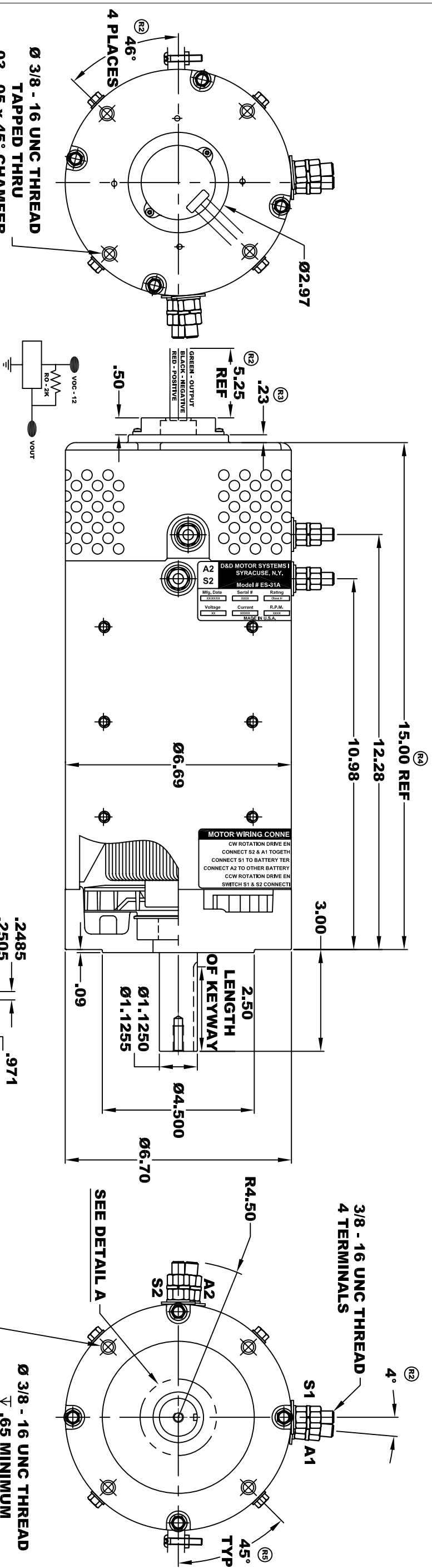


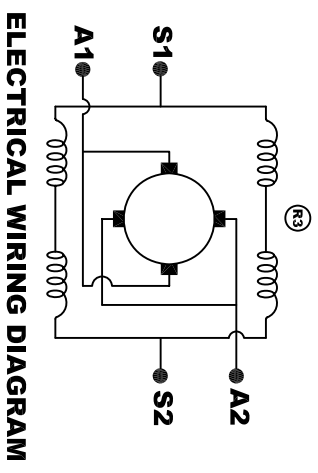
D&D MOTOR SYSTEMS INC.			
SYRACUSE N.Y.			
A2	A1	Model # ES-31A	
S2	S1	Mfg. Date	Serial #
XXXXXX	XXXX	XXXX	XXXX
Voltage	Current	Rating	Duty
XX	XXXX	Class "H"	S2 - XX MIN
		R.P.M.	H.P.
		XXXX	XX
		MADE IN U.S.A.	

**TORQUE SPECIFICATION FOR
POWER CABLE SECURING TOP NUTS
3/8-16 UNC - 140 IN / LBS MAX**



SPEED SENSOR ELECTRICAL SPECIFICATION:
-4.5V TO 24V OPERATING VOLTAGE
-20°C TO 85°C OPERATING TEMPERATURE
-CURRENT SINKING UP TO 25mA
-AN EXTERNAL OUTPUT PULL UP RESISTOR IS REQUIRED
-SENSOR IS DESIGNED TO OPERATE WITH 4 N/S POLEPAIRS
-THE OPERATIONAL DISTANCE BETWEEN THE MAGNET AND THE HOUSING, INCLUDING ANY RUNOUT SHOULD NOT EXCEED .030 INCHES

MOTOR WEIGHT: 83 LBS
CLASS "H" INSULATION
PERFORMANCE SPEC: 16
REVISED VIEW



MOTOR WIRING CONNECTIONS:
CW ROTATION DRIVE END
CONNECT S2 & A1 TOGETHER
CONNECT S1 TO BATTERY TERMINAL
CCW ROTATION DRIVE END
CONNECT A2 TO OTHER BATTERY TERMINAL
SWITCH S1 & S2 CONNECTIONS

THIS PRINT IS THE PROPERTY OF D&D MOTOR SYSTEMS INC.
DO NOT SCALE
WORK TO DIMENSIONS
TOLERANCES UNLESS OTHERWISE SPECIFIED ARE AS FOLLOWS

.XX _____ .01
.XXX _____ .005
.XX ROUGH CASTING _____ .03
HOLES _____ -.001 / +.006
ANGLES _____ 0°30"

D & D MOTOR SYSTEMS INC			
MOTOR OUTLINE			
SIZE	DRAWN DATE	RELEASE DATE	DWG NO. / PART NO.
B	8-4-03		ES-31A
SCALE	DRAWN BY	REV DATE	REV
STF	MJG	6-9-09	R5