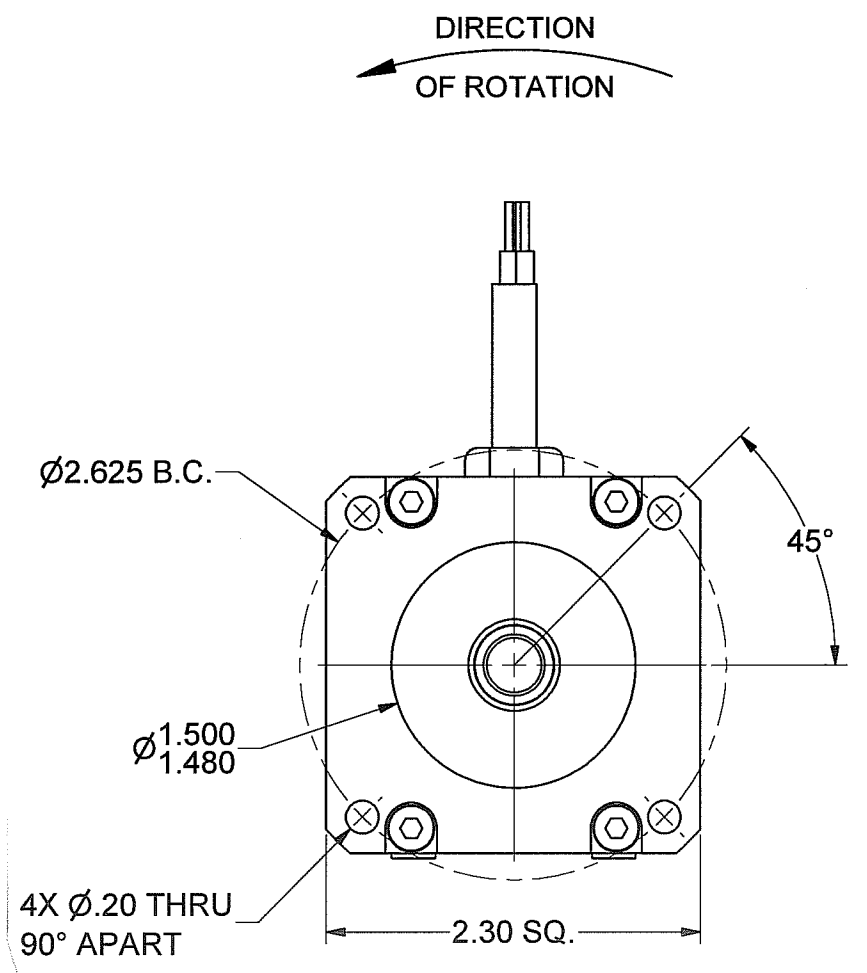
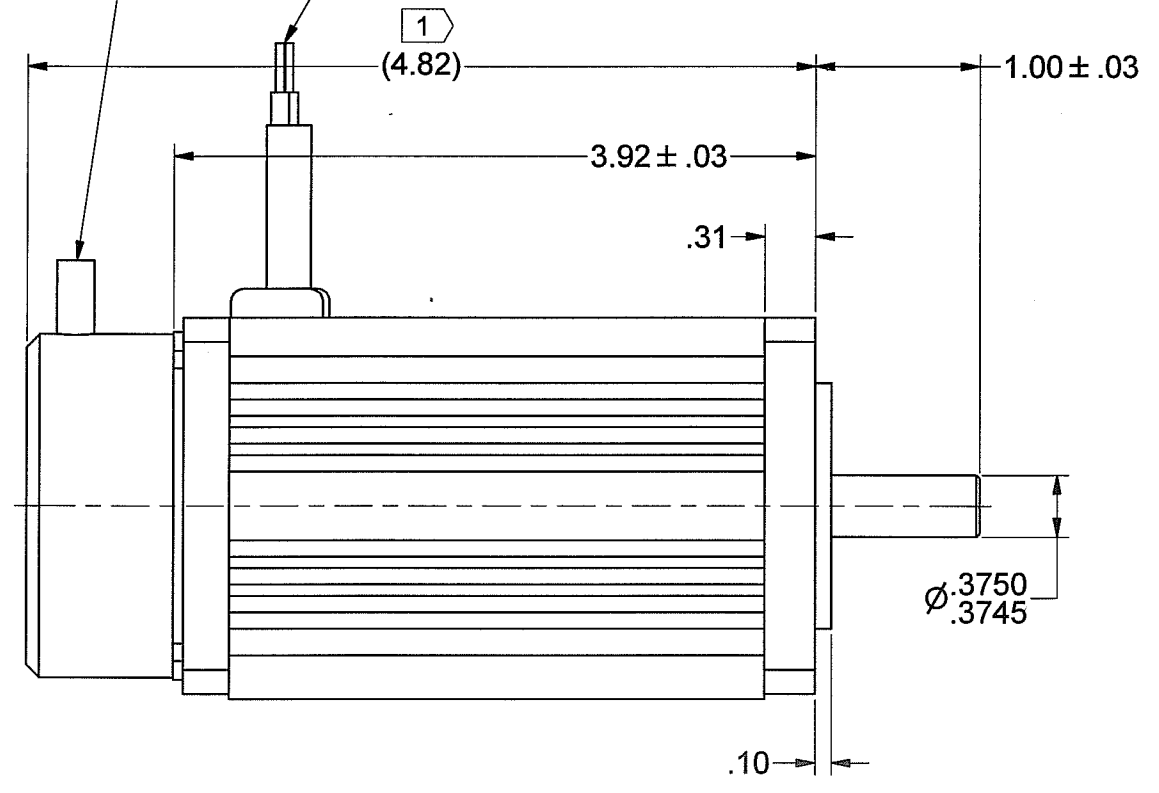
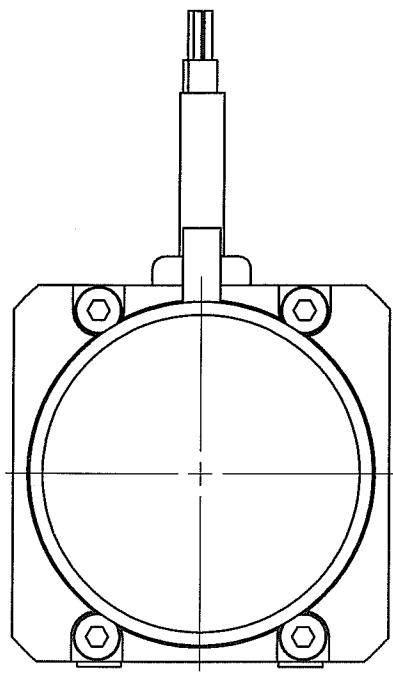


REV	DESCRIPTION	DATE	BY	APPROVED
A	PROTOTYPE			

2) 2000 LINE INCREMENTAL / COMMUTATING ENCODER
24"±1" LONG SHIELDED CABLE
(SEE CHART FOR FUNCTIONS AND COLORS)

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



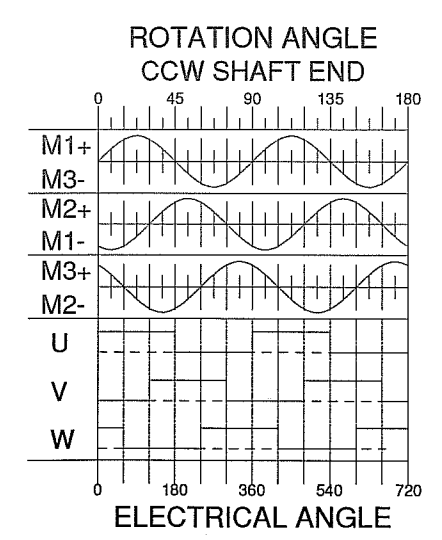
MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 40.0 ± 10% OZ-IN/AMP - SPECIAL
VOLTAGE CONSTANT (Ke) = 29.6 ± 10% VOLTS/KRPM - SPECIAL

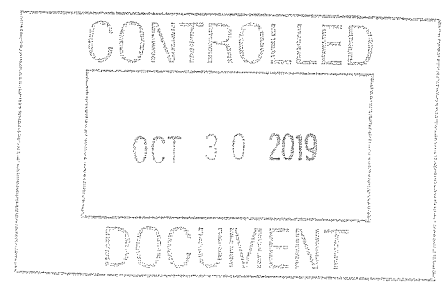
NOTES:

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'



MOTOR LEADS - 18 AWG	
M1	RED
M2	BLACK
M3	WHITE



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		10/29/2019		FINAL ASSEMBLY, BFA23-I-200FE	
SPEC		CHECKED [Signature]		10/30/19		SIZE NUMBER	
FINISH		ENG APPR.		10/30/19		D 730240059	
NONE		MFG APPR. [Signature]		Q.A.		REV A	
SPEC		UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES. COUNTERSINK TAPPED HOLES TO BODY SIZE. FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		SCALE: -		WEIGHT: - LB. SHEET 1 OF 3	



10 Coppage Drive
Worcester, MA 01603
11/5/2019

MOTOR PERFORMANCE / SPECIFICATIONS

Attn.:

Final Product No.: **BFA 23 I 200 FE**

Customer:

RFQ 730240059

Phone/Fax:

By: JC

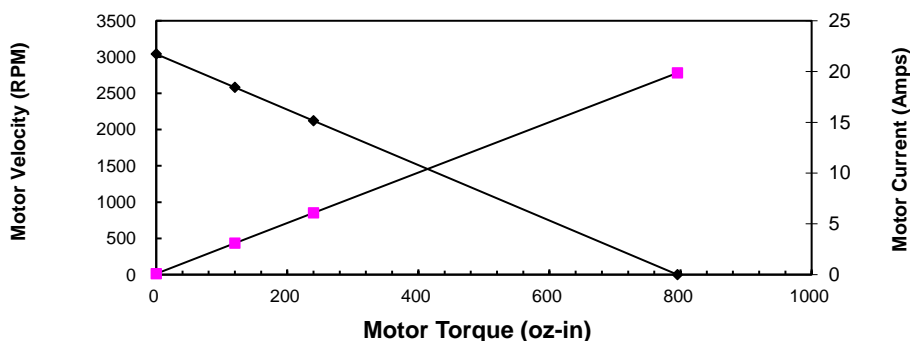
Date: 10/9/2019

This is a calculation data sheet

SPECS	C/S	Frame	PM	- Winding -	Stack	Options	Gear Ratio
MODEL #	BFA	23			I	200	FE

V in =*	90 Vdc	Input Voltage	eff = 0.9
Ke =*	29.6 V/krpm	Voltage Constant	
Kt =	40.0 oz-in/A	Torque Constant	
Rt =*	4.53 Ohms(@20° C)	Terminal Resistance+Amplifier	
Io =*	0.09 Amps	No load current	
I as =	19.9 Amps	Stall Current (reference only)	
T gs =	795 oz-in	Stall Torque (reference only @ V in)	
I 1 =	3.1 Amps	Current @ Torque-1	
T 1 =*	120 oz-in	Torque-1	108.0 oz-in 6.8 in-lb
T 2 =*	240 oz-in	Torque-2	216.0 oz-in 13.5 in-lb
I 2 =	6.1 Amps	Current @ Torque-2	
RPM nl =	3041 RPM	No Load Velocity	3040.5 rpm
RPM r =	2582 RPM	RPM @ T1	2581.8 rpm
RPM p =	2123 RPM	RPM @ T2	2123.0 rpm
R ah =	5.93 Ohms(@105° C)	Term. Resistance Hot	
T gsh =	608 oz-in	Stall Torque Hot	
I ash =	15.2 Amps	Stall Current Hot	
R th =*	2 °C/W	Thermal Resistance	
Tr =	97 °C	Without cooling air	Temperature Rise (above ambient)
Nm/A =	0.28	Torque Constant	
Lb in/A =	2.50	Torque Constant	
Km =	18.8 Kt/r	Motor Constant	

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
90	0	3041	0.1	0	0
90	120	2582	3.1	0.82461	229.15162
90	240	2123	6.1	0.68811	376.86556
90	795	0	19.9	0	0