PWM and IP Protected Centrifugal DC Fan

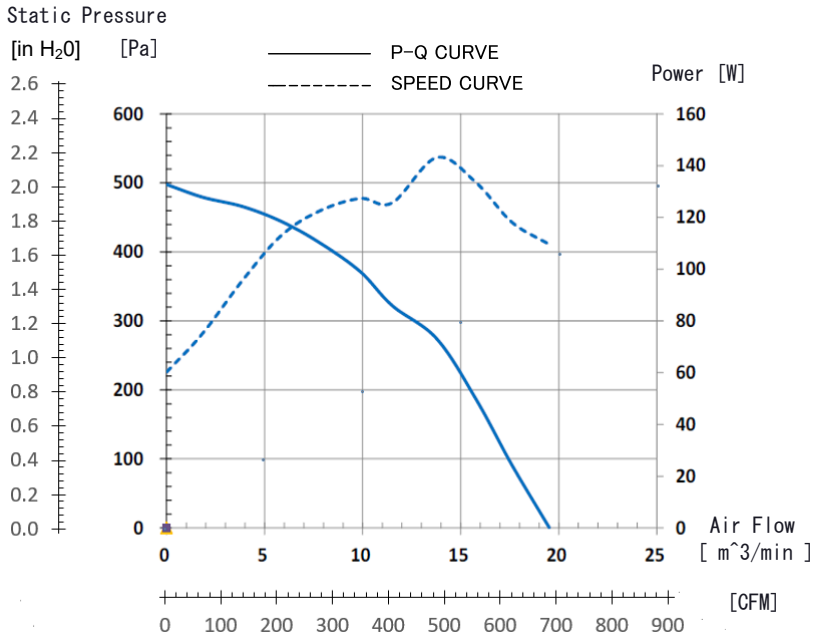
F225G

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)

Characteristic Curves



For reference only. Please see fan outline for details

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

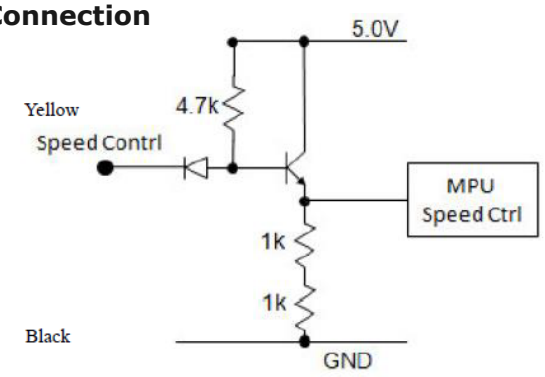
MODEL	Rating Voltage	Operating Voltage	Current		Input Power		Speed Inlet/Outlet	Max. Air Flow		Max. Static Pressure		Noise	Mass
			Avg	Max	Avg	Max							
	(V)	(V)	(A)*1	(A)*1	(W)*1	(W)*1	RPM	(CFM)	(m^3/min)	(in H_2O)	(Pa)	(dB)*1	(kg)
F225G1-092-D0720	48	36 to 72	2.0	3.3	96	158.4	2650	689	19.5	2.0	498	70	2.0

PWM and Tach Output Centrifugal DC Fan

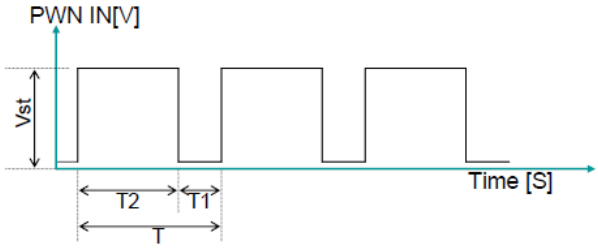
F225G

PWM Specifications

Connection



Speed control signal definition



Duty Rate = (T2/T) × 100 [%]

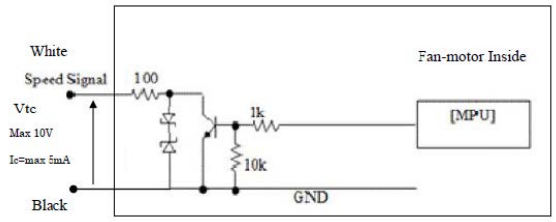
Vst = 5 [V]

Frequency = 300 [Hz] to 50 [kHz]

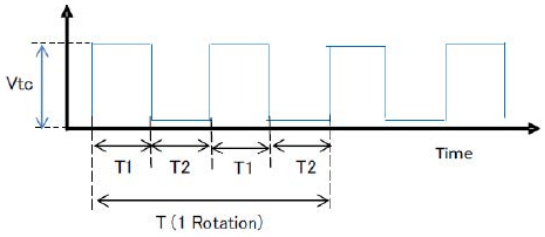
If the SC signal is open circuit, the fan will rotate SCDuty=100% speed.

TACHO Specifications

Connection

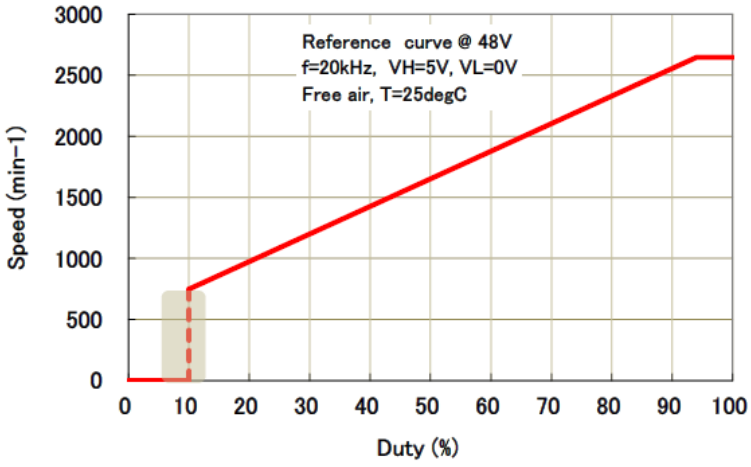


Speed signal



Pulse output / 1 Rotation, T1= T2 (50% ±10% Duty)

PWM Characteristic Curve



Start up duty: min 20%

PWM Curve at free air and rated voltage.

PWM and Tach Output Centrifugal DC Fan with Potting

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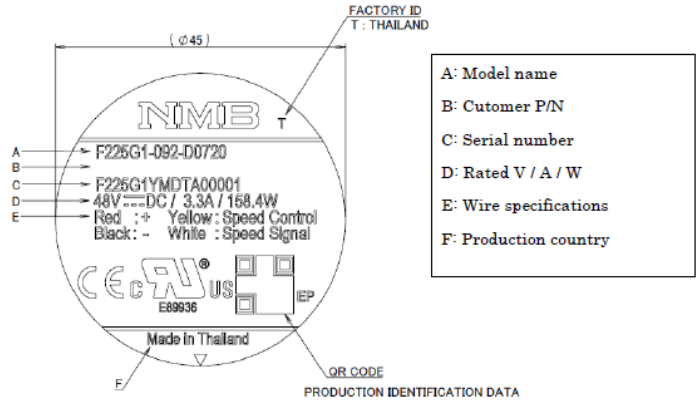
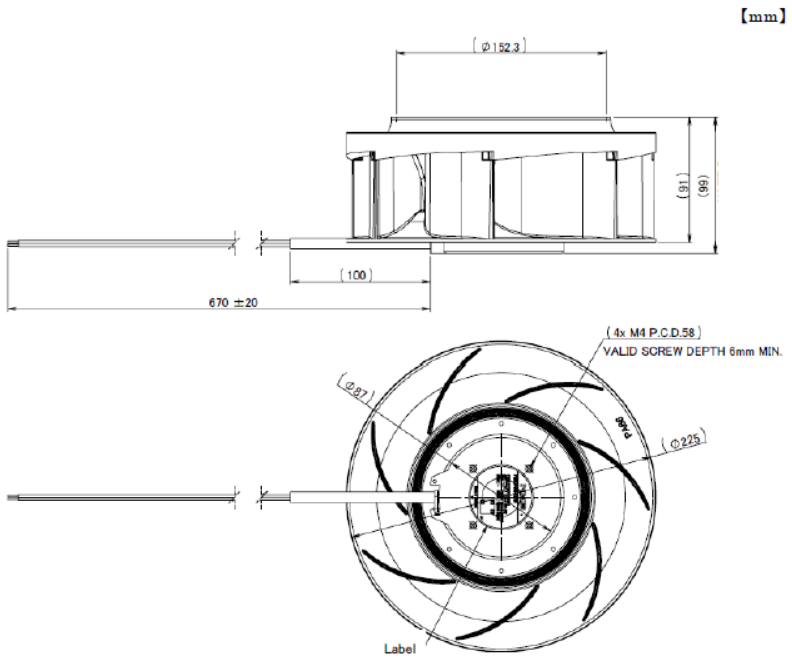
Outlines

(Name Plate)



(Outline)



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