

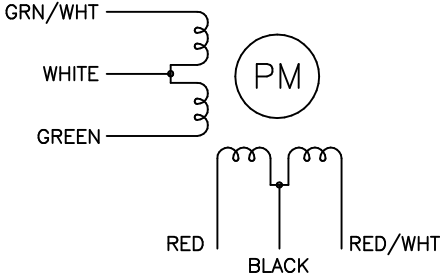
| SPECIFICATIONS:   |  |
|---|--|
| STEPS PER REVOLUTION: 200                               | ROTOR INERTIA: 35 G-CM <sup>2</sup> (.19 OZ-IN <sup>2</sup> )REF |
| STEP ANGLE: 1.8°  | HOLDING TORQUE: 2.2KG-CM ( 30.5 OZ-IN)MIN <sup>1</sup>           |
| STEP TO STEP ACCURACY: ±5 % <sup>1</sup> , <sup>2</sup> | DETENT TORQUE: 65 G-CM (0.9 OZ-IN) MIN                           |
| POSITIONAL ACCURACY: ±5 % <sup>1</sup> , <sup>3</sup>   |  |
| HYSTERESIS: - %   | INSULATION CLASS: B  |
| WINDING RESISTANCE: 7.5 OHM ±10% AT 25° <sup>7</sup>    | BEARINGS: ABEC 3 , DOUBLE SHIELDED                               |
| WINDING INDUCTANCE: 6.6 mH ± 20% <sup>8</sup>           |  |
| PHASE VOLTAGE: 6.0 VDC                                  | TEMP. RISE: 80°C MAX. <sup>9</sup>                               |
| PHASE CURRENT: 0.8 AMP (RATED)                          | OPERATING TEMP. RANGE: -10 TO 40 °C                              |
|   | STORAGE TEMP. RANGE: -40 TO 70 °C                                |
| SHAFT RUNOUT: 0.013 TIR                                 | RELATIVE HUMIDITY RANGE: 5 TO 95 %                               |
| RADIAL PLAY: .03 MAX WITH 2KG RADIAL LOAD               |  |
| END PLAY: .03 MAX WITH A 3KG AXIAL LOAD                 |  |
|   |  |
|   |  |

NOTES, UNLESS OTHERWISE SPECIFIED:

- <sup>1</sup> MEASURMENTS MADE AT RATED CURRENT IN EACH PHASE.
- <sup>2</sup> BETWEEN ANY TWO ADJACENT STEP POSITIONS.
- <sup>3</sup> MAXIMUM ERROR IN 360°.
4. HIPOT 500 VAC FOR ONE MINUTE.
5. LEADS: 6 ,AWG 22,7 STRAND MIN.,UL AND CSA APPROVED, UL 3265. "L" = 305mm MINIMUM.
6. INSULATION RESISTANCE: 100 MEGOHMS MIN AT 500 VDC.
- <sup>7</sup> AS MEASURED ACROSS ANY WINDING.
- <sup>8</sup> AS MEASURED ACROSS ANY WINDING USING AN A.C. INDUCTANCE BRIDGE (1 KHz).
- <sup>9</sup> AS MEASURED BY THE CHANGE IN RESISTANCE METHOD, WITH RATED VOLTAGE APPLIED TO 2 PHASES; WITH MOTOR AT REST.
- <sup>10</sup> SHAFT OPTION: IF REAR SHAFT REQUIRED ADD "D" TO END OF PART NUMBER.
11. ROTOR; LAMINATED CONSTRUCTION.
12. THIS MOTOR TO BE MANUFACTURED IN COMPLIANCE WITH EU DIRECTIVE "ROHS 2002/95/EC".
13. MOTOR LABEL TO INCLUDE "ROHS" COMPLIANT.


SWITCHING SEQUENCE FOR CW ROTATION  
FACING MOUNTING END

| STEP | RED | RED/WHT | GREEN | GRN/WHT |
|------|-----|---------|-------|---------|
| 0    | ON  | OFF     | ON    | OFF     |
| 1    | OFF | ON      | ON    | OFF     |
| 2    | OFF | ON      | OFF   | ON      |
| 3    | ON  | OFF     | OFF   | ON      |
| 4    | ON  | OFF     | ON    | OFF     |

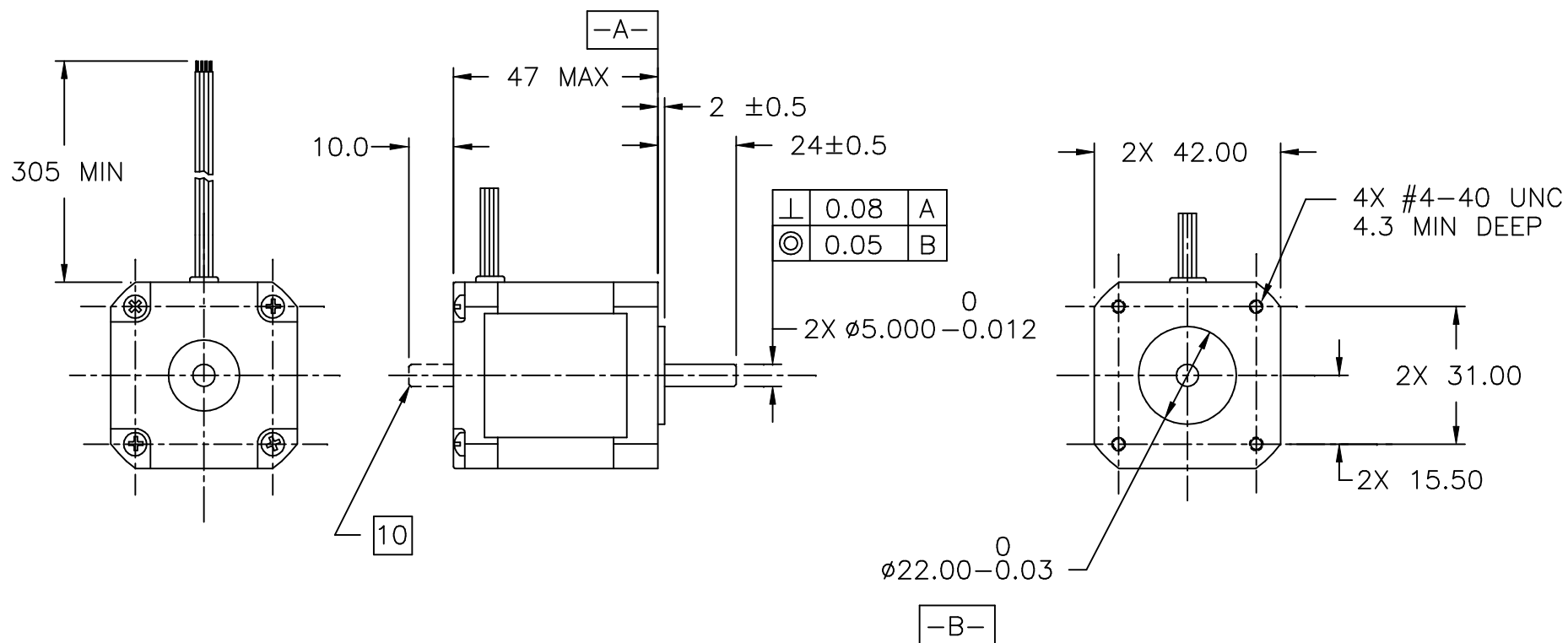


| REVISIONS |     |                         |         |              |
|-----------|-----|-------------------------|---------|--------------|
| ECO NO.   | REV | DESCRIPTION             | DATE    | APPROVED     |
| 3505      | A   | INITIAL RELEASE         | 1/22/90 | B. Corser    |
| 3650      | B   | SEE ECO                 | 7/16/91 | K. Kordik    |
| 3933      | C   | SEE ECO                 |         |              |
| 5235      | D   | ADD EU COMPLIANCE NOTES | 8/25/05 | R. Hazelwood |
| 5721      | E   | REVISE INDUCTANCE       | 4/11/08 | J. Kordik    |
|           |     |                         |         |              |
|           |     |                         |         |              |
|           |     |                         |         |              |
|           |     |                         |         |              |
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|           |     |                         |         |              |
|           |     |                         |         |              |


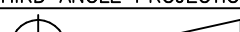
5017-013

|   |         |  |                               |                  |
|---|---------|--|-------------------------------|------------------|
| THIS SPEC NOT COMPLETE WITHOUT DWG NO. 171846 |         |  |                               |                  |
| CONTRACT NO. CAT                              |         |  <b>APPLIED<br/>MOTION<br/>PRODUCTS, INC.</b> |                               |                  |
| APPROVALS                                     | DATE    | <b>STEP MOTOR OUTLINE</b>  |                               |                  |
| DRAWN <i>R. BARRICK</i>                       | 9/28/89 |  |                               |                  |
| CHECKED                                       |         | <b>B</b>   | COMPUTER DATA<br>BASE DRAWING | DWG NO. 5017-013 |
| APPROVED <i>B. Corser</i>                     | 1/22/90 |  |                               | REV <b>E</b>     |
| APPROVED                                      |         |  | SCALE: FULL                   | SHEET 1 OF 1     |

| REVISIONS |                           |          |           |
|-----------|---------------------------|----------|-----------|
| REV       | DESCRIPTION               | DATE     | APPROVED  |
| A         | INITIAL RELEASE, ECO 3561 | 6/12/90  | B.CORSER  |
| B         | UPDATE NEW END BELLS      | 12/10/90 | K. Kordik |
| C         | ADDED NOTATION 10 3612    | 1/24/91  | K. Kordik |



THIS DWG NOT COMPLETE WITHOUT SPEC NO. 5017-

| TOLERANCES   |  | THIRD ANGLE PROJECTION  |          |  APPLIED<br>MOTION<br>PRODUCTS, INC. |                   |          |
|--|--|---|----------|---|-------------------|----------|
| DECIMALS: MM (INCH)<br>X.XXX= ±0.01 (.005)<br>X.XX = ±0.10 (.010)<br>X.X = ±0.20 (.020)<br>ANGLES:<br>MACH. = ±5°<br>CHAM. = ±5° |  |  |          |   |                   |          |
|  |  | APPROVALS   | DATE     | STEP MOTOR OUTLINE  |                   |          |
|  |  | DRAWN<br>R. BARRICK   | 5/19/89  |   |                   |          |
|  |  | CHECKED<br>B. Corser  | 1/24/91  | B   | DWG NO.<br>171846 | REV<br>C |
|  |  | APPROVED<br>K. Kordik   | 12/10/90 |   |                   |          |
| COMPUTER DATA<br>BASE DRAWING  |  | SCALE: FULL   |          | SHEET 1   |                   |          |