

### MOTOR DATA @ 460 VAC (TRAP)

MOTOR PARAMETERS	UNITS	VALUE
HORSEPOWER	HP RATED	2.1
KILOWATTS	KW RATED	1.6
MAX. OPERATING SPEED	N MAX	4200
SPEED @ RATED TORQUE	N RATED	3000
* CONTINUOUS RATED TORQUE @ 3000 RPM	IN-LBS [Nm]	45.0 [5.1]
* CONTINUOUS STALL TORQUE	IN-LBS [Nm]	54.0 [6.1]
CONTINUOUS LINE CURRENT	AMPS	4.4
PEAK TORQUE	IN-LBS [Nm]	189.1 [21.3]
PEAK CURRENT	AMPS	15.3
MAX. THEORETICAL ACCEL.	RAD/SEC <sup>2</sup>	28,224
TORQUE SENSITIVITY	Kt [IN-LBS/AMP] [Nm/AMP]	12.4 [1.42]
BACK EMF (LINE TO LINE)	Vrms/Krpm	110.0
D.C. RESISTANCE (P-P)	OHMS	3.3
INDUCTANCE (P-P)	MILLIHENRIES	24.4
ROTOR INERTIA W/BRAKE	Jm [IN-LBS-SEC <sup>2</sup> ] [Kg-M <sup>2</sup> ]	0.00067 [0.00076]
STATIC FRICTION	Tf [IN-LBS] [Nm]	1.0 [0.11]

\*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:

- AXIAL LOAD: 50 LBS MAX
- RADIAL LOAD: 100 LBS MAX @ 1" FROM FACE
- MOTOR SEALED TO IP65.
- MOTOR WEIGHT: 21.6 LBS. [ 9.8 KJ]
- MOTOR FINISH: BLACK EPOXY
- MOTOR OUTPUT SHAFT: STAINLESS STEEL
- MILLIMETERS (INCHES)

#### PERMANENT MAGNET BRAKE:

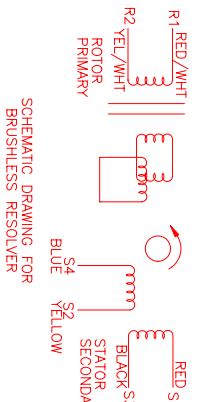
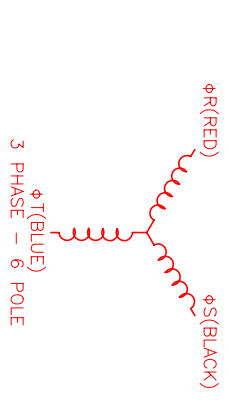
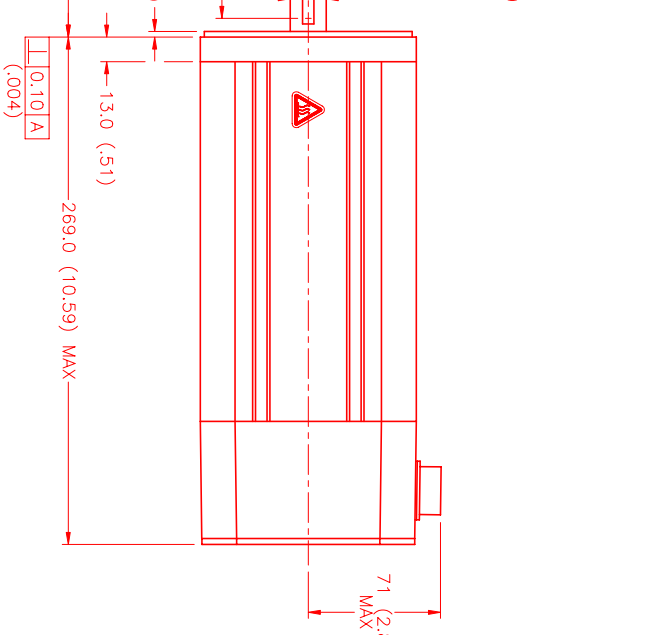
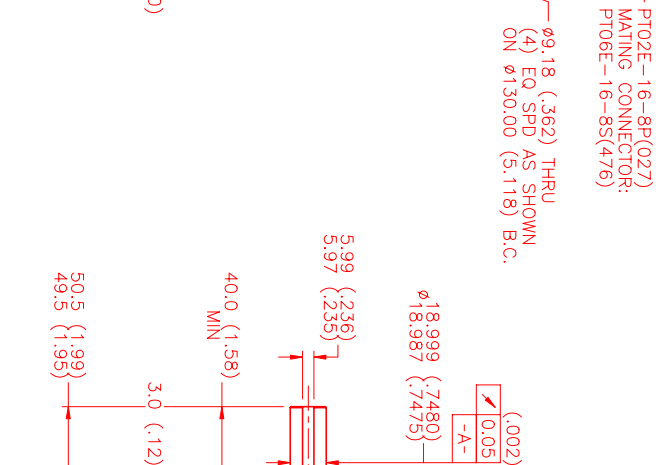
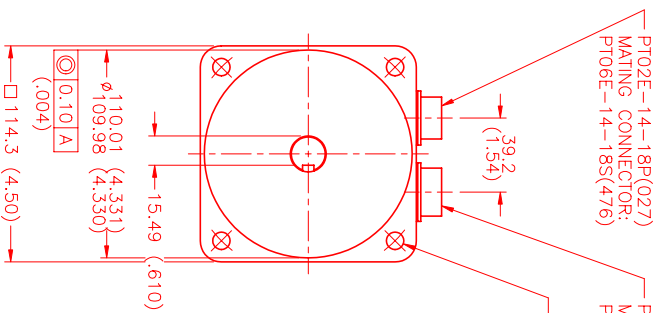
MIN HOLDING TORQUE: 195 IN-LBS  
INPUT VOLTAGE: 24 VOLTS

#### CONNECTION CHART MOTOR/BRAKE CONNECTOR: PT02E-16-8P(027) (270-00032)

MOTOR/BRAKE	WIRE	WIRE LEADS
PIN	FUNCTION	WIRE COLOR
A	ΦR	RED
B	ΦS	BLACK
C	ΦT	BLUE
D	PE GND	GRN/YEL
E	BRK SHLD	-
F	BRK (+)	DIODE
G	BRK (-)	1N4007
H	-	-

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

RES/THERM	WIRE	WIRE LEADS
PIN	FUNCTION	WIRE COLOR
U	THERM	BLACK
N	THERM	BLACK
H	SIN	YELLOW
G	COS GND	BLACK
S	COS	RED
F	SIN GND	BLUE
R	REF GND	YEL/WHT
E	REF	RED/YEL
D	RES SHLD	GRN/YEL
P	GND	GRN/YEL
A	-	-
B	-	-
C	-	-
J	-	-
K	-	-
L	-	-
M	-	-
T	-	-



SCHEMATIC DRAWING FOR  
BRUSHLESS RESOLVER

REV. 1	DESCRIPTION	DATE	APP'D.
PRELIMINARY		6/12/02	MS

NO. 1	PART NUMBER	DESCRIPTION	QTY.
UNLESS SPECIFIED			
DECIMAL: .0005			
FRACTIONAL: 1/32			
ANGLE: 1/2°			
SCALE: N/S			
DATE: 6/12/02			
CHECKED:			
APPROVED:			

**MTS**  
Automation Division

MTS Systems Corporation  
Drawing Number: MPM1141CTUG1Q  
Scale: 1/2:1