

PWM and Tach Output Centrifugal DC Fan F225H

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

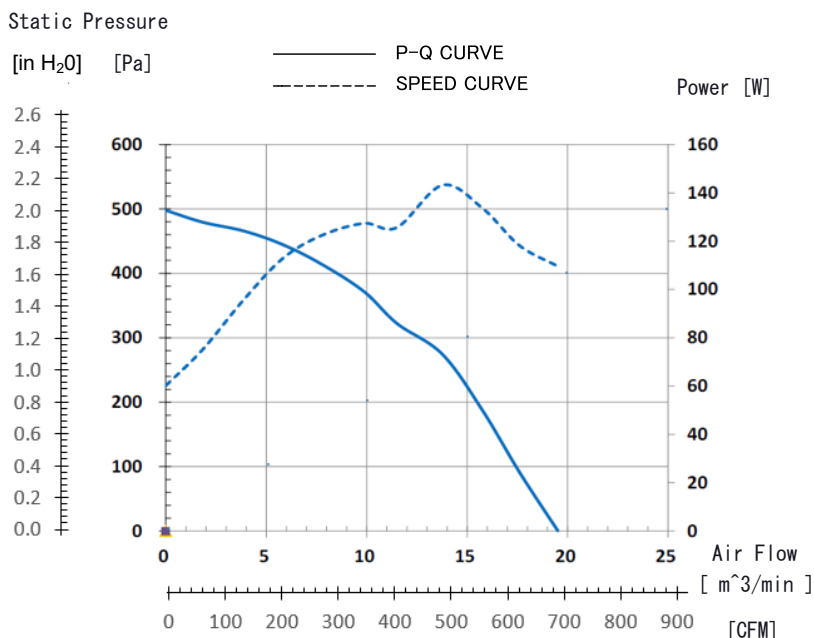
Allowable Ambient Temperature Range:

-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 four wires and PWM with tach signal
- Efficient motor technology, high torque, and aerodynamic impeller design
- Energy saving, low vibration, and increased life expectancy
- Outfitted with NMB precision machined ball bearings for long life
- High pressure and air flow that can be used in servers, data centers, or telecommunications

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

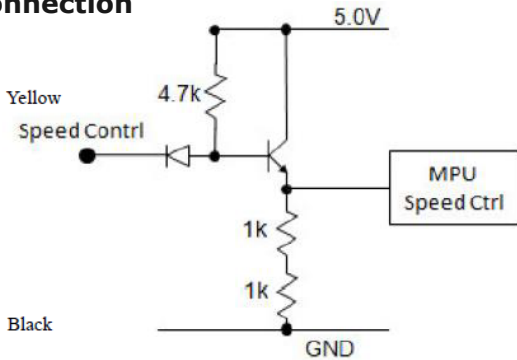
| MODEL | Rating Voltage | Operating Voltage | Current | | Input Power | | Speed | Max. Air Flow | | Max. Static Pressure | | Noise | Mass |
|------------------|----------------|-------------------|---------|-------|-------------|-------|--------------|---------------|-----------------------|-----------------------|------|--------|------|
| | (V) | (V) | Avg | Max | Avg | Max | Inlet/Outlet | (CFM) | (m ³ /min) | (in H ₂ O) | (Pa) | (dB)*1 | (kg) |
| | (V) | (V) | (A)*1 | (A)*1 | (W)*1 | (W)*1 | RPM | (CFM) | (m ³ /min) | (in H ₂ O) | (Pa) | (dB)*1 | (kg) |
| F225H1-092-D0720 | 48 | 36 to 72 | 2.0 | 3.3 | 96 | 158.4 | 2650 | 689 | 19.5 | 2.0 | 498 | 70 | 1.8 |

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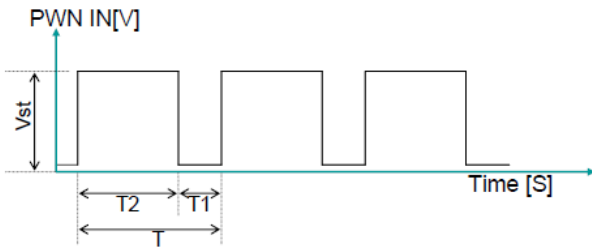


PWM Specifications

Connection



Speed control signal definition



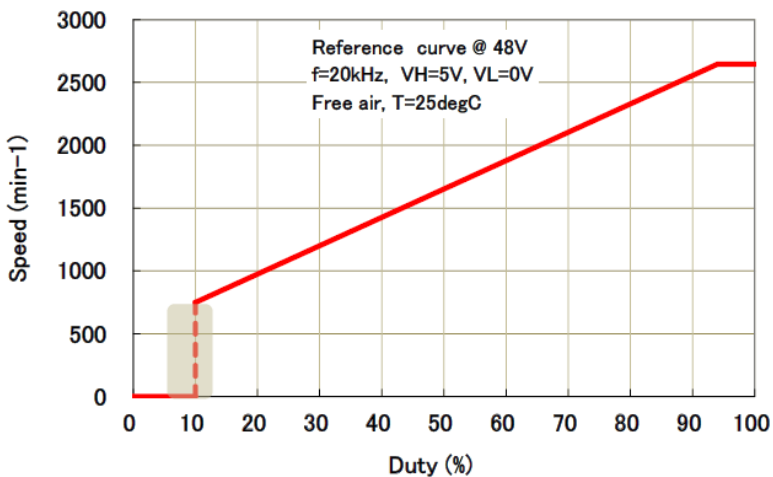
$$\text{Duty Rate} = (T2/T) \times 100 [\%]$$

$$Vst = 5 [V]$$

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

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

PWM Characteristic Curve

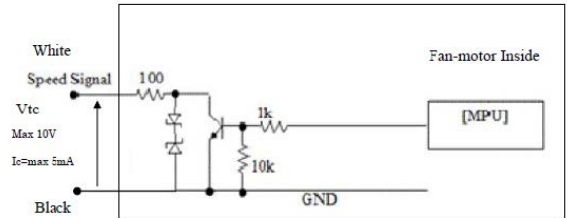


Start up duty: min 20%

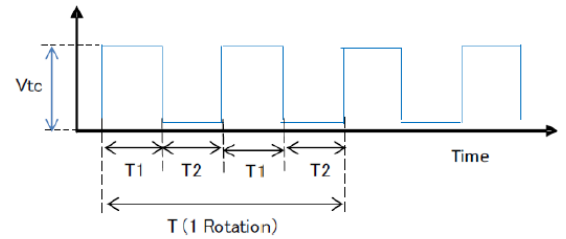
PWM Curve at free air and rated voltage.

TACHO Specifications

Connection



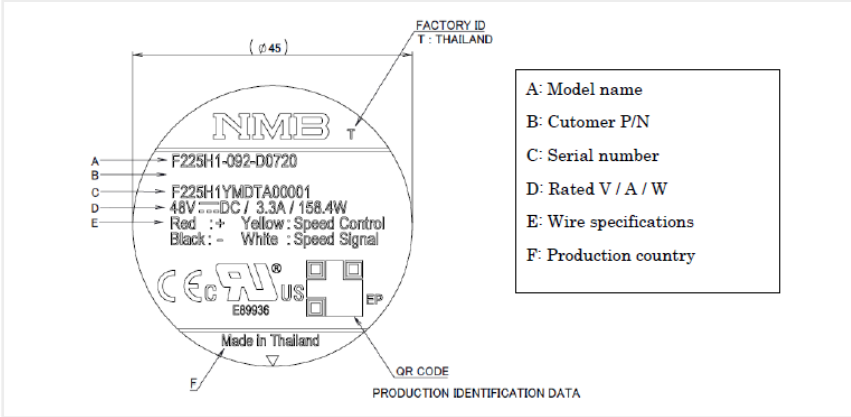
Speed signal



Pulse output / 1 Rotation, $T1 = T2 (50\% \pm 10\% \text{ Duty})$

Outlines

(Name Plate)



Materials

Sleeve Tube: PVC TUBE AH-6 AWG2

Impeller: Plastic (PA66 94V-0)

Bearing: Ball Bearing

Lead Wire: UL1430
AWG18 for Red, Black,
White, and Yellow

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

(Outline)

