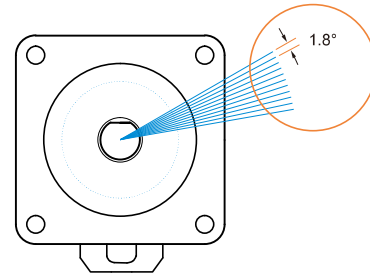


# Overview of Stepper

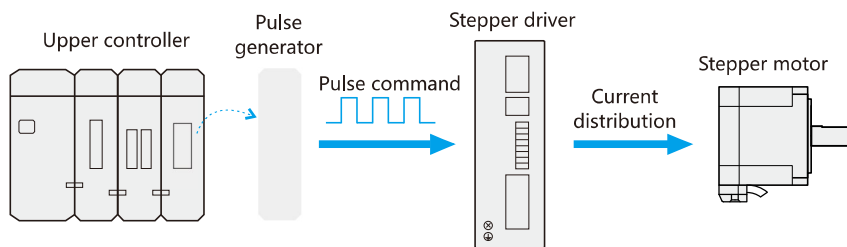
Stepper motor is a control motor whose operating speed and position can be determined. It operates step by step at a fixed angle (step angle) in rotation. Control switching pace of the step angle of stepper motor to control its operating speed and position.

The stepper servo is used for switching the pace of step angle of the stepper motor according to the specified sequence.



Schematic diagram of the step angle of a two-phase hybrid stepper motor.

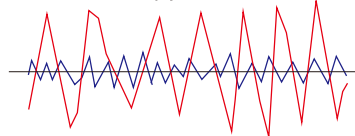
## Block diagram of stepper



## Features of digital stepper

Low resonance	Low temperature rise	Low noise
Low speed anti-resonance algorithm, lowering down the vibration amplitude of low speed resonance area of the motor	With the same driver current, the digital drive features smoother current waveform, smaller current fluctuation and low temperature rise	Built-in S type speed reduction and low speed micro-stepping technologies, significantly lowering down the vibration amplitude of motor within each speed range

Vibration amplitude



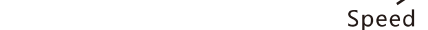
— Traditional analog drive

Temperature



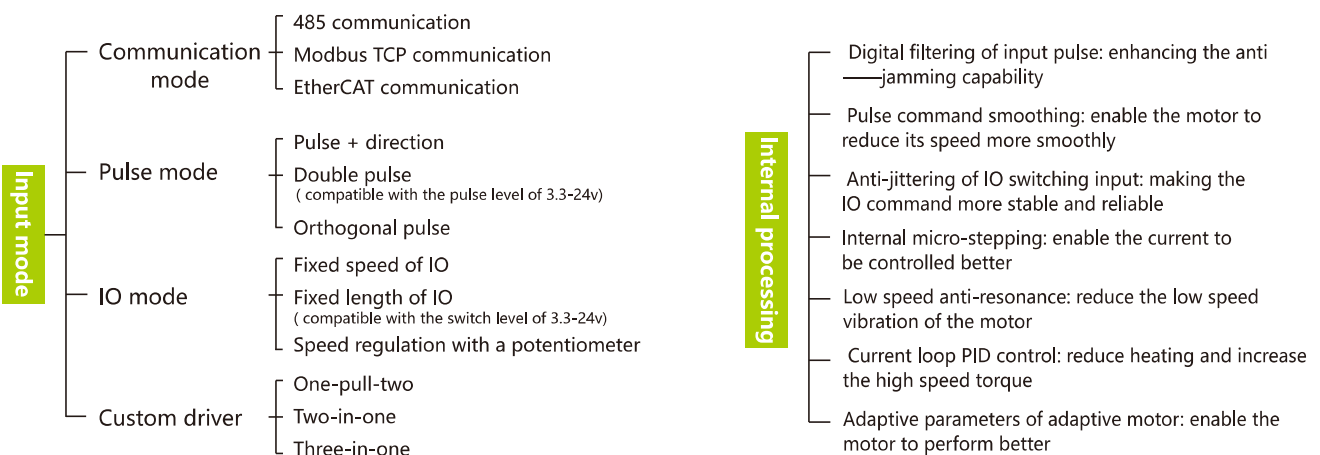
— Simitach digital drive

Vibration amplitude



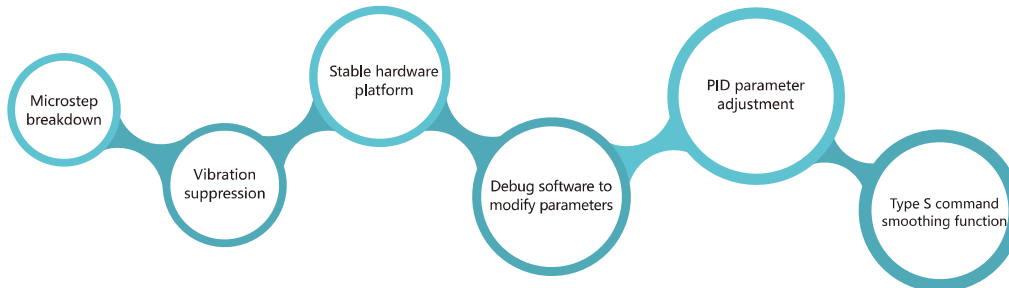
Speed

## Description of R series driver functions



# Stepper Driver

Based on the new 32-bit DSP platform and adopting the micro-stepping technology and PID current control algorithm design, R series stepper driver surpasses the performance of common analog stepper driver comprehensively.



## Naming of stepper driver



- 1: 2: 2 phase(omitted)  
3: 3 phase  
5: 5 phase
- 2: Simitach R series stepper driver
- 3: Drive a stepper motor base below 60mm
- 4: Multifunction upgrades
- 5: Non-standard code

## Description of R series driver functions

**Current:** The maximum current is set inside the driver, and the current is adjusted in real time during operation without additional settings.

**Subdivision:** The driver subdivides the entire step into multiple steps, with smaller angles and less vibration. Derived as the number of pulses per revolution.

**Motor wiring:** the same phase winding sequence is reversed, the motor is reversed (five phases cannot be reversed).

**Half current and full current:** Half current means that the current is halved when the motor stops, which can reduce heat generation.



## Technical specifications

Model	Peak current	Weight	Input voltage range	Dimension	Micro-stepping level number	Pulse level	Matching motor
R42	2.2A	100g	24-48VDC	92.6×56×21mm	200-25600	3.3-24V	20、28、35、39、42
R60-AL	5.6A	250g	24-50VDC	116×69×26.5mm	200-25600	24V	42、57、60
R60	5.6A	250g	24-50VDC	118×76×33mm	200-25600	3.3-24V	57、60
R86	7.2A	650g	18-80VAC	151×97×52mm	400-51200	3.3-24V	86
R86Mini	7.2A	250g	18-80VAC	119×79×35mm	400-25600	3.3-24V	57、60、86
R110PLUS	8.0A	1000g	110-230VAC	178×109×68mm	400-60000	3.3-24V	86、110
R130	8.0A	1400g	110-230VAC	203×147×78mm	200-25600	3.3-24V	110、130
3R60	8.0A	250g	24-50VDC	118×76×33mm	400-51200	3.3-24V	3 phase 57、60
3R110PLUS	7.2A	1000g	110-230VAC	178×109×68mm	500-60000	3.3-24V	3 phase 86/110
3R130	8.0A	1400g	110-230VAC	203×147×78mm	400-60000	3.3-24V	3 phase 110/130

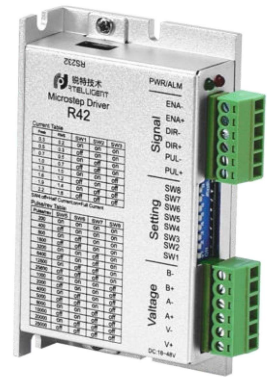
## Driver working status LED indication

LED status	Driver status	Troubleshooting
● Green indicator is on for a long time	Driver not enabled	
●● Green indicator is flickering	Driver working normally	
●●● One green indicator and one red indicator	Driver overcurrent	Check connection and repair the driver
●●●● One green indicator and two red indicators	Driver input power overvoltage	Check the voltage of input power
●●●●● One green indicator and three red indicators	The internal voltage of the driver is wrong	Driver faults
●●●●●●● One green indicator and seven red indicators	Motor phase failure	Check the wiring terminal and confirm the extension cable connector

# R42

The R42 digital 2-phase stepper driver is based on 32-bit DSP platform and integrated with the micro-stepping technology and the auto tuning of power-up parameters. With the features of low noise, low vibration, low heating and high-speed high torque output, it is suitable for most stepper motors.

- Pulse mode: monopulse/double-pulse.
- Signal level: 3.3~24V compatible; series resistance not necessary for the application of PLC.
- Power voltage: 24~48V DC supply; 24 or 36V recommended.
- Typical application: marking machine, soldering tin machine, laser, 3D printing, visual localization, automatic assembly equipment.



## R42 wiring diagram

### Control signal

ENA	Enable	3.3~24V compatible; series resistance not necessary for the application of PLC
DIR	Direction	
PUL	Pulse	

### Power supply-DC

V-	Power negative	24~48VDC, power over 100w
V+	Power positive	

### Motor cable

A+	A-	B+	B-
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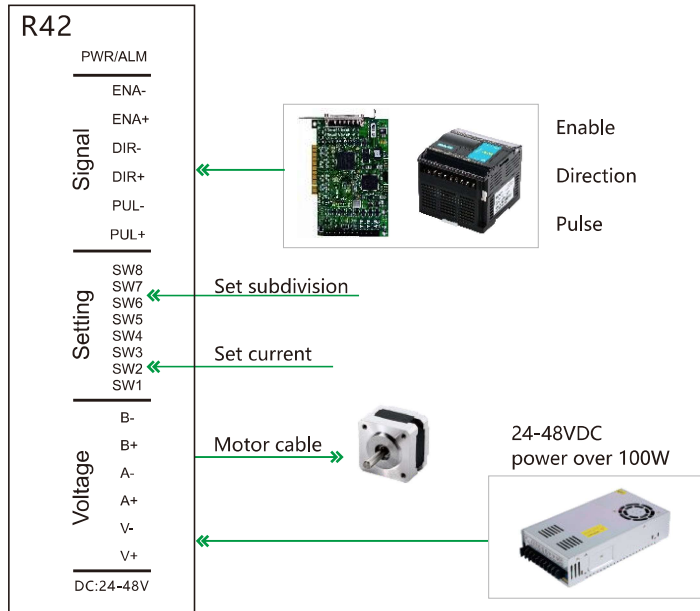
Arbitrarily exchange two of the same phase, the motor is reversed

### Working current setting

Output current peak	Output current RMS	SW1	SW2	SW3
0.3A	0.2A	on	on	on
0.5A	0.3A	off	on	on
0.7A	0.5A	on	off	on
1.0A	0.7A	off	off	on
1.3A	1.0A	on	on	off
1.6A	1.2A	off	on	off
1.9A	1.4A	on	off	off
2.2A	1.6A	off	off	off

### Setting of semi-/full current

	SW4
off	Semi-current When the motor is not in operation, its current half of operating current
on	Full current When the motor is not in operation, its current equal to operating current

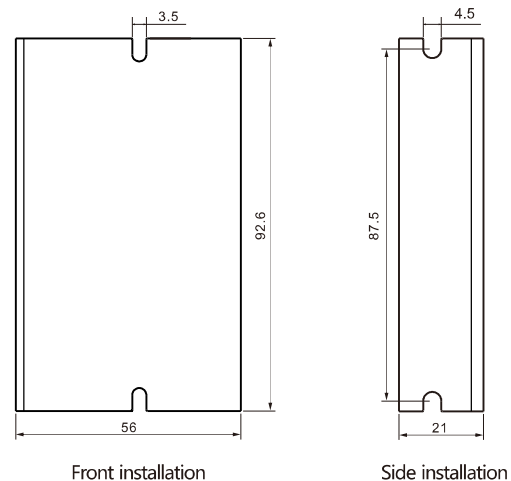


## Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
200	on	on	on	on
400	off	on	on	on
800	on	off	on	on
1600	off	off	on	on
3200	on	on	off	on
6400	off	on	off	on
12800	on	off	off	on
25600	off	off	off	on
1000	on	on	on	off
2000	off	on	on	off
4000	on	off	on	off
5000	off	off	on	off
8000	on	on	off	off
10000	off	on	off	off
20000	on	off	off	off
25000	off	off	off	off

When SW5, SW6, SW7, SW8 are all on, any subdivision can be changed through the debugging software

## Installation dimensions



## R60

R60 digital 2-phase stepper driver is based on 32-bit DSP platform and integrated with the micro-stepping technology and the auto tuning of power-up parameters. With the features of low noise, low vibration, low heating and high-speed high torque output, it is suitable for most stepper motors.

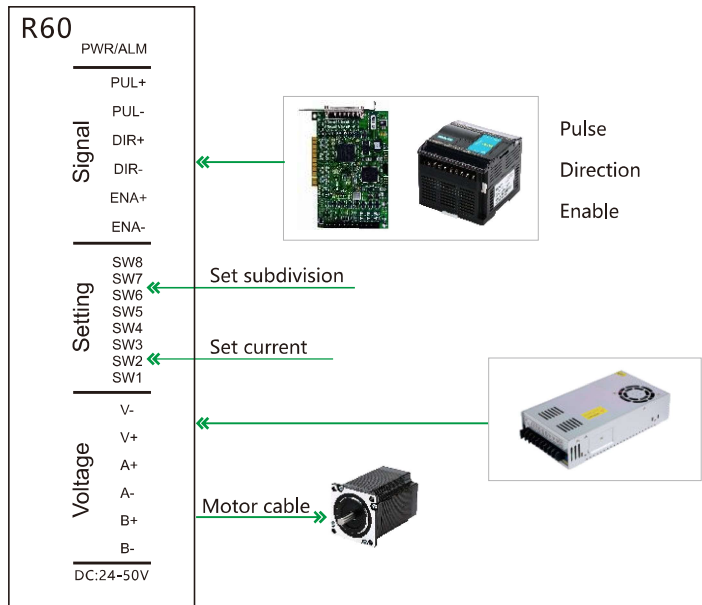
R60 is used to drive two-phase stepper motors base below 60mm.

- Pulse mode: monopulse/double-pulse.
- Signal level: 3.3~24V compatible; serial resistance not necessary for the application of PLC.
- Power voltage: 24-50V DC supply; 36 or 48V recommended.
- Typical application: carving machine, marking machine, cutting machine, plotter, laser, auto assembly equipment.



### R60 wiring diagram

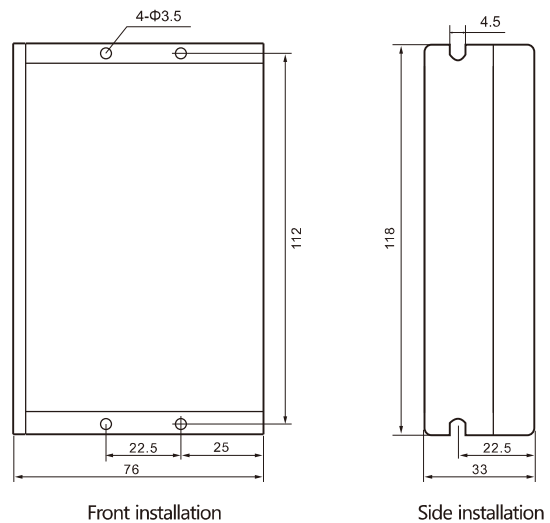
Control signal				
ENA	Enable	3.3~24V compatible; series resistance not necessary for the application of PLC		
DIR	Direction			
PUL	Pulse			
Power supply-DC				
V-	Power negative	24-50VDC, power over 150w		
V+	Power positive			
Motor cable				
A+	A-	B+	B-	
Arbitrarily exchange two of the same phase, the motor is reversed				
Working current setting				
Output current peak	Output current RMS	SW1	SW2	SW3
1.4A	1.0A	on	on	on
2.1A	1.5A	off	on	on
2.7A	1.9A	on	off	on
3.2A	2.3A	off	off	on
3.8A	2.7A	on	on	off
4.3A	3.1A	off	on	off
4.9A	3.5A	on	off	off
5.6A	4.0A	off	off	off
Setting of semi-/full current				SW4
off	Semi-current	When the motor is not in operation, its current half of operating current		
on	Full current	When the motor is not in operation, its current equal to operating current		



### Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
200	on	on	on	on
400	off	on	on	on
800	on	off	on	on
1600	off	off	on	on
3200	on	on	off	on
6400	off	on	off	on
12800	on	off	off	on
25600	off	off	off	on
1000	on	on	on	off
2000	off	on	on	off
4000	on	off	on	off
5000	off	off	on	off
8000	on	on	off	off
10000	off	on	off	off
20000	on	off	off	off
25000	off	off	off	off

### Installation dimensions

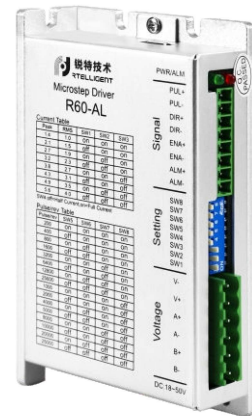


# R60-AL

R60-AL digital 2-phase stepper driver is based on 32-bit DSP platform. It has function with alarm output and modification of driver parameter via the data cable. With the features of low noise, low vibration, low heating and high-speed high torque output, it is suitable for most stepper motors.

R60-AL is used to drive two-phase stepper motors base below 60mm.

- Pulse mode: monopulse/double-pulse.
- Signal Level: 24V (5V can be customized).
- Power voltage: 24-50V DC supply; 36 or 48V recommended.
- Typical application: carving machine, marking machine, cutting machine, plotter, laser, auto assembly equipment.



## R60-AL wiring diagram

### Control signal

ENA	Enable	Default 24V level 5V need to change the drive
DIR	Direction	
PUL	Pulse	
ALM	Alarm output	Open collector, max current 40mA

### Power supply-DC

V-	Power negative	24-50VDC, power over 150w
V+	Power positive	

### Motor cable

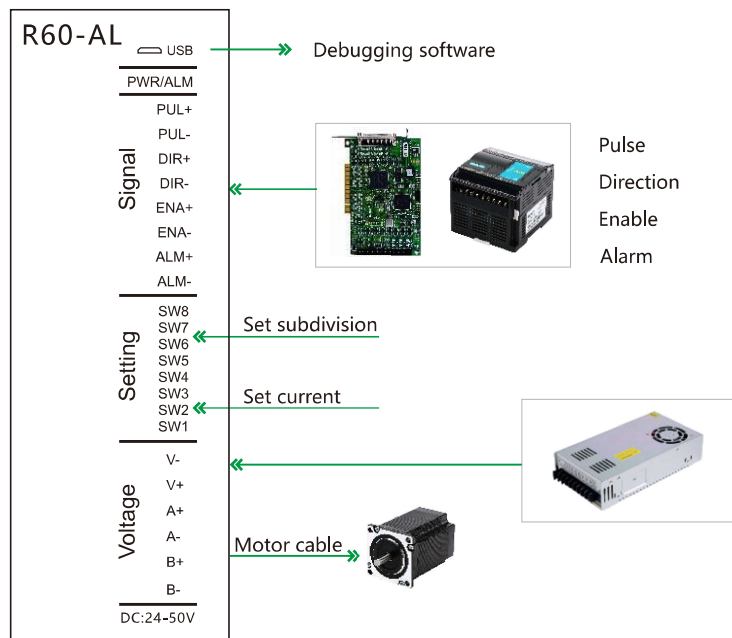
A+	A-	B+	B-
Arbitrarily exchange two of the same phase, the motor is reversed			

### Working current setting

Output current peak	Output current RMS	SW1	SW2	SW3
1.4A	1.0A	on	on	on
2.1A	1.5A	off	on	on
2.7A	1.9A	on	off	on
3.2A	2.3A	off	off	on
3.8A	2.7A	on	on	off
4.3A	3.1A	off	on	off
4.9A	3.5A	on	off	off
5.6A	4.0A	off	off	off

### Setting of semi-/full current

		SW4
off	Semi-current	When the motor is not in operation, its current half of operating current
on	Full current	When the motor is not in operation, its current equal to operating current

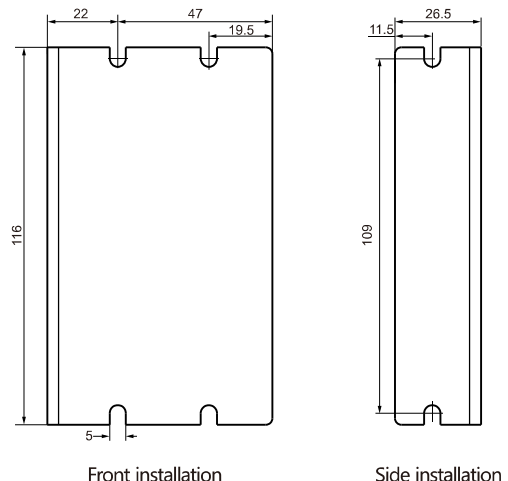


## Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
200	on	on	on	on
400	off	on	on	on
800	on	off	on	on
1600	off	off	on	on
3200	on	on	off	on
6400	off	on	off	on
12800	on	off	off	on
25600	off	off	off	on
1000	on	on	on	off
2000	off	on	on	off
4000	on	off	on	off
5000	off	off	on	off
8000	on	on	off	off
10000	off	on	off	off
20000	on	off	off	off
25000	off	off	off	off

When SW5, SW6, SW7, SW8 are all on, any subdivision can be changed through the debugging software

## Installation dimensions



## R86

The R86 digital 2-phase stepper driver is based on 32-bit DSP platform and integrated with the micro-stepping technology and the auto tuning of power-up parameters. With the features of low noise, low vibration, low heating and high-speed high torque output, it is suitable for most stepper motors.

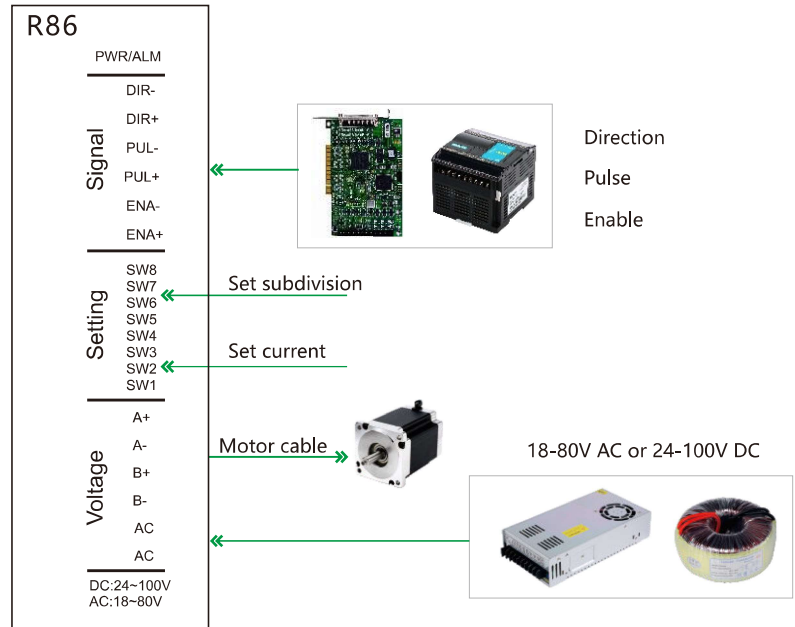
R86 is used to drive two-phase stepper motors base below 86mm.

- Pulse mode: monopulse/double-pulse.
- Signal Level: 3.3~24V compatible; series resistance not necessary for the application of PLC.
- Power voltage: 24~100V DC or 18~80V AC; 48V or 60V AC recommended.
- Typical application: carving machine, labeling machine, cutting machine, plotter, numerical control machine, laser, automatic assembly equipment.



### R86 wiring diagram

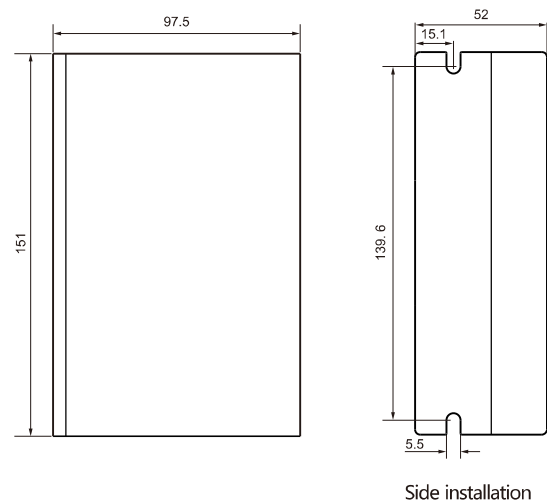
Control signal				
DIR	Direction	3.3~24V compatible; series resistance not necessary for the application of PLC		
PUL	Pulse			
ENA	Enable			
Power supply--AC/DC				
AC	power supply	18~80V AC or 24~100V DC, power over 150W		
AC	power supply			
Motor cable				
A+	A-	B+	B-	
Arbitrarily exchange two of the same phase, the motor is reversed				
Working current setting				
Output current peak	Output current RMS	SW1	SW2	SW3
2.40A	2.00A	on	on	on
3.08A	2.57A	off	on	on
3.77A	3.14A	on	off	on
4.45A	3.71A	off	off	on
5.14A	4.28A	on	on	off
5.83A	4.86A	off	on	off
6.52A	5.43A	on	off	off
7.20A	6.00A	off	off	off
Setting of semi-/full current				SW4
off	Semi-current	When the motor is not in operation, its current half of operating current		
on	Full current	When the motor is not in operation, its current equal to operating current		



### Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
400	on	on	on	on
800	off	on	on	on
1600	on	off	on	on
3200	off	off	on	on
6400	on	on	off	on
12800	off	on	off	on
25600	on	off	off	on
51200	off	off	off	on
1000	on	on	on	off
2000	off	on	on	off
4000	on	off	on	off
5000	off	off	on	off
8000	on	on	off	off
10000	off	on	off	off
20000	on	off	off	off
40000	off	off	off	off

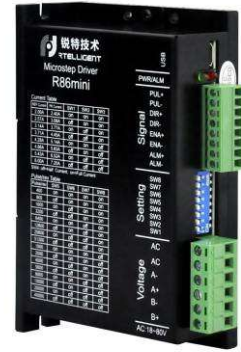
### Installation dimensions



# R86MINI

R86MINI digital 2-phase stepper driver, integrated with the micro-stepping technology and the auto tuning of power-up parameters. With the features of low noise, low vibration, low heating and high-speed high torque output, it is suitable for most stepper motor.

- Pulse mode: monopulse/double-pulse.
- Signal level: 3.3~24V compatible; serial resistance not necessary for the application of PLC.
- Power voltage: 24~100V DC or 18~80V AC; 36V or 48V recommended.
- Typical application: carving machine, labeling machine, cutting machine, plotter, numerical control machine, laser, automatic assembly equipment.



## R86mini wiring diagram

Control signal		
PUL	Pulse	Default 24V level 5V need to change the driver
DIR	Direction	
ENA	Enable	
ALM	Alarm	Open collector, maximum current 40mA

Power supply-DC/AC		
AC	Power supply	24-100V DC or 18-80V AC
AC	Power supply	power over 150W

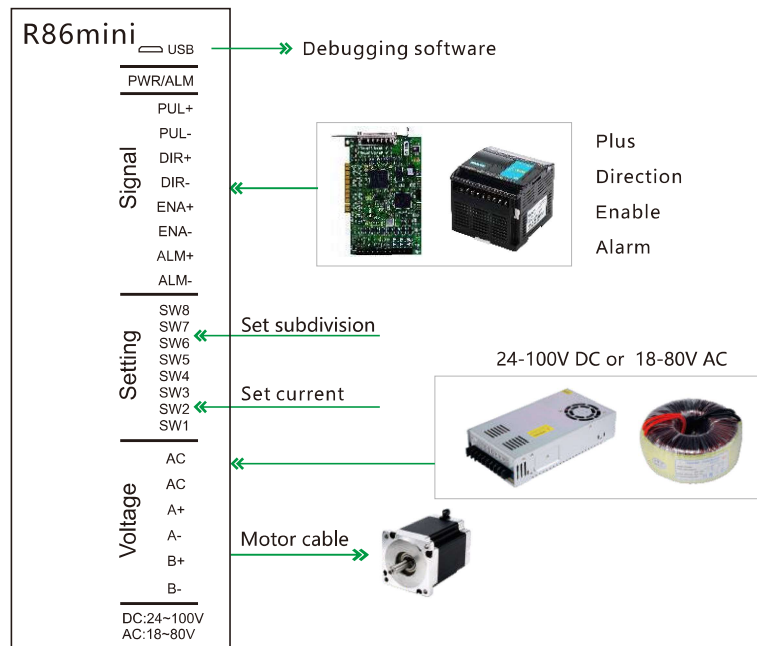
Motor cable			
A+	A-	B+	B-

Arbitrarily exchange two of the same phase, the motor is reversed

Working current setting				
Peak	RMS	SW1	SW2	SW3
2.40A	2.00A	on	on	on
3.08A	2.57A	off	on	on
3.77A	3.14A	on	off	on
4.45A	3.71A	off	off	on
5.14A	4.28A	on	on	off
5.83A	4.86A	off	on	off
6.52A	5.43A	on	off	off
7.20A	6.00A	off	off	off

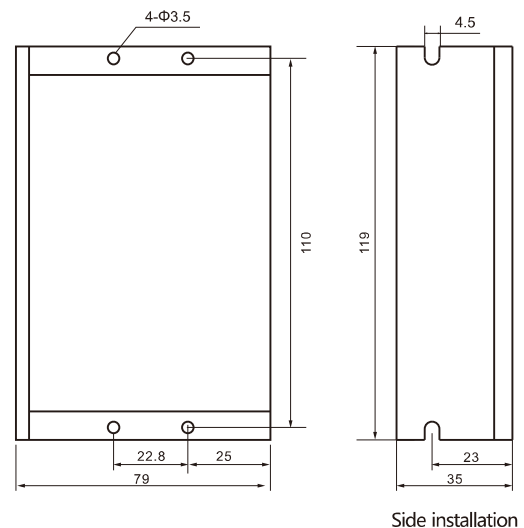
Setting of semi-/full current		SW4
off	When not in operation, its current half of operating current	
on	When not in operation, its current equal to operating current	



## Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
400	on	on	on	on
800	off	on	on	on
1600	on	off	on	on
3200	off	off	on	on
6400	on	on	off	on
12800	off	on	off	on
25600	on	off	off	on
51200	off	off	off	on
1000	on	on	on	off
2000	off	on	on	off
4000	on	off	on	off
5000	off	off	on	off
8000	on	on	off	off
10000	off	on	off	off
20000	on	off	off	off
40000	off	off	off	off

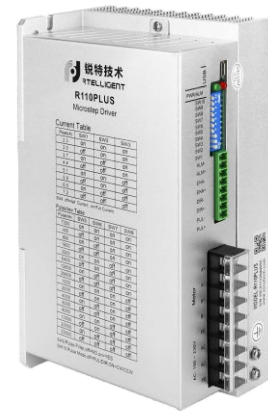
## Installation dimensions



# R110PLUS

The R110PLUS digital 2-phase stepper driver is based on 32-bit DSP platform and integrated with the micro-stepping technology and the auto tuning of power-up parameters. With the features of low noise, low vibration, low heating and high-speed high torque output, which can fully exert the performance of two-phase high-voltage stepper motors.

- Pulse mode: monopulse/double-pulse
- Signal level: 3.3~24V compatible; serial resistance not necessary for the application of PLC.
- Power supply: 110~230V AC. 220V AC recommended, with superior high-speed performance.
- Typical application: carving machine, cutting machine, screen printing device, numerical control machine, automatic assembly equipment.



## R110PLUS wiring diagram

Control signal		
ENA	Enable	3.3~24V compatible; series resistance not necessary for the application of PLC
DIR	Direction	
PUL	Pulse	
ALM	Alarm output	Open collector, max current 50mA

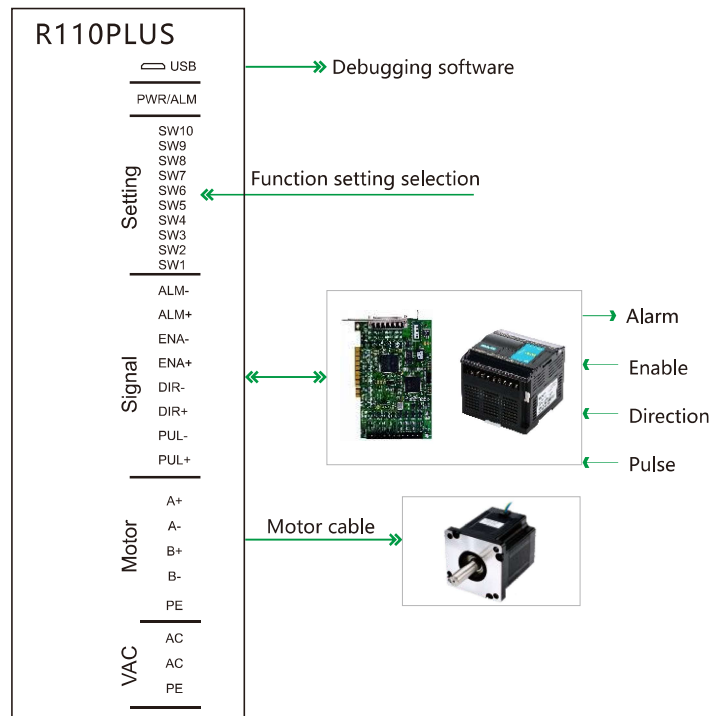
Power supply--AC		
AC	power supply	110~230V AC
AC	power supply	

Working current setting				
Output current peak	Output current RMS	SW1	SW2	SW3
2.3A	2.0A	on	on	on
3.0A	2.6A	off	on	on
3.7A	3.1A	on	off	on
4.4A	3.7A	off	off	on
5.1A	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

Setting of semi-/full current			SW4
off	Semi-current	When the motor is not in operation, its current half of operating current	
on	Full current	When the motor is not in operation, its current equal to operating current	

Filter function selection			SW9
off	No filtering	Smooth command deactivated	
on	With filtering	Smooth command activated	

Pulse mode selection			SW10
off	monopulse	PUL+DIR	
on	double-pulse	CW&CCW	

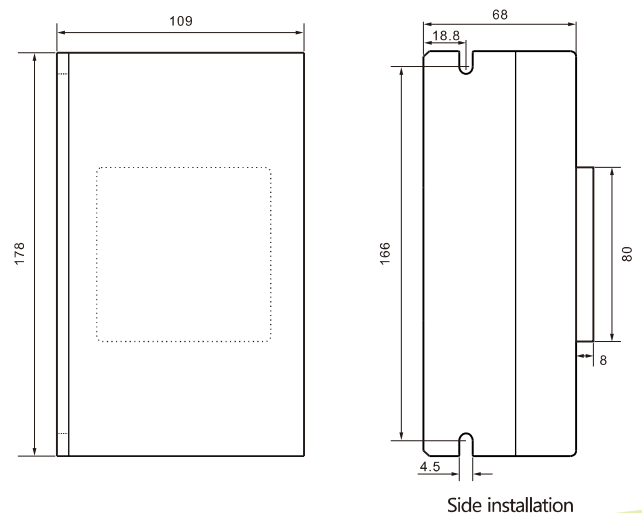


## Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
7200	on	on	on	on
400	off	on	on	on
800	on	off	on	on
1600	off	off	on	on
3200	on	on	off	on
6400	off	on	off	on
12800	on	off	off	on
25600	off	off	off	on
1000	on	on	on	off
2000	off	on	on	off
4000	on	off	on	off
5000	off	off	on	off
8000	on	on	off	off
10000	off	on	off	off
20000	on	off	off	off
25000	off	off	off	off

When SW5, SW6, SW7, SW8 are all on, any subdivision can be changed through the debugging software

## Installation dimensions





# R130

The R130 digital 2-phase stepper driver is based on 32-bit DSP platform and integrated with the micro-stepping technology and the auto tuning of power-up parameters. With the features of low noise, low vibration, low heating and high-speed high torque output, it is suitable for most stepper motors.

- Pulse mode: monopulse/double-pulse/orthogonal pulse.
- Signal level: 3.3~24V compatible; serial resistance not necessary for the application of PLC.
- Power supply: 110~230V AC.
- Typical application: carving machine, cutting machine, screen printing device, numerical control machine, automatic assembly equipment.



## R130 wiring diagram

### Control signal

PUL	Pulse	3.3~24V compatible; series resistance not necessary for the application of PLC
DIR	Direction	
ENA	Enable	
ALM	Alarm output	Open collector, max current 50mA
RDY	RDY output	Open collector, max current 50mA

### Motor cable

A+      A-      B+      B-

Arbitrarily exchange two of the same phase, the motor is reversed

### Working current setting

RMS(A)	SW1	SW2	SW3	SW4
0.7	on	on	on	on
1.1	off	on	on	on
1.6	on	off	on	on
2.0	off	off	on	on
2.4	on	on	off	on
2.8	off	on	off	on
3.2	on	off	off	on
3.6	off	off	off	on
4.0	on	on	on	off
4.5	off	on	on	off
5.0	on	off	on	off
5.4	off	off	on	off
5.8	on	on	off	off
6.2	off	on	off	off
6.6	on	off	off	off
7.0	off	off	off	off

### Filter function selection

SW9

off	No filtering	Smooth command deactivated
ON	With filtering	Smooth command activated

### Max pulse frequency selection

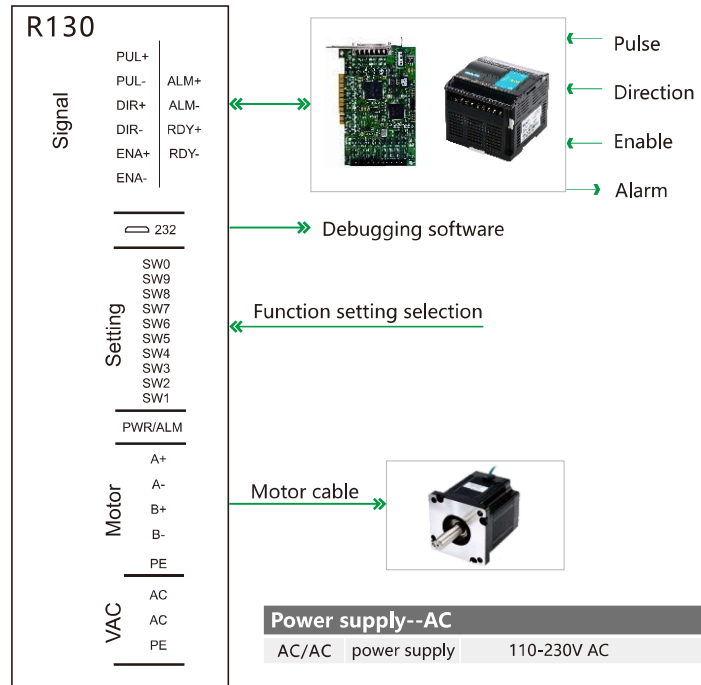
SW0

off	Max frequency 200KHz	ON	Max frequency 1MHz
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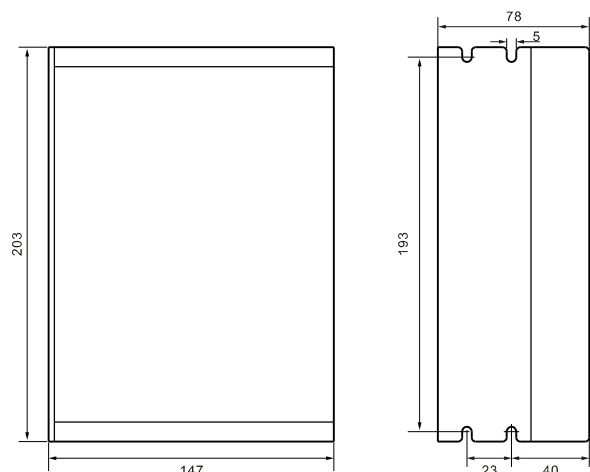
## Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
400	on	on	on	on
500	off	on	on	on
600	on	off	on	on
800	off	off	on	on
1000	on	on	off	on
1200	off	on	off	on
2000	on	off	off	on
3000	off	off	off	on
4000	on	on	on	off
5000	off	on	on	off
6000	on	off	on	off
10000	off	off	on	off
12000	on	on	off	off
20000	off	on	off	off
30000	on	off	off	off
60000	off	off	off	off

When SW5, SW6, SW7, SW8 are all on, any subdivision can be changed through the debugging software



## Installation dimensions



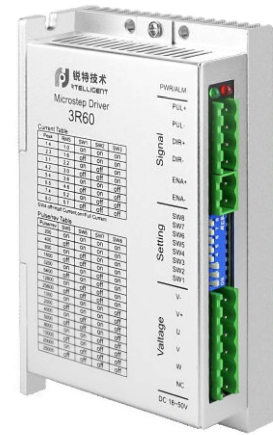
Side installation

## 3R60

The 3R60 digital 3-phase stepper driver is based on 32-bit DSP platform and integrated with the micro-stepping technology and the patented three-phase demodulation algorithm. It allows the 3-phase stepper motor's characteristics of low resonance at low speed and low torque ripple to be fully utilized.

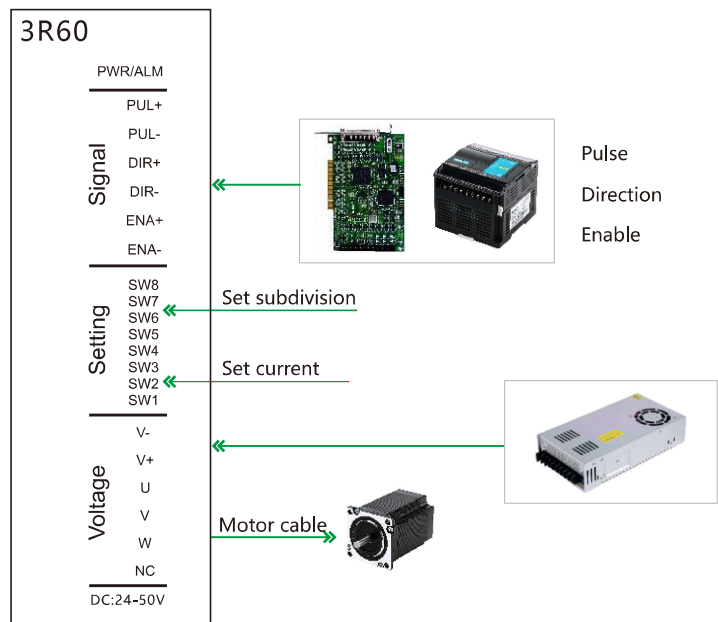
3R60 is used to drive three-phase stepper motors base below 60mm.

- Pulse mode: monopulse/double-pulse.
- Signal level: 3.3~24V compatible; serial resistance not necessary for the application of PLC.
- Power supply: 24-50V DC; 36 or 48V recommended.
- Typical application: dispenser, soldering tin machine, carving machine, laser cutting machine, 3D printer.



### 3R60 wiring diagram

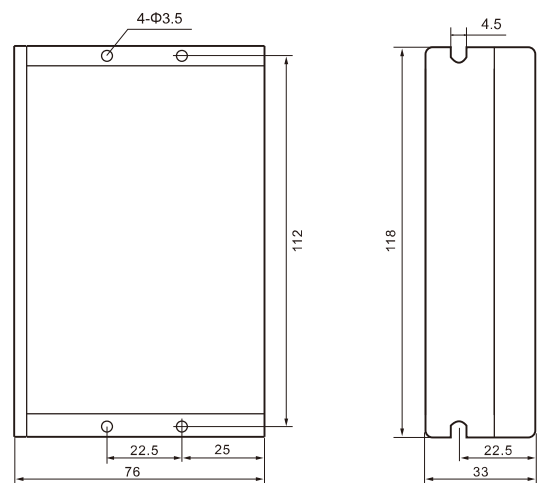
Control signal				
ENA	Enable	3.3~24V compatible; series resistance not necessary for the application of PLC		
DIR	Direction			
PUL	Pulse			
Power supply-DC				
V-	Power negative	24-50VDC, power over 150w		
V+	Power positive			
Motor cable				
NC	U	V	W	
No pin, no wiring Exchange two cables arbitrarily, the motor is reversed				
Working current setting				
Output current peak	Output current RMS	SW1	SW2	SW3
1.4A	1.0A	on	on	on
2.3A	1.6A	off	on	on
3.1A	2.2A	on	off	on
4.2A	3.0A	off	off	on
5.4A	3.8A	on	on	off
6.5A	4.6A	off	on	off
7.4A	5.2A	on	off	off
8.0A	5.7A	off	off	off
Setting of semi-/full current				SW4
off	Semi-current	When the motor is not in operation, its current half of operating current		
on	Full current	When the motor is not in operation, its current equal to operating current		



### Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
200	on	on	on	on
400	off	on	on	on
800	on	off	on	on
1600	off	off	on	on
3200	on	on	off	on
6400	off	on	off	on
12800	on	off	off	on
25600	off	off	off	on
1000	on	on	on	off
2000	off	on	on	off
4000	on	off	on	off
5000	off	off	on	off
8000	on	on	off	off
10000	off	on	off	off
20000	on	off	off	off
25000	off	off	off	off

### Installation dimensions



Front installation

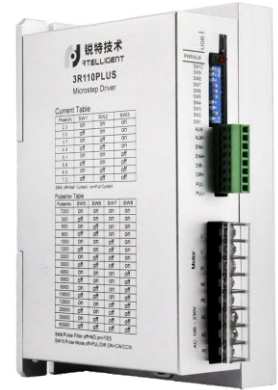
Side installation

# 3R110PLUS

The 3R110PLUS digital 3-phase stepper driver is integrated with the micro-stepping technology and the patented three-phase demodulation algorithm. With the features of low noise, low vibration, low heating and high-speed high torque output, it allows the three-phase stepper motor itself to deliver full performance benefits.

3R110PLUS is used to drive three-phase stepper motors base below 110mm.

- Pulse mode: monopulse/double-pulse.
- Signal level: 3.3~24V compatible; serial resistance not necessary for the application of PLC.
- Power supply: 110~230V AC, 220V recommended for superior high speed performance.
- Typical application: carving machine, labeling machine, cutting machine, plotter, numerical control machine, laser, automatic assembly equipment.



## 3R110PLUS wiring diagram

### Control signal

ENA	Enable	3.3~24V compatible; series resistance not necessary for the application of PLC
DIR	Direction	
PUL	Pulse	
ALM	Alarm output	

### Motor cable

NC	U	V	W
No pin, no wiring	Exchange two cables arbitrarily, the motor is reversed		

### Working current setting

Output current peak	Output current RMS	SW1	SW2	SW3
2.3A	2.0A	on	on	on
3.0A	2.6A	off	on	on
3.7A	3.1A	on	off	on
4.4A	3.7A	off	off	on
5.1A	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

### Setting of semi-/full current

Setting	Semi-current	When the motor is not in operation, its current half of operating current
off	Full current	When the motor is not in operation, its current equal to operating current

### Filter function selection

Setting	No filtering	Smooth command deactivated
on	With filtering	Smooth command activated

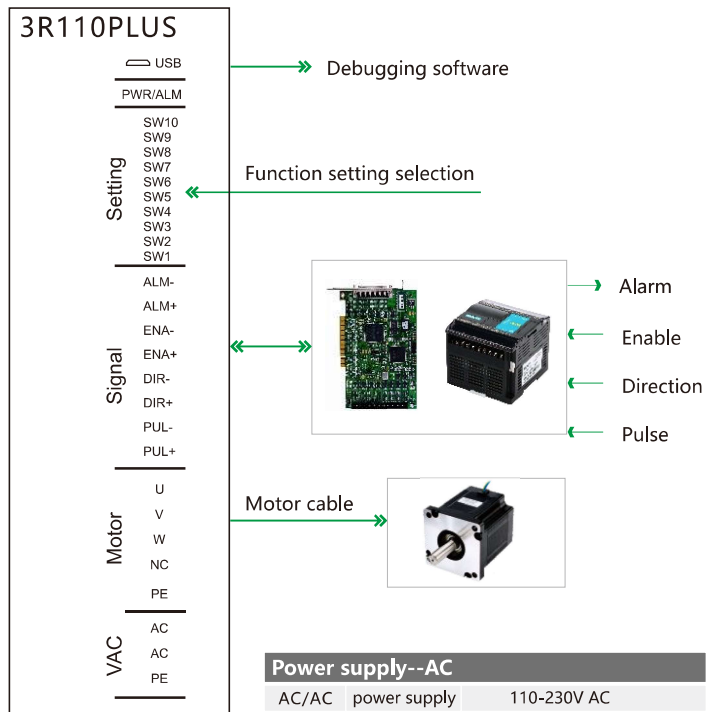
### Pulse mode selection

Setting	monopulse	PUL+DIR
on	double-pulse	CW&CCW

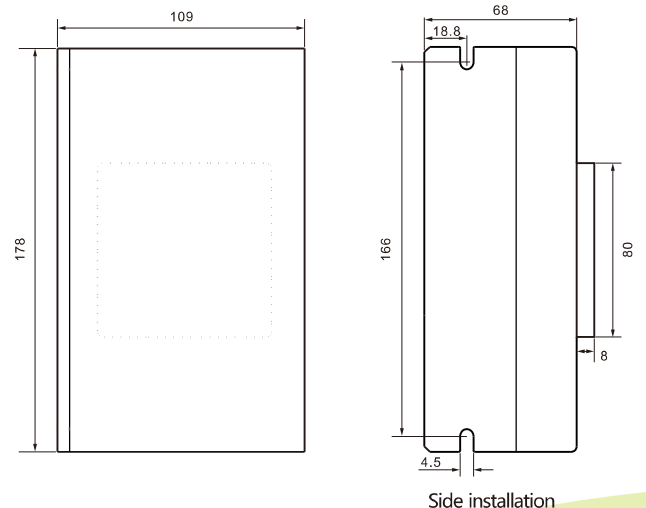
### Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
7200	on	on	on	on
500	off	on	on	on
600	on	off	on	on
800	off	off	on	on
1000	on	on	off	on
1200	off	on	off	on
2000	on	off	off	on
3000	off	off	off	on
4000	on	on	on	off
5000	off	on	on	off
6000	on	off	on	off
10000	off	off	on	off
12000	on	on	off	off
20000	off	on	off	off
30000	on	off	off	off
60000	off	off	off	off

When SW5, SW6, SW7, SW8 are all on, any subdivision can be changed through the debugging software



## Installation dimensions



# 3R130

The 3R130 digital 3-phase stepper driver is integrated with the micro-stepping technology and the patented three-phase demodulation algorithm. With the features of low noise, low vibration, low heating and high-speed high torque output, it allows the three-phase stepper motor itself to deliver full performance benefits.

3R130 is used to drive three-phase stepper motors base below 130mm.

- Pulse mode: monopulse/double-pulse/orthogonal pulse.
- Signal level: 3.3~24V compatible; serial resistance not necessary for the application of PLC.
- Power supply: 110~230V AC.
- Typical application: carving machine, cutting machine, screen printing device, numerical control machine, automatic assembly equipment.



## 3R130 wiring diagram

### Control signal

PUL	Pulse	3.3~24V compatible; series resistance not necessary for the application of PLC
DIR	Direction	
ENA	Enable	
ALM	Alarm output	Open collector, max current 50mA
RDY	RDY output	Open collector, max current 50mA

### Motor cable

NC	U	V	W
No pin, no wiring	Exchange two cables arbitrarily, the motor is reversed		

### Working current setting

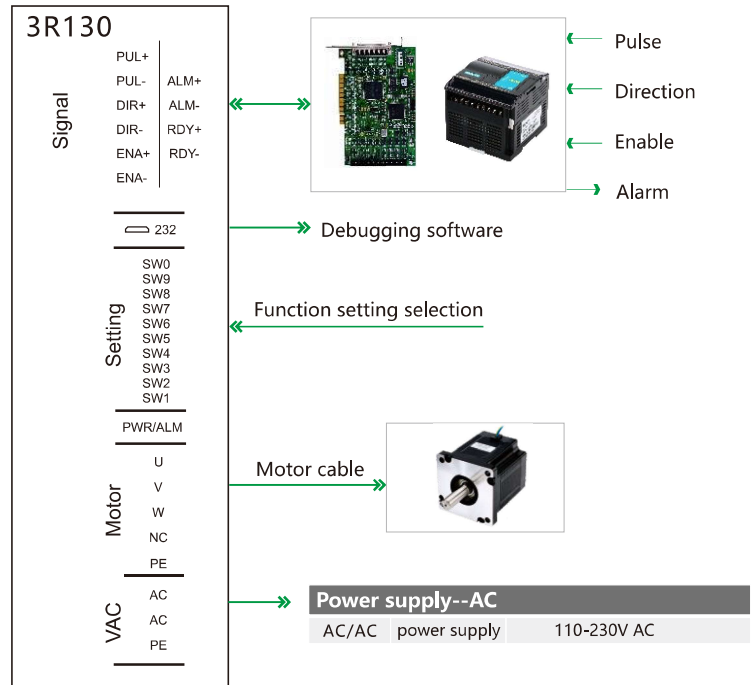
RMS(A)	SW1	SW2	SW3	SW4
0.7	on	on	on	on
1.1	off	on	on	on
1.6	on	off	on	on
2.0	off	off	on	on
2.4	on	on	off	on
2.8	off	on	off	on
3.2	on	off	off	on
3.6	off	off	off	on
4.0	on	on	on	off
4.5	off	on	on	off
5.0	on	off	on	off
5.4	off	off	on	off
5.8	on	on	off	off
6.2	off	on	off	off
6.6	on	off	off	off
7.0	off	off	off	off

### Filter function selection

Off	No filtering	Smooth command deactivated
On	With filtering	Smooth command activated

### Max pulse frequency selection

off	Max frequency 200KHz	ON	Max frequency 1MHz
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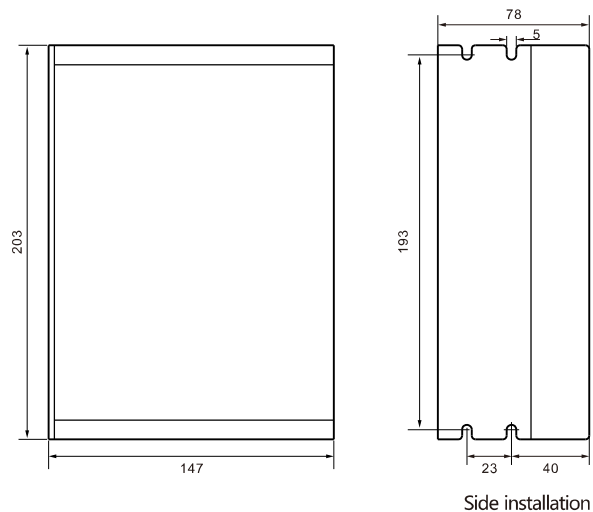


## Micro-stepping level setting

Steps/revolution	SW5	SW6	SW7	SW8
400	on	on	on	on
500	off	on	on	on
600	on	off	on	on
800	off	off	on	on
1000	on	on	off	on
1200	off	on	off	on
2000	on	off	off	on
3000	off	off	off	on
4000	on	on	on	off
5000	off	on	on	off
6000	on	off	on	off
10000	off	off	on	off
12000	on	on	off	off
20000	off	on	off	off
30000	on	off	off	off
60000	off	off	off	off

When SW5, SW6, SW7, SW8 are all on, any subdivision can be changed through the debugging software

## Installation dimensions



Side installation