



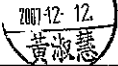


# SPECIFICATION FOR APPROVAL

TO : \_\_\_\_\_

REF. No. \_\_\_\_\_

<b>APPROVED DATE</b> 	<b>CHECKED DATE</b> 	<b>PREPARED DATE</b> 	 
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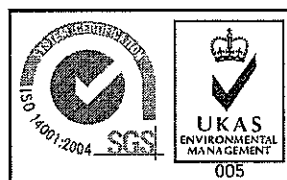
MODEL No. AQ0912HB-A70GL P.S. \_\_\_\_\_

DESCRIPTION: DC FAN (RoHS) REV. A

ID No. \_\_\_\_\_

THIS OFFER IS MADE ACCORDING TO YOUR CURRENT INQUIRY.  
UNLESS OTHERWISE REVISED, THIS SPECIFICATION WILL BE FINAL FOR  
ALL FUTURE PRODUCTION OF ORDERS FROM YOUR RESPECTED COMPANY

KINDLY STUDY IN DETAILS AND RETURN TO US THE DUPLICATE DULY  
SIGNED AS YOUR CONFIRMATION OF SAME.



ADDA CORP.  
REGISTERED TO ISO 9001  
ISO/TS 16949  
CERTIFICATE NO. A8035



**ADDA CORPORATION**

## D A T A - S H E E T

Engineering

BRUSHLESS AXIAL COOLING FANS.

Printed on: 07/12/12

Customer	:		Ref: (RoHS)
ADDA Model No.	:	AQ0912HB-A70GL	
Samples attached	:	piece(s)	
Safety Approval	:	CE	
Specifications			
=====			
ITEM		SPECIFICATION / CONDITION	
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DIMENSIONS	:	92x92x25	MM
BEARING TYPE	:	BALL	
RATED VOLTAGE	:	12.0	VDC
OPERATING VOLTAGE RANGE	:	10.8 VDC - 13.2	VDC
START-UP VOLTAGE	:	7.0	VDC, NOMINAL
RATED CURRENT	:	0.250	Amp. + 10% MAX
RATED POWER	:	3.00	Watt.
RATED SPEED	:	2900	RPM $\pm$ 10%
AIR FLOW	:	52.5	CFM
STATIC AIR PRESSURE	:	0.133	Inch Water
NOISE LEVEL	:	35.0	dB/A
MOTOR PROTECTION	:	BY IMPEDANCE	
CONNECTION LEAD TYPE	:	WIRE	,AWG#24
LIFE EXPECTANCY	:	70000	Hours at 40°C / 65%
NET WEIGHT	:	101	Gram.
PACKING	:	180 pcs.	per Export Carton
Unless otherwise stated, the relative humidity is 65%, and the temperature is 40°C for the standard testing.			
Should you have any doubt, please refer to the environmental conditions specified in the acknowledgement document.			
ADDA CORPORATION	Model No.: AQ0912HB-A70GL		Page 1/4



## SPECIFICATION

### 1.0 SCOPE

This documentation defines the mechanical & electrical Characteristics of DC Brushless Fans.

### 2.0 MATERIAL

- 2.1 Housing : UL94V-0 Glass Filled polyester (P.B.T)
- 2.2 Fan Blade : UL94V-0 Glass Filled polyester (P.B.T)
- 2.3 Bearing Sys. : ( ) Sleeve, oil impregnated.  
(V) Two Ball Bearing  
( ) One Ball one Sleeve  
( ) Hypro Bearing  
( ) FDB Bearing
- 2.4 RoHS : (V) YES

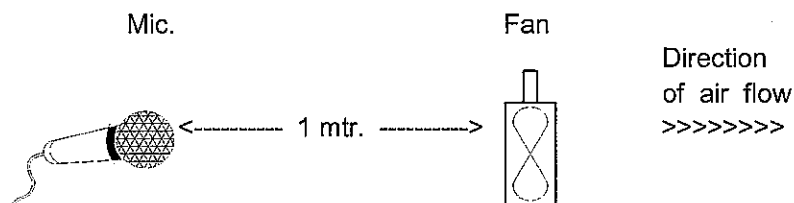
### 3.0 DIMENSIONS & CONSTRUCTION

All dimensions, Direction of rotation and air flow were specified as per drawing attached.

### 4.0 CHARACTERISTICS & DEFINITION

- 4.1 All rated characteristics were specified as per data sheet enclosed.
- 4.2 Rated Current : Rated Current shall be measured after 3 minutes of continuous rotation at rated voltage.
- 4.3 Rated Speed : Rated Speed shall be measured after 3 minutes of continuous rotation at rated voltage.
- 4.4 Start Voltage : The voltage which is able to start the fan to operate by suddenly switching 'ON'.
- 4.5 Input Power : Input Power shall be measured after 3 minutes of continuous rotation at rated voltage.
- 4.6 Locked Rotor Current : Locked current shall be measured within one minute of rotor locked, after 3 minutes of continuous rotation at rated voltage in clean air.
- 4.7 Air Flow & Static Pressure : The air flow data and static pressures should be determined in accordance with AMCA standard or DIN24163 specification in a doublechamber testing with intake – side measurement.
- 4.8 Noise Level : The measurement of noise level is carried out with reference to CNS8753 in an anechoic chamber with the microphone positioned 1 meter from the air intake. Testing fan shall be hung in clean air.

#### NOISE LEVEL MEASUREMENT



- 4.9 Protection Degree : IP 55 in accordance to IEC529 standard
- Dust Tight : The fan is protected from total touch protection and no harmful ingress of dust.
- Protected Against Powerful Water Jets : The fan is protected from water jets, from any directions and no harmful ingress of water.



## SPECIFICATION

### 5.0 MECHANICAL INSPECTION

#### 5.1 Rotation Direction

Counterclockwise when look into impeller side.

#### 5.2 Protection

All fans have integrated protection against locked rotor condition so that there will be no damage to winding or any electronic component.

Restarting is automatic as soon as any constraint to rotation has been released.

As fan placed at dead angle position, and the switch was changed from off to on. Restarting was automatic normal as soon as and proved that this fan is good fan.

#### 5.3 Locked Rotor Protection

No damage shall be found after 72 hours continuously at condition of rotation locked.

Restarting is automatic as soon as constraint to running has been released.

#### 5.4 Avoid the damage, check the correct voltage and proper polarity before connecting with power.

#### 5.5 Free Drop Shock

In minimum package condition, the fan should withstand drops on any three faces from a height of 30cm onto a wood board of 10mm thick.

#### 5.6 Please do not stick a grease and/or an oil to the fan housing or blade which may have a harmful influence by a chemical reaction at high humidity.

### 6.0 ELECTRICAL INSPECTION

#### 6.1 Insulation Resistance

Not less than 10M ohm between housing and positive end of lead wire (red) at 500V DC.

#### 6.2 Dielectric Strength

No damage should be found at 500 VAC for 60 seconds, measured with 1mA trip current between housing and positive end of lead wire.

#### 6.3 Life Expectancy

The continuous duty life at given temperature after which, 90% of testing units shall still be running.

### 7.0 ENVIRONMENTAL

#### 7.1 Operating Temperature / Humidity

-10°C to +70 at humidity 100% RH.

#### 7.2 Storage Temperature

All function shall be normal after 500 hours storage at -40°C to +70 °C with a 24 hour recovery period at room temperature.

#### 7.3 Humidity

After 96 hours, 95% RH, 40+/-2°C per MIL-STD-202F, method 103B humidity test, the measured data on insulation resistance and dielectric strength shall meet the specification.



## SPECIFICATION

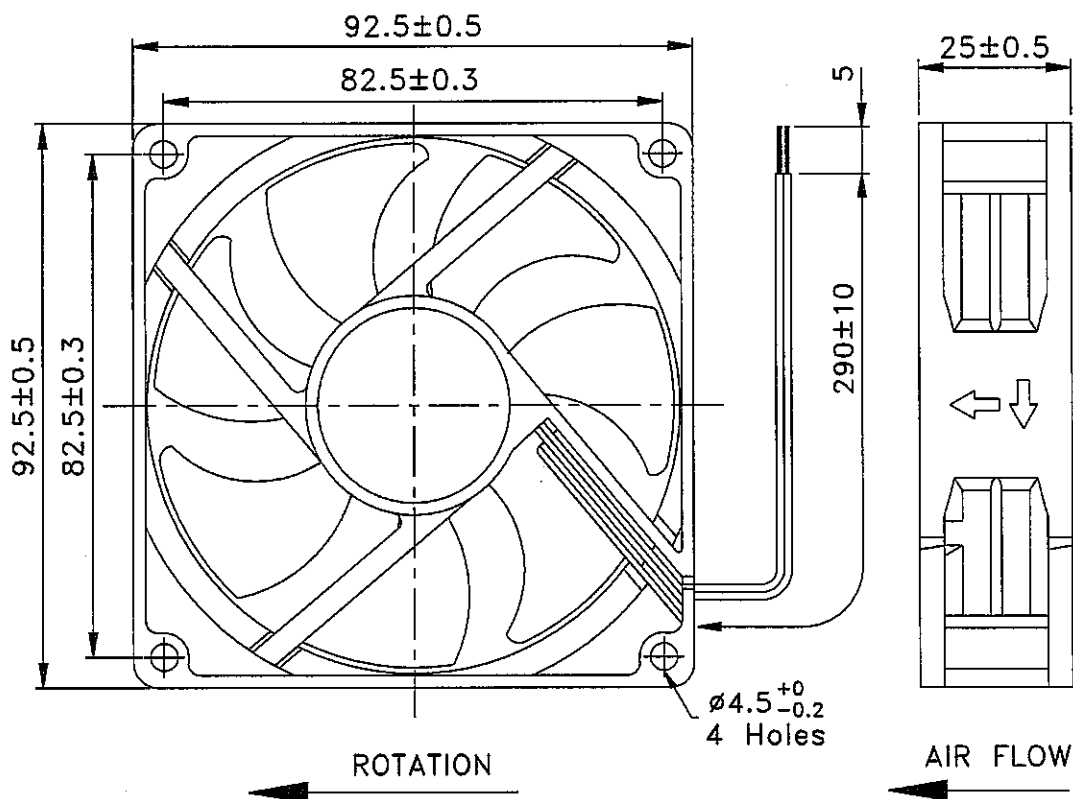
### 8.0 REMARKS

8.1 Material and construction are subject to change without advance notice. The changes should be within specification.

8.2 All fans shall meet the quality inspection under sampling plan MIL-STD-105E as follow:

Critical	0.25%
Major	1.00%
Minor	2.50%

### 9.0 OUTLINE STYLING & DIMENSIONS



LEAD WIRES : UL 1007, AWG24 , L = 290 +/- 10 MM  
Red = positive ; Black = negative.

### 10.0 Notes:

- 10.1 Please do not touch and push Fan Blade with fingers or others, fan blade and ball bearings may be damaged and it causes noise defect.
- 10.2 Do not carry the fan by its lead wires.
- 10.3 If the fan does not have the polarity protection function, the connection of the colored wires should be red + red, and black + black, or else the fan will be damaged in no time.
- 10.4 For the models without reverse connection of polarity protection, please do not connect the lead wire in reverse



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