

### MOTOR DATA @ 460 VAC (SINE)

MOTOR PARAMETERS	UNITS	VALUE
HORSEPOWER	HP RATED	4.5
KILOWATTS	KW RATED	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[RMS/φ]	5.6
PEAK TORQUE	IN-LBS[Nm]	630.0[70.8]
PEAK CURRENT	AMPS[RMS/φ]	16.8
MAX. THEORETICAL ACCEL.	RAD/SEC <sup>2</sup>	33,511
TORQUE SENSITIVITY	Kt [N-LBS/AMPERES/φ][Nm/AMPERES/φ]	36.54[4.13]
BACK EMF (LINE TO LINE)	Vrms/Krpm	230.0
D.C. RESISTANCE (P-P)	OHMS	2.5
INDUCTANCE (P-P)	MILLIHENRIES	23.0
ROTOR INERTIA W/BRAKE	Jm [IN-LBS-SEC <sup>2</sup> ][Kg-M <sup>2</sup> ]	0.02110[0.00238]
STATIC FRICTION	Tf [IN-LBS][Nm]	3.0[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 HEATSIK. 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:

- AXIAL LOAD: 50 LBS MAX
- RADIAL LOAD: 150 LBS MAX @ 1" FROM FACE
- MOTOR SEALED TO IP65.
- MOTOR WEIGHT: 60.4 LBS. [ 27.4 Kg ]
- MOTOR FINISH: BLACK EPOXY
- MOTOR OUTPUT SHAFT: STAINLESS STEEL
- MILLIMETERS (INCHES)

#### ENCODER: (290-00073)

0IH48-2048P6-16-5V  
**FAILSAFE BRAKE:**  
 MIN. HOLDING TORQUE: 240 IN-LBS  
 INPUT VOLTAGE: 24 VOLTS

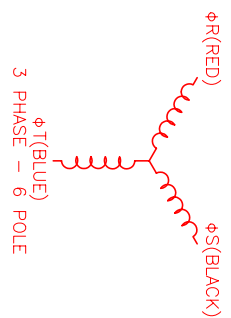
#### CONNECTION CHART

ENC/THERM/BRK CONNECTOR:  
 PTO2E-16-23P(027)  
 (270-00219)

ENC/THERM/BRK	WIRE FUNCTION	WIRE COLOR	WIRE LEADS
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	
V	BRK (+)	DIODE	
W	BRK (-)	1N4007	
X	BRK SHLD	-	
Y	-	-	
Z	-	-	

MOTOR CONNECTOR:  
 SG3102E-22-22P(027)  
 (270-00017)

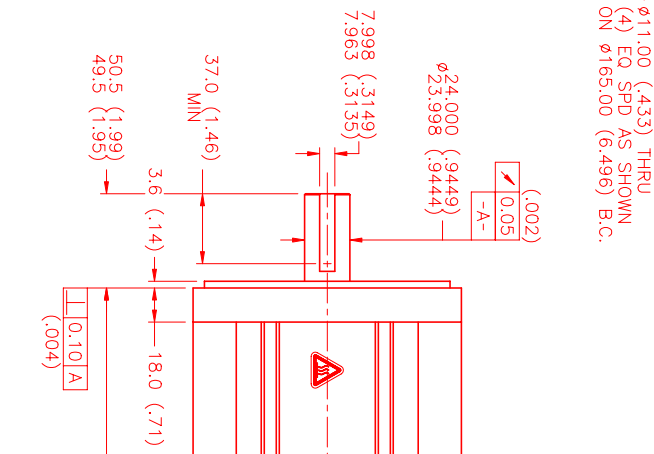
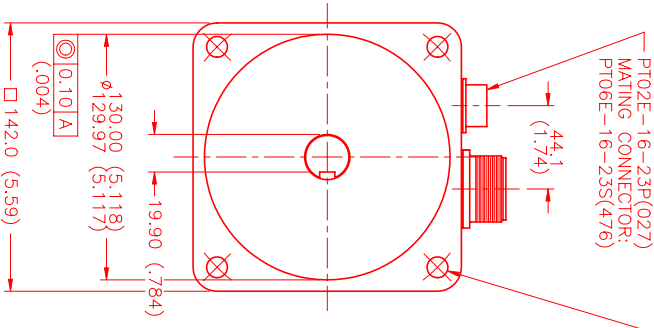
MOTOR	WIRE FUNCTION	WIRE COLOR	WIRE LEADS
A	φR	RED	
B	φS	BLACK	
C	φT	BLUE	
D	PE GND	GRN/YEL	



HALL TENSORS	BROWN	GRAY	WHITE
MOTOR LEADS	BLACK respect to RED	RED respect to BLUE	BLUE respect to BLACK

MOTOR ROTATION (CW/COUNTER CLOCKWISE)  
 (LOOKING AT THE FACE OF THE MOTOR)  

 WAVE REPRESENTING STATOR OUTPUT  
 WAVE REPRESENTING HALL SENSOR



SG3102E-22-22P(027)  
 MATING CONNECTOR:  
 SG3108E-22-22S(476)

95 (3.7)  
 MAX

NO.	PART NUMBER	DESCRIPTION	QTY.
1	MTS	MTS Systems Corporation Automation Division	

REV.	DESCRIPTION	DATE	APP.
PRELIMINARY		4/1/02	MS

DATE: 4/1/02	TITLE: 'D' / SINE/460 /MET /T2048 /CONV/BRK
DESIGNED BY: MS	CHECKED:
DRAWN BY: MPM1422DSU7Y1R	SCALE: 1/2:1