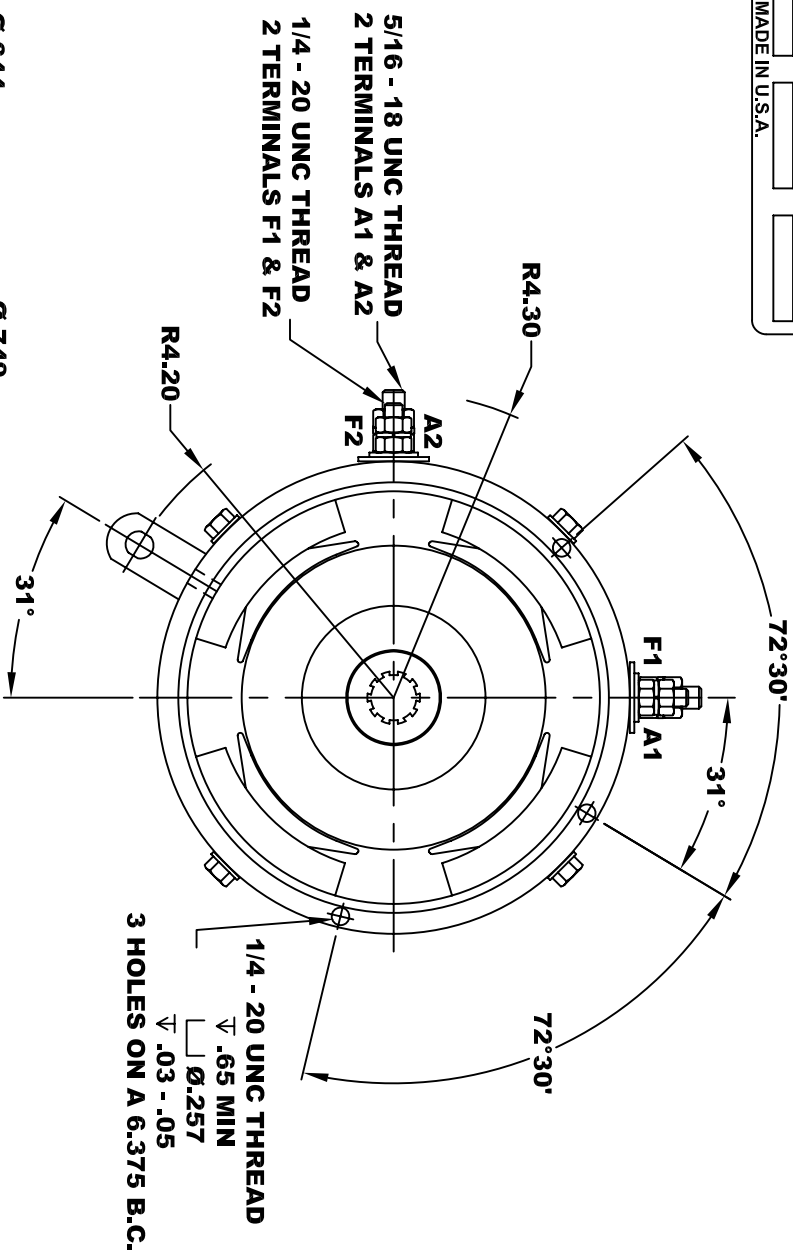
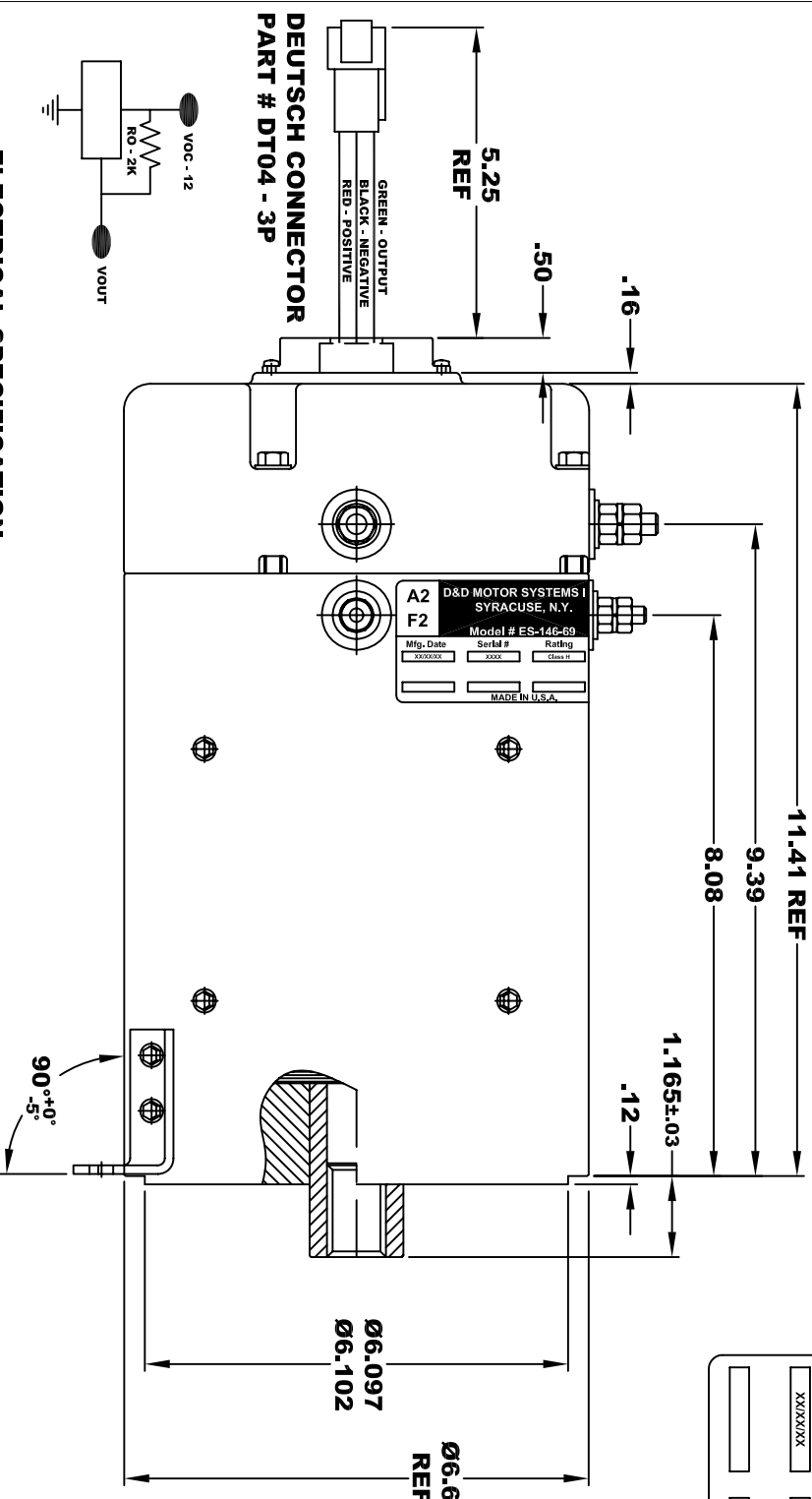
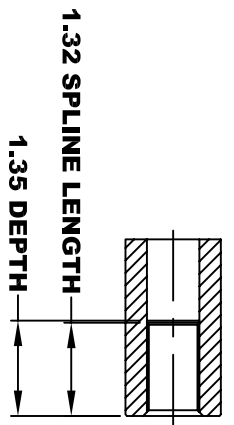


<b>D&amp;D MOTOR SYSTEMS INC.</b>			
SYRACUSE N.Y.			
<b>A2</b>	<b>F2</b>	<b>A1</b>	<b>F1</b>
Model # ES-146-69			
Mfg. Date	Serial #	Rating	Voltage
XXXXXX	XXXX	CLASS -H	36 / 48
MADE IN U.S.A.			

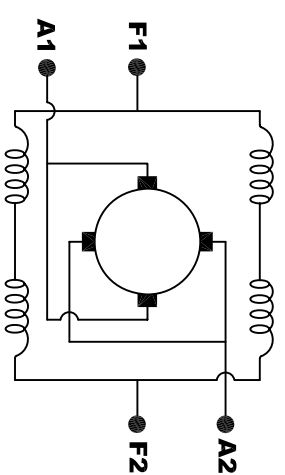
**TORQUE SPECIFICATION FOR  
POWER CABLE SECURING TOP NUTS**  
5/16-18 UNC (A1 / A2) - 110 IN / LBS MAX  
1/4-20 UNC (F1 / F2) - 50 IN / LBS MAX



**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 66 LBS  
CLASS "H" INSULATION  
PERFORMANCE SPEC: 69**



**ELECTRICAL WIRING DIAGRAM**

**MOTOR WIRING CONNECTIONS:**  
**CW ROTATION DRIVE END**  
CONNECT A1 & F1 TO ONE BATTERY TERMINAL  
CONNECT A2 & F2 TO OTHER BATTERY TERMINAL  
**CCW ROTATION DRIVE END**  
SWITCH F1 & F2 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"

<b>D &amp; D MOTOR SYSTEMS INC</b>			
<b>MOTOR OUTLINE</b>			
SIZE	DRAWN DATE	RELEASE DATE	DWG NO. / PART NO.
B	9-17-15		ES-146-69
SCALE	STF	DRAWN BY	MJG
			REV DATE