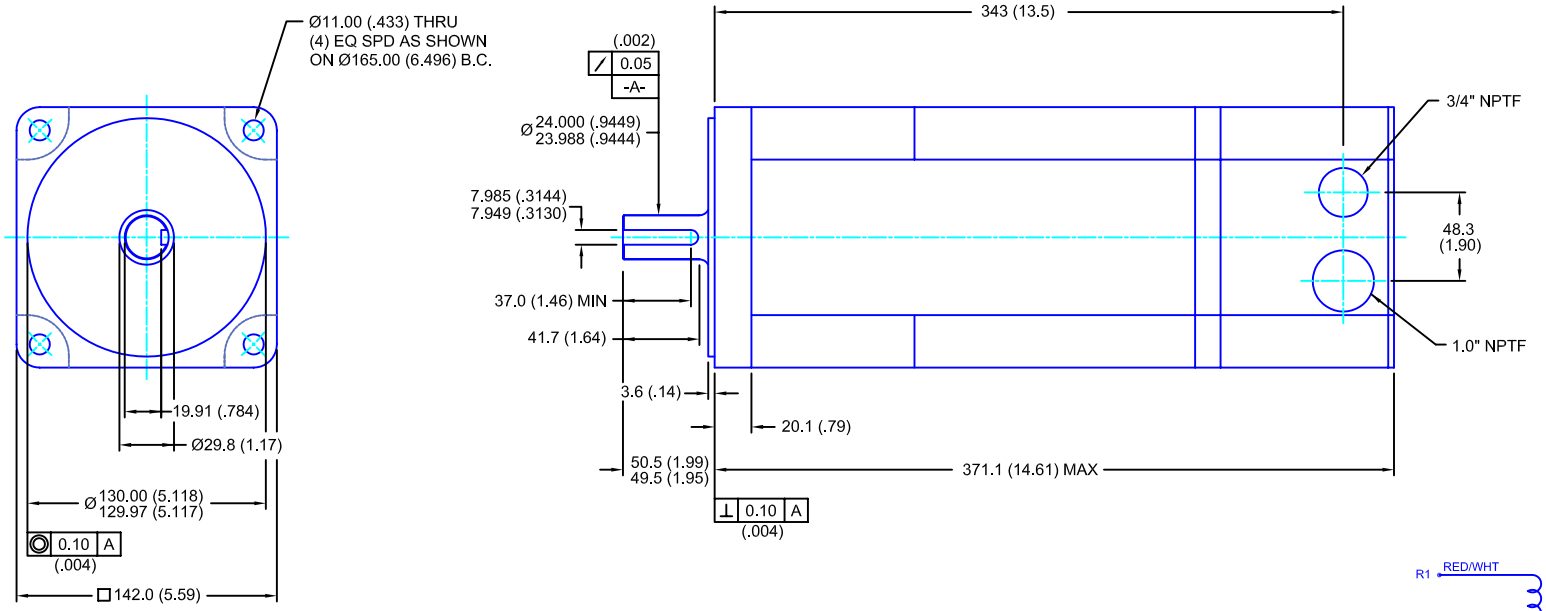
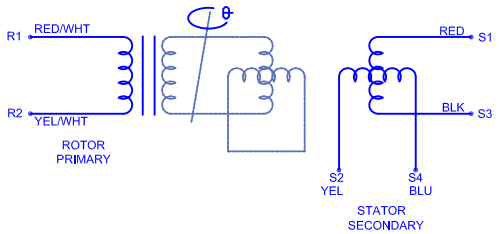
REVISIONS			
REV	DESCRIPTION	DATE	APP'D
1	RELEASE DRAWING	8/13/04	





SCHEMATIC FOR
BRUSHLESS RESOLVER

NOTES:

1. MILLIMETERS (INCHES)
2. AXIAL LOAD: 23 KG [50 LBS] MAX
3. RADIAL LOAD: 68 KG [150 LBS] MAX @ 25.4MM [1.00] FROM FACE
4. MOTOR SEALED TO IP65
5. MOTOR SHAFT: 416 STAINLESS STEEL
6. MOTOR FINISH: BLACK MATT FINISH
7. MOTOR WEIGHT 23.6 KG [52 LBS]

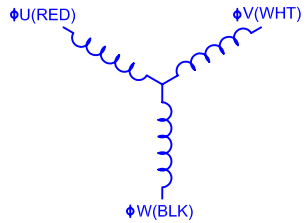
ELECTRICAL DATA			
MOTOR PARAMETERS		UNITS/MEASURE	VALUES
VOLTAGE		VOLTS-AC	230
AMP TYPE		-	SINE
HORSEPOWER		Hp	6.8
KILOWATTS		KW	5.1
MAX OPERATING SPEED		RPM	2700
SPEED @ RATED TORQUE		RPM	2400
*CONTINUOUS RATED TORQUE @ 2400 RPM		IN-LBS[Nm]	179[20.2]
*CONTINUOUS STALL TORQUE		IN-LBS[Nm]	210[23.7]
CONTINUOUS LINE CURRENT		AMPS(RMS/ϕ)	18.9
PEAK TORQUE		IN-LBS[Nm]	630[71.2]
PEAK CURRENT		AMPS(RMS/ϕ)	56.8
MAX THEORETICAL ACCEL.		RAD/SEC^2	31,980
TORQUE SENSITIVITY	Kt	IN-LBS/AMP(RMS/ϕ)[Nm/AMP(RMS/ϕ)]	11.1[1.26]
BACK EMF (LINE TO LINE)	±10%	Vrms/Krpm	70
D.C. RESISTANCE (P-P)	±10%	OHMS	.20
INDUCTANCE (P-P)	±10%	MILLIHENRIES	1.6
ROTOR INERTIA	Jm	IN-LBS-SEC^2[Kg-M^2]	.0197[.00223]
STATIC FRICTION	Tf	IN-LBS[Nm]	3.0[0.34]

*25°C AMBIENT WITH A MAXIMUM CASE TEMPERATURE OF 100°C ON THE MOTOR. THERMOSTAT IN STATOR WILL OPEN IF STATOR TEMPERATURE EXCEEDS 155°C. THIS WILL GIVE YOU ~10% HEADROOM IN THE CONTINUOUS TORQUE RATING BEFORE THERMOSTAT OPENS. MOTOR MOUNTED ON A 305 X 305 X 12.7MM ALUMINUM HEATSINK.

CONNECTION CHART

RES/THERM WIRE LEADS		
TERM	WIRE FUNCTION	WIRE COLOR
RI	GND/SHLD	WHT/BLK
R2	THERM	WHT
R3	THERM	WHT
R4	SIN GND	YEL
R5	COS GND	BLK
R6	COS	RED
R7	SIN	BLU
R8	REF	RED/WHT
R9	REF GND	YEL/WHT
R10	-	-
R11	-	-

MOTOR WIRE LEADS		
TERM	WIRE FUNCTION	WIRE COLOR
1	ϕU	RED
2	ϕV	WHT
3	ϕW	BLK
4	PE GND	GRN/YEL



3 PHASE - 6 POLE

TOLERANCES UNLESS SPECIFIED
SURFACE FINISH: = 63 Ra ✓
BORE: = H12
SHAFT: = h12
DECIMAL .XXX ± .13 (.005)
DECIMAL .XX ± .25 (.010)
DECIMAL .X ± .51 (.020)
FRACTION ± .40 (.016)
ANGLES ± 0°30'
MM (INCHES)

REMOVE ALL BURRS. BREAK SHARP EDGES .25MM (.010") OR 45° CHAMFER

FINISH:

MATERIAL:

CUSTOM MOTORS INC

142MM - 2 STK
230V/KE=70/MET/RES/NPT

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CUSTOMER: -	DRAWN: DFLA	SHEET: 1 OF 1	
SCALE	DATE	DRAWING NO.	REV.
1/2:1	5/13/04	CM1422Q70MKRNPT	1