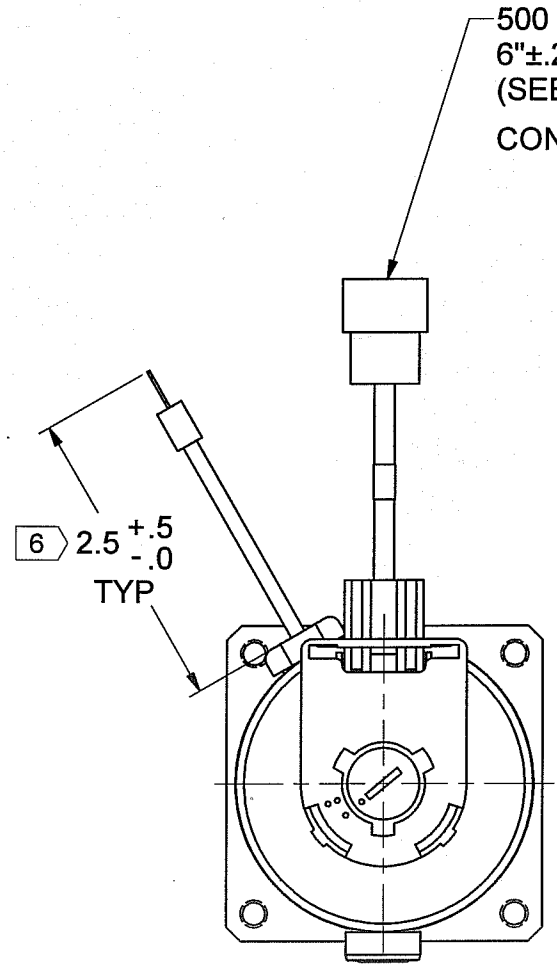
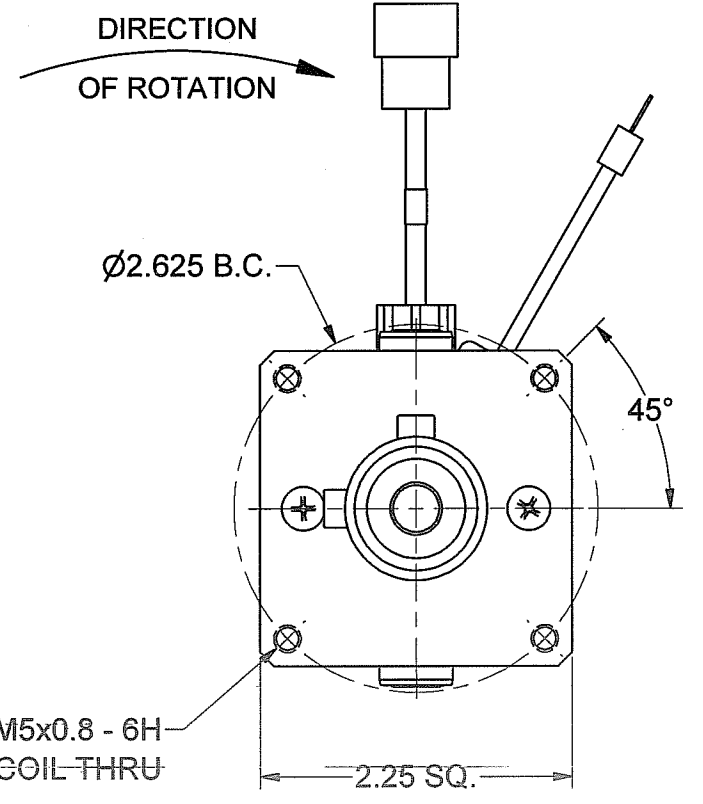
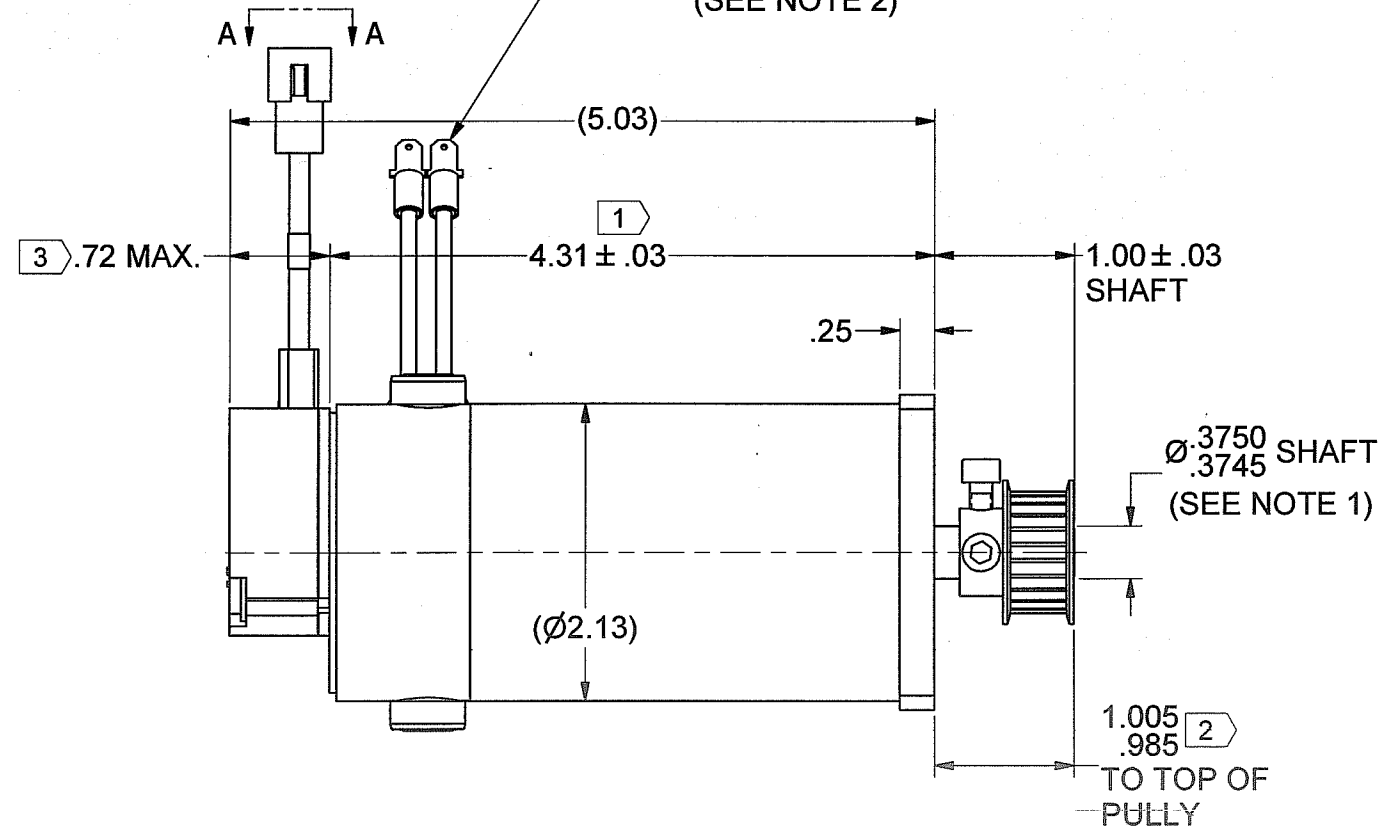


REVISION				
REV	DESCRIPTION	DATE	BY	APPROVED
3	RELEASED DRAWING BY MAGMOTOR FORMAT, ECO99-0010	3/31/99	-	-
4	REF NUMBERS DELETED, ECO00-0070	12/20/00	-	-
5	ADDED SERIAL NUMBER EXAMPLE, ECO M04-0027	12/14/04	RAL	-
6	ITEM 030 WAS 210170132, ECO M05-0001	1/19/05	RAL	-



500 LINE INCREMENTAL ENCODER 7
 6"±.25" LONG SHIELDED CABLE
 (SEE CHART FOR FUNCTIONS AND COLORS)
 CONNECTOR: MOLEX # 03-06-2061

MOTOR LEADS 18 AWG 8
 COLOR FUNCTION
 RED MOTOR (+)
 BLACK MOTOR (-)
 MALE TAB: T & B # 18RAD-188
 (SEE NOTE 2)



DIRECTION
OF ROTATION

MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 10.8 ± 10% OZ-IN/AMP - SPECIAL
 VOLTAGE CONSTANT (Ke) = 8.0 ± 10% VOLTS/KRPM - SPECIAL

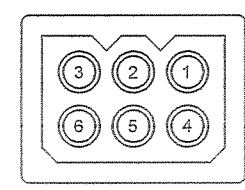
NOTES:

- 1.) SHAFT RUNOUT SHALL NOT EXCEED 0.001" T.I.R.
- 2.) MOTOR ROTATION IS CLOCKWISE WHEN VIEWED FROM OUTPUT SHAFT WITH POSITIVE VOLTAGE APPLIED TO RED LEAD.
- 3.) X IDENTIFIES INSPECTION DIMENSIONS.

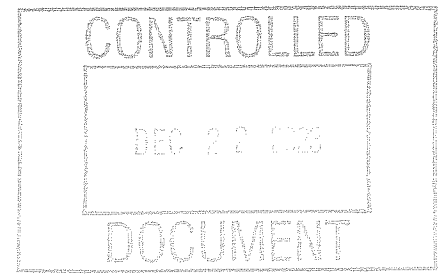
* DETERMINED WHEN LABEL IS PRINTED

5 Magmotor Technologies Inc.
 10 Coppage Drive, Worcester, MA 01603

Part:	720102811 REV *
Cust:	21231
Serial:	*



VIEW A-A
MOLEX # 03-06-2061



LABEL DETAIL
PUT LABEL IN STANDARD LOCATION

4 ENCODER CONNECTOR - MOLEX # 03-06-2061

FUNCTION	COLOR	PIN
A OUTPUT	YELLOW	1
+V, 5 VOLT SUPPLY	RED	2
GROUND	BLACK	3
B OUTPUT	BLUE	4

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & [mm]		THIRD ANGLE PROJECTION DO NOT SCALE DRAWING		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MAGMOTOR TECHNOLOGIES. ANY REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED THEREIN IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION FROM MAGMOTOR TECHNOLOGIES IS PROHIBITED.		Magmotor	
TOLERANCES ON: ANGLES = ± 1/2° X.XX [X.X] = ± .01 [0.25] X.XXX [X.XX] = ± .005 [0.12]	125 ✓	SIGNATURES	DATE	TITLE			
MATERIAL		DRAWN BZ	3/31/1999	FINAL ASSEMBLY, C21-F-175FE			
SPEC		CHECKED <i>ML</i>	12/22/03				
FINISH NONE		ENG APPR.					
SPEC		MFG APPR. <i>ST</i>	12/22/03				
UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES. COUNTERSINK TAPPED HOLES TO BODY SIZE. FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		Q.A.		SIZE	NUMBER	REV	
				D	720102811	6	
		SCALE: -	WEIGHT: - LB.	SHEET 1 OF 3			



10 Coppage Drive
Worcester, MA 01603
1/2/2024

MOTOR PERFORMANCE / SPECIFICATIONS

Attn.:

Final Product No.: **C21-F-175FE**

Customer:

RFQ 720102811

Phone/Fax:

By: BT

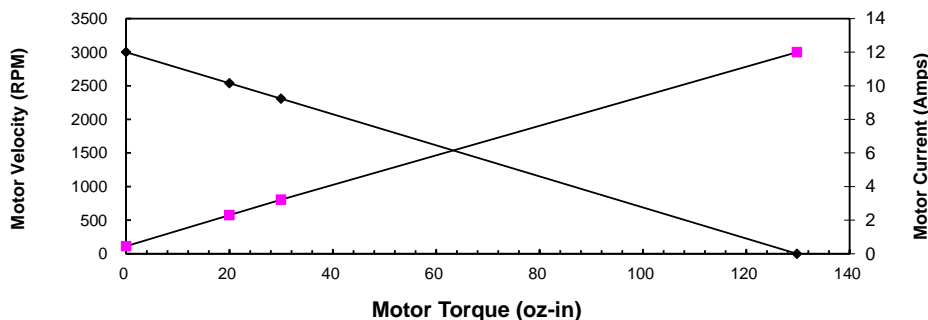
Date: 10/10/2023

This is a calculation data sheet

SPECS	C/S	Frame	PM	Winding	-	Stack	Options	Gear Ratio
MODEL #	C	21	-	F	-	175	FE	

V in =*	24 Vdc		Input Voltage	Eff = 0.9
Ke =*	8.00 V/krpm		Voltage Constant	
Kt =	10.8 oz-in/A		Torque Constant	
Rt =*	2.00 Ohms(@20° C)		Terminal Resistance+Amplifier	
Io =*	0.45 Amps		No load current	
I as =	12.0 Amps		Stall Current (reference only)	
T gs =	130 oz-in		Stall Torque (reference only @ V in)	
I 1 =	2.3 Amps		Current @ Torque-1	
I 2 =	3.2 Amps		Current @ Torque-2	
T 1 =*	20 oz-in		Torque-1	
T 2 =*	30 oz-in		Torque-2	
RPM nl =	3000 RPM		No Load Velocity	
RPM r =	2538 RPM		RPM @ T1	
RPM p =	2307 RPM		RPM @ T2	
R ah =	2.62 Ohms(@105° C)		Term. Resistance Hot	
T gsh =	99 oz-in		Stall Torque Hot	
I ash =	9.2 Amps		Stall Current Hot	
R th =*	4.9 °C/W		Thermal Resistance	
Tr =	86 °C	Without cooling air	Temperature Rise @ T1 (above ambient)	
Tr =	128 °C	Without cooling air	Temperature Rise @ T2 (above ambient)	
Nm/A =	0.08		Torque Constant	
Lb in/A =	0.68		Torque Constant	
Km =	7.7	Kt/r	Motor Constant	

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
24	0	3000	0.5		0
24	20	2538	2.3	0.680538345	37.542287
24	30	2307	3.2	0.661760945	51.186123
24	130	0	12.0		0