

Model	Matching Drivers
35HS01	M422
39HS02	M422
42HS03	M422
57HS09	M542
57HS13	M542
57HS22	M542
86HS35	MA860H/M880A/M542
86HS45	MA860H/M880A
86HS85	MA860H/M880A
86HS120	MA860H/M880A
110HS12	DM1182/DM2282
110HS20	DM1182/DM2282
110HS28	DM1182/DM2282
130HS27	DM1182/DM2282
130HS33	DM1182/DM2282
130HS40	DM1182/DM2282
130HS45	DM1182/DM2282
573S09	3DM580/3DM683
573S15	3DM580/3DM683
863S22	3DM683/3DM580
863S42	3DM683/3DM580
863S68H	3DM683/3DM580



86 series 3-phase Stepping Motors



General Specifications

Step Angle Accuracy	+5%(full step, no load)
Temperature Rise	80°CMax
Ambient Temperature	-10°C -- +50°C
Insulation Resistance	100MΩmin.500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	0.06 Max.(450g-load)
Shaft Axial Play	0.08 max.(450g-load)

Electrical Specifications

Model No.	Step Angle (°)	Holding Torque N.m	Current /phase A	Inductance /phase mH	Resistance /phase Ohm	# of leads	Rotor Inertia g.cm ²	Detent Torque N.cm	Motor Weight Kg	Motor Length L mm
863S22	1.2	2.3	5.0	2.8	0.9	6	1200	-	2.1	73
863S42	1.2	4.3	5.0	4.5	1.35	6	2500	-	3.0	105
863S68H	1.2	6.8	3.5	20	4.5	6	3300	-	3.8	127

* Above motors are our typical models, and if you need a customization motor, please contact us.

Mechanical Specifications

Dimensions are in millimeters and 1 inch=25.4mm

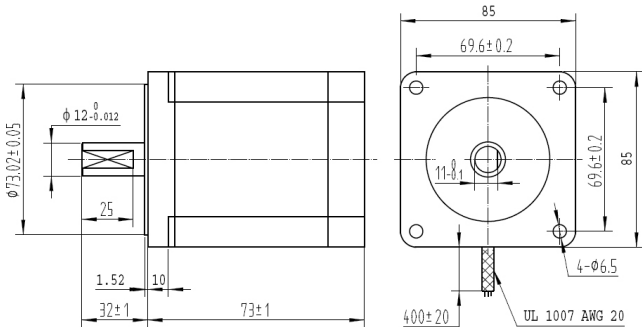


Figure 1: Mechanical specifications of 863S22

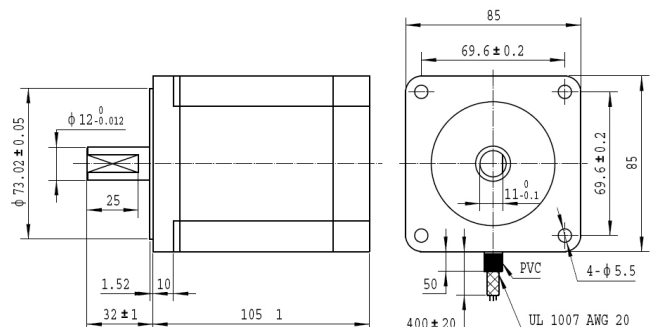


Figure 2: Mechanical specifications of 863S42

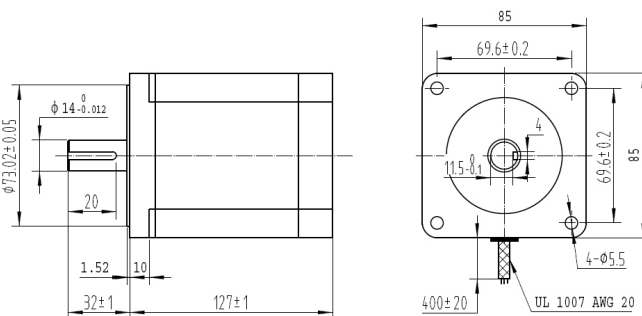


Figure 3: Mechanical specifications of 863S68H



Wiring Diagrams

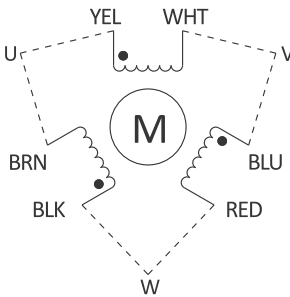


Figure 4: Wiring diagram of the 863Sxx

Speed-Torque Characteristics

Speed-torque curves show the maximum torques that can be output at a given speed. When selecting a motor, make sure the required torque falls within the particular curve.

• 863S22

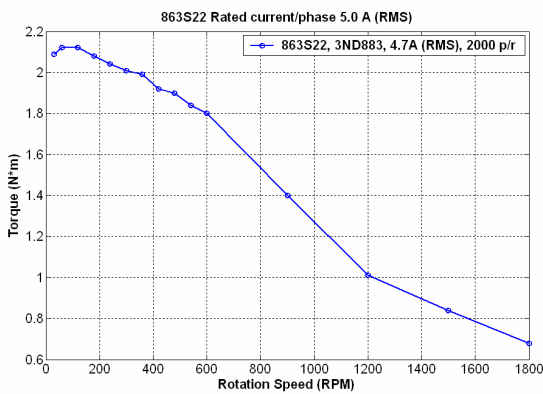


Figure 5: Speed-torque curves of the 863S22

• 863S42

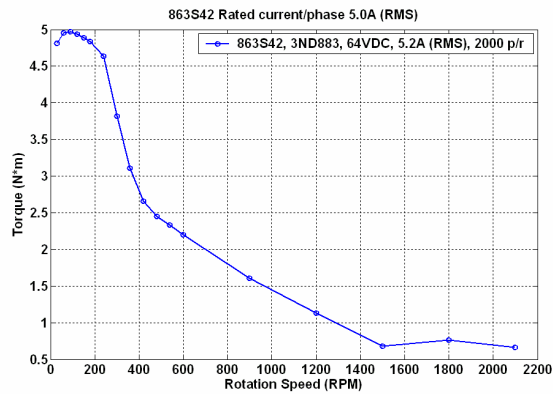


Figure 6: Speed-torque curves of the 863S42

• 863S68H

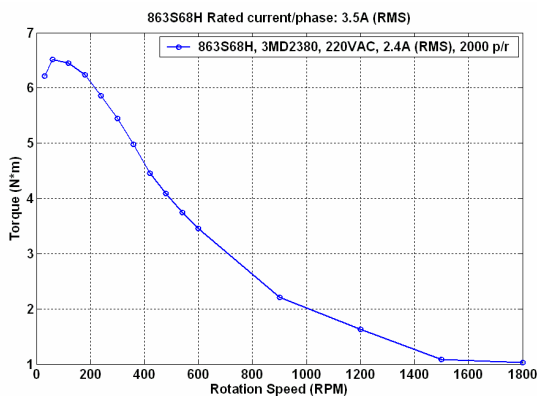


Figure 7: Speed-torque curves of the 863S68H

Remarks:

1. Title "863S22 Rated current/phase: 5.0A (RMS)" means "The rated current/phase of the 863S22 is 5.0A (RMS) ".
2. Legend "863S22, 3ND883, 64VDC, 4.7A (RMS), 2000p/r" means "This speed-torque curve of the 863S22 was done with the 3ND883 driver. The settings of the 3ND883 are 4.7A (RMS), resolution is 2000 pulses per revolution and use 64VDC power supply ".
3. The actual characteristics will vary depending on the driver used. Please use these curves only for reference purposes when selecting motor. You must also conduct a thorough evaluation with the actual driver to be used. Please consult Leadshine Motor and Driver Packages for more information about this issue.

