

MOTOR DATA @ 230 VAC (TRAP)

MOTOR PARAMETERS	UNITS	VALUE
MOTOR HORSEPOWER	HP RATED	2.9
	KW RATED	2.1
MAX. OPERATING SPEED	N MAX	1750
SPEED @ RATED TORQUE	RPM	1500
* CONTINUOUS RATED TORQUE @ 1500 RPM	IN-LBS [Nm]	120.0 [13.5]
* CONTINUOUS STALL TORQUE	IN-LBS [Nm]	130.0 [14.7]
CONTINUOUS LINE CURRENT	AMPS	9.8
PEAK TORQUE	IN-LBS [Nm]	390.0 [43.9]
PEAK CURRENT	AMPS	29.6
MAX. THEORETICAL ACCEL.	RAD/SEC ²	36,792
TORQUE SENSITIVITY	Kt [IN-LBS/AMP] [Nm/AMP]	12.9 [1.5]
BACK EMF (LINE TO LINE)	Vrms/Krpm	115.0
D.C. RESISTANCE (P-P)	OHMS	1.7
INDUCTANCE (P-P)	MILLIHENRIES	12.6
ROTOR INERTIA	Jm [IN-LBS-SEC ²] [Kg-M ²]	.0106 [0.0119]
STATIC FRICTION	Tf [IN-LBS] [Nm]	2.4 [27]

*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: 32.8 LBS. [14.9 kg]
5. MOTOR FINISH: BLACK EPOXY
6. MOTOR OUTPUT SHAFT: STAINLESS STEEL
7. MILLIMETERS (INCHES)

ENCODER: (290-00052)
OH48-2000P6-16-5V

CONNECTION CHART

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

MOTOR WIRE LEADS	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)

ENC/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	

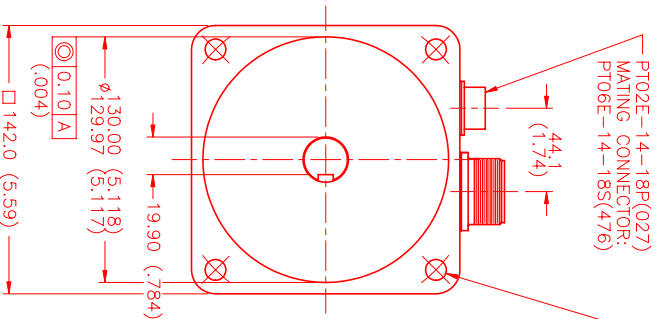
MOTOR & HALL POSITION CHART

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

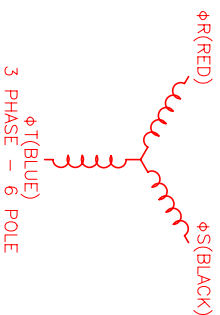
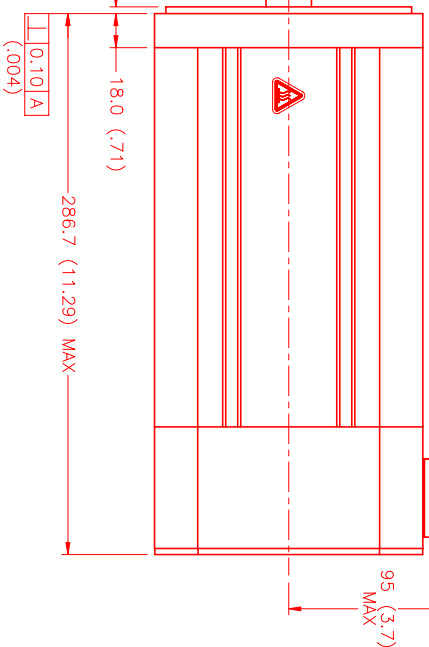
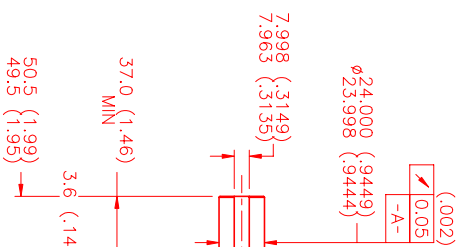
*MOTOR ROTATION CCM (COUNTER CLOCKWISE)
(LOOKING AT THE FACE OF THE MOTOR)



WAVE REPRESENTING HALL SENSOR



Φ11.00 (.433) THRU (4) EO SPD AS SHOWN ON Φ165.00 (6.496) B.C.



3 PHASE - 6 POLE

NO.	PART NUMBER	DESCRIPTION	QTY.
1	MPM1421BTG7JUN1N	230VAC 1.5HP 1/2" SHAFT	1

MTS Systems Corporation
Automation Division

UNLESS SPECIFIED	DATE: 8/9/99	SCALE: 1/2:1
DESIGNED BY: MVS	CHECKED BY:	
DRAWN BY: MVS	DATE: 8/9/99	
APPROVED BY:		

REV.	DESCRIPTION	DATE	APPD.
PRELIMINARY		8/9/99	MVS

DATE: 8/9/99	REVISED BY: MVS	REVISED DATE: 8/9/99
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