MOTOR DATA @ 460 VAC (SINE)

MOTOR PARAMETERS		UNITS	VALUE
HORSEPOWER	HP RATED	Hp	2.1
KILOWATTS	KW RATED	KW	1.6
MAX. OPERATING SPEED	N MAX	RPM	4200
SPEED @ RATED TORQUE	N RATED	RPM	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(RMS/ϕ)	3.1
PEAK TORQUE	Tpk	IN-LBS[Nm]	189.1[21.3]
PEAK CURRENT		AMPS(RMS/ϕ)	10.8
MAX. THEORETICAL ACCEL.		RAD/SEC²	54,029
TORQUE SENSITIVITY	Kt	IN-LBS/AMP(RMS/ϕ)[Nm/AMP(RMS/ϕ)]	17.5[2.00]
BACK EMF (LINE TO LINE)	±10%	Vrms/Krpm	110.0
D.C. RESISTANCE (P-P)	±10%	OHMS	3.2
INDUCTANCE (P-P)	±10%	MILLIHENRIES	24.0
ROTOR INERTIA	Jm	IN-LBS-SEC² [Kg-M²]	.0035[.00039]
STATIC FRICTION	Tf	IN-LBS[Nm]	1.0[.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:

1. AXIAL LOAD: 50 LBS MAX
2. RADIAL LOAD: 100 LBS MAX @ 1" FROM FACE
3. MOTOR SEALED TO IP65.
4. MOTOR WEIGHT: 17.8 LBS. [8.1 Kg]
5. MOTOR FINISH: BLACK EPOXY
6. MOTOR OUTPUT SHAFT: STAINLESS STEEL
7. MILLIMETERS (INCHES)

ENCODER: (290-00073)
OIH48-2048P6-L6-5V

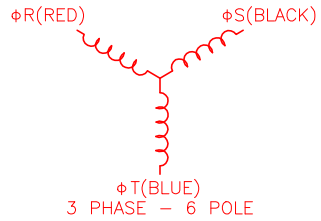
CONNECTION CHART

MOTOR CONNECTOR:
PT02E-14-5P(027)
(270-00026)

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

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

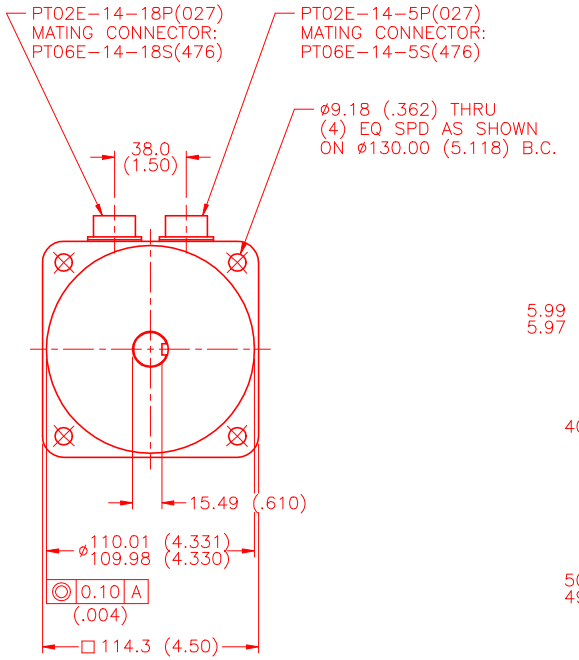


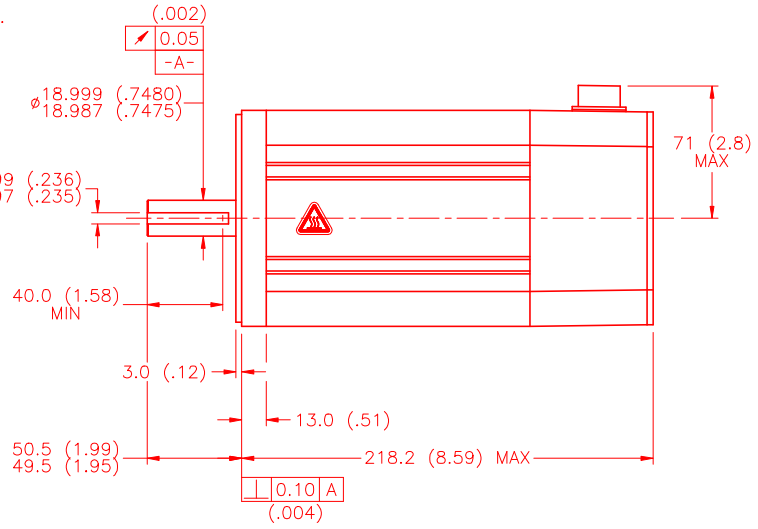
MOTOR & HALL POSITION CHART

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

WAVE REPRESENTING STATOR OUTPUT
WAVE REPRESENTING HALL SENSOR





TITLE: "C"/SINE/460/MET/T2048/CONN	DRAWING NUMBER: MPM1141CSJ7JY1N

REVISIONS

REV.	DESCRIPTION	DATE	APPD.
	PRELIMINARY	4/5/00	AJS

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: AJS	TITLE: "C"/SINE/460/MET/T2048/CONN	REV.
DATE: 4/5/00		
CHECKED:	MATERIAL:	
APPROVED:	DRAWING NUMBER: MPM1141CSJ7JY1N	SCALE: 1/2:1