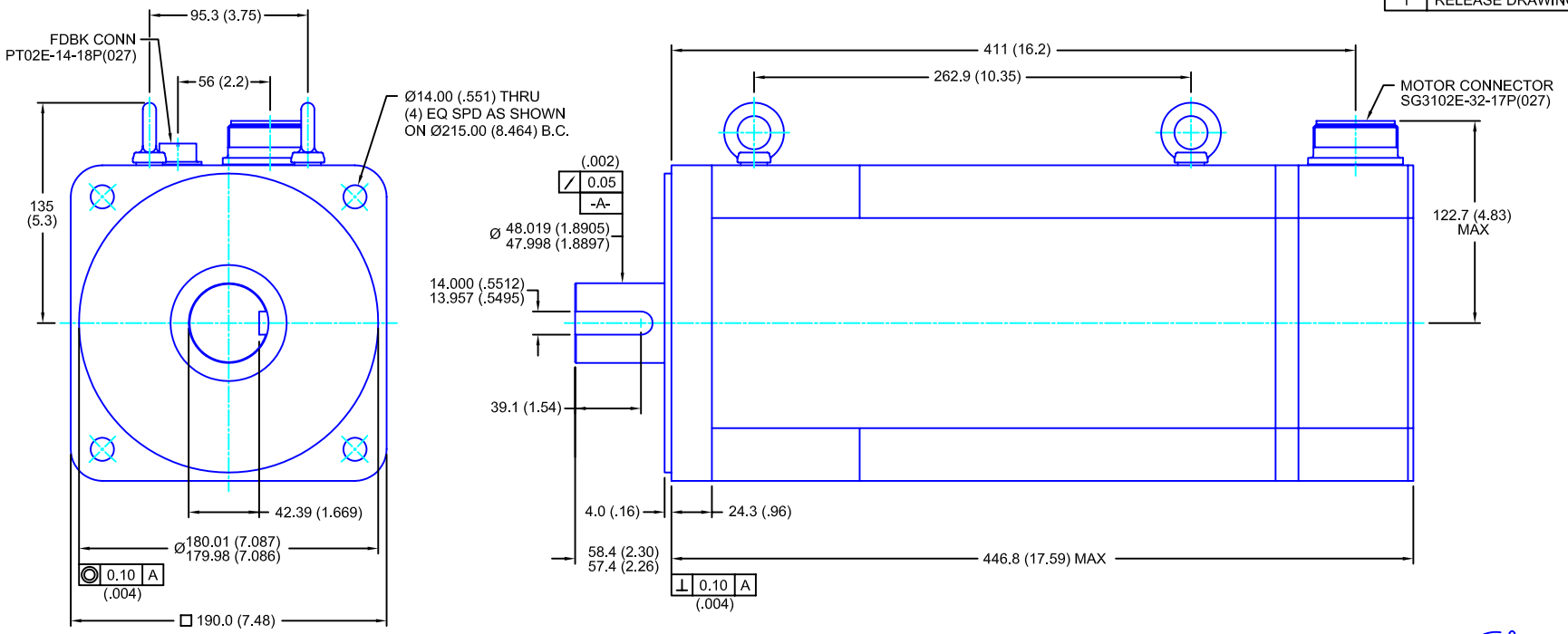
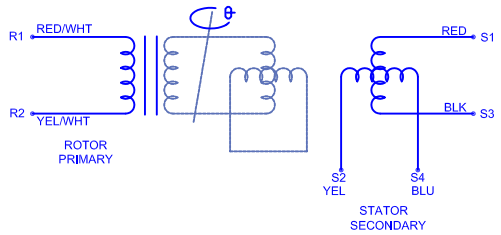
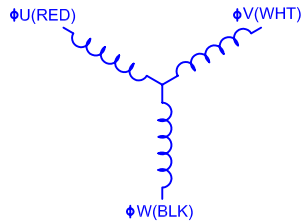
REVISIONS			
REV	DESCRIPTION	DATE	APP'D
1	RELEASE DRAWING	11/3/05	





SCHEMATIC FOR
BRUSHLESS RESOLVER



3 PHASE - 6 POLE

NOTES:

1. MILLIMETERS (INCHES)
2. AXIAL LOAD: 45 KG [100 LBS] MAX
3. RADIAL LOAD: 113 KG [250 LBS] MAX @ 25.4MM [1.00] FROM FACE
4. MOTOR SEALED TO IP65
5. MOTOR SHAFT: G&P STEEL, GRADE 1144
6. MOTOR FINISH: BLACK MATT FINISH
7. MOTOR WEIGHT 59 KG [130 LBS]

ELECTRICAL DATA			
MOTOR PARAMETERS		UNITS/MEASURE	VALUES
VOLTAGE		VOLTS-AC	230
AMP TYPE		-	SINE
HORSEPOWER		Hp	14.4
KILOWATTS		KW	10.7
MAX OPERATING SPEED		RPM	1400
SPEED @ RATED TORQUE		RPM	1200
*CONTINUOUS RATED TORQUE @ 1200 RPM		IN-LBS[Nm]	757[85.5]
*CONTINUOUS STALL TORQUE		IN-LBS[Nm]	880[99.4]
CONTINUOUS LINE CURRENT		AMPS(RMS/ϕ)	34.2
PEAK TORQUE		IN-LBS[Nm]	2640[298.3]
PEAK CURRENT		AMPS(RMS/ϕ)	102.7
MAX THEORETICAL ACCEL.		RAD/SEC^2	24,399
TORQUE SENSITIVITY	Kt	IN-LBS/AMP(RMS/ϕ)[Nm/AMP(RMS/ϕ)]	25.7[2.91]
BACK EMF (LINE TO LINE)	±10%	Vrms/Krpm	162
D.C. RESISTANCE (P-P)	±10%	OHMS	.19
INDUCTANCE (P-P)	±10%	MILLIHENRIES	2.6
ROTOR INERTIA	Jm	IN-LBS-SEC^2[Kg-M^2]	.1082[.01222]
STATIC FRICTION	Tf	IN-LBS[Nm]	11.4[1.3]

*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 356 X 356 X 19MM ALUMINUM HEATSINK.

CONNECTION CHART

PT02E-14-18P(027)

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

SG3102E-32-17P(027)

MOTOR WIRE LEADS		
PIN	WIRE FUNCTION	WIRE COLOR
A	ϕU	RED
B	ϕV	WHT
C	ϕW	BLK
D	PE GND	GRN/YEL

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

CUSTOM MOTORS INC

190MM - 3 STK
230V/KE=162/MET/RES/CONN

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FINISH:	CUSTOMER:	DRAWN: DFLA	SHEET: 1 OF 1
MATERIAL:	SCALE 1/2:1	DATE 3/8/05	DRAWING NO. CM1903Q162MKRCS	REV. 1