

## HT23-598C

NEMA 23 Step Motor with 10 Foot Shielded Cable



### Product Features

- 2-phase hybrid step motor
- High torque design
- Standard NEMA 23 dimensions



## Description

### Product Description:

The HT23-598 two-phase stepper motor is designed for use with the ST5 and STR4 stepper drives and is suitable for a wide range of motion control applications. The motor is optimized for use with DC powered drives and comes with an integral 10 ft shielded cable.

Single and double shaft versions are available. The HT23-598DC-ZAC includes an optical encoder with 10 foot cable and rugged metal cover.

The motor is terminated with 8 motor leads plus 1 ground lead.












Please note: 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

<b>Part Number:</b>	HT23-598C
<b>Frame Size:</b>	NEMA 23
<b>Motor Type:</b>	High torque
<b>Part Number w/Double Shaft:</b>	HT23-598DC
<b>Part Number w/Encoder:</b>	HT23-598DC-ZAA
<b>Part Number w/Encoder &amp; Cover:</b>	HT23-598DC-ZAC
<b>Motor Length:</b>	2.35 inches
<b>Number of Lead Wires:</b>	8
<b>Lead Wire Configuration:</b>	shielded cable, no connector
<b>Lead Wire/Cable Length:</b>	10 feet inches
<b>Lead Wire Gauge:</b>	22 AWG
<b>Unipolar Holding Torque:</b>	120 oz-in
<b>Bipolar Holding Torque:</b>	158 oz-in
<b>Step Angle:</b>	1.8 deg
<b>Bipolar Series Current:</b>	2.12 A/phase
<b>Bipolar Series Resistance:</b>	2.0 Ohms/phase
<b>Bipolar Series Inductance:</b>	5.6 mH/phase
<b>Bipolar Parallel Current:</b>	4.24 A/phase
<b>Bipolar Parallel Resistance:</b>	0.5 Ohms/phase
<b>Bipolar Parallel Inductance:</b>	1.4 mH/phase
<b>Unipolar Current:</b>	3.00 A/phase
<b>Unipolar Resistance:</b>	1.0 Ohms/phase
<b>Unipolar Inductance:</b>	1.4 mH/phase
<b>Rotor Inertia:</b>	0.0036 oz-in-sec <sup>2</sup>
<b>Integral Gearhead:</b>	No

<b>Weight:</b>	1.32 lbs
<b>Storage Temperature:</b>	-30 +70 °C
<b>Operating Temperature:</b>	-20 +50 °C
<b>Insulation Class:</b>	B
<b>Shaft Run Out:</b>	0.002 inch T.I.R. max
<b>Radial Play:</b>	0.001 inch max w/ 1.1 lb load
<b>End Play:</b>	0.003 inch max w/ 1.1 lb load
<b>Perpendicularity:</b>	0.004 inches
<b>Concentricity:</b>	0.002 inches

## Downloads

<b>Datasheet:</b>	<a href="http://s3.amazonaws.com/applied-motion-pdf/HT23-598C.pdf">http://s3.amazonaws.com/applied-motion-pdf/HT23-598C.pdf</a>
<b>2D Drawing:</b>	<a href="#"> <a href="#">HT23-598C_RevC.pdf</a></a> <a href="#"> <a href="#">HT23-598DC_RevB.pdf</a></a> <a href="#"> <a href="#">HT23-598DC-ZAC_RevA.pdf</a></a> <a href="#"> <a href="#">HT23-598DC-ZAA_RevA.pdf</a></a>
<b>3D Drawing:</b>	<a href="#"> <a href="#">HT23-598C.igs</a></a> <a href="#"> <a href="#">HT23-598DC.igs</a></a> <a href="#"> <a href="#">HT23-598DC-ZAA.igs</a></a> <a href="#"> <a href="#">HT23-598DC-ZAC.igs</a></a>
<b>Speed-Torque Curves:</b>	<a href="#"> <a href="#">ST_speed-torque.pdf</a></a> <a href="#"> <a href="#">STR_speed-torque.pdf</a></a> <a href="#"> <a href="#">STR2_speed-torque.pdf</a></a>

## Products in the Series *Cabled Step Motors*

Part Number	Frame Size	Length	Holding Torque	Series Current	Parallel Current	Rotor Inertia
<a href="#">HT23-552</a>	NEMA 23	1.71	84.4	0.71	1.41	1.70E-03
<a href="#">HT23-553</a>	NEMA 23	2.17	167	0.71	1.41	4.25E-03
<a href="#">HT23-554</a>	NEMA 23	3.05	255	0.71	1.41	6.80E-03
<a href="#">HT23-598C</a>	NEMA 23	2.35	158	2.12	4.24	0.0036
<a href="#">HT23-601C</a>	NEMA 23	3.20	269	2.12	4.24	0.0064
<a href="#">HT34-495</a>	NEMA 34	3.11	555	2.15	4.30	2.27E-02
<a href="#">HT34-496</a>	NEMA 34	4.63	1110	2.05	4.10	4.53E-02
<a href="#">HT34-497</a>	NEMA 34	6.14	1694	2.55	5.10	6.80E-02
<a href="#">HT34-506C</a>	NEMA 34	4.94	1260	2.8	5.6	0.0387
<a href="#">HT34-696</a>	NEMA 34	4.59	1110	2.05	4.1	3.87E-02
<a href="#">HW23-598</a>	NEMA 23	2.34	158	2.12	4.24	3.68E-03
<a href="#">HW23-601</a>	NEMA 23	3.21	269	2.12	4.24	6.51E-03
<a href="#">HW23-753</a>	NEMA 23	2.19	153	0.71	1.41	3.12E-03
<a href="#">HW23-754</a>	NEMA 23	3.23	227	0.71	1.41	6.51E-03
<a href="#">HW24-108</a>	NEMA 24	3.72	354	NA	4.0	1.27E-02
<a href="#">HW34-506</a>	NEMA 34	5.0	1260	2.8	5.6	3.87E-02
<a href="#">HW34-696</a>	NEMA 34	4.59	1062	2.03	4.06	3.87E-02