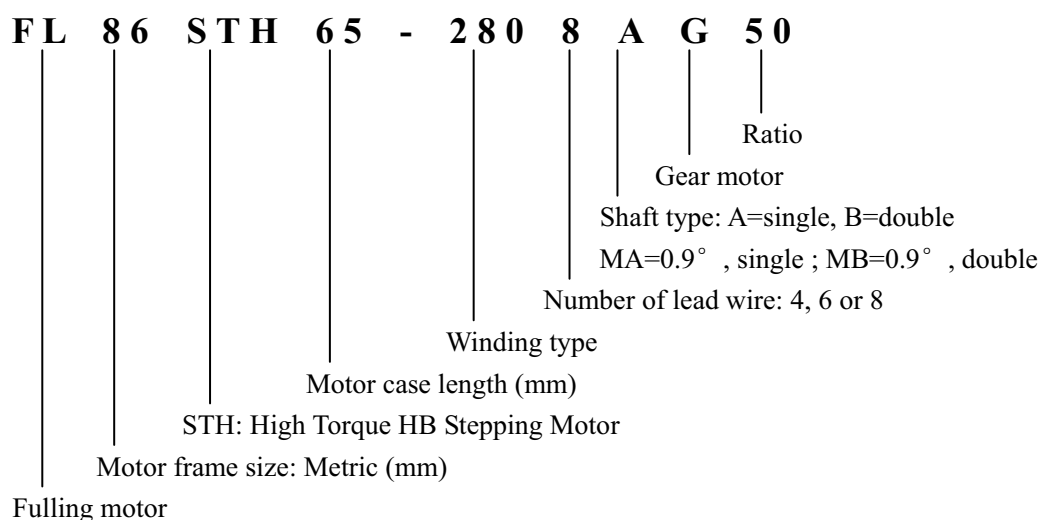
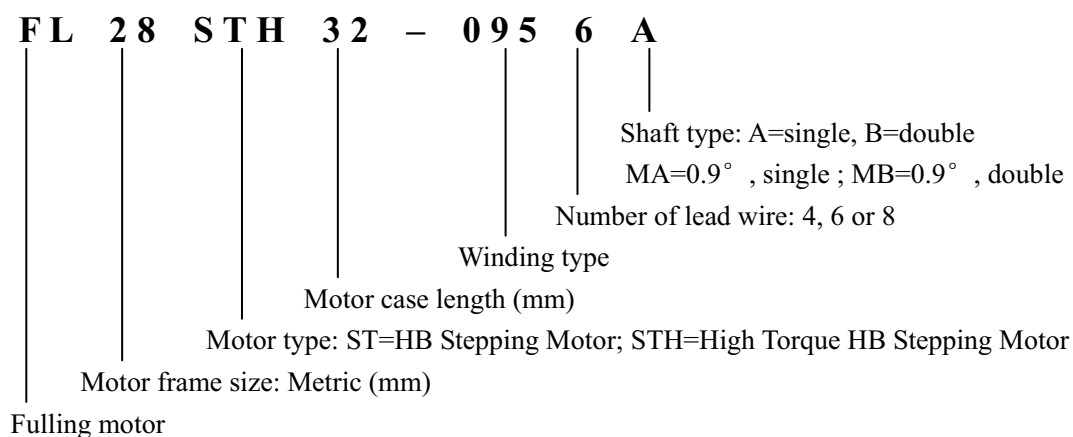
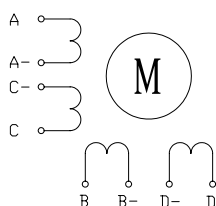


## ● Product Number Code For Hybrid Stepping Motor

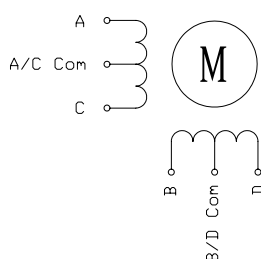


## ● Wiring diagram

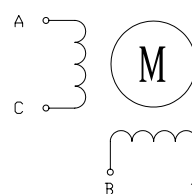
8 LEADS:



6 LEADS:

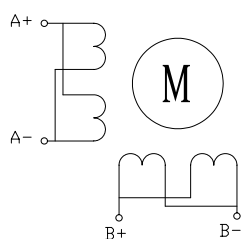


4 LEADS:

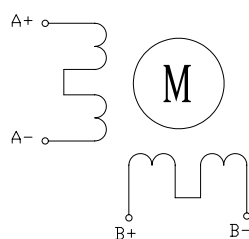


8 LEADS:

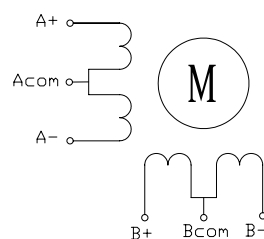
1. Bipolar (parallel) connection



2. Bipolar (series) connection



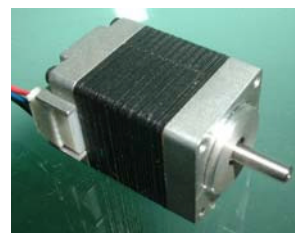
3. Unipolar connection



# 1.8° Size 20mm High Torque Hybrid Stepping Motor

A2

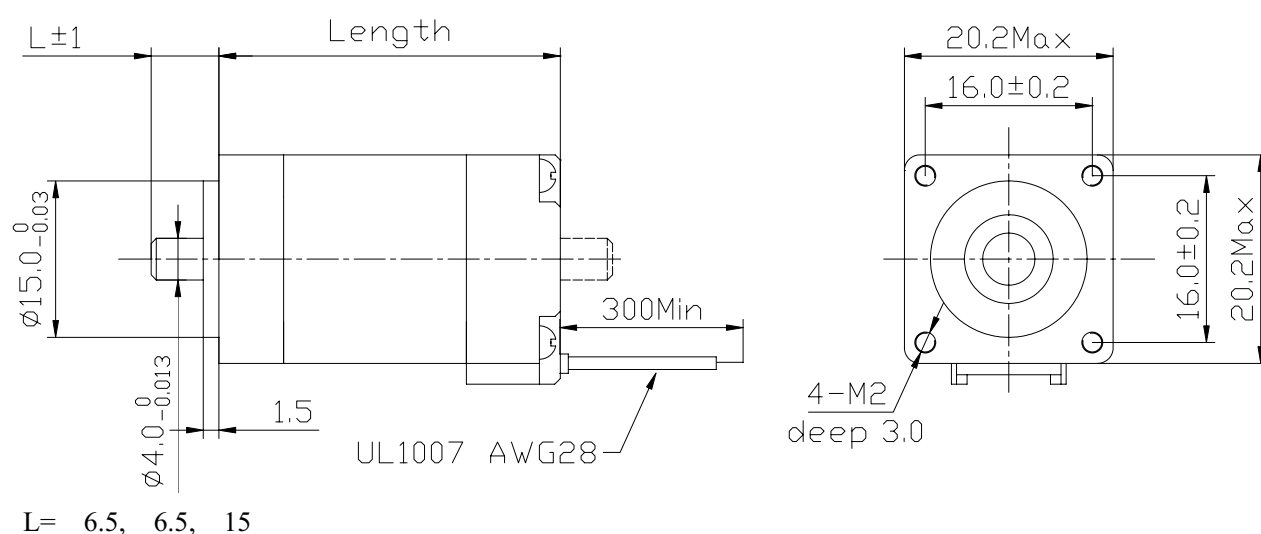
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	20N
Max. axial force	2N



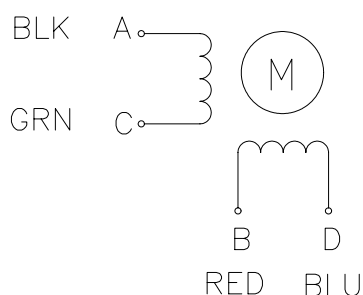
## ● Size 20mm High Torque Hybrid Stepping Motor Specifications

Model No.	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Length
Single Shaft	V	A	Ω	mH	g.cm		kg-m <sup>2</sup>	kg	mm
FL20STH30-0604A	3.9	0.6	6.5	1.7	180	4	2.0x10 <sup>-7</sup>	0.06	30
FL20STH33-0604A	3.9	0.6	6.5	1.7	180	4	2.0x10 <sup>-7</sup>	0.06	33
FL20STH42-0804A	4.32	0.8	5.4	1.5	300	4	3.6x10 <sup>-7</sup>	0.08	42

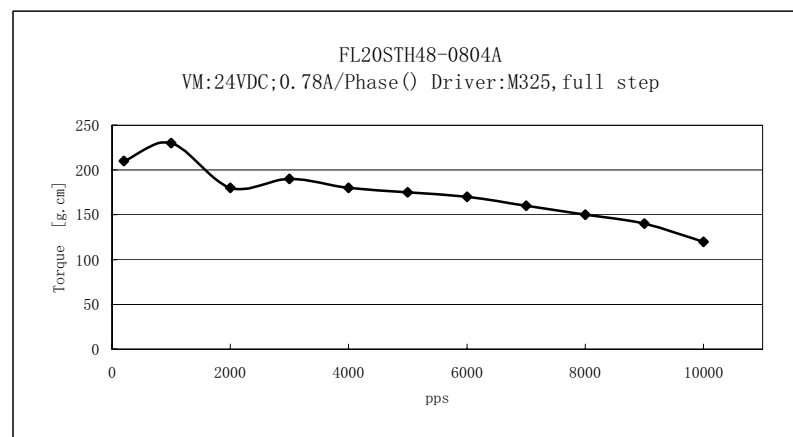
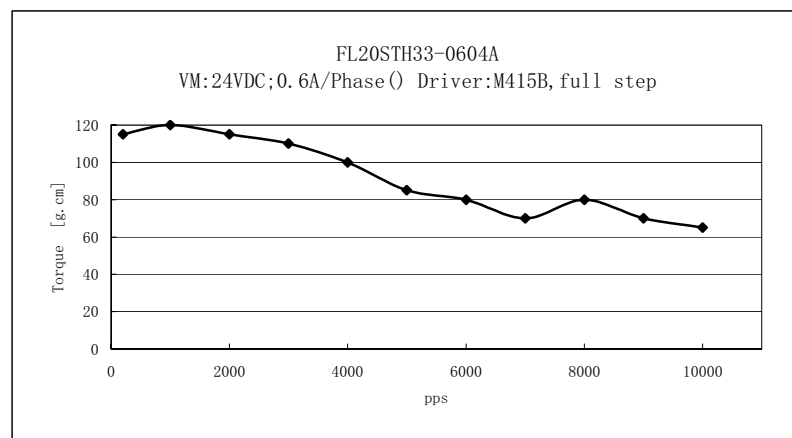
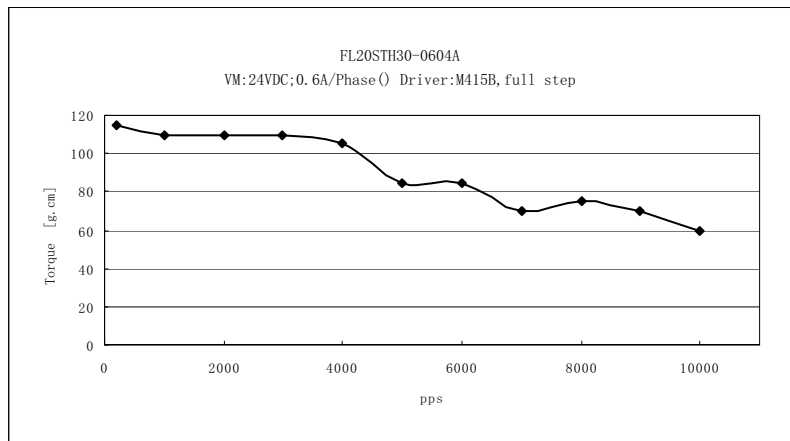
## ● Dimension: :



## ● Wiring Diagram:



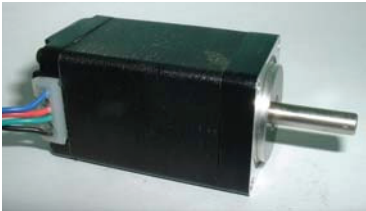
- Pull out torque curve:



# 1.8° Size 28mm High Torque Hybrid Stepping Motor

A4

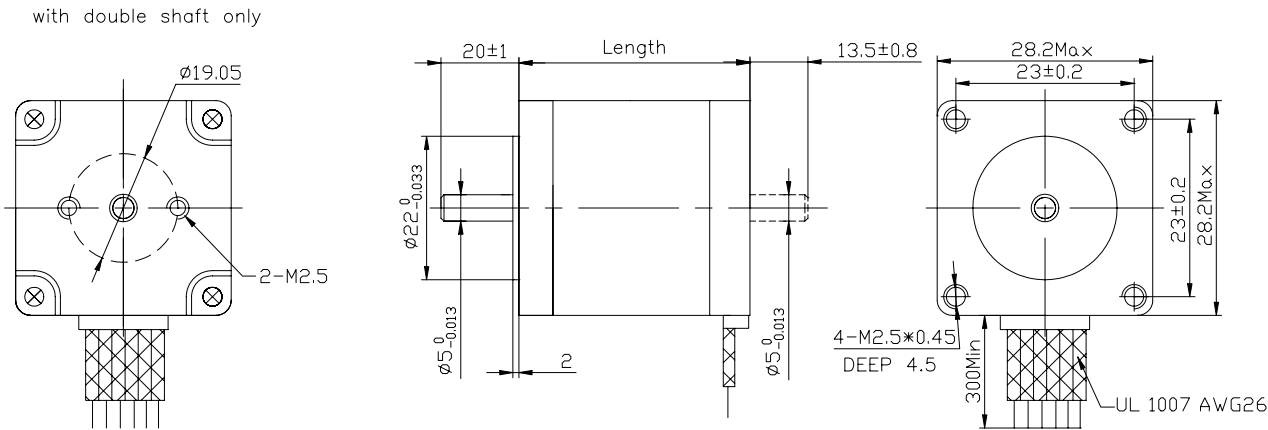
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N



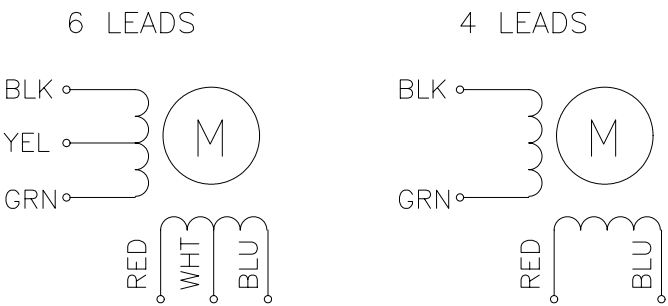
## ● Size 28mm High Torque Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Length
Single Shaft	Double Shaft	V	A	Ω	mH	g. cm		kg-m <sup>2</sup>	kg	mm
FL28STH32-0956A	FL28STH32-0956B	2.66	0.95	2.8	0.8	430	6	9x10 <sup>-7</sup>	0.11	31.5
FL28STH32-0674A	FL28STH32-0674B	3.8	0.67	5.6	3.4	600	4			
FL28STH45-0956A	FL28STH45-0956B	3.4	0.95	3.4	1.2	750	6	12x10 <sup>-7</sup>	0.14	44.5
FL28STH45-0674A	FL28STH45-0674B	4.56	0.67	6.8	4.9	950	4			
FL28STH51-0956A	FL28STH51-0956B	4.4	0.95	4.6	1.8	900	6	18x10 <sup>-7</sup>	0.2	50.5
FL28STH51-0674A	FL28STH51-0674B	6.2	0.67	9.2	7.2	1200	4			

## ● Dimension

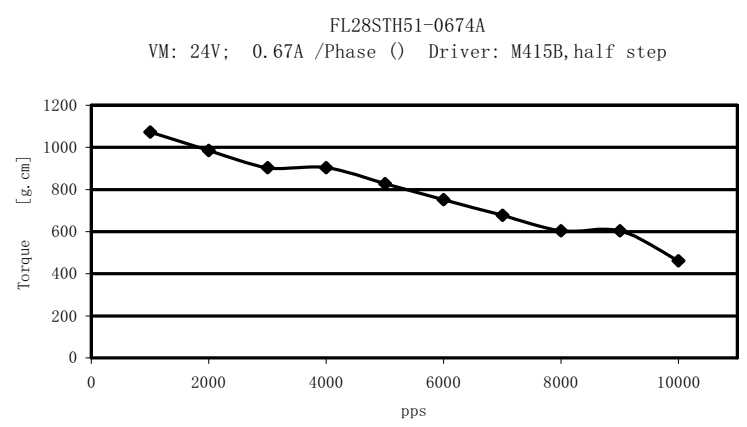
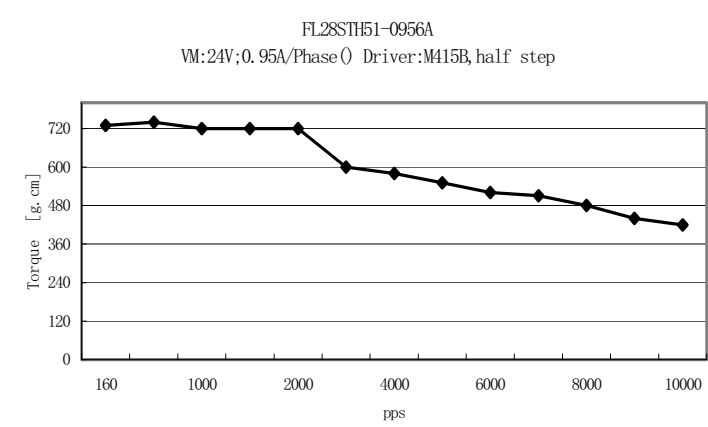
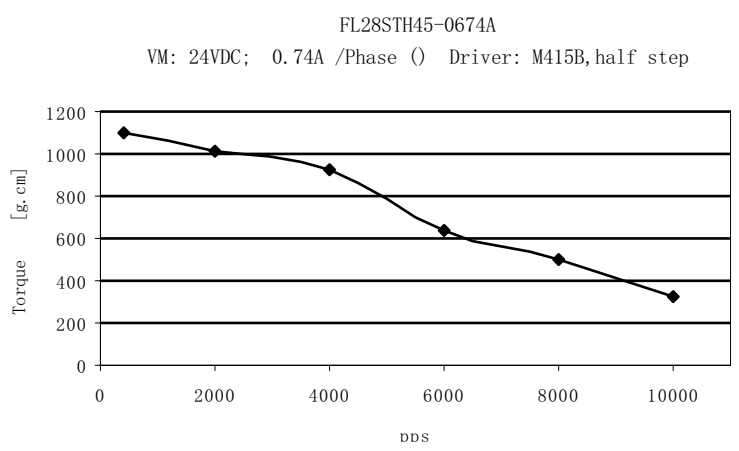
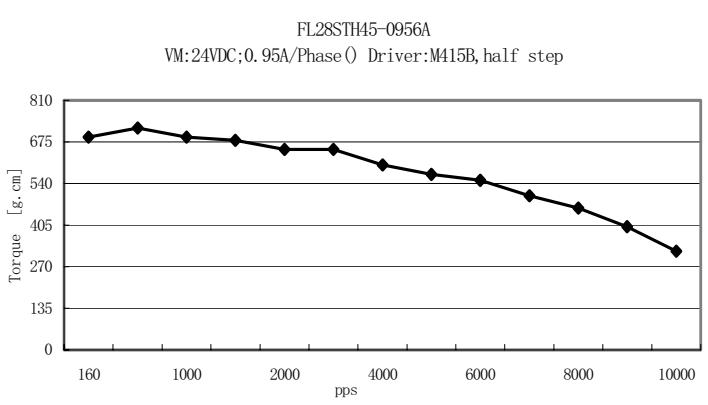
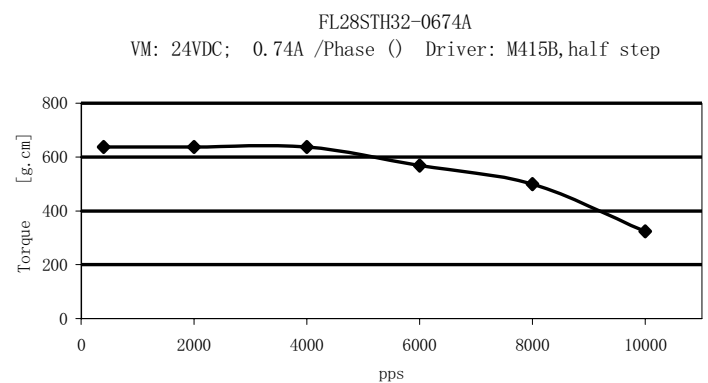
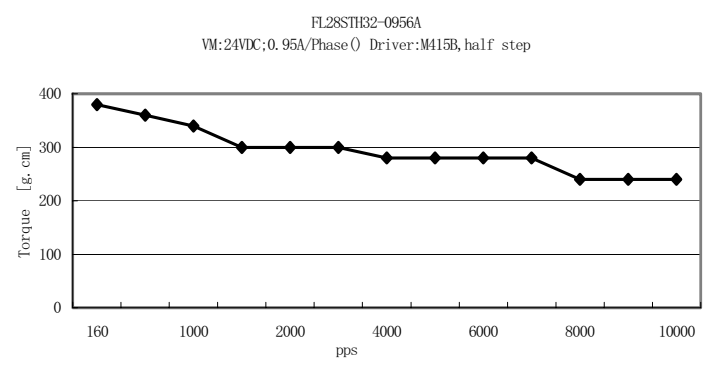


## ● Wiring Diagram:



Pull out torque:

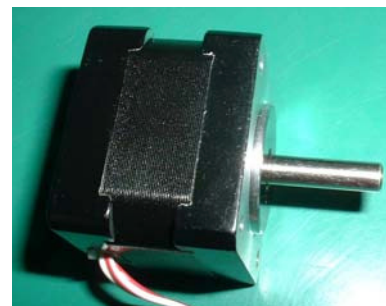
A5



# 1.8° Size 35mm Hybrid Stepping Motor

A6

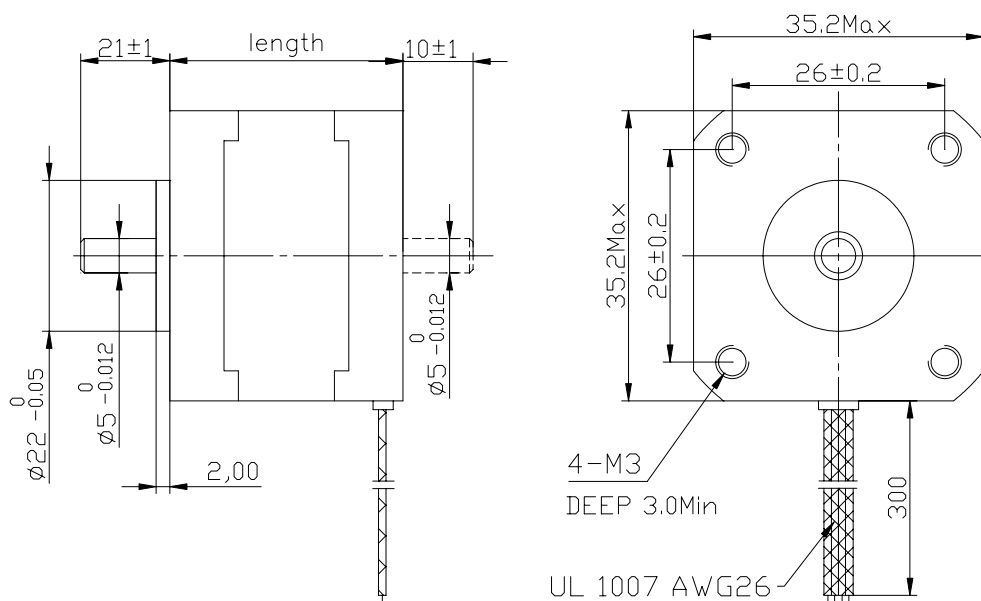
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N



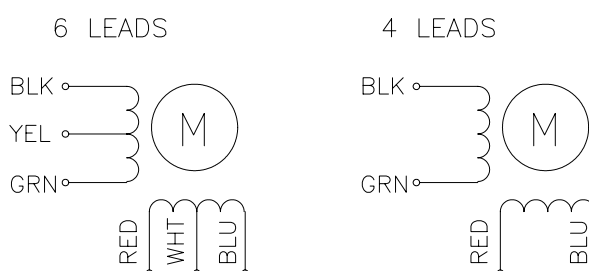
## ● Size 35mm Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single shaft	Double shaft	V	A	Ω	mH	g-cm	#	g-cm <sup>2</sup>	kg	g-cm	mm
FL35ST26-0284A	FL35ST26-0284B	7.4	0.28	26	27	700	4	10	0.13	60	26
FL35ST28-0504A	FL35ST28-0504B	10	0.5	20	18	1000	4	11	0.14	80	28
FL35ST36-1004A	FL35ST36-1004B	2.7	1.0	2.7	4.3	1400	4	14	0.18	100	36

## ● Dimension

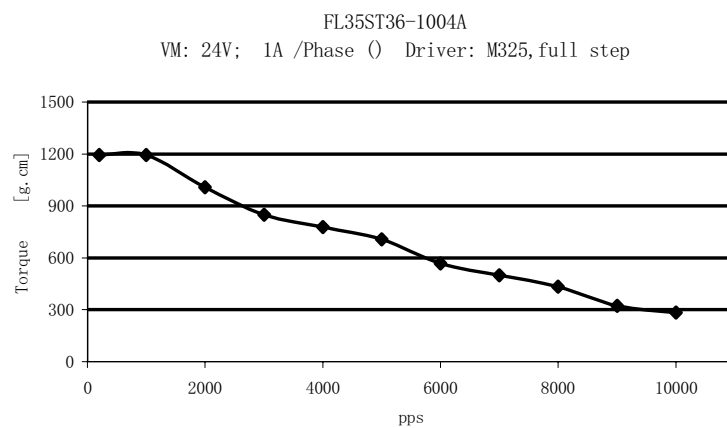
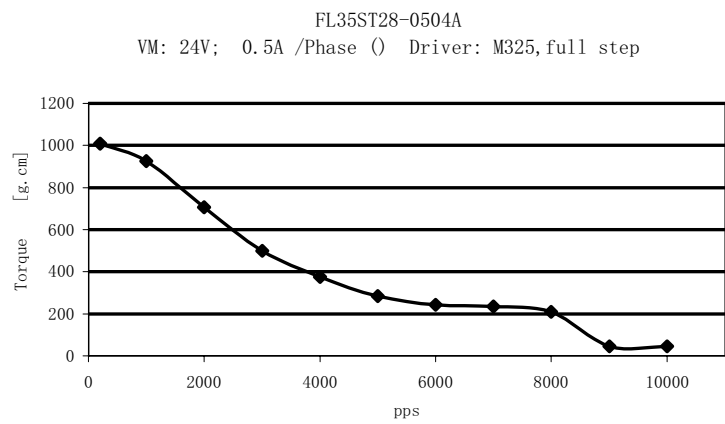
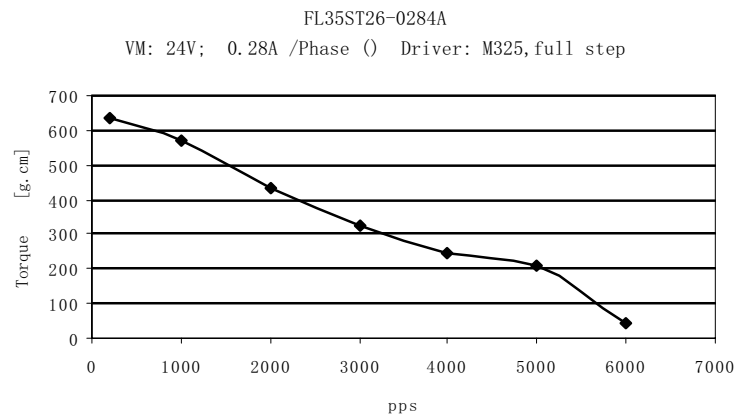


## ● Wiring Diagram



● Pull out torque curve

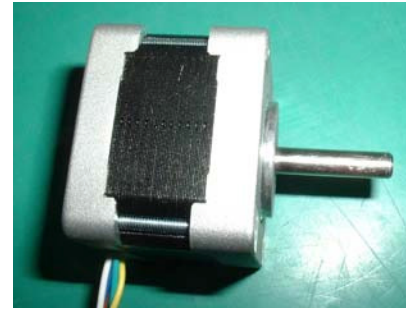
A7



# 1.8° Size 9mm Hybrid Stepping Motor

A8

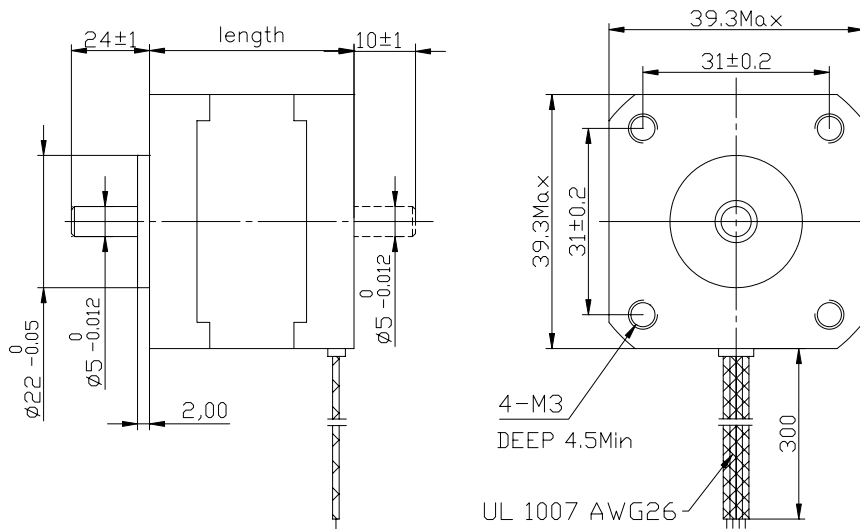
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N



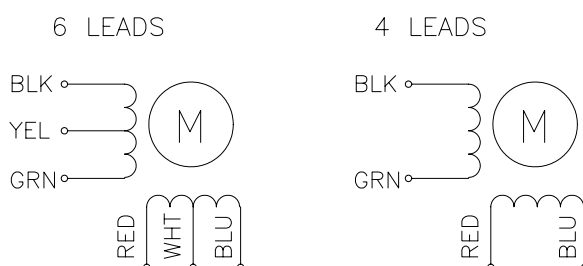
## ● Size 39mm Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single shaft	Double shaft	V	A	Ω	mH	g-cm		g-cm <sup>2</sup>	kg	g-cm	mm
FL39ST20-0404A	FL39ST20-0404B	2.64	0.4	6.6	7.5	650	4	11	0.12	50	20
FL39ST20-0506A	FL39ST20-0506B	6.5	0.5	13	7.5	800	6				
FL39ST34-0404A	FL39ST34-0404B	12	0.4	30	32	2100	4	20	0.18	120	34
FL39ST34-0306A	FL39ST34-0306B	12	0.3	40	20	1300	6				
FL39ST38-0504A	FL39ST38-0504B	12	0.5	24	45	2900	4	24	0.2	180	38
FL39ST38-0806A	FL39ST38-0806B	6	0.8	7.5	6	2000	6				
FL39ST44-0304A	FL39ST44-0304B	12	0.3	40	100	2800	4	40	0.25	250	44

## ● Dimension

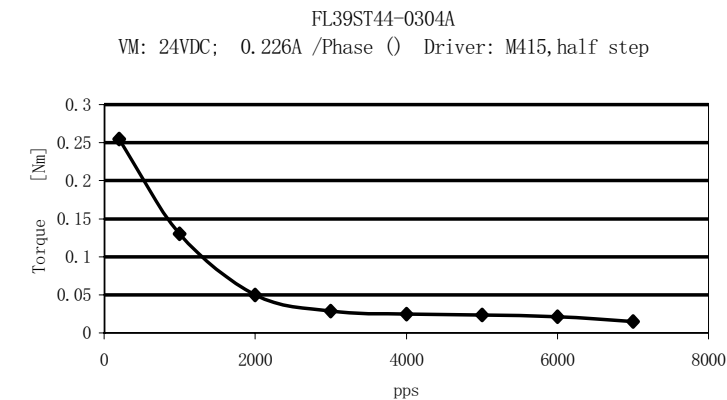
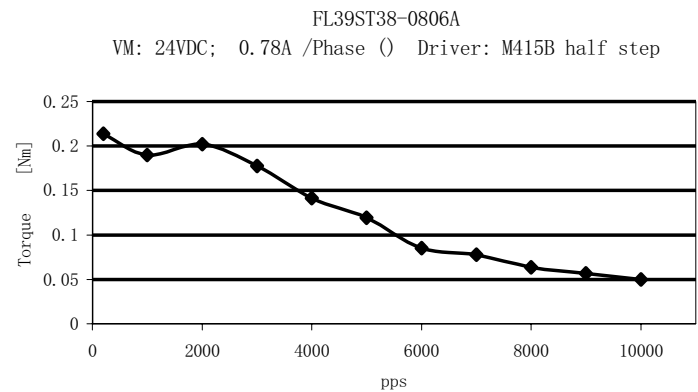
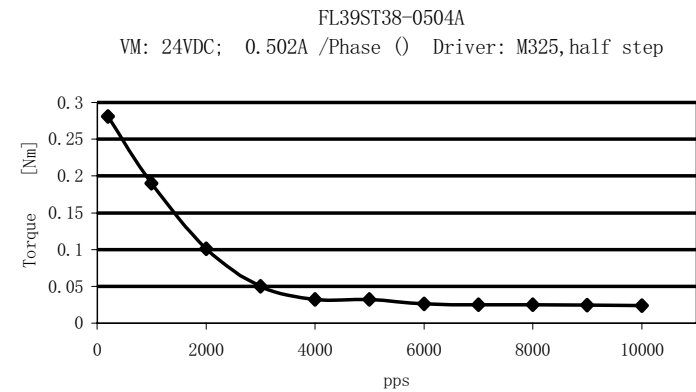
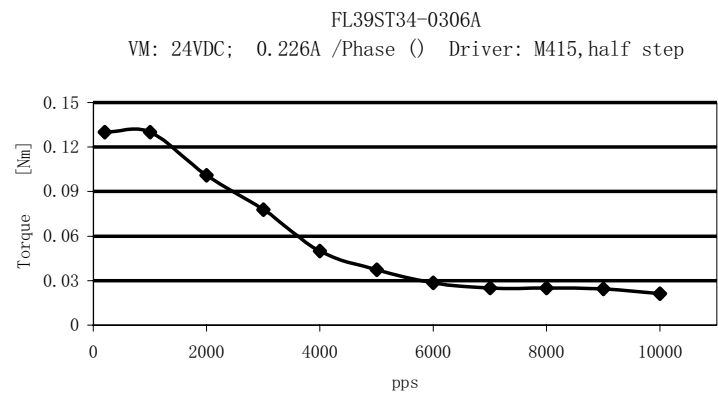
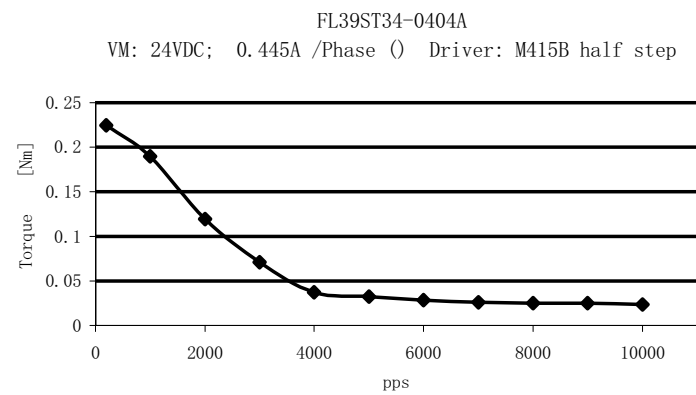
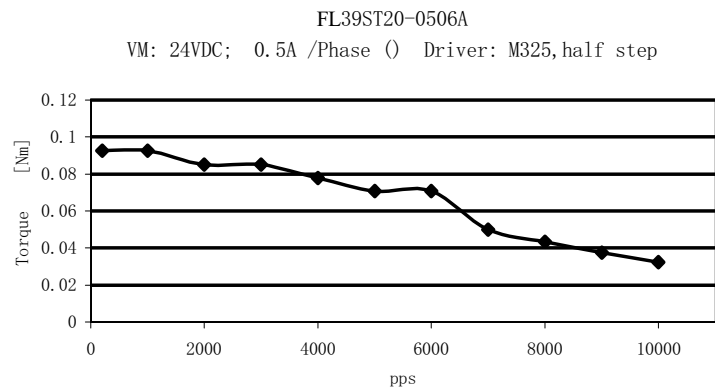
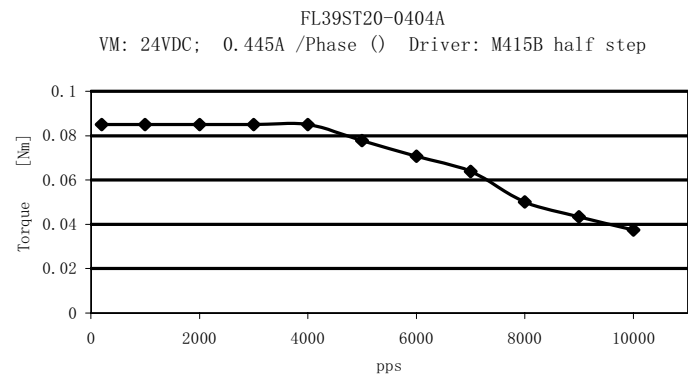


## ● Wiring Diagram





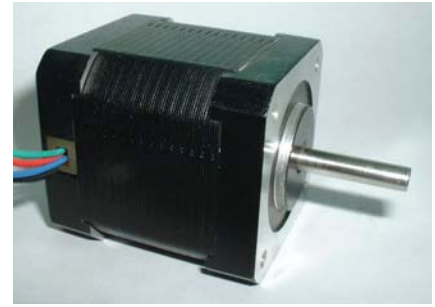
● Pull out Torque Curve



# 0.9° Size 42mm High Torque Hybrid Stepping Motor

A10

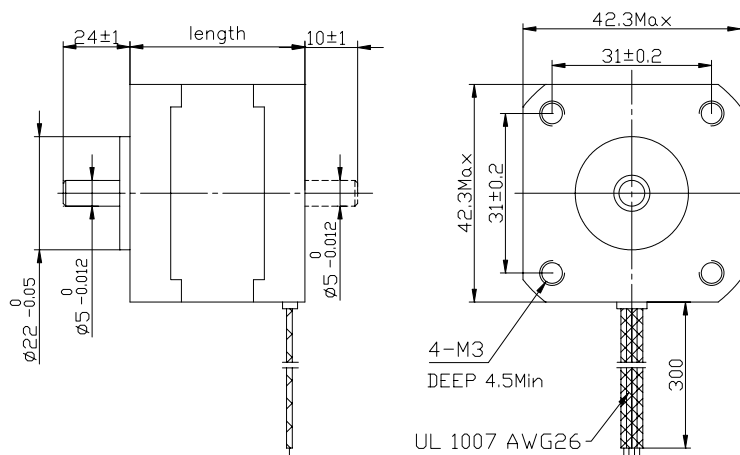
Item	Specifications
Step Angle	0.9°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N



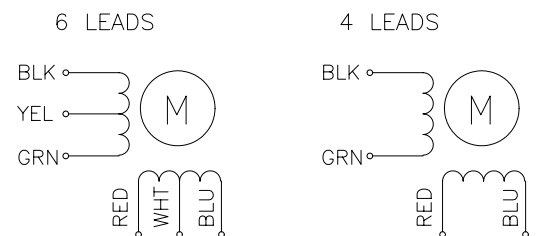
## ● Size 42mm High Torque Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	Kg-cm		g-cm <sup>2</sup>	kg	g-cm	mm
FL42STH33-0956MA	FL42STH33-0956MB	4	0.95	4.2	4	1.58	6	35	0.22	200	33
FL42STH33-0606MA	FL42STH33-0606MB	6	0.6	10	9.5	1.58	6				
FL42STH33-0316MA	FL42STH33-0316MB	12	0.31	38.5	33	1.58	6				
FL42STH33-1334MA	FL42STH33-1334MB	2.8	1.33	2.1	4.2	2.2	4				
FL42STH38-1206MA	FL42STH38-1206MB	4	1.2	3.3	3.4	2.59	6	54	0.28	220	39
FL42STH38-0806MA	FL42STH38-0806MB	6	0.8	7.5	6.7	2.59	6				
FL42STH38-0406MA	FL42STH38-0406MB	12	0.4	30	30	2.59	6				
FL42STH38-1684MA	FL42STH38-1684MB	2.8	1.68	1.65	3.2	3.3	4				
FL42STH47-1206MA	FL42STH47-1206MB	4	1.2	3.3	4	3.17	6	68	0.35	250	47
FL42STH47-0806MA	FL42STH47-0806MB	6	0.8	7.5	10	3.17	6				
FL42STH47-0406MA	FL42STH47-0406MB	12	0.4	30	38	3.17	6				
FL42STH47-1684MA	FL42STH47-1684MB	2.8	1.68	1.65	4.1	4.4	4				

## Dimension



## Wiring Diagram

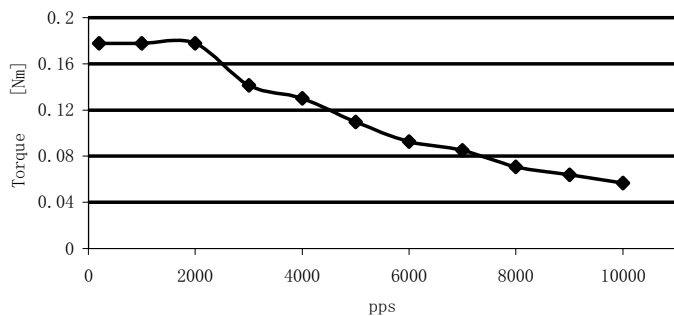


# ● Pull out Torque Curve

A11

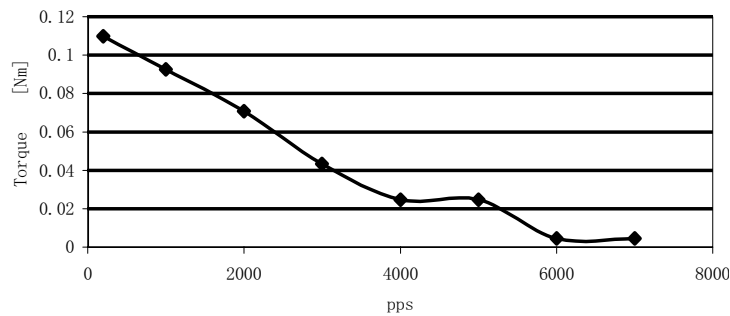
FL42STH33-0956MA

VM: 24VDC; 1.00A /Phase () Driver: M325, FULL step



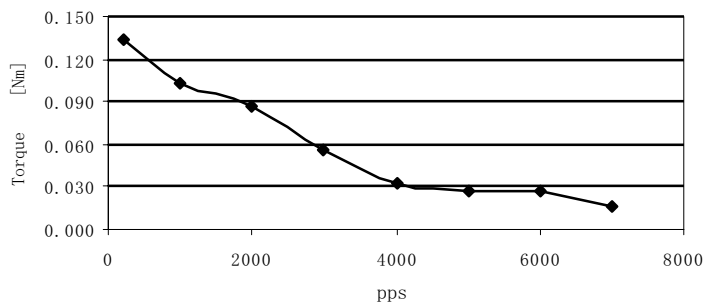
FL42STH33-0606MA

VM: 24VDC; 0.6A /Phase () Driver: M415B, full step



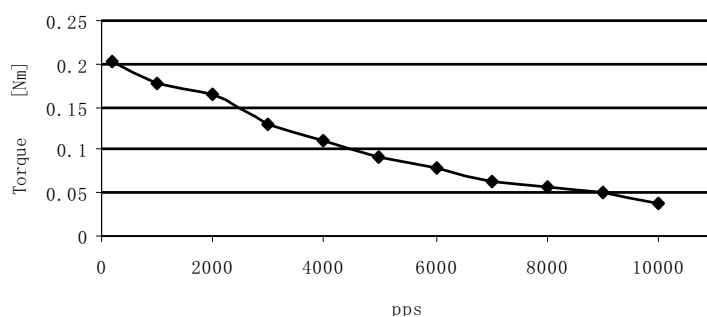
FL42STH33-0316MA

VM: 24VDC; 0.31A /Phase () Driver: M325, full step



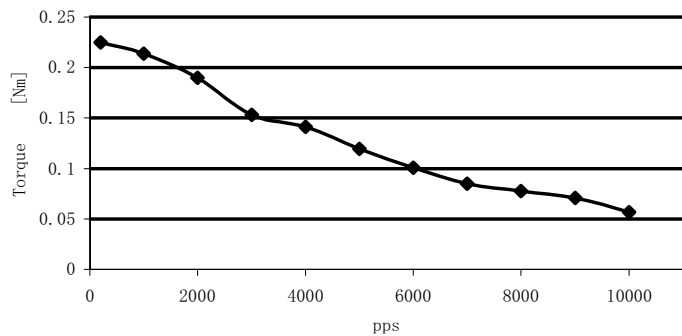
FL42STH33-1334MA

VM: 24VDC; 1.27A /Phase () Driver: HA335, full step



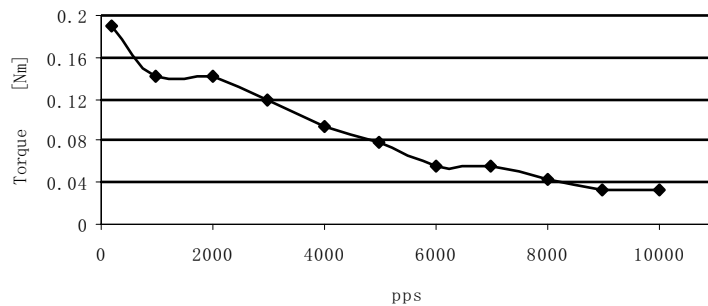
FL42STH38-1206MA

VM: 24VDC; 1.2A /Phase () Driver: HA335, full step



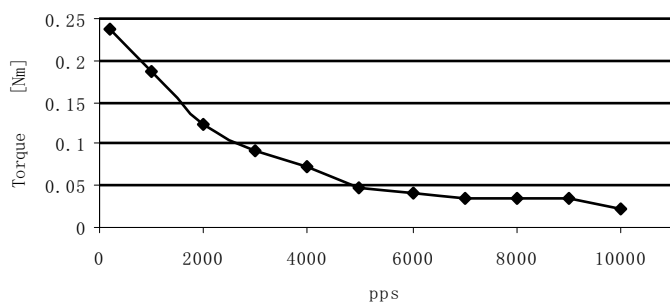
FL42STH38-0806MA

VM: 24VDC; 0.78A /Phase () Driver: M325, full step



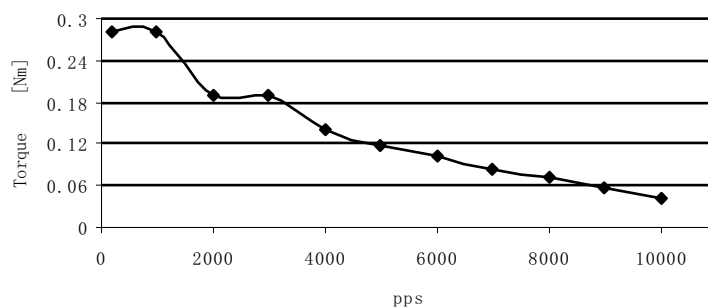
FL42STH38-0404MA

VM: 24VDC; 0.4A /Phase () Driver: M325, full step



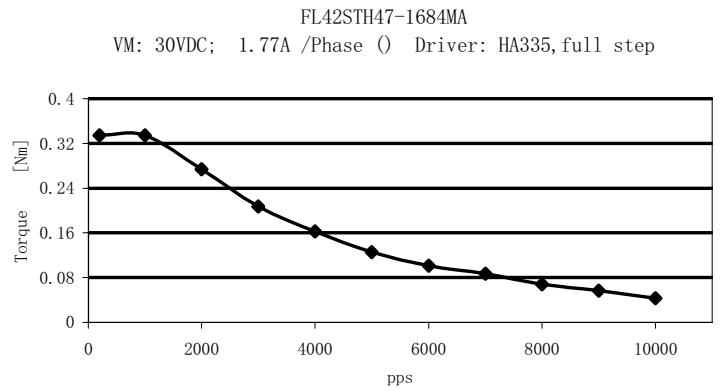
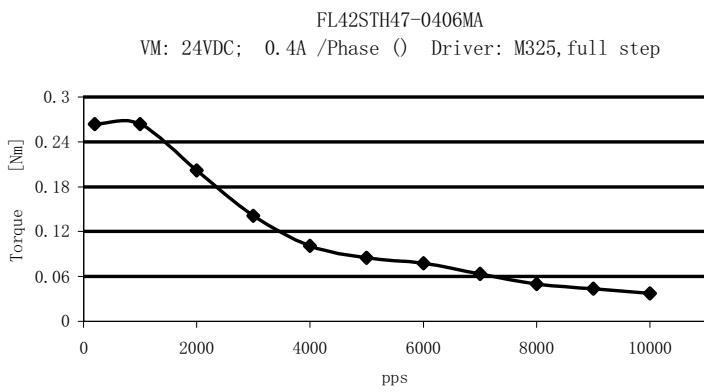
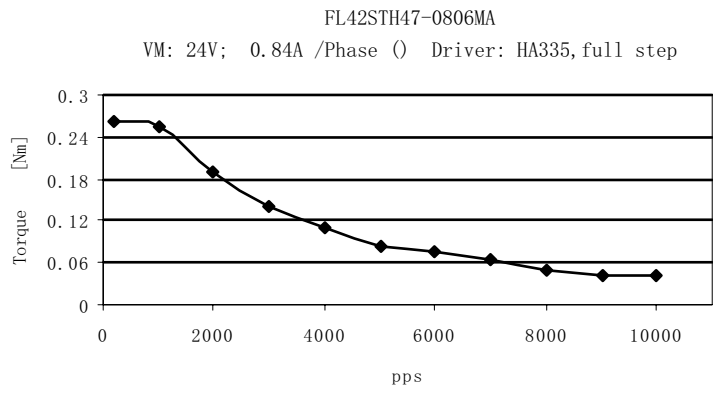
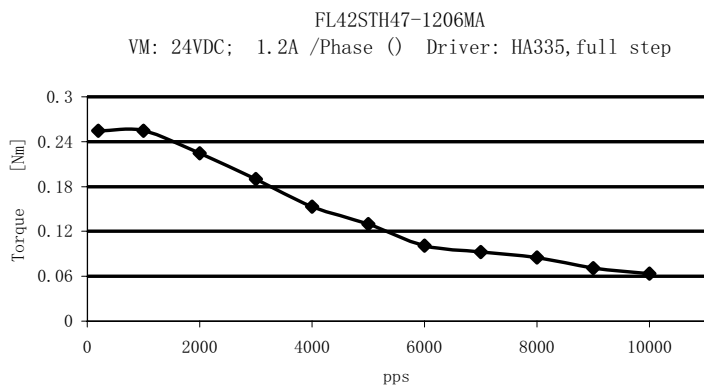
FL42STH38-1684MA

VM: 24VDC; 1.68A /Phase () Driver: HA335, full step



## ● Pull out Torque Curve

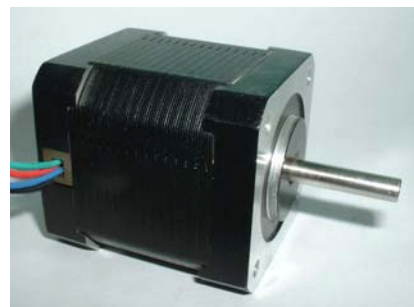
A12



# 1.8° Size 42mm High Torque Hybrid Stepping Motor

A13

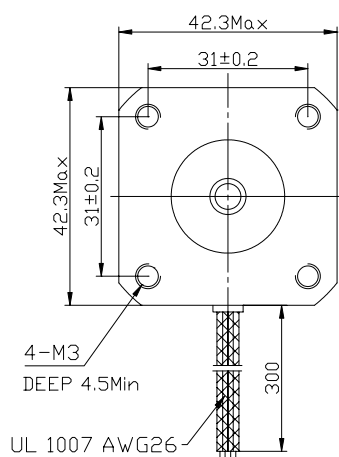
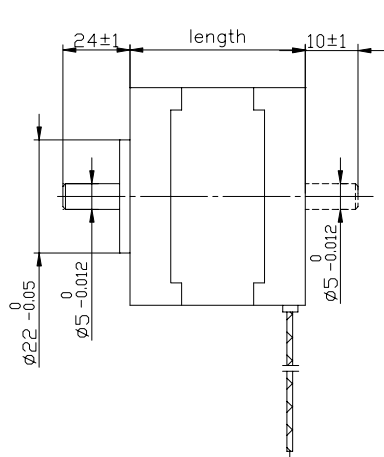
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N



## ● Size 42mm High Torque Hybrid Stepping Motor Specifications

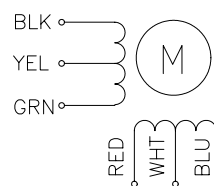
Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	Kg-cm		g-cm <sup>2</sup>	kg	g-cm	mm
FL42STH25-0404A	FL42STH25-0404B	9.6	0.4	24	36	1.7	4	20	0.15	75	25
FL42STH33-0956A	FL42STH33-0956B	4	0.95	4.2	2.5	1.6	6	35	0.22	120	34
FL42STH33-0406A	FL42STH33-0406B	9.6	0.4	24	15	1.6	6				
FL42STH33-0316A	FL42STH33-0316B	12	0.31	38.5	21	1.6	6				
FL42STH33-1334A	FL42STH33-1334B	2.8	1.33	2.1	2.5	2.2	4				
FL42STH38-1206A	FL42STH38-1206B	4	1.2	3.3	3.2	2.6	6	54	0.28	150	40
FL42STH38-0806A	FL42STH38-0806B	6	0.8	7.5	6.7	2.6	6				
FL42STH38-0406A	FL42STH38-0406B	12	0.4	30	30	2.6	6				
FL42STH38-1684A	FL42STH38-1684B	2.8	1.68	1.65	3.2	3.6	4				
FL42STH47-1206A	FL42STH47-1206B	4	1.2	3.3	2.8	3.17	6	68	0.35	200	48
FL42STH47-0806A	FL42STH47-0806B	6	0.8	7.5	6.3	3.17	6				
FL42STH47-0406A	FL42STH47-0406B	12	0.4	30	25	3.17	6				
FL42STH47-1684A	FL42STH47-1684B	2.8	1.68	1.65	2.8	4.4	4				
FL42STH60-1206A	FL42STH60-1206B	7.2	1.2	6	7	6.5	6	102	0.5	280	60

## Dimension

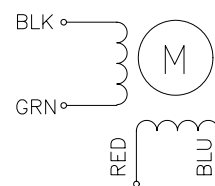


## Wiring Diagram

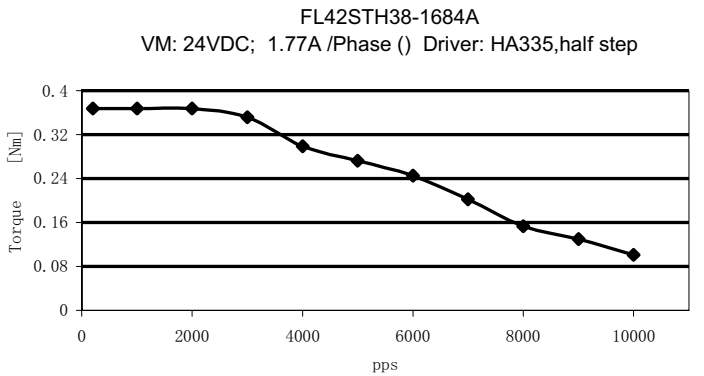
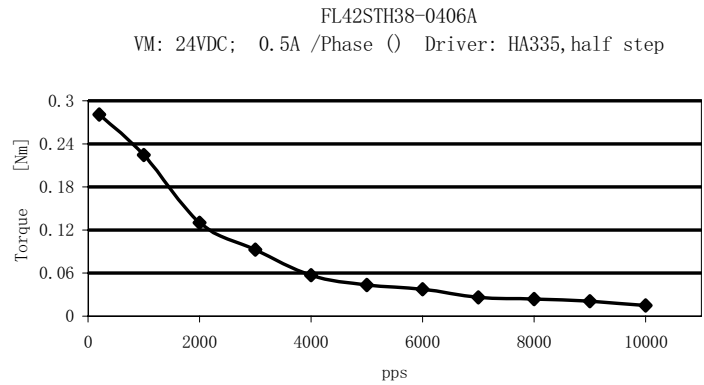
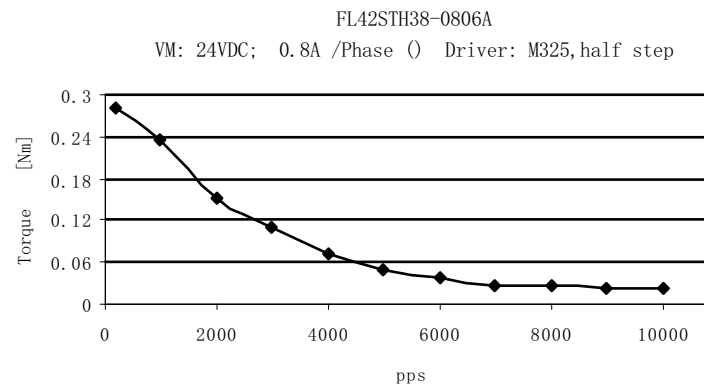
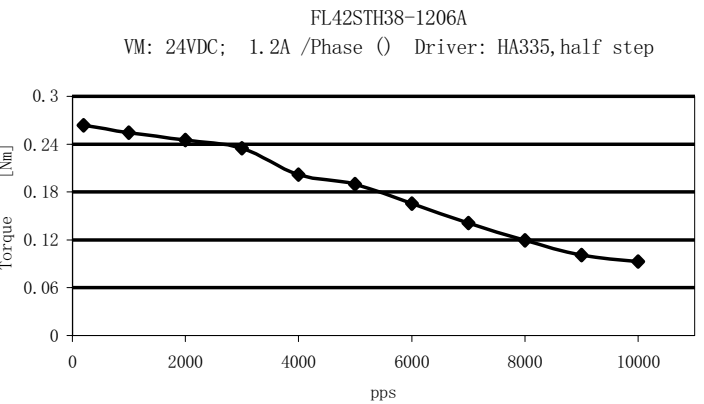
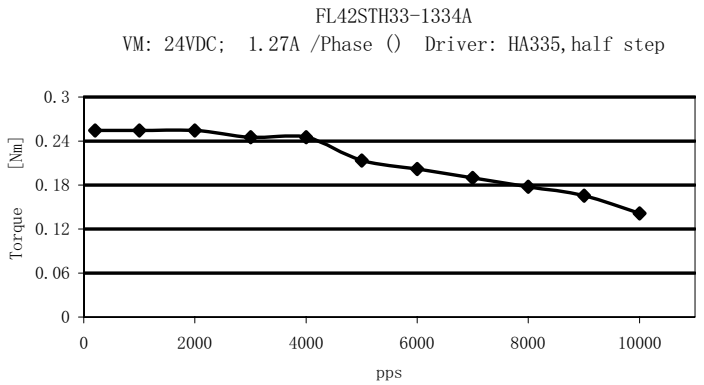
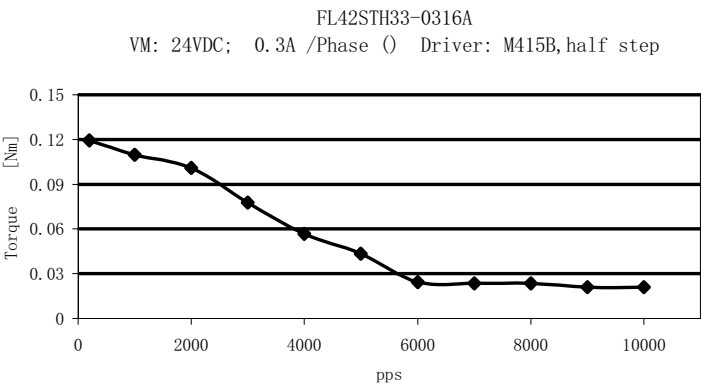
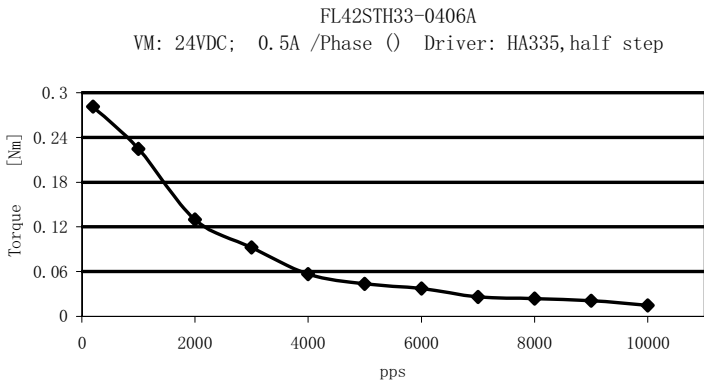
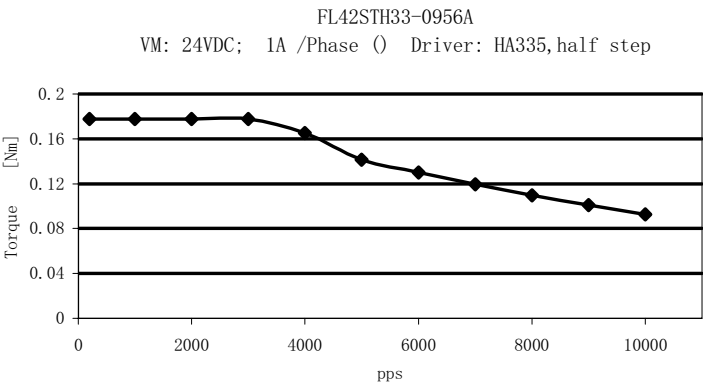
6 LEADS



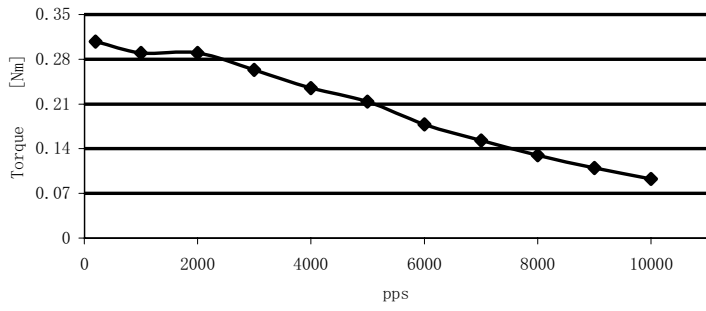
4 LEADS



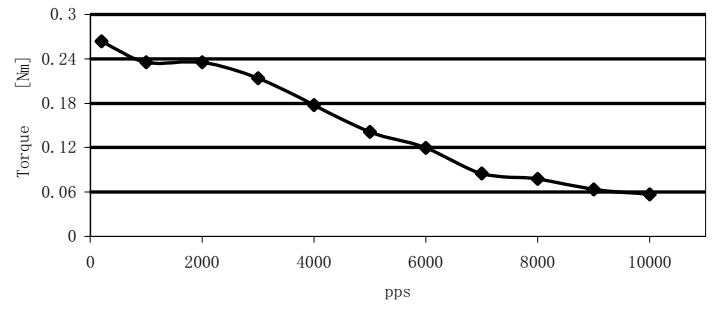
● Pull out Torque Curve



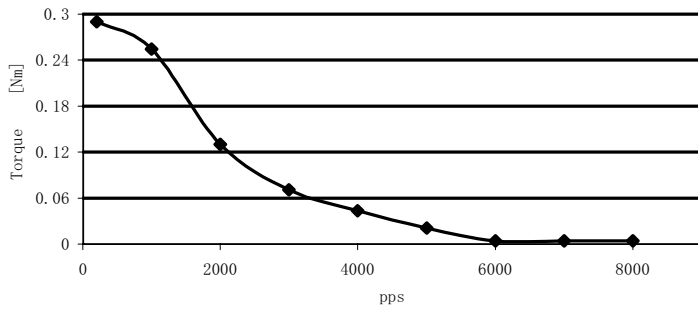
FL42STH47-1206A  
VM: 24VDC; 1.2A /Phase () Driver: HA335, half step



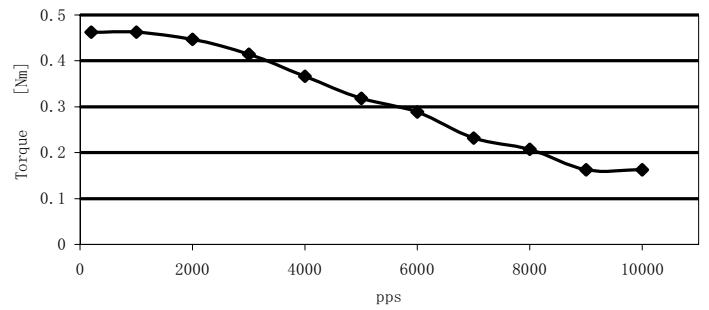
FL42STH47-0806A  
VM: 24VDC; 0.8A /Phase () Driver: M325, half step



FL42STH47-0406A  
VM: 24VDC; 0.44A /Phase () Driver: M415B, half step



FL42STH47-1684A  
VM: 24VDC; 1.77A /Phase () Driver: HA335, half step



# 1.8° Size 42mm High Torque Hybrid Stepping Motor With Thread A15

## ● General Specification for High Torque Hybrid Stepping Motor With Thread

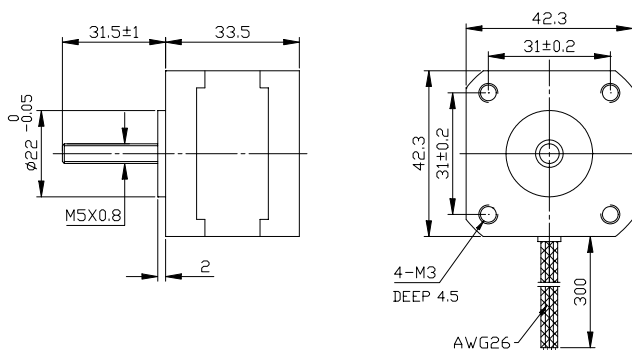
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M $\Omega$ Min. ,500VDC
Dielectric Strength	500VAC for one minute
Max. radial force	28N (20mm from the flange)
Max. axial force	10N

## ● Size 42mm High Torque Hybrid Stepping Motor Specifications With Thread

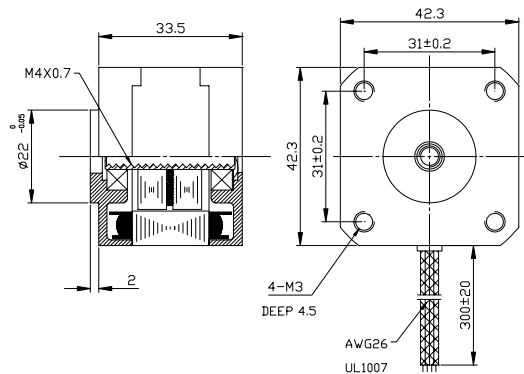
Model No.	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	V	A	$\Omega$	mH	g-cm		g-cm <sup>2</sup>	kg	g-cm	mm
FL42STH33T-0554A	1.8	0.55	3.2	4.5	900	4	35	0.2	120	34
FL42STH33S-0956A	4.0	0.95	4.2	2.5	1580	6	35	0.2	120	34

## Dimension

FL42STH33T-0554A

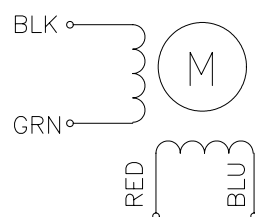


FL42STH33S-0956A

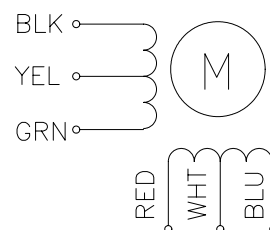


## ● Wiring Diagram

4 LEADS



6 LEADS



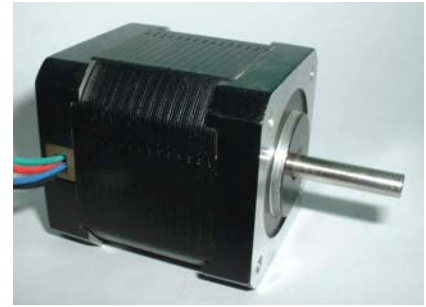


## 3.6° Size 42mm Hybrid Stepping Motor

A16

### ● General Specification for High Torque Hybrid Stepping Motor

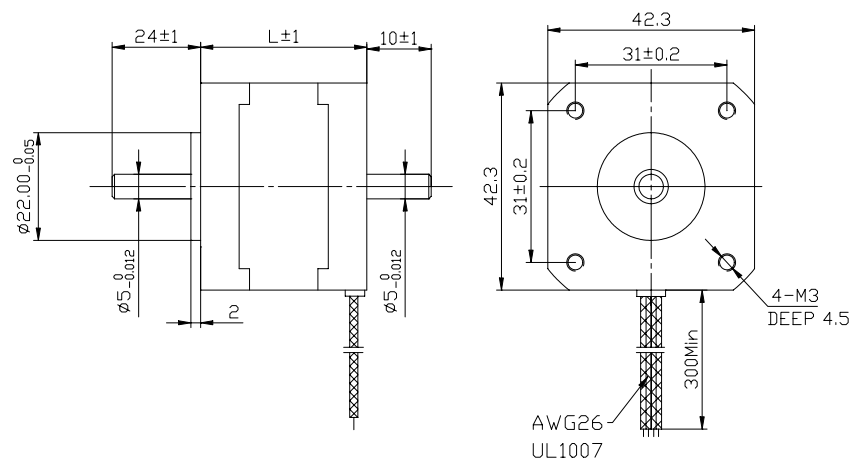
Item	Specifications
Step Angle	3.6°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N



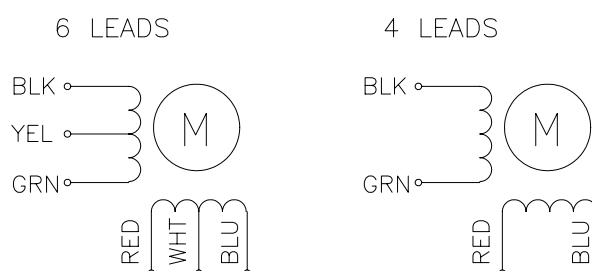
### ● Size 42mm Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	g-cm		g-cm <sup>2</sup>	kg	g-cm	mm
FL42ST33-0114DA	FL42ST33-0114DB	14	0.114	123	130	780	4	20	0.2	150	34
FL42ST33-0156DA	FL42ST33-0156DB	15	0.15	100	60	500	6	20	0.2	150	34
FL42ST33-0954DA	FL42ST33-0954DB	9.31	0.095	98	200	530	4	20	0.20	150	34
FL42ST38-0954DA	FL42ST38-0954DB	9.98	0.095	105	330	700	4	23	0.23	150	38

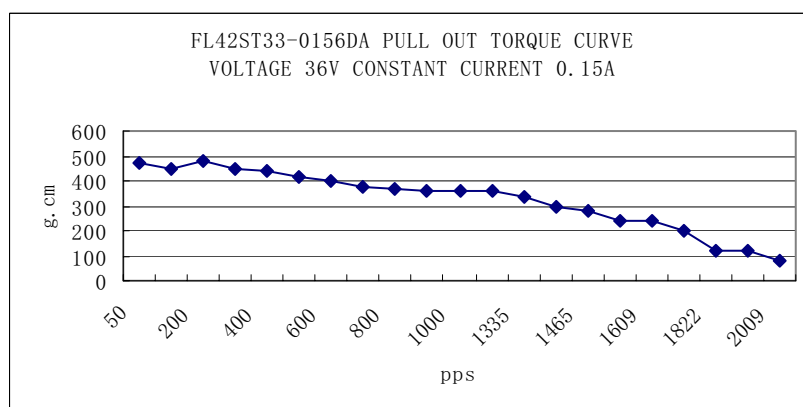
### ● Dimension



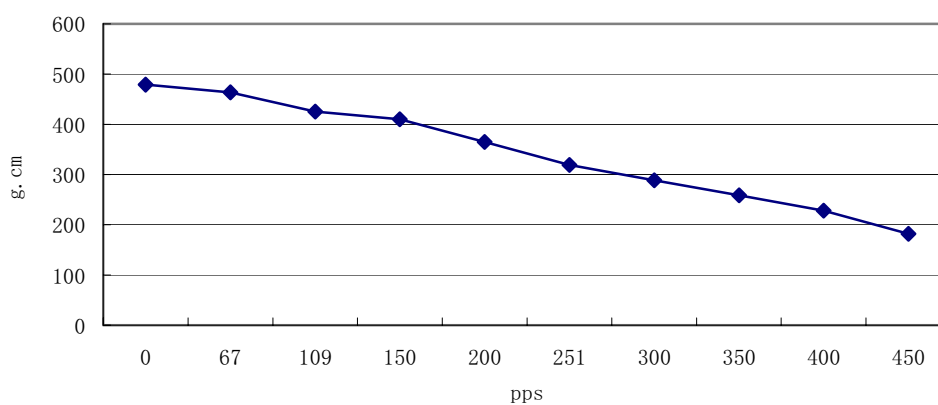
### ● Wiring Diagram:



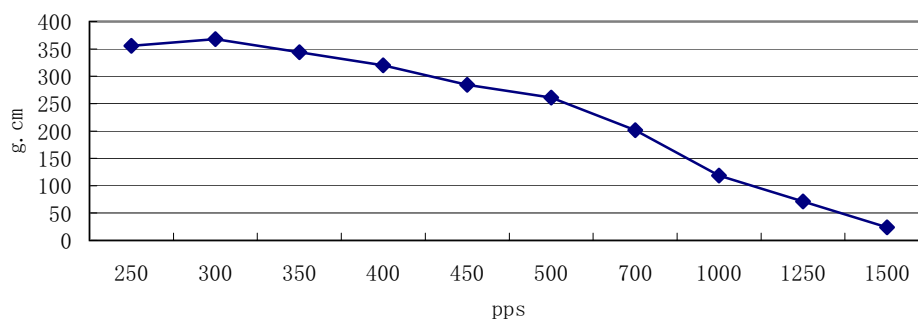
# ● Pull out Torque Curve:



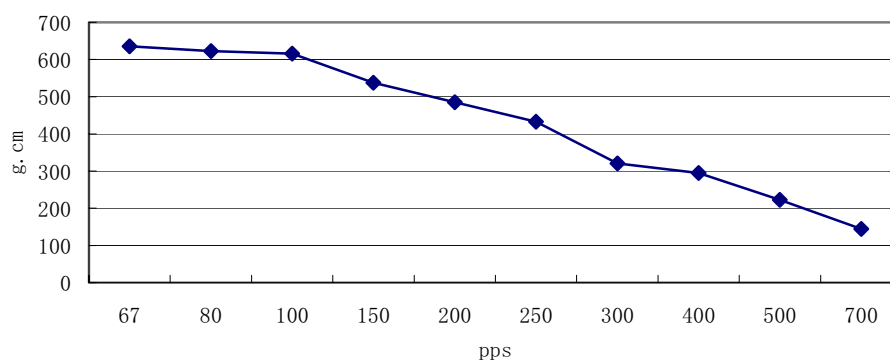
FL42STH33-0114DA PULL OUT TORQUE CURVE  
VOLTAGE:18VDC, CURRENT:0.114A, FULL STEP



FL42ST33-0954DA PULL OUT TORQUE CURVE  
VOLTAGE:18VDC, CURRENT:0.095A, HALF STEP



FL42ST38-0954DA PULL OUT TORQUE CURVE  
VOLTAGE:18VDC, CURRENT:0.095A, HALF STEP



# 0.9° Size 57mm High torque Hybrid Stepping Motors

A18

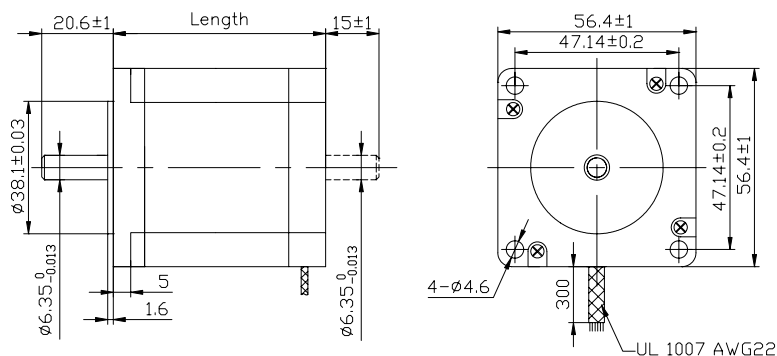
Item	Specifications
Step Angle	0.9°
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N



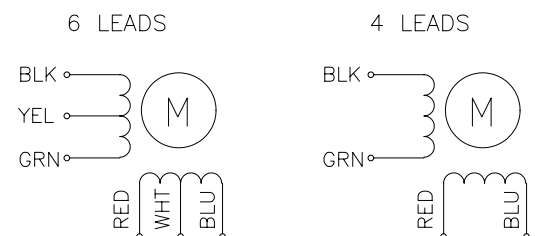
## ● Size 57mm High Torque Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	kg-cm		g-cm <sup>2</sup>	kg	kg-cm	mm
FL57STH41-1006MA	FL57STH41-1006MB	5.7	1	5.7	8.0	3.9	6	120	0.45	0.21	41
FL57STH41-2006MA	FL57STH41-2006MB	2.8	2	1.4	2.2	3.9	6				
FL57STH41-3006MA	FL57STH41-3006MB	1.9	3	0.63	1.0	3.9	6				
FL57STH41-2804MA	FL57STH41-2804MB	2	2.8	0.7	2.2	5.5	4				
FL57STH56-1006MA	FL57STH56-1006MB	7.4	1	7.4	17.5	9.0	6	300	0.7	0.4	56
FL57STH56-2006MA	FL57STH56-2006MB	3.6	2	1.8	4.5	9.0	6				
FL57STH56-3006MA	FL57STH56-3006MB	2.3	3	0.75	1.9	9.0	6				
FL57STH56-2804MA	FL57STH56-2804MB	2.5	2.8	0.9	4.5	12.0	4				
FL57STH76-1006MA	FL57STH76-1006MB	8.6	1	8.6	23	13.5	6	480	1	0.68	76
FL57STH76-2006MA	FL57STH76-2006MB	4.5	2	2.25	5.6	13.5	6				
FL57STH76-3006MA	FL57STH76-3006MB	3	3	1	2.6	13.5	6				
FL57STH76-2804MA	FL57STH76-2804MB	3.2	2.8	1.13	5.6	18.0	4				

## ● Dimension



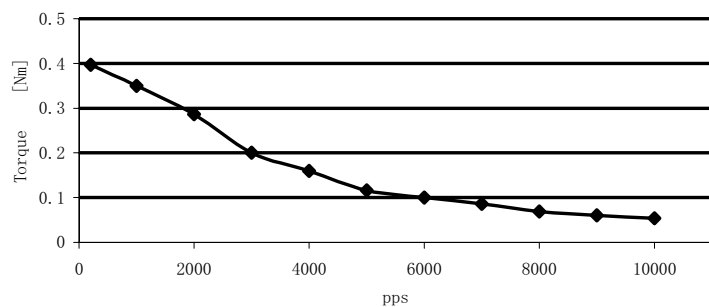
## Wiring Diagram



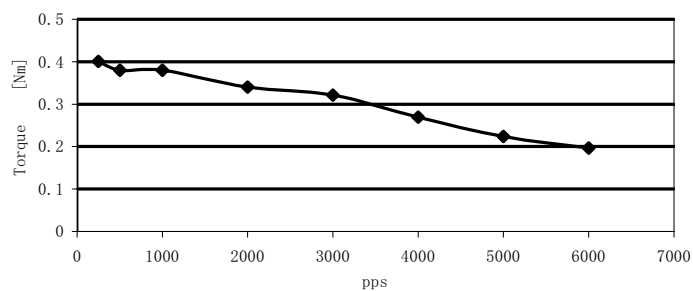
# ● Pull out Torque Curve

A19

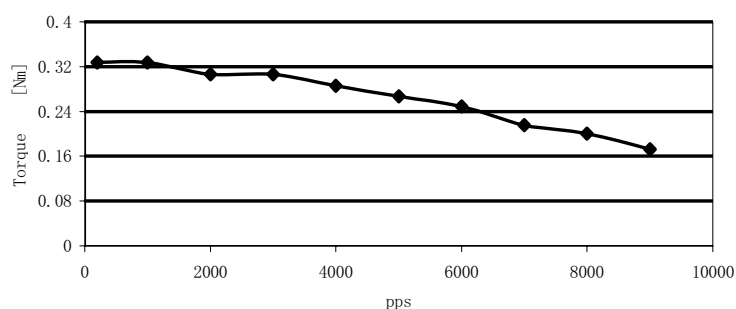
FL57STH41-1006MA  
VM: 30VDC; 1A /Phase () Driver: HA335,full step



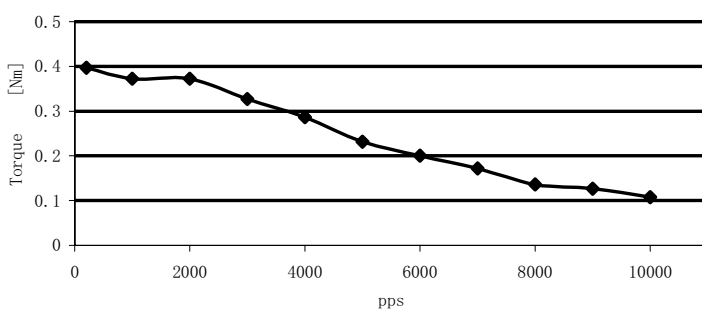
FL57STH41-2006MA  
VM: 30V; 2A /Phase () Driver: M542,full step



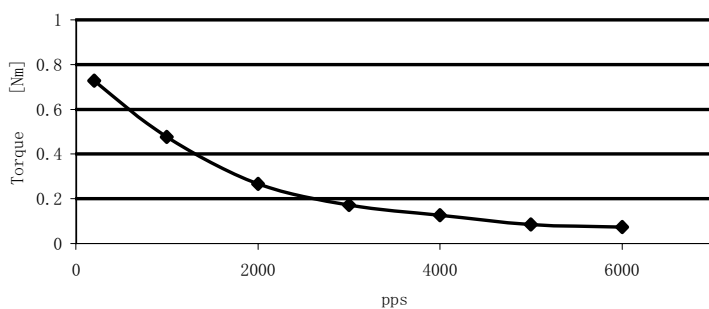
FL57STH41-3006MA  
VM: 30VDC; 2.7A /Phase () Driver: H860B,full step



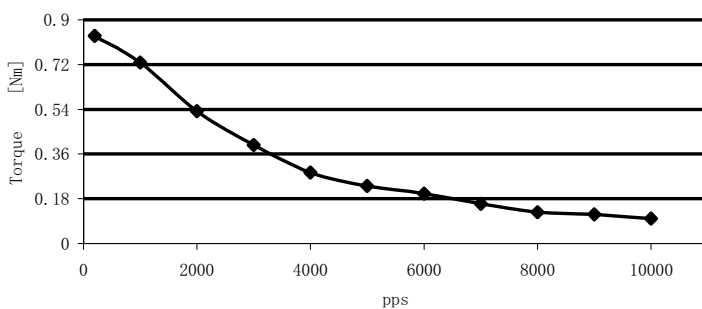
FL57STH41-2804MA  
VM: 30VDC; 2.7A /Phase () Driver: H860B,full step



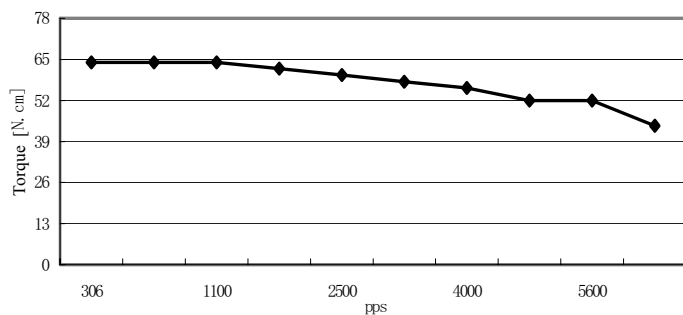
FL57STH56-1006MA  
VM: 30VDC; 1A /Phase () Driver: HA335,full step



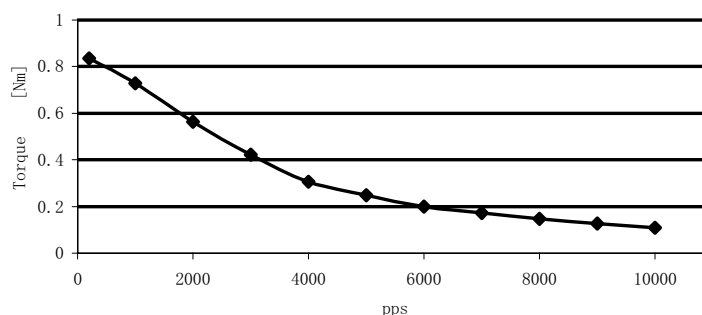
FL57STH56-2006MA  
VM: 30VDC; 2.1A /Phase () Driver: HA335,full step



FL57STH56-3006MA  
VM:30VDC;3A/Phase() Driver: M542, half step



FL57STH56-2804MA  
VM: 30VDC; 2.7A /Phase () Driver: H860B,full step

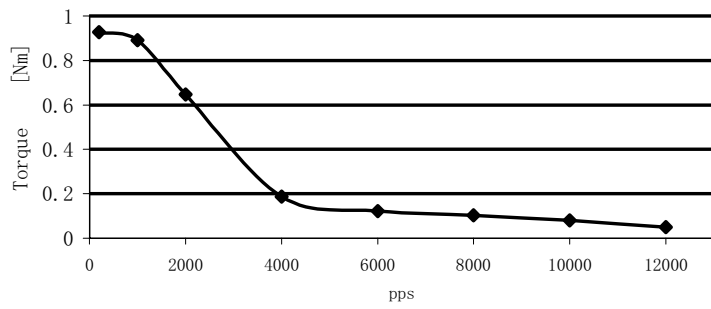


## ● Pull out Torque Curve

A20

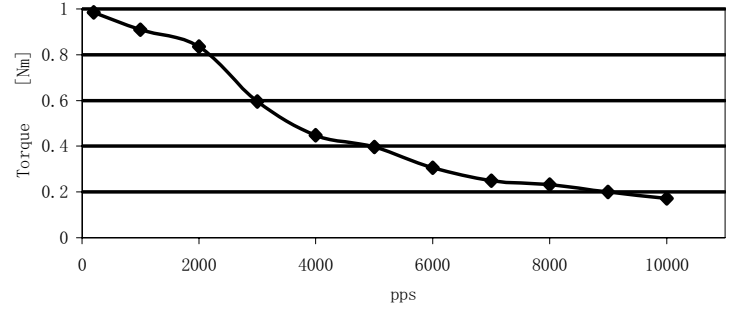
FL57STH76-1006MA

VM: 30VDC; 1A /Phase () Driver: M542, half step



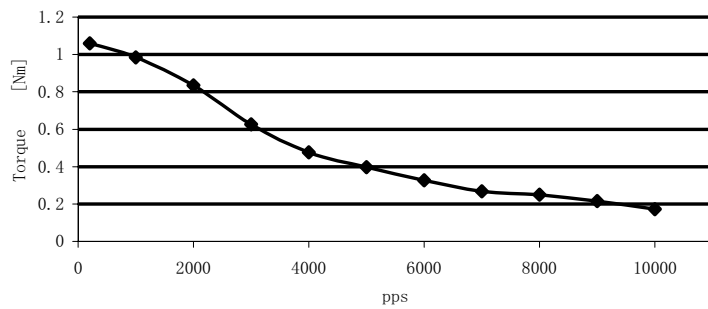
FL57STH76-2006MA

VM: 30VDC; 2.1A /Phase () Driver: HA335, full step



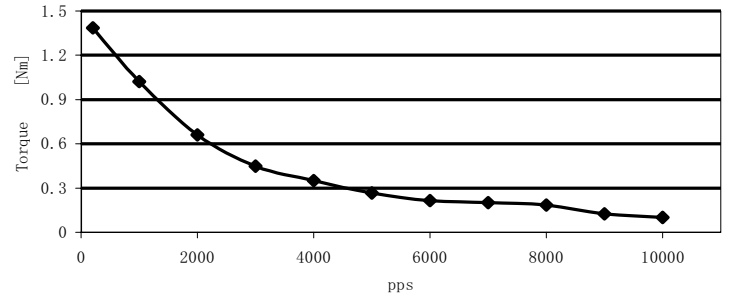
FL57STH76-3006MA

VM: 30VDC; 2.7A /Phase () Driver: H860B, full step



FL57STH76-2804MA

VM: 30VDC; 2.5A /Phase () Driver: HA335, full step



# 1.8° Size 57mm Hybrid Stepping Motor

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Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N

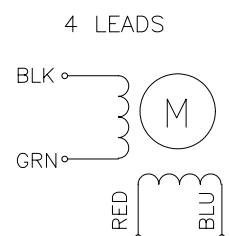
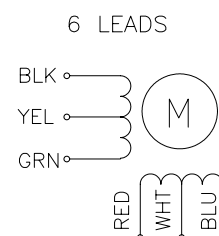
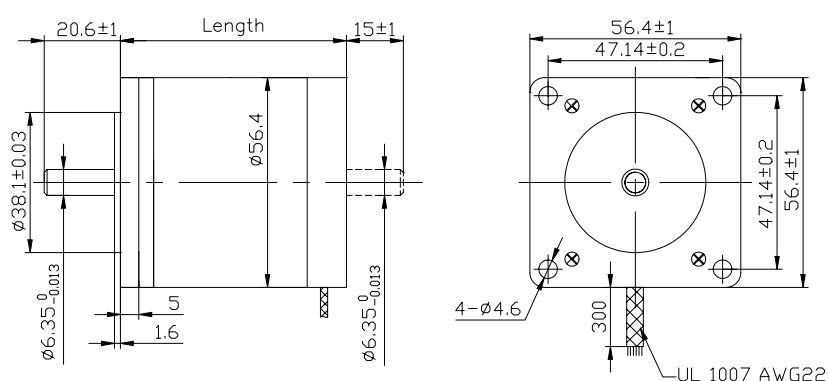


## ● Size 57mm Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	kg-cm		g-cm <sup>2</sup>	kg	kg-cm	mm
FL57ST41-1106A	FL57ST41-1106B	4	1.1	3.6	3.6	2.88	6	57	0.54	0.18	41
FL57ST41-0406A	FL57ST41-0406B	12	0.4	30	30	2.88	6				
FL57ST41-1564A	FL57ST41-1564B	2.8	1.56	1.8	3.6	4.0	4				
FL57ST51-0856A	FL57ST51-0856B	6	0.85	7.1	9	4.97	6	110	0.60	0.35	51
FL57ST51-0426A	FL57ST51-0426B	12	0.42	29	36	4.97	6				
FL57ST51-2804A	FL57ST51-2804B	2.38	2.8	0.85	2.1	6.9	4				
FL57ST56-1206A	FL57ST56-1206B	6	1.2	5	8	6.05	6	135	0.65	0.42	56
FL57ST56-0606A	FL57ST56-0606B	12	0.6	20	32	6.05	6				
FL57ST56-2554A	FL57ST56-2554B	2.8	2.55	1.1	3.6	8.4	4				
FL57ST76-1506A	FL57ST76-1506B	5.4	1.5	3.6	6	9	6	200	0.95	0.72	76
FL57ST76-0686A	FL57ST76-0686B	12	0.68	17.7	30	9	6				
FL57ST76-3304A	FL57ST76-3304B	2.7	3.3	0.85	3	12.5	4				

## Dimension

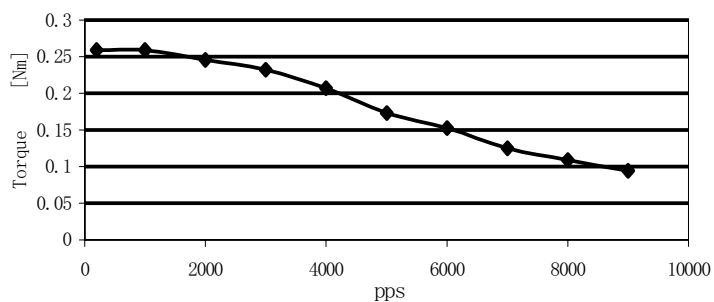
## Wiring Diagram



# ● Pull out Torque Curve

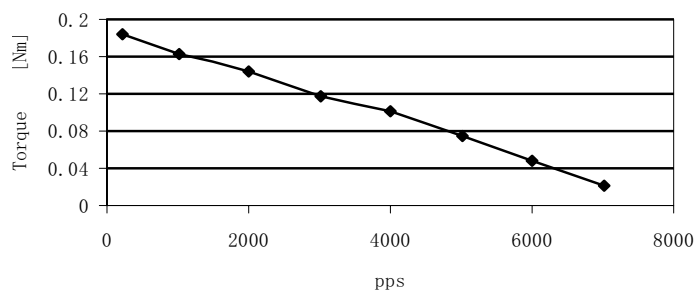
FL57ST41-1106A

VM: 30VDC; 1.1 /Phase () Driver: HA335 half step



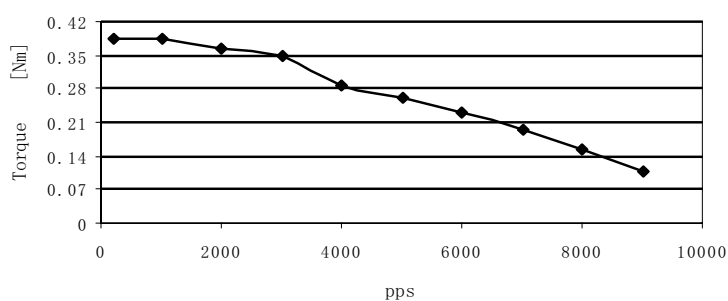
FL57ST41-0406A

VM: 30VDC; 0.4A /Phase () Driver: HA335 half step



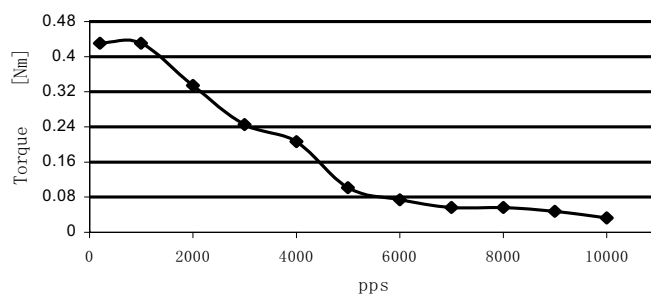
FL57ST41-1564A

VM: 30VDC; 1.4A /Phase () Driver: HA335 half step



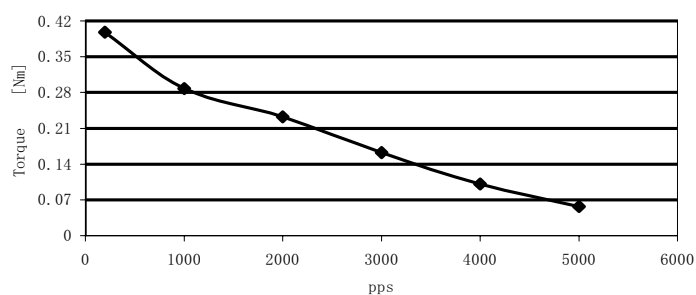
FL57ST51-0856A

VM: 30VDC; 0.85A /Phase () Driver: HA335 half step



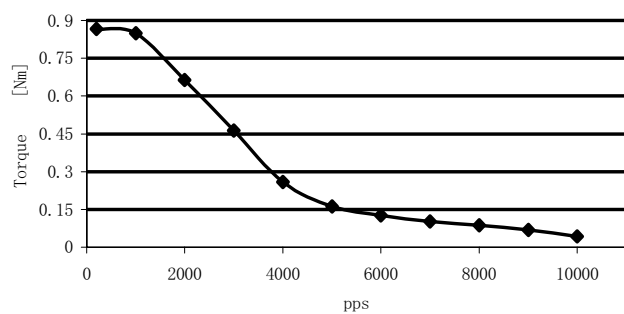
FL57ST51-0426A

VM: 30VDC; 0.5A /Phase () Driver: HA335 half step



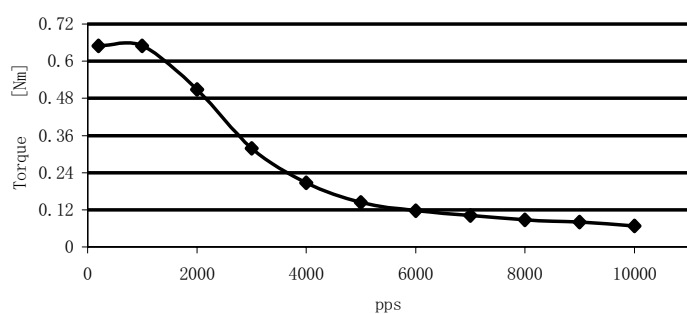
FL57STH76-1506A

VM: 30VDC; 1.4A /Phase () Driver: HA335 half step



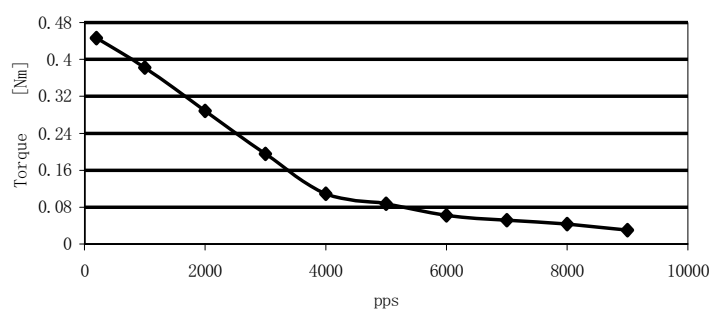
FL57ST56-1206A

VM: 30VDC; 1.2A /Phase () Driver: HA335 half step



FL57STH56-0606A

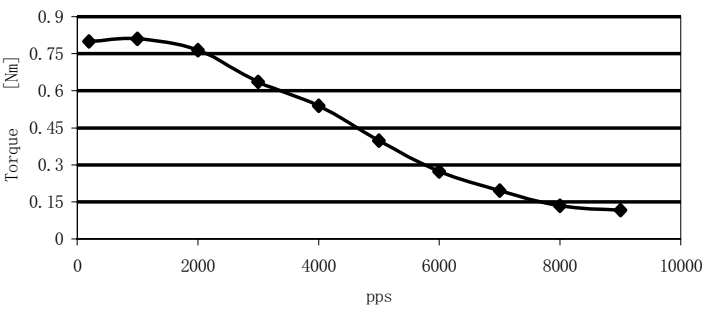
VM: 30VDC; 0.5 /Phase () Driver: HA335 half step



● Pull out Torque Curve

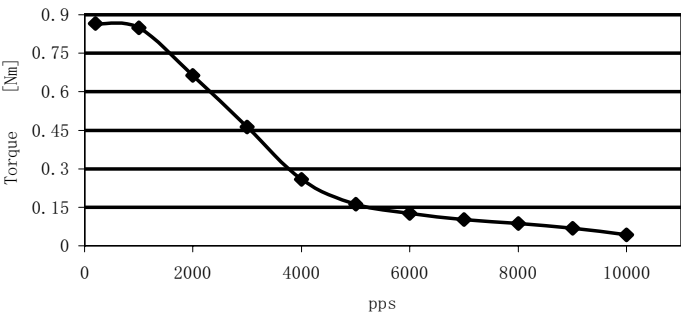
FL57ST56-2554A

VM: 30VDC; 2.5A /Phase () Driver: HA335 half step



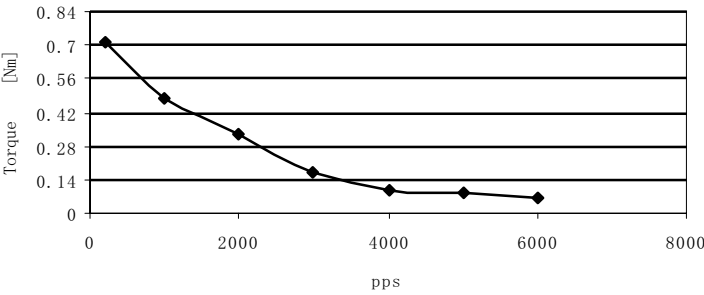
FL57STH76-1506A

VM: 30VDC; 1.4A /Phase () Driver: HA335 half step



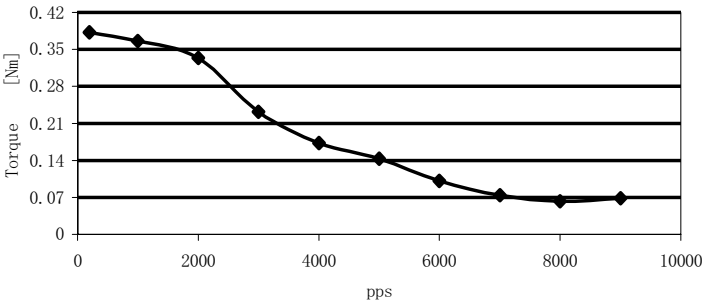
FL57ST76-0686A

VM: 30VDC; 0.7A /Phase () Driver: HA335 half step

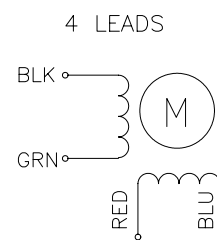


FL57ST76-3304A

VM: 30VDC; 3.04A /Phase () Driver: MD556 half step



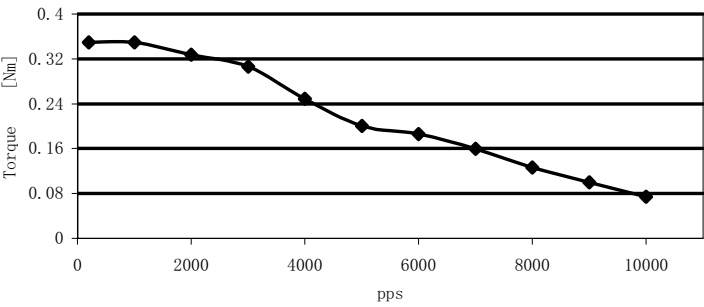




● Pull out Torque Curve

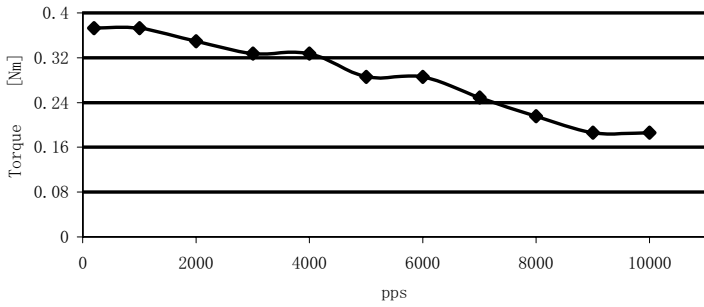
FL57STH41-1006A

VM: 30VDC; 1A /Phase ( ) Driver: M542, half step



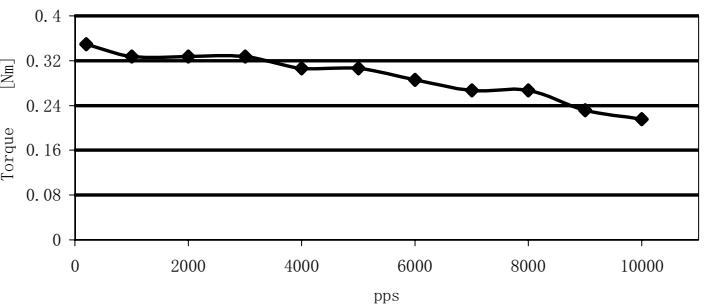
FL57STH41-2006A

VM: 30VDC; 2A /Phase ( ) Driver: M542, half step



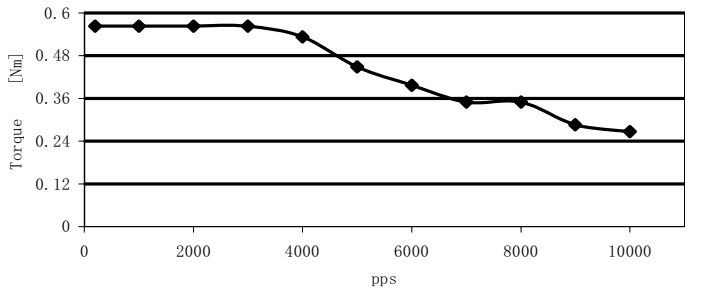
FL57STH41-3006A

VM: 30VDC; 3A /Phase ( ) Driver: M542, half step



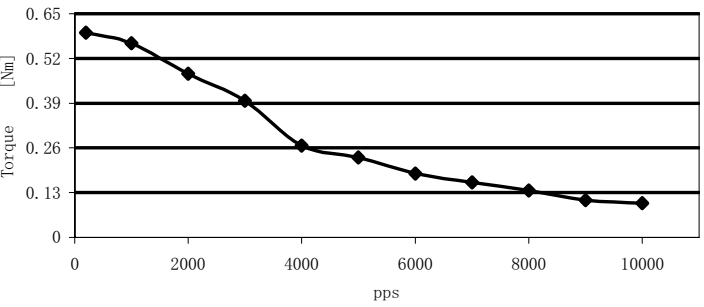
FL57STH41-2804A

VM: 30VDC; 2.7A /Phase ( ) Driver: H860B, half step



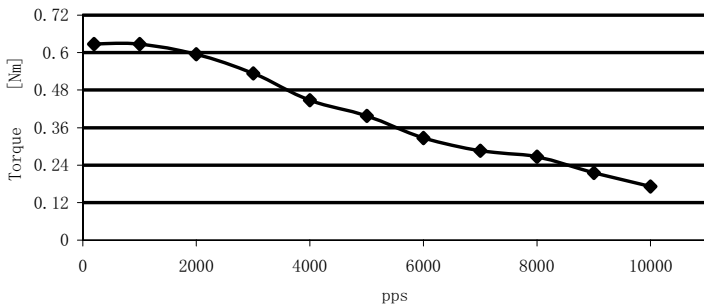
FL57STH51-1006A

VM: 30VDC; 1A /Phase ( ) Driver: M542, half step



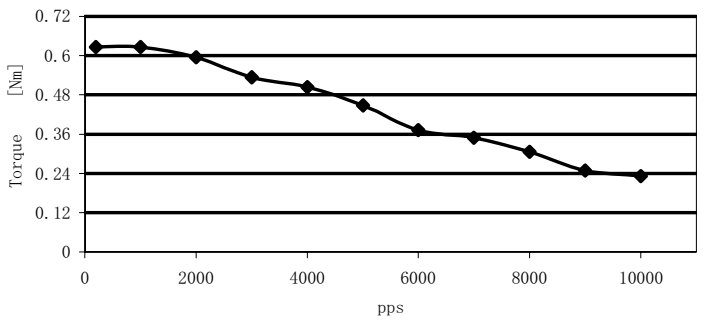
FL57STH51-2006A

VM: 30VDC; 2A /Phase ( ) Driver: M542, half step



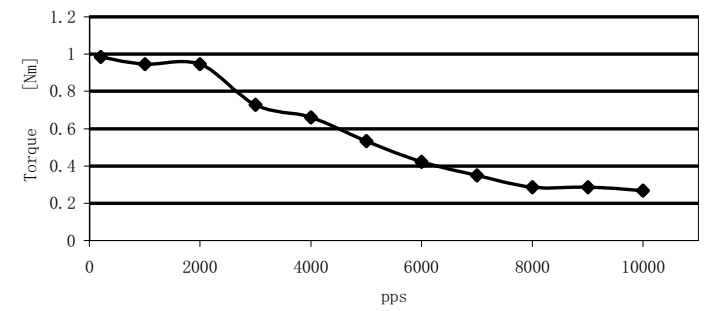
FL57STH51-3006A

VM: 30VDC; 3A /Phase ( ) Driver: M542, half step



FL57STH51-2804A

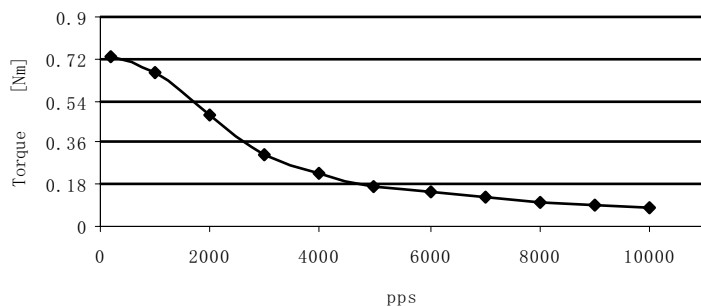
VM: 30VDC; 2.7A /Phase ( ) Driver: H860B, half step



## ● Pull out Torque Curve

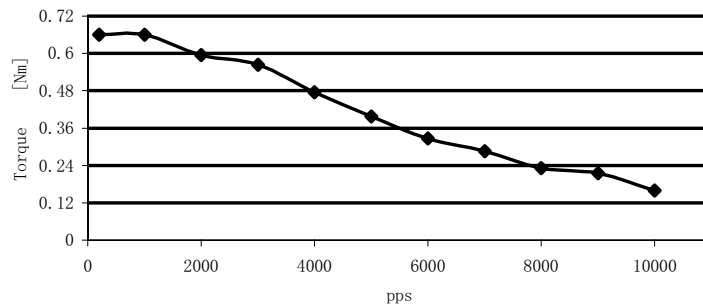
FL57STH56-1006A

VM: 30VDC; 1A /Phase () Driver: HA335, half step



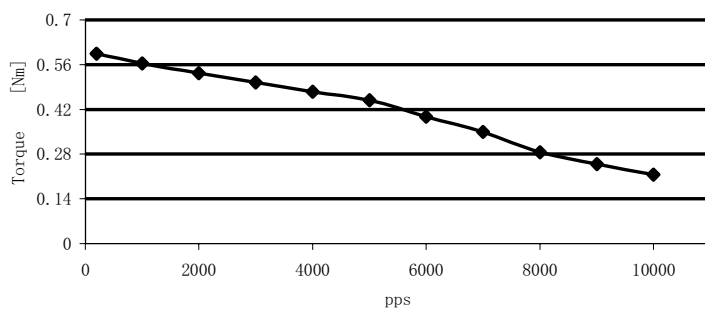
FL57STH56-2006A

VM: 30VDC; 2A /Phase () Driver: M542, half step



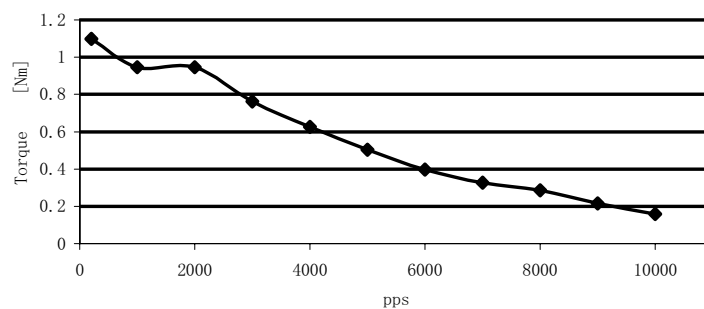
FL57STH56-3006A

VM: 30VDC; 2.7A /Phase () Driver: H860B, full step



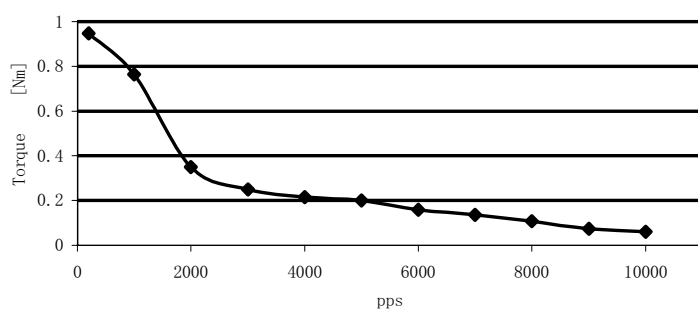
FL57STH56-2804A

VM: 30VDC; 2.7A /Phase () Driver: H860B, half step



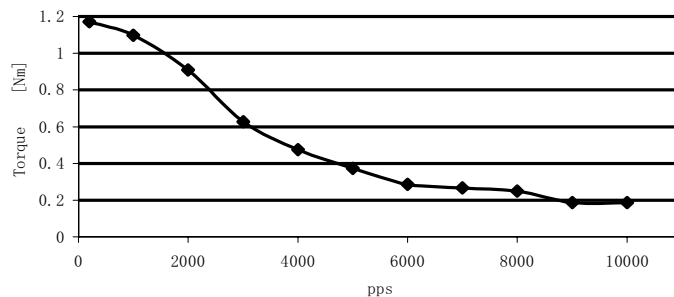
FL57STH76-1006A

VM: 30VDC; 1A /Phase () Driver: M542, half step



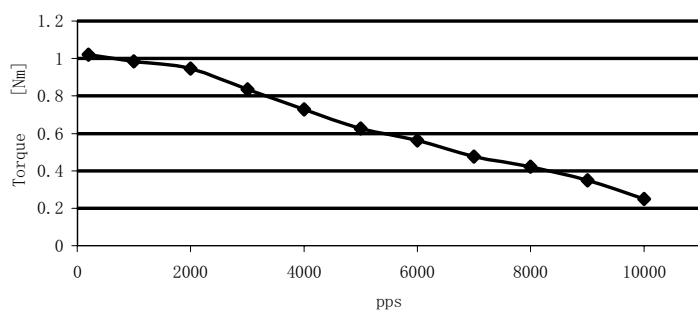
FL57STH76-2006A

VM: 30VDC; 2A /Phase () Driver: M542, half step



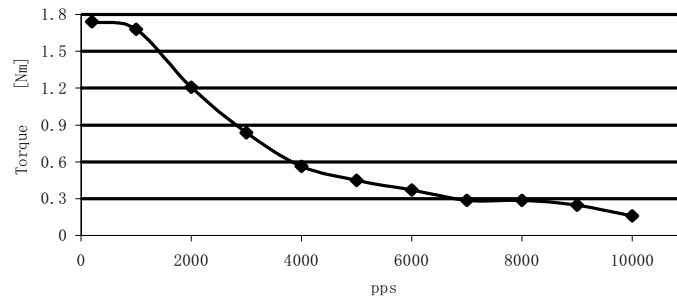
FL57STH76-3006A

VM: 30VDC; 2.7A /Phase () Driver: H860B, half step



FL57STH76-2804A

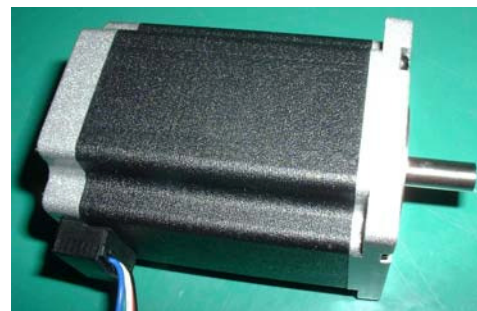
VM: 30VDC; 2.7A /Phase () Driver: H860B, half step



# 1.8° Size 60mm High Torque Hybrid Stepping Motor

A27

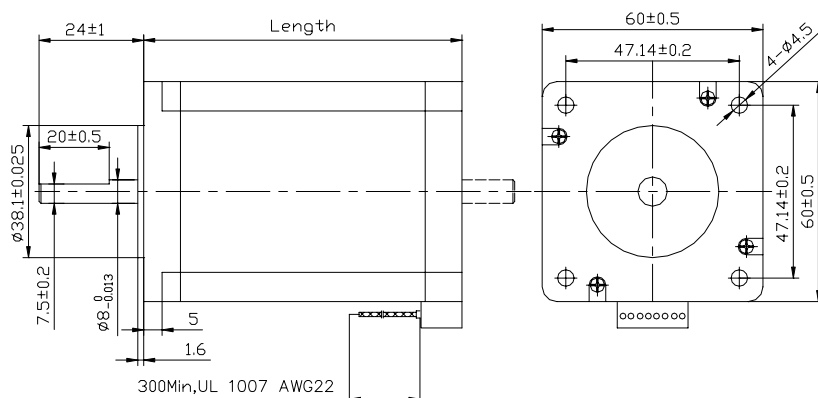
Item	Specifications
Step Angle	0.9°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N



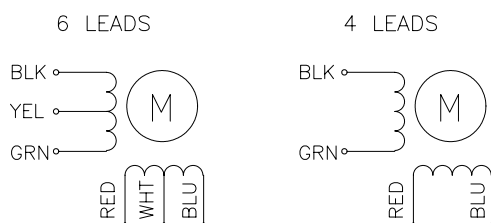
## ● Size 60mm High Torque Hybrid Stepping Motor Specifications

Model No.			Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft		V	A	Ω	mH	kg-cm		g-cm <sup>2</sup>	kg	kg-cm	mm
FL60STH45-2008AF	FL60STH45-2008BF	unipolar	3	2	1.5	2	7.8	8	275	0.6	0.5	47
		parallel	2.1	2.8	0.75	2	11					
		series	4.2	1.4	3.0	8	11					
FL60STH56-2008AF	FL60STH56-2008BF	unipolar	3.6	2	1.8	3.6	11.7	8	300	0.77	0.7	56
		parallel	2.52	2.8	0.9	3.6	16.5					
		series	5.04	1.4	3.6	14.4	16.5					
FL60STH65-2008AF	FL60STH65-2008BF	unipolar	4.8	2	2.4	4.6	15	8	570	1.2	0.9	67
		parallel	3.36	2.8	1.2	4.6	21					
		series	6.72	1.4	4.8	18.4	21					
FL60STH86-2008AF	FL60STH86-2008BF	unipolar	6	2	3	6.8	22	8	840	1.4	1.0	88
		parallel	4.17	2.8	1.5	6.8	31					
		series	8.4	1.4	6	27.2	31					

## ● Dimension



## ● Wiring Diagram

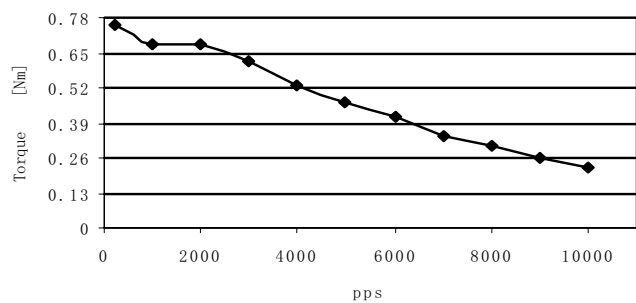


## ● Pull out Torque Curve

A28

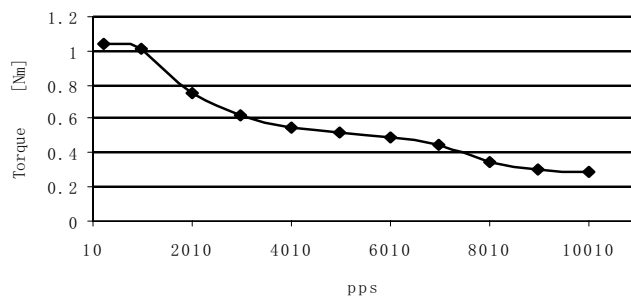
FL60STH45-2008AF

VM: 30VDC; 2.0A /Phase () Driver: M542,half step,parallel



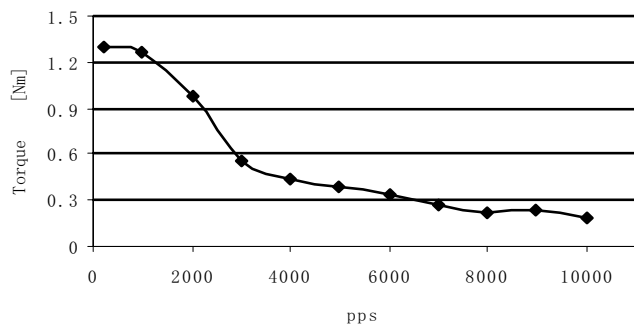
FL60STH56-2008AF

VM: 30VDC; 2.0A /Phase () Driver: M542,half step,parallel



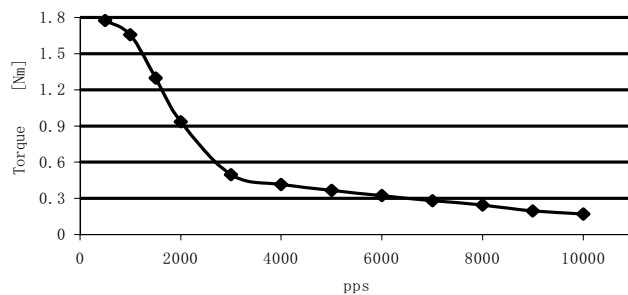
FL60STH65-2008AF

VM: 30VDC; 2.0A /Phase () Driver: M542,half step,parallel



FL60STH86-2008AF

VM: 30VDC; 2.0A /Phase () Driver: M542,half step,parallel



# 1.8° Size 86mm Round High Torque Hybrid Stepping Motor

A29

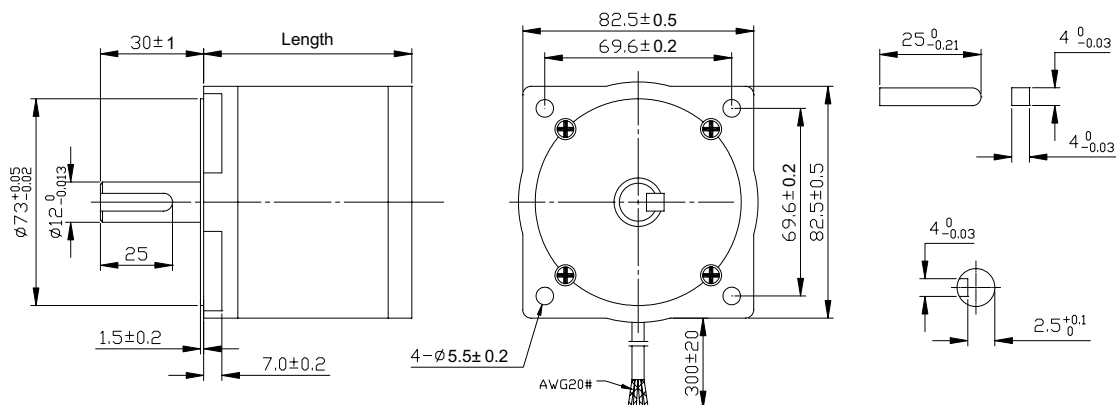
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	820VAC , 1s , 3mA
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N



## ● Size 86mm High Torque Hybrid Stepping Motor Specifications

Model No.	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
	V	A	Ω	mH	Kg.cm		g-cm <sup>2</sup>	kg	kg-cm	mm
FL86ST67-2808A	3.64	2.8	1.3	5.1	28	8	660	1.6		67
FL86ST94-2808A	4.76	2.8	1.7	7.7	48	8	1200	2.4		94
FL86ST125-3508A	4.97	3.5	1.42	7.9	76	8	1800	3.6		125

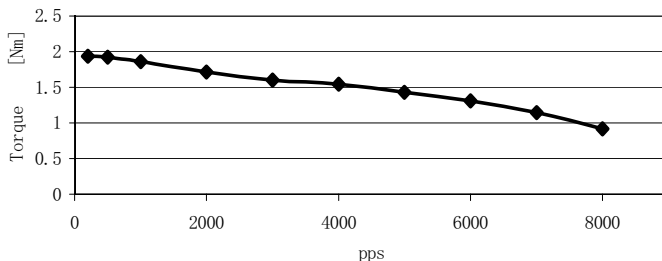
## ● Dimension



## ● Pull out Torque Curve

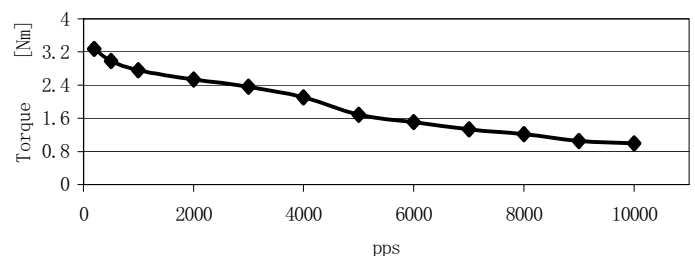
FL86ST67-2808A

VM:100VAC;3.96A /Phase() Driver:MD2278, 400pu1/rev, PARALLEL



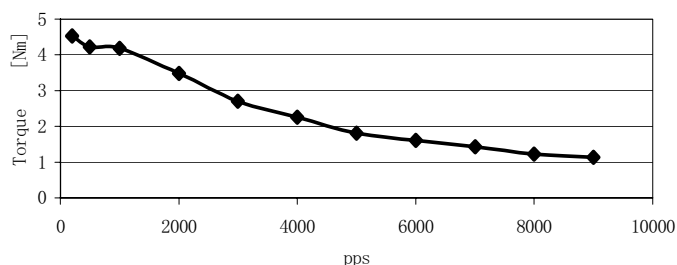
FL86ST94-2808A

VM:100VAC;3.96A /Phase() Driver:MD2278, 400pu1/rev, PARALLEL



FL86ST125-3508A

VM:100VAC;4.71A /Phase() Driver:MD2278, 400pu1/rev, PARALLEL



# 1.8° Size 86mm Round Standard Hybrid Stepping Motor A30

## ● General Specification for Hybrid Stepping Motor

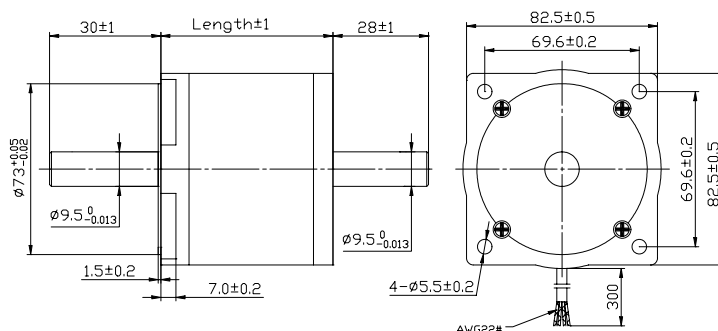
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	1500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N
Rotation	CW( See from Front Flange)



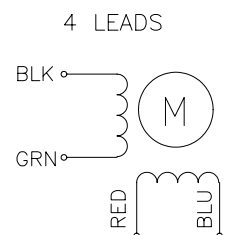
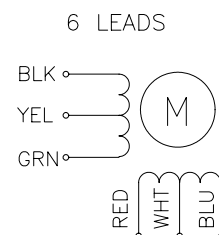
## ● Size 86mm High Torque Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	Kg.cm		g-cm <sup>2</sup>	kg	kg-cm	mm
FL86ST62-4506A	FL86ST62-4506B	1.8	4.5	0.4	1.4	13	6	560	1.5	0.8	62
FL86ST62-1256A	FL86ST62-1256B	5.5	1.25	4.4	14	13	6				
FL86ST62-1406A	FL86ST62-1406B	0.7	14	20	60	13	6				
FL86ST62-5904A	FL86ST62-5904B	1.33	5.9	0.23	1.5	18	4				
FL86ST94-4006A	FL86ST94-4006B	3.0	4.0	0.75	4.5	26	6	1100	2.6	2.4	94
FL86ST94-2006A	FL86ST94-2006B	6.0	2.0	3.0	13	26	6				
FL86ST94-1006A	FL86ST94-1006B	12	1	12	72	26	6				
FL86ST94-5604A	FL86ST94-5604B	2.1	5.6	0.38	3.9	35	4				
FL86ST134-6706A	FL86ST134-6706B	3.0	6.7	0.45	2	36	6	1800	3.6	3.6	134
FL86ST134-4006A	FL86ST134-4006B	5.0	4.0	1.25	6.6	36	6				
FL86ST134-1806A	FL86ST134-1806B	12	1.8	6.5	41	36	6				
FL86ST134-5604A	FL86ST134-5604B	3.5	5.6	0.63	6.6	50	4				

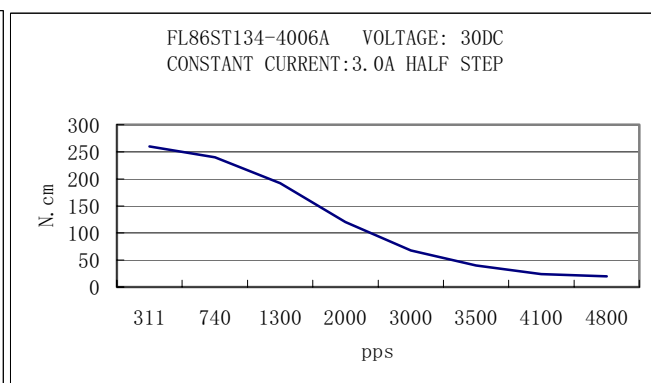
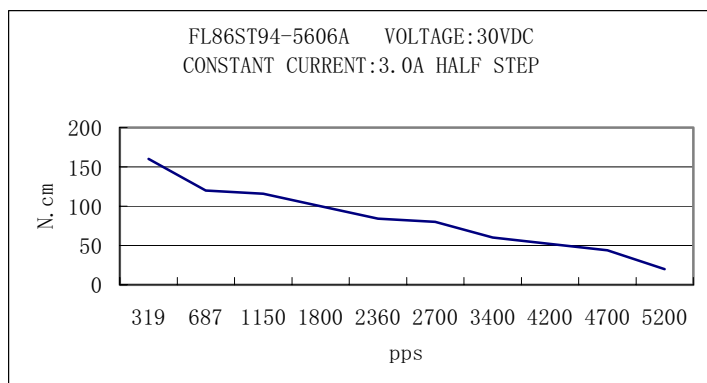
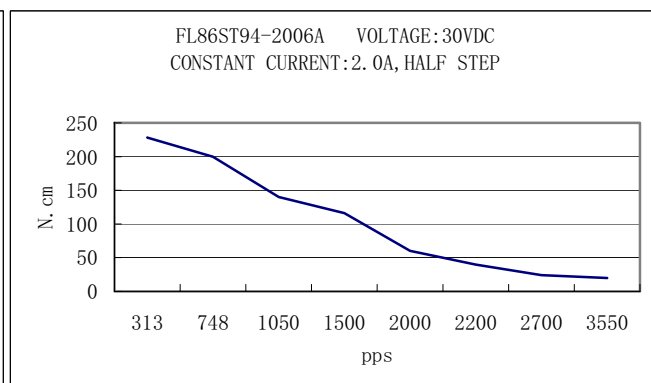
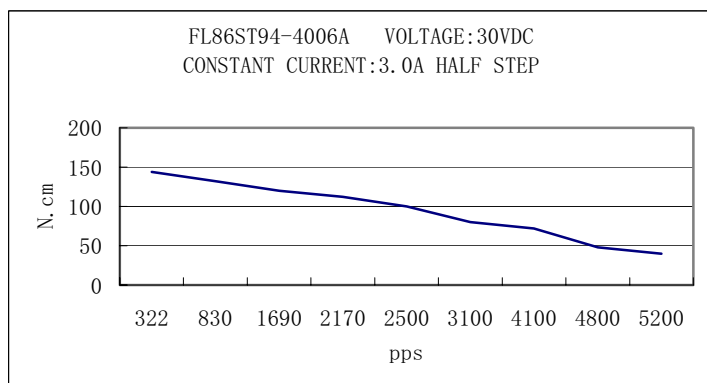
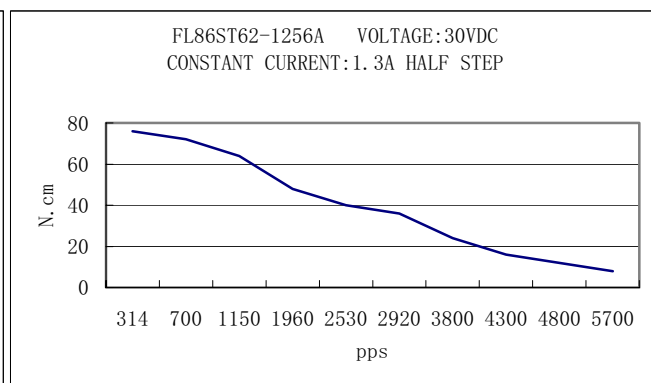
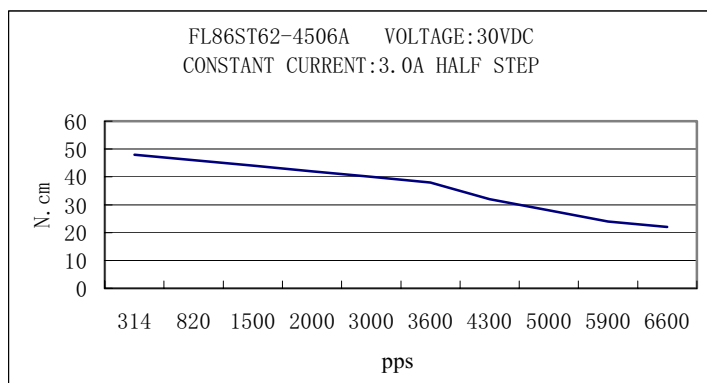
## ● Dimension



## Wiring Diagram



- Pull out Torque Curve





# 1.8° Size 86mm High Torque Hybrid Stepping Motor

A32

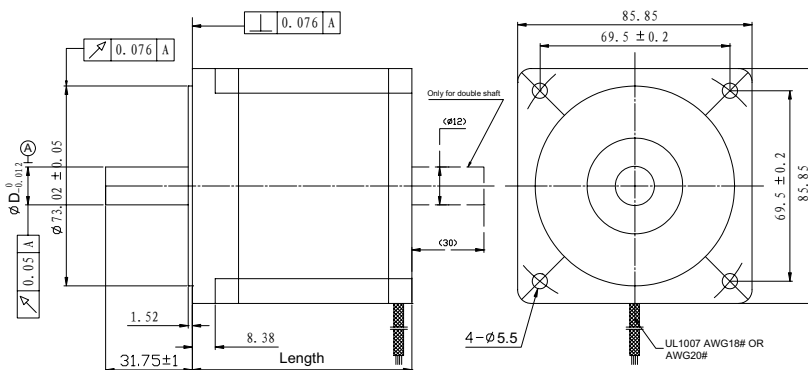
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	820VAC , 1s , 3mA
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N



## ● Size 86mm High Torque Hybrid Stepping Motor Specifications

Model No.		Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque (Bipolar)	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	A	Ω	mH	Kg.cm	#	g-cm <sup>2</sup>	kg	kg-cm	mm
FL86STH65-5904A	FL86STH65-5904B	5.9	0.28	1.7	34	4	1000	1.7	0.8	65
FL86STH65-2808A	FL86STH65-2808B	2.8	1.4	3.9	34	8				
FL86STH80-5504A	FL86STH80-5504B	5.5	0.46	4	46	4	1400	2.3	1.2	80
FL86STH80-4208A	FL86STH80-4208B	4.24	0.75	3.4	46	8				
FL86STH118-6004A	FL86STH118-6004B	6	0.6	6.5	87	4	2700	3.8	2.4	118
FL86STH118-4208A	FL86STH118-4208B	4.2	0.9	6	87	8				
FL86STH156-6204A	FL86STH156-6204B	6.2	0.75	9	122	4	4000	5.4	3.6	156
FL86STH156-4208A	FL86STH156-4208B	4.2	1.25	8	122	8				

## ● Dimension

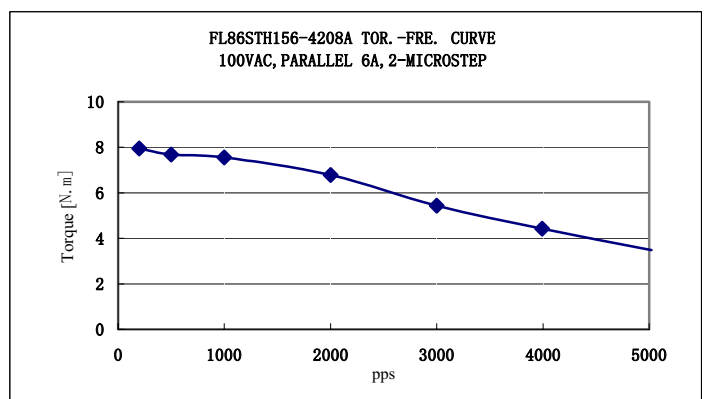
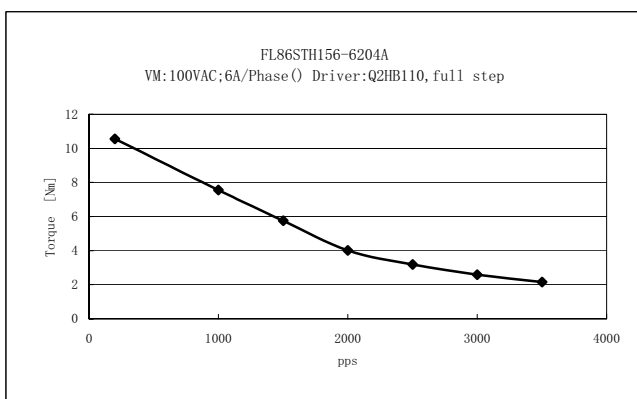
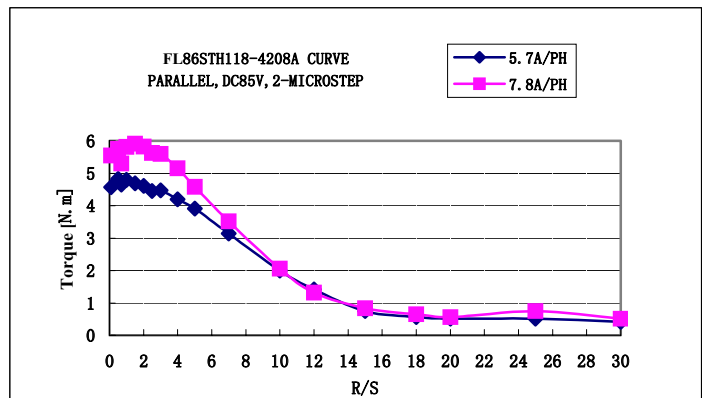
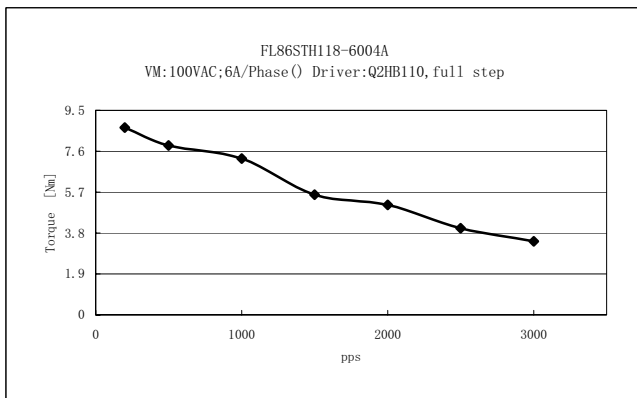
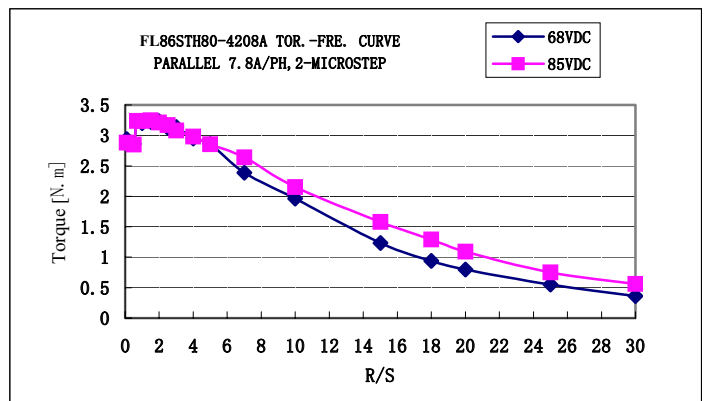
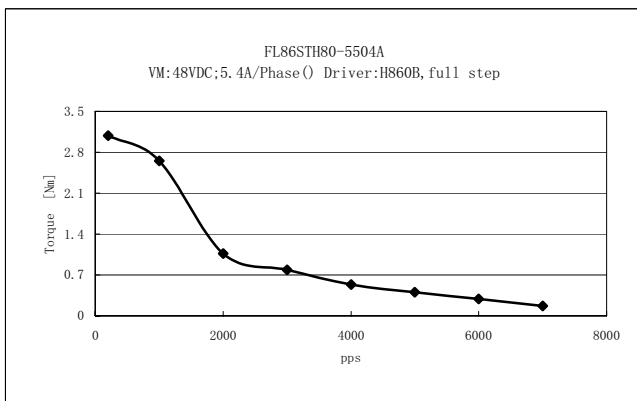
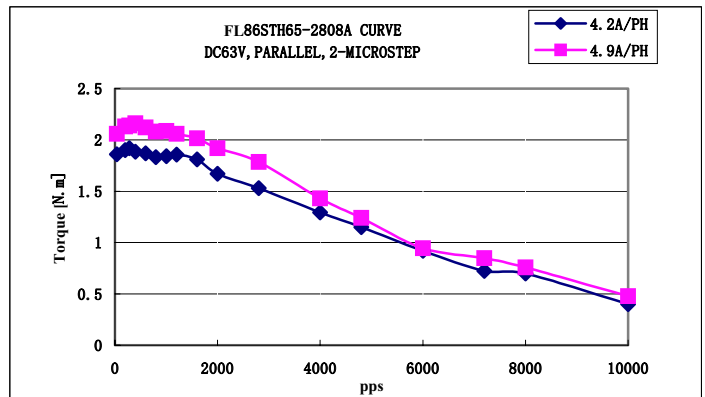
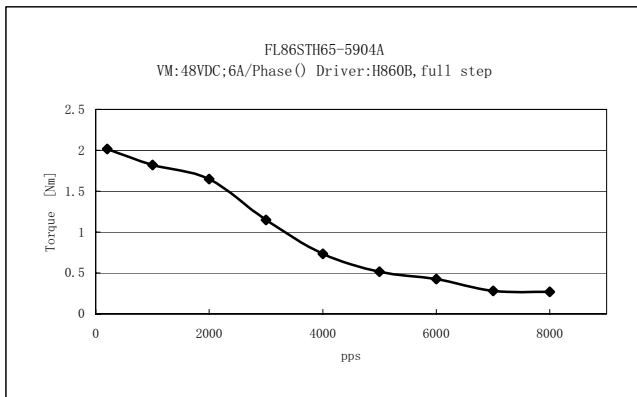


FL86STH65-2808A FL86STH65-2808A	
FL86STH80-5504A FL86STH80-4208A	
FL86STH118-6004A FL86STH118-4208A	
FL86STH156-6204A FL86STH156-4208A	

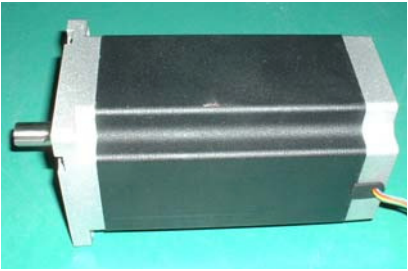
## ● WIRE DIAGRAM



## ● Pull out Torque Curve



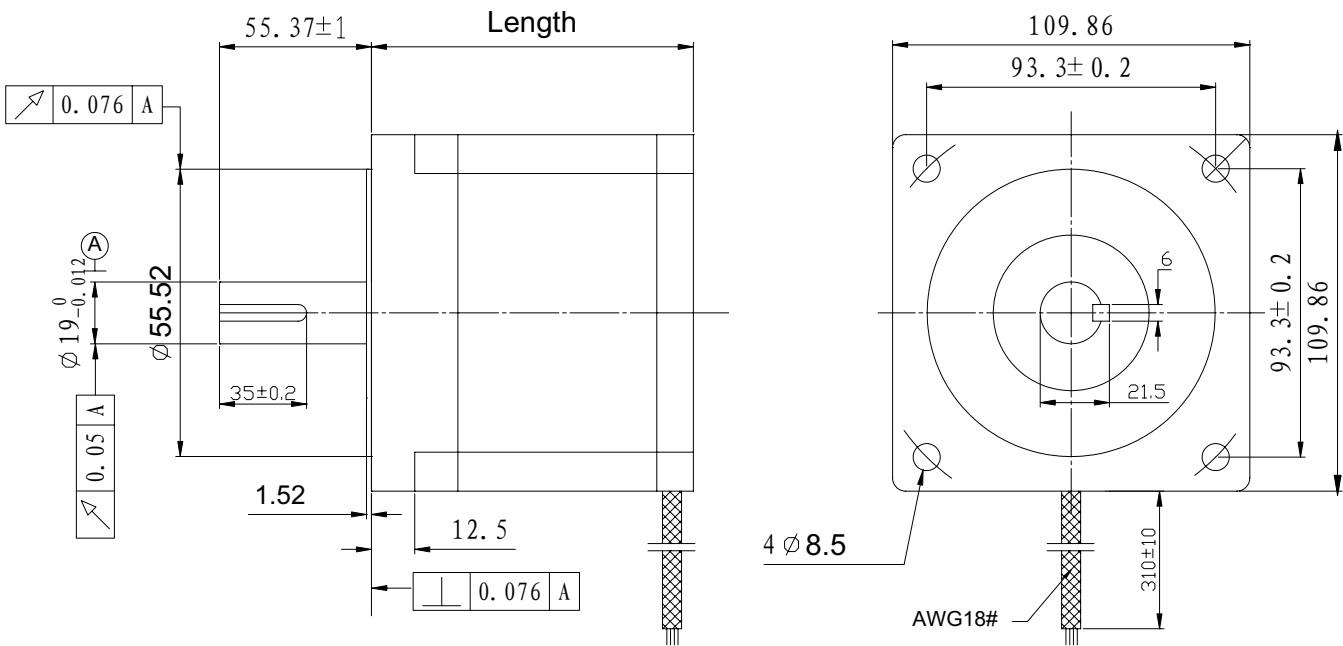
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	1800VAC , 1s , 5mA
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N



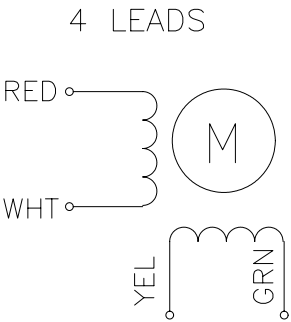
● Size 110mm High Torque Hybrid Stepping Motor Specifications

Model No.	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single shaft	A	Ω	mH	N.m	#	g-cm <sup>2</sup>	kg	kg-cm	mm
FL110STH99-5504A	5.5	0.9	12	11.2	4	5500	5	3	99
FL110STH150-6504A	6.5	0.8	15	21	4	10900	8.4	5.9	150
FL110STH201-8004A	8	0.67	12	28	4	16200	11.7	7.5	201

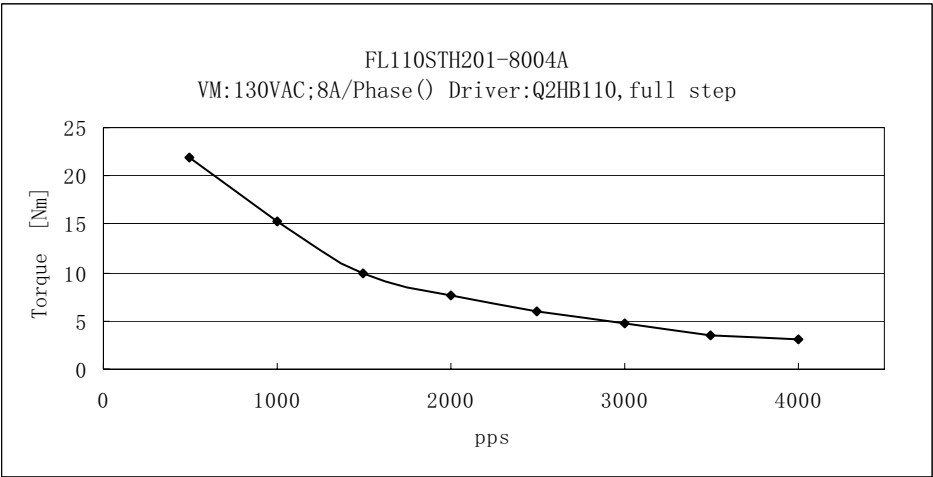
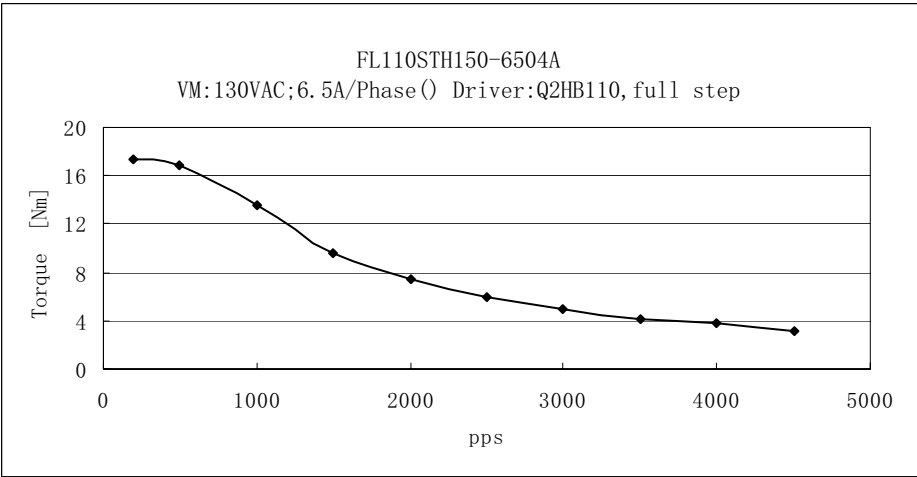
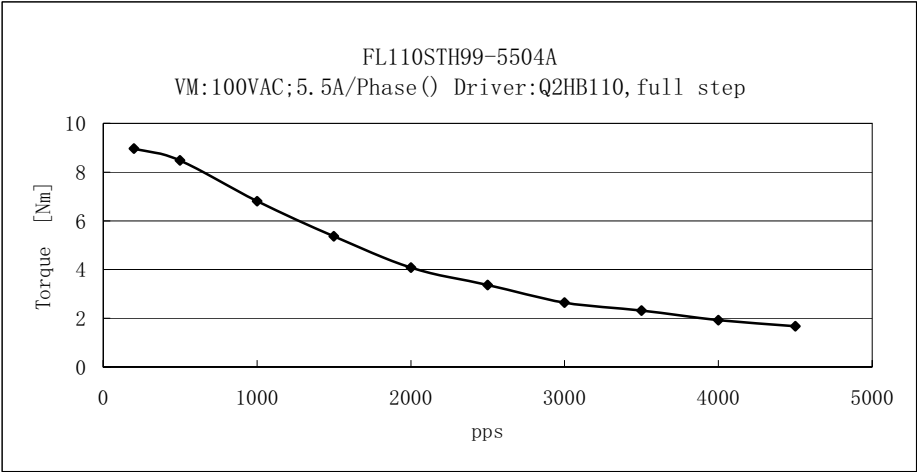
● Dimension



Wiring Diagram



● Pull out Torque Curve



0.72° , 1.2° , 1.5° and 1.8° Size 110mm Hybrid Stepping Motor A36

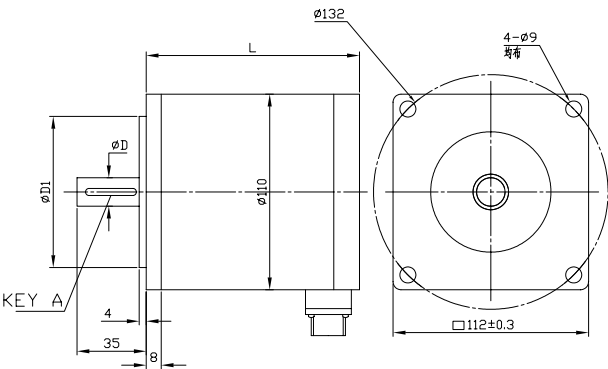
● General Specification for Hybrid Stepping Motor

Item	Specifications
Step Angle	0. 72/1. 2/1. 5/ 1. 8°
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	1500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N
Rotation	CW( See from Front Flange)

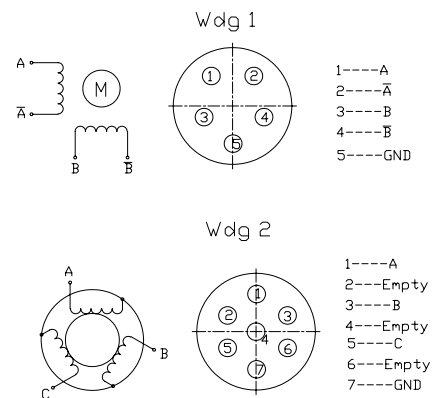
● Size 110mm Hybrid Stepping Motor Specifications

Model No.	No. of phase	Step angle	Rated Voltage	Current /Phase	No Load Run Frequency	Holding Torque	Rotor Inertia	Length	Shaft Dimention Φ D	Flange Dimention Φ D1	KEY A	Wiring Diagram
Single shaft		degree	V	A	KHz	Kg.cm	kg-cm <sup>2</sup>	mm	mm	mm		
FL110BYG2500	2	1.8	120-310	4.0	≥15	8.0	6.0	86	16 <sup>-0.01 -0.022</sup>	85 <sup>0 -0.017</sup>	4×9	1
FL110BYG2501	2	1.8	120-310	4.0	≥15	12.0	11.0	144	16 <sup>-0.01 -0.022</sup>	85 <sup>0 -0.017</sup>	4×9	1
FL110BYG2502	2	1.8	120-310	5.0	≥20	20.0	15.0	182	16 <sup>-0.01 -0.022</sup>	85 <sup>0 -0.017</sup>	4×9	1
FL110BYG2600	2	1.5	120-310	4.0	≥15	8.0	6.0	86	16 <sup>-0.01 -0.022</sup>	85 <sup>0 -0.017</sup>	4×9	1
FL110BYG2601	2	1.5	120-310	4.0	≥20	12.0	11.0	142	16 <sup>-0.01 -0.022</sup>	85 <sup>0 -0.017</sup>	4×9	1
FL110BYG2602	2	1.5	120-310	5.0	≥20	20.0	15.0	184	16 <sup>-0.01 -0.022</sup>	85 <sup>0 -0.017</sup>	4×9	1
FL110BYG3500	3	1.2	120-310	3.0	≥25	8.0	6.0	100	19 <sup>-0.013 -0.028</sup>	85 <sup>0 -0.017</sup>	6×30	2
FL110BYG3501	3	1.2	120-310	3.0	≥30	12.0	11.0	144	19 <sup>-0.013 -0.028</sup>	85 <sup>0 -0.017</sup>	6×30	2
FL110BYG3502	3	1.2	120-310	3.0	≥30	16.0	15.0	182	19 <sup>-0.013 -0.028</sup>	85 <sup>0 -0.017</sup>	6×30	2
FL110BYG3503	3	1.2	120-310	3.0	≥30	20.0	18.0	261	19 <sup>-0.013 -0.028</sup>	85 <sup>0 -0.017</sup>	6×30	2
FL110BYG5501	5	0.72	120-310	3.0	≥20	10.0	11.0	144	16 <sup>-0.01 -0.022</sup>	56 <sup>0 -0.017</sup>	5×25	1
FL110BYG5502	5	0.72	120-310	5.0	≥20	16.0	15.0	189	16 <sup>-0.01 -0.022</sup>	56 <sup>0 -0.017</sup>	5×25	1
FL110BYG5503	5	0.72	120-310	5.0	≥20	20.0	18.0	231	19 <sup>-0.013 -0.028</sup>	56 <sup>0 -0.017</sup>	5×25	1

Dimension



Wiring Diagram



0.72° , 1.2° and 1.8° Size 130mm Hybrid Stepping Motor A37

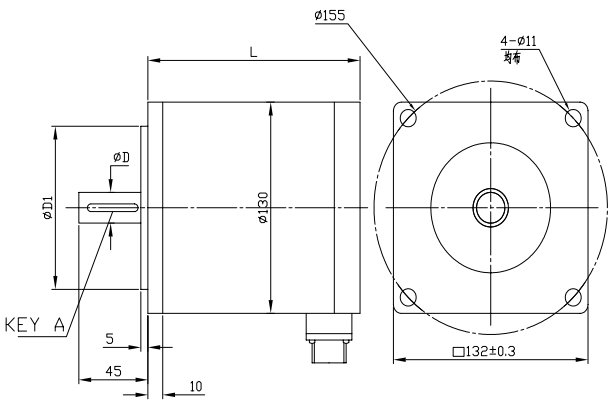
● General Specification for Hybrid Stepping Motor

Item	Specifications
Step Angle	0. 72° /1. 2° /1. 8°
Step Angle Accuracy	± 5% (full step, no load)
Resistance Accuracy	± 10%
Inductance Accuracy	± 20%
Temperature Rise	80° C Max.(rated current,2 phase on)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	1500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N
Rotation	CW( See from Front Flange)

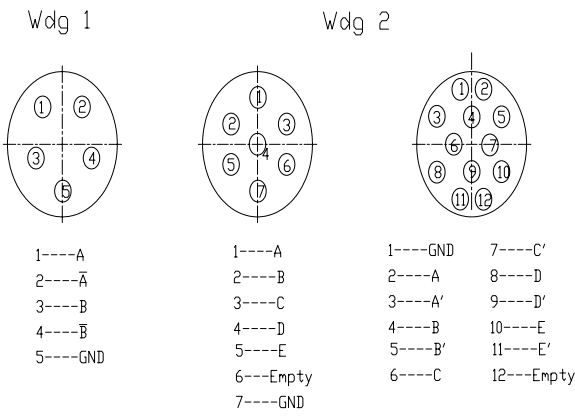
● Size 110mm Hybrid Stepping Motor Specifications

Model No.	No. of phase	Step angle	Rated Voltage	Current /Phase	No Load Run Frequency	Holdin g Torque	Rotor Inertia	Length	Shaft Dimention Φ D	Flange Dimention Φ D1	KEY A	Wiring Diagram
Single shaft		degree	V	A	KHz	Kg.cm	kg-cm <sup>2</sup>	mm	mm	mm		
FL130BYG2501	2	1.8	120-310	6.0	≥20	27	33	165	19 <sup>-0.013 -0.028</sup>	100 <sup>0 -0.023</sup>	5×25	1
FL130BYG2502	2	1.8	120-310	7.0	≥15	40	48	230	19 <sup>-0.013 -0.028</sup>	100 <sup>0 -0.023</sup>	5×25	1
FL130BYG2503	2	1.8	120-310	7.0	≥12	50	60	270		100 <sup>0 -0.023</sup>		1
FL130BYG3501	3	1.2	80-325	6.0	≥15	25	33	165	19 <sup>-0.013 -0.028</sup>	100 <sup>0 -0.023</sup>	5×25	
FL130BYG3502	3	1.2	80-325	6.0	≥15	37	48	230	19 <sup>-0.013 -0.028</sup>	100 <sup>0 -0.023</sup>	5×25	
FL130BYG3503	3	1.2	80-325	6.0	≥15	50	60	270		100 <sup>0 -0.023</sup>		
FL130BYG5501	5	0.72	120-310	5.0	≥20	20	33	165	19 <sup>-0.013 -0.028</sup>	100 <sup>0 -0.023</sup>	5×25	2
FL130BYG5502	5	0.72	120-310	5.0	≥20	30	48	230	19 <sup>-0.013 -0.028</sup>	100 <sup>0 -0.023</sup>	5×25	2
FL130BYG5503	5	0.72	120-310	5.0	≥15	40	60	270		100 <sup>0 -0.023</sup>		2

Dimension



Wiring Diagram



## ● General Specification for High Torque Hybrid Stepping Motor

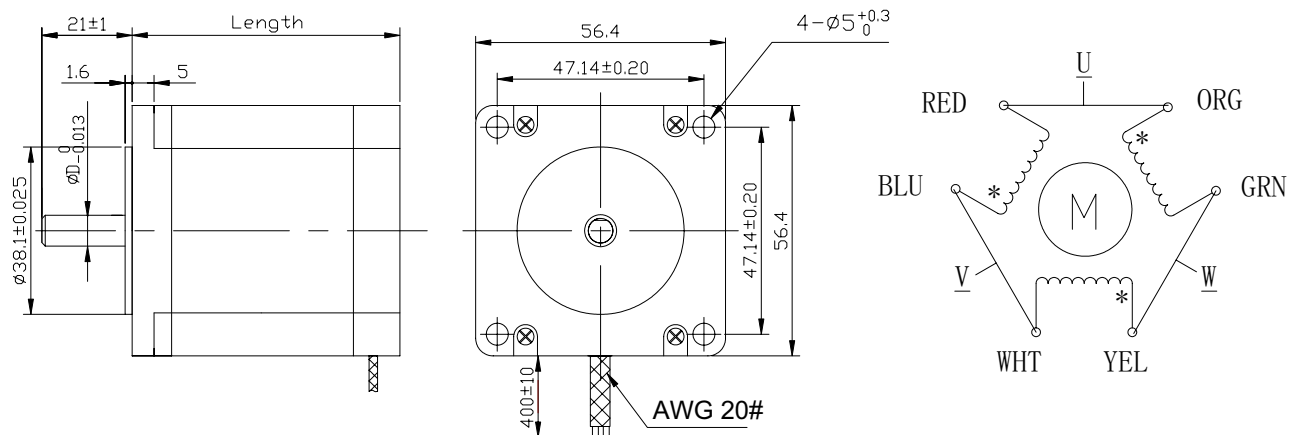
Item	Specifications
Step Angle	1.2°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N
Insulation class	F



## ● Size 57mm 3-Phase Hybrid Stepping Motor Specifications

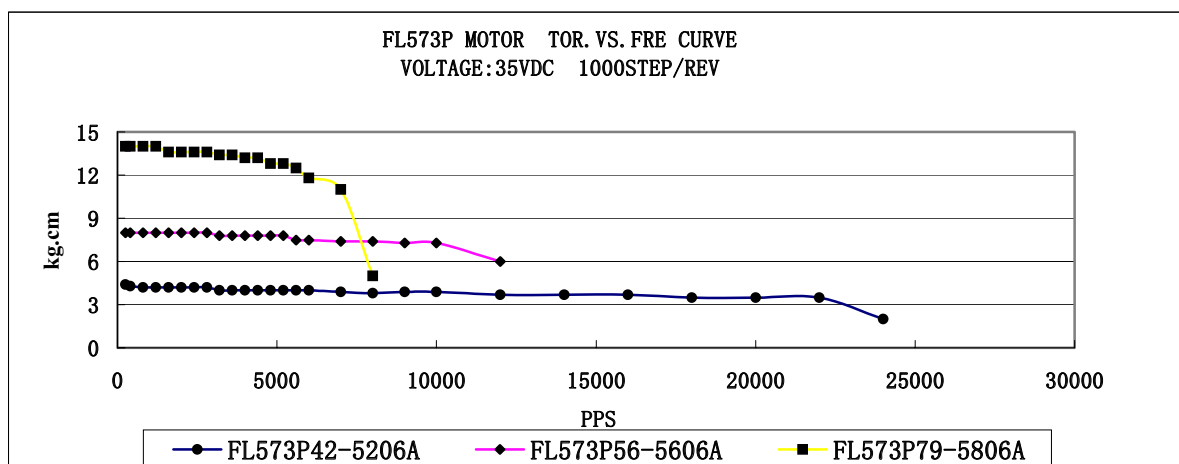
Model No.	Voltage /Phase	Inductance /Phase	Resistance /Phase	Current /Phase	Holding Torque	Detent Torque	Rotor Inertia	Weight	Length ( L )
unit	V	mH	Ω	A	N.m	N.cm	g·cm <sup>2</sup>	kg	mm
FL573P42-5206A	6.76	1.4	1.3	5.2	0.45	2.1	110	0.45	42
FL573P56-5606A	4	1.7	0.7	5.6	0.90	4	300	0.75	56
FL573P79-5806A	6	2.4	1.05	5.8	1.5	6.8	480	1.10	79

## ● Dimension



For FL573P42-5206A & FL573P56-5606A, “D” is 6.35, for FL573P79-5806A, “D” is 8.

## ● Pull out Torque Curve

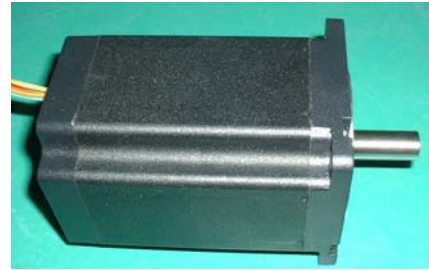


# Size 86mm 3-Phase Hybrid Stepping Motor

A39

## ● General Specification for High Torque Hybrid Stepping Motor

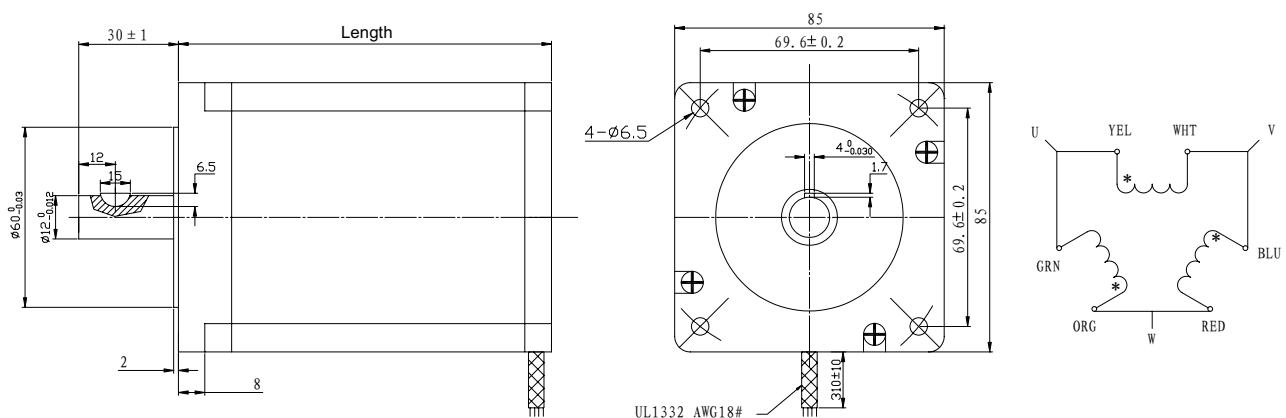
Item	Specifications
Step Angle	1.2°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	1800VAC , 1s , 3mA
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N
Insulation class	F



## ● Size 86mm 3-Phase Hybrid Stepping Motor Specifications

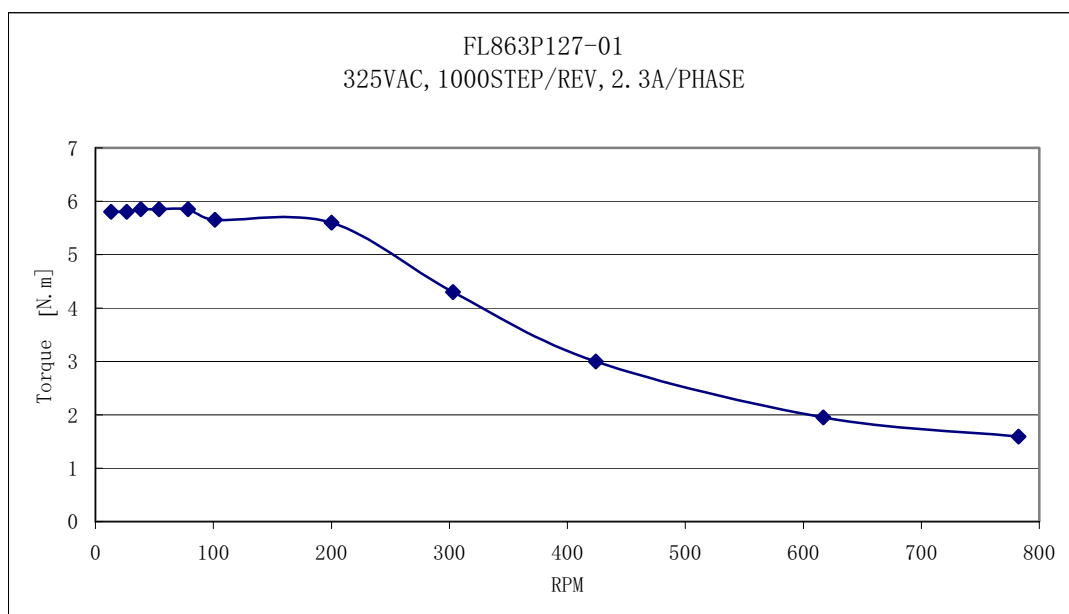
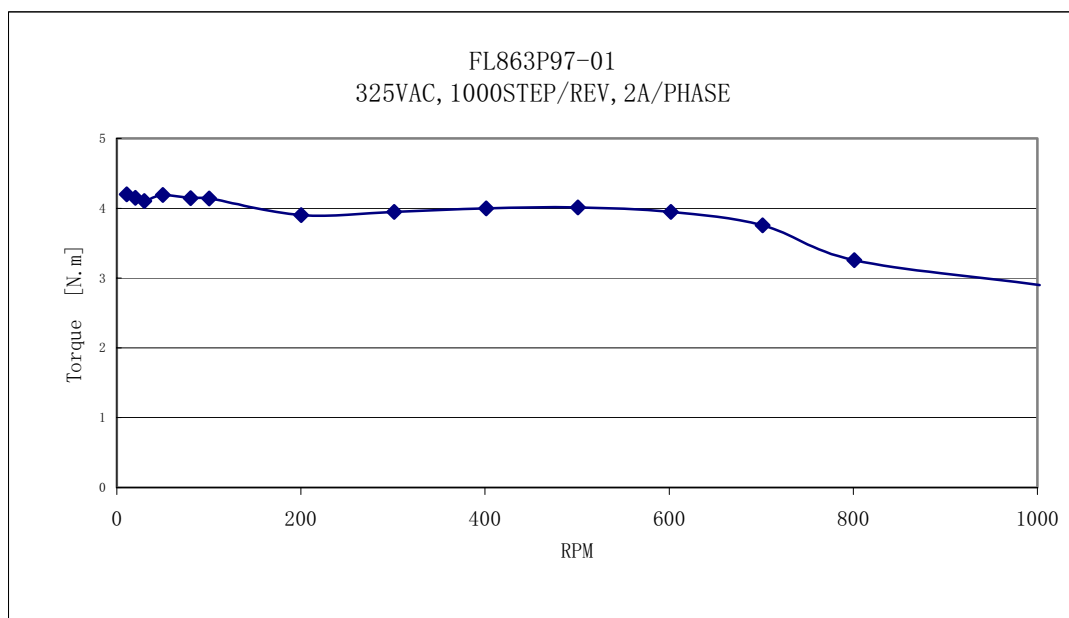
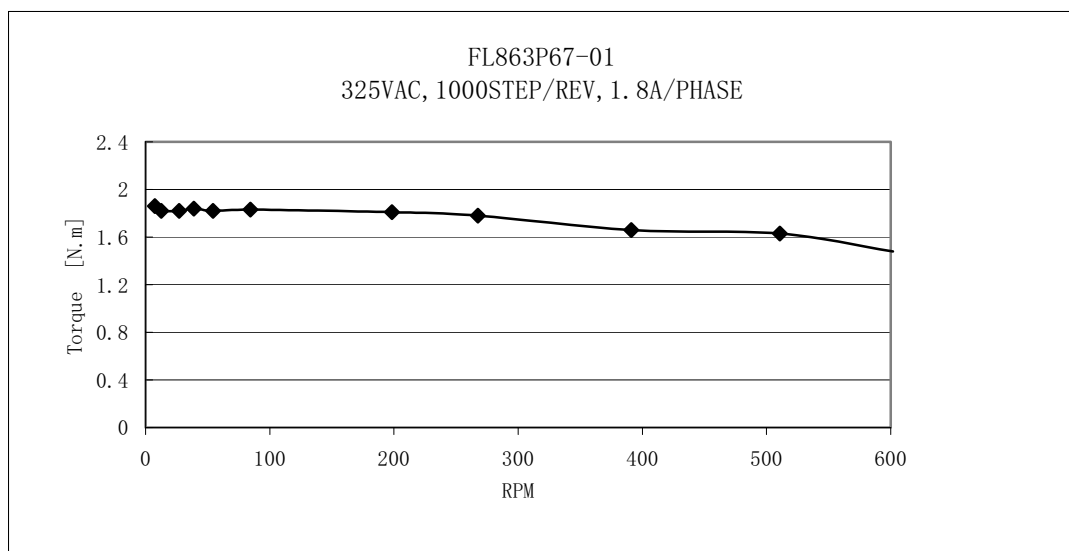
Model No.	Voltage /phase	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	Ratedng Torque	Rotor Inertia	Weight	Length
unit	VDC	A	Ω	mH	N.m	N.m	g-cm <sup>2</sup>	kg	mm
FL863P67-01	325	1.75	4.25	12.3	2.26	2	1100	1.65	67
FL863P97-01	325	2	5.4	23	4.52	4	2320	2.7	97
FL863P97-02	40	5.8	0.9	3.2	4.52	4			
FL863P127-01	325	2.25	9	41	6.78	6	3300	3.8	127
FL863P127-02	40	5.2	2.75	13.7	6.78	6			

## ● Dimension





## Pull out Torque Curve



# Size 110mm 3-Phase Hybrid Stepping Motor

A41

## ● General Specification for High Torque Hybrid Stepping Motor

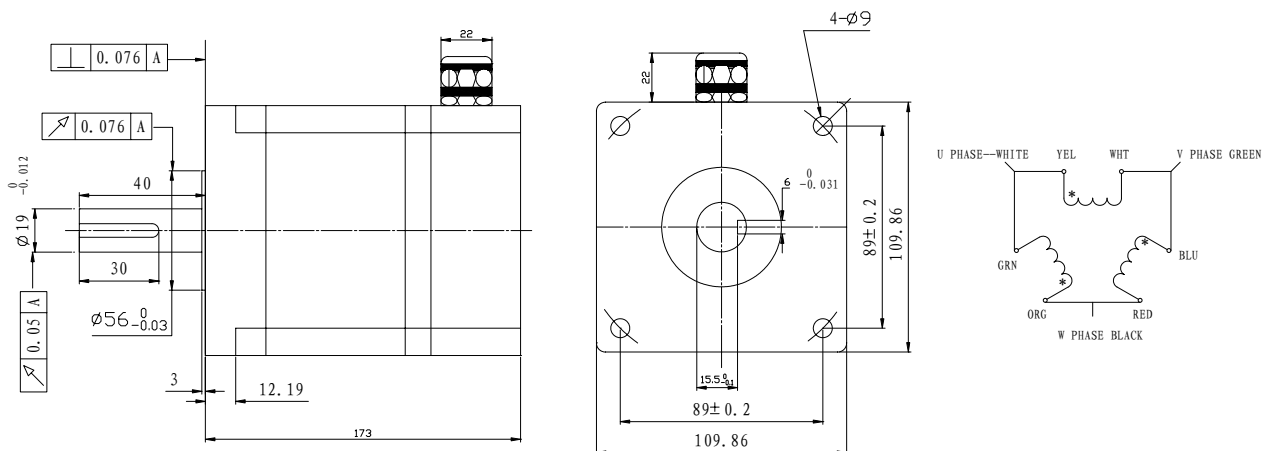
Item	Specifications
Step Angle	1.2°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80° C Max.(rated current)
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	1800VAC , 1s ,5mA
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N
Insulation class	F



## ● Size 110mm 3-Phase Hybrid Stepping Motor Specifications

Model No.	Max. starting speed	Voltage /Phase	Current /Phase	Holding Torque	Ratedng Torque	Rotor Inertia	Weight	Length
unit	Rpm/s	VDC	A	N.m	N.m	g-cm <sup>2</sup>	kg	mm
FL1103P170-01	4.7	325	4.1	13.92	12	10500	8	173

## ● Dimension



## ● Pull out Torque Curve

FL11039170-01  
VM: 220VAC, 4A/PHASE, 1000STEP/REV

