

# MOTOR DATA @ 230 VAC (TRAP)

| MOTOR PARAMETERS          | UNITS  | VALUE             |
|---------------------------|--|-------------------|
| HORSEPOWER                | HP RATED   | 0.55              |
| KILOWATTS                 | KW RATED   | 0.41              |
| MAX. OPERATING SPEED      | N MAX RPM  | 3000              |
| SPEED @ RATED TORQUE      | N RATED RPM  | 2400              |
| * CONTINUOUS RATED TORQUE | IN-LBS[Nm]   | 14.5[1.64]        |
| * CONTINUOUS STALL TORQUE | IN-LBS[Nm]   | 16.0[1.81]        |
| CONTINUOUS LINE CURRENT   | AMPS   | 1.9               |
| PEAK TORQUE               | IN-LBS[Nm]   | 58.8[6.64]        |
| PEAK CURRENT              | AMPS   | 7.0               |
| MAX. THEORETICAL ACCEL.   | RAD/SEC <sup>2</sup>                               | 76,863            |
| TORQUE SENSITIVITY        | Kt [N-LBS/AMP] [Nm/AMP]                            | 8.4[0.96]         |
| BACK EMF (LINE TO LINE)   | Vrms/Krpm  | 75.2              |
| D.C. RESISTANCE (P-P)     | OHMS   | 15.4              |
| INDUCTANCE (P-P)          | MILLIHENRIES                                       | 39.6              |
| ROTOR INERTIA W/BRAKE     | Jm [IN-LBS-SEC <sup>2</sup> ] [Kg-M <sup>2</sup> ] | .000765[.0000861] |
| STATIC FRICTION           | Tf [IN-LBS] [Nm]                                   | 0.4[0.05]         |

\*25°C AMBIENT WITH A MAXIMUM CASE TEMPERATURE OF 100°C ON MOTOR. MOTOR MOUNTED ON A 10" X 10" X 10" X 1/4" ALUMINUM HEATSINK. THERMOSTAT IN STATOR WINDINGS WILL OPEN IF WINDING TEMPERATURE EXCEEDS 155°C. THIS ALLOWS FOR AN APPROXIMATE +10% HEADROOM IN THE CONTINUOUS TORQUE RATING BEFORE THERMOSTAT OPENS.

### MECHANICAL NOTES:

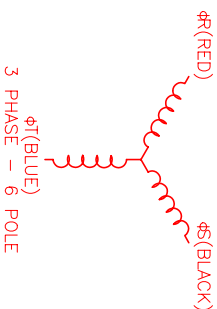
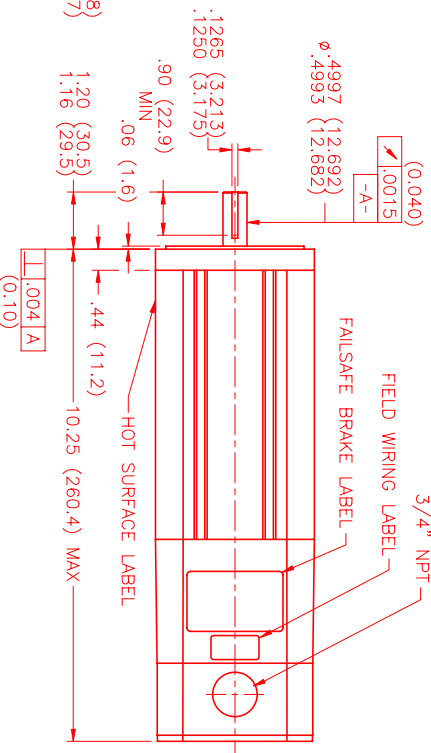
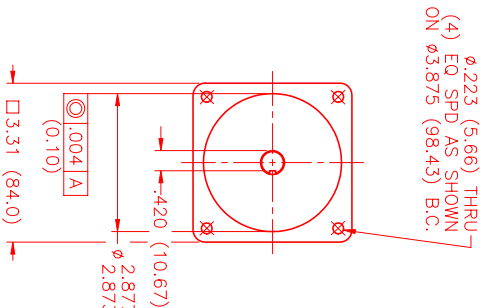
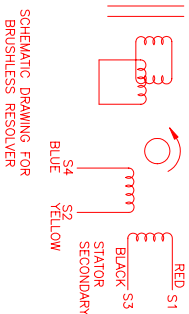
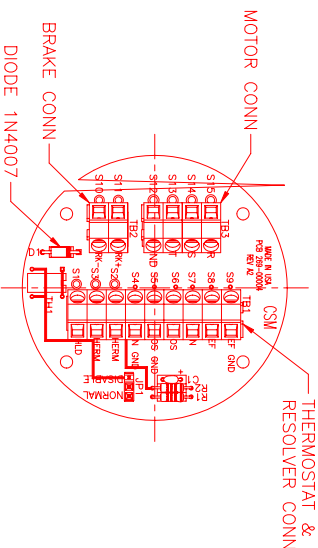
1. AXIAL LOAD: 25 LBS MAX
2. RADIAL LOAD: 40 LBS MAX @ 1" FROM FACE
3. MOTOR SEALED TO IP65.
4. MOTOR WEIGHT: 10 LBS. [ 4.5 kg]
5. MOTOR FINISH: BLACK EPOXY
6. MOTOR OUTPUT SHAFT: STAINLESS STEEL
7. INCHES (MILLIMETERS)

**FAILSAFE BRAKE:**  
 MIN HOLDING TORQUE: 60 IN-LBS  
 INPUT VOLTAGE: 24 VOLTS

### CONNECTION CHART

| MOTOR/BRAKE WIRE  | WIRE LEADS     |
|-------------------|----------------|
| TERMINAL FUNCTION | WIRE COLOR     |
| S15               | ΦR RED         |
| S14               | ΦS BLACK       |
| S13               | ΦT BLUE        |
| S12               | PE GND GRN/YEL |
| S11               | BRK (+) BLUE   |
| S10               | BRK (-) BLUE   |

| RES/THERM WIRE    | WIRE LEADS       |
|-------------------|------------------|
| TERMINAL FUNCTION | WIRE COLOR       |
| S9                | REF GND YEL/WHIT |
| S8                | REF RED/WHIT     |
| S7                | SIN YELLOW       |
| S6                | COS RED          |
| S5                | COS GND BLACK    |
| S4                | SIN GND BLUE     |
| S3                | THERM BLACK      |
| S2                | THERM BLACK      |
| S1                | GND/SHLD GRN/YEL |



| REV.        | DESCRIPTION | DATE    | APPD. |
|-------------|-------------|---------|-------|
| PRELIMINARY |             | 7/22/99 | MVS   |

### REVISIONS

| REV.        | DESCRIPTION | DATE    | APPD. |
|-------------|-------------|---------|-------|
| PRELIMINARY |             | 7/22/99 | MVS   |

| NO. | PART NUMBER   | DESCRIPTION        | QTY. |
|-----|---------------|--------------------|------|
| 1   | MPM891BTG6G3R | Brushless Resolver | 1    |

DRAWING NUMBER: MPM891BTG6G3R  
 SCALE: 1/2=1  
 APPROVED: [Signature]  
 CHECKED: [Signature]  
 DATE: 7/22/99  
 TITLE: 'B' /230 /ENG/RES./NPT./BRAKE  
 MATERIAL: [Blank]  
 DRAWING: [Blank]

MTS Systems Corporation  
 Automation Division

UNLESS SPECIFIED OTHERWISE, ALL DIMENSIONS ARE IN INCHES AND DECIMAL FRACTIONS ARE TO BE USED UNLESS OTHERWISE SPECIFIED. DIMENSIONS IN PARENTHESES ARE FOR INFORMATION ONLY AND ARE NOT TO BE USED FOR MANUFACTURING PURPOSES.

PROTECTIVE SURFACES OF BRUSHLESS RESOLVERS ARE FINISHED IN THE PERFORMANCE OF THE MANUFACTURING PROCESS. THE FINISH IS NOT TO BE USED FOR IDENTIFICATION PURPOSES. THE FINISH IS NOT TO BE USED FOR IDENTIFICATION PURPOSES.

REVISIONS: [Blank]