

**SPECIFICATIONS:**

|   |  |
|---|--|
| STEPS PER REVOLUTION: 200                     | ROTOR INERTIA: 460 G-CM <sup>2</sup> (6.51E-03 oz-in-sec <sup>2</sup> )NOM |
| STEP ANGLE: 1.8°                              | DETENT TORQUE: 0.070 N-m (9.91 oz-in) MIN                                  |
| STEP TO STEP ACCURACY: ±0.09 DEGREES [1], [2] | INSULATION CLASS: B  |
| RADIAL PLAY: 0.02 mm MAX W/.5KG RADIAL LOAD   | WEIGHT: 1.0 KG (2.2 LB)  |
| END PLAY: 0.08 MAX W/1.0 KG AXIAL LOAD        | OPERATING TEMP. RANGE: -20 TO +50 °C                                       |
| SHAFT RUNOUT: 0.05 T.I.R.                     | STORAGE TEMP. RANGE: -30 TO +70 °C   |
| TEMP. RISE: 80 °C MAX. [8]                    | RELATIVE HUMIDITY RANGE: 15 TO 99 %  |

|                   | [3]                           | [7]                          | [1]               | [1]                    | [1]                      |
|-------------------|-------------------------------|------------------------------|-------------------|------------------------|--------------------------|
| SPECIFICATION     | RESISTANCE PER PHASE OHM ±10% | INDUCTANCE PER PHASE mH ±20% | RATED CURRENT Amp | HOLDING TORQUE N-m Min | HOLDING TORQUE oz-in Min |
| BI-POLAR SERIES   | 2.6                           | 6.8                          | 2.12              | 1.90                   | 269                      |
| BI-POLAR PARALLEL | 0.65                          | 1.7                          | 4.24              | 1.90                   | 269                      |
| UNI-POLAR         | 1.3                           | 1.7                          | 3.00              | 1.35                   | 191                      |

NOTES, UNLESS OTHERWISE SPECIFIED:

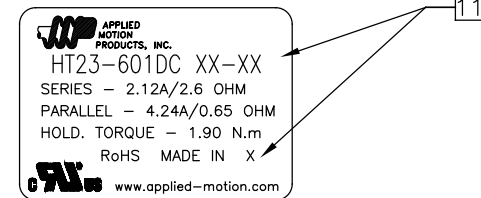
- [1] MEASUREMENTS MADE AT RATED CURRENT IN BOTH PHASES.
- [2] BETWEEN ANY TWO ADJACENT FULL STEP POSITIONS.
- [3] MEASUREMENTS MADE AT LEAD ENDS.
- 4. HIPOT 500 VAC, 60 Hz FOR ONE MINUTE.
- [5] LEADS: 8, 22 AWG, 7 STRAND MIN., UL2517 AND CSA APPROVED, 105°C RATED SHIELDED CABLE 666-2126, 8 COND W/DRAIN. DRAIN WIRE TO BE CONNECTED TO INSIDE OF REAR ENDBELL.
- 6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
- [7] MEASURED USING AN A.C. INDUCTANCE BRIDGE, AT 1KHz AT LEAD ENDS.
- [8] AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED CURRENT APPLIED TO 2 PHASES; WITH MOTOR AT REST.
- 9. HIGH TORQUE MOTOR DESIGN, MICROSTEP LAMINATION, INTENDED FOR USE WITH 80VDC DRIVES WHEN WINDINGS CONNECTED IN PARALLEL AND WITH 160VDC DRIVES WHEN WINDINGS CONNECTED IN SERIES.
- 10. THIS MOTOR TO BE MANUFACTURED IN COMPLIANCE WITH EU DIRECTIVE "ROHS 2002/95/EC".
- [11] MOTOR LABEL TO INCLUDE "ROHS" COMPLIANT, 'MADE IN (COUNTRY OF ORIGIN)' AND DATE CODE.
- [12] CABLE GLAND TO BE NICKEL-PLATED BRASS, ASI P/N 3012215 OR EQUIVALENT.

HT23-601DC

REVISIONS

| ECO NO. | REV | DESCRIPTION                  | DATE     | APPROVED  |
|---------|-----|------------------------------|----------|-----------|
| 6604    | A   | INITIAL RELEASE              | 10/29/12 | J.KORDIK  |
| 6728    | B   | ADD CABLE GLAND              | 7/18/13  | S.Lovejoy |
| 7410    | C   | RESISTANCE VALUE CHANGES     | 4/7/16   | J.KORDIK  |
| 8179    | D   | ADD UL TO LABEL, MTG TAB THK | 6/5/19   | J.KORDIK  |
|         |     |                              |          |           |
|         |     |                              |          |           |
|         |     |                              |          |           |

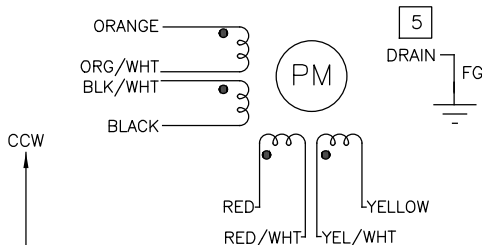
LABEL DETAIL



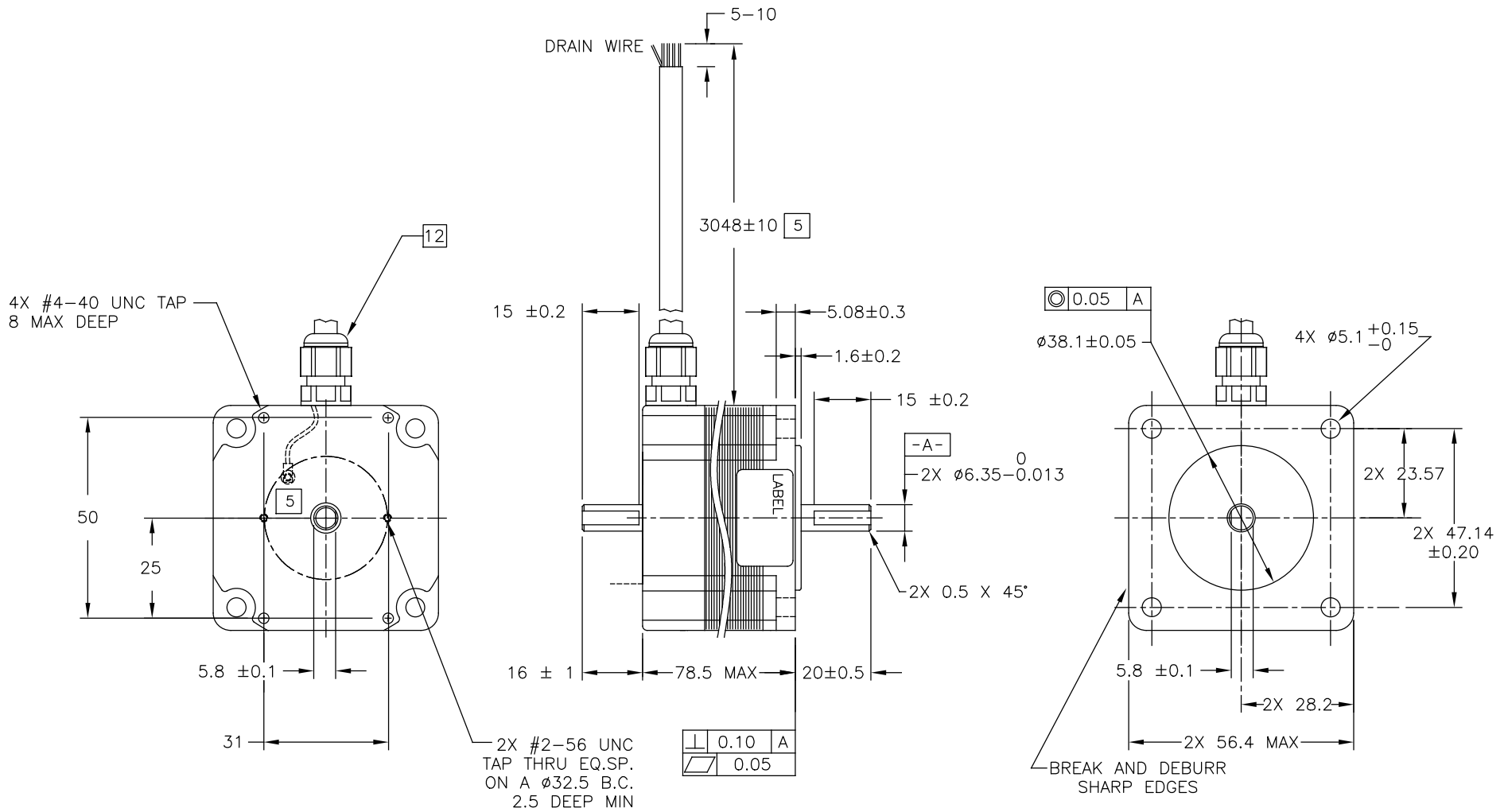
BIPOLAR, FULL STEP, 2 PHASE ON PARALLEL CONNECTED

SWITCHING SEQUENCE FOR CW ROTATION FACING MOUNTING END

| STEP | ORANGE & BLK/WHT | BLACK & ORN/WHT | RED & YEL/WHT | YELLOW & RED/WHT |
|------|------------------|-----------------|---------------|------------------|
| 0    | +                | -               | +             | -                |
| 1    | -                | +               | +             | -                |
| 2    | -                | +               | -             | +                |
| 3    | +                | -               | -             | +                |
| 4    | +                | -               | +             | -                |



|                         |         |                               |                               |                              |                 |
|-------------------------|---------|-------------------------------|-------------------------------|------------------------------|-----------------|
| CONTRACT NO.<br>-       |         | APPLIED MOTION PRODUCTS, INC. |                               |                              |                 |
| APPROVALS               | DATE    | <b>STEP MOTOR OUTLINE</b>     |                               |                              |                 |
| DRAWN<br><i>R.JONEZ</i> | 10/3/12 |                               |                               |                              |                 |
| CHECKED                 |         | <b>B</b>                      | COMPUTER DATA<br>BASE DRAWING | DWG NO.<br><b>HT23-601DC</b> | REV<br><b>D</b> |
| APPROVED                |         |                               | SCALE: NONE                   | SHEET 1 OF 2                 |                 |



| TOLERANCES  |  | THIRD ANGLE PROJECTION                          |                 | APPLIED MOTION PRODUCTS, INC. |  |              |
|---|--|---|-----------------|-------------------------------|--|--------------|
| DECIMALS: MM (INCH)<br>X.XXX = ± (.005)<br>X.XX = ± 0.13 (.010)<br>X.X = ± 0.25 (.020)<br>ANGLES:<br>MACH. = ± 5°<br>CHAM. = ± 5° |  |   |                 | <b>STEP MOTOR OUTLINE</b>     |  |              |
| COMPUTER DATA<br>BASE DRAWING   |  | APPROVALS<br>DRAWN<br><i>R.JONEZ</i><br>CHECKED | DATE<br>10/3/12 |                               |  | B            |
|   |  | APPROVED  |                 | SCALE: NONE                   |  | SHEET 2 OF 2 |