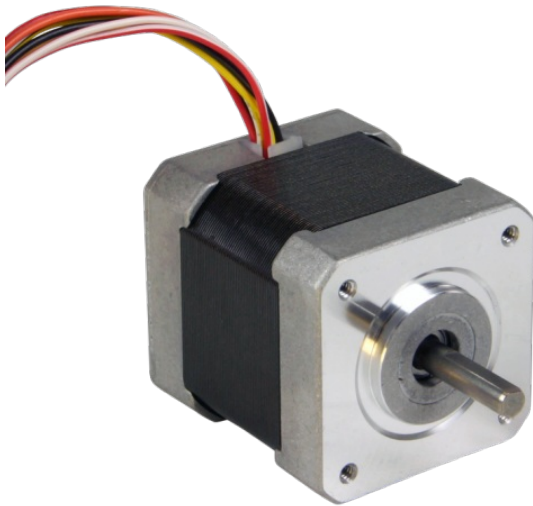


## HT17-275

NEMA 17 High Torque Step Motor



### **Product Features**

- 2-phase hybrid step motor
- High torque design
- Standard NEMA 17 dimensions
- Series or parallel wiring
- Double shaft version available
- Motor is UL Recognized
- Encoder options available



**Product Description:**

The HT17-275 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
HT17-275	Base, single shaft motor.
HT17-275D	Double shaft motor.
HT17-275D-WAA	<p>Motor with WAA type <a href="#">optical</a> 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.</p> <ul style="list-style-type: none"> <li>• Mating cable for use with Applied Motion drives (D-sub connector):<a href="#">3004-195-10</a></li> <li>• Mating cable with flying leads:<a href="#">3004-257</a></li> </ul>
HT17-275D-CAA	<p>Motor with CAA type <a href="#">capacitive</a> 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.</p> <ul style="list-style-type: none"> <li>• Mating cable for use with Applied Motion drives (D-sub connector):<a href="#">3004-329-10</a></li> <li>• Mating cable with flying leads:<a href="#">3004-349-03</a></li> </ul>
HT17-275D-BAA	<p>Motor with BAA type <a href="#">capacitive</a> encoder mounted to rear shaft and end bell of motor. <b>Not recommended for use with Applied Motion stepper drives to perform Stall Detection and Stall Prevention functions.</b> 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.</p>

**UL Recognized**












The single and double-shaft versions of this motor are UL Recognized in the US and Canada, file no. E472271. The encoder is not included in the listing.

## Specifications

<b>Part Number:</b>	HT17-275
<b>Frame Size:</b>	NEMA 17
<b>Motor Type:</b>	High torque
<b>Part Number w/Double Shaft:</b>	HT17-275D
<b>Part Number w/Encoder:</b>	HT17-275D-WAA or HT17-275D-CAA or HT17-275D-BAA
<b>Motor Length:</b>	1.90 inches
<b>Number of Lead Wires:</b>	8
<b>Lead Wire Configuration:</b>	flying leads, no connector
<b>Lead Wire/Cable Length:</b>	12 inches inches
<b>Lead Wire Gauge:</b>	26 AWG
<b>Unipolar Holding Torque:</b>	55.2 oz-in
<b>Bipolar Holding Torque:</b>	77.9 oz-in
<b>Step Angle:</b>	1.8 deg
<b>Bipolar Series Current:</b>	0.85 A/phase
<b>Bipolar Series Resistance:</b>	6.6 Ohms/phase
<b>Bipolar Series Inductance:</b>	12.8 mH/phase
<b>Bipolar Parallel Current:</b>	1.70 A/phase
<b>Bipolar Parallel Resistance:</b>	1.7 Ohms/phase
<b>Bipolar Parallel Inductance:</b>	3.2 mH/phase
<b>Unipolar Current:</b>	1.20 A/phase
<b>Unipolar Resistance:</b>	3.3 Ohms/phase
<b>Unipolar Inductance:</b>	3.2 mH/phase
<b>Rotor Inertia:</b>	1.16E-03 oz-in-sec <sup>2</sup>
<b>Integral Gearhead:</b>	No
<b>Weight:</b>	0.8 lbs
<b>Storage Temperature:</b>	-30 to 70 °C

<b>Operating Temperature:</b>	-20 to 50 °C
<b>Insulation Class:</b>	Class B (130 °C)
<b>Shaft Run Out:</b>	0.001 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="#"> <a href="#">StepMotorWiring-8-lead-striped.pdf</a></a> <a href="#"> <a href="#">Stepper Motor Life data-110817.pdf</a></a>
<b>Product PDF - S3 Link:</b>	<a href="http://s3.amazonaws.com/applied-motion-pdf/HT17-275.pdf">http://s3.amazonaws.com/applied-motion-pdf/HT17-275.pdf</a>
<b>2D Drawing:</b>	<a href="#"> <a href="#">HT17-275_RevE.pdf</a></a> <a href="#"> <a href="#">HT17-275D-CAA_RevB.pdf</a></a> <a href="#"> <a href="#">HT17-275D-BAA_RevA.pdf</a></a>
<b>3D Drawing:</b>	<a href="#"> <a href="#">17HT47D.igs</a></a> <a href="#"> <a href="#">HT17-275D-BAA_STEP_7817.zip</a></a> <a href="#"> <a href="#">HT17-278D-CAA_STEP_7817.zip</a></a>
<b>Speed-Torque Curves:</b>	<a href="#"> <a href="#">STR_speed-torque.pdf</a></a> <a href="#"> <a href="#">STR2_speed-torque.pdf</a></a> <a href="#"> <a href="#">ST_Speed_Torque_revF_Size17.pdf</a></a>

## Products in the Series *CORE Step Motors*

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