MOTOR DATA @ 230 VAC (SINE)

MOTOR PARAMETERS		UNITS	VALUE
HORSEPOWER	HP RATED	Hp	.48
KILOWATTS	KW RATED	KW	.35
MAX. OPERATING SPEED	N MAX	RPM	6000
SPEED @ RATED TORQUE	N RATED	RPM	5000
* CONTINUOUS RATED TORQUE @ 5000 RPM		IN-LBS[Nm]	6.0[0.68]
* CONTINUOUS STALL TORQUE		IN-LBS[Nm]	10.0[1.13]
CONTINUOUS LINE CURRENT		AMPS(RMS/Φ)	2.2
PEAK TORQUE	Tpk	IN-LBS[Nm]	30.0[3.4]
PEAK CURRENT		AMPS(RMS/Φ)	6.6
MAX. THEORETICAL ACCEL.		RAD/SEC²	188,679
TORQUE SENSITIVITY	Kt	IN-LBS/AMP(RMS/Φ)[Nm/AMP(RMS/Φ)]	4.50[0.51]
BACK EMF (LINE TO LINE)	±10%	Vrms/Krpm	28.3
D.C. RESISTANCE (P-P)	±10%	OHMS	7.0
INDUCTANCE (P-P)	±10%	MILLIHENRIES	11.0
ROTOR INERTIA	Jm	IN-LBS-SEC²[Kg-M²]	0.000159[0.0000179]
STATIC FRICTION	Tf	IN-LBS[Nm]	0.8[0.09]

*25°C AMBIENT WITH A MAXIMUM CASE TEMPERATURE OF 100°C ON MOTOR. MOTOR MOUNTED ON A 10" X 10" X 1/4" 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: 15 LBS MAX
2. RADIAL LOAD: 20 LBS MAX @ 1" FROM FACE
3. MOTOR SEALED TO IP65.
4. MOTOR WEIGHT: 3.7 LBS [1.7 Kg]
5. MOTOR FINISH: BLACK EPOXY
6. MOTOR OUTPUT SHAFT: STAINLESS STEEL
7. MILLIMETERS (INCHES)

ENCODER: (290-00056)
OIH35-2000P4-L6-5V

CONNECTION CHART

MOTOR/THERM CONNECTOR:
ⒹBEGA089NN00000007000
(270-00256)

MOTOR/THERM WIRE LEADS		
PIN	WIRE FUNCTION	WIRE COLOR
1	ΦR(U1)	RED
2	PE GND	GRN/YEL
3	ΦS(W1)	BLACK
4	ΦT(V1)	BLUE
A	–	–
B	–	–
C	THERM	BLACK
D	THERM	BLACK

ENCODER CONNECTOR:
ⒹAEGA052NN00000020000
(270-00257)

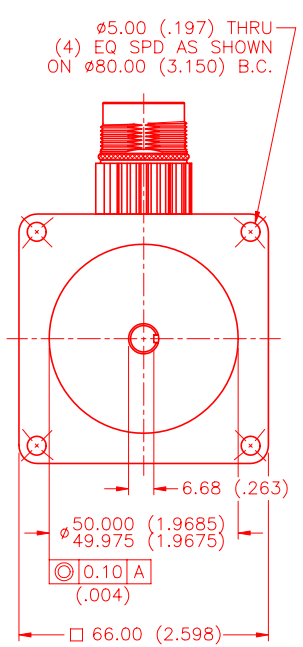
ENCODER WIRE LEADS		
PIN	WIRE FUNCTION	WIRE COLOR
1	GND(0V)	BLACK
2	CH A\(A)	BLUE/BLK
3	CH A(A\)	BLUE
4	CH B(B)	GREEN
5	CH B\(B\)	GRN/BLK
6	CH Z(Z)	YELLOW
7	CH Z\(Z\)	YEL/BLK
8	+5V(+5V)	RED
9	–	–
10	CH U(RLG U)	BROWN
11	CH V(RLG V)	GRAY
12	CH W(RLG W)	WHITE

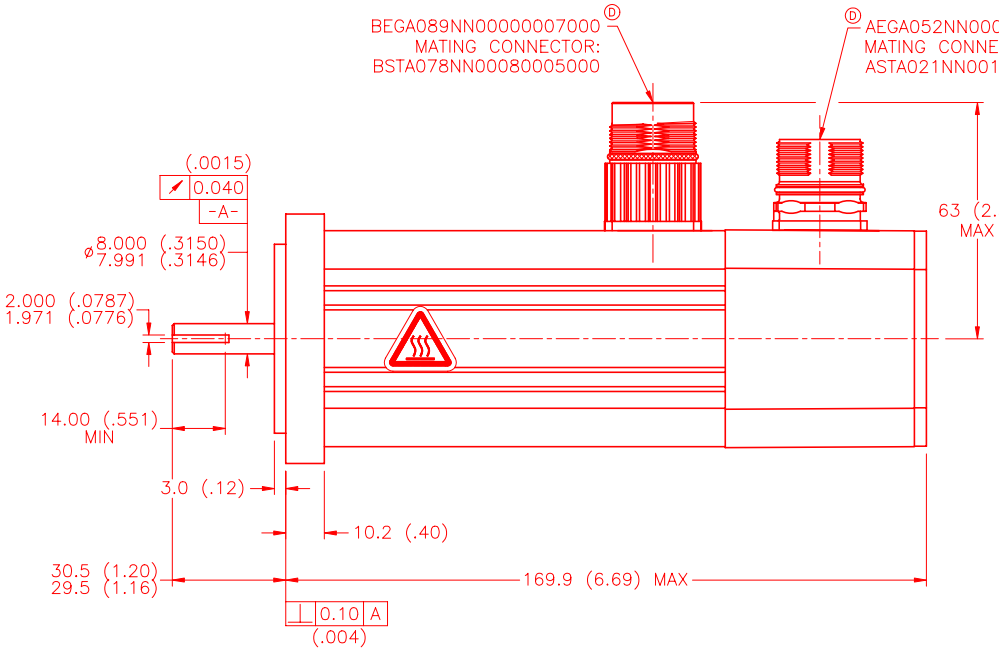
MOTOR & HALL POSITION CHART

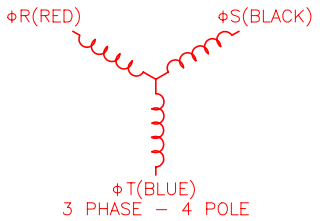
HALL LEADS	BROWN	GRAY	WHITE
MOTOR LEADS	BLACK respect to RED	RED respect to BLUE	BLUE respect to BLACK
VIEW ON THE OSCILLOSCOPE			

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

WAVE REPRESENTING STATOR OUTPUT
WAVE REPRESENTING HALL SENSOR







TITLE: "B"/SINE/230/MET/T2/INT
DRAWING NUMBER: MPM664BSG7JN2N

REVISIONS

REV.	DESCRIPTION	DATE	APPD.
	PRELIMINARY	10/1/99	MS
A	E.C.O. – 547	11/3/99	MVS
B	E.C.O. – 572	5/25/00	AJS
C	E.C.O. – 584	8/1/00	MVS
D	E.C.O. – 620	4/9/01	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: MS
DATE: 10/1/99
CHECKED:
APPROVED:

TITLE: "B"/SINE/230/MET/T2/INTERCONN
REV. D
MATERIAL:
DRAWING NUMBER: MPM664BSG7JN2N
SCALE: 1:1