

# IP55 Protected/Tacho Output Brushless DC Fan

## 08025SE

NMB

### General Specifications

#### Motor Type:

DC Brushless Motor

#### Motor Protection:

Auto Restart / Polarity Protection (Motor withstands reverse connection for positive and negative leads.)

#### Insulation Resistance:

10M $\Omega$  or over with a DC 500V Megger

#### Dielectric Withstand Voltage:

AC 700V 1sec or 500V 1min

#### Allowable Ambient Temperature Range:

-10°C ~ + 70°C for 12Q (Operating)

-10°C ~ + 60°C for 24R (Operating)

-40°C ~ + 70°C (Storage)

(non-condensing environment)

#### Installation:

Fans to be installed with leadwire pointing downward to avoid water ingress to the motor.



### Features

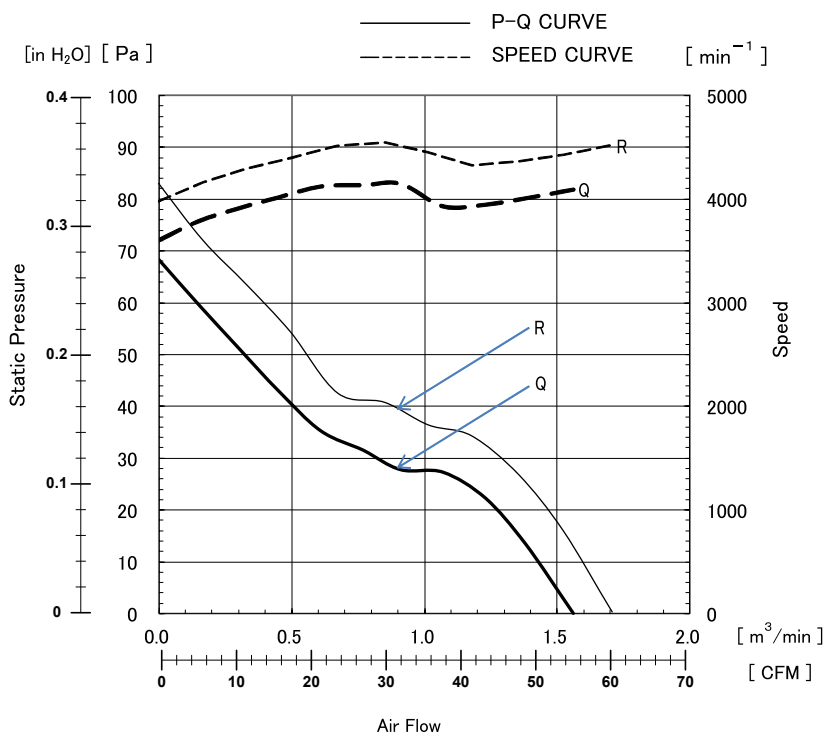
- Meets IP55 rating and below per IEC 60529 standard
- Long life and high reliability with NMB rust resistant precision ball bearings
- Open Drain Tacho Signal output for fan speed

### Life Expectancy L10

40,000 Hours at 60°C

*\*Fan life expectancy is based on free air operation at 60°C, rated voltage, and indoor benign lab environment*

### Characteristic Curves



\*1: Values in Free Air

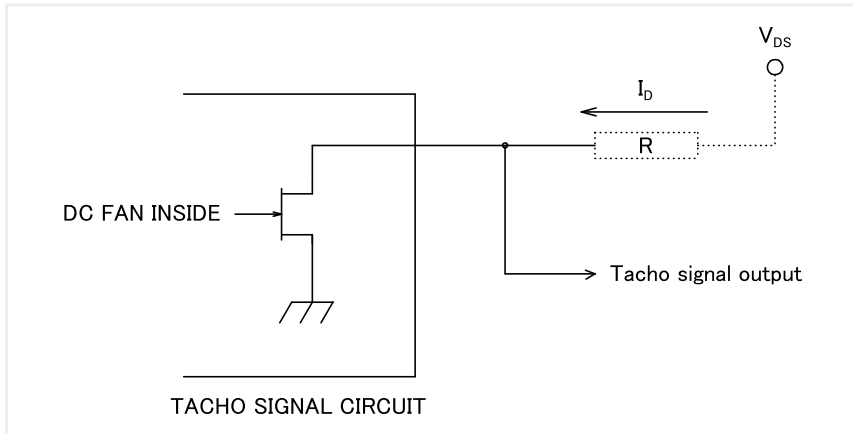
### Specifications

| MODEL             | Rating Voltage | Operating Voltage | Current |       | Input Power |       | Speed | Max. Air Flow          |                       | Max. Static Pressure  |                       | Noise | Mass |
|-------------------|----------------|-------------------|---------|-------|-------------|-------|-------|------------------------|-----------------------|-----------------------|-----------------------|-------|------|
|                   | (V)            | (V)               | Avg     | Max   | Avg         | Max   |       | (CFM)                  | (m <sup>3</sup> /min) | (in H <sub>2</sub> O) | (Pa)                  |       |      |
|                   | (V)            | (V)               | (A)*1   | (A)*1 | (W)*1       | (W)*1 |       | (min <sup>-1</sup> )*1 | (CFM)                 | (m <sup>3</sup> /min) | (in H <sub>2</sub> O) | (Pa)  |      |
| 08025SE-12Q-FT-DW | 12             | 7.0-13.8          | 0.26    | 0.38  | 3.12        | 4.56  | 4100  | 54.7                   | 1.55                  | 0.273                 | 68                    | 39.5  | 80   |
| 08025SE-24R-FT-DW | 24             | 12.0-26.4         | 0.17    | 0.22  | 4.08        | 5.28  | 4500  | 60.0                   | 1.70                  | 0.329                 | 82                    | 42.0  | 80   |

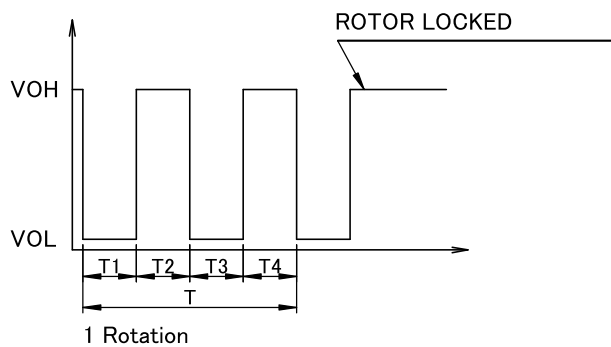
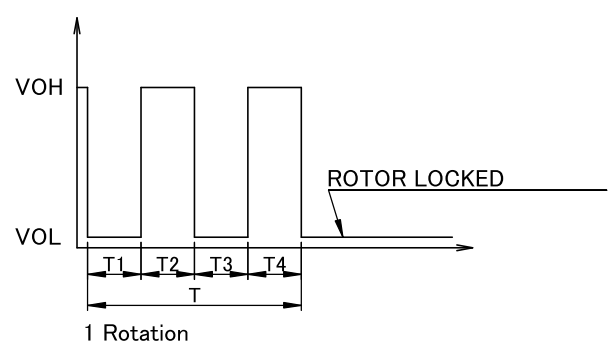
**TACHO Specifications****Tachometer Signal**

1. Output Circuit: Open Drain

2. Specification

*Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$*  $V_{DS} \text{ max: } +15\text{V}$  $I_D \text{ max: } 5\text{mA} [V_{DS}(\text{sat}) \text{ max}=0.5\text{V}]$ 

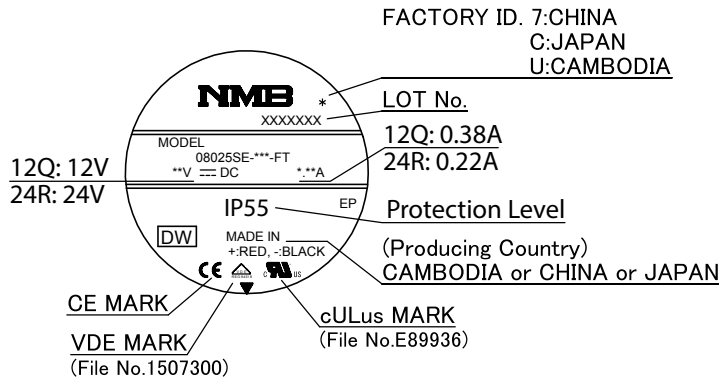
3. Output Waveform: At Rated Voltage

**Output Signal Voltage****Case-1****Case-2**1) When the rotor is locked at V<sub>OH</sub> position of signal, signal keeps V<sub>OH</sub> position.2) When the rotor is locked at V<sub>L</sub> position of signal, signal keeps V<sub>L</sub> position.3)  $T=T_1+T_2+T_3+T_4=60/m=1 \text{ rotation}$ m: Fan Speed ( $\text{min}^{-1}$ )

Tacho Duty Cycle=50%±10%

## Outlines

### (Name Plate)



### Materials

**Casing:** Plastic (Black UL94V-0)

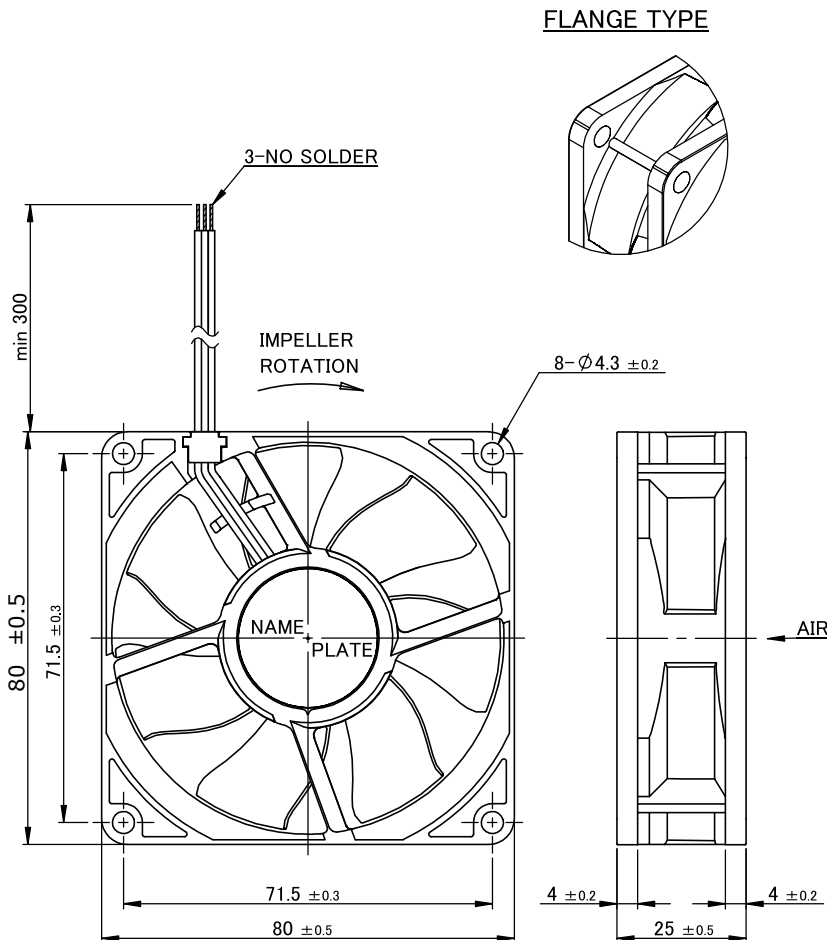
**Impeller:** Plastic (Black UL94V-0)

**Bearing:** Ball Bearing

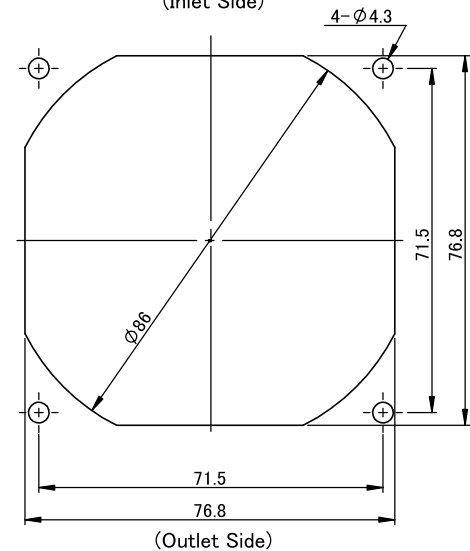
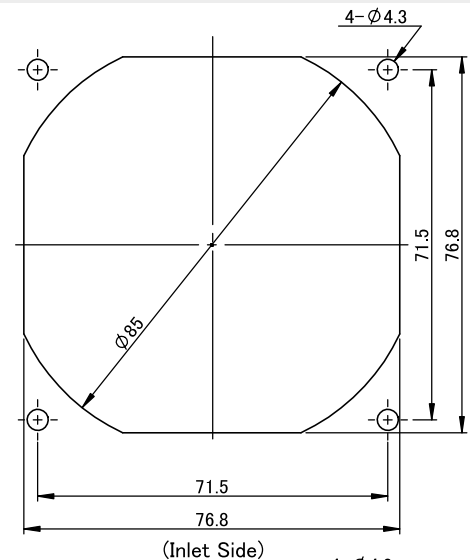
**Lead Wire:** (+): Red (-) Black

Tacho: White

### (Outline)



### (Panel Out-line)



\*Install the fans with rotor impeller facing up or in vertical position to avoid water accumulation in the rotor cup.

\*IP protection does not provide long term reliability guarantee.

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