

Products Catalogue

The logo for ican Automation, featuring the word "ican" in a stylized white font with a blue swoosh underneath, followed by the word "Automation" in a white sans-serif font, all set against a blue rectangular background.

ican Automation



Leading technology, smart automation

DONGGUAN ICAN TECHNOLOGY CO.,LTD

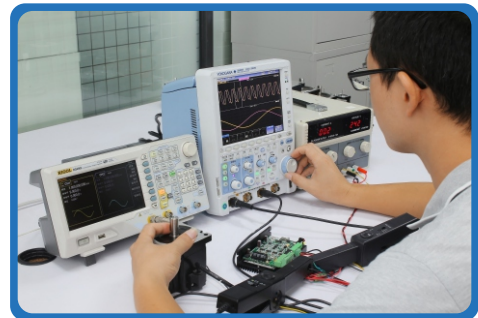
Company Profile



ICAN-TECH

Founded in 2008, Dongguan ICAN Technology Co., Ltd is one of the market leaders of motion control products. ICAN Technology offers a full complement of products including easy servo drives & motors (closed loop steppers), stepper motors & drivers, BLDC & BLDC drivers(basic type and high precision).

As one of the fastest growing companies, ICAN Technology provides solutions and quality products to tens of industries, and thousands of OEM clients in North & South America, Asia, Europe, Australia, and Japan. The products are widely adopted in thousands of applications such as CNC routers, lathes, laser cutters/engravers/markers, 3D printers, electronics equipments, medical equipments, packaging equipments, textile machines, robotics, pick-and-place devices, etc.



Marketing distribution





Products Application

Application Fields

- | | | | |
|------------------|---|---|---------------------------------|
| Robotics | ■ | ■ | Laser cutters/Engraving machine |
| CNC Routers | ■ | ■ | Electronics equipments |
| Lathes | ■ | ■ | Medical equipments |
| AGV | ■ | ■ | Semi-conductor manufacturing |
| 3D printer | ■ | ■ | Packaging equipments |
| Plotters | ■ | ■ | Pick-and-place devices |
| Textile machines | ■ | ■ | Stage lamp for entertainment |
| Inkjet printers | ■ | ■ | Lithium battery |

Typical Solutions



Automatic dispensing equipment solution



AGV control solution



CNC Routers solution



Plasmas cleaning equipment solution



LED ad rotator solution



Intelligent medicine telling system solution



Computer textile equipment solution



Self-service library solution



Medical biochemical analysis equipment solution



Logistics sorting equipment solution

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Stepper products series

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BLDC products series

Products selection

CONTENTS

Motor driver selection table

Motor driver series	Model	Current (A)	Voltage(VDC)	Voltage(VAC)	Matched Motor	N.W.(g)	Overall Dimensions(mm)
2 Phase stepper driver	MR2	0.3-2.5	12-50	-	28, 35, 42	110	94×56×21
	MR4	1.0-4.2	20-50	-	57, 60	270	118×76×33
	MR5	2.0-5.6	20-75	-	57, 60, 86	270	118×76×33
	MR7	2.4-7.2	18-80	18-60	60, 86	390	143×96×38
	MR7A	2.4-7.2	18-110	18-80	60, 86	610	151×98×52
3 Phase stepper driver	MC8H	0.5-8.0	-	85-265	110, 130	880	160×127×45
	3MR8	1.5-7.8	24-75	-	57, 86	270	118×76×33
Closed loop stepper driver	3MC8H	0.5-8.0	-	85=265	110, 130	880	160×127×45
	SS57	7.0	24-75	-	57 closed loop stepper	210	115.5×67×28
	SS86	8.0	20-110	24-80	86 closed loop stepper	-	-
BLDC motor driver	SS110	9.0	-	85-220	110 closed loop stepper	-	-
	Model	Peak Current(A)	Rated Current(A)	Voltage(A)	Matched Motor	N.W.(g)	Overall Dimensions(mm)
	BLD-70	6	3	VDC12-30	≤70W	130	94×56.5×21
	BLD-120	16	8	VDC12-30	≤125W	170	96×60×24.5
	BLD-300B	35	15	VDC12-56	≤300W	340	143×80×33
	BLD-750	45	25	VDC18-52	≤750W	600	151×97.5×52
BLDH-350	4	2	VAC180-265	≤350W	650	151×97.5×52	
BLDH-750	8	4	VAC180-265	≤750W	850	170×97.5×65	

BLDC motor selection table

Model	Output Power(W)	Motor Voltage(VDC)	Rotational Speed(RPM)	Rated Torque(Nm)	Motor Length(mm)	N.W.(kg)	Matched Driver
42BLF-0330NBB	30	24	3000	0.1	49	0.33	BLD-70/BLD-120A
42BLF-0630NBB	62	24	3000	0.2	68	0.49	BLD-70/BLD-120A
57BLY-0730NBB	69	24	3000	0.22	66.5	0.66	BLD-120A/BLD-300B
57BLY-1030NBB	103	24	3000	0.33	87	0.89	BLD-120A/BLD-300B
57BLY-1230NBB	125	24	3000	0.44	106.5	1.14	BLD-120A/BLD-300B
57BLF-0615NBB	65	24	1500	0.4	82	0.95	BLD-120A/BLD-300B
57BLF-0730NBB	65	24	3000	0.22	62	0.65	BLD-70/BLD-120A
57BLF-1230NBB	125	24	3000	0.4	80	0.93	BLD-120A/BLD-300B
57BLF-1830NBB	188	24	3000	0.6	101	1.28	BLD-300B/BLD-750
57BLF-1230HBB	125	310	3000	0.32	80	0.93	BLDH-350
57BLF-1830HBB	188	310	3000	0.64	101	1.28	BLDH-350
60BLF-0815NBB	80	24	1500	0.5	100	1.27	BLD-300B/BLD-750
60BLF-0830NBB	80	24	3000	0.25	78	0.86	BLD-300B/BLD-750
60BLF-1630NBB	160	24	3000	0.5	100	1.22	BLD-300B/BLD-750
60BLF-2430LBB	240	48	3000	0.75	120	1.66	BLD-300B/BLD-750
70BLF-3230LBB	320	48	3000	1.0	120	2.01	BLD-750
80BLF-7530LBB	750	48	3000	2.5	150	3.0	BLD-750
80BLF-2515HBB	250	310	1500	1.6	145	2.6	BLDH-350
80BLF-2530HBB	250	310	3000	0.8	132.5	2.2	BLDH-350
80BLF-3530HBB	350	310	3000	1.1	132.5	2.2	BLDH-350
80BLF-5030HBB	500	310	3000	1.6	145	2.6	BLDH-750
80BLF-7530HBB	750	310	3000	2.5	150	3.0	BLDH-750
86BLF-2230LBB	220	48	3000	0.7	82	1.77	BLD-300B
86BLF-4430LBB	440	48	3000	1.4	112	2.83	BLD-750
86BLF-2230HBB	220	310	3000	0.7	82	1.77	BLDH-350
86BLF-3315HBB	330	310	1500	2.1	152	3.9	BLDH-350
86BLF-3330HBB	330	310	3000	1.05	96	2.3	BLDH-350
86BLF-4030HBB	400	310	3000	1.4	112	2.8	BLDH-750
86BLF-5030HBB	500	310	3000	1.6	125	3.4	BLDH-750
110BLF-6020HBB	630	310	2000	3.0	138	7.5	BLDH-750
110BLF-12520HBB	1250	310	3000	6.0	198	9.2	BLDH-750

BLDC geared motor selection table

Model	Output Power(W)	Motor Voltage(VDC)	Rotational Speed(RPM)	Rated Torque(Nm)	Gear Ratio	N.W.(kg)	Matched Driver
57BLY-0730NBB-J	69	24	3000	0.2	1:05/1:7.5	1.2	BLD-120A/BLD-300B
57BLY-1030NBB-J	103	24	3000	0.33	1:10/1:15	1.48	BLD-120A/BLD-300B
86BLF-2230NBB-J	220	24	3000	0.7	1:20/1:30	3.16	BLD-300B

Note: OEM is available according to customers' detail requirements.

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

High voltage BLDC driver

BLDC motor

Geared BLDC motor

Products selection

Stepper motor selection table

Series	Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Motor Length L(mm)	N.W.(kg)	Matched Driver
2 phase stepper motor	28H2P3205A4	1.8	0.06	0.45	11	6.9	3	12	32	0.1	MR2
	28H2P4509A6	1.8	0.075	0.95	3.4	1.2	5	18	45	0.17	MR2
	35H2P2803A4	1.8	0.11	0.3	40	1.6	5	19	28	0.13	MR2
	35H2P2810A4	1.8	0.125	1.0	3.5	3.5	5	18	28	0.13	MR2
	35H2P2810A6	1.8	0.075	1.0	2.7	1.0	5	18	28	0.13	MR2
	39H2P2005A4	1.8	0.1	0.48	25	23	5	17.5	20	0.1	MR2
	39H2P3105A6	1.8	0.1	0.5	9	4.0	5	22	31	0.16	MR2
	42H2P3412A4	1.8	0.19	1.2	3.2	4.4	5	18	34	0.22	MR2
	42H2P4010A4	1.8	0.35	1.0	5.7	9	5	18	40	0.29	MR2
	42H2P4412A4	1.8	0.35	1.2	2.7	6	5	18	44	0.33	MR2
	42H2P4812A4	1.8	0.45	1.2	3.2	6	5	18	48	0.36	MR2
	42H2P4812A4-AB	1.8	0.38	1.2	3.8	3.4	5	15/15	48	0.36	MR2
	42H2P4812A6	1.8	0.38	1.2	3.8	3.4	5	22	48	0.36	MR2
	42H2P6017A4	1.8	0.75	1.7	2.5	6.7	5	18	60	0.47	MR2
	57H2P4115A6	1.8	0.35	1.5	1.8	3.5	6.35	17	41	0.43	MR2/MR4
	57H2P5130A4	1.8	0.9	3.0	0.8	2.9	6.35	19	51	0.57	MR4
	57H2P5442A4	1.8	1.2	4.2	0.4	1.2	6.35	19	54	0.67	MR4/MR5
	57H2P5442A4-A	1.8	1.2	4.2	0.4	1.4	8	20.4	54	0.67	MR4/MR5
	57H2P5442A4-B	1.8	1.2	4.2	0.38	1.3	8	31	54	0.67	MR4/MR5
	57H2P7842A4	1.8	2.1	4.2	0.55	1.8	6.35	20.4	78	1.06	MR4/MR5
	57H2P7842A4-A	1.8	2.1	4.2	0.55	1.8	8	19.4	78	1.06	MR4/MR5
	57H2P7842A4-B	1.8	2.1	4.2	0.55	1.8	8	31	78	1.06	MR4/MR5
	57H2P8440A4	1.8	2.3	4.0	0.9	2.7	8	31	84	1.18	MR4/MR5
	57H2P9850A4	1.8	2.6	4.5	0.7	2.4	8	32	98	1.45	MR4/MR5
	60H2P6630A4	1.8	2.0	3.0	1.2	3.0	8	22	66	0.95	MR4/MR5
	60H2P8642A4	1.8	2.7	4.2	0.65	2.5	8	26	86	1.34	MR4/MR5
	85H2P6860A4	1.8	3.4	6.0	0.35	1.7	9.5	30	68	1.87	MR5/MR7
	85H2P8060A4	1.8	4.5	6.0	0.35	3.2	12.7	30	80	2.3	MR5/MR7
	85H2P9760A4	1.8	7.0	6.0	0.5	4.0	12.7	30	97	3.0	MR7A/MR7
	85H2P11860A4	1.8	8.5	6.0	0.62	5.0	12.7/14	30	118	3.76	MR7A/MR7
	85H2P15160A4	1.8	10	6.5	0.55	6.0	14	35	156	5.3	MR7A/MR7
	110H2P1255A4	1.8	11.2	5.5	0.9	12	19	54	99	5.0	MC8H
	110H2P2168A4	1.8	21	6.8	0.8	11	19	54	150	9.0	MC8H
	110H2P3080A4	1.8	30	8.0	0.67	16	19	54	201	12	MC8H
	130H2P5050A4	1.8	50	5.0	1.58	28	19	45	282	23.4	MC8H
	3 phase stepper motor	57H3P4124A3	1.2	0.4	2.4	3.4	4	6.35	19	41	0.43
57H3P5656A3		1.2	0.9	5.6	0.5	1.1	6.35	19	56	0.69	3MR8
57H3P7652A3		1.2	1.2	5.2	0.5	1.4	8	19	76	1.02	3MR8
85H3P6858A3		1.2	2.0	5.8	0.52	1.5	12	29	68	1.86	3MR8
85H3P9758A3		1.2	3.2	5.8	0.53	2.5	12	29	97	2.9	3MR8
85H3P12558A3		1.2	6.0	5.8	0.87	6.1	14	29	125	4.1	3MR8
110H3P0843A3		1.2	8.0	4.3	1.31	17.1	19	36	136	5.7	3MC8H
110H3P1260A3		1.2	12	6.0	0.66	9.2	19	36	150	6.5	3MC8H
110H3P1665A3		1.2	16	6.5	0.63	8.9	19	36	181	8.7	3MC8H
110H3P2070A3		1.2	20	7.0	0.67	10.4	19	36	218	11.2	3MC8H
130H3P2068A3		1.2	20	6.8	0.62	7.8	24	48	168	10	3MC8H
130H3P2868A3		1.2	28	6.8	0.79	10.8	24	48	203	11	3MC8H
130H3P3568A3		1.2	35	6.8	0.97	14.2	24	48	238	12.3	3MC8H
130H3P5068A3		1.2	50	6.8	1.12	18.9	24	48	285	21.5	3MC8H

Geared stepper motor selection table

Series	Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Motor Length L(mm)	Motor Length L(mm)	N.W.(kg)	Gear Ratio	Matched Driver
stepper motor with gear box	42H2P0712A4-G30	1.8	7	1.2	3.2	6	5	21	74	0.3	1:30	MR2
	57H2P0930A8-G10	1.8	9	3.0	1.2	2.2	8	25	108	1.3	1:10	MR4/MR5
	57H2P1830A8-G20	1.8	18	3.0	1.2	2.2	8	25	113	1.3	1:20	MR4/MR5
	85H2P6045A4-G12.5	1.8	60	4.5	0.65	4.7	15	32	171	5.8	1:12.5	MR7/MR7A
	85H2P8045A4-G20	1.8	80	4.5	0.65	4.7	15	32	171	5.8	1:20	MR7/MR7A
	86H2P6842A4-G	1.8	3.2	5.0	0.36	3.0	12	27	69	3.12	1:5/1:10	MR7/MR7A
	85H2P11860A4-G	1.8	6	6.0	0.31	2.0	12	27	118	5.02	1:20	MR7/MR7A
stepper motor with planetary reducer	42H2P3412A4-PG05	1.8	0.9	1.2	3.2	4.4	8	19.5	76	0.45	1:05	MR2
	42H2P3412A4-PG10	1.8	1.8	1.2	3.2	4.4	8	19.5	76	0.45	1:10	MR2
	42H2P3412A4-PG20	1.8	3.5	1.2	3.2	4.4	8	19.5	86	0.52	1:20	MR2
	42H2P4812A4-PG05	1.8	2.0	1.2	3.2	6	8	19.5	90	0.59	1:05	MR2
	42H2P4812A4-PG10	1.8	4.0	1.2	3.2	6	8	19.5	90	0.59	1:10	MR2
	42H2P4812A4-PG20	1.8	8.0	1.2	3.2	6	8	19.5	100	0.65	1:20	MR2
	57H2P5442A4-PG05	1.8	5	4.2	0.38	1.3	14	32	107	1.4	1:05	MR4/MR5
	57H2P5442A4-PG10	1.8	10	4.2	0.38	1.3	14	32	107	1.4	1:10	MR4/MR5
	57H2P5442A4-PG20	1.8	20	4.2	0.38	1.3	14	32	124	1.65	1:20	MR4/MR5
	57H2P7842A4-PG05	1.8	9	4.2	0.55	1.9	14	32	131	1.76	1:05	MR4/MR5
57H2P7842A4-PG10	1.8	18	4.2	0.55	1.9	14	32	131	1.76	1:10	MR4/MR5	
57H2P7842A4-PG20	1.8	36	4.2	0.55	1.9	14	32	148	2.04	1:20	MR4/MR5	

Note: OEM is available according to customers' detail requirements.

Reliable stepper motor system

- Advanced current control
- Microstep Emulation
- Anti-Resonance
- Self Test



Stepper products series

2 phase stepper driver

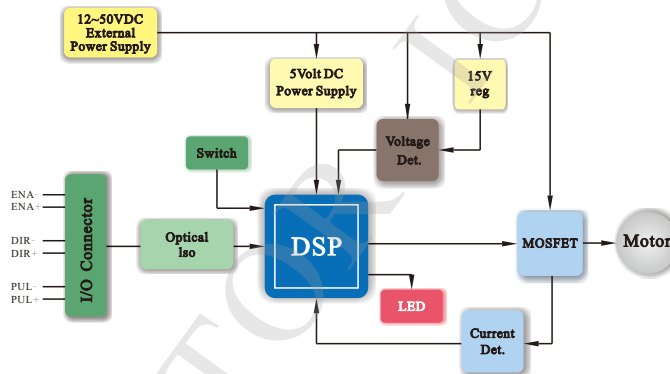
3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

Stepper driver specialty



BLDC series

Low voltage BLDC driver

High voltage BLDC driver

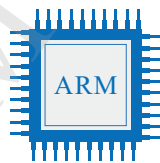
BLDC motor

Geared BLDC motor

Products selection

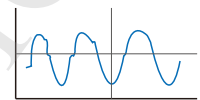
Advanced current control

MR series digital stepper motor driver is high cost-effective motor driver with resolution based on ARM chip. It has feature advanced micro stepping performance, as well as high speed with high torque output, low noise low vibration and low temperature rise. Besides, it has abundant chip resource, which is good for customers' development and design.



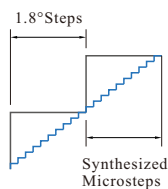
Anti-Resonance/Electronic Damping

Step motor systems have a natural tendency to resonate at certain speeds. MR series Stepper Drive automatically calculates the system's natural frequency and applies damping to the control algorithm. This greatly improves midrange stability, allows for higher speeds, greater torque utilization.



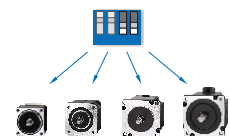
Microstep Emulation

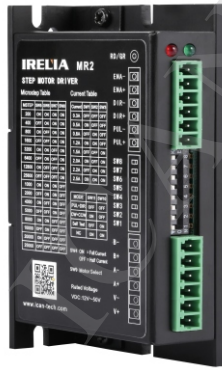
With Microstep Emulation, low resolution systems can still provide smooth motion. The drive can take low-resolution step pulses and create fine resolution micro-step motion.



Multiple motor parameter selection

To optimize the system performance to gain fastest feedback, customers are allowed to select parameters (4 or 16 choices) to match the motor size, motor inductance.





MR2 Digital stepper motor driver

Electrical parameters

Parameters	Min Value	Typical Value	Max Value	Unit
Input Voltage	12	24	50	VDC
Output Current	0.3	-	2.5	A
Input Signal Voltage	3.3	5	24	VDC
Input Pulse Frequency	-	-	200K	Hz
Input Pulse Width	250	-	5E+ 8	ns

Current setting

Peak current	SW1	SW2	SW3
0.3A	OFF	OFF	OFF
0.5A	ON	OFF	OFF
0.8A	OFF	ON	OFF
1.2A	ON	ON	OFF
1.5A	OFF	OFF	ON
2.0A	ON	OFF	ON
2.2A	OFF	ON	ON
2.5A	ON	ON	ON

SW4 =OFF half current lock, SW4=ON full current lock.

Function settings

Single/double pulse modes selection

CW/CCW mode: SW9=ON
PUL/DIR mode: SW9=OFF (factory setting)

Driver self test

When self test function is set up, driver itself detects whether the internal components work well and outer signal connection.

Self test open: SW10=ON, Self test closed: SW10=OFF

Motor parameter selection and matching

To optimize the system to gain the best performance customers are advised to select suitable parameters (4 choices based on SW11 and SW12) to match the motor size, motor inductance.

For motor which is high torque and high inductance, customers are advised to set SW11=OFF, SW12=OFF (factory setting)

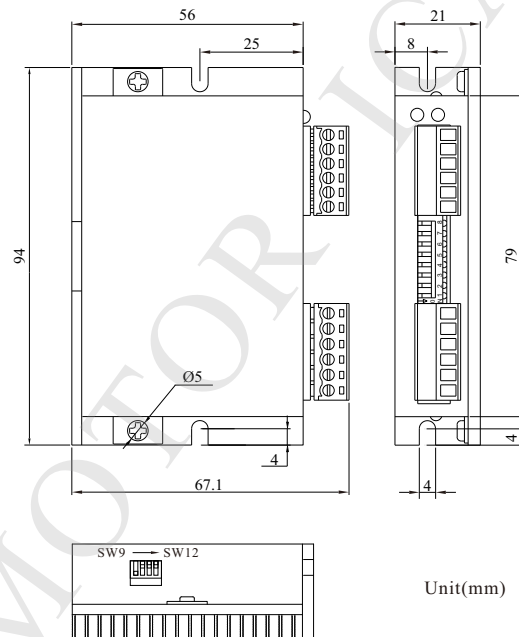
For motor which is low torque and low inductance, customers are advised to set SW11=ON, SW12=ON



Subdivision settings

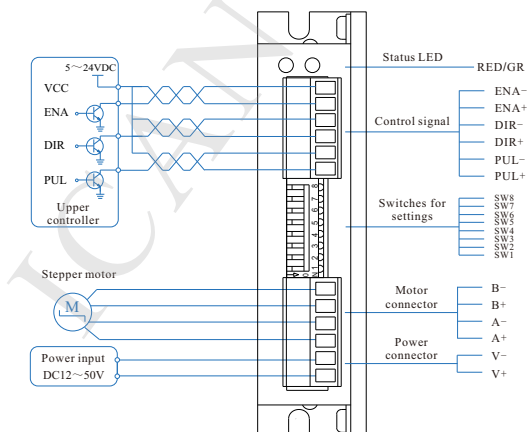
Subdivision (Step/r)	SW5	SW6	SW7	SW8
200	ON	ON	ON	ON
400	OFF	ON	ON	ON
800	ON	OFF	ON	ON
1600	OFF	OFF	ON	ON
3200	ON	ON	OFF	ON
6400	OFF	ON	OFF	ON
12800	ON	OFF	OFF	ON
25600	OFF	OFF	OFF	ON
1000	ON	ON	ON	OFF
2000	OFF	ON	ON	OFF
4000	ON	OFF	ON	OFF
5000	OFF	OFF	ON	OFF
8000	ON	ON	OFF	OFF
10000	OFF	ON	OFF	OFF
20000	ON	OFF	OFF	OFF
25000	OFF	OFF	OFF	OFF

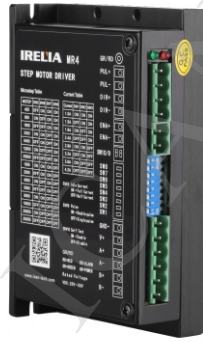
Machine dimension



Unit(mm)

Driver interface and wiring diagram





MR4 Digital stepper motor driver

Stepper products series

Electrical parameters

Parameters	Min Value	Typical Value	Max Value	Unit
Input Voltage	20	48	50	VDC
Output Current	1.0	-	4.2	A
Input Signal Voltage	3.3	5	24	VDC
Input Pulse Frequency	-	-	200K	Hz
Input Pulse Width	250	-	5E+ 8	ns

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3phase stepper motor

Stepper motor with reducer

Current setting

Peak current	SW1	SW2	SW3
1.0A	ON	ON	ON
1.5A	OFF	ON	ON
1.9A	ON	OFF	ON
2.4A	OFF	OFF	ON
2.8A	ON	ON	OFF
3.3A	OFF	ON	OFF
3.8A	ON	OFF	OFF
4.2A	OFF	OFF	OFF

SW4 =OFF half current lock, SW4=ON full current lock.

Subdivision settings

Subdivision (Step/r)	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

BLDC series

Low voltage BLDC driver

High voltage BLDC driver

Function settings

Single/double pulse modes selection

CW/CCW mode: SW9=ON
PUL/DIR mode: SW9=OFF (factory setting)



Driver self test

When self test function is set up, driver itself detects whether the internal components work well and outer signal connection.

Self test open: SW10=ON, Self test closed: SW10=OFF



Motor parameter selection and matching

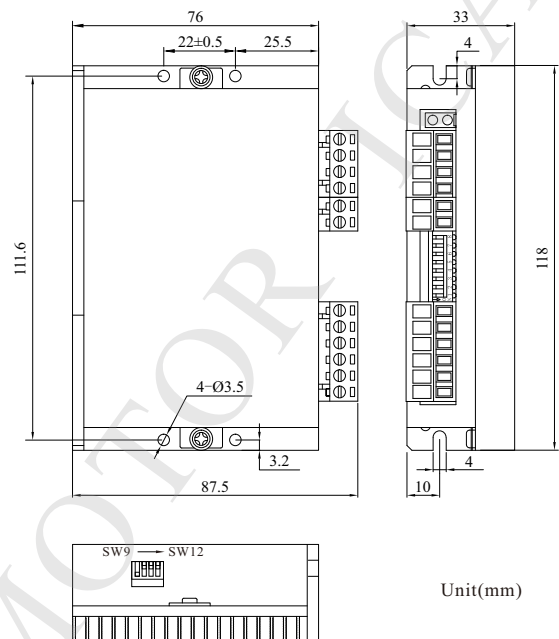
To optimize the system to gain the best performance customers are advised to select suitable parameters (4 choices based on SW11 and SW12) to match the motor size, motor inductance.

For motor which is high torque and high inductance, customers are advised to set SW11=OFF, SW12=OFF (factory setting)

For motor which is low torque and low inductance, customers are advised to set SW11=ON, SW12=ON



Machine dimension

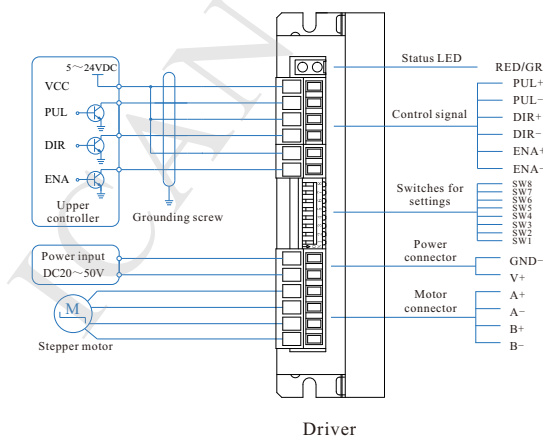


BLDC motor

Geared BLDC motor

Products selection

Driver interface and wiring diagram





MR5 Digital stepper motor driver

Electrical parameters

Parameters	Min Value	Typical Value	Max Value	Unit
Input Voltage	20	48	75	VDC
Output Current	2.0	-	5.6	A
Input Signal Voltage	3.3	5	24	VDC
Input Pulse Frequency	-	-	200K	Hz
Input Pulse Width	250	-	5E+ 8	ns

Current setting

Peak current	SW1	SW2	SW3
2.0A	OFF	OFF	OFF
2.7A	ON	OFF	OFF
3.2A	OFF	ON	OFF
3.8A	ON	ON	OFF
4.1A	OFF	OFF	ON
4.5A	ON	OFF	ON
4.9A	OFF	ON	ON
5.6A	ON	ON	ON

SW4 =OFF half current lock, SW4=ON full current lock.

Function settings

Single/double pulse modes selection

CW/CCW mode: SW9=ON
PUL/DIR mode: SW9=OFF (factory setting)

Driver self test

When self test function is set up, driver itself detects whether the internal components work well and outer signal connection.

Self test open: SW10=ON, Self test closed: SW10=OFF

Motor parameter selection and matching

To optimize the system to gain the best performance customers are advised to select suitable parameters (4 choices based on SW11 and SW12) to match the motor size, motor inductance.

For motor which is high torque and high inductance, customers are advised to set SW11=OFF, SW12=OFF (factory setting)

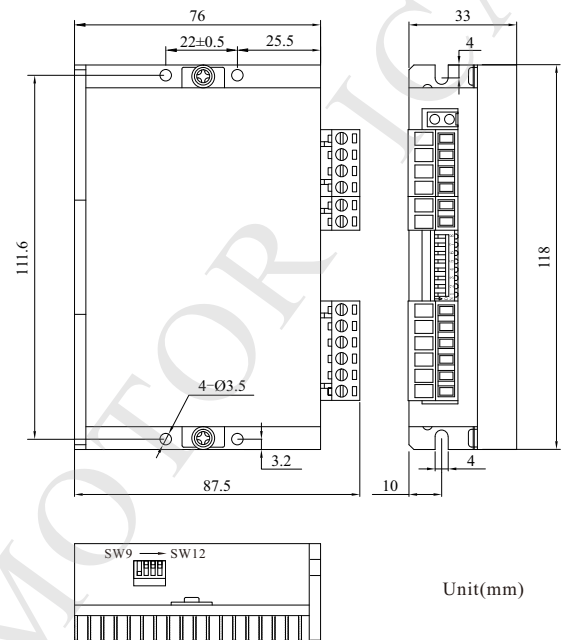
For motor which is low torque and low inductance, customers are advised to set SW11=ON, SW12=ON



Subdivision settings

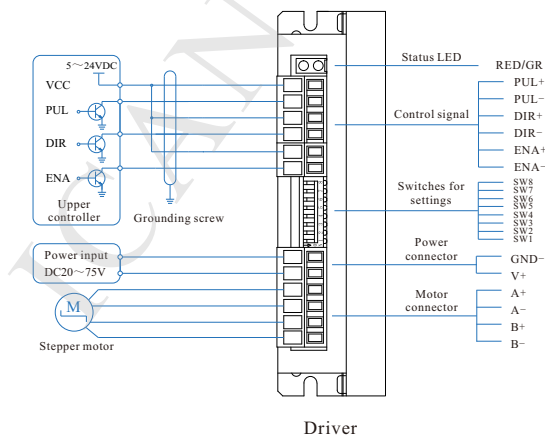
Subdivision (Step/r)	SW5	SW6	SW7	SW8
200	ON	ON	ON	ON
400	OFF	ON	ON	ON
800	ON	OFF	ON	ON
1600	OFF	OFF	ON	ON
3200	ON	ON	OFF	ON
6400	OFF	ON	OFF	ON
12800	ON	OFF	OFF	ON
25600	OFF	OFF	OFF	ON
1000	ON	ON	ON	OFF
2000	OFF	ON	ON	OFF
4000	ON	OFF	ON	OFF
5000	OFF	OFF	ON	OFF
8000	ON	ON	OFF	OFF
10000	OFF	ON	OFF	OFF
20000	ON	OFF	OFF	OFF
25000	OFF	OFF	OFF	OFF

Machine dimension



Unit(mm)

Driver interface and wiring diagram



Driver



MR7

Digital stepper motor driver

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

High voltage BLDC driver

BLDC motor

Geared BLDC motor

Products selection

Electrical parameters

Parameters	Min Value	Typical Value	Max Value	Unit
Input Voltage	18	50	60	VAC
Output Current	2.4	-	7.2	A
Input Signal Voltage	3.3	5	24	VDC
Input Pulse Frequency	-	-	200K	Hz
Input Pulse Width	250	-	5E+ 8	ns

Subdivision settings

Subdivision (Step/r)	SW5	SW6	SW7	SW8
200	ON	ON	ON	ON
400	OFF	ON	ON	ON
800	ON	OFF	ON	ON
1600	OFF	OFF	ON	ON
3200	ON	ON	OFF	ON
6400	OFF	ON	OFF	ON
12800	ON	OFF	OFF	ON
25600	OFF	OFF	OFF	ON
1000	ON	ON	ON	OFF
2000	OFF	ON	ON	OFF
4000	ON	OFF	ON	OFF
5000	OFF	OFF	ON	OFF
8000	ON	ON	OFF	OFF
10000	OFF	ON	OFF	OFF
20000	ON	OFF	OFF	OFF
25000	OFF	OFF	OFF	OFF

Current setting

Peak current	SW1	SW2	SW3
2.4A	OFF	OFF	OFF
3.1A	ON	OFF	OFF
3.8A	OFF	ON	OFF
4.5A	ON	ON	OFF
5.1A	OFF	OFF	ON
5.8A	ON	OFF	ON
6.4A	OFF	ON	ON
7.2A	ON	ON	ON

SW4 =OFF half current lock, SW4=ON full current lock.

Function settings

Single/double pulse modes selection

CW/CCW mode: SW9=ON
PUL/DIR mode: SW9=OFF (factory setting)



Driver self test

When self test function is set up, driver itself detects whether the internal components work well and outer signal connection.

Self test open: SW10=ON, Self test closed: SW10=OFF



Motor parameter selection and matching

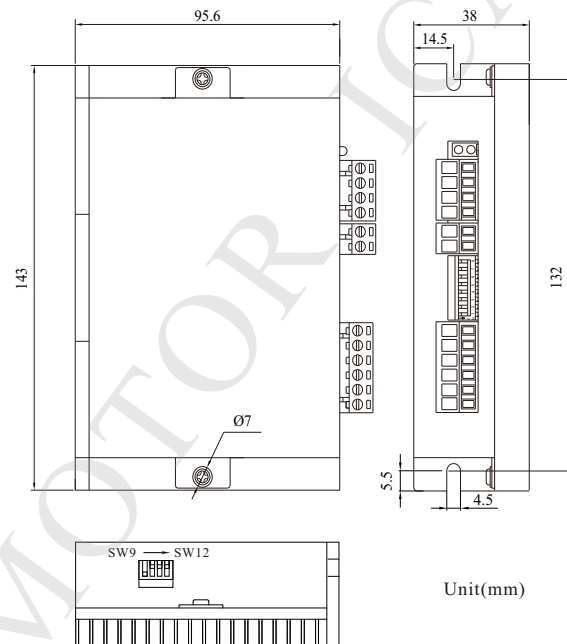
To optimize the system to gain the best performance customers are advised to select suitable parameters (4 choices based on SW11 and SW12) to match the motor size, motor inductance.

For motor which is high torque and high inductance, customers are advised to set SW11=OFF, SW12=OFF (factory setting)

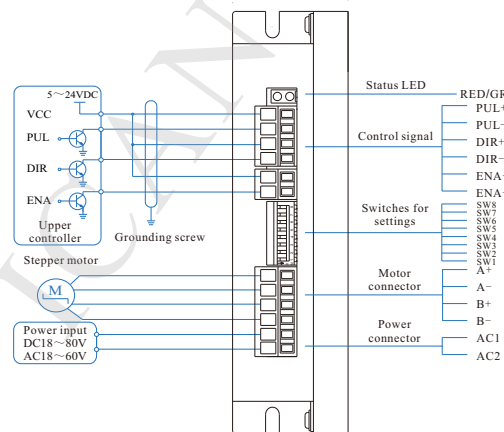
For motor which is low torque and low inductance, customers are advised to set SW11=ON, SW12=ON



Machine dimension



Driver interface and wiring diagram



Driver



MR7A

Digital stepper motor driver

Electrical parameters

Parameters	Min Value	Typical Value	Max Value	Unit
Input Voltage	18	70	80	VAC
Output Current	2.4	-	7.2	A
Input Signal Voltage	3.3	5	24	VDC
Input Pulse Frequency	-	-	200K	Hz
Input Pulse Width	250	-	5E+ 8	ns

Current setting

Peak current	SW1	SW2	SW3
2.4A	OFF	OFF	OFF
3.1A	ON	OFF	OFF
3.8A	OFF	ON	OFF
4.5A	ON	ON	OFF
5.1A	OFF	OFF	ON
5.8A	ON	OFF	ON
6.4A	OFF	ON	ON
7.2A	ON	ON	ON

SW4 =OFF half current lock, SW4=ON full current lock.

Function settings

Single/double pulse modes selection

CW/CCW mode: SW9=ON
 PUL/DIR mode: SW9=OFF (factory setting)

Driver self test

When self test function is set up, driver itself detects whether the internal components work well and outer signal connection.

Self test open: SW10=ON, Self test closed: SW10=OFF

Motor parameter selection and matching

To optimize the system to gain the best performance customers are advised to select suitable parameters (4 choices based on SW11 and SW12) to match the motor size, motor inductance.

For motor which is high torque and high inductance, customers are advised to set SW11=OFF, SW12=OFF (factory setting)

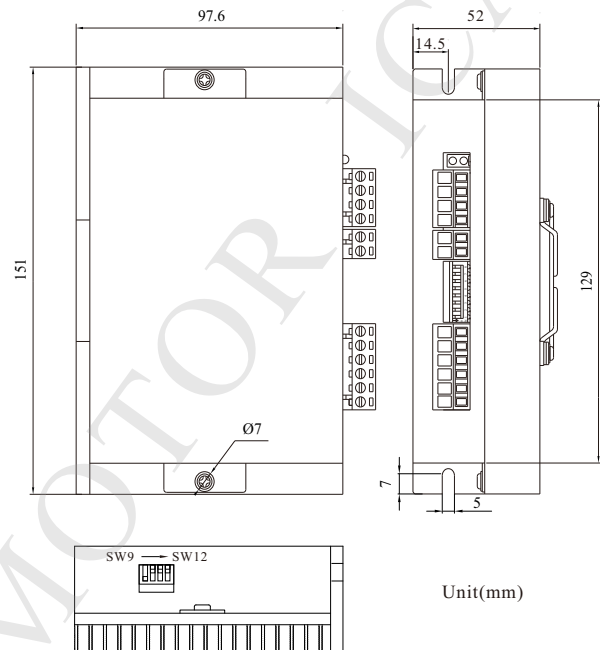
For motor which is low torque and low inductance, customers are advised to set SW11=ON, SW12=ON



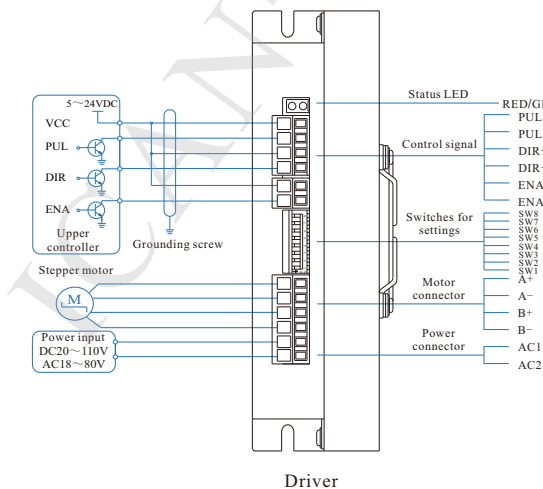
Subdivision settings

Subdivision (Step/r)	SW5	SW6	SW7	SW8
200	ON	ON	ON	ON
400	OFF	ON	ON	ON
800	ON	OFF	ON	ON
1600	OFF	OFF	ON	ON
3200	ON	ON	OFF	ON
6400	OFF	ON	OFF	ON
12800	ON	OFF	OFF	ON
25600	OFF	OFF	OFF	ON
1000	ON	ON	ON	OFF
2000	OFF	ON	ON	OFF
4000	ON	OFF	ON	OFF
5000	OFF	OFF	ON	OFF
8000	ON	ON	OFF	OFF
10000	OFF	ON	OFF	OFF
20000	ON	OFF	OFF	OFF
25000	OFF	OFF	OFF	OFF

Machine dimension



Driver interface and wiring diagram





MC8H

Digital stepper motor driver

Stepper products series

Electrical parameters

Parameters	Min Value	Typical Value	Max Value	Unit
Input Voltage	85	220	265	VAC
Output Current	0.5	-	8.0	A
Input Signal Voltage	3.3	5	24	VDC
Input Pulse Frequency	1	-	1M	Hz
Input Pulse Width	250	-	5E+ 8	ns

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3phase stepper motor

Stepper motor with reducer

Current setting

Switches	0	1	2	3	4	5
Current	0.5A	1.0A	1.5A	2.0A	2.5A	3.0A
Switches	6	7	8	9	A	B
Current	3.5A	4.0A	4.5A	5.0A	5.5A	6.0A
Switches	C	D	E	F		
Current	6.5A	7.0A	7.5A	8.0A		

SW6 =OFF half current lock, SW6=ON full current lock.

Function settings

Driver self test

When self test function is set up, driver itself detects whether the internal components work well and outer signal connection.
Self test open: SW4=ON, Self test closed: SW4=OFF



Single/double pulse modes selection

CW/CCW mode: SW5=ON
PUL/DIR mode: SW5=OFF (factory setting)



Subdivision settings

Switches	0	1	2	3	4	5
Subdivision	200	400	800	1600	3200	6400
Switches	6	7	8	9	A	B
Subdivision	12800	25600	1000	2000	4000	5000
Switches	C	D	E	F		
Subdivision	8000	10000	20000	25000		

Motor selection settings

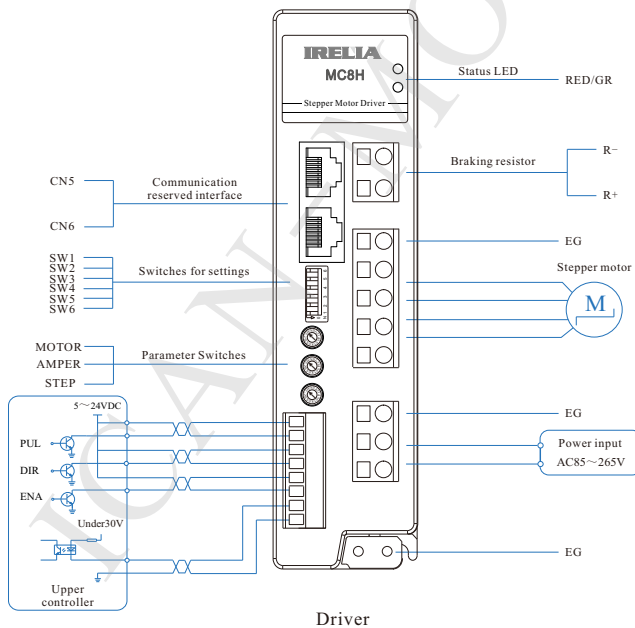
Switches	0	1	2	3	4	5
Matched motor	57	57	60	60	86	86
Switches	6	7	8	9	A	B
Matched motor	86	86	110	110	110	110
Switches	C	D	E	F		
Matched motor	130	130	130	130		

BLDC series

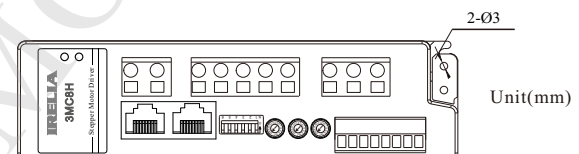
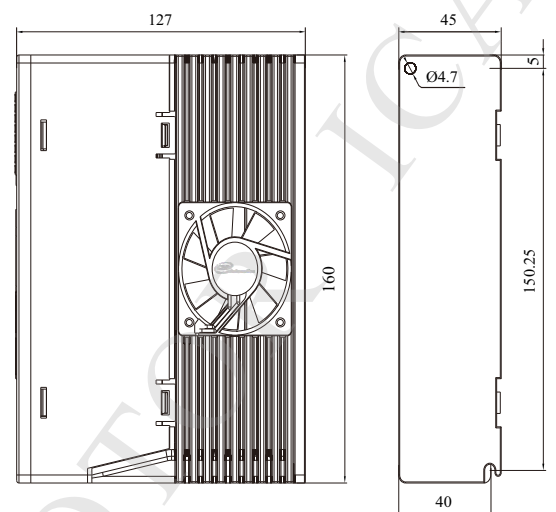
Low voltage BLDC driver

High voltage BLDC driver

Driver interface and wiring diagram



Machine dimension



BLDC motor

Geared BLDC motor

Products selection



3MR8 Digital stepper motor driver

Electrical parameters

Parameters	Min Value	Typical Value	Max Value	Unit
Input Voltage	24	48	75	VDC
Output Current	1.5	-	7.8	A
Input Signal Voltage	3.3	5	24	VDC
Input Pulse Frequency	-	-	200K	Hz
Input Pulse Width	250	-	5E+ 8	ns

Current setting

Peak current	SW1	SW2	SW3
1.5A	OFF	OFF	OFF
2.0A	ON	OFF	OFF
3.0A	OFF	ON	OFF
4.0A	ON	ON	OFF
5.2A	OFF	OFF	ON
5.8A	ON	OFF	ON
7.0A	OFF	ON	ON
7.8A	ON	ON	ON

SW4=OFF half current lock, SW4=ON full current lock.

Function settings

Single/double pulse modes selection

CW/CCW mode: SW12=ON
PUL/DIR mode: SW12=OFF (factory setting)



Driver self test

When self test function is set up, driver itself detects whether the internal components work well and outer signal connection.

Self test open: SW13=ON, Self test closed: SW13=OFF



Motor parameter selection and matching

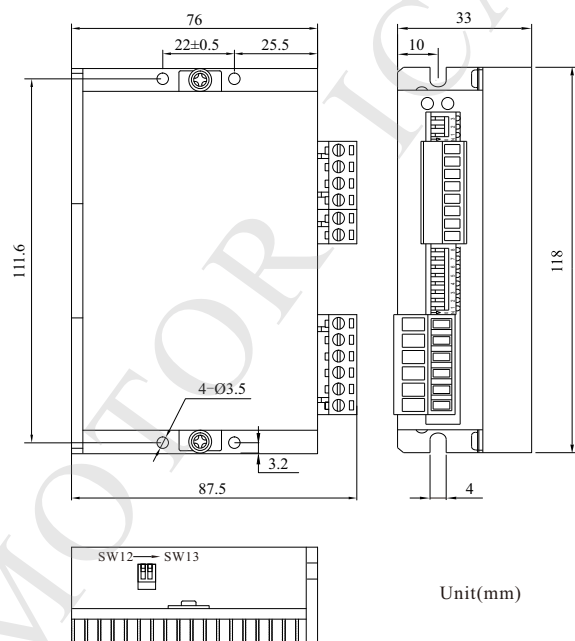
To optimize the system performance to gain fastest feedback, customers are allowed to select parameters (7 choices based on SW9 SW10 and SW11) to match the motor size, motor inductance. Go to instruction book for the corresponding parameters tab.



Subdivision settings

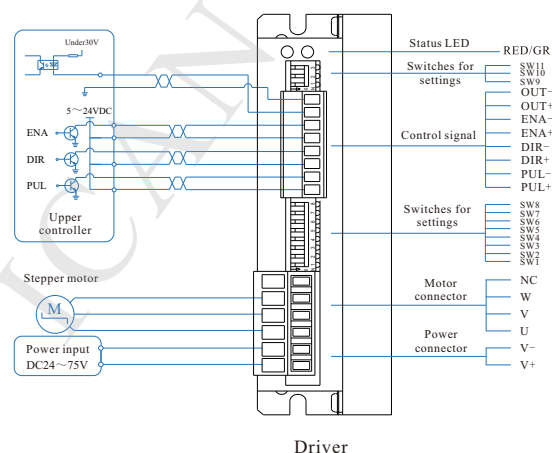
Subdivision (Step/r)	SW5	SW6	SW7	SW8
200	ON	ON	ON	ON
400	OFF	ON	ON	ON
800	ON	OFF	ON	ON
1600	OFF	OFF	ON	ON
3200	ON	ON	OFF	ON
6400	OFF	ON	OFF	ON
12800	ON	OFF	OFF	ON
25600	OFF	OFF	OFF	ON
1000	ON	ON	ON	OFF
2000	OFF	ON	ON	OFF
4000	ON	OFF	ON	OFF
5000	OFF	OFF	ON	OFF
8000	ON	ON	OFF	OFF
10000	OFF	ON	OFF	OFF
20000	ON	OFF	OFF	OFF
25000	OFF	OFF	OFF	OFF

Machine dimension



Unit(mm)

Driver interface and wiring diagram



Driver



3MC8H

Digital stepper motor driver

Stepper products series

Electrical parameters

Parameters	Min Value	Typical Value	Max Value	Unit
Input Voltage	85	220	265	VAC
Output Current	0.5	-	8.0	A
Input Signal Voltage	3.6	5	24	VDC
Input Pulse Frequency	1	-	1M	Hz
Input Pulse Width	250	-	5E+ 8	ns

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3phase stepper motor

Stepper motor with reducer

Current setting

Switches	0	1	2	3	4	5
Current	0.5A	1.0A	1.5A	2.0A	2.5A	3.0A
Switches	6	7	8	9	A	B
Current	3.5A	4.0A	4.5A	5.0A	5.5A	6.0A
Switches	C	D	E	F		
Current	6.5A	7.0A	7.5A	8.0A		

SW6 =OFF half current lock, SW6=ON full current lock.

Function settings

Driver self test

When self test function is set up, driver itself detects whether the internal components work well and outer signal connection.
Self test open: SW4=ON, Self test closed: SW4=OFF



Single/double pulse modes selection

CW/CCW mode: SW5=ON
PUL/DIR mode: SW5=OFF (factory setting)



Subdivision settings

Switches	0	1	2	3	4	5
Subdivision	200	400	800	1600	3200	6400
Switches	6	7	8	9	A	B
Subdivision	12800	25600	1000	2000	4000	5000
Switches	C	D	E	F		
Subdivision	8000	10000	20000	25000		

Motor selection settings

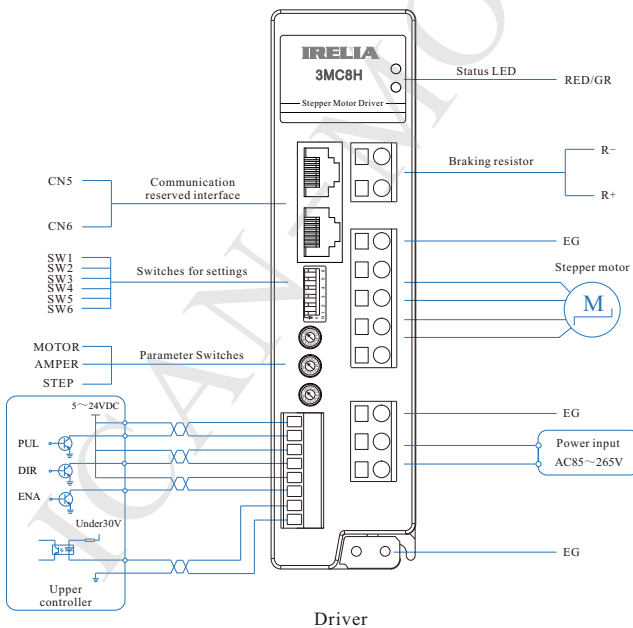
Switches	0	1	2	3	4	5
Matched motor	57	57	60	60	86	86
Switches	6	7	8	9	A	B
Matched motor	86	86	110	110	110	110
Switches	C	D	E	F		
Matched motor	130	130	130	130		

BLDC series

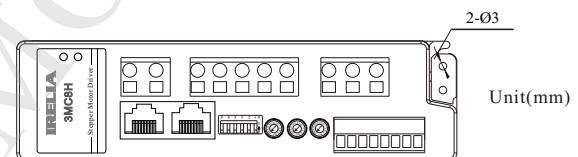
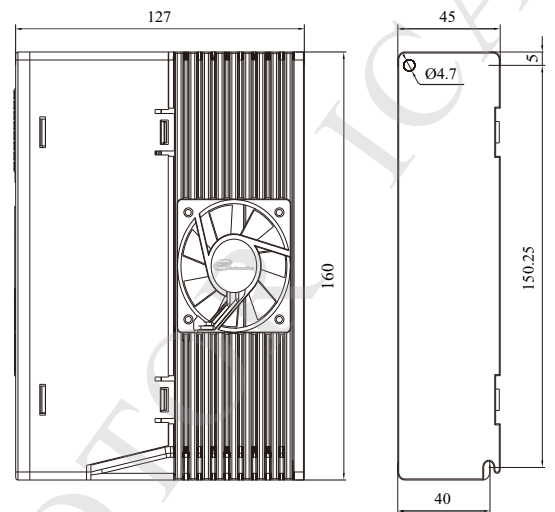
Low voltage BLDC driver

High voltage BLDC driver

Driver interface and wiring diagram



Machine dimension

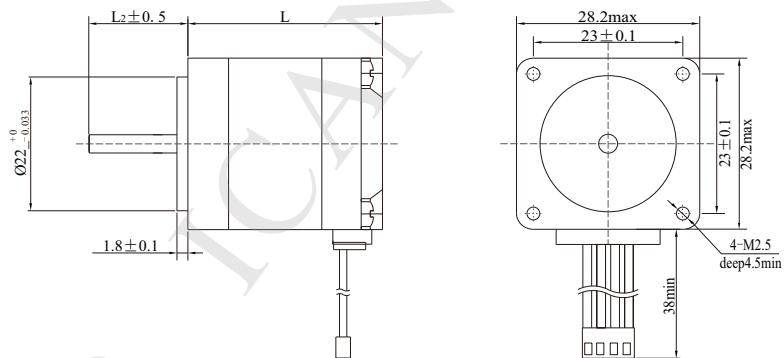


BLDC motor

Geared BLDC motor

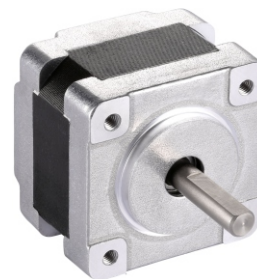
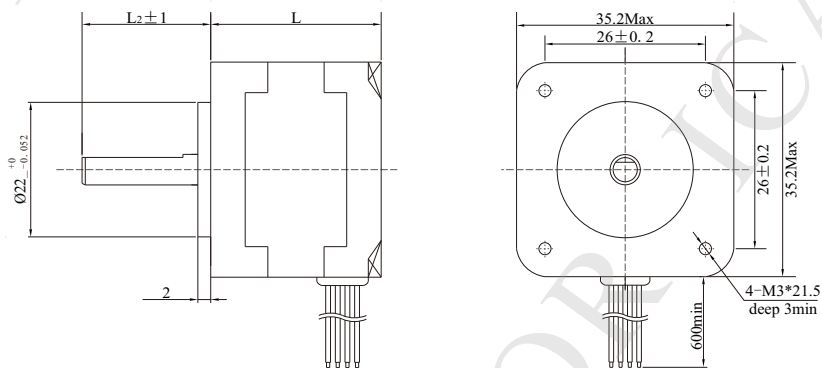
Products selection

2 phase nema 11 stepper motor



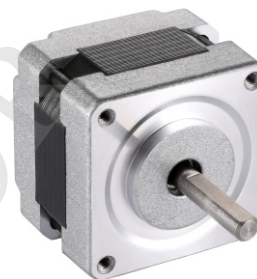
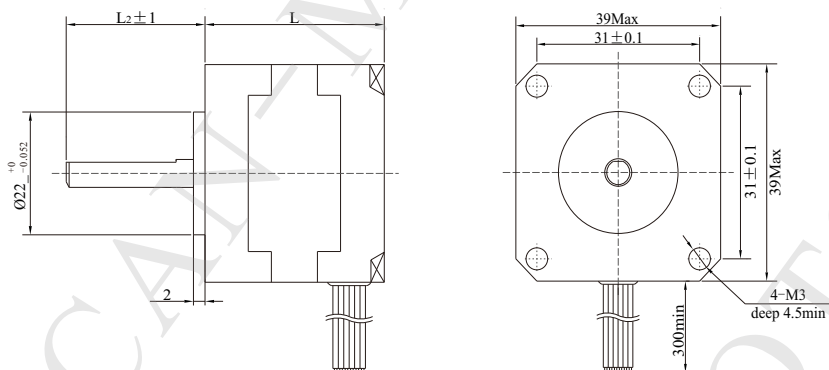
Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
28H2P3205A4	1.8	0.06	0.45	11	6.9	3	12	32	0.1	MR2
28H2P4509A6	1.8	0.075	0.95	3.4	1.2	5	18	45	0.17	MR2

2 phase nema 14 stepper motor



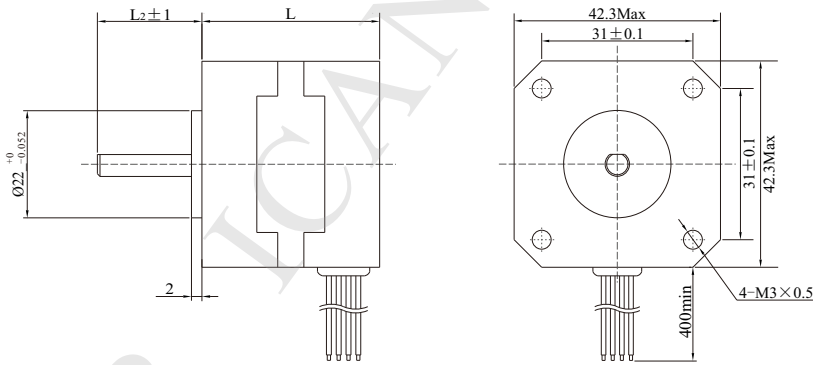
Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
35H2P2803A4	1.8	0.11	0.3	40	1.6	5	19	28	0.13	MR2
35H2P2810A4	1.8	0.125	1.0	3.5	3.5	5	18	28	0.13	MR2
35H2P2810A6	1.8	0.075	1.0	2.7	1.0	5	18	28	0.13	MR2

2 phase nema 16 stepper motor



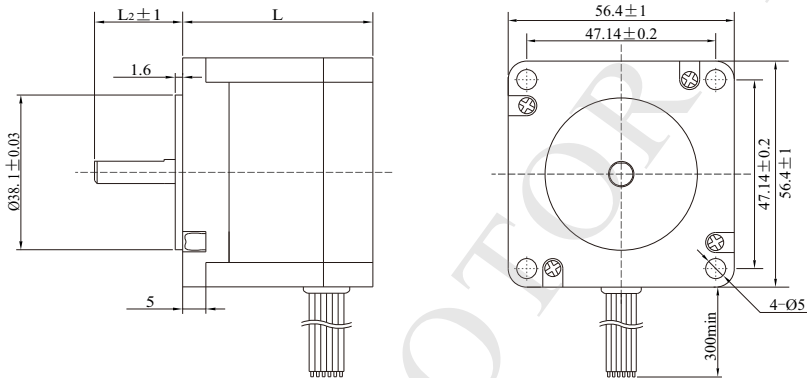
Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
39H2P2005A4	1.8	0.1	0.48	25	23	5	17.5	20	0.1	MR2
39H2P3105A6	1.8	0.1	0.5	9	4	5	22	31	0.16	MR2

2 phase nema 17 stepper motor



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
42H2P3412A4	1.8	0.19	1.2	3.2	4.4	5	18	34	0.22	MR2
42H2P4010A4	1.8	0.35	1.0	5.7	9	5	18	40	0.29	MR2
42H2P4412A4	1.8	0.35	1.2	2.7	6	5	18	44	0.33	MR2
42H2P4812A4	1.8	0.45	1.2	3.2	6	5	18	48	0.36	MR2
42H2P4812A4-AB	1.8	0.38	1.2	3.8	3.4	5	15/15	48	0.36	MR2
42H2P4812A6	1.8	0.38	1.2	3.8	3.4	5	22	48	0.36	MR2
42H2P6017A4	1.8	0.75	1.7	2.5	6.7	5	18	60	0.47	MR2

2 phase nema 23 stepper motor



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
57H2P4115A6	1.8	0.35	1.5	1.8	3.5	6.35	17	41	0.43	MR2/MR4
57H2P5130A4	1.8	0.9	3.0	0.8	2.9	6.35	19	51	0.57	MR4
57H2P5442A4	1.8	1.2	4.2	0.4	1.2	6.35	19	54	0.67	MR4/MR5
57H2P5442A4-A	1.8	1.2	4.2	0.4	1.4	8	20.4	54	0.67	MR4/MR5
57H2P5442A4-B	1.8	1.2	4.2	0.38	1.3	8	31	54	0.67	MR4/MR5
57H2P7842A4	1.8	2.1	4.2	0.55	1.9	6.35	20.4	78	1.06	MR4/MR5
57H2P7842A4-A	1.8	2.1	4.2	0.55	1.9	8	19.4	78	1.06	MR4/MR5
57H2P7842A4-B	1.8	2.1	4.2	0.55	1.9	8	31	78	1.06	MR4/MR5
57H2P8440A4	1.8	2.3	4.0	0.9	2.7	8	31	84	1.18	MR4/MR5
57H2P9850A4	1.8	2.6	4.5	0.7	2.4	8	32	98	1.45	MR4/MR5

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

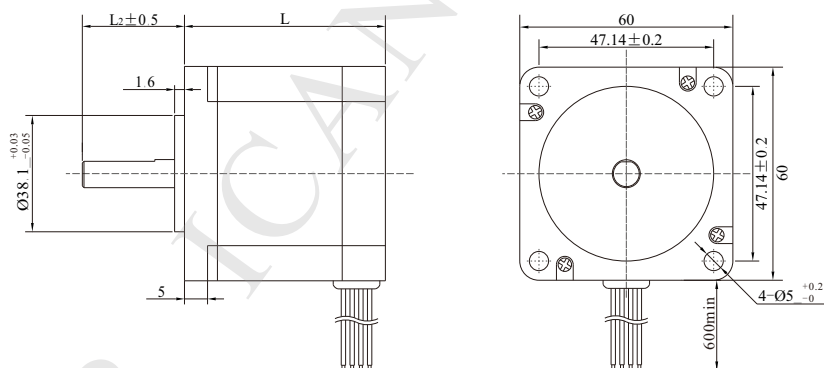
High voltage BLDC driver

BLDC motor

Geared BLDC motor

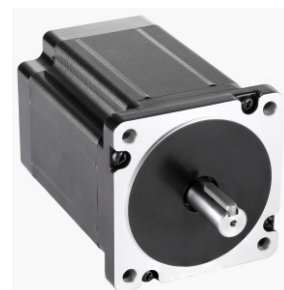
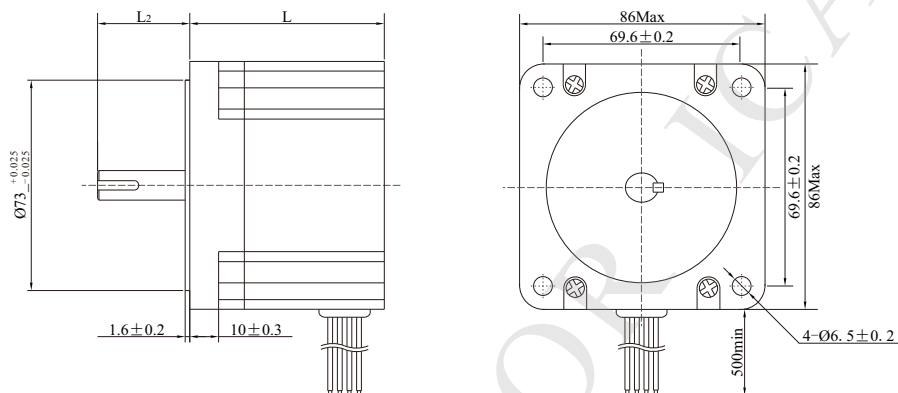
Products selection

2 phase nema 24 stepper motor



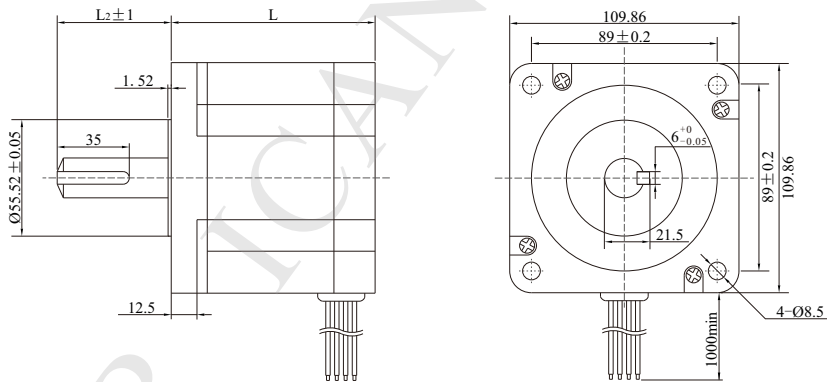
Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
60H2P6630A4	1.8	2.0	3.0	1.2	3.0	8	22	66	0.95	MR4/MR5
60H2P8642A4	1.8	2.7	4.2	0.65	2.5	8	26	86	1.34	MR4/MR5

2 phase nema 34 stepper motor



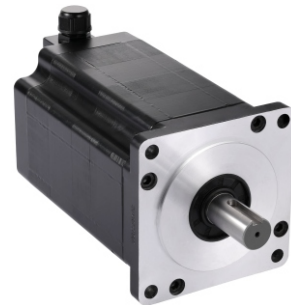
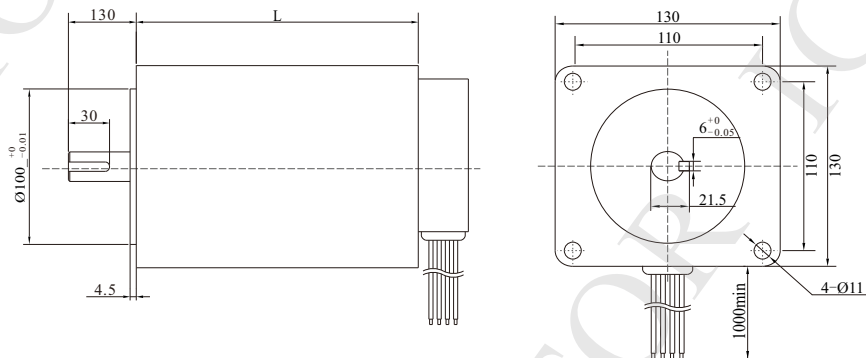
Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
85H2P6860A4	1.8	3.4	6.0	0.35	1.7	9.5	30	68	1.87	MR5/MR7
85H2P8060A4	1.8	4.5	6.0	0.35	3.2	12.7	30	80	2.3	MR5/MR7
85H2P9760A4	1.8	7.0	6.0	0.5	4	12.7	30	97	3.0	MR7A/MR7
85H2P11860A4	1.8	8.5	6.0	0.62	6.3	12.7/14	30	118	3.76	MR7A/MR7
85H2P15160A4	1.8	10	6.5	0.55	6	14	35	156	5.3	MR7A/MR7

2 phase nema 42 stepper motor



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
110H2P1255A4	1.8	11.2	5.5	0.9	12	19	54	99	5.0	MC8H
110H2P2168A4	1.8	21	6.8	0.8	11	19	54	150	9.0	MC8H
110H2P3080A4	1.8	30	8.0	0.67	16	19	54	201	12	MC8H

2 phase nema 51 stepper motor



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
130H2P5050A4	1.8	50	5.0	1.58	28	19	45	282	23.4	MC8H

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

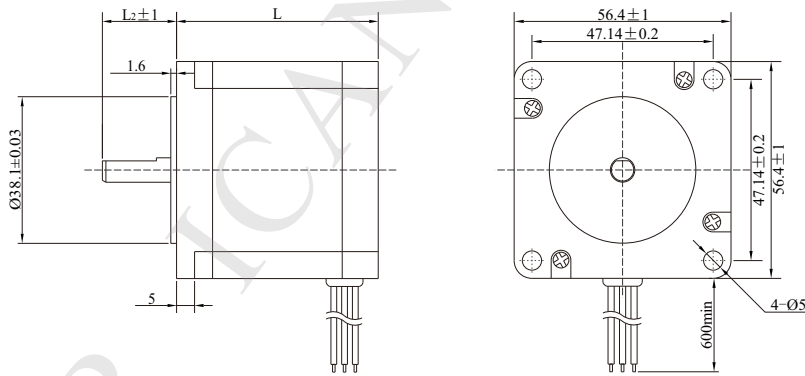
High voltage BLDC driver

BLDC motor

Geared BLDC motor

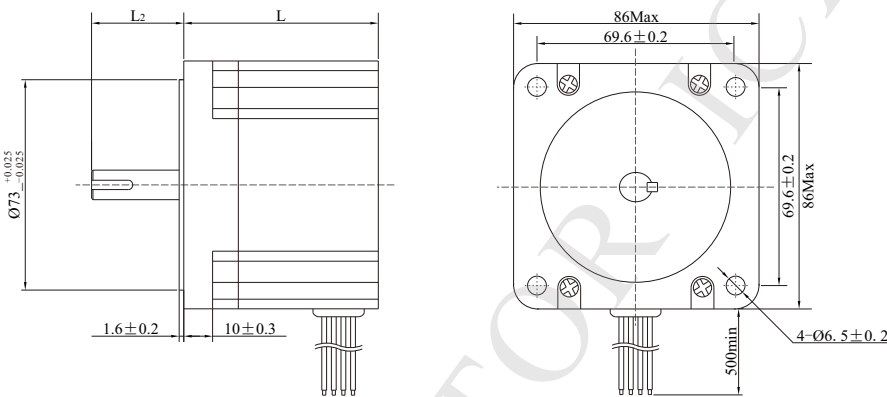
Products selection

3 phase nema 23 stepper motor



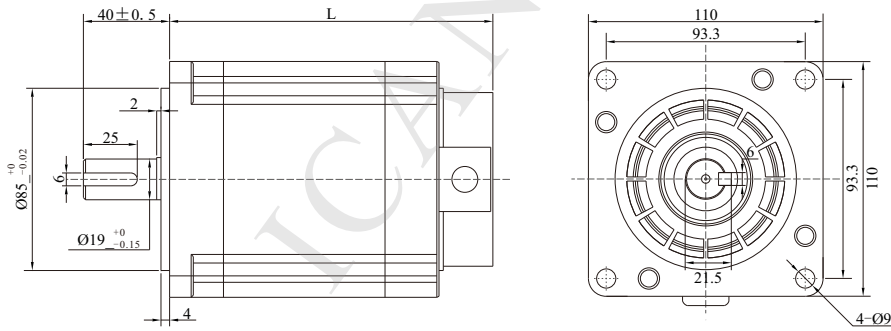
Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
57H3P4124A3	1.2	0.4	2.4	3.4	4	6.35	19	41	0.43	3MR8
57H3P5656A3	1.2	0.9	5.6	0.5	1.1	6.35	19	56	0.69	3MR8
57H3P7652A3	1.2	1.2	5.2	0.5	1.4	8	19	76	1.02	3MR8

3 phase nema 34 stepper motor



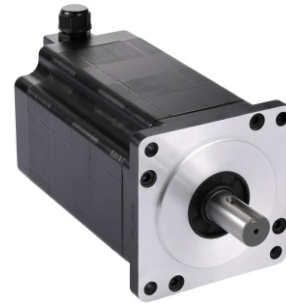
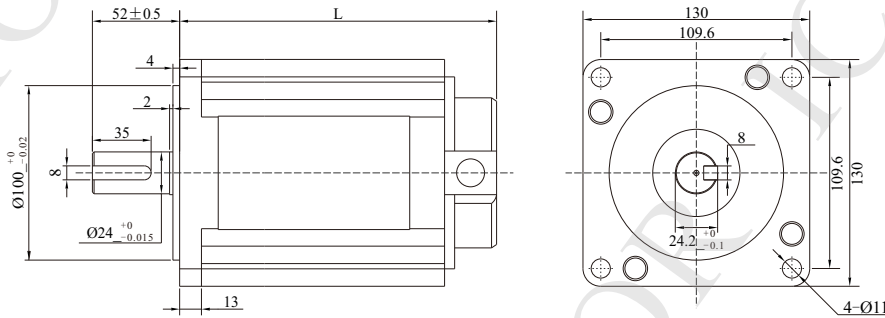
Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
85H3P6858A3	1.2	2.0	5.8	0.52	1.5	12	29	68	1.86	3MR8
85H3P9758A3	1.2	3.2	5.8	0.53	2.5	12	29	97	2.9	3MR8
85H3P12558A3	1.2	6.0	5.8	0.87	6.1	14	29	125	4.1	3MR8

3 phase nema 42 stepper motor



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
110H3P0843A3	1.2	8.0	4.3	1.31	17.1	19	36	136	5.7	3MC8H
110H3P1260A3	1.2	12	6	0.66	9.2	19	36	150	6.5	3MC8H
110H3P1665A3	1.2	16	6.5	0.63	8.9	19	36	184	8.7	3MC8H
110H3P2070A3	1.2	20	7	0.67	10.4	19	36	218	11.2	3MC8H

3 phase nema 51 stepper motor



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Matched Driver
130H3P2068A3	1.2	20	6.8	0.62	7.8	24	48	168	10	3MC8H
130H3P2868A3	1.2	28	6.8	0.79	10.8	24	48	203	11	3MC8H
130H3P3568A3	1.2	35	6.8	0.97	14.2	24	48	238	12.3	3MC8H
130H3P5068A3	1.2	50	6.8	1.12	18.9	24	48	285	21.5	3MC8H

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

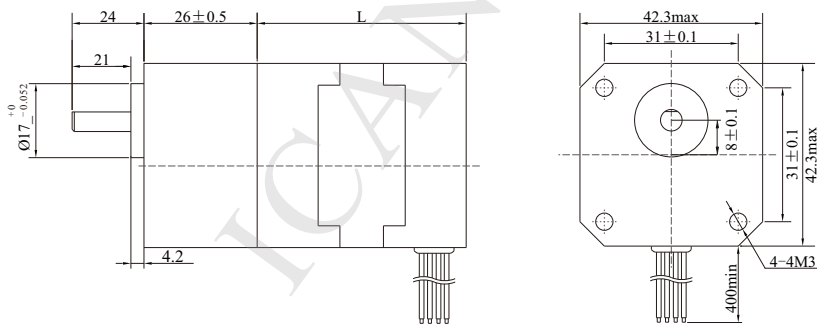
High voltage BLDC driver

BLDC motor

Geared BLDC motor

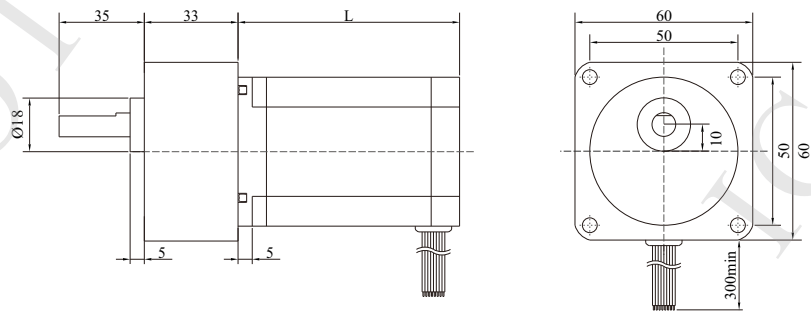
Products selection

Nema 17 stepper motor with gear reducer



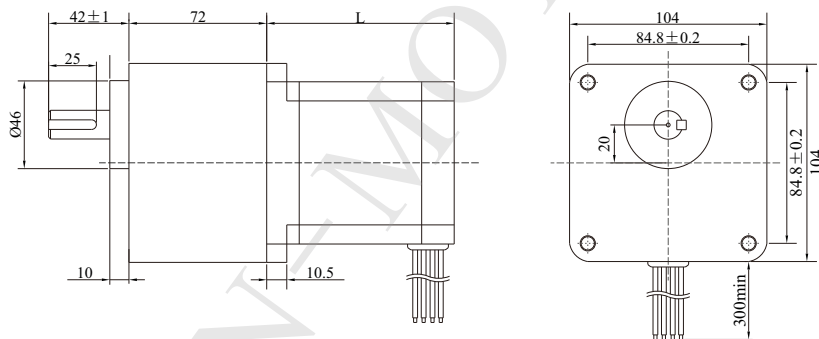
Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N. W.(kg)	Gear Ratio	Matched Driver
42H2P0712A4-G30	1.8	4.5	0.45	3.2	6	5	21	74	0.3	1:30	MR2

Nema 23 stepper motor with gear reducer



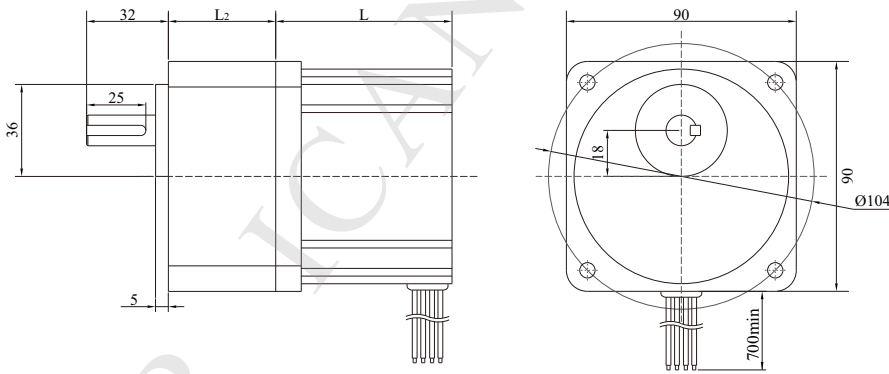
Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N. W.(kg)	Gear Ratio	Matched Driver
57H2P0930A8-G10	1.8	9	3	1.2	2.2	8	25	108	1.3	1:10	MR4/MR5
57H2P1830A8-G20	1.8	18	3	1.2	2.2	8	25	113	1.3	1:20	MR4/MR5

Nema 34 stepper motor with gear reducer



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N. W.(kg)	Gear Ratio	Matched Driver
85H2P6045A4-G12.5	1.8	60	4.5	0.65	4.7	15	32	171	5.8	1:12.5	MR7/MR7A
85H2P8045A4-G20	1.8	80	4.5	0.65	4.7	15	32	171	5.8	1:20	MR7/MR7A

Nema 34 stepper motor with gear reducer



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L (mm)	N. W.(kg)	Gear Ratio	Matched Driver
86H2P6842A4-G	1.8	3.2	5.0	0.36	3.0	12	27	69	3.12	1:5	MR7/MR7A
85H2P11860A4-G	1.8	6.0	6.0	0.31	2.0	12	27	118	5.02	1:10 1:20	MR7/MR7A

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

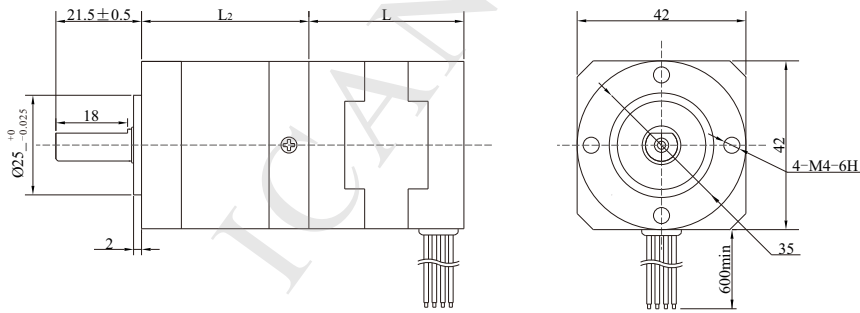
High voltage BLDC driver

BLDC motor

Geared BLDC motor

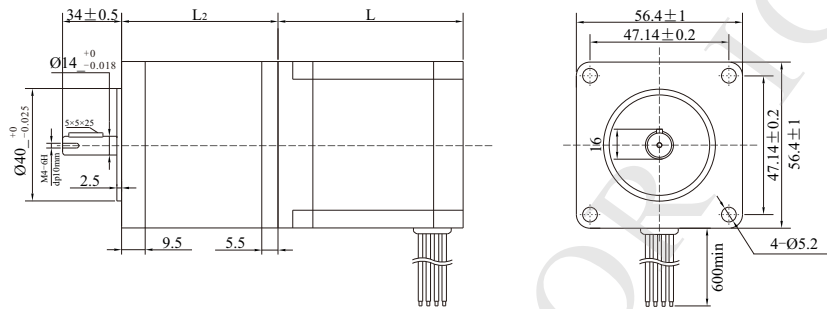
Products selection

Nema 17 stepper motor with planetary reducer



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Gear Ratio	Matched Driver
42H2P3412A4-PG05	1.8	0.9	1.2	3.2	4.4	8	19.5	76	0.45	1:05	MR2
42H2P3412A4-PG10	1.8	1.8	1.2	3.2	4.4	8	19.5	76	0.45	1:10	MR2
42H2P3412A4-PG20	1.8	3.5	1.2	3.2	4.4	8	19.5	86	0.52	1:20	MR2
42H2P4812A4-PG05	1.8	2	1.2	3.2	6	8	19.5	90	0.59	1:05	MR2
42H2P4812A4-PG10	1.8	4	1.2	3.2	6	8	19.5	90	0.59	1:10	MR2
42H2P4812A4-PG20	1.8	8	1.2	3.2	6	8	19.5	100	0.65	1:20	MR2

Nema 23 stepper motor with planetary reducer



Model	Step Angel(°)	Holding Torque(Nm)	Current /phase(A)	Resistance (Ω)	Inductance (Mh)	Diameter of axle LB(mm)	Axial length LA(mm)	Length L(mm)	N.W.(kg)	Gear Ratio	Matched Driver
57H2P5442A4-PG05	1.8	5	4.2	0.38	1.3	14	32	107	1.4	1:05	MR4/MR5
57H2P5442A4-PG10	1.8	10	4.2	0.38	1.3	14	32	107	1.4	1:10	MR4/MR5
57H2P5442A4-PG20	1.8	20	4.2	0.38	1.3	14	32	124	1.65	1:20	MR4/MR5
57H2P7842A4-PG05	1.8	9	4.2	0.55	1.9	14	32	131	1.76	1:05	MR4/MR5
57H2P7842A4-PG10	1.8	18	4.2	0.55	1.9	14	32	131	1.76	1:10	MR4/MR5
57H2P7842A4-PG20	1.8	36	4.2	0.55	1.9	14	32	148	2.04	1:20	MR4/MR5

Advanced BLDC motor&drive system

- ✓ Wide speed range, flat torque
- ✓ Excellent speed stability
- ✓ Low power consumption low noise low vibration
- ✓ Low cogging torque



Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3phase stepper motor

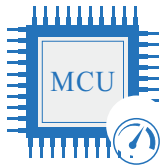
Stepper motor with reducer

BLDC products characters

A variety of speed adjustment modes

BLD drivers support multiple speed adjustment modes:

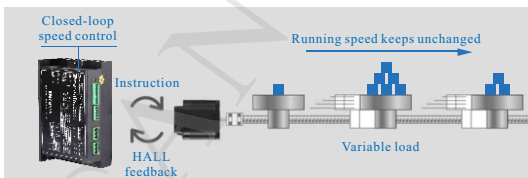
- Speed setting via PWM
- RS485 control
- Speed setting via pulse frequency
- Speed setting via built-in potentiometer RV
- Speed setting via external potentiometer
- Speed setting via external analog signal (0-5V or 0-10V)



Open-loop and closed-loop control modes

In order to improve the stability of speed, BLD has both open-loop and closed-loop control modes.

- Open loop control (default setting) mode: It is advised to be set up in constant load application environment and motor will have good stability of speed, little rush current.
- Closed loop control mode: It is advised to be set up in variable load application environment. It uses feedback signal to bring motor a stable speed.



Acceleration and deceleration settings

This potentiometer can be used for adjusting acceleration and deceleration time directly.

Acceleration is the time the motor needs from stationary state to rated speed state; Deceleration time is the time the motor needs from rated speed state to stationary state.

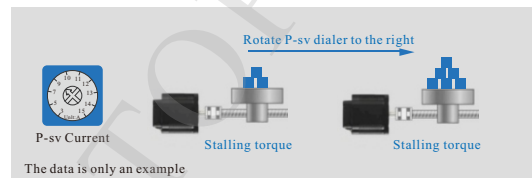
The range can be set is: 0.3s-15s.



Stalling torque keeping

BLD drivers have stalling torque keeping character. When the motor is locked suddenly, the torque will be kept.

- Stalling torque can be set in adjustable range.
- The locked rotor torque is the shortest time behavior; it cannot be used as a system brake.



BLDC series

Low voltage BLDC driver

High voltage BLDC driver

BLDC motor

Geared BLDC motor

Products selection



BLD-70 BLDC Motor driver

Product features

- Drive motor under 70W
- Brake and rotation function
- Strong over-current, over-temperature, Hall fault protection
- Easy operation with on board potentiometer or external potentiometer
- Speed setting via external analog
- Compact size

Electrical Specification

Parameters	Min Value	Typical Value	Max Value	Unit
Power supply	12	24	30	VDC
Output current	-	-	3	A
Over voltage protection	-	-	30	VDC
Under voltage protection	12	-	-	VDC
External potentiometer	-	10K	-	Ω
Input analog voltage	-	-	5	VDC
Speed control range	-	-	20000	RPM

*Limited by the maximum rated speed of the motor

Functions setting

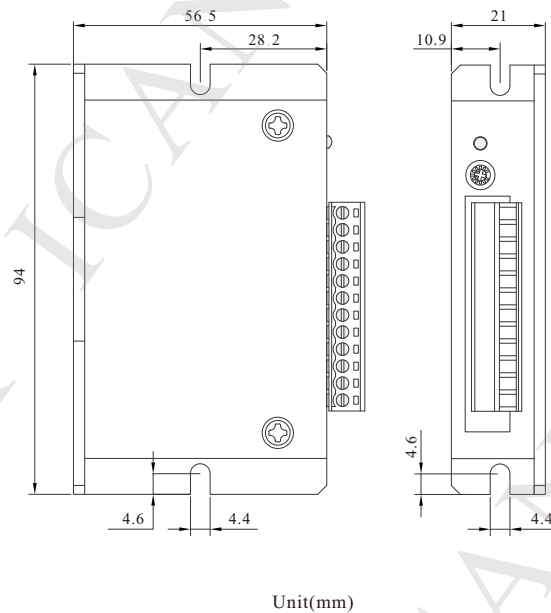
Brake setting

BRK and DC- terminal is short circuit in default and the motor will rotate automatically when power is on. Motor will stop if BRK and DC- disconnect.

CW/CCW rotation setting

F/R and DC- disconnect in default, when power is on, motor will start to run clockwise when customers adjust potentiometer. To control the direction of the motor, a switch or PLC can be added between F/R and DC-. Connect F/R and DC-, the motor will rotate anticlockwise, otherwise, the motor will rotate clockwise.

Machine dimension

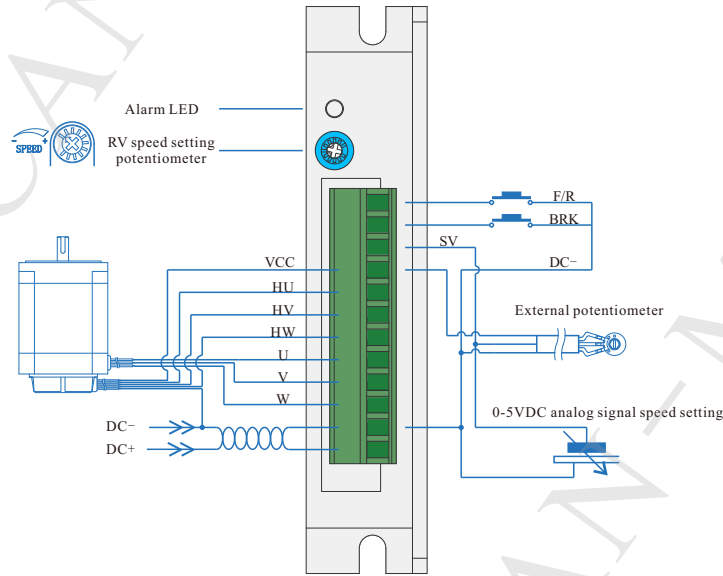


Unit(mm)

Port signal description

CN5Terminal	Signal category	Functional Description
F/R	Control signal	Motor direction control terminal; F/R and DC- disconnect, motor will rotate clockwise, and otherwise, motor will rotate anticlockwise.
BRK		Motor brake stop control signal; BRK and DC- connect in default, motor brake stops when BRK and DC- disconnect.
SV		External speed setting signal input terminal; when connecting external potentiometer, the middle terminal connects SV, the other two terminals connect to VCC and DC-.
VCC		External potentiometer power (Hall sensor positive electrode)
HU	Hall signal	Hall sensor signal Hu
HV		Hall sensor signal Hv
HW		Hall sensor signal Hw
U	Motor connection	Motor line U phase
V		Motor line V phase
W		Motor line W phase
DC-	Power connection	Power supply negative electrode (Hall sensor negative electrode)
DC+		Power supply positive electrode (12-30VDC)

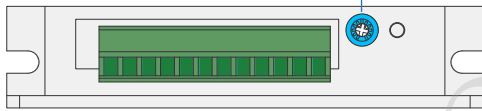
Driver interface and wiring diagram



Speed setting via built-in potentiometer

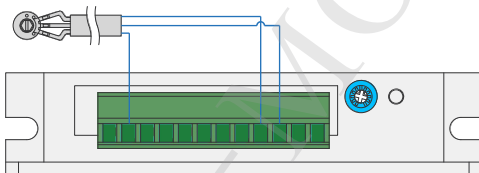
Motor speed increases when RV knobs is rotated clockwise, when anticlockwise, motor speed decreases. If customers use other speed setting modes, RV should be rotated anticlockwise to limit position.

Built-in potentiometer RV



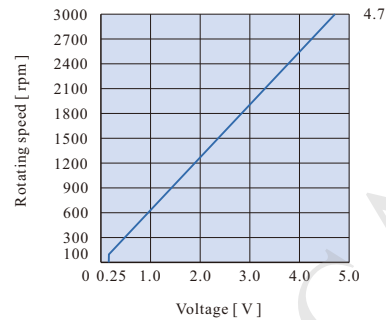
Speed setting via external potentiometer

Use a suitable potentiometer with a resistance value of 10KΩ; when connect external potentiometer, the middle terminal connects to SV, the other two terminals connect to VCC and DC-



Speed setting via external analog signal

The analog signal voltage can be 0-5VDC; when the voltage is 0.25VDC, the motor speed reaches 5% of fastest speed; when the voltage is 4.7VDC, the motor speed reaches maximum value, which depends on the motor specification and power voltage.



Matched motor

Motor model	Flange size	Output power	Voltage	Rated speed	Rated Torque	Motor length	Detail page
42BLY-0330NBB	42mm	30W	24VDC	3000rpm	0.1Nm	49mm	P37
42BLY-0630NBB	42mm	62W	24VDC	3000rpm	0.2Nm	68mm	P37
57BLY-0730NBB	57mm	69W	24VDC	3000rpm	0.22Nm	67mm	P37
57BLF-0615NBB	57mm	65W	24VDC	1500rpm	0.4Nm	82mm	P37
57BLF-0730NBB	57mm	65W	24VDC	3000rpm	0.22Nm	62mm	P37

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

High voltage BLDC driver

BLDC motor

Geared BLDC motor

Products selection



BLD-120A BLDC Motor driver

Product features

- Drive motor under 120W
- Acceleration and deceleration settings
- Power protection function (max current setting)
- Easy operation with external potentiometer
- Speed setting via external analog and PWM
- Compact size

Electrical Specification

Parameters	Min Value	Typical Value	Max Value	Unit
Power supply	12	24	30	VDC
Output current	-	-	8	A
Over voltage protection	-	-	5	V
Under voltage protection	-	20	-	mA
External potentiometer	-	10K	-	Ω
Input analog voltage	-	-	5	VDC
Speed control range	-	-	20000	RPM

*Limited by the maximum rated speed of the motor

Functions setting

Max output current setting

P-sv current setting is for protecting the driver when it runs under over-load condition via over-current alarm. The set current value should be matched with the rated current of the matched motor and real voltage used. The set range: 1.6A-8A.



P-sv Current

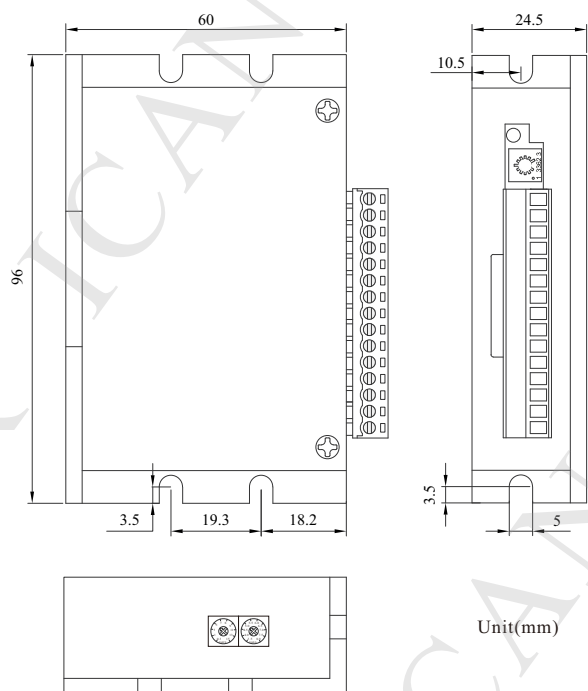
Acceleration and deceleration settings

This potentiometer can be used for adjusting acceleration and deceleration time directly. Acceleration is the time the motor needs from stationary state to rated speed state; Deceleration time is the time the motor needs from rated speed state to stationary state. The range can be set is: 0.3s-15s.



ACC/DEC

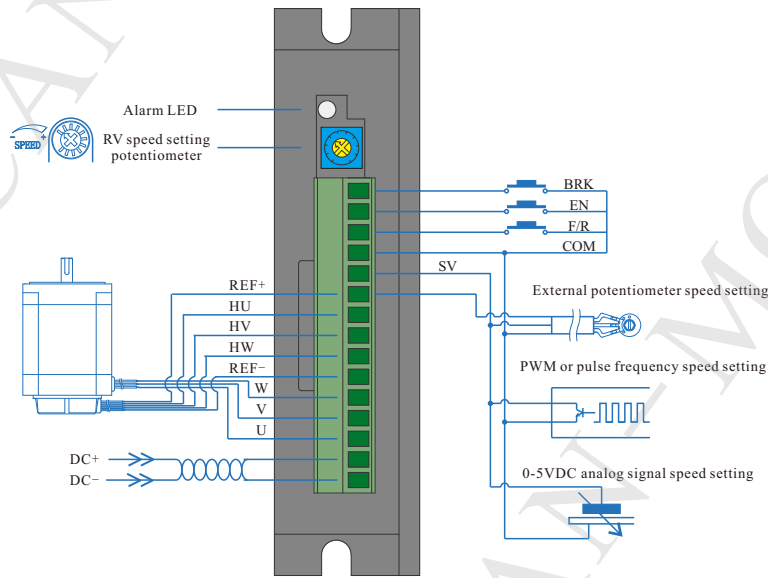
Machine dimension



Port signal description

CN5Terminal	Signal category	Functional Description
BRK	Control signal	Motor brake stop control signal; when BRK and COM connects, motor brake stops.
EN		Motor stop signal port; When EN and COM disconnect, motor stops slowly while when they are connected, motor runs.
F/R		Motor direction control terminal; F/R and COM disconnect, motor will rotate clockwise; otherwise, motor will rotate anticlockwise.
COM		Common port(0V)
SV	Hall signal	External speed setting signal input terminal; when connecting external potentiometer, the middle terminal connects SV, the other two terminals connect to REF and COM.
REF+		BLDC Hall signal power positive pole
HU		Hall sensor signal Hu
HV		Hall sensor signal Hv
HW	Hall sensor signal Hw	
REF-	BLDC Hall signal power negative electrode	
W	Motor connection	Motor line W phase
V		Motor line V phase
U		Motor line U phase
DC+	Power connection	Power supply positive electrode (12-30VDC)
DC-		Power supply negative electrode (Hall sensor negative electrode)

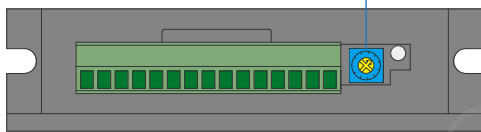
Driver interface and wiring diagram



Speed setting via built-in potentiometer

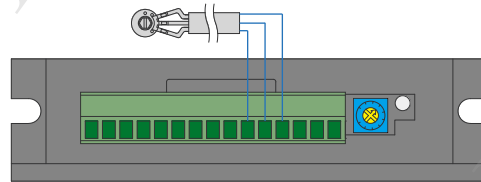
Motor speed increases when RV knobs is rotated clockwise, when anticlockwise, motor speed decreases. If customers use other speed setting modes, RV should be rotated anticlockwise to limit position.

Built-in potentiometer RV



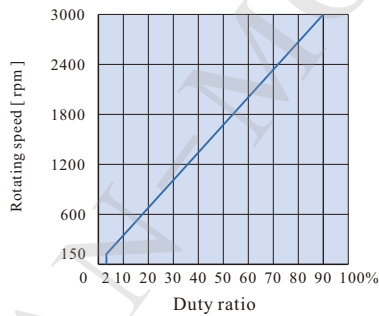
Speed setting via external potentiometer

Use a suitable potentiometer with a resistance value of 10KΩ; when connect external potentiometer, the middle terminal connects to SV, the other two terminals connect to VCC and DC-



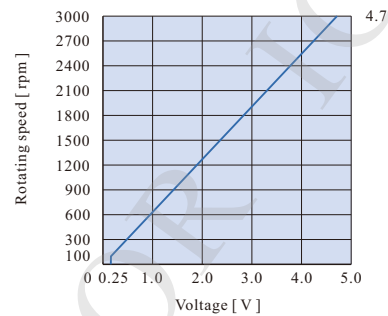
PWM speed setting mode

When customers select PWM speed setting mode, the duty ratio is advised to set as 2%-90%. When duty ratio is 2%, the motor speed reaches 5% of the fastest speed; when the duty ratio is 90%, the motor speed reaches maximum value, which depends on the motor specification and power voltage. (The pulse frequency range: 1-3KHz).



Speed setting via external analog signal

The analog signal voltage can be 0-5VDC; when the voltage is 0.25VDC, the motor speed reaches 5% of fastest speed; when the voltage is 4.7VDC, the motor speed reaches maximum value, which depends on the motor specification and power voltage.



Matched motor

Motor model	Flange size	Output power	Voltage	Rated speed	Rated Torque	Motor length	Detail page
57BLY-0730NBB	57mm	69W	24VDC	3000rpm	0.22Nm	67mm	P37
57BLY-1030NBB	57mm	103W	24VDC	3000rpm	0.33Nm	88mm	P37
57BLY-1230NBB	57mm	120W	24VDC	3000rpm	0.44Nm	107mm	P37
57BLF-0615NBB	57mm	65W	24VDC	1500rpm	0.4Nm	82mm	P37
57BLF-0730NBB	57mm	65W	24VDC	3000rpm	0.22Nm	62mm	P37
57BLF-1230NBB	57mm	125W	24VDC	3000rpm	0.4Nm	80mm	P37

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3phase stepper motor

Stepper motor with reducer

BLDC series

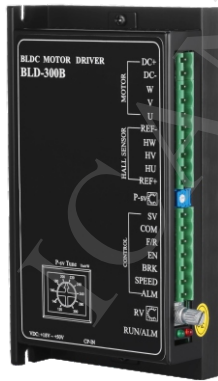
Low voltage BLDC driver

High voltage BLDC driver

BLDC motor

Geared BLDC motor

Products selection



BLD-300B BLDC Motor driver

Product features

Parameters	Min Value	Typical Value	Max Value	Unit
Power supply	12	48	56	VDC
Output current	-	-	15	A
Over voltage protection	-	-	5	V
Under voltage protection	12	-	-	mA
External potentiometer	-	10K	-	Ω
Input analog voltage	-	-	5	VDC
Speed control range	-	-	20000	RPM

*Limited by the maximum rated speed of the motor

Functions setting

Motor pole pair selection

In order to match different motors, customers have choices for pole pair selection via SW1.
SW1=OFF, 4 pole pairs (default)
SW1=ON, 2 pole pairs



PID closed loop selection

In order to improve the stability of speed when in variable load application environment, customers are advised to select closed loop mode via SW2.
SW2=OFF, open loop (default); SW2=ON, closed loop.



Max output current setting

P-sv current setting is for protecting the driver when it runs under over-load condition via over-current alarm. The set current value should be matched with the rated current of the matched motor and real voltage used. The set range: 3A-15A.



P-sv Current

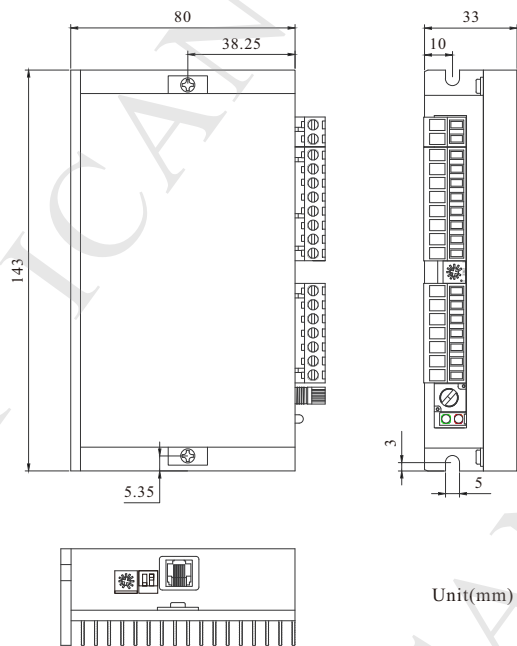
Acceleration and deceleration settings

This potentiometer can be used for adjusting acceleration and deceleration time directly. Acceleration is the time the motor needs from stationary state to rated speed state; Deceleration time is the time the motor needs from rated speed state to stationary state. The range can be set is: 0.3s-15s.



ACC/DEC

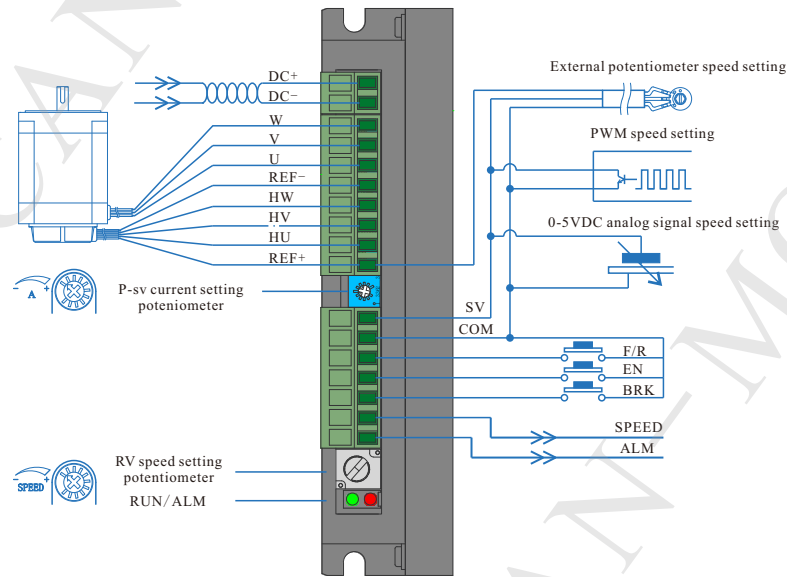
Machine dimension



Port signal description

CN5Terminal	Signal category	Functional Description
DC+	Power connection	Power supply positive electrode (12-30VDC)
DC-		Power supply negative electrode (Hall sensor negative electrode)
W	Motor connection	Motor line W phase
V		Motor line V phase
U		Motor line U phase
REF+	Hall signal	BLDC Hall signal power positive pole
HW		Hall sensor signal Hw
HV		Hall sensor signal Hv
HU		Hall sensor signal Hu
REF-		BLDC Hall signal power negative electrode
SV	Control signal	External speed setting signal input terminal; when connecting external potentiometer, the middle terminal connects SV, the other two terminals connect to REF and COM.
COM		Common port(0V)
F/R		Motor direction control terminal; F/R and COM disconnect, motor will rotate clockwise; otherwise, motor will rotate anticlockwise.
EN		Motor stop signal port; When EN and COM disconnect, motor stops slowly while when they are connected, motor runs.
BRK		Motor brake stop control signal; BRK and DC- connect in default, motor brake stops when BRK and DC- disconnect.
SPEED		Output signal
ALM	Alarm signal output port. When fault occurs, the voltage changes to 0V from 5V.	

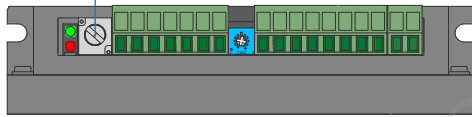
Driver interface and wiring diagram



Speed setting via built-in potentiometer

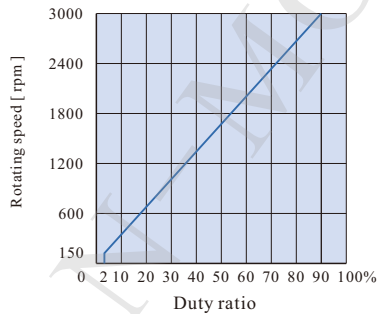
Motor speed increases when RV knobs is rotated clockwise, when anticlockwise, motor speed decreases. If customers use other speed setting modes, RV should be rotated anticlockwise to limit position.

Built-in potentiometer RV



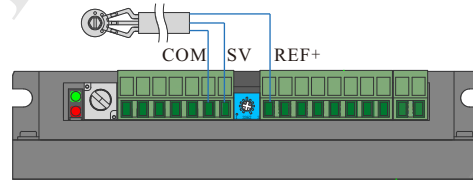
PWM speed setting mode

When customers select PWM speed setting mode, the duty ratio is advised to set as 2%-90%. When duty ratio is 2%, the motor speed reaches 5% of the fastest speed; when the duty ratio is 90%, the motor speed reaches maximum value, which depends on the motor specification and power voltage. (The pulse frequency range: 1-3KHz).



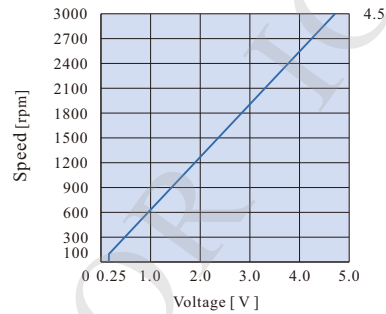
Speed setting via external potentiometer

Use a suitable potentiometer with a resistance value of 10KΩ; when connect external potentiometer, the middle terminal connects to SV, the other two terminals connect to VCC and DC-.



Speed setting via external analog signal

The analog signal voltage can be 0-5VDC; when the voltage is 0.25VDC, the motor speed reaches 5% of fastest speed; when the voltage is 4.7VDC, the motor speed reaches maximum value, which depends on the motor specification and power voltage.



Matched motor

Motor model	Flange size	Output power	Voltage	Rated speed	Rated Torque	Motor length	Detail page
57BLY-1030NBB	57mm	103W	24VDC	3000rpm	0.33Nm	88mm	P37
57BLY-1230NBB	57mm	120W	24VDC	3000rpm	0.44Nm	106mm	P37
57BLF-1230NBB	57mm	120W	24VDC	3000rpm	0.4Nm	80mm	P37
57BLF-1830NBB	57mm	180W	24VDC	3000rpm	0.6Nm	101mm	P37
60BLF-1630NBB	60mm	160W	24VDC	3000rpm	0.5Nm	100mm	P38
60BLF-2430NBB	60mm	240W	24VDC	3000rpm	0.75Nm	120mm	P38

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

High voltage BLDC driver

BLDC motor

Geared BLDC motor

Products selection



BLD-750 BLDC Motor driver

Product features

Parameters	Min Value	Typical Value	Max Value	Unit
Power supply	18	48	52	VDC
Output current	-	-	25	A
Over voltage protection	-	-	5	V
Under voltage protection	12	-	-	mA
External potentiometer	-	10K	-	Ω
Input analog voltage	-	-	5	VDC
Speed control range	-	-	20000	RPM

*Limited by the maximum rated speed of the motor

Functions setting

PID closed loop selection

In order to improve the stability of speed when in variable load application environment, customers are advised to select closed loop mode via SW1. SW1=OFF, open loop (default); SW1=ON, closed loop.



Motor pole pair selection

In order to match different motors, customers have choices for pole pair selection via SW2. SW2=OFF, 4 pole pairs (default); SW2=ON, 2 pole pairs



Max output current setting

P-sv current setting is for protecting the driver when it runs under over-load condition via over-current alarm. The set current value should be matched with the rated current of the matched motor and real voltage used. The set range: 4A-25A.



P-sv Current

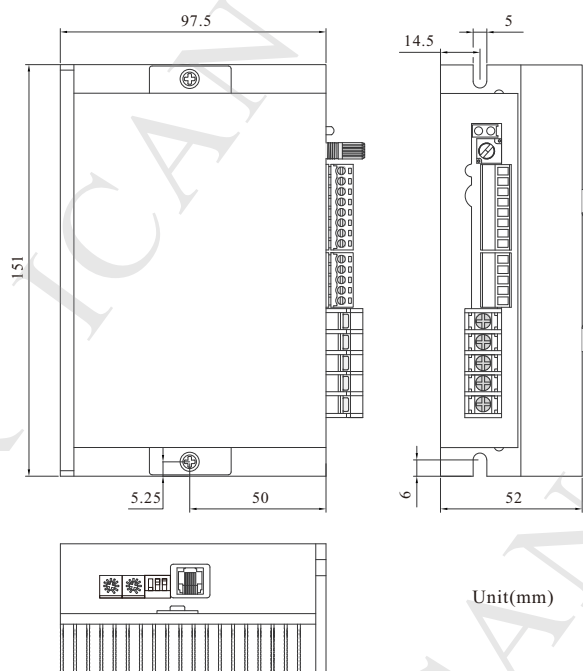
Acceleration and deceleration settings

This potentiometer can be used for adjusting acceleration and deceleration time directly. Acceleration is the time the motor needs from stationary state to rated speed state; Deceleration time is the time the motor needs from rated speed state to stationary state. The range can be set is: 0.3s-15s.



ACC/DEC

Machine dimension

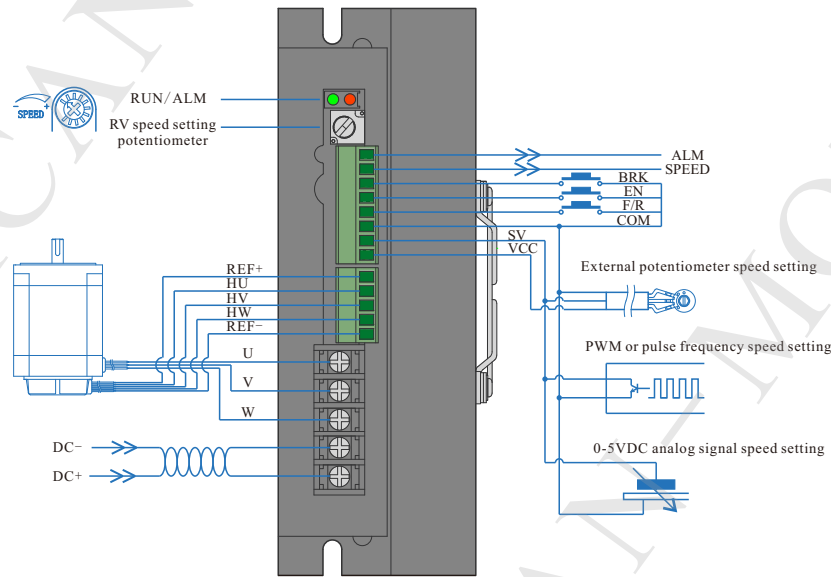


Unit(mm)

Port signal description

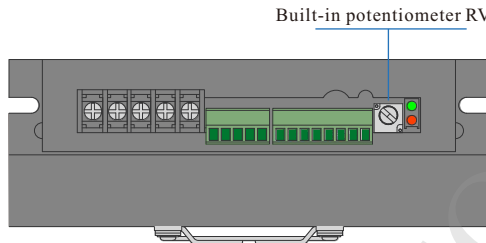
CN5Terminal	Signal category	Functional Description
ALM	Output signal	Alarm signal output port. When fault occurs, the voltage changes to 0V from 5V.
SPEED		Speed signal output port. Pulse frequency is corresponding to the rotating speed
BRK	Control signal	Motor brake stop control signal; BRK and DC- connect in default, motor brake stops when BRK and DC- disconnect.
EN		Motor stop signal port; When EN and COM disconnect, motor stops slowly while when they are connected, motor runs.
F/R		Motor direction control terminal; F/R and COM disconnect, motor will rotate clockwise; otherwise, motor will rotate anticlockwise.
COM		Common port(0V)
SV		External speed setting signal input terminal; when connecting external potentiometer, the middle terminal connects SV, the other two terminals connect to VCC and COM.
VCC	Hall signal	External potentiometer power port
REF+		BLDC Hall signal power positive pole
HU		Hall sensor signal Hu
HV		Hall sensor signal Hv
HW		Hall sensor signal Hw
REF-	Motor connection	BLDC Hall signal power negative electrode
U		Motor line U phase
V		Motor line V phase
W		Motor line W phase
DC-	Power connection	Power supply negative electrode (Hall sensor negative electrode)
DC+		Power supply positive electrode (18-52VDC)

Driver interface and wiring diagram



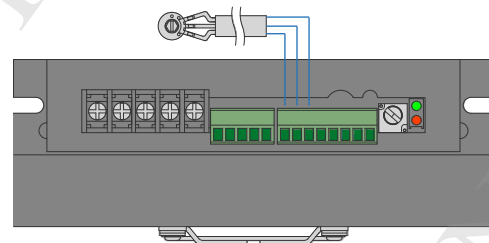
Speed setting via built-in potentiometer

Motor speed increases when RV knobs is rotated clockwise, when anticlockwise, motor speed decreases. If customers use other speed setting modes, RV should be rotated anticlockwise to limit position.



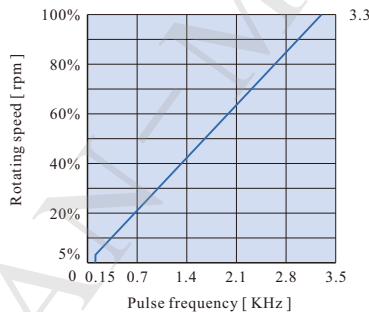
Speed setting via external potentiometer

Use a suitable potentiometer with a resistance value of 10KΩ; when connecting external potentiometer, the middle terminal connects to SV, the other two terminals connect to VCC and COM.



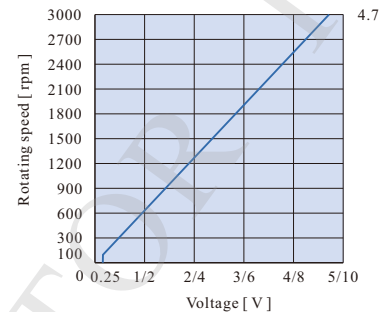
Speed setting via pulse frequency

When selecting this mode, set SW3=ON. The pulse frequency can be 150-4KHz; when the pulse frequency is 150Hz, the motor speed reaches 5% of fastest speed; when the pulse frequency is 4KHz, the motor speed reaches maximum value, which depends on the motor specification and source voltage.



Speed setting via analog voltage

When selecting this mode, set SW3=OFF. The analog signal voltage can be 0-5VDC; when the voltage is 0.25VDC, the motor speed reaches 5% of fastest speed; when the voltage is 4.7VDC, the motor speed reaches maximum value, which depends on the motor specification and source voltage.



Matched motor

Motor model	Flange size	Output power	Voltage	Rated speed	Rated Torque	Motor length	Detail page
60BLF-1630NBB	60mm	160W	24VDC	3000rpm	0.5Nm	100mm	P38
60BLF-2430LBB	60mm	240W	48VDC	3000rpm	0.75Nm	120mm	P38
70BLF-3230NBB	70mm	320W	48VDC	3000rpm	1.0Nm	120mm	P38
86BLF-2230NBB	86mm	220W	48VDC	3000rpm	0.7Nm	82mm	P39
86BLF-4430NBB	86mm	440W	48VDC	3000rpm	1.4Nm	109mm	P39

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

High voltage BLDC driver

BLDC motor

Geared BLDC motor

Products selection



BLDH-350 BLDC Motor driver

Product features

Parameters	Min Value	Typical Value	Max Value	Unit
Power supply	180	220	265	VAC
Output current	-	-	4	A
Over voltage protection	-	-	5.5	V
Under voltage protection	12	-	-	mA
External potentiometer	-	10K	-	Ω
Input analog voltage	-	-	5	VDC
Speed control range	-	-	20000	RPM

*Limited by the maximum rated speed of the motor

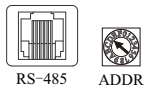
Functions setting

Speed setting modes selection

Speed setting modes	SW1	SW2
Built-in potentiometer RV	OFF	OFF
External potentiometer/ External analog voltage	ON	OFF
PWM	OFF	ON
Pulse frequency	ON	ON

RS-485 communication port

Driver parameter and instructions setting can be finished by upper computer via RS-485. Customer can set communication via ADDR.



Acceleration and deceleration settings

This potentiometer can be used for adjusting acceleration and deceleration time directly. Acceleration is the time the motor needs from stationary state to rated speed state; Deceleration time is the time the motor needs from rated speed state to stationary state. The range can be set is: 0.3s-15s.



ACC/DEC

Motor pole pair selection

Pole pair can be set as 2, 4 and 5 via SW5-SW6; the default setting is 4 poles. The setting can also be done by upper computer via RS-485.



SW5 6

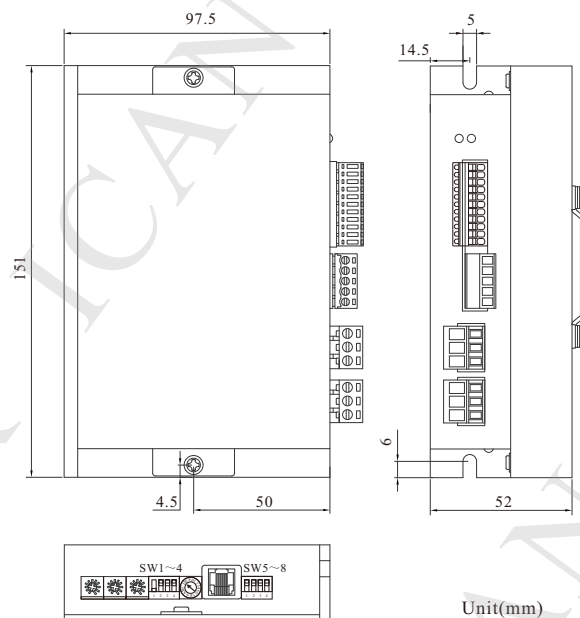
PID closed loop selection

SW7, open/closed loop selection; SW7=OFF closed loop, SW7=ON open loop
SW8, closed loop modes selection; SW8=OFF speed closed loop; SW8=ON speed and current closed loop.



SW7 8

Machine dimension

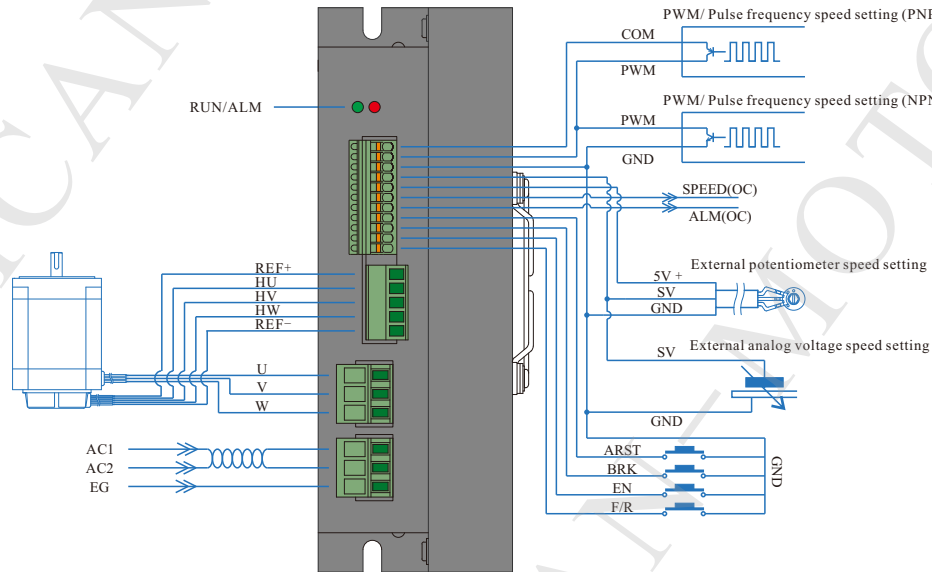


Unit(mm)

Port signal description

CN5Terminal	Signal category	Functional Description
COM	Control signal	Source power common port (PLC 24V output port)
PWM		Pulse frequency/PWM speed setting signal input. SW1 and SW2 are for modes selection.
GND		Control signal grounding screw (common port)
SV		External speed setting signal input terminal; when connecting external potentiometer, the middle terminal connects SV, the other two terminals connect to +5V and GND.
5V+		Built-in 5V voltage port, potentiometer can be connected to it for speeding setting.
SPEED		Speed signal output port(open-drain output). The output is pulse frequency corresponding to the rotating speed
ALM		Alarm signal output port(open-drain output). When fault occurs, the voltage changes from high to low voltage.
ARST		Alarm reset port. If ARST connects with GND, fault alarm will be cleared.
BRK		Motor brake stop control port; BRK and GND connect in default, motor brake stops when BRK and GND disconnect.
EN		Motor stop signal port; When EN and GND disconnect, motor stops slowly while when they connect, motor runs.
F/R	Motor direction control terminal; F/R and GND disconnect, motor will rotate clockwise, and otherwise, motor will rotate anticlockwise.	
REF+	Motor connection	BLDC Hall signal power positive pole
HU、HV、HW		Hall sensor signal HU、HV、HW
REF-		BLDC Hall signal power negative electrode
U、V、W	Power connection	Motor line U、V、W phase
AC1		Power supply+ (180-265VAC)
AC2		Power supply-
EG		Grounding screw

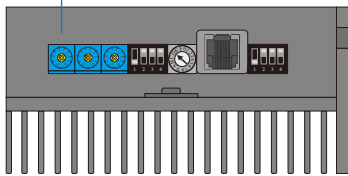
Driver interface and wiring diagram



Speed setting via built-in potentiometer

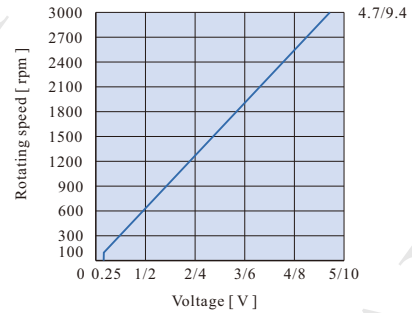
Motor speed increases when RV knobs is rotated clockwise, when anticlockwise, motor speed decreases. If customers use other speed setting modes, RV should be rotated anticlockwise to limit position.

Built-in potentiometer RV



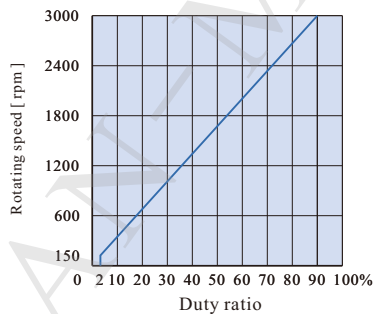
Speed setting via external analog signal

Set SW1=ON and SW2=OFF to select analog voltage speed setting mode. The analog signal voltage can be 0.25-4.7VDC or 0.25-9.4VDC.



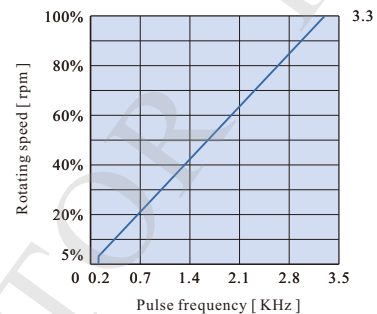
PWM speed setting mode

When customers select PWM speed setting mode, the duty ratio is advised to set as 2%-90%. When duty ratio is 2%, the motor speed reaches 5% of the fastest speed; when the duty ratio is 90%, the motor speed reaches maximum value, which depends on the motor specification and power voltage. (The pulse frequency range: 1-3KHz).



Speed setting via pulse frequency

The pulse frequency can be 200-3.3KHz; when the pulse frequency is 200Hz, the motor speed reaches 5% of fastest speed; when the pulse frequency is 3.3KHz, the motor speed reaches maximum value, which depends on the motor specification and source voltage.



Matched motor

Motor model	Flange size	Output power	Voltage	Rated speed	Rated Torque	Motor length	Detail page
80BLF-2515HBB	80mm	250W	310VDC	1500rpm	1.6Nm	118mm	P38
80BLF-2530HBB	80mm	250W	310VDC	3000rpm	0.8Nm	132mm	P38
86BLF-2230HBB	86mm	220W	310VDC	3000rpm	0.7Nm	82mm	P39
86BLF-3315HBB	86mm	330W	310VDC	1500rpm	2.1Nm	152mm	P39
86BLF-3330HBB	86mm	330W	310VDC	3000rpm	1.05Nm	96mm	P39

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

High voltage BLDC driver

BLDC motor

Geared BLDC motor

Products selection



BLDH-750 BLDC Motor driver

Product features

Parameters	Min Value	Typical Value	Max Value	Unit
Power supply	180	220	265	VAC
Output current	-	-	8	A
Over voltage protection	-	-	5.5	V
Under voltage protection	12	-	-	mA
External potentiometer	-	10K	-	Ω
Input analog voltage	-	-	5	VDC
Speed control range	-	-	20000	RPM

*Limited by the maximum rated speed of the motor

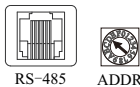
Functions setting

Speed setting modes selection

Speed setting modes	SW1	SW2
Built-in potentiometer RV	OFF	OFF
External potentiometer/ External analog voltage	ON	OFF
PWM	OFF	ON
Pulse frequency	ON	ON

RS-485 communication port

Driver parameter and instructions setting can be finished by upper computer via RS-485. Customer can set communication via ADDR.



Acceleration and deceleration settings

This potentiometer can be used for adjusting acceleration and deceleration time directly. Acceleration is the time the motor needs from stationary state to rated speed state; Deceleration time is the time the motor needs from rated speed state to stationary state. The range can be set is: 0.3s-15s.



Motor pole pair selection

Pole pair can be set as 2, 4 and 5 via SW5-SW6; the default setting is 4 poles. The setting can also be done by upper computer via RS-485.

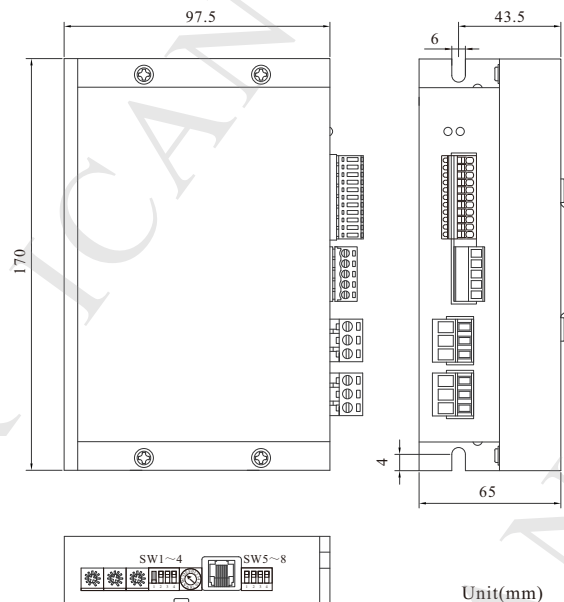


PID closed loop selection

SW7, open/closed loop selection; SW7=OFF closed loop, SW7=ON open loop
SW8, closed loop modes selection; SW8=OFF speed closed loop; SW8=ON speed and current closed loop.



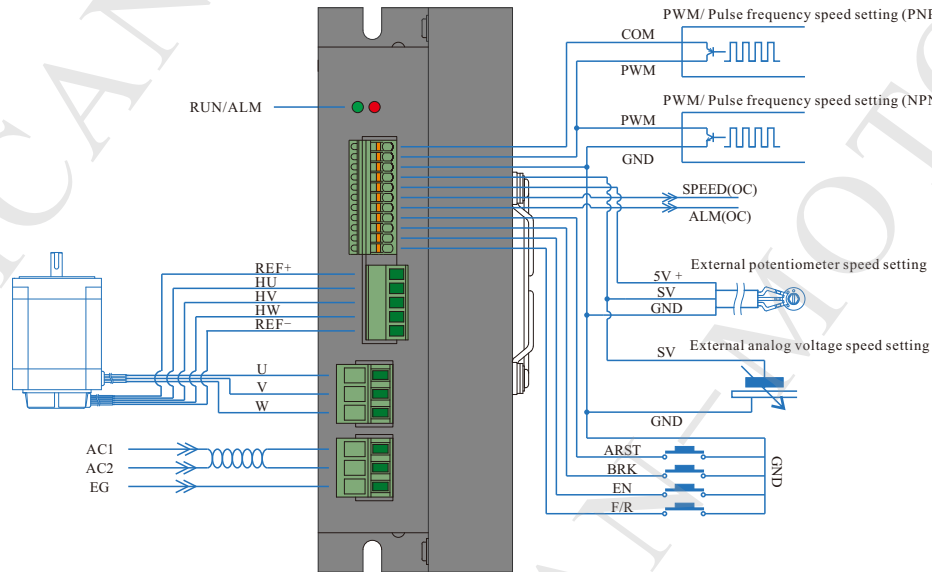
Machine dimension



Port signal description

CN5Terminal	Signal category	Functional Description
COM	Control signal	Source power common port (PLC 24V output port)
PWM		Pulse frequency/PWM speed setting signal input. SW1 and SW2 are for modes selection.
GND		Control signal grounding screw (common port)
SV		External speed setting signal input terminal; when connecting external potentiometer, the middle terminal connects SV, the other two terminals connect to +5V and GND.
5V+		Built-in 5V voltage port, potentiometer can be connected to it for speeding setting.
SPEED		Speed signal output port (open-drain output). The output is pulse frequency corresponding to the rotating speed
ALM		Alarm signal output port (open-drain output). When fault occurs, the voltage changes from high to low voltage.
ARST		Alarm reset port. If ARST connects with GND, fault alarm will be clear.
BRK		Motor brake stop control port; BRK and GND connect in default, motor brake stops when BRK and GND disconnect.
EN		Motor stop signal port; When EN and GND disconnect, motor stops slowly while when they connect, motor runs.
F/R	Motor direction control terminal; F/R and GND disconnect, motor will rotate clockwise, and otherwise, motor will rotate anticlockwise.	
REF+	Motor connection	BLDC Hall signal power positive pole
HU、HV、HW		Hall sensor signal HU、HV、HW
REF-		BLDC Hall signal power negative electrode
U、V、W		Motor line U、V、W phase
AC1	Power connection	Power supply+ (180-265VAC)
AC2		Power supply-
EG		Grounding screw

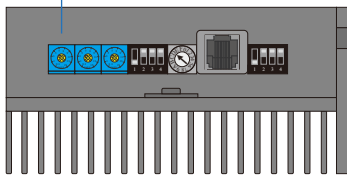
Driver interface and wiring diagram



Speed setting via built-in potentiometer

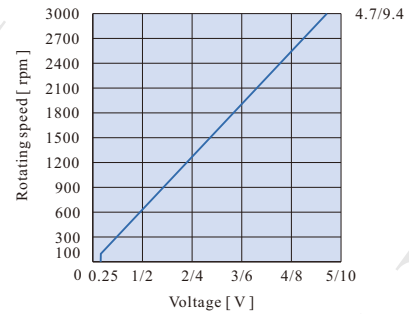
Motor speed increases when RV knobs is rotated clockwise, when anticlockwise, motor speed decreases. If customers use other speed setting modes, RV should be rotated anticlockwise to limit position.

Built-in potentiometer RV



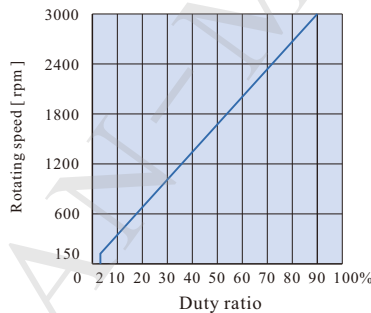
Speed setting via external analog signal

Set SW1=ON and SW2=OFF to select analog voltage speed setting mode. The analog signal voltage can be 0.25-4.7VDC or 0.25-9.4VDC.



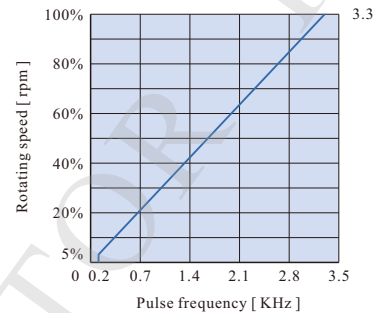
PWM speed setting mode

When customers select PWM speed setting mode, the duty ratio is advised to set as 2%-90%. When duty ratio is 2%, the motor speed reaches 5% of the fastest speed; when the duty ratio is 90%, the motor speed reaches maximum value, which depends on the motor specification and power voltage. (The pulse frequency range: 1-3KHz).



Speed setting via pulse frequency

The pulse frequency can be 200-3.3KHz; when the pulse frequency is 200Hz, the motor speed reaches 5% of fastest speed; when the pulse frequency is 3.3KHz, the motor speed reaches maximum value, which depends on the motor specification and source voltage.



Matched motor

Motor model	Flange size	Output power	Voltage	Rated speed	Rated Torque	Motor length	Detail page
80BLF-5030HBB	80mm	500W	310VDC	3000rpm	1.6Nm	145mm	P38
80BLF-7530HBB	80mm	750W	310VDC	3000rpm	2.5Nm	150mm	P38
86BLF-4030HBB	86mm	400W	310VDC	3000rpm	1.4Nm	112mm	P39
86BLF-5030HBB	86mm	500W	310VDC	3000rpm	1.6Nm	125mm	P39
110BLF-6020HBB	110mm	630W	310VDC	2000rpm	3.0Nm	138mm	P39

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

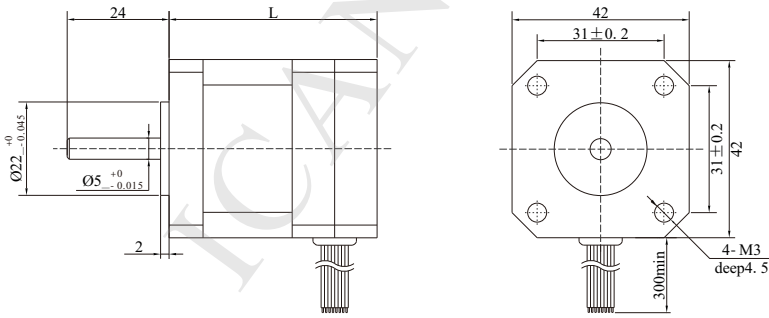
High voltage BLDC driver

BLDC motor

Geared BLDC motor

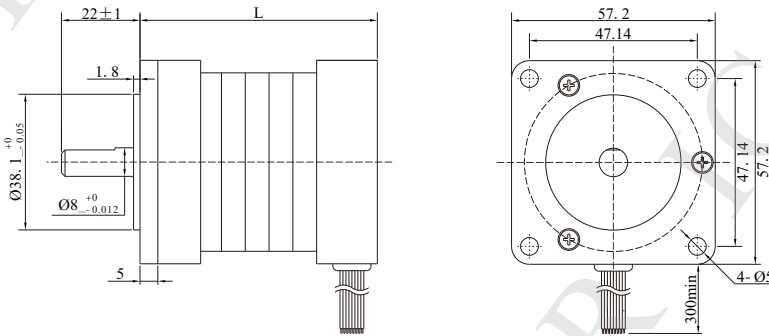
Products selection

42mm BLDC motor



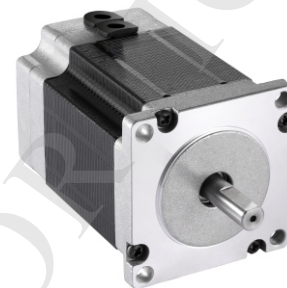
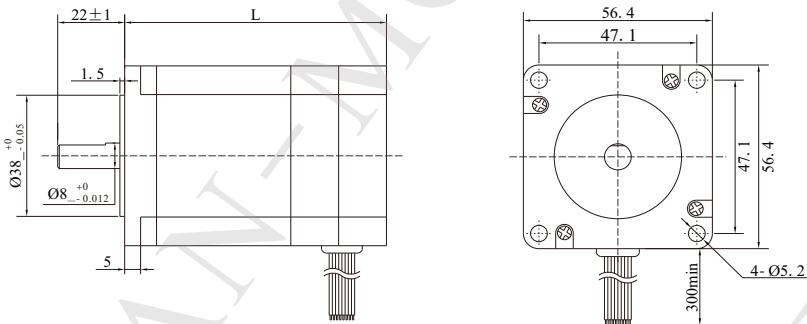
Model	Output Power(W)	Motor Voltage(VDC)	Rated Speed(RPM)	Rated Torque(Nm)	Motor Length(mm)	N.W.(kg)	Matched Driver
42BLF- 0330NBB	30	24	3000	0.1	49	0.33	BLD- 70/BLD- 120A
42BLF- 0630NBB	62	24	3000	0.2	68	0.49	BLD- 70/BLD- 120A

57mm BLDC motor(Round)



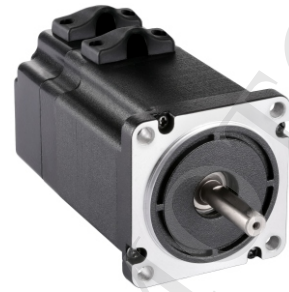
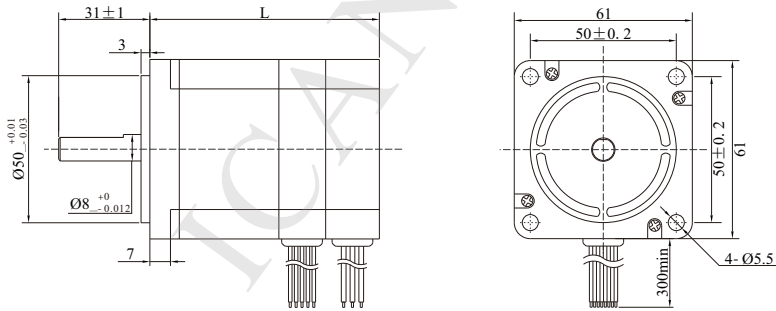
Model	Output Power(W)	Motor Voltage(VDC)	Rated Speed(RPM)	Rated Torque(Nm)	Motor Length(mm)	N.W.(kg)	Matched Driver
57BLY- 0730NBB	69	24	3000	0.22	66.5	0.66	BLD- 120A/BLD- 300B
57BLY- 1030NBB	103	24	3000	0.33	87	0.89	BLD- 120A/BLD- 300B
57BLY- 1230NBB	125	24	3000	0.44	106.5	1.14	BLD- 120A/BLD- 300B

57mm BLDC motor(Square)



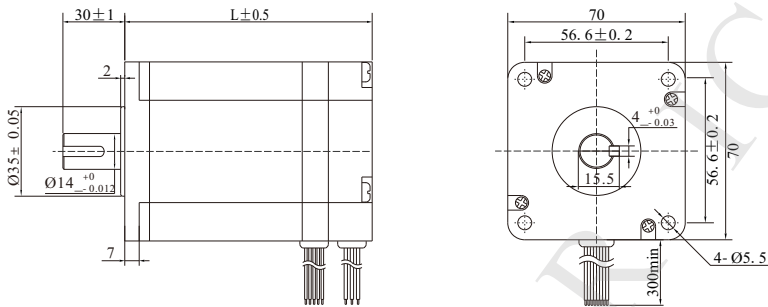
Model	Output Power(W)	Motor Voltage(VDC)	Rated Speed(RPM)	Rated Torque(Nm)	Motor Length(mm)	N.W.(kg)	Matched Driver
57BLF- 0615NBB	65	24	1500	0.4	82	0.95	BLD- 120A/BLD- 300B
57BLF- 0730NBB	65	24	3000	0.22	62	0.65	BLD- 70/BLD- 120A
57BLF- 1230NBB	125	24	3000	0.4	80	0.93	BLD- 120A/BLD- 300B
57BLF- 1830NBB	188	24	3000	0.6	101	1.28	BLD- 300B/BLD- 750
57BLF- 1230HBB	125	310	3000	0.32	80	0.93	BLDH- 350
57BLF- 1830HBB	188	310	3000	0.64	101	1.28	BLDH- 350

60mm BLDC motor



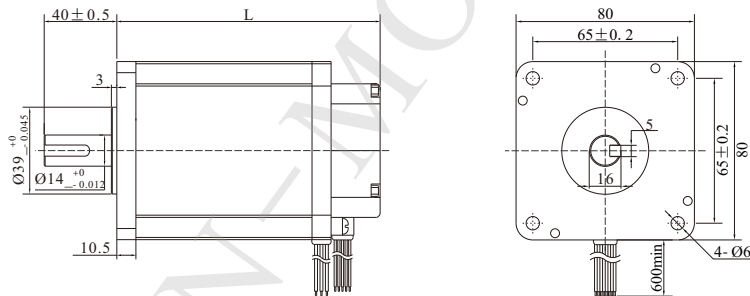
Model	Output Power(W)	Motor Voltage(VDC)	Rotational Speed(RPM)	Rated Torque(Nm)	Motor Length(mm)	N.W.(kg)	Matched Driver
60BLF- 0815NBB	80	24	1500	0.5	100	1.27	BLD- 300B/BLD- 750
60BLF- 0830NBB	80	24	3000	0.25	78	0.86	BLD- 300B/BLD- 750
60BLF- 1630NBB	160	24	3000	0.5	100	1.22	BLD- 300B/BLD- 750
60BLF- 2430LBB	240	48	3000	0.75	120	1.66	BLD- 300B/BLD- 750

70mm BLDC motor



Model	Output Power(W)	Motor Voltage(VDC)	Rated Speed(RPM)	Rated Torque(Nm)	Motor Length(mm)	N.W.(kg)	Matched Driver
70BLF- 3230LBB	320	48	3000	1	120	2.01	BLD- 750

80mm BLDC motor



Model	Output Power(W)	Motor Voltage(VDC)	Rated Speed(RPM)	Rated Torque(Nm)	Motor Length(mm)	N.W.(kg)	Matched Driver
80BLF- 7530LBB	750	48	3000	2.5	150	3.0	BLD- 750
80BLF- 2515HBB	250	310	1500	1.6	145	2.6	BLDH- 350
80BLF- 2530HBB	250	310	3000	0.8	132.5	2.2	BLDH- 350
80BLF- 3530HBB	350	310	3000	1.1	132.5	2.2	BLDH- 350
80BLF- 5030HBB	500	310	3000	1.6	145	2.6	BLDH- 750
80BLF- 7530HBB	750	310	3000	2.5	150	3.0	BLDH- 750

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3 phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

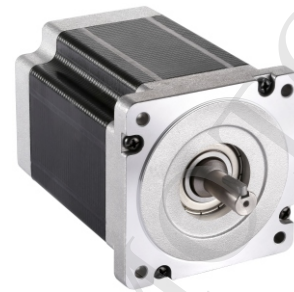
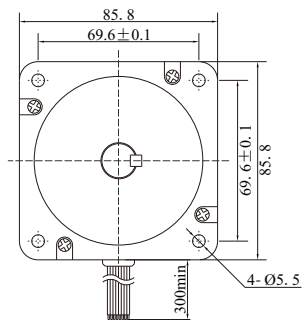
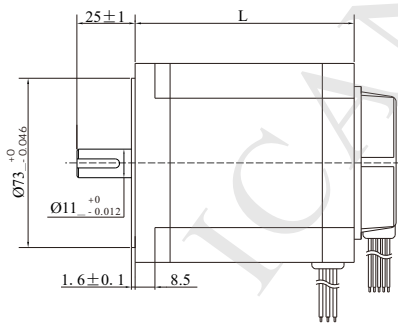
High voltage BLDC driver

BLDC motor

Geared BLDC motor

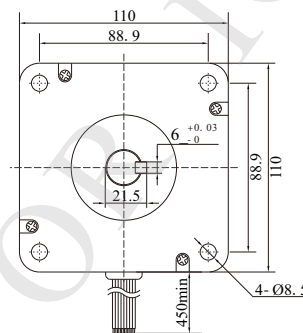
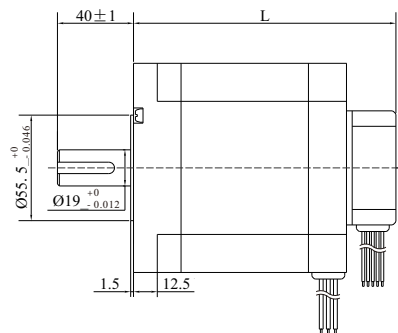
Products selection

86mm BLDC motor



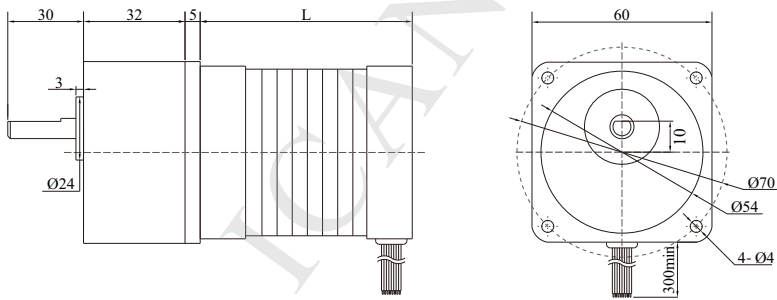
Model	Output Power(W)	Motor Voltage(VDC)	Rated Speed(RPM)	Rated Torque(Nm)	Motor Length(mm)	N.W.(kg)	Matched Driver
86BLF- 2230LBB	220	48	3000	0.7	82	1.77	BLD- 300B/BLD- 750
86BLF- 4430LBB	440	48	3000	1.4	112	2.83	BLD- 750
86BLF- 2230HBB	220	310	3000	0.7	82	1.77	BLDH- 350
86BLF- 3315HBB	330	310	1500	2.1	152	3.9	BLDH- 350
86BLF- 3330HBB	330	310	3000	1.05	96	2.30	BLDH- 350
86BLF- 4030HBB	400	310	3000	1.4	112	2.8	BLDH- 750
86BLF- 5030HBB	500	310	3000	1.6	125	3.4	BLDH- 750

110mm BLDC motor



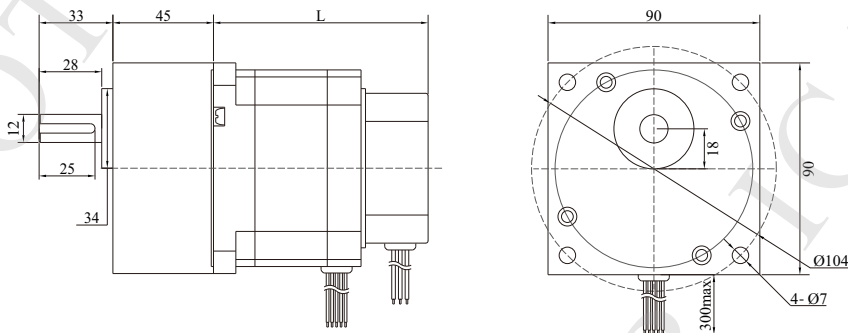
Model	Output Power(W)	Motor Voltage(VDC)	Rated Speed(RPM)	Rated Torque(Nm)	Motor Length(mm)	N.W.(kg)	Matched Driver
110BLF- 6020HBB	630	310	2000	3	138	7.5	BLDH- 750
110BLF- 12520HBB	1250	310	2000	6	198	9.2	BLDH- 750

57mm BLDC gear box motor



Model	Output Power(W)	Motor Voltage(VDC)	Rated Speed(RPM)	Rated Torque(Nm)	Gear Ratio	N.W.(kg)	Matched Driver
57BLY-0730NBB-J	69	24	3000	0.2	1:5/1:7.5	1.2	BLD-120A/BLD-300B
57BLY-1030NBB-J	103	24	3000	0.33	1:10/1:15 1:20/1:30	1.48	BLD-120A/BLD-300B

86mm BLDC gear box motor



Model	Output Power(W)	Motor Voltage(VDC)	Rated Speed(RPM)	Rated Torque(Nm)	Gear Ratio	N.W.(kg)	Matched Driver
86BLF-2230NBB-J	220	24	3000	0.7	1:5/1:7.5 1:10/1:15 1:20/1:30	3.16	BLD-300B

Stepper products series

2 phase stepper driver

3 phase stepper driver

2 phase stepper motor

3phase stepper motor

Stepper motor with reducer

BLDC series

Low voltage BLDC driver

High voltage BLDC driver

BLDC motor

Geared BLDC motor

Products selection



The use of eco-paper printing



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