

PWM and IP Protected Centrifugal DC Fan

F225G

NMB

General Specifications

Motor Type:

DC Brushless Three Phase Motor

Motor Protection:

Overload Protection/ Locked Rotor Protection / Polarity Protection (Motor withstands reverse connection for positive and negative leads.)

Insulation Resistance:

10MΩ or over with a DC 500V Megger

Dielectric Withstand Voltage:

AC 500V 1min

Allowable Ambient Temperature Range:

-30°C ~ + 70°C (Operating)

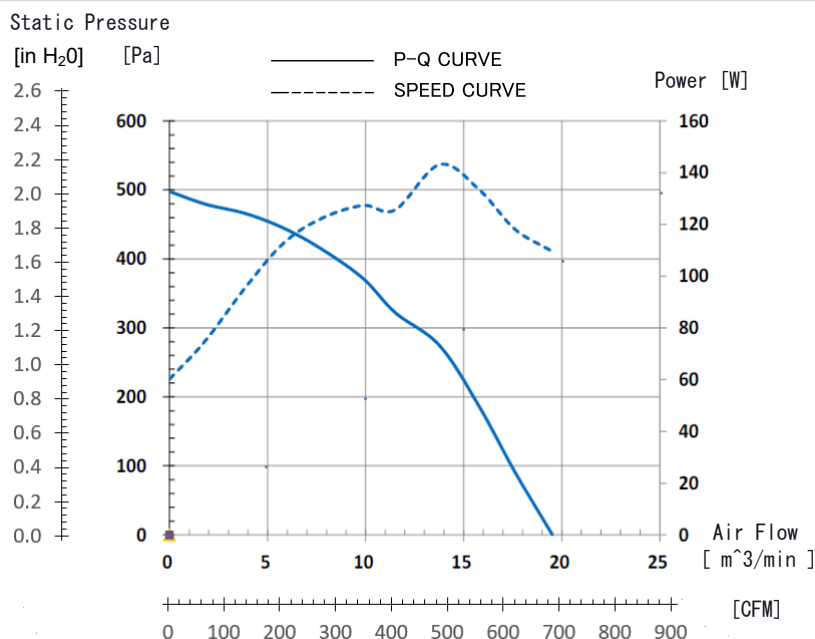
-40°C ~ + 80°C (Storage)

(non-condensing environment)



**For reference only. Please see fan outline for details*

Characteristic Curves



Features

- High performance centrifugal fan with PWM speed control and **IP 68 potting protection**
- Efficient motor technology, high torque, and aerodynamic impeller design
- **Withstands environmental hazards** such as water and dust
- Outfitted with NMB precision machined ball bearings for long life
- Applications include PV inverters, power storage, heat exchangers, EV chargers and telecom cabinets

Life Expectancy L10

70,000 Hours at 40°C

**Fan life expectation is based on free air operation at 40°C, rated voltage, and indoor benign lab environment*

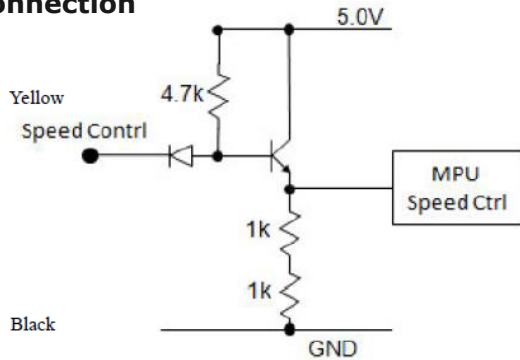
**1: Values in Free Air*

Specifications

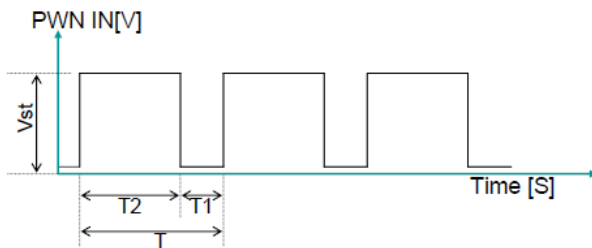
MODEL	Rating Voltage	Operating Voltage	Current		Input Power		Speed Inlet/Outlet	Max. Air Flow		Max. Static Pressure		Noise	Mass
	(V)	(V)	Avg (A)*1	Max (A)*1	Avg (W)*1	Max (W)*1		(CFM)	(m ³ /min)	(in H ₂ O)	(Pa)	(dB)*1	(kg)
F225G1-092-D0720	48	36 to 72	2.0	3.3	96	158.4	2650	689	19.5	2.0	498	70	2.0

PWM Specifications

Connection



Speed control signal definition



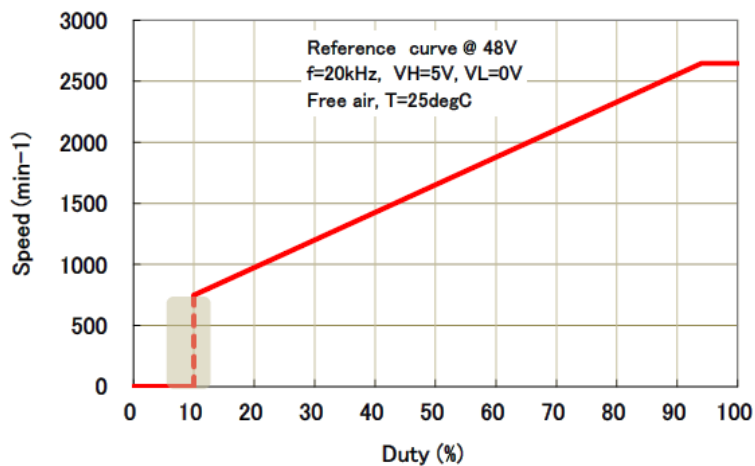
$$\text{Duty Rate} = (T_2/T) \times 100 [\%]$$

$$V_{st} = 5 [V]$$

$$\text{Frequency} = 300 [Hz] \text{ to } 50 [kHz]$$

If the SC signal is open circuit, the fan will rotate SCDuty=100% speed.

PWM Characteristic Curve

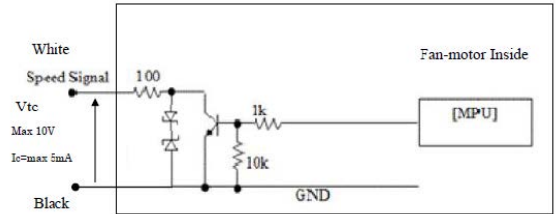


Start up duty: min 20%

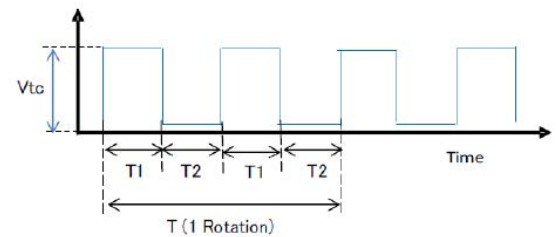
PWM Curve at free air and rated voltage.

TACHO Specifications

Connection



Speed signal

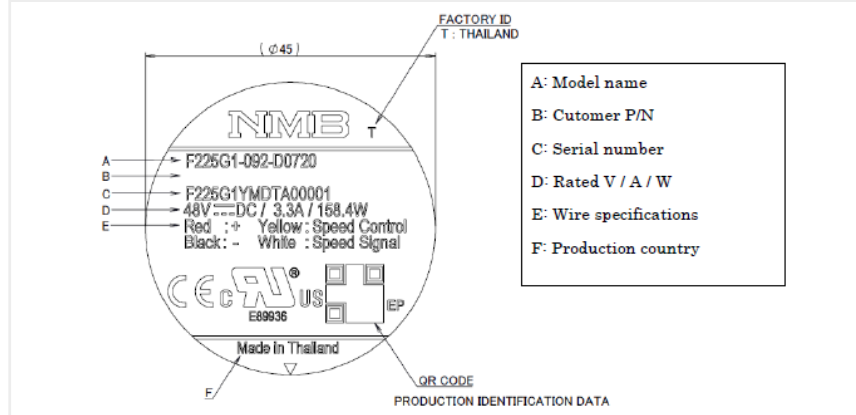


Pulse output / 1 Rotation,

$T_1 = T_2$ (50% \pm 10% Duty)

Outlines

(Name Plate)



Materials

Sleeve Tube: PVC TUBE AH-6 AWG2

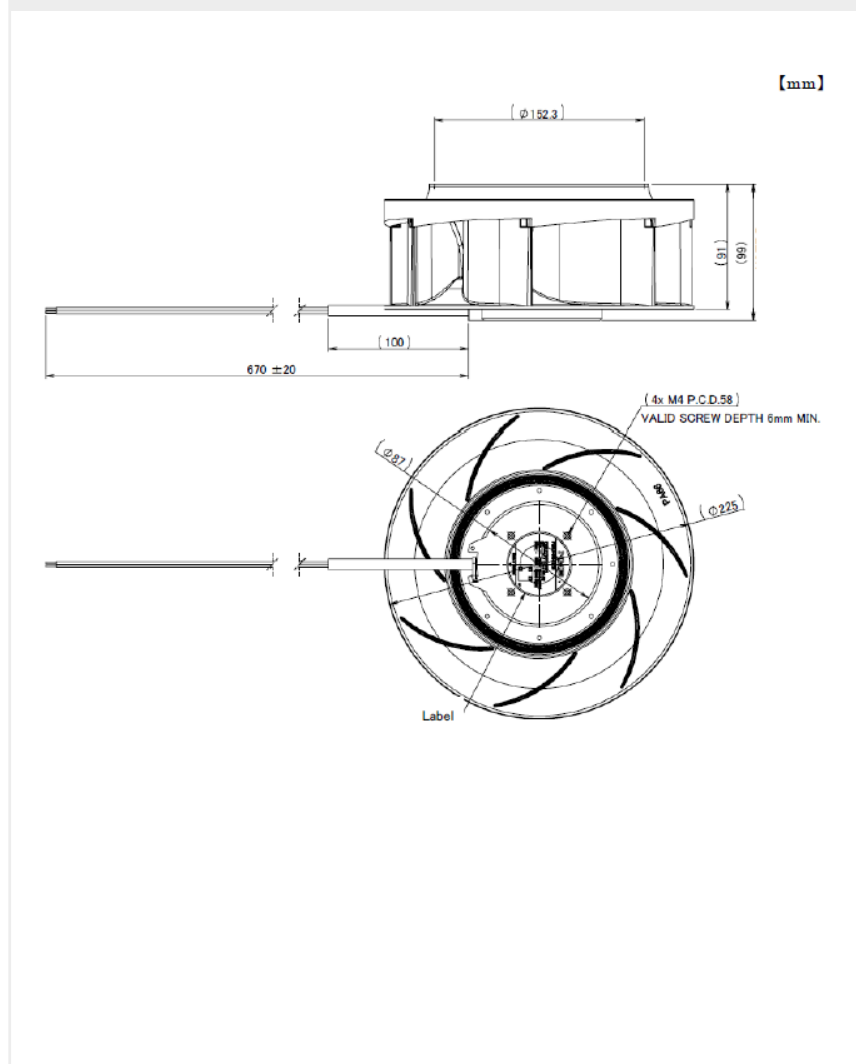
Impeller: Plastic (PA66 94V-0)

Bearing: Steel Ball Bearing

Lead Wire: UL1430 AWG18 for red, black, white and yellow

(+)/Red
(-)/Black
(TACH)/White
(PWM)/Yellow

(Outline)



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