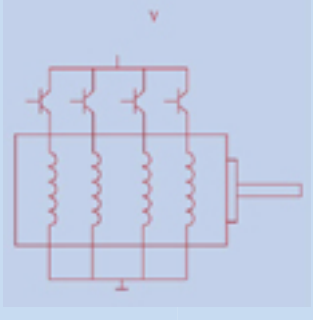
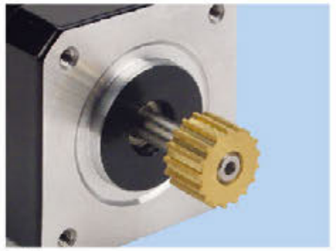
# STEPPING MOTORS

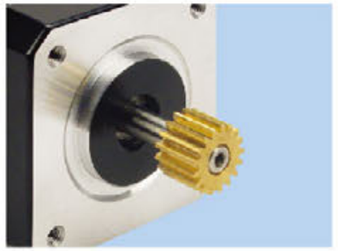


- Digital controlled positioning and speed control operating without position feedback
- Diameter of 20 - 86 mm
- up to IP 68 protection
- Stepping angles of 0,9 - 1,8° / 120°
- High torque and high step angle accuracy
- Spindle stepping motors from 0,003 - 0,04 mm / step
- Digital controler for stepping and spindle stepping motors
- System integration with application engineers
- more than 40 years martket experience
- ISO 9001:2008 certified since 1998

MEYLE

MEYER INDUSTRIE-ELECTRONIC GmbH – MEYLE
Carl-Bosch-Str. 8 · 49525 Lengerich/Germany
Phone +49 (0) 54 81-93 85-0 · Fax +49 (0) 54 81-93 85-12
www.meyle.de · E-Mail: sales@meyle.de


Pulley

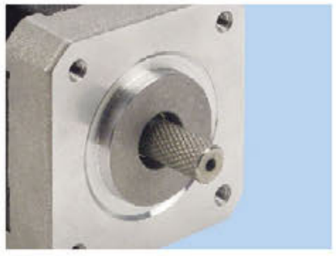

Gear


Plastic Pulley

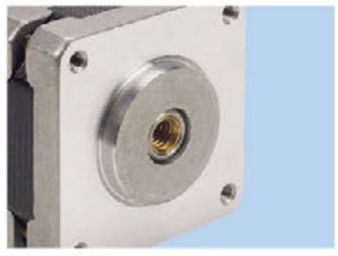

Single Flat

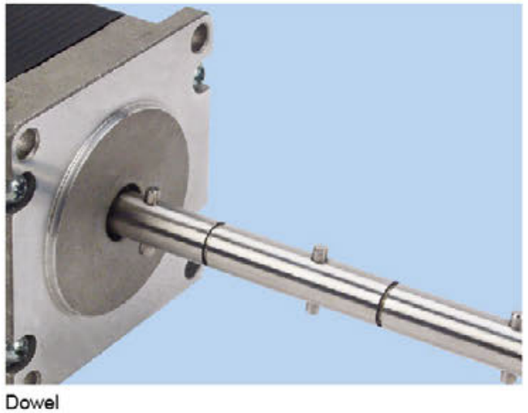

Double Flat

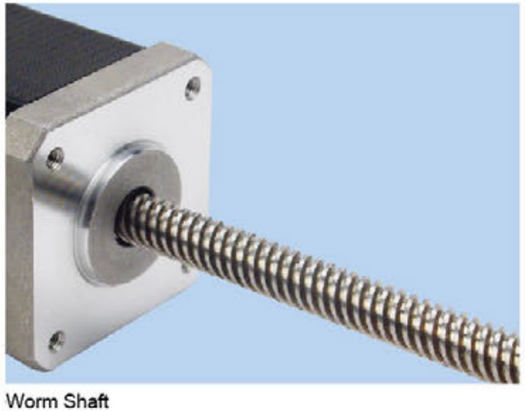

Key Way


Knurl


Hobbed Gear


Hollow Shaft

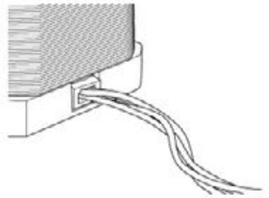

Dowel

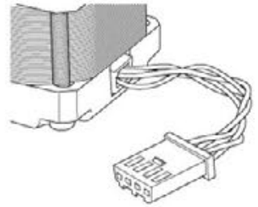

Worm Shaft

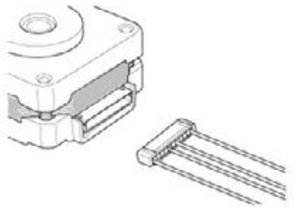
Note:
The styles above are in normal way.
Other special shafts can be customized.

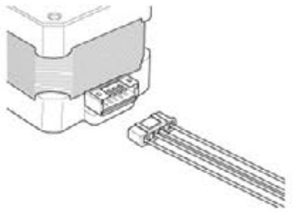


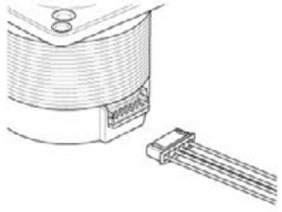


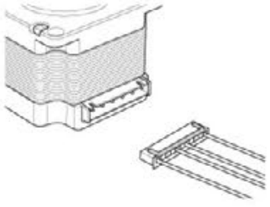

Lead Wire

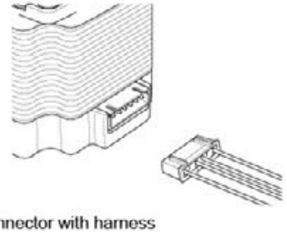

Lead Wire with Connector

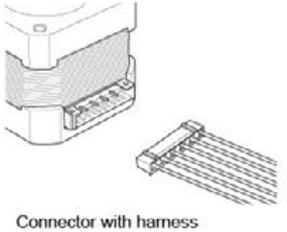

Connector with harness
Motor side: JST S11B-ER (LF)(SN)
Mate with: JST ZHR-11


Connector with harness
Motor side: JST S6B-PH-K (LF)(SN)
Mate with: JST PHR-6


Connector with harness
Motor side: JST S11B-ER (LF)(SN)
Mate with: JST ZHR-11

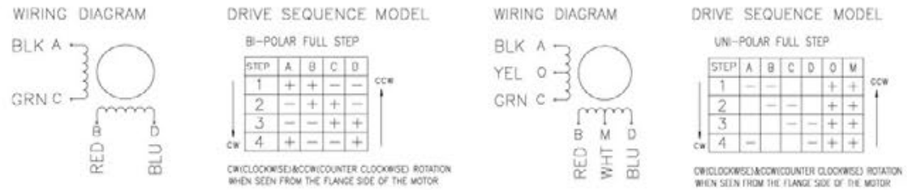

Connector with harness
Motor side: JST S6B-PH-K (LF)(SN)
Mate with: JST PHR-6


Connector with harness
Motor side: JST S6B-EH (LF)(SN)
Mate with: JST PHR-6


Connector with harness
Motor side: JST S11B-XH-A-1 (LF)(SN)
Mate with: JST XHP-11

Note:
The styles above are in normal way.
Other special connectors can be customized.

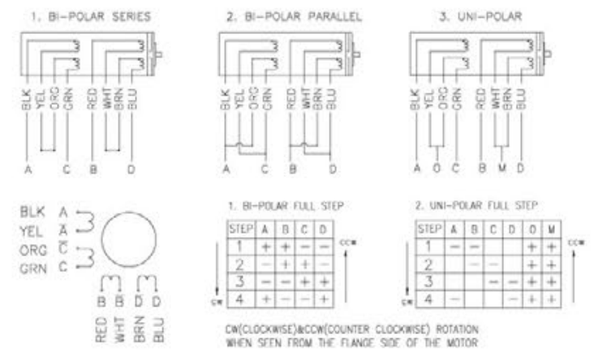
Bipolar - 4 Lead Wire




Unipolar – 6 Lead Wire




8 Lead Wire Series





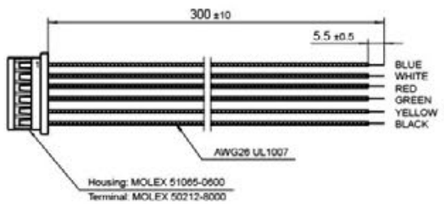

# HB-20S0001-01

1 2 3 4 5 6 7

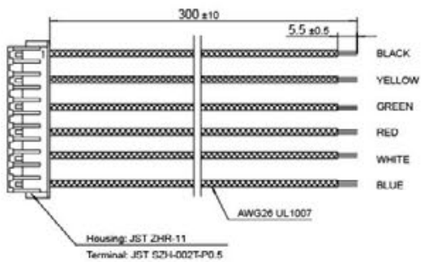
1. Size: Motor outside diameter in tenths of an inch (Motor Dimensions)
2. Type of Stepping Motor: "H" means Hybrid Stepping Motor
3. Type of Step Angle:
   - S: Step angle 1.8°, stator with 8 polar
   - C: Step angle 0.9°, stator with 8 polar
   - T: Step angle 1.2°
   - Y: Step angle 0.6°
   - F: Step angle 0.72°
4. Length of stator core
5. Type of lead wires:
   - "0" indicates connector only
   - "4, 5, 6, 8" indicates number of lead wires
6. Electric variation: variety of current, torque, etc.
7. Mechanical variation: variety of shaft, lead wires, screws, etc.

Accessory Harness Model

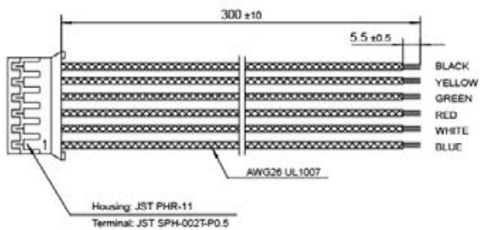
HB-28S series




HB-35S series




HB-42S series




Note:
The styles above are in normal way.
Other special harnesses can be customized.

# HB–20S

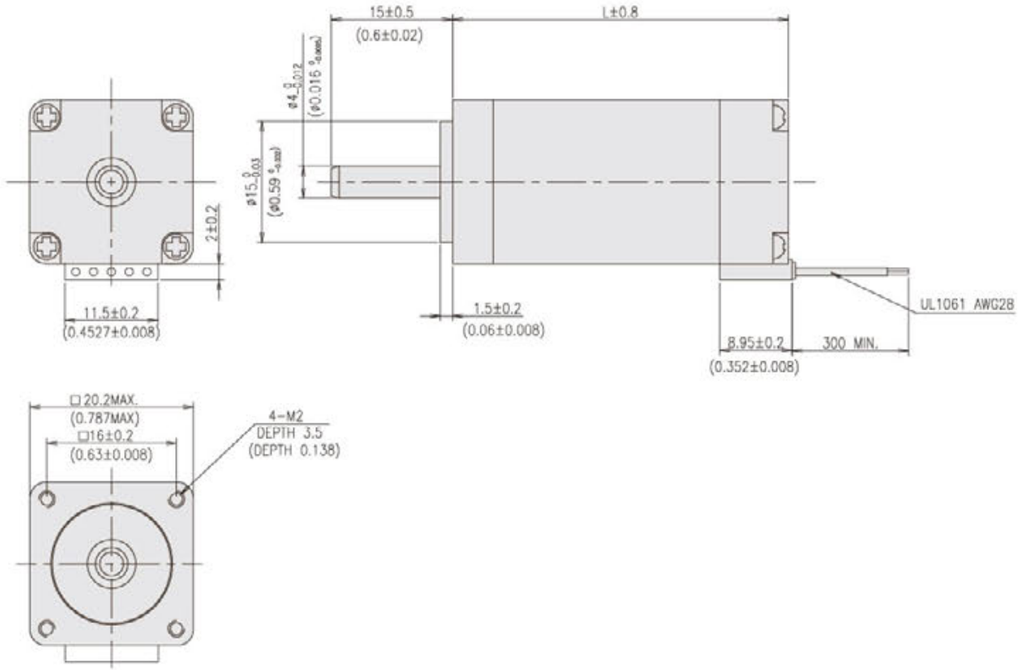
RoHS COMPLIANT 2002/95/EC

□20mm | 1.8° | Bipolar

## Bipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-20S2001 | 1.8° | 2.8 | 0.60 | 6.6 | 1.8 | 1.19 | 2 | 4 | 100 | 30 |
| HB-20S4001 | 1.8° | 6.0 | 0.50 | 12.0 | 3.3 | 38 | 3.6 | 4 | 150 | 42 |
| HB-20S4002 | 1.8° | 4.3 | 0.80 | 5.3 | 1.4 | 39 | 3.6 | 4 | 150 | 42 |

## Dimensions




**mm(inch)**



Note: If need special specification,pls contact with us.



# HB–28S

RoHS COMPLIANT 2002/95/EC

□28mm | 1.8° | Unipolar | Bipolar

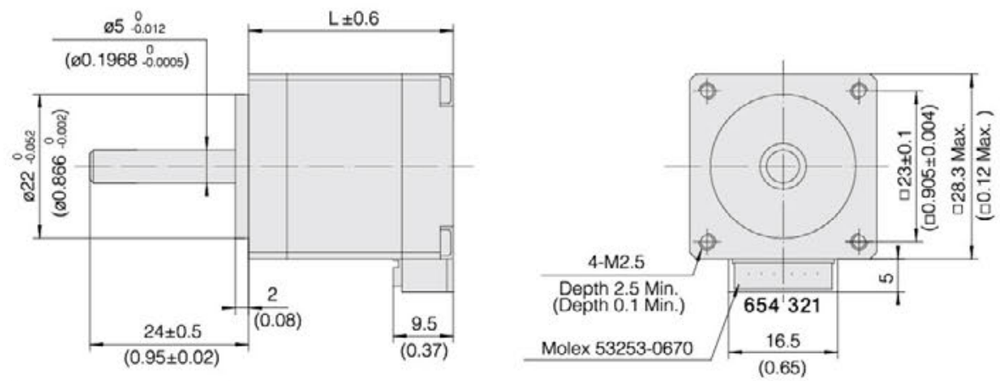
## Unipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-28S2601 | 1.8° | 1.9 | 1.00 | 1.9 | 0.9 | 35 | 9 | 6 | 100 | 31 |
| HB-28S2602 | 1.8° | 4.8 | 0.45 | 10.7 | 4.7 | 37 | 9 | 6 | 100 | 31 |
| HB-28S4601 | 1.8° | 3.4 | 1.00 | 3.4 | 1.6 | 68 | 12 | 6 | 150 | 40 |
| HB-28S4602 | 1.8° | 6.6 | 0.50 | 13.2 | 5.7 | 64 | 12 | 6 | 150 | 40 |
| HB-28S6601 | 1.8° | 4.6 | 1.00 | 4.6 | 2.3 | 90 | 18 | 6 | 200 | 51 |
| HB-28S6602 | 1.8° | 7.4 | 0.65 | 11.4 | 6.3 | 97 | 18 | 6 | 200 | 51 |

## Bipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-28S2401 | 1.8° | 2.8 | 1.50 | 0.9 | 0.9 | 35 | 9 | 4 | 100 | 31 |
| HB-28S2402 | 1.8° | 6.9 | 0.65 | 5.3 | 4.7 | 35 | 9 | 4 | 100 | 31 |
| HB-28S4401 | 1.8° | 4.8 | 0.40 | 1.7 | 1.6 | 96 | 12 | 4 | 150 | 40 |
| HB-28S4402 | 1.8° | 9.3 | 0.70 | 6.6 | 5.7 | 90 | 12 | 4 | 150 | 40 |
| HB-28S6401 | 1.8° | 6.4 | 1.40 | 2.3 | 2.3 | 133 | 18 | 4 | 200 | 51 |
| HB-28S6402 | 1.8° | 10.2 | 0.90 | 5.7 | 6.3 | 141 | 18 | 4 | 200 | 51 |

## Dimensions

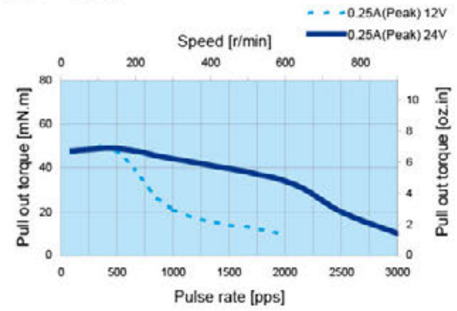



**mm(inch)**

Note: If need special specification,pls contact with us.

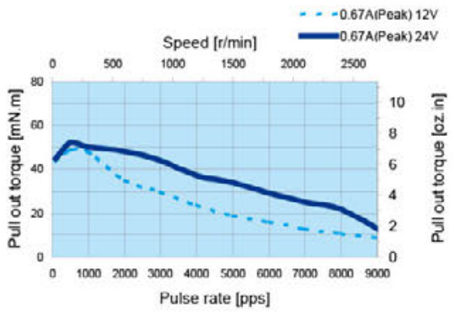
### HB-28S2402

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD2528
Mode: Full Step



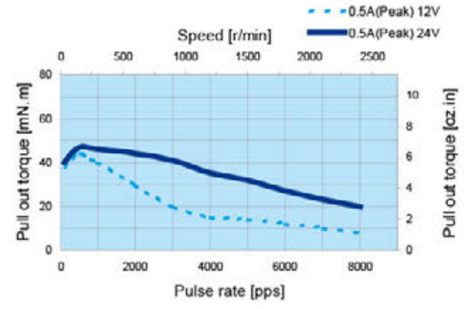

### HB-28S2403

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD2528
Mode: Full Step



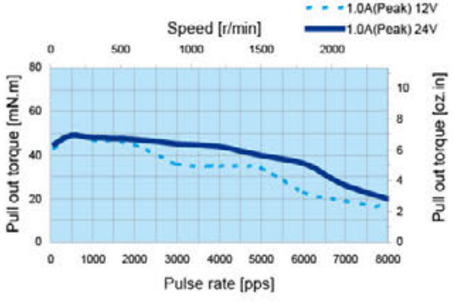

### HB-28S4602

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD2528
Mode: Full Step



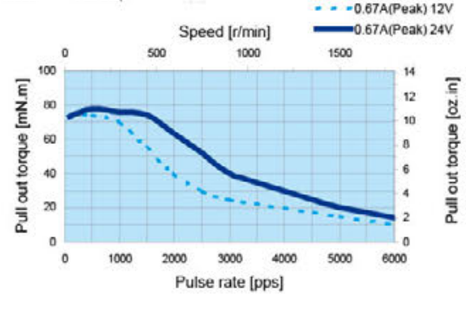

### HB-28S2601

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD2528
Mode: Full Step



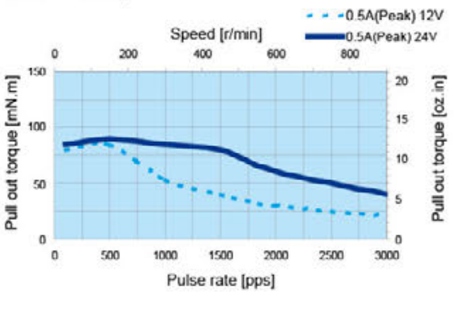

### HB-28S4601

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD2528
Mode: Full Step




### HB-28S6601

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD2528
Mode: Full Step






Note: If need special specification,pls contact with us.



## HB–42S

RoHS COMPLIANT 2002/95/EC

□42mm | 1.8° | Unipolar | Bipolar

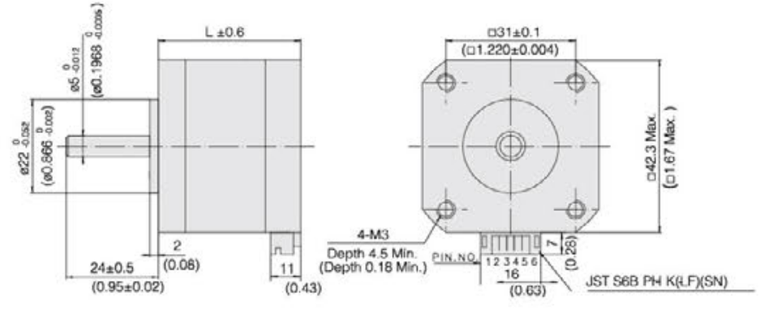
### Unipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-42S1001 | 1.8° | 3.9 | 1.0 | 3.9 | 3.0 | 200 | 40 | 6 | 210 | 33.5 |
| HB-42S1002 | 1.8° | 5.0 | 0.8 | 6.3 | 4.7 | 200 | 40 | 6 | 210 | 33.5 |
| HB-42S1003 | 1.8° | 9.5 | 0.4 | 23.7 | 18.9 | 200 | 40 | 6 | 210 | 33.5 |
| HB-42S3001 | 1.8° | 3.5 | 1.2 | 2.9 | 3.3 | 272 | 57 | 6 | 280 | 39.5 |
| HB-42S3002 | 1.8° | 5.8 | 0.8 | 7.3 | 6.8 | 258 | 57 | 6 | 280 | 39.5 |
| HB-42S3003 | 1.8° | 11.0 | 0.4 | 27.6 | 27.0 | 258 | 57 | 6 | 280 | 39.5 |
| HB-42S5001 | 1.8° | 4.2 | 1.2 | 3.5 | 2.9 | 441 | 82 | 6 | 360 | 47.5 |
| HB-42S5002 | 1.8° | 5.7 | 0.9 | 6.5 | 5.3 | 444 | 82 | 6 | 360 | 47.5 |
| HB-42S5003 | 1.8° | 9.8 | 0.5 | 19.6 | 17.0 | 441 | 82 | 6 | 360 | 47.5 |
| HB-42S7001 | 1.8° | 3.0 | 2 | 1.5 | 3.3 | 650 | 128 | 6 | 610 | 59.7 |
| HB-42S7002 | 1.8° | 6.8 | 1 | 6.8 | 13.2 | 650 | 128 | 6 | 610 | 59.7 |

### Bipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-42S1004 | 1.8° | 4.7 | 1.7 | 1.4 | 2.1 | 283 | 40 | 4 | 210 | 33.5 |
| HB-42S1005 | 1.8° | 7.2 | 1.15 | 3.1 | 4.7 | 288 | 40 | 4 | 210 | 33.5 |
| HB-42S1006 | 1.8° | 14.2 | 0.6 | 11.8 | 18.9 | 300 | 40 | 4 | 210 | 33.5 |
| HB-42S3004 | 1.8° | 4.6 | 1.80 | 1.3 | 2.5 | 357 | 57 | 4 | 280 | 39.5 |
| HB-42S3005 | 1.8° | 8.0 | 1.10 | 3.6 | 6.8 | 355 | 57 | 4 | 280 | 39.5 |
| HB-42S3006 | 1.8° | 15.2 | 0.55 | 13.8 | 27.0 | 355 | 57 | 4 | 280 | 39.5 |
| HB-42S5004 | 1.8° | 6.0 | 1.70 | 1.8 | 2.9 | 625 | 82 | 4 | 360 | 47.5 |
| HB-42S5005 | 1.8° | 8.4 | 1.20 | 3.5 | 6.5 | 655 | 82 | 4 | 360 | 47.5 |
| HB-42S5006 | 1.8° | 20.7 | 0.60 | 17.2 | 26.5 | 662 | 82 | 4 | 360 | 47.5 |
| HB-42S7003 | 1.8° | 4.2 | 2.80 | 0.8 | 3.3 | 910 | 128 | 4 | 610 | 59.7 |
| HB-42S7004 | 1.8° | 9.5 | 1.40 | 3.4 | 13.2 | 910 | 128 | 4 | 610 | 59.7 |

### Dimensions



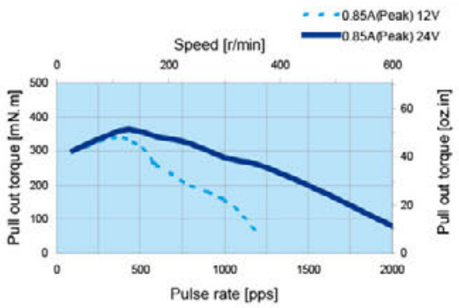

mm(inch)



Note: If need special specification,pls contact with us.

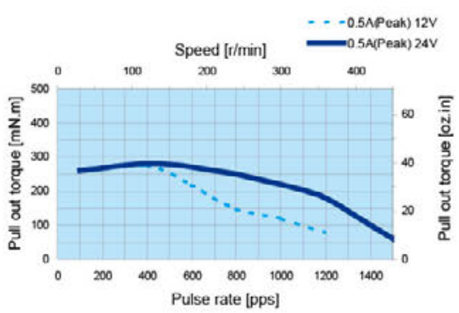
## HB-42S1002

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



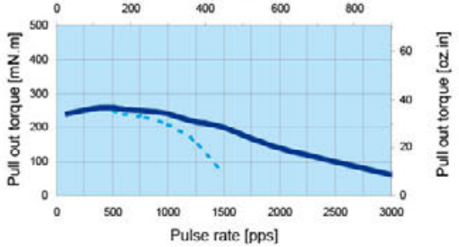

## HB-42S1003

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



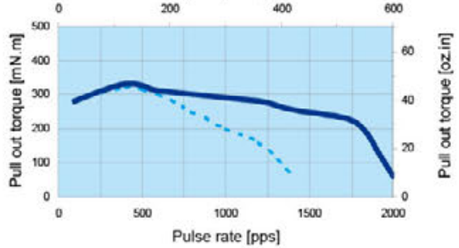

## HB-42S1001

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



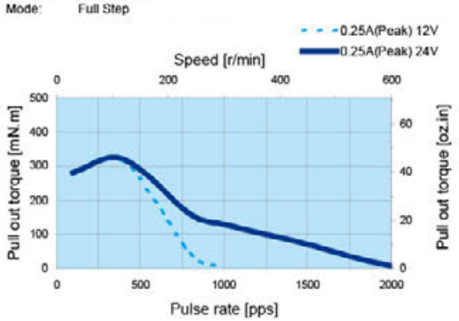

## HB-42S1002

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



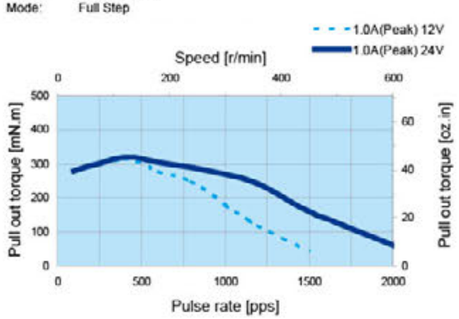

## HB-42S1004

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




## HB-42S1005

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



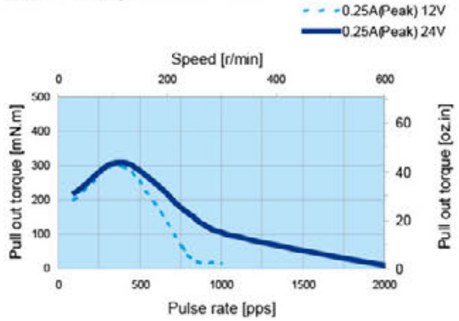



Note: If need special specification,pls contact with us.



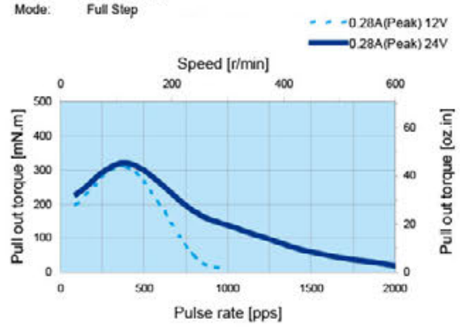
## HB-42S1006

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



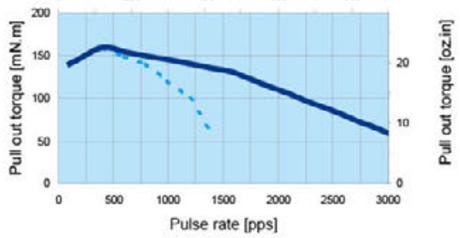

## HB-42S1007

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



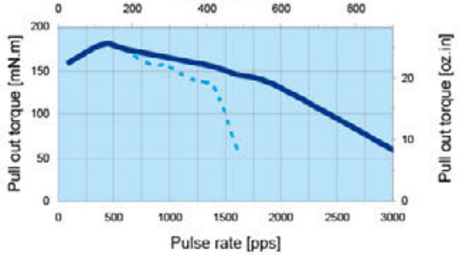

## HB-42S3006

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



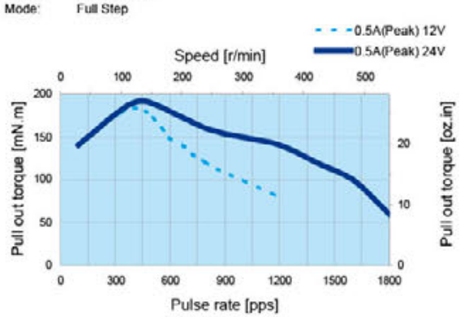

## HB-42S3007

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



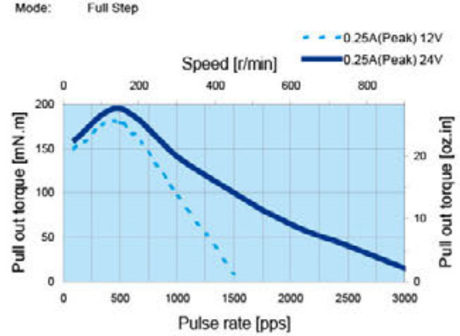

## HB-42S1008

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




## HB-42S3009

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




Note: If need special specification,pls contact with us.

# HB–42C 系列

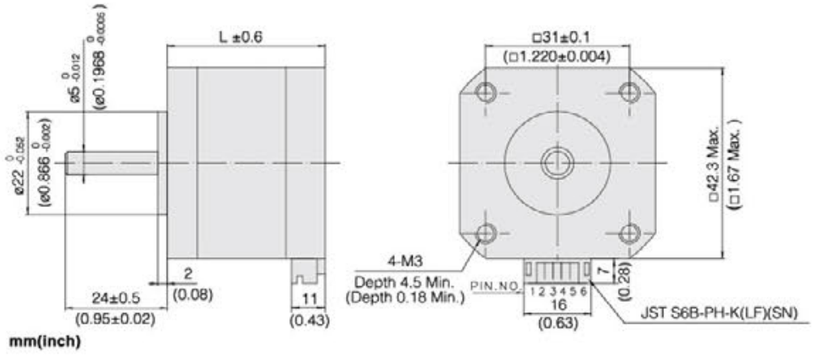
RoHS COMPLIANT 2002/95/EC

□42mm | 0.9° | Bipolar

## Bipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-42C1001 | 0.9° | 3.2 | 2 | 1.6 | 2.0 | 188 | 27 | 4 | 140 | 29.5 |
| HB-42C1002 | 0.9° | 4.3 | 1.5 | 2.8 | 3.5 | 185 | 27 | 4 | 140 | 29.5 |
| HB-42C1003 | 0.9° | 10.9 | 0.6 | 18.2 | 24.2 | 194 | 27 | 4 | 140 | 29.5 |
| HB-42C3001 | 0.9° | 4.7 | 2.00 | 2.4 | 2.7 | 393 | 57 | 4 | 280 | 39.5 |
| HB-42C3002 | 0.9° | 8.5 | 1.10 | 7.7 | 9.5 | 405 | 57 | 4 | 280 | 39.5 |
| HB-42C3003 | 0.9° | 15.3 | 0.55 | 27.9 | 34.8 | 388 | 57 | 4 | 280 | 39.5 |
| HB-42C5001 | 0.9° | 3.3 | 1.50 | 2.2 | 6.4 | 530 | 82 | 4 | 360 | 47.5 |
| HB-42C5002 | 0.9° | 5.0 | 1.00 | 5.0 | 14.4 | 530 | 82 | 4 | 360 | 47.5 |
| HB-42C5003 | 0.9° | 7.8 | 0.70 | 11.1 | 32.4 | 557 | 82 | 4 | 360 | 47.5 |

## Dimensions




mm(inch)

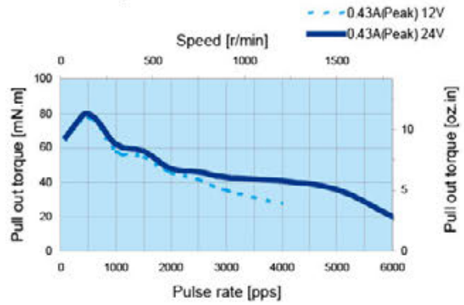


Note: If need special specification,pls contact with us.



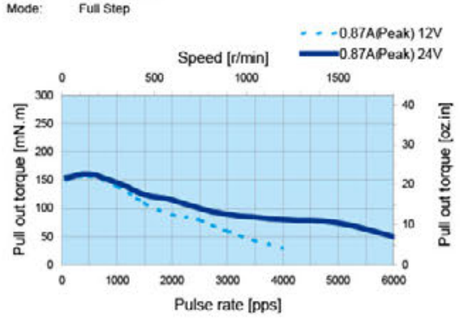
### HB-42C1003

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



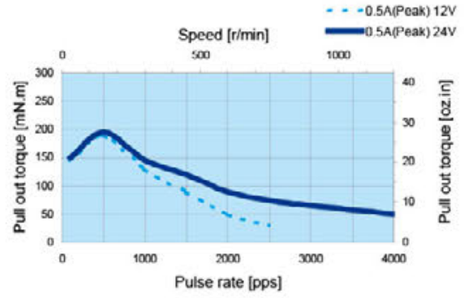

### HB-42C1004

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



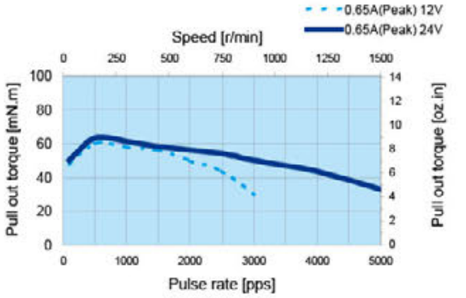

### HB-42C1005

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



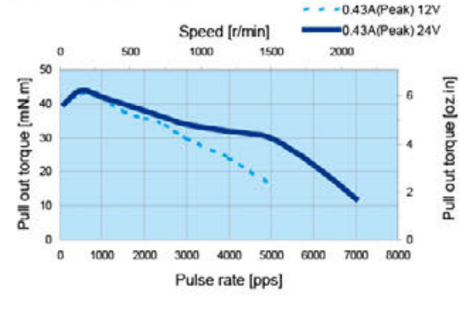

### HB-42C1006

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



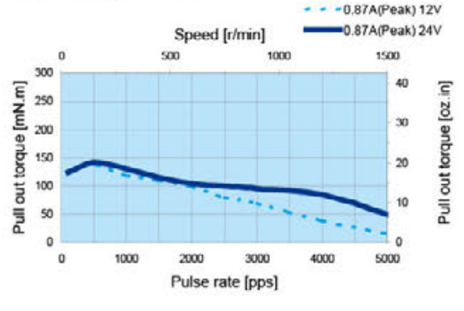

### HB-42C5004

Conditions: Uni-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




### HB-42C5002

Conditions: Uni-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



# HB–57S

RoHS COMPLIANT 2002/95/EC

□57mm | 1.8° | Unipolar | High torque output

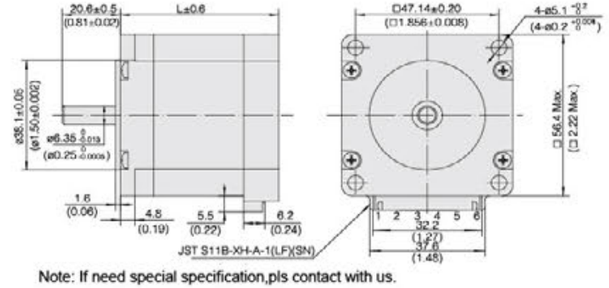
## Unipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-57S1001 | 1.8° | 2.0 | 3.0 | 0.7 | 1.0 | 663 | 170 | 6 | 420 | 42.3 |
| HB-57S1002 | 1.8° | 3.1 | 2.0 | 1.5 | 2.3 | 674 | 170 | 6 | 420 | 42.3 |
| HB-57S1003 | 1.8° | 6.0 | 1.0 | 6.0 | 8.8 | 663 | 170 | 6 | 420 | 42.3 |
| HB-57S3001 | 1.8° | 2.1 | 3.0 | 0.7 | 1.0 | 758 | 220 | 6 | 550 | 48.3 |
| HB-57S3002 | 1.8° | 3.2 | 2.0 | 1.6 | 2.3 | 770 | 220 | 6 | 550 | 48.3 |
| HB-57S3003 | 1.8° | 6.3 | 1.0 | 6.3 | 9.0 | 758 | 220 | 6 | 550 | 48.3 |
| HB-57S4001 | 1.8° | 2.4 | 3.0 | 0.8 | 1.2 | 1000 | 280 | 6 | 600 | 53.3 |
| HB-57S4002 | 1.8° | 3.7 | 2.0 | 1.9 | 2.8 | 1016 | 280 | 6 | 600 | 53.3 |
| HB-57S4003 | 1.8° | 7.3 | 1.0 | 7.3 | 10.8 | 1000 | 280 | 6 | 600 | 53.3 |
| HB-57S6001 | 1.8° | 3.5 | 3.0 | 1.2 | 1.8 | 1680 | 480 | 6 | 1000 | 77.3 |
| HB-57S6002 | 1.8° | 5.5 | 2.0 | 2.7 | 4.2 | 1707 | 480 | 6 | 1000 | 77.3 |
| HB-57S6003 | 1.8° | 10.7 | 1.0 | 10.7 | 16.2 | 1680 | 480 | 6 | 1000 | 77.3 |
| HB-57S7001 | 1.8° | 3.0 | 3.5 | 0.86 | 1.8 | 2030 | 530 | 6 | 1060 | 83.3 |
| HB-57S7002 | 1.8° | 7.2 | 1.5 | 4.78 | 10.0 | 2030 | 530 | 6 | 1060 | 83.3 |

## Bipolar

| Model No. | (dog) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-57S1004 | 1.8° | 2.8 | 4.2 | 0.33 | 1.0 | 928 | 170 | 4 | 510 | 42.3 |
| HB-57S1005 | 1.8° | 4.3 | 2.8 | 0.77 | 2.3 | 943 | 170 | 4 | 510 | 42.3 |
| HB-57S1006 | 1.8° | 8.4 | 1.4 | 3 | 8.8 | 928 | 170 | 4 | 510 | 42.3 |
| HB-57S3004 | 1.8° | 2.9 | 4.2 | 0.35 | 1.0 | 1061 | 220 | 4 | 620 | 48.3 |
| HB-57S3005 | 1.8° | 4.5 | 2.8 | 0.8 | 2.3 | 1078 | 220 | 4 | 620 | 48.3 |
| HB-57S3006 | 1.8° | 8.8 | 1.4 | 3.2 | 9.0 | 1061 | 220 | 4 | 620 | 48.3 |
| HB-57S4004 | 1.8° | 3.4 | 4.2 | 0.4 | 1.2 | 1400 | 280 | 4 | 710 | 53.3 |
| HB-57S4005 | 1.8° | 5.2 | 2.8 | 0.9 | 2.8 | 1422 | 280 | 4 | 710 | 53.3 |
| HB-57S4006 | 1.8° | 10.2 | 1.4 | 3.9 | 10.8 | 1400 | 280 | 4 | 710 | 53.3 |
| HB-57S6004 | 1.8° | 4.9 | 4.2 | 0.6 | 1.8 | 2352 | 480 | 4 | 1100 | 77.3 |
| HB-57S6005 | 1.8° | 7.7 | 2.8 | 1.4 | 4.2 | 2389 | 480 | 4 | 1100 | 77.3 |
| HB-57S6006 | 1.8° | 15.0 | 1.4 | 5.4 | 16.2 | 2352 | 480 | 4 | 1100 | 77.3 |
| HB-57S7003 | 1.8° | 4.3 | 5.0 | 0.43 | 1.8 | 2640 | 530 | 4 | 1160 | 83.3 |
| HB-57S7004 | 1.8° | 10.0 | 2.0 | 2.4 | 10.0 | 2700 | 530 | 4 | 1160 | 83.3 |

## Dimensions




mm(inch)

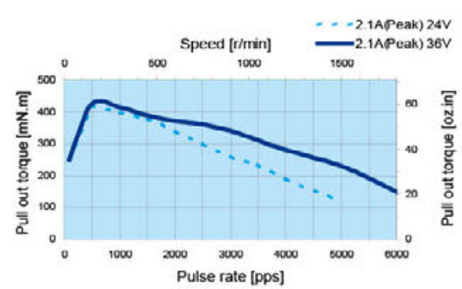
Note: If need special specification,pls contact with us.





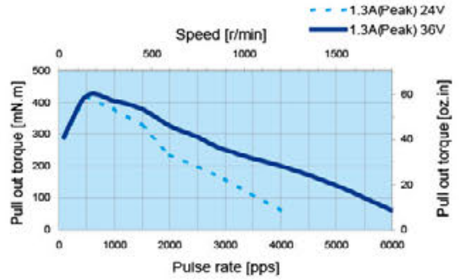
### HB-57S1002

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



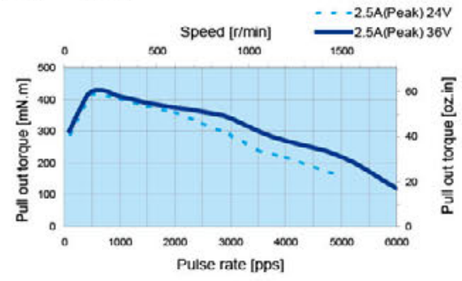

### HB-57S1003

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



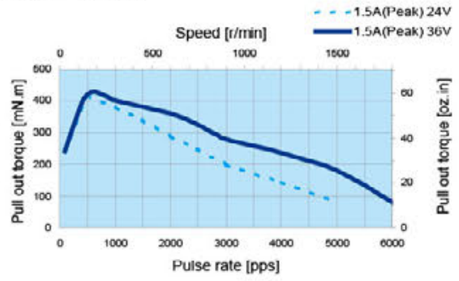

### HB-57S1004

Conditions: Bi-polar Constant Current Drive
Driver: DMBSD4548
Mode: Full Step



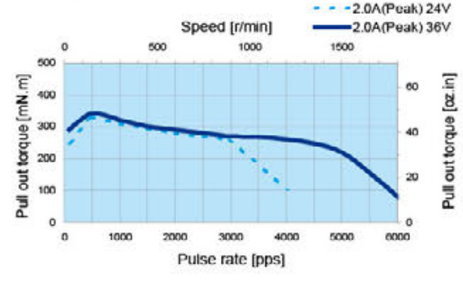

### HB-57S1005

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



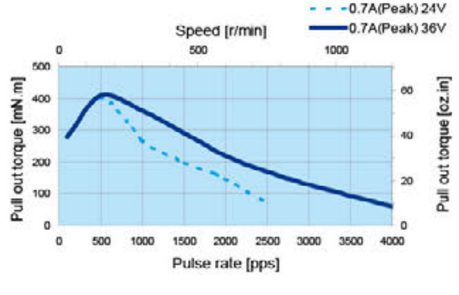

### HB-57S1006

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




### HB-57S1007

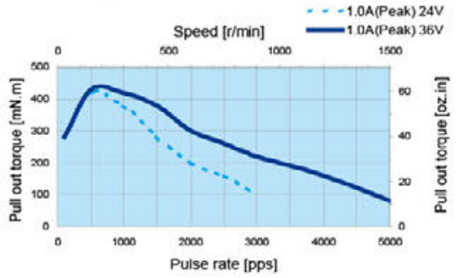
Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




Note: If need special specification,pls contact with us.

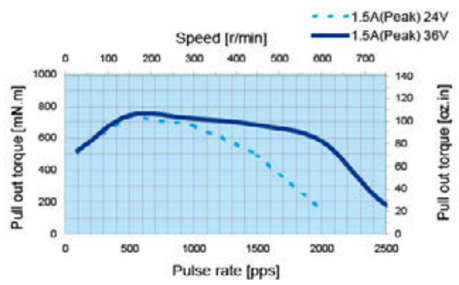
### HB-57S1008

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



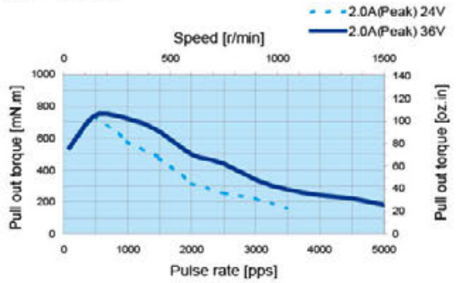

### HB-57S3002

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



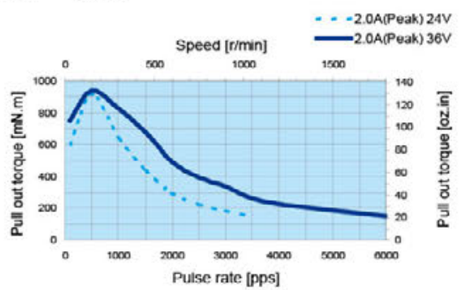

### HB-57S3003

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



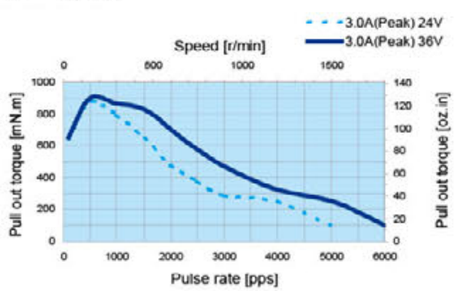

### HB-57S4002

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



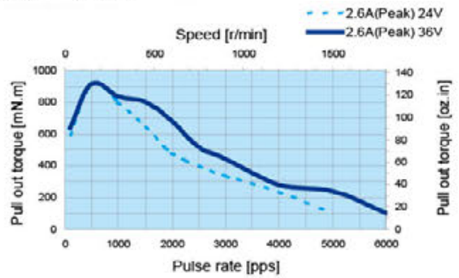

### HB-57S4003

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




### HB-57S3005

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step






Note: If need special specification,pls contact with us.



## HB–57FS

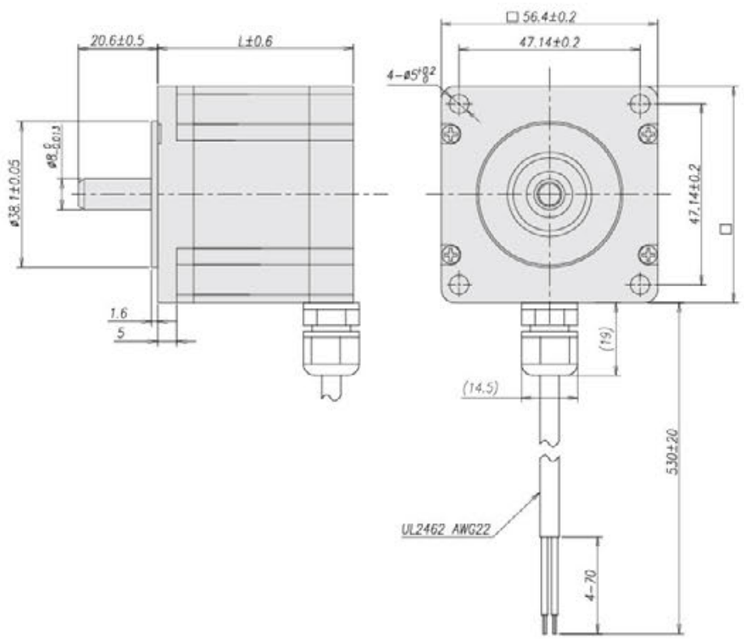
RoHS COMPLIANT 2002/95/EC


| □57mm | 1.8° | Unipolar | Waterproof performance is strong |
|---|---|---|---|

### Bipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | ($g.cm^2$) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-57FS1004 | 1.8° | 2.8 | 4.2 | 0.33 | 1.0 | 928 | 170 | 4 | 530 | 44 |
| HB-57FS1005 | 1.8° | 4.3 | 2.8 | 0.77 | 2.3 | 943 | 170 | 4 | 530 | 44 |
| HB-57FS1006 | 1.8° | 8.4 | 1.4 | 3 | 8.8 | 928 | 170 | 4 | 530 | 44 |
| HB-57FS3004 | 1.8° | 2.9 | 4.2 | 0.35 | 1.0 | 1061 | 220 | 4 | 640 | 50 |
| HB-57FS3005 | 1.8° | 4.5 | 2.8 | 0.8 | 2.3 | 1078 | 220 | 4 | 640 | 50 |
| HB-57FS3006 | 1.8° | 8.8 | 1.4 | 3.2 | 9.0 | 1061 | 220 | 4 | 640 | 50 |
| HB-57FS4004 | 1.8° | 3.4 | 4.2 | 0.4 | 1.2 | 1400 | 280 | 4 | 730 | 55 |
| HB-57FS4005 | 1.8° | 5.2 | 2.8 | 0.9 | 2.8 | 1422 | 280 | 4 | 730 | 55 |
| HB-57FS4006 | 1.8° | 10.2 | 1.4 | 3.9 | 10.8 | 1400 | 280 | 4 | 730 | 55 |
| HB-57FS6004 | 1.8° | 4.9 | 4.2 | 0.6 | 1.8 | 2352 | 480 | 4 | 1120 | 79 |
| HB-57FS6005 | 1.8° | 7.7 | 2.8 | 1.4 | 4.2 | 2389 | 480 | 4 | 1120 | 79 |
| HB-57FS6006 | 1.8° | 15.0 | 1.4 | 5.4 | 16.2 | 2352 | 480 | 4 | 1120 | 79 |
| HB-57FS7003 | 1.8° | 4.3 | 5.0 | 0.43 | 1.8 | 2640 | 530 | 4 | 1180 | 85 |
| HB-57FS7004 | 1.8° | 10.0 | 2.1 | 2.4 | 10.0 | 2700 | 530 | 4 | 1180 | 85 |

### Dimensions




mm(inch)

Note: If need special specification,pls contact with us.

# HB–60S

RoHS COMPLIANT 2002/95/EC

□60mm | 1.8° | Unipolar | Bipolar

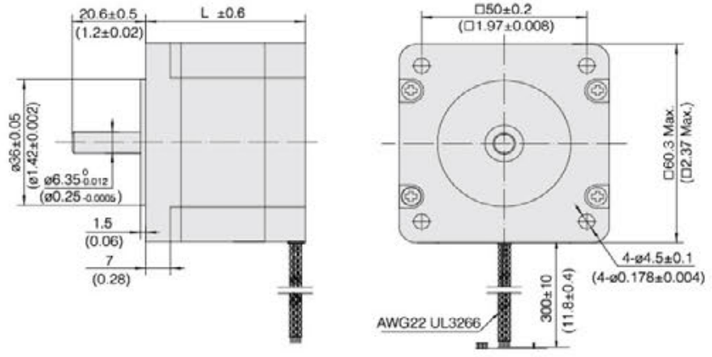
## Unipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-60S1601 | 1.8° | 2.2 | 3.0 | 0.74 | 0.8 | 793 | 280 | 6 | 600 | 44 |
| HB-60S1602 | 1.8° | 3.4 | 2.0 | 1.7 | 1.8 | 793 | 280 | 6 | 600 | 44 |
| HB-60S2603 | 1.8° | 6.7 | 1.0 | 6.7 | 7.2 | 793 | 280 | 6 | 600 | 44 |
| HB-60S2601 | 1.8° | 2.7 | 3.0 | 0.9 | 1.5 | 1311 | 450 | 6 | 800 | 54 |
| HB-60S2602 | 1.8° | 4.1 | 2.0 | 2.0 | 3.3 | 1311 | 450 | 6 | 800 | 54 |
| HB-60S2603 | 1.8° | 8.1 | 1.0 | 8.1 | 13.3 | 1311 | 450 | 6 | 800 | 54 |
| HB-60S4601 | 1.8° | 3.2 | 3.0 | 1.1 | 1.6 | 1571 | 560 | 6 | 1050 | 65 |
| HB-60S4602 | 1.8° | 4.8 | 2.0 | 2.4 | 3.6 | 1571 | 560 | 6 | 1050 | 65 |
| HB-60S4603 | 1.8° | 9.6 | 1.0 | 9.6 | 14.3 | 1571 | 560 | 6 | 1050 | 65 |
| HB-60S6601 | 1.8° | 4.3 | 3.0 | 1.4 | 3.0 | 2333 | 900 | 6 | 1400 | 85 |
| HB-60S6602 | 1.8° | 6.9 | 2.0 | 3.5 | 6.7 | 2333 | 900 | 6 | 1400 | 85 |
| HB-60S6603 | 1.8° | 13.7 | 1.0 | 13.7 | 26.7 | 2333 | 900 | 6 | 1400 | 85 |

## Bipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-60S1401 | 1.8° | 3.1 | 4.2 | 0.37 | 0.8 | 1110 | 280 | 4 | 600 | 44 |
| HB-60S1402 | 1.8° | 4.8 | 2.8 | 0.85 | 1.8 | 1110 | 280 | 4 | 600 | 44 |
| HB-60S2403 | 1.8° | 9.4 | 1.4 | 3.36 | 7.2 | 1110 | 280 | 4 | 600 | 44 |
| HB-60S2401 | 1.8° | 3.7 | 4.2 | 0.44 | 1.5 | 1836 | 450 | 4 | 800 | 54 |
| HB-60S2402 | 1.8° | 5.7 | 2.8 | 1.02 | 3.3 | 1836 | 450 | 4 | 800 | 54 |
| HB-60S2403 | 1.8° | 11.3 | 1.4 | 4.04 | 13.3 | 1836 | 450 | 4 | 800 | 54 |
| HB-60S4401 | 1.8° | 4.4 | 4.2 | 0.53 | 1.6 | 2200 | 560 | 4 | 1050 | 65 |
| HB-60S4402 | 1.8° | 6.8 | 2.8 | 1.21 | 3.6 | 2200 | 560 | 4 | 1050 | 65 |
| HB-60S4403 | 1.8° | 13.4 | 1.4 | 4.80 | 14.3 | 2200 | 560 | 4 | 1050 | 65 |
| HB-60S6401 | 1.8° | 6.1 | 4.2 | 0.72 | 3.0 | 3267 | 900 | 4 | 1400 | 85 |
| HB-60S6402 | 1.8° | 9.7 | 2.8 | 1.7 | 6.7 | 3267 | 900 | 4 | 1400 | 85 |
| HB-60S6403 | 1.8° | 19.2 | 1.4 | 6.9 | 26.7 | 3267 | 900 | 4 | 1400 | 85 |

## Dimensions




mm(inch)

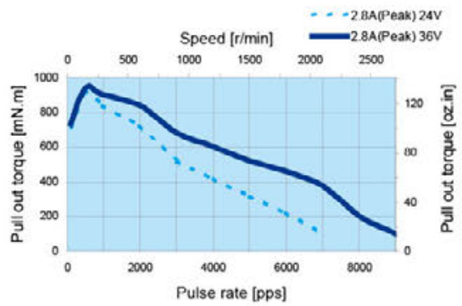


Note: If need special specification,pls contact with us.



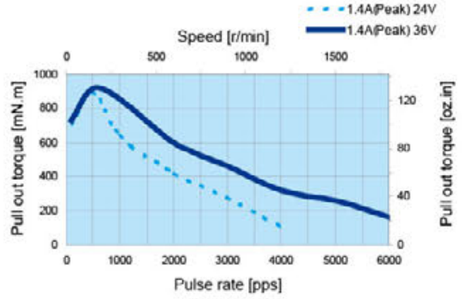
### HB-60S1601

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




### HB-60S1603

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




### HB-60S1605

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



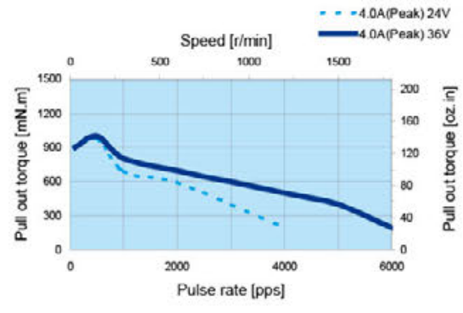

### HB-60S2402

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step



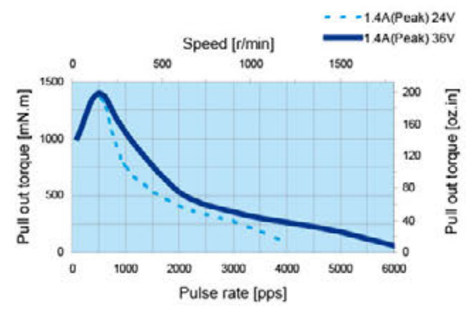

### HB-60S2401

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




### HB-60S2403

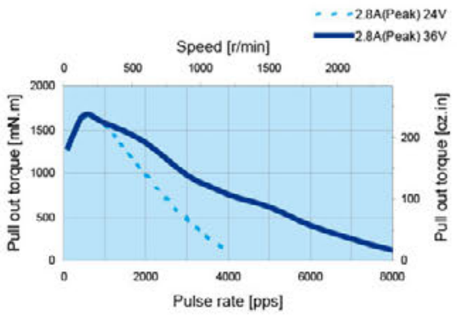
Conditions: Bi-polar Constant Current Driver
Driver: DMBSD4548
Mode: Full Step




Note: If need special specification,pls contact with us.

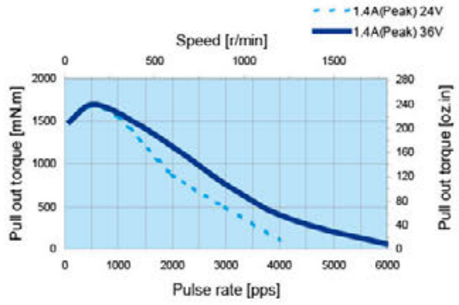
### HB-60S4402

Conditions: Bi-polar Constant Current Driver
Driver: AMP MS3540M-301
Mode: Full Step



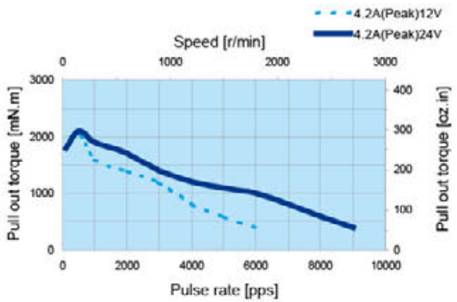

### HB-60S4403

Conditions: Bi-polar Constant Current Driver
Driver: AMP MS3540M-301
Mode: Full Step



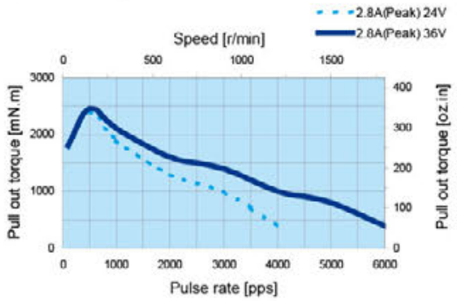

### HB-60S6401

Conditions: Bi-polar Constant Current Driver
Driver: AMP MS3540M-301
Mode: Full Step




### HB-60S6402

Conditions: Bi-polar Constant Current Driver
Driver: AMP MS3540M-301
Mode: Full Step






Note: If need special specification,pls contact with us.



## HB–86S

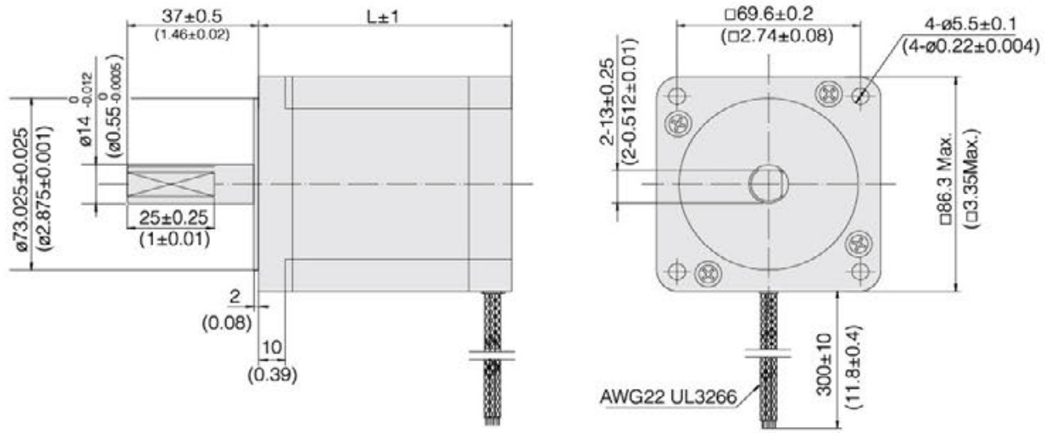
RoHS COMPLIANT 2002/95/EC

□86mm | 1.8° | Unipolar | Big torque output

### Bipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-86S1801 | 1.8° | 3.1 | 3.2 | 0.96 | 6.0 | 4 | 1100 | 4 | 1.7 | 66.5 |
| HB-86S1801 | 1.8° | 2.2 | 4.5 | 0.48 | 1.5 | 2.8 | 1100 | 4 | 1.7 | 66.5 |
| HB-86S1801 | 1.8° | 1.5 | 6.4 | 0.24 | 1.5 | 4 | 1100 | 4 | 1.7 | 66.5 |
| HB-86S2801 | 1.8° | 3.5 | 3.2 | 1.10 | 7.0 | 5.6 | 1400 | 4 | 2.3 | 79.5 |
| HB-86S2801 | 1.8° | 2.5 | 4.5 | 0.55 | 1.8 | 4 | 1400 | 4 | 2.3 | 79.5 |
| HB-86S2801 | 1.8° | 1.8 | 6.4 | 0.28 | 1.8 | 5.6 | 1400 | 4 | 2.3 | 79.5 |
| HB-86S3801 | 1.8° | 4.2 | 3.2 | 1.32 | 12.0 | 8.2 | 1950 | 4 | 2.7 | 95.5 |
| HB-86S3801 | 1.8° | 3.0 | 4.5 | 0.66 | 3.0 | 5.8 | 1950 | 4 | 2.7 | 95.5 |
| HB-86S3801 | 1.8° | 2.1 | 6.4 | 0.33 | 3.0 | 8.2 | 1950 | 4 | 2.7 | 95.5 |
| HB-86S5801 | 1.8° | 5.4 | 2.8 | 1.94 | 21.6 | 12 | 2850 | 4 | 3.8 | 124 |
| HB-86S5801 | 1.8° | 3.9 | 4.0 | 0.97 | 5.4 | 8.4 | 2850 | 4 | 3.8 | 124 |
| HB-86S5801 | 1.8° | 2.7 | 5.6 | 0.49 | 5.4 | 12 | 2850 | 4 | 3.8 | 124 |

### Dimensions



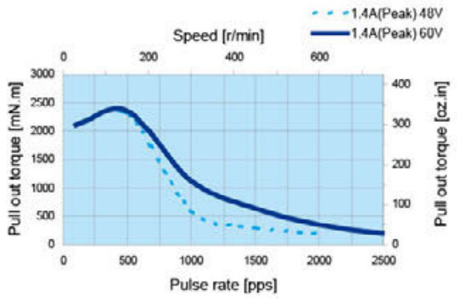

**mm(inch)**



Note: If need special specification,pls contact with us.

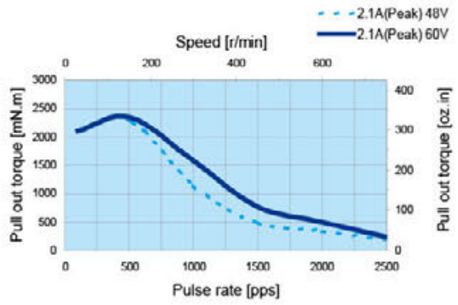
## HB-86S0801 Bi-polar series

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step



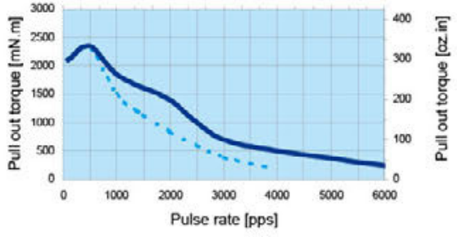

## HB-86S0802 Bi-polar series

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step



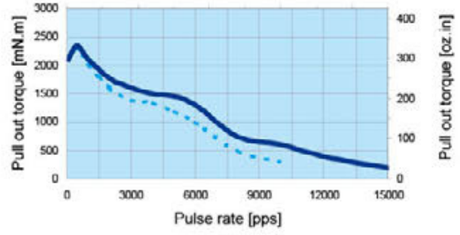

## HB-86S0803 Bi-polar series

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step



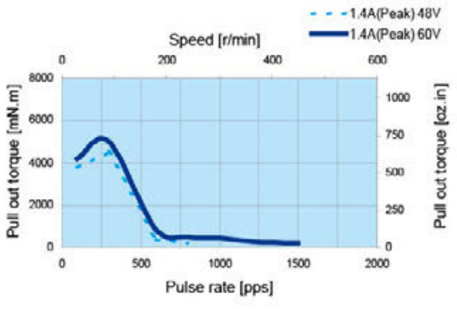

## HB-86S0804 Bi-polar parallel

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step



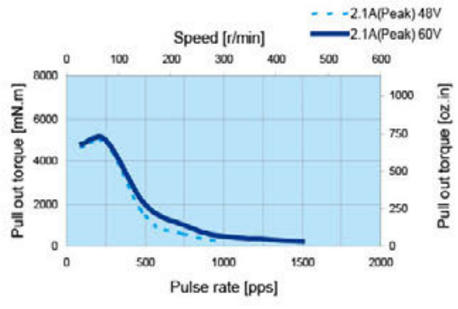

## HB-86S1806 Bi-polar series

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step




## HB-86S1807 Bi-polar series

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step



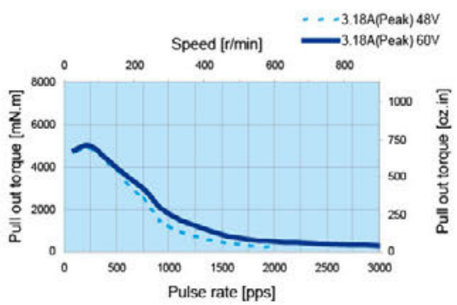



Note: If need special specification,pls contact with us.



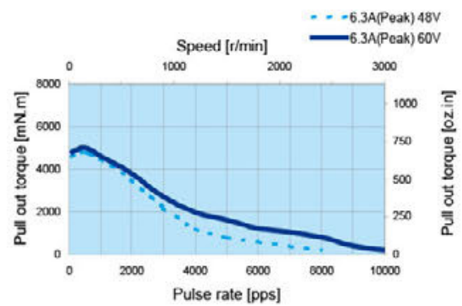
## HB-86S1808 Bi-polar series

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step



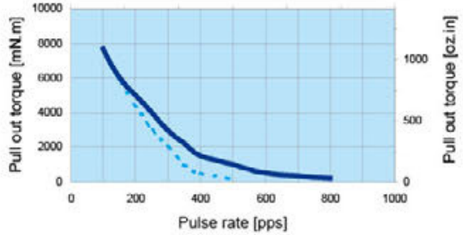

## HB-86S1809 Bi-polar parallel

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step



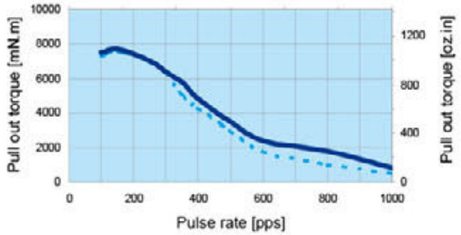

## HB-86S4801 Bi-polar series

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step




## HB-86S4802 Bi-polar series

Conditions: Bi-polar Constant Current Driver
Driver: DMBSD7875
Mode: Full Step




Note: If need special specification,pls contact with us.

# HB–60T

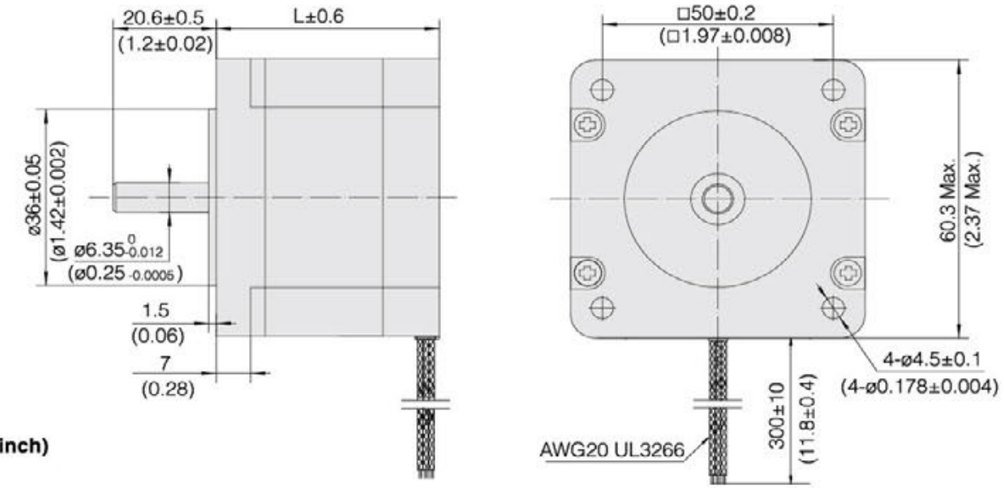
RoHS COMPLIANT 2002/95/EC

□60mm | 1.2° | Bipolar | Low inertia

## Bipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-60T1301 | 1.2° | 8.0 | 1.8 | 4.4 | 10.4 | 764 | 180 | 4 | 500 | 46 |
| HB-60T1302 | 1.2° | 3.6 | 4.0 | 0.9 | 6.2 | 754 | 180 | 4 | 500 | 46 |
| HB-60T3301 | 1.2° | 5.9 | 1.5 | 3.9 | 10.9 | 9.4 | 260 | 4 | 800 | 55 |
| HB-60T3302 | 1.2° | 1.7 | 5.8 | 0.30 | 0.76 | 900 | 260 | 4 | 800 | 55 |
| HB-60T5301 | 1.2° | 4.5 | 2.0 | 2.2 | 11.8 | 1523 | 460 | 4 | 1300 | 77 |
| HB-60T5302 | 1.2° | 2.6 | 5.8 | 0.45 | 1.3 | 1510 | 460 | 4 | 1300 | 77 |

## Dimensions




mm(inch)

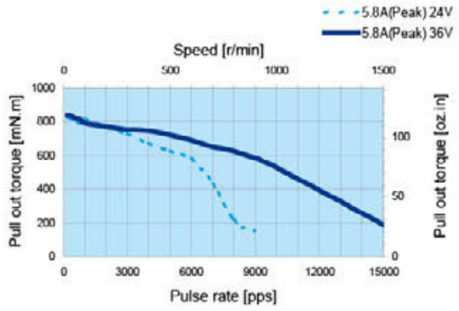


Note: If need special specification,pls contact with us.



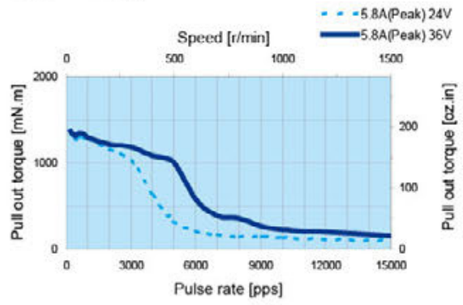
### HB-60T3302

Conditions: 3-Phase Constant Current Driver
Driver: DMB3SD3538
Mode: Half Step



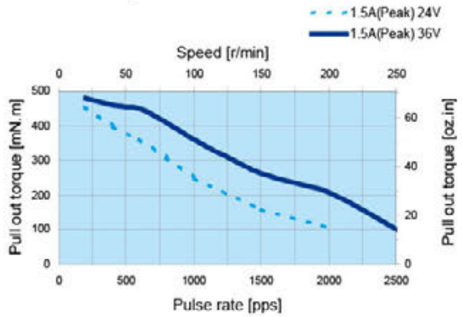

### HB-60T5302

Conditions: 3-Phase Constant Current Drive
Driver: DMB3SD3538
Mode: Half Step




### HB-60T3301

Conditions: 3-Phase Constant Current Driver
Driver: DMB3SD3538
Mode: Full Step



# HB–86T

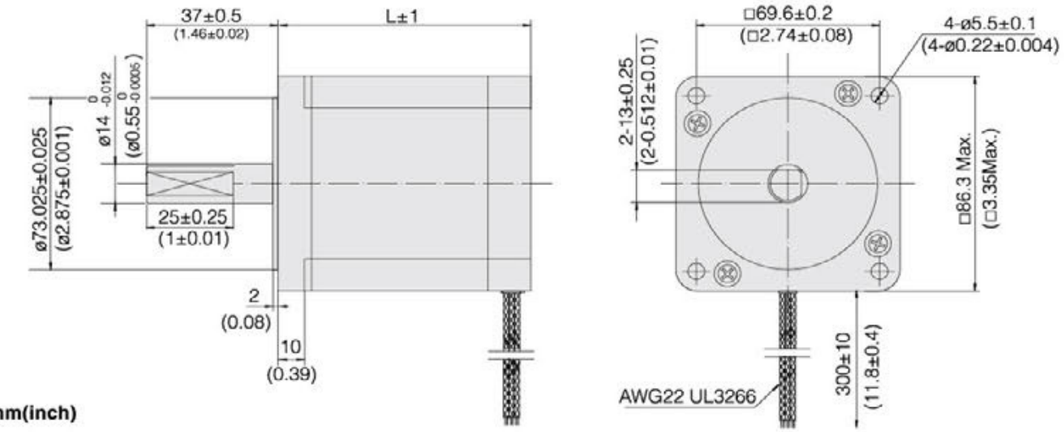
RoHS COMPLIANT 2002/95/EC

□86mm | 1.2° | Bipolar | Low inertia

## Bipolar

| Model No. | (deg) Step torque angle | (V) Rated Voltage | (A) Current | (ohm) Resistance | (mH) Inductance | (mN.m) Holding Torque | (g.cm²) Rotor Inertia | Outgoing line | (g) Weight | (mm) Thickness |
|---|---|---|---|---|---|---|---|---|---|---|
| HB-86T1301 | 1.2° | 6.0 | 3.0 | 1.32 | 26.7 | 1892 | 1100 | 4 | 1.7 | 66.5 |
| HB-86T1302 | 1.2° | 3.4 | 6.0 | 0.38 | 21.6 | 1966 | 1100 | 4 | 1.7 | 66.5 |
| HB-86T2301 | 1.2° | 7.6 | 3.0 | 1.70 | 26.7 | 2489 | 1400 | 4 | 2.3 | 79.5 |
| HB-86T2302 | 1.2° | 4.4 | 6.0 | 0.49 | 21.6 | 2586 | 1400 | 4 | 2.3 | 79.5 |
| HB-86T3301 | 1.2° | 9.1 | 3.0 | 2.02 | 50.0 | 4043 | 1950 | 4 | 2.7 | 95.5 |
| HB-86T3302 | 1.2° | 5.2 | 6.0 | 0.58 | 40.5 | 4200 | 1950 | 4 | 2.7 | 95.5 |
| HB-86T5301 | 1.2° | 12.5 | 3.0 | 2.79 | 73.4 | 6256 | 2850 | 4 | 3.8 | 124 |
| HB-86T5302 | 1.2° | 7.2 | 6.0 | 0.80 | 59.4 | 6500 | 2850 | 4 | 3.8 | 124 |

## Dimensions




mm(inch)

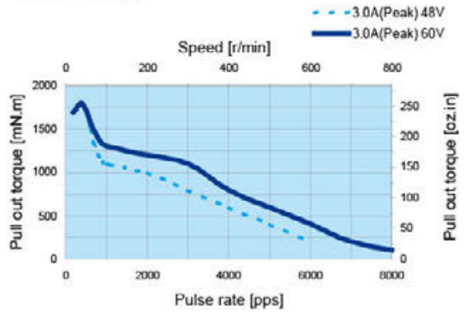


Note: If need special specification,pls contact with us.



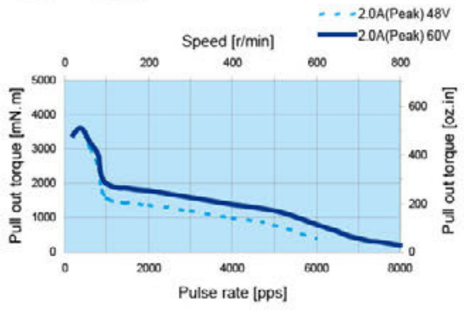
### HB-86T1301

Conditions: 3-Phase Constant Current Driver
Driver: DMB3SD9895
Mode: Half Step



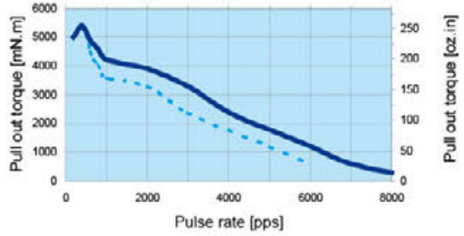

### HB-86T2302

Conditions: 3-Phase Constant Current Driver
Driver: DMB3SD9895
Mode: Half Step




### HB-86T3303

Conditions: 3-Phase Constant Current Driver
Driver: DMB3SD9895
Mode: Half Step




Note: If need special specification,pls contact with us.

0.006mm, 0.01mm, 0.02mm, 0.04mm

## Motor specifications

| Motor type | Phase current | Resistance per phase | Each phase inductance | PIN number | Motor length |
|---|---|---|---|---|---|
| HL-20S83024-003 | 0.3A | 20Ω ± 10% | 5.0mH ± 20% | 4 | 30mm |
| HL-20S83024-003 | 0.5A | 5Ω ± 10% | 1.5mH ± 20% | 4 | 30mm |
| HL-20S84244-006 | 0.6A | 10Ω ± 10% | 5.5mH ± 20% | 4 | 42mm |

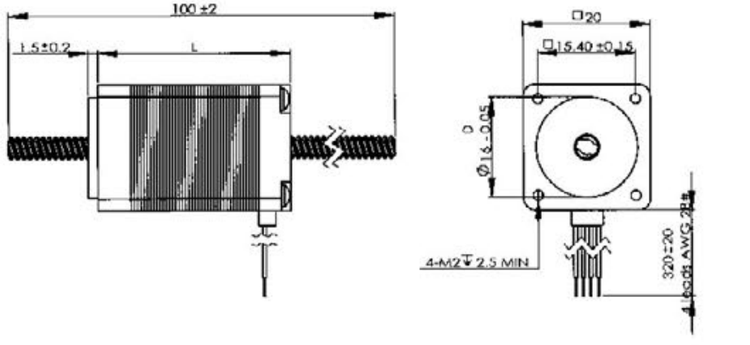
RoHS COMPLIANT 2002/95/EC

## Optional screw lead and basic step

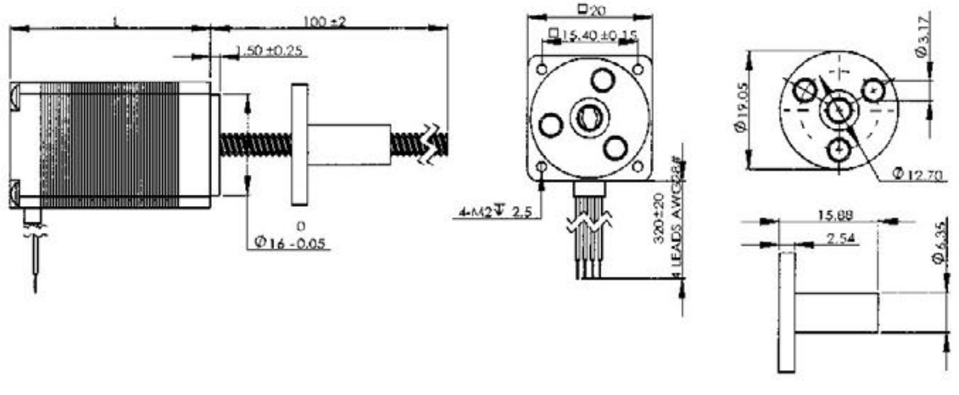
| Screw diameter (in) | Screw diameter (mm) | Lead(in) | Lead(mm) | Step(mm) |
|---|---|---|---|---|
| 0.138 | 3.5052 | 0.024 | 0.6096 | 0.0030 |
| 0.138 | 3.5052 | 0.048 | 1.2192 | 0.0061 |
| 0.138 | 3.5052 | 0.079 | 2 | 0.01 |
| 0.138 | 3.5052 | 0.158 | 4 | 0.02 |
| 0.138 | 3.5052 | 0.315 | 8 | 0.04 |

## Motor outline (mm)

### Connecting shaft




### External driv






Note: If need special specification,pls contact with us.



0.003175 0.0508mm

## Motor specifications

| Motor type | Phase current | Resistance per phase | Each phase inductance | PIN number | Motor length |
|---|---|---|---|---|---|
| HL-28S113424-002 | 0.2A | 68Ω ± 10% | 39mH ± 20% | 4 | 34mm |
| HL-28S113424-005 | 0.5A | 10Ω ± 10% | 6mH ± 20% | 4 | 34mm |
| HL-28S114044-001 | 1.0A | 2.1Ω ± 10% | 1.5mH ± 20% | 4 | 44mm |
| HL-28S1140-0.067 | 0.67A | 6.8Ω ± 10% | 4.9mH+/-20% | 4 | 45mm |
| HL-28S115164-095 | 0.95A | 3.2Ω ± 10% | 5.0mH ± 20% | 4 | 45mm |
| HL-28S115164-002 | 2.0A | 1.1Ω ± 10% | 1.1mH ± 20% | 4 | 45mm |

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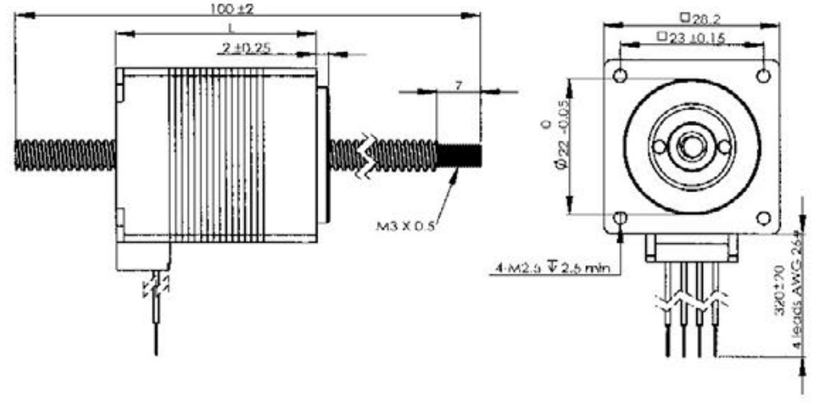
## Optional screw lead and basic step

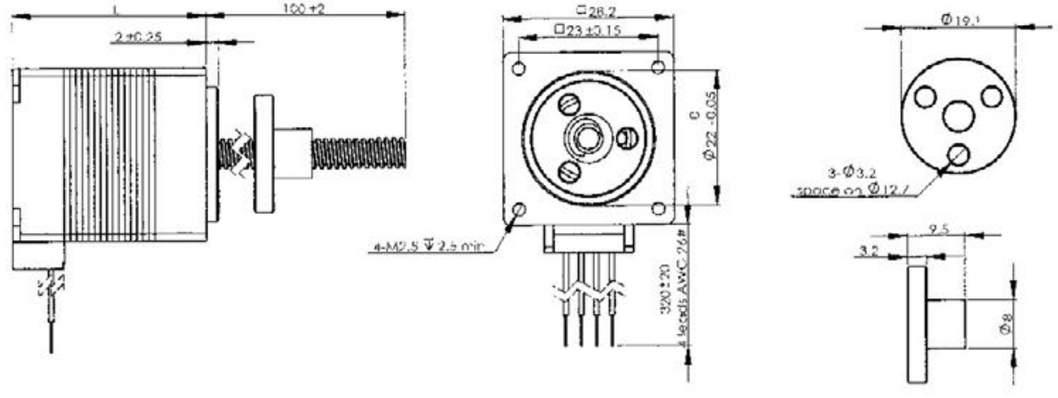
| Screw diameter (in) | Screw diameter (mm) | Lead(in) | Lead(mm) | Step(mm) |
|---|---|---|---|---|
| 0.188 | 4.7625 | 0.025 | 0.635 | 0.0032 |
| 0.188 | 4.7752 | 0.050 | 1.27 | 0.0063 |
| 0.188 | 4.7752 | 0.100 | 2.54 | 0.0127 |
| 0.188 | 4.7752 | 0.200 | 5.8 | 0.0254 |
| 0.188 | 4.7752 | 0.400 | 10.16 | 0.0508 |

## Motor outline (mm)

### Connecting shaft




### External driv

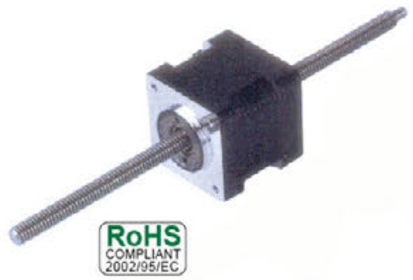



Note: If need special specification,pls contact with us.

0.003 0.048768mm

## Motor specifications

| Motor type | Phase current | Resistance per phase | Each phase inductance | PIN number | Motor length |
|---|---|---|---|---|---|
| HL-35S143524-005 | 0.5A | 14Ω ± 10% | 20mH ± 20% | 4 | 35mm |
| HL-35S143524-001 | 1.0A | 3.5Ω ± 10% | 4mH ± 20% | 4 | 35mm |
| HL-35S144744-015 | 1.5A | 1.5Ω ± 10% | 2.0mH ± 20% | 4 | 45mm |
| HL-35S144744-005 | 0.5A | 28Ω +/-10% | 40mH ± 20% | 4 | 47mm |
| HL-35S144744-001 | 1.0A | 5.5Ω ± 10% | 7.6mH ± 20% | 4 | 47mm |
| HL-35S144744-002 | 2.0A | 1.2Ω ± 10% | 1.95mH ± 20% | 4 | 47mm |

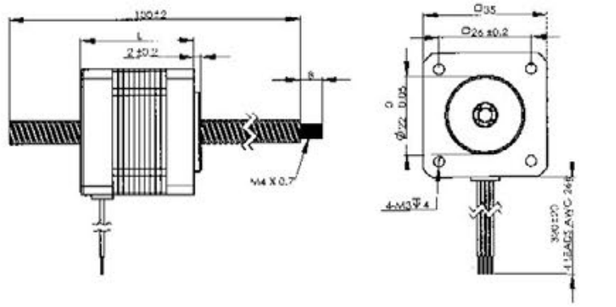



## Optional screw lead and basic step

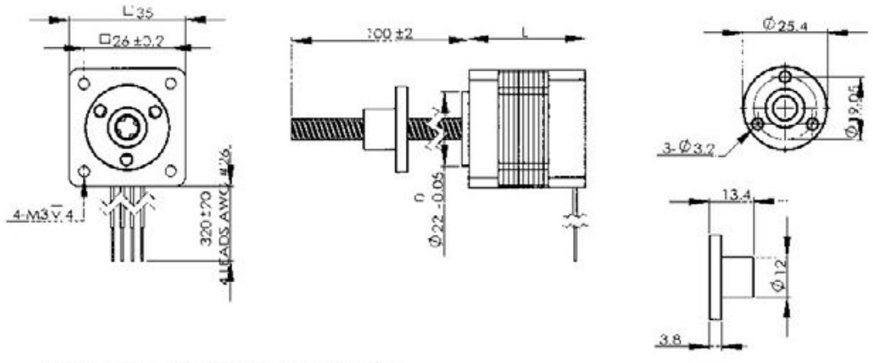
| Screw diameter (in) | Screw diameter (mm) | Lead (in) | Lead (mm) | @1.8°Step (mm) | @0.9°Step (mm) |
|---|---|---|---|---|---|
| 0.250 | 6.35 | 0.024 | 0.6096 | 0.003 | 0.015 |
| 0.250 | 6.35 | 0.048 | 1.2192 | 0.006 | 0.030 |
| 0.250 | 6.35 | 0.050 | 1.27 | 0.006 | 0.032 |
| 0.250 | 6.35 | 0.063 | 1.6002 | 0.008 | 0.040 |
| 0.250 | 6.35 | 0.096 | 2.4384 | 0.012 | 0.061 |
| 0.250 | 6.35 | 0.100 | 2.54 | 0.012 | 0.064 |
| 0.250 | 6.35 | 0.192 | 4.8768 | 0.024 | 0.122 |
| 0.250 | 6.35 | 0.025 | 6.35 | 0.031 | 0.159 |
| 0.250 | 6.35 | 0.330 | 8.382 | 0.041 | 0.210 |
| 0.250 | 6.35 | 0.384 | 9.7536 | 0.048 | 0.244 |

## Motor outline (mm)

## Connecting shaft




## External driv





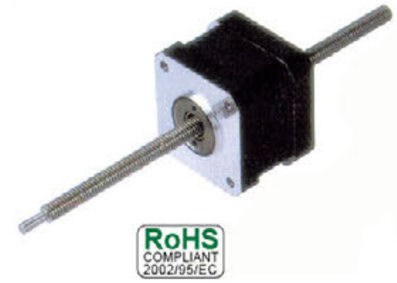

Note: If need special specification,pls contact with us.



0.003 0.127mm

## Motor specifications

| Motor type | Phase current | Resistance per phase | Each phase inductance | PIN number | Motor length |
|---|---|---|---|---|---|
| HL-42S1733514-005 | 0.5A | 16Ω ± 10% | 23mH ± 20% | 4 | 35mm |
| HL-42S1733514-001 | 1.0A | 4.2Ω ± 10% | 6mH ± 20% | 4 | 35mm |
| HL-42S1733515-015 | 1.5A | 1.8Ω ± 10% | 3mH ± 20% | 4 | 35mm |
| HL-42S1747554-005 | 0.5A | 23Ω ± 10% | 50mH ± 20% | 4 | 49mm |
| HL-42S1747554-012 | 1.2A | 3.5Ω ± 10% | 9mH ± 20% | 4 | 49mm |
| HL-42S1747554-025 | 2.5A | 1.0Ω ± 10% | 1.5mH ± 20% | 4 | 49mm |



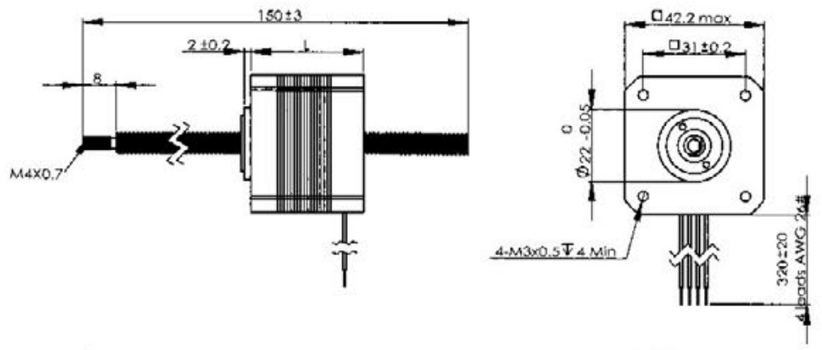

## Optional screw lead and basic step

| Screw diameter (in) | Screw diameter (mm) | Lead (in) | Lead (mm) | @1.8°Step (mm) | @0.9°Step (mm) |
|---|---|---|---|---|---|
| 0.250 | 6.35 | 0.024 | 0.6096 | 0.003 | 0.0015 |
| 0.250 | 6.35 | 0.048 | 1.2192 | 0.006 | 0.0030 |
| 0.250 | 6.35 | 0.050 | 1.27 | 0.006 | 0.0032 |
| 0.250 | 6.35 | 0.063 | 1.6002 | 0.008 | 0.0040 |
| 0.250 | 6.35 | 0.096 | 2.4384 | 0.012 | 0.0061 |
| 0.250 | 6.35 | 0.100 | 2.54 | 0.012 | 0.0064 |
| 0.250 | 6.35 | 0.192 | 4.8768 | 0.024 | 0.0122 |
| 0.250 | 6.35 | 0.025 | 6.35 | 0.031 | 0.0159 |
| 0.250 | 6.35 | 0.330 | 8.382 | 0.041 | 0.0210 |
| 0.375 | 9.525 | 0.384 | 9.7536 | 0.048 | 0.0244 |
| 0.375 | 9.525 | 0.025 | 0.635 | 0.003 | 0.0016 |
| 0.375 | 9.525 | 0.050 | 1.27 | 0.006 | 0.0032 |
| 0.375 | 9.525 | 0.063 | 1.6002 | 0.008 | 0.0040 |
| 0.375 | 9.525 | 0.083 | 2.1082 | 0.010 | 0.0053 |
| 0.375 | 9.525 | 0.100 | 2.54 | 0.012 | 0.0064 |
| 0.375 | 9.525 | 0.125 | 3.175 | 0.015 | 0.0079 |
| 0.375 | 9.525 | 0.167 | 4.2418 | 0.021 | 0.0106 |
| 0.375 | 9.525 | 0.200 | 5.08 | 0.025 | 0.0127 |
| 0.375 | 9.525 | 0.250 | 6.35 | 0.031 | 0.0159 |
| 0.375 | 9.525 | 0.375 | 9.525 | 0.047 | 0.0238 |
| 0.375 | 9.525 | 0.384 | 9.7536 | 0.048 | 0.0244 |
| 0.375 | 9.525 | 0.500 | 12.7 | 0.063 | 0.0318 |
| 0.375 | 9.525 | 1.000 | 25.4 | 0.127 | 0.0635 |

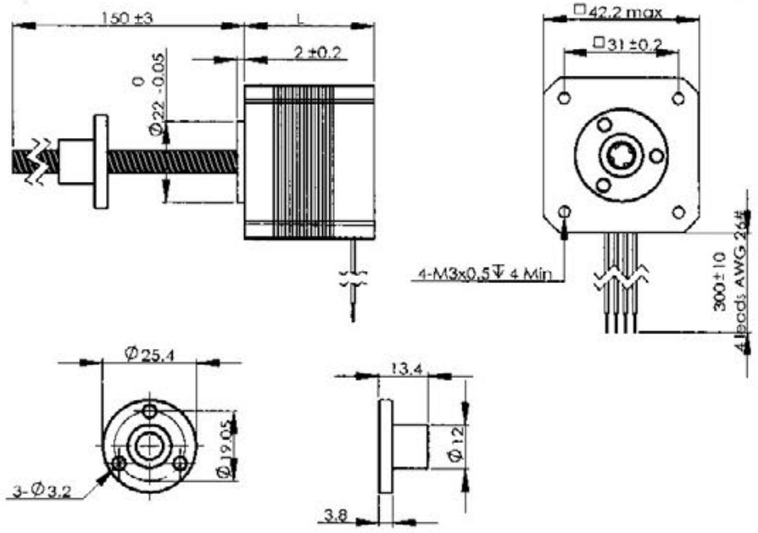
Note: If need special specification,pls contact with us.

## Motor outline (mm)

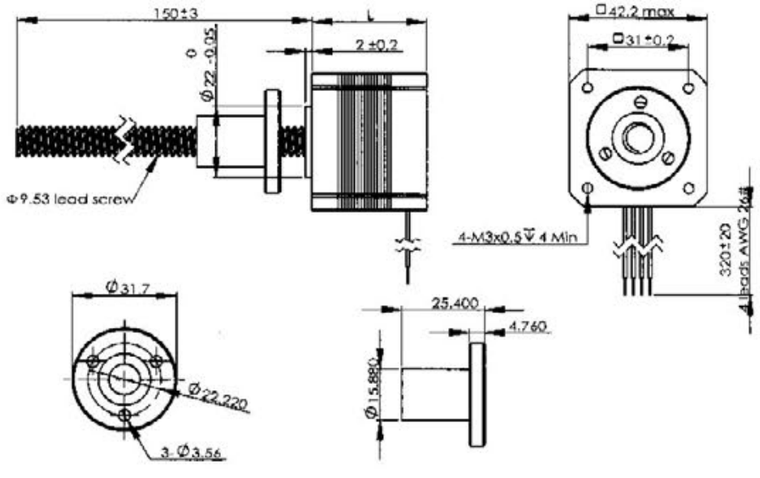
### Connecting shaft




### External driv




### 9.525mm

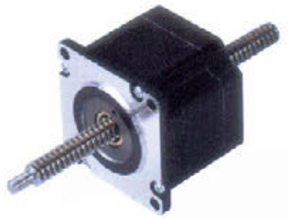





Note: If need special specification,pls contact with us.



0.0016 0.127mm



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## Motor specifications

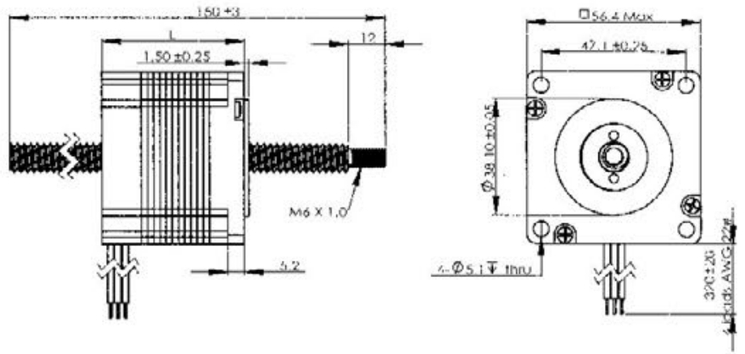
| Motor type | Phase current | Resistance per phase | Each phase inductance | PIN number | Motor length |
|---|---|---|---|---|---|
| HL-57S2348334-001 | 1.0A | 5.0Ω ± 10% | 15.7mH ± 20% | 4 | 47mm |
| HL-57S2348334-002 | 2.0A | 1.4Ω ± 10% | 4.1mH ± 20% | 4 | 47mm |
| HL-57S2348334-003 | 3.0A | 0.6Ω ± 10% | 1.9mH ± 20% | 4 | 47mm |
| HL-57S236544-001 | 1.0A | 12Ω ± 10% | 35mH ± 20% | 4 | 66mm |
| HL-57S236544-025 | 2.5A | 2.0Ω ± 10% | 7.6mH ± 20% | 4 | 66mm |
| HL-57S236544-040 | 4.0A | 0.7Ω ± 10% | 2.1mH ± 20% | 4 | 66mm |

## Optional screw lead and basic step

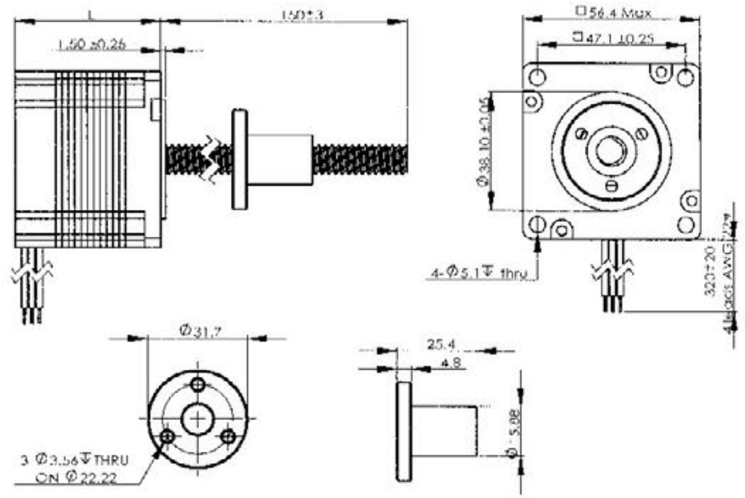
| Screw diameter (in) | Screw diameter (mm) | Lead (in) | Lead (mm) | @1.8°Step (mm) | @0.9°Step (mm) |
|---|---|---|---|---|---|
| 0.375 | 9.525 | 0.025 | 0.635 | 0.003 | 0.0016 |
| 0.375 | 9.525 | 0.050 | 1.27 | 0.006 | 0.0032 |
| 0.375 | 9.525 | 0.063 | 1.6002 | 0.008 | 0.0040 |
| 0.375 | 9.525 | 0.083 | 2.1082 | 0.010 | 0.0053 |
| 0.375 | 9.525 | 0.100 | 2.54 | 0.012 | 0.0064 |
| 0.375 | 9.525 | 0.125 | 3.175 | 0.015 | 0.0079 |
| 0.375 | 9.525 | 0.167 | 4.2418 | 0.021 | 0.0106 |
| 0.375 | 9.525 | 0.200 | 5.08 | 0.025 | 0.0127 |
| 0.375 | 9.525 | 0.250 | 6.35 | 0.031 | 0.0159 |
| 0.375 | 9.525 | 0.375 | 9.525 | 0.047 | 0.0238 |
| 0.375 | 9.525 | 0.384 | 9.7536 | 0.048 | 0.0244 |
| 0.375 | 9.525 | 0.500 | 12.7 | 0.063 | 0.0318 |
| 0.375 | 9.525 | 1.000 | 25.4 | 0.127 | 0.0635 |
| 0.625 | 15.875 | 0.100 | 2.54 | 0.012 | 0.0060 |
| 0.625 | 15.875 | 0.125 | 3.175 | 0.015 | 0.0075 |
| 0.625 | 15.875 | 0.200 | 5.08 | 0.025 | 0.00125 |
| 0.625 | 15.875 | 0.250 | 6.35 | 0.031 | 0.0155 |
| 0.625 | 15.875 | 1.000 | 25.4 | 0.127 | 0.0635 |

Note: If need special specification,pls contact with us.

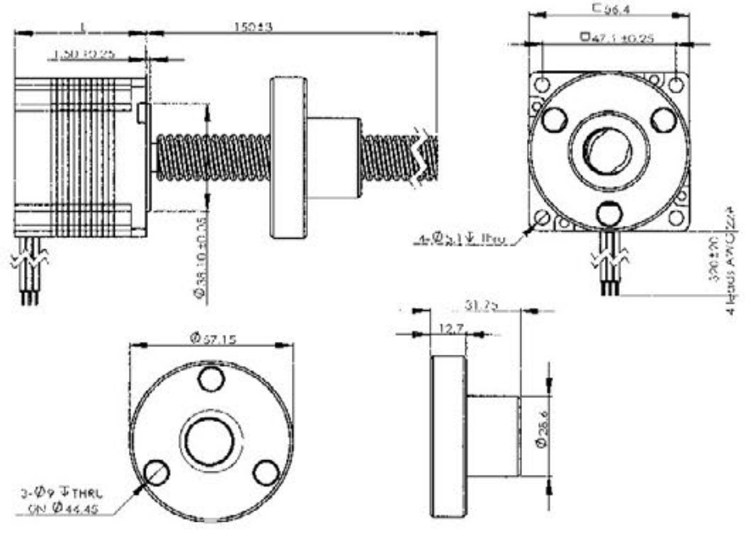
**Motor outline (mm)**
**Connecting shaft**




**External driv**
**9.525mm**




**25.88**






Note: If need special specification,pls contact with us.



0.00508mm 0.127mm

**Motor specifications**

| Motor type | Phase current | Resistance per phase | Each phase inductance | PIN number | Motor length |
|---|---|---|---|---|---|
| HL-86S348014-013 | 0.3A | 9.2Ω ± 10% | 51mH ± 20% | 4 | 80mm |
| HL-86S348014-050 | 0.5A | 1.6Ω ± 10% | 8.8mH ± 20% | 4 | 80mm |
| HL-86S348014-055 | 0.55A | 0.52Ω ± 10% | 2.9mH ± 20% | 4 | 80mm |

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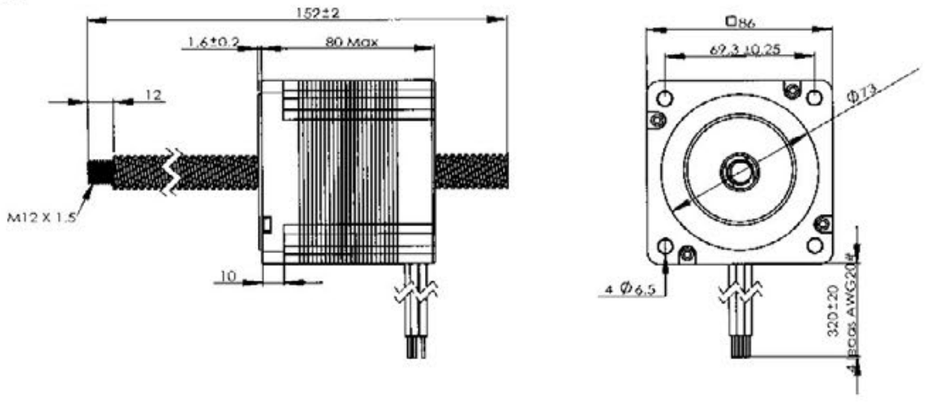
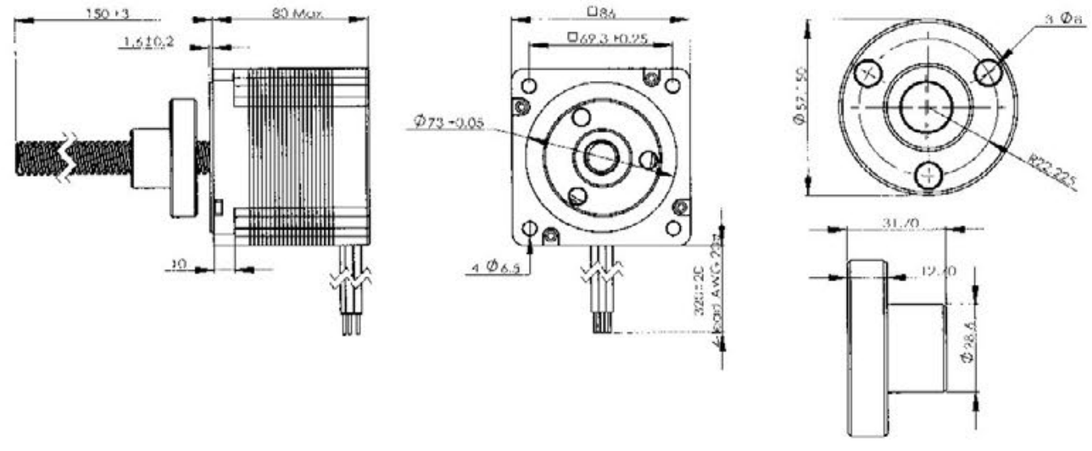
**Optional screw lead and basic step**

| Screw diameter (in) | Screw diameter (mm) | Lead (in) | Lead (mm) | @1.8°Step (mm) | @0.9°Step (mm) |
|---|---|---|---|---|---|
| 0.625 | 15.875 | 0.100 | 2.54 | 0.012 | 0.0051 |
| 0.625 | 15.875 | 0.125 | 3.175 | 0.015 | 0.0064 |
| 0.625 | 15.875 | 0.200 | 5.08 | 0.025 | 0.0102 |
| 0.625 | 15.875 | 0.250 | 6.35 | 0.031 | 0.0127 |
| 0.625 | 15.875 | 0.1000 | 2.54 | 0.127 | 0.0508 |

**Motor outline (mm)**
**Connecting shaft**




**External driv**






Note: If need special specification,pls contact with us.

## Mechanical Dimensions

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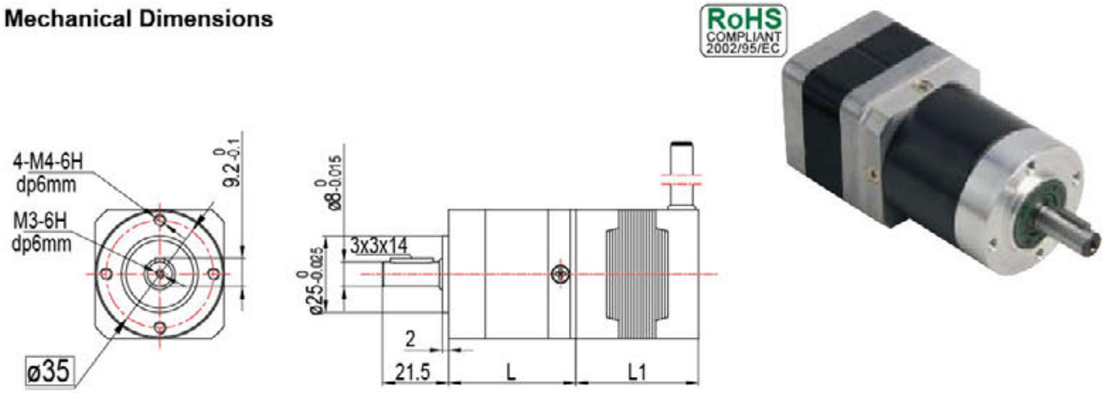



## Motor Specification

| Motor Type | Phases | VDC | ohm | A | rpm | mm | KG | Nm | Nm |
|---|---|---|---|---|---|---|---|---|---|
| HB42K5402 | 2 | 5.7 | 6.3 | 0.9 | | 48 | 0.36 | 0.3 | 0.45 |
| BL420502440 | 3 | 24 | 0.8 | | 4000 | 60 | 0.45 | 0.125 | 0.15 |

## Mechanical Performance

| Reduce Gearmotor | Output Torque (Nm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1:5 | 1:10 | 1:15 | 1:20 | 1:25 | 1:30 | 1:40 | 1:50 | 1:100 |
| PL42TxxxB+HB42K5402 | 1.425 | 2.85 | 4 | 5.4 | 6.75 | 8.1 | 10.8 | 13.5 | 15 |
| PL42TxxxB+BL420502440 | 0.6 | 1.2 | 1.65 | 2.25 | 2.8 | 3.37 | 4.5 | 5.63 | 11.3 |

## Electrical and Environmental

1. Insulation Class: B
2. Dielectric Strength: 500VDC, 1 minute
3. Insulation Resistance: >100Mohm, 500VDC
4. Comply with CE
5. Comply with RoHS

## Type Selection

According to the specific application to select the motor performance and speed reducer, the selection is for reference only

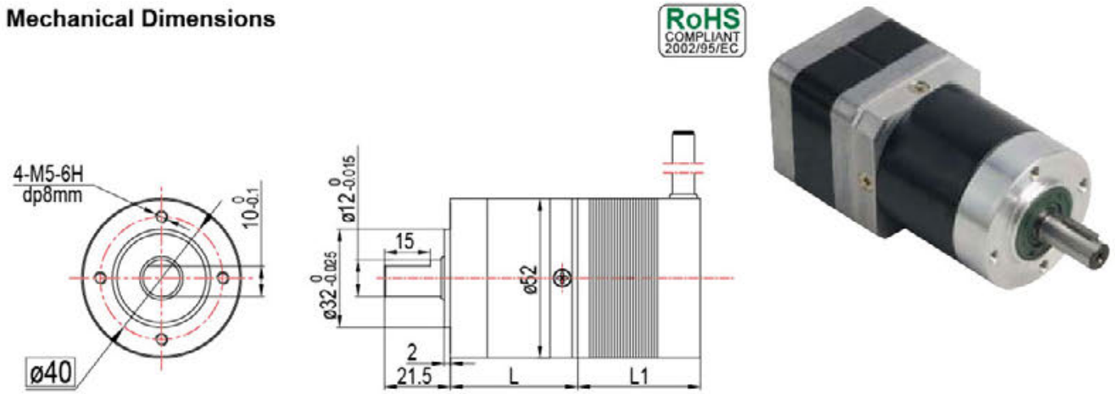


Note: If need special specification,pls contact with us.



## Mechanical Dimensions

RoHS COMPLIANT 2002/95/EC




## Motor Specification

| Motor Type | Phases | VDC | A | A | rpm | mm | KG | Nm | Nm |
|---|---|---|---|---|---|---|---|---|---|
| BL52012126 | 4 | 12 | 1.25 | 2.5 | 600 | 93 | 0.75 | 0.191 | 0.382 |

## Mechanical Performance

| Reduce Gearmotor | Output Torque (Nm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1:5 | 1:10 | 1:15 | 1:20 | 1:25 | 1:30 | 1:40 | 1:50 | 1:100 |
| PL42TxxxB+BL52012126 | 0.9 | 1.8 | 2.58 | 3.43 | 4.29 | 5.15 | 6.87 | 8.6 | 15 |

## Electrical and Environmental

1. Insulation Class: B
2. Dielectric Strength: 500VDC, 1 minute
3. Insulation Resistance: >100Mohm, 500VDC
4. Comply with CE
5. Comply with RoHS

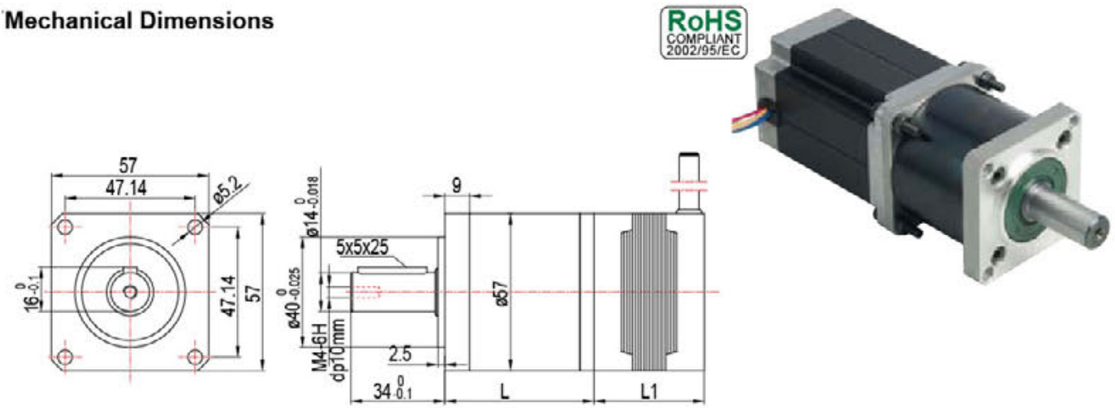
## Type Selection

According to the specific application to select the motor performance and speed reducer, the selection is for reference only

Note: If need special specification,pls contact with us.

## Mechanical Dimensions

RoHS COMPLIANT 2002/95/EC






## Motor Specification

| Motor Type | Phases | VDC | ohm | A | rpm | mm | KG | Nm | Nm |
|---|---|---|---|---|---|---|---|---|---|
| HB57K4406 | 2 | 10.2 | 3.6 | 1.4 | | 55 | 0.73 | 0.8 | 1.4 |
| BL570903640 | 3 | 36 | 0.7 | | 4000 | 72 | 0.75 | 0.22 | 0.7 |

## Mechanical Performance

| Reduce Gearmotor | Output Torque (Nm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1:5 | 1:10 | 1:15 | 1:20 | 1:25 | 1:30 | 1:40 | 1:50 | 1:100 |
| PL57TxxxA+HB57K4406 | 3.8 | 6.0 | 10.8 | 14.4 | 18 | 21.6 | 25 | 25 | 25 |
| PL57TxxxA+BL570903640 | 1.0 | 2.1 | 2.97 | 3.96 | 4.95 | 5.94 | 7.92 | 9.9 | 19.8 |

## Electrical and Environmental

1. Insulation Class: B
2. Dielectric Strength: 500VDC, 1 minute
3. Insulation Resistance: >100Mohm, 500VDC
4. Comply with CE
5. Comply with RoHS

## Type Selection

According to the specific application to select the motor performance and speed reducer, the selection is for reference only

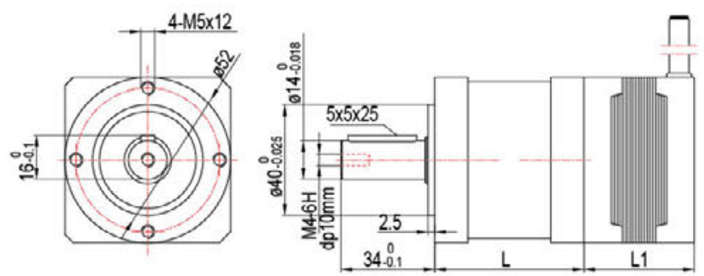


Note: If need special specification,pls contact with us.



## Mechanical Dimensions

RoHS COMPLIANT 2002/95/EC




## Motor Specification

| Motor Type | Phases | VDC | ohm | A | rpm | mm | KG | Nm | Nm |
|---|---|---|---|---|---|---|---|---|---|
| HB60K4602 | 2 | 4.8 | 2.4 | 2.0 | | 65 | 0.73 | 0.89 | 1.56 |
| BL601502430 | 3 | 24 | 0.7 | | 3000 | 100 | 1.1 | 0.4 | 0.8 |

## Mechanical Performance

| Reduce Gearmotor | Output Torque (Nm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1:5 | 1:10 | 1:15 | 1:20 | 1:25 | 1:30 | 1:40 | 1:50 | 1:100 |
| PL60TxxxB+HB60K4602 | 4.2 | 6.0 | 12 | 16 | 20 | 24 | 25 | 25 | 25 |
| PL60TxxxB+BL601502430 | 1.9 | 3.8 | 5.4 | 7.2 | 9 | 10.8 | 14.4 | 18 | 25 |

## Electrical and Environmental

1. Insulation Class: B
2. Dielectric Strength: 500VDC, 1 minute
3. Insulation Resistance: >100Mohm, 500VDC
4. Comply with CE
5. Comply with RoHS

## Type Selection

According to the specific application to select the motor performance and speed reducer, the selection is for reference only

Note: If need special specification,pls contact with us.

## 36 BLDC

### General Specifications

| Item | Specification |
|---|---|
| Winding type | Star/Delta |
| Hall effect angle | 120 degree electric angle/120 |
| Shaft runout | 0.025mm |
| Radial play | 0.06mm/50g |
| End play | 0.08mm/50g |
| Max radial force | 28N/20mm from the flange |
| Max axial force | 10N |
| Insulation class | Class B |
| IP class | IP40 |
| Dielectric strength | 500VDC for one minute |
| Insulation resistance | 100MΩ min 500VDC |

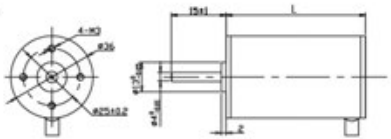
### Electric Connection

| Lead No. | Lead color | Lead gauge | Function | Description |
|---|---|---|---|---|
| 1 | Red | UL3266/28AWG | VCC+5VDC | SUPPLY VOLTAGE FOR HALL SENSORS |
| 2 | Black | | GND | GROUND FOR HALL SENSORS |
| 3 | Yellow | | HALL A | SIGNAL OF HALL A |
| 4 | Green | | HALL B | SIGNAL OF HALL B |
| 5 | Blue | UL3266/26AWG | HALL C | SIGNAL OF HALL C |
| 1 | Yellow | | PHASE U | MOTOR PAHSE U |
| 2 | Green | | PHASE V | MOTOR PHASE V |
| 3 | Blue | | PHASE W | MOTOR PHASE W |

### Electrical Specification

| Model | No.of Phase | Rated Voltage | Rated Speed | Rated Torque | Rated Power | Mass | Body length |
|---|---|---|---|---|---|---|---|
| | | VDC | rpm | g.cm | W | Kg | mm |
| G36BLDC-001A | 3 | 12 | 4000 | 120 | 5 | 0.15 | 40 |
| G36BLDC-002A | 3 | 24 | 5000 | 190 | 10 | 0.15 | 40 |
| G36BLDC-003A | 3 | 12 | 6000 | 120 | 8 | 0.18 | 50 |
| G36BLDC-004A | 3 | 24 | 6000 | 230 | 15 | 0.18 | 50 |
| G36BLDC-005A | 3 | 12 | 8000 | 240 | 20 | 0.22 | 60 |
| G36BLDC-006A | 3 | 24 | 8000 | 300 | 25 | 0.22 | 60 |

### Dimensions diagram




Note: If need special specification,pls contact with us.





## 42Y BLDC

### General Specifications

| Item | Specification |
|---|---|
| Winding type | Star/Delta |
| Hall effect angle | 120 degree electric angle/120 |
| Shaft runout | 0.025mm |
| Radial play | 0.06mm/50g |
| End play | 0.05mm/50g |
| Max radial force | 28N/20mm from the flange |
| Max axial force | 15N |
| Insulation class | Class B |
| IP class | IP40 |
| Dielectric strength | 500VDC for one minute |
| Insulation resistance | 100MΩ min 500VDC |

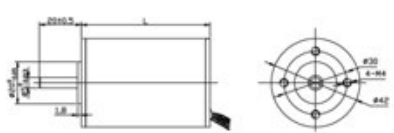
### Electric Connection

| Lead No. | Lead color | Lead gauge | Function | Description |
|---|---|---|---|---|
| 1 | Red | UL3266/28AWG | VCC+5VDC | SUPPLY VOLTAGE FOR HALL SENSORS |
| 2 | Black | | GND | GROUND FOR HALL SENSORS |
| 3 | Yellow | | HALL A | SIGNAL OF HALL A |
| 4 | Green | | HALL B | SIGNAL OF HALL B |
| 5 | Blue | UL3266/22AWG | HALL C | SIGNAL OF HALL C |
| 1 | Yellow | | PHASE U | MOTOR PAHSE U |
| 2 | Green | | PHASE V | MOTOR PHASE V |
| 3 | Blue | | PHASE W | MOTOR PHASE W |

### Electrical Specification

| Model | No.of Phase | Rated Voltage | Rated Speed | Rated Torque | Rated Power | Mass | Body length |
|---|---|---|---|---|---|---|---|
| | | VDC | rpm | g.cm | W | Kg | mm |
| G42YBLDC-001A | 3 | 12 | 4000 | 240 | 10 | 0.20 | 40 |
| G42YBLDC-002A | 3 | 24 | 5000 | 382 | 20 | 0.20 | 40 |
| G42YBLDC-003A | 3 | 12 | 6000 | 286 | 15 | 0.30 | 60 |
| G42YBLDC-004A | 3 | 24 | 6000 | 477 | 30 | 0.30 | 60 |
| G42YBLDC-005A | 3 | 12 | 8000 | 477 | 25 | 0.40 | 80 |
| G42YBLDC-006A | 3 | 24 | 8000 | 955 | 60 | 0.40 | 80 |

### Dimensions diagram




Note: If need special specification,pls contact with us.

## 42 BLDC

### General Specifications

| Item | Specification |
|---|---|
| Winding type | Star/Delta |
| Hall effect angle | 120 degree electric angle/120 |
| Shaft runout | 0.025mm |
| Radial play | 0.06mm/50g |
| End play | 0.05mm/50g |
| Max radial force | 28N/20mm from the flange |
| Max axial force | 15N |
| Insulation class | Class B |
| IP class | IP40 |
| Dielectric strength | 500VDC for one minute |
| Insulation resistance | 100MΩ min 500VDC |

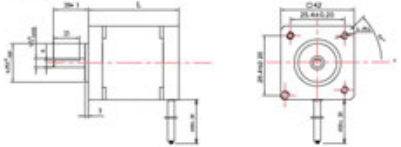
### Electric Connection

| Lead No. | Lead color | Lead gauge | Function | Description |
|---|---|---|---|---|
| 1 | Red | | VCC+5VDC | SUPPLY VOLTAGE FOR HALL SENSORS |
| 2 | Black | | GND | GROUND FOR HALL SENSORS |
| 3 | Yellow | UL3266/28AWG | HALL A | SIGNAL OF HALL A |
| 4 | Green | | HALL B | SIGNAL OF HALL B |
| 5 | Blue | | HALL C | SIGNAL OF HALL C |
| 1 | Yellow | | PHASE U | MOTOR PAHSE U |
| 2 | Green | UL3266/22AWG | PHASE V | MOTOR PHASE V |
| 3 | Blue | | PHASE W | MOTOR PHASE W |

### Electrical Specification

| Model | No.of Phase | Rated Voltage | Rated Speed | Rated Torque | Rated Power | Mass | Body length |
|---|---|---|---|---|---|---|---|
| | | VDC | rpm | g.cm | W | Kg | mm |
| G42BLDC--001A | 3 | 24 | 4000 | 625 | 26 | 0.25 | 40 |
| G42BLDC--002A | 3 | 24 | 4000 | 1250 | 52.5 | 0.35 | 60 |
| G42BLDC--003A | 3 | 24 | 4000 | 1580 | 77.5 | 0.45 | 80 |
| G42BLDC--004A | 3 | 24 | 4000 | 2500 | 105 | 0.55 | 100 |

### Dimensions diagram





Note: If need special specification,pls contact with us.



## 57 BLDC

### General Specifications

| Item | Specification |
|---|---|
| Winding type | Star/Delta |
| Hall effect angle | 120 degree electric angle/120 |
| Shaft runout | 0.025mm |
| Radial play | 0.05mm/50g |
| End play | 0.04mm/50g |
| Max radial force | 30N/20mm from the flange |
| Max axial force | 20N |
| Insulation class | Class B |
| IP class | IP40 |
| Dielectric strength | 500VDC for one minute |
| Insulation resistance | 100MΩ min 500VDC |

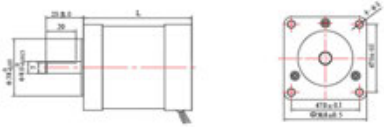
### Electric Connection

| Lead No. | Lead color | Lead gauge | Function | Description |
|---|---|---|---|---|
| 1 | Red | | VCC+5VDC | SUPPLY VOLTAGE FOR HALL SENSORS |
| 2 | Black | | GND | GROUND FOR HALL SENSORS |
| 3 | Yellow | UL3266/28AWG | HALL A | SIGNAL OF HALL A |
| 4 | Green | | HALL B | SIGNAL OF HALL B |
| 5 | Blue | | HALL C | SIGNAL OF HALL C |
| 1 | Yellow | | PHASE U | MOTOR PAHSE U |
| 2 | Green | UL3266/20AWG | PHASE V | MOTOR PHASE V |
| 3 | Blue | | PHASE W | MOTOR PHASE W |

### Electrical Specification

| Model | No.of Phase | Rated Voltage | Rated Speed | Rated Torque | Rated Power | Mass | Body length |
|---|---|---|---|---|---|---|---|
| | | VDC | rpm | N.m | W | Kg | mm |
| G57BLDC--001A | 3 | 36 | 4000 | 0.055 | 23 | 0.30 | 45 |
| G57BLDC--002A | 3 | 36 | 4000 | 0.08 | 50 | 0.35 | 55 |
| G57BLDC--003A | 3 | 36 | 6000 | 0.22 | 92 | 0.50 | 75 |
| G57BLDC--004A | 3 | 24 | 4000 | 0.32 | 133 | 0.65 | 95 |
| G57BLDC--005A | 3 | 24 | 4000 | 0.43 | 180 | 0.80 | 115 |

### Dimensions diagram



Note: If need special specification,pls contact with us.

# 90 BLDC

RoHS COMPLIANT 2002/95/EC

## General Specifications

| Item | Specification |
|---|---|
| Winding type | Star/Delta |
| | 120 degree electric angle/120 |
| Shaft runout | 0.03mm |
| Radial play | 0.03mm/50g |
| End play | 0.03mm/50g |
| Max radial force | 35N/20mm from the flange |
| Max axial force | 30N |
| Insulation class | Class B |
| IP class | IP40 |
| Dielectric strength | 500VDC for one minute |
| Insulation resistance | 100MΩ min 500VDC |

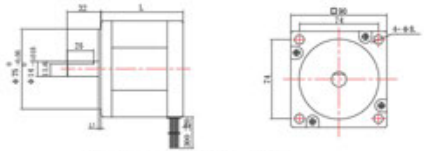
## Electric Connection

| Lead No. | Lead color | Lead gauge | Function | Description |
|---|---|---|---|---|
| 1 | Red | UL3266/28AWG | VCC+5VDC | SUPPLY VOLTAGE FOR HALL SENSORS |
| 2 | Black | | GND | GROUND FOR HALL SENSORS |
| 3 | Yellow | | HALL A | SIGNAL OF HALL A |
| 4 | Green | | HALL B | SIGNAL OF HALL B |
| 5 | Blue | | HALL C | SIGNAL OF HALL C |
| 1 | Yellow | UL3266/16AWG | PHASE U | MOTOR PAHSE U |
| 2 | Green | | PHASE V | MOTOR PHASE V |
| 3 | Blue | | PHASE W | MOTOR PHASE W |

## Electrical Specification

| Model | No.of Phase | Rated Voltage | Rated Speed | Rated Torque | Rated Power | Mass | Body length |
|---|---|---|---|---|---|---|---|
| | | VDC | rpm | N.m | W | Kg | mm |
| G90BLDC-001A | 3 | 48 | 3000 | 0.67 | 200 | 2.1 | 73 |
| G90BLDC-002A | 3 | 48 | 3000 | 1.34 | 400 | 3.3 | 113 |
| G90BLDC-003A | 3 | 48 | 3000 | 2.01 | 600 | 4.5 | 133 |

## Dimensions diagram





Note: If need special specification,pls contact with us.

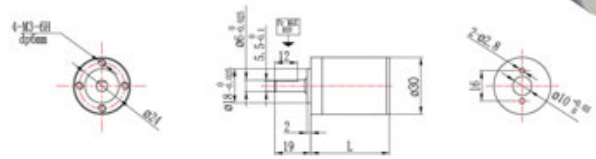


Output flange: Aluminium,Type standard(Below Drawing)

Housing: Steel

Input flange: Aluminium,Type standard(Below Drawing)

RoHS COMPLIANT 2002/95/EC



| Technical and Performance Date | | 1-stage | 2-stage | 3-stage | 4-stage |
|---|---|---|---|---|---|
| Ratio: | | 4, 5 | 16, 20 | 50, 100 | 200, 500 |
| L: | mm | 24 | 30 | 36 | 42 |
| Rated load: | Nm | 0.2 | 0.4 | 0.6 | 0.8 |
| Max load: | Nm | 0.4 | 0.8 | 1.8 | 3.0 |
| Efficiency: | % | 80 | 70 | 60 | 50 |
| Backlash: | arcmin | ≤90 | ≤120 | ≤120 | ≤150 |
| Weight: | g | 80 | 90 | 110 | 120 |
| Storage temperature: | ℃ | -30~+60 | | | |
| Storage humidity: | % | ~80 | | | |
| Running environment temperature: | ℃ | -10~+90 | | | |
| Rated input speed: | rpm | 3000 | | | |
| Max input speed: | rpm | 5000 | | | |
| Protect class: | IP | 44 | | | |
| Lubrication: | | life grease lubrication | | | |
| Noise: | dB | ≤55 | | | |
| Service life: | h | ~1,000 | | | |

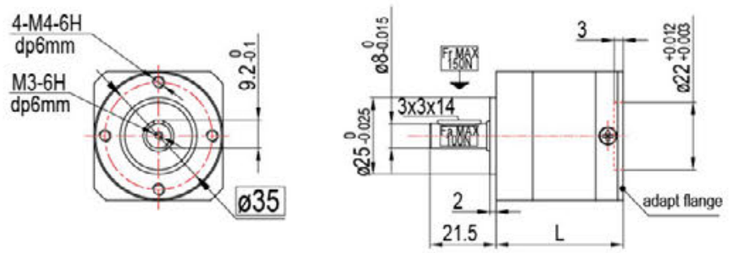
Note: If need special specification,pls contact with us.

Output flange:Aluminium,Type standard(Below Drawing)

Housing:Steel

Input flange:Aluminium,Type standard(Below Drawing)

RoHS COMPLIANT 2002/95/EC




| Technical and Performance Date | | 1-stage | 2-stage |
|---|---|---|---|
| Ratio: | | 5, 10 | 15,20,25,30,40,50,100 |
| L: | mm | 42 | 52 |
| Rated load: | Nm | 3.5 | 15 |
| Max load: | Nm | 6 | 25 |
| Efficiency: | % | 95 | 90 |
| Backlash: | arcmin | ≤15 | ≤25 |
| Weight: | KG | 0.4 | 0.6 |
| Storage temperature: | ℃ | -30~+60 | |
| Storage humidity: | % | ~80 | |
| Running environment temperature: | ℃ | -10~+90 | |
| Rated input speed: | rpm | 3000 | |
| Max input speed: | rpm | 5000 | |
| Protect class: | IP | 65 | |
| Lubrication: | | life grease lubrication | |
| Noise: | dB | ≤45 | |
| Service life: | h | ~8,000 | |



Note: If need special specification,pls contact with us.

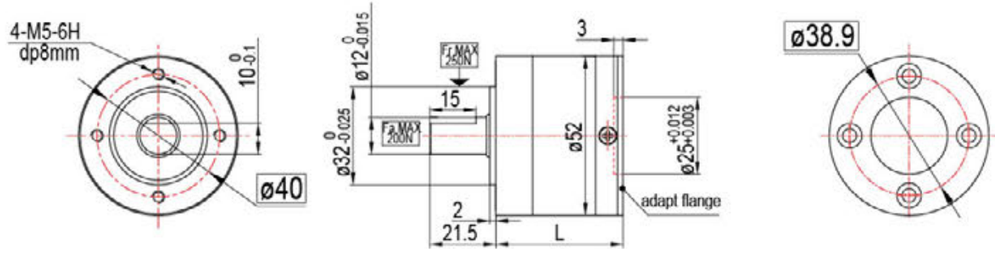


Output flange:Aluminium,Type standard(Below Drawing)

Housing:Steel

Input flange:Aluminium,Type standard(Below Drawing)

RoHS COMPLIANT 2002/95/EC




| Technical and Performance Date | | 1-stage | 2-stage |
|---|---|---|---|
| Ratio: | | 5, 10 | 15,20,25,30,40,50,100 |
| L: | mm | 43 | 53 |
| Rated load: | Nm | 3.5 | 15 |
| Max load: | Nm | 6 | 25 |
| Efficiency: | % | 95 | 90 |
| Backlash: | arcmin | ≤15 | ≤25 |
| Weight: | KG | 0.6 | 0.8 |
| Storage temperature: | ℃ | -30~+60 | |
| Storage humidity: | % | ~80 | |
| Running environment temperature: | ℃ | -10~+90 | |
| Rated input speed: | rpm | 3000 | |
| Max input speed: | rpm | 5000 | |
| Protect class: | IP | 65 | |
| Lubrication: | | life grease lubrication | |
| Noise: | dB | ≤45 | |
| Service life: | h | ~8,000 | |

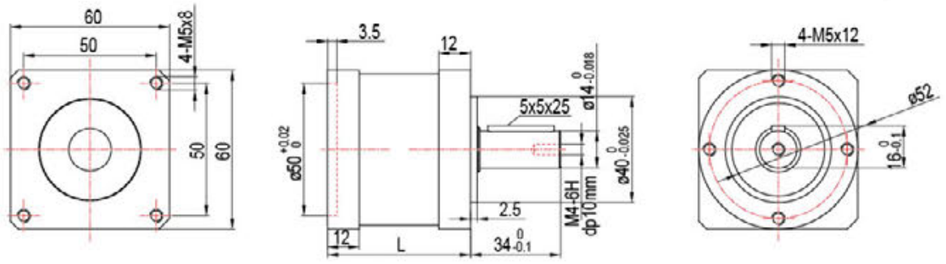
Note: If need special specification,pls contact with us.

Output flange:Aluminium,Type standard(Below Drawing)

Housing:Steel

Input flange:Aluminium,Type standard(Below Drawing)

RoHS COMPLIANT 2002/95/EC




| Technical and Performance Date | | 1-stage | 2-stage |
|---|---|---|---|
| Ratio: | | 5, 10 | 15,20,25,30,40,50,100 |
| L: | mm | 53 | 70 |
| Rated load: | Nm | 6 | 25 |
| Max load: | Nm | 12 | 40 |
| Efficiency: | % | 95 | 90 |
| Backlash: | arcmin | ≤15 | ≤25 |
| Weight: | KG | 0.9 | 1.2 |
| Storage temperature: | ℃ | -30~+60 | |
| Storage humidity: | % | ~80 | |
| Running environment temperature: | ℃ | -10~+90 | |
| Rated input speed: | rpm | 3000 | |
| Max input speed: | rpm | 5000 | |
| Protect class: | IP | 65 | |
| Lubrication: | | life grease lubrication | |
| Noise: | dB | ≤45 | |
| Service life: | h | ~8,000 | |



Note: If need special specification,pls contact with us.

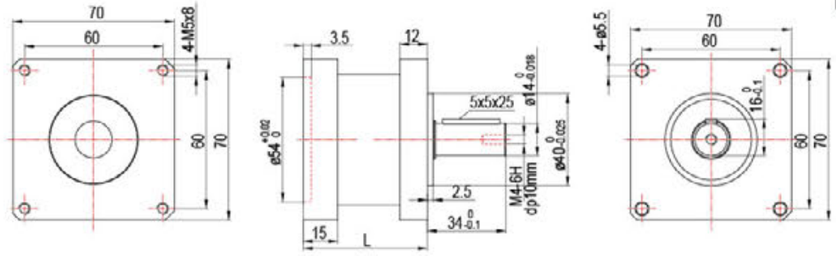


Output flange:Aluminium,Type standard(Below Drawing)

Housing:Steel

Input flange:Aluminium,Type standard(Below Drawing)

RoHS COMPLIANT 2002/95/EC




| Technical and Performance Date | | 1-stage | 2-stage |
|---|---|---|---|
| Ratio: | | 5, 10 | 15,20,25,30,40,50,100 |
| L: | mm | 53 | 70 |
| Rated load: | Nm | 6 | 25 |
| Max load: | Nm | 12 | 40 |
| Efficiency: | % | 95 | 90 |
| Backlash: | arcmin | ≤15 | ≤25 |
| Weight: | KG | 1.0 | 1.3 |
| Storage temperature: | ℃ | -30~+60 | |
| Storage humidity: | % | ~80 | |
| Running environment temperature: | ℃ | -10~+90 | |
| Rated input speed: | rpm | 3000 | |
| Max input speed: | rpm | 5000 | |
| Protect class: | IP | 65 | |
| Lubrication: | | life grease lubrication | |
| Noise: | dB | ≤45 | |
| Service life: | h | ~8,000 | |

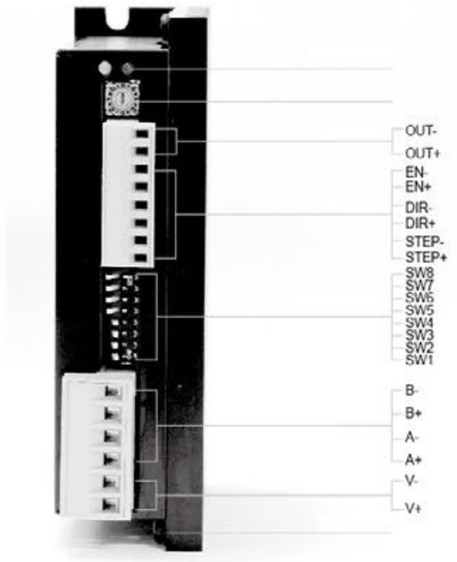
Note: If need special specification,pls contact with us.

Data Sheet

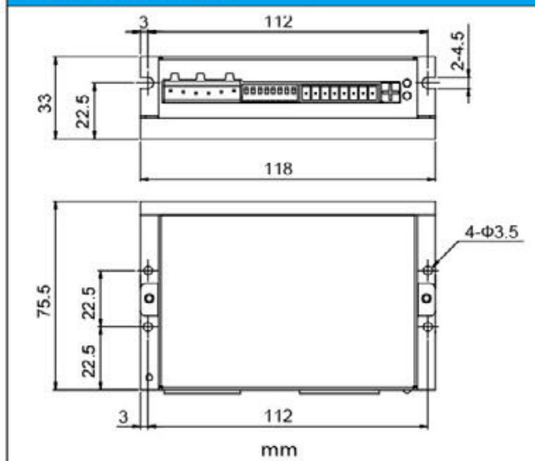
## Description

series drive is a cost–effective, high performance 2 phase step drive. The design is based on advanced digital current control technology, and features high torque, low noise, and low vibration. The running current and microstep resolution are switch selectable.

## Connections – Inputs & Outputs

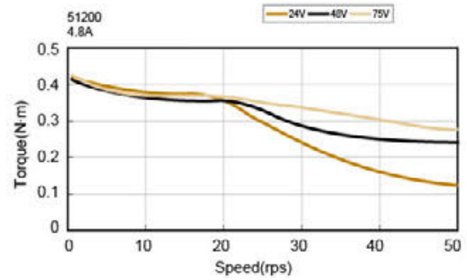


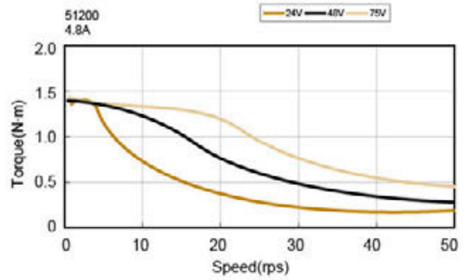

## Mechanical Drawings

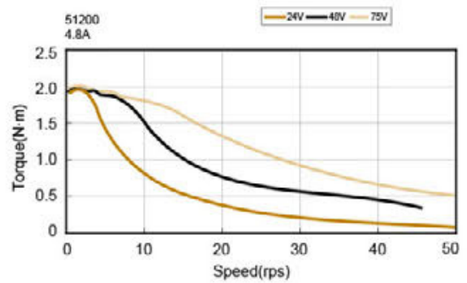


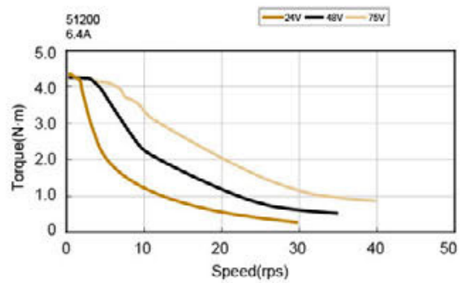

## Torque Curves

The torque curves below were generated from some of the recommended motors.






Note: If need special specification,pls contact with us.



## Specifications

### Electrical Specifications

| Parameter | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|
| Power Supply | 24 | – | 75 | VDC |
| Output Current (Peak) | 2.4 | – | 7.8 | amps |
| STEP/DIR Input Signal Average Forward Current | 6 | 10 | 15 | mA |
| Step Frequency | 2 | – | 2M | Hz |
| STEP Minimum Pulse Width Hi and Low | 250 | – | – | ns |
| DIR Minimum Pulse Width | 50 | – | – | us |
| Under Voltage Protection | – | 20 | – | VDC |
| Over Voltage Protection | – | 85 | – | VDC |
| STEP/DIR Input Signal Voltage | 4.0 | – | 28 | VDC |
| Driver Initialization Time | – | – | 2.5 | S |

### Environmental Specifications

| | |
|---|---|
| Heat Sinking Method | Natural cooling or fan–forced cooling |
| Surrounding Air Conditions | Avoid dust, oily mist and corrosive air |
| Operating Temperature | 0 – 40 °C (32 – 104°F) |
| Maximum Ambient Humidity | 90%/non–condensing |
| Shock | 5.9m/s² maximum |
| Storage Temperature | –10 – 70°C (14 – 158°F) |

## Switch Selections

Running current, idle current, microstep resolution and self test are selectable by a switch or a combination of on/off settings of 2 or more switches.

| | SW1 | SW2 | SW3 |
|---|---|---|---|
| 2.4A | ON | ON | ON |
| 3.2A | OFF | ON | ON |
| 4A | ON | OFF | ON |
| 4.8A | OFF | OFF | ON |
| 5.6A | ON | ON | OFF |
| 6.4A | OFF | ON | OFF |
| 7A | ON | OFF | OFF |
| 7.8A | OFF | OFF | OFF |

Idle Current (SW4) – ON for 50% of running value, OFF for 90%

| (step/rev) | SW5 | SW6 | SW7 |
|---|---|---|---|
| 400 | ON | ON | ON |
| 800 | OFF | ON | ON |
| 1600 | ON | OFF | ON |
| 3200 | OFF | OFF | ON |
| 6400 | ON | ON | OFF |
| 12800 | OFF | ON | OFF |
| 25600 | ON | OFF | OFF |
| 51200 | OFF | OFF | OFF |

Self test (SW8) – ON for self test, OFF for none

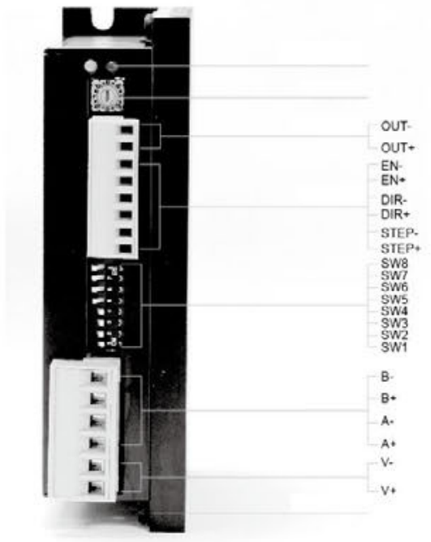
Note: If need special specification,pls contact with us.

Data Sheet

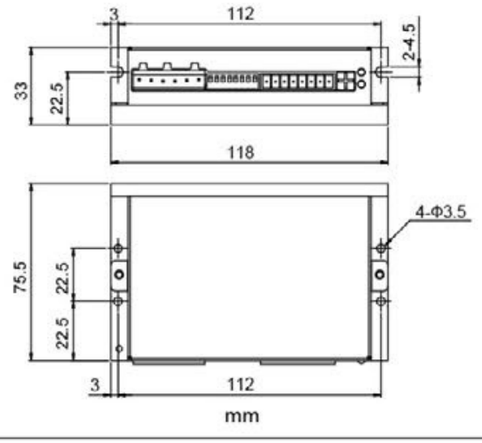
## Description

series drive is a cost–effective, high performance 2 phase step drive. The design is based on advanced digital current control technology, and features high torque, low noise, and low vibration. The running current and microstep resolution are switch selectable.

## Connections – Inputs & Outputs

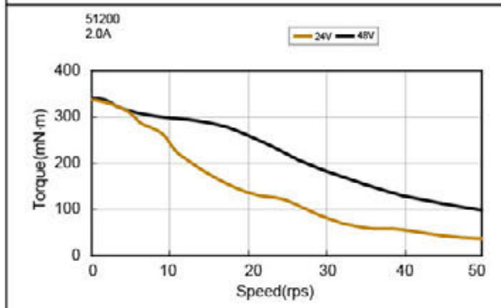


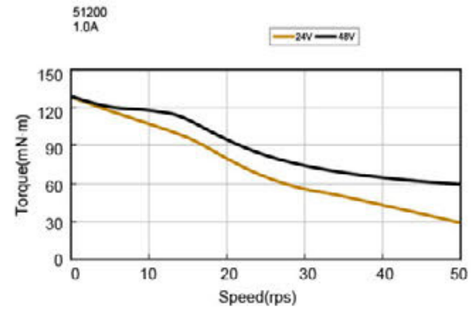

## Mechanical Drawings

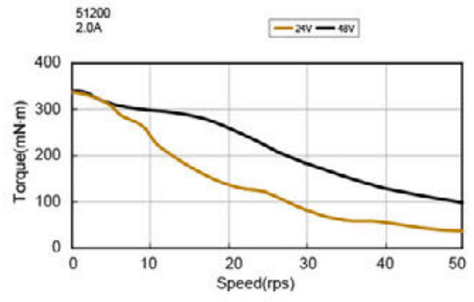


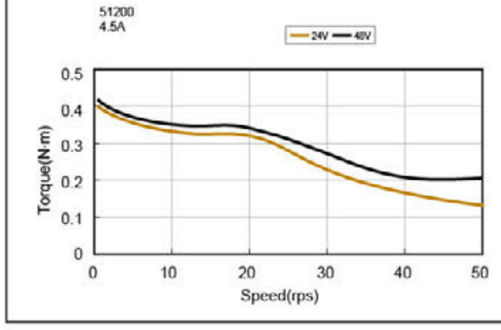

## Torque Curves

The torque curves below were generated from some of the recommended motors.




## Specifications

| Electrical Specifications | | | | |
|---|---|---|---|---|
| Parameter | Min. | Typ. | Max. | Unit |
| Power Supply | 24 | – | 48 | VDC |
| Output Current (Peak) | 1 | – | 4.5 | amps |
| STEP/DIR Input Signal Average Forward Current | 6 | 10 | 15 | mA |
| Step Frequency | 2 | – | 2M | Hz |
| STEP Minimum Pulse Width Hi and Low | 250 | – | – | ns |
| DIR Minimum Pulse Width | 50 | – | – | us |
| Under Voltage Protection | – | 20 | – | VDC |
| Over Voltage Protection | – | 60 | – | VDC |
| STEP/DIR Input Signal Voltage | 4.0 | – | 28 | VDC |
| Driver Initialization Time | – | – | 2.5 | S |

| Environmental Specifications | |
|---|---|
| Heat Sinking Method | Natural cooling or fan–forced cooling |
| Surrounding Air Conditions | Avoid dust, oily mist and corrosive air |
| Operating Temperature | 0 – 40 °C (32 – 104 °F) |
| Maximum Ambient Humidity | 90% non–condensing |
| Shock | 5.9m/s² maximum |
| Storage Temperature | –10 – 70 °C (14 – 158 °F) |

## Switch Selections

Running current, idle current, microstep resolution and self test are selectable by a switch or a combination of on/off settings of 2 or more switches.

| | SW1 | SW2 | SW3 |
|---|---|---|---|
| 1A | ON | ON | ON |
| 1.5A | OFF | ON | ON |
| 2A | ON | OFF | ON |
| 2.5A | OFF | OFF | ON |
| 3A | ON | ON | OFF |
| 3.5A | OFF | ON | OFF |
| 4A | ON | OFF | OFF |
| 4.5A | OFF | OFF | OFF |

Idle Current (SW4) – ON for 50% of running value, OFF for 90%

| (step/rev) | SW5 | SW6 | SW7 |
|---|---|---|---|
| 400 | ON | ON | ON |
| 800 | OFF | ON | ON |
| 1600 | ON | OFF | ON |
| 3200 | OFF | OFF | ON |
| 6400 | ON | ON | OFF |
| 12800 | OFF | ON | OFF |
| 25600 | ON | OFF | OFF |
| 51200 | OFF | OFF | OFF |

Self test (SW8) – ON for self test, OFF for none



Note: If need special specification,pls contact with us.

Note: If need special specification,pls contact with us.