

BRUSHED MOTOR SPECIFICATIONS

Product No.: 80BDS155-414-xxx

Customer:

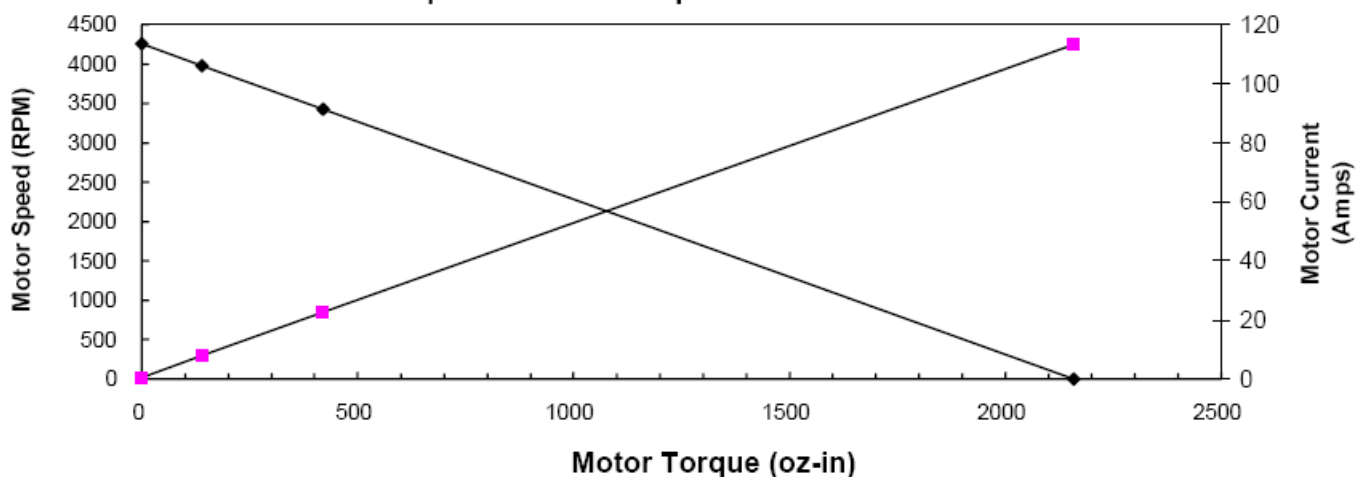
RFQ

Date: 2014-04-08 (updated 2014-06-13)

This is a calculation data sheet

SPECS	Series	Frame	Stack Code	Winding	Part No	Options	Gear Ratio
MODEL #	P	80	16	D	XXX		
V input =	60	Vdc			Input Voltage	90% Efficiency	
Ke =	14.1	V/krpm			Voltage Constant		
Kt =	19.1	Oz-in/A			Torque Constant		
Rt =	0.53	Ohms(@20° C)			Terminal Resistance + Amplifier		
Io=	0.57	Amps			No load current		
RPM nl =	4225	RPM			No Load RPM		
T 1 =	140	Oz-in		0.99 Nm	Torque-1	0.0 Nm	
I 1 =	7.91	Amps			Current @ Torque=T1		
RPM 1 =	3979	RPM			RPM @ T-1	#DIV/0! RPM	
P1=	412	W			Power Out		
T 2 =	420 Oz-in	2.97 Nm			Torque-2	0.0 Nm	
I 2 =	22.6 Amps				Current @ Torque=T2		
RPM 2=	3427 RPM				RPM @ T-2	#DIV/0! RPM	
T st =	2159 Oz-in	15.24 Nm			Stall Torque (@ E in)		
I samp =	113.2 Amps				Stall Current		
R th =	1.8 °C/W				Thermal Resistance		
T rise@T1 =	112 °C				Temperature Rise (above ambient)		
T w@T1 =	53 °C				Winding Temperature Rise (above ambient)		

Speed Current Torque Curve



Calculation data

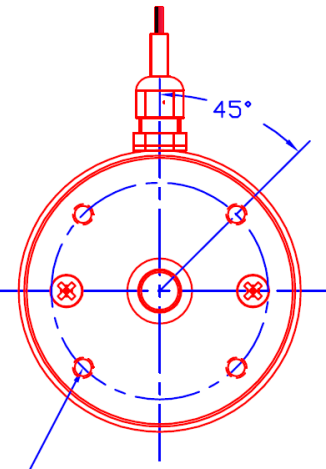
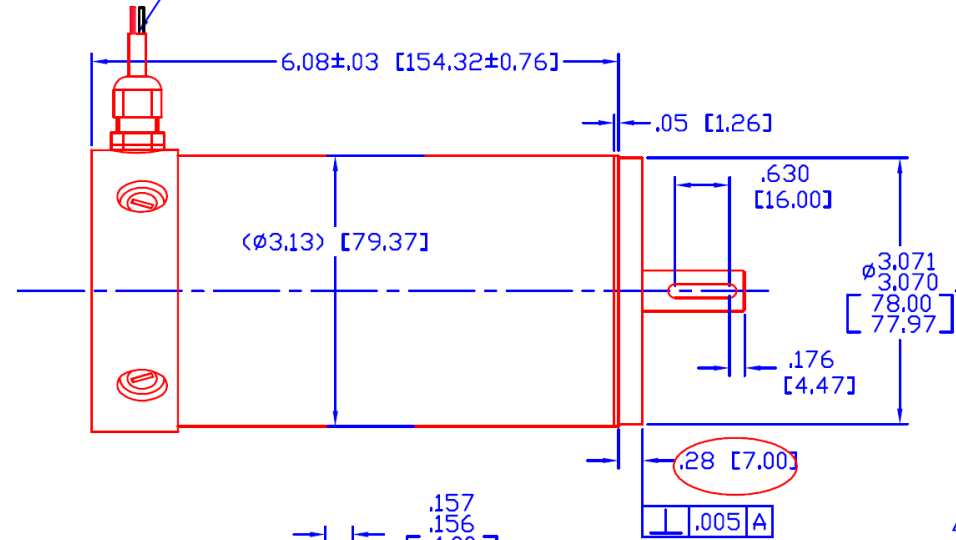
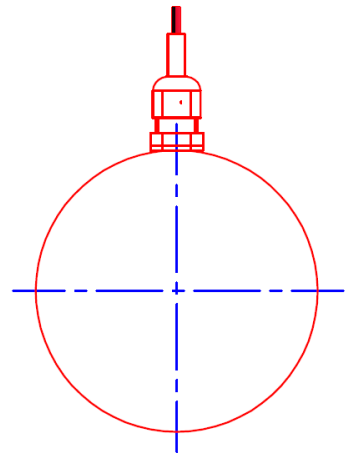
Voltage	Torque	RPM	Amp	Efficiency	Watts Out
60	0	4255	0.6	0.00%	0
60	140	3979	7.9	86.80%	412
60	420	3427	22.6	78.50%	1065
60	2159	0	113.2	0.00%	0

REVISIONS			
REV	DESCRIPTION	APPROVED	DATE
A	PROTOTYPE	GAO	2014/06/12

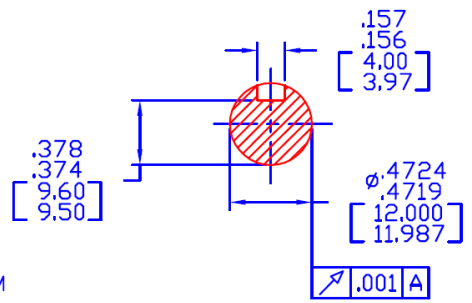
DRAFT 2014/07/01

MOTOR LEADS CABLE 3 X 1.0 mm²
 44"±1" [1118mm±25.4mm] LENGTH
 COLOR FUNCTION
 RED MOTOR (+)
 BLACK MOTOR (-)
 WHITE GROUND
 TRIP BACK INSULATION
 3"±.1" [7.62mm±2.54mm]

DIRECTION
 OF ROTATION



M6 THRU (4) HOLES
 90° APART ON A
 $\phi 2.500$ [63.50] B.C.



MOTOR SPECIFICATIONS:
 TORQUE CONSTANT (Kt) = 19.1 ± 10% OZ-IN/AMP
 VOLTAGE CONSTANT (Ke) = 14.1 ± 10% VOLTS/KRPM

NOTE:
 MOTOR ROTATION IS CLOCKWISE WHEN VIEWED FROM OUTPUT
 SHAFT WITH POSITIVE VOLTAGE APPLIED TO RED LEAD.
 SCREW PENETRATION NOT TO EXCEED SPECIFIED THREAD DEPTH.

UNLESS OTHERWISE SPECIFIED TOLERANCES		
DECIMALS	INCH	MM
.0	±.020	±0.50
.00	±.010	±0.25
.000	±.005	±0.13
ANGLES	± 1/2°	± 1/2°
BREAK ALL SHARP EDGES		
PROJECTION		

Motion Control Products Ltd. Tel.: 01202 599922			
TITLE		MOTOR ASSEMBLY	
SIZE	DWG. NO.	REV	
D	80BDS155-441-065	A	
USED IN			
SCALE	1 : 1	SHEET 1 OF 2	

APPROVALS	DATE
DRAWN GAO	2014/06/12
CHECKED	
APPROVED	

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