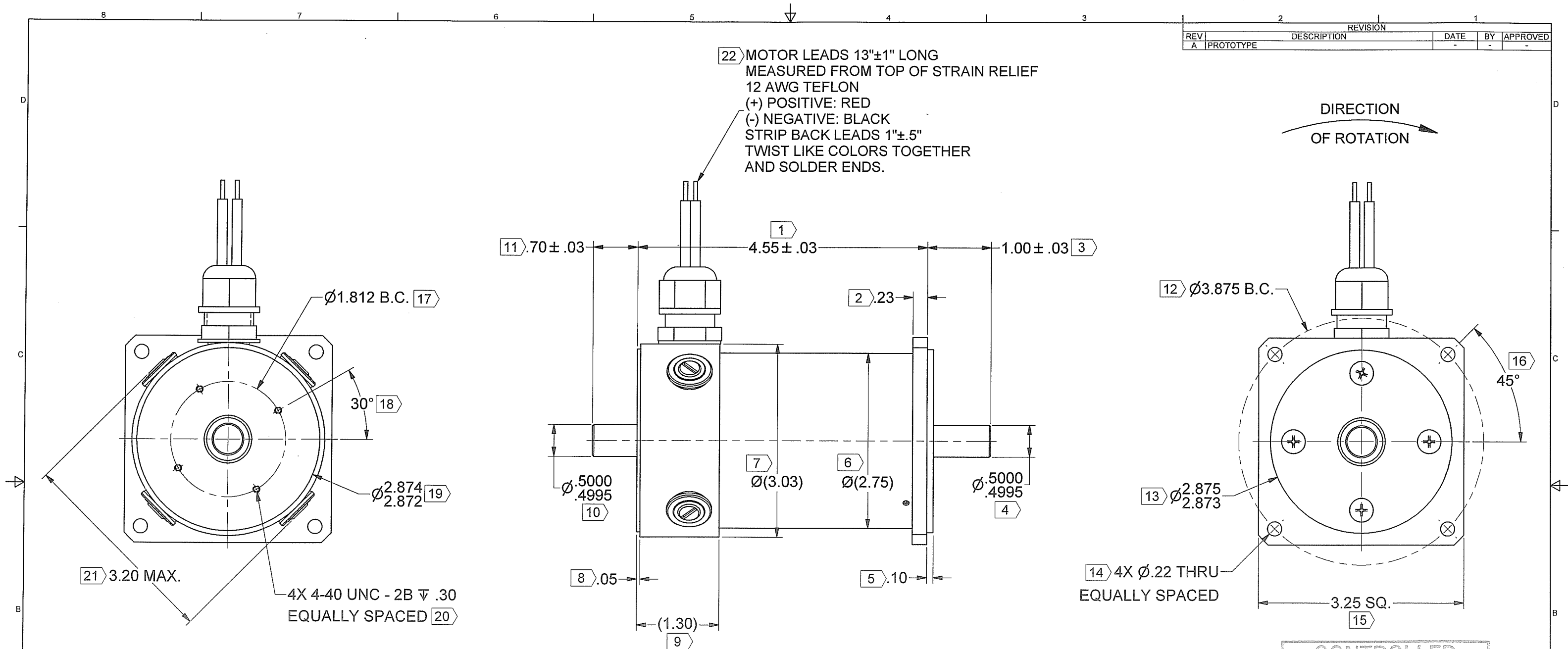


REV	DESCRIPTION	REVISION	DATE	BY	APPROVED
A	PROTOTYPE				



CONTROLLED
OCT 30 2017
DOCUMENT

MOTOR SPECIFICATIONS:

TORQUE CONSTANT (Kt) = 8.8 ± 10% OZ-IN/AMP
VOLTAGE CONSTANT (Ke) = 6.5 ± 10% VOLTS/KRPM

NOTES:

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

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		8/16/2017		MOTOR ASSEMBLY, S28-D2-200FX	
SPEC		CHECKED <i>SLC</i>		10/30/17		REV	
FINISH		ENG APPR.		MFG APPR. <i>BT</i>		10/30/17	
NONE		Q.A.		UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & SHARP EDGES COUNTERSINK TAPPED HOLES TO BODY SIZE FILLETS: .03 MAX. / EXTERNAL CORNERS: .015 MAX.		SIZE NUMBER D 500280456	
SPEC		SCALE: -		WEIGHT: - LB.		SHEET 1 OF 3	



10 Coppage Drive
Worcester, MA 01603
10/26/2017

MOTOR PERFORMANCE / SPECIFICATIONS

Final Product No.: **S28 D2 200 FX**
RFQ **500280456**
By: **JC**

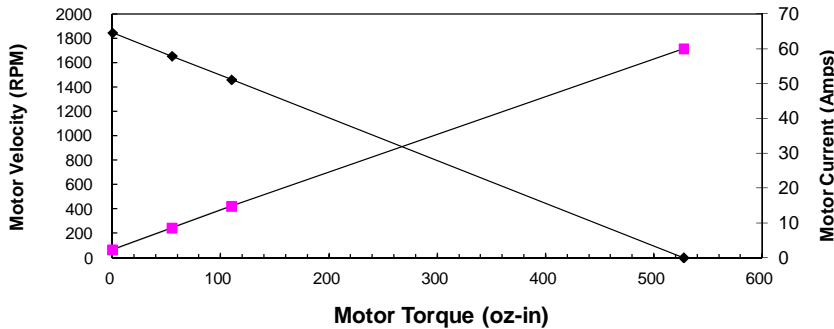
Attn.:
Customer:
Phone/Fax:
Date: **8/15/2017**

This is a calculation data sheet

SPECS	C/S	Frame	PM	- Winding	- Stack	Options	Gear Ratio
MODEL #	S	28		D2	200	FX	1.0

V in =*	12 Vdc					Input Voltage	eff = 0.9
Ke =*	6.5 V/krpm					Voltage Constant	
Kt =	8.8 oz-in/A					Torque Constant	
Rt =*	0.2 Ohms (@20°C)					Terminal Resistance+Amplifier	
Io =*	2.25 Amps					No load current	
I as =	60.0 Amps					Stall Current (reference only)	
T gs =	527 oz-in					Stall Torque (reference only @ V in)	
I 1 =	8.5 Amps					Current @ Torque-1	
T 1 =*	55 oz-in					Torque-1	49.5 oz-in 149.5 Nm
T 2 =*	110 oz-in					Torque-2	99.0 oz-in 299 Nm
I 2 =	14.8 Amps					Current @ Torque-2	
RPM nl =	1846 RPM					No Load Velocity	1846.2 rpm
RPM r =	1654 RPM					RPM @ T1	1653.6 rpm
RPM p=	1461 RPM					RPM @ T2	1461.1 rpm
R ah =	0.26 Ohms (@105°C)					Term. Resistance Hot	
T gsh =	403 oz-in					Stall Torque Hot	
I ash =	45.9 Amps					Stall Current Hot	
R th =*	2.9 °C/W					Thermal Resistance	
Tr =	101 °C	Without cooling air				Temperature Rise (above ambient)	
Nm/A=	0.06					Torque Constant	
Lb in/A=	0.55					Torque Constant	
Km=	19.7 Kt/r					Motor Constant	

Torque Curve



Calculation data

Voltage	Torque	RPM	Amp	Efficiency	Watts out
12	0	1846	2.3	0	0
12	55	1654	8.5	0.659	67.270879
12	110	1461	14.8	0.67102	118.87869
12	527	0	60.0	0	0