

SPECIFICATIONS:

| | |
|---|--|
| NUMBER OF PHASES: 2 | ROTOR INERTIA: 135 g-cm ² (0.74 oz-in ²) NOM |
| STEPS PER REVOLUTION: 400 | DETENT TORQUE: 25 mNm (3.54 oz-in) MIN |
| STEP ANGLE: 0.9° | BEARINGS: 608ZZ |
| STEP TO STEP ACCURACY: ±0.045° [1], [2] | INSULATION CLASS: B |
| POSITIONAL ACCURACY: ±5% [1], [3] | HYSTERESIS: N/A% |
| SHAFT RUNOUT: 0.03 mm T.I.R. MAX | TEMP. RISE: 80 °C MAX. [9] |
| RADIAL PLAY: 0.02 mm MAX (.5KG RADIAL LOAD) | OPERATING TEMP. RANGE: -20 TO +50 °C |
| END PLAY: 0.08 mm MAX (.5KG AXIAL LOAD) | STORAGE TEMP. RANGE: -30 TO +70 °C |
| MAXIMUM RADIAL LOAD: 71N (15.96lb) | RELATIVE HUMIDITY RANGE: 15 TO 85 % |
| MAXIMUM AXIAL LOAD: 15N (3.37lb) | WEIGHT: 0.42 kg (0.93 lb) |

| SPECIFICATION | [7] | [8] | [1] | [1] |
|-----------------|---------------------------------|--------------------------------|---------------------|-------------------------|
| CONNECTION | RESISTANCE PER PHASE (ohm ±10%) | INDUCTANCE PER PHASE (mH ±20%) | RATED CURRENT (amp) | HOLDING TORQUE (Nm MIN) |
| BI-POLAR SERIES | 2.0 | 6.6 | 1.5 | 0.48 |

NOTES, UNLESS OTHERWISE SPECIFIED:

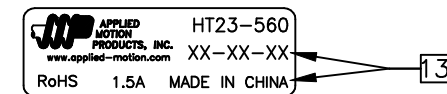
- [1] MEASUREMENTS MADE AT RATED CURRENT IN EACH PHASE.
- [2] BETWEEN ANY TWO ADJACENT FULL STEP POSITIONS.
- [3] MAXIMUM ERROR IN 360°.
- 4. HIPOT 500 VAC, 60 Hz FOR ONE MINUTE.
- [5] LEADS: 4, AWG 22, 7 STRAND MIN., UL AND CSA APPROVED, UL 1007
- 6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
- [7] AS MEASURED ACROSS EACH PHASE.
- [8] AS MEASURED ACROSS EACH PHASE USING AN A.C. INDUCTANCE BRIDGE AT 1 KHz.
- [9] AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED CURRENT APPLIED TO 2 PHASES; WITH MOTOR AT REST.
- [10] ADD "D" TO END OF PART NUMBER IF DOUBLE SHAFT IS REQUIRED. ENCODER HOLES INCLUDED WITH REAR SHAFT VERSION ONLY.
- 11. ROTOR & STATOR LAMINATED CONSTRUCTION.
- 12. THIS MOTOR IS MANUFACTURED IN COMPLIANCE WITH THE CURRENT EU RoHS DIRECTIVE.
- [13] MOTOR LABEL TO INCLUDE "ROHS" COMPLIANT, AMP P/N, 'MADE IN (COUNTRY OF ORIGIN)', AND DATE CODE.
- 14. HIGH TORQUE MOTOR DESIGN

HT23-560

REVISIONS

| ECO NO. | REV | DESCRIPTION | DATE | APPROVED |
|---------|-----|---------------------|---------|-----------|
| 6947 | A | PRELIMINARY RELEASE | 4/11/14 | D.MACLEOD |
| 7048 | B | ERROR CORRECTION | 8/11/14 | D.MACLEOD |
| 7069 | C | MANU. SPEC. CHANGES | 9/23/14 | D.MACLEOD |
| 7243 | D | ERROR CORRECTION | 7/1/15 | D.MACLEOD |
| 7445 | E | REVISE NOTE 12 | 6/6/16 | J KORDIK |
| 7614 | F | NO FLAT; REAR SHAFT | 4/19/17 | J KORDIK |
| - | - | - | - | - |
| - | - | - | - | - |
| - | - | - | - | - |
| - | - | - | - | - |
| - | - | - | - | - |

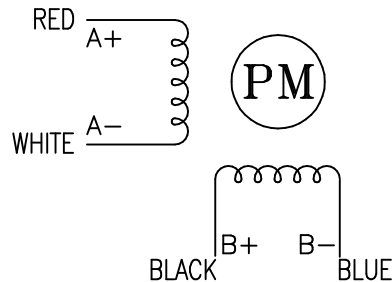
LABEL DETAIL



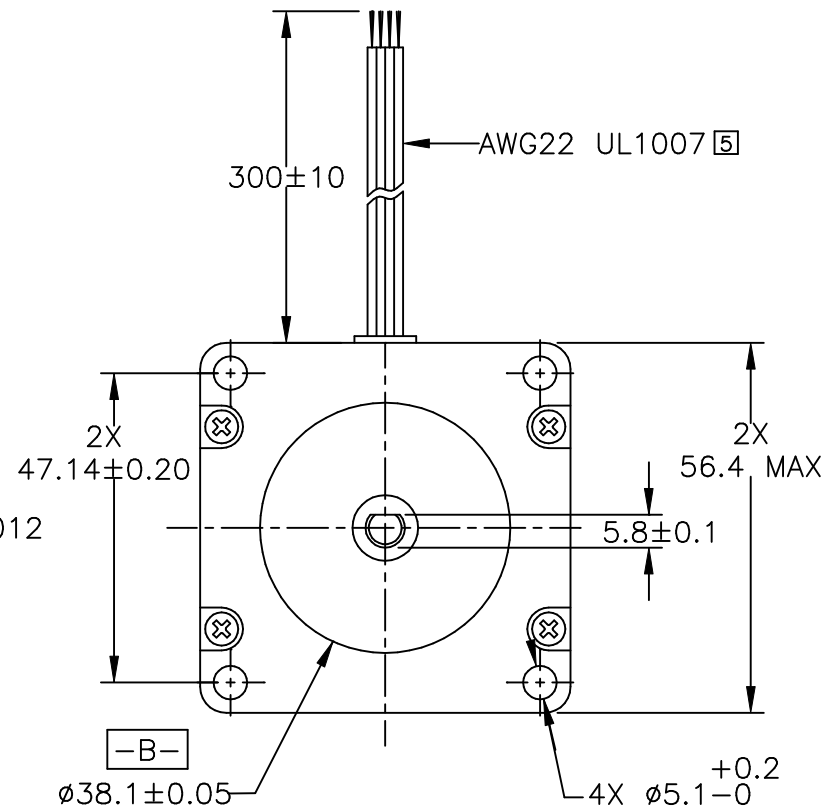
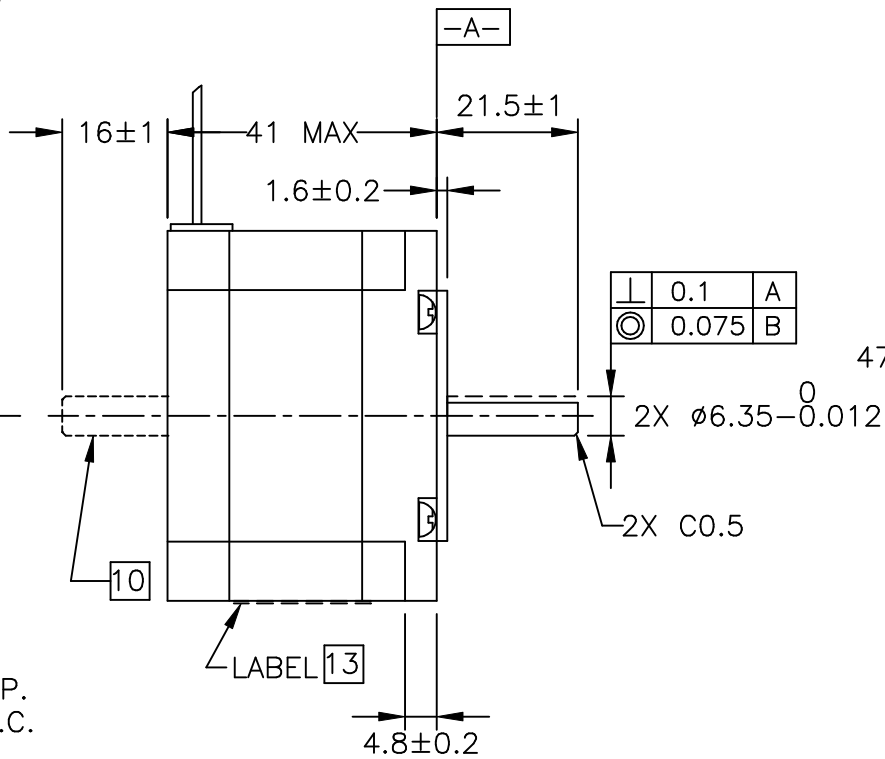
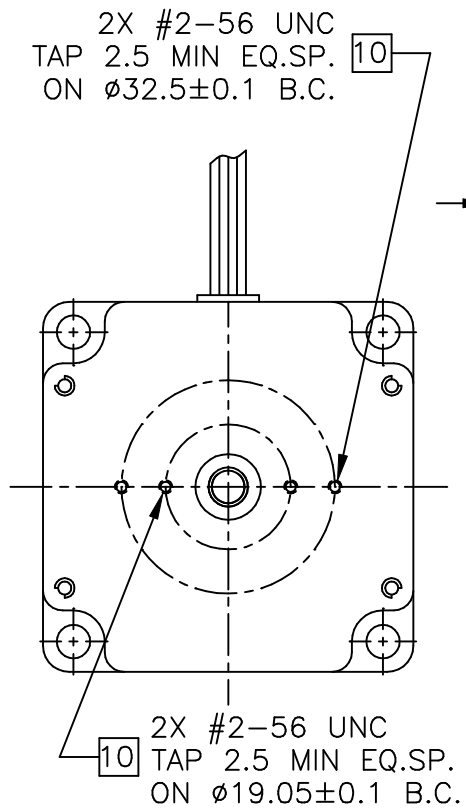
FULL STEP SWITCHING SEQUENCE
BI-POLAR, FACING MOUNTING END


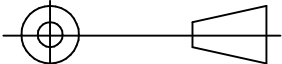
| STEP | A+ | A- | B+ | B- | CCW |
|------|----|----|----|----|-----|
| 0 | + | - | + | - | ↑ |
| 1 | - | + | + | - | |
| 2 | - | + | - | + | |
| 3 | + | - | - | + | |
| 4 | + | - | + | - | |

PHASE DETAIL



| | | | | | |
|-------------------|----------|---------------------------|-------------------------------|---------------------|----------|
| CONTRACT NO. - | | | | | |
| APPROVALS | DATE | STEP MOTOR OUTLINE | | | |
| DRAWN K.KESLER | 7/1/2015 | | | | |
| CHECKED - | - | B | COMPUTER DATA BASE DRAWING | DWG NO. HT23-560 | REV F |
| APPROVED - | - | | SCALE: NONE | SHEET 1 OF 2 | |



| TOLERANCES | THIRD ANGLE PROJECTION | |  APPLIED MOTION PRODUCTS, INC. |
|---|---|----------|--|
| *ALL DIMENSIONS IN MM DECIMALS: MM X.XX = ± 0.13 X.X = ± 0.25 ANGLES: MACH. = $\pm 0.5^\circ$ CHAM. = $\pm 5^\circ$ |  | | |
| | APPROVALS | DATE | |
| | DRAWN K.KESLER | 7/1/2015 | B |
| | CHECKED - | - | DWG NO. HT23-560 |
| | APPROVED - | - | REV F |
| COMPUTER DATA BASE DRAWING | | | SCALE: NONE |
| | | | SHEET 2 OF 2 |