



Specification For Approval

CUSTOMER : _____
DESCRIPTION : _____ Heater 1000 W _____
CUSTOMER PART NO. : _____ REV. : _____
DELTA MODEL NO. : _____ HEH100BA _____ REV. : 06 _____
SAMPLE ISSUE NO. : _____
SAMPLE ISSUE DATE : _____ Sep.18 2015 _____

Please send one copy of this specification back after you signed approval for production pre-arrangement

Approved by : _____

Date : _____

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*** SAMPLE HISTORY***

CUSTOMER: __STD__

CUSTOMER P/N:

DELTA MODEL : HEH100BA

REV.	DESCRIPTION	DRAWN	CHECKED			APPROVED	ISSUE DATE
			ME	EE	CE		
0	Issue spec.	李武奇 4/27'12	李武奇 4/27'12	涂雅森 4/27'12	-----	陳英琦 4/27'12	4/27'12
1	Modify outside dimension & Function description	李武奇 9/03'12	李武奇 9/03'12	涂雅森 9/03'12	----	陳英琦 9/03'12	9/03'12
2	Add earth mark on 1-3-1 drawing.Delete External sensor connector & Correct Alarm contact rating on 2-1.	李武奇 11/01'13	李武奇 11/01'13	涂雅森 11/01'13	----	陳英琦 11/01'13	11/04'13
3	Add CUL certificate number on 5-1	李武奇 05/08'14	李武奇 05/08'14	涂雅森 05/08'14	----	陳英琦 05/08'14	05/08'14
4	Add Defination of MTBF and Protection rating	王慶順 08/13'15	王慶順 08/13'15	涂雅森 08/13'15	----	陳英琦 08/13'15	08/17'15
5	Modify the operating voltage to wide range	李武奇 09/03'15	李武奇 09/03'15	涂雅森 09/03'15	----	陳英琦 09/03'15	09/03'15
6	Modify the operating voltage range	李武奇 09/18'15	李武奇 09/18'15	涂雅森 09/18'15	----	陳英琦 09/18'15	09/18'15

PART NO :

DELTA HEATER MODEL : HEH100BA

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PART NO :

DELTA HEATER MODEL : HEH100BA

Specification for approval

Customer :

Description : 1000W 180-240VAC 50/60Hz Heater

Customer p/n :

rev. : 00

Delta model no. : HEH100BA

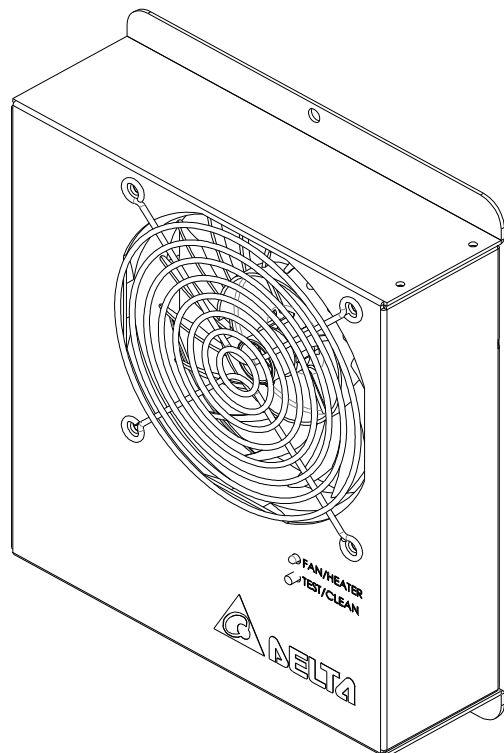
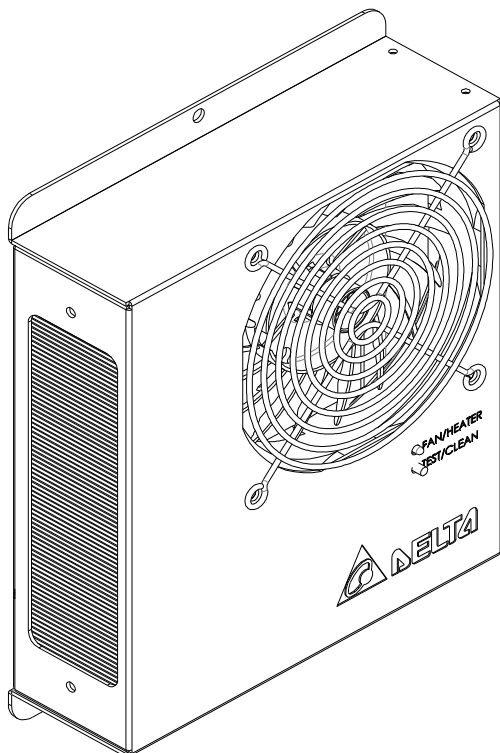
rev. : 06

Sample rev.:

issue no. :

Sample issue date :

quantity : sets



PART NO :

DELTA HEATER MODEL : HEH100BA

1. Description

1-1 General description :

The heater is designed for warming up air in the cabinet. It heat air to avoid equipment damaged from over-cool air. The heater can be mounted on the wall of cabinet.

1-2 Main feature & model number

Main feature	Unit	Model number
		HEH100BA
Outline dimensions	mm	235 h x 185 w x 58 d
Weight	kg	1.5 ± 0.5
Warming capacity	W	1000 ±10% @20°C
Airflow rate	CFM	67(TYP)
Rated voltage	Vac	220. (typ.)
Operating voltage range	Vac	180-240
Current (continuous)	A	5 @240 Vac
Controller		Built-in
Operating status		Led indicator
Fan /Heater fail alarm		Dry contact output
Acoustic noise at 1M : (Sound pressure)	dB-A	65.0 (typ.)
Mounting location		Internal wall

*Note 1: The heating capacity (w) is defined as power consumption.

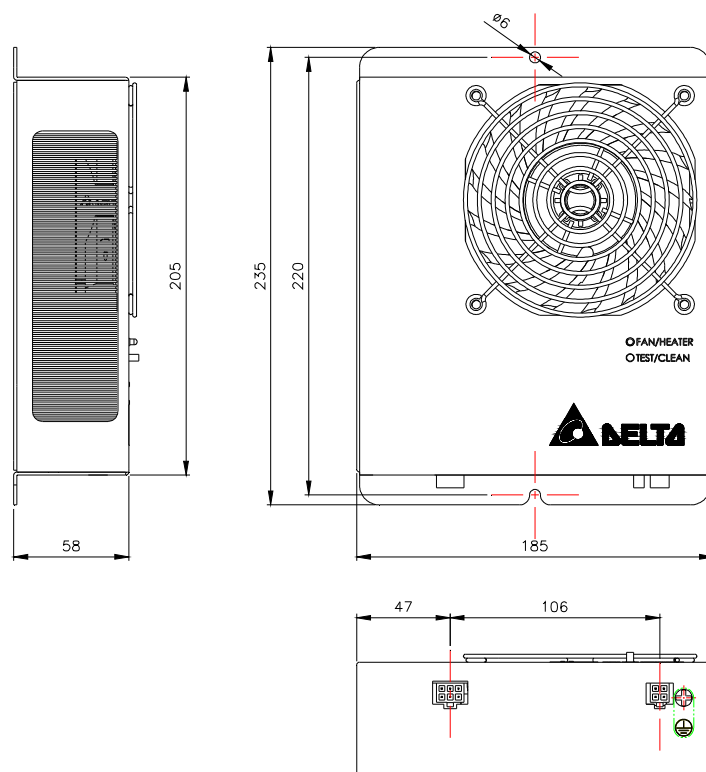
*Note 2: The variation of current is depended on ambient temperature.

PART NO :

DELTA HEATER MODEL : HEH100BA

1-3 Dimension

1-3-1 Drawing



(1) Material: case aluminum sheet

(2) Finish: RAL 7032

(3) Dimensional tolerance:

Decimal

X : ± 1 mm

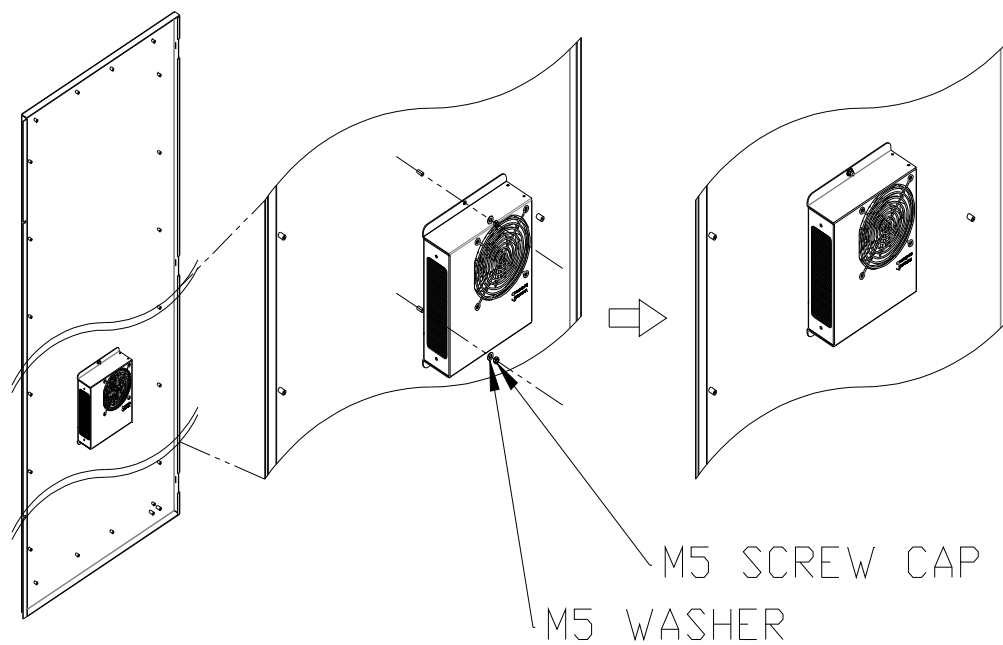
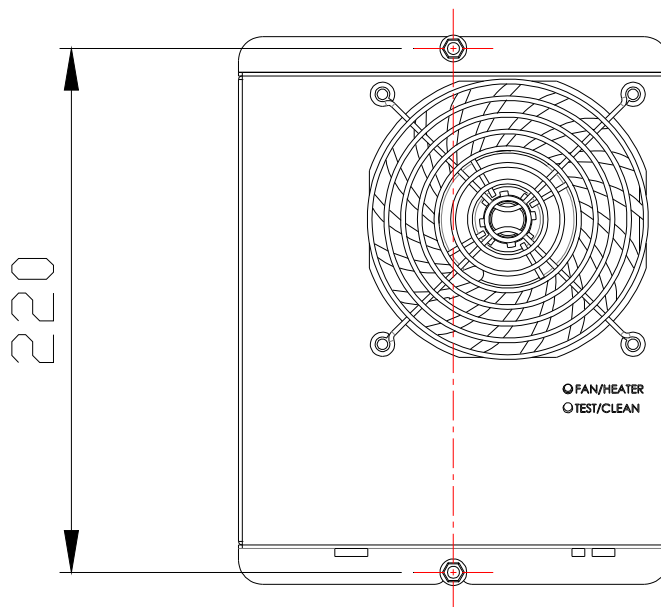
X.X : ± 0.3 mm

PART NO :

DELTA HEATER MODEL : HEH100BA

1-3-2 Mounting type

Wall mount

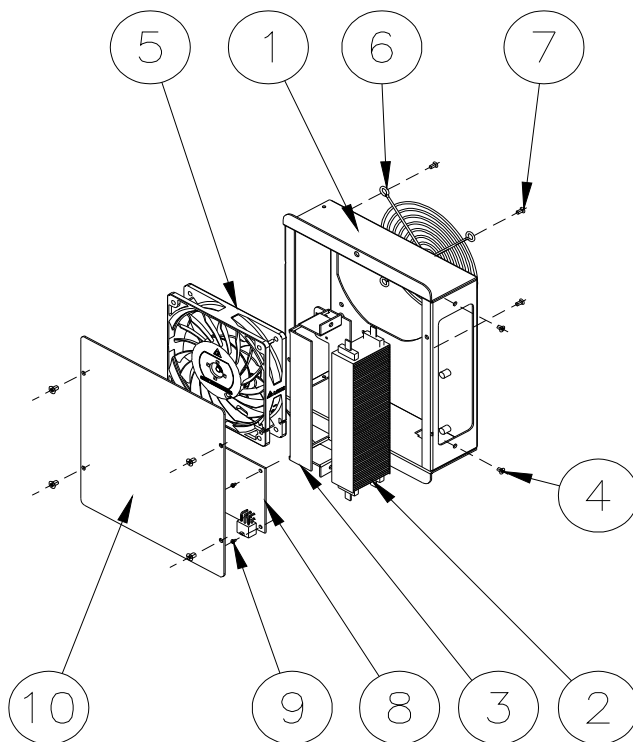


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DELTA HEATER MODEL : HEH100BA

1-4 Configuration & Maintenance

HEH100BA is designed to be maintained from the inside cabinet. Take Off the back cover, then it is easy to replace the fan , PTC Heater & control board.



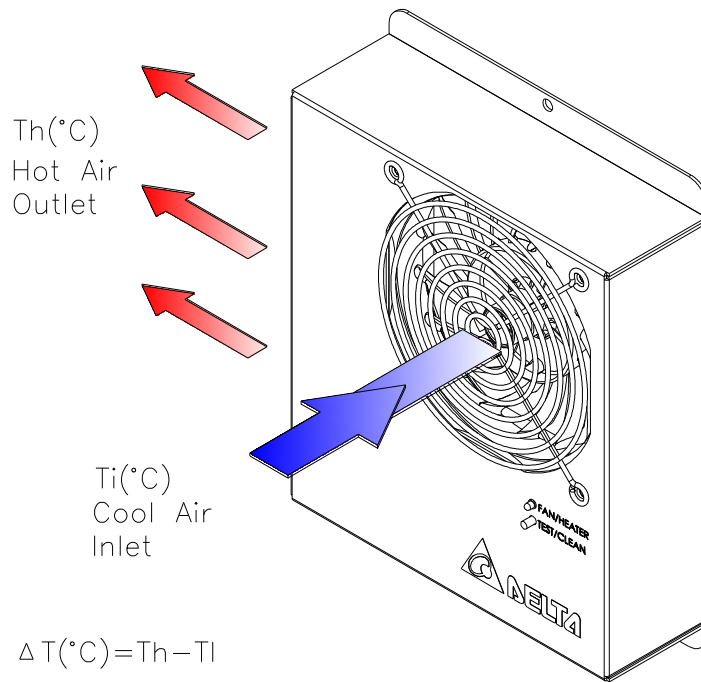
NO.	Q'TY	Description
1	1	Case
2	1	Heater
3	1	Bracket
4	6	Mount screw(M4)
5	1	DC fan
6	1	Fan guard
7	4	Mount screw
8	1	Control board
9	7	Mount screw(M3)
10	1	Back cover

PART NO :

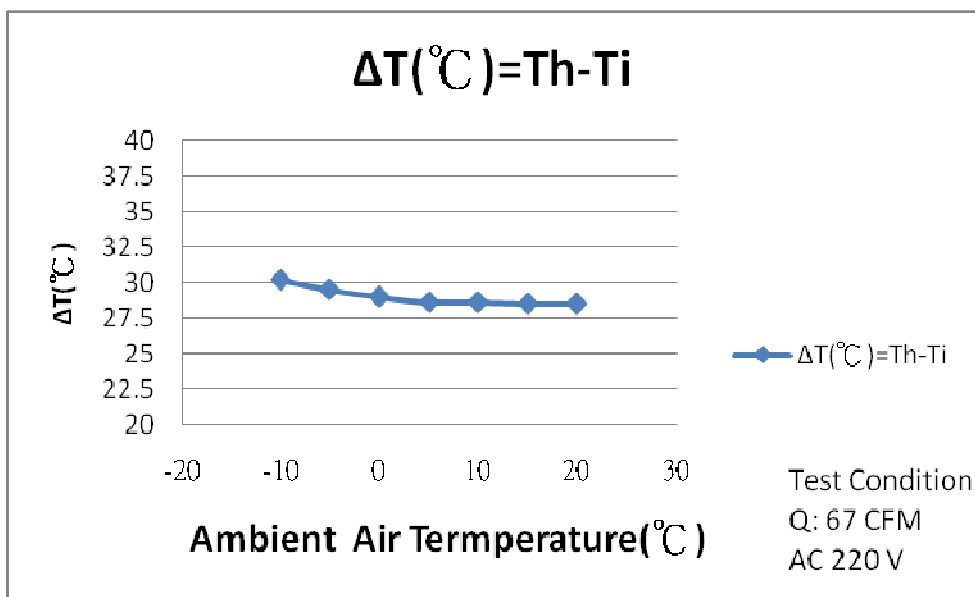
DELTA HEATER MODEL : HEH100BA

1-5. Thermal path & airflow baffle

The air fuel with the active fans in the system, The cool air flow into the front surface of heater , The cool air will be warm by PTC in the heater unit, then the warm air flow into the system.



3D VIEW



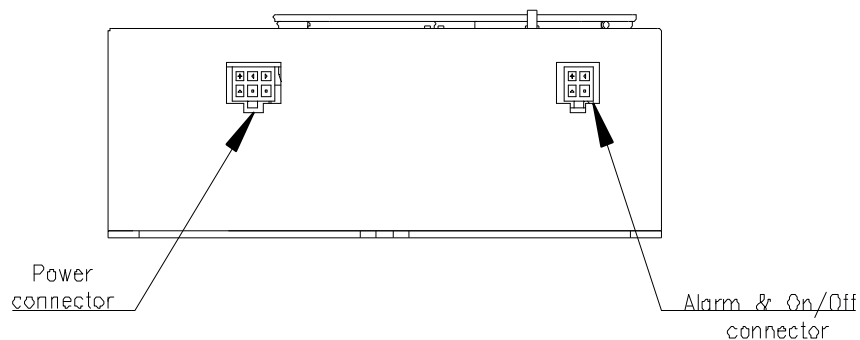
PART NO :

DELTA HEATER MODEL : HEH100BA

2. Electrical specifications

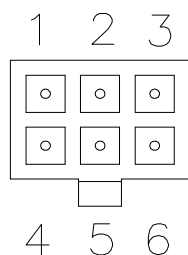
2-1. Indicators & connector

The HEH100BA have an interface to back plane and it can be connected and disconnected flexibly. The interface is composed of power connectors, signal connector, and alarm output,



JWT P/N C4201WR0-6PNL

Mate with JWT C4202H00-2*3P or Equivalent.



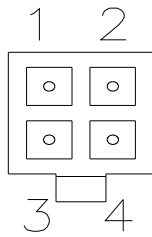
Power connector	
Pin	Function
1	N(AC 220V)
2	
3	L(AC 220V)
4	N(AC 220V)
5	
6	L(AC 220V)

Signal connector: JWT P/N C4201WR0-4PNL

Mate with JWT C4202H00-2*2P or Equivalent.

PART NO :

DELTA HEATER MODEL : HEH100BA



Power connector	
Pin	Function
1	Alarm contact
2	ON/OFF control
3	Alarm contact
4	ON/OFF control

Alarm logic (N.C)

- Fan & Heater normal:
 - Pin 1 and pin 3 dry contact close
 - FAN or Heater Failed:
 - Pin 1 and pin 3 dry contact open
 - Internal sensor failed
 - Pin 1 and pin 3 dry contact open
 - Over heating (case part above 50° C)
 - Pin 1 and pin 3 dry contact open
- Alarm contact ----- Max. (± 60VDC ,100mA)

Switch "TEST"

When pressing the "TEST/CLEAN" button, LED will blink and HEH100BA will run heat function automatically about two minutes. It can be off by pressing the test button again.

- LED "FAN/HEATER"
 - (Dark) : Heater off ○ FAN/HEATER
 - (Green) : Heater on ○ TEST/CLEAN
 - (Red) : Fan ,heater or over heating failed
 - (Blink Green) : Fan normal in test process
 - (Blink Red) : Failed in test process or sensor failed

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DELTA HEATER MODEL : HEH100BA

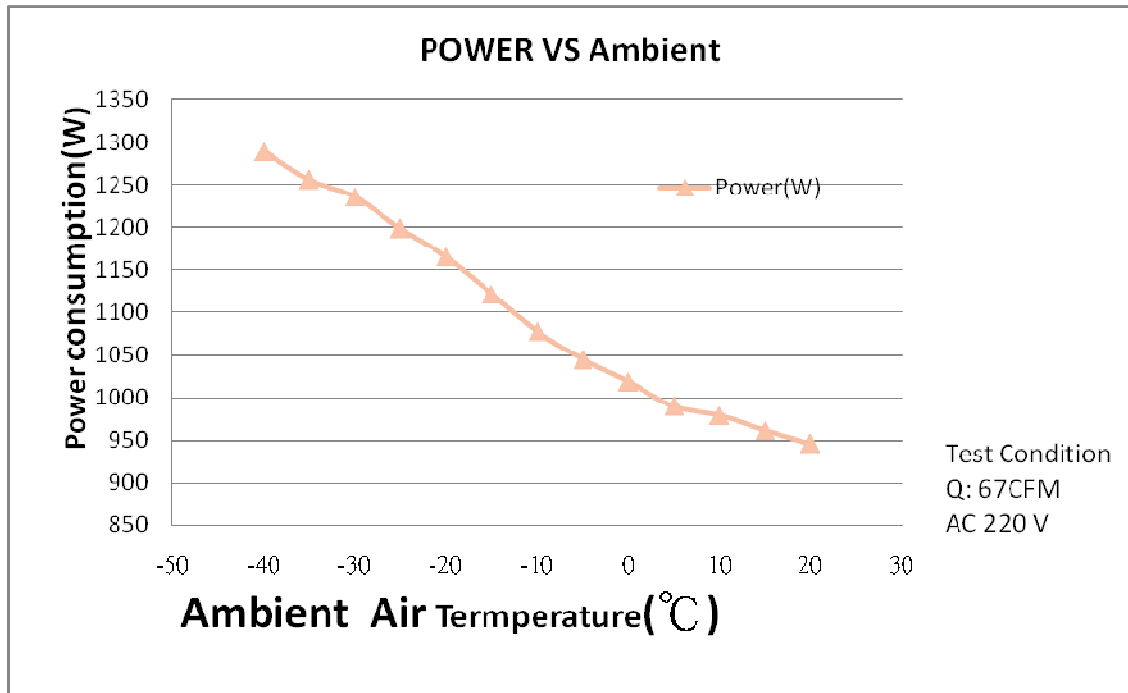
2-2. AC power supply

HEH100BA was designed for AC 220V power supply in accordance with the following parameters:

Input Voltage Range: AC 180-240V

Nominal Voltage: AC 220V

Power Consumption:



2-3. Control mode

User can control HEH100BA heat function by ON/OFF control pin2 & pin4 open or close

	ON/OFF control pin2 &4	HEH100BA
Switch module control	CLOSE (<100ohm)	Heater function ON
	OPEN(>100Kohm)	Heater function OFF

User should connect to a switch to control HEH100BA work status without electric input.

2-4. Over Heat Protection

HEH100BA have internal sensor to monitor temperature. When temperature on the surface of heater case rise above 50°C , the controller will shut off the AC Heater power .If the fan lock or internal sensor failed, HEH100BA will shut off the heater immediately, and LED will indicate the HEH100BA status.

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DELTA HEATER MODEL : HEH100BA

3. Environmental conditions

3-1. Operating temperature :

-40°C ~ +75°C (-40°F ~ 167°F)

3-2. Storage temperature :

-40°C ~ +75°C (-40°F ~ 167°F)

3-3. Humidity

5 ~ 90% RH, Non-condensing

3-4. Protection rating

IP20(IEC60529)

3-5. MTBF

The L10 Fan life is expected to be at least 80,000 hours continuous operation at 40°C with 15 ~ 65%RH .@ label rated vol tage.

4. Reliability table

Test item	Condition
High temp	IEC 60068-2-2
Low temp	IEC 60068-2-1
Temperature cycle	IEC 60068-2-3
Vibration	ETSI 300 019-1-4 CLASS 4.1
Package bump	IEC 60068-2-29

5. Certified safety

5-1. UL ,CUL : Certificate number E358666





Application Notice

- 1. Delta will not guarantee the performance of the products if the application condition falls outside the parameters set forth in the specification.**
- 2. A written request should be submitted to Delta prior to approval if deviation from this specification is required.**
- 3. Please exercise caution when handling fans. Damage may be caused when pressure is applied to the impeller, if the fans are handled by the lead wires, or if the fan was hard-dropped to the production floor.**
- 4. Except as pertains to some special designs, there is no guarantee that the products will be free from any such safety problems or failures as caused by the introduction of powder, droplets of water or encroachment of insect into the hub.**
- 5. The above-mentioned conditions are representative of some unique examples and viewed as the first point of reference prior to all other information.**
- 6. It is very important to establish the correct polarity before connecting the fan to the power source. Positive (+) and Negative (-). Damage may be caused to the fans if connection is with reverse polarity, if there is no foolproof method to protect against such error specifically mentioned in this spec.**
- 7. Delta fans without special protection are not suitable where any corrosive fluids are introduced to their environment.**
- 8. Please ensure all fans are stored according to the storage temperature limits specified. Do not store fans in a high humidity environment. We highly recommend performance testing is conducted before shipping, if the fans have been stored over 6 months.**
- 9. Not all fans are provided with the Lock Rotor Protection feature. If you impair the rotation of the impeller for the fans that do not have this function, the performance of those fans will lead to failure.**
- 10. Please be cautious when mounting the fan. Incorrect mounting of fans may cause excess resonance, vibration and subsequent noise.**
- 11. It is important to consider safety when testing the fans. A suitable fan guard should be fitted to the fan to guard against any potential for personal injury.**
- 12. Except where specifically stated, all tests are carried out at room (ambient) temperature and relative humidity conditions of 25°C, 65% RH. The test value is only for fan performance itself.**
- 13. Be certain to connect an “ 4.7 μ F or greater” capacitor to the fan externally when the application calls for using multiple fans in parallel, to avoid any unstable power.**