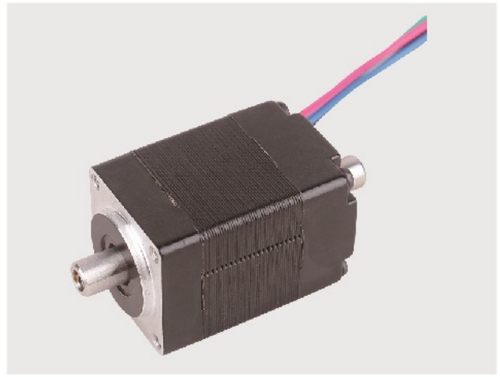
20HBH series

NEMA8 1.8° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	20N(20mm from th flange)
Max.Axial Force	2N

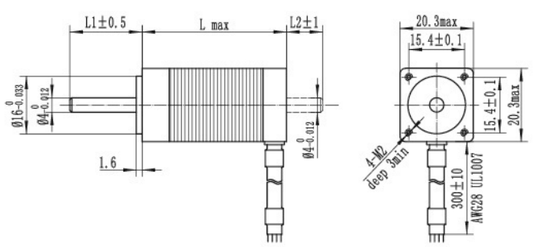


(Electrical Specifications)

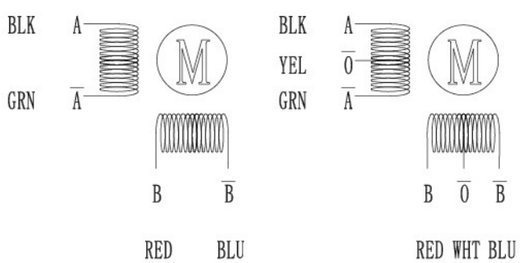
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (g.cm)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (g)
20HBH28-0204	1.8	4.6	0.2	23	8.2	140	2.5	28	4	50
20HBH30-0506	1.8	5.75	0.5	11.5	1.7	180	2.8	30	6	60
20HBH33-0604	1.8	3.9	0.6	4.5	1.6	180	3.2	33	4	70
20HBH38-0604	1.8	6	0.6	10	5.5	260	3.6	38	4	80
20HBH42-0804	1.8	1.2	0.8	1.5	5.4	300	4	42	4	90

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)



Note:

L1 and L2 can be customized according to customers' requirements.

4 Leads

6 Leads

28HBH series

NEMA11 1.8° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	20N(20mm from th flange)
Max.Axial Force	2N

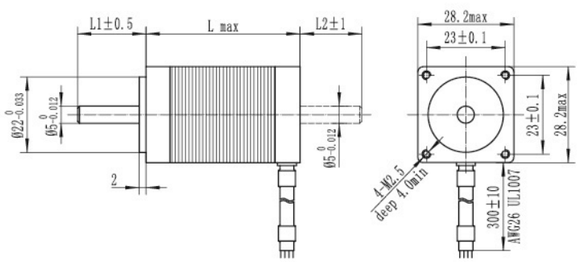


(Electrical Specifications)

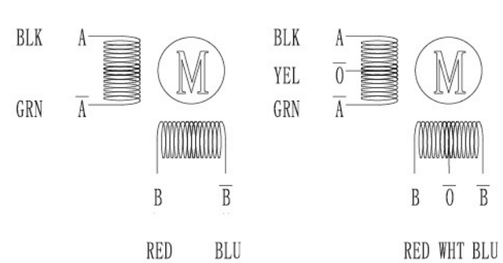
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (g.cm)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (g)
28HBH28-0354	1.8	4.2	0.35	12	5.8	450	6	28	4	105
28HBH28-0604	1.8	2.52	0.6	4.2	2.2	450	6	28	4	105
28HBH32-0674	1.8	3.88	0.67	5.8	3.2	600	9	32	4	110
28HBH32-0956	1.8	2.75	0.95	2.9	0.9	430	9	32	6	110
28HBH45-0674	1.8	4.56	0.67	6.8	4.9	950	12	45	4	140
28HBH45-0956	1.8	3.4	0.95	3.4	1.2	750	12	45	6	140
28HBH51-0674	1.8	3.2	0.67	9.2	7.2	1200	18	51	4	200
28HBH51-0956	1.8	4.4	0.95	4.6	1.8	900	18	51	6	200

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)



Note:

L1 and L2 can be customized according to customers' requirements.

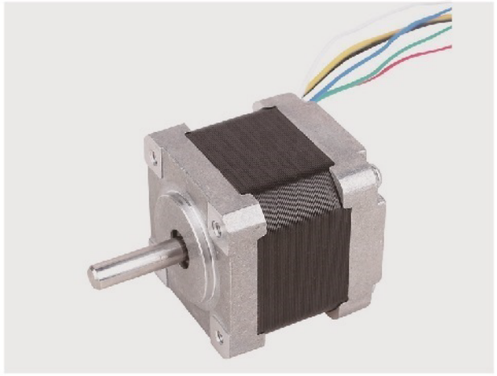
4 Leads

6 Leads

35HBF series

NEMA14 0.9° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	0.9°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	28N(20mm from th flange)
Max.Axial Force	10N

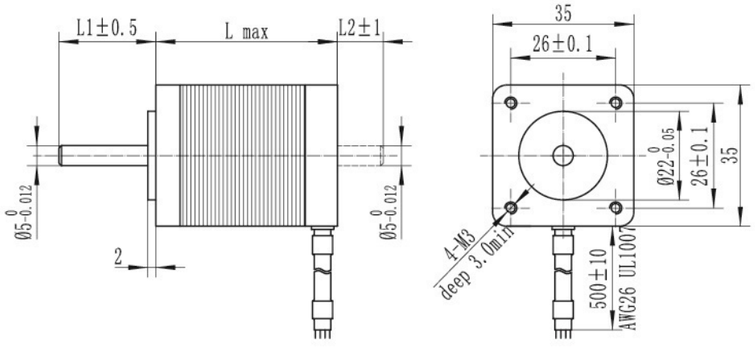


(Electrical Specifications)

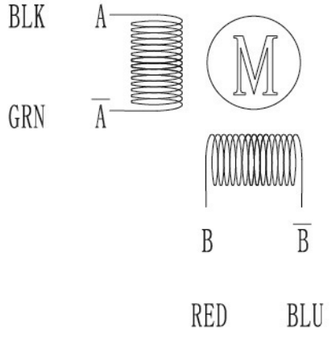
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (g.cm)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (g)
35HBF28-0244	0.9	8.2	0.24	34	42	700	12	28	4	150
35HBF28-0804	0.9	3.6	0.8	4.5	4.2	900	12	28	4	130
35HBF33-0554	0.9	6.6	0.55	12	19	1400	18	33	4	180
35HBF36-0704	0.9	4.3	0.7	6.2	12	1200	14	36	4	190
35HBF36-0804	0.9	4.8	0.8	6	10	1400	18	33	4	190

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)



4 Leads

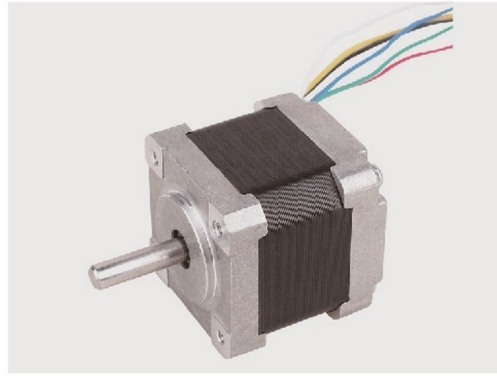
Note:

L1 and L2 can be customized according to customers' requirements.

35HBH series

NEMA14 1.8° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	28N(20mm from th flange)
Max.Axial Force	10N

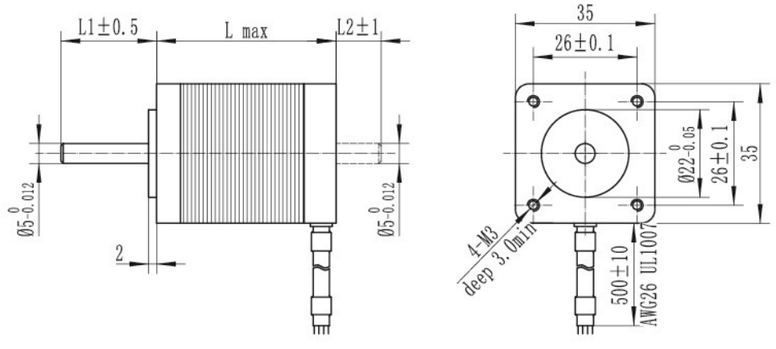


(Electrical Specifications)

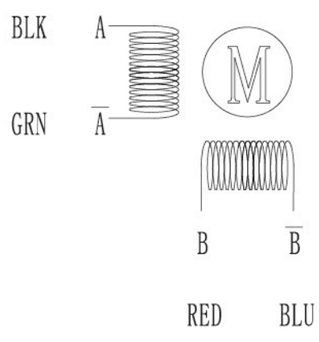
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (g.cm)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (g)
35HBH30-0804	1.8	5.44	0.8	6.8	8	1200	17	30	4	150
35HBH30-1504	1.8	2.25	1.5	1.5	1.8	1200	17	30	4	150
35HBH34-0504	1.8	6.6	0.5	13.2	14	1500	20	34	4	170
35HBH34-1204	1.8	3	1.2	2.5	3.5	1500	20	34	4	170
35HBH38-1684	1.8	2.77	1.68	1.65	2.8	2000	24	38	4	200
35HBH38-2004	1.8	5.6	2	2.8	3.8	2500	24	38	4	200
35HBH45-0804	1.8	6	0.8	7.5	12	3000	28	45	4	250
35HBH45-2004	1.8	5	2	2.5	2.6	4500	28	45	4	250

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)



4 Leads

Note:

L1 and L2 can be customized according to customers' requirements.

39HBF series

NEMA16 0.9° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	0.9°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	28N(20mm from th flange)
Max.Axial Force	10N

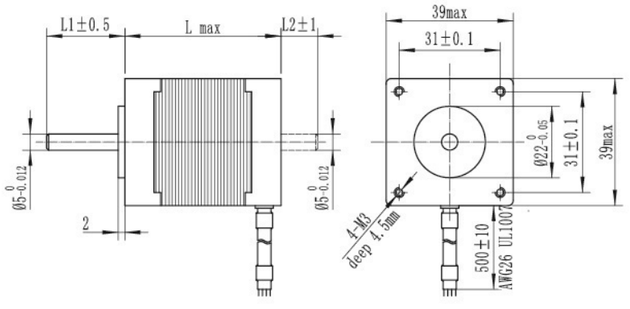


(Electrical Specifications)

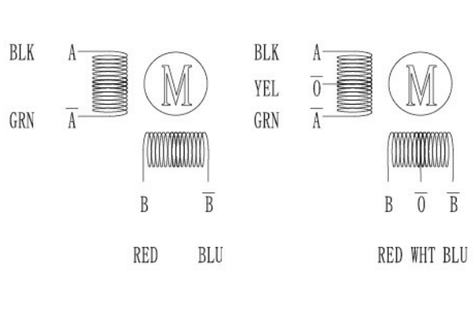
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (g)
39HBF20-0504	0.9	4.0	0.5	8	8.4	0.8	50	15	20	4	100
39HBF26-0506	0.9	12	0.5	24	13	1	50	11	26	6	150
39HBF26-0604	0.9	5.4	0.6	9	16	1.4	50	18	26	4	150
39HBF33-0406	0.9	12	0.4	30	16	1.2	120	23	33	6	160
39HBF33-0604	0.9	5.4	0.6	9	15	1.6	120	23	33	4	160
39HBF33-1204	0.9	3	1.2	2.5	3.6	1.6	120	23	33	4	160
39HBF40-0406	0.9	12	0.4	30	26	1.8	180	30	40	6	210
39HBF40-0604	0.9	7.2	0.6	12	20	2.2	180	30	40	4	210
39HBF40-1204	0.9	3.84	1.2	3.2	5.5	2.2	180	30	40	4	210

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)

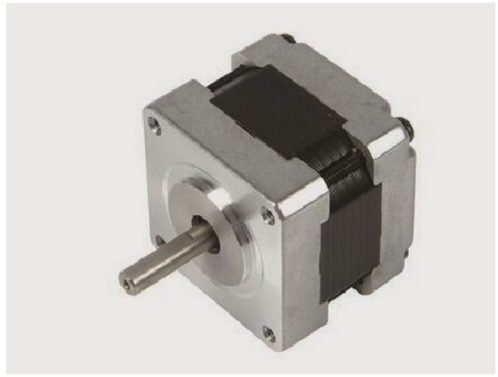


Note:
L1 and L2 can be customized according to customers' requirements.

39HBH series

NEMA16 1.8° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	28N(20mm from th flange)
Max.Axial Force	10N

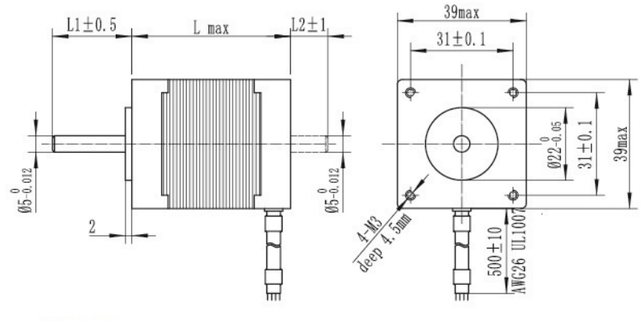


(Electrical Specifications)

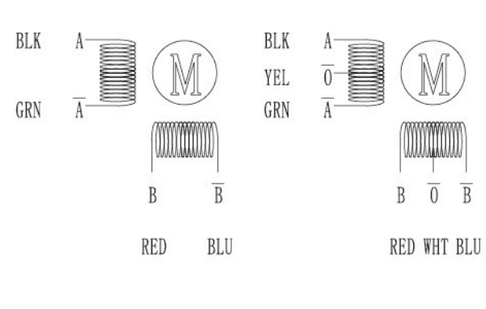
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (g)
39HBH20-0404A	1.8	2.64	0.4	7.5	6.6	0.65	50	11	20	4	120
39HBH20-0506A	1.8	6.5	0.5	7.5	1.3	0.8	50	11	20	6	120
39HBH34-0654A	1.8	4.55	0.65	9.3	7	1.8	120	20	34	4	210
39HBH34-0306A	1.8	12	0.3	20	40	1.3	120	20	34	6	210
39HBH38-0504A	1.8	12	0.5	45	24	2.9	180	24	38	4	250
39HBH38-0806A	1.8	6	0.8	6	7.5	2	180	24	38	6	250
39HBH44-0304A	1.8	12	0.3	80	42	3	250	40	44	4	260

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)

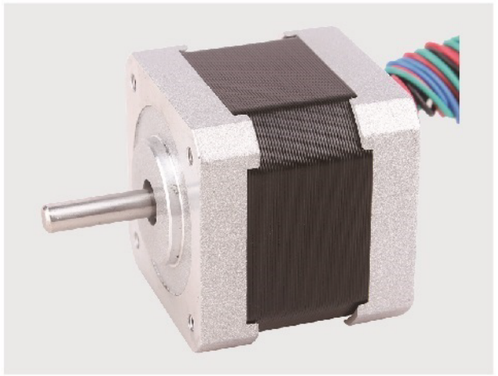


Note:
L1 and L2 can be customized according to customers' requirements.

42HBF series

NEMA17 0.9° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	0.9°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	28N(20mm from th flange)
Max.Axial Force	10N

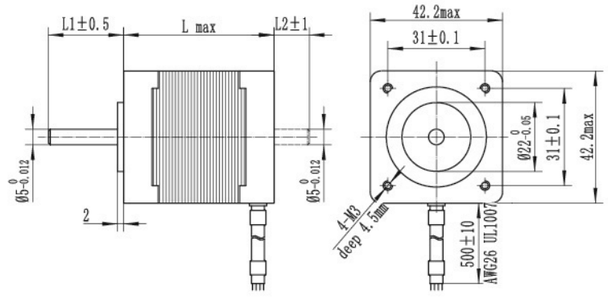


(Electrical Specifications)

Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
42HBF34-0404	0.9	8.0	0.4	20	25	1.8	200	35	34	4	0.22
42HBF34-0606	0.9	6.8	0.6	10	11.3	1.9	200	35	34	6	0.22
42HBF34-1204	0.9	3.24	1.2	2.7	5.2	2.3	200	35	34	4	0.22
42HBF40-1704	0.9	2.7	1.7	1.6	4	3.2	220	54	40	4	0.28
42HBF40-2004	0.9	2.4	2	1.2	2.8	3.2	220	54	40	4	0.28
42HBF40-0806	0.9	5.44	0.8	6.8	10.2	3	220	54	40	6	0.28
42HBF48-0406	0.9	12.0	0.4	30	28	4	250	68	48	6	0.38
42HBF48-0804	0.9	6.2	0.8	7.8	20	3.2	250	68	48	4	0.38
42HBF48-1684	0.9	2.8	1.68	1.65	4.1	4.4	250	68	48	4	0.38

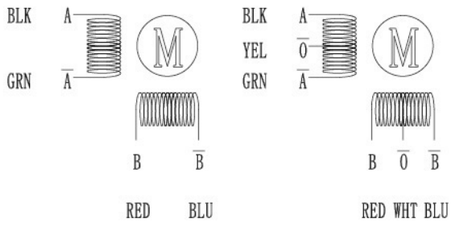
Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



Note:
L1 and L2 can be customized according to customers' requirements.

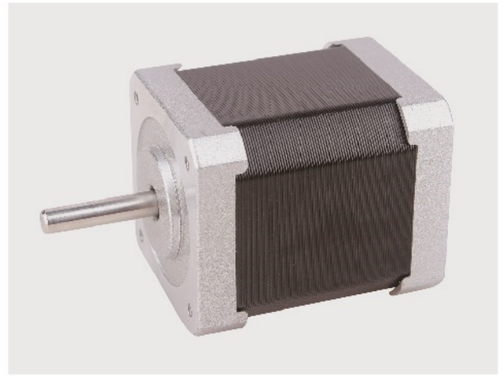
(Wiring Diagram)



42HBH series

NEMA17 1.8° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	28N(20mm from th flange)
Max.Axial Force	10N

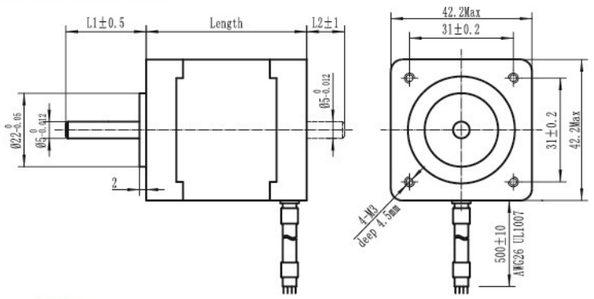


(Electrical Specifications)

Model No.	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
42HBH29-0804	1.8	2.3	0.8	2.9	3	1.8	180	25	29	4	0.16
42HBH34-0404	1.8	12.0	0.4	30	35	3.2	200	34	34	4	0.22
42HBH34-0844	1.8	4.8	0.84	5.75	8	2.8	200	34	34	4	0.22
42HBH34-1704	1.8	2.2	1.7	1.3	1.8	2.8	200	34	34	4	0.22
42HBH40-0404	1.8	12.0	0.4	30	60	4.2	220	54	40	4	0.28
42HBH40-0804	1.8	5.4	0.8	6.8	12	4.5	220	54	40	4	0.28
42HBH40-1204	1.8	6.6	1.2	5.5	11	5.2	220	54	40	4	0.28
42HBH40-1684	1.8	2.8	1.68	1.68	3.4	4	220	54	40	4	0.28
42HBH40-1704	1.8	3.4	1.7	2	3	4	220	54	40	4	0.28
42HBH40-1206	1.8	4.0	1.2	3.3	3.5	2.97	220	54	40	6	0.28
42HBH48-0404	1.8	12.0	0.4	30	45	4.5	280	68	48	4	0.38
42HBH48-1004	1.8	4.5	1	4.5	10	5	280	68	48	4	0.38
42HBH48-1304	1.8	4.6	1.3	3.5	6.6	5.5	280	68	48	4	0.38
42HBH48-1504	1.8	4.2	1.5	2.8	5.5	5.5	280	68	48	4	0.38
42HBH48-1684	1.8	3.4	1.68	2	3.8	5.2	280	68	48	4	0.38
42HBH48-0406	1.8	12.0	0.4	30	28	3.2	280	68	48	6	0.38
42HBH52-1504	1.8	4.5	1.5	3	7	6.8	300	95	52	4	0.45
42HBH60-1504	1.8	3.8	1.5	2.5	6	7	360	95	60	4	0.55

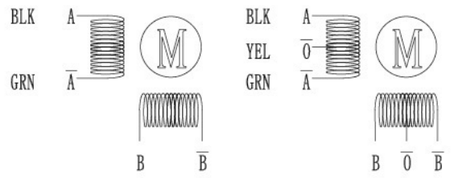
Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



Note:
L1 and L2 can be customized according to customer's requirements

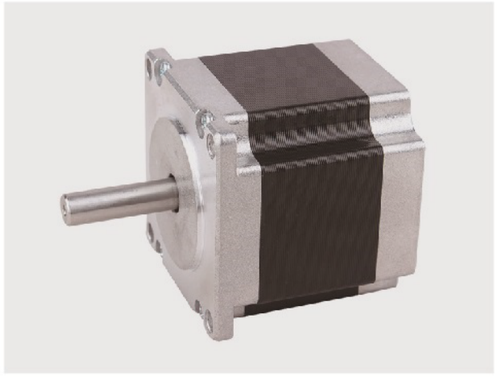
(Wiring Diagram)



57HBT series

NEMA23 3–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.2°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	75N(20mm from th flange)
Max.Axial Force	15N

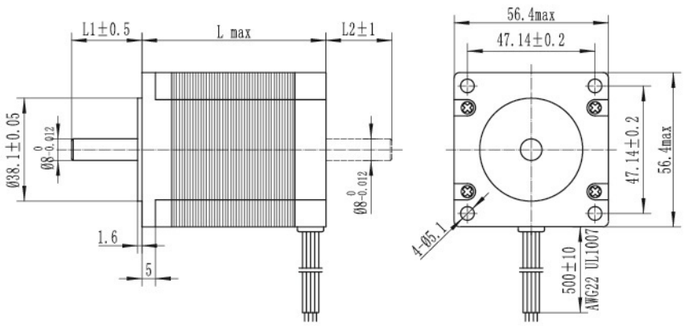


(Electrical Specifications)

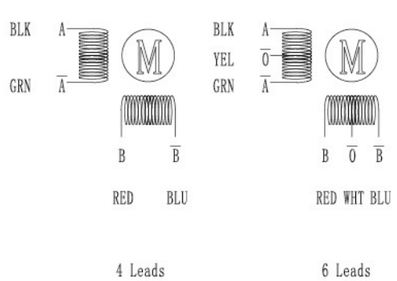
Model No.	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
57HBT42-5206	1.2	6.76	5.2	1.3	1.1	4.5	210	110	42	6	0.48
57HBT56-5606	1.2	3.92	5.6	0.7	1.1	9	400	300	56	6	0.72
57HBT79-5806	1.2	6.09	5.8	1.05	1.3	15	680	480	79	6	1.1

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)

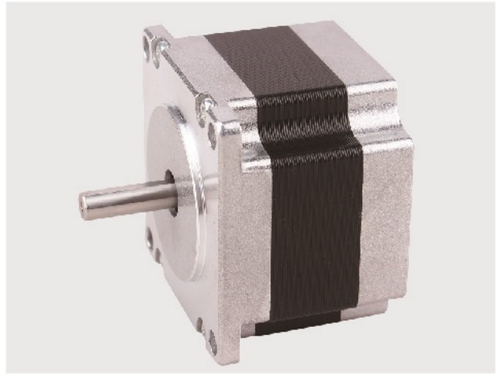


Note:
L1 and L2 can be customized according to customers' requirements.

57HBF series

NEMA23 0.9° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	0.9°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	75N(20mm from th flange)
Max.Axial Force	15N

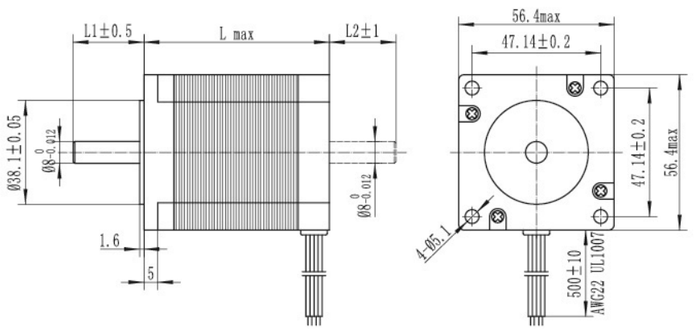


(Electrical Specifications)

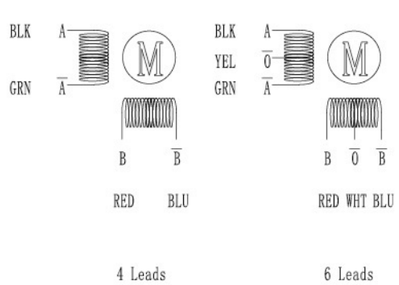
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
57HBF41-1006	0.9	4.2	1	4.2	6	3.9	210	120	41	6	0.45
57HBF41-2006	0.9	2.4	2	1.2	2.1	3.9	210	120	41	6	0.45
57HBF51-0604	0.9	6.6	0.6	11	33	8	260	240	51	4	0.56
57HBF51-1704	0.9	6.8	1.7	4	14	7.5	260	240	51	4	0.56
57HBF56-2006	0.9	3.3	2	1.65	4.5	10	400	300	56	6	0.7
57HBF56-3004	0.9	2.7	3	0.9	3.5	10	400	300	56	4	0.7
57HBF56-4204	0.9	1.7	4.2	0.4	1.5	10.5	400	300	56	4	0.7
57HBF64-1004	0.9	7.8	1	7.8	29.2	12	500	380	64	4	0.85
57HBF64-4204	0.9	1.8	4.2	0.43	1.6	13	500	380	64	4	0.85
57HBF76-1006	0.9	8.6	1	8.6	23.2	13.5	680	440	76	6	1.05
57HBF76-3004	0.9	3.6	3	1.2	4.5	15	680	440	76	4	1.05
57HBF76-4204	0.9	2.1	4.2	0.51	2.4	18	680	440	76	4	1.05

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)

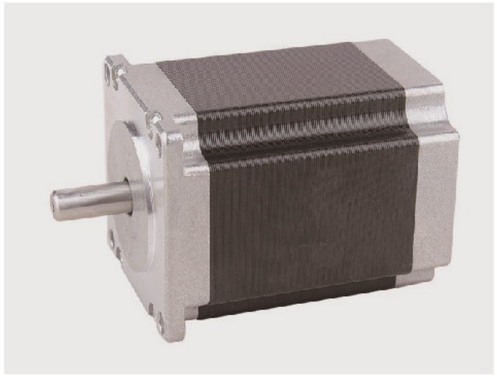


Note:
L1 and L2 can be customized according to customers' requirements.

57HBH series

NEMA23 1.8° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	75N(20mm from th flange)
Max.Axial Force	15N

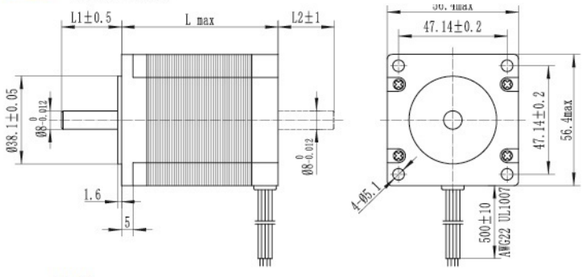


(Electrical Specifications)

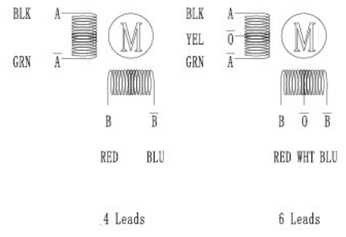
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
57HBH41-2004	1.8	2	2	1	1.2	3.2	210	120	41	4	0.45
57HBH41-1004	1.8	5.4	1	5.4	9.5	5.5	210	120	41	4	0.45
57HBH41-2004	1.8	2	2	1	2.2	5	210	120	41	4	0.45
57HBH51-1504	1.8	2.4	1.5	1.6	3.8	8.2	360	275	51	4	0.65
57HBH51-2004	1.8	2.4	2	1.2	3	9	360	275	51	4	0.65
57HBH51-2006	1.8	2	2	1	1.6	7	360	275	51	6	0.65
57HBH56-1504	1.8	5.7	1.5	3.8	12	13.5	400	300	56	4	0.7
57HBH56-3004	1.8	2.85	3	0.95	2.8	12	400	300	56	4	0.7
57HBH56-2006	1.8	3.6	2	1.8	2.8	9	400	300	56	6	0.7
57HBH64-3004	1.8	3.9	3	1.3	2.2	15	500	380	64	4	0.8
57HBH76-2004	1.8	8.6	2	4.3	16.2	24	680	480	76	4	1
57HBH76-3004	1.8	2.7	3	0.9	3.5	20	680	480	76	4	1
57HBH76-4004	1.8	2.4	4	0.6	2.2	20	680	480	76	4	1
57HBH82-3004	1.8	4.2	3	1.4	5	22	700	510	82	4	1.2
57HBH82-4004	1.8	3	4	0.75	3.5	20	700	510	82	4	1.2
57HBH100-3004	1.8	3	3	1	4.5	25	1000	680	100	4	1.4
57HBH112-3004	1.8	3.9	3	1.3	6.5	30	1200	800	112	4	1.7
57HBH112-3504	1.8	2.45	3.5	0.7	3	28	1200	800	112	4	1.7

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)



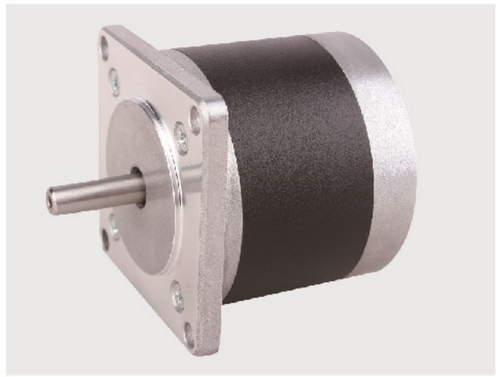
Note:

L1 and L2 can be customized according to customers' requirements.

57HBO series

NEMA23 Round Shape Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	75N(20mm from th flange)
Max.Axial Force	15N

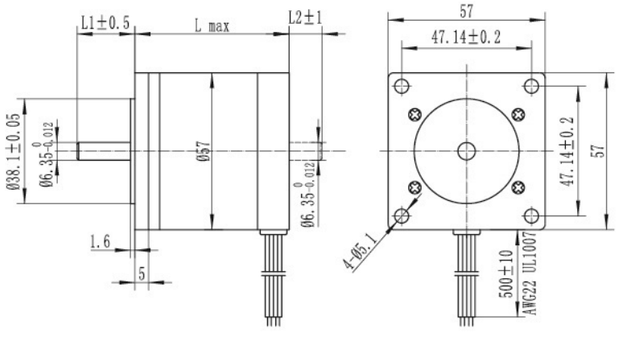


(Electrical Specifications)

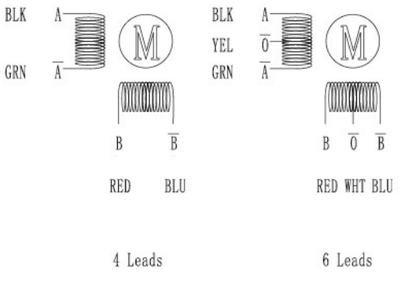
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
57HBO41-0406	1.8	12	0.4	30	30	2.8	180	57	41	6	0.54
57HBO41-1504	1.8	2.85	1.5	1.9	4	3	180	57	41	4	0.54
57HBO41-2104	1.8	1.68	2.1	0.8	1.4	3.2	180	57	41	4	0.54
57HBO51-0426	1.8	12	0.42	29	36	5	350	110	51	6	0.6
57HBO51-1504	1.8	3.75	1.5	2.5	6	6	350	110	51	4	0.6
57HBO51-2004	1.8	2.6	2	1.3	3.2	6	350	110	51	4	0.6
57HBO56-0606	1.8	12	0.6	20	20	6	420	145	56	6	0.65
57HBO56-1206	1.8	6	1.2	5	6.8	6	420	145	56	6	0.65
57HBO56-2804	1.8	2	2.8	0.72	1.8	8	420	145	56	4	0.65
57HBO76-0686	1.8	12	0.68	17.7	30	9	720	200	76	6	0.95
57HBO76-2104	1.8	4.62	2.1	2.2	6.2	11	720	230	76	4	0.95

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)



Note:

L1 and L2 can be customized according to customers' requirements.

60HBH series

NEMA24 1.8° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	75N(20mm from th flange)
Max.Axial Force	15N

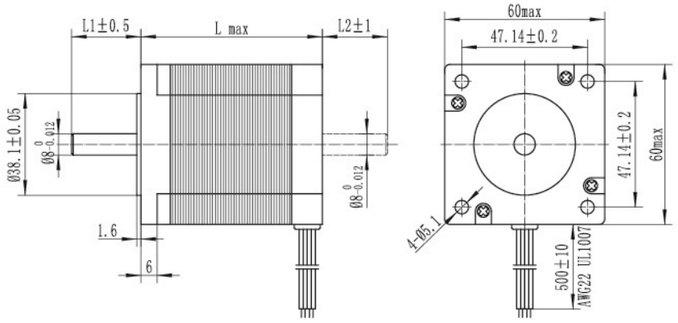


(Electrical Specifications)

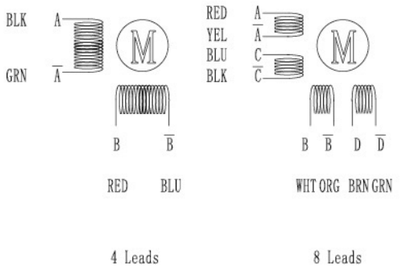
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
60HBH45-3004	1.8	2.4	3	0.8	1.6	9.5	350	200	45	4	0.55
60HBH56-3004	1.8	2.4	3	0.8	2.4	16	400	300	56	4	0.8
60HBH67-4004	1.8	2.2	4	0.55	1.8	20	500	590	67	4	1
60HBH67-2808	1.8	3.4	2.8	1.2	4	21	500	590	67	8	1
60HBH88-4004	1.8	3.2	4	0.8	3.5	30	1200	860	88	4	1.4
60HBH88-2808	1.8	4.5	2.8	1.6	7	30	1200	860	88	8	1.4
60HBH100-3504	1.8	3.2	3.5	0.9	3.8	32	1400	1200	100	4	1.6

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)

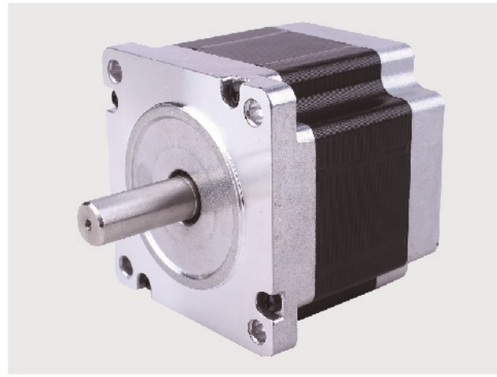


Note:
L1 and L2 can be customized according to customers' requirements.

86HBT series

NEMA34 1.2° 3–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.2°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	220N(20mm from th flange)
Max.Axial Force	60N

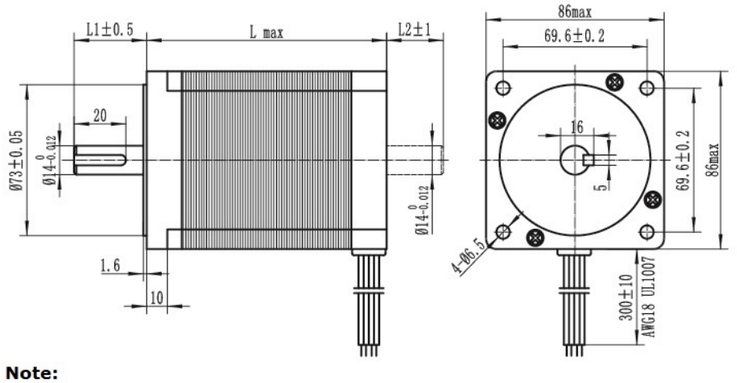


(Electrical Specifications)

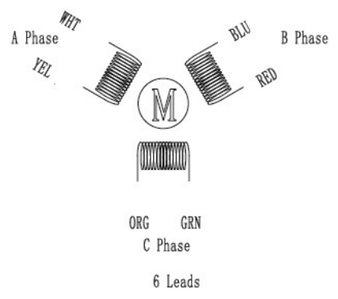
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Inertia (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
60HBT67-1756	1.2	7.4	1.75	4.25	12.3	22.6	1000	1100	67	6	1.9
60HBT97-2006	1.2	10.8	2	5.4	23	43	2000	1400	97	6	3.1
60HBT97-5806	1.2	5.2	5.8	0.9	3.2	46	2000	1400	97	6	3.1
60HBT97-5206	1.2	6.2	5.2	1.2	5.2	45	2000	1400	97	6	3.1
60HBT127-2256	1.2	20.3	2.25	9	41	65	3000	2700	127	6	4.3
60HBT127-5206	1.2	14.3	5.2	2.75	13.7	67	3000	2700	127	6	4.3
60HBT150-5006	1.2	7.5	5	1.5	3	70	3600	4700	150	6	4.6

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)

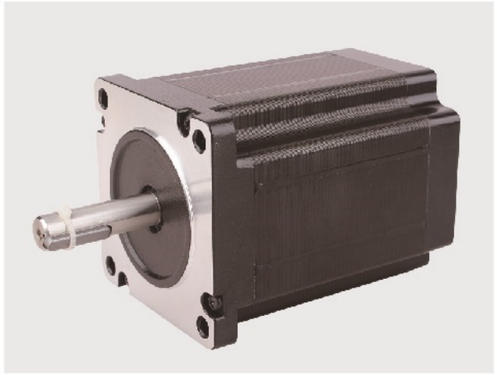


Note:
L1 and L2 can be customized according to customers' requirements.

86HBH series

NEMA34 1.8° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	220N(20mm from th flange)
Max.Axial Force	60N

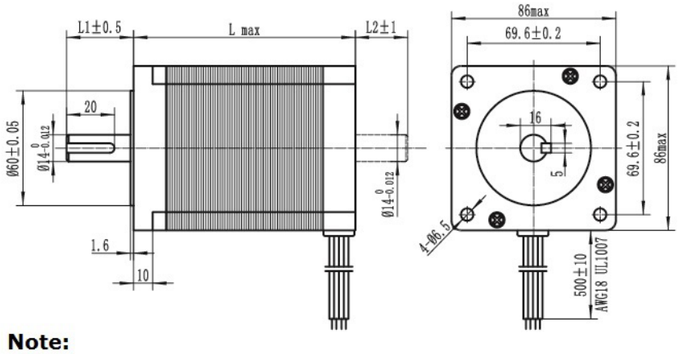


(Electrical Specifications)

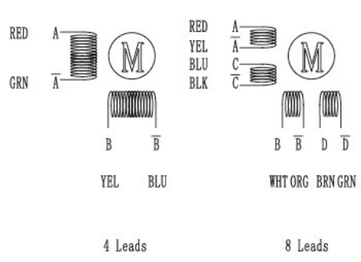
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Rotor Inertia (g.cm²)	Detent Torque (g.cm Max)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
86HBH65-3004	1.8	3.3	3	1.1	6.5	28	1000	800	65	4	1.7
86HBH68-4004	1.8	1.3	4	0.33	1.6	35	1200	1000	68	4	1.7
86HBH78-4004	1.8	1.5	4	0.38	2.5	35	1400	1200	78	4	2.3
86HBH78-4204	1.8	1.9	4.2	0.45	4	45	1400	1200	78	4	2.3
86HBH78-6008	1.8	3.0	6	0.5	4	45	1400	1200	78	8	2.3
86HBH82-4504	1.8	1.4	4.5	0.32	2.8	45	1500	1300	82	4	2.5
86HBH82-5608	1.8	2.0	5.6	0.35	3	50	1500	1300	82	8	2.5
86HBH100-5004	1.8	2.5	5	0.5	4	68	2100	2000	100	4	3.2
86HBH100-5008	1.8	2.5	5	0.5	4	65	2100	2000	100	8	3.2
86HBH118-6004	1.8	3.6	6	0.6	6	85	2700	2400	118	4	3.7
86HBH118-5608	1.8	3.4	5.6	0.6	6	85	2700	2400	156	8	3.7
86HBH156-5504	1.8	3.9	5.5	0.7	9	120	4000	3600	156	4	5.5
86HBH156-6204	1.8	3.6	6.2	0.75	9	122	4000	3600	156	8	5.5

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)



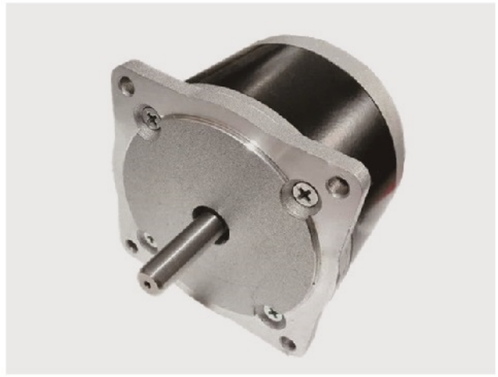
Note:

L1 and L2 can be customized according to customers' requirements.

86HBO series

NEMA34 Round Shape Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	220N(20mm from th flange)
Max.Axial Force	60N

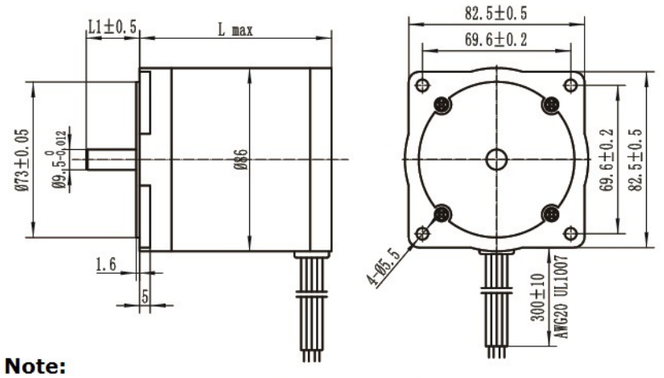


(Electrical Specifications)

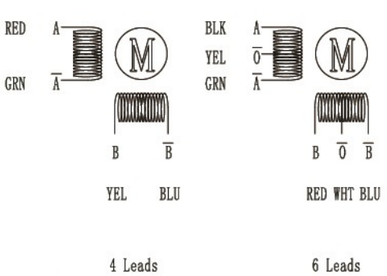
Model No	Step Angle (°)	Rated Voltage (V)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (Kg.cm)	Detent Torque (g.cm Max)	Rotor Torque (g.cm²)	Motor Length (mm)	Lead Wires No.	Motor Weight (Kg)
86HBO62-4506	1.8	2.3	4.5	0.52	1.3	16	800	560	62	6	1.5
86HBO62-5904	1.8	2.1	5.9	0.36	1.73	20	800	560	62	4	1.5
86HBO94-4006	1.8	2.8	4	0.71	3.35	36	2400	1100	94	6	2.6
86HBO94-5604	1.8	2.1	5.6	0.36	2.5	45	2400	1100	94	4	2.6
86HBO134-6706	1.8	2.7	6.7	0.4	1.77	60	3600	1800	134	6	3.6
86HBO134-5604	1.8	3.1	5.6	0.56	6.45	75	3600	1800	134	4	3.6

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)



Note:

L1 can be customized according to customers' requirements.

110HBT series

NEMA42 1.2° 3–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.2°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	220N(20mm from th flange)
Max.Axial Force	60N

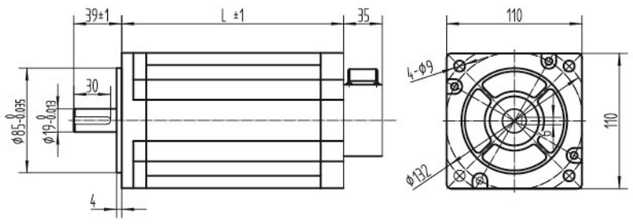


(Electrical Specifications)

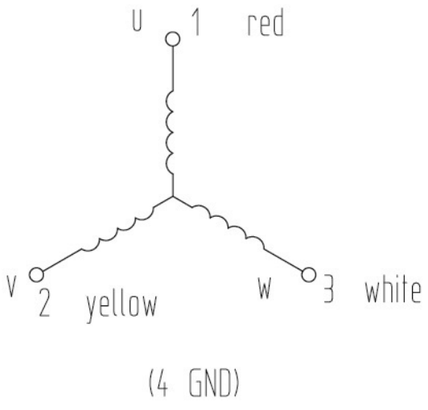
Model No	Step Angle (°)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (N.m)	Rotor Inertia (g.cm²)	Motor Length (mm)	Wiring	Motor Weight (Kg)
110HBT118-4203	1.2	4.2	1	12.5	8	7400	118	Four Hole Socket	5.5
110HBT125-4203	1.2	4.2	1.1	9	9	7800	125		6
110HBT139-4203	1.2	4.2	1.2	13	12	8400	139		6.5
110HBT180-6403	1.2	6.4	0.9	9.5	16	12800	180		8.5
110HBT221-5203	1.2	5.2	1.9	18	20	16800	221		11

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



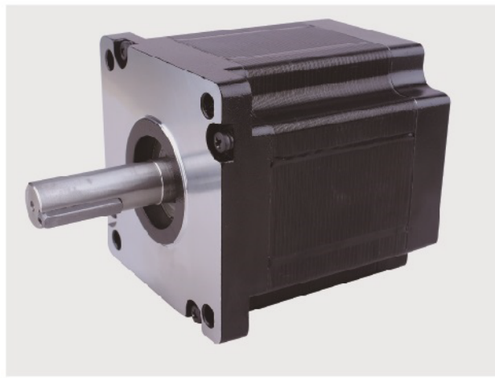
(Wiring Diagram)



110HBH series

NEMA42 1.8° 2–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	220N(20mm from th flange)
Max.Axial Force	60N

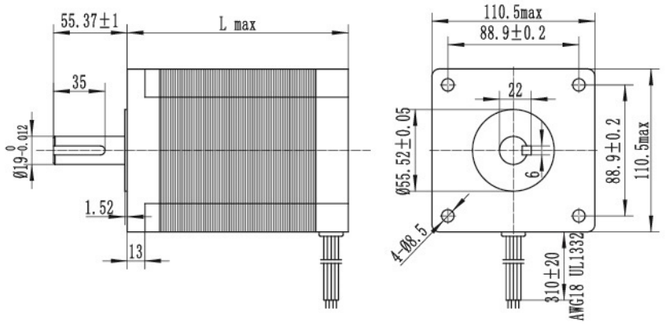


(Electrical Specifications)

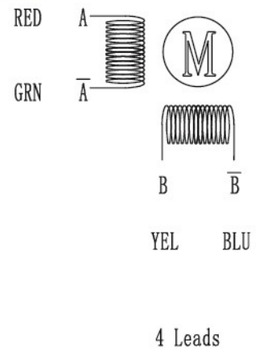
Model No	Step Angle (°)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (N.m)	Rotor Inertia (g.cm²)	Motor Length (mm)	Leads No.	Motor Weight (Kg)
110HBH99-5504	1.8	5.5	0.72	10.9	11	5500	99	4	5
110HBH115-6004	1.8	6	0.44	7.17	12	7200	115	4	6.2
110HBH150-6504	1.8	6.5	0.72	12.8	20	10900	150	4	8.4
110HBH168-6004	1.8	6	0.9	16	24	13000	168	4	9.8
110HBH201-8004	1.8	8	0.71	15.38	33	16200	201	4	11.7

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



(Wiring Diagram)



130HBT series

NEMA52 1.2° 3–Phase Hybrid Stepper Motor

Item	Specifications
Step Angle	1.2°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	220N(20mm from th flange)
Max.Axial Force	60N

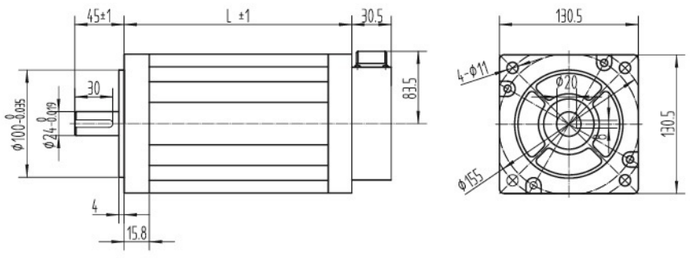


(Electrical Specifications)

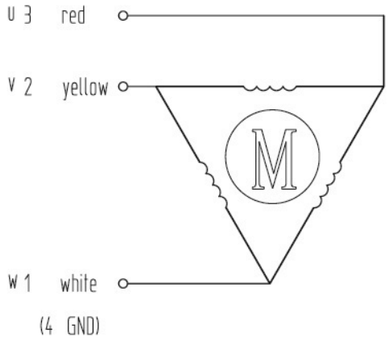
Model No	Step Angle (°)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (N.m)	Motor Length (mm)	Wiring	Motor Weight (Kg)
130HBT125-10003	1.2	10	0.83	7.65	15	125		6
130HBT135-10003	1.2	10	0.82	7.99	17	135	Four	7
130HBT139-10003	1.2	10	0.75	9	20	139	Hole	8
130HBT230-10003	1.2	10	1.3	12.66	40	230	Socket	18
130HBT286-7003	1.2	7	1.82	18.5	50	286		22

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



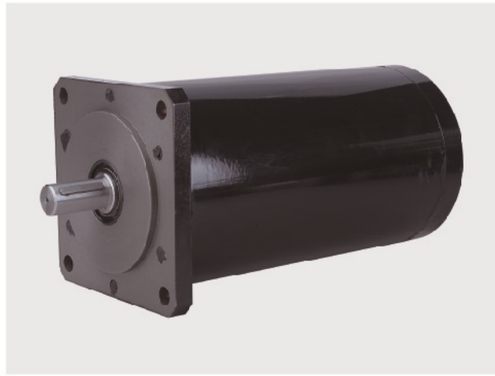
(Wiring Diagram)



130HBO series

NEMA52 Round Shape Hybrid Stepper Motor

Item	Specifications
Step Angle	1.8°
Temperature Rise	80℃ Max
Ambient Temperature	-20℃ Max~+50℃
Insulation Resistance	100M ΩMin.,500VDC
Dielectric Strength	500VAC for 1 minute
Shaft Radial Play	0.02Max (450g-load)
Shaft Axial Play	0.08Max(450g-load)
Max.Radial Force	220N(20mm from th flange)
Max.Axial Force	60N

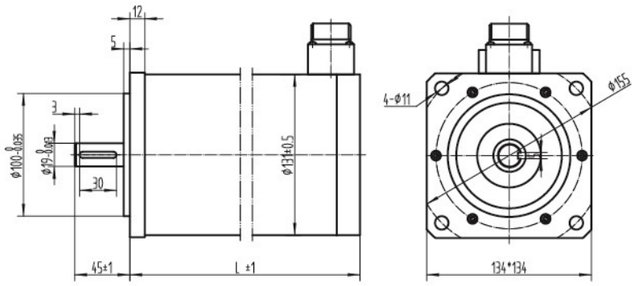


(Electrical Specifications)

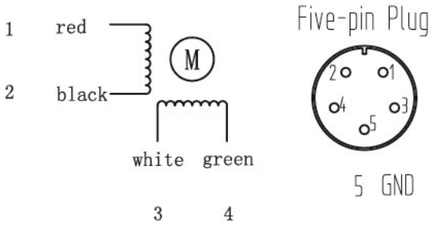
Model No	Step Angle (°)	Rated Current (A)	Phase Resistance (Ω)	Phase Inductance (mH)	Holding Torque (N.m)	Motor Length (mm)	Wiring	Motor Weight (Kg)
130HBO199-6004	1.8	6	0.75	12	25	199		16
130HBO226-6004	1.8	6	0.86	12.5	27	226	Five Hole	18
130HBO282-6004	1.8	6	0.66	9	37	282	Socket	22

Above only for representative products,products of special request can be made according to the customer request.

(Dimensions)
(Unit=mm)



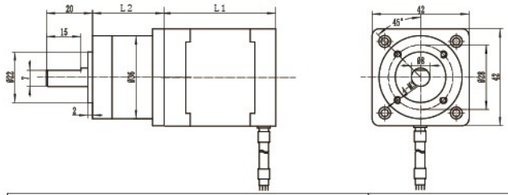
(Wiring Diagram)

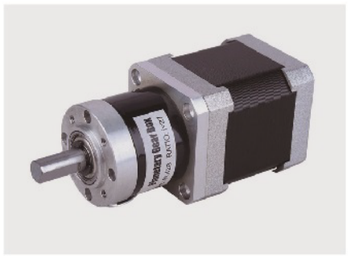


42HBG series

NEMA 17 Planetary Geared Stepper Motor

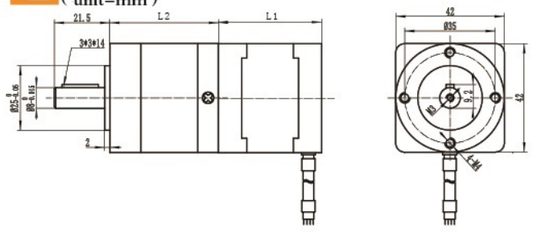
PL42−B (Dimensions)
(unit=mm)

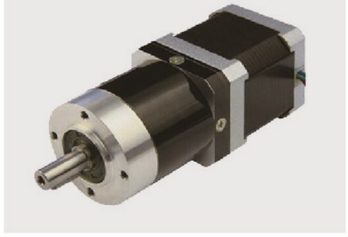




Specifications		First Stage	Second Stage	Third Stage
Gear Ratio		3.71 、 5.18	14 、 19 、 27	51 、 71 、 100 、 139
Length	mm	31	38.5	48.2
Rated Load	N.m	1.8	3	4.8
Max Load	N.m	5.3	8.9	14
Effiency	%	90	81	73
Blacklash	arcmin	⩽ 60	⩽ 75	⩽ 90
Weight	Kg	0.2	0.25	0.3
Rated Input Speed	RPM	3000	3000	3000
Max Input Speed	RPM	5000	5000	5000
Protection Class	IP	65	65	65
Lubrication		Grease	Grease	Grease
Noise	dB	⩽ 45	⩽ 45	⩽ 45
Life	h	20000	20000	20000

PL42 (Dimensions)
(unit=mm)





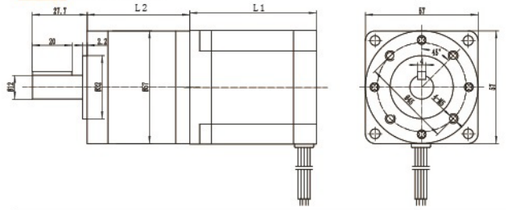
Specifications		First Stage	Second Stage
Gear Ratio		4,5,7,9,10	16,20,25,28,35,36,40,45,49,50, 53,70,81,90,100
Length	mm	42	52
Rated Load	N.m	3.5	15
Max Load	N.m	6	25
Effiency	%	95	90
Blacklash	arcmin	⩽15	⩽25
Weight	Kg	0.4	0.6
Rated Input Speed	RPM	3000	3000
Max Input Speed	RPM	5000	5000
Protection Class	IP	65	65
Lubrication		Grease	Grease
Noise	dB	⩽45	⩽45
Life	h	20000	20000

Remark: L1 is stepper motor length, L2 is gearbox length.Stepper motor specification see page (8)

57HBG series

Nema 23 Planetary Geared Stepper Motor

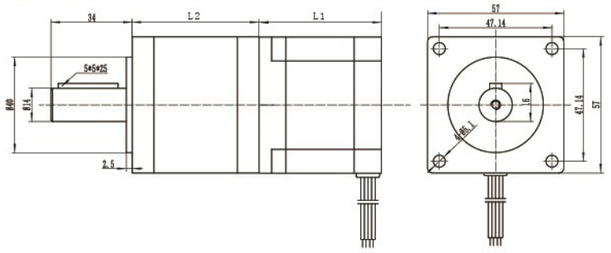
PL57−B (Dimensions)
(unit=mm)

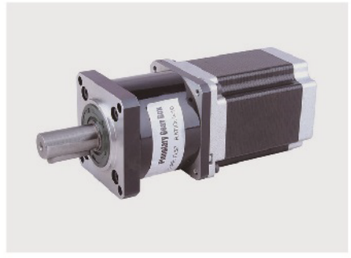




Specifications		First Stage	Second Stage	Third Stage
Gear Ratio		3.60 、 4.25	13 、 15 、 18	47 、 55 、 65 、 77
Length	mm	40.5	51.8	63.1
Rated Load	N.m	9	15	24
Max Load	N.m	26	44	71
Effiency	%	90	81	73
Blacklash	arcmin	⩽ 60	⩽ 75	⩽ 90
Weight	Kg	0.7	0.8	0.9
Rated Input Speed	RPM	3000	3000	3000
Max Input Speed	RPM	5000	5000	5000
Protection Class	IP	65	65	65
Lubrication		Grease	Grease	Grease
Noise	dB	⩽ 45	⩽ 45	⩽ 45
Life	h	20000	20000	20000

PL57 (Dimensions)
(unit=mm)





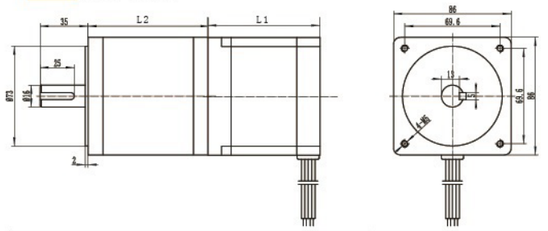
Specifications		First Stage	Second Stage
Gear Ratio		4、5、7、9、10	16、20、25、28、35、36、40、45、49、50、63、70、81、90、100
Length	mm	53	70
Rated Load	N.m	6	25
Max Load	N.m	12	40
Effiency	%	95	90
Blacklash	arcmin	⩽15	⩽25
Weight	Kg	0.8	1.1
Rated Input Speed	RPM	3000	3000
Max Input Speed	RPM	5000	5000
Protection Class	IP	65	65
Lubrication		Grease	Grease
Noise	dB	⩽45	⩽45
Life	h	20000	20000

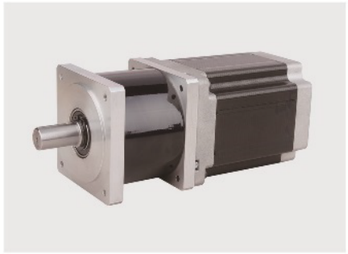
Remark: L1 is stepper motor length, L2 is gearbox length.Stepper motor specification see page (11)

86HBG series

Nema 34 Planetary Geared Stepper Motor

(Dimensions)
(unit=mm)





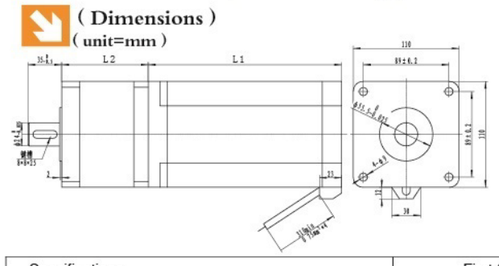
Specifications		First Stage	Second Stage
Gear Ratio		4、5、7、9、10	16、20、25、28、35、36、40、45、49、50、63、70、81、90、100
Length	mm	73	87
Rated Load	N.m	50	80
Max Load	N.m	100	160
Effiency	%	96	94
Blacklash	arcmin	⩽15	⩽25
Weight	Kg	2	2.5
Rated Input Speed	RPM	3000	3000
Max Input Speed	RPM	5000	5000
Protection Class	IP	65	65
Lubrication		Grease	Grease
Noise	dB	⩽45	⩽45
Life	h	20000	20000

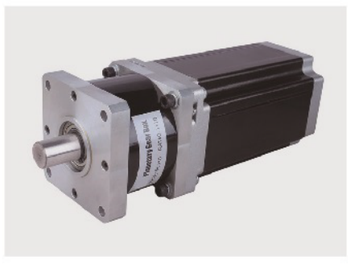
Remark: L1 is stepper motor length, L2 is gearbox length.Stepper motor specification see page（15）

110HBG series

Nema 42 Planetary Geared Stepper Motor

(Dimensions)
(unit=mm)





Specifications		First Stage	Second Stage
Gear Ratio		4、5、8	16、20、25、32、40、64
Length	mm	90	118
Rated Load	N.m	230	260
Max Load	N.m	460	520
Effiency	%	96	94
Blacklash	arcmin	⩽15	⩽25
Weight	Kg	2	2.5
Rated Input Speed	RPM	3000	3000
Max Input Speed	RPM	5000	5000
Protection Class	IP	65	65
Lubrication		Grease	Grease
Noise	dB	⩽45	⩽45
Life	h	20000	20000

Remark: L1 is stepper motor length, L2 is gearbox length.Stepper motor specification see page（18）

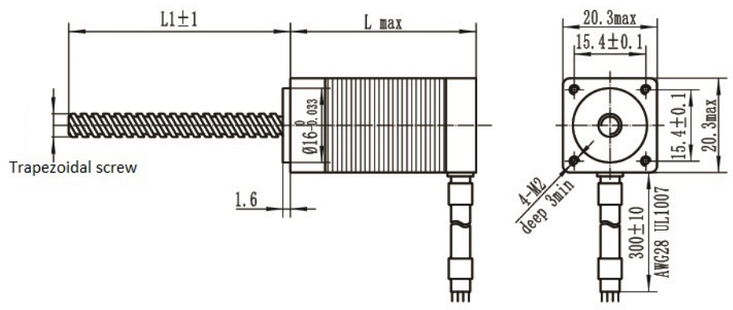
20HBL series

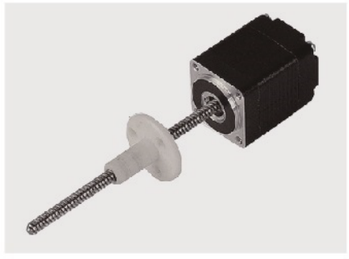
NEMA8 Linear Stepper Motor

(Lead Screw Specifications)

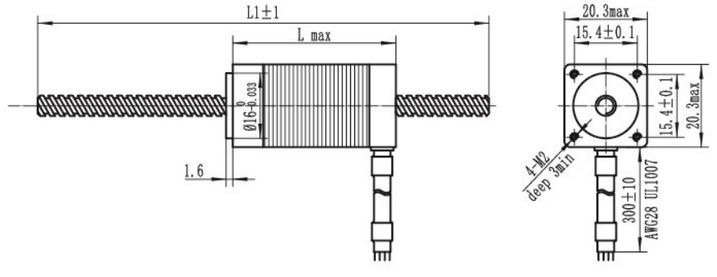
Diameter	Lead Distance(mm)	Start	Step Length(mm)	Applicable Motor
M5	1.6	2	0.008	20HBL-E
Tr3.5	0.61	1	0.00305	20HBL-N
Tr5	2	2	0.01	20HBL-E
Tr6.5	3	2	0.015	20HBL-E

20HBL-E (External Type Dimensions)
(unit=mm)





20HBL-N (Non-captive Type Dimensions)
(unit=mm)





Remark: Lead screw length and the nut for external type can be customized. The technical specifications and wiring diagram for the stepper motor see P(1)

28HBL series

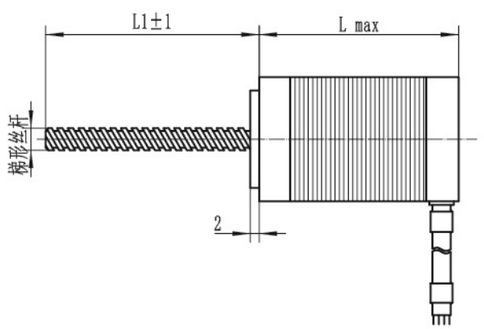
NEMA11 Linear Stepper Motor

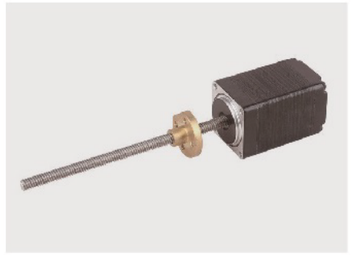
(Lead Screw Specifications)

Diameter	Lead Distance (mm)	Start	Step Length (mm)	Applicable Motor
M5	1.6	2	0.008	28HBL-E
Tr5	2	2	0.01	28HBL-E, 28HBL-N
Tr6.5	3	2	0.015	28HBL-E

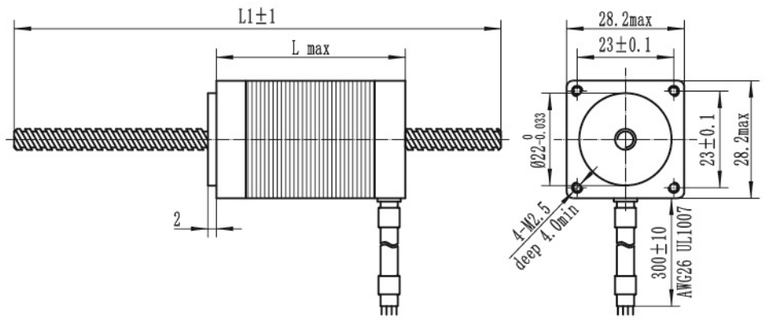
HBL-N

28HBL-E (External Type Dimensions)
(unit=mm)





28HBL-N (Non-captive Type Dimensions)
(unit=mm)





Remark: Lead screw length and the nut for external type can be customized. The technical specifications and wiring diagram for the stepper motor see P(2)

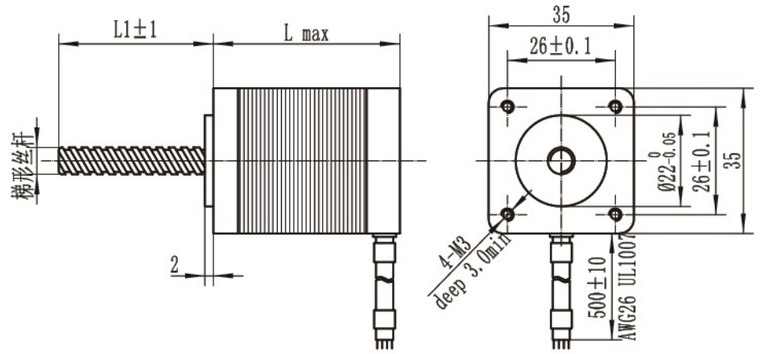
35HBL series

NEMA14 Linear Stepper Motor

(Lead Screw Specifications)

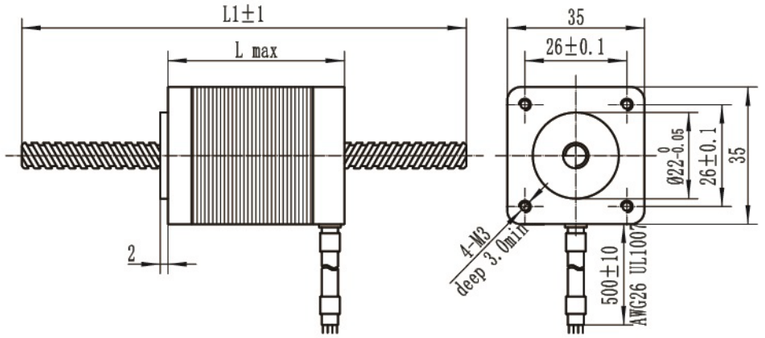
Diameter	Lead Distance (mm)	Start	Step Length (mm)	Applicable Motor
M5	1.6	2	0.008	35HBL-E, 35HBL-N
Tr5	2	2	0.01	35HBL-E, 35HBL-N
Tr6.5	3	2	0.015	35HBL-E, 35HBL-N
Tr8	1	1	0.005	35HBL-E
Tr8	2	1	0.01	35HBL-E
Tr8	4	2	0.02	35HBL-E
Tr8	8	4	0.04	35HBL-E

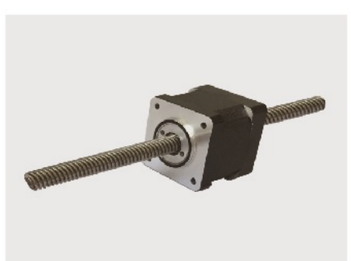
35HBL-E (External Type Dimensions)
(unit=mm)





35HBL-N (Non-captive Type Dimensions)
(unit=mm)





Remark: Lead screw length and the nut for external type can be customized. The technical specifications and wiring diagram for the stepper motor see P(4)

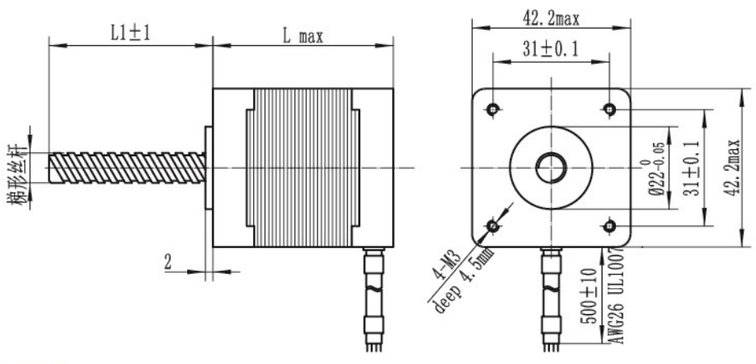
42HBL series

NEMA17 Linear Stepper Motor

(Lead Screw Specifications)

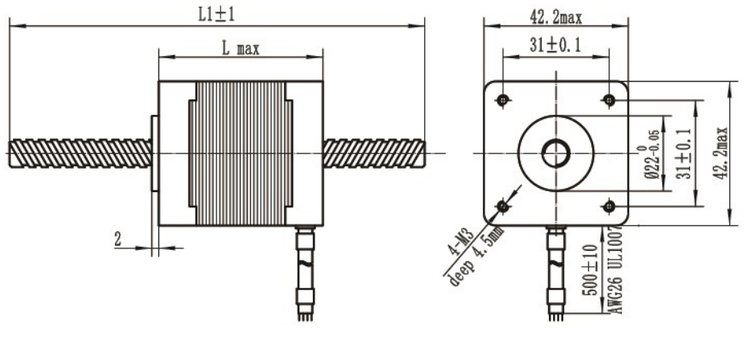
Diameter	Lead Distance (mm)	Start	Step Length (mm)	Applicable Motor
M5	1.6	2	0.008	42HBL-E , 42HBL-N
Tr5	2	2	0.01	42HBL-E , 42HBL-N
Tr6.5	3	2	0.015	42HBL-E , 42HBL-N
Tr8	1	1	0.005	42HBL-E , 42HBL-N
Tr8	2	1	0.01	42HBL-E , 42HBL-N
Tr8	4	2	0.02	42HBL-E , 42HBL-N
Tr8	8	4	0.04	42HBL-E , 42HBL-N
Tr10	2	1	0.01	42HBL-E
Tr10	4	2	0.02	42HBL-E

42HBL-E(External Type Dimensions)
(unit=mm)





42HBL-N(Non-captive Type Dimensions)
(unit=mm)





Remark: Lead screw length and the nut for external type can be customized. The technical specifications and wiring diagram for the stepper motor see P(8)

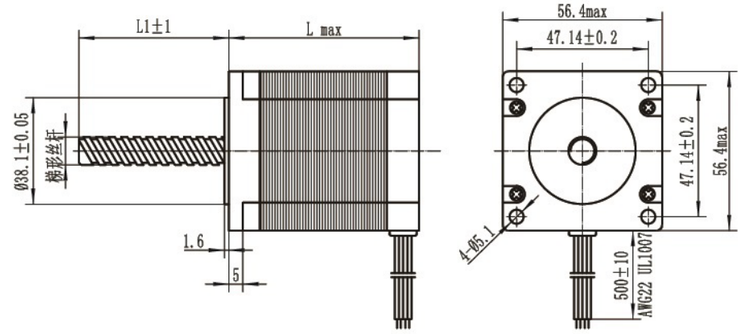
57HBL series

NEMA23 Linear Stepper Motor

(Lead Screw Specifications)

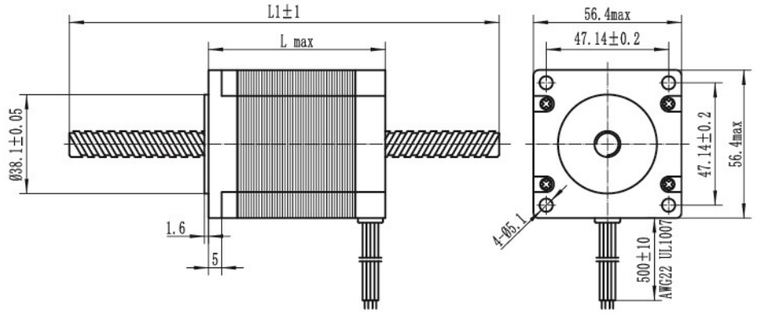
Diameter	Lead Distance (mm)	Start	Step Length (mm)	Applicable Motor
Tr8	1	1	0.005	57HBL-E , 57HBL-N
Tr8	2	1	0.01	57HBL-E , 57HBL-N
Tr8	4	2	0.02	57HBL-E , 57HBL-N
Tr8	8	4	0.04	57HBL-E , 57HBL-N
Tr10	2	1	0.01	57HBL-E , 57HBL-N
Tr10	4	2	0.02	57HBL-E , 57HBL-N
Tr12	6	2	0.03	57HBL-E

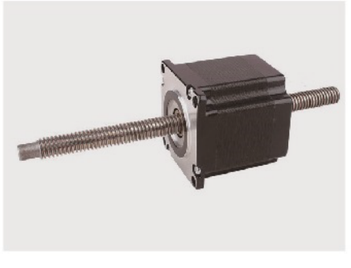
57HBL-E (External Type Dimensions)
(unit=mm)





57HBL-N (Non-captive Type Dimensions)
(unit=mm)





Remark: Lead screw length and the nut for external type can be customized. The technical specifications and wiring diagram for the stepper motor see P(11)