

HT23-550

NEMA 23 High Torque Step Motor



Product Features

- 2-phase hybrid step motor
- High torque design
- Standard NEMA 23 dimensions
- Optimized for high bus voltage



Description

Product Description:

The HT23-550 two-phase stepper motor is designed for use with the STAC6 series of stepper drives (120 VAC input versions only) and is suitable for a wide range of motion control applications. The motor comes with an integral 10 ft shielded cable and a preassembled drive connector for easy connection to a STAC6 drive.

When not used with STAC6 drives, the preassembled drive connector can be removed to reveal 8 motor leads plus 1 ground lead. The 8 motor leads can be connected in one of three ways to the step motor drive of your choice: bipolar series (required for STAC6 drives), bipolar parallel, or unipolar.

Note: The HT23-550 step motor has been superseded by the [HT23-554](#) step motor for use in all new applications with STAC6 stepper drives.

This motor has features which do not conform to standard NEMA for gearhead ordering purposes. Stated lead time for a gearhead ordered with this motor may be longer than shown. Please call for delivery on a gearhead being ordered with this motor.

Specifications

Part Number:	HT23-550
Frame Size:	NEMA 23
Motor Type:	High torque
Part Number w/Double Shaft:	HT23-550D
Part Number w/Encoder:	HT23-550D-ZAA
Motor Length:	3.05 inches
Number of Lead Wires:	8
Lead Wire Configuration:	shielded cable w/ connector
Lead Wire/Cable Length:	10 feet inches
Lead Wire Gauge:	24 AWG
Unipolar Holding Torque:	180 oz-in
Bipolar Holding Torque:	255 oz-in
Step Angle:	1.8 deg
Bipolar Series Current:	1.41 A/phase
Bipolar Series Resistance:	4.5 Ohms/phase
Bipolar Series Inductance:	15.2 mH/phase
Bipolar Parallel Current:	2.83 A/phase
Bipolar Parallel Resistance:	1.1 Ohms/phase
Bipolar Parallel Inductance:	3.8 mH/phase
Unipolar Current:	2.00 A/phase
Unipolar Resistance:	2.2 Ohms/phase
Unipolar Inductance:	3.8 mH/phase
Rotor Inertia:	6.80E-03 oz-in-sec ²
Integral Gearhead:	No
Weight:	2.2 lbs
Storage Temperature:	-40 to 70 °C

Operating Temperature:	-20 to 50 °C
Insulation Class:	Class B (130 °C)
Shaft Run Out:	0.002 inch T.I.R. max
Radial Play:	0.001 inch max w/ 1.0 lb load
End Play:	0.003 inch max w/ 1.0 lb load
Perpendicularity:	0.004 inches
Concentricity:	0.003 inches

Downloads

Family Datasheet:	 StepMotorWiring-8-lead-cabled-solid.pdf
Datasheet:	http://s3.amazonaws.com/applied-motion-pdf/HT23-550.pdf
2D Drawing:	 HT23-550_revH.pdf  HT23-550D-ZAA_RevA.pdf
3D Drawing:	 23HT76D.igs  HT23_76mm_w_ZAA_encoder.igs
Speed-Torque Curves:	 STAC6_speed-torque.pdf