



# **MC860G Analog Self-Running Step Drive**

## **User Manual**



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## I. Mounting

### 1. Electrical indexes

- **Voltage input range:** DC: 24V~90V/AC: 18V~80V
- **Max. peak current:** 7.2A
- **Analog input voltage:** 0~5V
- **Insulation resistance:** 500M

### 2. Environmental indexes

- **Storage temperature:** -20°C~80°C
- **Operating temperature:** 0°C~55°C
- **Operating humidity:** 90%RH (without condensation)
- **Vibration frequency:** < 0.5G (4.9m/s<sup>2</sup>), 10Hz~60Hz (non-continuous operation)

### 3. Mounting dimensions (unit: mm)

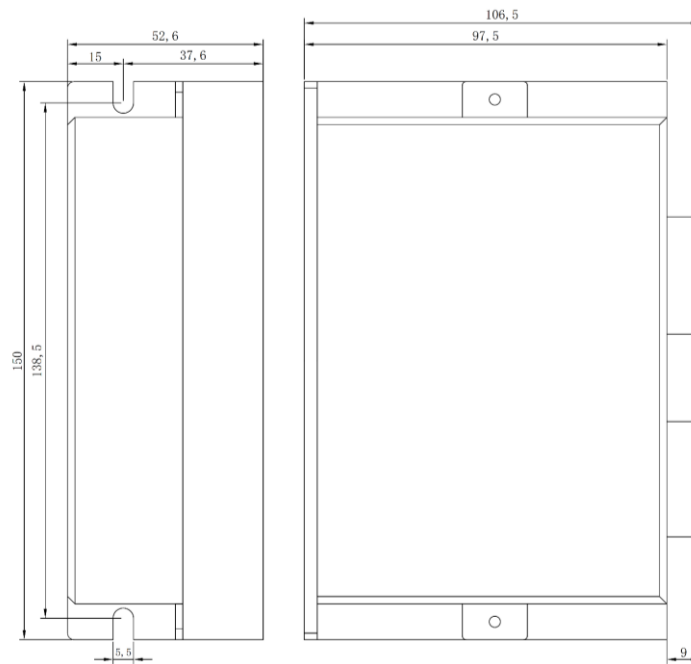


Fig. 1 Drive mounting dimensions

## II. Wiring

### 1. Description of drive terminals

#### 1) Power terminal definition

No.	Symbol	Function definition
1	A+	Motor power cable terminal See the label on the motor for the wire colors
2	A-	
3	B+	
4	B-	
5	AC	Power input terminal (DC24V~90V/AC18V~80V)
6	AC	

#### 2) Drive control terminal definition

No.	Symbol	Function definition
1	5V	Internal 5V voltage (power supply to other equipment not allowed)
2	AI	Analog input port
3	AGND	Analog ground
4	START	Start signal input terminal (start after powering on and stop after powering off)
5	DIR	Direction switching input terminal
6	ENA	Enabling signal input terminal
7	OPTO	Common terminal (When the common terminal is connected to 5/24V, the input terminal will be effective after being connected to 0V) (When the common terminal is connected to 0V, the input terminal will be effective after being connected to 5V/24V)
8	ALM+	Positive terminal of alarm output
9	ALM-	Negative terminal of alarm output

## 2. Control port wiring mode

### 1) NPN input/output wiring

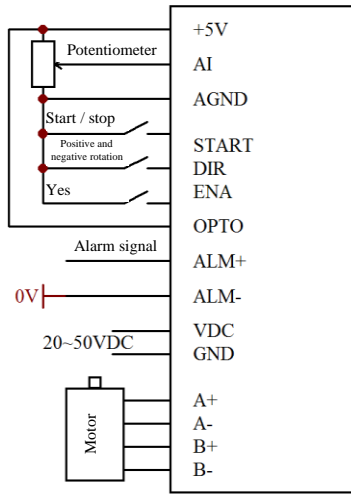


Fig. 2 Control via potentiometer and switch

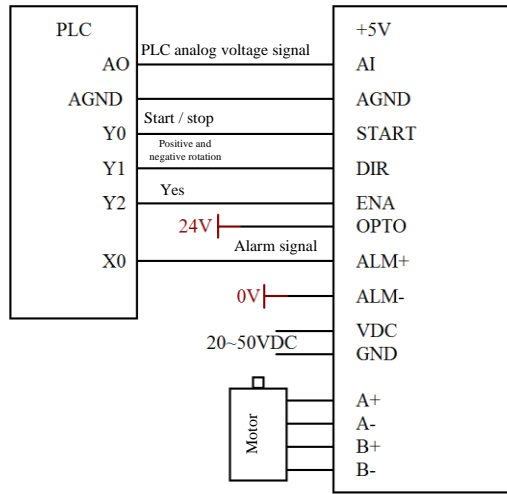


Fig. 3 Control via PLC output point

### 2) PNP input/output wiring

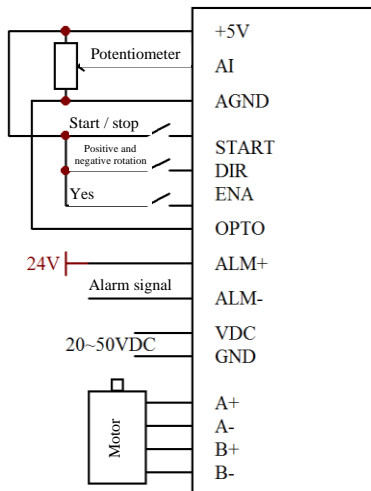


Fig. 4 Control via potentiometer and switch

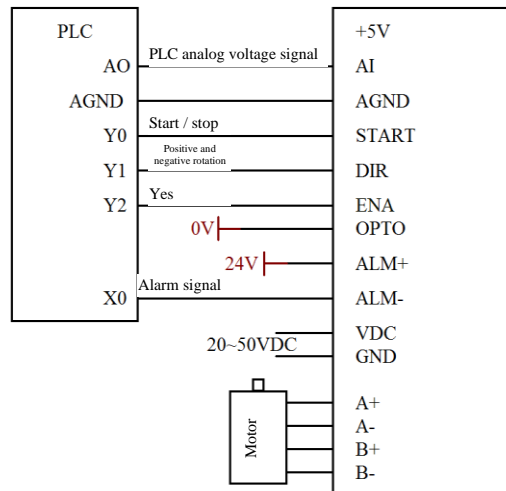
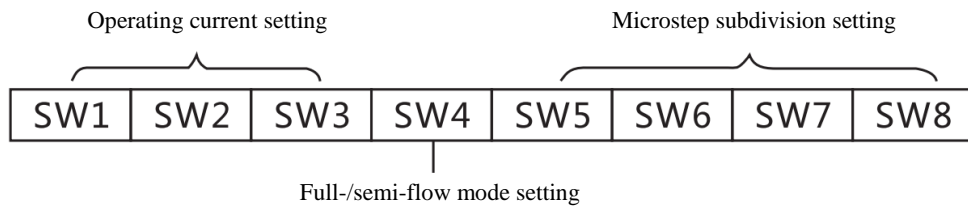


Fig. 5 Control via PLC output point

### III. Setting of dialing switch



#### 1) Operating current setting:

Peak current (A)	Root-mean-square current (A)	SW1	SW2	SW3
2.4	2.00	ON	ON	ON
3	2.57	OFF	ON	ON
3.7	3.14	ON	OFF	ON
4.3	3.71	OFF	OFF	ON
5	4.28	ON	ON	OFF
5.6	4.86	OFF	ON	OFF
6.4	5.43	ON	OFF	OFF
7	6.00	OFF	OFF	OFF

#### 2) Revolution velocity setting:

SPD	SW5	SW6	SW7	SW8
60	ON	ON	ON	ON
120	OFF	ON	ON	ON
180	ON	OFF	ON	ON
240	OFF	OFF	ON	ON
300	ON	ON	OFF	ON
360	OFF	ON	OFF	ON
420	ON	OFF	OFF	ON
600	OFF	OFF	OFF	ON
800	ON	ON	ON	OFF
900	OFF	ON	ON	OFF
1000	ON	OFF	ON	OFF
1100	OFF	OFF	ON	OFF
1200	ON	ON	OFF	OFF
1300	OFF	ON	OFF	OFF
1400	ON	OFF	OFF	OFF
1500	OFF	OFF	OFF	OFF

#### IV. Common Faults and Troubleshooting

Phenomenon	Possible problem	Solution
Motor not running	Power indicator not On	Use the power supply normally
	Too low set current	Select the appropriate current gear according to the rated current of the motor
	Drive protected	Power on again after troubleshooting
	Low enabling signal level	The signal is subject to a high level or not connected
	Control signal problem	Check the control signal for being normal
Incorrect motor rotation direction	Incorrect connection of motor power line	Exchange any two wires of the same phase of the motor (such as A+ and A- connection position exchange)
	Open circuit of motor power line	Check the line for correct connection
	The direction signal is incorrectly connected or damaged	Check the input voltage of the direction signal for being 5V or connect a current limiting resistor
Alarm indicator not On	Incorrect connection of motor power line	Check the wiring
	Too high voltage	Check the power supply voltage
	Motor or drive damaged	Replace the drive or motor
Motor stall during acceleration	Too short acceleration time	Prolong the acceleration time appropriately
	Too low motor torque	Use a motor with higher torque
	Too low voltage or current	Set a higher voltage or current appropriately

#### Description for number of alarm indicator flashes:

Flashing once every 3 seconds or normally on indicates the overcurrent alarm of the drive;  
 Flashing twice every 3 seconds indicates the overvoltage alarm of the drive;