**SPECIFICATIONS:**

- **STEPS PER REVOLUTION:** 200
- **ROTOR INERTIA:** 57.0 G-cm² (0.31 oz-in²) REF
- **STEP ANGLE:** 1.8°
- **DETENT TORQUE:** 152.9 G-cm (2.12 oz-in) MIN
- **STEP TO STEP ACCURACY:** ±0.09 DEGREES
- **INSULATION CLASS:** B
- **POSITIONAL ACCURACY:** ±0.09 DEGREES
- **BEARINGS:** ABEC 3, DOUBLE SHIELDED
- **Hysteresis:** ±%
- **WEIGHT:** 280 G (9.8 oz) APPROXIMATE
- **SHAFT RUNOUT:** 0.03 T.I.R.
- **TEMP. RISE:** 80 °C MAX.
- **RADIAl PLAY:** 0.02 MAX W/A 5KG RADIAL LOAD
- **OPERATING TEMP. RANGE:** -20 TO +50 °C
- **END PLAY:** 0.08 MAX W/A 5KG AXIAL LOAD
- **STORAGE TEMP. RANGE:** -30 TO +70 °C
- **RELATIVE HUMIDITY RANGE:** 15 TO 85 %

### Table

<table>
<thead>
<tr>
<th>Connection</th>
<th>Bi-Polar Series</th>
<th>Bi-Polar Parallel</th>
<th>Uni-Polar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Phase</td>
<td>Resistance per Phase</td>
<td>Inductance per Phase</td>
<td>Rated Current</td>
</tr>
<tr>
<td>Call</td>
<td>Ohm ±10%</td>
<td>mH ±20%</td>
<td>Amp</td>
</tr>
<tr>
<td>2</td>
<td>7.0</td>
<td>12.0</td>
<td>0.85</td>
</tr>
<tr>
<td>2</td>
<td>1.7</td>
<td>3.0</td>
<td>1.70</td>
</tr>
<tr>
<td>4</td>
<td>3.5</td>
<td>3.0</td>
<td>1.20</td>
</tr>
</tbody>
</table>

### Notes

1. **Measurements made at rated current in each phase.**
2. **Between any two adjacent step positions.**
3. **Maximum error in 360°.**
4. **Hipot 500 VAC, 60 Hz FOR ONE MINUTE.**
5. **Leads: 8, 26 AWG, 7 STRAND MIN., UL AND CSA APPROVED, UL 1430 OR UL 3265.**
6. **Insulation resistance: 100 MEGOHMS MIN at 500 VDC.**
7. **As measured using an A.C. Inductance Bridge, at 1kHz.**
8. **As measured by the change in resistance method, with rated voltage applied to 2 phases, with motor at rest.**
9. **Shaft option: if double shaft required add "D" to end of part number, double shaft requires added holes for encoder options.**
10. **This motor is manufactured in compliance with the current EU RoHS directive.**
11. **Motor label to include "RoHS" compliant, 'made in (country of origin)' and date code.
MOTOR DRAWING

2X #2-56 UNC TAP THRU EQ.SP.
ON A Ø19.05 B.C.

315±10

9 15±1

4.5±0.1 FLAT

9

0.5X45'

LABEL

20±0.5

2±0.2

39.8 MAX

0.10 A

0.05 B

TYP Ø5.000–0.012

4.5±0.1 FLAT

0.5 X 45'

15±25

²22 ±0.052

MOUNTING END

2X 31±0.1

2X 42.3 MAX

4X #4-40 UNC
4.5 MIN DEEP

2X 15.50

TOLERANCES

DECIMALS: MM (INCH)
X.XXX ±0.013 (0.005)
X.X ±0.25 (0.01)
X ±2.5 (0.1)
ANGLES:
MACH. = ±5
CHAM. = ±5

THIRD ANGLE PROJECTION

APPROVALS

DRAWN

CHECKED

B. JONES 6/18/09

STEP MOTOR OUTLINE

APPROVED

COMPUTER DATA

BASE DRAWING

SCALE: NONE

SHEET 2 OF 2

HT17–271

REV. F

B

DWG NO.