GND	Hw	Hv	Hu	5V	W	V	U
Black (Thin)	Blue (Thin)	Green (Thin)	Yellow (Thin)	Red (Thin)	Blue (Thick)	Green (Thick)	Yellow (Thick)

Direction control method

Method 1:
When CW and COM short are connected, the motor runs clockwise (factory default setting).
When CCW and COM short are connected, the motor runs anticlockwise.

Method 2:
Controlled by a rocker switch (type of KCD1 250V6A-3-pin 2-speed switch is recommended).

Rocker switch ON-ON

Method 3: Controlled by PLC:
Connect CW, CCW and COM with the output end of the PLC to control the direction without external relay.

Start-stop control method

Method 1:
Controlled by the start-stop switch on the panel.

Method 2:
Controlled by a rocker switch (type of KCD1 250V6A-3-pin 2-speed switch is recommended).

Rocker switch ON-OFF-ON

Method 3:
Controlled by PLC:
Disconnect both CW and CCW, the motor stops.

Speed setting method

Method 1:
Controlled by the start-stop switch on the panel.(Default)

Method 2:
Controlled by PWM duty ratio through PLC(NPN type) output signal.

Method 3:
Controlled by pulse frequency through PLC(NPN type) output signal.
(1HZ=1RPM)

Method 4:
Set constant rotate speed by seriol port.(Please contact sales to proceed if needed)

Output interface

R1 recommended 2K~5K (Current≤5mA)

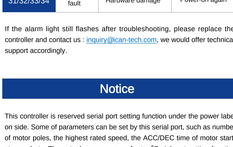
1: Alarm output (Default setting) :
When the speed controller is abnormal, the motor would stop working, and the corresponding alarm code would be displayed by the controller. In this situation, OUT and COM are connected, the OUT port is low-level.

2: Speed output (this function is set by serial port setting software) :
When the motor runs, the rotate speed would be displayed by the controller, and it would output the corresponding frequency. (1RPM=1HZ)

Matched motor

The matched brushless motors : 200W and lower power.
e.g. 60W, 90W,120W, 200W brushless motor or geared motor. 110VAC/ 220VAC input is acceptable.

Torque Speed Curve Chart



Alarm indicator

Alarm code	Fault name	Cause of alarm	Troule shooting
AL01	Over current	Short-circuit between phase lines of U,V,W / Hardware damage	Check the motor lines connection / Replace the controller
AL02	Over temperature	Ambient temperature is too high / Hardware damage	Check the ambient temperature / Replace the controller
AL05	Hall fault	Hall lines are poorly or wrongly connected / Hardware damage	Check the hall lines connection / Replace the hardware
AL08	Locked-rotor	Motor not running out of time	Check if motor is stuck or overload
10-20	Hardware fault	Hardware damage	Power-on again
31/32/33/34	Memory fault	Hardware damage	Power-on again

If the alarm light still flashes after troubleshooting, please replace the controller and contact us : inquiry@ican-tech.com, we would offer technical support accordingly.

Notice

This controller is reserved serial port setting function under the power label on side. Some of parameters can be set by this serial port, such as number of motor poles, the highest rated speed, the ACC/DEC time of motor start-stop and etc. The actual process can refer to《Serial port setting function software instruction manual》, please contact us if further needed : inquiry@ican-tech.com.