



MC542P Analog Step Drive

User Manual



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I. Mounting

1. Electrical indexes

- Voltage input range: DC: 20V~50V
- Max. output current: 4.2A
- Analog input voltage range: 0~5V (0~10V input customizable)
- Insulation resistance: 500M

2. Environmental indexes

- Storage temperature: $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$
- Operating temperature: $0^{\circ}\text{C} \sim 55^{\circ}\text{C}$
- Operating humidity: 90%RH (without condensation)
- Vibration frequency: $< 0.5\text{G}$ (4.9m/s^2), 10Hz~60Hz (non-continuous operation)

3. Mounting dimensions (unit: mm)

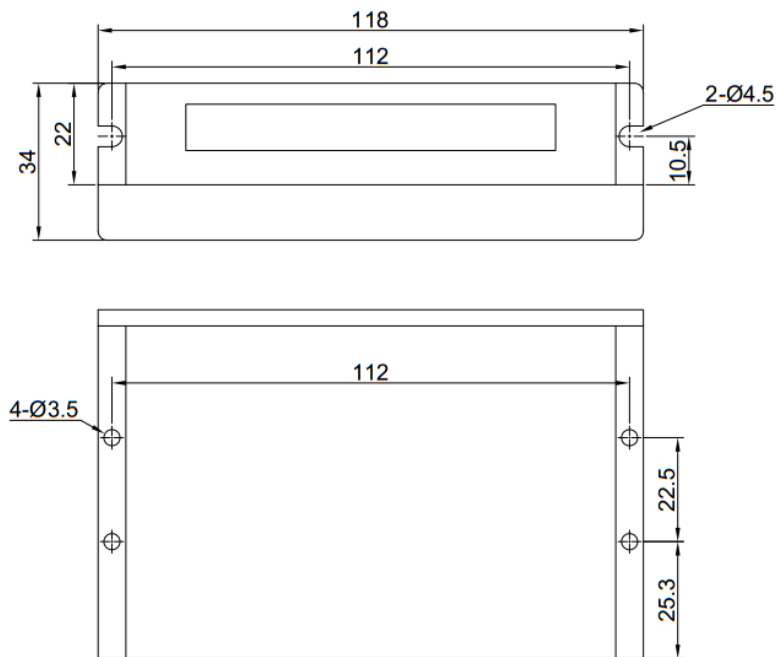


Fig. 1 Drive mounting dimensions

II. Wiring

1. Description of drive terminals

1) Power terminal definition

No.	Symbol	Function definition
1	+VDC	DC power supply input terminal 36V or higher recommended
2	GND	
3	A+	Motor power cable terminal See the label on the motor for the wire colors
4	A-	
5	B+	
6	B-	

2) Drive control terminal definition

No.	Symbol	Function definition
1	+5V	5V power supply output, positive (power supply for potentiometer and control terminal)
2	AI	Analog voltage input terminal for motor velocity regulation
3	AGND	5V power supply output, negative (power supply for potentiometer and control terminal)
4	DIR+	The direction signal control terminal for motor direction switching
5	DIR-	
6	ENA+	The enabling signal control terminal for switching the motor enabling states. When being disconnected, the motor is enabled. When being connected, the motor is disabled. At this time, the motor does not respond to the velocity command.
7	ENA-	

2. Control port wiring mode

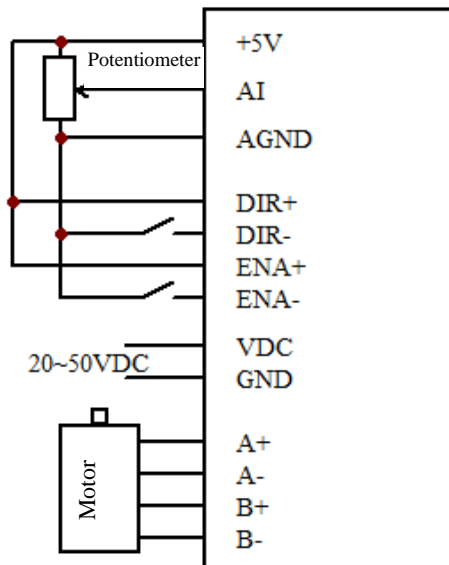


Fig. 2 Control via internal voltage of drive

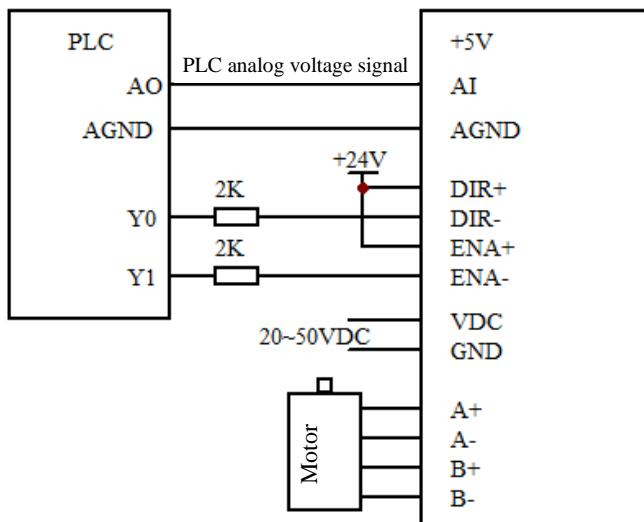
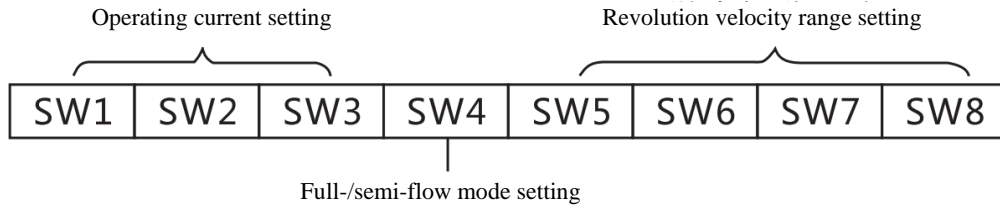


Fig. 3 Control via PLC analog and output point

Note: The DIR+, DIR-, ENA+ and ENA- control input terminals are subject to a 5V signal level. If PLC control is required, a current limiting resistor should be connected in series at the negative terminal.

III. Setting of dialing switch



1) Operating current setting:

Peak current	Root-mean-square current	SW1	SW2	SW3
1.00A	0.71A	ON	ON	ON
1.46A	1.04A	OFF	ON	ON
1.91A	1.36A	ON	OFF	ON
2.37A	1.69A	OFF	OFF	ON
2.84A	2.03A	ON	ON	OFF
3.31A	2.36A	OFF	ON	OFF
3.76A	2.69A	ON	OFF	OFF
4.20A	3.00A	OFF	OFF	OFF

2) Revolution velocity range setting:

SPD	SW5	SW6	SW7	SW8
60	ON	ON	ON	ON
90	OFF	ON	ON	ON
120	ON	OFF	ON	ON
150	OFF	OFF	ON	ON
180	ON	ON	OFF	ON
240	OFF	ON	OFF	ON
300	ON	OFF	OFF	ON
360	OFF	OFF	OFF	ON
420	ON	ON	ON	OFF
480	OFF	ON	ON	OFF
540	ON	OFF	ON	OFF
600	OFF	OFF	ON	OFF
720	ON	ON	OFF	OFF
840	OFF	ON	OFF	OFF
960	ON	OFF	OFF	OFF
1200	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+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;