DATASHEET
EC-001

THE FANS WORLD
Specification for Approval

DATE: 02/09/2021
REV. 02 / 02/09/2021

Fan Type **(3)**	**EC BRUSHLESS FAN**	P/N **(6)**	**FL-E12038HA2TB**	Model No.	**FL-E12038HA2TB-IP55**
Rev.	02	Description	Label voltage, from 230 VAC to 220-240 VAC		

SPECIFICATION

General Specification

General Data	Unit	Specification		Conditions
Operating Freq. (1)	Hz	**50**	**60**	----
Rated Voltage	VAC	**230**		----
Operating Voltage	VAC	**187**	**250**	At 25°C
Start-up Voltage	VAC	**187**		At 25°C
Label Voltage (1)	VAC	**220 - 240 VAC**		----
Input Power	W	**4.8 (5.8 MAX)**		At rated Voltage
Label Power (2)	W	**5.00/5.00W**		----
Speed	RPM	**2500±10%**		±200 RPM
Air Flow	CFM	**96.65 (86.98Min)**		In Free Air
Air Pressure	mmH_2O	**5.33 (4.32Min)**		At Zero Air Flow
Noise Level	dB(A)	**42.6 (45.6MAX)**		At Rated Speed

Mechanical Characteristics/Materials

Dimenion	**120*120*38mm**
Frame	**BLACK PBT (UL94V-0) GLASS FIBER REINFORCED**
Impeller	**BLACK PBT (UL94V-0) 7 BLADES**
Terminal	**2 TERMINALS 2.8 X 0.5**
Bearing system (3)	**DUAL BALL BEARING**
Life Expectancy	**70000 h**
Weight	**296.1 g**

Label

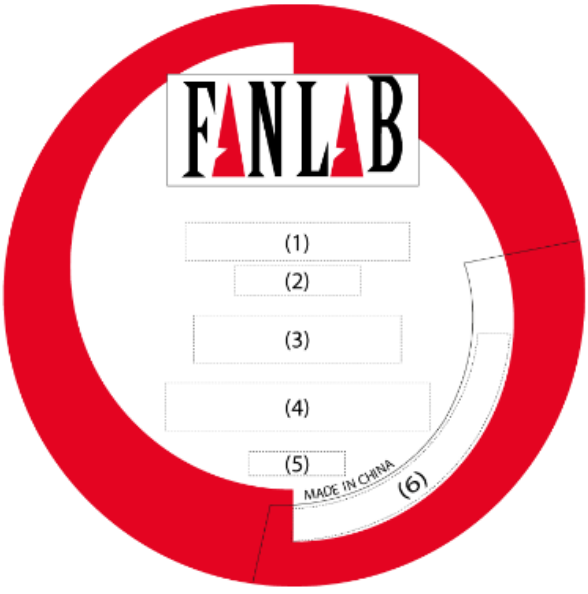
Label Indication	
(1)	**Label Voltage + Operating Freq.**
(2)	**Label Power**
(3)	**Bearing System + Fan Type +(IP)**
(4)	**Safety Approvals**
(5)	**Production Lot**
(6)	**Part No.**
Size	**60mm**

Elecrtical Characteristics

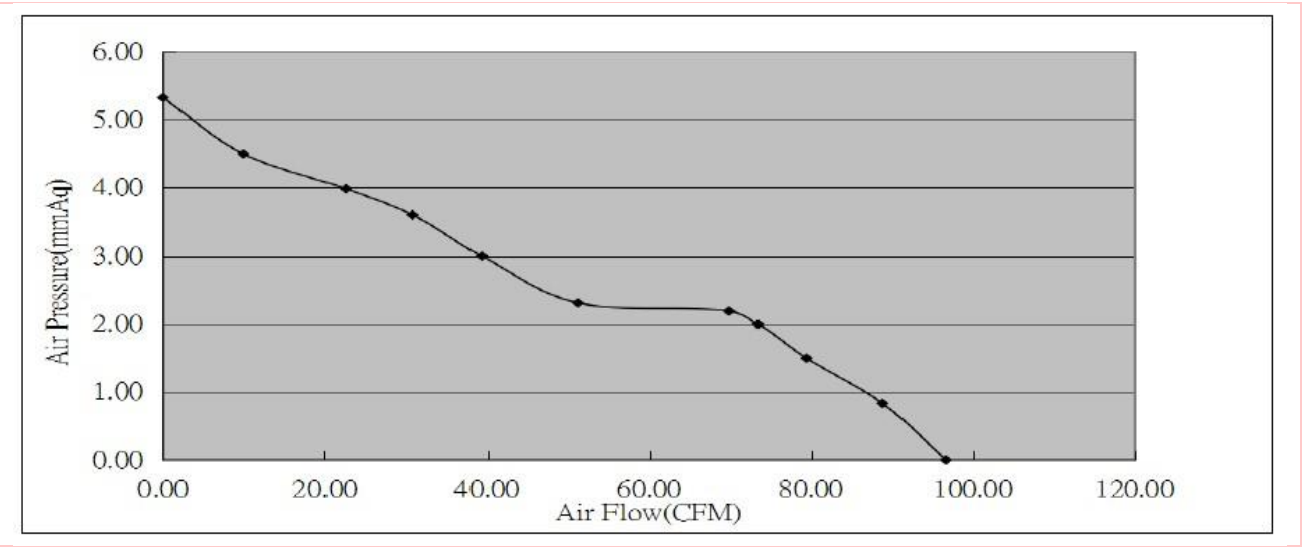
Insulation resistance	**10 MΩ minimum at 500 VDC/min.**
Dielectric strength	**1500 VAC/1mA for one minute.**
Motor Protections	**Auto Restart**
Insulated Class	**CLASS A (105°C)**
Safety Approvals (4)	**CE**
IP Protection (3)	**IP 55**

Environmental

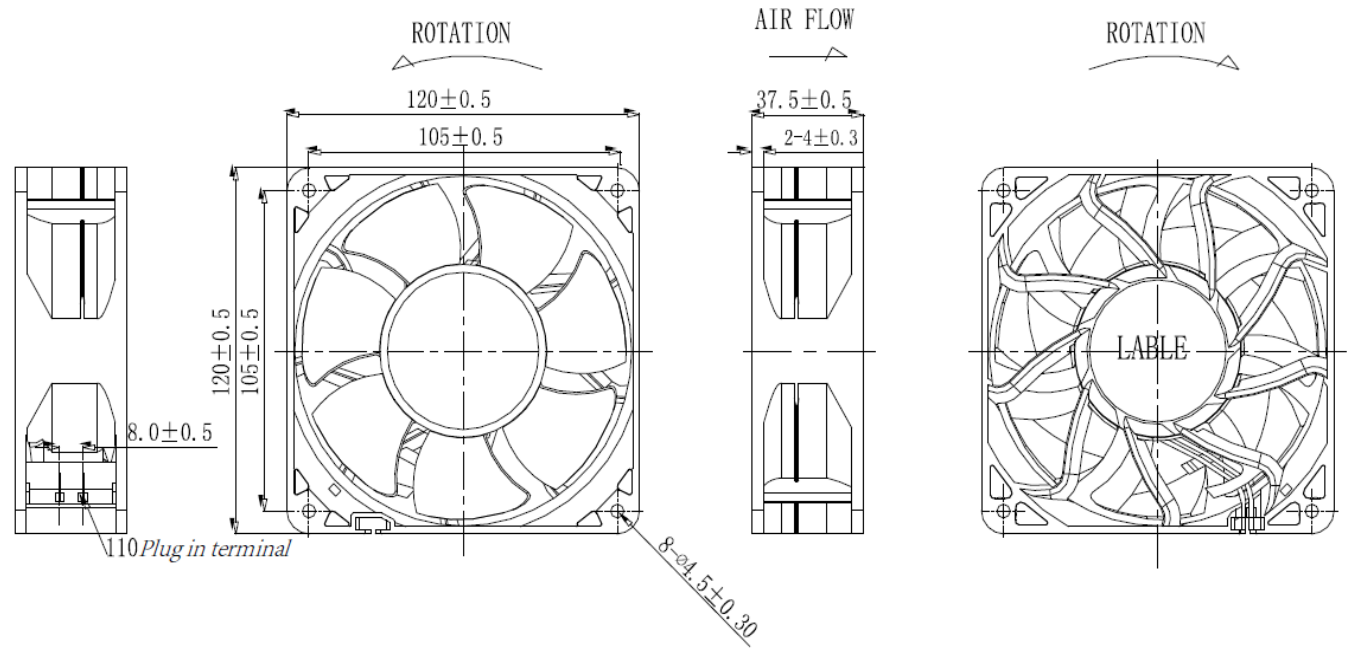
Operating Temperature	**-30°C ~ +70°C**
Storage Temperature	**-40°C ~ +75°C**
Operating Humidity	**35% ~ 85%**
Storage Humidity	**35% ~ 85%**
RoHs Compliance	



Performance Curve



Drawing



Air flow Direction	Direction of Rotation	UNITS
Label Side	Clockwise view front fan label	mm

Fan Installation

1. In case of using bolt-nut fasteners, the flatness of chassis mating surfaces should be kept below 0.1mm.
2. How to fasten the frame including different types Flange type : Screw the bolt and nut together from the inlet or outlet. The torque should not be exceed 4.5 kgf-cm [figure(a)]. Rib type : Screw the bolt through the rib. The torque should not be exceed 7.5 kgf-cm [figure(b].
3. In case of using self-tapping screws, appropriate screws according to the current standard should be used. The dimensional details of the self-tapping screws recommended are shown in Table(A). Each fastener hole should only be tightened once or slippage may occur. In addition, the torque to be applied to the self-tapping screws must not exceed the values stated in Table(A).
4. The countersunk part of fastener head should not interfere with the frame or there would be a risk of breakage [figure(c)]. Fastener head with flat inner surface, i.e. no countersunk, is recommended.
5. It is not recommended press the impeller's fins in assembly process. As shown in (Fig. d).
6. It is not recommended pull the wire strongly in assembly process. As shown in (Fig. e).

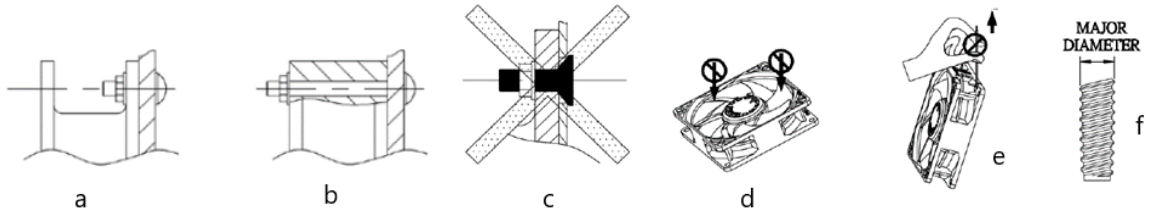


Table A

MOUNTING HOLE DIAMETER	SCREWSPEC.	MAJOR DIAMETER[Fig.(f)]		*RECOMMENDED MAX. TORQUE (kgf-cm)	
		MAXIMUM	MINIMUM	FLANGE TYPE FRAME	RIB TYPE FRAME
Ø3.5	M4	4.0	3.85	4.5	7.5
Ø4.3	M4.8	4.8	4.65	5.5	7.5
Ø4.5	M5	5.0	4.85	5.5	7.5

*A lower torque than the recommended value should be used if slippage is observed.

Notes

- Our products should be used within the specification appointed condition, so we will not guarantee this product quality if your application exceeds the limitations outlined in this specification.
- Product will be shipped in accordance with this specification unless has exception parameters differently notified.
- Please use fan guards to avoid personal accidental injuries.
- Unless this fan motor is specified for use in abnormal environments designated by IP rating level, this fan is designed to operate under normal environmental conditions.
- Please avoid operating FAN's products in poisonous material (organic, cyanogens, formalin, phenol, etc.) or corrosive gas environment(H2S, SO2, NO2,etc.)
- Please use filters to clean the air-intake in very dusty air environments for extended fan life.
- Always ensure that fans are stored according to the storage temperatures specified. Do not store in a high temperatures and humidity environment. If the fans are stored for more than 6 months, we recommend evaluating then functional testing before using.
- Contact Fanlab for confirmation if you can't ensure that.
- Make sure to turn off the power before connecting or disconnecting the connectors to avoid electronic parts damage.