

| SPECIFICATIONS: | |
|--|---|
| STEPS PER REVOLUTION: 200 | ROTOR INERTIA: 750 G-CM ² (4.09 oz-in ²)NOM |
| STEP ANGLE: 1.8° | DETENT TORQUE: 120 mN-m (16.99 oz-in) MIN |
| STEP TO STEP ACCURACY:±.09 DEGREES [1] , [2] | INSULATION CLASS: B |
| RADIAL PLAY:0.02 mm MAX W/.5KG RADIAL LOAD | WEIGHT: 1.5 KG (3.3 LB) |
| SHAFT DYNAMIC AXIAL LOAD: 15N MAX | OPERATING TEMP. RANGE: -20 TO +50 °C |
| SHAFT DYNAMIC RADIAL LOAD: 75N MAX | STORAGE TEMP. RANGE: -30 TO +70 °C |
| TEMP. RISE: 80 °C MAX. [8] | |
| RELATIVE HUMIDITY RANGE: 15 TO 85 % | |

| CONNECTION | [3] | [7] | [1] | [1] | |
|-------------------|-------------------------------------|------------------------------------|-------------------------|------------------------------|--------------------------------|
| | 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 | 8.8 | 2.5 | 2.5 | 354 |
| BI-POLAR PARALLEL | 0.5 | 2.2 | 5.0 | 2.5 | 354 |
| UNI-POLAR | 1.0 | 2.2 | 3.5 | 1.86 | 264 |

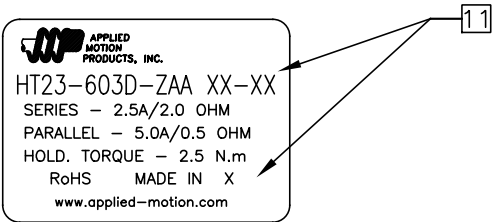
NOTES, UNLESS OTHERWISE SPECIFIED:

- [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, UL 1430 OR UL 3265.
6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
- [7] MEASURED USING AN A.C. INDUCTANCE BRIDGE, AT 1 kHz.
MEASUREMENTS MADE AT LEAD ENDS.
- [8] AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED
VOLTAGE APPLIED TO 2 PHASES; WITH MOTOR AT REST.
- [9] ENCODER 970-1001 INSTALLED PER AMP ASSEMBLY PRACTICES. ENCODER CABLE SOLD SEPARATELY..
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.

HT23-603D-ZAA

| REVISIONS | | | | |
|-----------|-----|----------------------------|---------|-----------|
| ECO NO. | REV | DESCRIPTION | DATE | APPROVED |
| 6941 | A | INITIAL RELEASE | 6/16/14 | J KORDIK |
| 8034 | B | CHG REAR SHAFT LENGTH/TYPO | 8/28/18 | M.Maroney |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

LABEL DETAIL



BI-POLAR, FULL STEP, 2 PHASE ON

CW

STEP

ORANGE & BLK/WHT

BLACK & ORG/WHT

RED & YEL/WHT

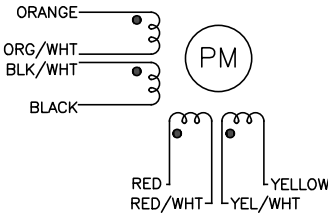
YELLOW & RED/WHT


| | | | | |
|---|---|---|---|---|
| 0 | + | - | + | - |
| 1 | - | + | + | - |
| 2 | - | + | - | + |
| 3 | + | - | - | + |
| 4 | + | - | + | - |

CCW

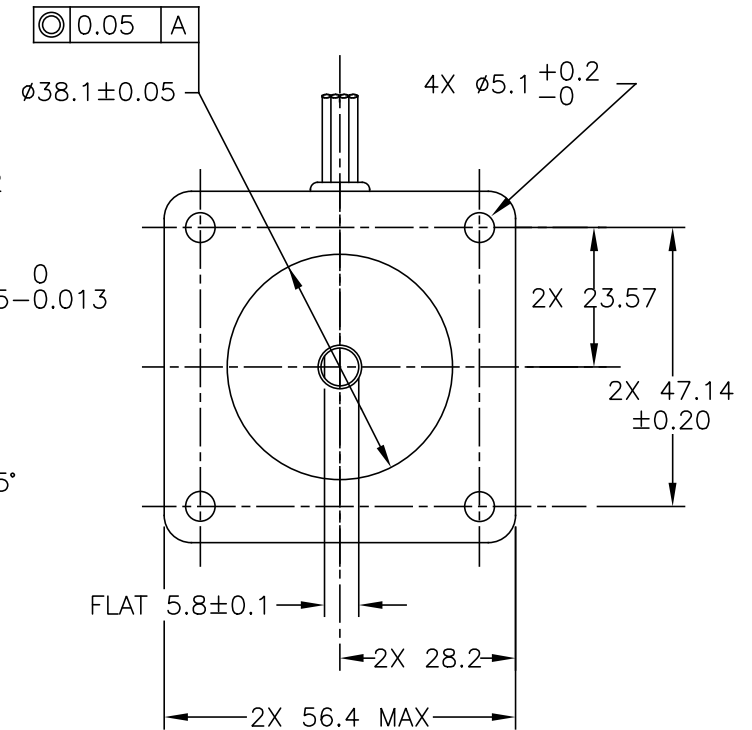
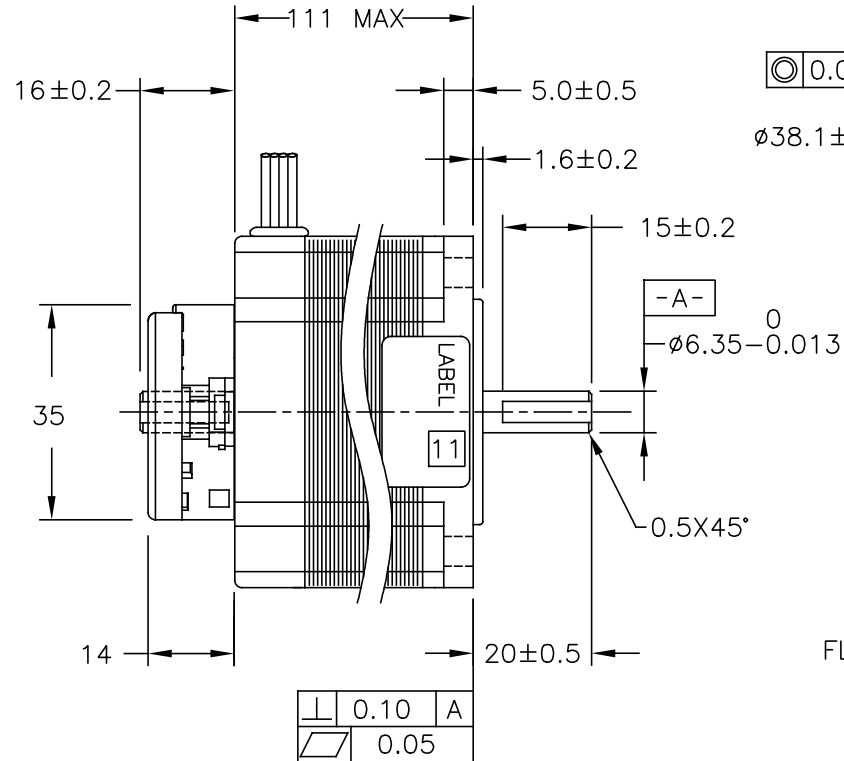
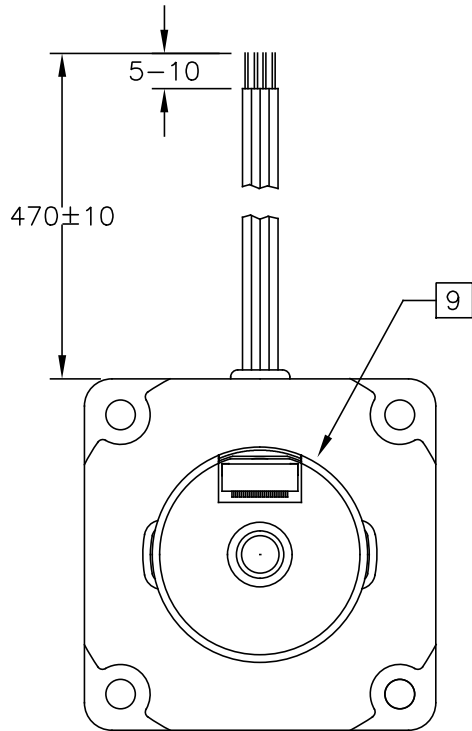
SWITCHING SEQUENCE FOR ROTATION FACING MOUNTING END.

WIRING DIAGRAM



| | | | | | |
|-------------------|---------|---|-------------------------------|--------------------------|----------|
| CONTRACT NO. — | |  APPLIED MOTION PRODUCTS, INC. | | | |
| APPROVALS | DATE | STEP MOTOR OUTLINE | | | |
| DRAWN R.JONEZ | 3/18/14 | | | | |
| CHECKED | | | | | |
| APPROVED | | | | | |
| APPROVED | | B | COMPUTER DATA BASE DRAWING | DWG NO. HT23-603D-ZAA | REV B |
| APPROVED | | SCALE: NONE | | SHEET 1 OF 2 | |

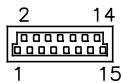
MOTOR DRAWING


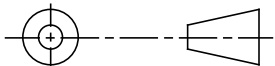


ENCODER RESOLUTION: 2000 cpr
WITH MARKER PULSE.

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 MOTION PRODUCTS, INC. | |
|--|--|---|---------|---|--------------------------|
| DECIMALS: MM (INCH) X.XXX= ± (.005) X.XX = ±0.13 (.010) X.X = ±0.25 (.020) ANGLES: MACH. = ±5° CHAM. = ±5° | |  | | | |
| COMPUTER DATA BASE DRAWING | | APPROVALS | DATE | STEP MOTOR OUTLINE | |
| | | DRAWN R. JONEZ | 3/18/14 | | |
| | | CHECKED | | B | DWG NO. HT23-603D-ZAA |
| | | APPROVED | | | REV B |
| | | SCALE: NONE | | SHEET 2 OF 2 | |

Mouser Electronics

Authorized Distributor

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[HT23-603D-ZAA](#)