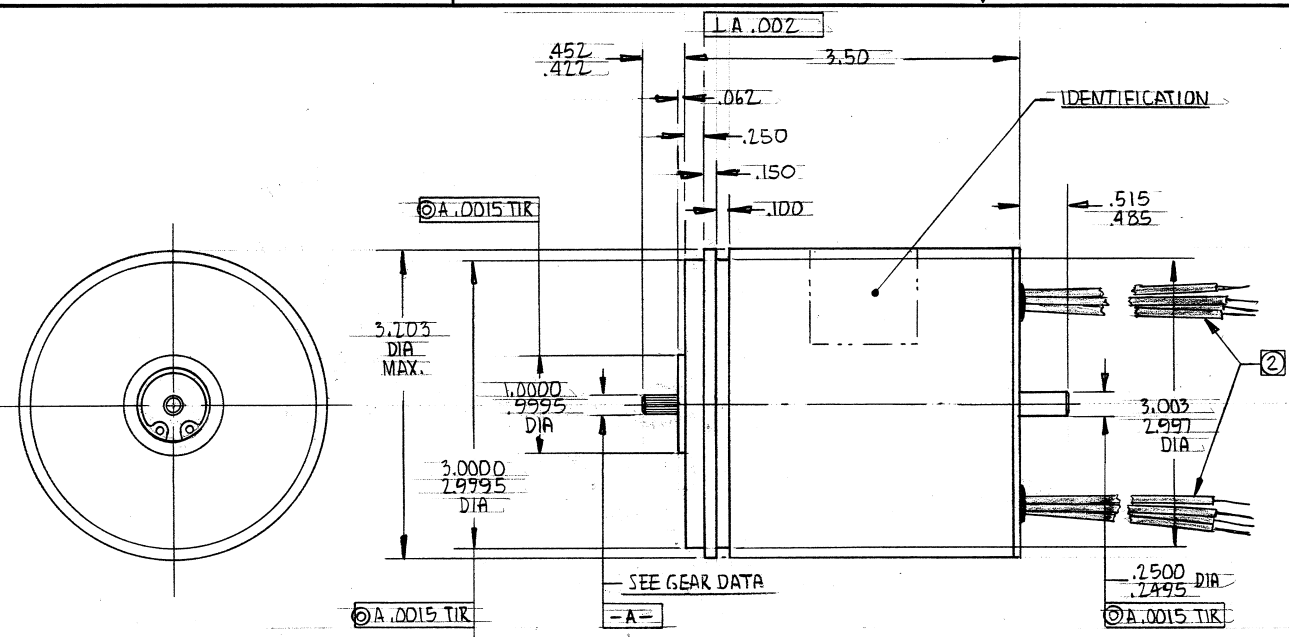


| REVISIONS | | | |
|-----------|---|--------|----------|
| ZONE LTR | DESCRIPTION | DATE | APPROVED |
| NC | PRODUCTION RELEASE WITHOUT CHANGE PER ECO 33318 | 9/5/81 | Kw |
| | Doc. 9/18/81 | | |

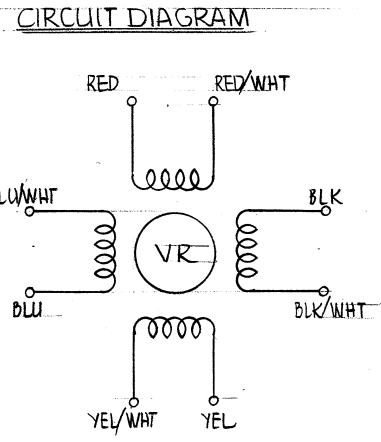


ELECTRICAL DATA

| | |
|--|------|
| VOLTAGE (VOLTS DC) | 30 |
| CURRENT PER PHASE (AMPS) (MAX) | 7.2 |
| D.C. RESISTANCE PER PHASE (OHMS) (MIN) | 4.25 |
| RUNNING TORQUE (IN-OZ) | 19 |

GENERAL DATA

| | |
|--|------------------|
| WEIGHT (OUNCES) | 67 |
| STALL TORQUE (IN-OZ) | 40 |
| ROTOR INERTIA (GM-CM ²) | 18 |
| TEMPERATURE RANGE (DEG.C) | -55 TO +125 |
| STEP ANGLE | 7.5 ± 1/2 |
| STEPPING RATE (P.P.S.) | |
| REVERSIBLE | |
| RESPONSE RATE WITH 85 GM-CM ² INERTIA LOAD @ 30 VDC (P.P.S.) | 575 |
| SHAFT END PLAY CHECKED WITH A 16 OUNCE REVERSING AXIAL LOAD | 0.0010 0.0045 |
| SHAFT RADIAL PLAY MEASURED 1/8 FROM BEARING WITH A 16 OUNCE REVERSING RADIAL LOAD APPLIED 1/4 FROM BEARING | 0.001 |
| SHAFT RUNOUT NOT TO EXCEED | 0.001 |
| NO LOAD SLEW RATE (PPS) | 3000 |



- GEAR DATA -

| | |
|--------------------------------|-------------|
| CLASS OF GEAR AGMA | DUAL 11 |
| TOOTH TO TOOTH COMPOSITE ERROR | .0005 |
| TOTAL COMPOSITE ERROR | .0007 |
| NUMBER OF TEETH | 15 |
| DIAMETRAL PITCH | 96 |
| PRESSURE ANGLE | 20° |
| PITCH DIAMETER | .1562 |
| WHOLE DEPTH | .0249 |
| ROOT DIAMETER | .1272 |
| DIA OVER .018 DIA PINS | .1800/.1790 |
| OUTSIDE DIAMETER | .1771/.1766 |

| QTY REQD | SYM | NOMENCLATURE OR DESCRIPTION | CODE IDENT NO. | PART OR IDENTIFYING NO. | SPECIFICATION | MATERIAL OR NOTE | ZONE | ITEM NO. | | | | | | | | |
|-----------------------------|----------------|---|----------------|---|---------------|------------------|------|----------|--------------|----------------|-----------------------------|---------|--------------------------|--------|----------------------------|--------|
| LIST OF MATERIAL | | | | | | | | | | | | | | | | |
| | | UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: | | <table border="1"> <tr> <td>CONTRACT NO.</td> <td>DATE</td> </tr> <tr> <td>DRAWN <i>T MARTINEZ</i></td> <td>3-25-81</td> </tr> <tr> <td>CHECK <i>M. M. M. M.</i></td> <td>7/6/81</td> </tr> <tr> <td>ENGINEER <i>Phil Hamel</i></td> <td>4-2-89</td> </tr> </table> | | | | | CONTRACT NO. | DATE | DRAWN <i>T MARTINEZ</i> | 3-25-81 | CHECK <i>M. M. M. M.</i> | 7/6/81 | ENGINEER <i>Phil Hamel</i> | 4-2-89 |
| CONTRACT NO. | DATE | | | | | | | | | | | | | | | |
| DRAWN <i>T MARTINEZ</i> | 3-25-81 | | | | | | | | | | | | | | | |
| CHECK <i>M. M. M. M.</i> | 7/6/81 | | | | | | | | | | | | | | | |
| ENGINEER <i>Phil Hamel</i> | 4-2-89 | | | | | | | | | | | | | | | |
| | | FRACTIONS DECIMALS ANGLES | | <table border="1"> <tr> <td colspan="2">TITLED</td> </tr> <tr> <td colspan="2" style="text-align: center;">STEPPER MOTOR</td> </tr> </table> | | | | | TITLED | | STEPPER MOTOR | | | | | |
| TITLED | | | | | | | | | | | | | | | | |
| STEPPER MOTOR | | | | | | | | | | | | | | | | |
| | | = 1/64 .XX ± .01 ± 5° | | <table border="1"> <tr> <td>APPROVED</td> <td></td> </tr> <tr> <td>APPROVED <i>[Signature]</i></td> <td>4/2/89</td> </tr> <tr> <td>APPROVED</td> <td></td> </tr> <tr> <td>APPROVED</td> <td></td> </tr> </table> | | | | | APPROVED | | APPROVED <i>[Signature]</i> | 4/2/89 | APPROVED | | APPROVED | |
| APPROVED | | | | | | | | | | | | | | | | |
| APPROVED <i>[Signature]</i> | 4/2/89 | | | | | | | | | | | | | | | |
| APPROVED | | | | | | | | | | | | | | | | |
| APPROVED | | | | | | | | | | | | | | | | |
| | | .XXX ± .005 | | <table border="1"> <tr> <td>SIZE</td> <td>CODE IDENT NO.</td> <td>DWG NO.</td> <td>REV</td> </tr> <tr> <td>C</td> <td>89321</td> <td>32SA1</td> <td>NC</td> </tr> </table> | | | | | SIZE | CODE IDENT NO. | DWG NO. | REV | C | 89321 | 32SA1 | NC |
| SIZE | CODE IDENT NO. | DWG NO. | REV | | | | | | | | | | | | | |
| C | 89321 | 32SA1 | NC | | | | | | | | | | | | | |
| | | b3/ ALL MACHINED SURFACES REF. MIL-STD-10 | | <table border="1"> <tr> <td>SCALE FULL</td> <td>SHEET 1 OF 1</td> </tr> </table> | | | | | SCALE FULL | SHEET 1 OF 1 | | | | | | |
| SCALE FULL | SHEET 1 OF 1 | | | | | | | | | | | | | | | |
| | | MATERIAL: | | <table border="1"> <tr> <td>APPLICATION</td> <td>QTY REQD</td> </tr> </table> | | | | | APPLICATION | QTY REQD | | | | | | |
| APPLICATION | QTY REQD | | | | | | | | | | | | | | | |
| | | FINISH: | | <table border="1"> <tr> <td>REPLACES</td> <td>SIMILAR TO</td> <td>W.O. NO.</td> </tr> </table> | | | | | REPLACES | SIMILAR TO | W.O. NO. | | | | | |
| REPLACES | SIMILAR TO | W.O. NO. | | | | | | | | | | | | | | |

② LEADWIRES - TEFLON 20 AWG PER MIL-W-16878/4 (TYPE E) ALL LEADWIRES TO BE 12 INCHES MIN LONG
 1. ALL VALUES ARE NOMINAL AT ROOM AMBIENT (25°C ± 5°C).
 NOTES: UNLESS OTHERWISE SPECIFIED,