SPECIFICATION

MODEL
K-DC17251-A24-44

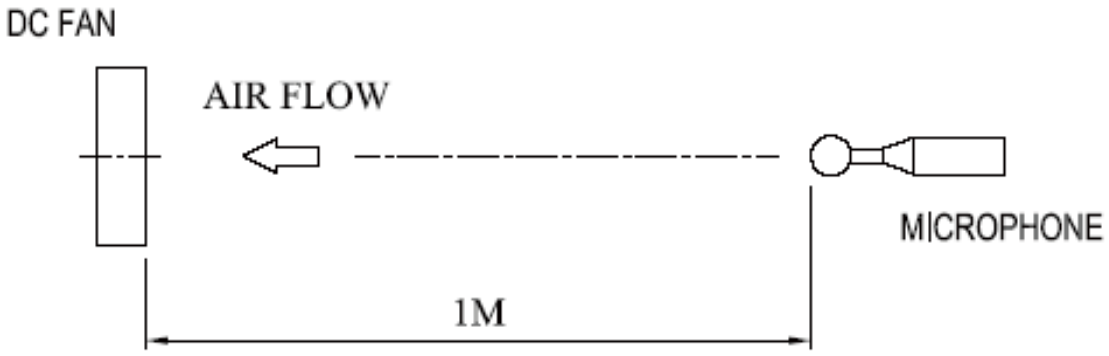
1.Technical data

Rated Voltage	24VDC
Operation Voltage	14~26.4VDC
Input Current	1.8≤ (UL1.90)A
Input Power	43.2≤W
Speed	4400±10%R.P.M
Speed Control Type	PWM Control
Signal Output	Frequency Generator (FG)
Max. Air Flow (At Zero Static Pressure)	9.14(8.23min)m^3/min
	323.0(290.7min)CFM
Max. Air Pressure (At Zero Flow)	26.9(21.81Min)mm-H2O
	1.06(0.86min)Inch-H2O
Acoustical Noise	61.0(64.0Max)dB-A
Insulation Resistance	10Mega Ohm Min. At 500Vdc (Between Frame And (+) Terminal)
Dielectric Strength	5ma Max. At 500 Vac 60Hz One Minute (Between Frame And (+) Terminal)
Life Expectance	L10 Life Expection 70,000 Hours At 40C Room Humidity 15%~65%Rh Operate At Rated Voltage
Rotation	Counter-Clockwise Viewed From Inlet
Air Flow Direction	Air Exhaust Over Strut
Insulation Class	UL：Class A

Note:

A. The Values Written In Parenthesis,( ), Are Limited Spec.

B. Acoustical Noise Measuring Condition:



Noise Is Measured At Rated Voltage In Free Air In Acoustical Chamber With Larson Davis Type 824S Sound Level Meter

C. The Air Flow And Air Pressure Measured At Rated Voltage In Double Chambe Is Measured According To Amca Standard 210-99

2.Mechanical data

Dimension	See Dimention Drawing
Frame	Die-Cast Aluminum Painted Black
Fan Blade	Thermoplastic Black /Pa66+25% Gf Of Ul 94-V0
Bearing System	Two Ball Bearings
Weight	610g

3.Environment

3-1.Operation Temperature:- 10 To +70℃

Notice:Dew Condensation May Damage The Operation Of The Fans. Should Keep The Fans Out Of Dew Condensation During Storage Or Operation

3-2.Storage Temperature:-40 To +75℃

3-3.Operation Humidity:5 To 90% Rh

3-4.Storage Humidity:5 To 95% Rh

3-5.Drop Test

In Minimum Packaging Condition Fan Withstand Each One Drop Of Three Faces From 30cm Distance Height Onto 10mm Thickness Of Wooden Board

3-6.Vibration Test

Sinewave Displacement Amplitude:0.75mm(Equivalent 10G) Frequency Range:10-55Hz/30Sec 55- 10Hz/30Sec.Linear Scanning 120 Cycle,Endurance Time Per Axis:2 Hours,Orientation:X,Y,Z

3-7.Shock Test

Apply Peak Acceleration 50g And Keep Duration Of The Pulses For 11Ms(Half Sinewave)

3-8.Rohs Compliance----------See Rohs Standard

4.Protection

4-1.Locked Rotor Protection(■YES,□NO)

Impedance Of Motor Winding Protects Motor From Damage In 72 Hours Of Locked Rotor Condition At The Reated Voltage;

4-2.Polarity Protection(■YES,□NO)

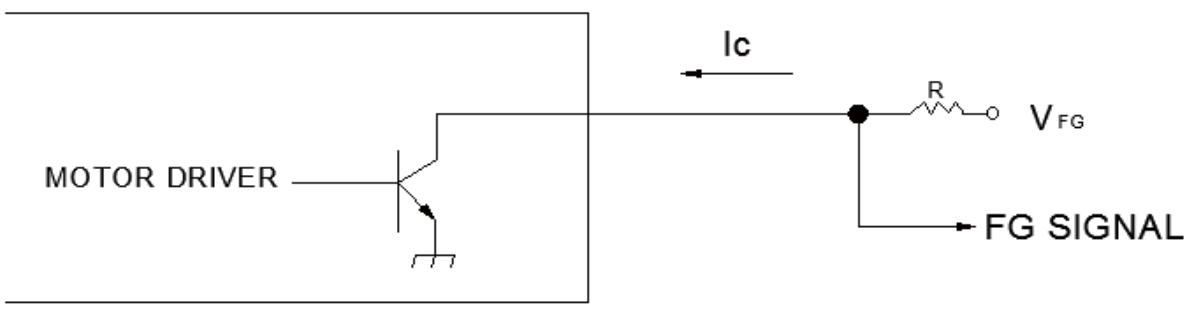
Be Capable Of Withstanding If Reverse Connection For Positive And Negative Leads;

4-3. Auto-Restart Protection(■YES,□NO)

When The Fan Motor Is Locked The Device Will Cut Off The Drive Curren For A While And Restart Automatically Later. If The Lock Situation Is Continued The Device Will Work As The Above Situation Repeatly Till T Lock Is Released.

5.Frequency Generator (Fg) Signal

5-1.Schematic

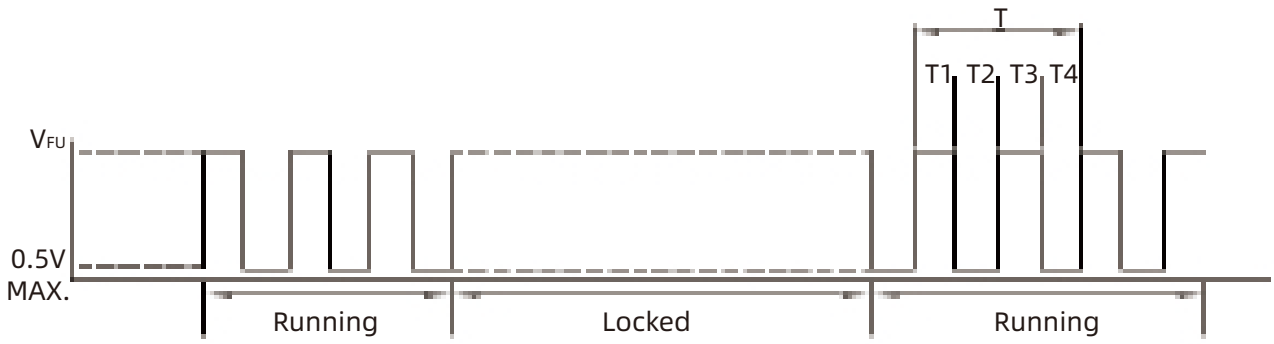


Caution:

The Lead Wire Of Fg Signal Can Not Tough,The Lead Wire Of Positive Or Negative

5-2.Signal Specification:Output Type Open Collect,Vfg Maximum Voltage= 12V,Ic Maximum Current=5MA,Low Level Voltage=0.5VMax,R ≥ V_{fg}/Ic

5-3.Frequency Generator Waveform



T=T1+T2+T3+T4=60/N(Sec) N:Speed (Rpm)

6.Frequency Generator (Fg) Signal

6-1.Signal Description

6-1-1.Control Signal: Pwm Control

6-1-2.Signal Type:Input High Level Voltage: Min. >2.6V Max.<5V

6-1-3.Pwm Frequency Range: 1Khz~ 100Khz

6-1-4.Max. Sink Current: 8MA

6-2.Fan Speed Control

6-2-1.Input Voltage: 5 VDC

6-2-2.Pwm Frequency : 25KHZ

6-2-3.The Fan Speed Should Run At Full Speed Given PWM 100% Duty Cycle Input.

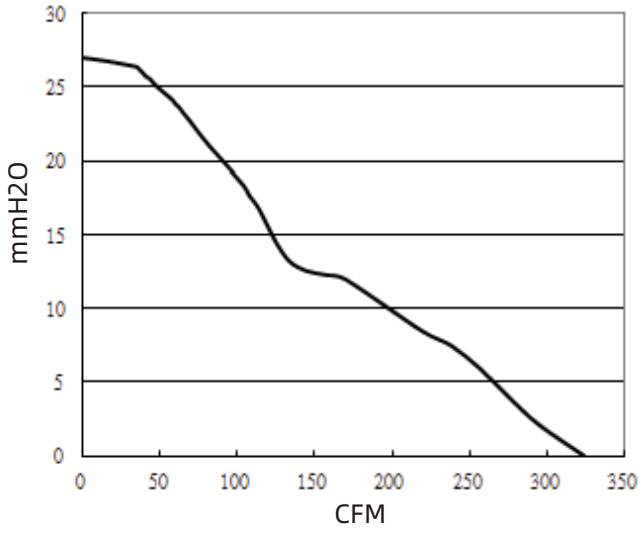
6-2-4.The Fan Speed Should Run At Zero Speed Given At PWM 0 % Duty Cycle Input.

6-2-5.The Fan Will Go To Full Speed When If The Control Signal Is Disconnected.

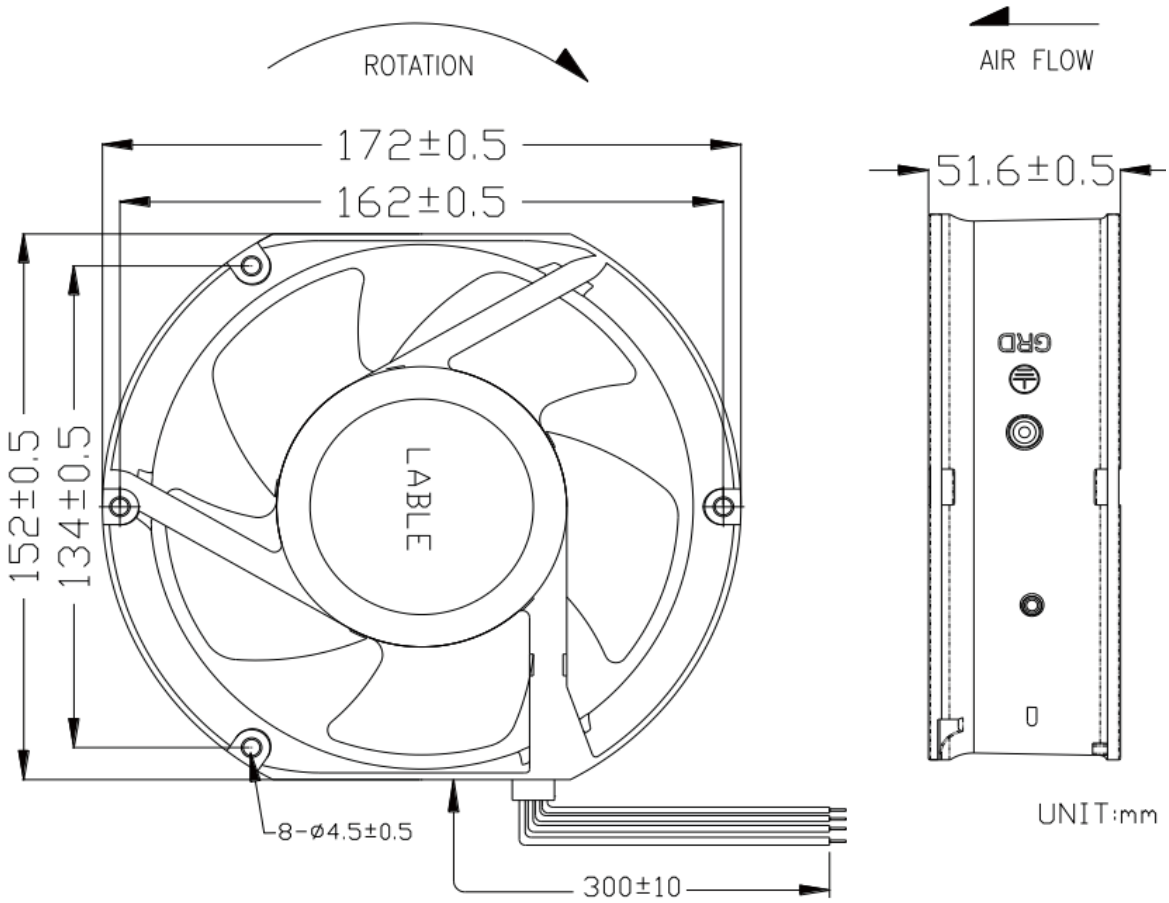
6-3. Pwm Duty Vs Rpm Curved Vs Pwm Comtrol Chart

Duty (%)	25%	50%	75%	100%
Speed R.P.M (Ref)	1600Ref	2700±25%	3600±20%	4400±10%

7.P&Q-Curve



8.Outline Drawing



9.Application Notice

9-1.CROWN will not guarantee the performance of the products if the application condition falls outside theparameters set forth in the specification.

9-2.A written request should be submitted to CROWN prior to approval if deviation from this specification isrequired.

9-3.Please exercise caution when handling fans. Damage may be caused when pressure is applied to theimpeller, if the fans are handled by the lead wires, or if the fan was hard-dropped to the production floor.

9-4.Except as pertains to some special designs, there is no guarantee that the products will be free from anysuch safety problems or failures as caused by the introduction of powder, droplets of water orencroachment of insect into the hub.

9-5.The above-mentioned conditions are representative of some unique examples and viewed as the first point of reference prior to all other information.
9-6.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 isno foolproof method to protect against such error specifically mentioned in this spec.
9-7.CROWN fans without special protection are not suitable where any corrosive fluids are introduced totheir environment.
9-8.Please ensure all fans are stored according to the storage temperature limits specified. Do not store fans ina high humidity environment. We highly recommend performance testing is conducted before shipping, ifthe fans have been stored over 6 months.
9-9.Not all fans are provided with the Lock Rotor Protection feature. If you impair the rotation of the impellerfor the fans that do not have this function, the performance of those fans will lead to failure.
9-10.Please be cautious when mounting the fan. Incorrect mounting of fans may cause excess resonance,vibration and subsequent noise.
9-11.It is important to consider safety when testing the fans. A suitable fan guard should be fitted to the fan toguard against any potential for personal injury.
9-12.Except where specifically stated, all tests are carried out at room(ambient) temperature and relativehumidity conditions of 25oC, 65% RH. The test value is only for fan performance itself.
9-13.Be certain to connect an"4.7μF or greater"capacitor to the fan externally when the application calls forusing multiple fans in parallel, to avoid any unstable power.