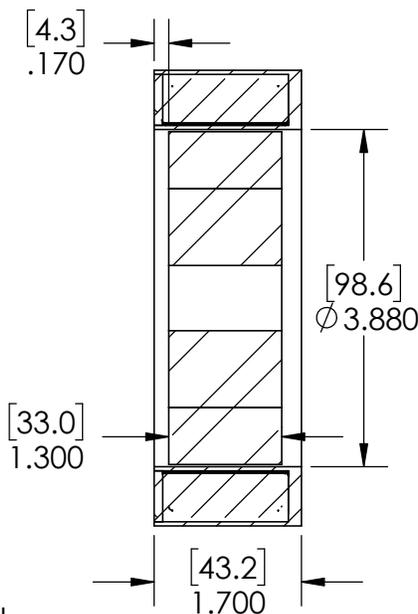
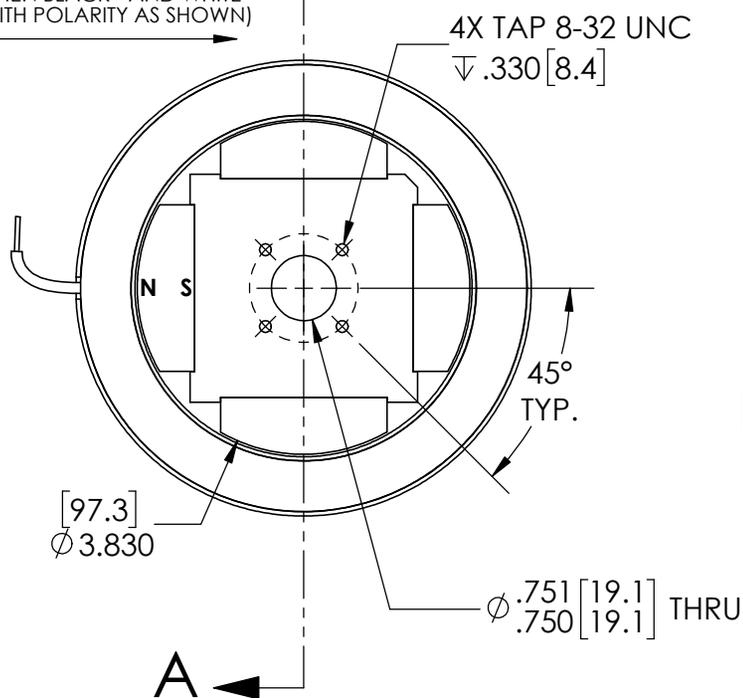


**MOTOR SHOWN AT MIDSTROKE**

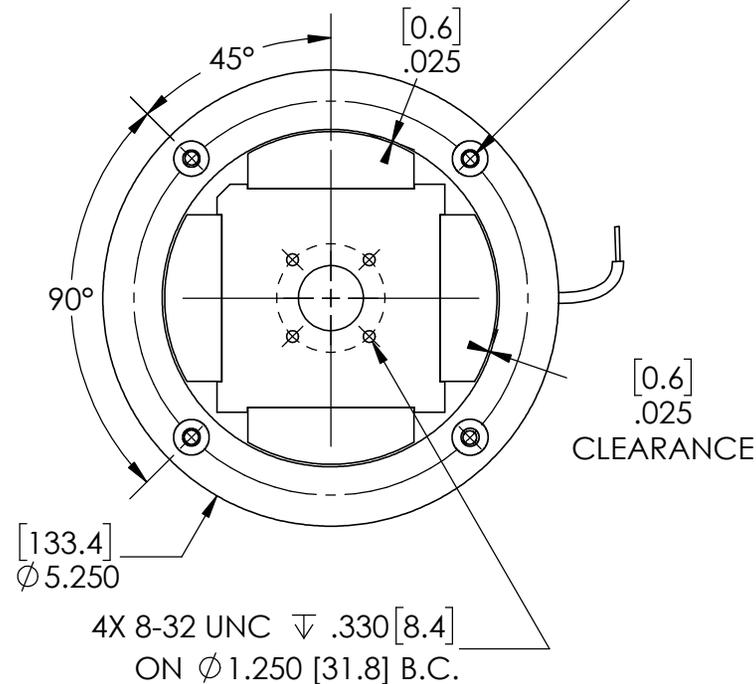
REVISION TABLE					
REV	ECN#	DESCRIPTION	REV BY	APPROVED	DATE
---	---	Original Drawing	JRM	MPW	3-6-14

**MOTION:**  
 ROTOR TURNS CLOCKWISE  
 WHEN BLACK+ AND WHITE-  
 (WITH POLARITY AS SHOWN)



SECTION A-A  
 SCALE 1 : 2.2

4X TAP 10-32 UNF  $\nabla$  .300 [7.6]  
 ON  $\phi$  4.540 [115.3] B.C.



1

2

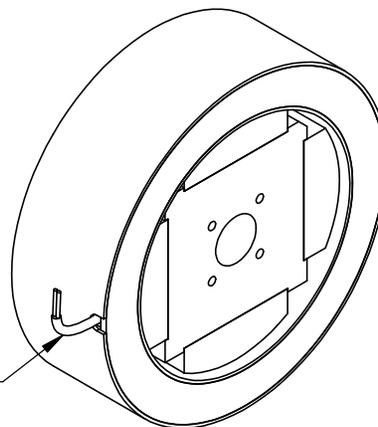
3

4

5

### LIMITED ANGLE TORQUE MOTOR SPECIFICATIONS

Motor P/N	TMR-020-53-270-4-48V	
Device Type	MR	
Stroke	20 degrees	0.35 radians
Radial Clearance	0.025 in	0.64 mm
Housed with Bearings	No	
Rotor Inertia	110.4 oz-in <sup>2</sup>	2.02 E-3 kg-m <sup>2</sup>
Total Mass	6.5 lbs	3.00 kgs
Resistance @ 20C	9.0 ohms	
Inductance @ 20C	5.5 mH	
Electrical Time Constant	0.61 msec	
Motor Constant	60 in-oz/sqrt(watt)	42 N-cm/sqrt(watt)
Torque Constant	180 in-oz/amp	126 N-cm/amp
Back EMF	0.13 V/rpm	1.3 V/rad/sec
Torque @ 100% Duty	380 in-oz	265 N-cm
Power @ 100% Duty	40 watts	
Current @ 100% Duty	2.1 amps	
Torque @ 10% Duty	960 in-oz	795 N-cm
Power @ 10% Duty	360 watts	
Current @ 10% Duty	6.3 amps	



POWER LEADS  
2X CONDUCTOR CABLE  
P/N#: E22(2)SJ FEP



**H2W Technologies, Inc.**  
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UNLESS SPECIFIED OTHERWISE:  
All dimensions are in inches  
Standard Tolerances are as follows  
.XXX ±.005 ANGLES ±.1°  
.XX ±.010 FILLETS .010  
.X ±.020 CORNERS .010  
Remove All Burrs and Sharp Edges

**FOR  
REFERENCE  
ONLY**

MATERIAL

FINISH

TITLE  
Limited Angle Torque Motor Model #:  
**TMR-020-53-270-4-48V**

DWG # **80-0272**

REV ----

DATE 3-6-14

SHEET 2 of 2