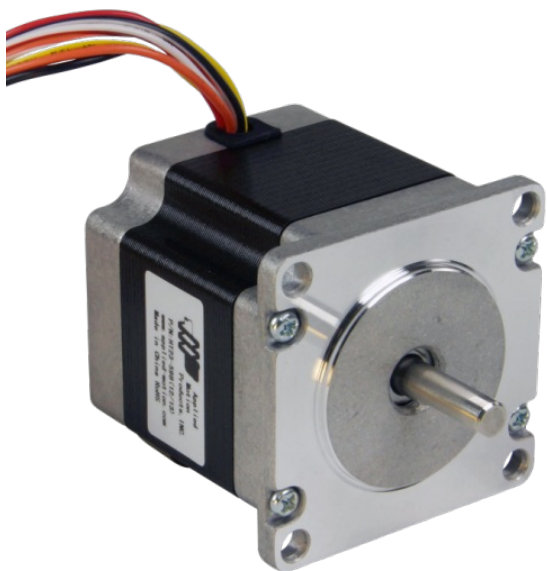


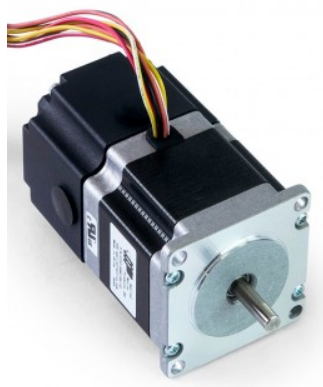
HT23-598

NEMA 23 High Torque Step Motor



Product Features

- 2-phase hybrid step motor
- High torque design
- Standard NEMA 23 dimensions
- Series or parallel wiring
- Optimized for microstepping



Product Description:

The HT23-598 two-phase stepper motor is suitable for a wide range of motion control applications. Terminated with 8 motor leads, the motor can be connected in a few different ways, including bipolar series and bipolar parallel.

Available Part Numbers

Part No.	Details
HT23-598	Base, single shaft motor.
HT23-598D	Double shaft motor.
HT23-598B	Motor with 24-volt holding brake mounted to rear shaft and end bell of motor. Cannot be used in conjunction with encoder options below.
HT23-598D-ZAA	Motor with ZAA type optical encoder mounted to rear shaft and end bell of motor. Recommended for use with Applied Motion stepper drives to perform Stall Detection and Stall Prevention functions. 2,000 CPR (8,000 counts quadrature); A, B, and Z (index) channels; differential, line driver outputs. • Mating cable for use with Applied Motion drives (D-sub connector): 3004-195-10 • Mating cable with flying leads: 3004-257
HT23-598D-CAA	Motor with CAA type capacitive encoder mounted to rear shaft and end bell of motor. Recommended for use with Applied Motion stepper drives to perform Stall Detection and Stall Prevention functions. 2,000 CPR (8,000 counts quadrature); A, B, and Z (index) channels; differential, line driver outputs. • Mating cable for use with Applied Motion drives (D-sub connector): 3004-329-10 • Mating cable with flying leads: 3004-349-03
HT23-598D-BAA	Motor with BAA type capacitive encoder mounted to rear shaft and end bell of motor. Not recommended for use with Applied Motion stepper drives to perform Stall Detection and Stall Prevention functions. Intended for use in applications where single-ended signals are acceptable and ambient electrical noise is well controlled. 2,000 CPR (8,000 counts quadrature); A, B, and Z (index) channels; single-ended outputs. Additional resolutions (CPR) available upon request - use the quote request form below to inquire.

UL Recognized

The single shaft (HT23-598) and double shaft (HT23-598D) versions of this motor are UL Recognized in the US and Canada, file no. E472271. The encoder and holding brake options are not included in the listing.

Specifications

Part Number:	HT23-598
Frame Size:	NEMA 23
Motor Type:	High torque
Part Number w/Double Shaft:	HT23-598D
Part Number w/Encoder:	HT23-598D-ZAA or HT23-598D-CAA or HT23-598D-BAA
Motor Length:	2.13 inches
Number of Lead Wires:	8
Lead Wire Configuration:	flying leads, no connector
Lead Wire/Cable Length:	18 inches inches
Lead Wire Gauge:	22 AWG
Unipolar Holding Torque:	120 oz-in
Bipolar Holding Torque:	158 oz-in
Step Angle:	1.8 deg
Bipolar Series Current:	2.12 A/phase
Bipolar Series Resistance:	1.7 Ohms/phase
Bipolar Series Inductance:	5.7 mH/phase
Bipolar Parallel Current:	4.24 A/phase
Bipolar Parallel Resistance:	0.4 Ohms/phase
Bipolar Parallel Inductance:	1.4 mH/phase
Unipolar Current:	3.00 A/phase
Unipolar Resistance:	0.9 Ohms/phase
Unipolar Inductance:	1.4 mH/phase
Rotor Inertia:	3.68E-03 oz-in-sec ²
Integral Gearhead:	No
Weight:	1.32 lbs
Storage Temperature:	-30 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/ 1.1 lb load
End Play:	0.003 inch max w/ 1.1 lb load
Perpendicularity:	0.004 inches
Concentricity:	0.002 inches

Downloads

Datasheet:	 StepMotorWiring-8-lead-striped.pdf  Stepper Motor Life data-110817.pdf
Product PDF - S3 Link:	http://s3.amazonaws.com/applied-motion-pdf/HT23-598.pdf
2D Drawing:	 HT23-598_RevG.pdf  HT23-598B_RevB.pdf  HT23-598D-CAA_RevB.pdf  HT23-598D-ZAA_RevA.pdf  HT23-598D-BAA_RevA.pdf
3D Drawing:	 23HT54D.igs  HT23-598B.zip  HT23-598D-BAA_STEP_7817.zip  HT23-598D-CAA_STEP_7817.zip  HT23-598DC-CAA_STEP_7817.zip
Speed-Torque Curves:	 STR_speed-torque.pdf  STR2_speed-torque.pdf  ST_Speed Torque_revF_Size23_24.pdf

Products in the Series *CORE Step Motors*

Part Number	Frame Size	Length	Holding Torque	Series Current	Parallel Current	Rotor Inertia
HT08-220	NEMA 8	1.24	2.12	NA	0.35	2.83E-05
HT08-221	NEMA 8	1.85	4.53	NA	0.35	5.95E-05
HT11-020	NEMA 11	1.22	7.08	NA	1.0	1.27E-04
HT11-021	NEMA 11	2.05	14.16	NA	1.0	2.55E-04
HT17-268	NEMA 17	1.31	31.2	0.67	1.34	5.38E-04
HT17-271	NEMA 17	1.57	52.4	0.85	1.70	8.07E-04
HT17-275	NEMA 17	1.90	77.9	0.85	1.70	1.16E-03
HT17-278	NEMA 17	2.47	113	1.0	2.0	1.74E-03
HT23-594	NEMA 23	1.61	76.5	1.41	2.83	1.91E-03
HT23-598	NEMA 23	2.13	158	2.12	4.24	3.68E-03
HT23-601	NEMA 23	2.99	269	2.12	4.24	6.51E-03
HT23-603	NEMA 23	4.37	354	2.5	5.0	1.06E-02
HT34-504	NEMA 34	2.62	397	3.18	6.30	1.56E-02
HT34-505	NEMA 34	3.78	850	3.18	6.30	2.62E-02
HT34-506	NEMA 34	4.94	1260	2.80	5.60	3.89E-02