## MOTOR DATA @ 460 VAC (TRAP)

| MOTOR PARAMETERS | | UNITS | VALUE |
|---|---|---|---|
| HORSEPOWER | HP RATED | Hp | 4.5 |
| KILOWATTS | KW RATED | KW | 3.4 |
| MAX. OPERATING SPEED | N MAX | RPM | 1750 |
| SPEED @ RATED TORQUE | N RATED | RPM | 1500 |
| * CONTINUOUS RATED TORQUE @ 1500 RPM | | IN-LBS[Nm] | 190.0[21.3] |
| * CONTINUOUS STALL TORQUE | | IN-LBS[Nm] | 210.0[23.7] |
| CONTINUOUS LINE CURRENT | | AMPS | 7.9 |
| PEAK TORQUE | Tpk | IN-LBS[Nm] | 630.0[70.8] |
| PEAK CURRENT | | AMPS | 23.7 |
| MAX. THEORETICAL ACCEL. | | RAD/SEC² | 33,511 |
| TORQUE SENSITIVITY | Kt | IN-LBS/AMP[Nm/AMP] | 26.6[3.0] |
| BACK EMF (LINE TO LINE) | ±10% | Vrms/Krpm | 230.0 |
| D.C. RESISTANCE (P-P) | ±10% | OHMS | 2.5 |
| INDUCTANCE (P-P) | ±10% | MILLIHENRIES | 23.0 |
| ROTOR INERTIA | Jm | IN-LBS-SEC²[Kg-M²] | .0188[.00212] |
| STATIC FRICTION | Tf | IN-LBS[Nm] | 3.0[.34] |

*25°C AMBIENT WITH A MAXIMUM CASE TEMPERATURE OF 100°C ON MOTOR. MOTOR MOUNTED ON A 12" X 12" X 1/2" 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: 50 LBS MAX
2. RADIAL LOAD: 150 LBS MAX @ 1" FROM FACE
3. MOTOR SEALED TO IP65.
4. MOTOR WEIGHT: 48.8 LBS. [ 22.2 Kg]
5. MOTOR FINISH: BLACK EPOXY
6. MOTOR OUTPUT SHAFT: STAINLESS STEEL
7. INCHES (MILLIMETERS)

**ENCODER: (290-00107)**
OIH48-4096P6-L6-5V

**CONNECTION CHART**

MOTOR CONNECTOR:
SG102E-22-22P(027)
(270-00017)

| MOTOR WIRE LEADS | | |
|---|---|---|
| PIN | WIRE FUNCTION | WIRE COLOR |
| A | ΦR | RED |
| B | ΦS | BLACK |
| C | ΦT | BLUE |
| D | PE GND | GRN/YEL |

ENCODER/THERM CONNECTOR:
PT02E-14-18P(027)
(270-00024)

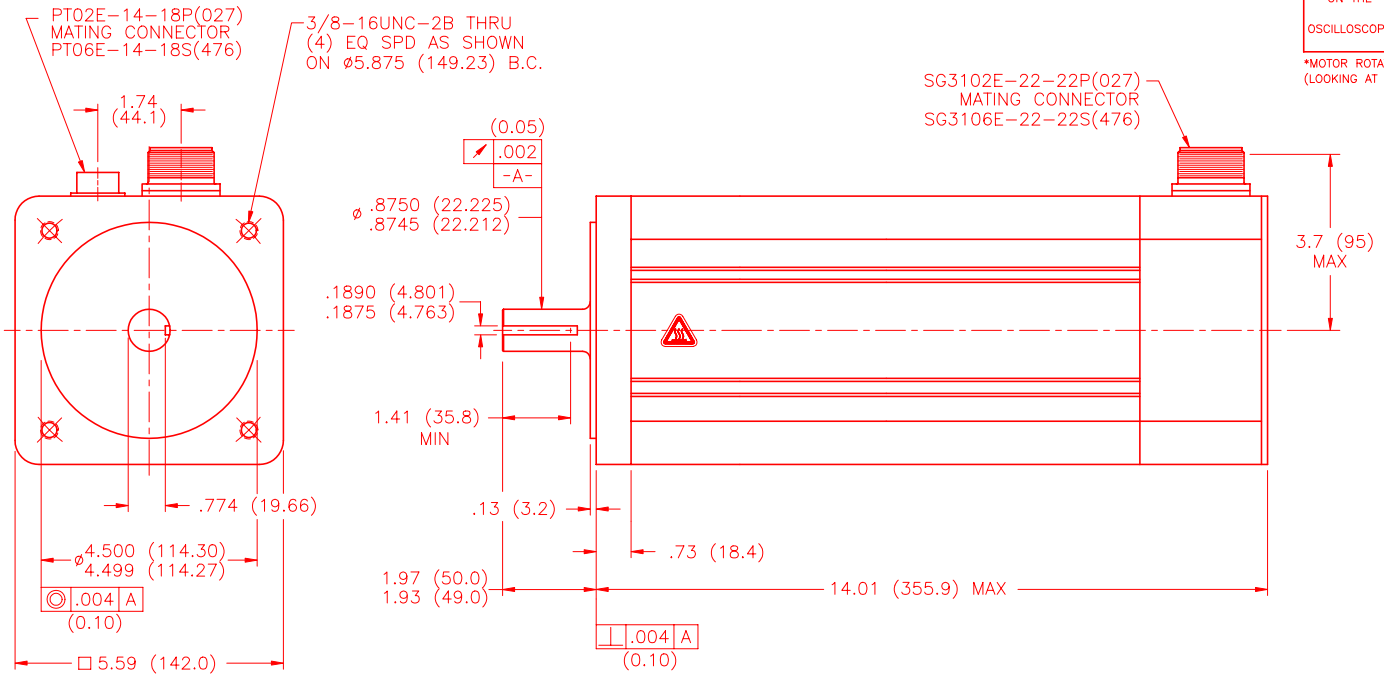
| ENCODER/THERM WIRE LEADS | | |
|---|---|---|
| PIN | WIRE FUNCTION | WIRE COLOR |
| T | GROUND | BLACK |
| K | +5VDC | RED |
| B | CH A | BLUE |
| C | CH A\ | BLUE/BLK |
| N | CH B | GREEN |
| P | CH B\ | GRN/BLK |
| M | CH Z | YELLOW |
| U | CH Z\ | YEL/BLK |
| E | CH U | BROWN |
| R | CH U\ | BRN/BLK |
| F | CH V | GRAY |
| S | CH V\ | GRAY/BLK |
| G | CH W | WHITE |
| H | CH W\ | WHT/BLK |
| D | GND/CABLE | SHLD |
| A | THERM | BLACK |
| L | THERM | BLACK |
| J | GND | GRN/YEL |

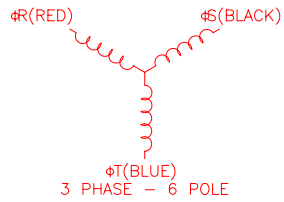
**MOTOR & HALL POSITION CHART**

| HALL LEADS | BROWN | GRAY | WHITE |
|---|---|---|---|
| MOTOR LEADS | BLACK respect to RED | RED respect to BLUE | BLUE respect to BLACK |
| VIEW ON THE OSCILLOSCOPE | | | |

*MOTOR ROTATION CCW (COUNTER CLOCKWISE)
(LOOKING AT THE FACE OF THE MOTOR)

WAVE REPRESENTING STATOR OUTPUT
WAVE REPRESENTING HALL SENSOR




| REVISIONS | | | |
|---|---|---|---|
| REV. | DESCRIPTION | DATE | APPD. |
| | PRELIMINARY | 6/14/00 | MVS |

TITLE: "D"/TRAP/460/ENG/T4096/CONN
DRAWING NUMBER: MPM1422DTJ6JZ1N

| NO. | PART NUMBER | DESCRIPTION | QTY. |
|---|---|---|---|

TOLERANCES UNLESS SPECIFIED
DECIMAL .XXX ± .005
DECIMAL .XX ± .010
DECIMAL .X ± .020
FRACTION ± 1/64
ANGLE ± 1/2°

MTS Systems Corporation
Automation Division

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DRAWN: MVS
DATE: 6/14/00
CHECKED:
APPROVED:
TITLE: "D"/TRAP/460/ENG/T4096/CONN
REV.
MATERIAL:
DRAWING NUMBER: MPM1422DTJ6JZ1N
SCALE: 1/2:1