

PERFORMANCE SPECIFICATION

PRODUCT TITLE: DC BRUSHLESS FAN

MODEL NO: DC7015

1? SCOPE:

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE DC BRUSHLESS AXIAL FLOW FAN. THE FAN MOTOR IS WITH TWO PHASES AND FOUR POLES.

2? ELECTRICAL CHARACTERISTICS:

ALL MEASUREMENTS PERFORMED AT 20-30? ROOM TEMPERATURE & 50-70% R.H. UNLESS OTHERWISE SPECIFIED.

ITEM	DESCRIPTION	UNIT	SYMBOL	SPEC.	CONDITION
1	RATED VOLTAGE	VOLTS	V	12	
2	OPERATION VOLTAGE	VOLTS	V	10.2~13.8	
3	INPUT CURRENT	AMP	A	0.37MAX	AT RATED VOLTAGE
4	INPUT POWER	WATTS	W	4.44MAX	AT RATED VOLTAGE
5	ROTATION SPEED	RPM	RPM	4500 ±10?	AT RATED VOLTAGE FREE AIR
6	ACOUSTICAL NOISE (AVG)	dB(A)	dB(A)	42 ±10%	DETAILS SEE ATTACHED PAGE.
7	MAX. AIR -FLOW	CFM	Q	37 ±10?	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
8	MAX. AIR -PRESSURE	mmH ₂ O	P	6.16 ±10?	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
9	STARTING VOLTAGE	VOLTS	V	7	AT RATED VOLTAGE
10	INSULATION RESISTANCE	MEG. OHM	MO	10MO MIN. AT 500V DC	BETWEEN FRAME AND (+)LEAD WIRE.
11	DIELECTRIC STRENGTH	MILLI-AMP	mA	5mA MAX. AT 500V AC 60Hz. FOR 1 MINUTE	BETWEEN FRAME AND (+)LEAD WIRE.

ITEM	DESCRIPTION	SPEC.	
12	ROTATION	CW VIEW FROM NAME PLATE SIDE	
13	AIR-FLOW DIRECTION	AIR INTAKE OVER THE STRUTS	
14	INSULATION RANK	UL: CLASS A	
15	LIFE EXPECTANCY	50000 HOURS CONTINUOUS	?
16	OUTPUT SIGNAL	FREQUENCY GENERATOR	SEE SECTION 9

? LIFE IS DEFINED AS THE TIME MOTOR SPEED DECREASED MORE THAN 30% COMPARED WITH INITIAL VALUE.

3? MECHANICAL

- 3-1. DIMENSIONS ----- SEE SECTION 8
- 3-2. FRAME----- PLASTIC PBT UL: 94V-0 RATING + FIBRE GLASS.
- 3-3. FAN BLADE ----- PLASTIC PBT UL: 94V-0 RATING + FIBRE GLASS.
- 3-4. BEARING SYSTEM ----- BALL BEARING
- 3-5. WEIGHT ----- 51 GRAMS
- 3-6. LEAD WIRE ----- 1007 AWG # 26
 - + POSITIVERED
 - NEGATIVEBLACK
 - SENSOR OUTPUT..... YELLOW (3 rd WIRE)

4? ENVIRONMENTAL:

- 4-1. OPERATING TEMPERATURE----- -10 TO +70?
- 4-2. STORAGE TEMPERATURE----- -40 TO +75?
- 4-3. DROP TEST
 - IN MINIMUM PACKAGING CONDITION FAN WITHSTANDS EACH ONE DROP OF THREE FACES FROM 30CM DISTANCE HEIGHT ONTO 10mm THICKNESS OF WOODEN BOARD.
- 4-4. VIBRATION TEST
 - FREQUENCY: 10- 55Hz AMPLITUDE: 4MM
 - X , Y , Z DIRECTION EACH FOR 1 HR.

4-5. SHOCK TEST

APPLY PEAK ACCELERATION 50g AND KEEP DURATION OF THE PULSE FOR 11ms (HALF SINE WAVE) .

5? PROTECTION:

5-1. POLARITY PROTECTION

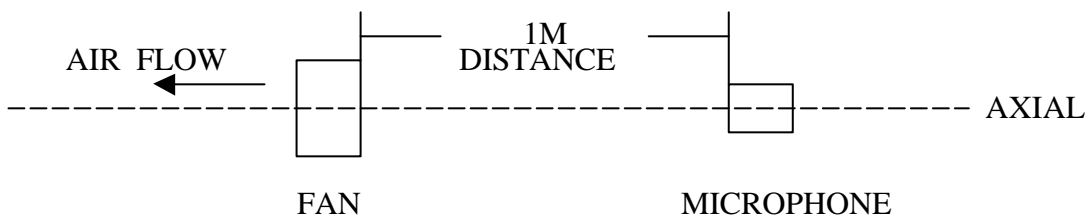
BUILT-IN ELECTRONIC CIRCUIT PROTECTS THE FAN AGAINST REVERSE CONNECTION OF POSITIVE AND REVERSES LEADS.

5-2. LOCKED ROTOR PROTECTION

THE CURRENT SHUT-DOWN CHARACTER PROVIDE A MINIMUM 72Hrs SAFETY PROTECTION FOR FAN MOTOR WHILE LOCKED ROTOR OCCURED.

6? ACOUSTICAL NOISE:

6-1. MEASUREMENT SET-UP



6-2. MEASUREMENT PERFORMED IN ANECHOIC TEST CHAMBER UNDER FREE AIR CONDITION.

6-3. CHAMBER BACKGROUND NOISE 17dB MAX.

6-4. READING TAKEN FROM SPECTRUM ANALYZER.

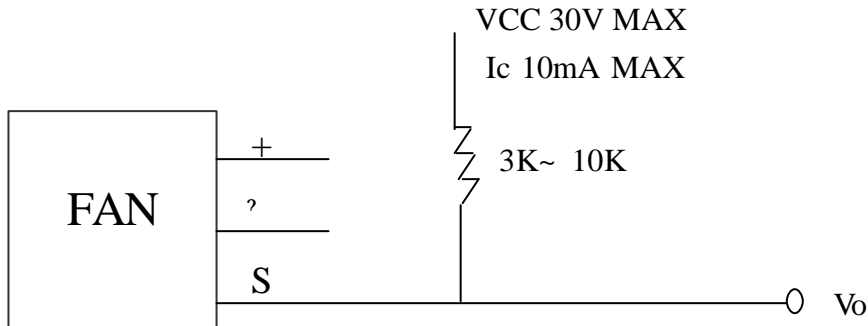
6-5. NOISE DISTRIBUTION CURVE SEE ATTACHED PAGE.

7? STATICS PRESSURE VS AIR FLOW CURVE:

MEASURED PER TWO CHAMBER METHOD.

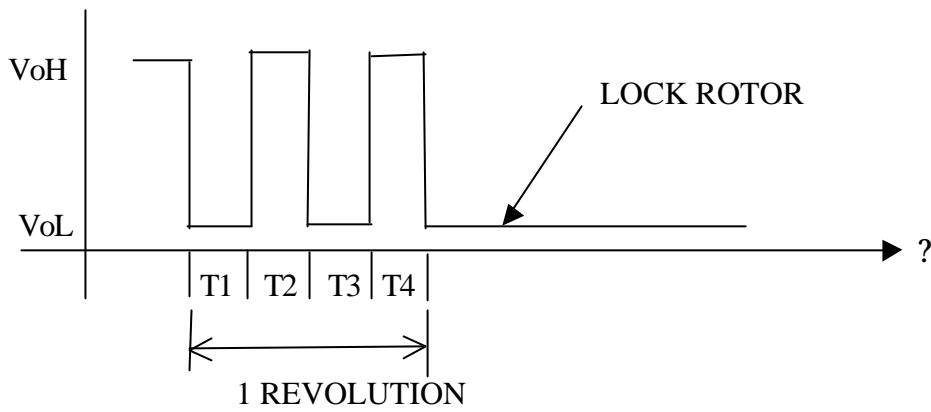
DATA-CURVE SEE ATTACHED PAGE.

8? OUTPUT SIGNAL: AT RATED VOLTAGE



FG SIGNAL

ROTOR LOCKED



$$T = T1 + T2 + T3 + T4$$

$$= 1 \text{ REVOLUTION}$$

$$T1 = T2 = T3 = T4$$