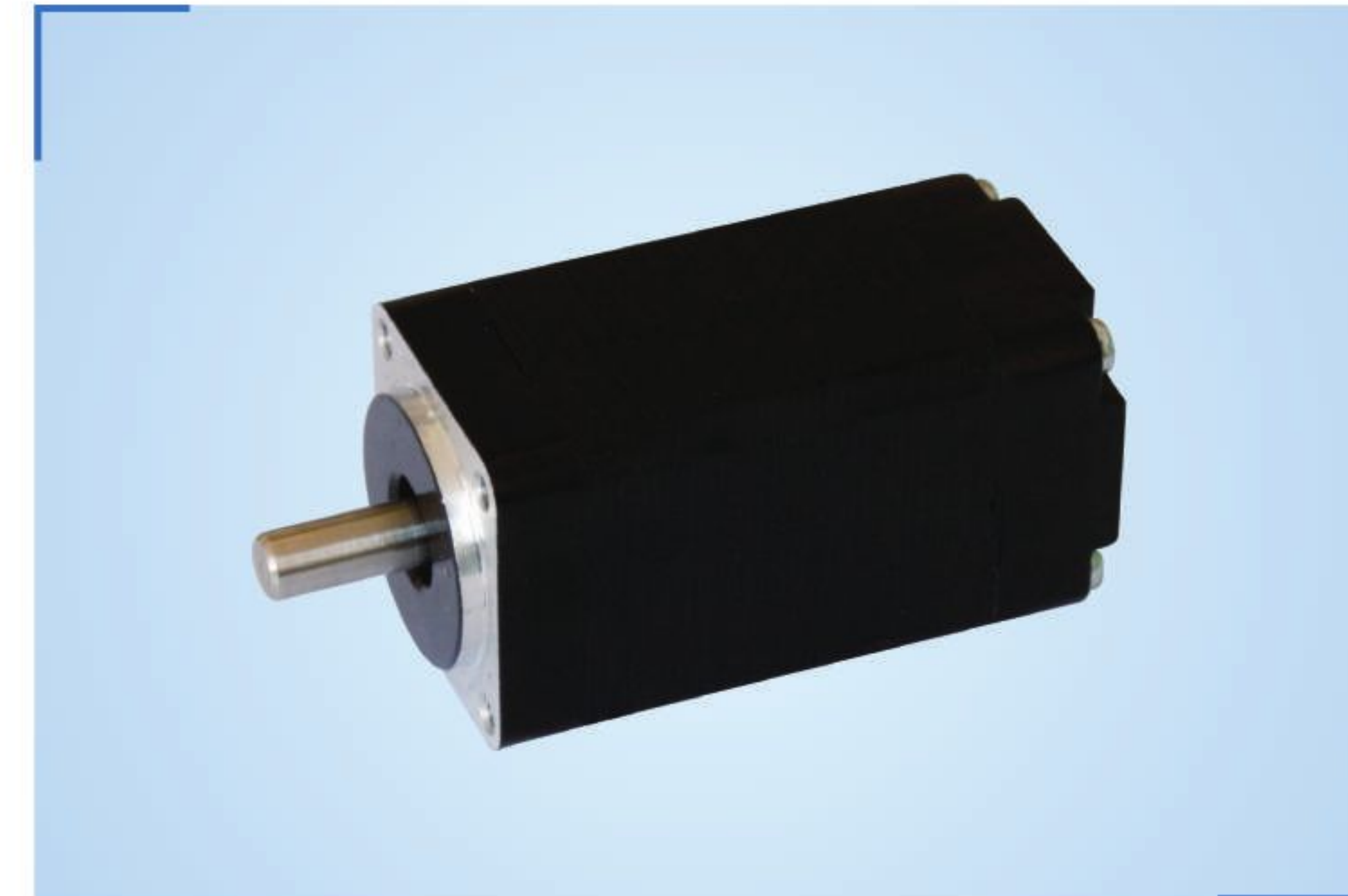


1.8°20mm (NEMA8) 2 phase Hybrid Stepper Motor

General Specification:

Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	500VAC for 1minute
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	20N (20mm from the flange)
Max. axial force	2N

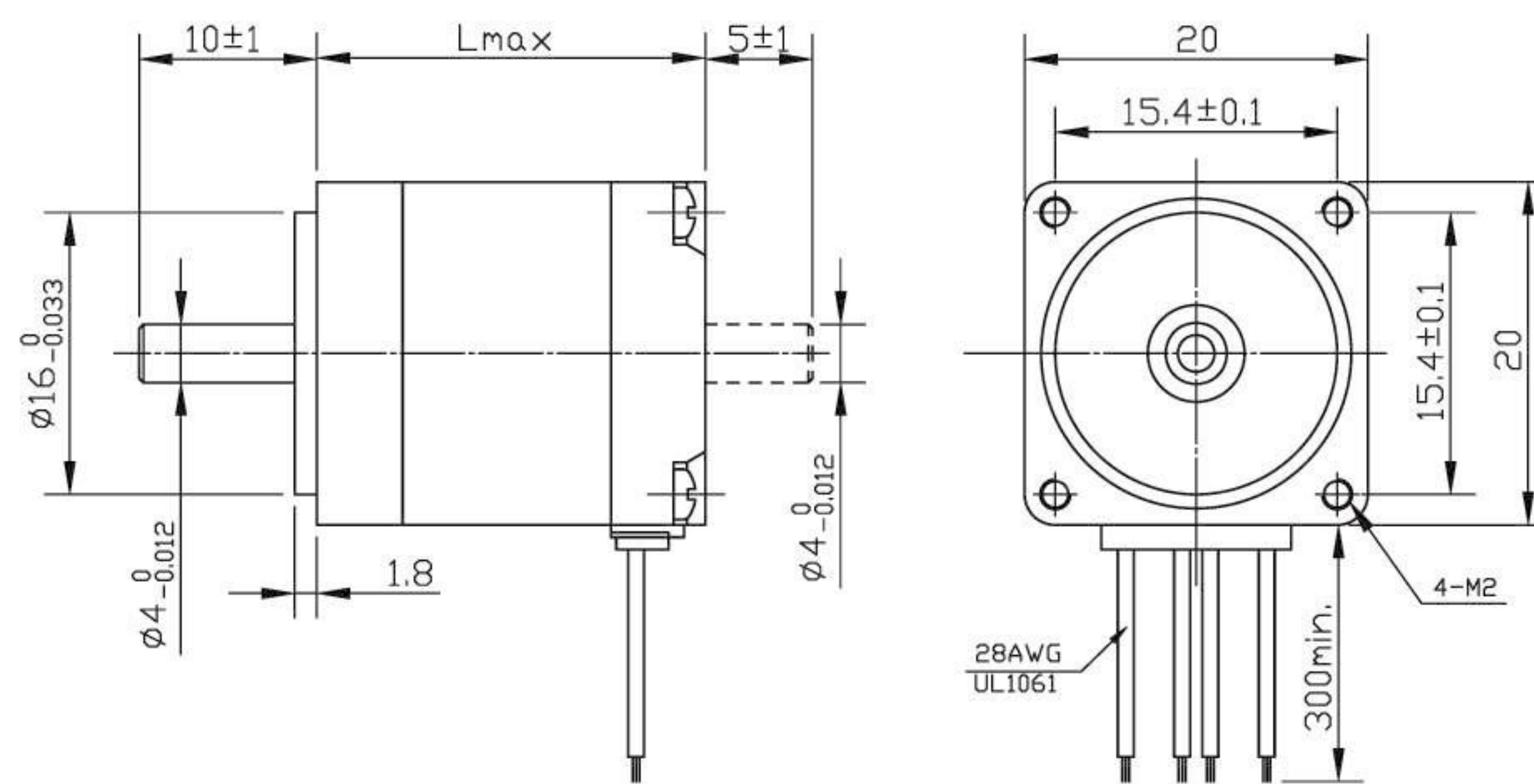


Electrical Specification:

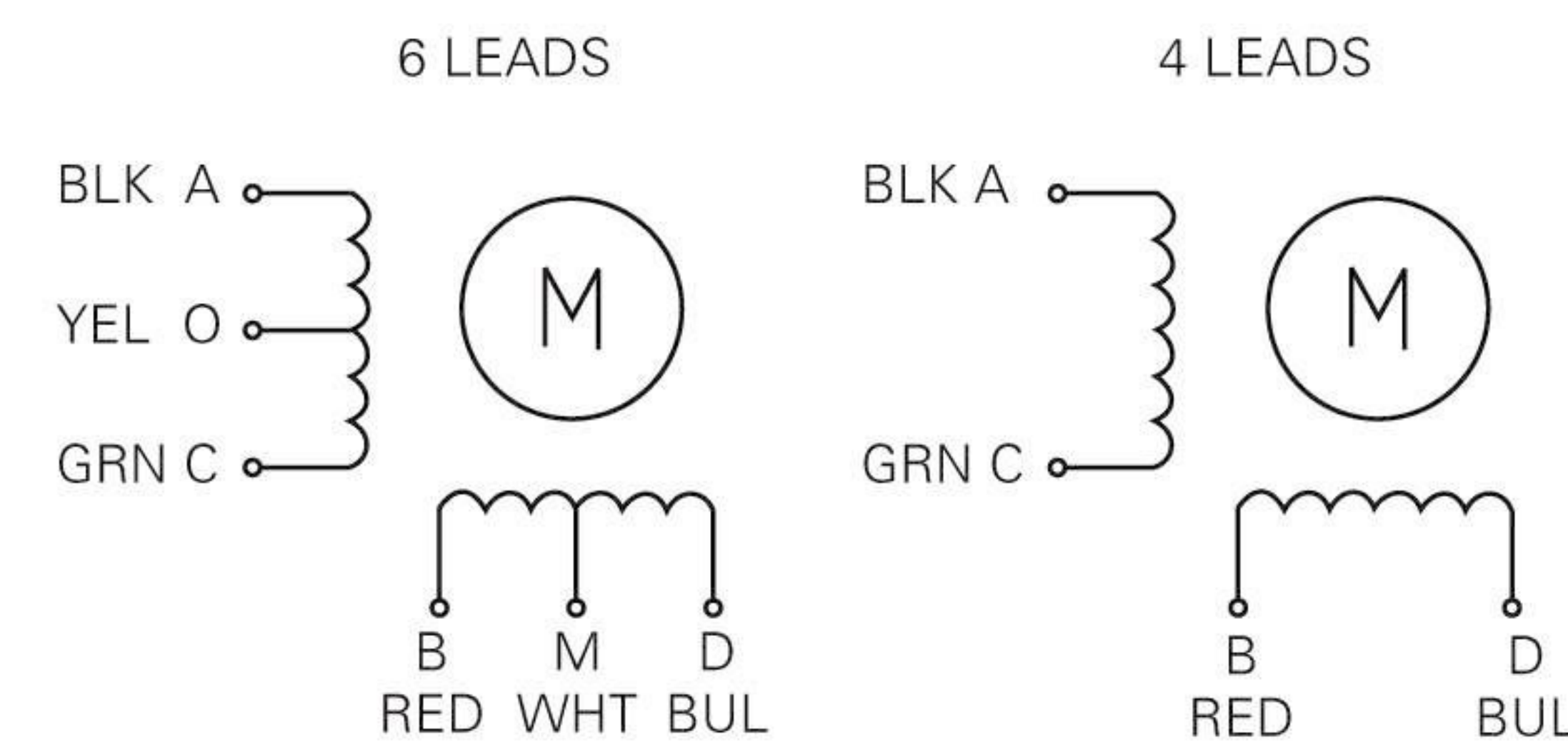
Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Tprque		#Of Leads	Weight	Length
Single Shaft	Double Shaft	V	A	Ω	mH	Oz-in	g-cm		Kg	mm
SM20HT28-0204A	SM20HT28-0204B	4.8	0.2	24	8.0	2.2	160	4	0.05	28
SM20HT30-0506A	SM20HT30-0506B	5.75	0.5	11.5	1.7	2.5	180	6	0.06	30
SM20HT33-0604A	SM20HT33-0604B	3.9	0.6	6.5	2.2	2.8	200	4	0.07	33
SM20HT38-0604A	SM20HT38-0604B	10	0.6	10	5.5	5.6	400	4	0.08	38

Dimensions:

(Unit=mm)



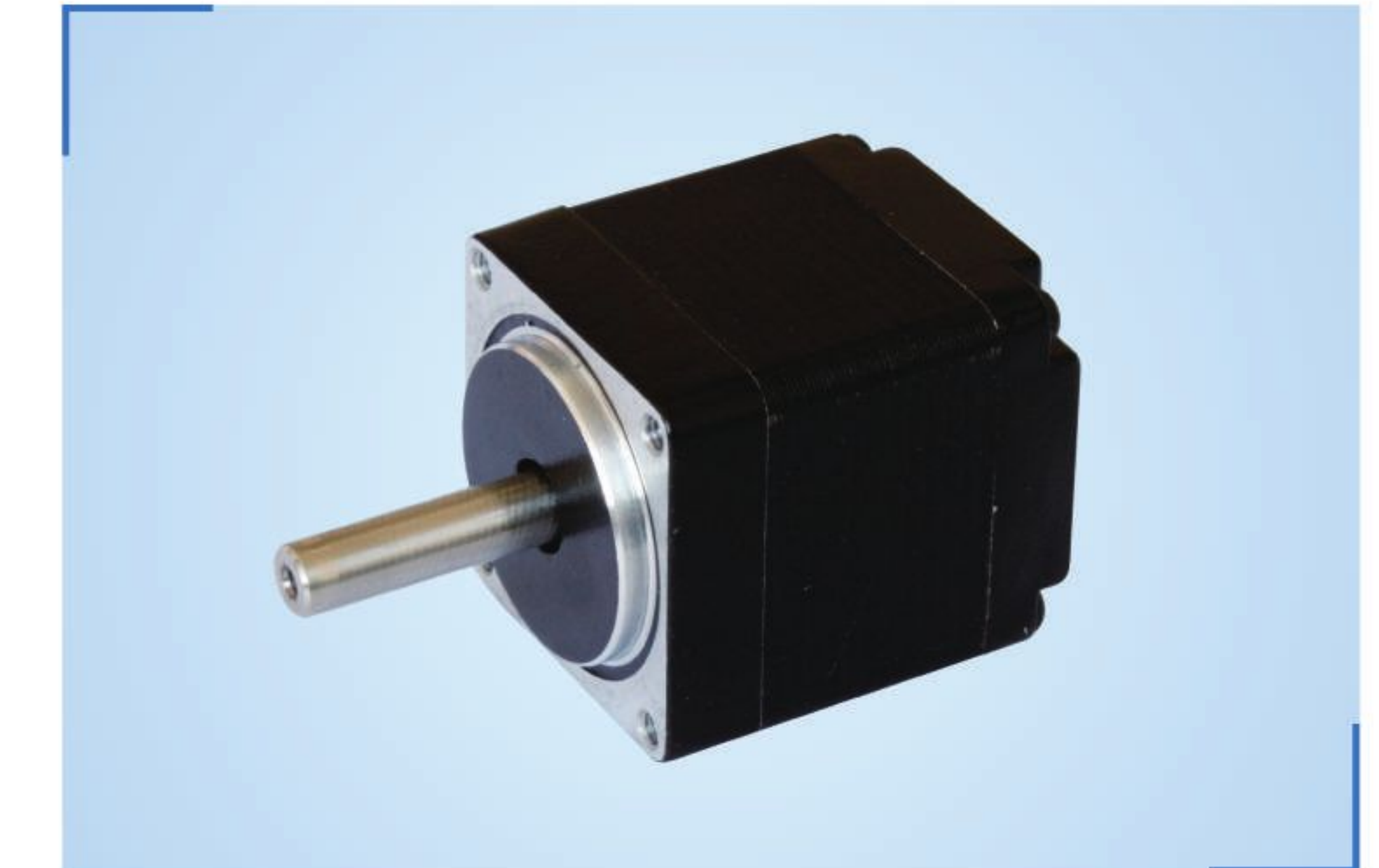
Wiring Diagram:



1.8°28mm (NEMA11) 2 phase Hybrid Stepper Motor

General Specification:

Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	500VAC for 1minute
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N

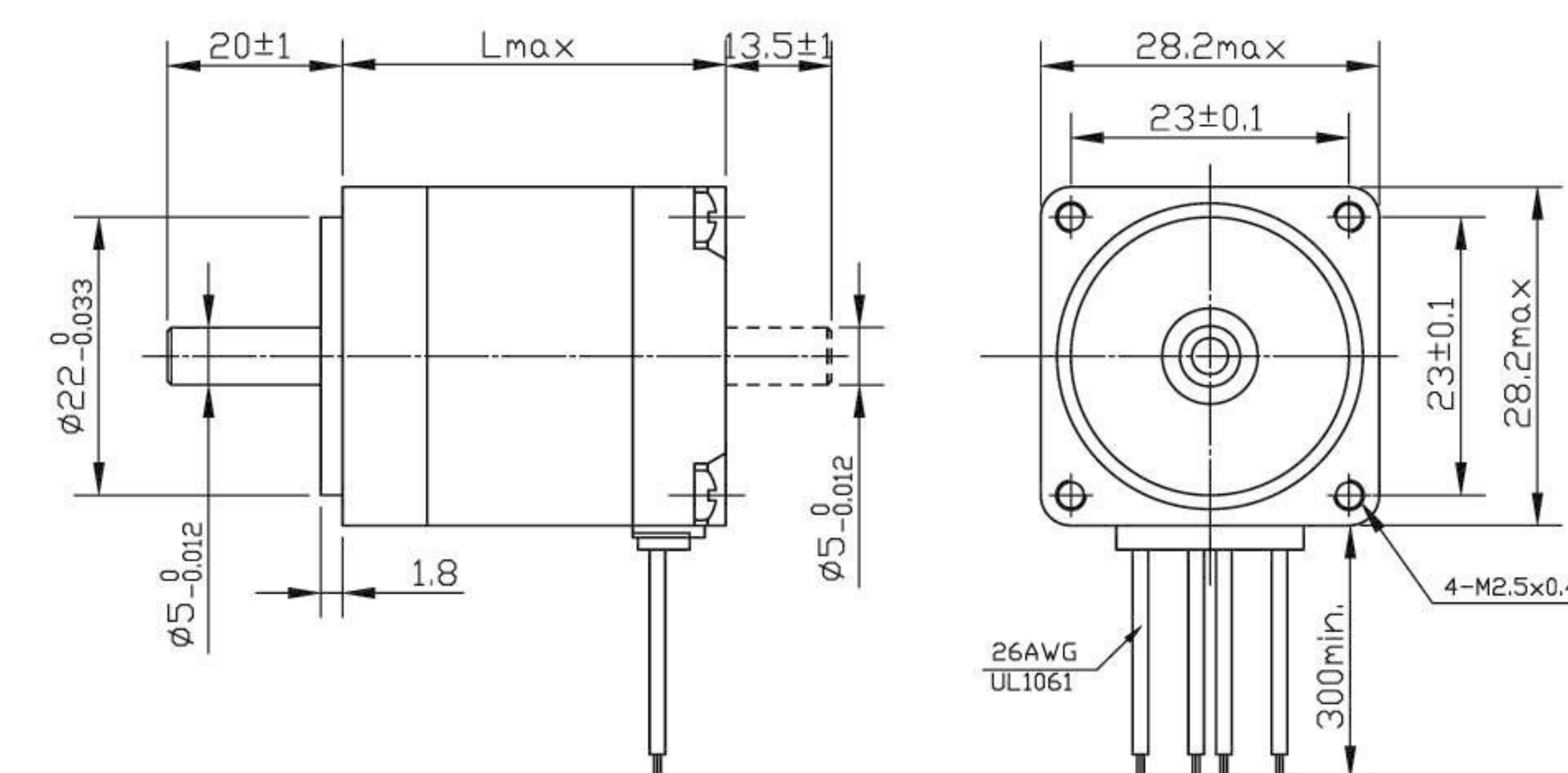


Electrical Specification:

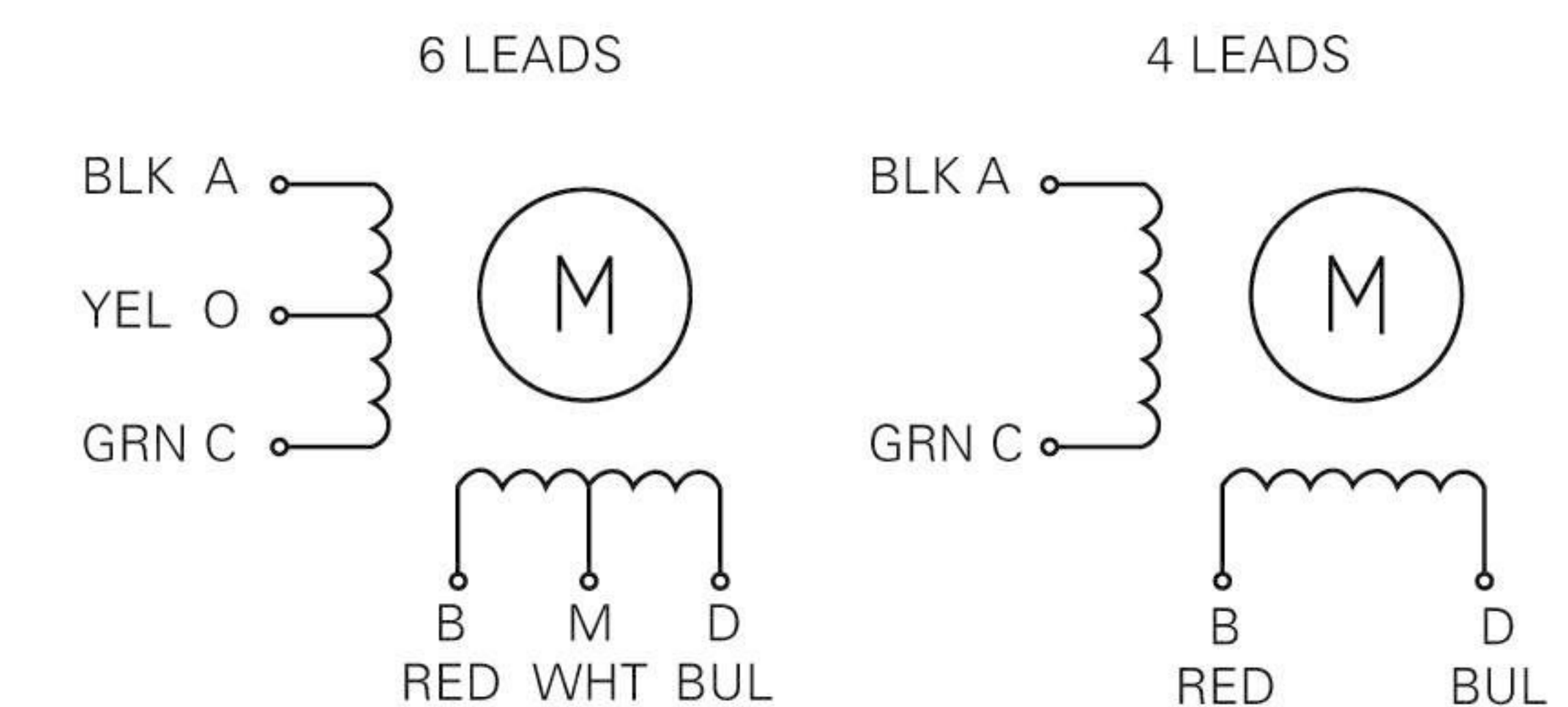
Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque		#Of Leads	Rotor Inertia	Weight	Length
Single Shaft	Double Shaft	V	A	Ω	mH	Oz-in	g-cm		g-cm ²	Kg	mm
SM28HT32-0956A	SM28HT32-0956B	2.66	0.95	2.8	1.0	6	430	6	9	0.11	32
SM28HT32-0674A	SM28HT32-0674B	3.8	0.67	5.6	4.2	8.3	600	4			
SM28HT45-0956A	SM28HT45-0956B	3.2	0.95	3.4	1.2	10.4	750	6	12	0.14	45
SM28HT45-0674A	SM28HT45-0674B	4.6	0.67	6.8	4.9	13.2	950	4			
SM28HT51-0956A	SM28HT51-0956B	4.4	0.95	4.6	1.4	12.5	900	6	18	0.2	51
SM28HT51-0674A	SM28HT51-0674B	6.2	0.67	9.2	5.7	16.7	1200	4			

Dimensions:

(Unit=mm)



Wiring Diagram:



0.9°42mm (NEMA17) 2 phase Hybrid Stepper Motor

General Specification:

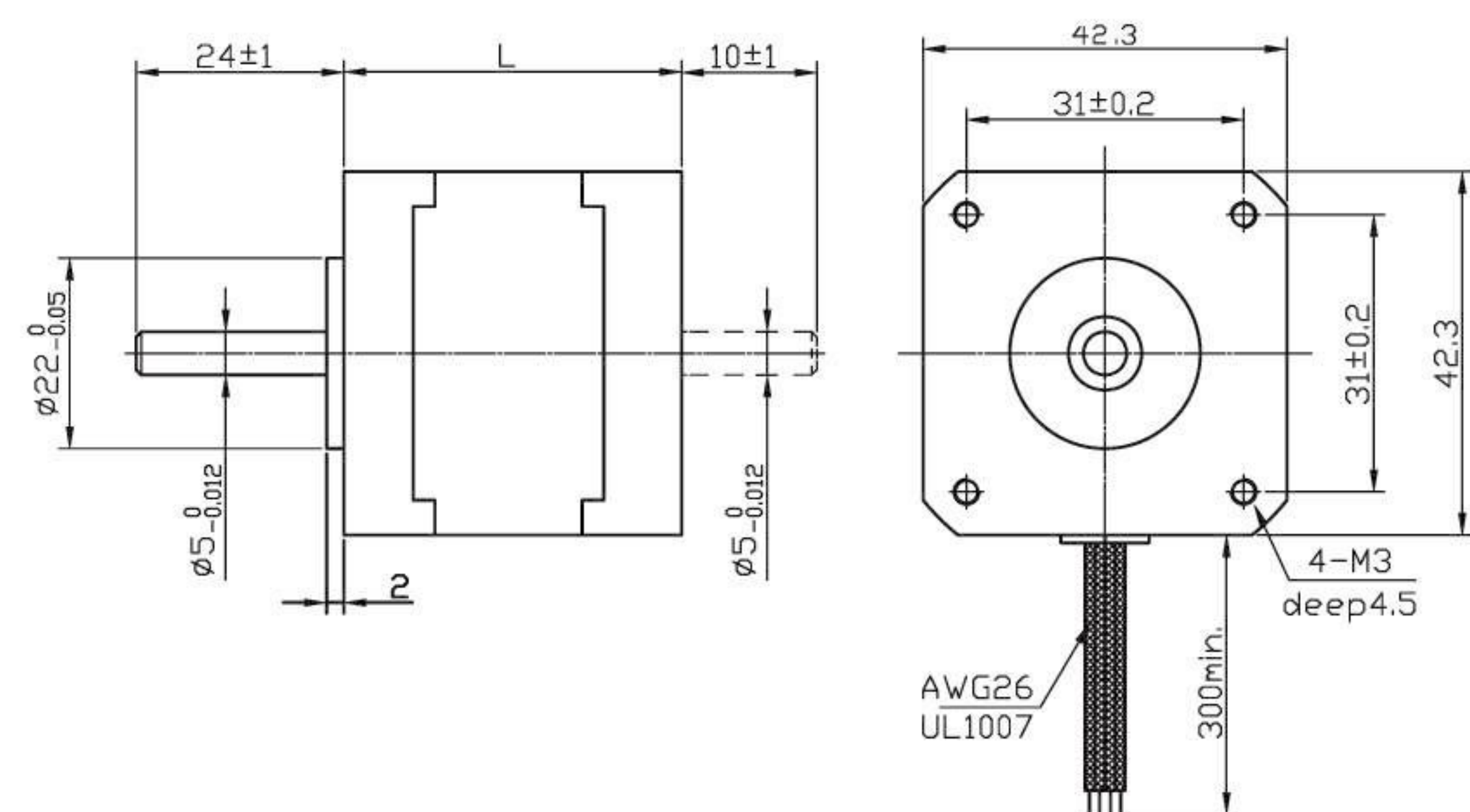
Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	500VAC for 1minute
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N



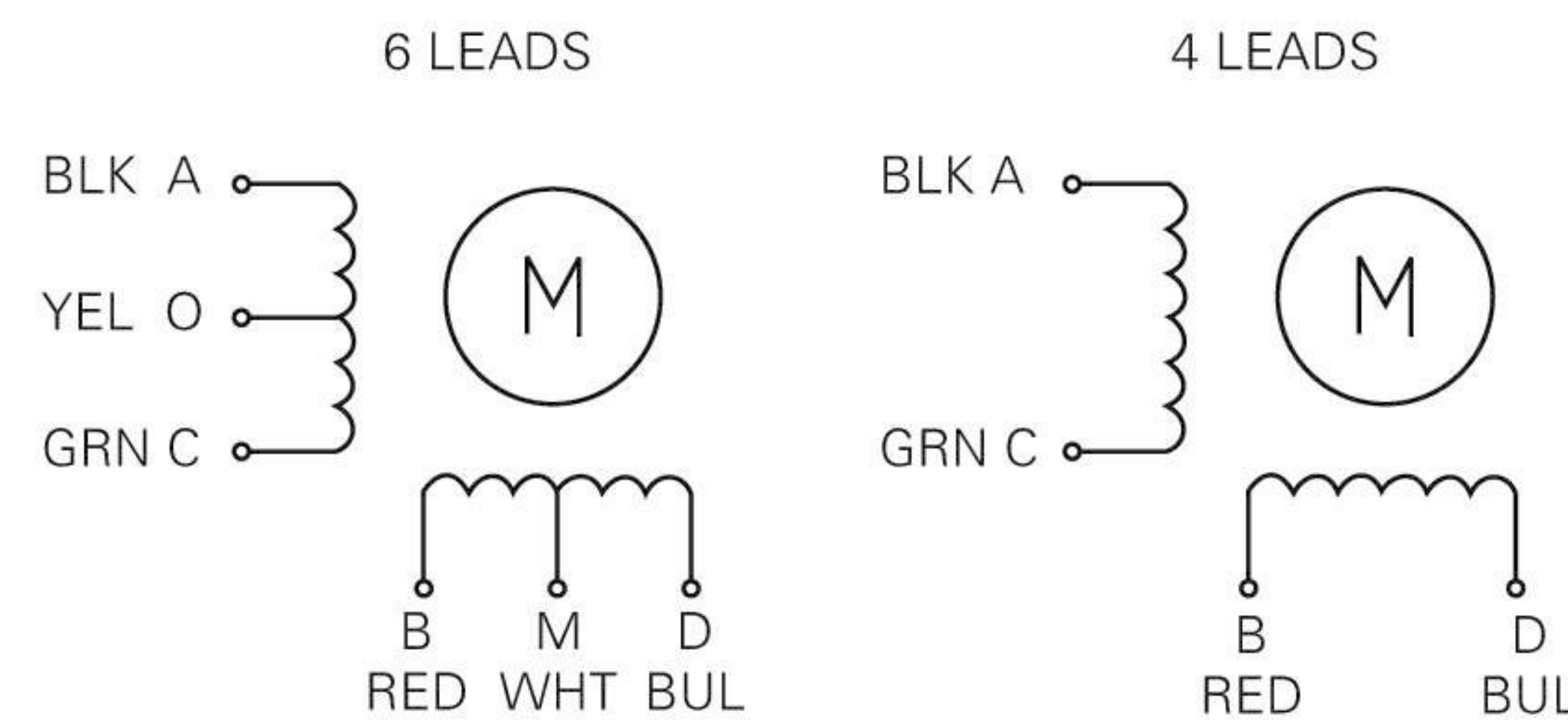
Electrical Specification:

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	Oz-in g-cm		g-cm ²	Kg	mm
SM42HT33-0956MA	SM42HT33-0956MB	4	0.95	4.2	4	22 1580	6	35	0.22	33
SM42HT33-0606MA	SM42HT33-0606MB	6	0.6	10	9.5					
SM42HT33-0316MA	SM42HT33-0316MB	12	0.31	38.5	33					
SM42HT33-1334MA	SM42HT33-1334MB	2.8	1.33	2.1	4.2	30 2200	4	54	0.28	38
SM42HT38-1206MA	SM42HT38-1206MB	4	1.2	3.3	4					
SM42HT38-0806MA	SM42HT38-0806MB	6	0.8	7.5	7.5					
SM42HT38-0406MA	SM42HT38-0406MB	12	0.4	30	30	50 3300	4	68	0.35	48
SM42HT38-1684MA	SM42HT38-1684MB	2.8	1.68	1.65	4					
SM42HT47-1206MA	SM42HT47-1206MB	4	1.2	3.3	4					
SM42HT47-0806MA	SM42HT47-0806MB	6	0.8	7.5	10	44 3170	6	68	0.35	48
SM42HT47-0406MA	SM42HT47-0406MB	12	0.4	30	38					
SM42HT47-1684MA	SM42HT47-1684MB	2.8	1.68	1.65	4.1					

Dimensions:
(Unit=mm)



Wiring Diagram:



1.8°42mm (NEMA17) 2 phase Hybrid Stepper Motor

General Specification:

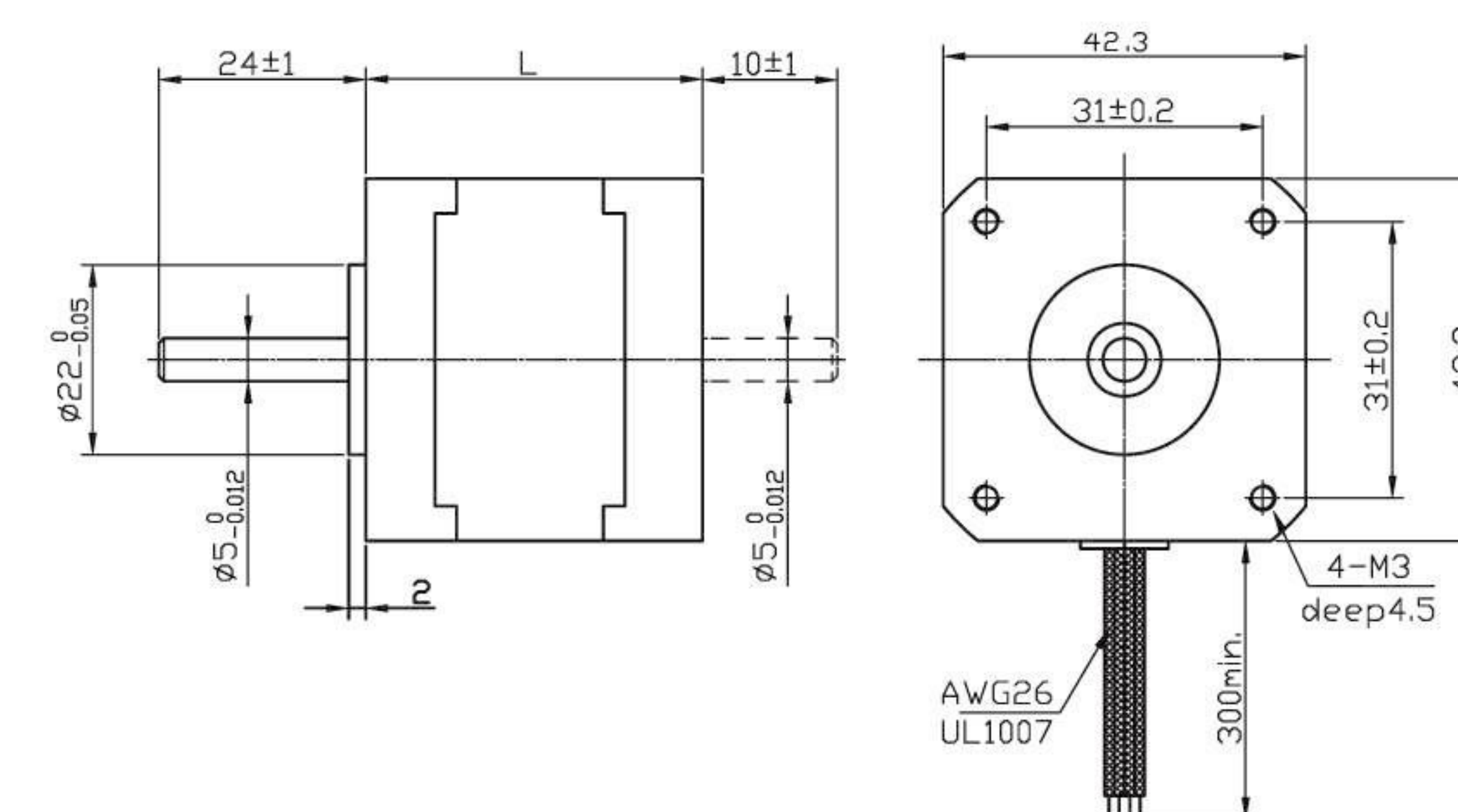
Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	500VAC for 1minute
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N



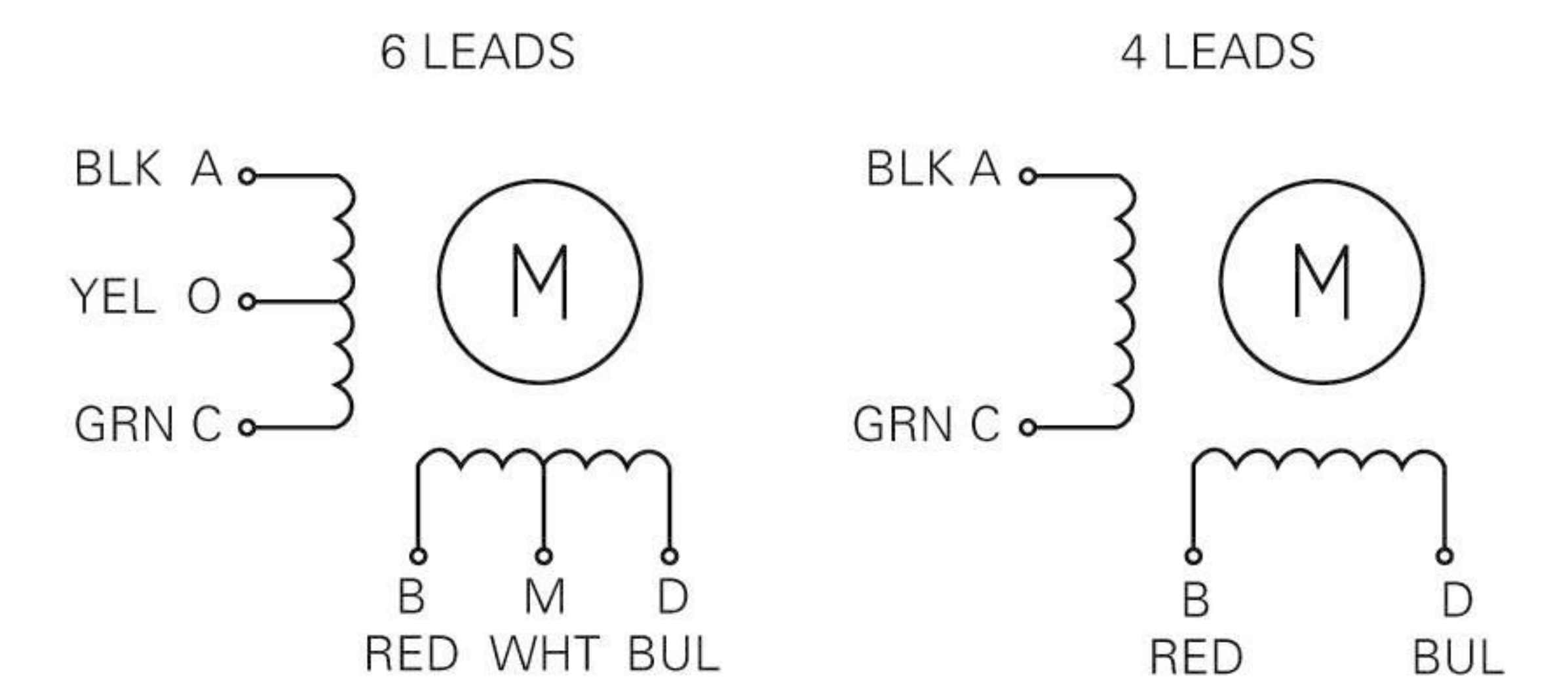
Electrical Specification:

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	Oz-in g-cm		g-cm ²	Kg	mm
SM42HT33-0956A	SM42HT33-0956B	4	0.95	4.2	2.5	22 1580	6	35	0.22	33
SM42HT33-0406A	SM42HT33-0406B	9.6	0.4	24	15					
SM42HT33-0316A	SM42HT33-0316B	12	0.31	38.5	21					
SM42HT33-1334A	SM42HT33-1334B	2.8	1.33	2.1	2.5	30 2200	4	54	0.28	38
SM42HT38-1206A	SM42HT38-1206B	4	1.2	3.3	3.2					
SM42HT38-0806A	SM42HT38-0806B	6	0.8	7.5	6.7					
SM42HT38-0406A	SM42HT38-0406B	12	0.4	30	30	50 3600	4	68	0.35	48
SM42HT38-1684A	SM42HT38-1684B	2.8	1.68	1.65	3.2					
SM42HT47-1206A	SM42HT47-1206B	4	1.2	3.3	2.8					
SM42HT47-0806A	SM42HT47-0806B	6	0.8	7.5	6.3	44 3170	6	68	0.35	48
SM42HT47-0406A	SM42HT47-0406B	12	0.4	30	25					
SM42HT47-1684A	SM42HT47-1684B	2.8	1.68	1.65	2.8					

Dimensions:
(Unit=mm)



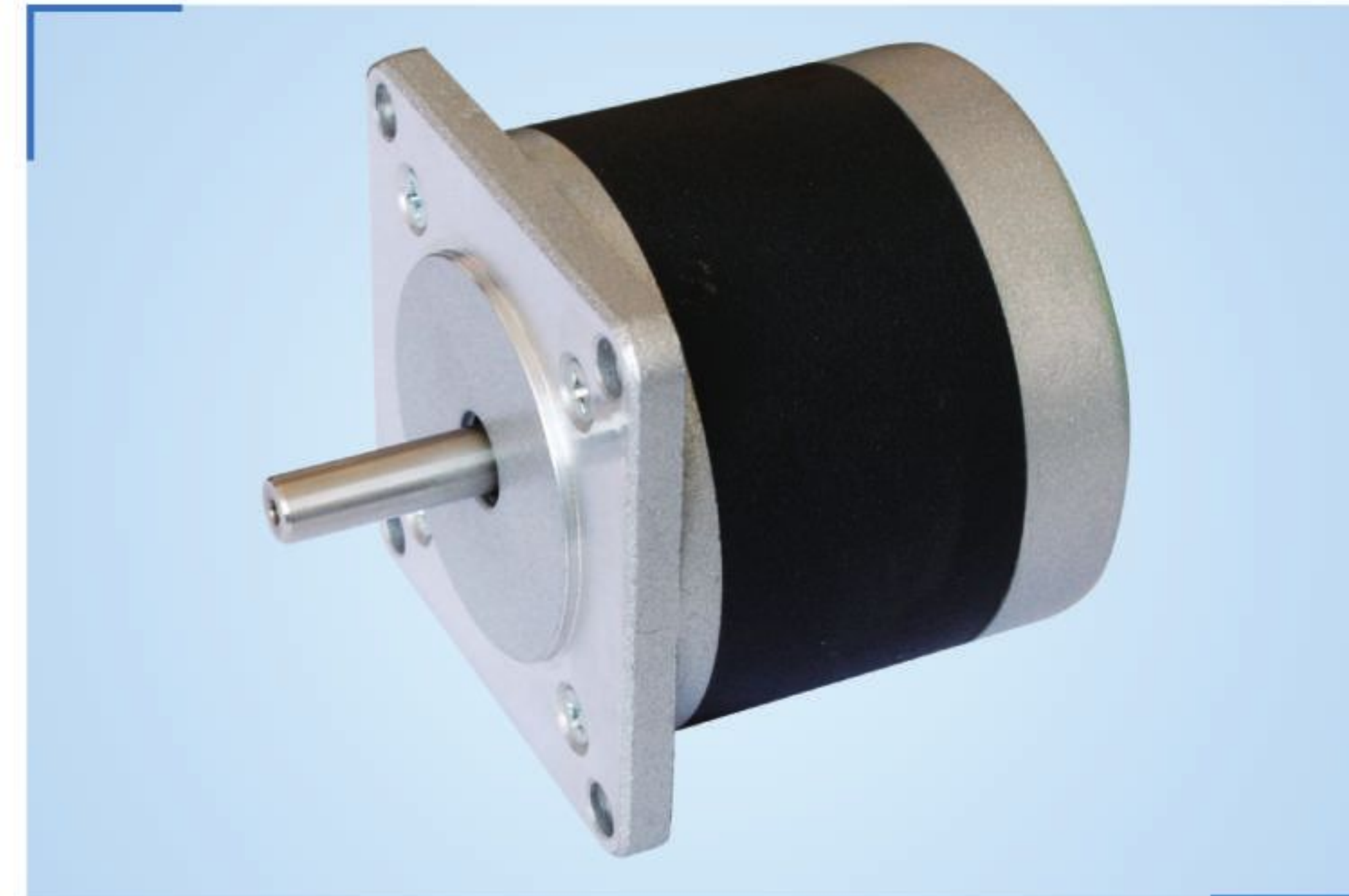
Wiring Diagram:



1.8°57mm (NEMA23) 2 phase Round Hybrid Stepper Motor

General Specification:

Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	500VAC for 1minute
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N

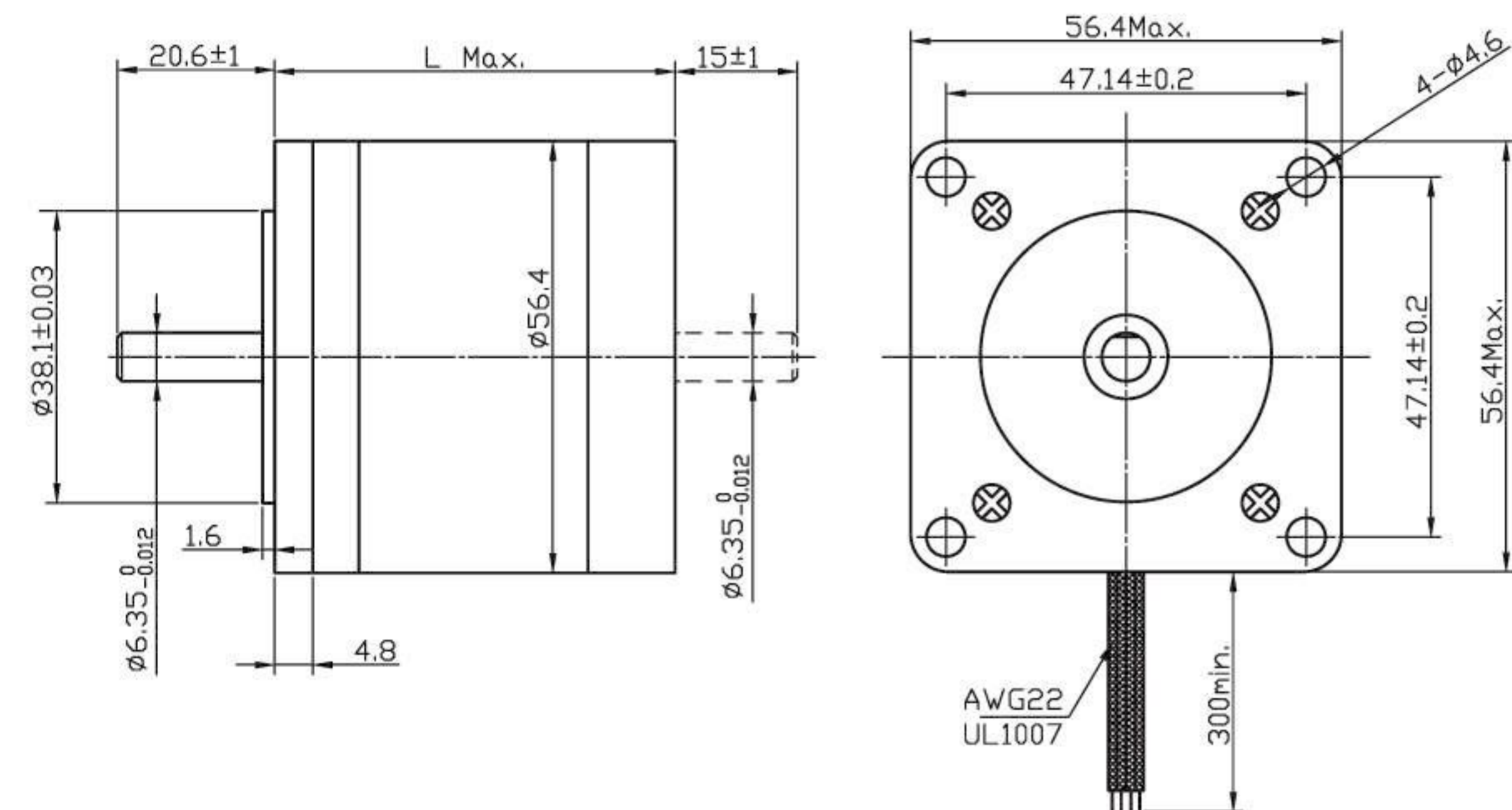


Electrical Specification:

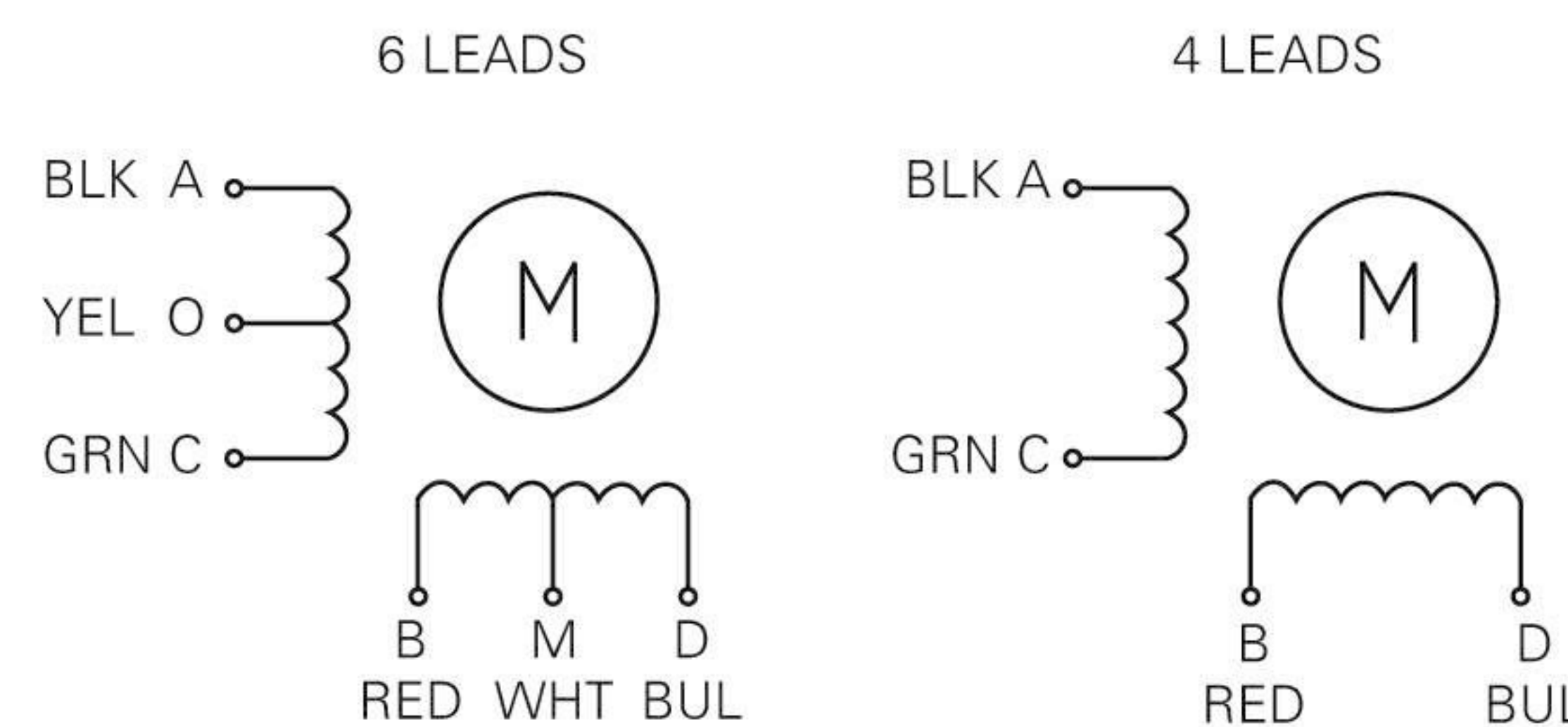
Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	#Of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	Kg-cm		g-cm ²	Kg	kg-cm	mm
SM57ST41-1106A	SM57ST41-1106B	4	1.1	3.6	3.6	2.88	6	57	0.54	0.18	41
SM57ST41-0406A	SM57ST41-0406B	12	0.4	30	30	2.88	6				
SM57ST41-1564A	SM57ST41-1564B	2.8	1.56	1.8	3.6	4.0	4				
SM57ST51-0856A	SM57ST51-0856B	6	0.85	7.1	9	4.97	6	110	0.60	0.35	51
SM57ST51-0426A	SM57ST51-0426B	12	0.42	29	36	4.97	6				
SM57ST51-2804A	SM57ST51-2804B	2.38	2.8	0.85	2.1	6.9	4				
SM57ST56-1206A	SM57ST56-1206B	6	1.2	5	8	6.05	6	135	0.65	0.42	56
SM57ST56-0606A	SM57ST56-0606B	12	0.6	20	32	6.05	6				
SM57ST56-2554A	SM57ST56-2554B	2.8	2.55	1.1	3.6	8.4	4				
SM57ST76-1506A	SM57ST76-1506B	5.4	1.5	3.6	6	9	6	200	0.95	0.72	76
SM57ST76-0686A	SM57ST76-0686B	12	0.68	17.7	30	9	6				
SM57ST76-3304A	SM57ST76-3304B	2.7	3.3	0.85	3	12.5	4				

Dimensions:

(Unit=mm)



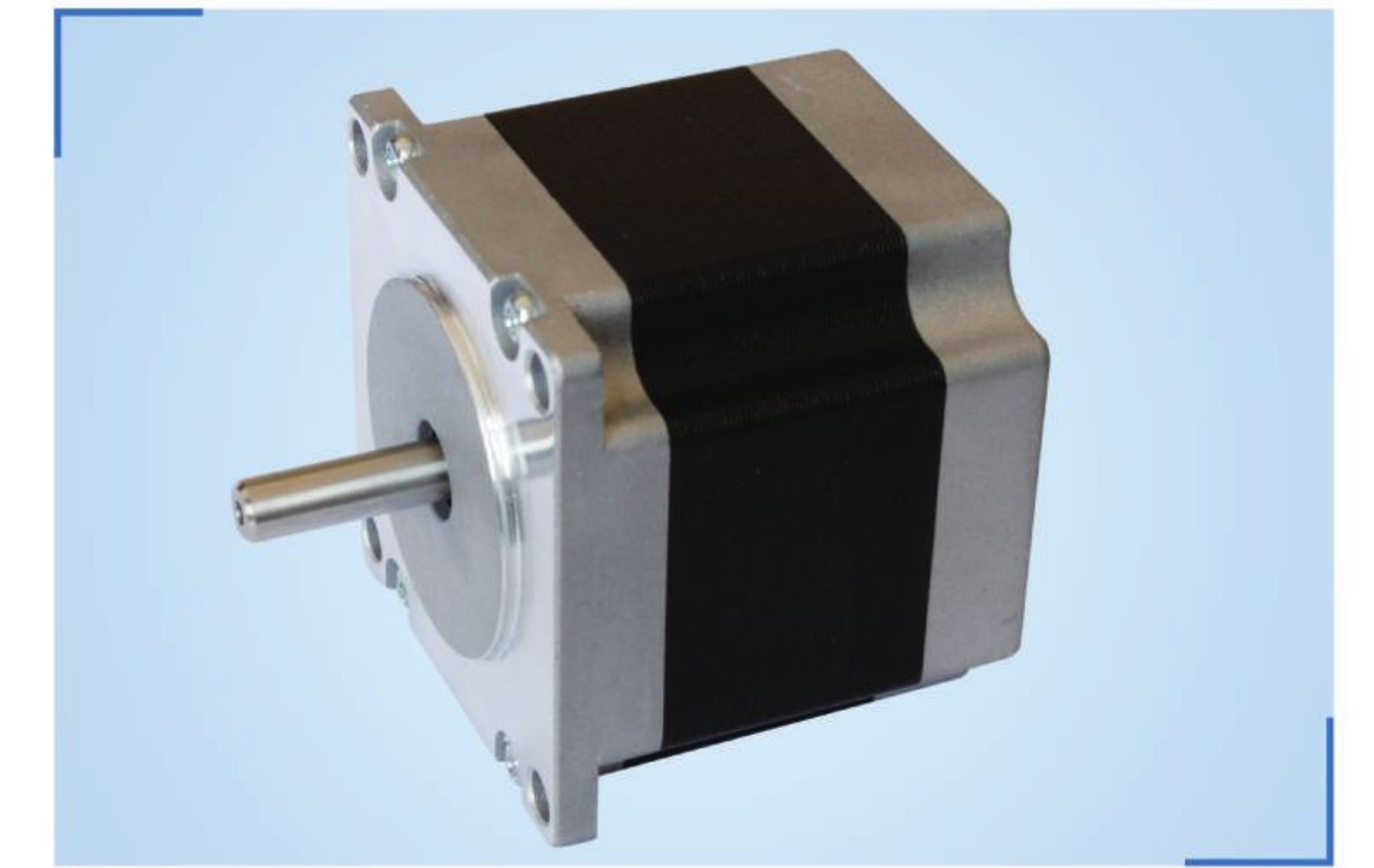
Wiring Diagram:



0.9°57mm (NEMA23) 2 phase Hybrid Stepper Motor

General Specification:

Item	Specifications
Step Angle	0.9°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	500VAC for 1minute
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N

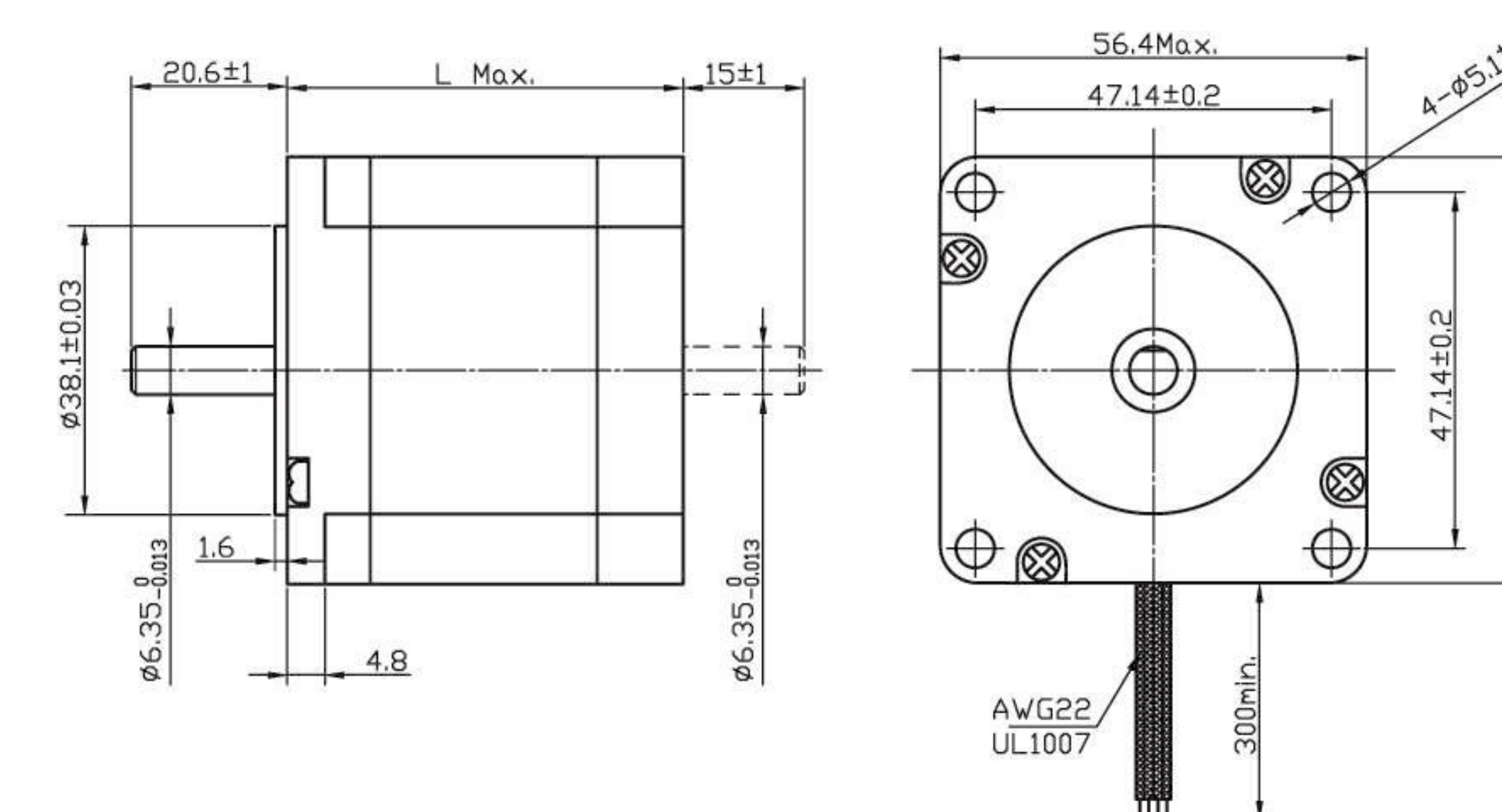


Electrical Specification:

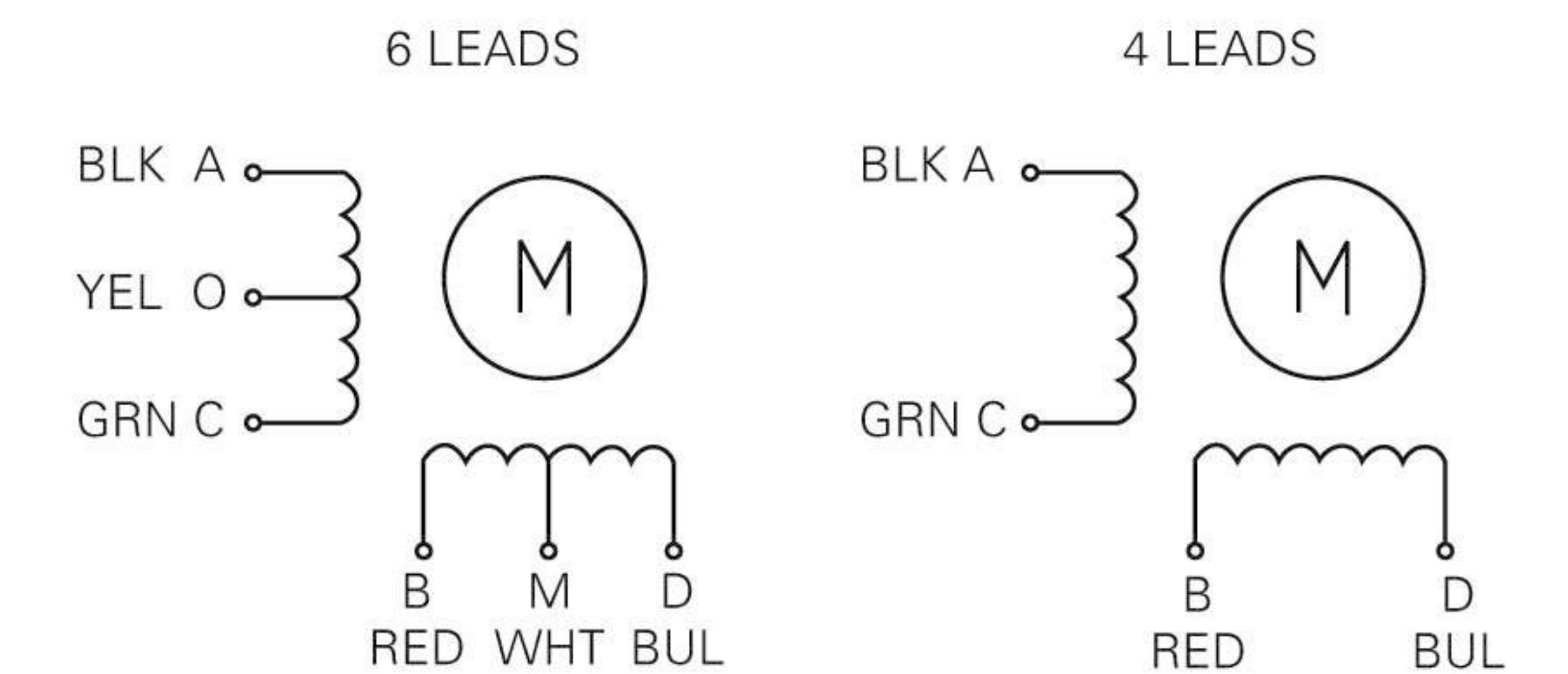
Model No.		Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single Shaft	Double Shaft	V	A	Ω	mH	kg-cm		g-cm ²	kg	kg-cm	mm
SM57HT41-1006MA	SM57HT41-1006MB	5.7	1	5.7	8.0	3.9	6	120	0.45	0.21	41
SM57HT41-2006MA	SM57HT41-2006MB	2.8	2	1.4	2.2	3.9	6				
SM57HT41-3006MA	SM57HT41-3006MB	1.9	3	0.63	1.0	3.9	6				
SM57HT41-2804MA	SM57HT41-2804MB	2	2.8	0.7	2.2	5.5	4	300	0.7	0.4	56
SM57HT56-1006MA	SM57HT56-1006MB	7.4	1	7.4	17.5	9.0	6				
SM57HT56-2006MA	SM57HT56-2006MB	3.6	2	1.8	4.5	9.0	6				
SM57HT56-3006MA	SM57HT56-3006MB	2.3	3	0.75	1.9	9.0	6	480	1	0.68	76
SM57HT56-2804MA	SM57HT56-2804MB	2.5	2.8	0.9	4.5	12.0	4				
SM57HT76-1006MA	SM57HT76-1006MB	8.6	1	8.6	23	13.5	6				
SM57HT76-2006MA	SM57HT76-2006MB	4.5	2	2.25	5.6	13.5	6	480	1	0.68	76
SM57HT76-3006MA	SM57HT76-3006MB	3	3	1	2.6	13.5	6				
SM57HT76-2804MA	SM57HT76-2804MB	3.2	2.8	1.13	5.6	18.0	4				

Dimensions:

(Unit=mm)



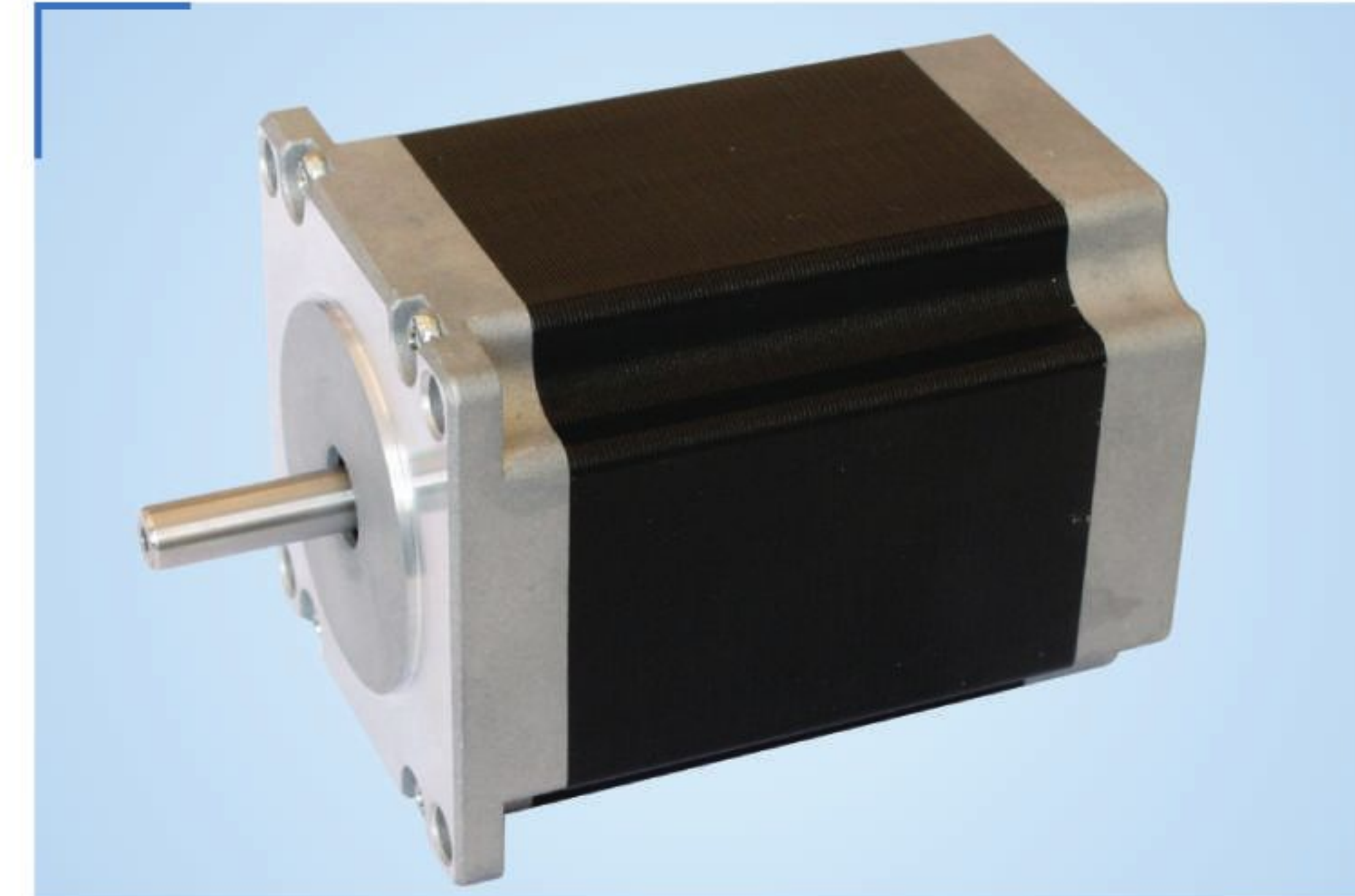
Wiring Diagram:



1.8°57mm (NEMA23) 2 phase Hybrid Stepper Motor

General Specification:

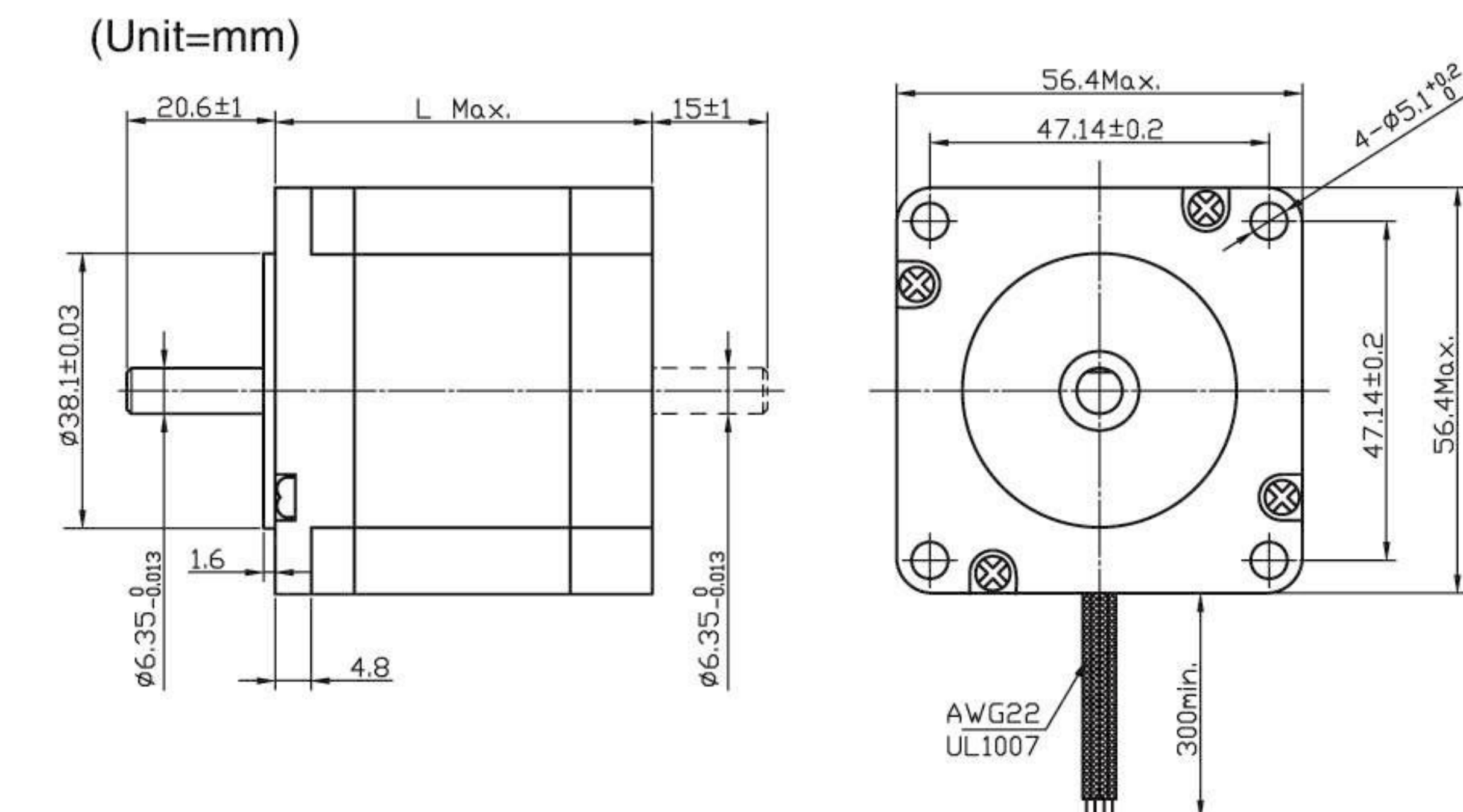
Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	500VAC for 1minute
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N



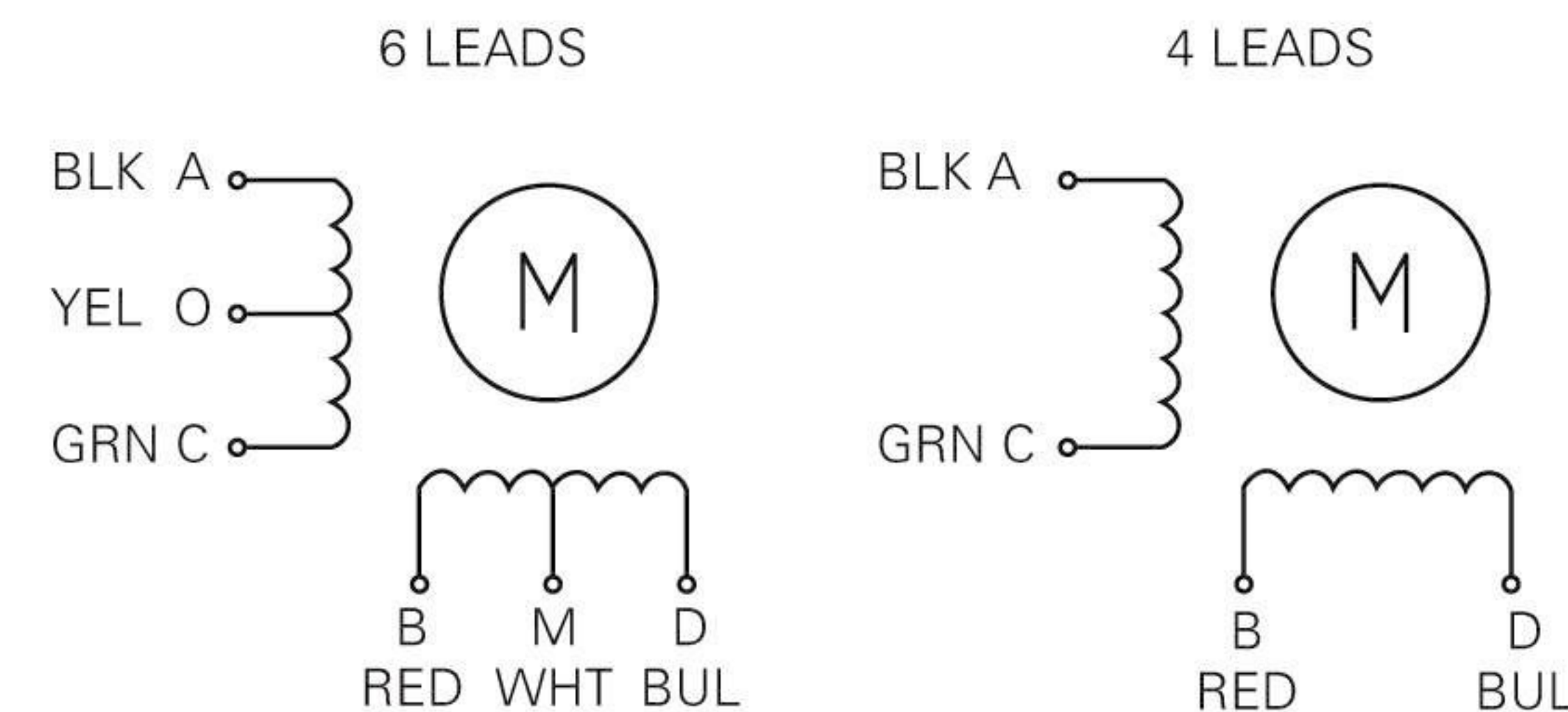
Electrical Specification:

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 ²	kg	kg-cm	mm
SM57HT41-1006A	SM57HT41-1006B	5.7	1	5.7	5.4	3.9	6	120	0.45	0.21	41
SM57HT41-2006A	SM57HT41-2006B	2.8	2	1.4	1.4	3.9	6				
SM57HT41-3006A	SM57HT41-3006B	1.9	3	0.63	0.6	3.9	6				
SM57HT41-2804A	SM57HT41-2804B	2	2.8	0.7	1.4	5.5	4				
SM57HT51-1006A	SM57HT51-1006B	6.6	1	6.6	8.2	7.2	6	275	0.65	0.36	51
SM57HT51-2006A	SM57HT51-2006B	3.3	2	1.65	2.2	7.2	6				
SM57HT51-3006A	SM57HT51-3006B	2.2	3	0.74	0.9	7.2	6				
SM57HT51-2804A	SM57HT51-2804B	2.3	2.8	0.83	2.2	10.1	4				
SM57HT56-1006A	SM57HT56-1006B	7.4	1	7.4	10	9.0	6	300	0.7	0.4	56
SM57HT56-2006A	SM57HT56-2006B	3.6	2	1.8	2.5	9.0	6				
SM57HT56-3006A	SM57HT56-3006B	2.3	3	0.75	1.1	9.0	6				
SM57HT56-2804A	SM57HT56-2804B	2.5	2.8	0.9	2.5	12.6	4				
SM57HT64-2006A	SM57HT64-2006B	3.6	2	1.8	2.5	10.5	6	380	0.85	0.5	64
SM57HT64-3004A	SM57HT64-3004B	2.4	3	0.8	2.3	15.0	4	380	0.85	0.5	64
SM57HT76-1006A	SM57HT76-1006B	8.6	1	8.6	14	13.5	6	480	1	0.68	76
SM57HT76-2006A	SM57HT76-2006B	4.5	2	2.25	3.6	13.5	6				
SM57HT76-3006A	SM57HT76-3006B	3	3	1	1.6	13.5	6				
SM57HT76-2804A	SM57HT76-2804B	3.2	2.8	1.13	3.6	18.9	4				
SM57HT82-3004A	SM57HT82-3004B	3.6	3	1.2	4	22	4	600	1.2	1	82
SM57HT82-5004A	SM57HT82-5004B	3	5	0.6	1.5	22	4				
SM57HT112-3004A	SM57HT112-3004B	4.8	3	1.6	6.8	28	4	800	1.4	1.2	112
SM57HT112-4204A	SM57HT112-4204B	3.8	4.2	0.9	3.8	28	4				

Dimensions:



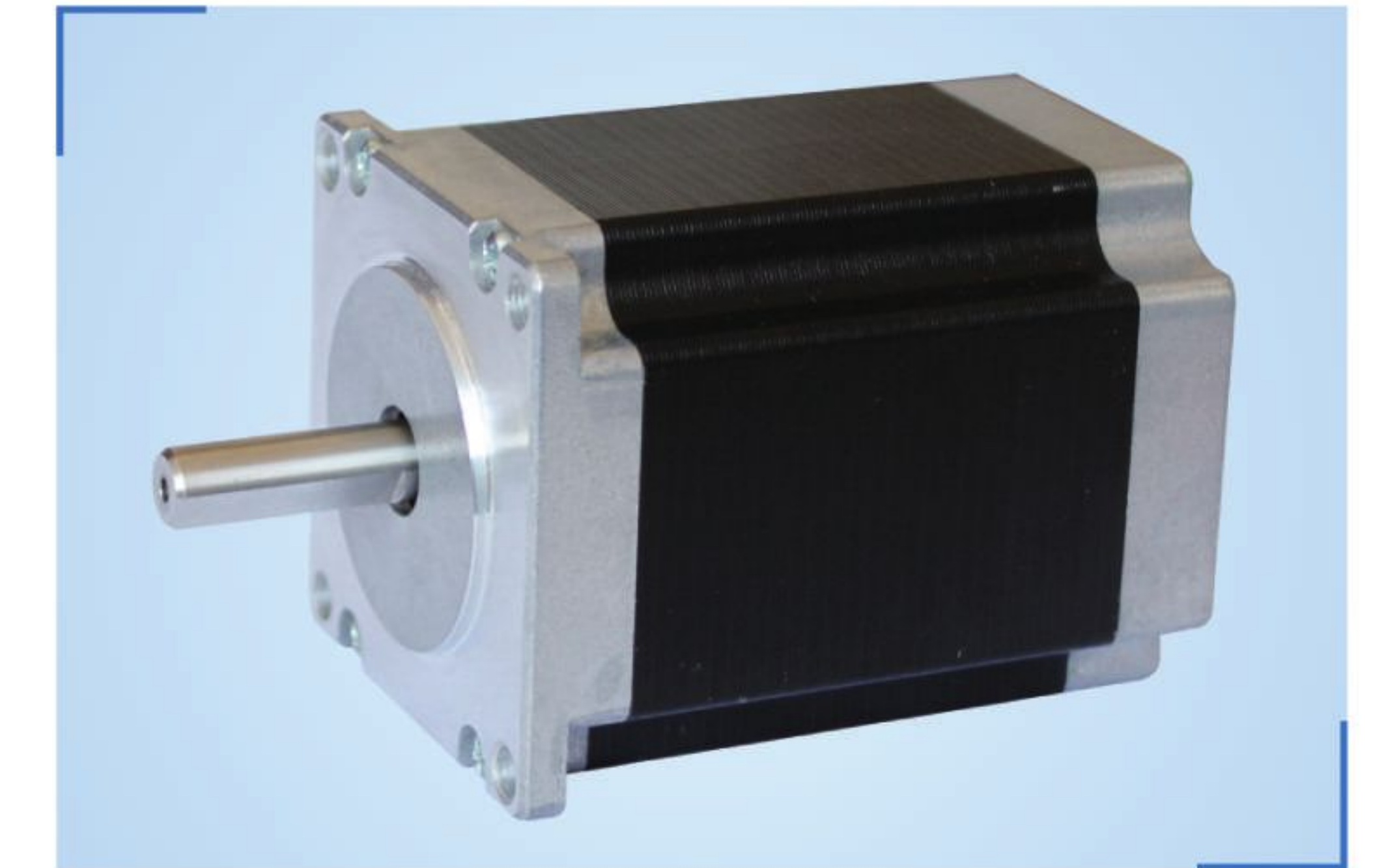
Wiring Diagram:



1.8°60mm (NEMA24) 2 phase Hybrid Stepper Motor

General Specification:

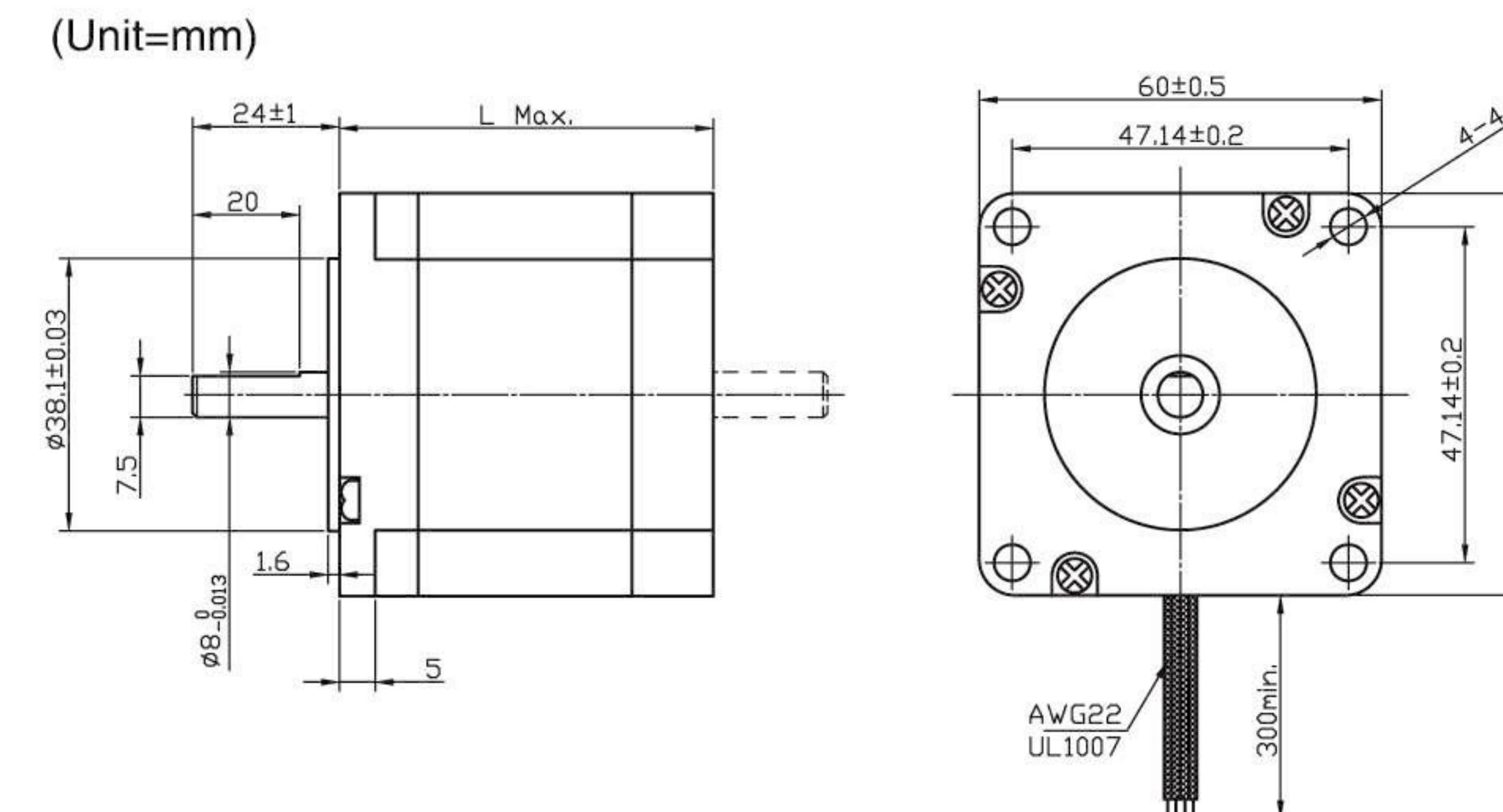
Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	500VAC for 1minute
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N



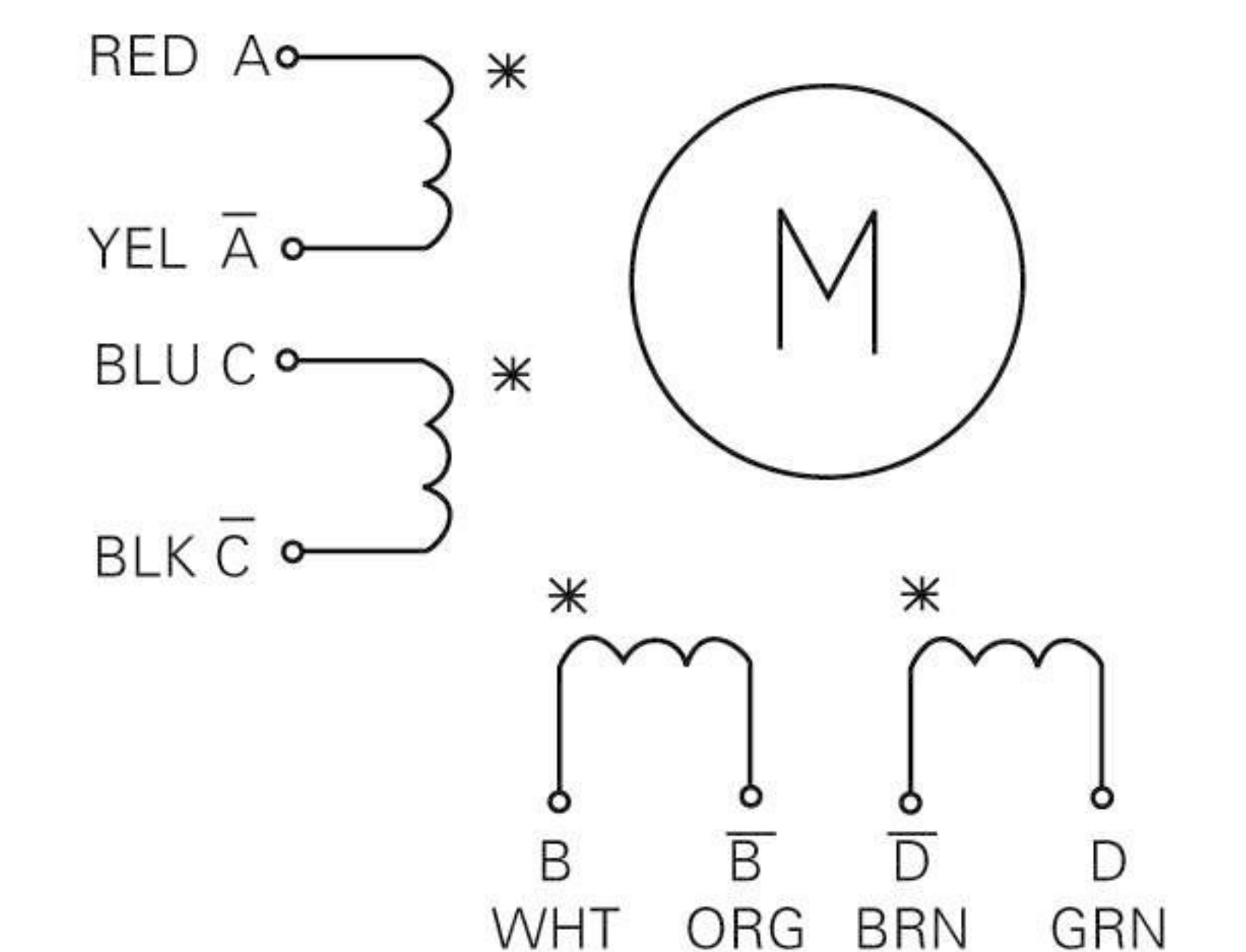
Electrical Specification:

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 ²	kg	kg-cm	mm
SM60HT45-2008AF	SM60HT45-2008BF	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					
SM60HT56-2008AF	SM60HT56-2008BF	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					
SM60HT65-2008AF	SM60HT65-2008BF	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					
SM60HT86-2008AF	SM60HT86-2008BF	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					
SM60HT100-2008AF	SM60HT100-2008BF	unipolar	8	2	4	9	28	8	1050	1.6	1.1	100
		parallel	5.6	2.8	2	9	39					
		series	11.2	1.4	8	36	39					

Dimensions:



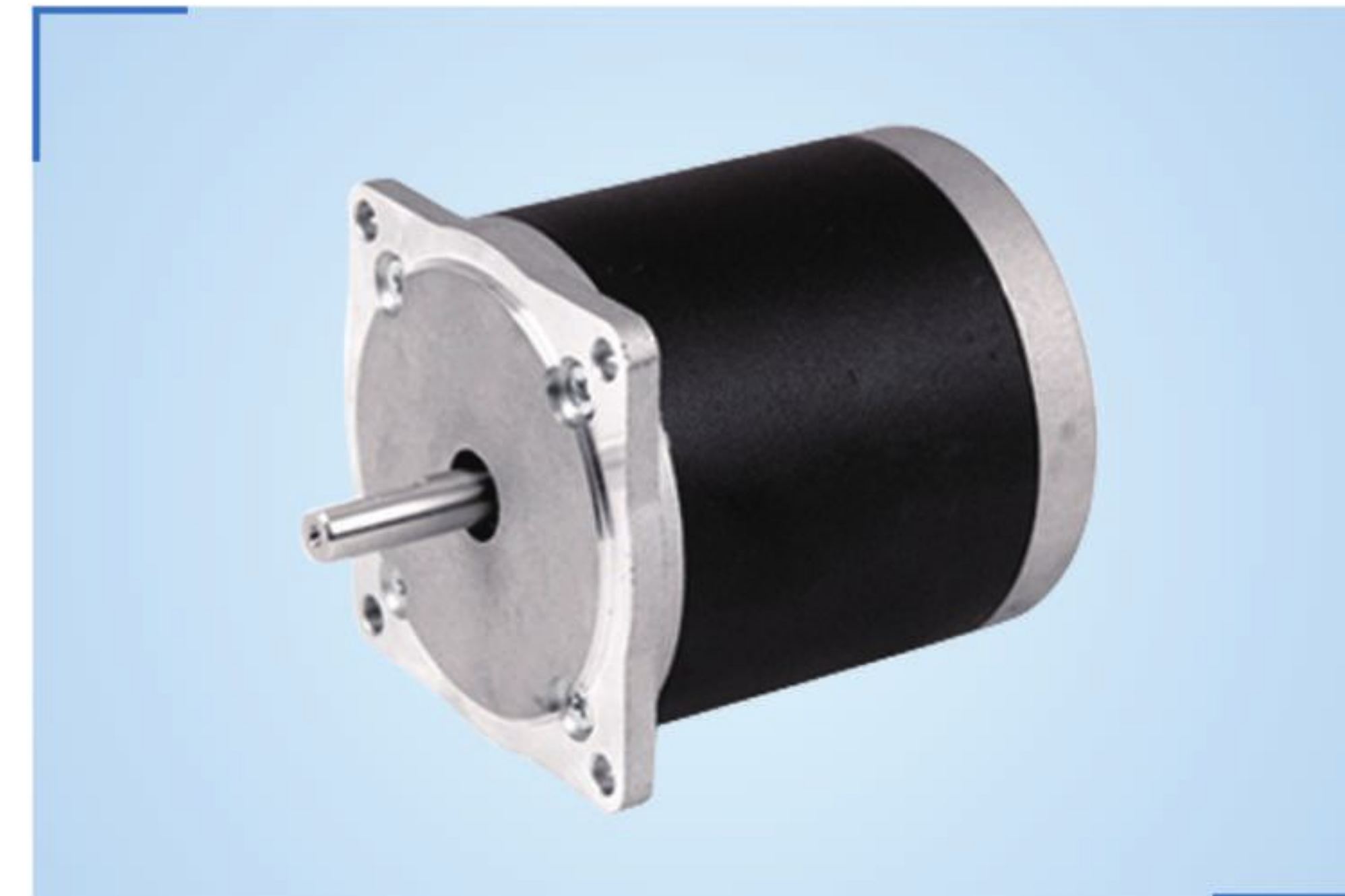
Wiring Diagram:



1.8°86mm (NEMA34) 2 phase Round Hybrid Stepper Motor

General Specification:

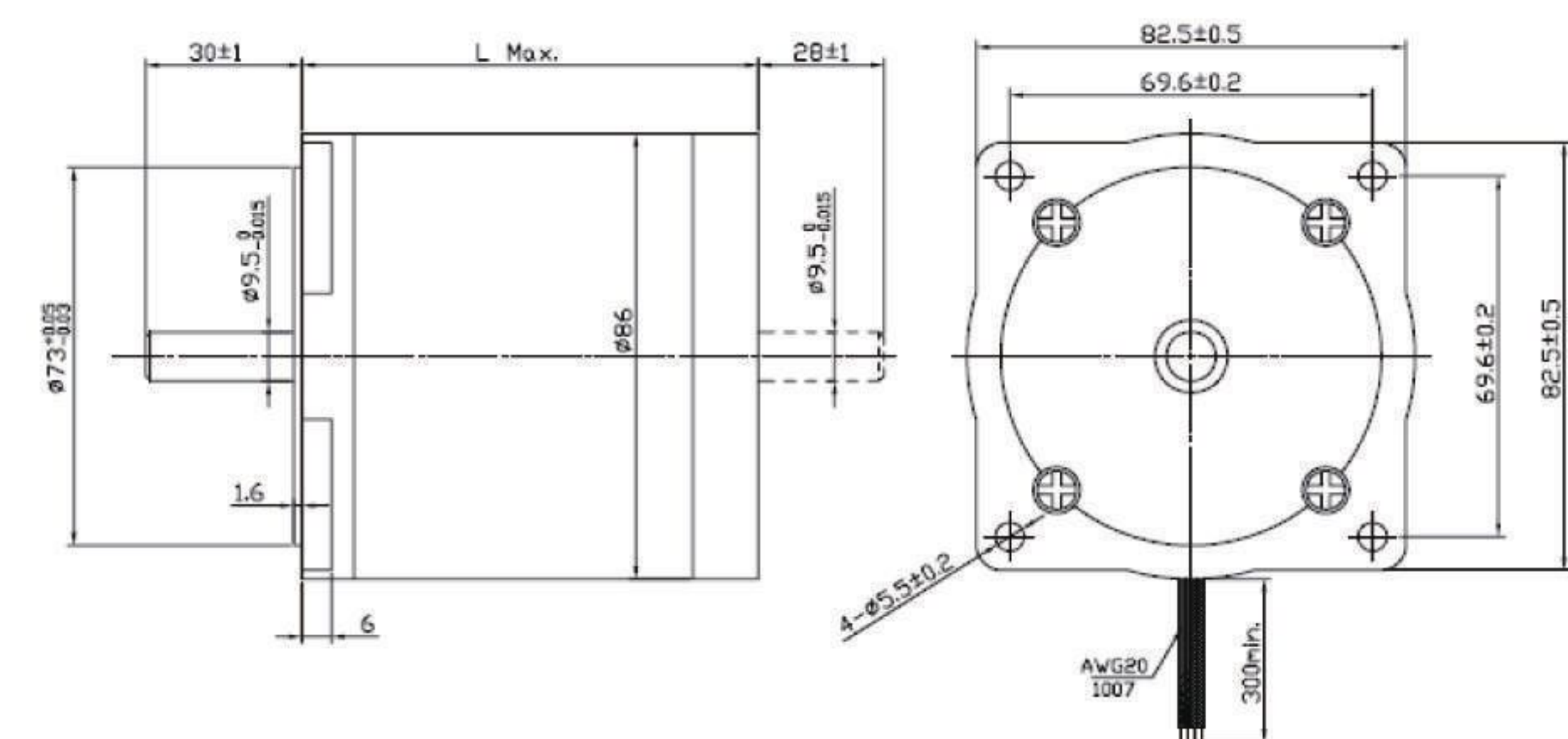
Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	820VAC for 1s 3mA
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N



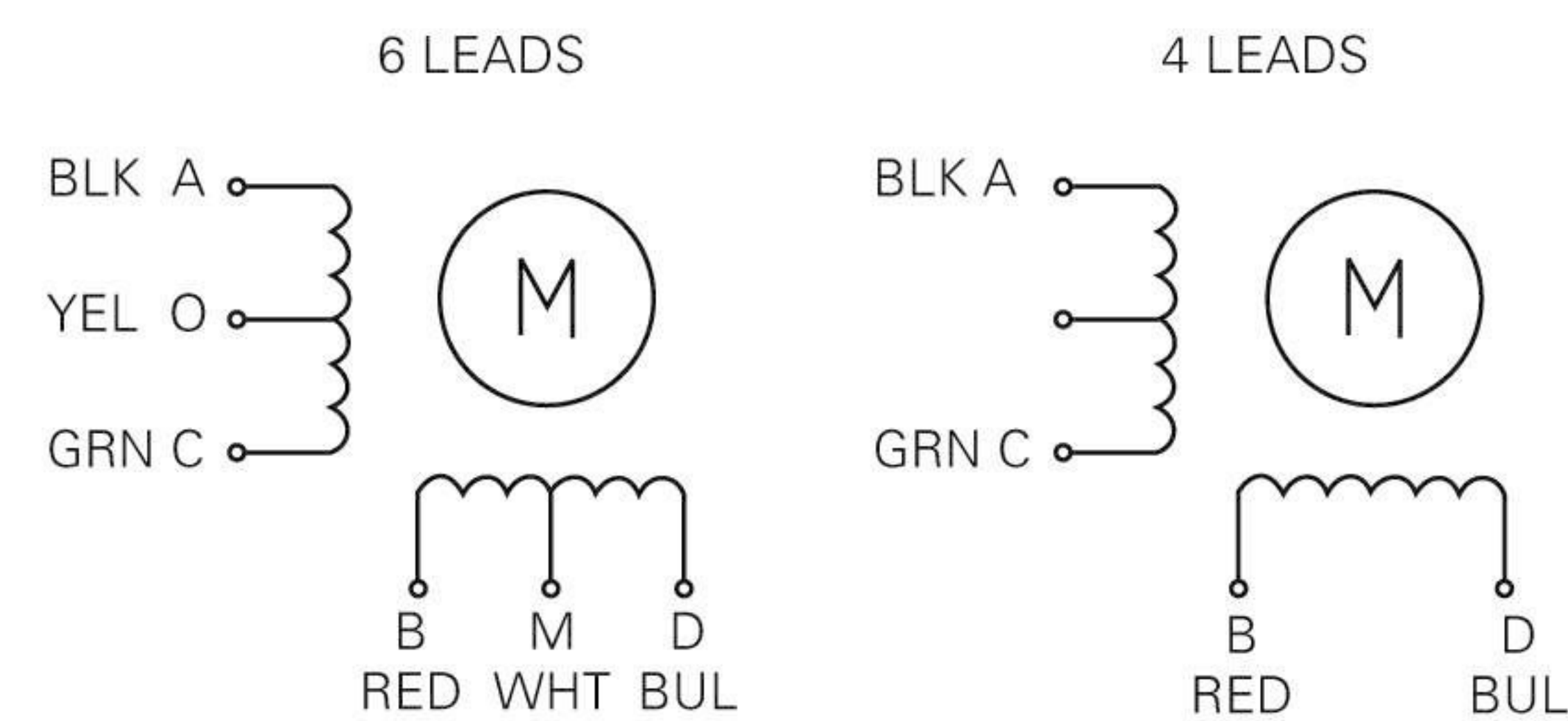
Electrical Specification:

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 ²	kg	kg-cm	mm
SM86ST62-4506A	SM86ST62-4506B	1.8	4.5	0.4	1.4	13	6	560	1.5	0.8	62
SM86ST62-1256A	SM86ST62-1256B	5.5	1.25	4.4	14	13	6				
SM86ST62-1406A	SM86ST62-1406B	0.7	14	20	60	13	6				
SM86ST62-5904A	SM86ST62-5904B	1.33	5.9	0.23	1.5	18	4				
SM86ST94-4006A	SM86ST94-4006B	3.0	4.0	0.75	4.5	26	6				
SM86ST94-2006A	SM86ST94-2006B	6.0	2.0	3.0	13	26	6				
SM86ST94-1006A	SM86ST94-1006B	12	1	12	72	26	6	1100	2.6	2.4	94
SM86ST94-5604A	SM86ST94-5604B	2.1	5.6	0.38	3.9	35	4				
SM86ST134-6706A	SM86ST134-6706B	3.0	6.7	0.45	2	36	6	1800	3.6	3.6	134
SM86ST134-4006A	SM86ST134-4006B	5.0	4.0	1.25	6.6	36	6				
SM86ST134-1806A	SM86ST134-1806B	12	1.8	6.5	41	36	6				
SM86ST134-5604A	SM86ST134-5604B	3.5	5.6	0.63	6.6	50	4				

Dimensions: (Unit=mm)



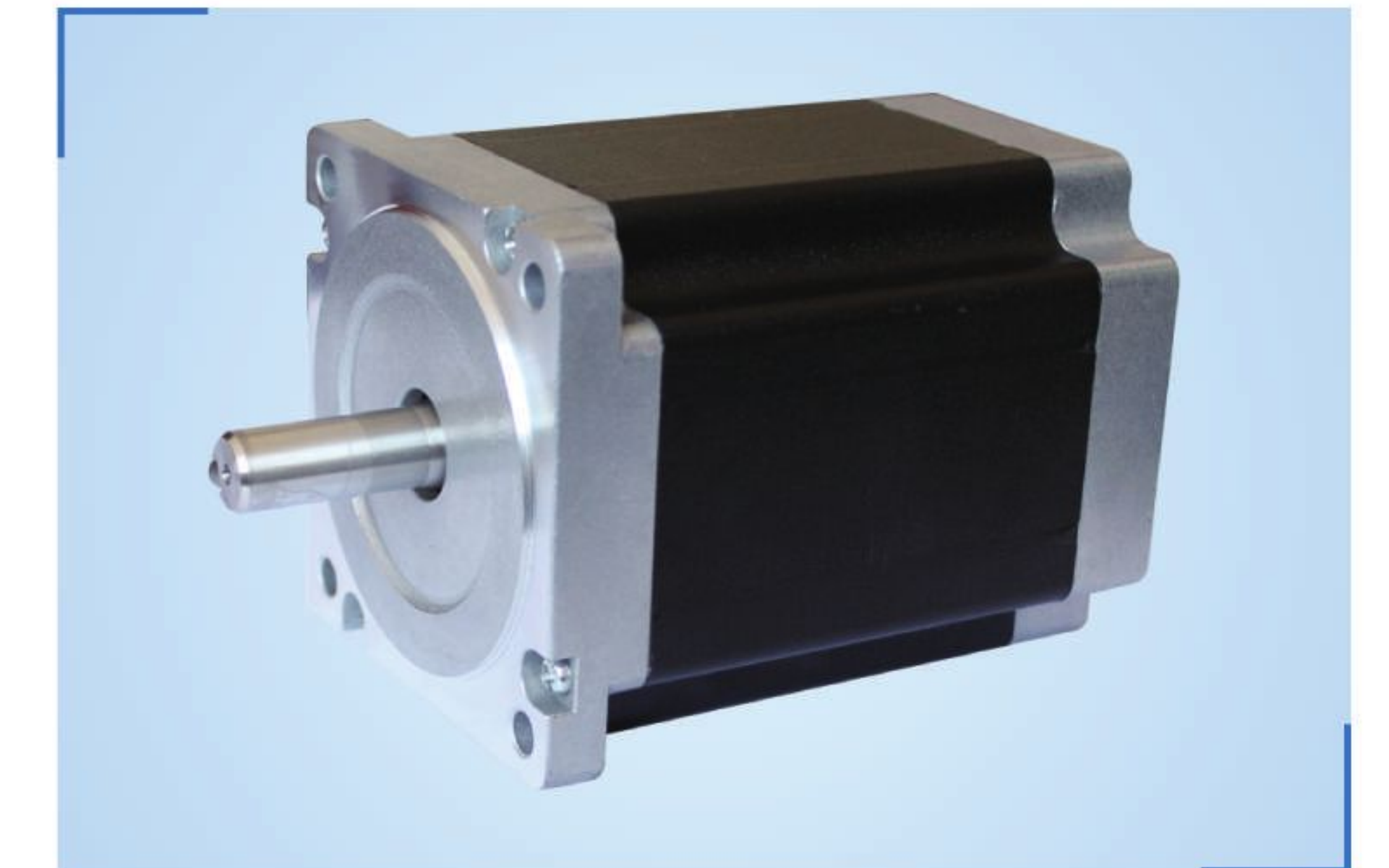
Wiring Diagram:



1.8°86mm (NEMA34) 2 phase Hybrid Stepper Motor

General Specification:

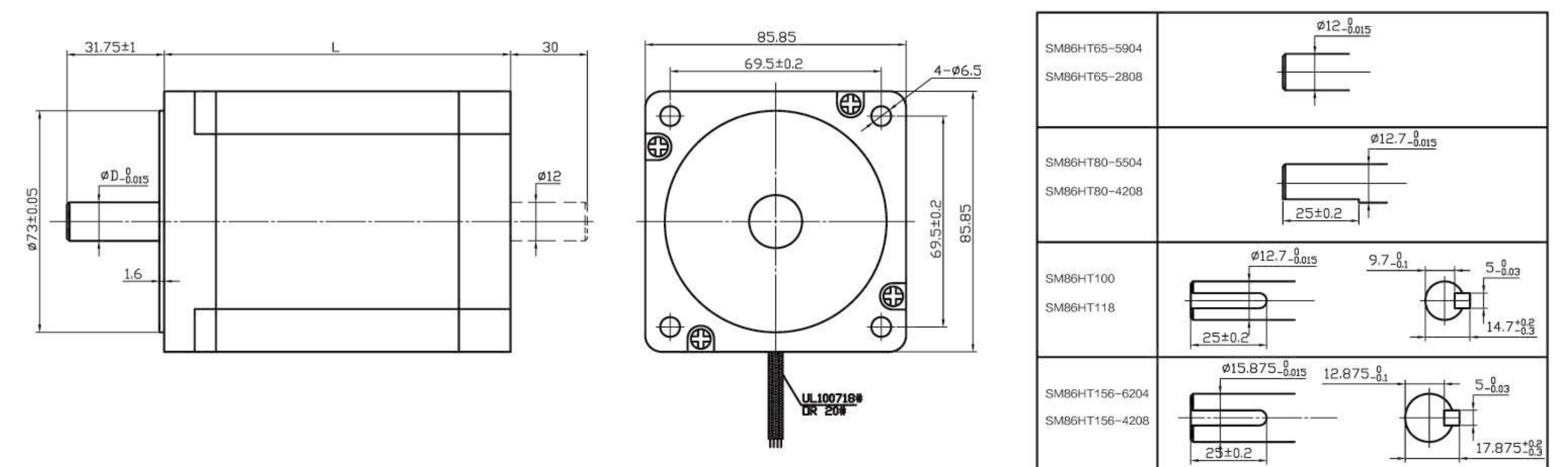
Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	820VAC for 1s 3mA
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N



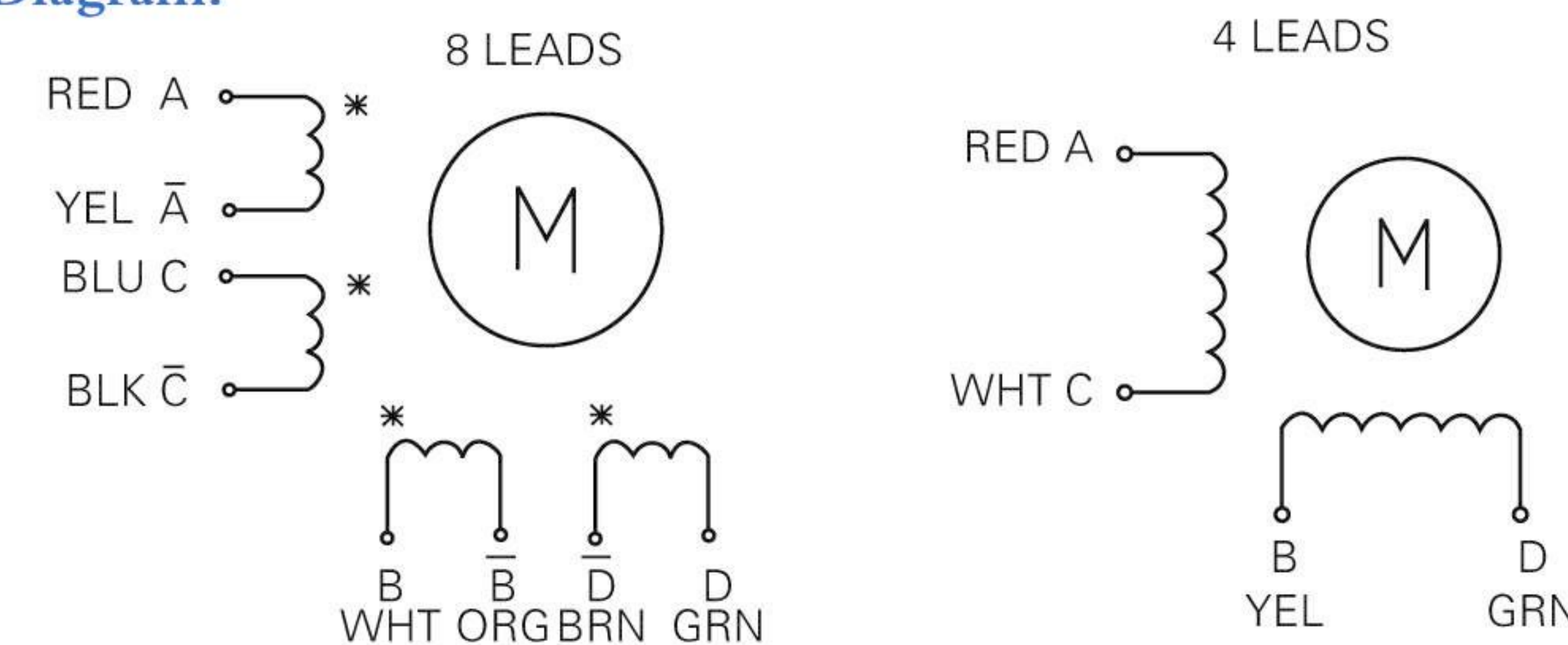
Electrical Specification:

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 ²	kg	kg-cm	mm
SM86HT65-5904A	SM86HT65-5904B	5.9	0.28	1.7	34	4	1000	1.7	0.8	65
SM86HT65-2808A	SM86HT65-2808B	2.8	1.4	3.9	34	8				
SM86HT80-5504A	SM86HT80-5504B	5.5	0.46	4	46	4	1400	2.3	1.2	80
SM86HT80-4208A	SM86HT80-4208B	4.2	0.75	3.4	46	8				
SM86HT100-5504A	SM86HT100-5504B	5.5	0.5	4.35	68	4	2059	3	2	100
SM86HT100-4208A	SM86HT100-4208B	4.2	0.8	3.8	68	8				
SM86HT118-6004A	SM86HT118-6004B	6	0.6	6.5	87	4	2700	3.8	2.4	118
SM86HT118-4208A	SM86HT118-4208B	4.2	0.9	6	87	8				
SM86HT156-6204A	SM86HT156-6204B	6.2	0.75	9	122	4	4000	5.4	3.6	156
SM86HT156-4208A	SM86HT156-4208B	4.2	1.25	8	122	8				

Dimensions: (Unit=mm)



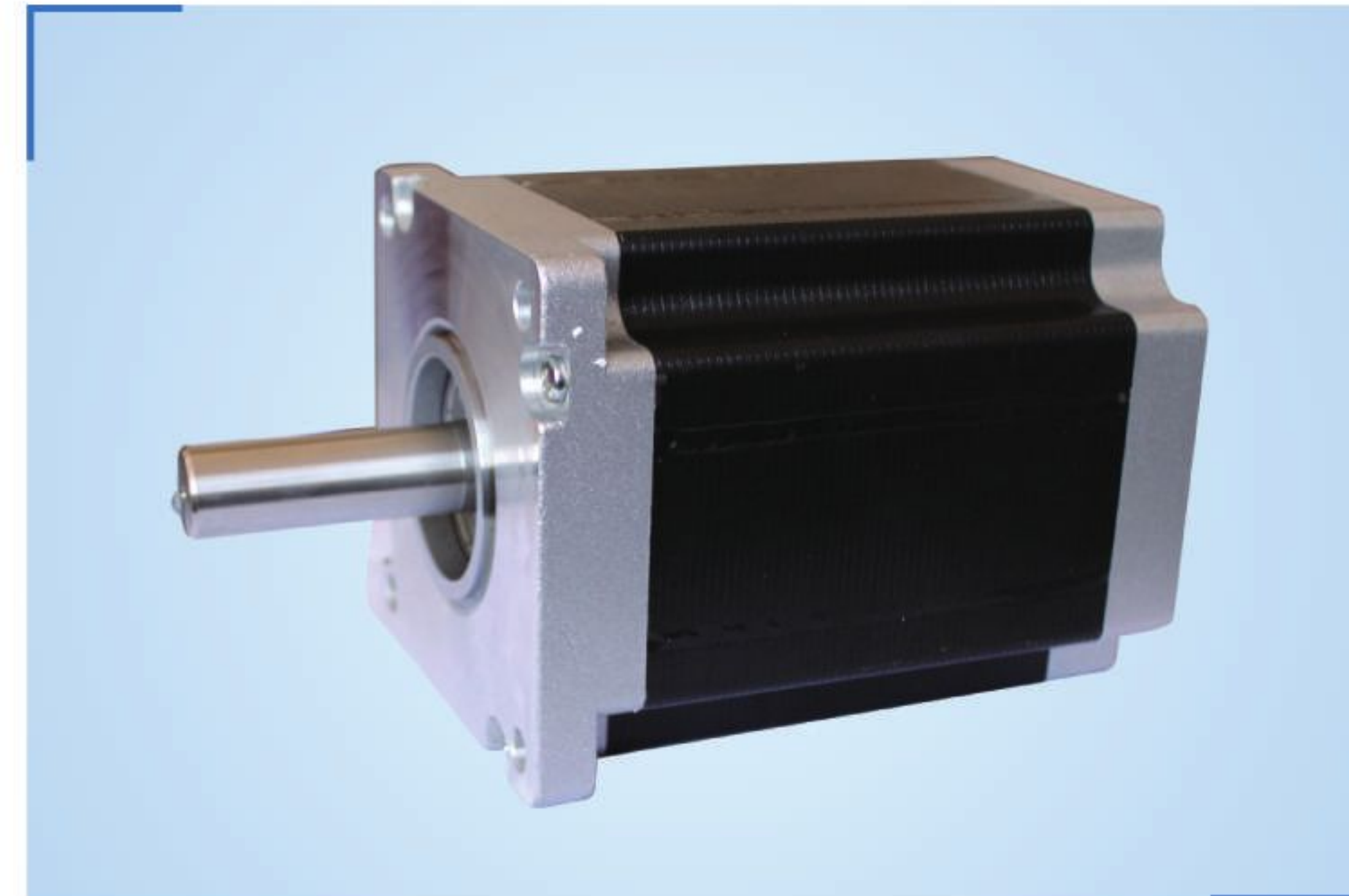
Wiring Diagram:



1.8°110mm (NEMA42) 2 phase Hybrid Stepper Motor

General Specification:

Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	1800VAC for 1S 5mA
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.08Max. (450g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N

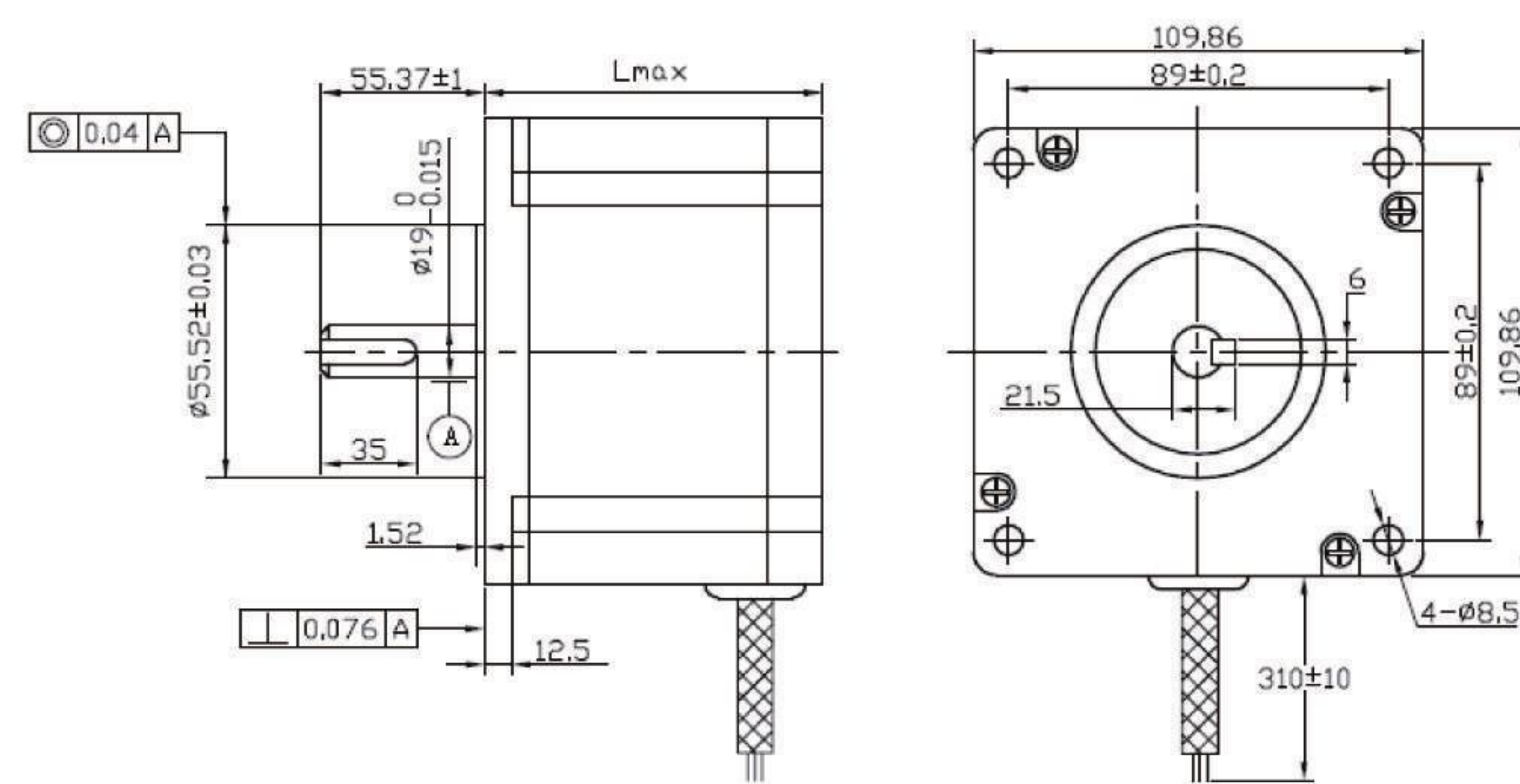


Electrical Specification:

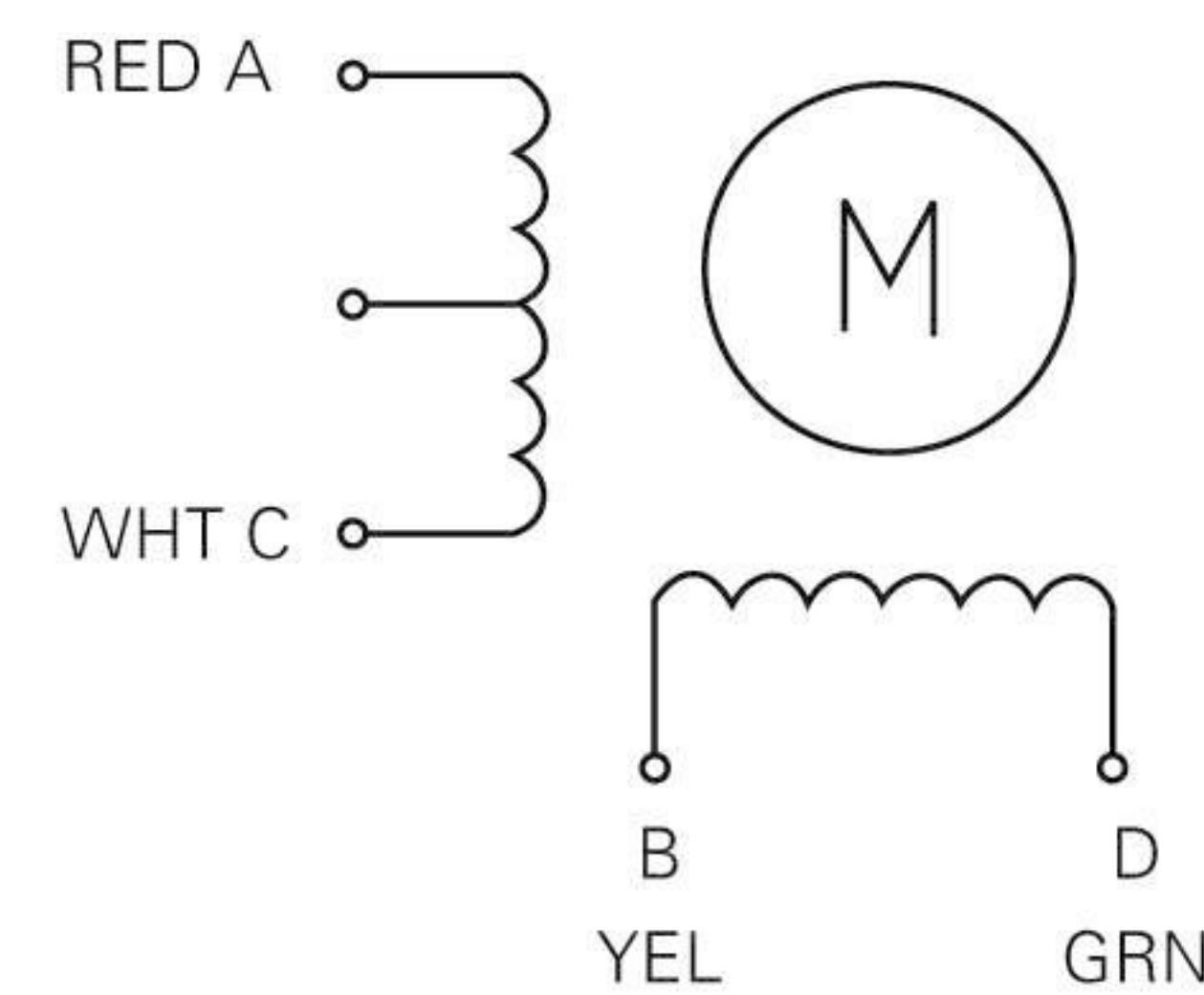
Model No.	Current /Phase	Resistance /Phase	Inductance /Phase	Holding Torque	# of Leads	Rotor Inertia	Weight	Detent Torque	Length
Single shaft	A	Ω	mH	N.m	#	g-cm ²	kg	kg-cm	mm
SM110HT99-5504A	5.5	0.9	12	11.2	4	5500	5	3	99
SM110HT150-6504A	6.5	0.8	15	21	4	10900	8.4	5.9	150
SM110HT165-7004A	7	1.2	17	24	4	13650	9.2	6.4	165
SM110HT201-8004A	8	0.67	12	28	4	16200	11.7	7.5	201

Dimensions:

(Unit=mm)



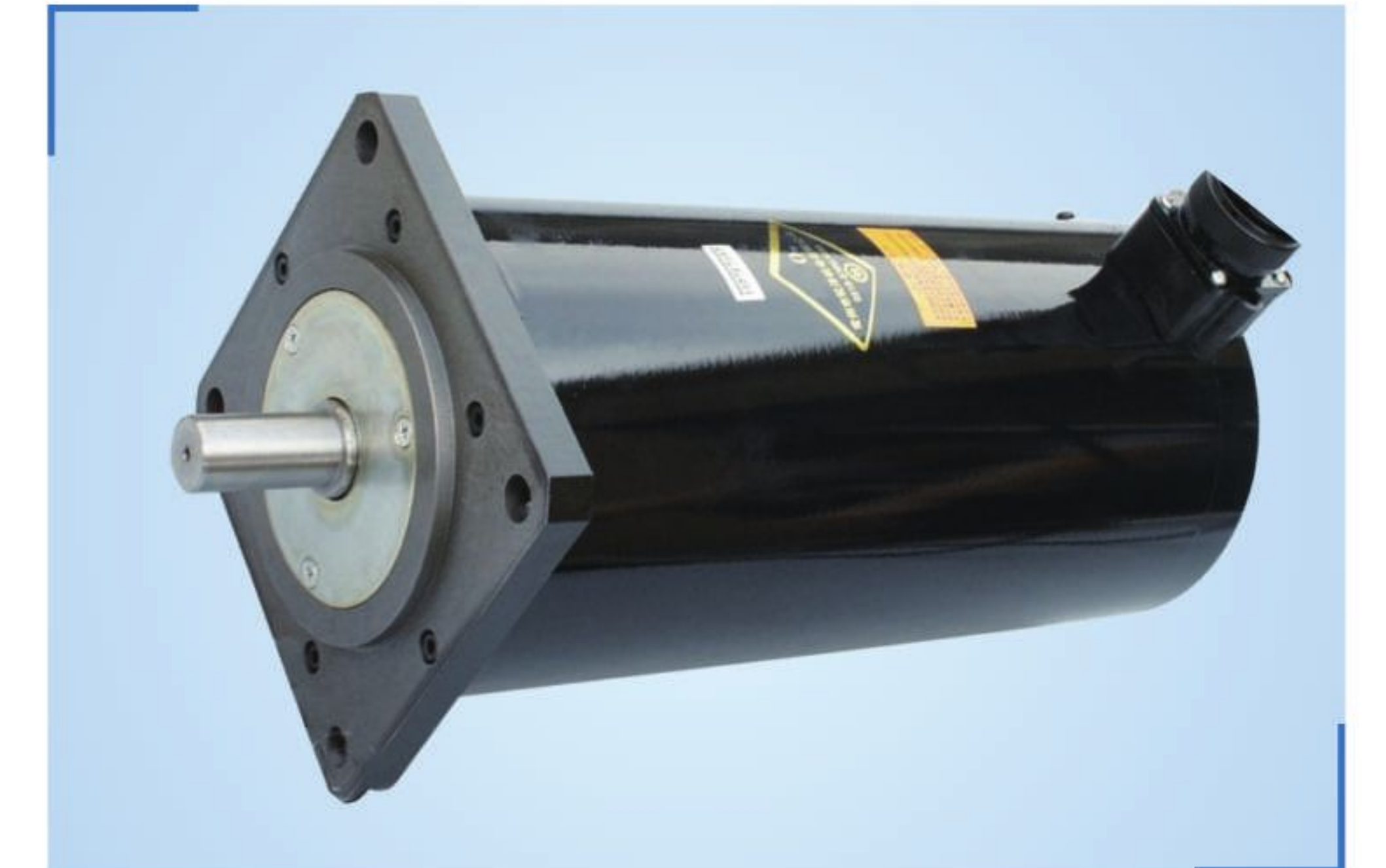
Wiring Diagram:



1.8°130mm (NEMA52) 2 phase Hybrid Stepper Motor

General Specification:

Item	Specifications
Step Angle	1.8°
Temperature Rise	80°Cmax
Ambient Temperature	-20°C~+50°C
Insulation Resistance	100 MΩ Min. ,500VDC
Dielectric Strength	500VAC for 1minute
Shaft Radial Play	0.02Max. (450g-load)
Shaft Axial Play	0.03Max. (450g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N

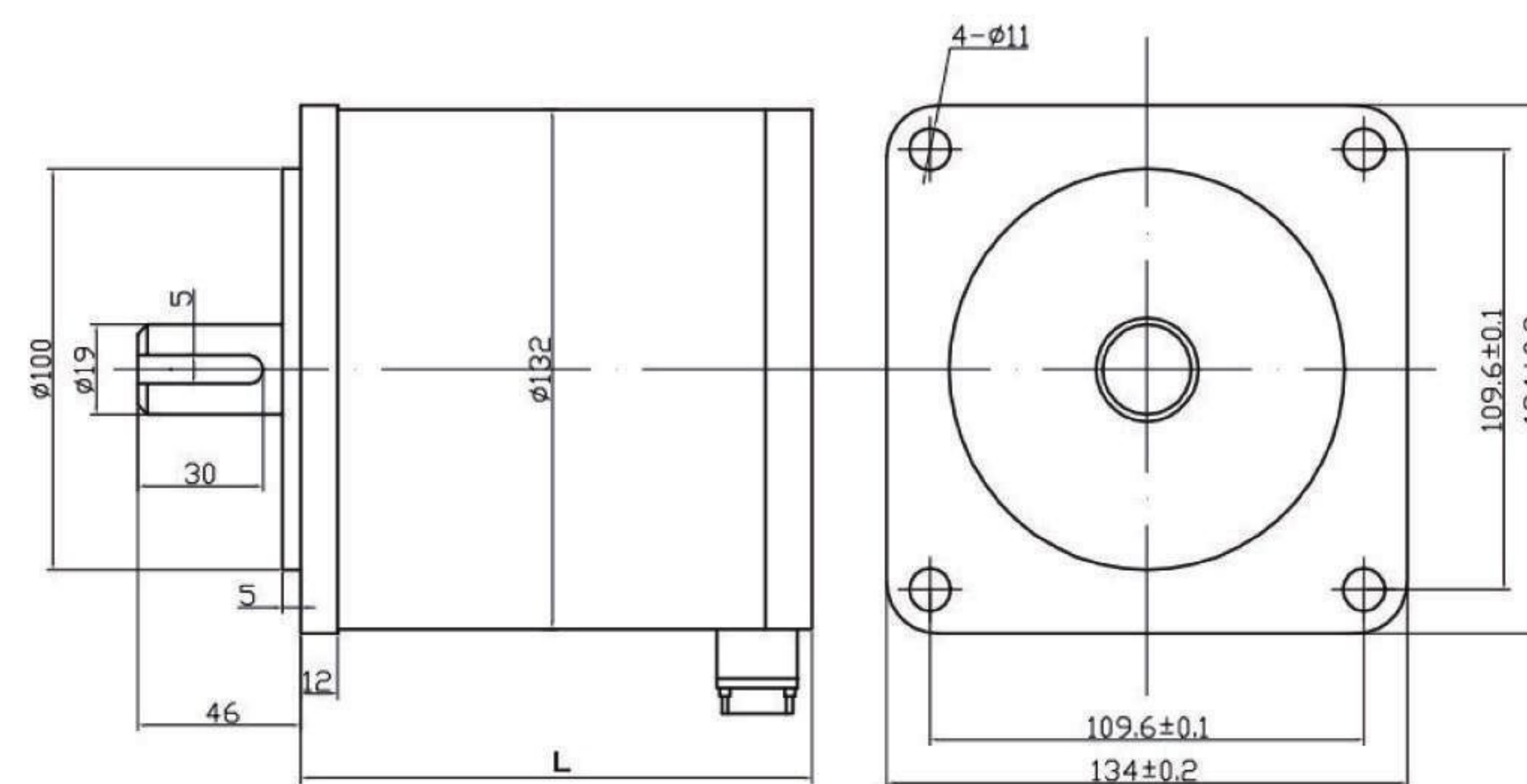


Electrical Specification:

Model No.	Rated Voltage	Current /Phase	Resistance /Phase	Inductance /Phase	No load Frequency	Starting Frequency	Holding Torque	Length	Weight
	V	A	Ω	mH	Hz	Hz	N.m	Kg	Kg
130H170-6004	80~325	6	0.75	12.6	25000	2300	20	170	13.3
130H225-6004	80~325	6	0.87	14.5	25000	2300	30	225	18
130H250-7004	80~325	7	0.77	12.4	23000	2200	40	250	19
130H280-7004	80~325	7	0.85	14.4	23000	2200	50	280	22.5

Dimensions:

(Unit=mm)



Wiring Diagram:

