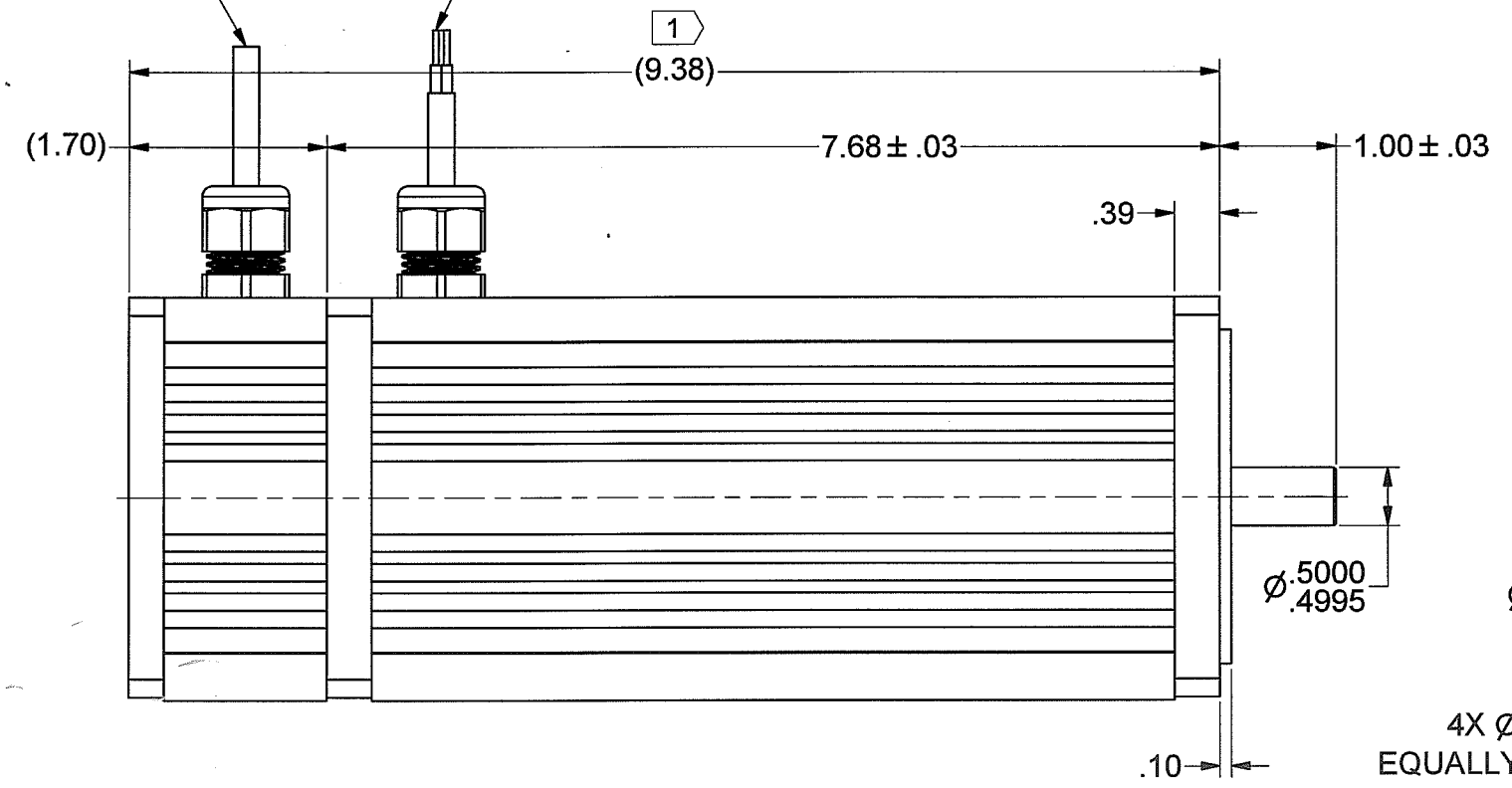
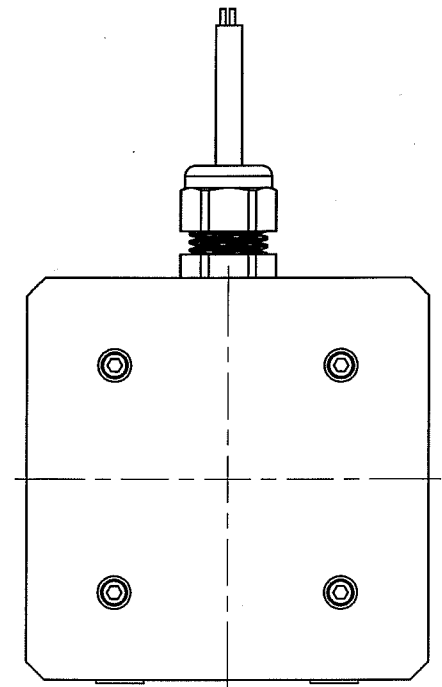


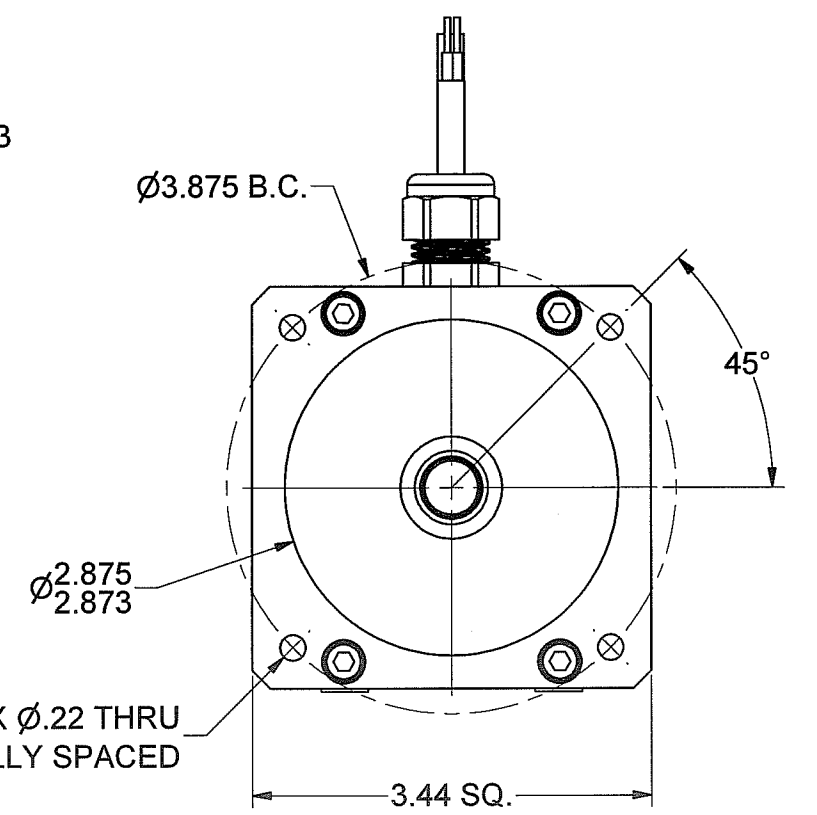
REV	DESCRIPTION	DATE	BY	APPROVED
A	PROTOTYPE			

2) 2000 LINE INCREMENTAL ENCODER
22"±1" LONG SHIELDED CABLE
MEASURED FROM TOP OF STRAIN RELIEF
(SEE CHART FOR FUNCTIONS AND COLORS)

MOTOR LEAD WIRES, 18"±1" LONG (TEFLON) 3)
MEASURED FROM TOP OF STRAIN RELIEF
COVERED WITH CLEAR HEAT SHRINK
(SEE CHART FOR FUNCTIONS AND COLORS)



DIRECTION OF ROTATION

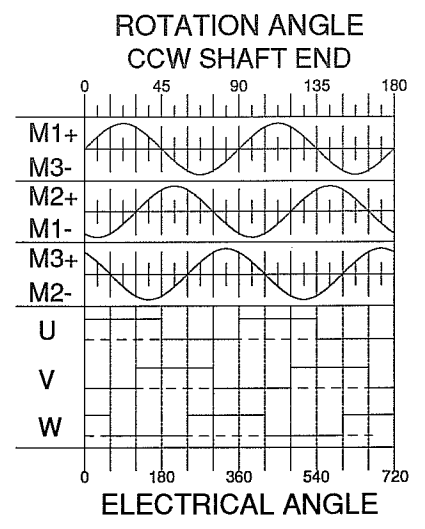


MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 41.4 ± 10% OZ-IN/AMP
VOLTAGE CONSTANT (Ke) = 30.6 ± 10% VOLTS/KRPM

NOTES:

1.) X IDENTIFIES INSPECTION DIMENSIONS.



ENCODER WIRING - 28 AWG	
COLOR CODE	FUNCTION
RED	Vcc Inc +5V
BLACK	GND Inc
BLUE	A
BLUE / BLACK	A'
GREEN	B
GREEN / BLACK	B'
VIOLET	Z
VIOLET / BLACK	Z'
BROWN	U
BROWN / BLACK	U'
GRAY	V
GRAY / BLACK	V'
WHITE	W
WHITE / BLACK	W'
DRAIN	BARE

MOTOR LEADS - 16 AWG	
M1	RED
M2	BLACK
M3	WHITE

CONTROLLED
APR 29 2019
DOCUMENT

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]		SIGNATURES		DATE		TITLE	
MATERIAL		DRAWN SLC		4/26/2019		FINAL ASSEMBLY, BFA34-C-500FE	
SPEC		CHECKED [Signature]		4/29/19		SIZE NUMBER	
FINISH NONE		ENG APPR.		MFG APPR. [Signature]		D 730340092	
SPEC		UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES, COUNTERSINK TAPPED HOLES TO BODY SIZE, FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		Q.A.		REV A	
SCALE: -		WEIGHT: - LB.		SHEET 1 OF 3			



10 Coppage Drive
Worcester, MA 01603
6/11/2019

MOTOR PERFORMANCE / SPECIFICATIONS

Attn.:

Final Product No.: **BFA34 C 500 FE**

Customer:

RFQ **730340092**

Phone/Fax:

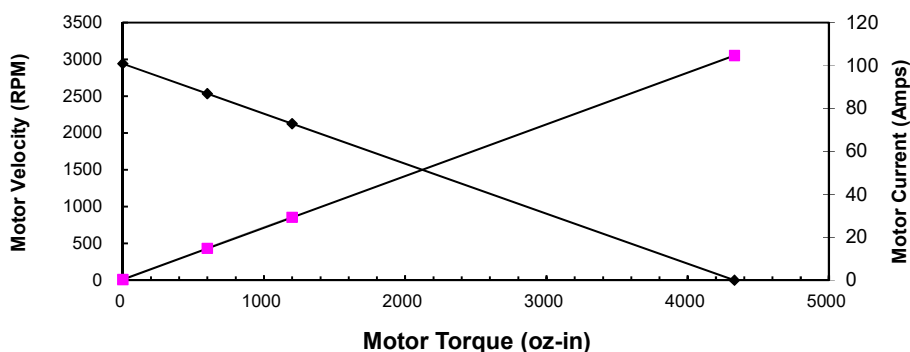
By: JC

Date: **6/11/2019**

This is a calculation data sheet

SPECS	C/S	Frame	PM	- Winding -	Stack	Options	Gear Ratio
MODEL #	BFA34	C			500	FE	1.00
V in =*	90 Vdc				Input Voltage		eff = 0.9
Ke =*	30.6 V/krpm				Voltage Constant		
Kt =	41.4 oz-in/A				Torque Constant		
Rt =*	0.86 Ohms(@20° C)				Terminal Resistance+Amplifier		
Io=*	0.33 Amps				No load current		
I as =	104.7 Amps				Stall Current (reference only)		
T gs =	4331 oz-in				Stall Torque (reference only @ V in)		
I l =	14.8 Amps				Current @ Torque-1		
T 1 =*	600 oz-in				Torque-1	540.0 oz-in	33.8 in-lb
T 2 =*	1200 oz-in				Torque-2	1080.0 oz-in	67.5 in-lb
I 2 =	29.3 Amps				Current @ Torque-2		
RPM nl =	2941 RPM				No Load Velocity		2941.2 rpm
RPM r =	2534 RPM				RPM @ T1		2533.7 rpm
RPM p=	2126 RPM				RPM @ T2		2126.2 rpm
R ah =	1.13 Ohms(@105° C)				Term. Resistance Hot		
T gsh =	3310 oz-in				Stall Torque Hot		
I ash =	80.0 Amps				Stall Current Hot		
R th =*	0.48 °C/W				Thermal Resistance		
Tr =	101 °C	Without cooling air			Temperature Rise (above ambient)		
Nm/A=	0.29				Torque Constant		
Lb in/A=	2.59				Torque Constant		
Km=	44.6 Kt/r				Motor Constant		

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
90	0	2941	0.3	0	0
90	600	2534	14.8	0.84254	1124.4234
90	1200	2126	29.3	0.71499	1887.1821
90	4331	0	104.7	0	0