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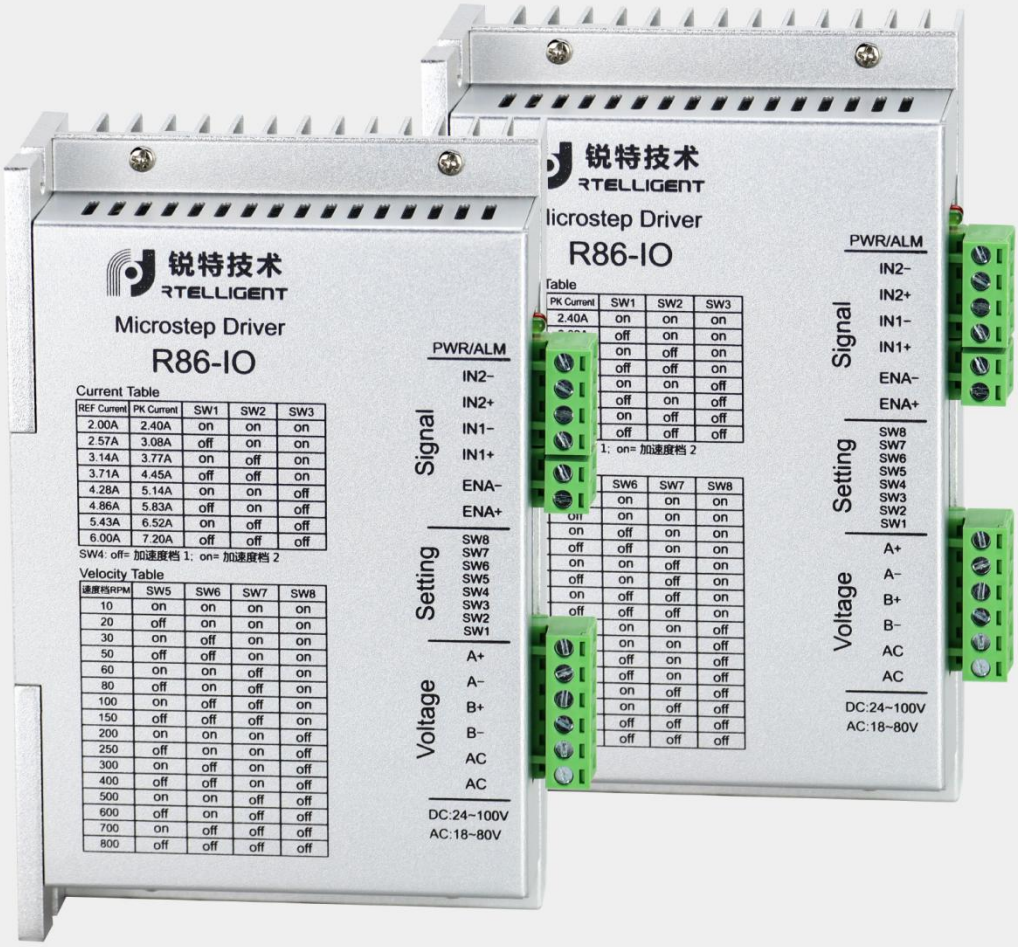

R86-IO步进驱动器
用户手册

深圳锐特机电技术有限公司
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Manual version change record

date	Changed version	Changes

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1 Product Overview

1.1 R86-IO Driver Ports and Wiring

1.1.1 Port Function Description

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AC 20~80V</td></tr>
<tr><td colspan="2">AC</td><td>Input AC power</td></tr>
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1.2 Power Input

The driver's working power supply is AC power, which is universal for AC and DC. The input voltage range is 20V~80VAC or 24V~100VDC.

The AC power voltage cannot exceed 80VAC, and do not connect directly to 220VAC mains!!!

Power supply selection reference:

Voltage:

The stepper motor has the characteristic that the torque decreases as the motor speed increases, and the input power voltage will affect the magnitude of the motor's high-speed torque decrease. Properly increasing the input voltage can enhance the motor's torque output when running at high speed.

Therefore, if better high-speed performance is desired, the driver supply voltage needs to be increased.

Current:

The driver works by converting the input high voltage and low current power into low voltage and high current at both ends of the motor winding. In actual use, the appropriate power supply should be selected according to factors such as the motor model and load torque.

Effect of regenerative voltage:

When the stepper motor is working, it also retains the characteristics of a generator. When decelerating, the kinetic energy accumulated by the load will be converted into electrical energy and superimposed on the driver circuit and input power supply. When using it, you should pay attention to the setting of the acceleration and deceleration time to prevent the protection of the driver and power supply.

When the driver is powered off, you can see the driver LED indicator light up when pulling the load to make the motor move, which is also related to this.

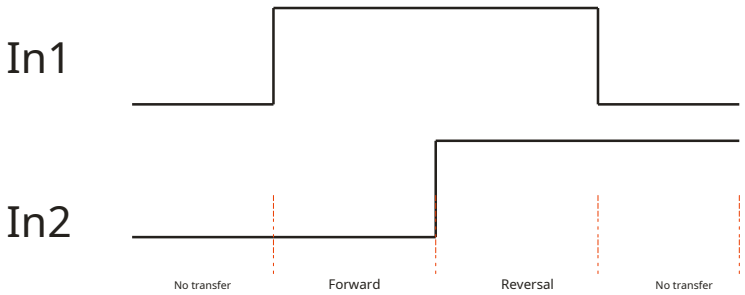
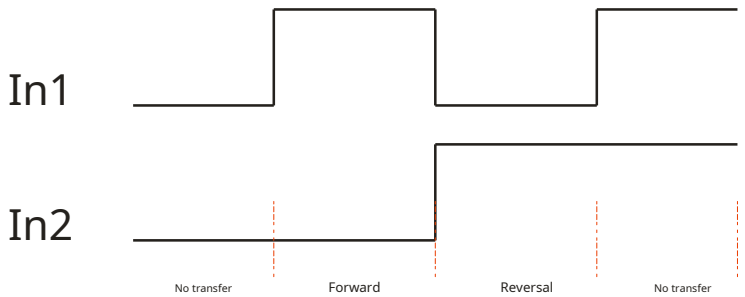
1.3 Control signal wiring

1.3.1 Switching port: used for connecting switching signals.

The standard R-IO series driver signal interface is in the form of switch quantity.

The source of the switch signal can be PLC, single-chip microcomputer, control card, controller, sensor, ordinary switch, etc.

The acceptable switching level of the R86-IO driver is: 3.3V~24V (no series resistor required)

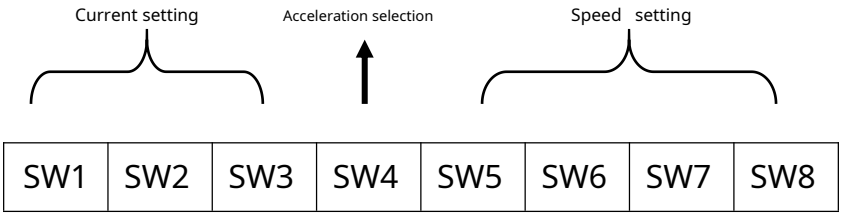
speed Spend mold Mode one Show	
meaning	When IN1 is on and IN2 is off, the motor is triggered to rotate forward; at this time, when IN1 is off, the motor decelerates and stops. When IN1 and IN2 are turned on, the motor reverses; when IN1 is turned off, the motor decelerates and stops. When IN1 is off, the motor stops running. (This is the default mode)
speed Spend mold Mode two Show	
meaning	When IN1 is turned on, the motor is triggered to rotate forward continuously; when it changes from on to off, the motor decelerates and stops. When IN2 is turned on, the motor is triggered to reverse continuously; when it changes from on to off, the motor decelerates and stops. When IN1 and IN2 are both on, the motor will stop running.

1.3.2 ENA port: used to enable or disable.

By default, when the optocoupler is turned off, the driver outputs current to the motor; when the internal optocoupler is turned on, the driver will cut off the current of each phase of the motor to put the motor in a free state, and the step pulse will not be responded to.

When the motor is in error state, the enable is automatically disconnected. The level of the ENA signal can be set to the opposite.

1.4 Dial and operating parameter settings



1.4.1 Current setting

Peak current	Mean current	SW1	SW2	SW3	Remark
2.4A	2.0A	on	on	on	Other current values can be customized
3.1A	2.6A	off	on	on	
3.8A	3.1A	on	off	on	
4.5A	3.7A	off	off	on	
5.2A	4.3A	on	on	off	
5.8A	4.9A	off	on	off	
6.5A	5.4A	on	off	off	
7.2A	6.0A	off	off	off	

DIP switches SW1, SW2, and SW3 are used to set the current value that the driver outputs to the motor.

Normally, the current is set to not exceed the rated current of the motor (effective value).

1.4.2 Speed setting

Speed/rpm	SW5	SW6	SW7	SW8	Remark
10	on	on	on	on	
20	off	on	on	on	
30	on	off	on	on	
50	off	off	on	on	
60	on	on	off	on	
80	off	on	off	on	
100	on	off	off	on	
150	off	off	off	on	Other transfers can be customized speed
200	on	on	on	off	
250	off	on	on	off	
300	on	off	on	off	
400	off	off	on	off	
500	on	on	off	off	
600	off	on	off	off	
700	on	off	off	off	
800	off	off	off	off	

The dial switches SW5, SW6, SW7, and SW8 are used to set the speed of the motor when it is triggered. They have built-in S-type acceleration and deceleration.

When the switch is closed, the motor accelerates to the set speed; when the switch is open, the motor decelerates and stops.

1.4.3 Acceleration selection

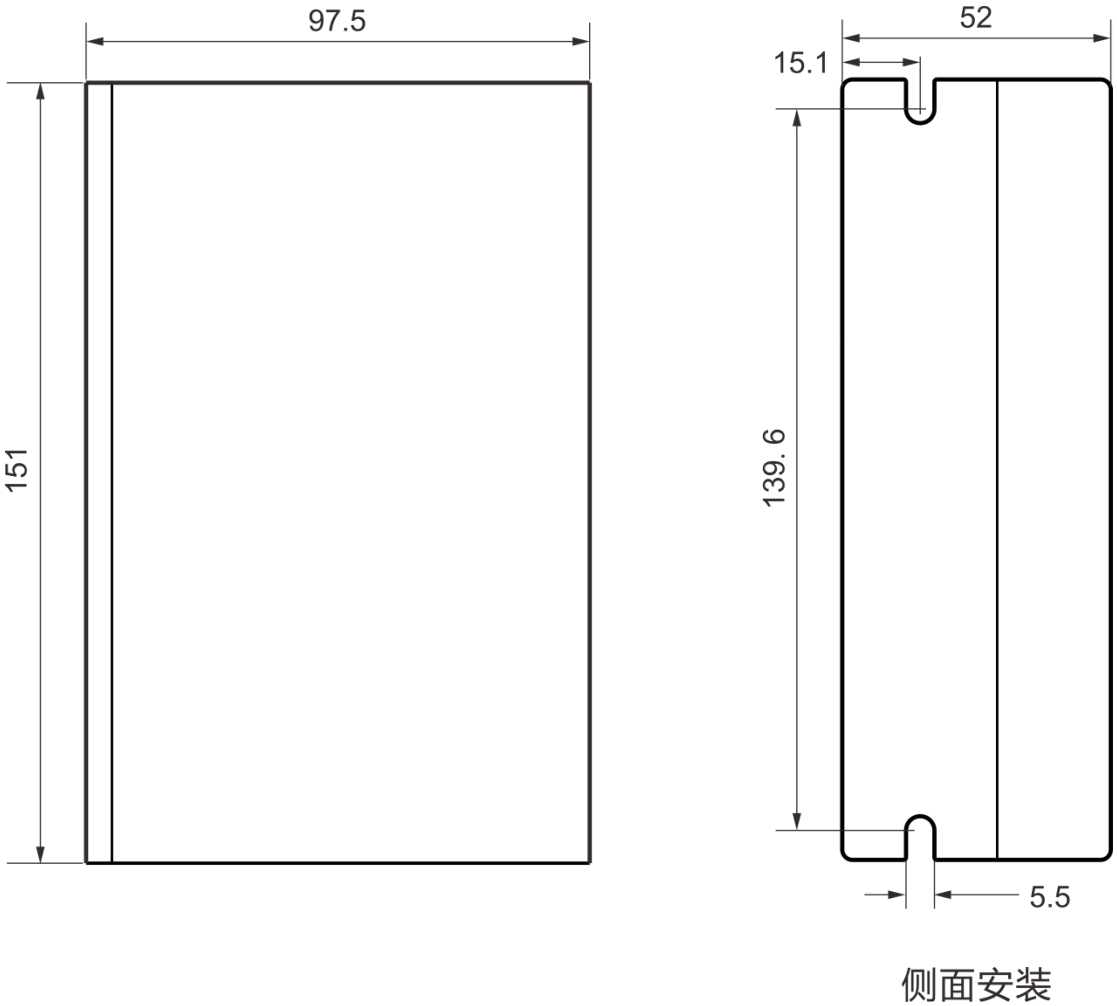
DIP switch SW4 is used to set the acceleration of the motor during operation.

Off means acceleration gear 1, moderate acceleration;

On means acceleration gear 2, with high acceleration.

The default acceleration for general applications is gear 1.

1.5 Installation dimensions



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