



07 Stepping system

Bus-type stepping driver |
RS485 Integrated drive and control stepping
Pulse-type stepping driver | Stepper motors

Bus type stepping driver

DP3C closed-loop bus stepping driver

- Integrating EtherCAT bus technology
- Fast response
- Strong anti-interference ability
- Significantly improved performance



DP3CL open loop bus stepping driver

- Excellent value
- Low cost while retaining the high performance and stability of DP3C



■ Integrating EtherCAT bus technology, the communication is faster

Support COE (CANopen over EtherCAT) protocol, conform to the CiA402 standard and support 32 axes. Support the master station with standard EtherCAT protocol. The communication cycle between the master station and the slave station can reach 32 axes 1ms at most.

■ Simple wiring and convenient equipment maintenance

A network cable replaces the traditional pulse direction signal cable, and is equipped with power cable and encoder cable, making the wiring simpler. It can greatly reduce the cable cost, labor cost and maintenance cost.



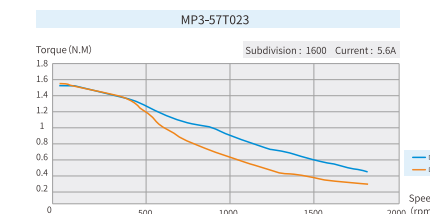
■ Higher reliability and anti-interference

Relying on the low bus load and point-to-point physical layer of EtherCAT bus, it can greatly suppress the generation of interference and clutter, and significantly improve the reliability and anti-interference ability of the system.

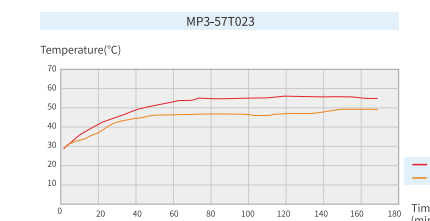
■ A new generation of control algorithm with better performance

EtherCAT bus technology combined with the latest control algorithm, greatly improves the performance

The torque is increased, which significantly improves the high-speed performance of the motor, up to 2000rpm.



The motor runs more smoothly and the temperature ising is significantly reduced



Application scenario

DP3C, DP3CL series bus stepping driver

It is suitable for electronics, laser and occasions requiring multi-axis control.

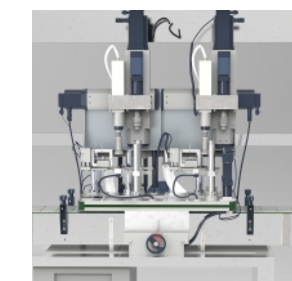
- 01 Stripping machine
- 02 Marking machine
- 03 Graph plotter
- 04 Medical equipment
- 05 Electronic processing equipment
- 06 Engraving machine
- 07 Laser machine
- 08 Cutting machine
- 09 Numerical control machine
- 10 Automatic assembly equipment



Graph plotter



Filling machine



Capping machine



Mask machine

Hardware interface

DP3C series

① LED display status

Signal	Explanation
E_TX+	EtherCAT data send +
E_TX-	EtherCAT data send -
E_RX+	EtherCAT data receive +
E_RX-	EtherCAT data receive -

*Note: the cable length between EtherCAT bus nodes is recommended to be no more than 50m. It is recommended to use CAT5e 100M Ethernet cable with double-layer shielding layer or better.

② EtherCAT terminal

Signal	Explanation
E_TX+	EtherCAT data send +
E_TX-	EtherCAT data send -
E_RX+	EtherCAT data receive +
E_RX-	EtherCAT data receive -

*Note: the cable length between EtherCAT bus nodes is recommended to be no more than 50m. It is recommended to use CAT5e 100M Ethernet cable with double-layer shielding layer or better.

③ Control signal interface

Signal	Explanation
SI1+	Differential input signal SI1, 24V is effective, max input frequency 200KHz, default probe input signal 1
SI1-	
SI2+	Differential input signal SI2, 24V is effective, max input frequency 200KHz, default probe input signal 2
SI2-	
SI3	Single ended input signal SI3-SI7, 12~24V is effective, max input frequency 10KHz, signal definition can be set. I3 default is origin point, I4, I5 default are positive/negative limit, I6, I7 default is general purpose. COMI is common terminal of singleended signal input, common anode or common cathode
SI6	
SI4	
SI7	
SI5	
COMI	
SO1+	Differential output signal OUT1, output max current 100mA, withstand voltage 30VDC, default is alarm output
SO1-	
SO2+	Differential output signal OUT2, output max current 100mA, withstand voltage 30VDC, default is in place signal
SO2-	
SO3	Single ended output, common cathode, max current 100mA, withstand voltage 30VDC
SO6	Single ended output, common cathode, max current 100mA, withstand voltage 30VDC
SO4	Single ended output, common cathode, max current 100mA, withstand voltage 30VDC
24V	Used together with braking output
SO5	Single ended output, common cathode, max current 100mA, withstand voltage 30VDC
BRK+	Braking output +, max 500mA, withstand voltage 24V, can connect the brake directly without connecting the relay
COMO	Common terminal of the output common cathode
BRK-	Braking output -, max 500mA, withstand voltage 24V, can connect the brake directly without connecting the relay

④ Encoder signal input terminal

Signal	Explanation
PE	Shielding ground
NC	Reserved signal
NC	Reserved signal
VCC	5V power supply output, provided by the driver, only for encoder power supply
GND	
EZ+	Encoder phase Z signal +
EZ-	Encoder phase Z signal -
EB+	Encoder phase B signal +
EB-	Encoder phase B signal -
EA+	Encoder phase B signal -
EA-	Encoder phase A signal -

*Note: the standard configuration is without Z signal. If Z phase homing is required, the motor and encoder cables supporting Z signal shall be selected.

⑤ Power supply terminal

Signal	Explanation
GND	Power supply ground
VDC	Power supply positive input

*Note: Xinje's standard power cable diameter is 0.75mm².

⑥ Upper computer communication RS232 port

Signal	Explanation
TXD	RS232 send
RXD	RS232 receive
GND	RS232 ground

*Note: please use the special cable provided by Xinje company for communication. RS232 default communication parameters: baud rate 115200bps, data bit 8, stop bit 1, even parity, station no.1.

⑦ Node address selection knob

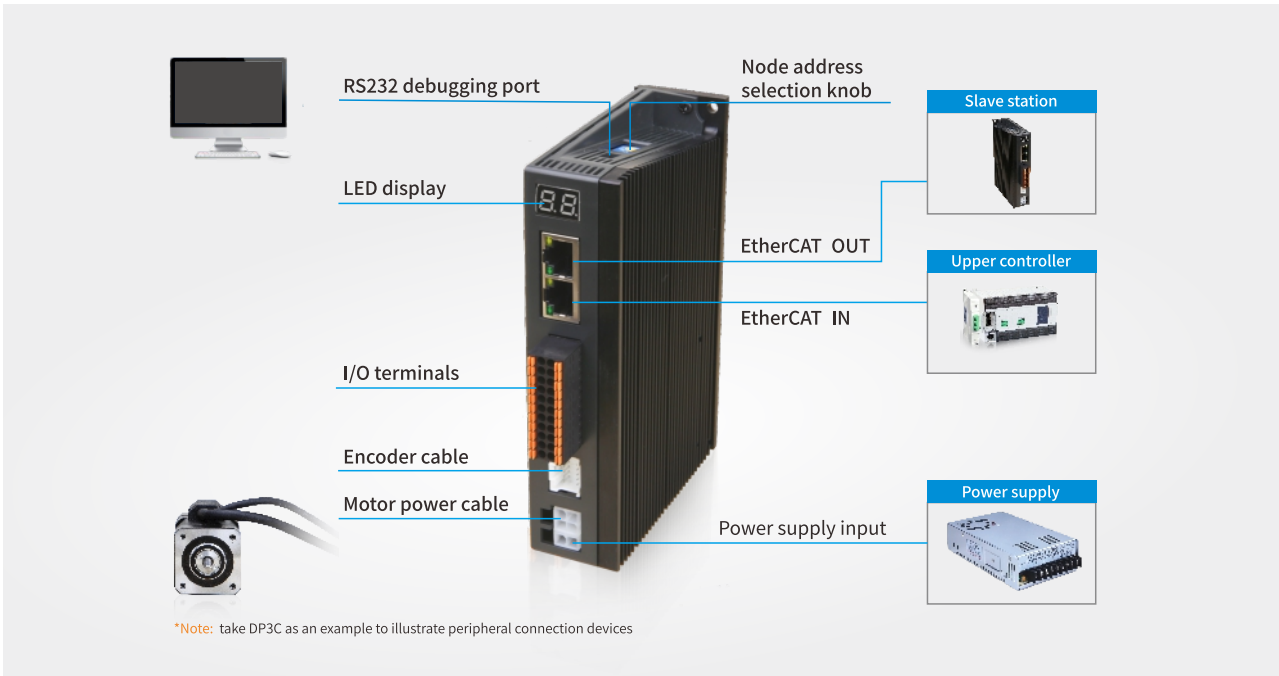
The node address can be set through the combination of two hexadecimal rotary dialing codes MSD (high bit) and LSD (low bit).

DP3C series displays operation speed, state machine/operation mode, node address, alarm fault and other information through two digits LED.

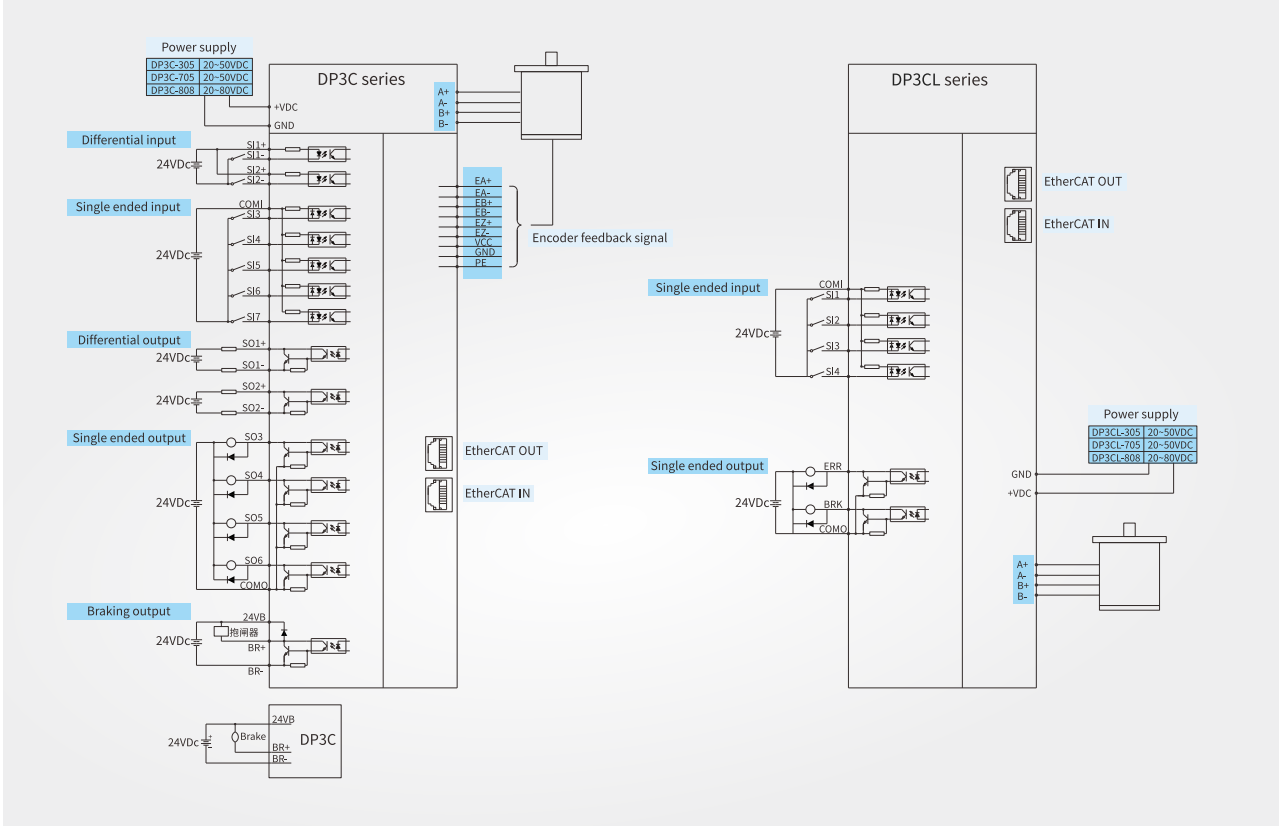
Stage	Display information
Power on initial stage	After the driver is powered on, the two LEDs are on for 0.5s, and display the actual node address of the current driver in hexadecimal. During this period, the LED node address flashes at an interval of 1s (0.5s on and 0.5s off). The time is 5s in total. After that, it enters the normal operation stage
Normal operation stage (parameter modification display content)	Speed (r/s) Operation mode, state machine: hexadecimal display (default) Node address: always on display

*Note: during initialization and normal operation, if the node address is changed, the LED flashes at an interval of 1s (0.5s on, 0.5s off), and then continues to return to the original state after 5s.

Driver peripheral circuit



Driver wiring diagram



DP3CL series

① Power and alarm indicator light

Color	Function
Green light	Power supply display PWR
Red light	Fault alarm indicator

*Note: when a fault occurs, the indicator light flashes continuously, pauses for one second and then flashes continuously.

② Upper computer communication RS232 port

Signal	Explanation
TXD	RS232 send
RXD	RS232 receive
GND	RS232 ground

*Note: please use the special cable provided by Xinje company for communication. RS232 default communication parameters: baud rate 115200bps, data bit 8, stop bit 1, even parity, station no.1.

③ EtherCAT terminal

Signal	Explanation
E_TX+	EtherCAT data send +
E_TX-	EtherCAT data send -
E_RX+	EtherCAT data receive +
E_RX-	EtherCAT data receive -

*Note: the cable length between EtherCAT bus nodes is recommended to be no more than 50m. It is recommended to use CAT5e 100M Ethernet cable with double-layer shielding layer or better.

④ Control signal terminal

Signal	Explanation
SI1	Single ended input signal SI1-SI4, 24V is effective, max pulse frequency 10KHz, the signal definition can be set. SI1, SI2, SI3, SI4 default is alarm clear, left/right limit and originpoint. COMI is single ended input signal common terminal, supports NPN and PNP
SI2	
SI3	
SI4	
COMI	
COMO	Output common terminal COM
ERR	Alarm output, max 50mA, withstand voltage 24V
BRK	Braking output, max 500mA, withstand voltage 24V, can connect the brake directly without connecting the relay

⑤ Motor and power supply input interface

Interface	Function
A+, A-	Motor phase A
B+, B-	Motor phase B
GND	DC power supply ground
+V	DC power supply +

⑥ Top dial switch

Dial number	Explanation
SW1, SW2, SW3	Dynamic current setting
SW4	Half current/full current mode
SW5, SW6	Filter time
SW7	Direction
SW8	Station switching

Product model

| Driver model naming

DP3 C L - 70 5

① ② ③ ④ ⑤

① Name		② Series		③ Control type		④ Driver output peak current		⑤ Driver max power supply voltage	
Sign	Product name	Sign	Product series	Sign	Current	Sign	Current	Sign	Current
DP3	Stepping driver	C	Bus type	L	Open loop control	30	3.0A	5	50V
				None	Closed-loop control	70	7.0A	8	80V
						80	8.4A		

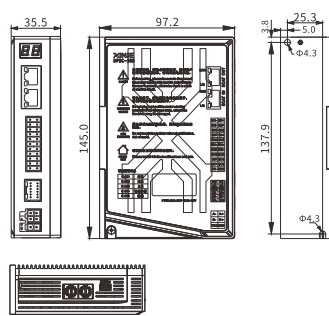
Driver specification

Driver model		DP3C-305	DP3C-705	DP3C-808	DP3CL-305	DP3CL-705	DP3CL-808	DP3CL-808A
Input power supply voltage (VDC)		DC20~50	DC20~50	DC20~80	DC20~50	DC20~50	DC20~80	AC20~80 DC20~110
Recommended power supply voltage(VDC)		24~36	57motor recommended 24~36;86 or high-speed motor recommend48V	48Above	24~36	57motor recommended 24~36;86 or high-speed motor recommend48V	48Above	
Using environment(A)		1~3	1~7	1~8.4	1~3	1~7	1~8.4	
Adaptive motor (base)		42	57/60	86	42	57/60	86	
External dimension (mm)		97.2*145.0*35.5			92.2*125.0*35.5			
Input signal		Alarm output, in place output, brake signal output, user-defined output			Origin input, positive/negative limit, alarm clear, user-defined input			
Output signal		Alarm output, brake signal output, user-defined output			Alarm output, brake signal output, user-defined output			
Alarm function		Over current, over voltage, out of tolerance, communication error, etc						
Debugging software		Xinje stepping driver software						
Using environment	Use occasion	Try to avoid dust, oil mist and corrosive gas. Combustible gas and conductive dust are prohibited in places with high humidity and strong vibration						
	Ambient temperature	0℃~50℃						
	Max working temperature	60℃						
	Humidity	40%~90% RH(no condensation or water droplets)						
	Vibration	5.9m/s² Max						
	Storage temperature	-20℃~65℃						

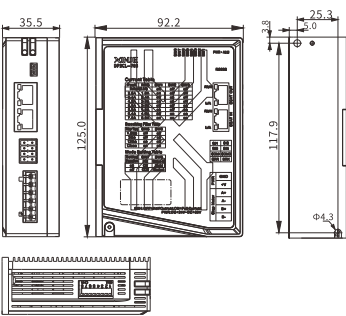
Driver dimension

(Unit: mm)

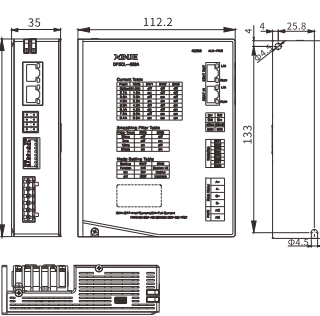
DP3C-305/DP3C-705/DP3C-808



DP3CL-305/DP3CL-705/DP3CL-808



DP3CL-808A



Accessories

| Encoder cable

Model	Length L(m)
CP-MD-2	2
CP-MD-3	3
CP-MD-5	5
CP-MD-8	8
CP-MD-10	10
CP-MD-12	12
CP-MD-16	16
CP-MD-20	20

CNA side	1	2	3	11	12	13
Color	Blue	Yellow	Yellow black	Green	Green black	Blue black
Definition	A+	VCC	GND	B+	B-	A-
CNB side	11	5	6	9	10	12

*Note: if Z signal output is required, please use encoder cable [CP-MD-Z-length].

| Power cable

Model	Length L(m)
CM-MP07-2	2
CM-MP07-3	3
CM-MP07-5	5
CM-MP07-8	8
CM-MP07-10	10
CM-MP07-12	12
CM-MP07-16	16
CM-MP07-20	20

A end PIN	1	2	3	4
Definition	B+	A+	A-	B-
Color	Black	Brown	Blue	Yellow green
B end PIN	2	1	3	4

*Note: for customers who want to make cable by themselves, they can choose JAMP-M4-P4 accessory package, which contains the terminals of driver and motor, and can press the cables by themselves. If you need this bus driver with open-loop motor, please choose JAMP-M4 accessories, including the driver terminal, which can press the cable by yourself.

| EtherCAT bus cable

Model	Length (m)
JC-CB-0P1	0.1
JC-CB-0P2	0.2
JC-CB-0P3	0.3
JC-CB-0P5	0.5
JC-CB-1	1
JC-CB-3	3
JC-CB-5	5
JC-CB-10	10
JC-CB-20	20

| Power supply cable

Each driver will be delivered with a power cable for free. For additional needs, the purchase models are as follows:

Model	Length (m)
JC-PM-20	2

RS485 Integrated Control Stepper Driver

DP3S Series Closed-loop RS485 Communication Stepper Driver

- Featuring isolated RS485 design for reliable communication
- Built-in single-axis controller (PR) saves pulse output points of PLC
- Closed-loop control prevents missed steps
- Configurable 16-segment motion paths, supporting homing/position limit/positioning/speed/JOG functions
- Supports IO control for multi-speed control
- Supports broadcast control, one master multiple slaves



DP3SL Series Open-loop Rs485 Communication Stepper Driver

- Featuring isolated RS485 design for reliable communication
- Built-in single-axis controller (PR) saves pulse output points of PLC
- Supports station number settings for up to 31 axes
- Configurable 16-segment motion paths, supporting homing/position limit/positioning/speed/JOG functions
- Supports IO control for multi-speed control.



Application Scenarios

DP3S and DP3SL series drivers are suitable for conveyor systems, transfer stations, textile industry, etc.



Conveyor systems



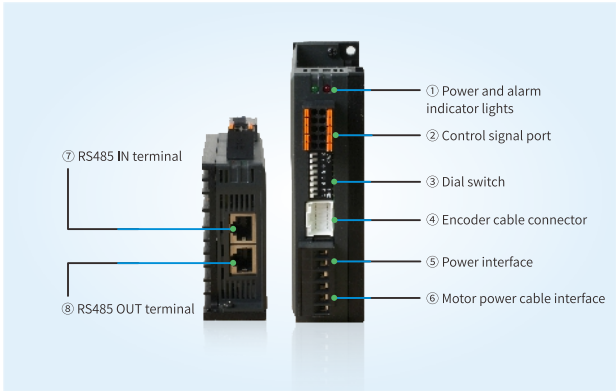
Transfer stations



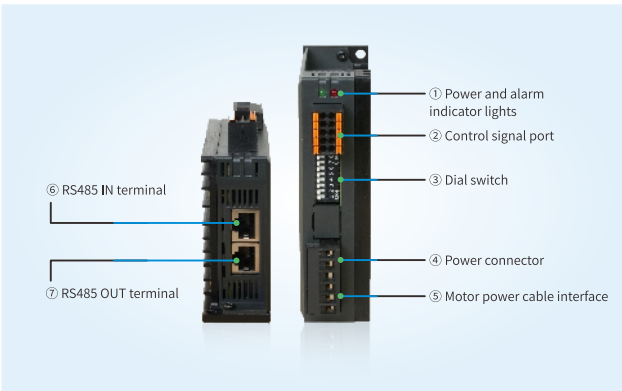
Textile industry

Hardware interface

DP3S series



DP3SL series

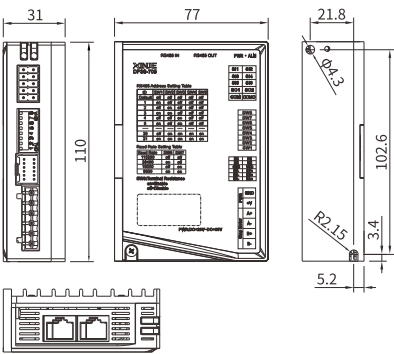


Driver specification

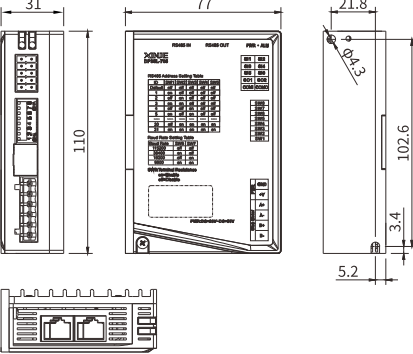
Driver model		DP3S-705	DP3S-808A	DP3SL-705	DP3SL-808A
Input power supply voltage (V)		20V~50VDC	20V~80VAC/20V~110VDC	20V~50VDC	20V~80VAC/20V~110VDC
Peak output current (A)		1-7	1-8.4	1-7	1-8.4
Matching motor (base)		42/57/60	86	42/57/60	86
Electrical specification	Station address setting	Parameter/DIP switch			
	Digital input interface	6-channel single ended input, input voltage is 12-24V			
	Digital output interface	2-channel single ended output, supporting a maximum of 50mA			
	Serial port debugging	Can be connected to the upper computer via 485 network port for debugging			
Usage environment	Use occasion	Try to avoid dust, oil stains, and corrosive gases, as well as places with high humidity and strong vibrations. Combustible gases and conductive dust are prohibited			
	Ambient temperature	0°C~50°C			
	Maximum operating temperature	60°C			
	Humidity	40%~90% RH (No condensation or water droplets)			
	Vibration	5.9m/s2 Max			
	Storage temperature	-25°C~70°C			

Driver dimension (Unit: mm)

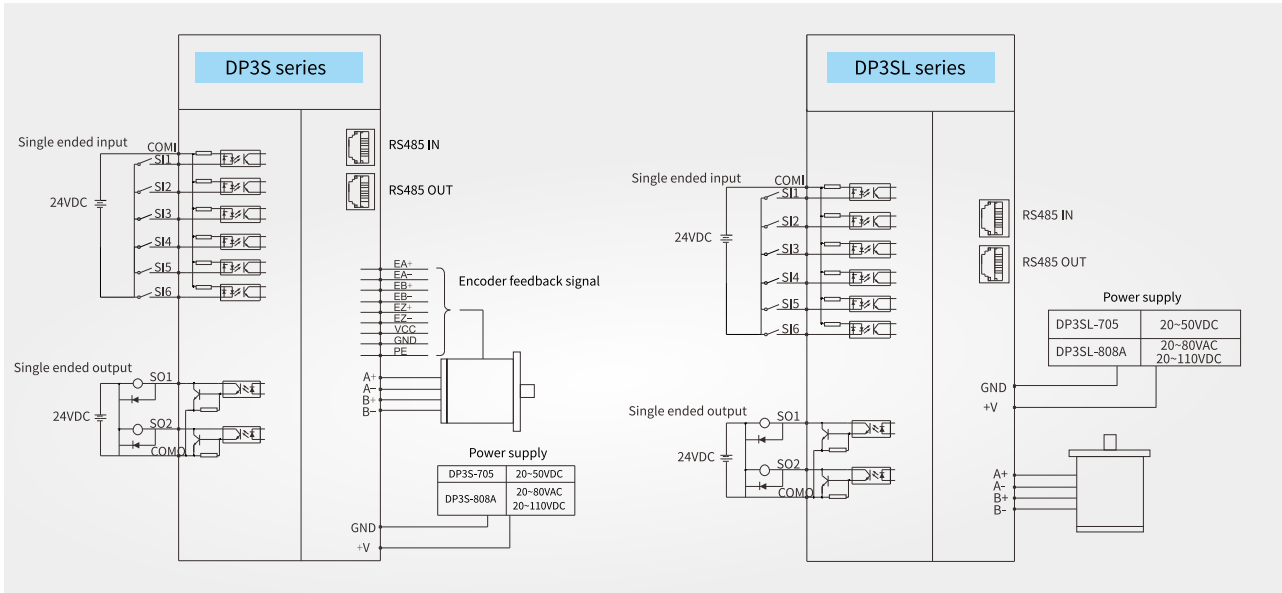
DP3S-705



DP3SL-705



Driver wiring diagram



Accessories

| Encoder cable

CAN side	1	2	3	11	12	13
Color	Blue	Yellow	Yellow black	Green	Green black	Blue black
Definition	A+	VCC	GND	B+	B-	A-
CNB side	11	5	6	9	10	12

Model	Length L (m)	Model	Length L (m)
CP-MD-2	2	CP-MD-10	10
CP-MD-3	3	CP-MD-12	12
CP-MD-5	5	CP-MD-16	16
CP-MD-8	8	CP-MD-20	20

*Note: If Z-signal output function is required, please equip the encoder cable CP-MD-Z-length.

| Power cable

Terminal A PIN	1	2	3	4
Definition	B+	A+	A-	B-

Model	Length L (m)	Model	Length L (m)
CM-P07B-2	2	CM-P07B-10	10
CM-P07B-3	3	CM-P07B-12	12
CM-P07B-5	5	CM-P07B-16	16
CM-P07B-8	8	CM-P07B-20	20

*Note: For customers who need to make their own power cables, they can choose the accessory kit JA-CM-P4, which includes terminals that match the motor.

Pulse type stepping driver

DP3F1 closed-loop pulse stepping driver

- Closed loop control and torque lifting to prevent step loss
- Higher running speed and acceleration
- More stable operation at low speed
- The plug-in wiring is simple and fast
- Pulse and direction input voltage support 5V and 24V
- Comprehensive overvoltage, overcurrent, undervoltage and short circuit protection functions

Applicable occasions: various small and medium-sized automation equipment and instruments, such as engraving machine, stripping machine, cutting machine, etc.



DP3L1 open loop pulse stepping driver

- Smaller size and space saving
- Reliable quality and excellent performance
- Large output, fast speed, stable operation and low temperature rising
- Pulse direction supports 5~24V
- New open loop IO stepping driver: Dial code speed regulation, IO trigger, stable start and stop, uniform speed, widely used in conveying equipment, docking station, PCB feeder

Applicable occasions: all kinds of small and medium-sized automation equipment and instruments, such as labeling machine, 3C, photovoltaic, lithium battery, bearing, labeling canned, winding machine



DP3L high voltage open loop pulse stepping driver

- Supply voltage 220~240VAC
- Pulse and direction input voltage support 5V and 24V
- New control algorithm, significantly improved performance
- The medium and high speed torque is 10 ~ 30% higher than the original product

Applicable occasions: slicer, clothing packaging machine, non-woven bag making machine, glove machine, etc.



Hardware interface

DP3F1 series

① Power and alarm indicator light

Color	Function
Green light	Power display PWR
Red light	Fault alarm indicator

Flashing message	Fault explanation
Flash once	Over current or short circuit
Flash continuously twice	Over voltage
Flash continuously 3 times	Under voltage
Flash continuously 4 times	Open circuit or poor contact of motor
Flash continuously 5 times	Position overlimit
Flash continuously 12 times	Power on stall detection

② Upper computer communication RS232 port

Interface	Function
VCC	Power supply +
WT	Data write
WR	Data read
ID	Empty
GND	Power supply ground

*Note:

 please use the special cable provided by Xinje company for communication. RS232 default communication parameters: baud rate 115200bps, data bit 8, stop bit 1, even parity, station no.1.

*Note:

 when a fault occurs, the indicator light flashes continuously, pauses for one second and then flashes continuously.

③ Control signal interface

Signal	Function
PUL+	Pulse control signal
PUL-	
DIR+	Direction control signal
DIR-	
ENA-	Enable/release signal
ENA+	
ALM	Alarm output signal
PEND/Z	In place/Z signal output
BRK+	Brake output signal
COM	Common terminal of output signal

④ Output signal common terminal

Sign	Name
NC	Reserved signal
NC	Reserved signal
NC	Reserved signal
NC	Reserved signal
VCC	5V power supply output, provided by the driver, only for encoder power supply
GND	
EZ+	Encoder Z phase signal +
EZ-	Encoder Z phase signal -
EB+	Encoder B phase signal +
EB-	Encoder B phase signal -
EA+	Encoder A phase signal +
EA-	Encoder A phase signal -

⑤ Motor and power input interface

Interface	Function
A+, A-	Motor phase A
B+, B-	Motor phase B
GND	DC power supply ground
+V	DC power supply +
AC1, AC2	AC power supply

⑥ Dial switch

Dial switch	Function
SW1-SW4	Subdivision setting
SW5	Motor operation initial direction selection
SW6	Z/in place signal
SW7	Control signal pulse mode selection
SW8	Open/closed loop selection
SW9	Command smooth filter
SW10	

DP3L1 series

① Power and alarm indicator light

Color	Function
Green light	Power display PWR
Red light	Fault alarm indicator

*Note:

 when a fault occurs, the indicator light flashes continuously, pauses for one second and then flashes continuously.

② Control signal interface

Interface	Function
PUL+	Pulse signal input +
PUL-	Pulse signal input -
DIR+	Pulse direction input +
DIR-	Pulse direction input -
ENA+	Enable/release signal input +
ENA-	Enable/release signal input -
ERR	Driver error signal output
COM	Error signal ground

③ Dial switch

Dial switch	Function
SW1~SW3	Dynamic current setting
SW4	Half/full current setting
SW5~SW8	Subdivision accuracy setting
SW9	Command filtering
SW10	IO/PUL mode switching

④ Power supply interface

Interface	Function
GND	DC power supply ground
+V	DC power supply +

⑤ Motor power cable interface

Interface	Function
A+, A-	Motor phase A
B+, B-	Motor phase B

Driver peripheral circuit

Driver wiring diagram

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Product model

Driver naming rule

DP3 L - 110 22 A 3

① ② ③ ④ ⑤ ⑥

① Name		② Series		③ Driver output peak current		④ Driver max power supply voltage	
Sign	Product name	Sign	Product series	Sign	Current	Sign	Voltage
DP3	Stepping driver	F	Closed-loop type	22	2.2A	4	40V
		L	Open loop type	30	3.0A	5	50V
		L1	Driver type	42	4.2A	8	80V
				56	5.6A	22	220V
				70	7.0A		
				80	8.0A		
				110	11.0A		
⑤ Voltage type		⑥ Driver type					
Sign	Power supply type	Sign	Driver type				
A	AC/DC power supply	3	Three-phase driver				
None	DC power supply	None	Two-phase driver				

Driver specification

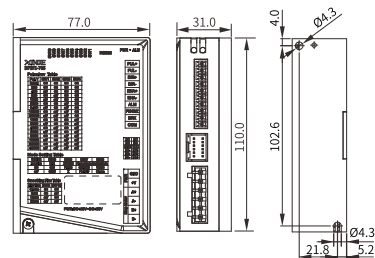
		DP3F closed-loop pulse type			
Driver model		DP3F1-305	DP3F1-705	DP3F1-805A	DP3F1-808A
Basic specification	Input power supply voltage (V)	DC 20~50	DC 20~50	DC 20~80/AC20~50	AC 20~100/AC20~80
	Output current peak value (A)	1~4	1~7	1~8.4	1~8.4
	Adaptive motor (base)	42	57/86	86	86
	Dimension (mm)	110*77*31	110*77*31	141.5*97.5*56.0	141.5*97.5*56.0
	Stepping pulse frequency (kHz)	24V signal 150K, 5V differential signal 150K			
Use environment	Control signal input voltage (VDC)	Support 5V and 24V (DC)			
	Use occasion	Avoid dust, oil mist and corrosive gas			
	Ambient temperature	-10°C~50°C			
	Max working temperature	60°C			
	Humidity	40%~90% RH (no condensation or water droplets)			
	Vibration	5.9m/s² Max			
	Storage temperature	-20°C~65°C			

		DP3L1 economic open-loop pulse type					DP3L1 open loop IO type	DP3L high voltage open loop pulse type
Driver model		DP3L1-224	DP3L1-565	DP3L1-565A	DP3L1-805A	DP3L1-808A	DP3L1-565-IO	DP3L-11022A3
Basic specification	Input power supply voltage (V)	DC20~40	DC20~50	DC20~80/AC20~50	DC20~80/AC20~50	DC20~110/AC20~80	DC20~50	AC200~240
	Output current peak value (A)	0.5~2.2	1.4~5.6	1.4~5.6	2.7~8.4	2.7~8.4	1.4~5.6	3.1~11.3
	Adaptive motor (base)	42	57/86	42/57	86	86	57/86	86/110/130
	Dimension (mm)	80*55*21.3	105*75.8*27.8	105*75.8*27.8	150*97.5*52.6	150*97.5*56	105*75.8*27.8	199.5*137*79
	Stepping pulse frequency (kHz)	200 Khz						
Use environment	Control signal input voltage (VDC)	5~24V						5/24V(dial switch)
	Use occasion	Avoid dust, oil mist and corrosive gas						
	Ambient temperature	0°C~50°C						
	Max working temperature	60°C						
	Humidity	40%~90% RH(no condensation or water droplets)						
	Vibration	5.9m/s² Max						
	Storage temperature	-20°C~65°C						

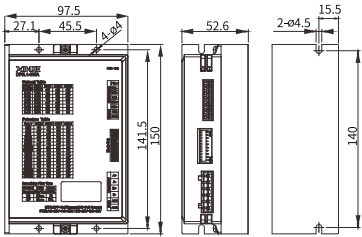
*Note:DP3L1-565/565-IO hardware version 1.0.00 only supports 24V, version 1.1.01 and up support 5~24V.

Driver dimension (Unit: mm)

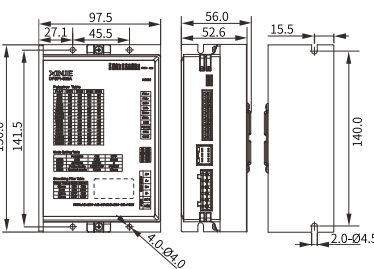
DP3F1-305/DP3F1-705



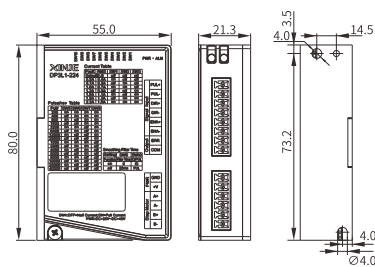
DP3F1-805A



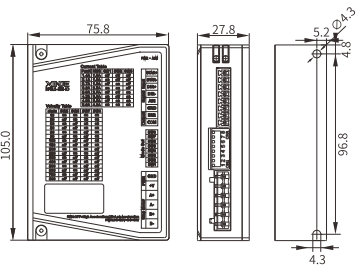
DP3F1-808A



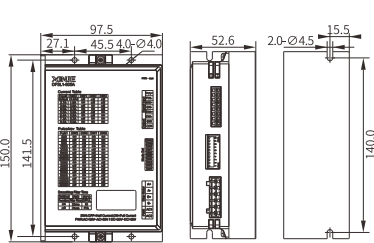
DP3L1-224



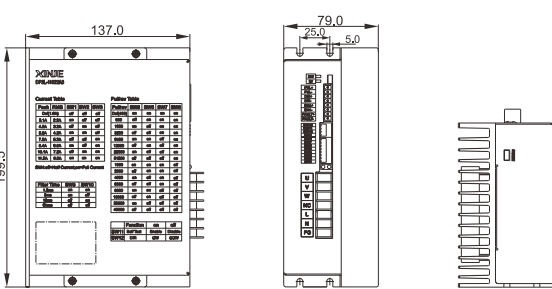
DP3L1-565/DP3L1-565-IO/DP3L1-565A



DP3L1-805A/DP3L1-808A



DP3L-11022A3



Accessories

| Encoder cable



Welding surface

HDB-15F female, three rows, with front nut

1 11 12

11 12

1 2

A side through PIN surface

$L \pm 100$

CNAside	1	2	3	11	12	13
Color	Blue	Yellow	Yellow black	Green	Green black	Blue black
Definition	A+	VCC	GND	B+	B-	A-
CNBside	11	5	6	9	10	12

*Note: if Z signal output function is required, please use encoder cable [CP-MD-Z-length].

Model	Length L(m)
CP-MD-2	2
CP-MD-3	3
CP-MD-5	5
CP-MD-8	8
CP-MD-10	10
CP-MD-12	12
CP-MD-16	16
CP-MD-20	20

| Length



A-end connect the motor

A-end

31

B-end connect the driver

B-end

1 2 3 4

1 2 3 4

$L \pm 20$

A-endPIN	1	2	3	4
Definition	B+	A+	A-	B-

*Note: for customers who need make cable by themselves, they can buy accessory package JA-CM-P4, which includes the terminals suitable for the motor.

Model	Length L(m)
CM-P07B-2	2
CM-P07B-3	3
CM-P07B-5	5
CM-P07B-8	8
CM-P07B-10	10
CM-P07B-12	12
CM-P07B-16	16
CM-P07B-20	20

*Note: suitable for DP3F1 series

Stepping motor



| Motor naming rule

MP3- 57 H □ □ 080 - □

① ② ③ ④ ⑤ ⑥ ⑦

① Name	② Base number	③ Open close loop type	④ Special motor type	⑤ Brake type	⑥ Holding torque																																																																																
<table><thead><tr><th>Sign</th><th>Product name</th></tr></thead><tbody><tr><td>MP3</td><td>Stepping motor</td></tr></tbody></table>	Sign	Product name	MP3	Stepping motor	<table><thead><tr><th>Sign</th><th>Base number</th></tr></thead><tbody><tr><td>20</td><td>20 base</td></tr><tr><td>28</td><td>28 base</td></tr><tr><td>35</td><td>35 base</td></tr><tr><td>42</td><td>42 base</td></tr><tr><td>57</td><td>57 base</td></tr><tr><td>60</td><td>60 base</td></tr><tr><td>86</td><td>86 base</td></tr><tr><td>110</td><td>110 base</td></tr><tr><td>130</td><td>130 base</td></tr></tbody></table>	Sign	Base number	20	20 base	28	28 base	35	35 base	42	42 base	57	57 base	60	60 base	86	86 base	110	110 base	130	130 base	<table><thead><tr><th>Sign</th><th>Type</th></tr></thead><tbody><tr><td>H</td><td>Standard open loop motor</td></tr><tr><td>T</td><td>Optical encoder closed-loop motor</td></tr></tbody></table>	Sign	Type	H	Standard open loop motor	T	Optical encoder closed-loop motor	<table><thead><tr><th>Sign</th><th>Type</th></tr></thead><tbody><tr><td>I</td><td>Waterproof motor</td></tr><tr><td>S</td><td>Double output shaft motor</td></tr></tbody></table>	Sign	Type	I	Waterproof motor	S	Double output shaft motor	<table><thead><tr><th>Sign</th><th>Power-off brake</th></tr></thead><tbody><tr><td>Vacant</td><td>Brake type</td></tr><tr><td>Z</td><td>Power-off brake</td></tr></tbody></table>	Sign	Power-off brake	Vacant	Brake type	Z	Power-off brake	<table><thead><tr><th>Sign</th><th>Static moment</th></tr></thead><tbody><tr><td>0028</td><td>0.028N.m</td></tr><tr><td>0115</td><td>0.115N.m</td></tr><tr><td>005</td><td>0.5 N.m</td></tr><tr><td>008</td><td>0.8 N.m</td></tr><tr><td>013</td><td>1.3 N.m</td></tr><tr><td>023</td><td>2.3 N.m</td></tr><tr><td>030</td><td>3.0 N.m</td></tr><tr><td>042</td><td>4.2 N.m</td></tr><tr><td>045</td><td>4.5 N.m</td></tr><tr><td>080</td><td>8.0 N.m</td></tr><tr><td>085</td><td>8.5 N.m</td></tr><tr><td>100</td><td>10 N.m</td></tr><tr><td>120</td><td>12 N.m</td></tr><tr><td>160</td><td>16 N.m</td></tr><tr><td>200</td><td>20 N.m</td></tr><tr><td>280</td><td>28 N.m</td></tr><tr><td>350</td><td>35 N.m</td></tr><tr><td>500</td><td>50 N.m</td></tr></tbody></table>	Sign	Static moment	0028	0.028N.m	0115	0.115N.m	005	0.5 N.m	008	0.8 N.m	013	1.3 N.m	023	2.3 N.m	030	3.0 N.m	042	4.2 N.m	045	4.5 N.m	080	8.0 N.m	085	8.5 N.m	100	10 N.m	120	12 N.m	160	16 N.m	200	20 N.m	280	28 N.m	350	35 N.m	500	50 N.m
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*Note: the body length of the closed-loop motor needs to add the encoder length based on the open-loop motor. The encoder cable lengths include: 42 motor 18mm, 57 motor 20mm, 60 motor 22mm, 86 motor 26mm.

| Adaptation table of closed-loop motor and driver

Closed loop motor model		Step angle (°)	Static moment (N.m)	Phase current (A)	Motor shaft	Shaft diameter (mm)	Matched driver
Standard series	Brake series						
MP3-42T005	MP3-42TZ005	1.8	0.5	1.68	Flat	5	DP3F1/C-305
MP3-42T008	MP3-42TZ008	1.8	0.8	1.7	Flat	5	
MP3-57T013	MP3-57TZ013	1.8	1.3	4	Flat	8	DP3F1/C-705
MP3-57T013-D6.35	MP3-57TZ013-D6.35	1.8	1.3	4	Flat	6.35	
MP3-57T023	MP3-57TZ023	1.8	2.3	5	Flat	8	
MP3-57T030	MP3-57TZ030	1.8	3	5	Flat	8	
MP3-57T030-4A	MP3-57TZ030-4A	1.8	3	4	Flat	8	
MP3-60T030	MP3-60TZ030	1.8	3	5	Flat	8	
MP3-86T045	MP3-86TZ045	1.8	4.5	6	Flat Key 5*25	14	DP3C-808 DP3F1-805A DP3F1-808A
MP3-86T080	MP3-86TZ080	1.8	8	6	Flat Key 5*25	14	
MP3-86T085	MP3-86TZ085	1.8	8.5	6	Flat Key 5*25	14	
MP3-86T085-D12.7	MP3-86TZ085-D12.7	1.8	8.5	6A	Flat Key5*25	12.7	
MP3-86T100	MP3-86TZ100	1.8	10	6	Flat Key 5*25	14	
MP3-86T120	MP3-86TZ120	1.8	12	6	Flat Key 5*25	14	

| Adaptation table of three-phase open loop motor and driver

Three phase open loop motor model		Step angle (°)	Static moment (N.m)	Phase current (A)	Motor shaft	Shaft diameter (mm)	Matched driver
Standard series	Brake series						
MP3-110H120	MP3-110HZ120	1.2	12	6	Flat Key 6*30	19	DP3L-11022A3
MP3-110H160	MP3-110HZ160	1.2	16	6.4	Flat Key 6*30	19	
MP3-110H200	MP3-110HZ200	1.2	20	6.9	Flat Key 6*30	19	
MP3-110H250	MP3-110HZ250	1.2	25	6	Flat Key6*25	19	
MP3-130H280	MP3-130HZ280	1.2	28	6.9	Flat Key 8*36	24	
MP3-130H350	MP3-130HZ350	1.2	35	6.9	Flat Key 8*36	24	
MP3-130H500	MP3-130HZ500	1.2	50	6.9	Flat Key 8*36	24	

| Adaptation table of two-phase open loop motor and driver

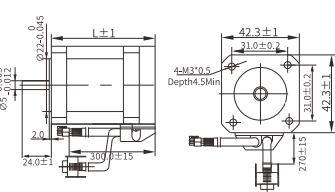
Open loop motor model		Step angle (°)	Static moment (N.m)	Phase current (A)	Motor shaft	Shaft diameter (mm)	Matched driver
Standard series	Brake series						
MP3-20H0028	/	1.8	0.028	0.2	Flat	4	DP3CL-305 DP3L1-224
MP3-20H0048	/	1.8	0.048	0.65	Flat	4	
MP3-28H0085	/	1.8	0.085	0.7	Flat	5	
MP3-28H0115	/	1.8	0.115	1	Flat	5	
MP3-28H017	/	1.8	0.17	1	Flat	5	
MP3-35H017	/	1.8	0.17	1	Flat	5	
MP3-35H026	/	1.8	0.26	1	Flat	5	
MP3-42H002	/	1.8	0.22	1.33	Flat	5	
MP3-42H004	MP3-42HZ004	1.8	0.46	1.7	Flat	5	
MP3-42H005	MP3-42HZ005	1.8	0.5	1.68	Flat	5	
MP3-42H008	MP3-42HZ008	1.8	0.8	1.7	Flat	5	
MP3-57H006	MP3-57HZ006	1.8	0.6	3	Flat	8	
MP3-57H013	MP3-57HZ013	1.8	1.3	4	Flat	8	
MP3-57H013-D6.35	MP3-57HZ013-D6.35	1.8	1.2	4	Flat	6.35	
MP3-57H023	MP3-57HZ023	1.8	2.3	5	Flat	8	
MP3-57H030	MP3-57HZ030	1.8	3	5	Flat	8	
MP3-57H030-4A	MP3-57HZ030-4A	1.8	3	4	Flat	8	
MP3-60H030	MP3-60HZ030	1.8	3	5	Flat	8	
MP3-86H035	MP3-86HZ035	1.8	3.5	4	Flat Key 5*25	14	
MP3-86H035-D12.7	MP3-86HZ035-D12.7	1.8	3.5	4	Flat Key 5*25	12.7	
MP3-86H045	MP3-86HZ045	1.8	4.5	6	Flat Key 5*25	14	
MP3-86H045-D12.7	MP3-86HZ045-D12.7	1.8	4.5	6	Flat Key 5*25	12.7	
MP3-86H080	MP3-86HZ080	1.8	8	5	Flat Key 5*25	14	
MP3-86H080-D12.7	MP3-86HZ080-D12.7	1.8	8	5	Flat Key 5*25	12.7	
MP3-86H085	MP3-86HZ085	1.8	8.5	6	Flat Key 5*25	14	
MP3-86H085-D12.7	MP3-86HZ085-D12.7	1.8	8.5	6	Flat Key 5*25	12.7	
MP3-86H100	MP3-86HZ100	1.8	10	6	Flat Key 5*25	14	
MP3-86H120	MP3-86HZ120	1.8	12	6	Flat Key 5*25	14	

Motor mounting dimension (Unit: mm)

| Closed-loop motor

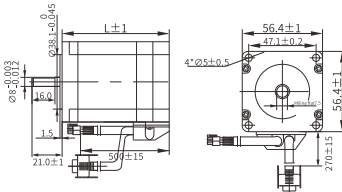
42 series

Model	L(mm)	
	General	With brake
MP3-42T005	66	97
MP3-42T008	78	109



57 series

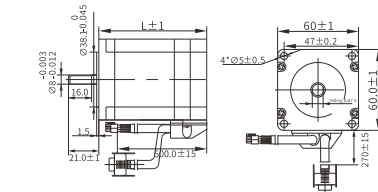
Model	L(mm)	
	General	With brake
MP3-57T013	75	115
MP3-57T023	95	135
MP3-57T030-4A	130	170



Large 57 series

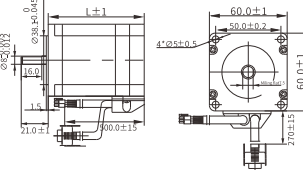
Model	L(mm)	
	General	With brake
MP3-57T030	107	147

*Note: this motor adopts the body width of 60 motor and the front cover of 57 motor. The installation method is the same as that of 57 motor. With a relatively short body length, the holding torque of 3N can be achieved, which improves the stability of the motor.



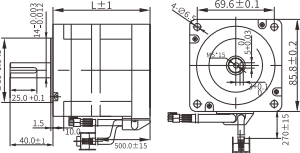
60 series

Model	L(mm)	
	General	With brake
MP3-60T030	107	147



86 series

Model	L(mm)	
	General	With brake
MP3-86T045	106	143
MP3-86T080	124	161
MP3-86T085	144	181
MP3-86T120	176	213

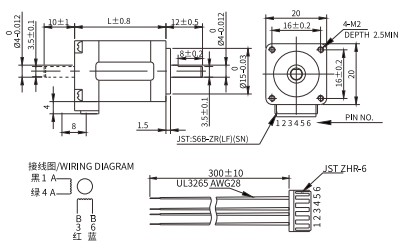


Motor mounting dimension (Unit: mm)

| Two-phase open loop motor

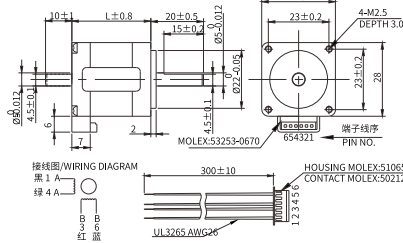
20 series

Model	L(mm)	
	Normal	With brake
MP3-20H0028	27.2	/
MP3-20H0048	37.8	/



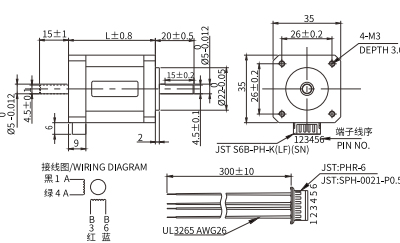
28 series

Model	L(mm)	
	Normal	With brake
MP3-28H0085	30.1	/
MP3-28H0115	39.2	/
MP3-28H017	50.4	/



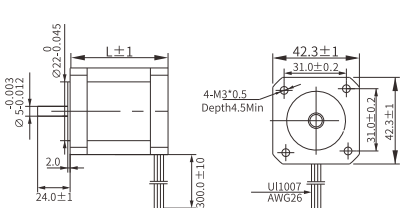
35 series

Model	L(mm)	
	Normal	With brake
MP3-35H017	31.4	/
MP3-35H026	42.3	/
MP3-35H042	51.7	/



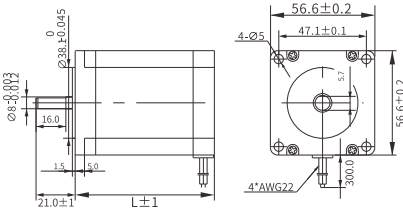
42 series

Model	L(mm)	
	Normal	With brake
MP3-42H002	33	-
MP3-42H004	40	71
MP3-42H005	48	79
MP3-42H008	60	91



57 series

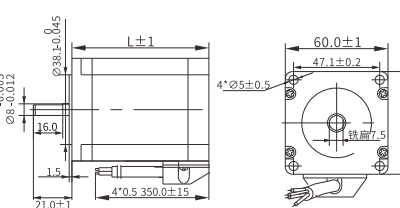
Model	L(mm)	
	Normal	With brake
MP3-57H013	56	96
MP3-57H023	76	115
MP3-57H030-4A	110	150



Large 57 series

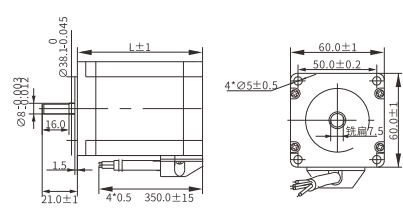
Model	L(mm)	
	Normal	With brake
MP3-57H030	88	127

*Note: This motor has a body width of 60 motors, a front cover of 57 motors, installation method is same to 57 motors. The holding torque of 3N can be achieved by using a relatively short body length, improving the motor stability.



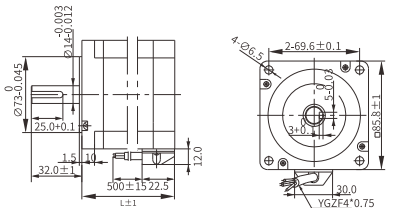
60 series

Model	L(mm)	
	Normal	With brake
MP3-60H030	88	127



86 series

Model	L(mm)	
	Normal	With brake
MP3-86H035	65	108
MP3-86H045	80	123
MP3-86H080	98	141
MP3-86H085	118	161
MP3-86H120	150	193



Motor torque frequency characteristic diagram

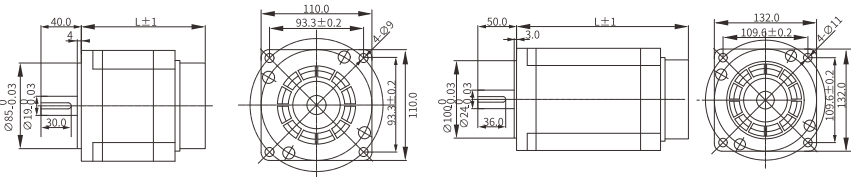
Three-phase open loop motor

110 series

Model	L(mm)	
	Normal	With brake
MP3-110H120	151	219
MP3-110H160	185	253
MP3-110H200	219	287

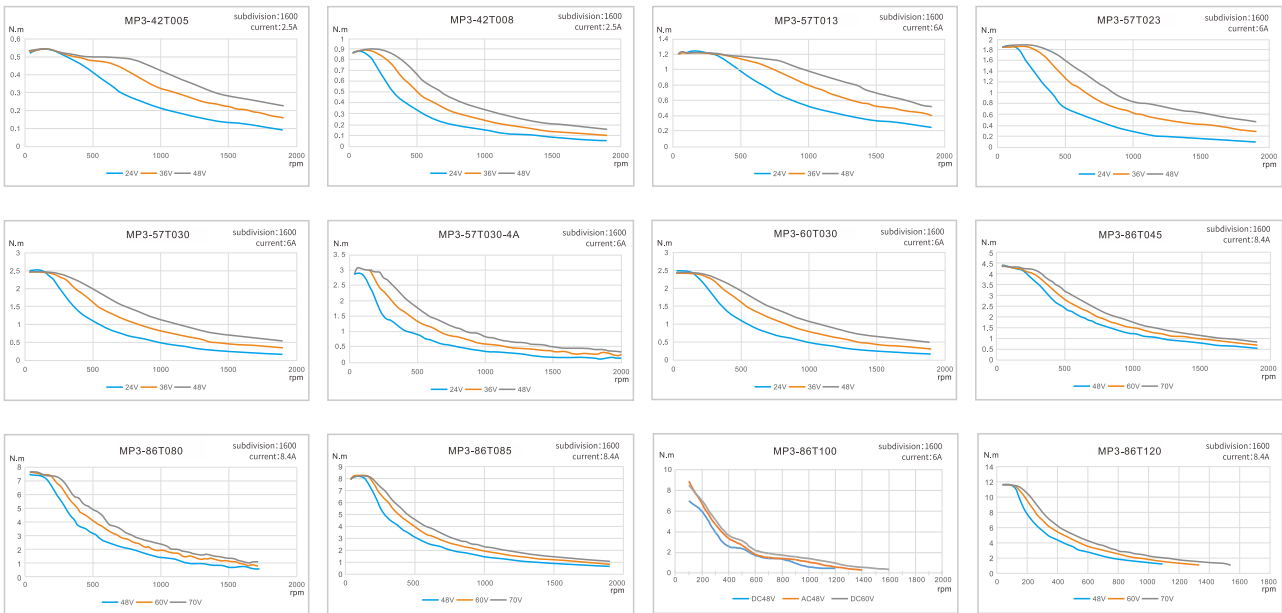
130 series

Model	L(mm)	
	Normal	With brake
MP3-130H280	222	275
MP3-130H350	254	307
MP3-130H500	319	352
MP3-110H250	194	/

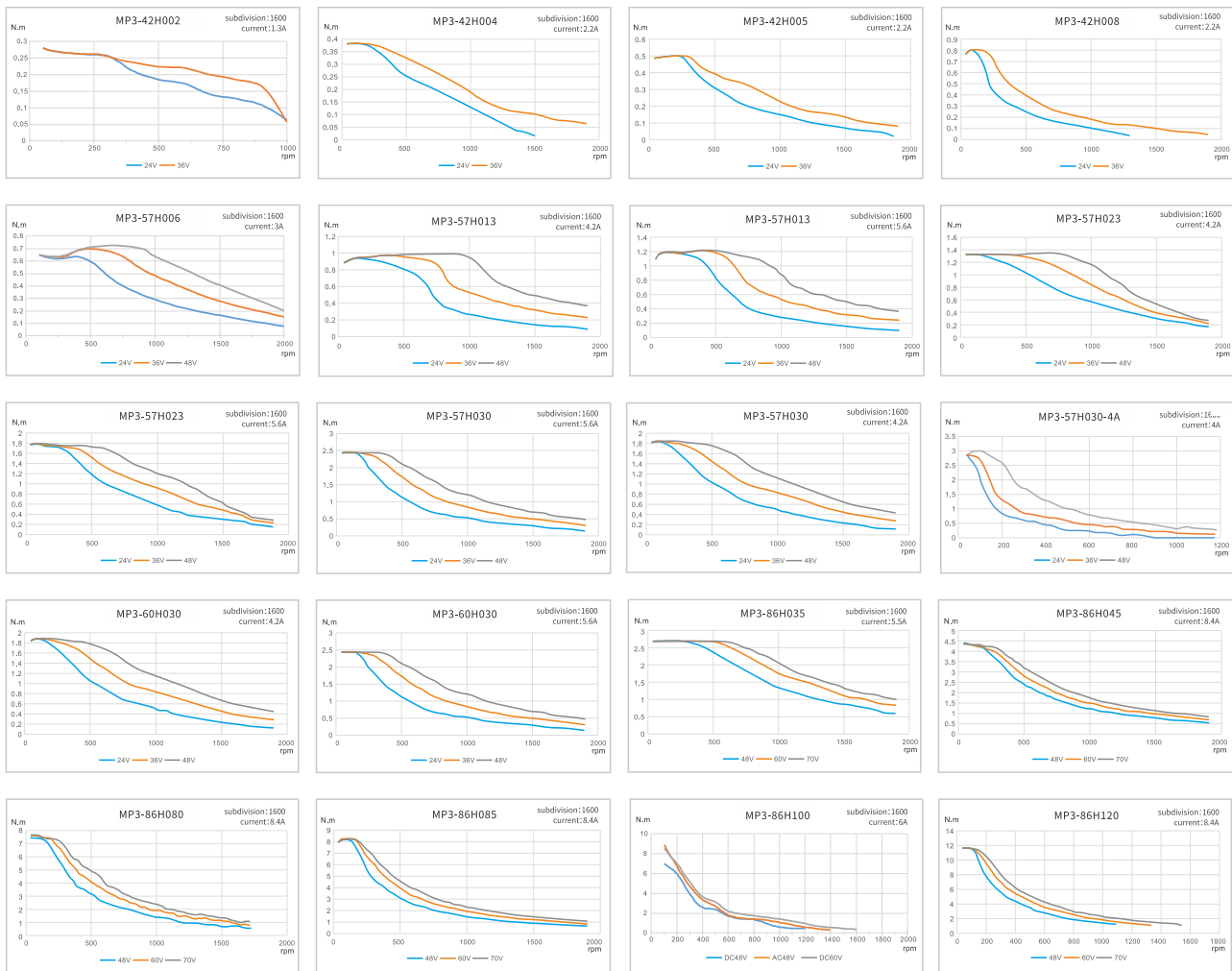


Motor torque frequency characteristic diagram

Closed-loop series (the follow current is peak current)



Two-phase open loop series (the follow current is peak current)



Three-phase open loop series (the follow current is peak current)

