



Hybrid Digital Stepper System

Catalog



Shenzhen Just Motion Control Electromechanics Co., Ltd.

Add.: Building B, Jiayu Technology Innovation Industrial Park, Jin'an Road, Matian Street, Guangming District, Shenzhen, China (Postcode: 518106)

Tel: +86 755-26509689

Email: export@jmc-motion.com

info@jmc-motion.com

Web: www.jmc-motion.com

www.jmc-motor.com



本公司产品已通过CE认证



本公司已通过ISO9001:2000
质量管理体系认证



www.jmc-motion.com



Company Profile

Shenzhen Just Motion Control Electromechanics Co., Ltd. is a high-tech enterprise specializing in R&D, production and sales of motion control products. The company has assembled a group of elites who have been engaged in R&D, production and marketing in the field of motion control for many years, and strive to develop new products that meet the needs of the market and customers.

The company's main products include digital stepper drives, hybrid stepper servo systems, brushless motors, open programmable multi-axis motion controllers, DC servos, AC servo systems, and intelligent stepper systems... the company's products and involved Engineering has been widely used in semiconductor, textile, packaging, laser, engraving, printing, advertising, clothing, stone, ceramics, medical, robotics and military industries. Products are also exported to Europe, the United States, Singapore, Indonesia, South Korea, Hong Kong, Taiwan and other countries and regions.

JMC has always regarded product quality as the life of the company. Good supporting channels, strong technical force, strict quality inspection procedures, and perfect management system have made our products highly praised by customers. With high-quality, cost-effective products, we have won many domestic customers.

JMC people are willing to develop and improve together with the majority of users!



Corporate Culture Concept

Quality policy: full participation, attention to details, continuous improvement, customer satisfaction.

Product service: Keep improving, three-dimensional team, build industry standards, and quality to prove customer satisfaction.

Enterprise mission: create all the way, promote the progress of manufacturing equipment automation, and give back to the society.

Corporate Vision: Based in China, among the international.
Marketing concept: Products are the eternal magic weapon for sales.

The essence of business: goodness is like water, morality and virtue.



R&D



IQC



Assembly area



Assembly area



Test area



Aging room



Aging room



Packing area



- Naming rules for hybrid digital stepper drives 04
- Hybrid digital stepper driver selection list 04
- Notice 04
- Fault handling 04
- 2DM415 05-06
- 2DM420 07-08
- 2DM442 09-10
- 2DM542 11-12
- 2DM556 13-14
- 2DM860 15-16
- 2DM860H 17-18
- 2DM2260 19-20
- 2DM2280 21-22
- 3DM783 23-24
- 3DM860H 25-26
- 3DM2060H 27-28
- 3DM2080 29-30
- 3DM3422 31-32
- 3DM3722 33-34
- Stepper motor series introduction 35
- Naming rules for hybrid digital stepper motors 36
- 20/28 two-phase motor 37
- 35/39 two-phase motor 38
- 42 two-phase motor 39
- 57 two-phase motor 40
- 60 two-phase motor 41
- 86 two-phase motor 42
- 110 two-phase motor 43
- 57/86 three-phase motor 44
- 110/130 three-phase motor 45
- JMC typical stepper motor torque diagram 46-48

Hybrid Digital Stepper Driver

Naming rules for hybrid digital stepper drives

2 DM 5 56 - XXX
 ① ② ③ ④ ⑤

① Phases: 2 - 2 phases; 3 - 3 phases ② Digital
 ③ Driver power supply voltage: value*10, blow 9 is DC, above 10 is AC
 ④ Dirver output current: value/10 ⑤ Design number, default is standard model
 2DM556 represents a 2-phase digital driver, power supply voltage less than 50V, output current 5.6A.

Hybrid digital stepper driver selection list

Phase	Model	Current	Voltage	Microstep	Motor	Weight(KG)	Dimensions(mm)
2 Phase	2DM415	0.21-1.50A	DC(18-36V)	2-128	20,28,35,39,42	0.1	86x55x20
	2DM420	0.9-3.0A	DC(18-36V)	2-128,5-125	42,57	0.15	96x60x25
	2DM442	1.0-4.2A	DC(24-48V)	2-128,5-125	42,57	0.2	116x69x26
	2DM542	1.0-4.2A	DC(24-48V)	2-128,5-125	57,86	0.27	118x75.5x34
	2DM556	1.4-5.6A	DC(24-60V)	2-128,5-125	57,86	0.27	118x75.5x34
	2DM860	2.1-8.4A	DC(24-110V) AC(18-75V)	2-256,5-200	57,86,110	0.6	150x97.5x53
	2DM860H	2.1-8.4A	DC(24-110V) AC(18-75V)	2-256,5-200	57,86,110	0.6	150x97.5x53
	2DM2260	1.3-5.6A	AC(80-240V)	1-64,2,5-50	86,110	1.5	180x122x78
	2DM2280	2.2-8.2A	AC(80-240V)	2-128,5-125	110,130	1.5	192x127x85
	3 Phase	3DM783	1.8-8.3A	DC(24-60V)	2-256,5-200	57,86	0.6
3DM860		2.0-8.3A	DC(24-80V) AC(18-60V)	1-64,2,5-50	57,86	0.55	150x97x53
3DM860H		2.0-8.3A	DC(24-110V) AC(18-80V)	1-64,2,5-50	57,86	0.55	150x97x53
3DM2060H		1.3-5.6A	AC(80-240V)	1-64,2,5-50	86,110	1.5	180x122x78
3DM2080		2.0-8.0A	AC(80-240V)	2-128,2,5-50	86,110,130	1.5	192x127x85
Special Model		3DM3422	1.2-7.0A	AC(80-240V)	2-300	86,110	1.5
	3DM3722	1.2-7.0A	AC(80-240V)	2-300	110,130	1.5	200x146x80

Notice

1. Since the driver has no overheating protection, please install a heat sink when the temperature of the driver exceeds 70 degrees.
 2. Over current (excessive current or low voltage) fault indicator ALARM light is on, please check the motor wiring and other short-circuit faults or whether the voltage is too low, after the fault is removed, you need to re-power on to restore.
 3. The green indicator light is on when the power is turned on.
 4. When the above protection functions are activated, the motor shaft loses its self-locking force and the power indicator light turns red. If you want to resume normal operation, you need to confirm that the above faults are eliminated, and then power on again, the power indicator light turns green, the motor shaft is locked, and the drive returns to normal.

Fault handling

Fault	Reasons	Solutions
LED not light on	Wrong power connection	Check the power wiring
	Power voltage is low	Increase voltage
Motor not rotate, and no holding torque	Wrong wiring	Correct the wiring
	Offline enable RESET signal is valid	Invalidate RESET
Motor not rotate, but has holding torque	No pulse signal input	Adjust pulse width and signal level
Wrong rotation direction	Wrong connection of power line phase sequence	Swap any two connected lines
	Wrong direction signal input	Change direction setting
Motor torque is too low	Phase current too small	Set the phase current correctly
	Acceleration too high	Decrease acceleration
	Motor stalled	Troubleshoot mechanical failures
	Driver not match motor	Use a suitable motor

2DM415

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Overcurrent protection, overvoltage protection;
 Automatic detection, flexible selection of pulse edge counting method;
 Green light means running, red light means protection or offline.



Performance Introduction

2DM415 is a digital two-phase stepper driver, controlled by the latest 32-bit ARM processor. The peripheral microstep, current, and auxiliary functions of this digital drive dial code, users can freely set according to their needs, and internally write advanced drive control algorithms to ensure accurate and stable operation of the stepper motor at each speed range. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors to maximize motor performance; built-in smoothing algorithm, can greatly improve the motor's acceleration and deceleration performance. In a word, this digital driver can meet the application of most occasions, and it is a highly cost-effective motion control product.

Technical index

Input Voltage	DC18V~36V	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 6A±10% Overvoltage action value 50VDC	
Dimensions (mm)	118x75.5x34	
Weight	260g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
Cooling method	Natural cooling or forced cooling air	

Dial switch setting

◆ Six-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Microstep selection switch: SW4, SW5, SW6;

For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table

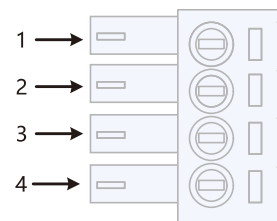
Current	Dial switch		SW1	SW2	SW3
	Peak	Effective			
0.21A	0.15A		OFF	ON	ON
0.42A	0.30A		ON	OFF	ON
0.63A	0.45A		OFF	OFF	ON
0.84A	0.60A		ON	ON	OFF
1.05A	0.75A		OFF	ON	OFF
1.26A	0.91A		ON	OFF	OFF
1.50A	1.09A		OFF	OFF	OFF

◆ Microstep dial code table

Microstep	Dial switch		
	SW4	SW5	SW6
200	ON	ON	ON
400	OFF	ON	ON
800	ON	OFF	ON
1600	OFF	OFF	ON
3200	ON	ON	OFF
6400	OFF	ON	OFF
12800	ON	OFF	OFF
25600	OFF	OFF	OFF

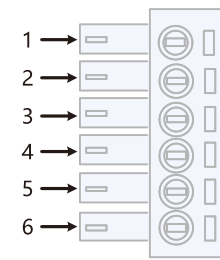
Driver interface function and use

◆ Control signal input port



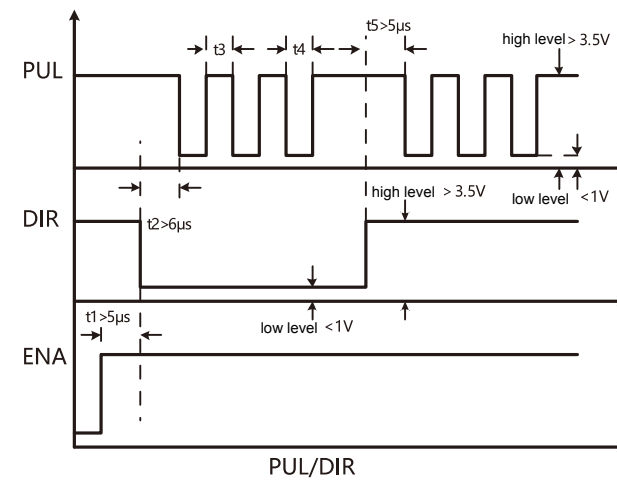
Port	Symbol	Name	Description
1	PUL	pulse input -	compatible with 5V-24V level
2	DIR	direction unput -	
3	VCC	public port +	
4	ENA	enable input -	

◆ Power port



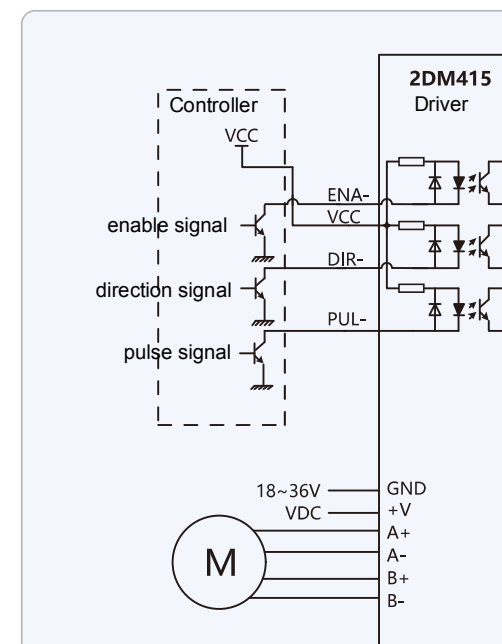
Port	Symbol	Name	Description
1	GND	power -	DC18V~36V
2	+V	power +	
3	A+	motor A+ port	motor phase A winding
4	A-	motor A- port	
5	B+	motor B+ port	motor phase B winding
6	B-	motor B- port	

Control signal timing diagram



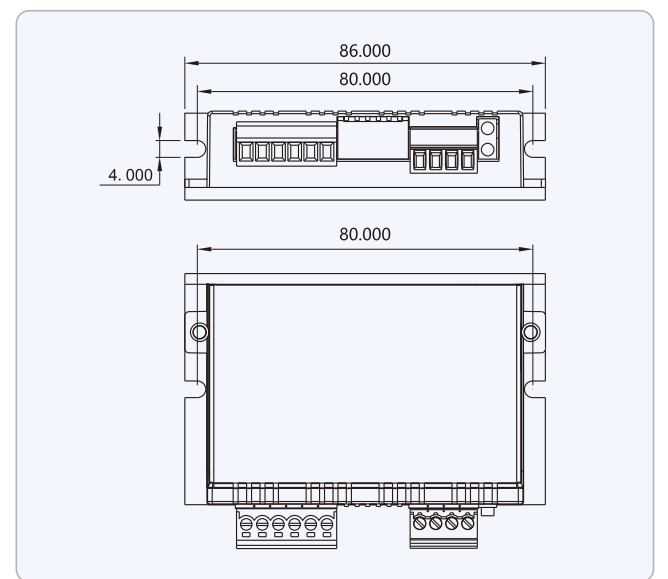
Notes:
 t1: ENA (enable signal) should be determined as high at least 5us in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6us ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5us.
 t4: The low-level width is not less than 2.5us.

Typical wiring diagram

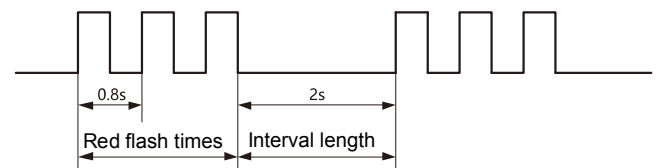


Note: The signal interface is compatible with 5-24V level, no resistance is needed in series.

Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

2DM420

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Overcurrent protection, overvoltage protection;
 Automatic detection, flexible selection of pulse edge counting method;
 Green light means running, red light means protection or offline.



Performance Introduction

2DM420 is a digital two-phase stepper drive, controlled by the latest 32-bit ARM processor. The peripheral microstep, current, and auxiliary functions of this digital drive dial code, users can freely set according to their needs, and internally write advanced drive control algorithms to ensure accurate and stable operation of the stepper motor at each speed range. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors to maximize motor performance; built-in smoothing algorithm, can greatly improve the motor's acceleration and deceleration performance. In a word, this digital driver can meet the application of most occasions, and it is a highly cost-effective motion control product.

Technical index

Input Voltage	DC18V~36V	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 6A±10% Overvoltage action value 50VDC	
Dimensions (mm)	118x75.5x34	
Weight	260g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
Cooling method	Natural cooling or forced cooling air	

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table

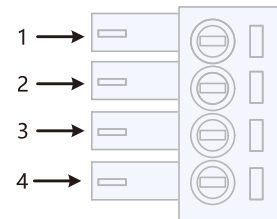
Current	Dial switch		SW1	SW2	SW3
	Peak	Effective			
0.90A	0.64A		ON	ON	ON
1.20A	0.85A		OFF	ON	ON
1.50A	1.06A		ON	OFF	ON
1.80A	1.27A		OFF	OFF	ON
2.10A	1.49A		ON	ON	OFF
2.40A	1.70A		OFF	ON	OFF
2.70A	1.91A		ON	OFF	OFF
3.00A	2.12A		OFF	OFF	OFF

◆ Microstep dial code table

Microstep	Dial switch			
	SW5	SW6	SW7	SW8
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

Driver interface function and use

◆ Control signal input port

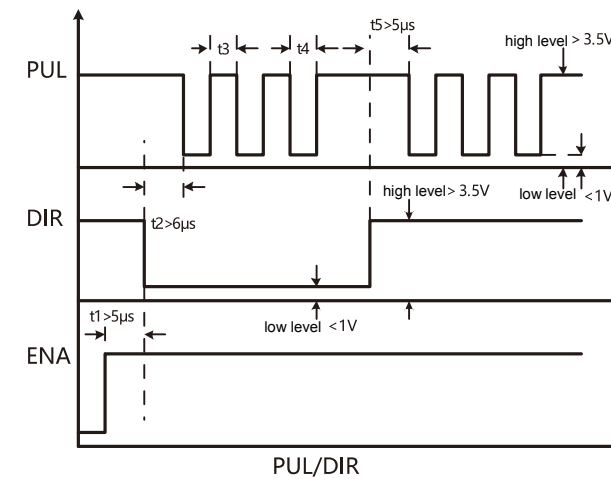


Port	Symbol	Name	Description
1	PUL	pulse input -	compatible with 5V-24V level
2	DIR	direction input -	
3	VCC	public port +	
4	ENA	enable input -	

◆ Power port

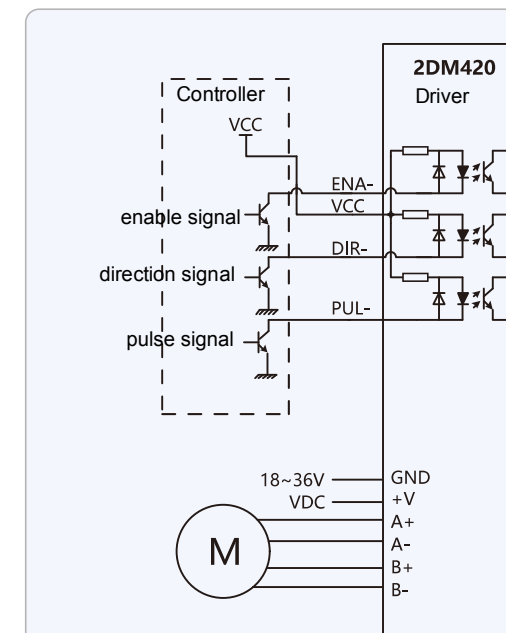
	Port	Symbol	Name	Description
1	power input port	GND	power -	DC18V~36V
2		+V	power +	
3	motor phase wire	A+	motor A+ port	motor phase A winding
4		A-	motor A- port	
5	motor phase wire	B+	motor B+ port	motor phase B winding
6		B-	motor B- port	

Control signal timing diagram



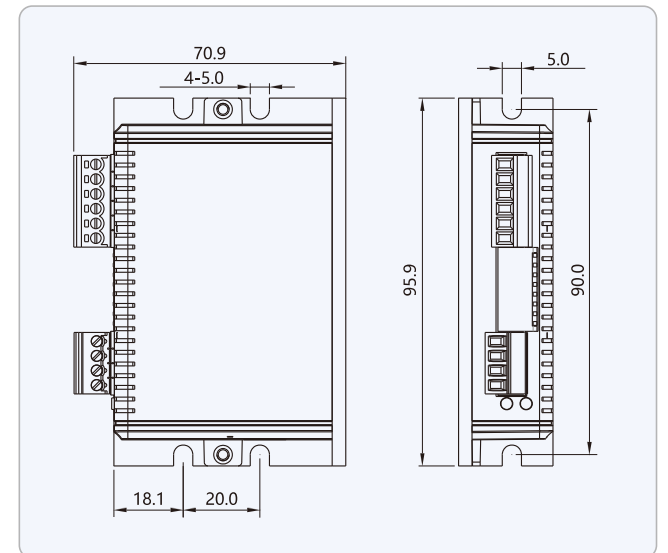
Notes:
 t1: ENA (enable signal) should be determined as high at least 5µs in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6µs ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5µs.
 t4: The low-level width is not less than 2.5µs.

Typical wiring diagram

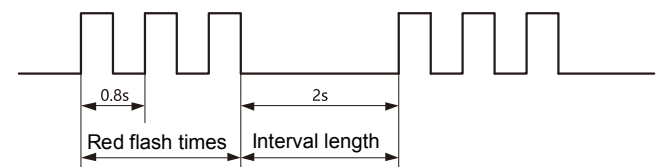


Note: The signal interface is compatible with 5-24V level, no resistance is needed in series.

Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

2DM442

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Single and double pulse control mode can be selected;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Overcurrent protection, overvoltage protection;
 Automatic detection, flexible selection of pulse edge counting method;
 Green light means running, red light means protection or offline.



Performance Introduction

2DM442 is a digital two-phase stepper drive, controlled by the latest 32-bit ARM processor. The peripheral microstep, current, and auxiliary functions of this digital drive dial code, users can freely set according to their needs, and internally write advanced drive control algorithms to ensure accurate and stable operation of the stepper motor at each speed range. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors to maximize motor performance; built-in smoothing algorithm, can greatly improve the motor's acceleration and deceleration performance. In a word, this digital driver can meet the application of most occasions, and it is a highly cost-effective motion control product.

Technical index

Input Voltage	DC24V~48V	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 10A±10% Overvoltage action value 60VDC	
Dimensions (mm)	118x75.5x34	
Weight	260g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
Cooling method	Natural cooling or forced cooling air	

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table (SW-2)

Current	Dial switch		SW1	SW2	SW3
	Peak	Effective			
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

◆ Microstep dial code table (SW-2)

Microstep	Dial switch			
	SW5	SW6	SW7	SW8
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

◆ Side dial switch description (SW-1)

SW-1 dial switch auxiliary function table

Dial switch	Option	
	OFF	ON
SW1	normal operation	automatic test
SW2	single pulse	double pulse
SW3	rising edge	falling edge

SW-1 smoothing coefficient

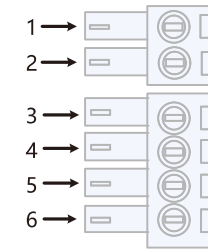
Smoothing coefficient	SW4	SW5
0	OFF	OFF
1	OFF	ON
2	ON	OFF
3	ON	ON

Driver interface function and use

◆ Control signal input port

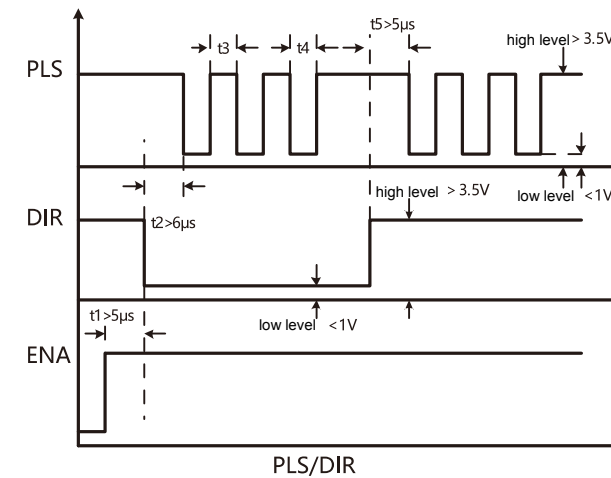
Port	Symbol	Name	Description
1	PLS+	pulse input +	compatible with 5V-24V level
2	PLS-	pulse input -	
3	DIR+	direction input +	compatible with 5V-24V level
4	DIR-	direction input -	
5	ENA+	enable input +	compatible with 5V-24V level
6	ENA-	enable input -	

◆ Power port



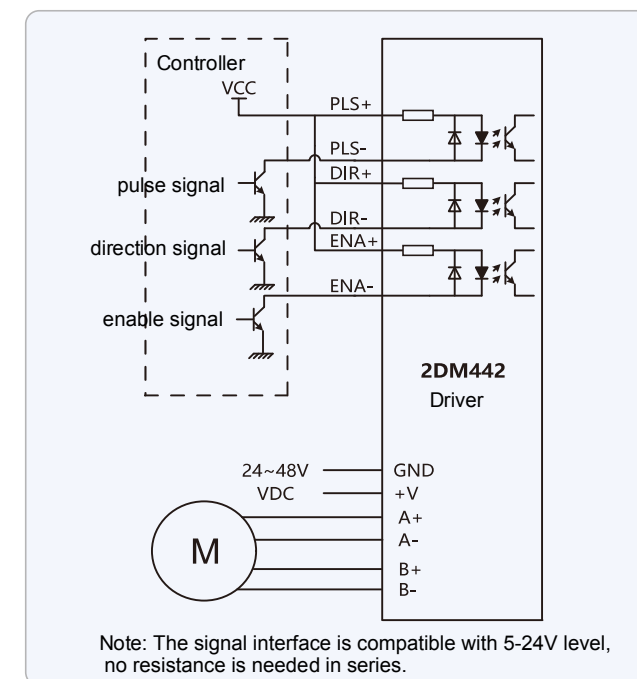
Port	Symbol	Name	Description
1	GND	power -	DC24V~48V
2	+V	power +	
3	A+	motor A+ port	motor phase A winding
4	A-	motor A- port	
5	B+	motor B+ port	motor phase B winding
6	B-	motor B- port	

Control signal timing diagram



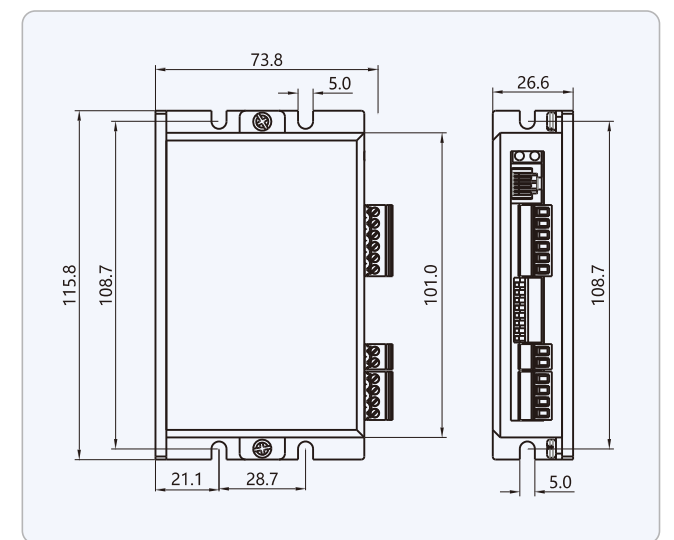
Notes:
 t1: ENA (enable signal) should be determined as high at least 5µs in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6µs ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5µs.
 t4: The low-level width is not less than 2.5µs.

Typical wiring diagram

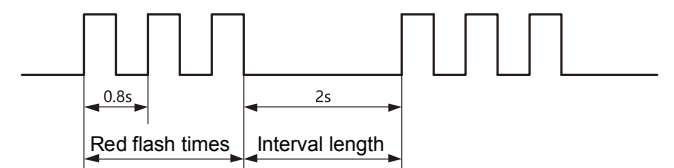


Note: The signal interface is compatible with 5-24V level, no resistance is needed in series.

Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value

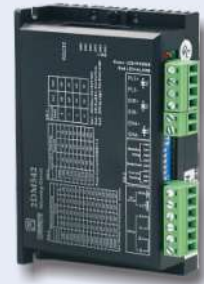
Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

2DM542

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Single and double pulse control mode can be selected;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Overcurrent protection, overvoltage protection;
 Automatic detection, flexible selection of pulse edge counting method;
 Green light means running, red light means protection or offline.



Performance Introduction

2DM542 is a digital two-phase stepper drive, controlled by the latest 32-bit ARM processor. The peripheral microstep, current, and auxiliary functions of this digital drive dial code, users can freely set according to their needs, and internally write advanced drive control algorithms to ensure accurate and stable operation of the stepper motor at each speed range. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors to maximize motor performance; built-in smoothing algorithm, can greatly improve the motor's acceleration and deceleration performance. In a word, this digital driver can meet the application of most occasions, and it is a highly cost-effective motion control product.

Technical index

Input Voltage	DC24V~48V
Maximum pulse frequency	200K
Default communication rate	57.6Kbps
Protection	Overcurrent action value (peak value) 10A±10% Overvoltage action value 60VDC
Dimensions (mm)	118x75.5x34
Weight	260g
Environment	Occasion Try to avoid dust, oil mist and corrosive gas Working temp 0~70°C Storage temp -20°C~+80°C Humidity 40~90%RH Cooling method Natural cooling or forced cooling air

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table (SW-2)

Dial Switch	SW1	SW2	SW3
Effective			
1.00A	ON	ON	ON
1.46A	OFF	ON	ON
1.91A	ON	OFF	ON
2.37A	OFF	OFF	ON
2.84A	ON	ON	OFF
3.31A	OFF	ON	OFF
3.76A	ON	OFF	OFF
4.20A	OFF	OFF	OFF

◆ Microstep dial code table (SW-2)

Dial Switch	SW5	SW6	SW7	SW8
Microstep				
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

◆ Dial switch auxiliary function (SW-1)

Dial switch	Option	OFF	ON
SW1	normal operation	normal operation	automatic test
SW2	single pulse	single pulse	double pulse
SW3	rising edge	rising edge	falling edge

◆ Smoothing coefficient dialing setting (SW-1)

Smoothing coefficient	SW4	SW5
0	OFF	OFF
1	OFF	ON
2	ON	OFF
3	ON	ON

Driver interface function and use

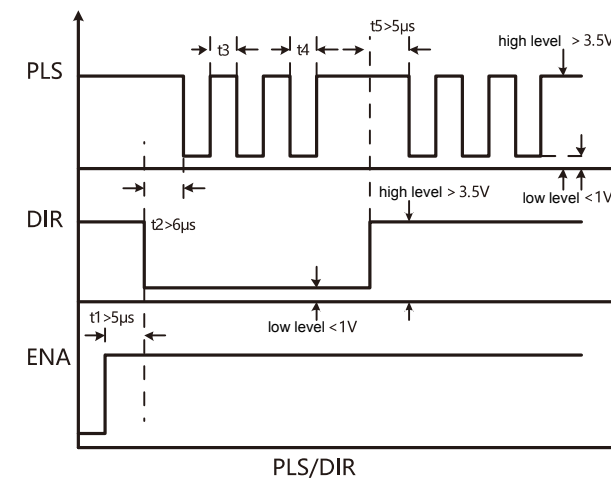
◆ Control signal input port

Port	Symbol	Name	Description
1	PLS+	pulse input +	compatible with 5V-24V level
2	PLS-	pulse input -	
3	DIR+	direction input +	
4	DIR-	direction input -	
5	ENA+	enable input +	
6	ENA-	enable input -	

◆ Power port

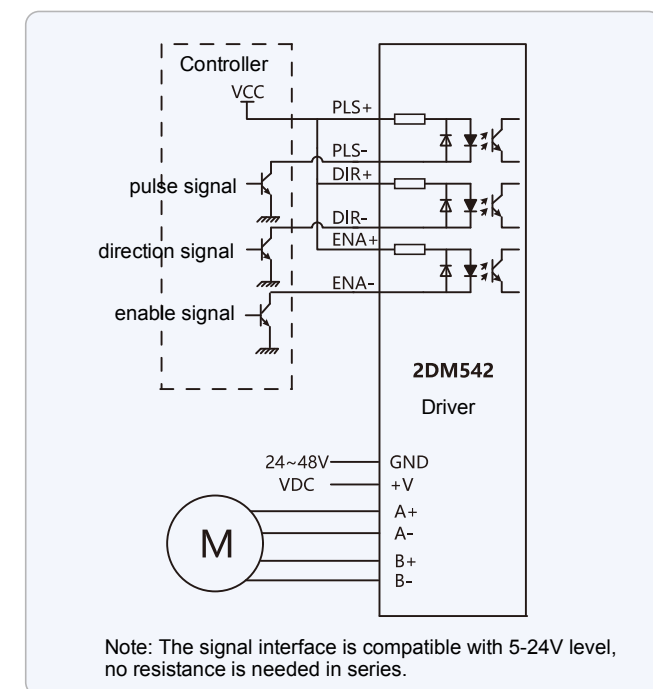
Port	Symbol	Name	Description
1	GND	power -	DC24V~48V
2	+V	power +	
3	A+	motor A+ port	motor phase A winding
4	A-	motor B- port	
5	B+	motor B+ port	motor phase B winding
6	B-	motor B- port	

Control signal timing diagram

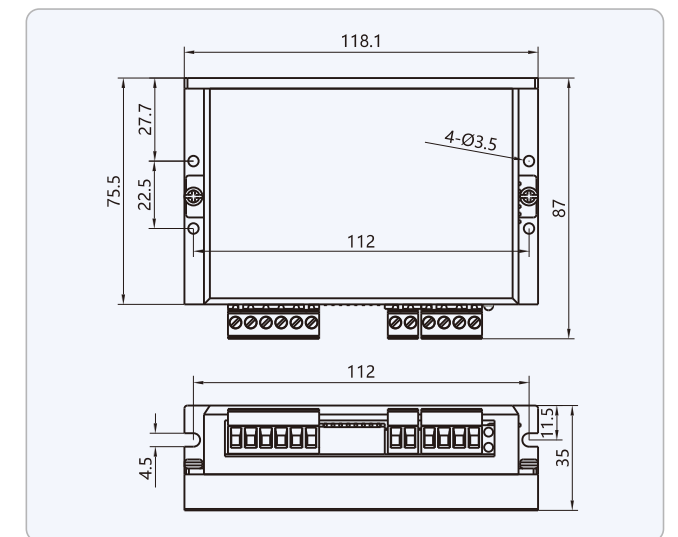


Notes:
 t1: ENA (enable signal) should be determined as high at least 5us in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6us ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5us.
 t4: The low-level width is not less than 2.5us.

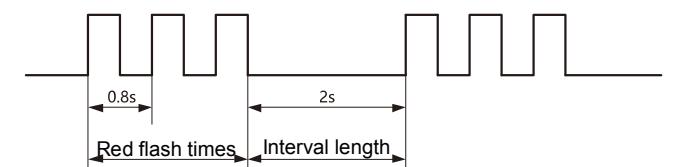
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

2DM556

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high-speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Convenient setting of current and microstep dial code;
 Overcurrent protection, overvoltage protection, undervoltage protection;
 Greenlight means running, red light means protection or offline.



Performance Introduction

2DM556 is a digital two-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	DC24V~60V	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 10A±10% Overvoltage action value 70VDC	
Dimensions (mm)	118x75.5x34	
Weight	260g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
Cooling method	Natural cooling or forced cooling air	

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.
 (OFF=0, ON=1)

◆ Current dial code table

Current	Dial switch		SW1	SW2	SW3
	Peak	Effective			
1.4A	1.00A	0	0	0	0
2.1A	1.50A	1	0	0	0
2.7A	1.92A	0	1	0	0
3.2A	2.28A	1	1	0	0
3.8A	2.71A	0	0	1	0
4.3A	3.07A	1	0	1	0
4.9A	3.50A	0	1	1	0
5.6A	4.00A	1	1	1	0

◆ Microstep dial code table

Microstep	Dial switch			
	SW5	SW6	SW7	SW8
400	0	1	1	1
800	1	0	1	1
1600	0	0	1	1
3200	1	1	0	1
6400	0	1	0	1
12800	1	0	0	1
25600	0	0	0	1
1000	1	1	1	0
2000	0	1	1	0
4000	1	0	1	0
5000	0	0	1	0
8000	1	1	0	0
10000	0	1	0	0
20000	1	0	0	0
25000	0	0	0	0

Driver interface function and use

◆ ALM signal output port

Port	Symbol	Name	Description
1	ALM+	Alarm output +	
2	ALM-	Alarm output -	

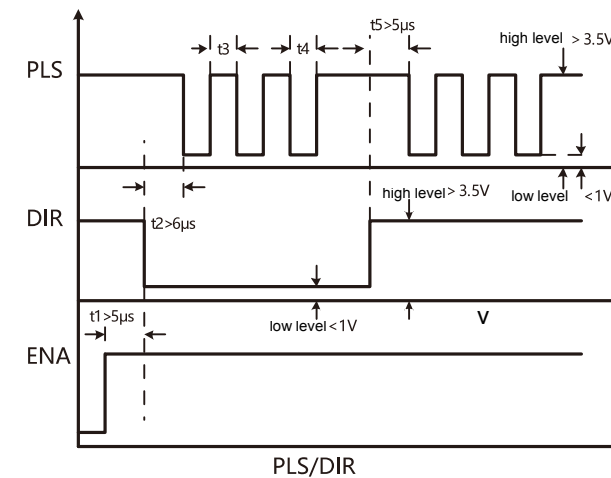
◆ Control signal input port

Port	Symbol	Name	Description
1	PLS+	pulse input +	compatible with 5V-24V level
2	PLS-	pulse input -	
3	DIR+	direction input +	
4	DIR-	direction input -	
5	ENA+	enable input +	
6	ENA-	enable input -	

◆ Power port

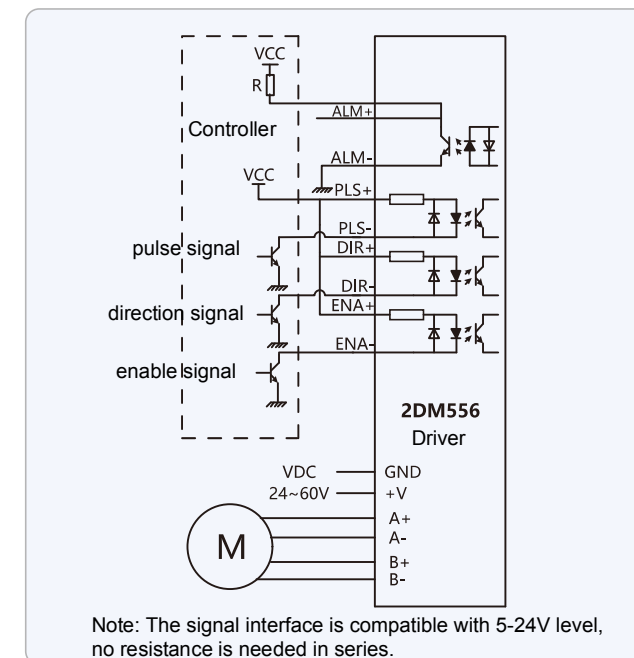
Port	Symbol	Name	Description
1	GND	power -	DC24V~60V
2	+V	power +	
3	A+	motor A+ port	motor phase A winding
4	A-	motor A- port	
5	B+	motor B+ port	motor phase B winding
6	B-	motor B- port	

Control signal timing diagram

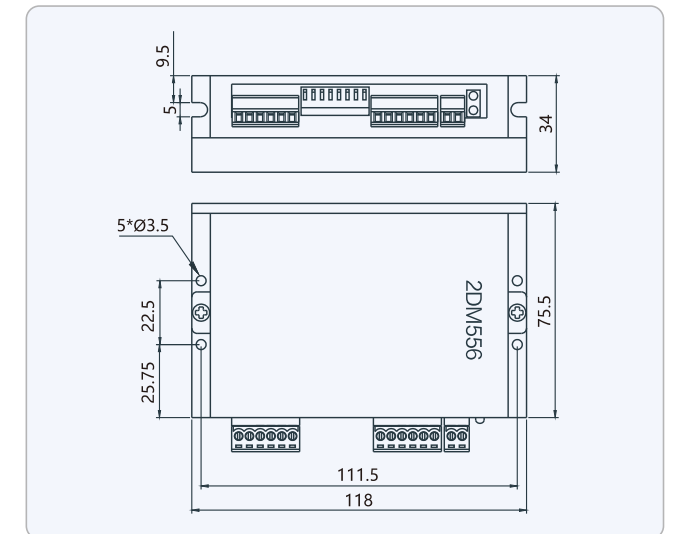


Notes:
 t1: ENA (enable signal) should be determined as high at least 5µs in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6µs ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5µs.
 t4: The low-level width is not less than 2.5µs.

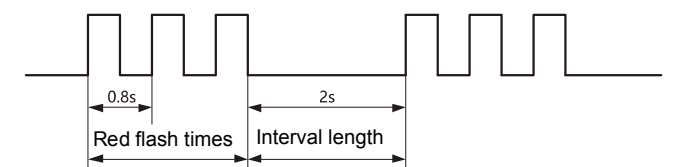
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

2DM860

Main features:

Parameter self-tuning, motor self-adaptation;
Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
Medium and high-speed torque compensation;
Current vector control, high efficiency;
Built-in acceleration and deceleration control to improve the smoothness of start and stop;
Motor running position memory;
Input signal differential optocoupler isolation, compatible with 5-24V;
Customizable microstep;
Convenient setting of current and microstep dial code;
Overcurrent protection, overvoltage protection, undervoltage protection;
Greenlight means running, red light means protection or offline.



Performance Introduction

2DM860 is a digital two-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	DC24V-110V AC18V-80V
Maximum pulse frequency	200K
Default communication rate	57.6Kbps
Protection	Overcurrent action value (peak value) 12A±10% Overvoltage action value 130VDC
Dimensions (mm)	150x97.5x53
Weight	580g
Environment	Occasion Try to avoid dust, oil mist and corrosive gas
	Working temp 0~70°C
	Storage temp -20°C~+80°C
	Humidity 40~90%RH
Cooling method	Natural cooling or forced cooling air

Microstep dial code table

Microstep	Dial switch			
	SW5	SW6	SW7	SW8
400	1	1	1	1
800	0	1	1	1
1600	1	0	1	1
3200	0	0	1	1
6400	1	1	0	1
12800	0	1	0	1
25600	1	0	0	1
51200	0	0	0	1
1000	1	1	1	0
2000	0	1	1	0
4000	1	0	1	0
5000	0	0	1	0
8000	1	1	0	0
10000	0	1	0	0
20000	1	0	0	0
40000	0	0	0	0

Driver interface function and use

ALM signal output port

Port	Symbol	Name	Description
1	ALM-	Alarm output -	
2	ALM+	Alarm output +	

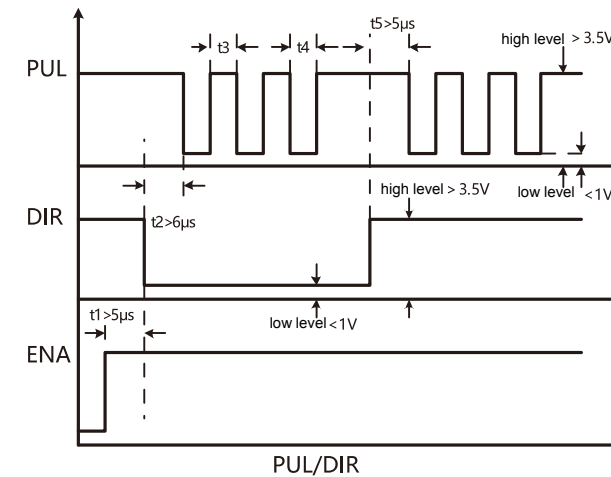
Control signal input port

Port	Symbol	Name	Description
1	DIR-	direction input -	compatible with 5V-24V level
2	DIR+	direction input +	
3	PUL-	pulse input -	
4	PUL+	pulse input +	
5	ENA-	enable input -	
6	ENA+	enable input +	

Power port

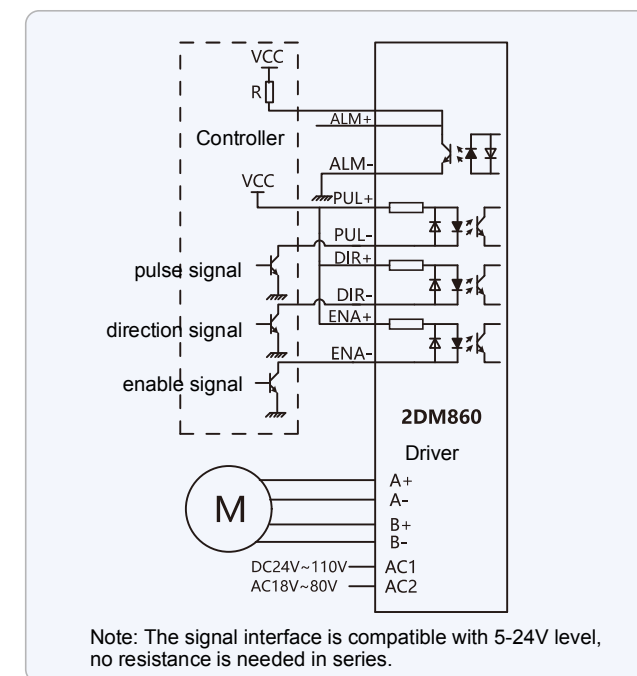
Port	Symbol	Name	Description
1	A+	motor A+ port	motor phase A winding
2	A-	motor A- port	
3	B+	motor B+ port	motor phase B winding
4	B-	motor B- port	
5	AC1	power input 1	DC24V~110V AC18V~80V
6	AC2	power input 2	

Control signal timing diagram

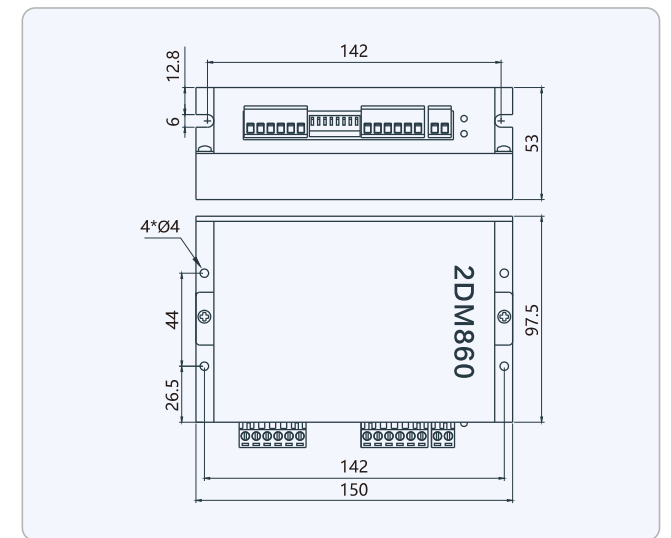


Notes:
t1: ENA (enable signal) should be determined as high at least 5µs in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
t2: DIR is at least 6µs ahead of the PUL counting edge to determine whether its state is high or low.
t3: The pulse width is not less than 2.5µs.
t4: The low-level width is not less than 2.5µs.

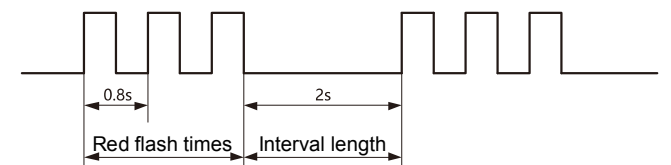
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value

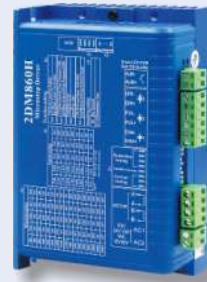
Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

2DM860H

Main features:

Parameter self-tuning, motor self-adaptation;
Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
Medium and high-speed torque compensation;
Current vector control, high efficiency;
Built-in acceleration and deceleration control to improve the smoothness of start and stop;
Single and double pulse control mode can be selected;
Motor running position memory;
Input signal differential optocoupler isolation, compatible with 5-24V;
Customizable microstep;
Convenient setting of current and microstep dial code;
Overcurrent protection, overvoltage protection, undervoltage protection;
Greenlight means running, red light means protection or offline.



Performance Introduction

2DM860H is a digital two-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	DC24V-110V AC18V-75V
Maximum pulse frequency	200K
Default communication rate	57.6Kbps
Protection	Overcurrent action value (peak value) 12A±10% Overvoltage action value 130VDC
Dimensions (mm)	150x97.5x53
Weight	580g
Occasion	Try to avoid dust, oil mist and corrosive gas
Working temp	0~70°C
Storage temp	-20°C~+80°C
Humidity	40~90%RH
Cooling method	Natural cooling or forced cooling air

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
Microstep selection switch: SW5, SW6, SW7, SW8;
For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table (S1)

Dial switch		SW1	SW2	SW3
Peak	Effective			
2.10A	1.50A	OFF	OFF	OFF
3.15A	2.25A	ON	OFF	OFF
4.03A	2.88A	OFF	ON	OFF
4.78A	3.42A	ON	ON	OFF
5.69A	4.06A	OFF	OFF	ON
6.44A	4.60A	ON	OFF	ON
7.35A	5.25A	OFF	ON	ON
8.40A	6.00A	ON	ON	ON

◆ Microstep dial code table (S1)

Dial switch	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

◆ Auxiliary dial setting (S2) ◆ Smooth setting (S3)

SW1	ON	Self-test mode (60rpm)	D0	No smooth coefficient
SW2	OFF	External pulse control mode		
SW2	ON	Double pulse mode	D1-D7	Smooth gain gradually increases
SW2	OFF	Pulse + direction mode		
SW3	ON	Max frequency of external pulse 100k		
SW3	OFF	Max frequency of ... 200k		
SW4	ON	Low-level enable is valid	D1-D7	Smooth gain gradually increases
SW4	OFF	High level enable is effective		

Driver interface function and use

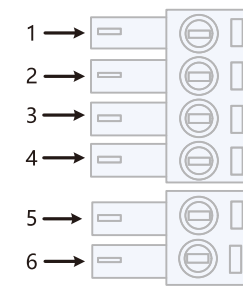
◆ ALM signal output port

Port	Symbol	Name	Description
1	ALM-	Alarm output -	
2	ALM+	Alarm output +	

◆ Control signal input port

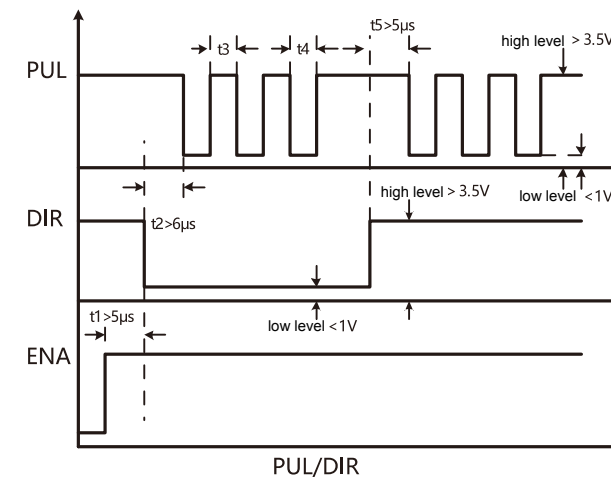
Port	Symbol	Name	Description
1	DIR-	direction input -	compatible with 5V-24V level
2	DIR+	direction input +	
3	PUL-	pulse input -	
4	PUL+	pulse input +	
5	ENA-	enable input -	
6	ENA+	enable input +	

◆ Power port



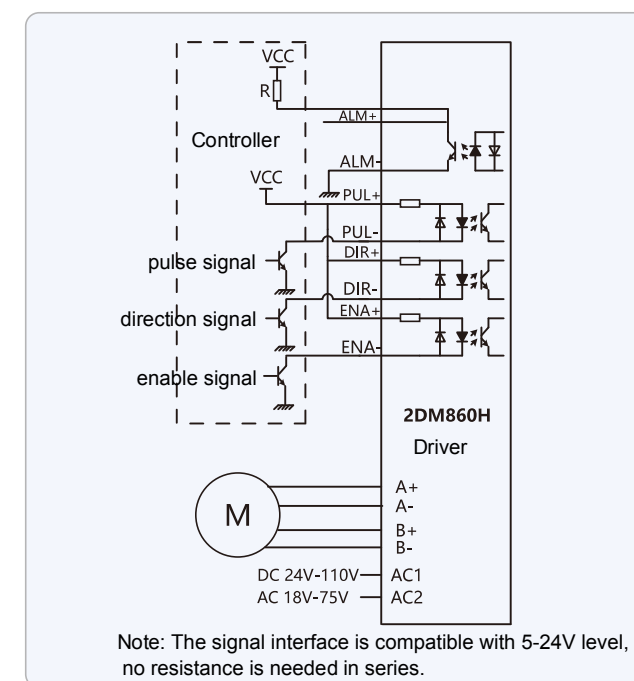
Port	Symbol	Name	Description
1	A+	motor A+ port	motor phase A winding
2	A-	motor A- port	
3	B+	motor B+ port	motor phase B winding
4	B-	motor B- port	
5	AC1	power input 1	DC24V~110V AC18V~75V
6	AC2	power input 2	

Control signal timing diagram

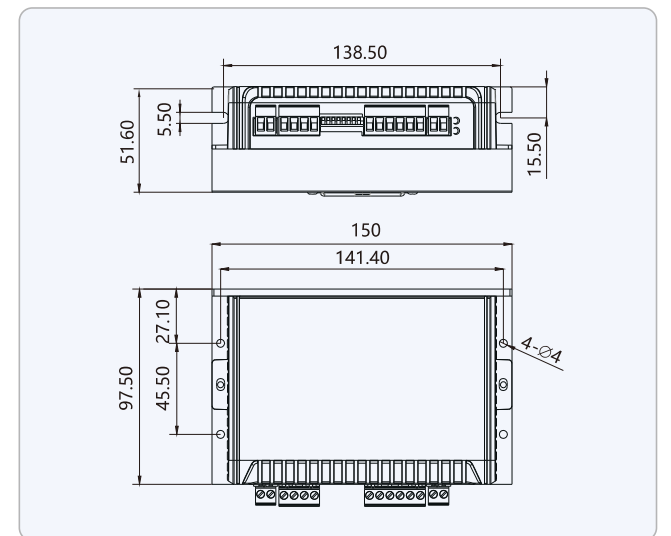


Notes:
t1: ENA (enable signal) should be determined as high at least 5us in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
t2: DIR is at least 6us ahead of the PUL counting edge to determine whether its state is high or low.
t3: The pulse width is not less than 2.5us.
t4: The pulse period is not less than 5us.
t5: The low-level width is not less than 2.5us.

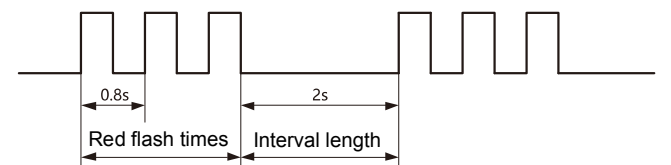
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

2DM2260

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high-speed torque compensation,
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Single and double pulse control mode can be selected;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Convenient setting of current and microstep dial code;
 Overcurrent protection, overvoltage protection, undervoltage protection;
 Greenlight means running, red light means protection or offline.



Performance Introduction

2DM2260 is a digital two-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	80V~240VAC	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 15A±10% Overvoltage action value 350VDC	
Dimensions (mm)	192x127x85	
Weight	1500g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
Cooling method	Natural cooling or forced cooling air	

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table

Dial switch	D1	D2	D3
Current(effective)			
1.3A	OFF	OFF	OFF
1.8A	ON	OFF	OFF
2.5A	OFF	ON	OFF
3.1A	ON	ON	OFF
3.7A	OFF	OFF	ON
4.3A	ON	OFF	ON
5.0A	OFF	ON	ON
5.6A	ON	ON	ON

◆ Microstep dial code table

Dial switch	D5	D6	D7	D8
Microstep				
200	OFF	OFF	OFF	OFF
400	ON	OFF	OFF	OFF
500	OFF	ON	OFF	OFF
800	ON	ON	OFF	OFF
1000	OFF	OFF	ON	OFF
1250	ON	OFF	ON	OFF
1600	OFF	ON	ON	OFF
2000	ON	ON	ON	OFF
2500	OFF	OFF	OFF	ON
3200	ON	OFF	OFF	ON
4000	OFF	ON	OFF	ON
5000	ON	ON	OFF	ON
6400	OFF	OFF	ON	ON
8000	ON	OFF	ON	ON
10000	OFF	ON	ON	ON
12800	ON	ON	ON	ON

◆ Function setting

DP4	ON	Turn off phase protection	D0	No smooth coefficient
	OFF	Turn on phase protection		
DP3	ON	Max frequency of external pulse 100k	D1-D7	Pulse smoothing effect increases step by step
	OFF	Max frequency of external pulse 200k		
DP2	ON	Double pulse mode (CW/CCW)		
	OFF	Single pulse mode (PUL + DIR)		
DP1	ON	Self-test mode (60rpm)		
	OFF	External pulse control mode		

◆ Smooth setting

Driver interface function and use

◆ ALM signal output port

Port	Symbol	Name	Description
1	ALM+	Alarm output -	
2	ALM-	Alarm output +	

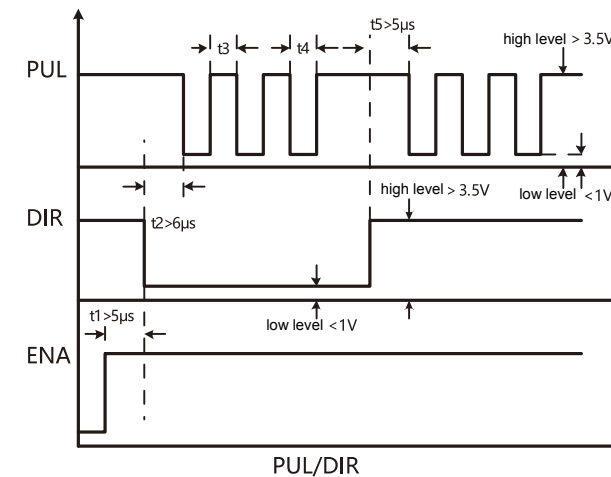
◆ Control signal input port

Port	Symbol	Name	Description
1	PUL+	pulse input +	compatible with 5V-24V level
2	PUL-	pulse input -	
3	DIR+	direction input +	
4	DIR-	direction input -	
5	ENA+	enable input +	
6	ENA-	enable input -	

◆ Power port

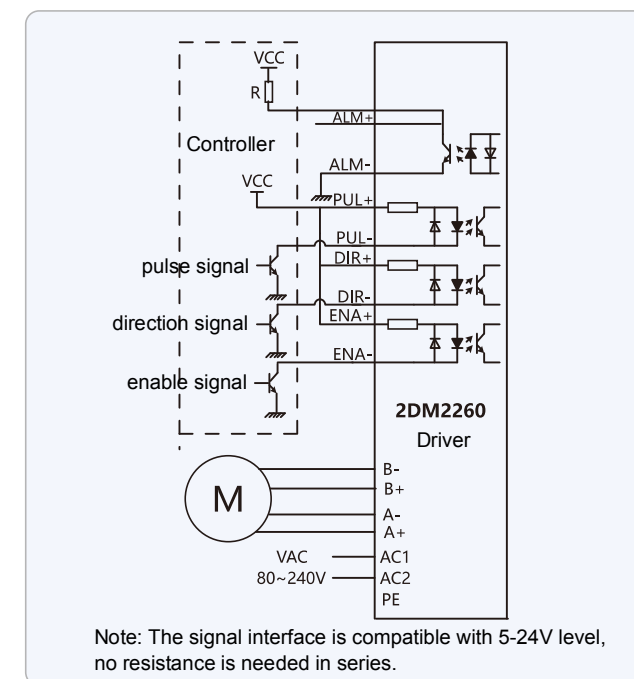
Port	Symbol	Name	Description
1	B-	motor B- port	motor phase B winding
2	B+	motor B+ port	
3	A-	motor A- port	motor phase A winding
4	A+	motor A+ port	
5	AC1	power input 1	AC80V~240V
6	AC2	power input 2	
7	PE		connect shielded wire, or leave it idle

Control signal timing diagram

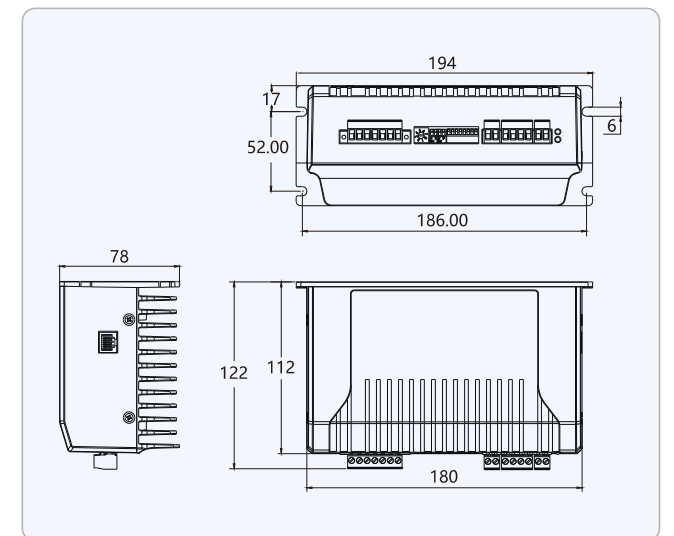


Notes:
 t1: ENA (enable signal) should be determined as high at least 5us in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6us ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5us.
 t4: The low-level width is not less than 2.5us.

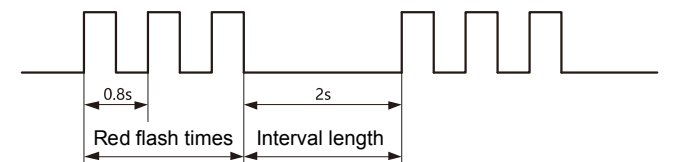
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value
5	motor phase loss alarm

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

2DM2280

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high-speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Convenient setting of current and microstep dial code;
 Overcurrent protection, overvoltage protection, undervoltage protection;
 Greenlight means running, red light means protection or offline.



Performance Introduction

2DM2280 is a digital two-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	80~240VAC	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 15A±10% Overvoltage action value 350VDC	
Dimensions (mm)	192×127×85	
Weight	1500g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
Cooling method	Natural cooling or forced cooling air	

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table

Dial switch	SW1	SW2	SW3
Current(peak)			
Default	OFF	OFF	OFF
2.2A	ON	OFF	OFF
3.2A	OFF	ON	OFF
4.5A	ON	ON	OFF
5.2A	OFF	OFF	ON
6.3A	ON	OFF	ON
7.2A	OFF	ON	ON
8.2A	ON	ON	ON

◆ Microstep dial code table

Dial switch	SW5	SW6	SW7	SW8
Microstep				
Default	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

Driver interface function and use

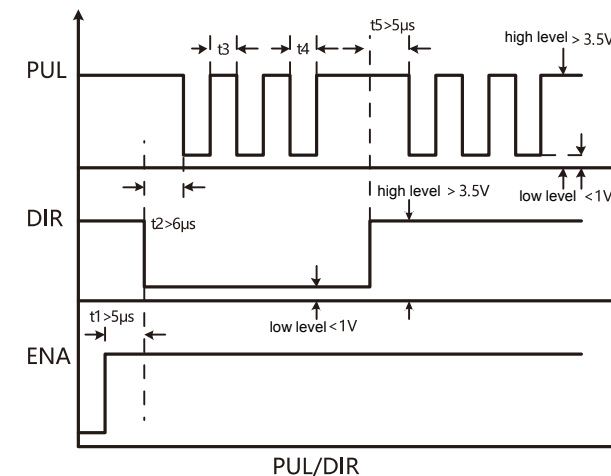
◆ Control signal input & ALM signal output port

Port	Symbol	Name	Description
1	PUL+	pulse input +	compatible with 5V-24V level
2	PUL-	pulse input -	
3	DIR+	direction input +	
4	DIR-	direction input -	
5	ENA+	enable input +	
6	ENA-	enable input -	
7	ALM+	alarm output +	
8	ALM-	alarm output -	

◆ Power port

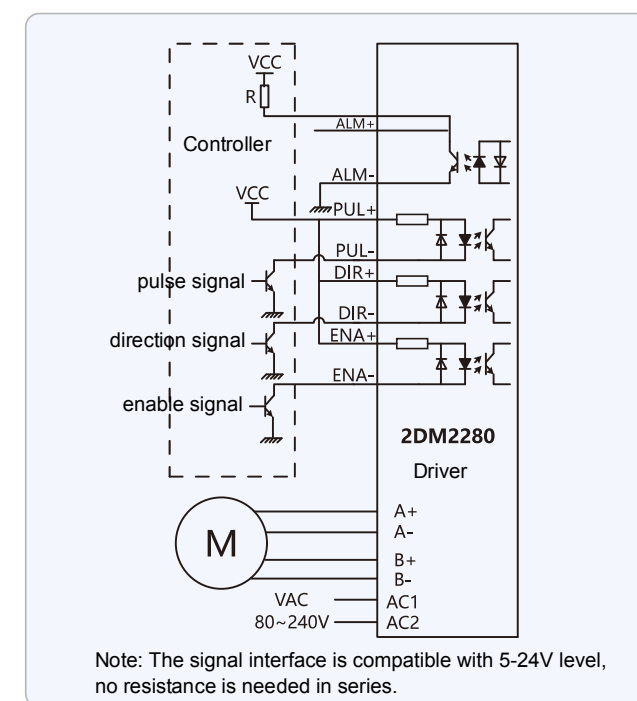
Port	Symbol	Name	Description
1	A+	motor A+ port	motor phase A winding
2	A-	motor A- port	
3	B+	motor B+ port	motor phase B winding
4	B-	motor B- port	
5	AC1	power input 1	AC80V~240V
6	AC2	power input 2	

Control signal timing diagram

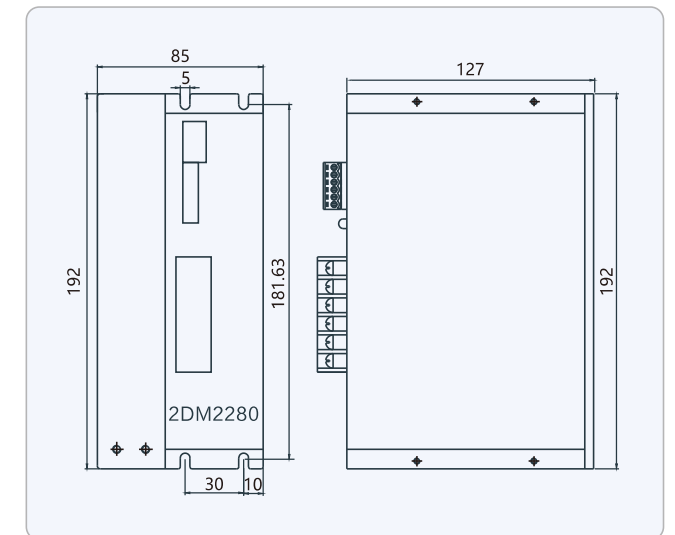


Notes:
 t1: ENA (enable signal) should be determined as high at least 5µs in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6µs ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5µs.
 t4: The low-level width is not less than 2.5µs.

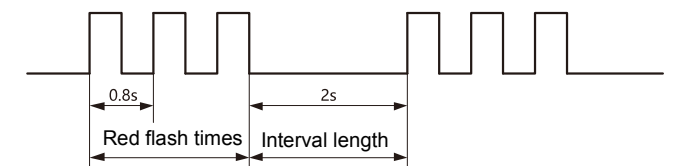
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value
5	motor phase loss alarm

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

3DM783

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high-speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Convenient setting of current and microstep dial code;
 Overcurrent protection, overvoltage protection, undervoltage protection;
 Greenlight means running, red light means protection or offline.



Performance Introduction

3DM783 is a digital three-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor. The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Current dial code table

Current	Dial switch			
	SW1	SW2	SW3	
Peak	Effective			
2.10A	1.50A	0	0	0
3.15A	2.25A	1	0	0
4.03A	2.88A	0	1	0
4.78A	3.42A	1	1	0
5.69A	4.06A	0	0	1
6.44A	4.60A	1	0	1
7.35A	5.25A	0	1	1
8.40A	6.00A	1	1	1

Microstep dial code table

Microstep	Dial switch			
	SW5	SW6	SW7	SW8
400	1	1	1	1
800	0	1	1	1
1600	1	0	1	1
3200	0	0	1	1
6400	1	1	0	1
12800	0	1	0	1
25600	1	0	0	1
51200	0	0	0	1
1000	1	1	1	0
2000	0	1	1	0
4000	1	0	1	0
5000	0	0	1	0
8000	1	1	0	0
10000	0	1	0	0
20000	1	0	0	0
40000	0	0	0	0

Technical index

Input Voltage	DC24V~60V	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 12A±10% Overvoltage action value 85VDC	
Dimensions (mm)	118×75.5×34	
Weight	260g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
	Cooling method	Natural cooling or forced cooling air

Dial switch setting

Eight-digit Dial switch function setting

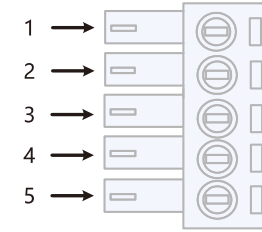
Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.
 (OFF=0, ON=1)

Driver interface function and use

Control signal input port

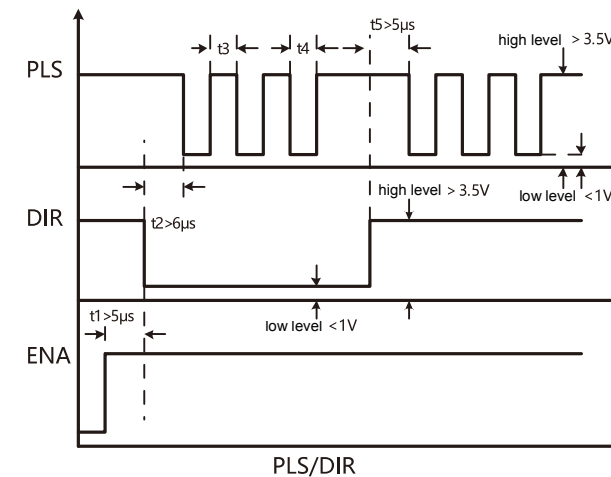
Port	Symbol	Name	Description
1	PLS+	pulse input +	compatible with 5V-24V level
2	PLS-	pulse input -	
3	DIR+	direction input +	
4	DIR-	direction input -	
5	ENA+	enable input +	
6	ENA-	enable input -	

Power port



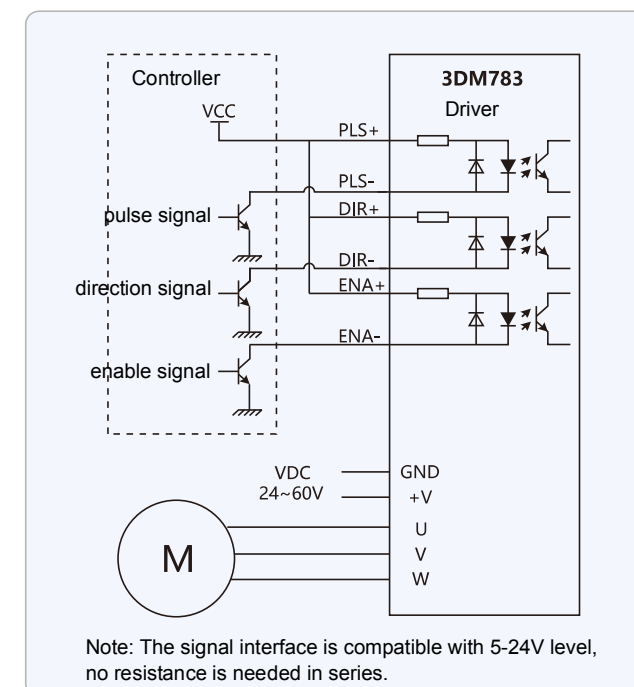
Port	Symbol	Name	Description
1	GND	power -	DC24V~60V
2	+V	power +	
3	U	motor phase U	
4	V	motor phase V	
5	W	motor phase W	

Control signal timing diagram

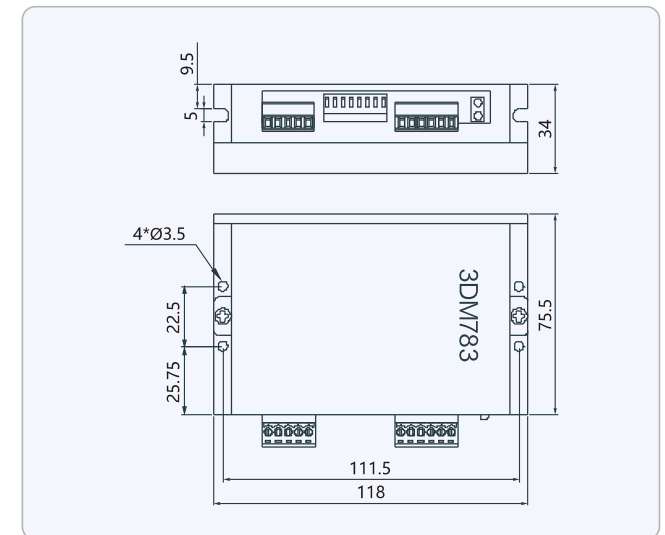


Notes:
 t1: ENA (enable signal) should be determined as high at least 5µs in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6µs ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5µs.
 t4: The low-level width is not less than 2.5µs.

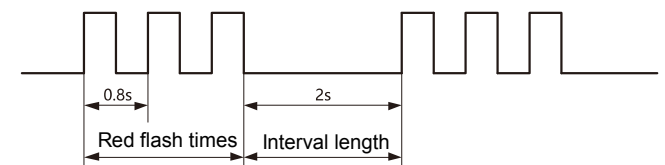
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

3DM860H

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high-speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Single and double pulse control mode can be selected;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Convenient setting of current and microstep dial code;
 Overcurrent protection, overvoltage protection, undervoltage protection;
 Greenlight means running, red light means protection or offline.



Performance Introduction

3DM860H is a digital three-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	DC24~110V, AC18V~80V
Maximum pulse frequency	200K
Default communication rate	57.6Kbps
Protection	Overcurrent action value (peak value) 12A±10% Overvoltage action value 160VDC
Dimensions (mm)	150×97×53
Weight	580g
Environment	Occasion Try to avoid dust, oil mist and corrosive gas Working temp 0~70°C Storage temp -20°C~+80°C Humidity 40~90%RH Cooling method Natural cooling or forced cooling air

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table

Current	Dial switch		SW1	SW2	SW3
	Peak	Effective			
2.1A	1.5A	OFF	OFF	OFF	OFF
2.8A	2.0A	ON	OFF	OFF	OFF
3.9A	2.7A	OFF	ON	OFF	OFF
4.8A	3.4A	ON	ON	OFF	OFF
5.7A	4.0A	OFF	OFF	ON	ON
6.5A	4.6A	ON	OFF	ON	ON
7.3A	5.2A	OFF	ON	ON	ON
8.3A	5.8A	ON	ON	ON	ON

◆ Microstep dial code table (DP1)

Microstep	Dial switch			
	SW5	SW6	SW7	SW8
200	OFF	OFF	OFF	OFF
400	ON	OFF	OFF	OFF
500	OFF	ON	OFF	OFF
800	ON	ON	OFF	OFF
1000	OFF	OFF	ON	OFF
1250	ON	OFF	ON	OFF
1600	OFF	ON	ON	OFF
2000	ON	ON	ON	OFF
2500	OFF	OFF	OFF	ON
3200	ON	OFF	OFF	ON
4000	OFF	ON	OFF	ON
5000	ON	ON	OFF	ON
6400	OFF	OFF	ON	ON
8000	ON	OFF	ON	ON
10000	OFF	ON	ON	ON
12800	ON	ON	ON	ON

◆ Auxiliary dial setting (DP2) ◆ Smooth setting (DP3)

SW1	ON	Self-test mode (60rpm)	D0	No smooth coefficient
SW1	OFF	External pulse control mode		
SW2	ON	Double pulse mode	D1-D7	Pulse smoothing effect increases step by step
	OFF	Pulse + direction mode		
SW3	ON	Maximum frequency of external pulse 100k	D1-D7	Pulse smoothing effect increases step by step
	OFF	Maximum ... 200k		
SW4	ON	Low-level enable is valid	D1-D7	Pulse smoothing effect increases step by step
	OFF	High level enable is effective		

Driver interface function and use

◆ ALM signal output port

Port	Symbol	Name	Description
1	ALM+	alarm output +	
2	ALM-	alarm output -	

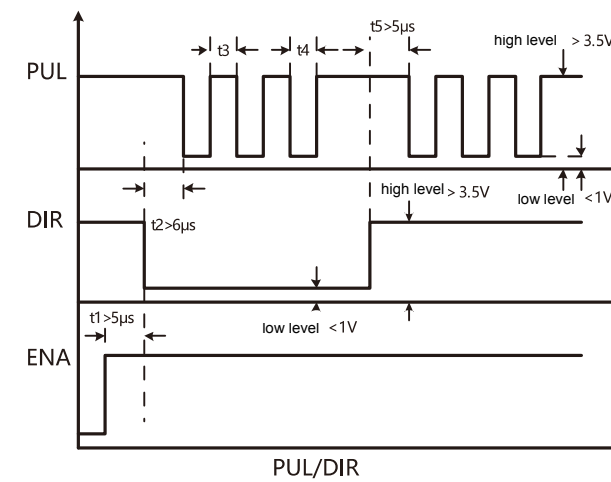
◆ Control signal input port

Port	Symbol	Name	Description
1	PUL+	pulse input +	compatible with 5V-24V level
2	PUL-	pulse input -	
3	DIR+	direction input +	compatible with 5V-24V level
4	DIR-	direction input -	
5	ENA+	enable input +	compatible with 5V-24V level
6	ENA-	enable input -	

◆ Power port

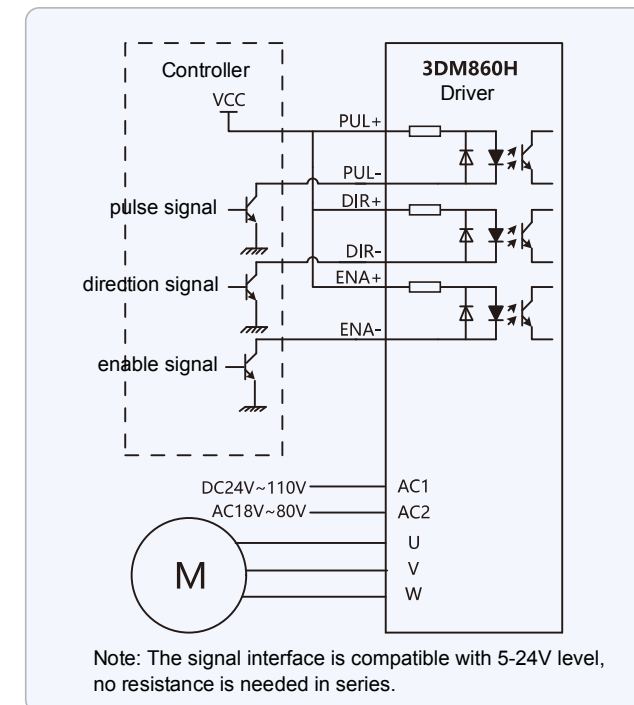
Port	Symbol	Name	Description
1	AC1	power input 1	DC24V~110V AC18V~80V
2	AC2	power input 2	
3	U	motor phase U	motor phase U motor phase V motor phase W
4	V	motor phase V	
5	W	motor phase W	

Control signal timing diagram

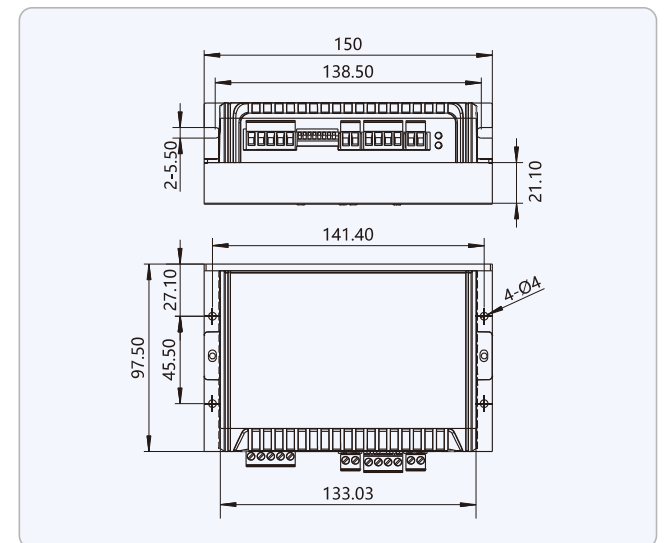


Notes:
 t1: ENA (enable signal) should be determined as high at least 5us in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6us ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5us.
 t4: The low-level width is not less than 2.5us.

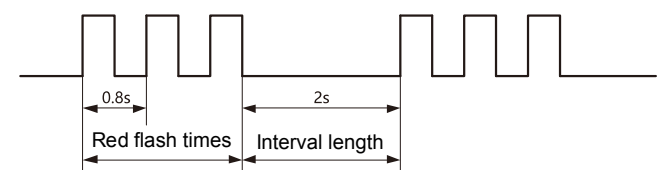
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

3DM2060H

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high-speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Single and double pulse control mode can be selected;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Convenient setting of current and microstep dial code;
 Overcurrent protection, overvoltage protection, undervoltage protection;
 Greenlight means running, red light means protection or offline.



Performance Introduction

3DM2060H is a digital three-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	80V~240VAC	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 15A±10% Overvoltage action value 350VDC	
Dimensions (mm)	192x127x85	
Weight	1500g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
Cooling method	Natural cooling or forced cooling air	

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table

Current	Dial switch	D1	D2	D3
1.3A		OFF	OFF	OFF
1.8A		ON	OFF	OFF
2.5A		OFF	ON	OFF
3.1A		ON	ON	OFF
3.7A		OFF	OFF	ON
4.3A		ON	OFF	ON
5.0A		OFF	ON	ON
5.6A		ON	ON	ON

◆ Microstep dial code table

Microstep	Dial switch	D5	D6	D7	D8
200		OFF	OFF	OFF	OFF
400		ON	OFF	OFF	OFF
500		OFF	ON	OFF	OFF
800		ON	ON	OFF	OFF
1000		OFF	OFF	ON	OFF
1250		ON	OFF	ON	OFF
1600		OFF	ON	ON	OFF
2000		ON	ON	ON	OFF
2500		OFF	OFF	OFF	ON
3200		ON	OFF	OFF	ON
4000		OFF	ON	OFF	ON
5000		ON	ON	OFF	ON
6400		OFF	OFF	ON	ON
8000		ON	OFF	ON	ON
10000		OFF	ON	ON	ON
12800		ON	ON	ON	ON

◆ Function setting

DP4	ON	turn off phase protection
	OFF	turn on phase protection
DP3	ON	pulse frequency 100k
	OFF	pulse frequency 200k
DP2	ON	double pulse mode(CW/CCW)
	OFF	single pulse mode(PUL+DIR)
DP1	ON	self-test mode (60rpm)
	OFF	external pulse control mode

◆ Smooth setting

D0	No	smooth coefficient
D1-D7	Pulse smoothing effect increases step by step	

Driver interface function and use

◆ ALM signal output port

Port	Symbol	Name	Description
1	ALM+	alarm output +	
2	ALM-	alarm output -	

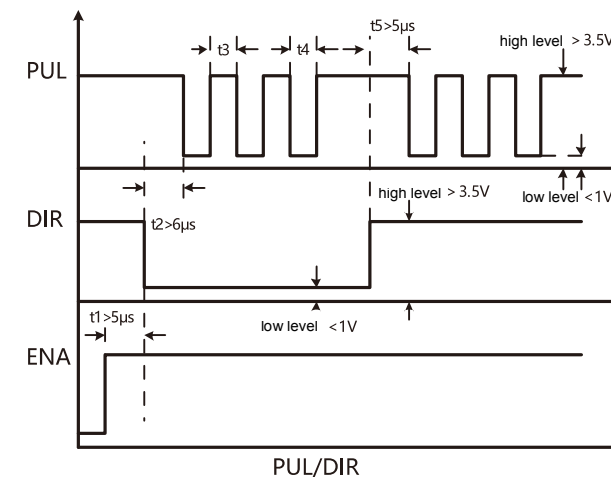
◆ Control signal input port

Port	Symbol	Name	Description
1	PUL+	pulse input +	compatible with 5V-24V level
2	PUL-	pulse input -	
3	DIR+	direction input +	
4	DIR-	direction input -	
5	ENA+	enable input +	
6	ENA-	enable input -	

◆ Power port

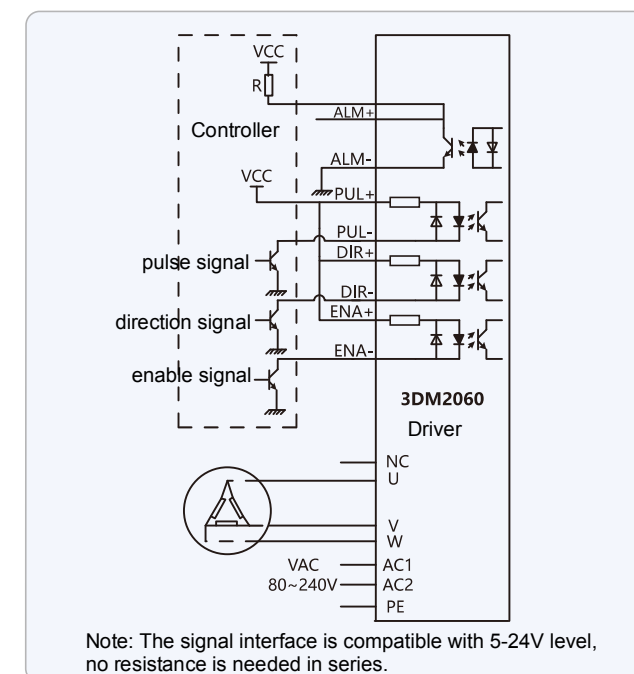
Port	Symbol	Name	Description
1	NC	NC	motor phase winding
2	U	motor phase U	
3	V	motor phase V	
4	W	motor phase W	
5	AC1	AC80V~240V	
6	AC2		
7	shielded wire	PE	connect shielded wire, or leave it idle

Control signal timing diagram

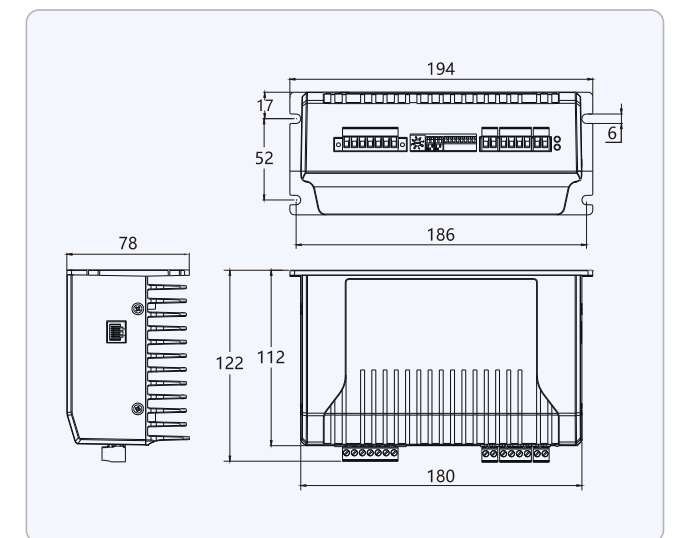


Notes:
 t1: ENA (enable signal) should be determined as high at least 5µs in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6µs ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5µs.
 t4: The low-level width is not less than 2.5µs.

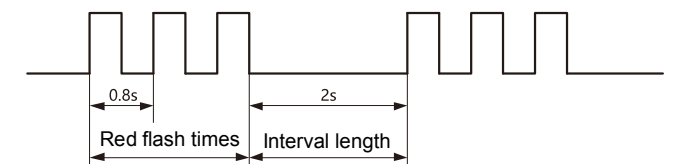
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value
5	motor phase loss alarm

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

3DM2080

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high-speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Customizable microstep;
 Convenient setting of current and microstep dial code;
 Overcurrent protection, overvoltage protection, undervoltage protection;
 Greenlight means running, red light means protection or offline.



Performance Introduction

3DM2080 is a digital three-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	80~240VAC	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 15A±10% Overvoltage action value 350VDC	
Dimensions (mm)	192×127×85	
Weight	1500g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
Cooling method	Natural cooling or forced cooling air	

Microstep dial code table

Microstep	Dial switch			
	SW5	SW6	SW7	SW8
400	OFF	OFF	OFF	OFF
500	OFF	OFF	OFF	ON
600	ON	OFF	OFF	ON
800	ON	OFF	OFF	OFF
1000	OFF	ON	OFF	ON
1600	OFF	ON	OFF	OFF
2000	ON	ON	OFF	OFF
3200	OFF	OFF	ON	OFF
4000	ON	OFF	ON	OFF
5000	ON	ON	OFF	ON
6000	OFF	OFF	ON	ON
6400	OFF	ON	ON	OFF
7500	ON	OFF	ON	ON
8000	ON	ON	ON	OFF
10000	OFF	ON	ON	ON
30000	ON	ON	ON	ON

Driver interface function and use

Control signal input & ALM signal output port

Port	Symbol	Name	Description
1	PUL+	pulse input +	compatible with 5V-24V level
2	PUL-	pulse input -	
3	DIR+	direction input +	
4	DIR-	direction input -	
5	ENA+	enable input +	
6	ENA-	enable input -	
7	ALM+	alarm output +	
8	ALM-	alarm output -	

Dial switch setting

Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

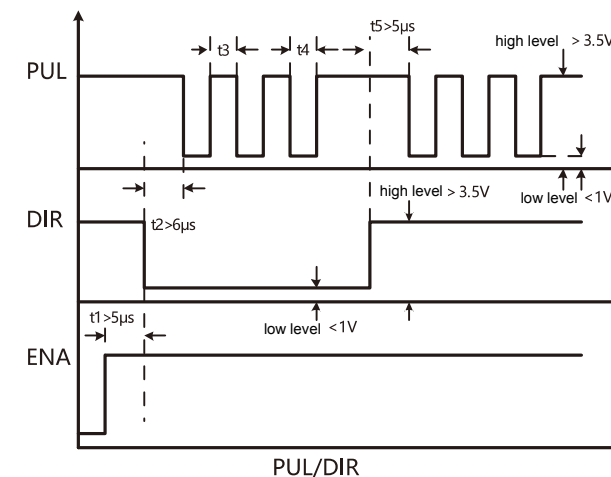
Current dial code table

Current(peak)	Dial switch		
	SW1	SW2	SW3
Default	OFF	OFF	OFF
2.2A	ON	OFF	OFF
3.2A	OFF	ON	OFF
4.5A	ON	ON	OFF
5.2A	OFF	OFF	ON
6.3A	ON	OFF	ON
7.2A	OFF	ON	ON
8.2A	ON	ON	ON

Power port

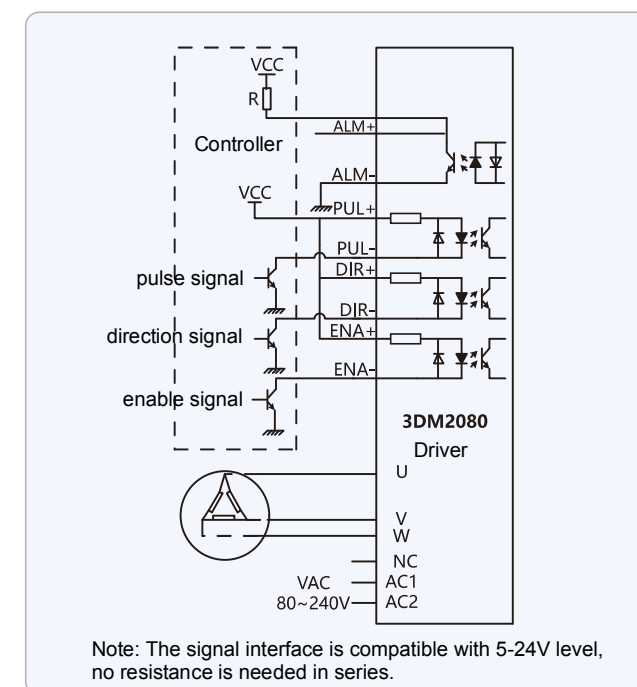
	Port	Symbol	Name	Description
1 →	1	U	motor U port	motor pahse winding
2 →	2	V	motor V port	
3 →	3	W	motor W port	
4 →	4	NC	NC	NC
5 →	5	AC1	power input 1	AC80V~240V
6 →	6	AC2	power input 2	

Control signal timing diagram

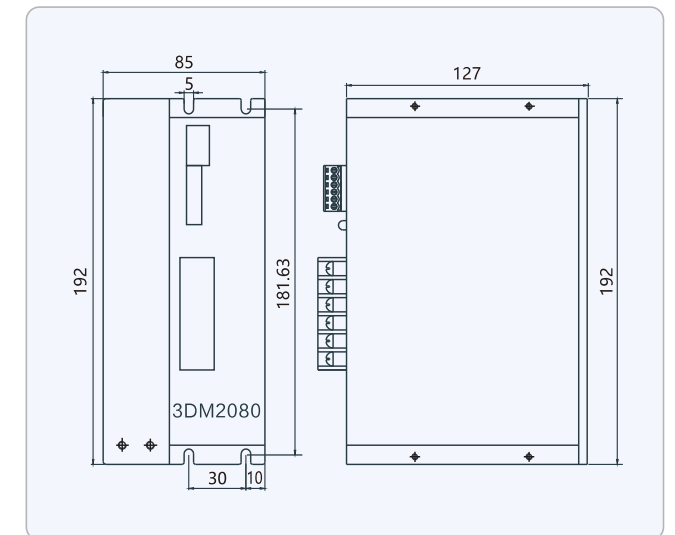


Notes:
 t1: ENA (enable signal) should be determined as high at least 5µs in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6µs ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5µs.
 t4: The low-level width is not less than 2.5µs.

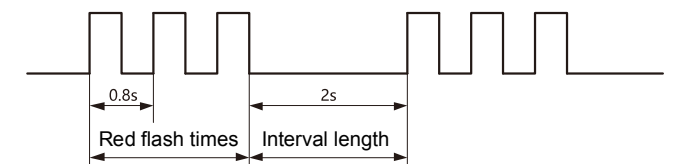
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value
5	motor phase loss alarm

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

3DM3422

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high-speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Single and double pulse control mode can be selected;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Users can customize the microstep of 50 times the value other than the dial code;
 Convenient setting of current and microstep dial code;
 Overcurrent protection, overvoltage protection;
 Overcurrent protection, overvoltage protection;
 Greenlight means running, red light means protection or offline.



Performance Introduction

3DM3422 is a digital three-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	80~240VAC	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 10A±10% Overvoltage action value 350VDC	
Dimensions (mm)	178×118×68	
Weight	1500g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
	Cooling method	Natural cooling or forced cooling air

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table

Dial switch	D1	D2	D3	D4
Current				
1.2A	OFF	OFF	OFF	OFF
1.4A	OFF	OFF	OFF	ON
1.6A	OFF	OFF	ON	OFF
2.1A	OFF	OFF	ON	ON
2.3A	OFF	ON	OFF	OFF
2.6A	OFF	ON	OFF	ON
2.8A	OFF	ON	ON	OFF
3.0A	OFF	ON	ON	ON

3.2A	ON	OFF	OFF	OFF
3.5A	ON	OFF	OFF	ON
3.7A	ON	OFF	ON	OFF
4.0A	ON	OFF	ON	ON
4.2A	ON	ON	OFF	OFF
4.4A	ON	ON	OFF	ON
4.6A	ON	ON	ON	OFF
4.8A	ON	ON	ON	ON

◆ Microstep dial code table

Dial switch	D5	D6	D7	D8
Microstep				
400	ON	ON	ON	ON
500	ON	ON	ON	OFF
600	ON	ON	OFF	ON
800	ON	ON	OFF	OFF
1000	ON	OFF	ON	ON
1200	ON	OFF	ON	OFF
2000	ON	OFF	OFF	ON
3000	ON	OFF	OFF	OFF
4000	OFF	ON	ON	ON
5000	OFF	ON	ON	OFF
6000	OFF	ON	OFF	ON
10000	OFF	ON	OFF	OFF
12000	OFF	OFF	ON	ON
20000	OFF	OFF	ON	OFF
30000	OFF	OFF	OFF	ON
60000	OFF	OFF	OFF	OFF

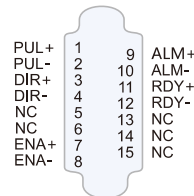
◆ Function dial setting

D9 Single/double pulse selection	ON	double pulse mode(CW/CCW)
	OFF	single pulse mode(PUL+DIR)
D10 Self-test mode selection	ON	The motor runs automatically at 30 rpm
	OFF	Receive external pulse signal to make the motor run

Driver interface function and use

◆ Control signal input port

Port	Symbol	Name	Description
1	PUL+	pulse input +	compatible with 5V-24V level
2	PUL-	pulse input -	
3	DIR+	direction input +	
4	DIR-	direction input -	
7	ENA+	enable input +	
8	ENA-	enable input -	

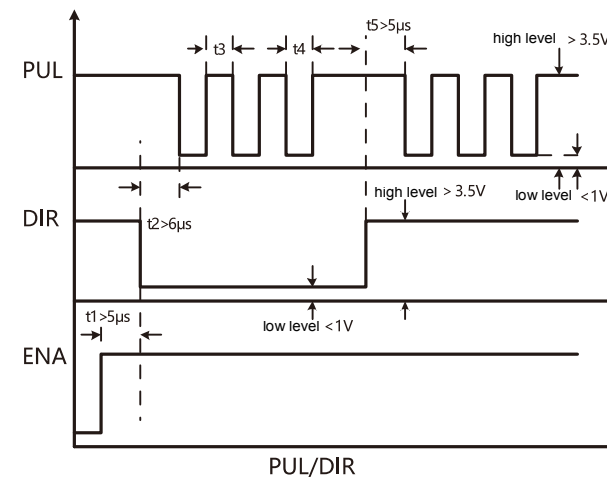


9	ALM+	alarm output +		11	RDY+	ready signal output +	
10	ALM-	alarm output -		12	RDY-	ready signal output -	

◆ Power port

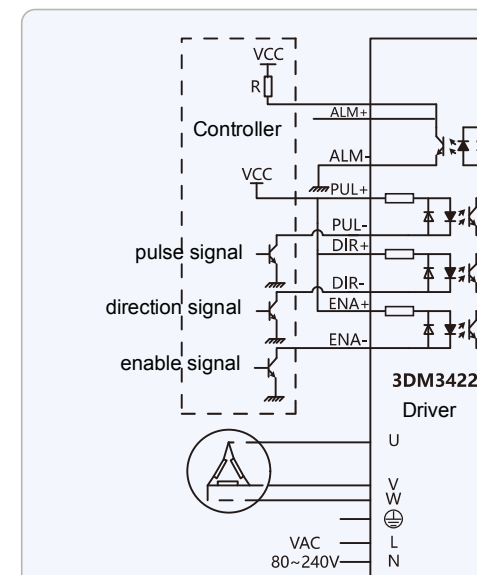
Port	Symbol	Name	Description
1	U	motor U port	motor phase winding
2	V	motor V port	
3	W	motor W port	
4	⊕	GND	
5	L	AC80V~240V	
6	N		

Control signal timing diagram



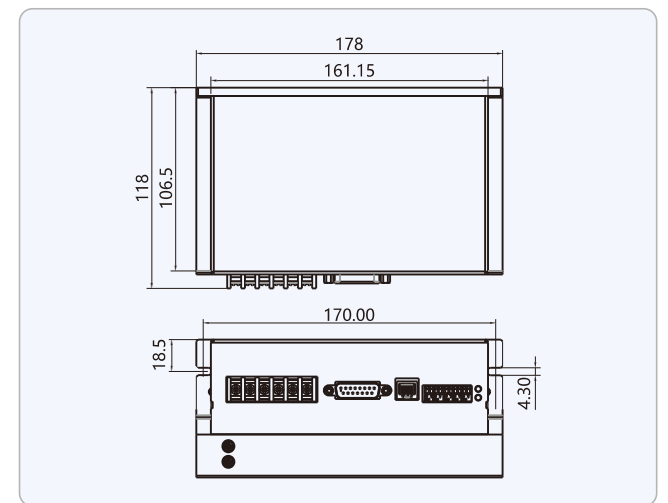
Notes:
 t1: ENA (enable signal) should be determined as high at least 5µs in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6µs ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5µs.
 t4: The low-level width is not less than 2.5µs.

Typical wiring diagram

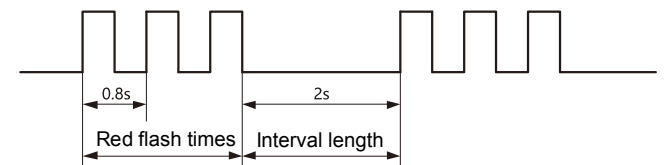


Note: The signal interface is compatible with 5-24V level, no resistance is needed in series.

Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value
5	motor phase loss alarm

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

3DM3722

Main features:

Parameter self-tuning, motor self-adaptation;
 Built-in high microstep, low vibration, low heat generation, stable operation at low speed;
 Medium and high-speed torque compensation;
 Current vector control, high efficiency;
 Built-in acceleration and deceleration control to improve the smoothness of start and stop;
 Single and double pulse control mode can be selected;
 Motor running position memory;
 Input signal differential optocoupler isolation, compatible with 5-24V;
 Users can customize the microstep of 50 times the value other than the dial code;
 Convenient setting of current and microstep dial code;
 Overcurrent protection, overvoltage protection, undervoltage protection;
 Greenlight means running, red light means protection or offline.



Performance Introduction

3DM3722 is a digital three-phase stepper driver, controlled by the latest 32-bit DSP. The peripheral microstep and current dialing of this digital driver can be set freely by users according to their needs. The internal DSP writes advanced drive control algorithms to ensure that the stepper motor runs accurately and stably in various speed ranges. Among them, there is a built-in microstep algorithm. It can make the motor run smoothly at low speed; medium and high speed torque compensation algorithm can maximize the torque of the motor at medium and high speed; parameter self-tuning algorithm can adapt to various motors and maximize the performance of the motor; built-in smoothing algorithm can greatly improve the motor The acceleration and deceleration performance. In short, this digital driver can meet most occasions and is a highly cost-effective motion control product.

Technical index

Input Voltage	80~240VAC	
Maximum pulse frequency	200K	
Default communication rate	57.6Kbps	
Protection	Overcurrent action value (peak value) 15A±10% Overvoltage action value 350VDC	
Dimensions (mm)	200×146×80	
Weight	1500g	
Environment	Occasion	Try to avoid dust, oil mist and corrosive gas
	Working temp	0~70°C
	Storage temp	-20°C~+80°C
	Humidity	40~90%RH
	Cooling method	Natural cooling or forced cooling air

Dial switch setting

◆ Eight-digit Dial switch function setting

Current selection switch: SW1, SW2, SW3;
 Static half flow or full flow selection: SW4 (ON-full flow, OFF-half flow);
 Microstep selection switch: SW5, SW6, SW7, SW8;
 For details, please refer to the screen printing instructions on the panel.

◆ Current dial code table (DP-1)

Dial switch	D1	D2	D3	D4
Current				
1.2A	OFF	OFF	OFF	OFF
1.5A	OFF	OFF	OFF	ON
2.0A	OFF	OFF	ON	OFF
2.3A	OFF	OFF	ON	ON
2.5A	OFF	ON	OFF	OFF
3.0A	OFF	ON	OFF	ON
3.2A	OFF	ON	ON	OFF
3.6A	OFF	ON	ON	ON

4.0A	ON	OFF	OFF	OFF
4.5A	ON	OFF	OFF	ON
5.0A	ON	OFF	ON	OFF
5.3A	ON	OFF	ON	ON
5.8A	ON	ON	OFF	OFF
6.2A	ON	ON	OFF	ON
6.5A	ON	ON	ON	OFF
7.0A	ON	ON	ON	ON

◆ Microstep dial code table (DP-2)

Dial switch	D1	D2	D3	D4
Microstep				
400	ON	ON	ON	ON
500	ON	ON	ON	OFF
600	ON	ON	OFF	ON
800	ON	ON	OFF	OFF
1000	ON	OFF	ON	ON
1200	ON	OFF	ON	OFF
2000	ON	OFF	OFF	ON
3000	ON	OFF	OFF	OFF
4000	OFF	ON	ON	ON
5000	OFF	ON	ON	OFF
6000	OFF	ON	OFF	ON
10000	OFF	ON	OFF	OFF
12000	OFF	OFF	ON	ON
20000	OFF	OFF	ON	OFF
30000	OFF	OFF	OFF	ON
60000	OFF	OFF	OFF	OFF

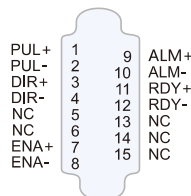
◆ Function dial setting (DP-2)

D9 Single/double pulse selection	ON	double pulse mode(CW/CCW)
	OFF	single pulse mode(PUL+DIR)
D10 Self-test mode selection	ON	The motor runs automatically at 30 rpm
	OFF	Receive external pulse signal to make the motor run

Driver interface function and use

◆ Control signal input port

Port	Symbol	Name	Description
1	PUL+	pulse input +	compatible with 5V-24V level
2	PUL-	pulse input -	
3	DIR+	direction input +	
4	DIR-	direction input -	
7	ENA+	enable input +	
8	ENA-	enable input -	

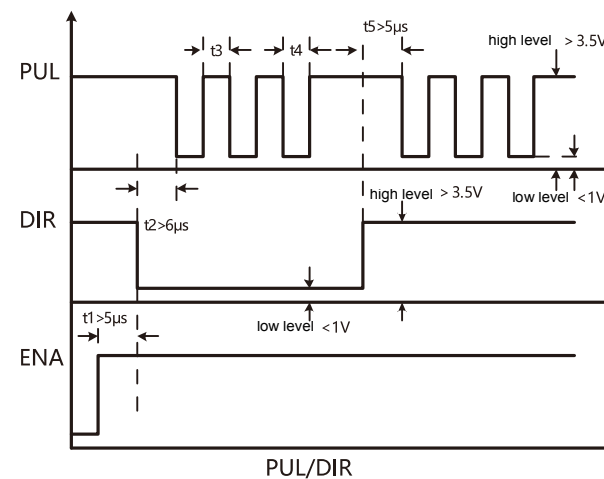


9	ALM+	alarm output +		11	RDY+	ready signal output +	
10	ALM-	alarm output -		12	RDY-	ready signal output -	

◆ Power port

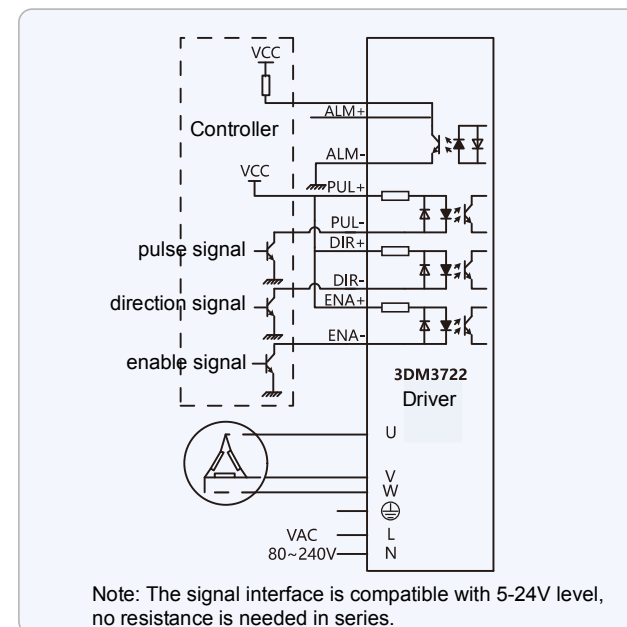
Port	Symbol	Name	Description
1	U	motor U port	motor phase winding
2	V	motor V port	
3	W	motor W port	
4	⊕	GND	
5	L	power input port	AC80V~240V
6	N		

Control signal timing diagram

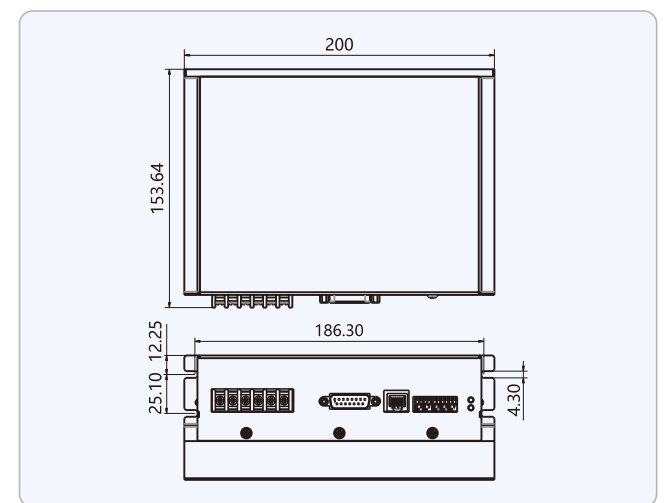


Notes:
 t1: ENA (enable signal) should be determined as high at least 5us in advance of DIR. Generally, it is recommended that ENA+ and ENA- be left floating.
 t2: DIR is at least 6us ahead of the PUL counting edge to determine whether its state is high or low.
 t3: The pulse width is not less than 2.5us.
 t4: The low-level width is not less than 2.5us.

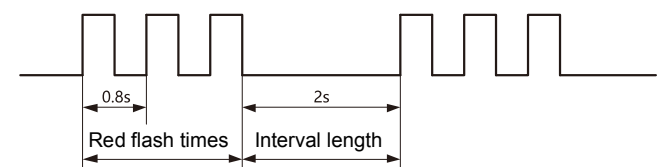
Typical wiring diagram



Installation size (mm)



False alarm



Red flash times	Alarm description
1	driver overcurrent
2	driver internal voltage reference error
3	driver parameter upload error
4	the driver supply voltage exceeds the maximum value
5	motor phase loss alarm

Fault handling

The power light is not on: the input power is faulty, please check the power line and whether the voltage is too low.
 The red light will alarm after power-on: 1. Whether the motor power phase line is connected. 2. Whether the input power voltage of the driver is too high or too low.
 No rotation after pulse input: 1. Whether the wiring of the pulse input terminal of the drive is reliable. 2. Whether the input mode in the driver system configuration is pulse input. 3. Whether the motor enable is released.

Stepper Motor Series Introduction

A stepper motor is a mechanical device that directly converts electrical pulses into angular positions. The amount of angle depends on the number of pulses. It and its matched stepping motor drive device together form a set of open loop system with simple control and low cost.

Working principle:

Simply put, the stepper motor driver controls the windings of the stepper motor to be energized positively and negatively in a certain time sequence through its internal logic circuit according to the external pulse, so as to realize its operation. Taking a two-phase 1.8° stepper motor as an example, it is mainly divided into two modes: 4-wire (bipolar) and 6-wire (unipolar).

For a 4-wire (bipolar) motor, the energization direction of its windings changes in sequence according to the four states of AC BD CA DB. Each time it changes, the motor runs one step, that is, 1.8°.

For a 6-wire (unipolar) motor, the energization direction of its windings changes in sequence according to the four states of OA OB OC OD. For each change, the motor will run one step, that is, 1.8°.

The above is only a principle introduction, and there will be special needs for applications in different industries. As a stepper motor manufacturer with rich experience, we can provide the best solution according to customer requirements.

Features:

1. Position control function: It can send out a specific number of pulses in advance to get the angle that needs to be output.
2. Stepless speed regulation function: According to the speed of sending pulse, the required motor speed can be obtained.
3. Positive/reverse, emergency stop and lock function: The effect of forward/reverse rotation can be obtained by controlling the high and low levels of the system. When the motor is locked (there is current in the motor winding and there is no external electric pulse required to rotate) There is an output that maintains torque.
4. Low speed and high-precision position function: Through the control of pulse speed, extremely low speed can be directly obtained without the transition of gears, thereby avoiding power loss and angular position deviation.
5. Long life: No need to commutate through brushes and inverters like ordinary DC motors, thereby reducing friction and increasing life.



Naming Rules For Hybrid Digital Stepper Motors

86 J 18 ## - 8 40 A - 60 - 14 F - 31 - FS - SC - XXXX - QH - 01
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Model definition:

1. Motor size
86 stands for 86mm base
Specifications are 20, 28, 35, 42, 57, 86, 110, 130
2. Motor type
J represents the motor is JMC series
3. Motor step angle
18 represents a two-phase motor (1.8°), 12 represents a three-phase motor (1.2°), 09 represents a two-phase motor (0.9°), and 07 represents a five-phase motor (0.72°)
4. Length of motor body (mm)
118 represents the length of the motor body 118mm
5. Number of lead wires of the motor
Specifications are 3, 4, 6, 8
6. Motor rated current
The unit is ampere (A), such as 40 means the motor current is 40/10=4A
7. Number of motor protruding shafts
A: Single shaft B: Double shaft, the default is A
8. Motor flange size
60 represents the motor flange $\phi 60$, the default is the standard flange
9. Motor shaft diameter
14 represents the diameter of the motor shaft $\phi 14$, the default is the standard shaft diameter
10. Motor shaft type
F stands for flat shaft, K stands for keyway, hollow shaft is expressed in words, S stands for round shaft, the default is standard shaft
20, 28, 35, 39, 42 standard shafts are round shafts, 57, 60 standard shafts are flat shafts, 86, 110, 130 standard shafts are keyway shafts
11. Shaft length
31 means the shaft length is 31mm, 25 means the shaft length is 25mm, the default is the standard shaft length
Standard shaft length of two-phase motors: 20 motors (20mm), 28 motors (25mm), 35 motors (24mm), 39 motors (24mm), 42 motors (24mm), 57 motors (21mm), 60 motors (21mm), 86 Motor (32mm), 110 motor (56mm)
Standard shaft length of three-phase motor : 57 motor (21mm), 60 motor (21mm), 110 motor (37.5mm), 130 motor (56mm)
12. Motor waterproof
FS stands for waterproof motor, the default means not waterproof
13. Motor brake
SC stands for round cover brake/SCG stands for square cover brake, the default means no brake
14. Non-standard customization
If the 60 motor needs 57 mounting holes, take the 57 mounting hole distance (47.14), the default is the standard motor
15. Customer customization
Customized number, default is none
16. Motor version number
01 represents the first version, 02 represents the second version, the default is the first version

For example, motor model 57J1841-420, model definition description:
57 stepper motor, two-phase 1.8°, body length 41mm, 4 leads, rated current 2.0A

20/28 2-phase stepper motor

Features: Low inertia, high accuracy, low noise



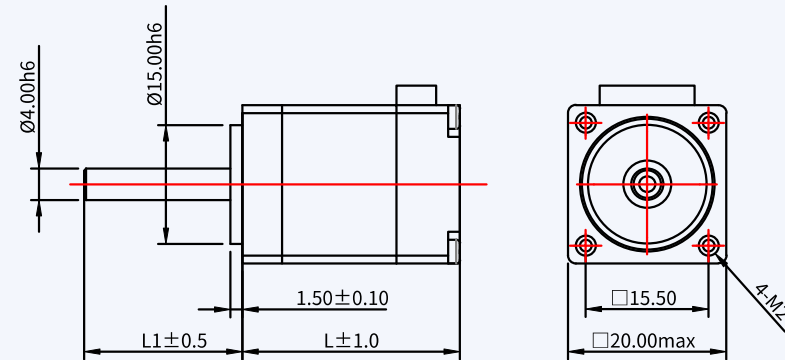
35/39 2-phase stepper motor

Features: Low inertia, high accuracy, low noise

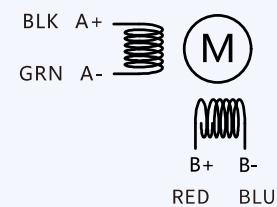


Motor Size (mm)

20 series

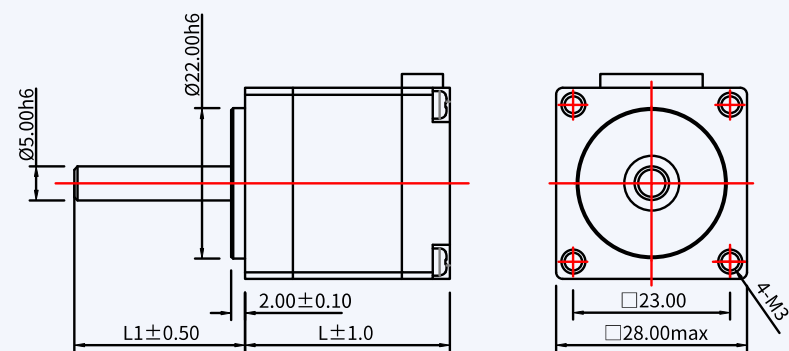


Wiring diagram

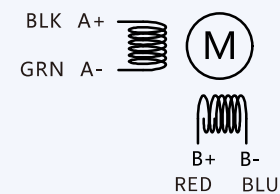


Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

28 series



Wiring diagram



Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

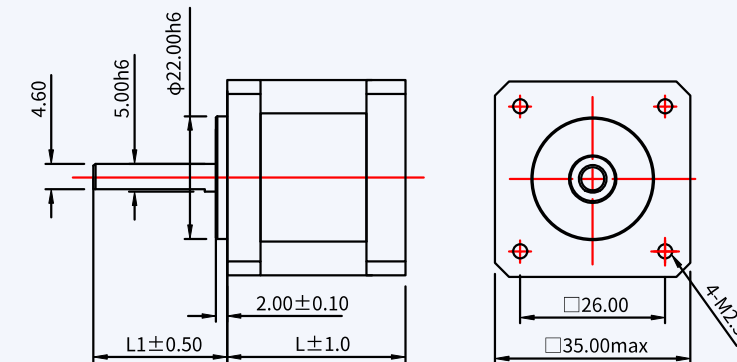
Motor Specifications

Model	Shaft length L1	Motor length L	Step angle (deg)	Holding torque (N.m)	Rated current (A)	Phase resistance (ohms)	Phase inductance (mH)	Rotor inertia (g-cm ²)	Insulation class	Number of leads	Weight (KG)	Matching driver
20J1840-404	20	38	1.8	0.027	0.4	12.0	4.0	4.5	B	4	0.045	2DM415
28J1830-407	25	30	1.8	0.065	0.67	5.2	4.2	8	B	4	0.1	2DM415
28J1851-407	25	51	1.8	0.1	0.67	8.5	7.5	18	B	4	0.18	2DM415

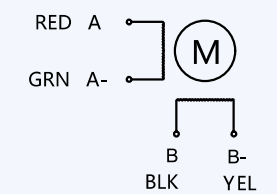
Note: The company can adjust the motor winding parameters and mechanical dimensions according to customer requirements. If the starting torque of the motor is required to reach the same value as the static torque of the motor, the voltage and current of the corresponding drive need to be increased. Generally, it is recommended to increase by about 30%, depending on the motor. The size of the load and the size of the acceleration.

Motor Size (mm)

35 series

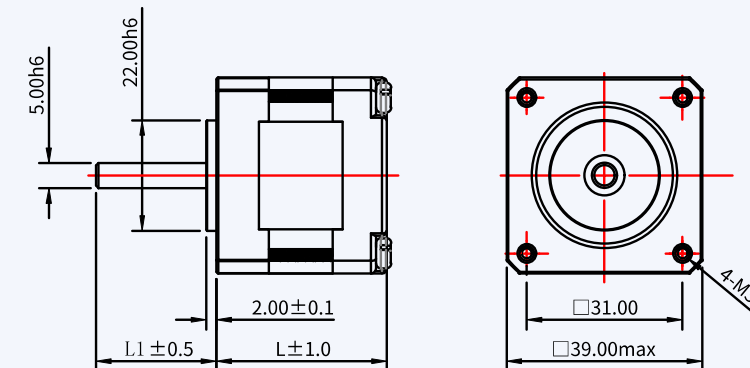


Wiring diagram

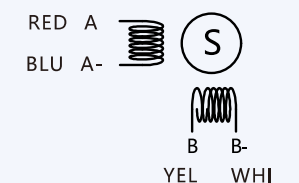


Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

39 series



Wiring diagram



Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

Motor Specifications

Model	Shaft length L1	Motor length L	Step angle (deg)	Holding torque (N.m)	Rated current (A)	Phase resistance (ohms)	Phase inductance (mH)	Rotor inertia (g-cm ²)	Insulation class	Number of leads	Weight (KG)	Matching driver
35J1834-407	24	33	1.8	0.12	0.7	2.5	4.8	14	B	4	0.18	2DM415
39J1844-405	24	44	1.8	0.28	0.5	21	39	40	B	4	0.18	2DM415

Note: The company can adjust the motor winding parameters and mechanical dimensions according to customer requirements. If the starting torque of the motor is required to reach the same value as the static torque of the motor, the voltage and current of the corresponding drive need to be increased. Generally, it is recommended to increase by about 30%, depending on the motor. The size of the load and the size of the acceleration.

42 2-phase stepper motor

Features: Low inertia, high accuracy, low noise



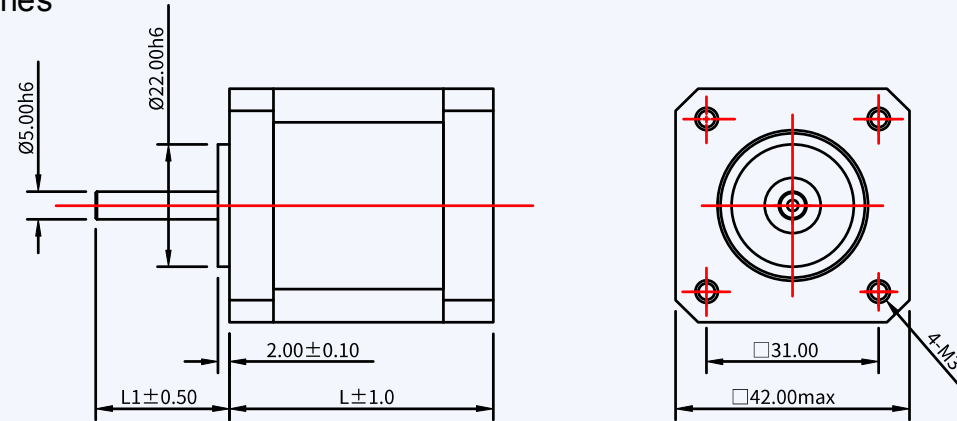
57 2-phase stepper motor

Features: Low noise, high torque, stable operation



Motor Size (mm)

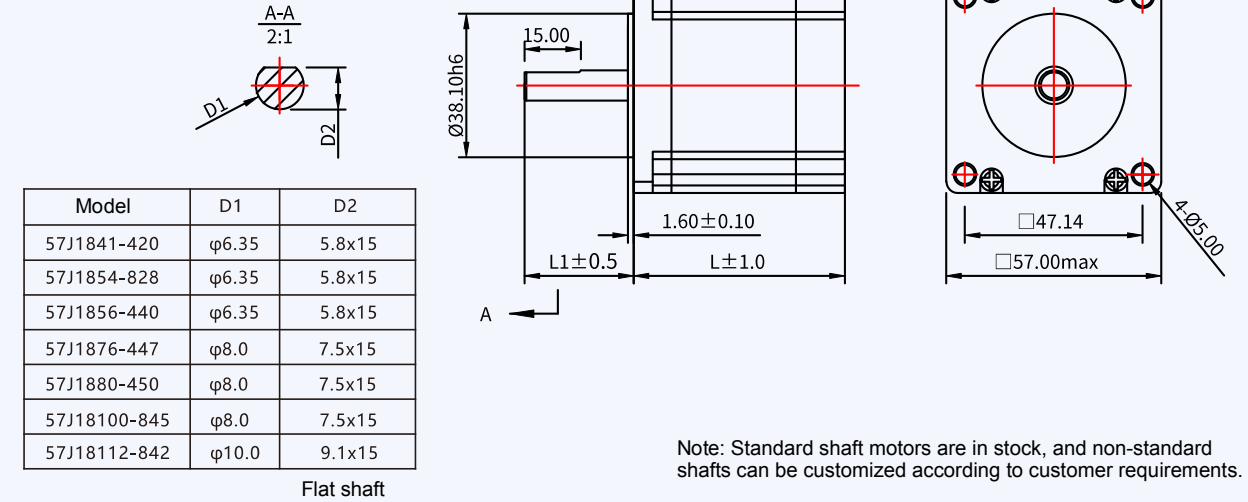
42 series



Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

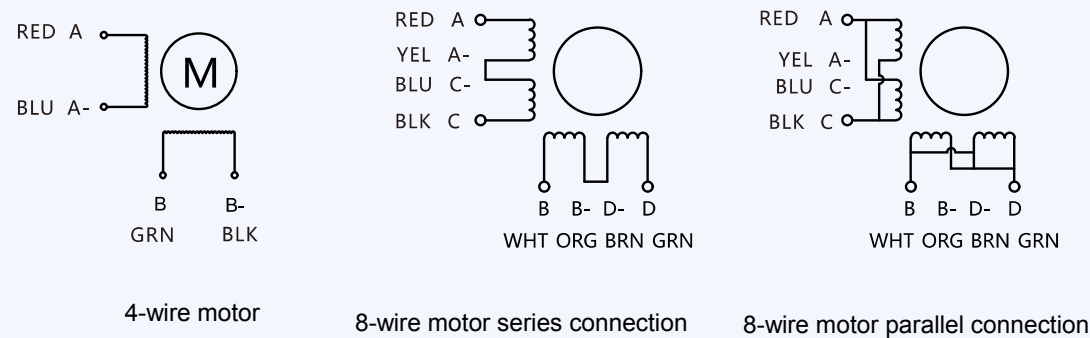
Motor Size (mm)

57 series

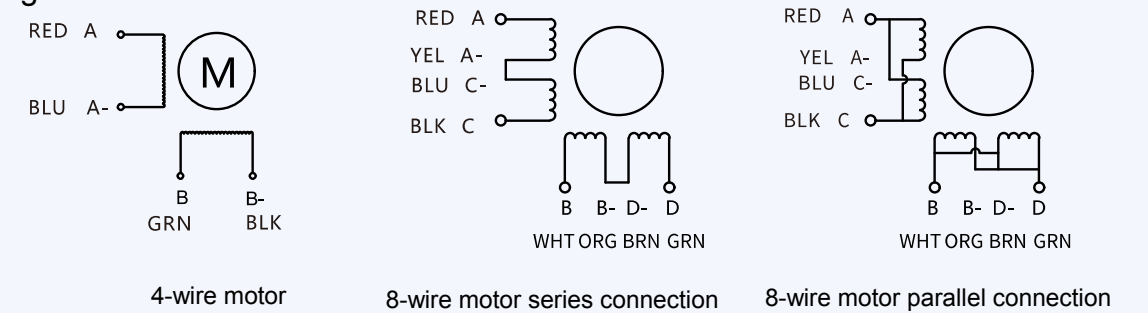


Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

Wiring diagram



Wiring diagram



Motor Specifications

Model	Shaft length L1	Motor length L	Step angle (deg)	Holding torque (N.m)	Rated current (A)	Phase resistance (ohms)	Phase inductance (mH)	Rotor inertia (g-cm ²)	Insulation class	Number of leads	Weight (KG)	Matching driver
42J1825-404	24	25	1.8	0.17	0.4	24	36	20	B	4	0.15	2DM415
42J1840-408	24	40	1.8	0.4	0.8	7.5	11.5	54	B	4	0.32	2DM415
42J1848-425	24	48	1.8	0.48	2.5	1.3	2.7	82	B	4	0.35	2DM415
42J1848-810	24	48	1.8	0.48	1.0	4.6	4.0	82	B	8	0.35	2DM415
42J1860-417	20	60	1.8	0.85	1.7	2.5	6.5	117	B	4	0.5	2DM420

Note: The company can adjust the motor winding parameters and mechanical dimensions according to customer requirements. If the starting torque of the motor is required to reach the same value as the static torque of the motor, the voltage and current of the corresponding drive need to be increased. Generally, it is recommended to increase by about 30%, depending on the motor. The size of the load and the size of the acceleration.

Motor Specifications

Model	Shaft length L1	Motor length L	Step angle (deg)	Holding torque (N.m)	Rated current (A)	Phase resistance (ohms)	Phase inductance (mH)	Rotor inertia (g-cm ²)	Insulation class	Number of leads	Weight (KG)	Matching driver
57J1841-420	21	43	1.8	0.75	2.0	1.3	3.2	157	B	4	0.4	2DM442
57J1854-828	21	56	1.8	0.85	3.0	0.95	1.2	280	B	8	0.6	2DM442
57J1856-440	20.6	56	1.8	1.2	4.0	0.43	1.35	280	B	4	0.6	2DM442
57J1876-447	20.6	76	1.8	2.0	4.7	0.37	1.75	480	B	4	1.05	2DM556
57J1880-450	21	81	1.8	2.2	5.0	0.4	1.8	520	B	4	1.15	2DM556
57J18100-845	21	100	1.8	2.8	4.5	0.95	3.4	700	B	8	1.45	2DM556
57J18112-842	21	112	1.8	3.0	4.2	1.4	2.7	780	B	8	1.7	2DM556

Note: The company can adjust the motor winding parameters and mechanical dimensions according to customer requirements. If the starting torque of the motor is required to reach the same value as the static torque of the motor, the voltage and current of the corresponding drive need to be increased. Generally, it is recommended to increase by about 30%, depending on the motor. The size of the load and the size of the acceleration.

60 2-phase stepper motor

Features: Low noise, high torque, stable operation



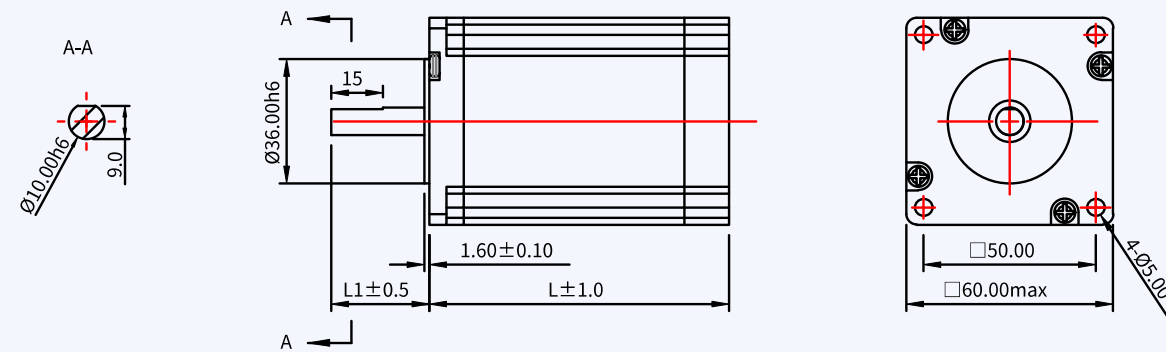
86 2-phase stepper motor

Features: Strong moment, high acceleration performance, load shock resistance, strong load capacity, long life



Motor Size (mm)

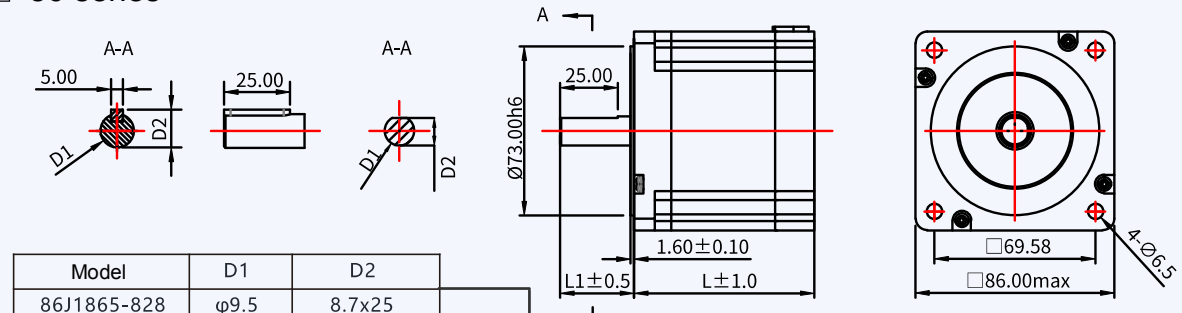
60 series



Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

Motor Size (mm)

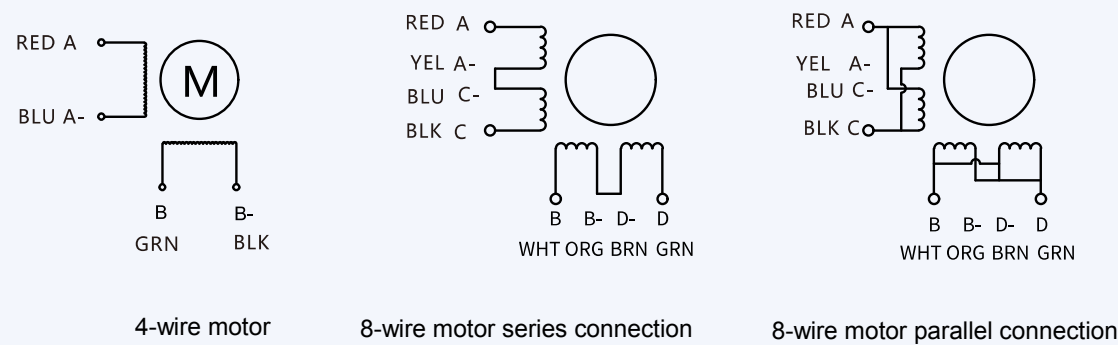
86 series



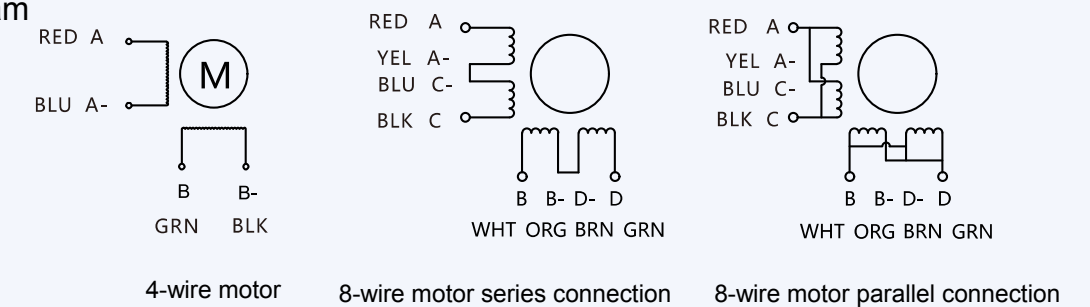
Model	D1	D2	Shaft Type
86J1865-828	$\varnothing 9.5$	8.7x25	Flat shaft A
86J1880-460	$\varnothing 12.7$	11.7x25	Keyway
86J18101-450	$\varnothing 12.7$	14.7x25	
86J18118-460	$\varnothing 12.7$	14.7x25	
86J18118-842	$\varnothing 12.7$	14.7x25	
86J18156-845	$\varnothing 15.87$	17.8x25	

Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

Wiring diagram



Wiring diagram



Motor Specifications

Model	Shaft length L1	Motor length L	Step angle (deg)	Holding torque (N.m)	Rated current (A)	Phase resistance (ohms)	Phase inductance (mH)	Rotor inertia (g-cm ²)	Insulation class	Number of leads	Weight (KG)	Matching driver
60J1887-440	24	87	1.8	3.3	4.0	0.7	2.5	900	B	4	1.4	2DM556
60J18100-440	30	100	1.8	3.3	4.0	0.8	3.2	950	B	4	1.7	2DM556

Note: The company can adjust the motor winding parameters and mechanical dimensions according to customer requirements. If the starting torque of the motor is required to reach the same value as the static torque of the motor, the voltage and current of the corresponding drive need to be increased. Generally, it is recommended to increase by about 30%, depending on the motor. The size of the load and the size of the acceleration.

Motor Specifications

Model	Shaft length L1	Motor length L	Step angle (deg)	Holding torque (N.m)	Rated current (A)	Phase resistance (ohms)	Phase inductance (mH)	Rotor inertia (g-cm ²)	Insulation class	Number of leads	Weight (KG)	Matching driver
86J1865-828	32	66	1.8	3.2	6.5	0.24	1.5	950	B	8	2.0	2DM860
86J1880-460	32	80	1.8	4.5	6.0	0.36	3.1	1400	B	4	2.3	2DM860
86J18101-450	32	98	1.8	7.5	5.0	0.48	3.8	2300	B	4	3.25	2DM860
86J18118-460	32	114	1.8	8.5	6.0	0.55	7.1	2700	B	4	3.8	2DM860
86J18118-842	32	118	1.8	8.5	4.2	0.56	3.0	2700	B	8	3.8	2DM860
86J18156-845	32	156	1.8	12.2	4.5	0.82	5.2	4000	B	8	5.4	2DM860

Note: The company can adjust the motor winding parameters and mechanical dimensions according to customer requirements. If the starting torque of the motor is required to reach the same value as the static torque of the motor, the voltage and current of the corresponding drive need to be increased. Generally, it is recommended to increase by about 30%, depending on the motor. The size of the load and the size of the acceleration.

110 2-phase stepper motor

Features: Strong moment, high acceleration performance, load shock resistance, strong load capacity, long life



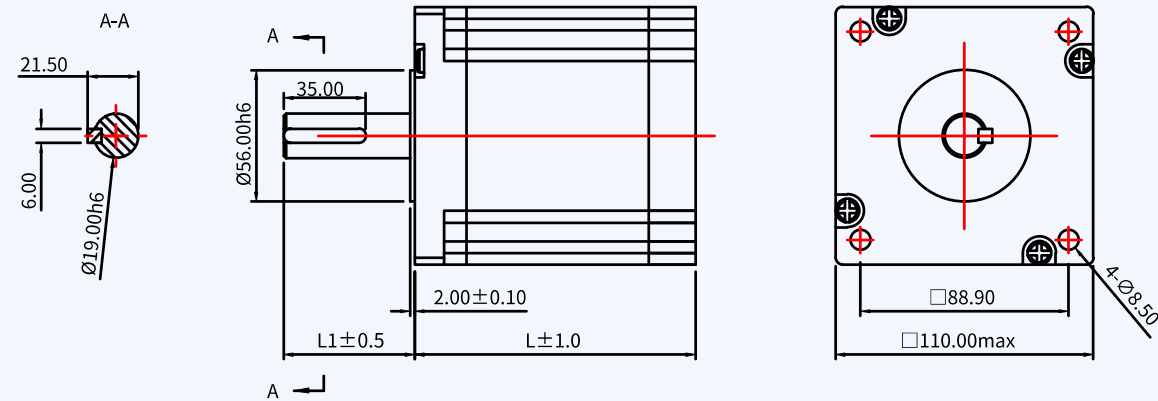
57/86 3-phase stepper motor

Features: Low noise, stable operation, high precision, high torque, good acceleration performance



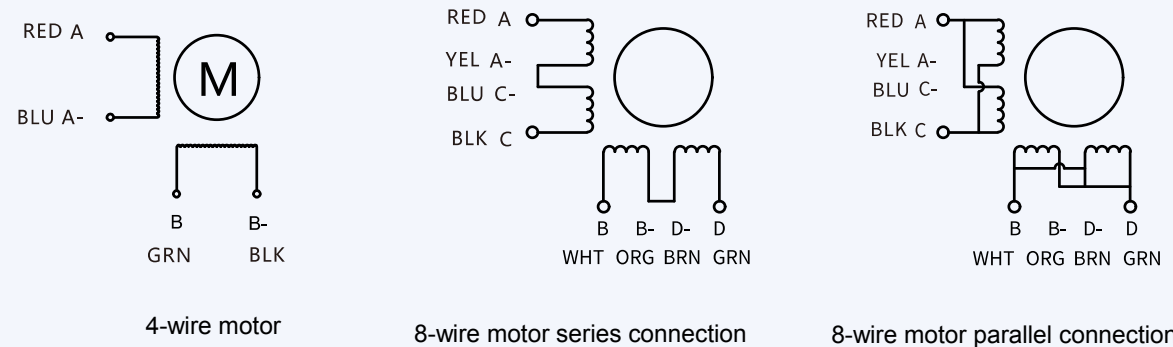
Motor Size (mm)

110 series



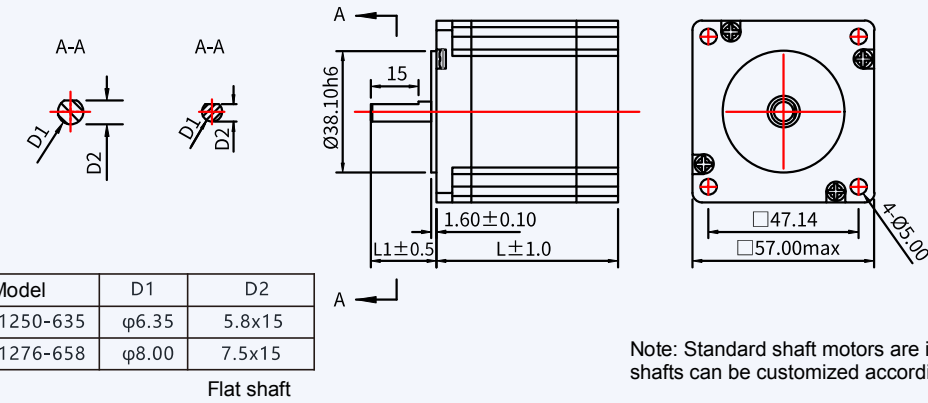
Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

Wiring diagram



Motor Size (mm)

57 series

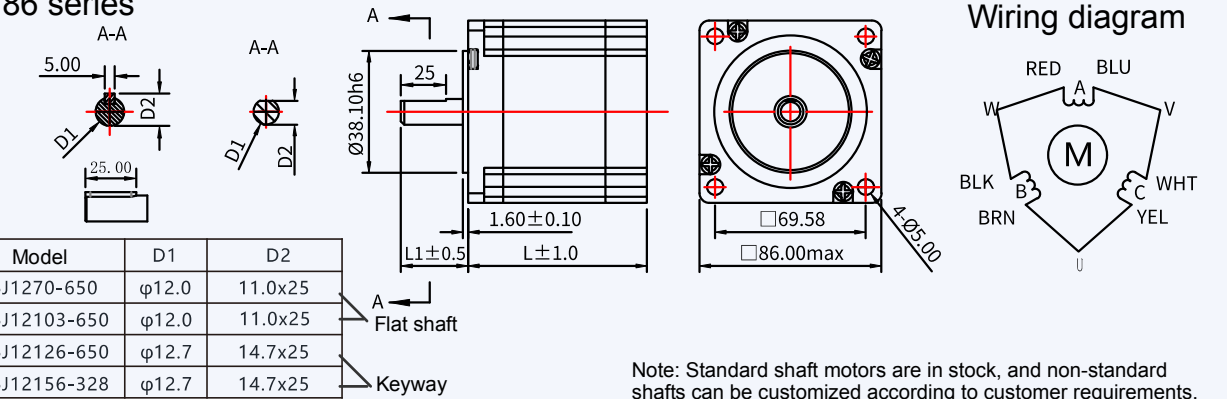


Model	D1	D2
57J1250-635	φ6.35	5.8x15
57J1276-658	φ8.00	7.5x15

Flat shaft

Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

86 series



Model	D1	D2
86J1270-650	φ12.0	11.0x25
86J12103-650	φ12.0	11.0x25
86J12126-650	φ12.7	14.7x25
86J12156-328	φ12.7	14.7x25

Flat shaft

Keyway

Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

Motor Specifications

Model	Shaft length L1	Motor length L	Step angle (deg)	Holding torque (N.m)	Rated current (A)	Phase resistance (ohms)	Phase inductance (mH)	Rotor inertia (g-cm ²)	Insulation class	Number of leads	Weight (KG)	Matching driver
110J18115-460	56	99	1.8	12	6.0	0.47	7.0	6000	B	4	5.8	2DM2280
110J18150-460	56	148	1.8	20	6.0	0.9	16	11000	B	4	8.4	2DM2280
110J18165-460	56	165	1.8	24	6.0	0.8	14	12500	B	4	9.5	2DM2280

Note: The company can adjust the motor winding parameters and mechanical dimensions according to customer requirements. If the starting torque of the motor is required to reach the same value as the static torque of the motor, the voltage and current of the corresponding drive need to be increased. Generally, it is recommended to increase by about 30%, depending on the motor. The size of the load and the size of the acceleration.

Motor Specifications

Model	Shaft length L1	Motor length L	Step angle (deg)	Holding torque (N.m)	Rated current (A)	Phase resistance (ohms)	Phase inductance (mH)	Rotor inertia (g-cm ²)	Insulation class	Number of leads	Weight (KG)	Matching driver
57J1250-635	20.6	56	1.2	0.9	3.5	0.77	1.8	280	B	6	0.75	3DM783
57J1276-658	21	56	1.2	1.5	5.8	0.86	2.0	480	B	6	1.1	3DM783
57J1285-658	21	85	1.2	1.8	5.8	1.2	2.0	550	B	6	1.2	3DM783
86J1270-650	32	70	1.2	2.8	5.0	0.75	5.0	1100	B	6	1.7	3DM783
86J12103-650	32	100	1.2	4.5	4.5	1.2	4.0	2340	B	6	2.85	3DM783
86J12126-650	32	126	1.2	7.0	5.0	1.5	5.5	3500	B	6	4.0	3DM3422
86J12156-328	32	156	1.2	7.8	2.8	5.0	32	4000	B	6	5.0	3DM3422

Note: The company can adjust the motor winding parameters and mechanical dimensions according to customer requirements. If the starting torque of the motor is required to reach the same value as the static torque of the motor, the voltage and current of the corresponding drive need to be increased. Generally, it is recommended to increase by about 30%, depending on the motor. The size of the load and the size of the acceleration.

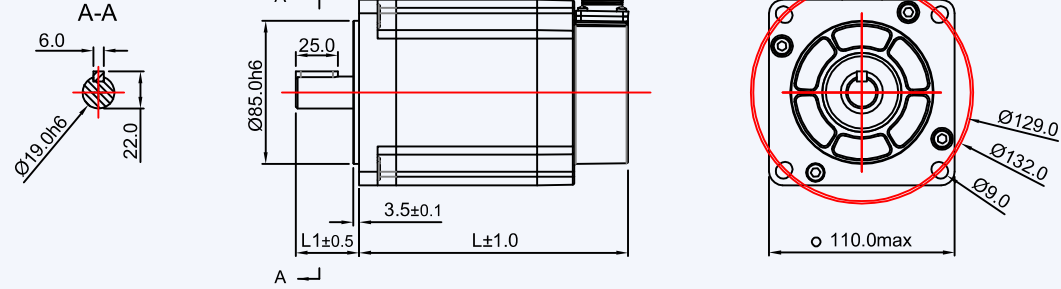
110/130 3-phase stepper motor

Features: Strong torque, super acceleration performance, stable operation, load shock resistance, high precision



Motor Size (mm)

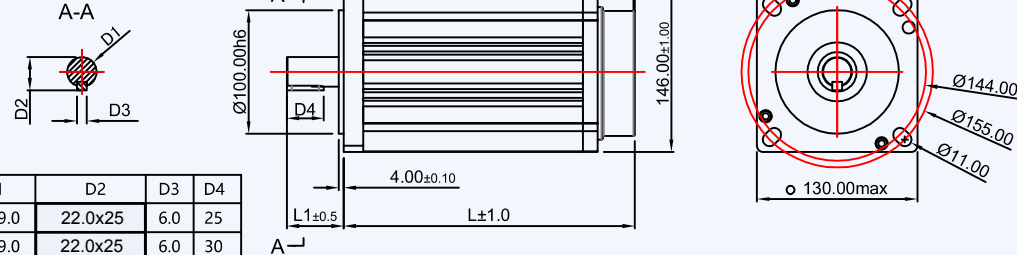
110 series



Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.



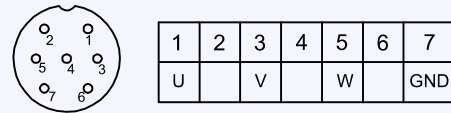
130 series



Model	D1	D2	D3	D4
130J12188-368	φ19.0	22.0x25	6.0	25
130J12220-368	φ19.0	22.0x25	6.0	30
130J12252-368	φ19.0	22.0x25	6.0	30
130J12280-368	φ19.0	22.0x25	6.0	30

Keyway

Note: Standard shaft motors are in stock, and non-standard shafts can be customized according to customer requirements.

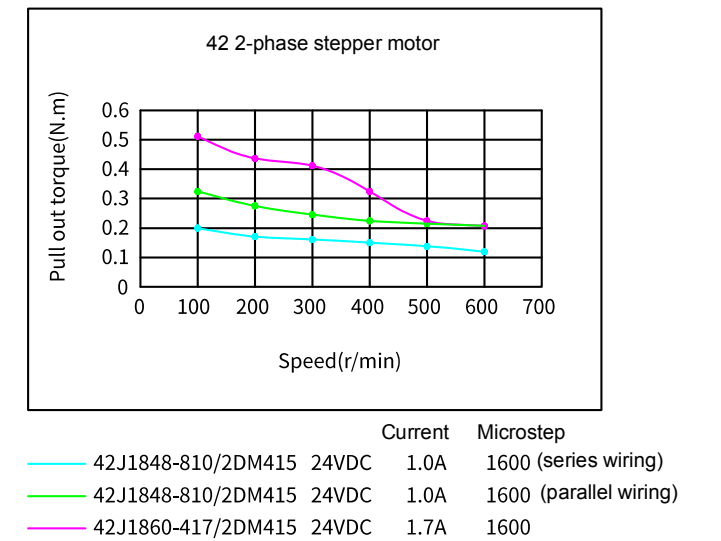
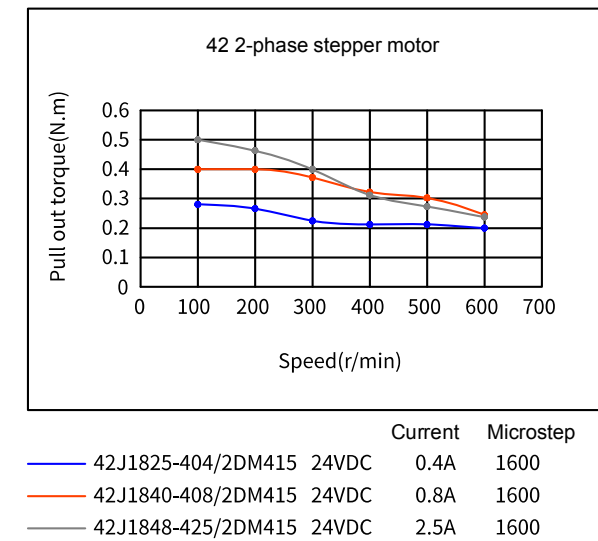
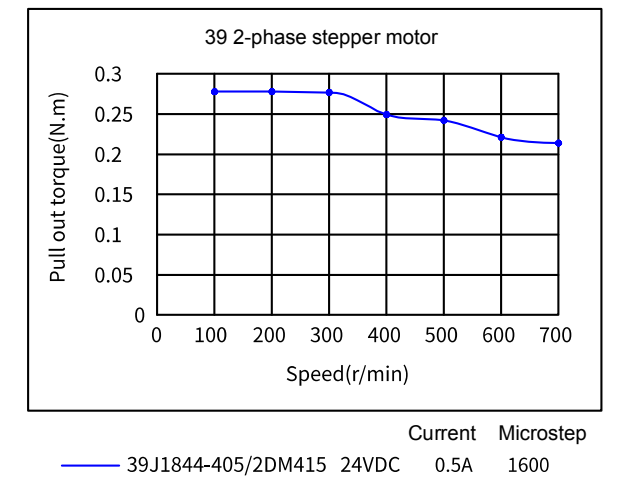
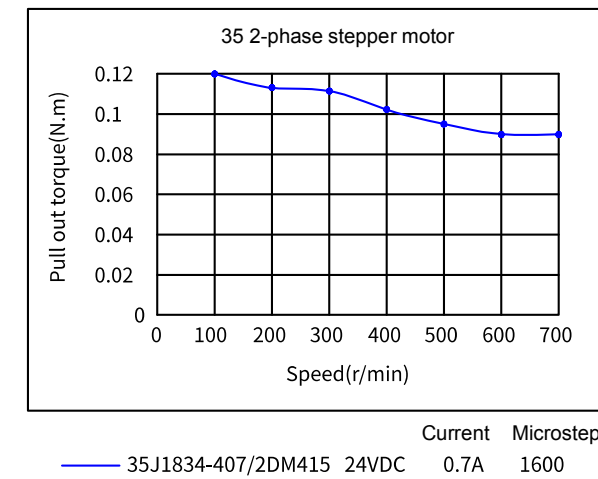
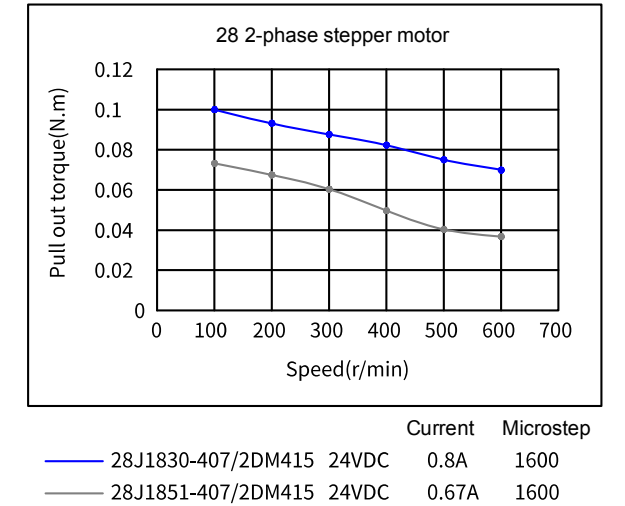
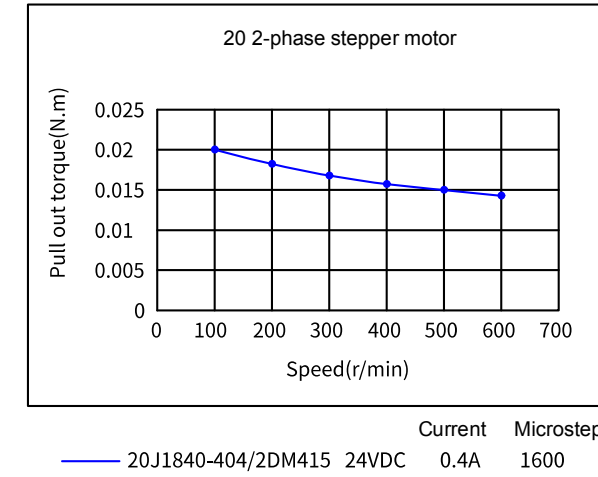


Motor Specifications

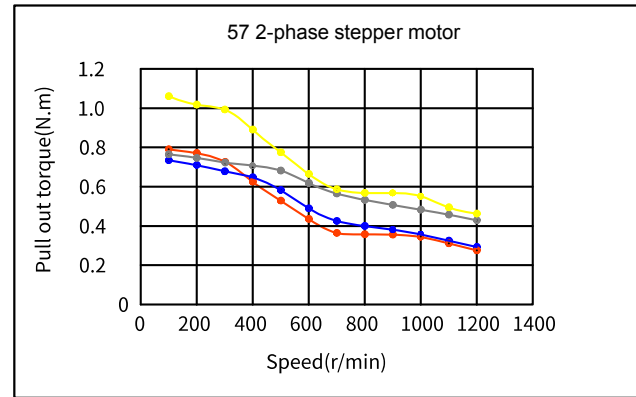
Model	Shaft length L1	Motor length L	Step angle (deg)	Holding torque (N.m)	Rated current (A)	Phase resistance (ohms)	Phase inductance (mH)	Rotor inertia (g-cm ²)	Insulation class	Number of leads	Weight (KG)	Matching driver
110J12161-360	37.5	160	1.2	12	6.0	0.76	11.5	11900	B	3	7.1	3DM2080
110J12185-360	37.5	188	1.2	16	6.0	1.28	19.0	14900	B	3	8.8	3DM2080
110J12220-360	37.5	222	1.2	20	6.0	1.24	22.0	19600	B	3	11	3DM2080
130J12188-368	36	190	1.2	24	6.8	0.96	16.2	26870	B	3	14	3DM2080
130J12220-368	46	236	1.2	28	6.8	1.1	19.0	33970	B	3	17	3DM2080
130J12252-368	44	256	1.2	35	6.8	1.4	24.0	41400	B	3	19	3DM2080
130J12280-368	44	273	1.2	50	6.8	1.5	18.3	47300	B	3	20.5	3DM2080

Note: The company can adjust the motor winding parameters and mechanical dimensions according to customer requirements. If the starting torque of the motor is required to reach the same value as the static torque of the motor, the voltage and current of the corresponding drive need to be increased. Generally, it is recommended to increase by about 30%, depending on the motor. The size of the load and the size of the acceleration.

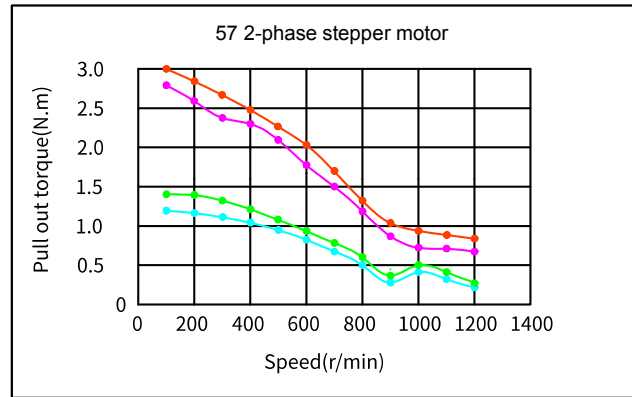
JMC Typical Stepper Motor Torque Diagram



JMC Typical Stepper Motor Torque Diagram

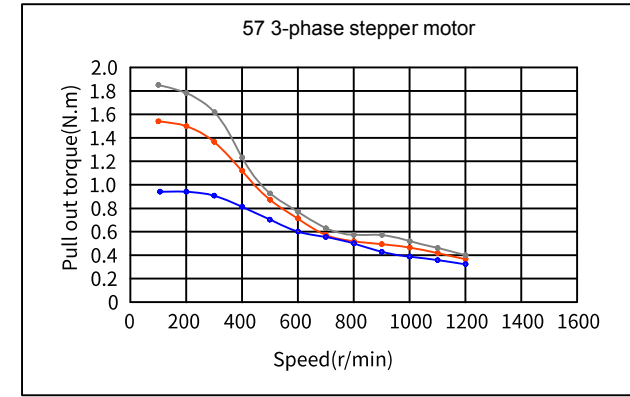


Current	Microstep
57J1841-420/2DM415 24VDC 2.0A	1600
57J1854-828/2DM415 24VDC 2.8A	1600 (series wiring)
57J1854-828/2DM415 24VDC 2.8A	1600 (parallel wiring)
57J1856-440/2DM415 24VDC 4.0A	1600

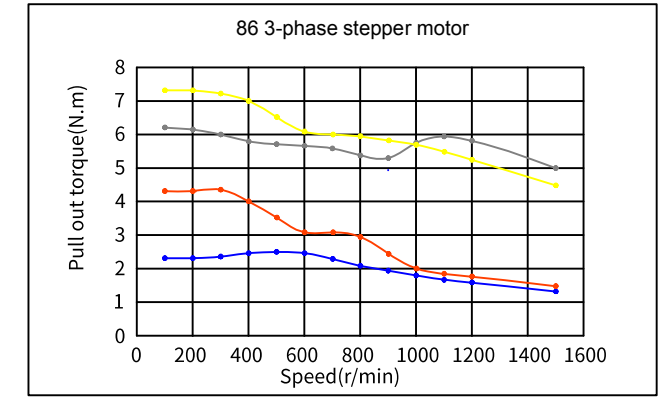


Current	Microstep
57J1876-447/2DM415 24VDC 4.7A	1600
57J1880-450/2DM415 24VDC 5.0A	1600
57J18100-845/2DM415 24VDC 4.5A	1600
57J18112-842/2DM415 24VDC 4.2A	1600

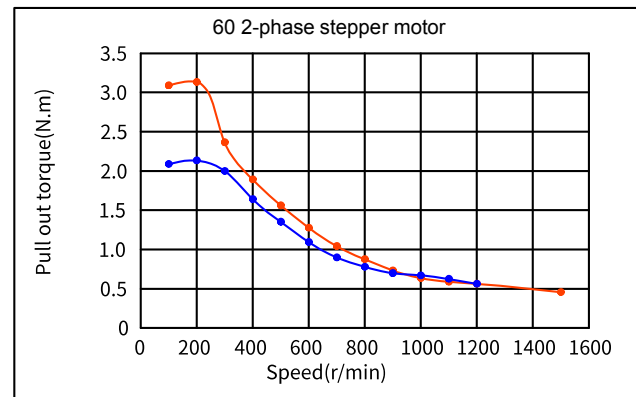
JMC Typical Stepper Motor Torque Diagram



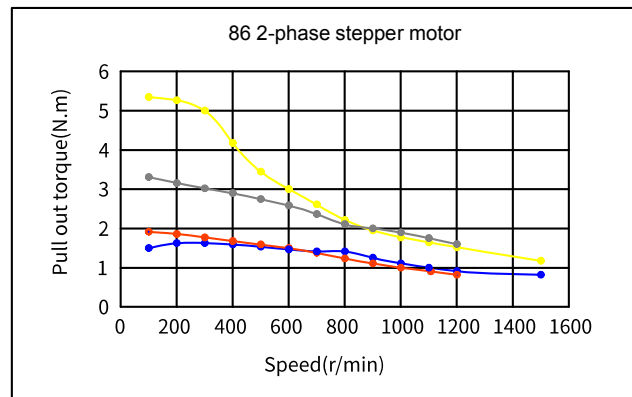
Current	Microstep
57J1250-635/3DM783 36VAC 3.5A	1600
57J1276-658/2DM783 36VAC 5.8A	1600
57J1285-658/2DM783 36VAC 5.8A	1600



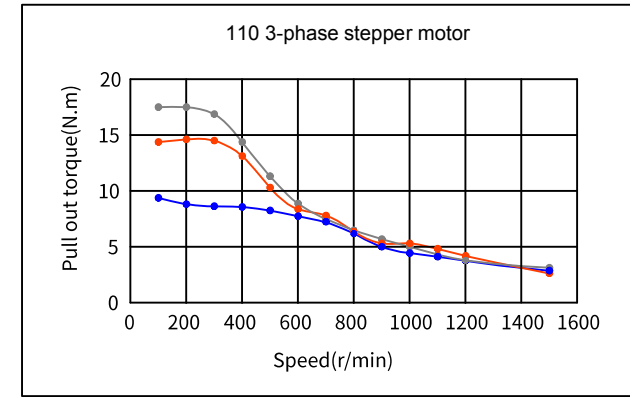
Current	Microstep
86J1270-650/3DM860 80VAC 5.0A	1600
86J12103-650/3DM860 80VAC 5.0A	1600
86J12126-650/3DM3422 220VAC 5.0A	2000
86J12156-328/3DM3422 220VAC 2.8A	2000



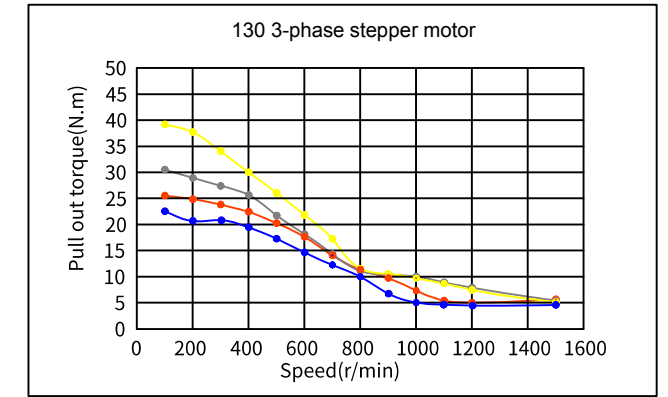
Current	Microstep
60J1887-440 /2DM556 48VDC 4.0A	1600
60J18100-440 /2DM556 48VDC 4.0A	1600



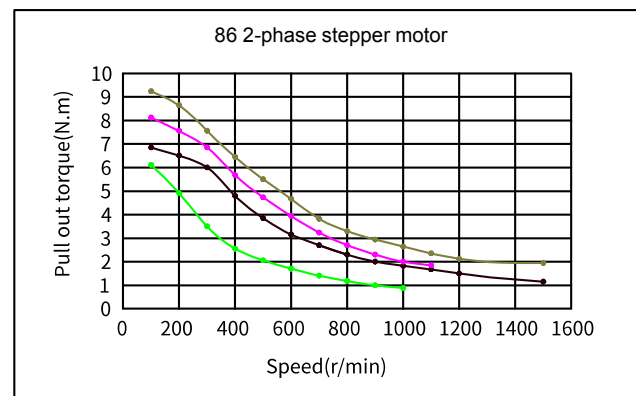
Current	Microstep
86J1865-828 /2DM860 60VAC 2.8A	1600 (series wiring)
86J1865-828 /2DM860 60VAC 2.8A	1600 (parallel wiring)
86J1880-460 /2DM860 60VAC 6.0A	1600
86J18101-450 /2DM860 60VAC 5.0A	1600



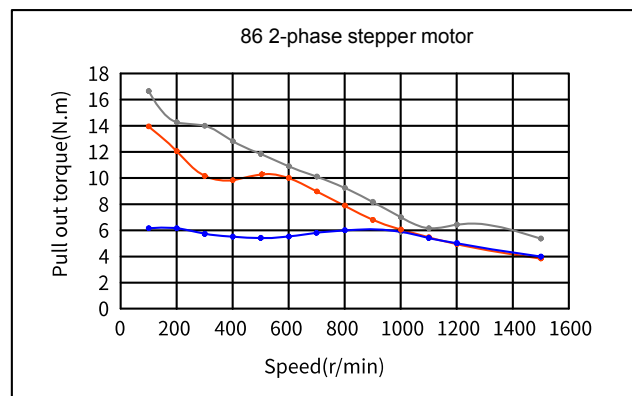
Current	Microstep
110J12161-360/3DM2080 220VDC 6.0A	1600
110J12185-360/3DM2080 220VDC 6.0A	1600
110J12220-360/3DM2080 220VDC 6.0A	1600



Current	Microstep
130J12188-368/3DM2080 220V4C 6.8A	1600
130J12220-368/3DM2080 220V4C 6.8A	1600
130J12252-368/3DM2080 220V4C 6.8A	1600
130J12280-368/3DM2080 220V4C 6.8A	1600



Current	Microstep
86J18118-460/2DM860 60VAC 6.0A	1600
86J18118-842/2DM860 60VAC 4.2A	1600 (series wiring)
86J18118-842/2DM860 60VAC 4.2A	1600 (parallel wiring)
86J18156-845/2DM860 60VAC 4.5A	1600 (series wiring)
86J18156-845/2DM860 60VAC 4.5A	1600 (parallel wiring)



Current	Microstep
110J18115-460/2DM2280 220VAC 6.0A	1600 (series wiring)
110J18150-460/2DM2280 220VAC 6.0A	1600 (parallel wiring)
110J18165-460/2DM2280 220VAC 6.0A	1600