

PERFORMANCE SPECIFICATION

PRODUCT TITLE: DC BRUSHLESS FAN

MODEL NO: DC4010

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 | 0.13MAX | AT RATED VOLTAGE |
| 4 | INPUT POWER | WATTS | W | 1.56 MAX | AT RATED VOLTAGE |
| 5 | ROTATION SPEED | RPM | RPM | 6500±10? | AT RATED VOLTAGE FREE AIR |
| 6 | ACOUSTICAL NOISE (AVG) | dB(A) | dB(A) | 29±10% | DETAILS SEE ATTACHED PAGE. |
| 7 | MAX. AIR -FLOW | CFM | Q | 7.7±10? | TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE. |
| 8 | MAX. AIR -PRESSURE | mmH ₂ O | P | 2.4±10? | TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE. |
| 9 | STARTING VOLTAGE | VOLTS | V | 8 | AT RATED VOLTAGE |
| 10 | INSULATION RESISTANCE | MEG. OHM | MO | 10MO MIN. AT 500V DC | BETWEEN FRAME AND (+)LEADWIRE . |
| 11 | DIELECTRIC STRENGTH | MILLI-AMP | mA | 5mA MAX. AT 500V AC 60Hz. FOR 1 MINUTE | BETWEEN FRAME AND (+)LEADWIRE . |

| 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 | ? |
| | | | |

? 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 ----- 18 GRAMS
- 3-6. LEAD WIRE ----- 1095 AWG # 28
 - + POSITIVERED
 - NEGATIVEBLACK

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

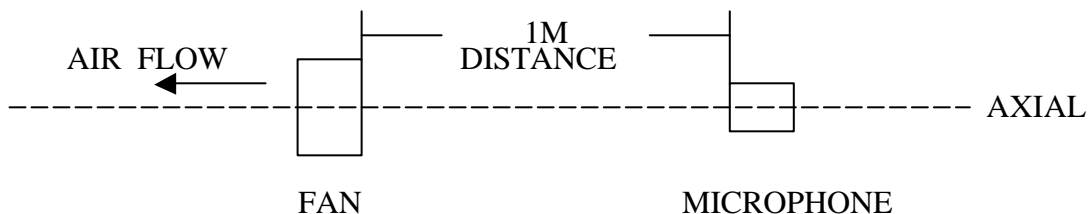
BUILT-IN ELECTRONIC CIRCUIT PROTECTS THE FAN AGAINST REVERSE CONNECTION OF POSITIVE AND REVERSE LEADS.

5-2. LOCKED ROTOR PROTECTION

IMPEDANCE OF MOTOR COIL WINDING PROTECTS MOTOR FROM FLAMING IN THE CONDITION OF 72 Hrs LOCKED ROTOR AT RATED VOLTAGE.

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.