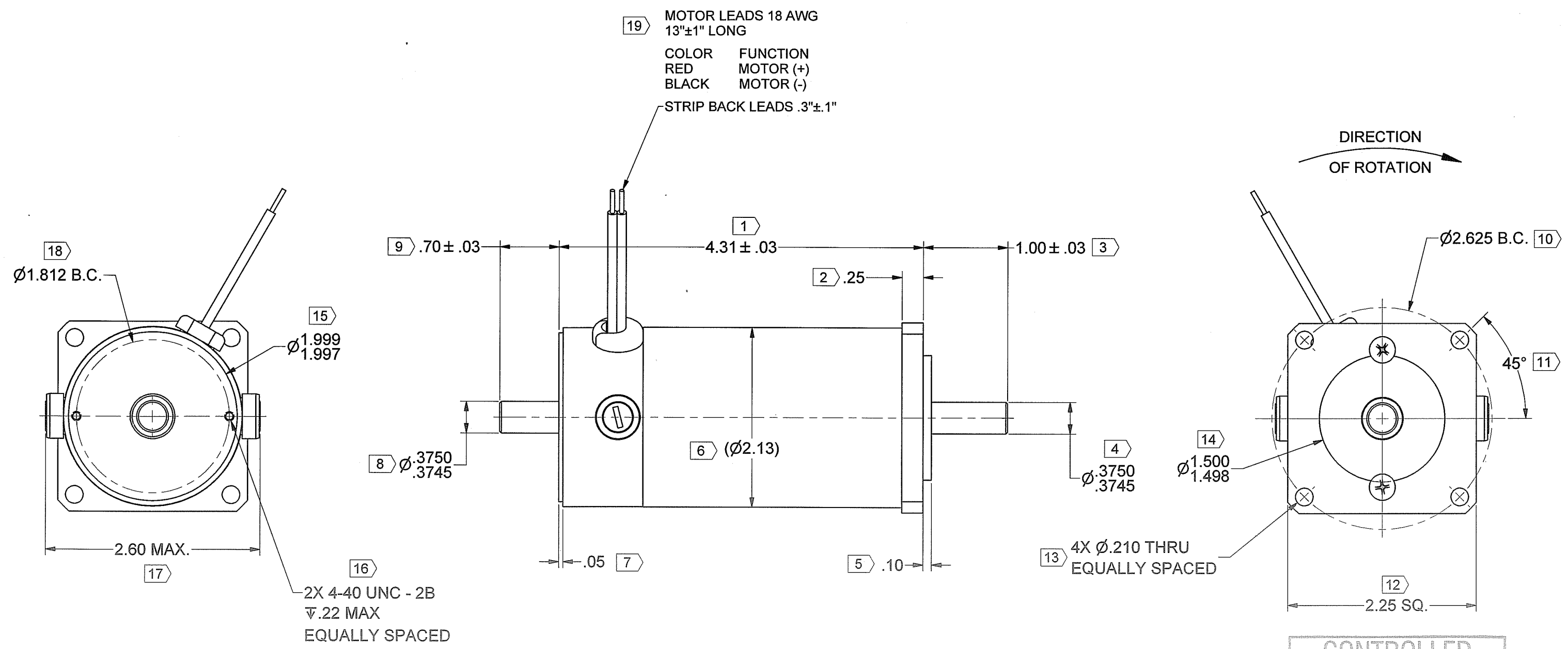


REV	DESCRIPTION	REVISION	DATE	BY	APPROVED
A	PROTOTYPE				



MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 56.8 ± 10% OZ-IN/AMP
VOLTAGE CONSTANT (Ke) = 42.0 ± 10% VOLTS/KRPM

NOTES:

- 1.) MOTOR ROTATION IS CLOCKWISE WHEN VIEWED FROM OUTPUT SHAFT WITH POSITIVE VOLTAGE APPLIED TO RED LEAD.
- 2.) SCREW PENETRATION NOT TO EXCEED SPECIFIED THREAD DEPTH.
- 3.) [X] IDENTIFIES INSPECTION DIMENSIONS.

CONTROLLED
JUN 15 2022
DOCUMENT

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES & [mm]		THIRD ANGLE PROJECTION		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]		DO NOT SCALE DRAWING		SIGNATURES		
MATERIAL	DRAWN CGW	DATE	TITLE			MOTOR ASSEMBLY, C21-M-175FX
SPEC	CHECKED <i>SM</i>	DATE	MATERIAL			
FINISH	ENG APPR. <i>WLM</i>	DATE	SPEC			SIZE NUMBER D 500210357
NONE	MFG APPR. <i>ST</i>	DATE	FINISH			
SPEC	UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES. COUNTERSINK TAPPED HOLES TO BODY SIZE. FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		Q.A.		SCALE: - WEIGHT: - LB. SHEET 1 OF 3	



10 Coppage Drive
Worcester, MA 01603
8/17/2022

MOTOR PERFORMANCE / SPECIFICATIONS

Attn.:

Final Product No.: **C21-M-175FX**

Customer:

RFQ 500210357

Phone/Fax:

By: MM

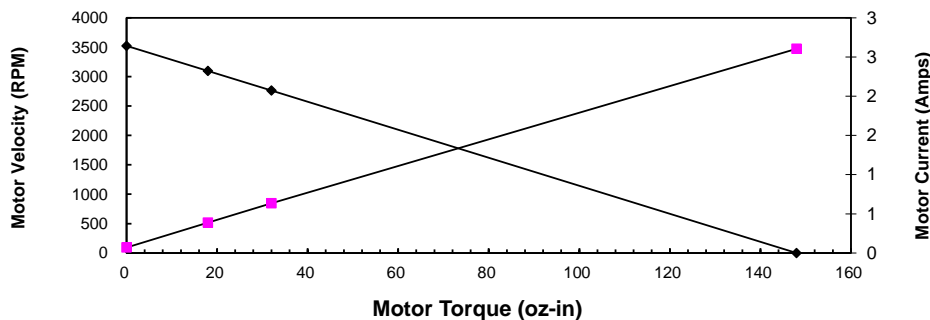
Date: 8/17/2022

This is a calculation data sheet

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

V in =*	148 Vdc								Input Voltage	Eff = 0.9
Ke =*	42.00 V/krpm								Voltage Constant	
Kt =	56.8 oz-in/A								Torque Constant	
Rt =*	56.80 Ohms(@20° C)								Terminal Resistance+Amplifier	
Io =*	0.07 Amps								No load current	
I as =	2.6 Amps								Stall Current (reference only)	
T gs =	148 oz-in								Stall Torque (reference only @ V in)	
I 1 =	0.4 Amps								Current @ Torque-1	
I 2 =	0.6 Amps								Current @ Torque-2	
T 1 =*	18 oz-in								Torque-1	
T 2 =*	32 oz-in								Torque-2	
RPM nl =	3524 RPM								No Load Velocity	
RPM r =	3095 RPM								RPM @ T1	
RPM p =	2762 RPM								RPM @ T2	
R ah =	74.31 Ohms(@105° C)								Term. Resistance Hot	
T gsh =	113 oz-in								Stall Torque Hot	
I ash =	2.0 Amps								Stall Current Hot	
R th =*	4.9 °C/W								Thermal Resistance	
Tr =	79 °C	Without cooling air							Temperature Rise @ T1 (above ambient)	
Tr =	139 °C	Without cooling air							Temperature Rise @ T2 (above ambient)	
Nm/A =	0.40								Torque Constant	
Lb in/A =	3.55								Torque Constant	
Km =	7.5	Kt/r							Motor Constant	

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
148	0	3524	0.1		0
148	18	3095	0.4	0.719670509	41.208872
148	32	2762	0.6	0.697369356	65.370781
148	148	0	2.6		0