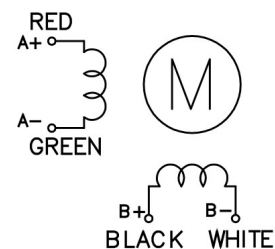
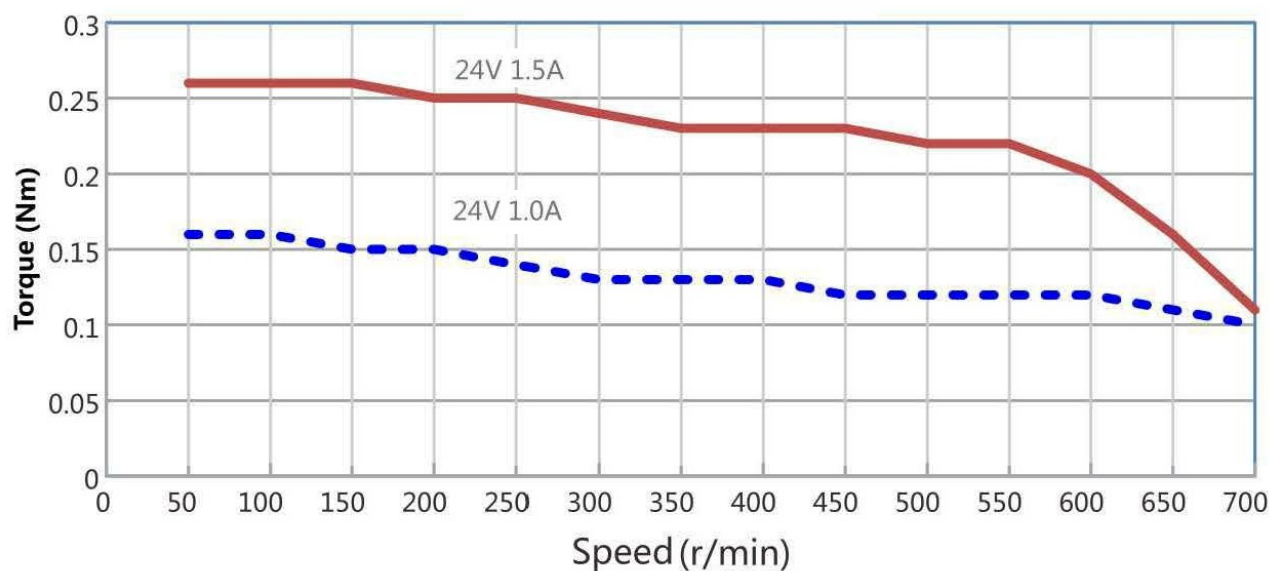
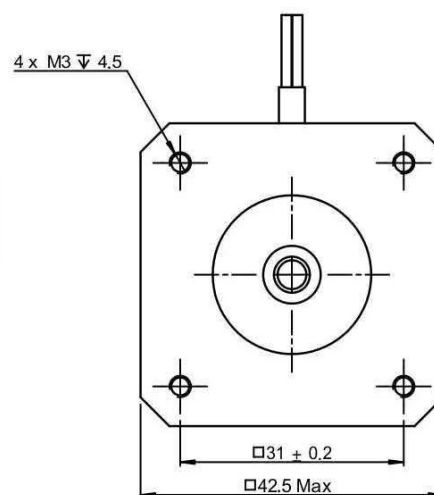
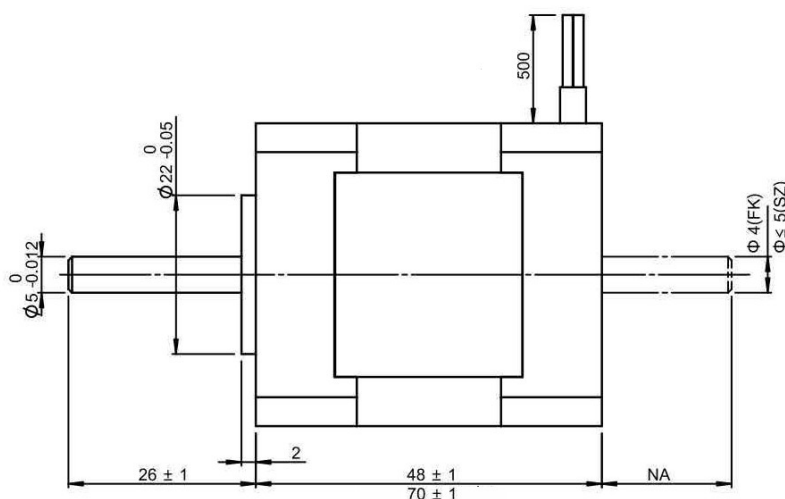


NEMA17-3015-VAC**2-Phase Vacuum Stepper Motor**

Specifications	Specifications
Step Angle	1.8°
Step Angle Accuracy	±5% (full step, no load)
Temperature Rise	80°C Max. (rated current, 2 phase on)
Insulation Resistance	100 M Ohm Minn., 500VDC
Dielectric Strength	500 VAC for one minute
Shaft Radial Play	0.02 Max. (450 g-load)
Shaft Axial Play	0.08 Max. (450 g-load)
Max. Radial Force	28N (20mm from the flange)
Max. Axial Force	10N
Temperature Rise	80°C Max. (rated current, 2 phase on)
Ambient Temperature	Selectable in Full Vacuum Class Code Range

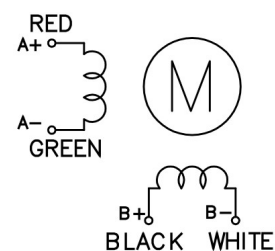


Rated Voltage (V)	2
Current/ Phase (A)	1.5
Resistance/ Phase (Ohm)	1.8
Inductance/ Phase (mH)	2.5
Holding Torque (Nm)	0.3
Rotor Inertia (gcm ²)	68
Body Length (mm)	48
Weight (kg)	0.38
Motor Length (mm)	48

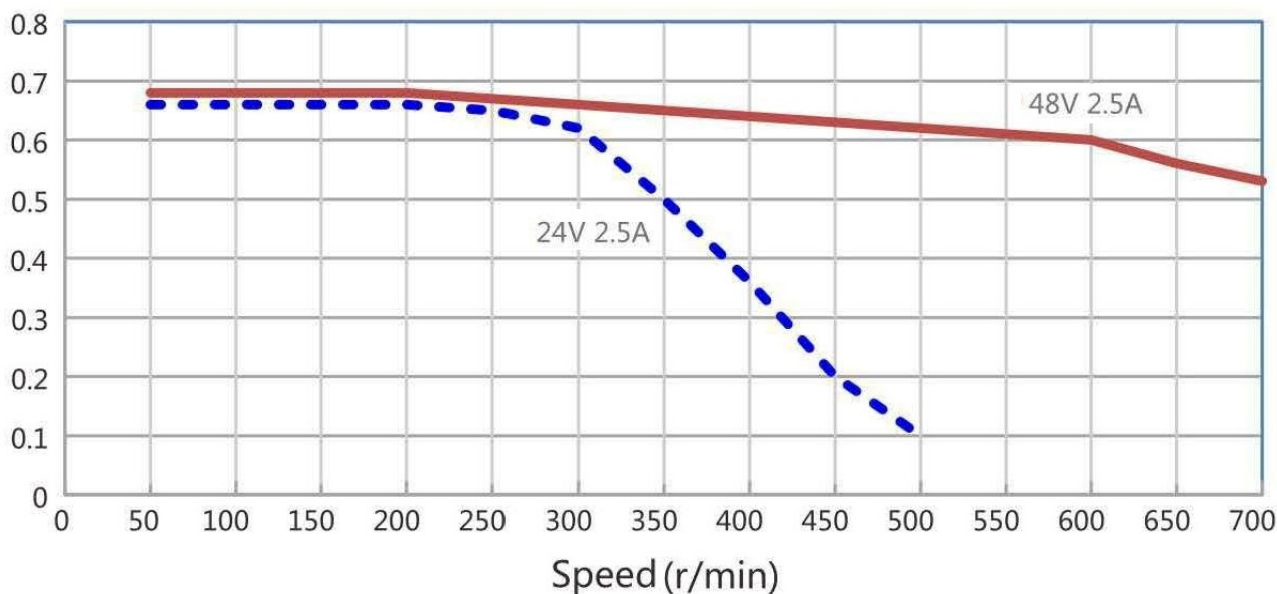
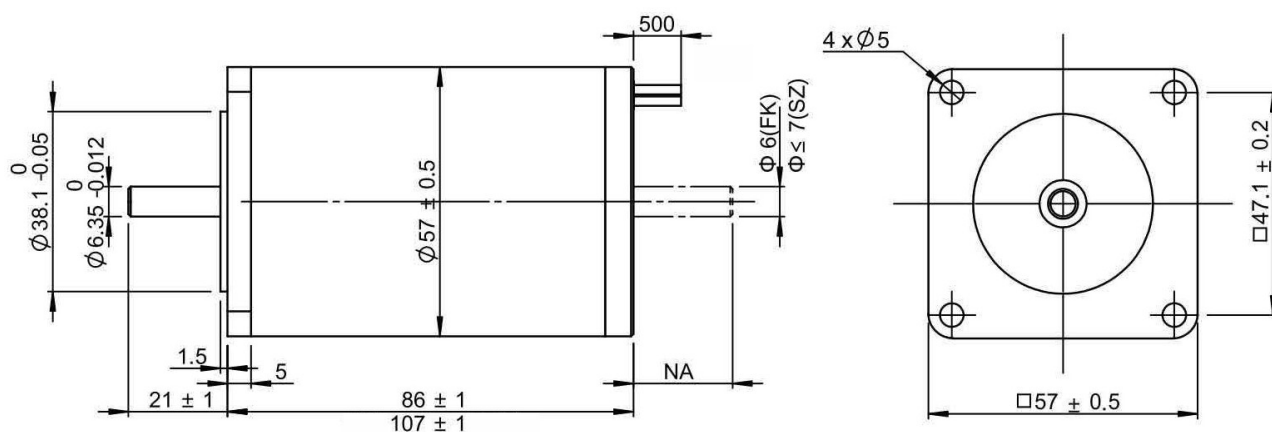


NEMA23-0825-VAC**2-Phase Vacuum Stepper Motor**

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)
Insulation Resistance	100 M Ohm 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
Temperature Rise	80°C Max. (rated current, 2 phase on)
Ambient Temperature	Selectable in Full Vacuum Class Code Range



Rated Voltage (V)	1.9
Current/ Phase (A)	2.5
Resistance/ Phase (Ohm)	1.3
Inductance/ Phase (mH)	2.7
Holding Torque (Nm)	0.8
Rotor Inertia (gcm ²)	350
Weight (kg)	1.2
Motor Length (mm)	86



Vacuum Classes

Code	Ambient Temperature (°C)	Baked Housing (1) RatedTemp. (°C)	Baked Housing (2) MaxTemp. (°C)	Vacuum (Pa)
VHT1	-20 ~ +200	+200	+220	10 ⁻⁵
VHT2	-20 ~ +160	+160	+180	10 ⁻⁵
VMT1	-20 ~ +200	+200	+220	10 ⁻³
VMT2	-20 ~ +150	+150	+170	10 ⁻³
VTL1	-20 ~ +100	+130	+150	10 ⁻¹
VTL2	-40 ~ +100	+130	+150	10 ⁻¹
VTL3	-60 ~ +100	+130	+150	10 ⁻¹
SHT	-20 ~ +200	+200	+220	NA
HT	-20 ~ +150	+150	+170	NA
NTL1	-20 ~ +85	+115	+135	NA
NTL2	-40 ~ +85	+115	+135	NA
NTL3	-60 ~ +85	+115	+135	NA
LT	-100 ~ +40	+100	+120	NA
SLT	-196 ~ +40	+100	+120	NA

(1) After reaching the max temperature, the motor should be run again when the housing temperature is at the ambient.

(2) The max temperature on the surface of motor housing lasts 5-minute.