

## SPECIFICATIONS:

|   |  |
|---|--|
| STEPS PER REVOLUTION: 200                   | ROTOR INERTIA: 260 G-CM <sup>2</sup> (3.68E-03 oz-in-sec <sup>2</sup> )NOM |
| STEP ANGLE: 1.8°                            | DETENT TORQUE: 0.040 N-m (5.66 oz-in) MIN                                  |
| STEP TO STEP ACCURACY: ±.09 DEGREE [1], [2] | INSULATION CLASS: B  |
| RADIAL PLAY: 0.02 mm MAX W/.5KG RADIAL LOAD | WEIGHT: 0.6 KG (1.32 LB)   |
| TEMP. RISE: 80 °C MAX. [8]                  | OPERATING TEMP. RANGE: -20 TO +50 °C                                       |
| RELATIVE HUMIDITY RANGE: 15 TO 99 %         | STORAGE TEMP. RANGE: -30 TO +70 °C   |

[3] [7] [1] [1]

| SPECIFICATION CONNECTION | 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          | 2.0                           | 5.7                          | 2.12              | 1.12                   | 158                      |
| BI-POLAR PARALLEL        | 0.5                           | 1.4                          | 4.24              | 1.12                   | 158                      |
| UNI-POLAR                | 1.0                           | 1.4                          | 3.00              | 0.85                   | 120                      |

## 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., UL AND CSA APPROVED, 105°C RATED SHIELDED CABLE 666-2126.
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.
- [13] ENCODER 970-1001 INSTALLED PER AMP ASSEMBLY PRACTICES.  
ENCODER CABLE SOLD SEPARATELY.
14. OTHER TAPPED HOLES MAY BE PRESENT ON REAR OF MOTOR.

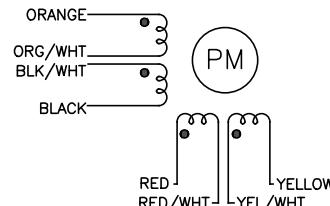
### BI-POLAR, FULL STEP, 2 PHASE ON

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

SWITCHING SEQUENCE FOR ROTATION FACING MOUNTING END.

CCW  
CW

## WIRING DIAGRAM

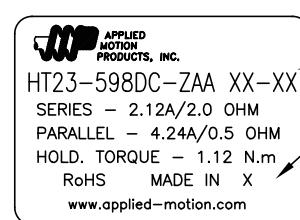


HT23-598DC-ZAA

## REVISIONS

| ECO NO. | REV | DESCRIPTION                | DATE     | APPROVED  |
|---------|-----|----------------------------|----------|-----------|
| 6860    | A   | INITIAL RELEASE            | 10/16/13 | J KORDIK  |
| 8034    | B   | CHG REAR SHAFT LENGTH/TYPO | 8/28/18  | M.Maroney |
|         |     |                            |          |           |
|         |     |                            |          |           |
|         |     |                            |          |           |
|         |     |                            |          |           |
|         |     |                            |          |           |

## LABEL DETAIL



## CONTRACT NO.

-

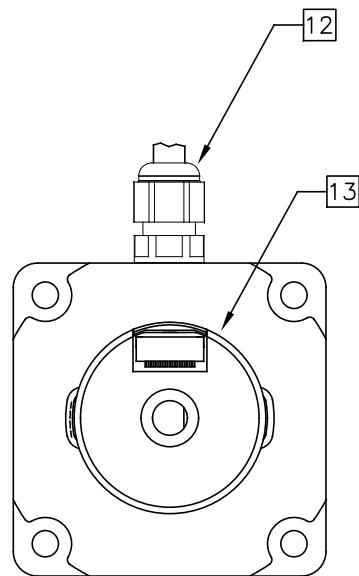


## STEP MOTOR OUTLINE

| APPROVALS        | DATE     | COMPUTER DATA |  | DWG. NO.     | REV |
|------------------|----------|---------------|--|--------------|-----|
| DRAWN<br>R.JONEZ | 10/11/13 |               |  |              |     |
| CHECKED          |          |               |  |              |     |
| APPROVED         |          |               |  |              |     |
| APPROVED         |          | SCALE: NONE   |  |              |     |
|                  |          |               |  | SHEET 1 OF 2 |     |

HT23-598DC-ZAA B

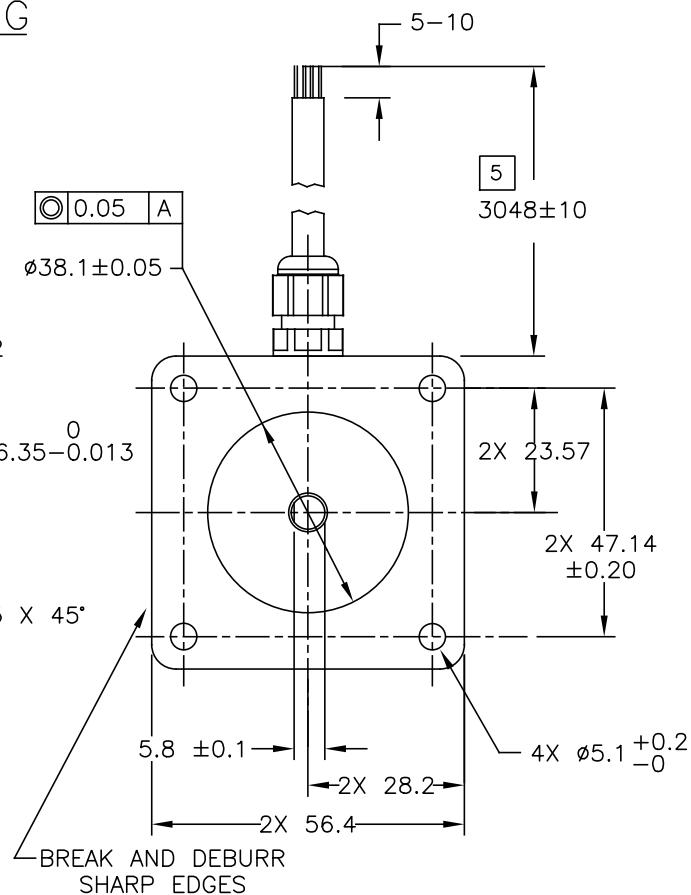
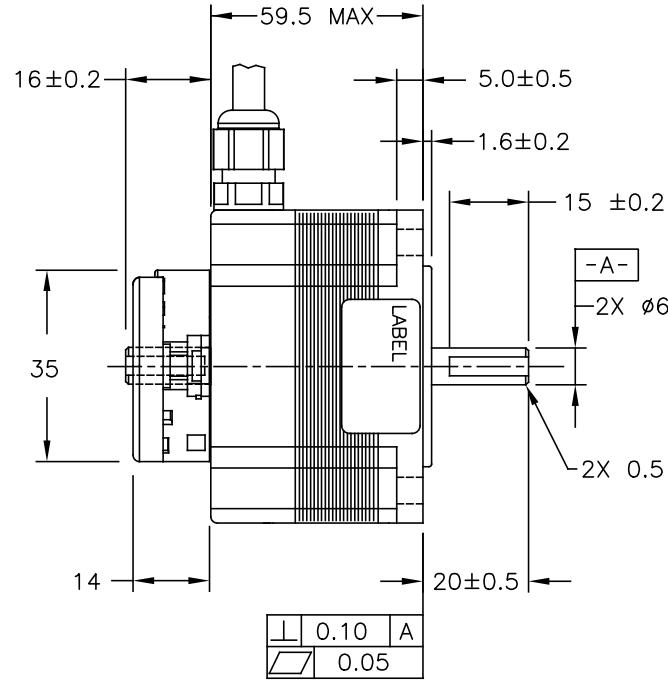
## MOTOR DRAWING



ENCODER RESOLUTION: 2000 cpr  
WITH MARKER PULSE.

### ENCODER PINOUTS

| PIN | SIGNAL |
|-----|--------|
| 1   | CH A   |
| 2   | CH A-  |
| 3   | CH B   |
| 4   | CH B-  |
| 5   | INDEX  |
| 6   | INDEX- |
| 7   | N/C    |
| 8   | N/C    |
| 9   | N/C    |
| 10  | N/C    |
| 11  | N/C    |
| 12  | N/C    |
| 13  | +Vcc   |
| 14  | GND    |
| 15  | N/C    |



| TOLERANCES                    |  | THIRD ANGLE PROJECTION |          | APPLIED<br>MOTION<br>PRODUCTS, INC. |  |
|-------------------------------|--|------------------------|----------|-------------------------------------|--|
| DECIMALS: MM (INCH)           |  |                        |          |                                     |  |
| X.XXX = ± .005                |  |                        |          |                                     |  |
| X.XX = ± 0.13 (.010)          |  |                        |          |                                     |  |
| X.X = ± 0.25 (.020)           |  |                        |          | STEP MOTOR OUTLINE                  |  |
| ANGLES:                       |  |                        |          |                                     |  |
| MACH. = ± .5°                 |  |                        |          |                                     |  |
| CHAM. = ± 5°                  |  |                        |          |                                     |  |
| COMPUTER DATA<br>BASE DRAWING |  | APPROVALS              | DATE     | B DWG. NO. HT23-598DC-ZAA REV B     |  |
|                               |  | DRAWN<br>R.JONEZ       | 10/11/13 |                                     |  |
|                               |  | CHECKED                |          | SCALE: NONE                         |  |
|                               |  | APPROVED               |          | SHEET 2 OF 2                        |  |