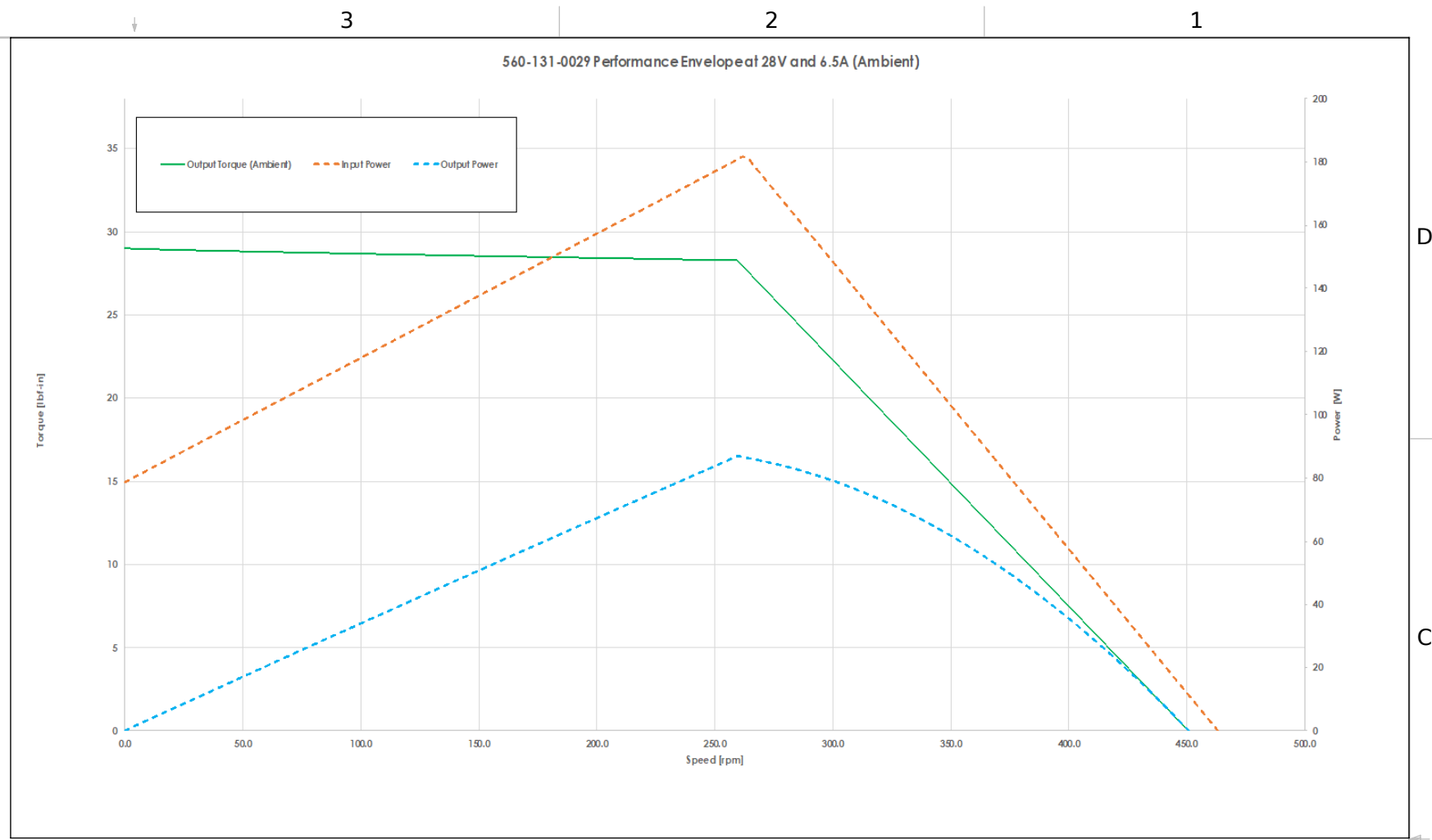
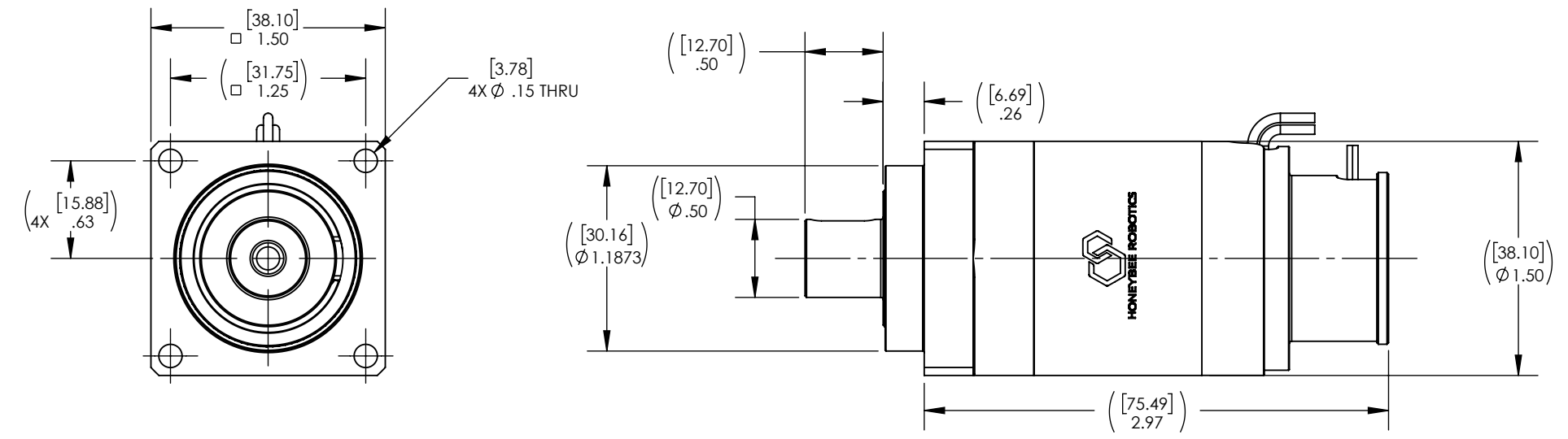
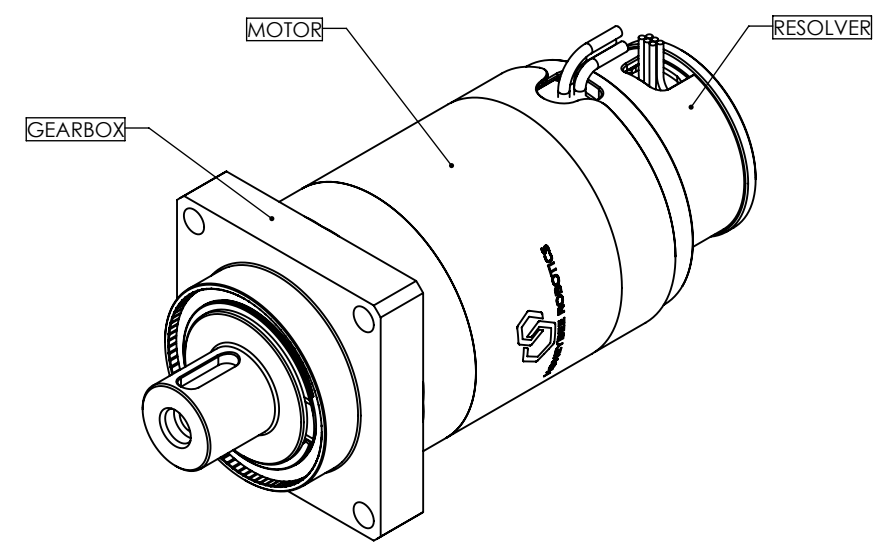


6	5	4
MECHANICAL PARAMETERS		units
FRAME SIZE	-	F
MASS	lbm [kg]	1.1 [0.5]
ROTOR INERTIA	oz-in-sec ² x 10 ⁻³ [g·cm ²]	0.249 [17.6]
OPERATING TEMPERATURE RANGE	°C	-60 TO +200
MOTOR PARAMETERS		
DRIVE TYPE	-	3 PHASE - TRAPEZOIDAL/SINUSOIDAL
NUMBER OF PHASES	-	3
NUMBER OF POLE PAIRS	-	2
REDUNDANCY	-	SIMPLEX
NO LOAD SPEED ¹	RPM	449.3
STALL TORQUE ²	lbf-in [N·m]	29.0 [3.3]
STEADY STATE CURRENT LIMIT ²	A	6.5
BACK EMF CONSTANT ⁴	V _{peak} /rad/sec	0.054
TORQUE CONSTANT ^{4,5}	lbf-in/A _{peak} [N·m/A _{peak}]	0.48 [0.054]
MOTOR CONSTANT ⁴	lbf-in/sqrt(W) [N·m/sqrt(W)]	0.35 [0.039]
RESISTANCE ³	Ohms	1.7 - 2.1
INDUCTANCE ³	mH	0.4 - 0.6
MAXIMUM ALLOWABLE WINDING TEMPERATURE	°C	200
COMMUTATION SENSOR PARAMETERS		
SENSOR TYPE	-	VARIABLE RELUCTANCE RESOLVER
REDUNDANCY	-	SIMPLEX
EXCITATION FREQUENCY	kHz	20
EXCITATION VOLTAGE	V _{rms}	2.2
SINE AND COSINE OUTPUT VOLTAGE	V _{rms}	0.7
TRANSFORMATION RATIO(OUTPUT/INPUT)	-	0.3
ELECTRICAL CYCLES PER MECHANICAL CYCLE	-	2
GEARBOX PARAMETERS		
GEARBOX TYPE	-	PLANETARY
GEAR REDUCTION	-	10.67:1
NUMBER OF STAGES	-	1
TYPICAL MECHANICAL EFFICIENCY	%	90
TYPICAL BACKLASH	DEGREES	1.25



- NOTES:
1. ASSUMING 28 VDC BUS VOLTAGE AT 22°C. CONTACT HBR FOR PERFORMANCE AT OTHER VOLTAGES AND TEMPERATURES.
 2. CURRENT LIMIT AND STALL TORQUE DERATED TO GEARBOX LOAD CAPACITY LIMITS, EEE-INST-0002 OR ELECTROMAGNETIC SATURATION. ACTUAL RMS CURRENT LIMIT AND STALL TORQUE WILL VARY BASED ON DUTY CYCLE AND INTERFACE TEMPERATURES. CONTACT HONEYBEE ROBOTICS FOR MORE INFORMATION.
 3. LINE TO LINE.
 4. AT MOTOR LEVEL.
 5. DERIVED FROM BACK-EMF CONSTANT.
 6. STANDARD OUTPUT SHAFT GEOMETRY. CONTACT HONEYBEE ROBOTICS FOR FURTHER OPTIONS.
 7. STEP FILE ATTACHED TO PDF.



UNLESS OTHERWISE NOTED: DIMENSIONS ARE IN INCHES <small>(CRITICAL DIMENSION)</small>		 HONEYBEE ROBOTICS
<small>ALL FEATURE CONTROL FRAME</small> INTERPRET DRAWING PER ASME Y14.5-2018 LINEAR TOLERANCES: .X ±.05 SURFACE .XX ±.01 ROUGHNESS .XXX ±.005 (XXX) CRITICAL ANGULAR TOLERANCES: ±0.5 DEGREES		
PROJECT TITLE STANDARD PRODUCT DATA SHEETS		REVISION A
PART NUMBER 560-131-0029		
PART DESCRIPTION F-SIZE BLDC (RESOLVER), 3-PHASE, 10.67:1		
CAGE CODE 8DSS5	SHEET SIZE B	SHEET 1 OF 1