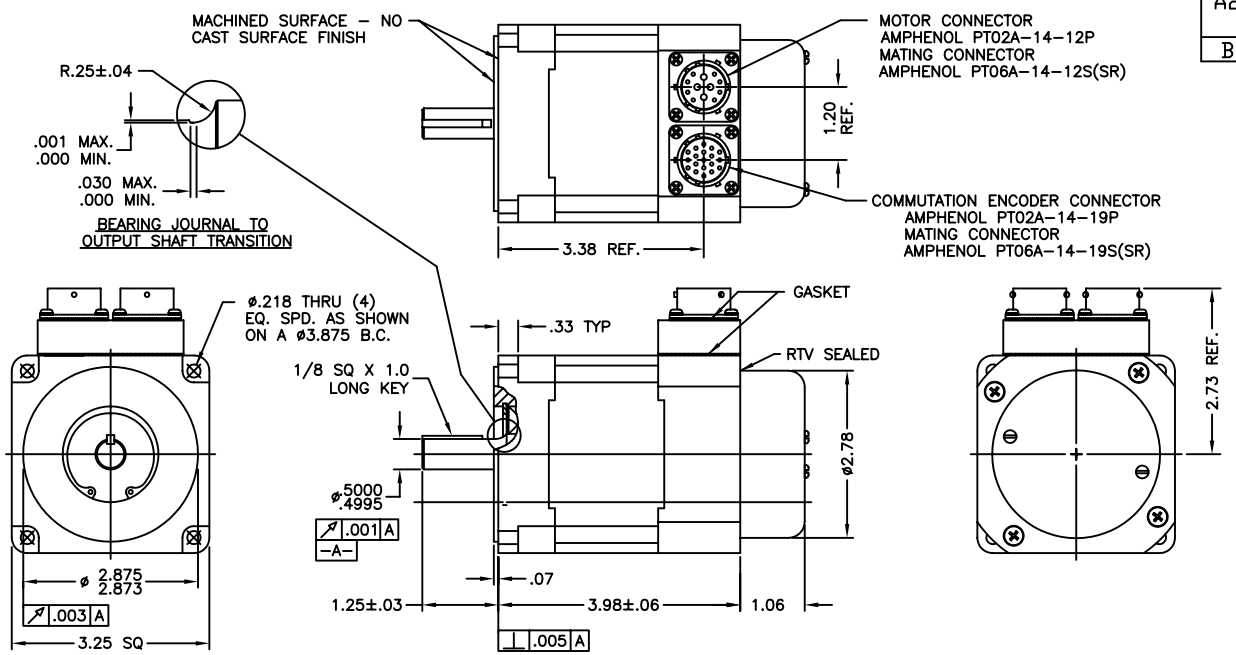
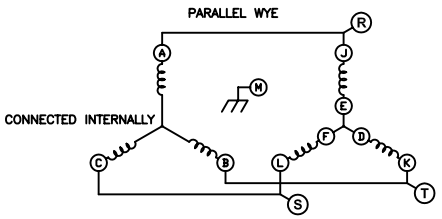
REV	DESCRIPTION/ECO NO.	DATE
A1	CORRECTED WINDING PIN NAMES	11/10/04
A2	SYNCHRONIZED SIGNAL NAMES WITH CABLE	11/12/04
B	HIPOT INCREASED TO 2300V	1/10/05

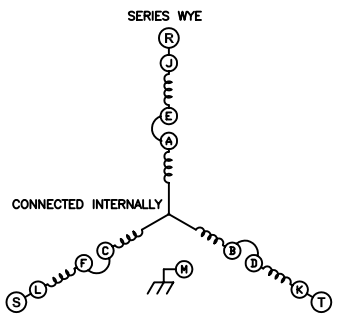


COMMUTATION ENCODER CHARACTERISTICS QUANTUM QD145-05/05-5000-8-04-T1-01-02	
INPUT VOLTAGE	5 VDC ±5%
INPUT CURRENT	125mA TYP.
INPUT RIPPLE	2% PK-PK @ 5VDC
FREQUENCY RESPONSE	500 kHz
SYMMETRY	180° ±10% TYP.
MINIMUM EDGE SEPERATION	54° ELECTRICAL
COMMUTATION ACCURACY	±1° MECHANICAL
OPERATING TEMPERATURE	-20 TO 100°C
RESOLUTION	5000 LINES, W/INDEX

MOTOR PARAMETERS @25°C	TOL.	UNITS	SERIES CONNECTION	PARALLEL CONNECTION
MAX. OPERATING SPEED (Sn1)	MAX.	R.P.M.	3000	6000
CONTINUOUS TORQUE (Tc)	MAX.	IN-LB	11.56	11.56
PEAK TORQUE (Tp)	MAX.	IN-LB	50.94	50.94
TORQUE SENSITIVITY (Kt)	±10%	IN-LB/AMPS	3.04	1.52
BACK EMF CONSTANT (Ke) (L-L, D.C.)	±10%	V/K R.P.M.	36.0	18.0
D.C. RESISTANCE (Rt) (L-L)	±10%	OHMS	1.62	0.41
INDUCTANCE (L) (L-L)	±15%	mH	8.1	2.03
ROTOR INERTIA (Ja)	NOM.	IN-LB-SEC ^{2}	0.0011	0.0011
FRICTION TORQUE (Tf)	NOM.	IN-LB	0.5	0.5
DAMPING TORQUE (Td)	NOM.	IN-LB/KRPM	0.053	0.053
THERMAL RESISTANCE (Rth)	NOM.	°C/WATT	1.05	1.05
WINDING TEMPERATURE	MAX.	°C	135	135
NUMBER OF POLES	–	–	8	8
WEIGHT	NOM.	LBS	5.5	5.5

NOTES:
1. MOTOR FRONT BEARING: 40mm O.D., 17mm I.D., 12mm WIDE. BASIC SERIES NO. 6203.
2. BEARING PRELOAD IS LOCATED AT DRIVE END OF MOTOR.
3. REAR BEARING IN BONDED INTO END CAP USING LOCTITE #680.
4. MOTOR IS PAINTED WITH BLACK ENAMEL PAINT, EXCEPT FOR THE MOUNTING FACE.
5. THERMOSTAT: NORMALLY CLOSED, OPENING TEMPERATURE 135°C. LOCATED ON WINDING END TURNS.
6. ENCODER SHIELD IS INSULATED FROM CASE.
7. HALL TRANSITIONS IN LINE WITH BACK EMF ø CROSSING WITHIN ±10° ELECTRICAL.
8. HIPOT TEST (100%): 2300 VDC RISE TIME=2Sec, DWELL=10Sec, 0..5mA MAX LEAKAGE, NO ARCING.
9. ALL UNITS TO BE 100% TESTED FOR BOTH ELECTRICAL AND MECHANICAL COMPLIANCE INCLUDING STATIC AND DYNAMIC FRICTION SPECIFICATIONS PER LATEST APPROVED TEKNIC MOTOR TEST PROCEDURE.





MOTOR CONNECTOR PINOUT (PT02A-14-12P)	
PIN	FUNCTION
A	R2S
B	T2S
C	S2S
D	T1F
E	R1F
F	S1F
G	N/C
H	N/C
J	R1S
K	T1S
L	S1S
M	CASE GROUND

COMMUTATION ENCODER CONNECTOR PINOUT (PT02A-14-19P)	
PIN	FUNCTION
A	THERMOSTAT
B	THERMOSTAT
C	COMM-T
D	ENC I
E	ENC I~
F	ENC A~
G	ENC A
H	ENCODER GROUND
J	N/C
K	+5 VDC ENCODER
L	N/C
M	COMM-S
N	ENC B
P	ENC B~
R	COMM-R
S	N/C
T	N/C
U	N/C
V	N/C

Teknic, Inc.

DESCRIPTION: BRUSHLESS MOTOR, 510-1020 OZ-IN

TOLERANCES UNLESS OTHERWISE SPECIFIED:	DATE	SCALE	DRAWN BY	MATERIAL	FINISH	FILENAME	DWG.NO.	REV.
ANGULAR ± 1° LINEAR ± .020	052604	NONE	DRL	NA	NA	M-3482-FT.DWG	M-3482-FT	B