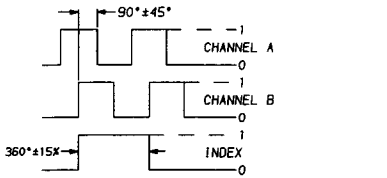


OUTPUT: TTL COMPATIBLE, CCW ROTATION, VIEWED FACING OPTICAL MOUNTING SURFACE.

OPTICAL ENCODER INFORMATION

MECHANICAL:	
MOMENT OF INERTIA	4.5×10^{-5} OZ-IN-SEC^2
RATED SPEED RANGE	RESOLUTION DEPENDENT
FLUTTER	LESS THAN ±1% P-P
ROTATION	CW AND CCW
HUB SIZE	1/2 DIA
ELECTRICAL:	
CODE	QUADRATURE OUTPUT (SEE GRAPH)
PULSES PER REVOLUTION	1000
INPUT POWER	5 VDC ±5% AT 135 mA
DATA RATE	DC TO 100 KHZ
ENVIRONMENTAL:	
OPERATING TEMPERATURE	-10° TO +85° C
STORAGE TEMPERATURE	-30° TO +110° C
HUMIDTY	90% REL. (NO CONDENSATION)

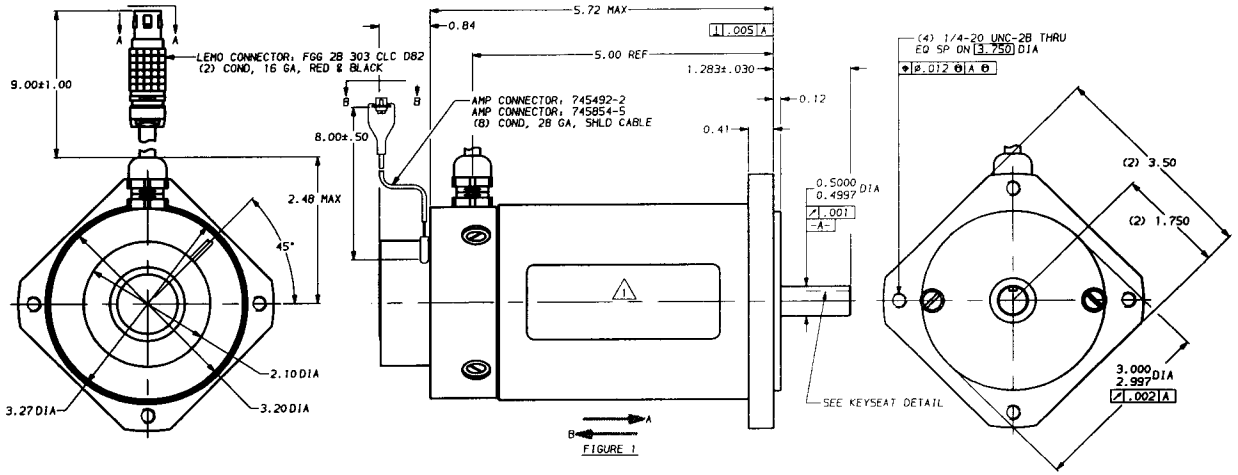
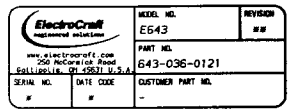


FIGURE 1

* DETERMINED WHEN NAMEPLATE IS PRINTED.
** DENOTES REVISION LEVEL OF ASSEMBLY.



NAMEPLATE DETAIL

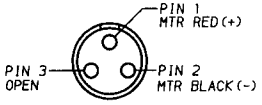
OPTICAL PINOUT		
PIN	COLOR	FUNCTION
1	RED	(+5) V
2	BLACK	GROUND
3	BLUE	CHANNEL B-
4	GREEN	CHANNEL B+
5	WHITE	CHANNEL A+
6	YELLOW	CHANNEL A-
7	ORANGE	INDEX +
8	BROWN	INDEX -
9	SHIELD	

NOTE:

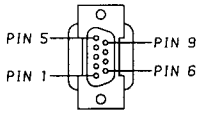
1. NAMEPLATE TO READ LEFT TO RIGHT FROM REAR OF MOTOR.

MOTOR SPECIFICATIONS ARE AT 25°C UNLESS OTHERWISE NOTED

1. MOTOR Kt: 16.8 ± 10% OZ-IN/A.
2. MOTOR Ke: 11.2-13.7 V/KRPM WITHIN 150 mV CW TO CCW.
3. MOTOR TERMINAL RESISTANCE: 0.40-0.54 OHMS AT 4 A.
4. MAXIMUM TERMINAL VOLTAGE: 60 V.
5. MAXIMUM CONTINUOUS SPEED: 4800 RPM (NO LOAD).
6. MAXIMUM PEAK TORQUE: 720 OZ-IN.
7. MAXIMUM PEAK CURRENT: 43 A.
8. MAXIMUM CONTINUOUS STALL TORQUE: 155 OZ-IN.
9. MAXIMUM CONTINUOUS CURRENT: 10.2 A.
10. ELECTRICAL TIME CONSTANT: 1.5 mSEC.
11. MECHANICAL TIME CONSTANT: 4.2 mSEC.
12. MOTOR INDUCTANCE: 0.7 mH.
13. MOTOR INERTIA: 0.030 OZ-IN-SEC^2.
14. STATIC FRICTION TORQUE: 8.0 OZ-IN MAX.
15. ROTATIONAL LOSSES: 2.5 OZ-IN/KRPM.
16. NO LOAD CURRENT AT 40 V: 1.0 A MAX.
17. MAXIMUM WINDING TEMP 155°C.
18. THERMAL RESISTANCE ARMATURE TO AMBIENT: 2.2°C/W, MOUNTED ON A: 12 IN. X 12 IN. X 0.50 IN. HEATSINK.
19. THERMAL STABILITY OF MOTOR TORQUE CONSTANT: -0.2%/°C.
20. DIELECTRIC BREAKDOWN OF MOTOR ARMATURE TO GROUND: 600 V AT 60 Hz FOR 1 SECOND.
21. SHAFT END PLAY (SEE FIGURE 1): 0.010 IN. MAX IN DIRECTION "A" WITH A 10 LB LOAD. 0.001 IN. MAX IN DIRECTION "B" WITH A 10 LB LOAD.
22. MOTOR WEIGHT 10 LBS.



VIEW "A-A"
MOTOR



VIEW "B-B"
OPTICAL

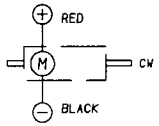
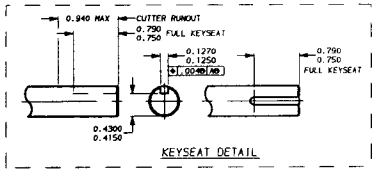


FIGURE 2



KEYSEAT DETAIL

REV	ECO No.	DATE
H	62147	7-24-03
G	59436	8-19-99
F	57515	1-7-98
E	56832	5-23-97
D	53137	6-16-95
C	53003	5-17-95
B	52772	3-23-95
A	52468	1-18-95

DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED	DWN BY	DATE	SCALE	TYPE	CONFIDENTIAL INFORMATION OF DOCUMENT APPLICATION INCORPORATED GALLIPOLIS, OHIO 45631
UNTOLERANCED DIMENSIONS REFERENCE	RBV	1-18-95	1:1	DC	
INCHES	CHK BY	DATE	DWG.SIZE	SERIES	
THIRD ANGLE PROJECTION	JV	1-18-95	D	643	
	CUSTOMER MINARIK ELECTRIC				
	CUSTOMER PART NO. & REVISION				

ElectroCraft engineered solutions

OUTLINE

DWG. No. ES643-036-0121