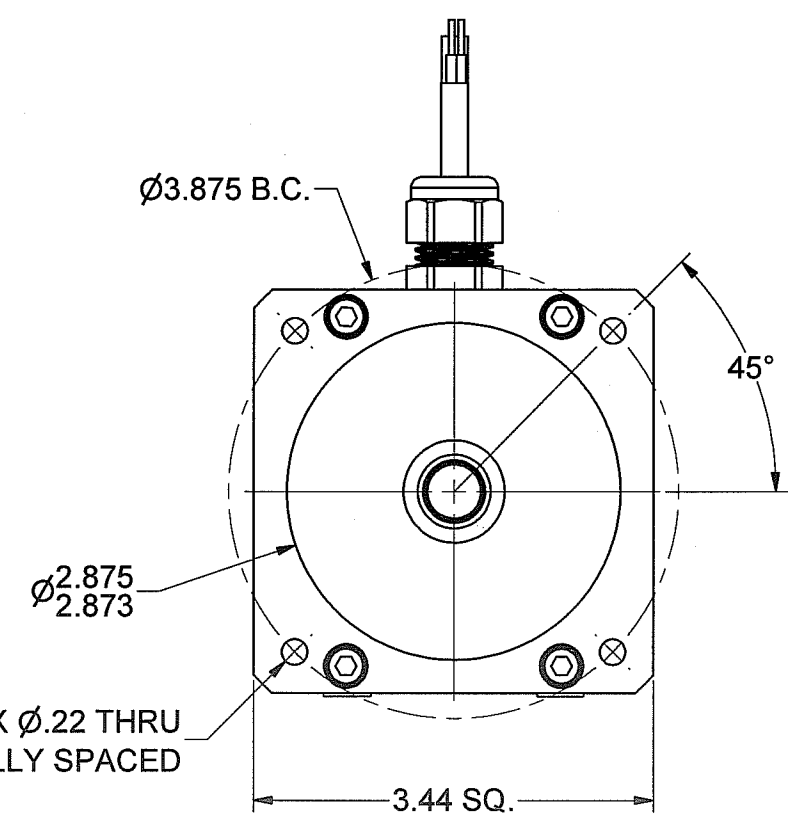
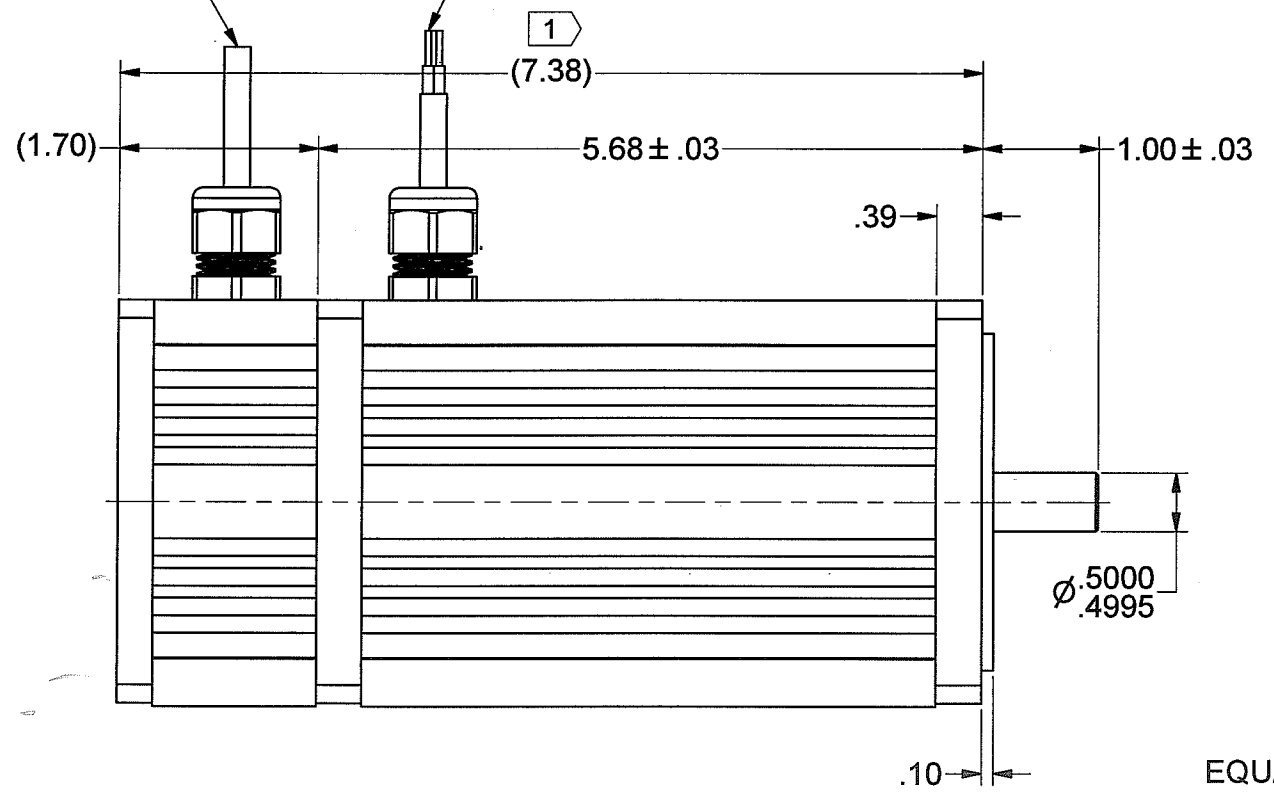
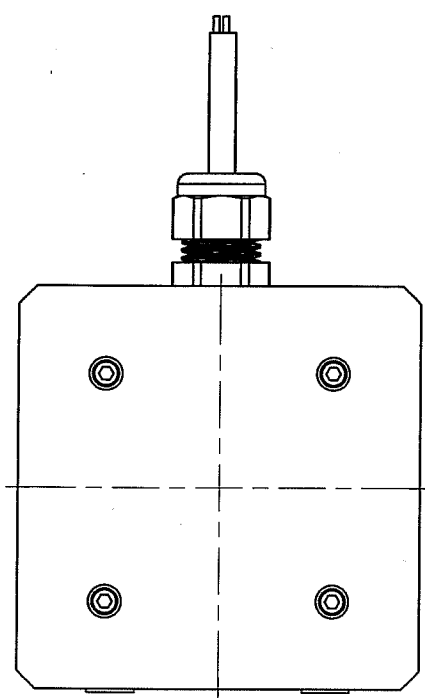


REV	DESCRIPTION	REVISION	DATE	BY	APPROVED
A	PROTOTYPE				

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

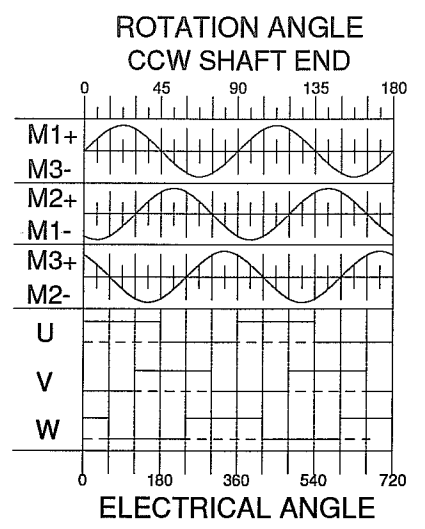


MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 19.3 ± 10% OZ-IN/AMP
VOLTAGE CONSTANT (Ke) = 14.3 ± 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 19 2019
DOCUMENT

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & [mm]

TOLERANCES ON:
ANGLES = ± 1/2°
X.XX [X.X] = ± .01 [0.25]
X.XXX [X.XXX] = ± .005 [0.12]

125 ✓

THIRD ANGLE PROJECTION
DO NOT SCALE DRAWING

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Magmotor™

SIGNATURES	DATE	TITLE
DRAWN SLC	3/13/2019	FINAL ASSEMBLY, BFA34-2E-300FE
CHECKED <i>SLC</i>	4/19/19	
ENG APPR.		
MFG APPR. <i>BT</i>	4/19/19	
Q.A.		

SIZE	NUMBER	REV
D	730340088	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 2E 300 FE**

Customer:

RFQ **730340088**

Phone/Fax:

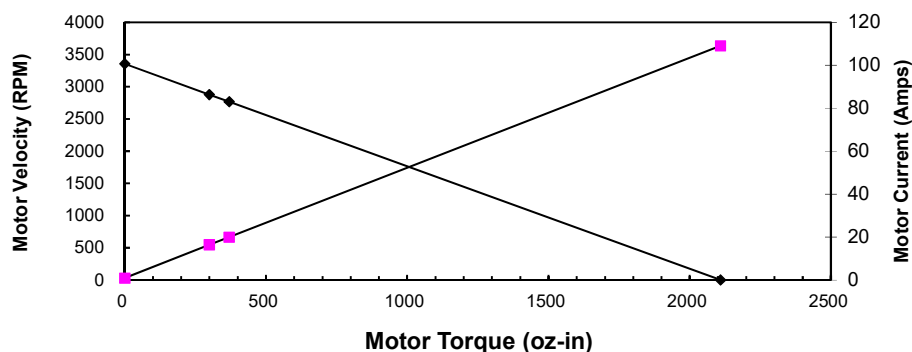
By: PR

Date: 6/11/2019

This is a calculation data sheet

SPECS	C/S	Frame	PM	- Winding -	Stack	Options	Gear Ratio
MODEL #		BFA34		2E	300	FE	1.0
V in =*	48	Vdc			Input Voltage		eff = 0.9
Ke =*	14.3	V/krpm			Voltage Constant		
Kt =	19.3	oz-in/A			Torque Constant		
Rt =*	0.44	Ohms(@20° C)			Terminal Resistance+Amplifier		
Io =*	0.9	Amps			No load current		
I as =	109.1	Amps			Stall Current (reference only)		
T gs =	2110	oz-in			Stall Torque (reference only @ V in)		
I l =	16.4	Amps			Current @ Torque-1		
T 1 =*	300	oz-in			Torque-1	270.0 oz-in	16.9 in-lb
T 2 =*	370	oz-in			Torque-2	333.0 oz-in	20.8 in-lb
I 2 =	20.0	Amps			Current @ Torque-2		
RPM nl =	3357	RPM			No Load Velocity		3356.6 rpm
RPM r =	2879	RPM			RPM @ T1		2879.3 rpm
RPM p=	2768	RPM			RPM @ T2		2768.0 rpm
R ah =	0.58	Ohms(@105° C)			Term. Resistance Hot		
T gsh =	1613	oz-in			Stall Torque Hot		
I ash =	83.4	Amps			Stall Current Hot		
R th =*	0.51	°C/W			Thermal Resistance		
Tr =	76	°C	Without cooling air		Temperature Rise (above ambient)		
Nm/A=	0.14				Torque Constant		
Lb in/A=	1.21				Torque Constant		
Km=	29.2	Kt/r			Motor Constant		
HP nl=	7.02	HP			Motor Horsepower		

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
48	0	3357	0.9	0	0
48	300	2879	16.4	0.811	638.90627
48	370	2768	20.0	0.78781	757.50555
48	2110	0	109.1	0	0