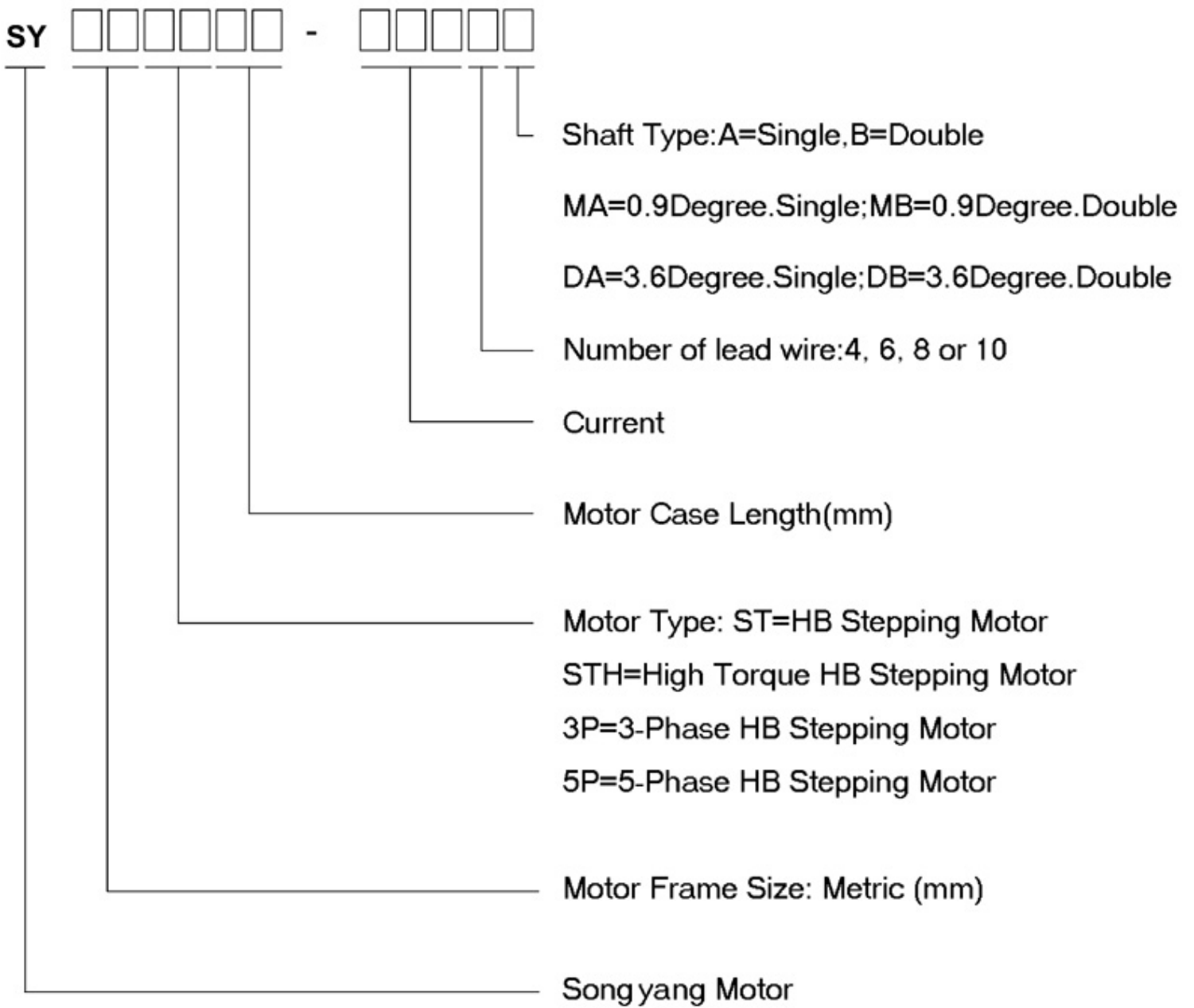


# SongYong Hybrid Stepping Motor





### 1.8° Size 20mm High Torque Hybrid Stepping Motor

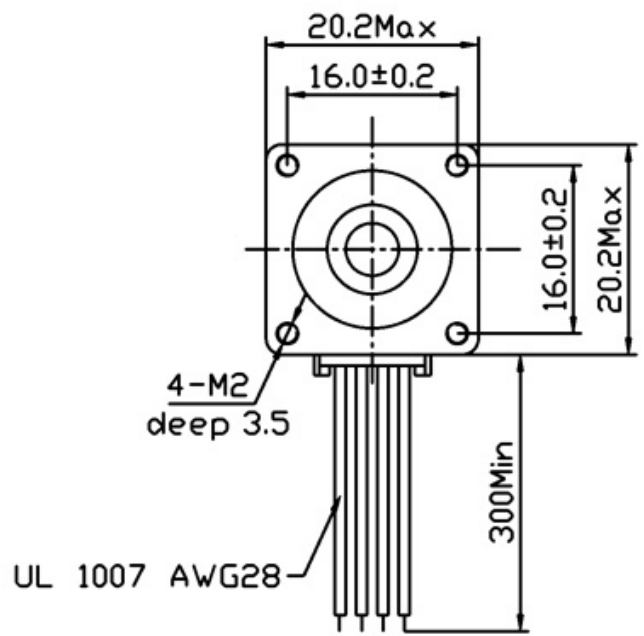
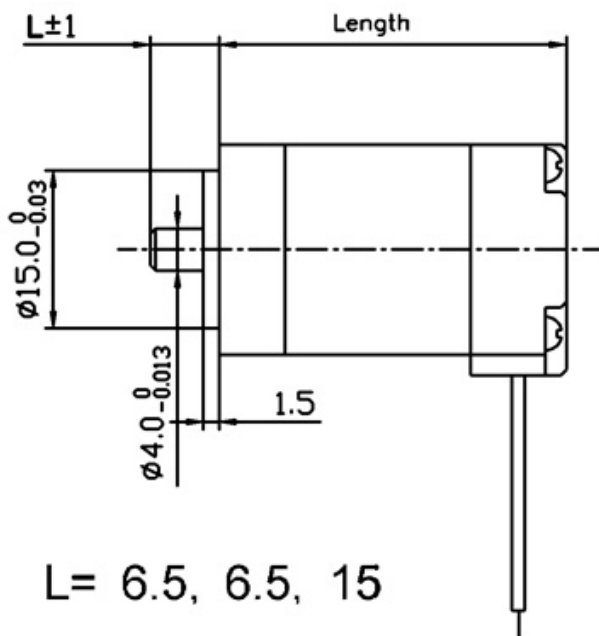
#### General Specification for High Torque Hybrid Stepping Motor

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	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Rotation	CW( See from Front Flange)

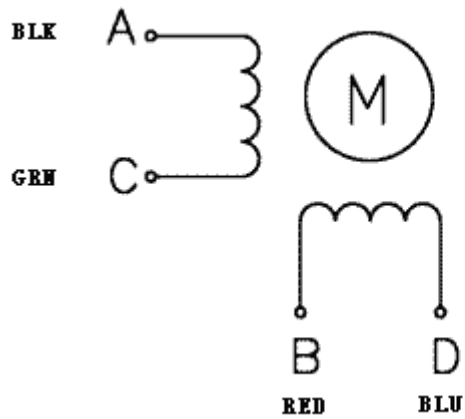
#### Size 20mm High Torque Hybrid Stepping Motor Specifications

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
SY20STH30-0604A	3.9	0.6	6.5	1.7	180	4	2.0x10 <sup>-7</sup>	0.06	30
SY20STH33-0604A	3.9	0.6	6.5	1.7	180	4	2.0x10 <sup>-7</sup>	0.06	33
SY20STH42-0804A	4.32	0.8	5.4	1.5	300	4	3.6x10 <sup>-7</sup>	0.08	42

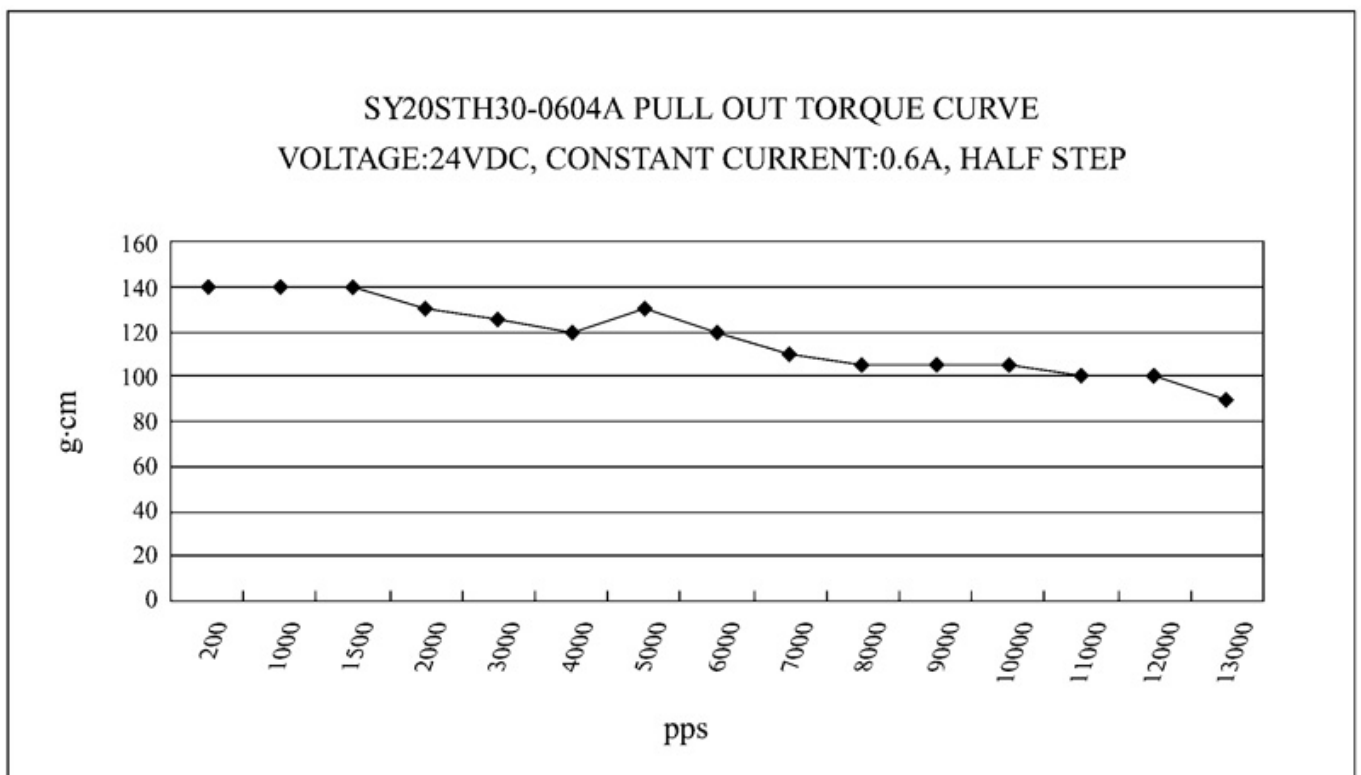
#### Dimension



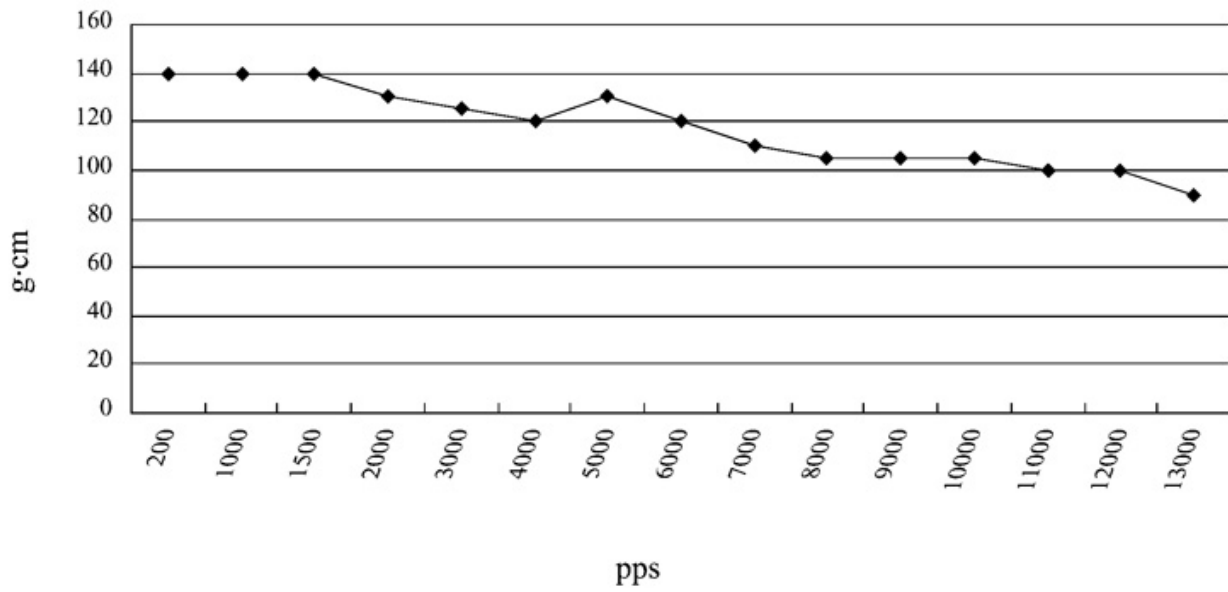
■ Wiring Diagram



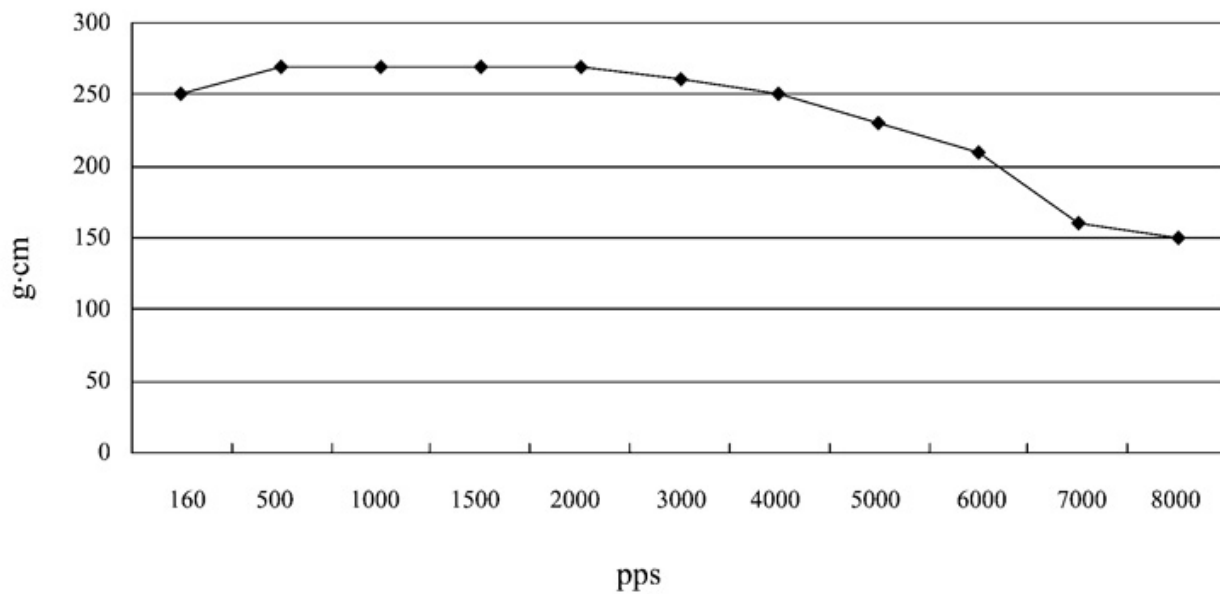
■ Pull out torque



SY20STH33-0604A PULL OUT TORQUE CURVE  
VOLTAGE:24VDC, CONSTANT CURRENT:0.6A, HALF STEP



SY20STH42-0804A PULL OUT TORQUE CURVE  
VOLTAGE:24VDC, CONSTANT CURRENT:0.8A, HALF STEP





### 1.8° Size 28mm High Torque Hybrid Stepping Motor

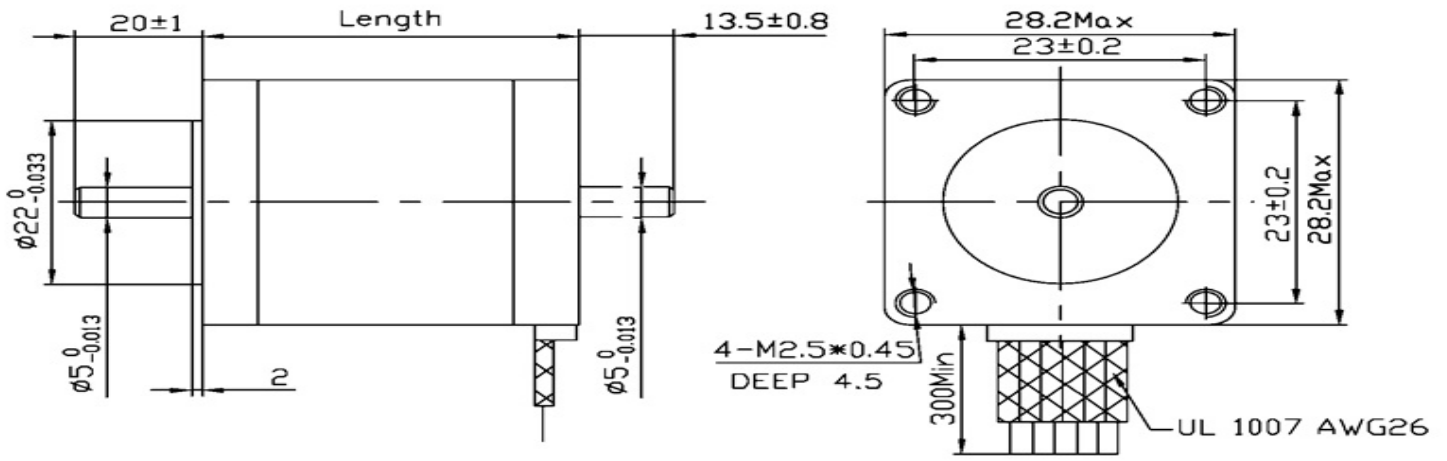
#### General Specification for High Torque Hybrid Stepping Motor

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	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
Rotation	CW( See from Front Flange )

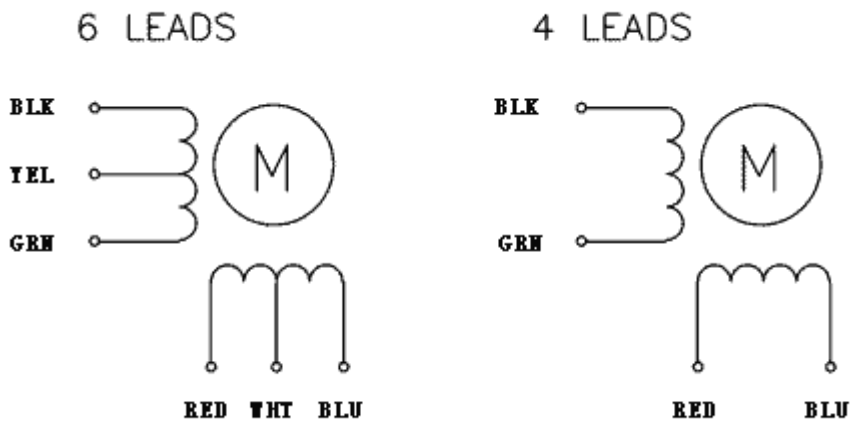
#### Size 28mm High Torque Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Weight	Rotor Inertia	Length
Single Shaft	Double Shaft	V	A	Ω	mH	g-cm		kg	kg-m <sup>2</sup>	mm
SY28STH32-0956A	SY28STH32-0956B	2.66	0.95	2.8	1	430	6	0.11	9x10 <sup>-7</sup>	31.5
SY28STH32-0674A	SY28STH32-0674B	3.8	0.67	5.6	4.2	600	4			
SY28STH45-0956A	SY28STH45-0956B	3.4	0.95	3.4	1.2	750	6	0.14	12x10 <sup>-7</sup>	44.5
SY28STH45-0674A	SY28STH45-0674B	4.56	0.67	6.8	4.9	950	4			
SY28STH51-0956A	SY28STH51-0956B	4.4	0.95	4.6	1.8	900	6	0.2	18x10 <sup>-7</sup>	50.5

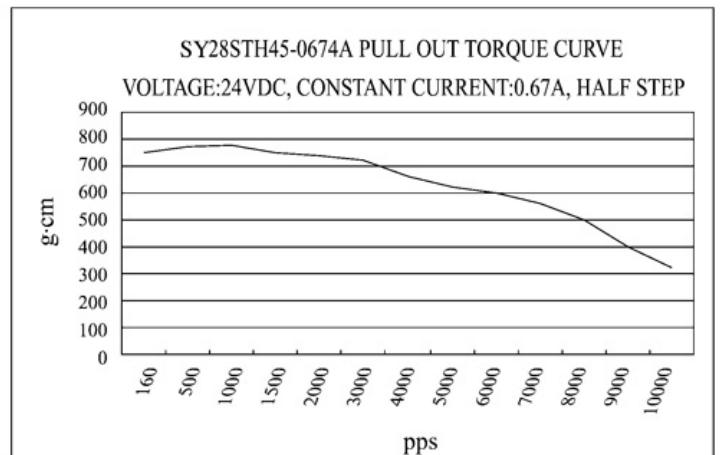
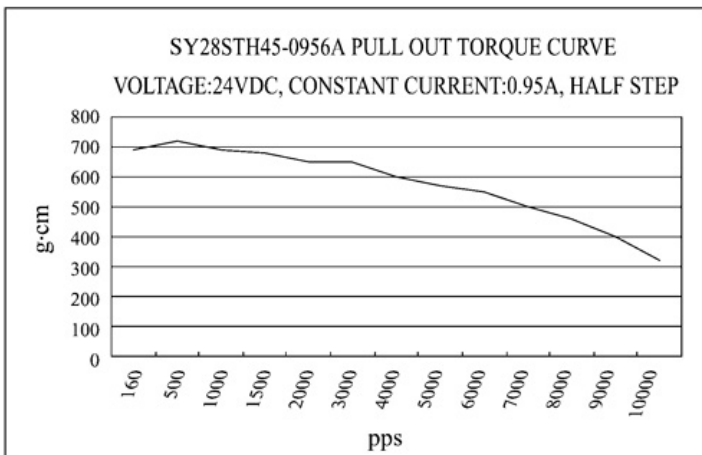
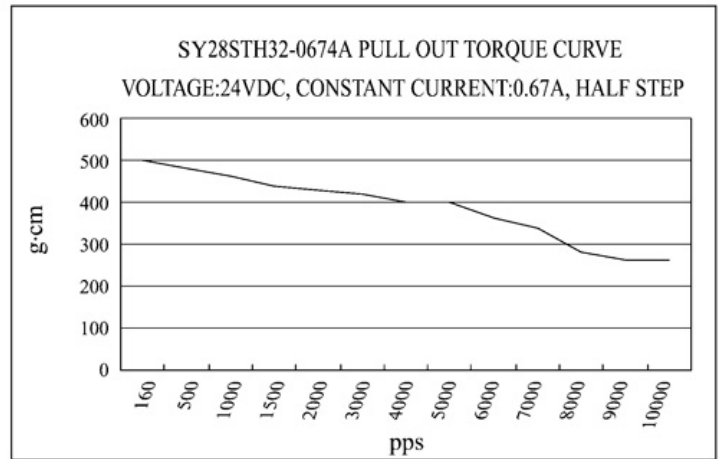
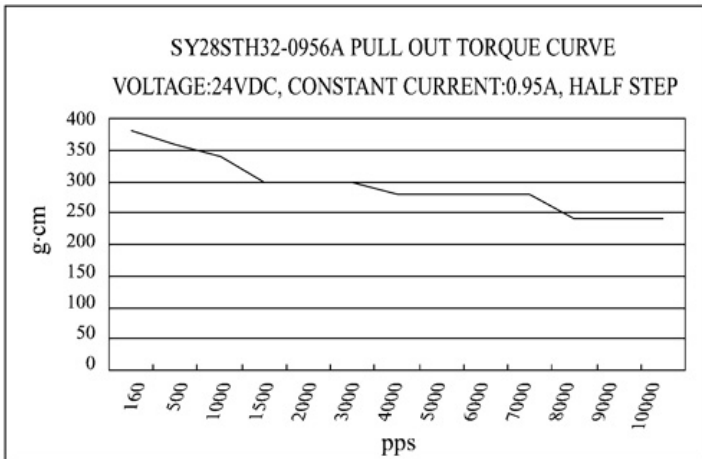
#### Dimension



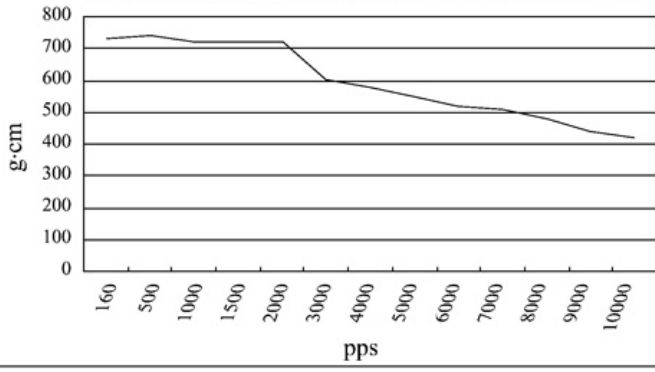
■ Wiring Diagram



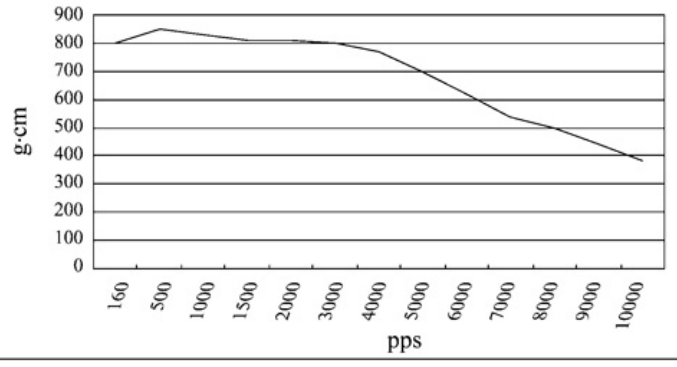
■ Pull out torque

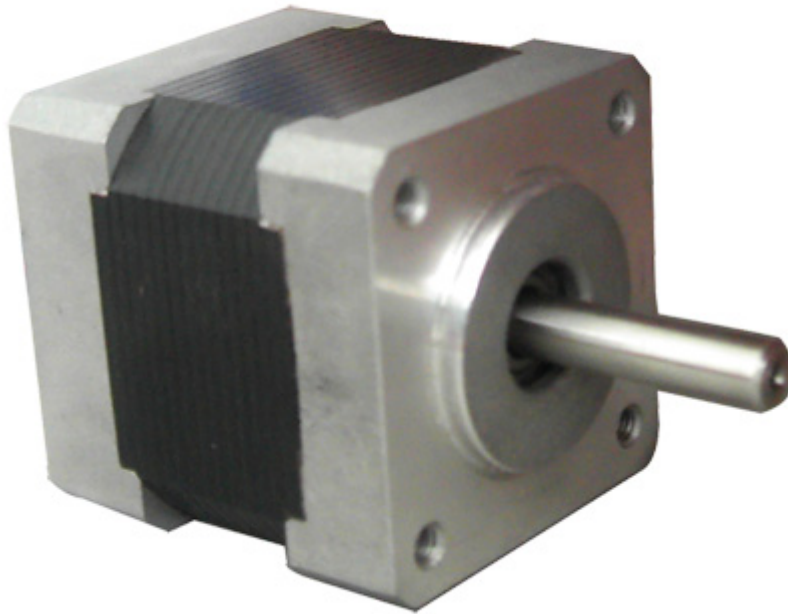


SY28STH51-0956A PULL OUT TORQUE CURVE  
VOLTAGE:24VDC, CONSTANT CURRENT:0.95A, HALF STEP



SY28STH51-0674A PULL OUT TORQUE CURVE  
VOLTAGE:24VDC, CONSTANT CURRENT:0.67A, HALF STEP





**1.8° Size 35mm Hybrid Stepping Motor**

■ **General Specification for Hybrid Stepping Motor**

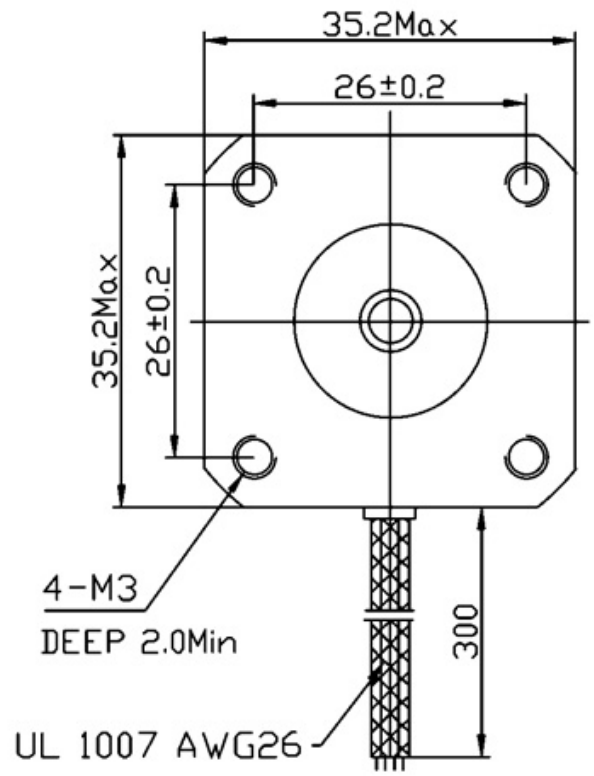
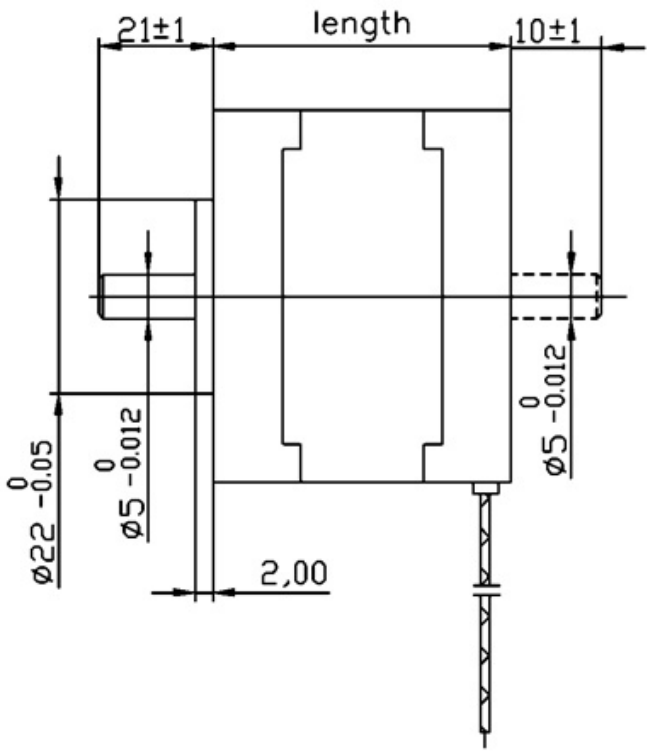
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80°C Max.(rated current,2 phase on)
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft 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
Rotation	CW( See from Front Flange )

■ **Size 35mm Hybrid Stepping Motor Specifications**

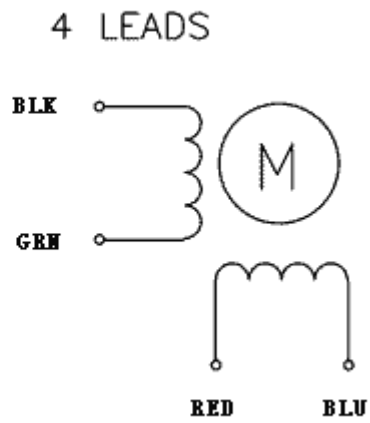
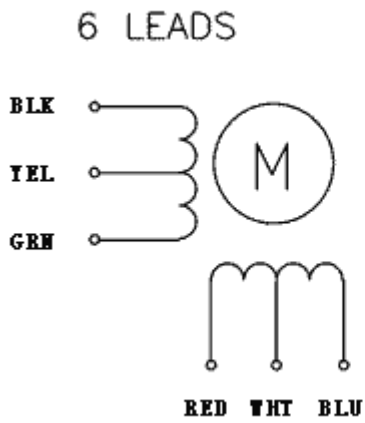
Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	g-cm		g-cm <sup>2</sup>	kg	g-cm	mm
SY35ST26-0604A	SY35ST26-0604B	3.24	0.6	5.4	3.5	510	4	10	0.13	60	26
SY35ST26-0284A	SY35ST26-0284B	7.4	0.28	26	19.2	650	4				
SY35ST28-0504A	SY35ST28-0504B	10	0.5	20	13.5	1000	4	10	0.14	80	28
SY35ST28-0406A	SY35ST28-0406B	11.2	0.4	28	10	500	6				
SY35ST36-0704A	SY35ST36-0704B	1.4	0.7	2	2.9	920	4	14	0.18	100	36

■ **Dimension**

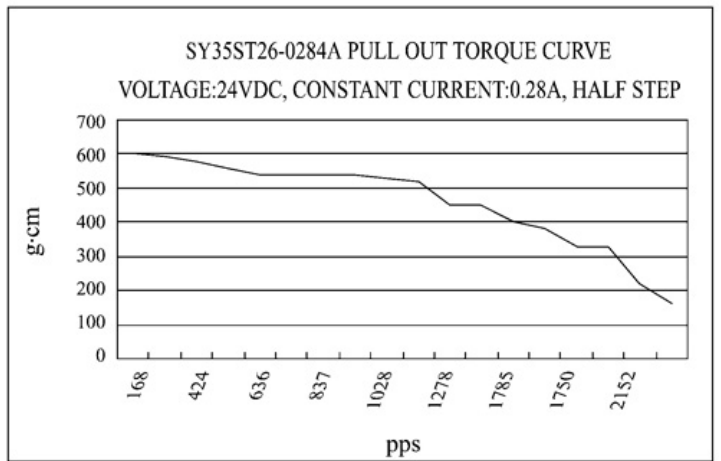
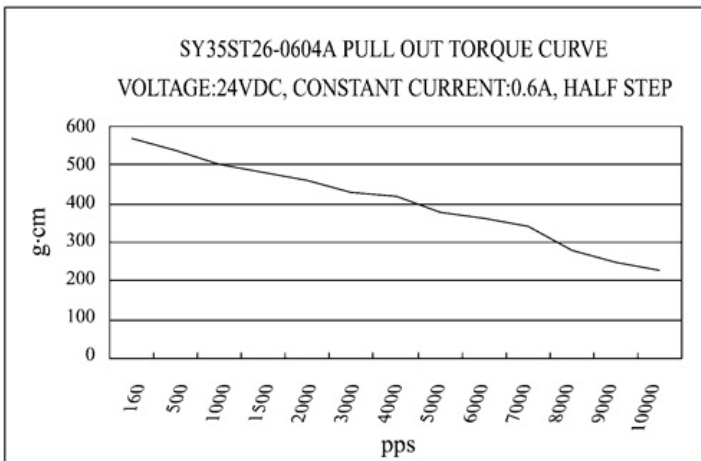




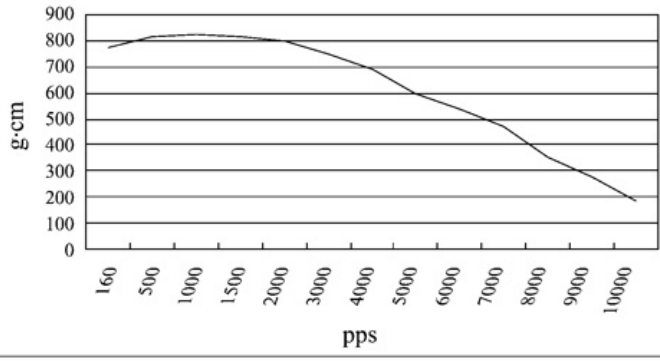
■ Wiring Diagram



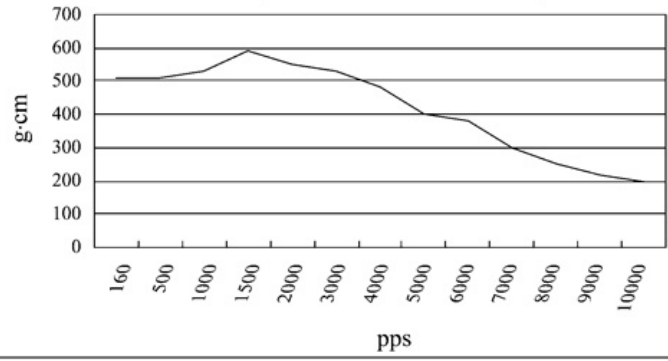
■ Pull out torque



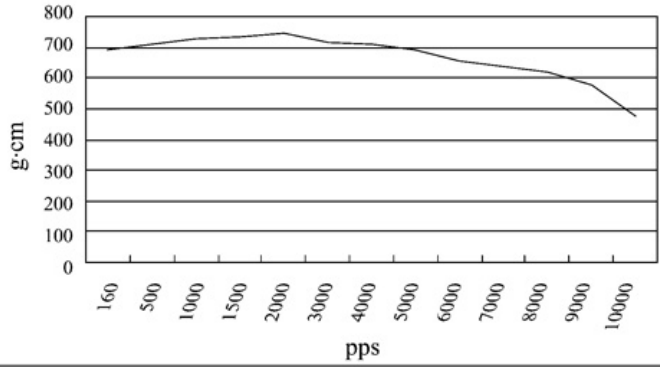
SY35ST28-0504A PULL OUT TORQUE CURVE  
 VOLTAGE:24VDC, CONSTANT CURRENT:0.5A, HALF STEP



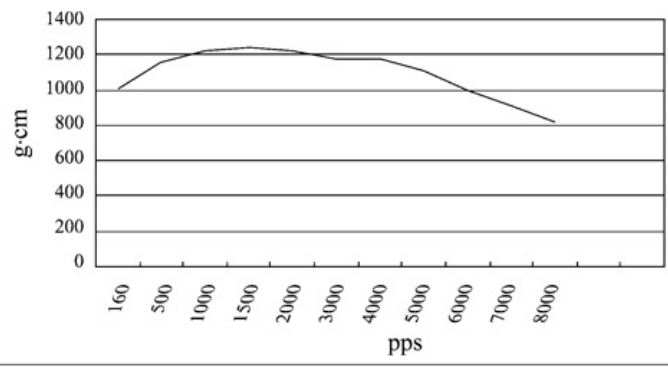
SY35ST28-0406A PULL OUT TORQUE CURVE  
 VOLTAGE:24VDC, CONSTANT CURRENT:0.4A, HALF STEP

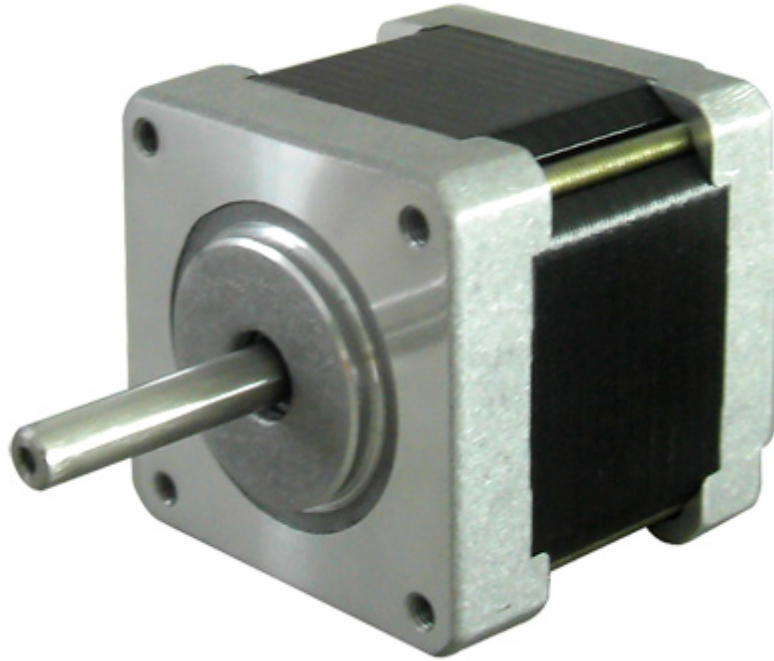


SY35ST36-0704A PULL OUT TORQUE CURVE  
 VOLTAGE:24VDC, CONSTANT CURRENT:0.7A, HALF STEP



SY35ST36-1004A PULL OUT TORQUE CURVE  
 VOLTAGE:24VDC, CONSTANT CURRENT:1.0A, HALF STEP





**1.8° Size 39mm Hybrid Stepping Motor**

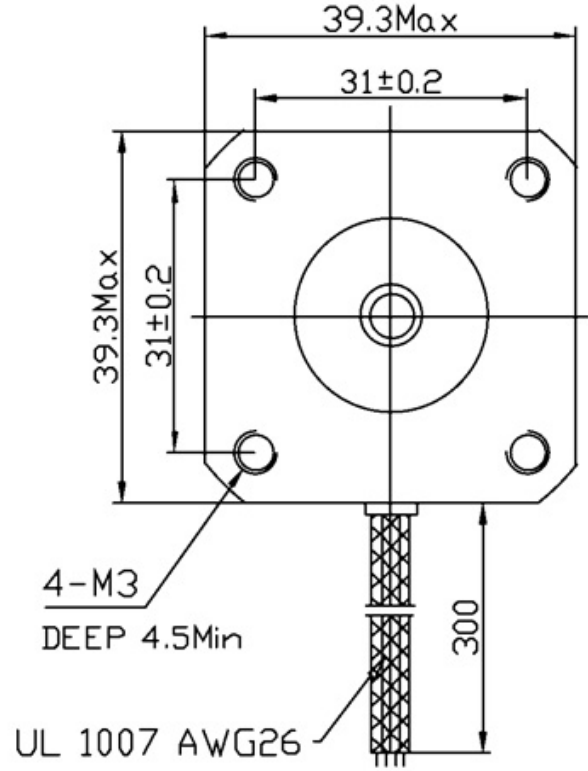
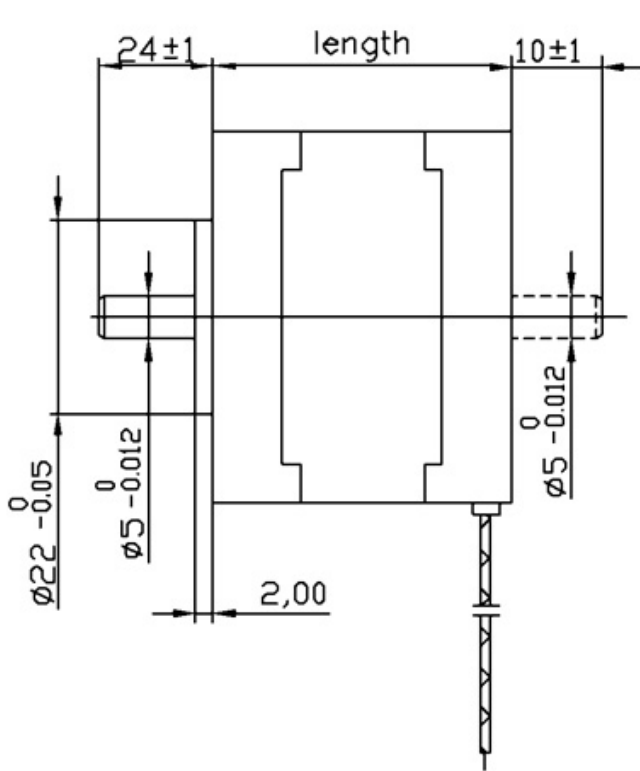
■ **General Specification for Hybrid Stepping Motor**

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	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
Rotation	CW( See from Front Flange )

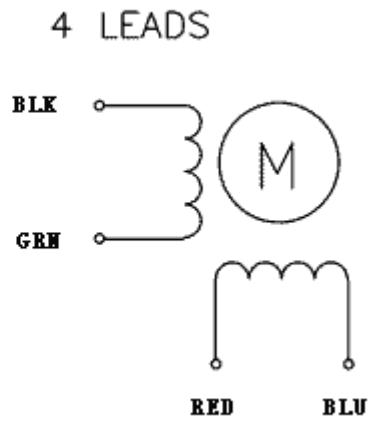
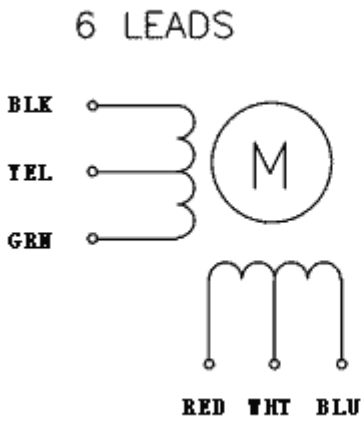
■ **Size 39mm Hybrid Stepping Motor Specifications**

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
SY39ST20-0404A	SY39ST20-0404B	2.64	0.4	6.6	7.5	650	4	11	0.12	50	20
SY39ST20-0506A	SY39ST20-0506B	6.5	0.5	13	7.5	800	6	11	0.12	50	20
SY39ST34-0654A	SY39ST34-0654B	4.55	0.65	7.0	9.3	1800	4	20	0.18	120	34
SY39ST34-0404A	SY39ST34-0404B	12	0.4	30	32	2100	4				
SY39ST34-0604A	SY39ST34-0604B	9	0.6	15	16	2200	4				
SY39ST34-0306A	SY39ST34-0306B	12	0.3	40	20	1300	6				
SY39ST34-0166A	SY39ST34-0166B	12	0.16	75	50	1100	6	24	0.2	180	38
SY39ST38-0504A	SY39ST38-0504B	12	0.5	24	45	2900	4				
SY39ST38-0806A	SY39ST38-0806B	6	0.8	7.5	6	2000	6				

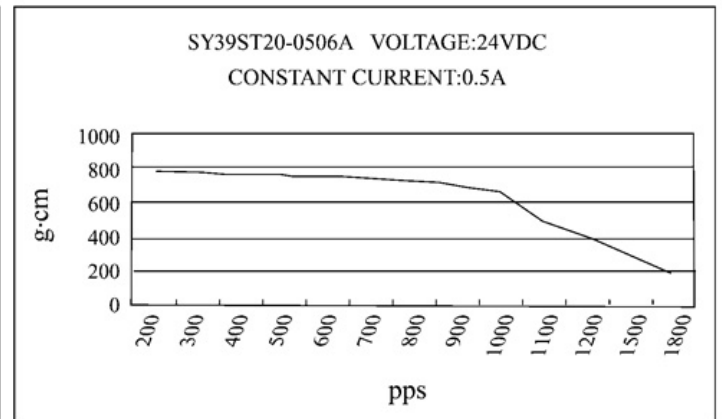
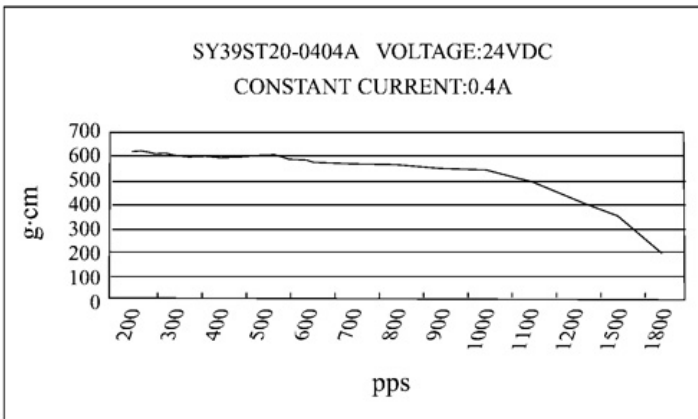
**Dimension**



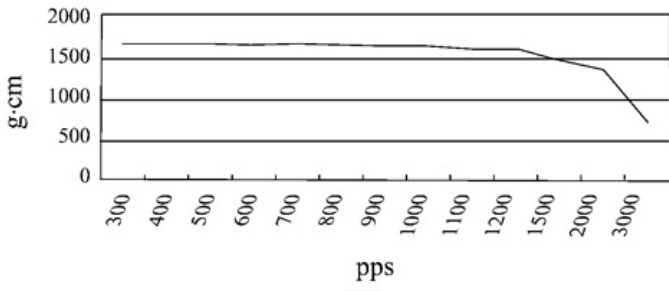
**Wiring Diagram**



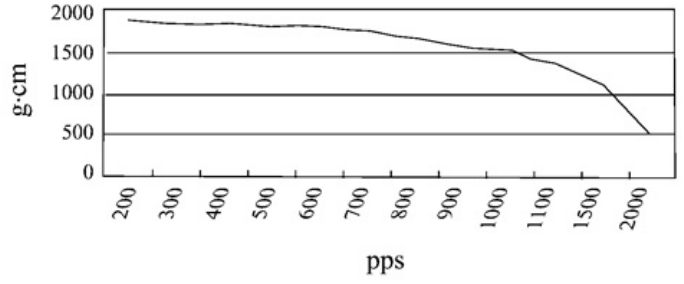
**Pull out torque**



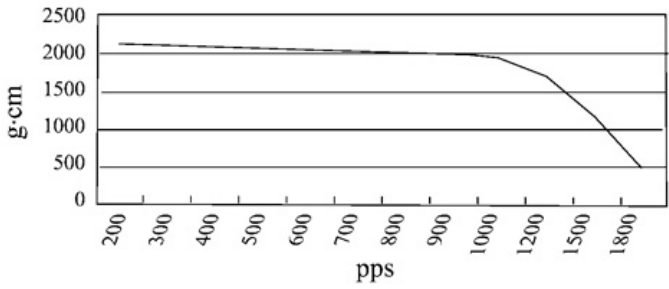
SY39ST34-0654A VOLTAGE:24VDC  
CONSTANT CURRENT:0.65A



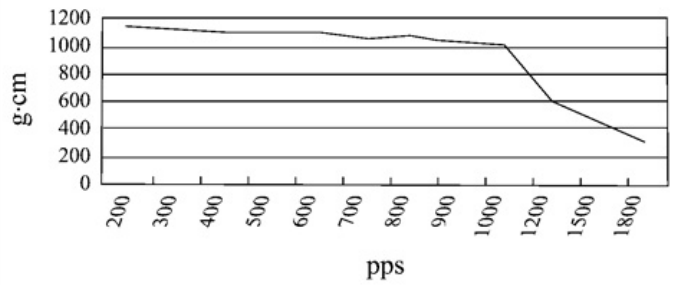
SY39ST34-0404A VOLTAGE:24VDC  
CONSTANT CURRENT:0.4A



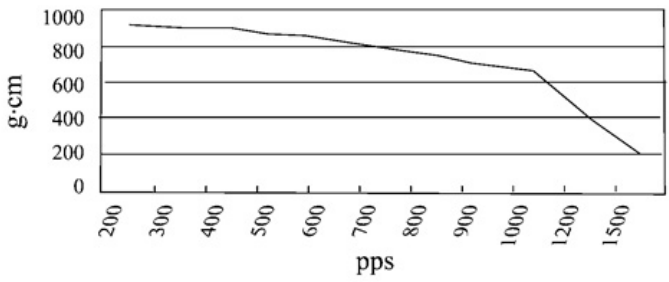
SY39ST34-0604A VOLTAGE:24VDC  
CONSTANT CURRENT:0.6A



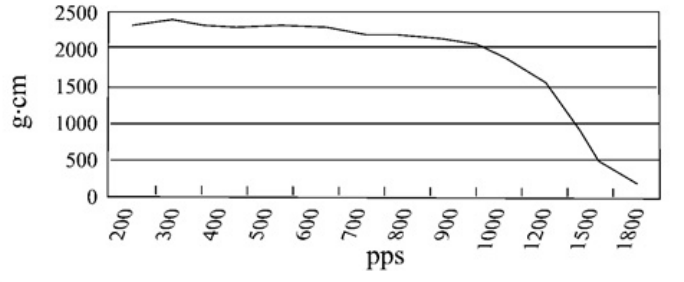
SY39ST34-0306A VOLTAGE:24VDC  
CONSTANT CURRENT:0.3A



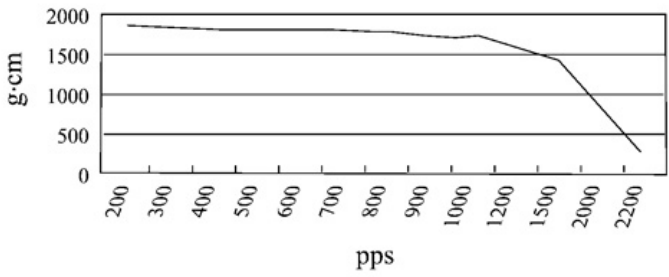
SY39ST34-0166A VOLTAGE:24VDC  
CONSTANT CURRENT:0.16A



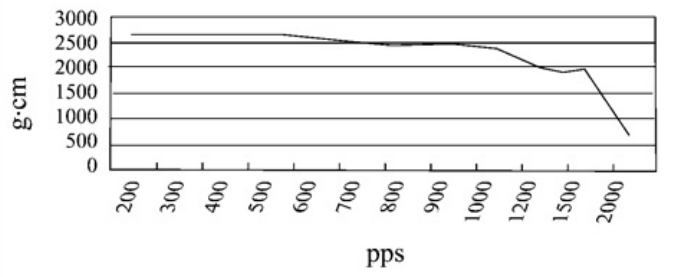
SY39ST38-0504A VOLTAGE:24VDC  
CONSTANT CURRENT:0.5A

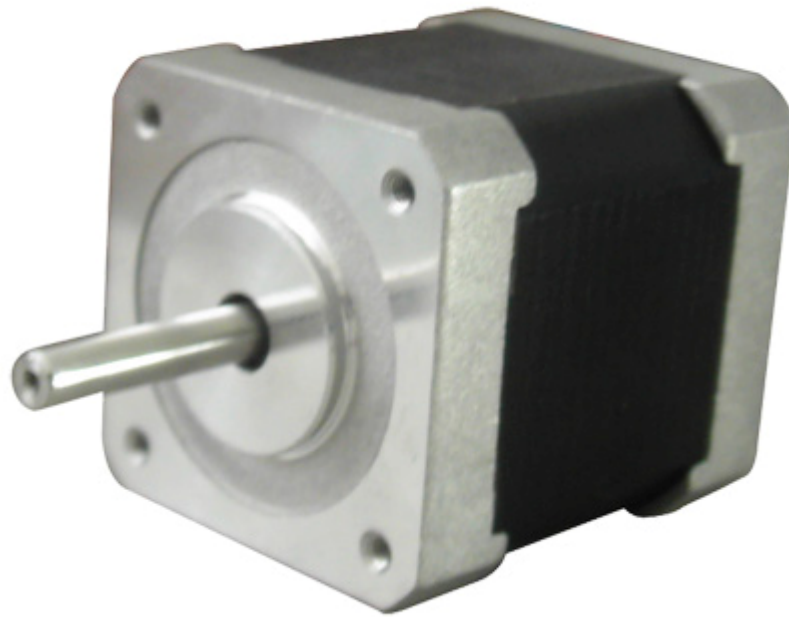


SY39ST38-0806A VOLTAGE:24VDC  
CONSTANT CURRENT:0.8A



SY39ST44-0304A VOLTAGE:24VDC  
CONSTANT CURRENT:0.3A





**0.9° Size 42mm High Torque Hybrid Stepping Motor**

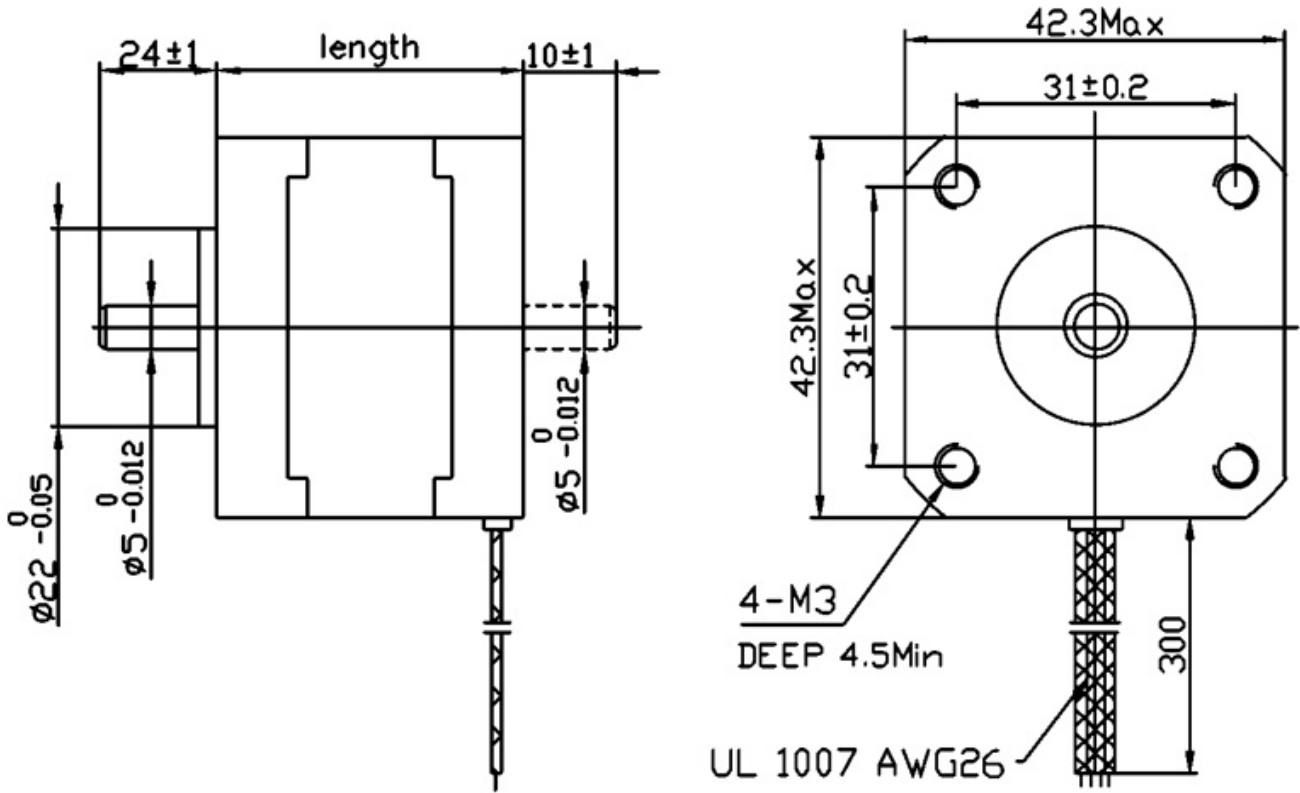
■ **General Specification for High Torque Hybrid Stepping Motor**

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
Rotation	CW( See from Front Flange )

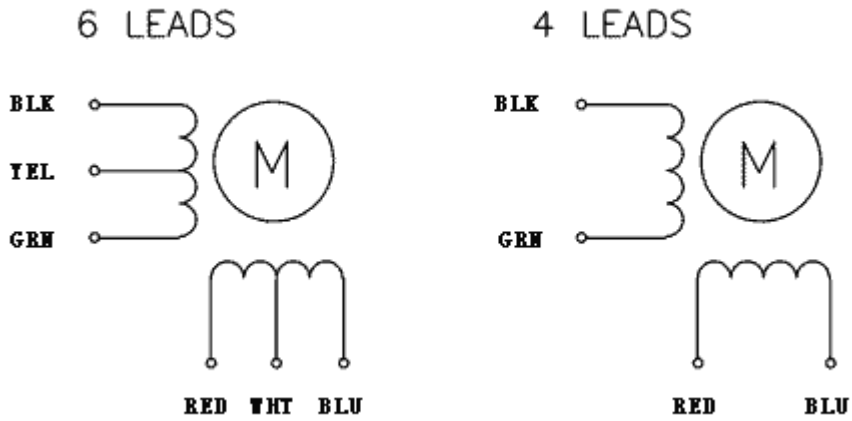
■ **Size 42mm Hybrid Stepping Motor Specifications**

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Operating Curve	Length
Single Shaft	Double Shaft	V	A	Ω	mH	Kg-cm		g-cm <sup>2</sup>	kg	g-cm		mm
SY42STH33-0956MA	SY42STH33-0956MB	4	0.95	4.2	4	1.58	6	35	0.22	200	a	33
SY42STH33-0606MA	SY42STH33-0606MB	6	0.6	10	9.5						b	
SY42STH33-0316MA	SY42STH33-0316MB	12	0.31	38.5	33						c	
SY42STH33-1334MA	SY42STH33-1334MB	2.8	1.33	2.1	4.2	2.2	4	d				
SY42STH38-1206MA	SY42STH38-1206MB	4	1.2	3.3	3.4	2.59	6	54	0.28	220	e	38
SY42STH38-0806MA	SY42STH38-0806MB	6	0.8	7.5	6.7						f	
SY42STH38-0406MA	SY42STH38-0406MB	12	0.4	30	30						6	
SY42STH38-1684MA	SY42STH38-1684MB	2.8	1.68	1.65	3.2	3.3	4	h				
SY42STH47-1206MA	SY42STH47-1206MB	4	1.2	3.3	4	3.17	6	68	0.35	250	i	47
SY42STH47-0806MA	SY42STH47-0806MB	6	0.8	7.5	10						j	
SY42STH47-0406MA	SY42STH47-0406MB	12	0.4	30	38						k	
SY42STH47-1684MA	SY42STH47-1684MB	2.8	1.68	1.65	4.1	4.4	4	l				

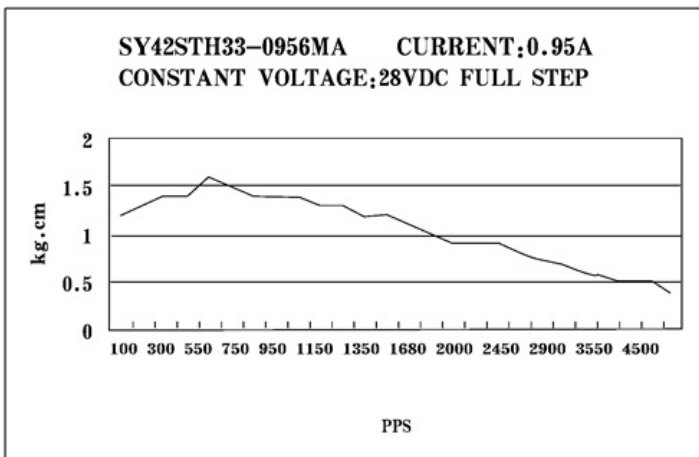
Dimension



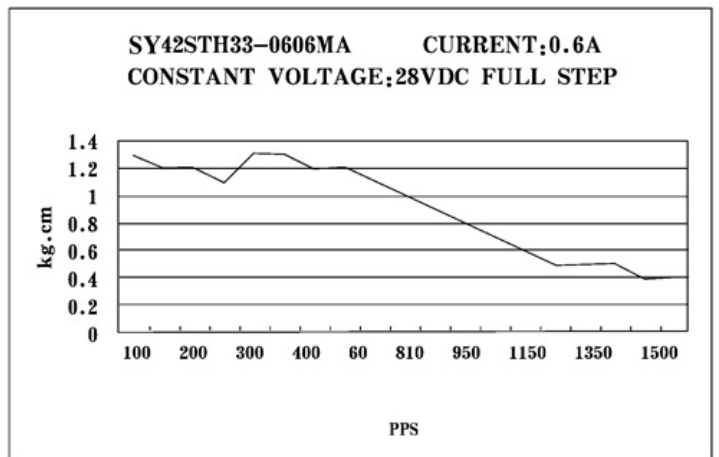
Wiring Diagram



Pull out torque

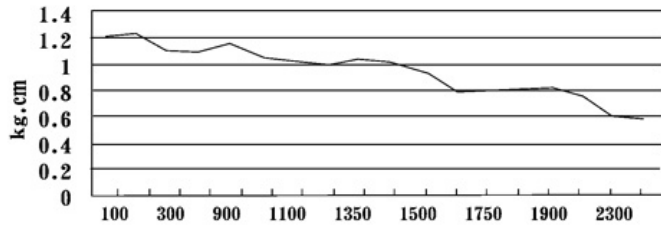


a



b

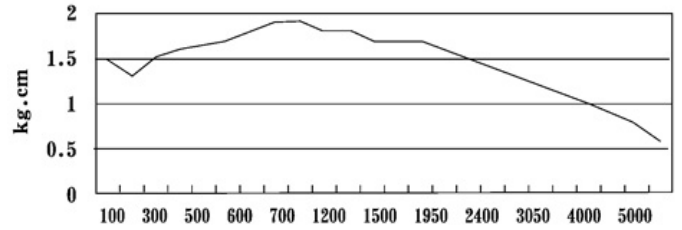
SY42STH33-0316MA CURRENT:0.31A  
CONSTANT VOLTAGE:24VDC FULL STEP



PPS

**c**

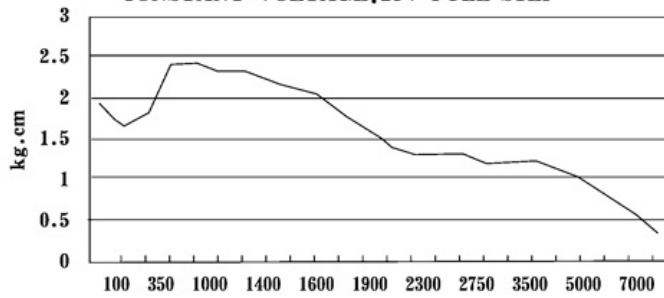
SY42STH33-1334MA CURRENT:1.33A  
CONSTANT VOLTAGE:28VDC FULL STEP



PPS

**d**

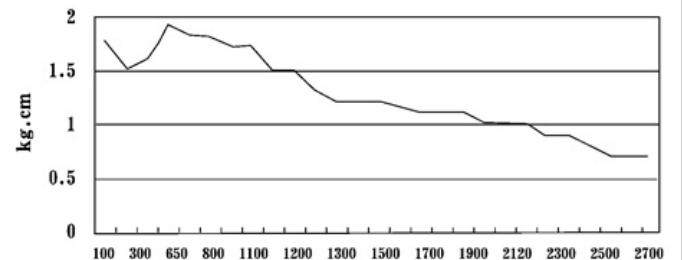
SY42STH38-1206MA CURRENT:1.2A  
CONSTANT VOLTAGE:28V FULL STEP



PPS

**e**

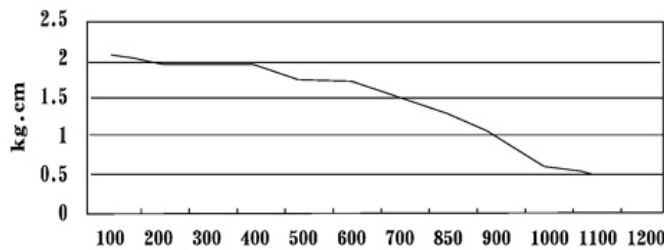
SY42STH38-0806MA CURRENT:0.8A  
CONSTANT VOLTAGE:28V FULL STEP



PPS

**f**

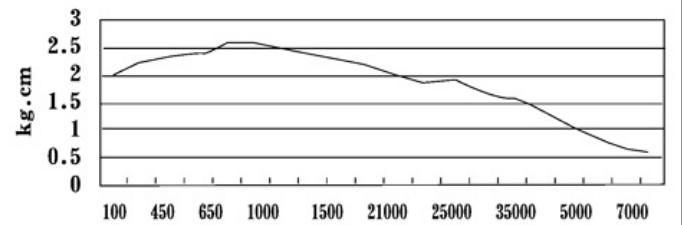
SY42STH38-0406MA CURRENT:0.4A  
CONSTANT VOLTAGE:28VDC FULL STEP



PPS

**g**

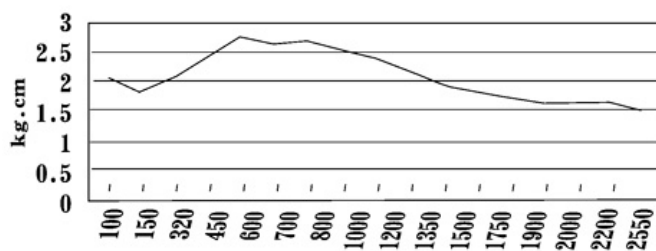
SY42STH38-1684MA CURRENT:1.68A  
CONSTANT VOLTAGE:28VDC FULL STEP



PPS

**h**

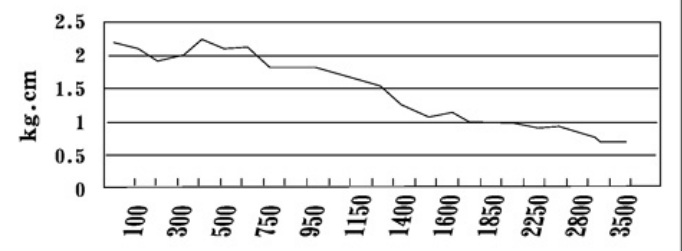
SY42STH47-1206MA CURRENT:1.2A  
CONSTANT VOLTAGE:28VDC FULL STEP



PPS

**i**

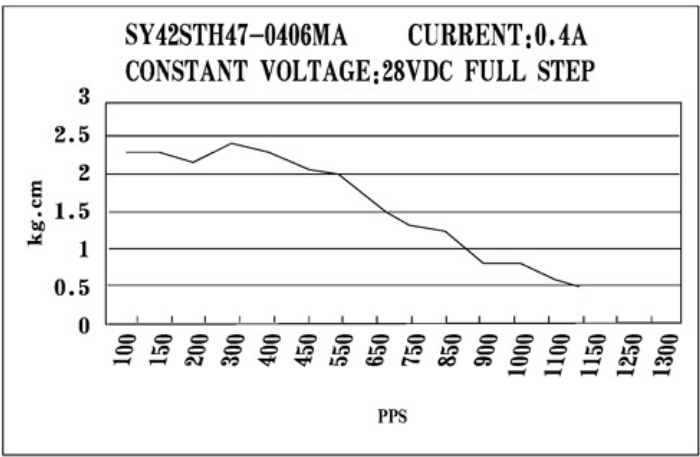
SY42STH47-0806MA CURRENT:0.8A  
CONSTANT VOLTAGE:28VDC FULL STEP



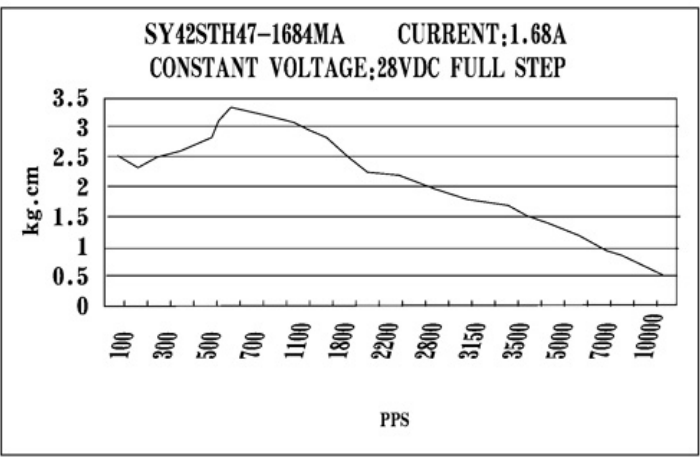
PPS

**j**

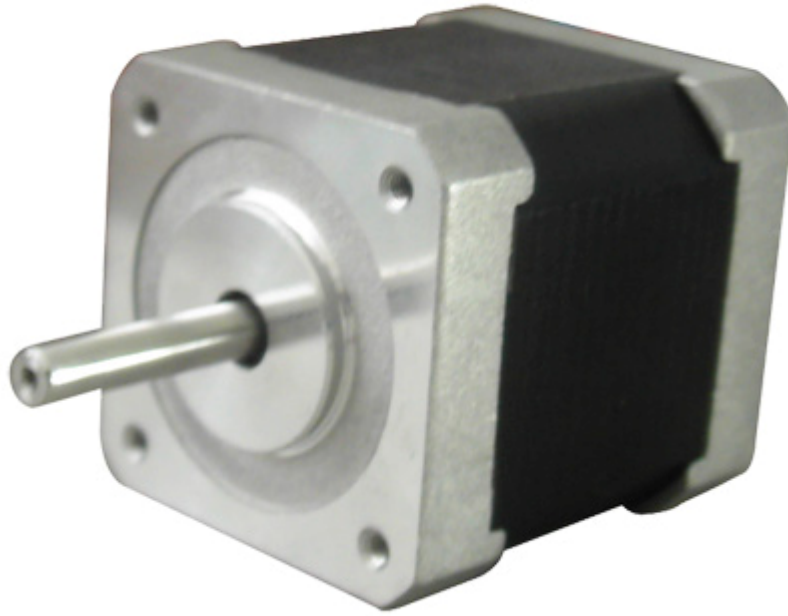




**k**



**l**



**1.8° Size 42mm High Torque Hybrid Stepping Motor**

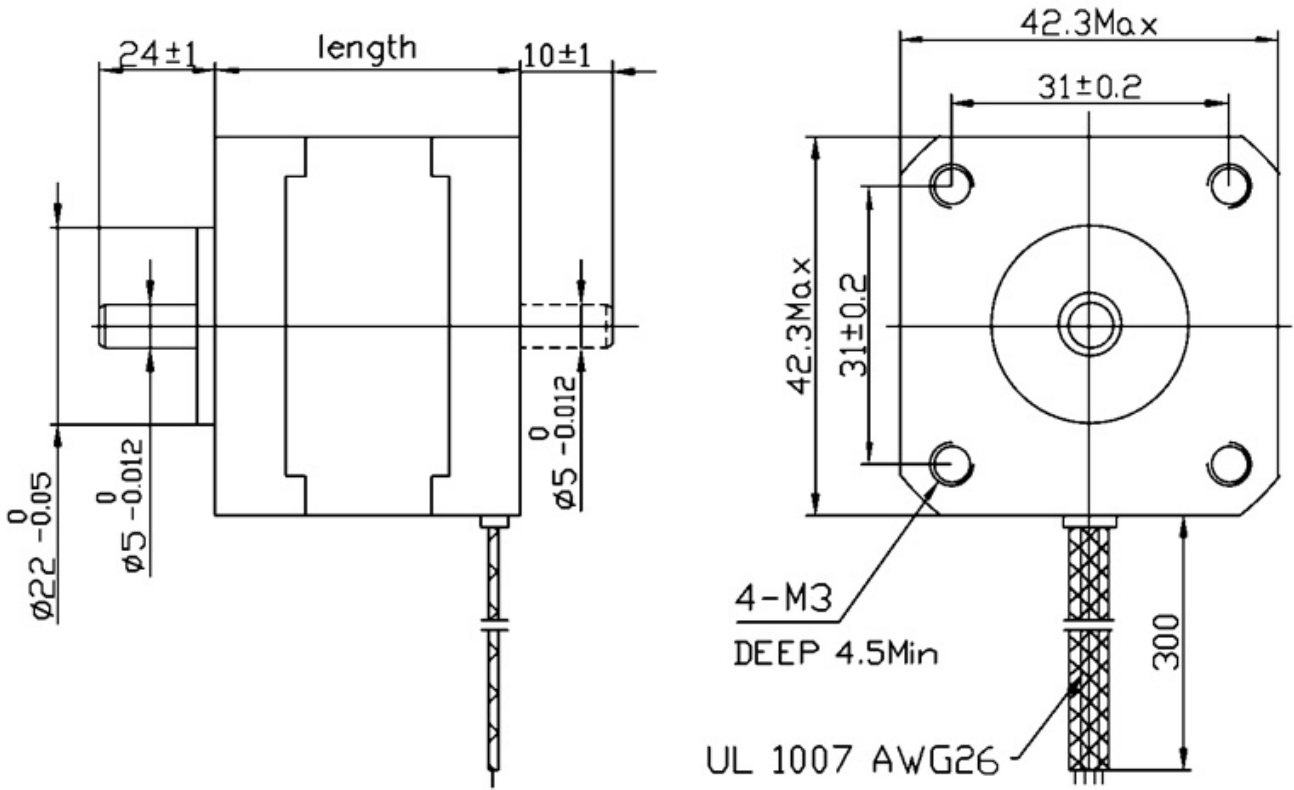
■ **General Specification for High Torque Hybrid Stepping Motor**

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	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
Rotation	CW( See from Front Flange )

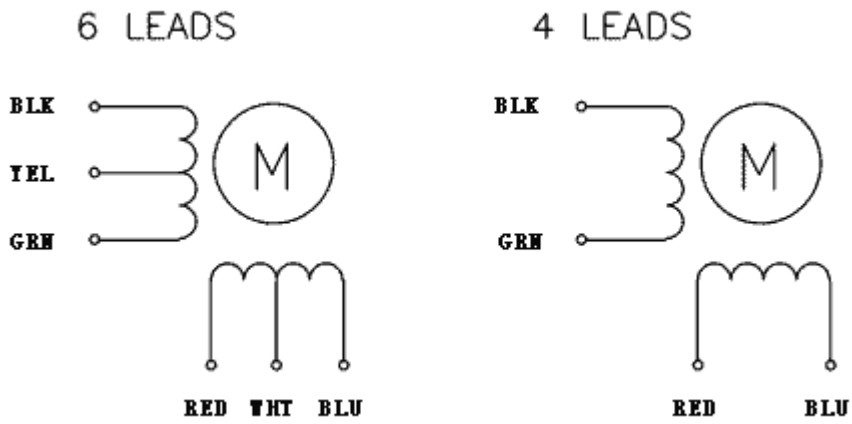
■ **Size 42mm Hybrid Stepping Motor Specifications**

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	Kg-cm		g-cm <sup>2</sup>	kg	g-cm	mm
SY42STH33-0956A	SY42STH33-0956B	4	0.95	4.2	2.5	1.6	6	35	0.22	120	34
SY42STH33-0406A	SY42STH33-0406B	9.6	0.4	24	15						
SY42STH33-0316A	SY42STH33-0316B	12	0.31	38.5	21						
SY42STH33-1334A	SY42STH33-1334B	2.8	1.33	2.1	2.5	2.2	4				
SY42STH38-1206A	SY42STH38-1206B	4	1.2	3.3	3.2	2.6	6	54	0.28	150	40
SY42STH38-0806A	SY42STH38-0806B	6	0.8	7.5	6.7						
SY42STH38-0406A	SY42STH38-0406B	12	0.4	30	30						
SY42STH38-1684A	SY42STH38-1684B	2.8	1.68	1.65	3.2	3.6	4				
SY42STH47-1206A	SY42STH47-1206B	4	1.2	3.3	2.8	3.17	6	68	0.35	200	48
SY42STH47-0806A	SY42STH47-0806B	6	0.8	7.5	6.3						

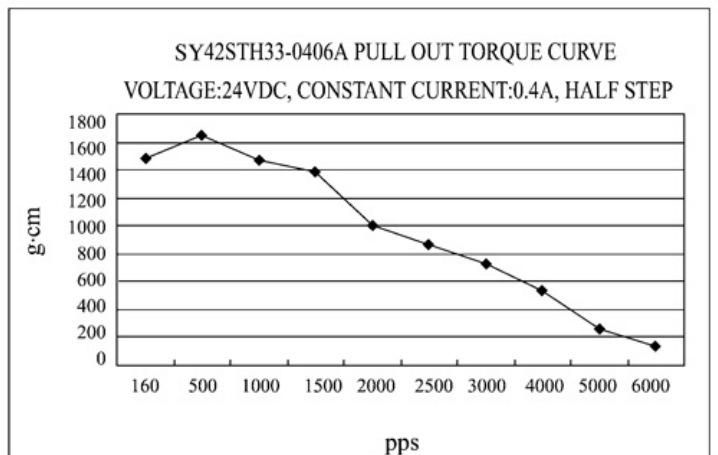
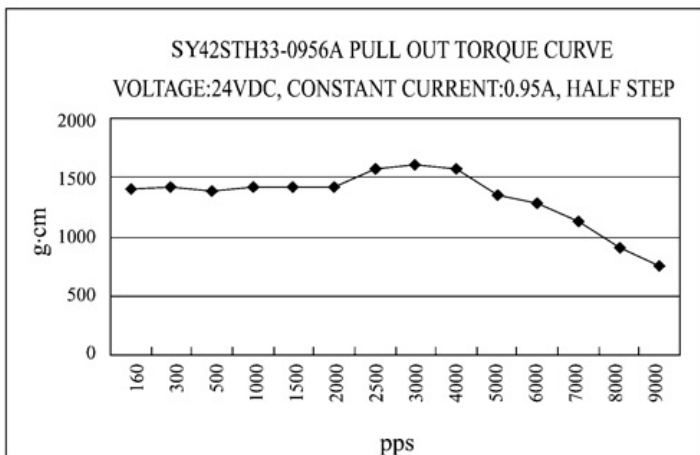
**Dimension**

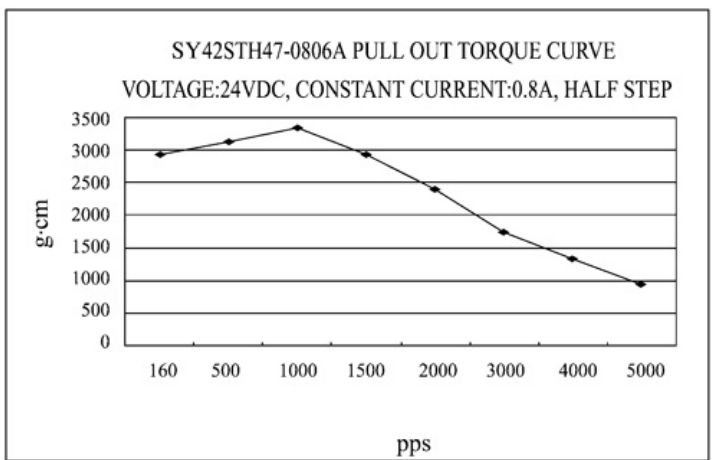
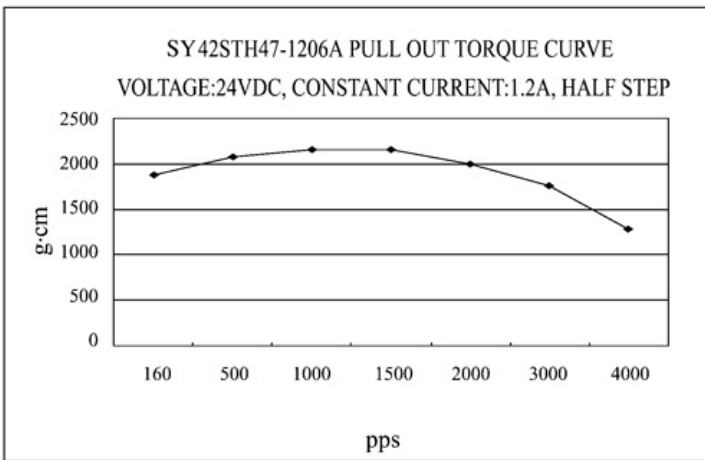
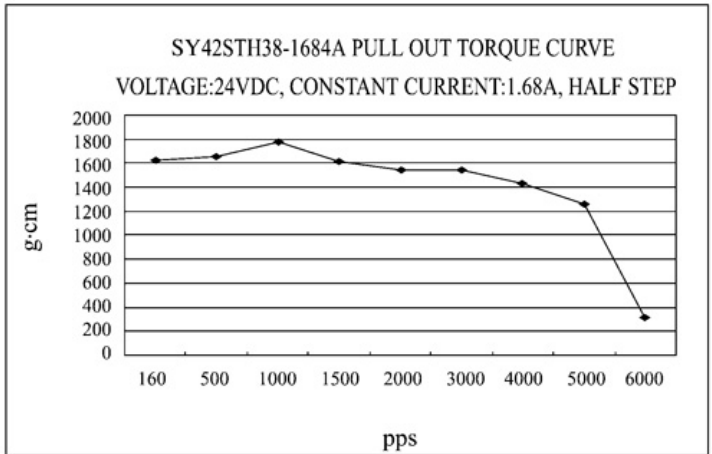
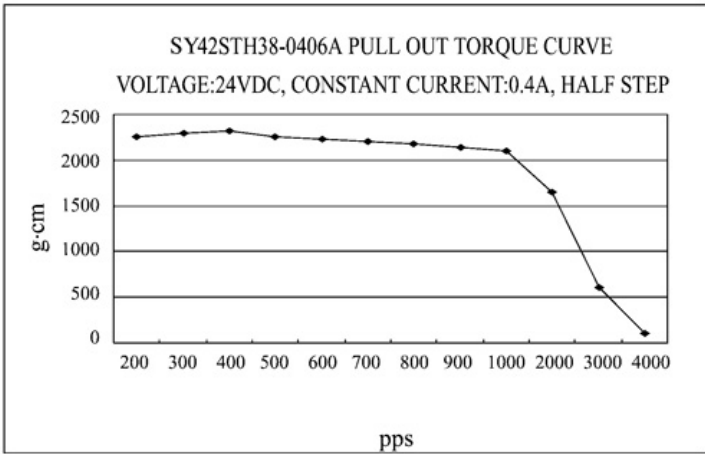
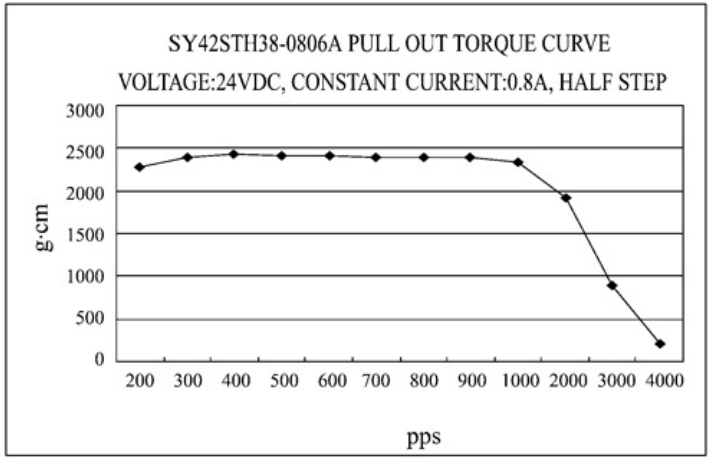
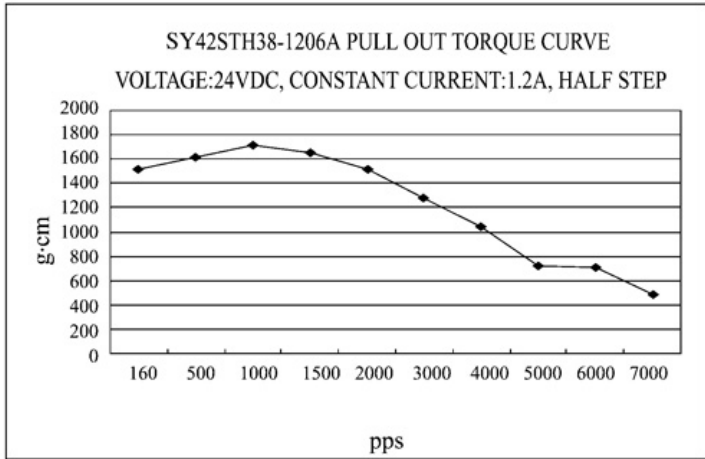
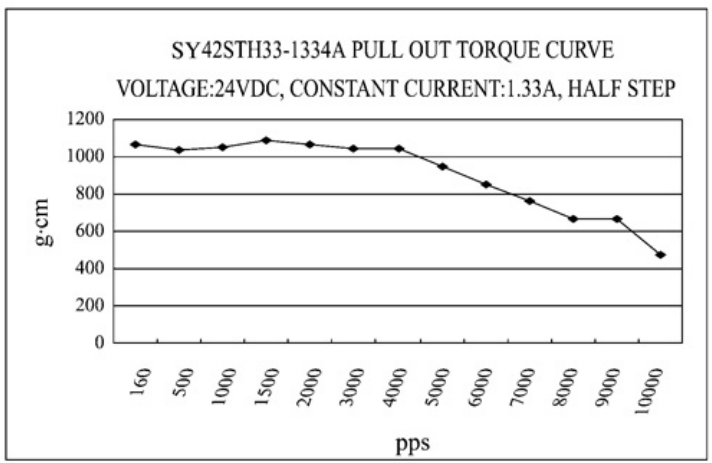
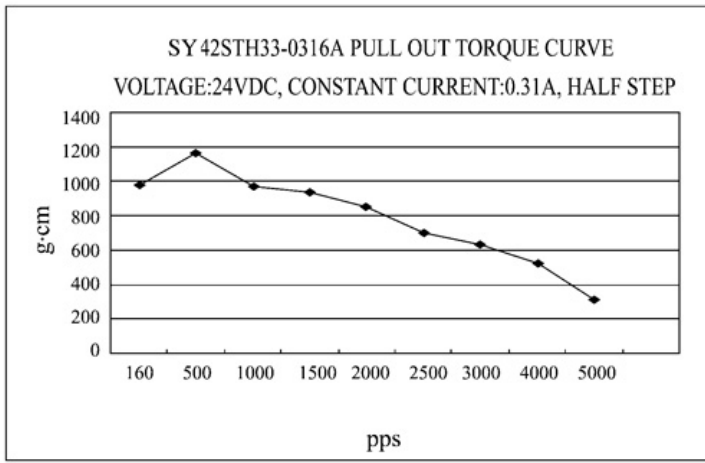


**Wiring Diagram**

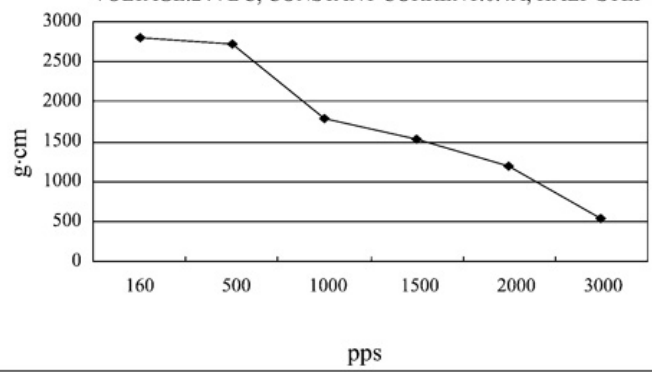


**Pull out torque**

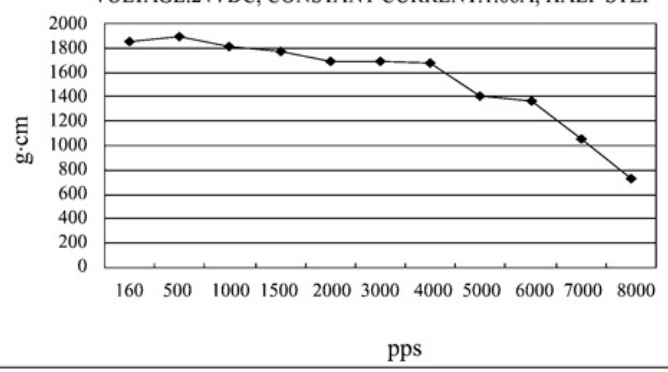


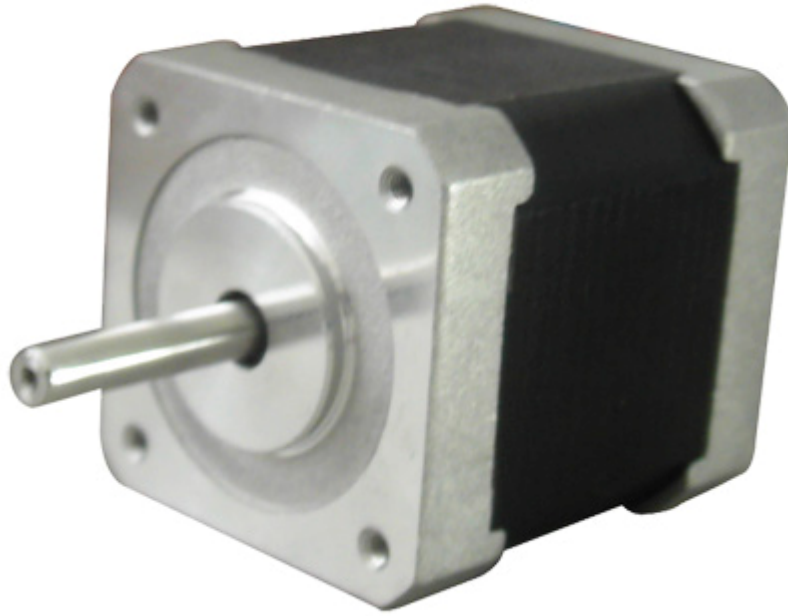


SY42STH47-0406A PULL OUT TORQUE CURVE  
VOLTAGE:24VDC, CONSTANT CURRENT:0.4A, HALF STEP



SY42STH47-1684A PULL OUT TORQUE CURVE  
VOLTAGE:24VDC, CONSTANT CURRENT:1.68A, HALF STEP





**3.6° Size 42mm Hybrid Stepping Motor**

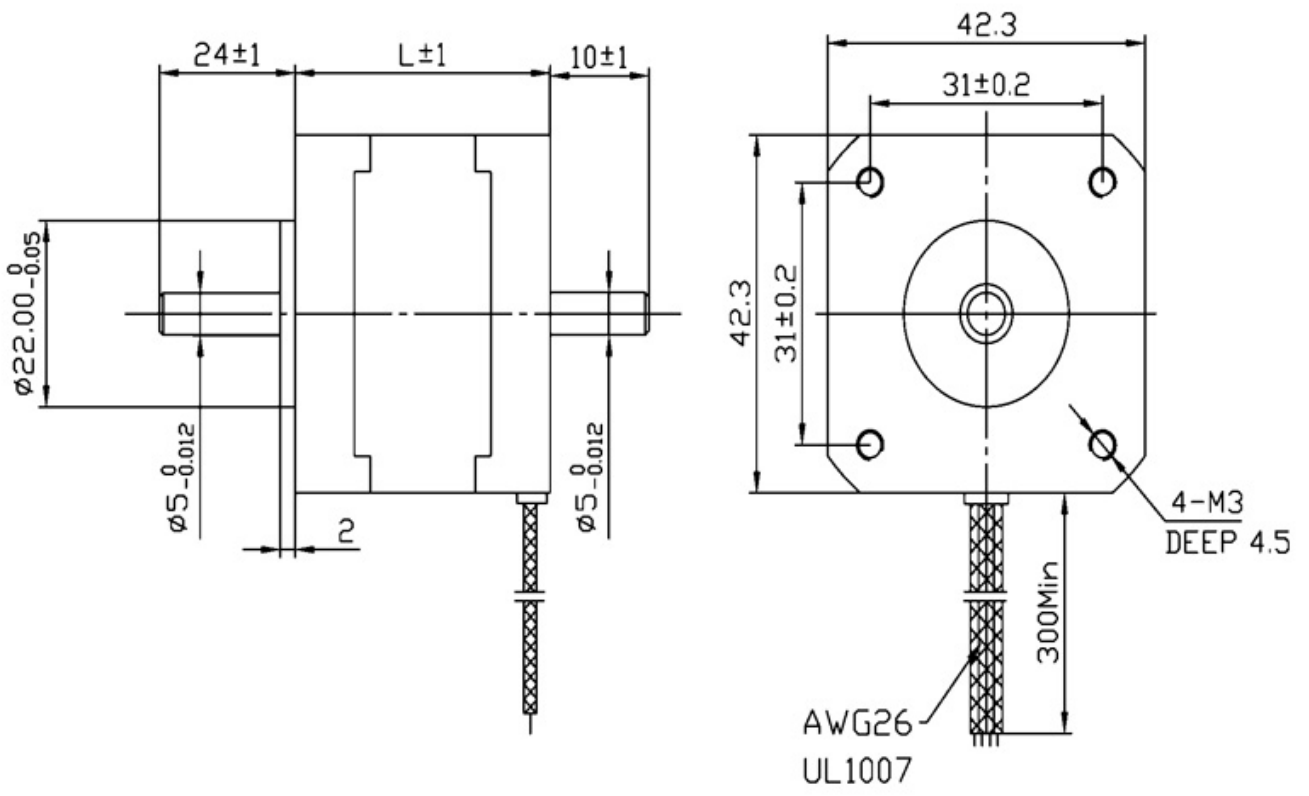
■ **General Specification for Hybrid Stepping Motor**

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
Rotation	CW( See from Front Flange )

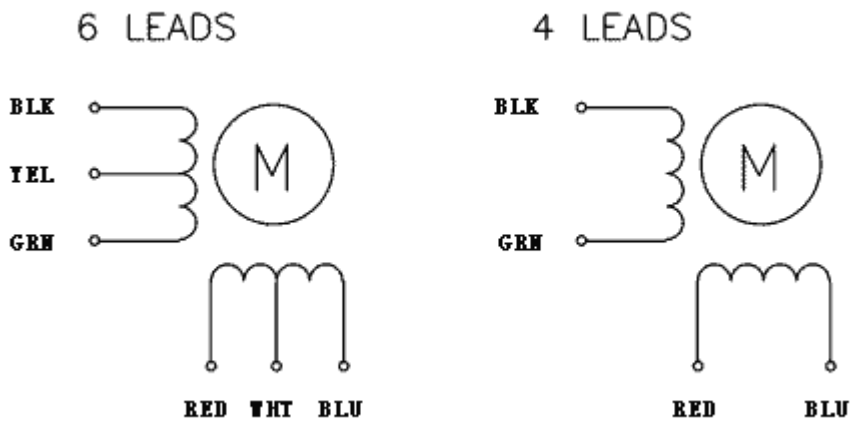
■ **Size 42mm Hybrid Stepping Motor Specifications**

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
SY42ST33-0114DA	SY42ST33-0114DB	14	0.114	123	130	780	4	20	0.2	150	34
SY42ST33-0156DA	SY42ST33-0156DB	15	0.15	100	60	500	6	20	0.2	150	34
SY42ST33-0954DA	SY42ST33-0954DB	9.31	0.095	98	200	530	4	20	0.20	150	34
SY42ST38-0954DA	SY42ST38-0954DB	9.98	0.095	105	330	700	4	23	0.23	150	38

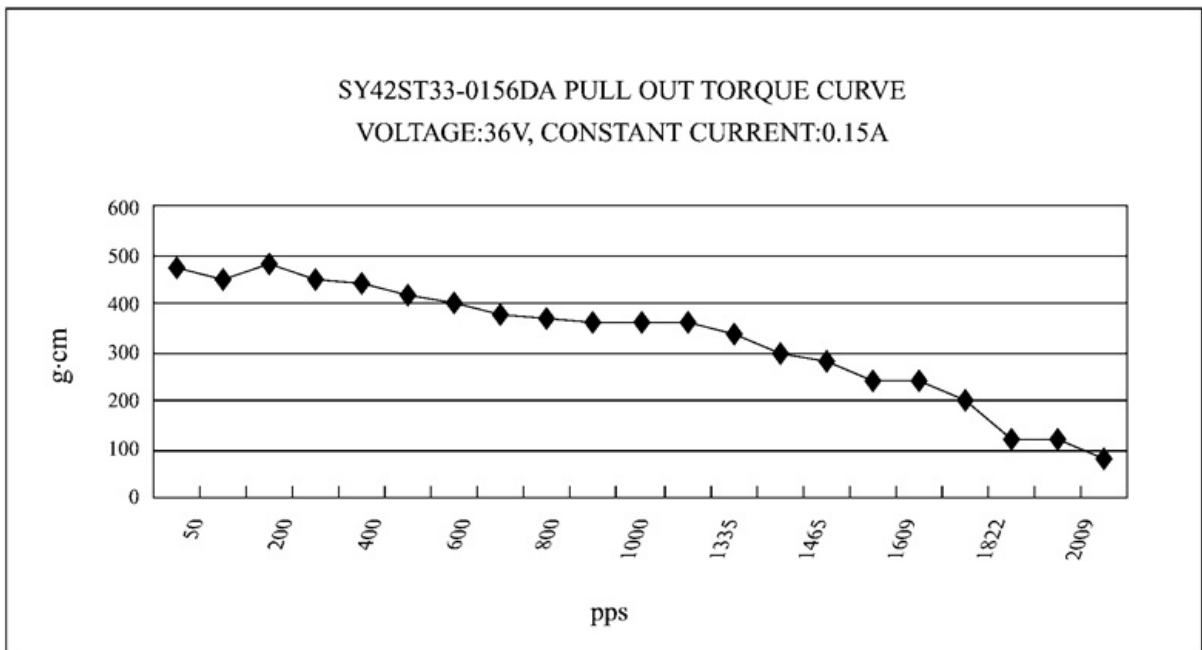
■ **Dimension**



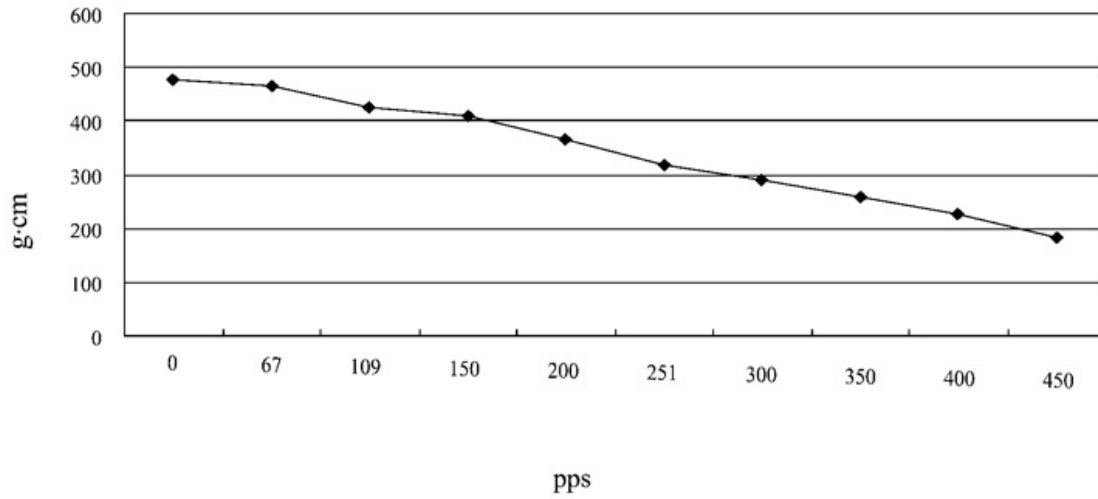
■ Wiring Diagram



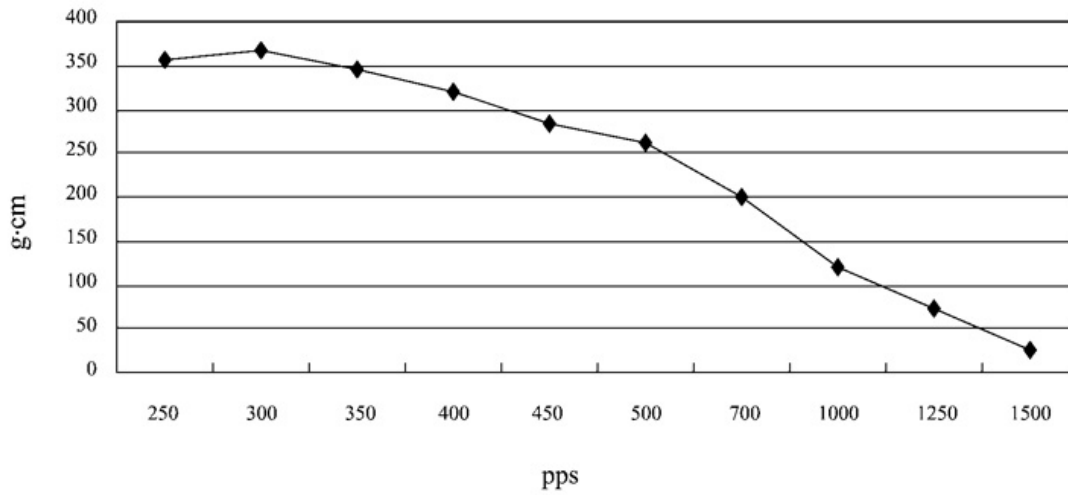
■ Pull out torque



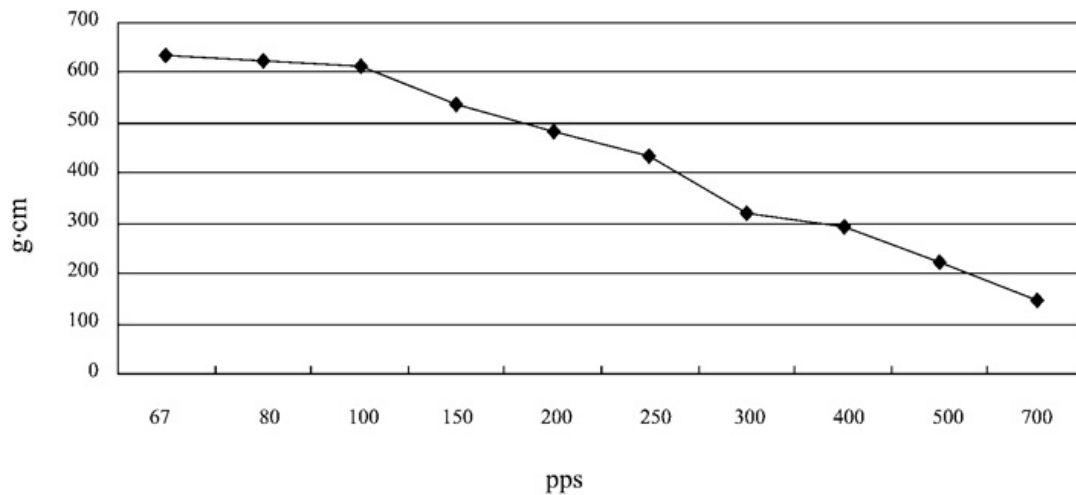
SY42STH33-0114DA PULL OUT TORQUE CURVE  
VOLTAGE:18VDC, CURRENT:0.114A, FULL STEP



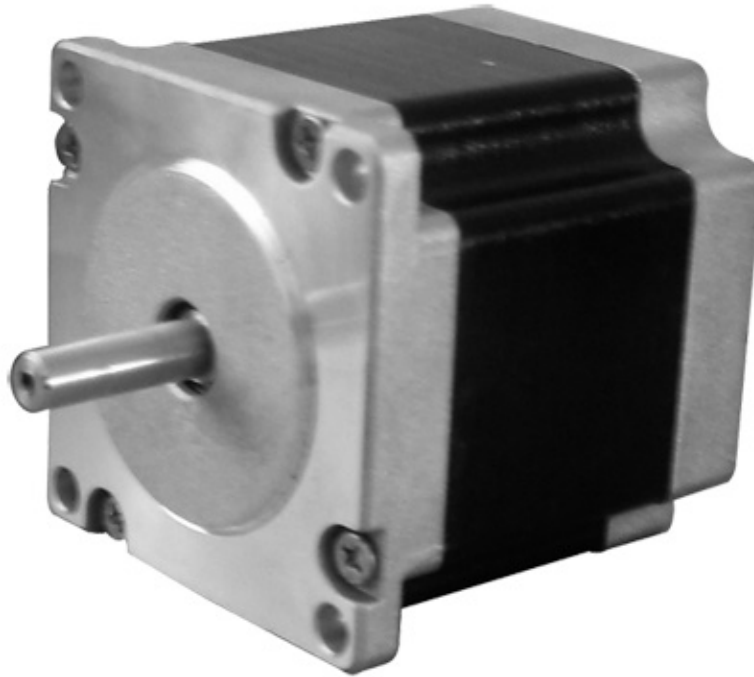
SY42ST33-0954DA PULL OUT TORQUE CURVE  
VOLTAGE:18VDC, CURRENT:0.095A, HALF STEP



SY42ST38-0954DA PULL OUT TORQUE CURVE  
VOLTAGE:18VDC, CURRENT:0.095A, HALF STEP







### 0.9° Size 57mm High Torque Hybrid Stepping Motor

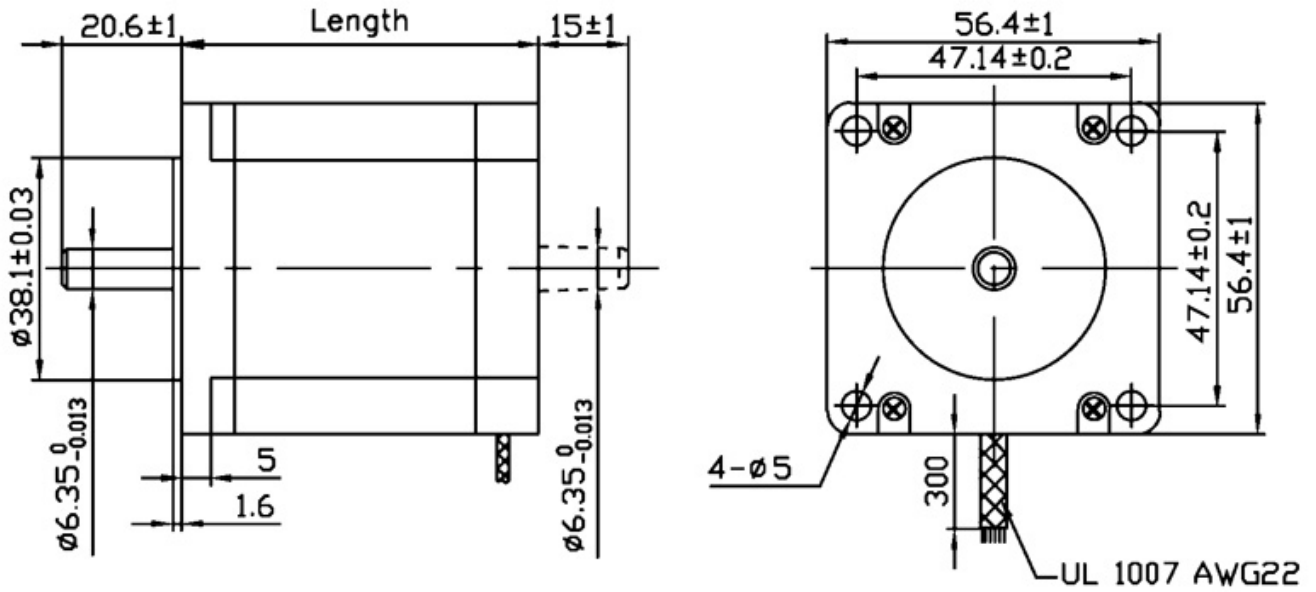
#### General Specification for High Torque Hybrid Stepping Motor

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	75 N ( 20mm from the Flange )
Max. axial force	15N
Rotation	CW( See from Front Flange )

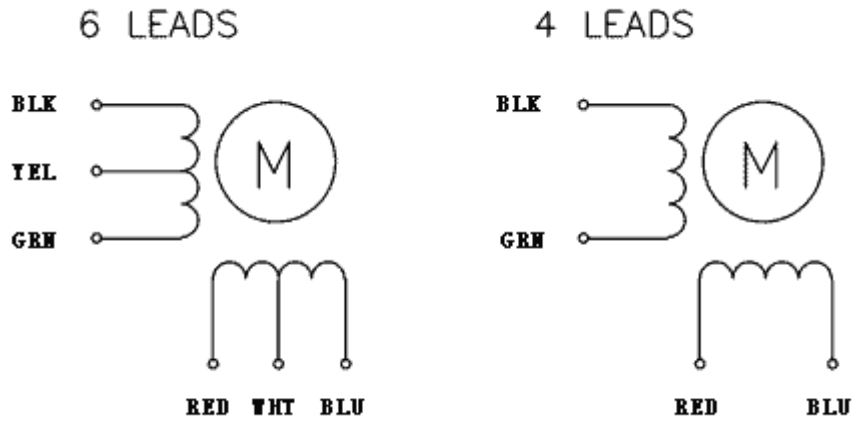
#### Size 57mm Hybrid Stepping Motor Specifications

Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Operating Curve	Length
Single Shaft	Double Shaft	V	A	Ω	mH	kg-cm		g-cm <sup>2</sup>	kg	kg-cm		mm
SY57STH41-1006MA	SY57STH41-1006MB	5.7	1	5.7	8	3.9	6	120	0.45	0.21	a	41
SY57STH41-2006MA	SY57STH41-2006MB	2.8	2	1.4	2.2						b	
SY57STH41-3006MA	SY57STH41-3006MB	1.9	3	0.63	1.0						c	
SY57STH41-2804MA	SY57STH41-2804MB	2	2.8	0.7	2.2	5.5	4	d				
SY57STH56-1006MA	SY57STH56-1006MB	7.4	1	7.4	17.5	9.0	6	300	0.7	0.4	e	56
SY57STH56-2006MA	SY57STH56-2006MB	3.6	2	1.8	4.5						f	
SY57STH56-3006MA	SY57STH56-3006MB	2.3	3	0.75	1.9						g	
SY57STH56-2804MA	SY57STH56-2804MB	2.5	2.8	0.9	4.5	12.6	4	h				
SY57STH76-1006MA	SY57STH76-1006MB	8.6	1	8.6	23	13.5	6	480	1	0.68	i	76
SY57STH76-2006MA	SY57STH76-2006MB	4.5	2	2.25	5.6						j	
SY57STH76-3006MA	SY57STH76-3006MB	3	3	1	2.6						k	
SY57STH76-2804MA	SY57STH76-2804MB	3.2	2.8	1.13	5.6	18.9	4	l				

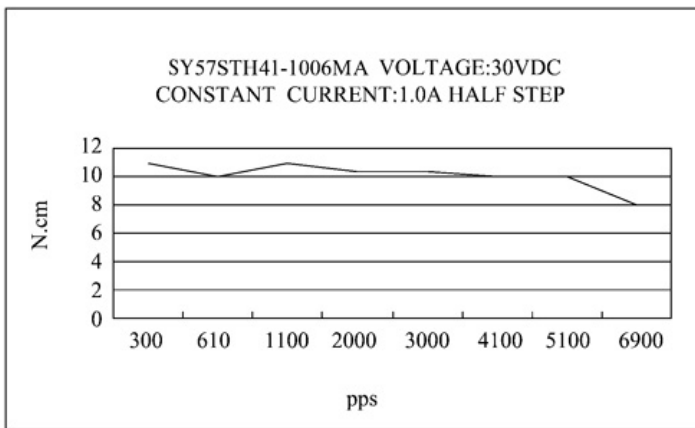
**Dimension**



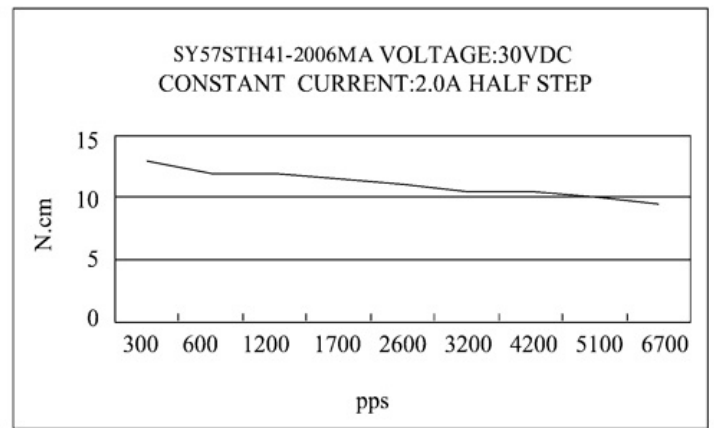
**Wiring Diagram**



**Pull out torque**

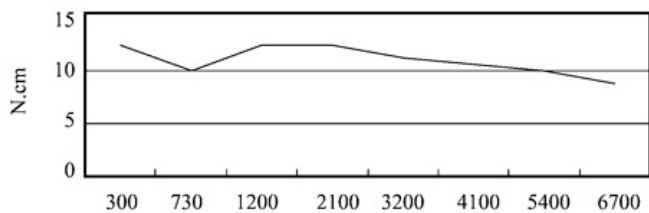


a



b

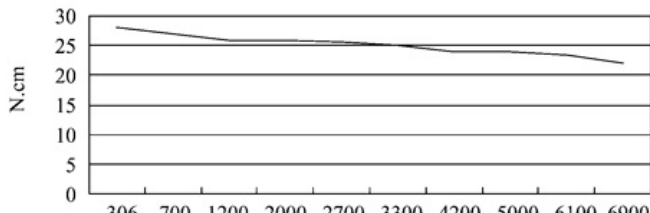
SY57STH41-3006MA VOLTAGE:30VDC  
CONSTANT CURRENT:3.0A HALF STEP



pps

c

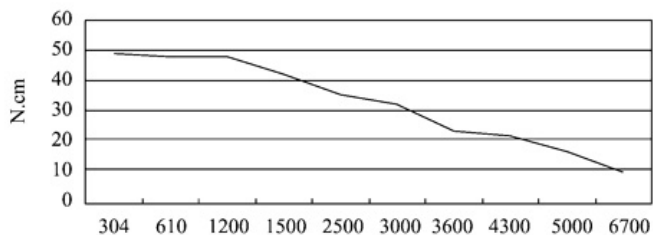
SY57STH41-2804MA VOLTAGE:30VDC  
CONSTANT CURRENT:2.8A HALF STEP



pps

d

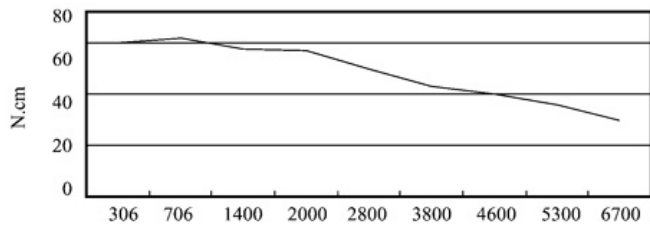
SY57STH56-1006MA VOLTAGE:30VDC  
CONSTANT CURRENT:1.0A HALF STEP



pps

e

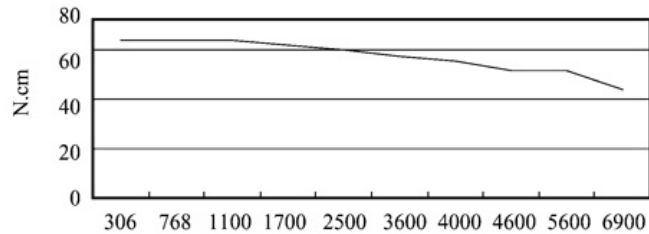
SY57STH56-2006MA VOLTAGE:30VDC  
CONSTANT CURRENT:2.0A HALF STEP



pps

f

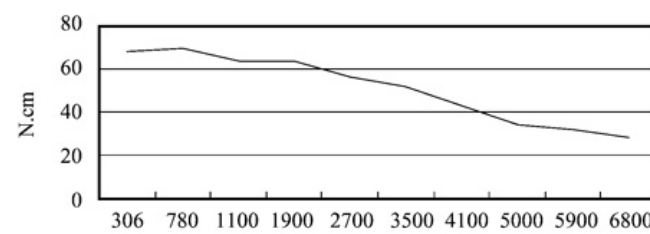
SY57STH56-3006MA VOLTAGE:30VDC  
CONSTANT CURRENT:3.0A HALF STEP



pps

g

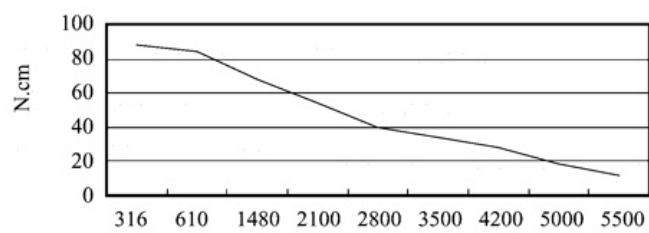
SY57STH56-2804MA VOLTAGE:30VDC  
CONSTANT CURRENT:2.8A HALF STEP



pps

h

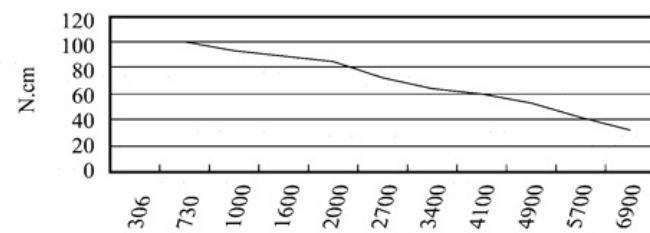
SY57STH76-1006MA VOLTAGE:30VDC  
CONSTANT CURRENT:1.0A HALF STEP



pps

i

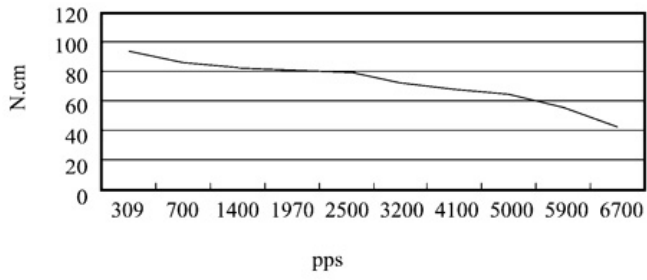
SY57STH76-2006MA VOLTAGE:30VDC  
CONSTANT CURRENT:2.0A HALF STEP



pps

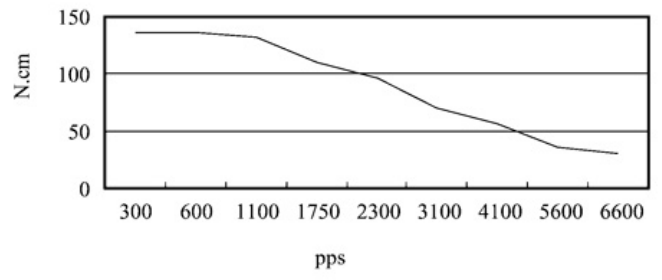
j

SY57STH76-3006MA VOLTAGE:30VDC  
CONSTANT CURRENT:3.0A HALF STEP

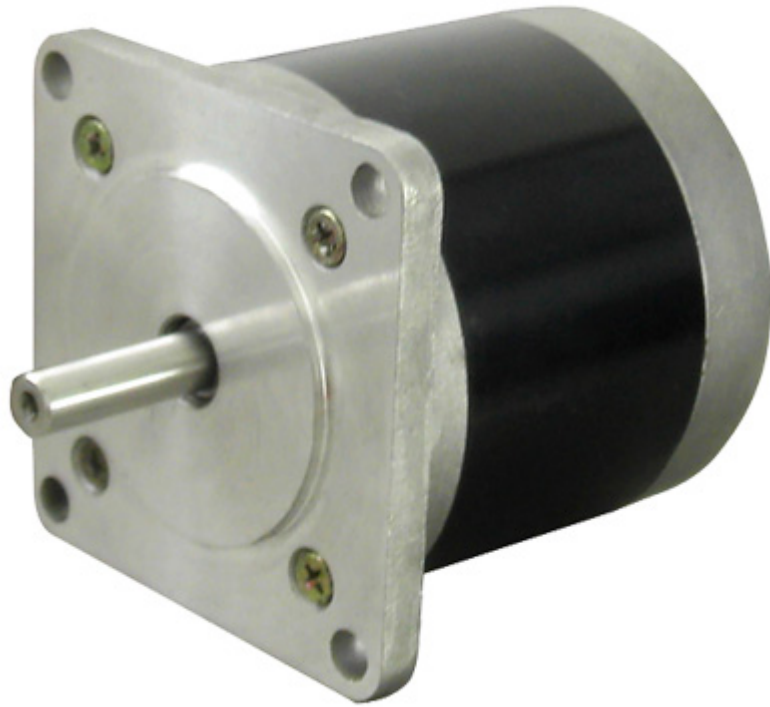


k

SY57STH76-2804MA VOLTAGE:30VDC  
CONSTANT CURRENT:2.8A HALF STEP



l



### 1.8° Size 57mm Hybrid Stepping Motor

#### General Specification for Hybrid Stepping Motor

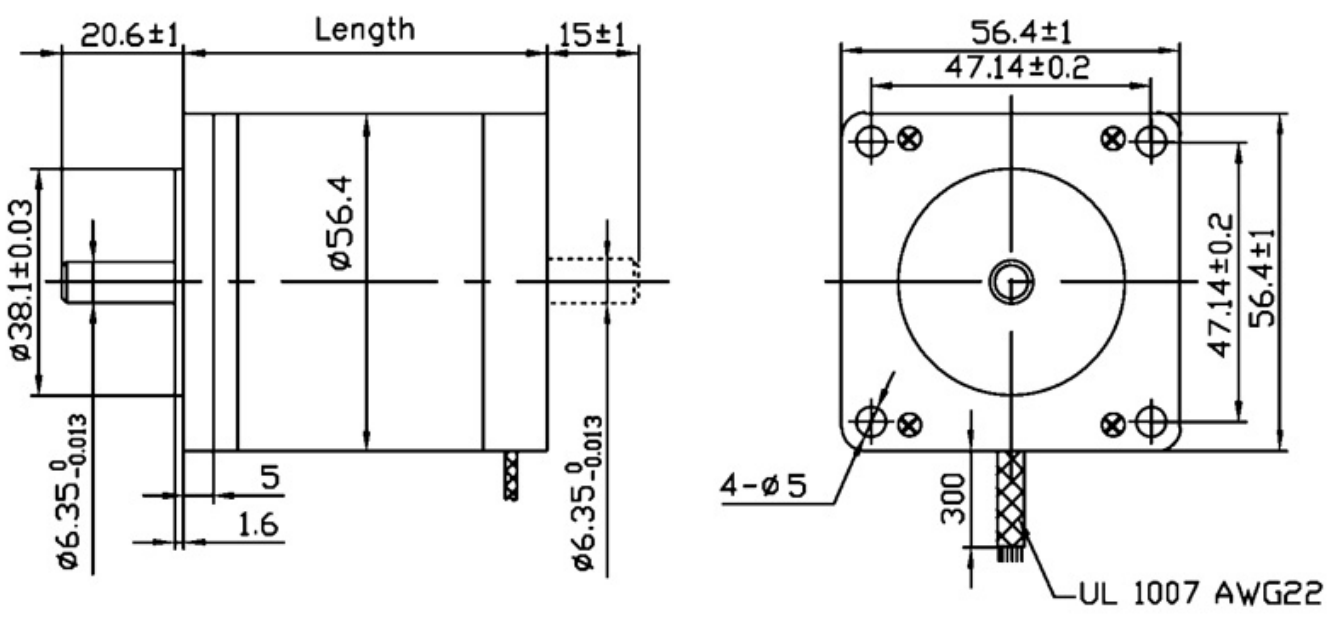
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80°C Max.(rated current,2 phase on)
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft 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	10N
Rotation	CW( See from Front Flange )

#### Size 57mm Hybrid Stepping Motor Specifications

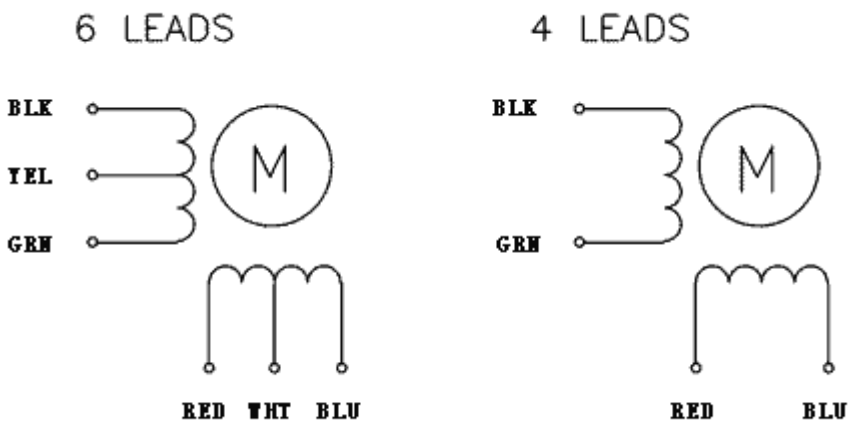
Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	kg-cm		g-cm <sup>2</sup>	kg	kg-cm	mm
SY57ST41-1106A	SY57ST41-1106B	4	1.1	3.6	3.6	2.88	6	57	0.54	0.18	41
SY57ST41-0406A	SY57ST41-0406B	12	0.4	30	30						
SY57ST41-1564A	SY57ST41-1564B	2.8	1.56	1.8	3.6	4.0	4				
SY57ST51-0856A	SY57ST51-0856B	6	0.85	7.1	9	4.97	6	110	0.60	0.35	51
SY57ST51-0426A	SY57ST51-0426B	12	0.42	29	36						
SY57ST51-2804A	SY57ST51-2804B	1.8	2.8	0.65	1.6	6.9	4				
SY57ST56-1206A	SY57ST56-1206B	6	1.2	5	8	6.05	6	135	0.65	0.42	56
SY57ST56-0606A	SY57ST56-0606B	12	0.6	20	32						
SY57ST56-2554A	SY57ST56-2554B	2.8	2.55	1.1	3.6	8.4	4				

SY57ST76-1506A	SY57ST76-1506B	5.4	1.5	3.6	6	9	6	200	0.95	0.72	76
SY57ST76-0686A	SY57ST76-0686B	12	0.68	17.7	30						
SY57ST76-3304A	SY57ST76-3304B	2.7	3.3	0.85	3	12.5	4				

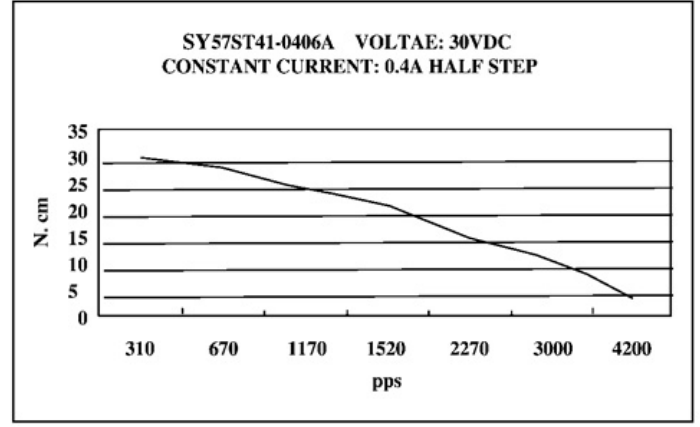
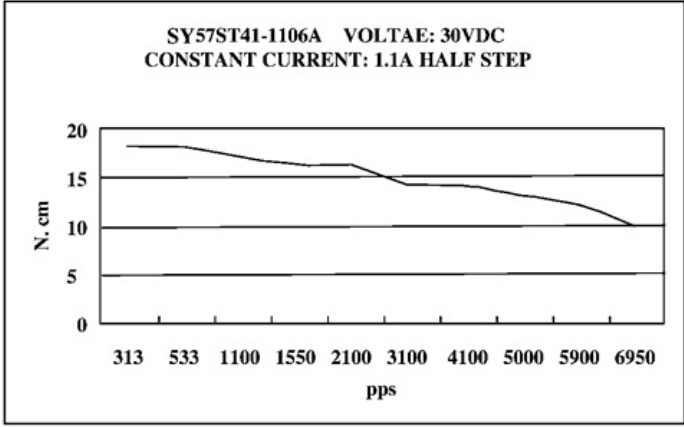
**Dimension**



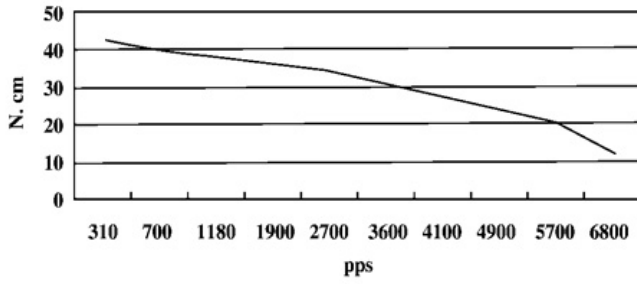
**Wiring Diagram**



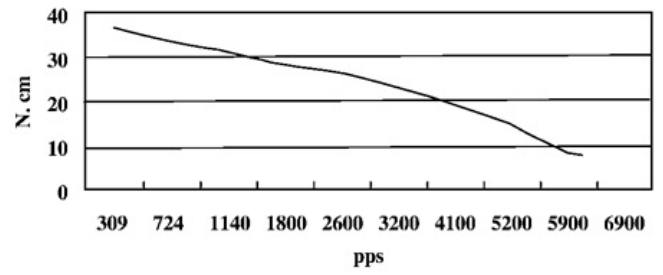
**Pull out torque**



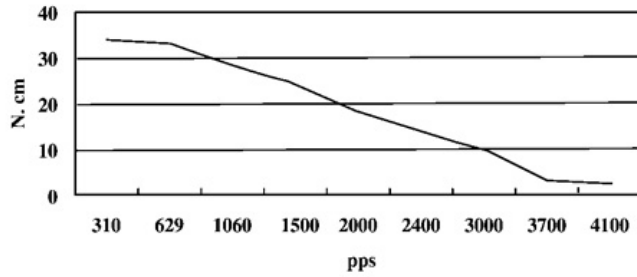
**SY57ST41-1564A VOLTAE: 30VDC  
CONSTANT CURRENT: 1.56A HALF STEP**



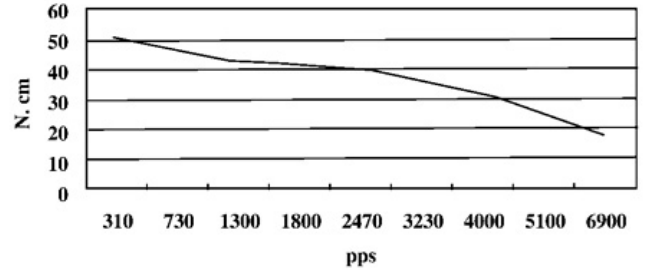
**SY57ST51-0856A VOLTAE: 30VDC  
CONSTANT CURRENT: 0.85A HALF STEP**



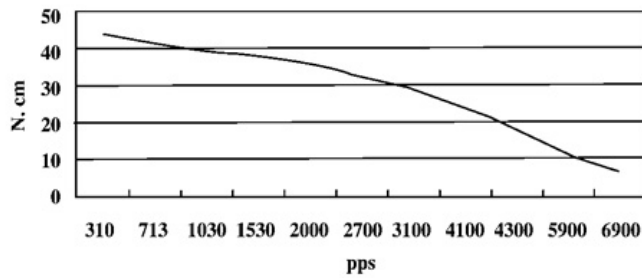
**SY57ST51-0426A VOLTAE: 30VDC  
CONSTANT CURRENT: 0.42A HALF STEP**



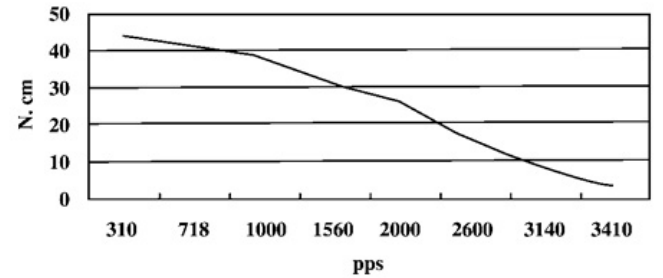
**SY57ST51-2804A VOLTAE: 30VDC  
CONSTANT CURRENT: 2.8A HALF STEP**



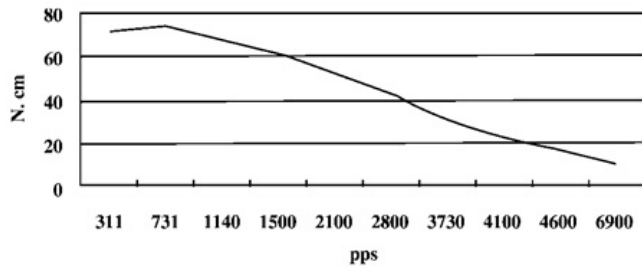
**SY57ST56-1206A VOLTAE: 30VDC  
CONSTANT CURRENT: 1.2A HALF STEP**



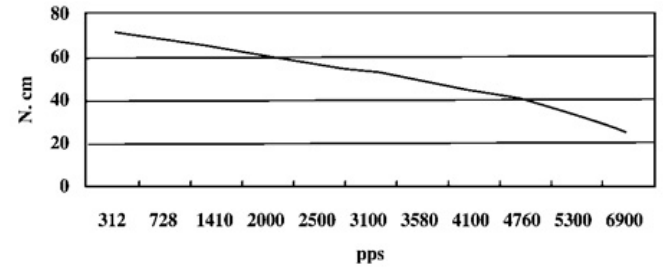
**SY57ST56-0606A VOLTAE: 30VDC  
CONSTANT CURRENT: 0.6A HALF STEP**



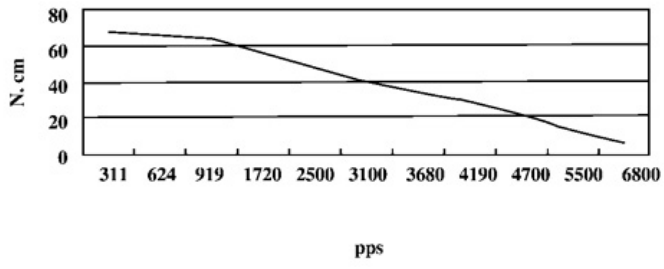
**SY57ST56-2554A VOLTAE: 30VDC  
CONSTANT CURRENT: 2.55A HALF STEP**



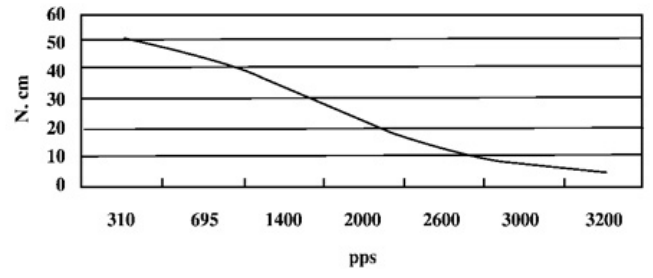
**SY57ST76-3304A VOLTAE: 30VDC  
CONSTANT CURRENT: 3.3A HALF STEP**



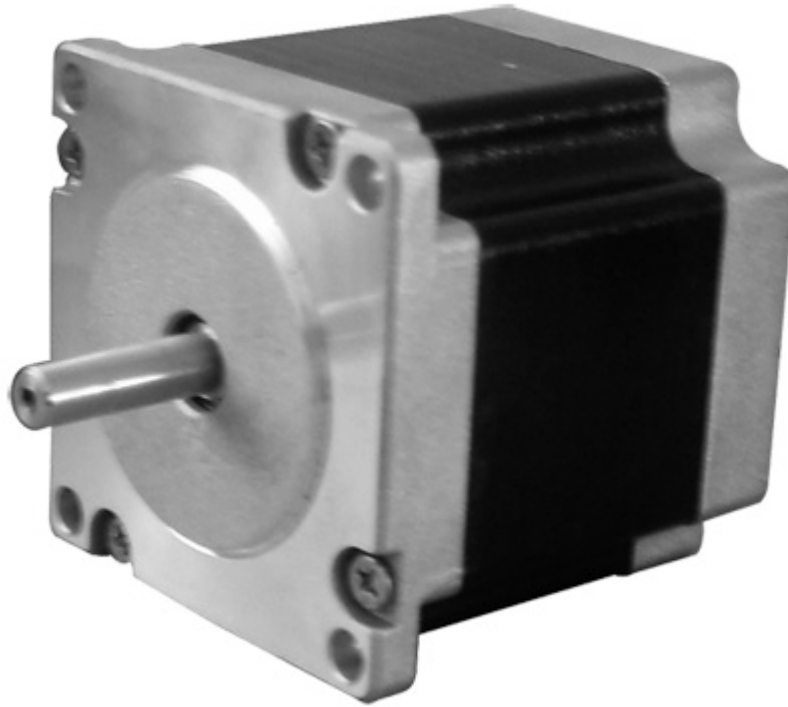
**SY57ST76-1506A VOLTAE: 30VDC  
CONSTANT CURRENT: 1.5A HALF STEP**



**SY57ST76-0686A VOLTAE: 30VDC  
CONSTANT CURRENT: 0.68A HALF STEP**







**1.8° Size 57mm High Torque Hybrid Stepping Motor**

■ **General Specification for High Torque Hybrid Stepping Motor**

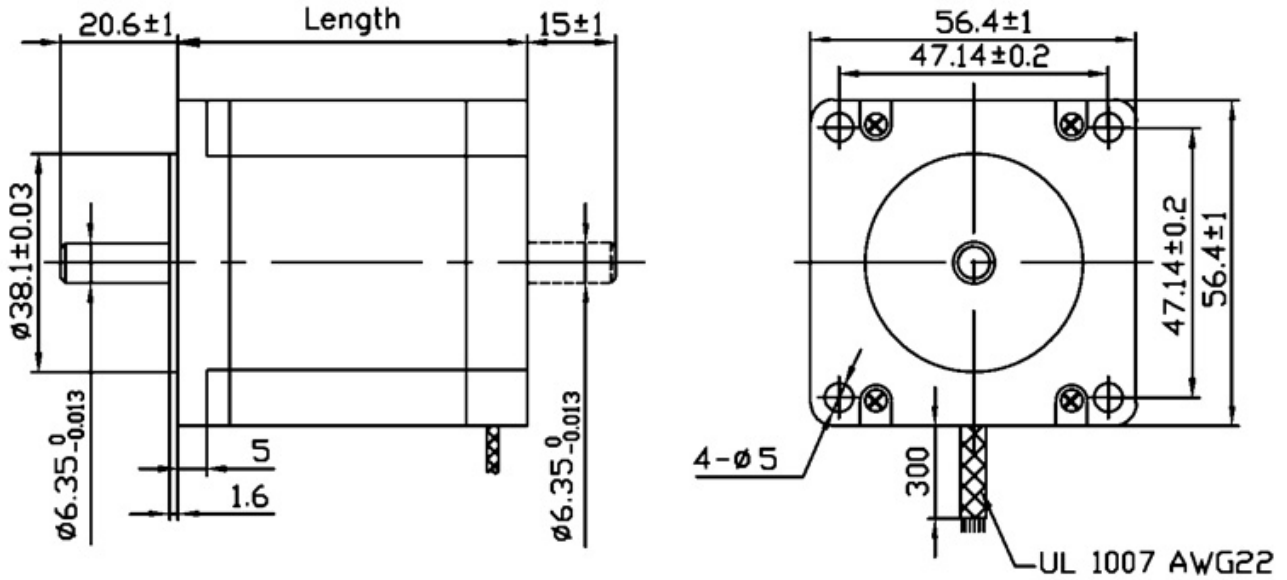
Item	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80°C Max.(rated current,2 phase on)
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft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

■ **Size 57mm Hybrid Stepping Motor Specifications**

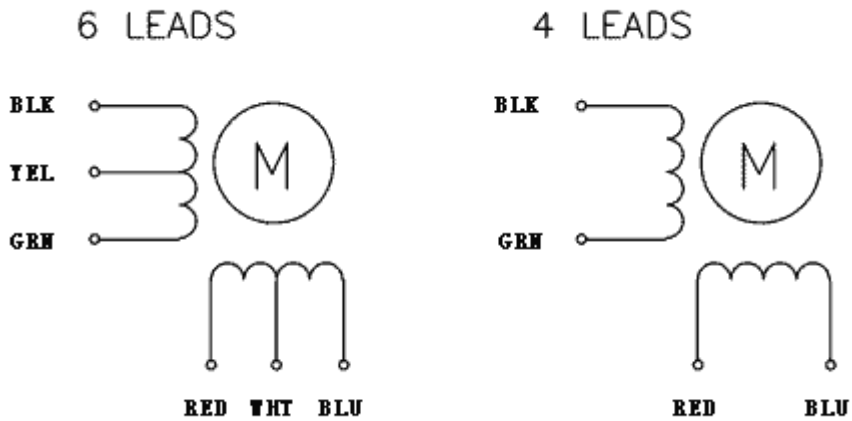
Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	kg-cm		g-cm <sup>2</sup>	kg	kg-cm	mm
SY57STH41-1006A	SY57STH41-1006B	5.7	1	5.7	5.4	3.9	6	120	0.45	0.21	41
SY57STH41-2006A	SY57STH41-2006B	2.8	2	1.4	1.4						
SY57STH41-3006A	SY57STH41-3006B	1.9	3	0.63	0.6						
SY57STH41-2804A	SY57STH41-2804B	2	2.8	0.7	1.4	5.5	4				
SY57STH51-1006A	SY57STH51-1006B	6.6	1	6.6	8.2	7.2	6	275	0.65	0.36	51
SY57STH51-2006A	SY57STH51-2006B	3.3	2	1.65	2.2						
SY57STH51-3006A	SY57STH51-3006B	2.2	3	0.74	0.9						
SY57STH51-2804A	SY57STH51-2804B	2.3	2.8	0.83	2.2	10.1	4				
SY57STH56-1006A	SY57STH56-1006B	7.4	1	7.4	10	9.0	6	300	0.7	0.4	56

SY57STH56-2006A	SY57STH56-2006B	3.6	2	1.8	2.5						
SY57STH56-3006A	SY57STH56-3006B	2.3	3	0.75	1.1						
SY57STH56-2804A	SY57STH56-2804B	2.5	2.8	0.9	2.5	12.6	4				
SY57STH76-1006A	SY57STH76-1006B	8.6	1	8.6	14	13.5	6	480	1	0.68	76
SY57STH76-2006A	SY57STH76-2006B	4.5	2	2.25	3.6						
SY57STH76-3006A	SY57STH76-3006B	3	3	1	1.6						
SY57STH76-2804A	SY57STH76-2804B	3.2	2.8	1.13	3.6						

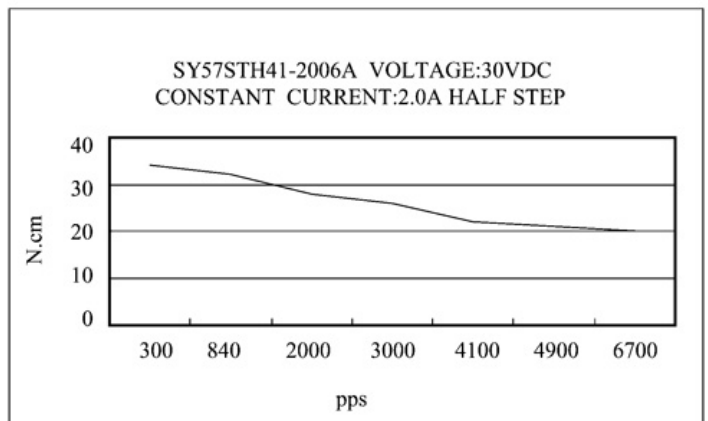
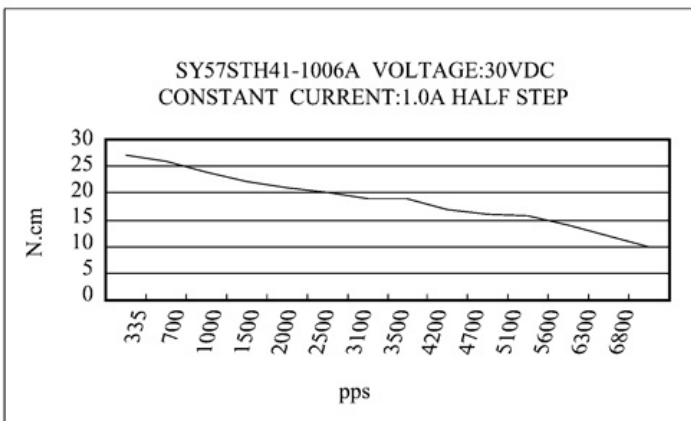
■ Dimension

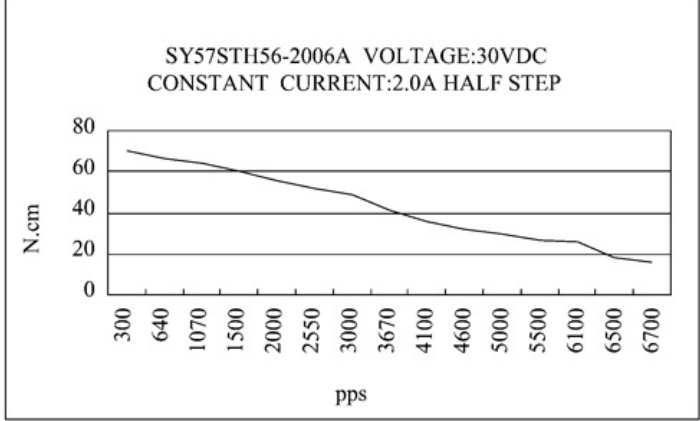
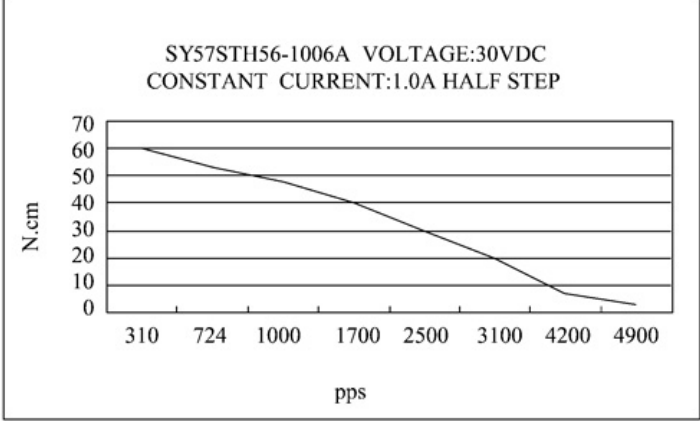
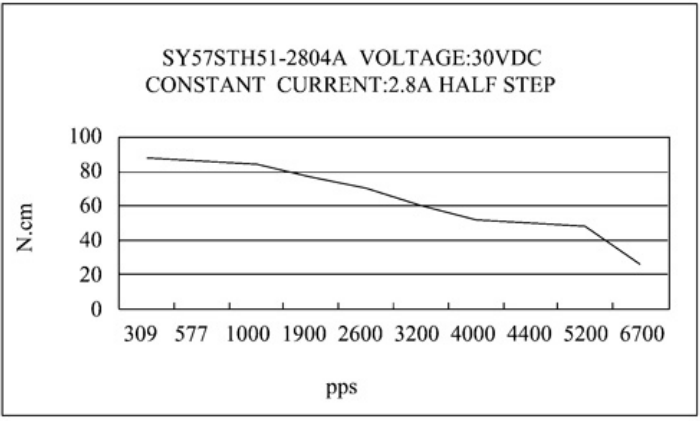
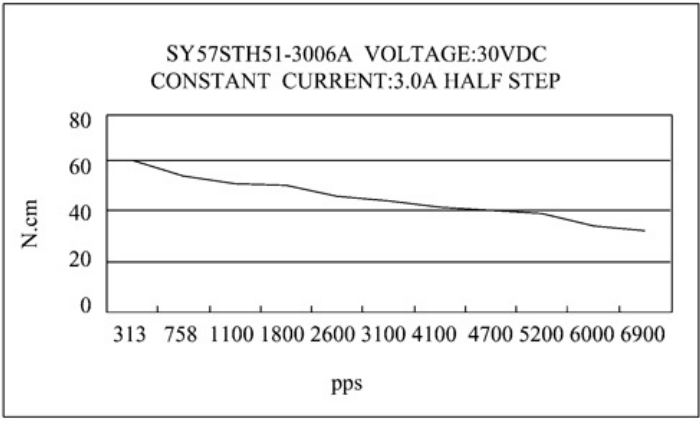
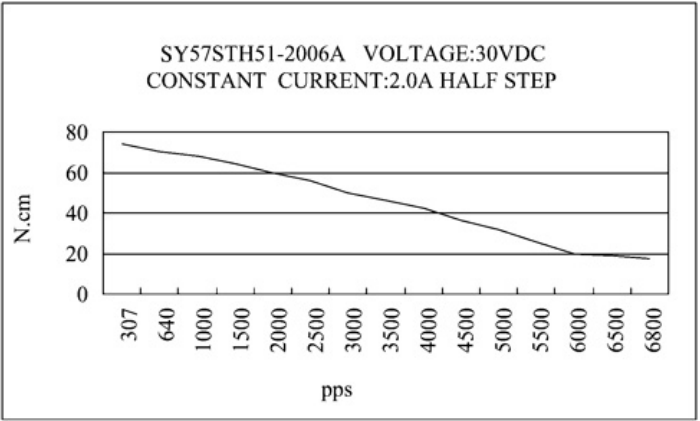
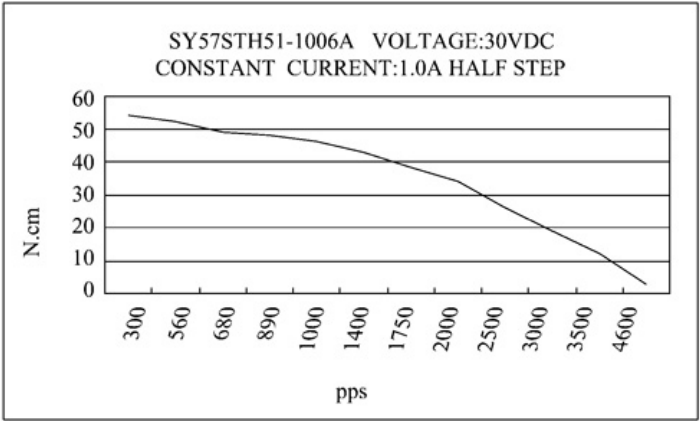
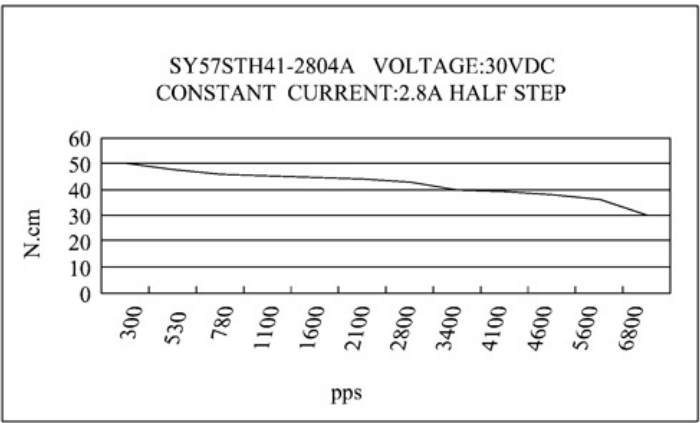
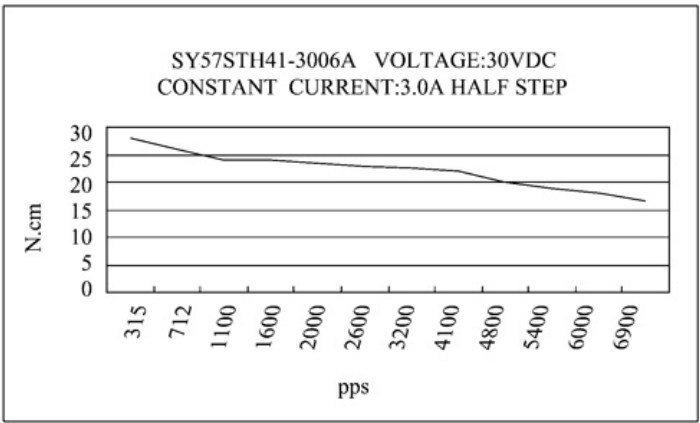


■ Wiring Diagram

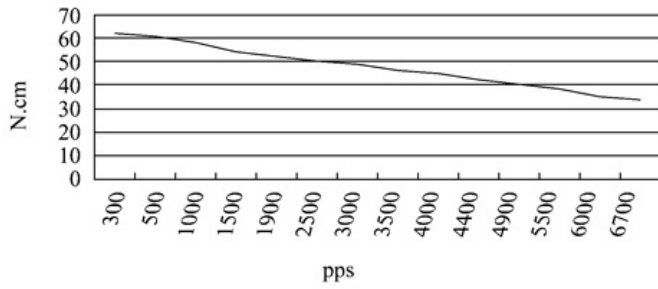


■ Pull out torque

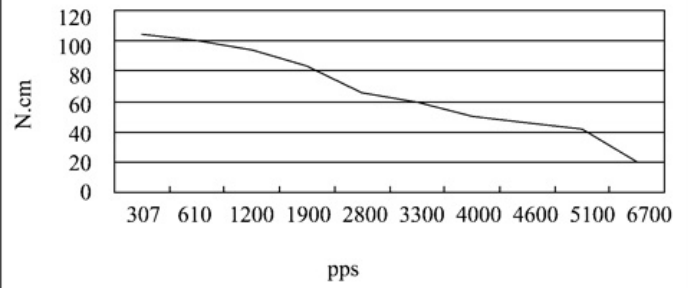




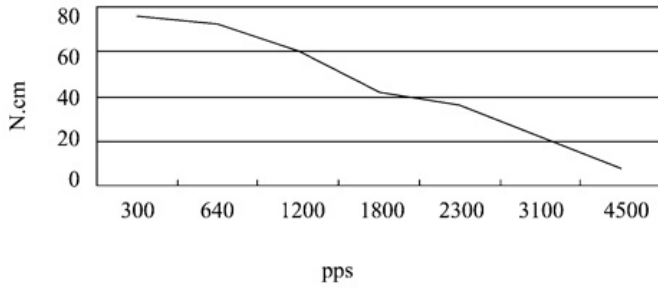
SY57STH56-3006A VOLTAGE:30VDC  
CONSTANT CURRENT:3.0A HALF STEP



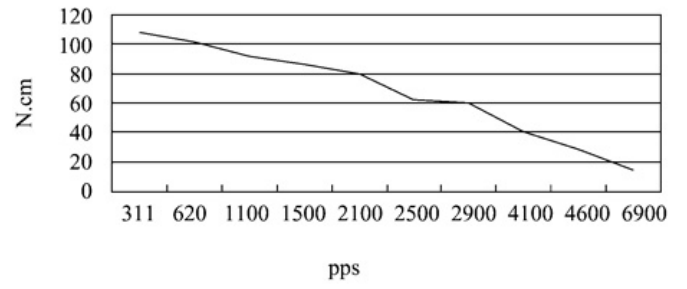
SY57STH56-2804A VOLTAGE:30VDC  
CONSTANT CURRENT:2.8A HALF STEP



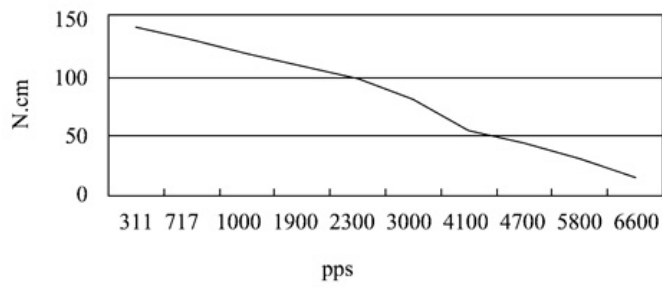
SY57STH76-1006A VOLTAGE:30VDC  
CONSTANT CURRENT:1.0A HALF STEP



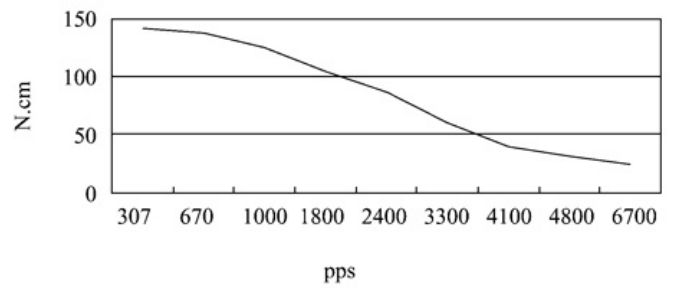
SY57STH76-2006A VOLTAGE:30VDC  
CONSTANT CURRENT:2.0A HALF STEP



SY57STH76-3006A VOLTAGE:30VDC  
CONSTANT CURRENT:3.0A HALF STEP



SY57STH76-2804A VOLTAGE:30VDC  
CONSTANT CURRENT:2.8A HALF STEP





**1.8° Size 86mm Hybrid Stepping Motor**

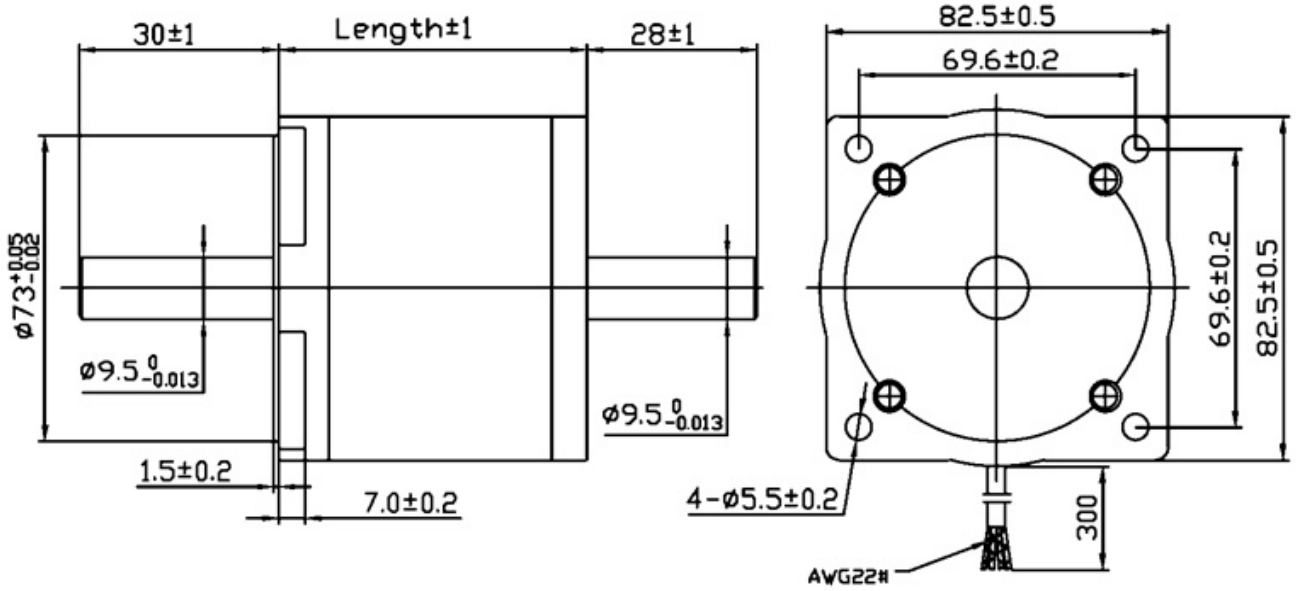
■ **General Specification for Hybrid Stepping Motor**

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	500VAC 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 )

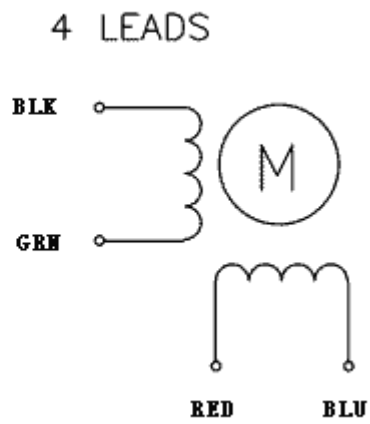
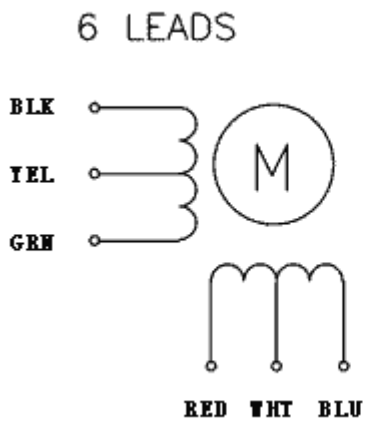
■ **Size 86mm Hybrid Stepping Motor Specifications**

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
SY86ST62-4506A	SY86ST62-4506B	1.8	4.5	0.4	1.4	13	6	560	1.5	0.8	62
SY86ST62-1256A	SY86ST62-1256B	5.5	1.25	4.4	14	13	6				
SY86ST62-1406A	SY86ST62-1406B	0.7	14	20	60	13	6				
SY86ST62-5904A	SY86ST62-5904B	1.33	5.9	0.23	1.5	18	4				
SY86ST94-4006A	SY86ST94-4006B	3.0	4.0	0.75	4.5	26	6	1100	2.6	2.4	94
SY86ST94-2006A	SY86ST94-2006B	6.0	2.0	3.0	18	26	6				
SY86ST94-1006A	SY86ST94-1006B	12	1	12	72	26	6				
SY86ST94-5604A	SY86ST94-5604B	2.1	5.6	0.38	3.9	35	4				
SY86ST134-6706A	SY86ST134-6706B	3.0	6.7	0.45	2	36	6	1800	3.6	3.6	134
SY86ST134-4006A	SY86ST134-4006B	5.0	4.0	1.25	6.6	36	6				
SY86ST134-1806A	SY86ST134-1806B	12	1.8	6.5	41	36	6				

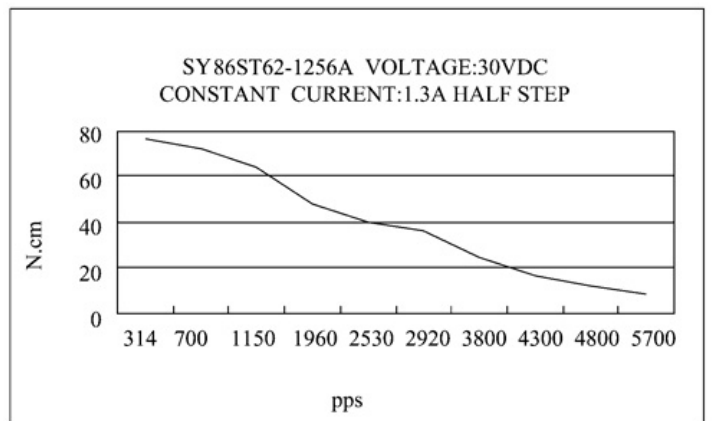
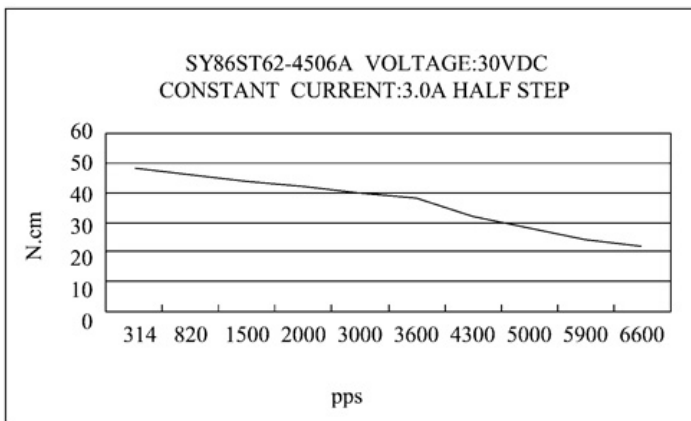
■ **Dimension**



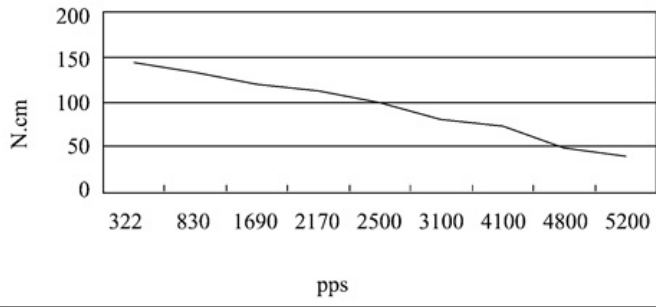
### Wiring Diagram



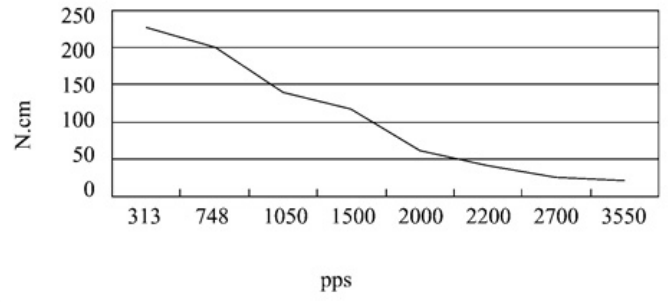
### Pull out torque



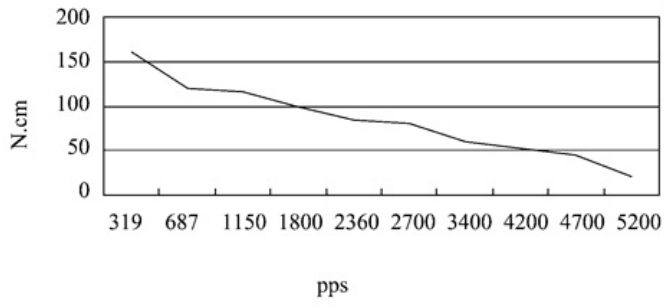
SY86ST94-4006A VOLTAGE:30VDC  
CONSTANT CURRENT:3.0A HALF STEP



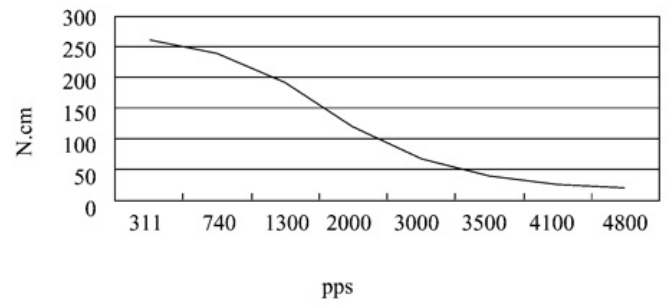
SY86ST94-2006A VOLTAGE:30VDC  
CONSTANT CURRENT:2.0A HALF STEP



SY86ST94-5604A VOLTAGE:30VDC  
CONSTANT CURRENT:3.0A HALF STEP



SY86ST134-4006A VOLTAGE:30VDC  
CONSTANT CURRENT:3.0A HALF STEP





**1.8° Size 85mm High Torque Hybrid Stepping Motor**

■ **General Specification for High Torque 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	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	200 N ( 20mm from the Flange )
Max. axial force	60N
Rotation	CW( See from Front Flange )

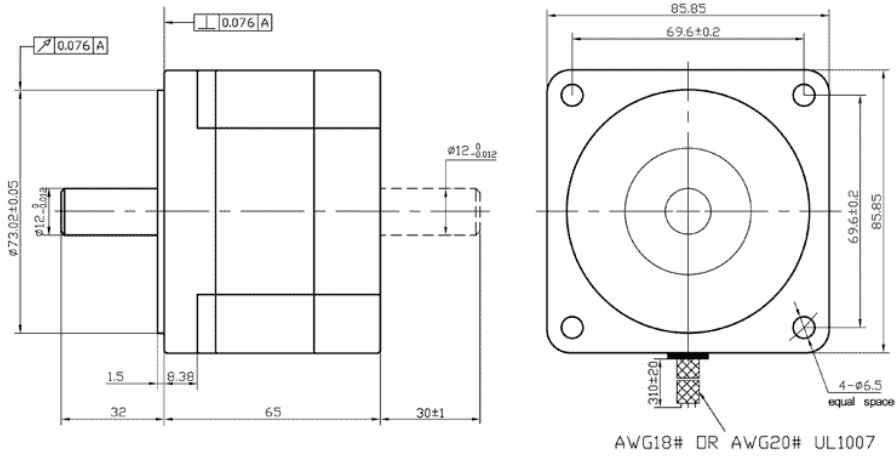
■ **Size 85mm Hybrid Stepping Motor Specifications**

Model No.		Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# 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
SY85STH65-5904A	SY85STH65-5904B	5.9	0.28	1.7	34	4	1000	1.7	0.8	65
SY85STH65-2808A	SY85STH65-2808B	2.8	1.4	3.9	34	8				
SY85STH80-5504A	SY85STH80-5504B	5.5	0.46	4	46	4	1400	2.3	1.2	80
SY85STH80-4208A	SY85STH80-4208B	4.2	0.75	3.4	46	8				
SY85STH118-6004A	SY85STH118-6004B	6	0.6	6.5	87	4	2700	3.8	2.4	118
SY85STH118-4208A	SY85STH118-4208B	4.2	0.9	6	87	8				
SY85STH156-6204A	SY85STH156-6204B	6.2	0.75	9	122	4	4000	5.4	3.6	156

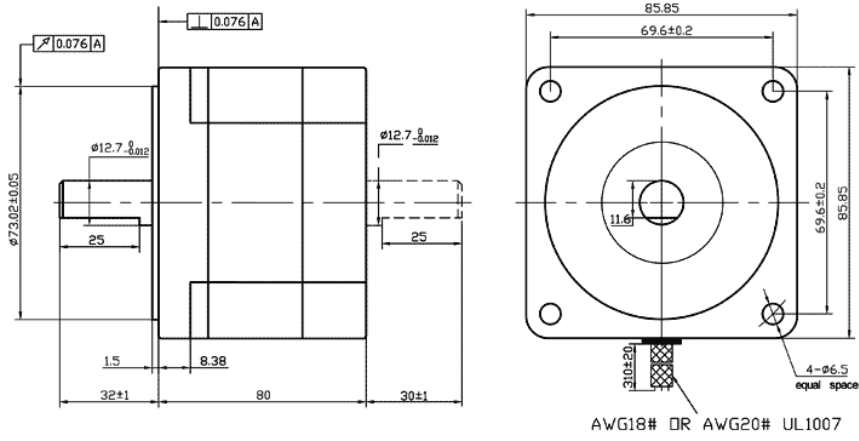
■ **Dimension**



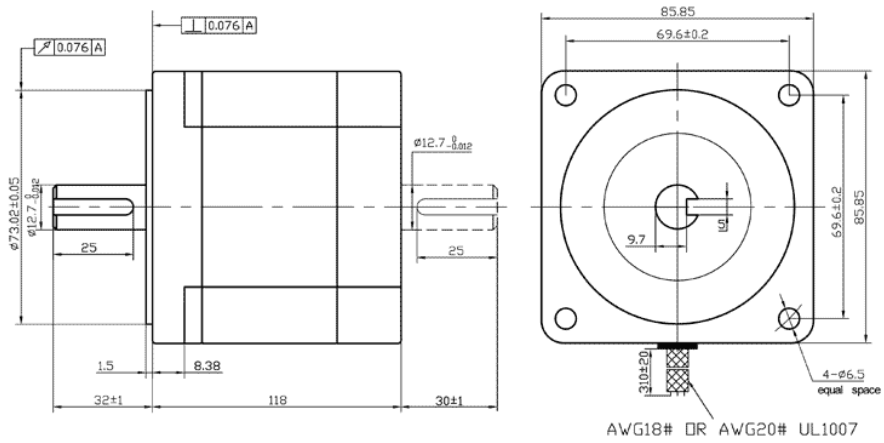
# SY85STH65-5904A/2808A



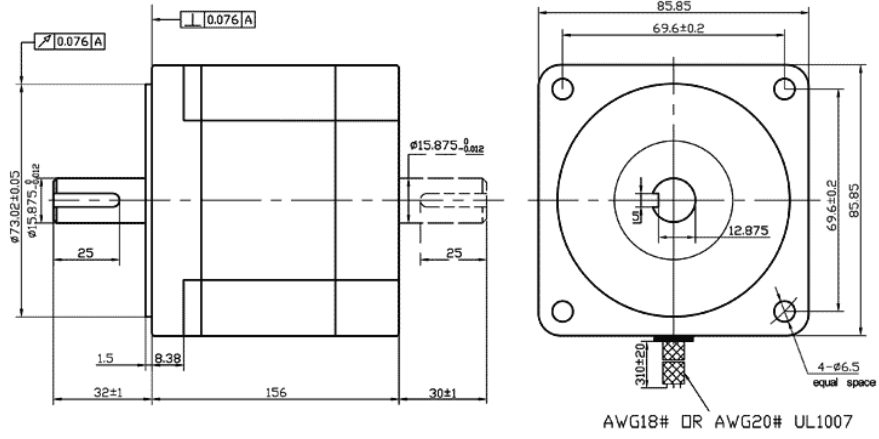
# SY85STH80-5504A/4208A



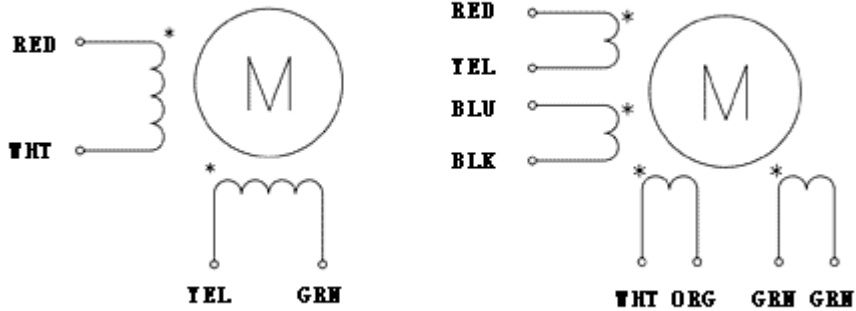
# SY85STH118-6004A/4208A



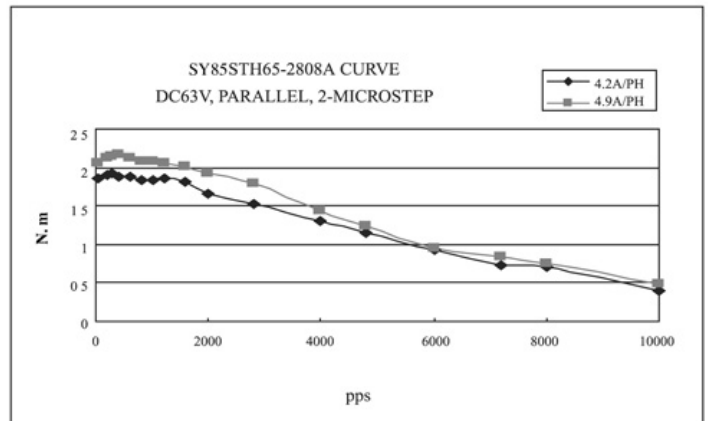
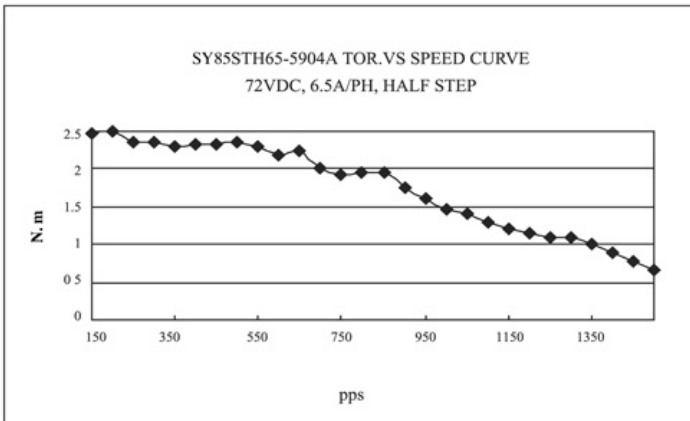
# SY85STH156-6204A/4208A

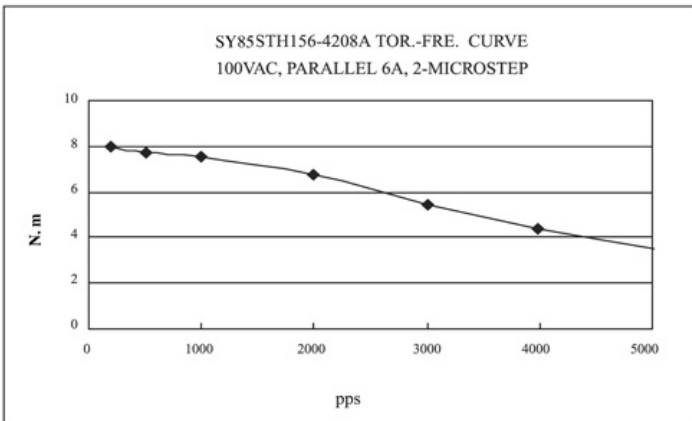
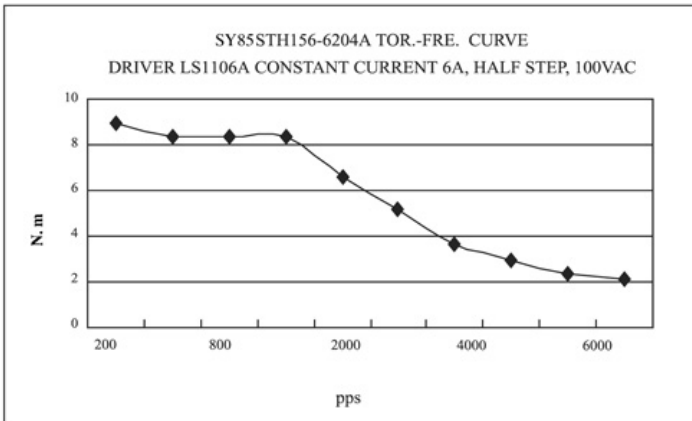
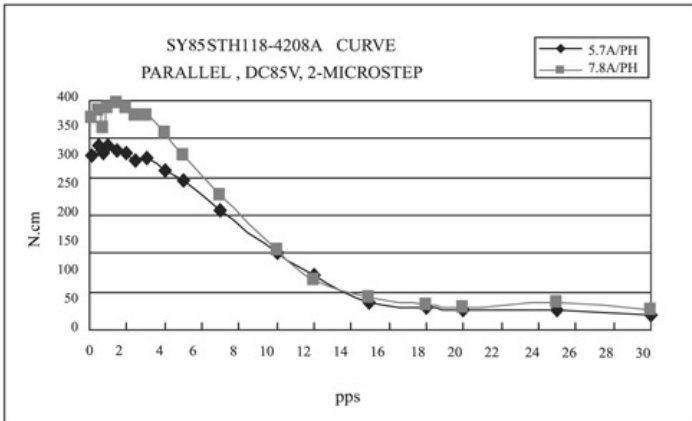
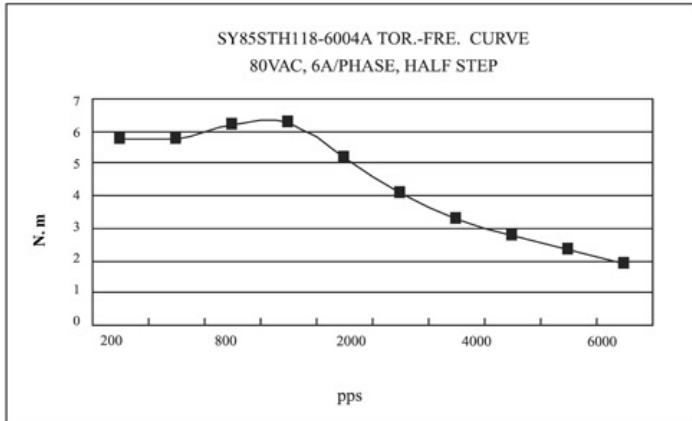
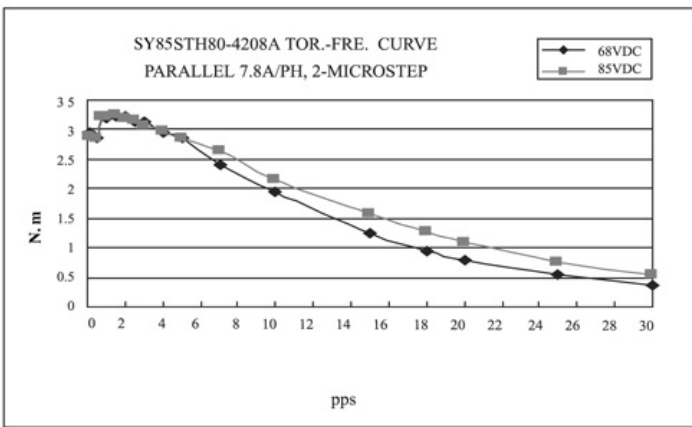
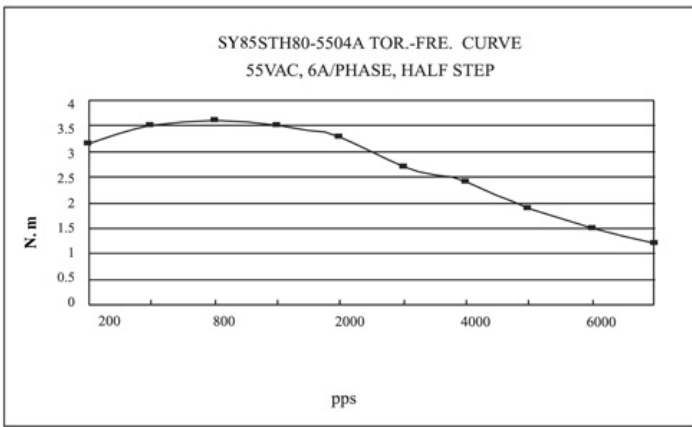


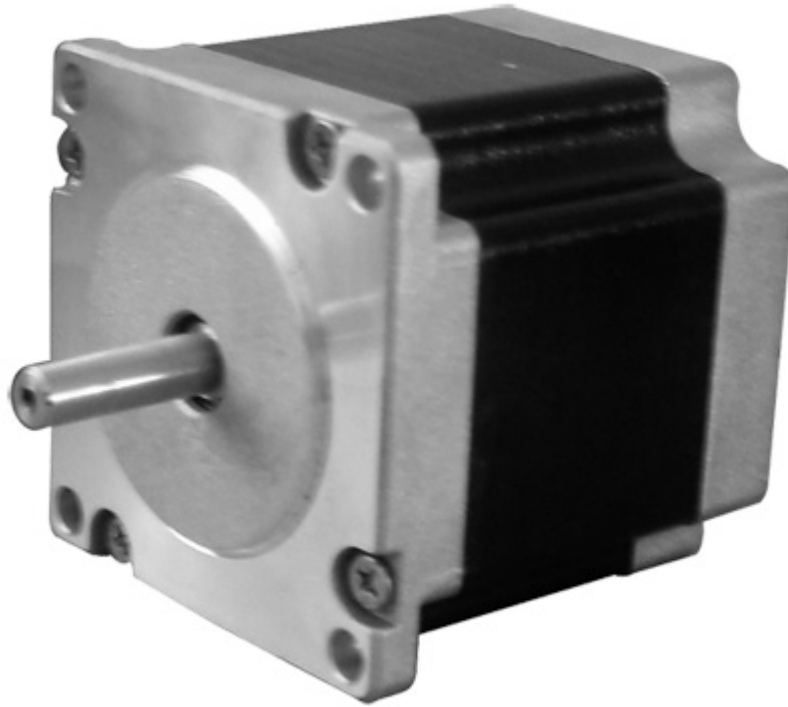
## Wiring Diagram



## Pull out torque







**Size 57mm 3-Phase Hybrid Stepping Motor**

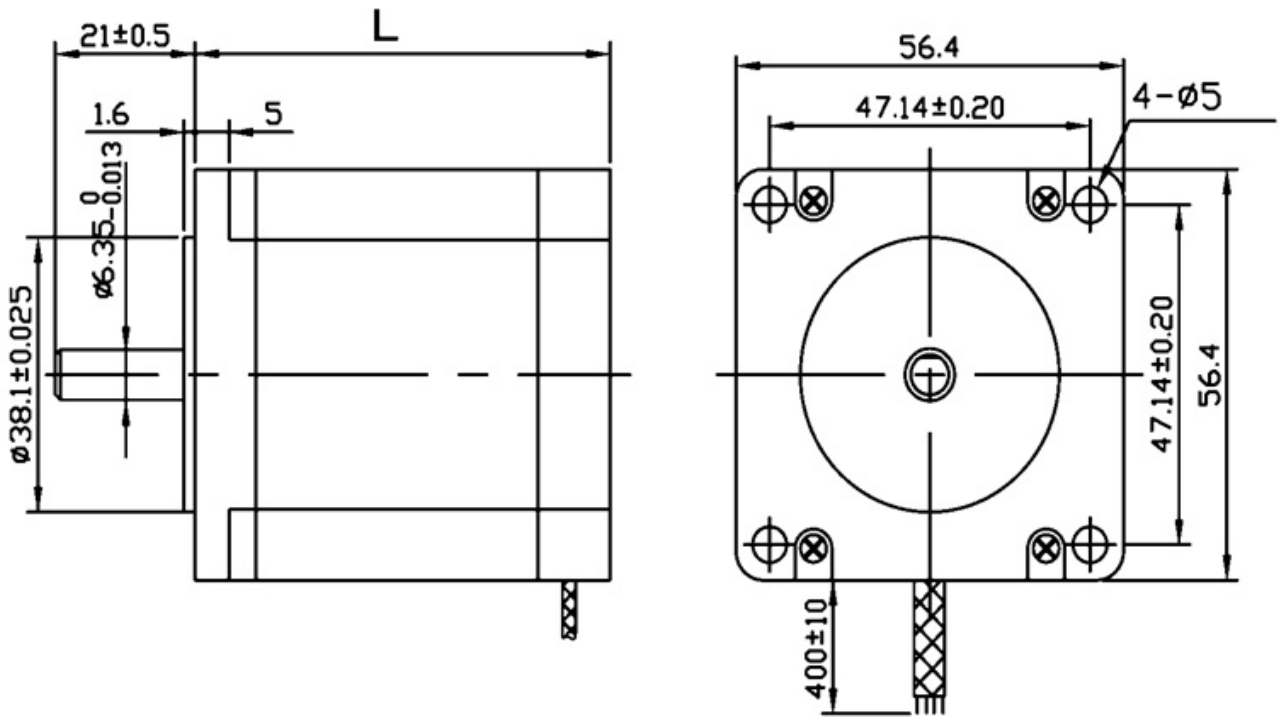
■ **General Specification for 3-Phase Hybrid Stepping Motor**

Item	Specifications
Step number per rev	200,400,500,1000,2000,4000,5000,10000
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
Rotation	B

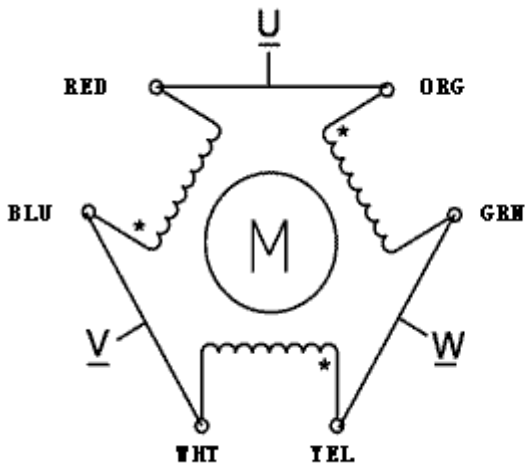
■ **Size 57mm 3-Phase Hybrid Stepping Motor Specifications**

Model No.	Rated Voltage	Inductance /Phase	Resistance /Phase	Current /Phase	Holding Torque	Detent Torque	Rotor Inertia	Weight	Length
Unit	V	mH	Ω	A	N.m	kg-cm	g-cm <sup>2</sup>	kg	mm
SY573P42-5206A	6.76	1.1	1.3	5.2	0.45	2.1	110	0.45	42
SY573P56-5606A	4	1.1	0.7	5.6	0.90	4	300	0.75	56
SY573P79-5806A	6	1.3	1.05	5.8	1.5	6.8	480	1.10	79

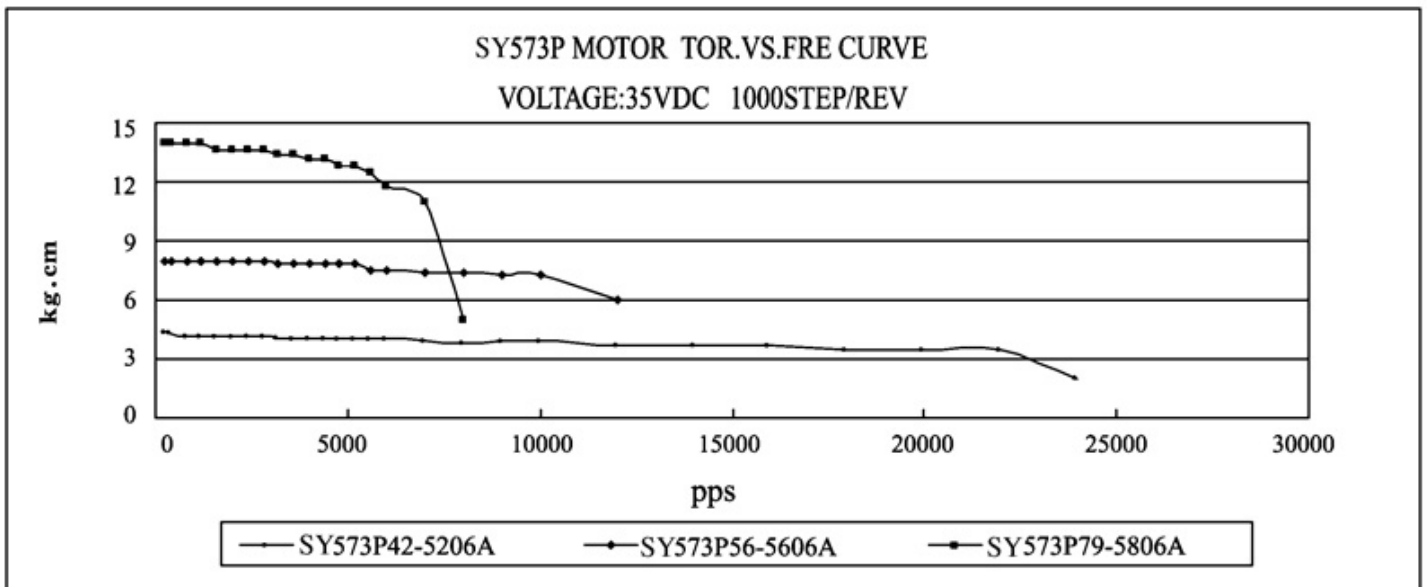
■ **Dimension**



■ Wiring Diagram



■ Pull out torque





**Size 85mm 3-Phase Hybrid Stepping Motor**

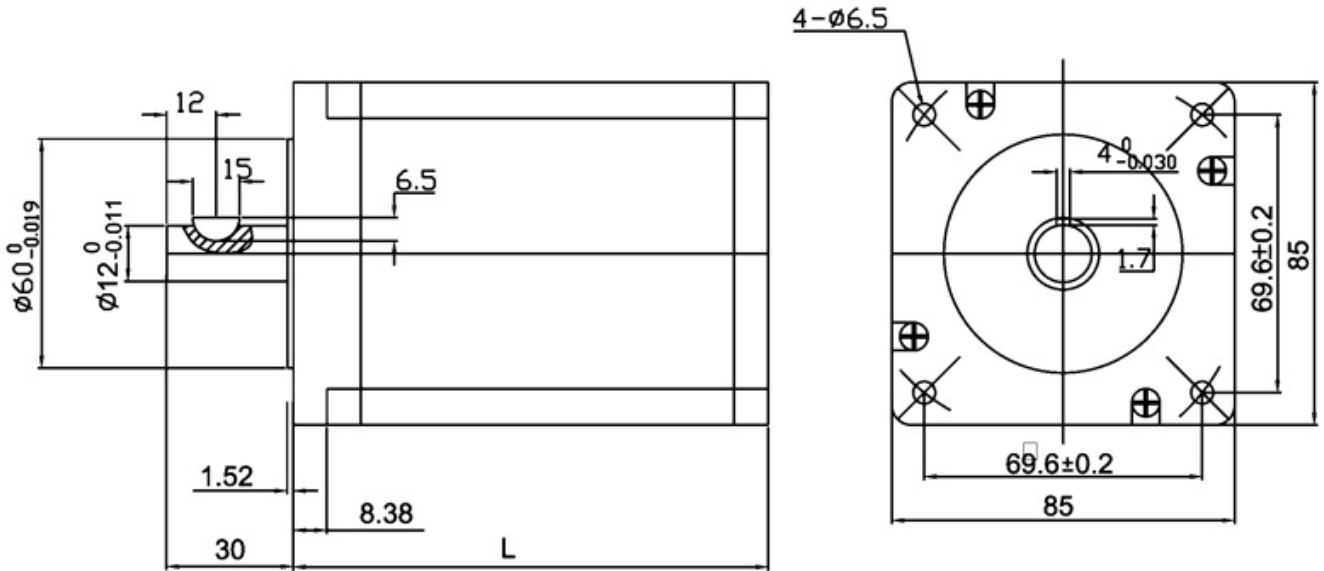
■ **General Specification for 3-Phase Hybrid Stepping Motor**

Item	Specifications
Step number per rev	200,400,500,1000,2000,4000,5000,10000
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	220N ( 20mm from the flange )
Max. axial force	60N
Rotation	B

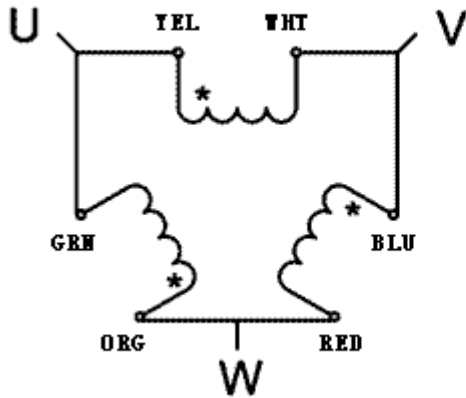
■ **Size 85mm 3-Phase Hybrid Stepping Motor Specifications**

Model No.	Voltage /Phase	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	Detent Torque	Rotor Inertia	Weight	Length
Unit	VAC	A	Ω	mH	N.m	N.m	g-cm <sup>2</sup>	kg	mm
SY853P67-1756A	325	1.75	4.25	12.3	2.26	2	2320	2.7	97
SY853P97-2006A	325	2	5.4	23	4.52	4			
SY853P97-5806A	40	5.8	0.9	3.2	4.52	4			
SY853P97-5206A	40	5.2	1.1	6.8	4.52	4	3300	3.8	127
SY853P127-2256A	325	2.25	9	41	6.78	6			

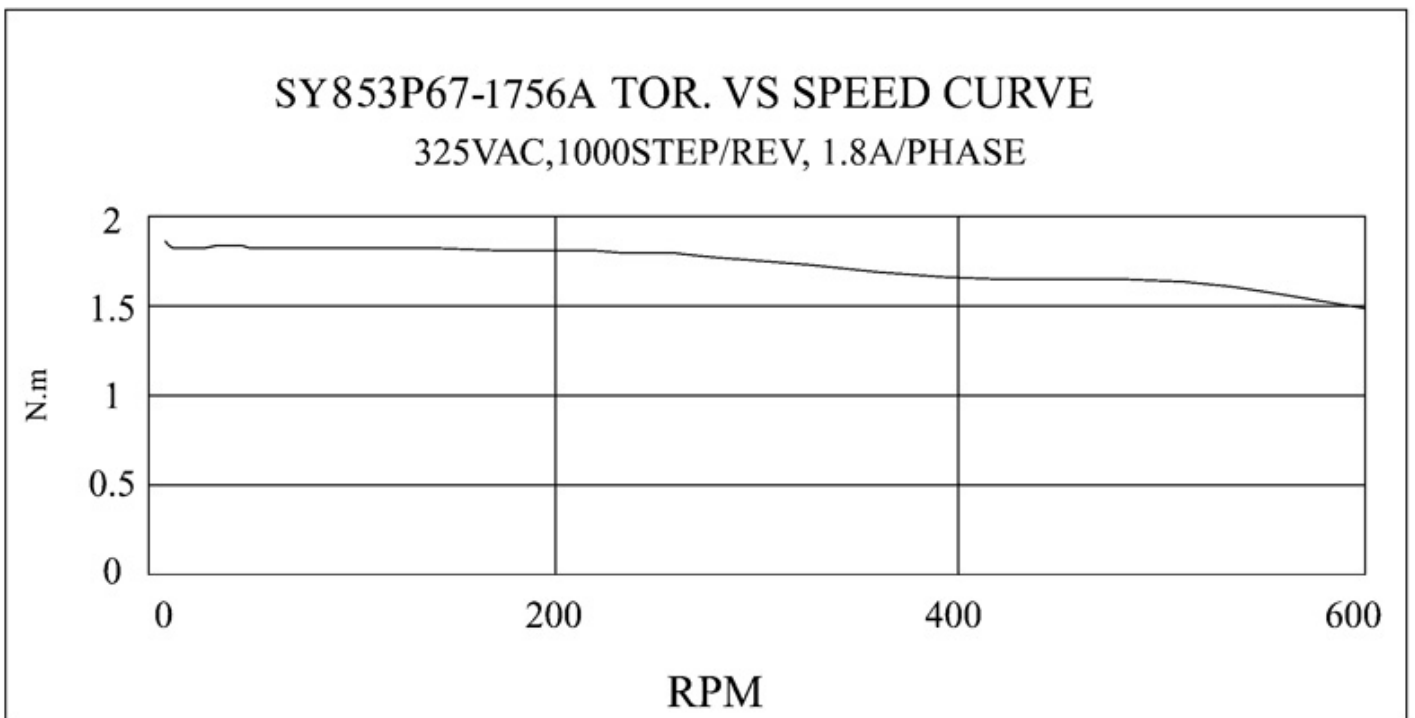
Dimension



Wiring Diagram

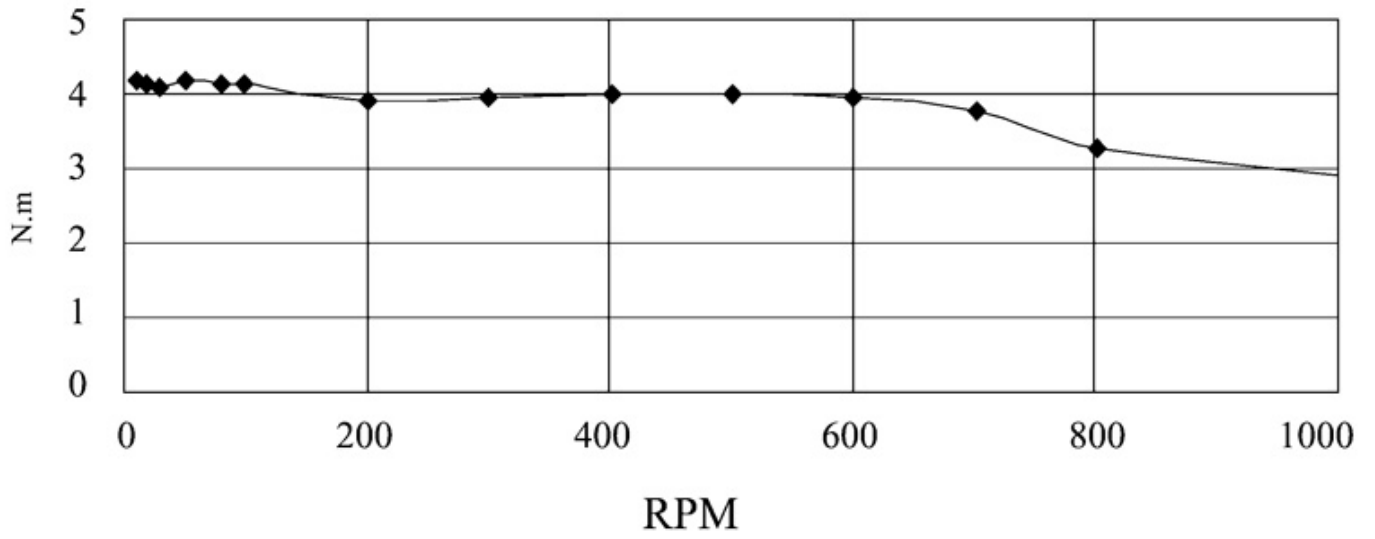


Pull out torque



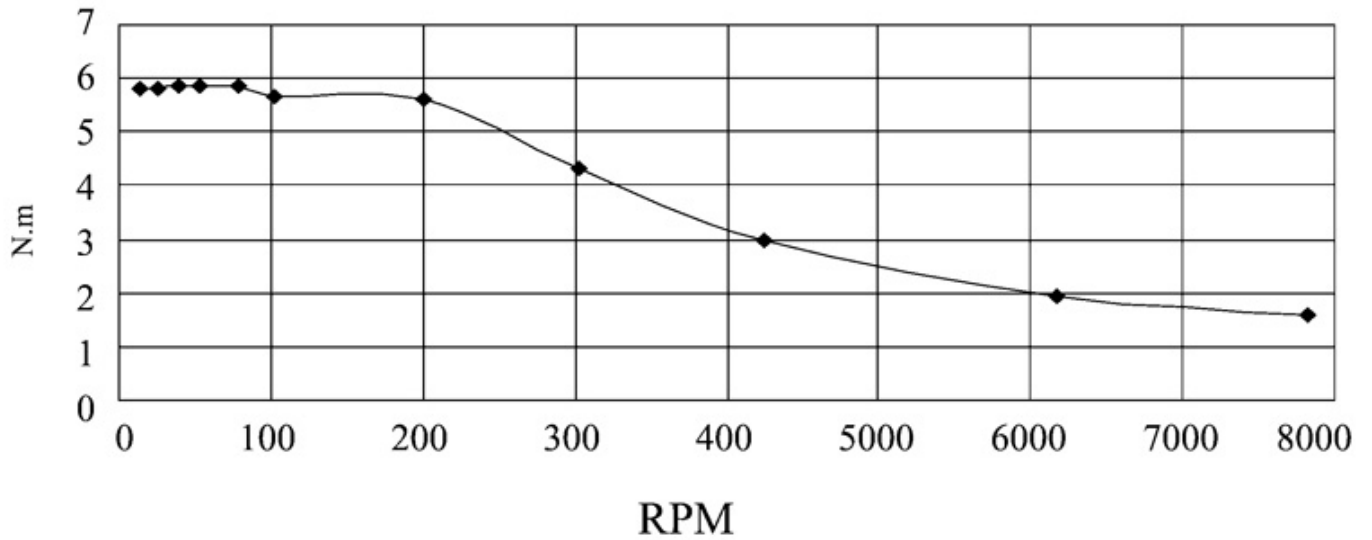
### SY853P97-2006A TOR. VS SPEED CURVE

325VAC,1000STEP/REV, 2A/PHASE

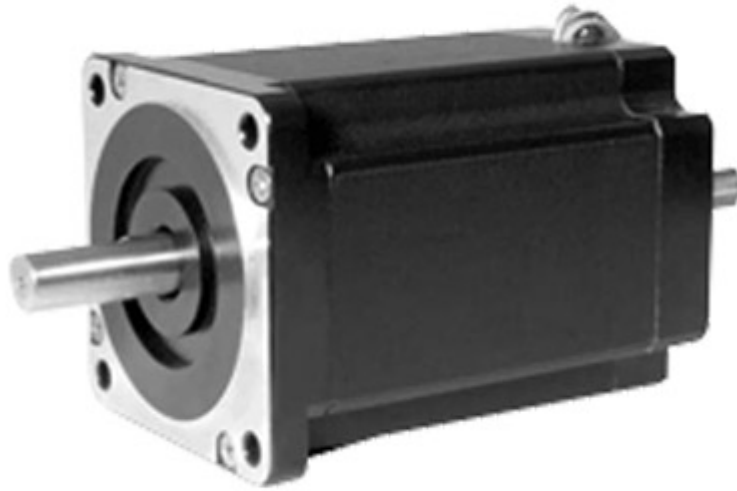


### SY853P127-2256A TOR. VS SPEED CURVE

325VAC,1000STEP/REV, 2.3A/PHASE







### 1.8° Size 110mm High Torque Hybrid Stepping Motor

#### General Specification for High Torque 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	500VAC 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 )

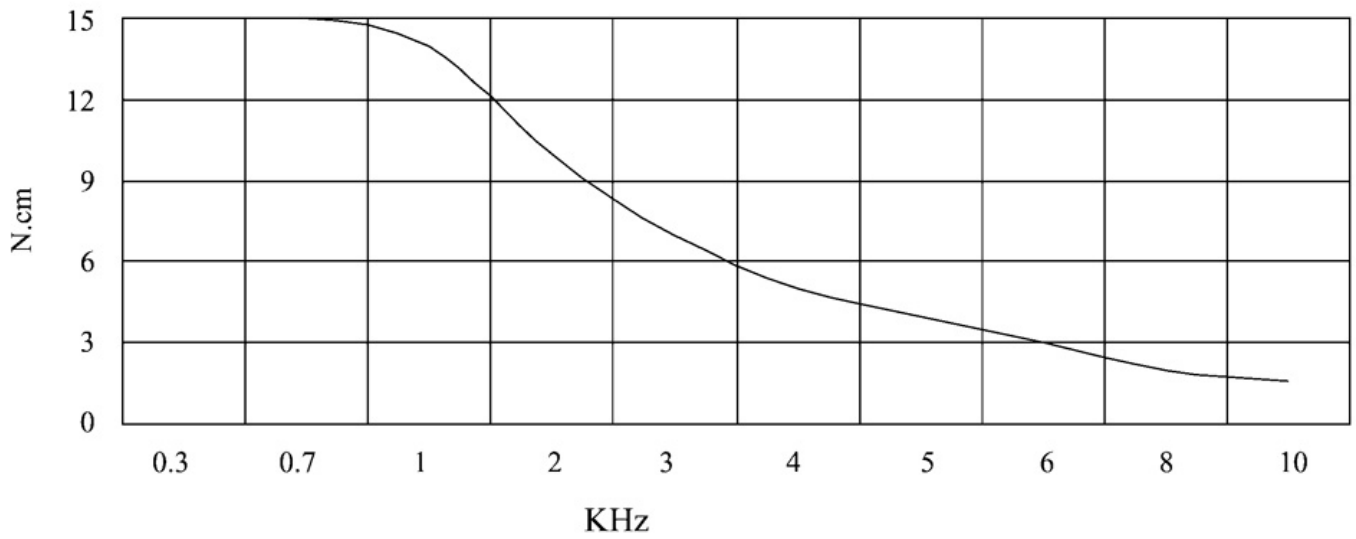
#### Size 110mm High Torque Hybrid Stepping Motor Specifications

Model No.	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Unit	A	Ω	mH	N.m		g-cm <sup>2</sup>	kg	kg-cm	mm
SY110STH99-5504A	5.5	0.9	12	11.2	4	5500	5	3	99
SY110STH150-6504A	6.5	0.8	15	21	4	10900	8.4	5.9	150
SY110STH201-8004A	8	0.67	12	28	4	16200	11.7	7.5	201

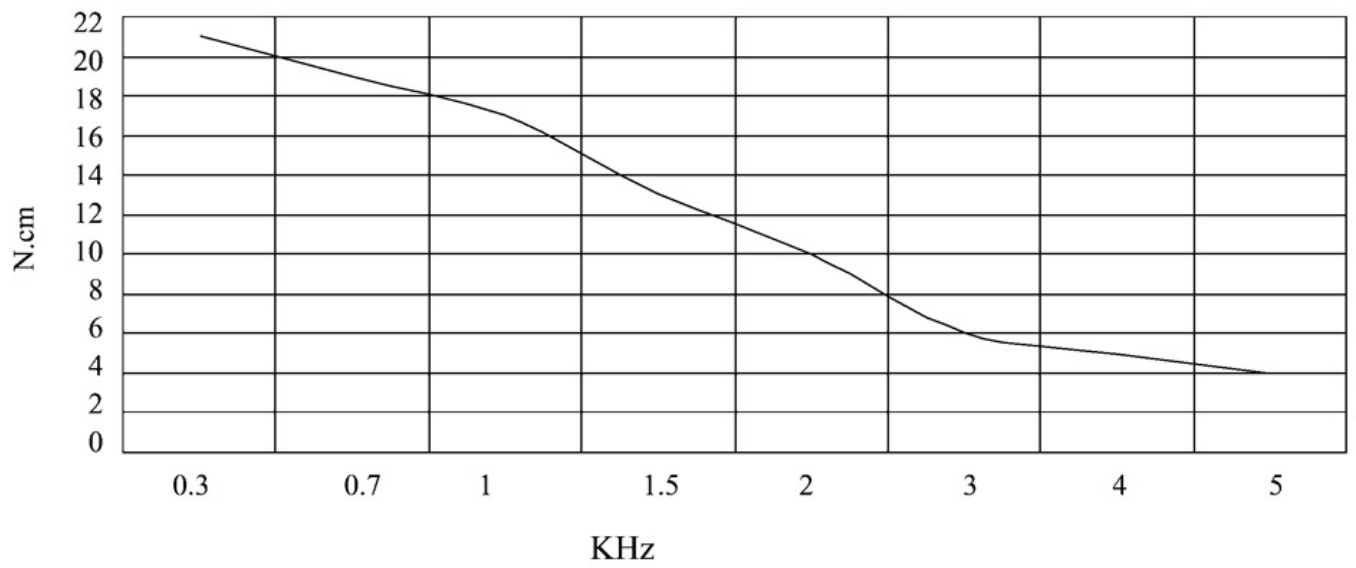
#### Dimension

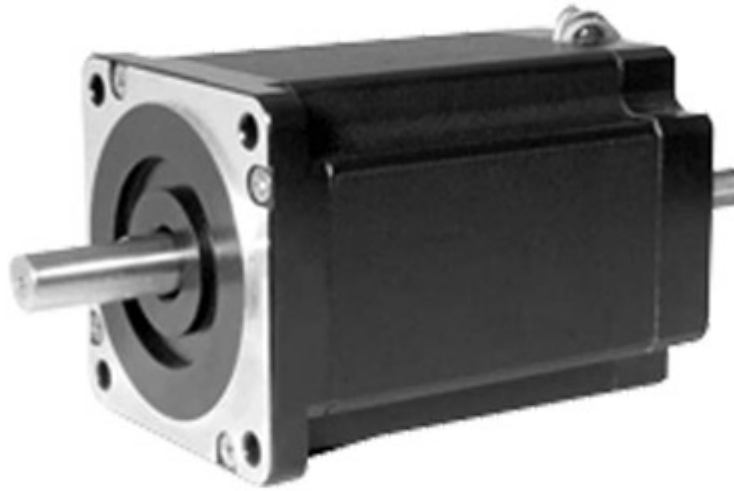


SY 110STH150-6504A TOR.-FRE. CURVE  
CONSTANT CURRENT 6A,100VAC,HALF STEP



SY110STH201-8004A TOR.-FRE. CURVE  
CONSTANT CURRENT 6A,110VAC,HALF STEP





### 1.2° Size 110mm High Torque Hybrid Stepping Motor

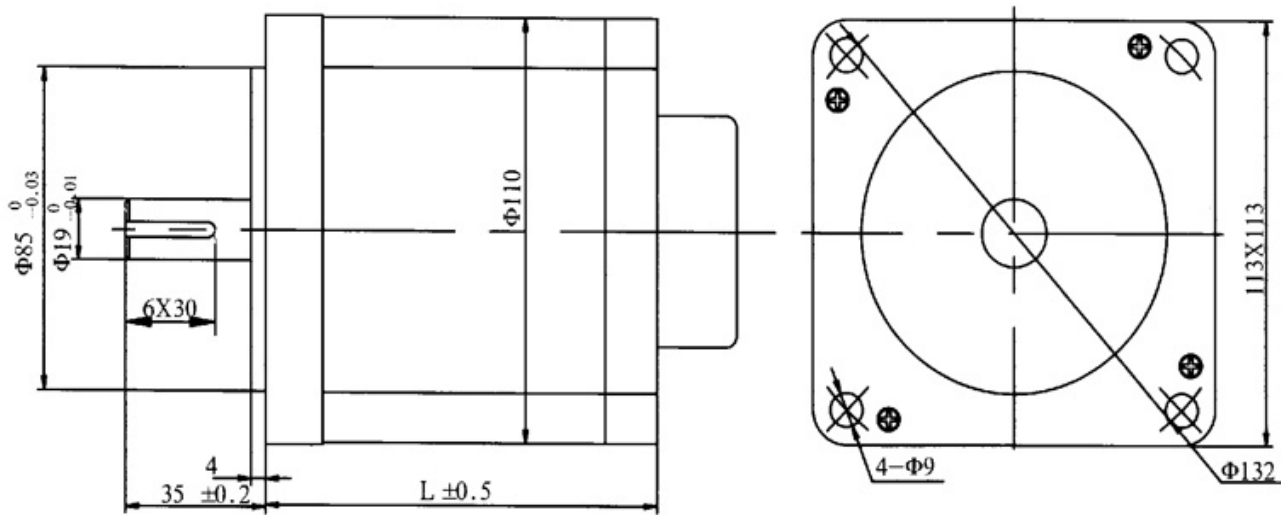
#### General Specification for High Torque Hybrid Stepping Motor

Item	Specifications
Step Angle	1.2° or 0.6°
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	220N ( 20mm from the flange )
Max. axial force	60N
Rotation	B

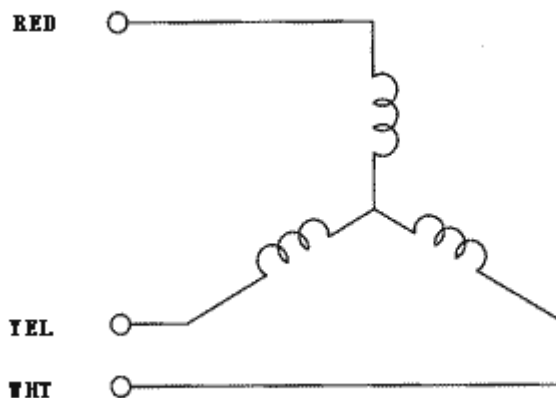
#### Size 110mm High Torque Hybrid Stepping Motor Specifications

Model No.	Step angle	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	Rotor Inertia	Weight	Detent Torque	Length
Unit	degree	V	A	Ω	mH	N.m	Kg-cm <sup>2</sup>	kg	N.m	mm
SY110STH137-4203A	1.2/0.6	220	4.2	1.7	15	8	8.4	7	0.3	137
SY110STH170-4803A	1.2/0.6	220	4.8	1.4	17	12	12.6	10	0.6	170
SY110STH205-5203A	1.2/0.6	220	5.2	1.7	18	16	16.8	12	0.9	205

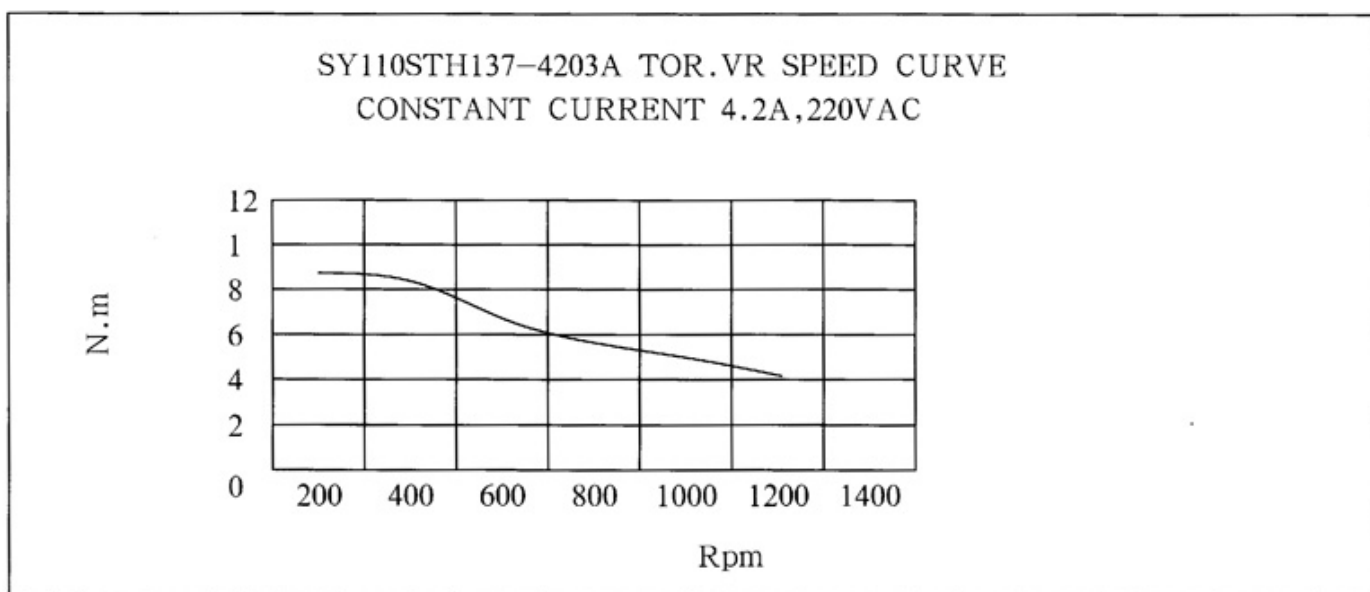
#### Dimension



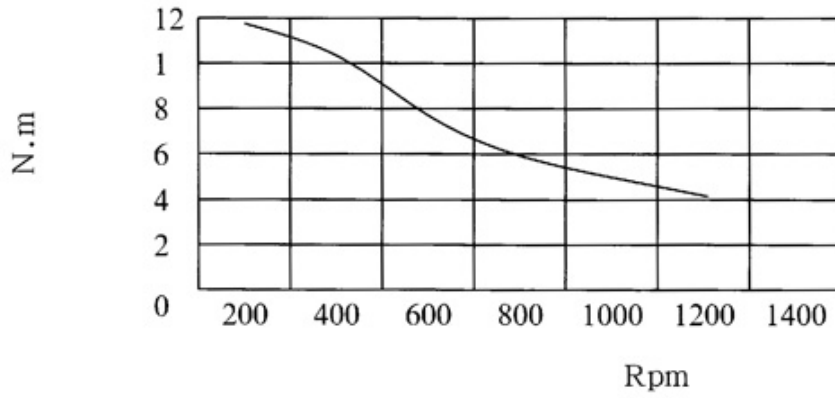
■ Wiring Diagram



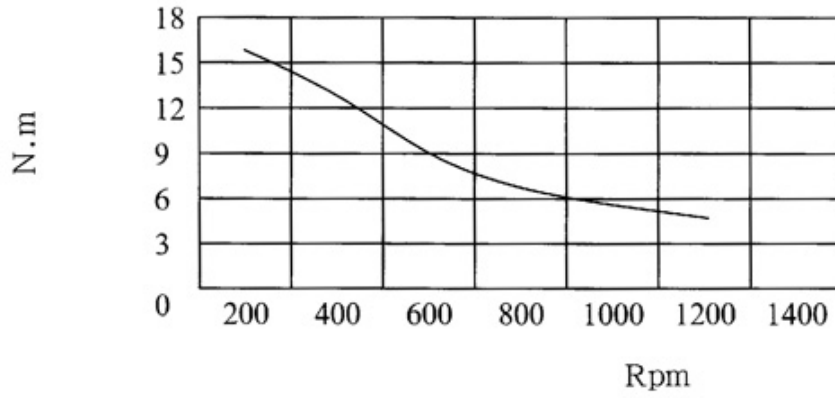
■ Pull out torque



SY110STH170-4803A TOR.VR SPEED CURVE  
CONSTANT CURRENT 4.8A, 220VAC



SY110STH205-5203A TOR.VR SPEED CURVE  
CONSTANT CURRENT 5.2A, 220VAC





**Size 110mm 3-Phase Hybrid Stepping Motor**

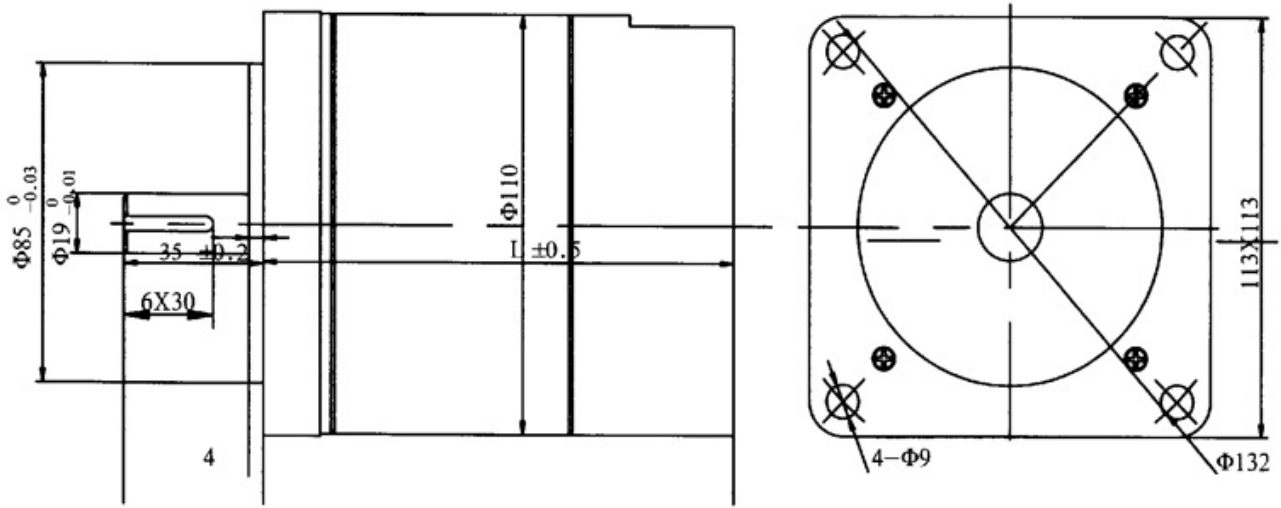
■ **General Specification for 3-Phase Hybrid Stepping Motor**

Item	Specifications
Step Angle	1.2° or 0.6°
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	220N ( 20mm from the flange )
Max. axial force	60N
Rotation	B

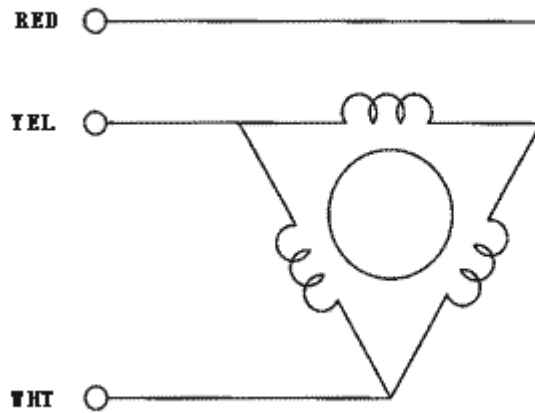
■ **Size 110mm 3-Phase Hybrid Stepping Motor Specifications**

Model No.	Step angle	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	Rotor Inertia	Weight	Detent Torque	Length
Unit	degree	V	A	Ω	mH	N.m	Kg-cm <sup>2</sup>	kg	N.m	mm
SY1103P158-2403A	1.2/0.6	220	2.4	1.7	12.2	8	8.4	7	0.3	158
SY1103P199-2803A	1.2/0.6	220	2.8	1.4	13.2	12	12.6	10	0.6	199
SY1103P240-3003A	1.2/0.6	220	3	1.7	18.4	16	16.8	12	0.9	240

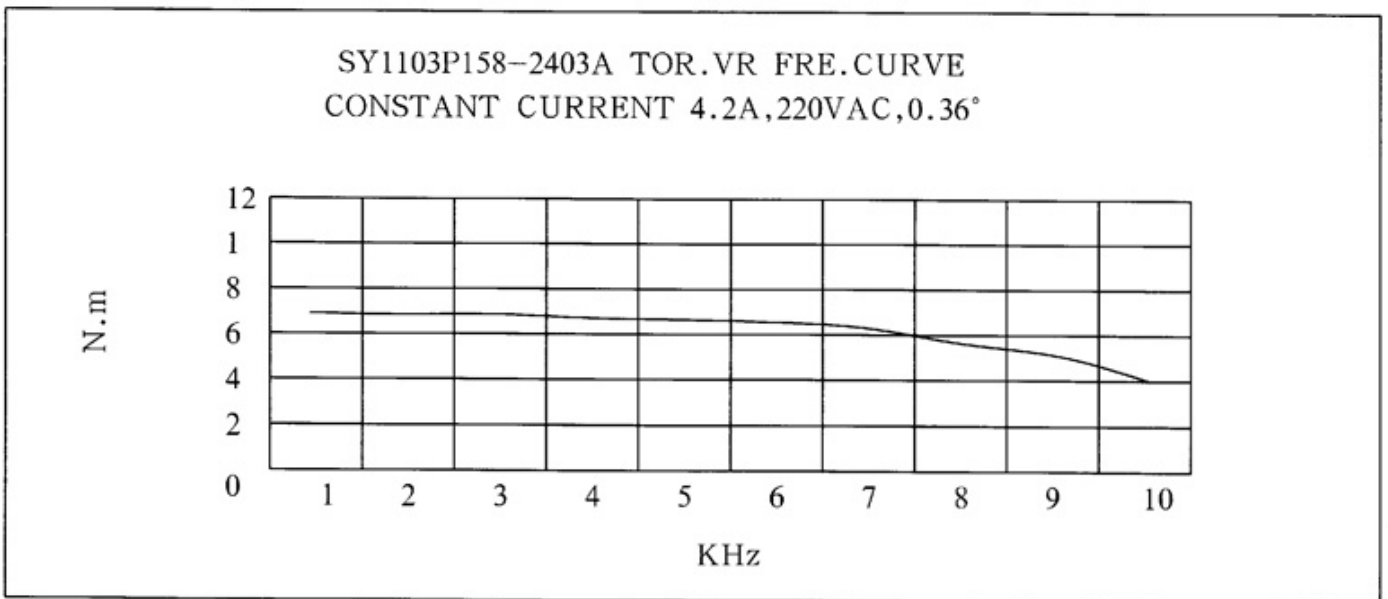
■ **Dimension**



■ Wiring Diagram

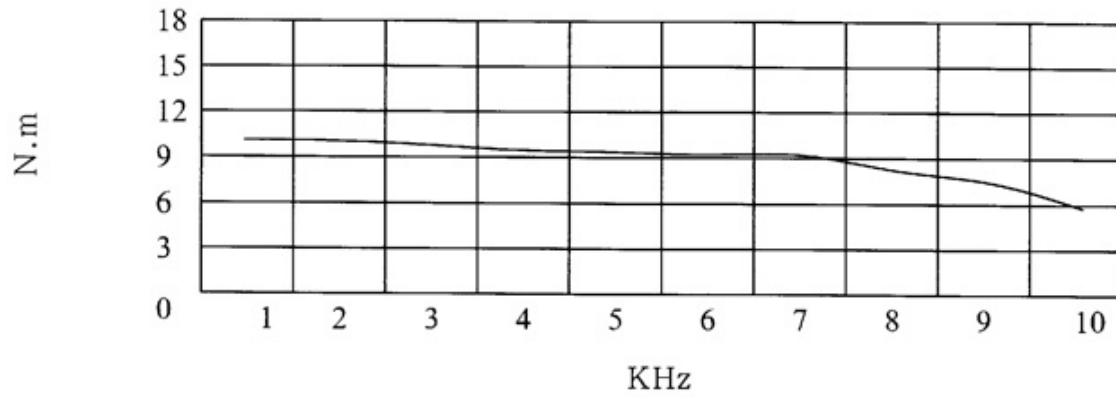


■ Pull out torque

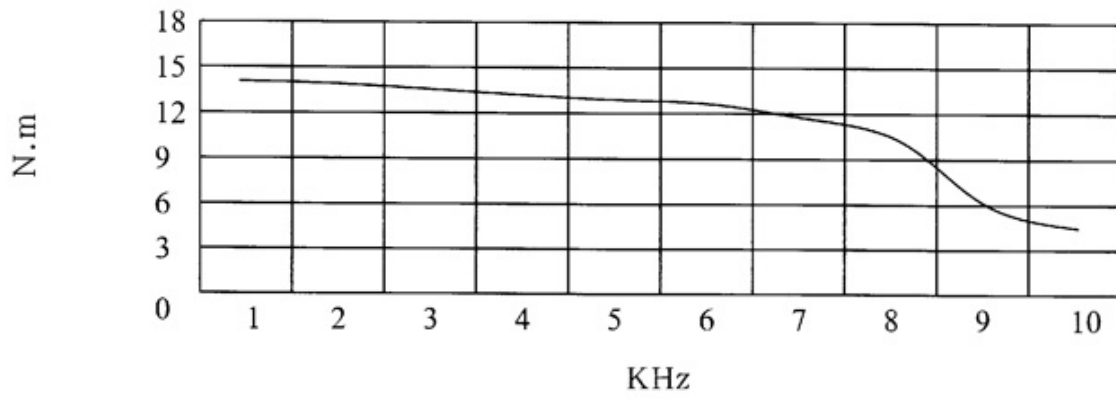




SY1103P199-2803A TOR.VR FRE.CURVE  
CONSTANT CURRENT 4.8A,220VAC,0.36°



SY1103P240-3003A TOR.VR FRE.CURVE  
CONSTANT CURRENT 5.2A,220VAC,0.36°





**1.8° Size 130mm Hybrid Stepping Motor**

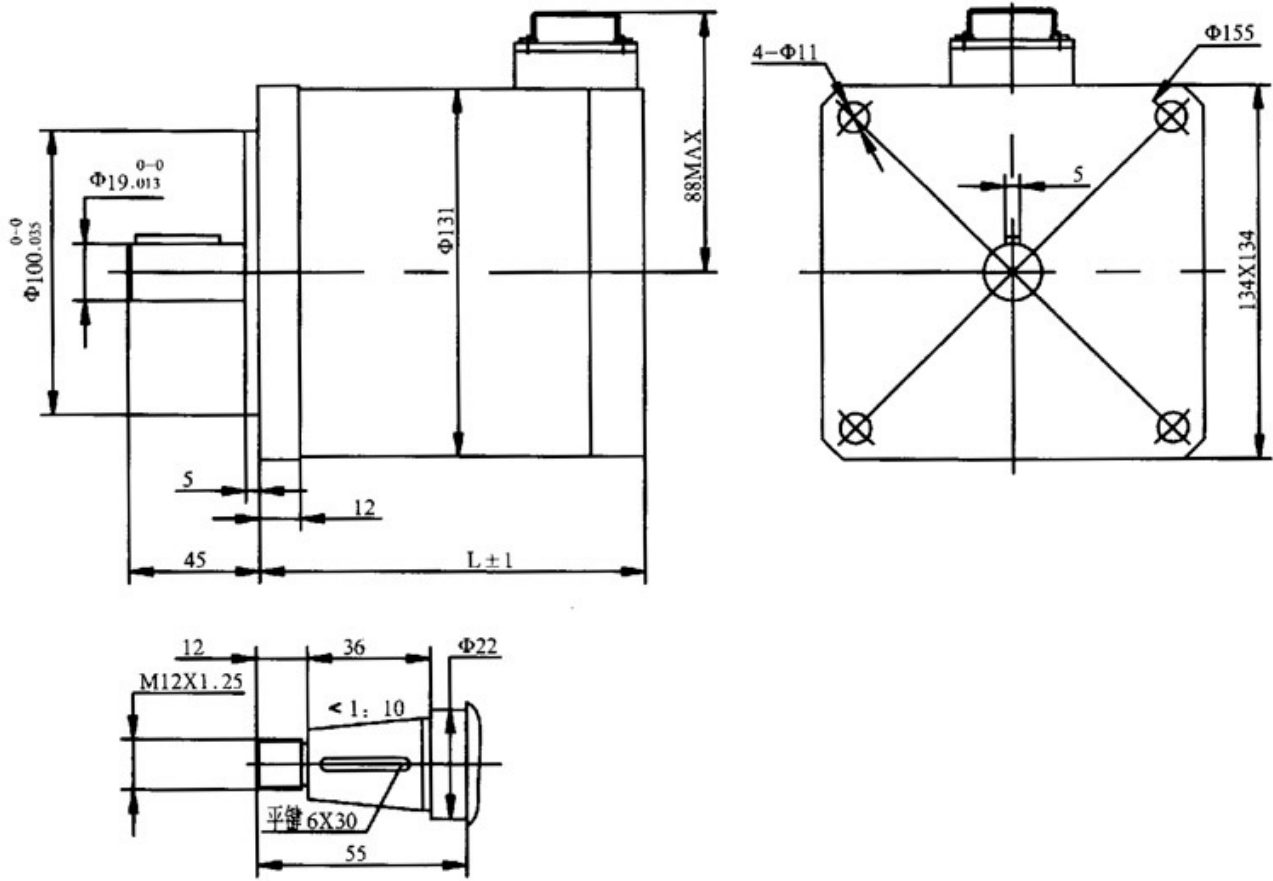
■ **General Specification for Hybrid Stepping Motor**

Item	Specifications
Step Angle	1.8° or 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	220N ( 20mm from the flange )
Max. axial force	60N
Rotation	B

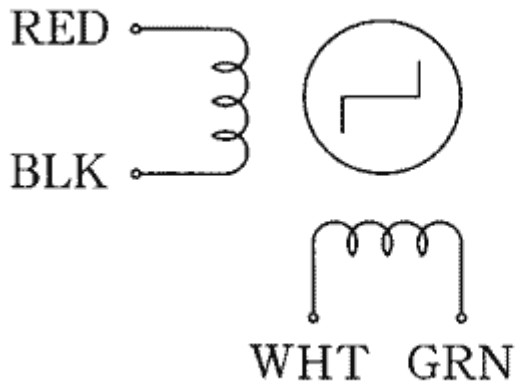
■ **Size 130mm Hybrid Stepping Motor Specifications**

Model No.	Step angle	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	Rotor Inertia	Weight	Detent Torque	Length
Unit	degree	V	A	Ω	mH	N.m	Kg-cm <sup>2</sup>	kg	N.m	mm
SY130ST198-6004A	1.8/0.9	80-325	6	0.75	12	22	30	16	0.6	198
SY130ST225-6004A	1.8/0.9	80-325	6	0.77	12	27	35	18	0.8	225
SY130ST282-7004A	1.8/0.9	80-325	7	0.66	9	37	45.5	22	1.2	282

■ **Dimension**

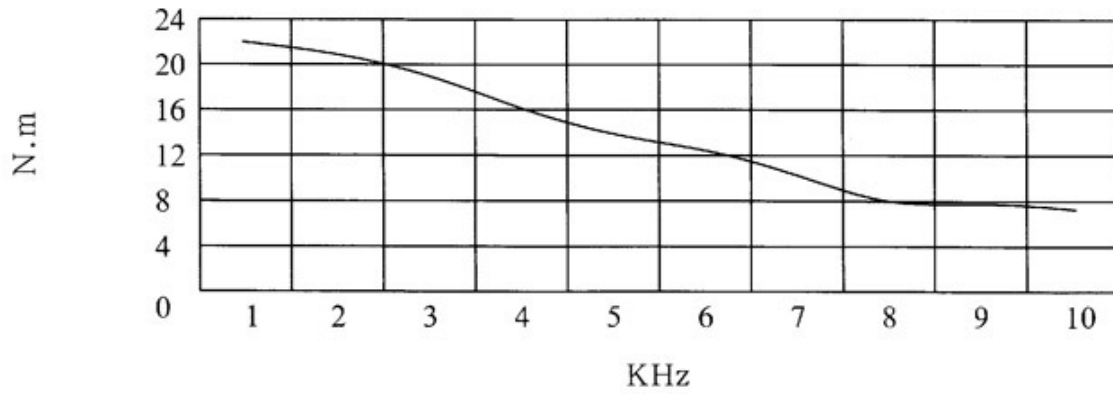


■ Wiring Diagram

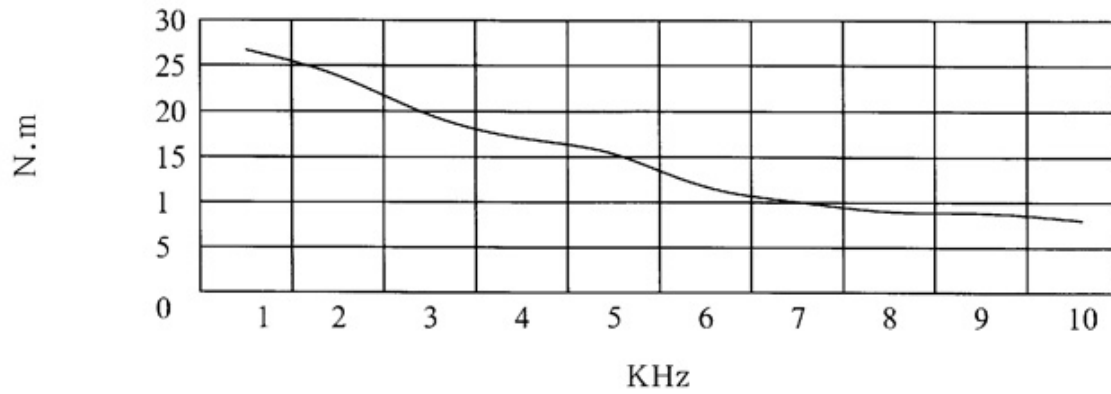


■ Pull out torque

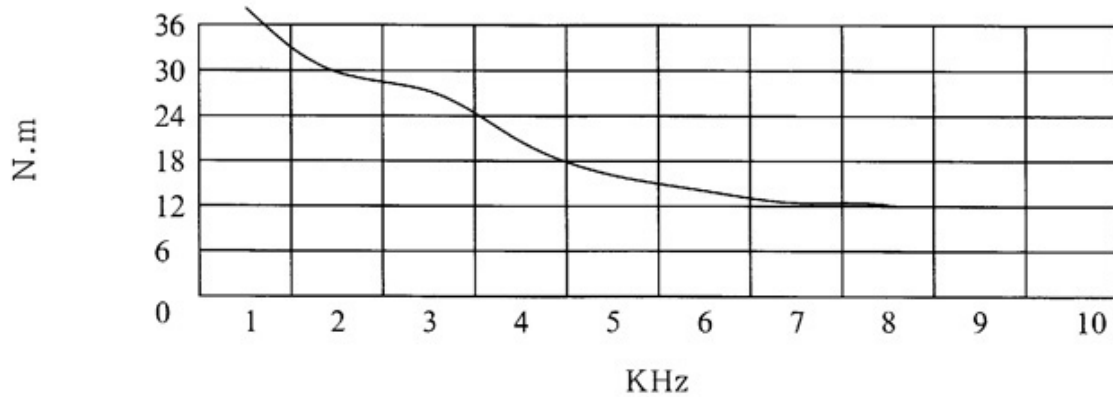
SY130ST198-6004A TOR.VR FRE.CURVE  
CONSTANT CURRENT 6A,220VAC,0.9°



SY130ST225-6004A TOR.VR FRE.CURVE  
CONSTANT CURRENT 6A,220VAC,0.9°



SY130ST282-7004A TOR.VR FRE.CURVE  
CONSTANT CURRENT 7A,220VAC,0.9°





**Size 130mm 3-Phase Hybrid Stepping Motor**

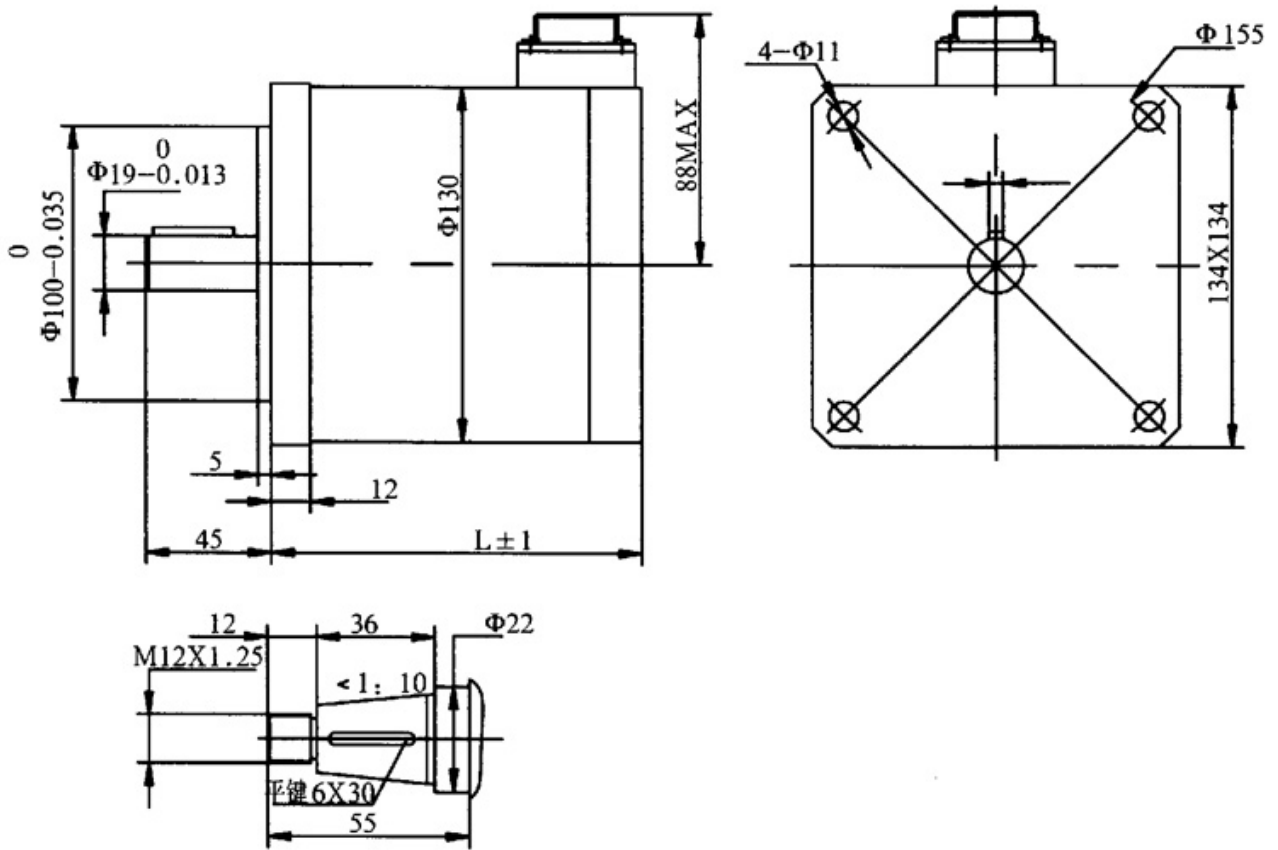
■ **General Specification for 3-Phase Hybrid Stepping Motor**

Item	Specifications
Step Angle	1.2° or 0.6°
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	220N ( 20mm from the flange )
Max. axial force	60N
Rotation	B

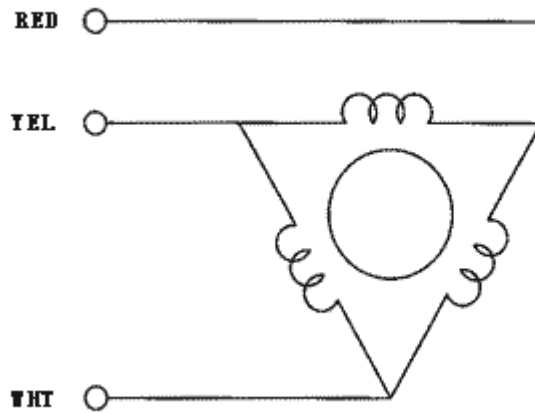
■ **Size 130mm 3-Phase Hybrid Stepping Motor Specifications**

Model No.	Step angle	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	Rotor Inertia	Weight	Detent Torque	Length
Unit	degree	V	A	Ω	mH	N.m	Kg-cm <sup>2</sup>	kg	N.m	mm
SY1303P168-5003A	1.2/0.6	80-325	5	0.8	4.1	23	25	13	0.4	168
SY1303P197-5003A	1.2/0.6	80-325	5	1	5.1	30	30	16	0.6	197
SY1303P225-5003A	1.2/0.6	80-325	5	1.3	13.1	36	35	18	0.8	225
SY1303P280-5003A	1.2/0.6	80-325	5	1.6	17.5	50	45.5	22	1.2	280

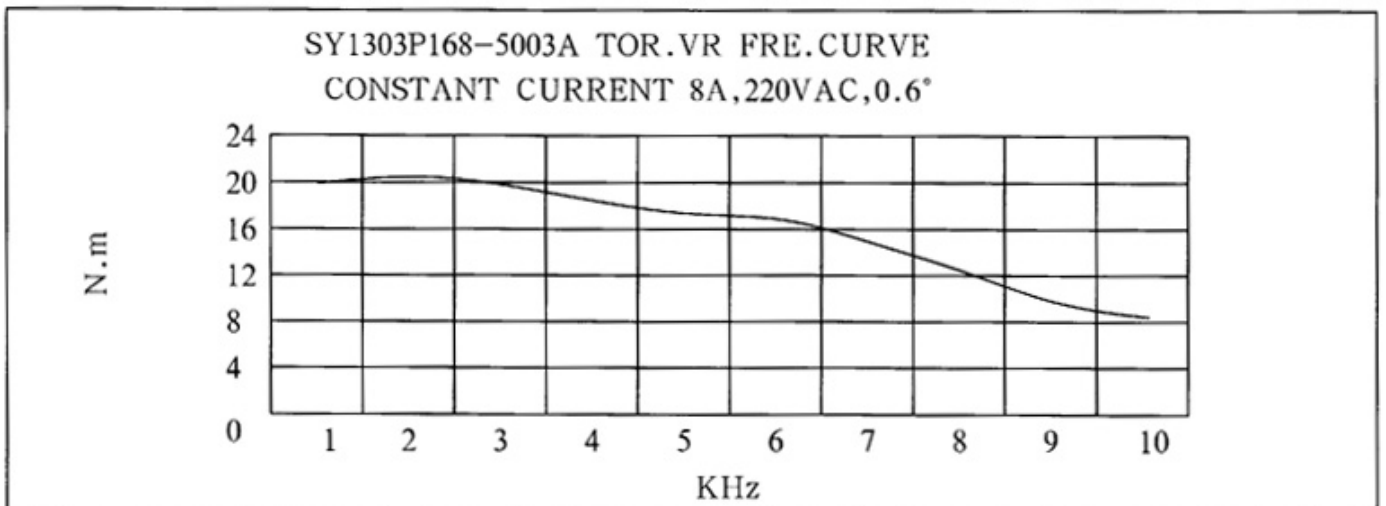
■ **Dimension**



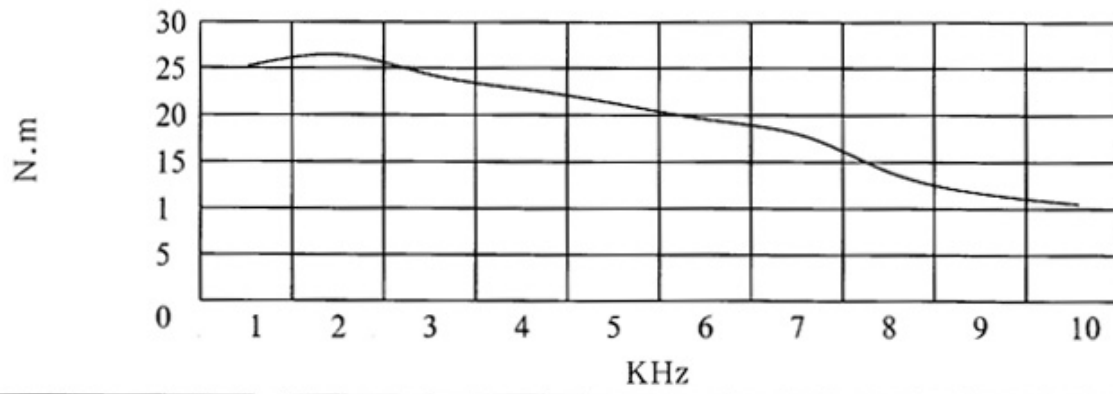
■ Wiring Diagram



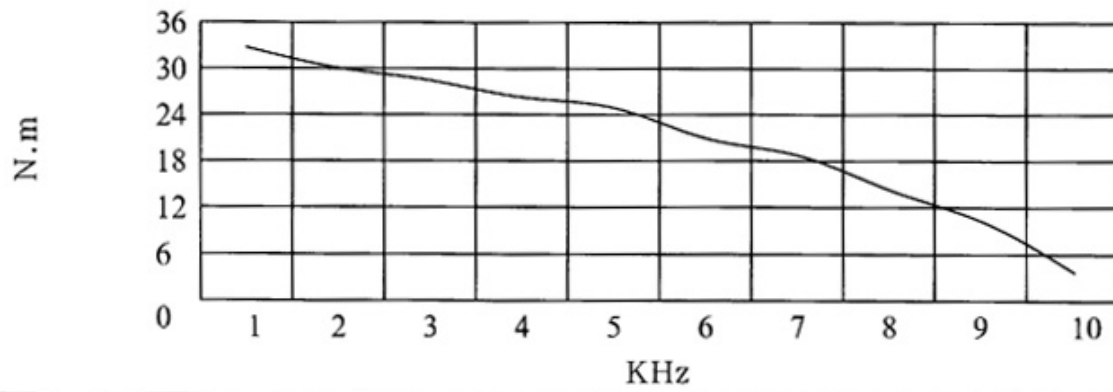
■ Pull out torque



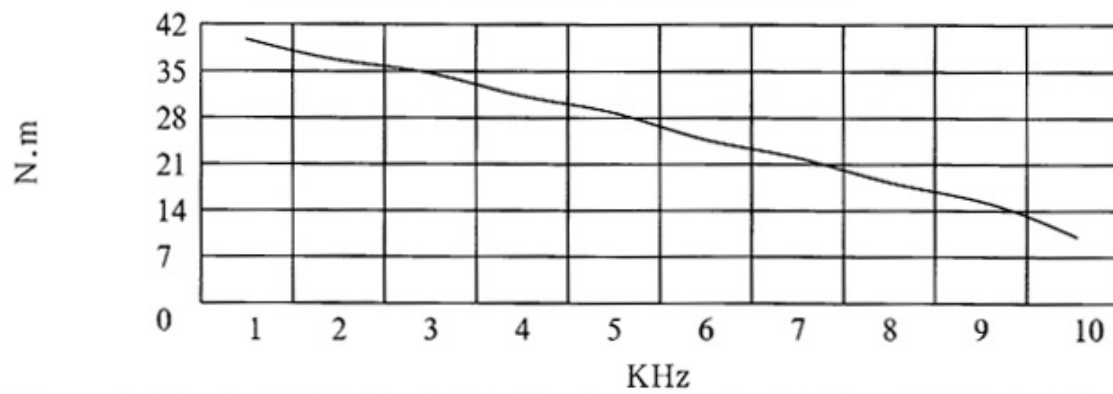
SY1303P197-5003A TOR.VR FRE.CURVE  
CONSTANT CURRENT 8A,220VAC,0.6°



SY1303P225-5003A TOR.VR FRE.CURVE  
CONSTANT CURRENT 8A,220VAC,0.6°



SY1303P280-5003A TOR.VR FRE.CURVE  
CONSTANT CURRENT 8A,220VAC,0.6°





**Size 130mm 5-Phase Hybrid Stepping Motor**

■ **General Specification for 5-Phase Hybrid Stepping Motor**

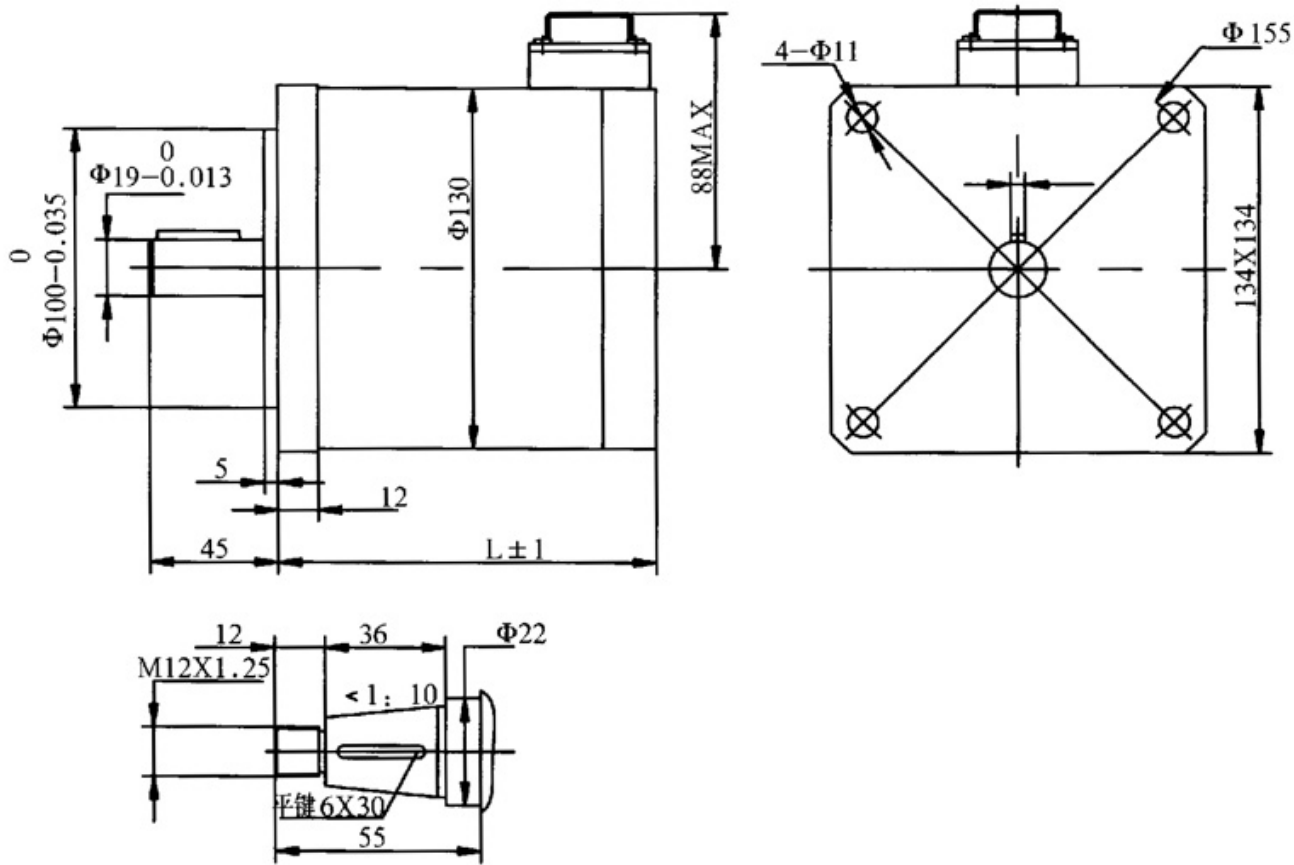
Item	Specifications
Step Angle	0.72° or 0.36°
Step Angle Accuracy	±5% (full step, no load)
Resistance Accuracy	±10%
Inductance Accuracy	±20%
Temperature Rise	80°C Max.(rated current,2 phase on)
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100M Ω Min. ,500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.02Max. (450 g-load)
Shaft Axial Play	0.08Max. (450 g-load)
Max. radial force	220N ( 20mm from the flange )
Max. axial force	60N
Rotation	B

■ **Size 130mm 5-Phase Hybrid Stepping Motor Specifications**

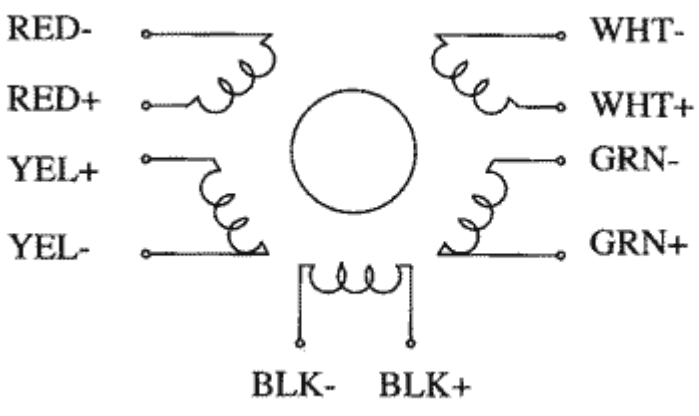
Model No.	Step angle	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	Rotor Inertia	Weight	Detent Torque	Length
Unit	degree	V	A	Ω	mH	N.m	Kg-cm <sup>2</sup>	kg	N.m	mm
SY1305P197-5010A	0.36/0.72	80-150	5	0.45	5.2	26	30	16	0.6	197
SY1305P225-5010A	0.36/0.72	80-150	5	0.5	6.5	32	35	18	0.8	225
SY1305P280-5010A	0.36/0.72	80-150	5	0.5	7.2	37	45.5	22	1.2	280

■ **Dimension**



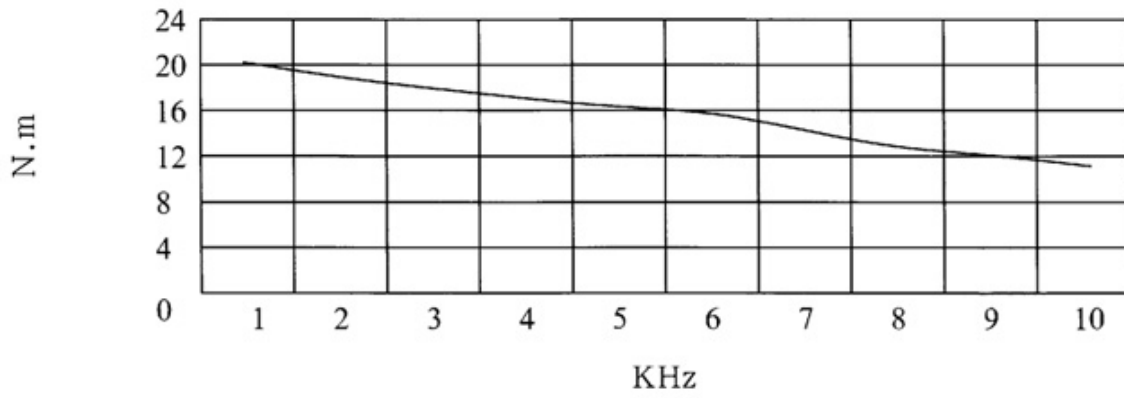


■ Wiring Diagram

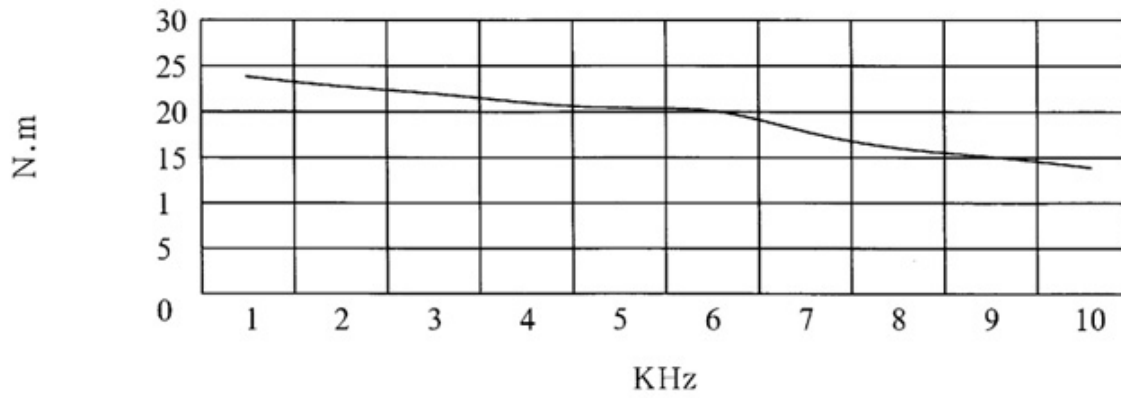


■ Pull out torque

SY1305P197-5010A TOR.VR FRE.CURVE  
CONSTANT CURRENT 5A,80VAC,0.36°



SY1305P225-5010A TOR.VR FRE.CURVE  
CONSTANT CURRENT 5A,80VAC,0.36°



SY1305P280-5010A TOR.VR FRE.CURVE  
CONSTANT CURRENT 5A,80VAC,0.36°

