

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 Ω 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

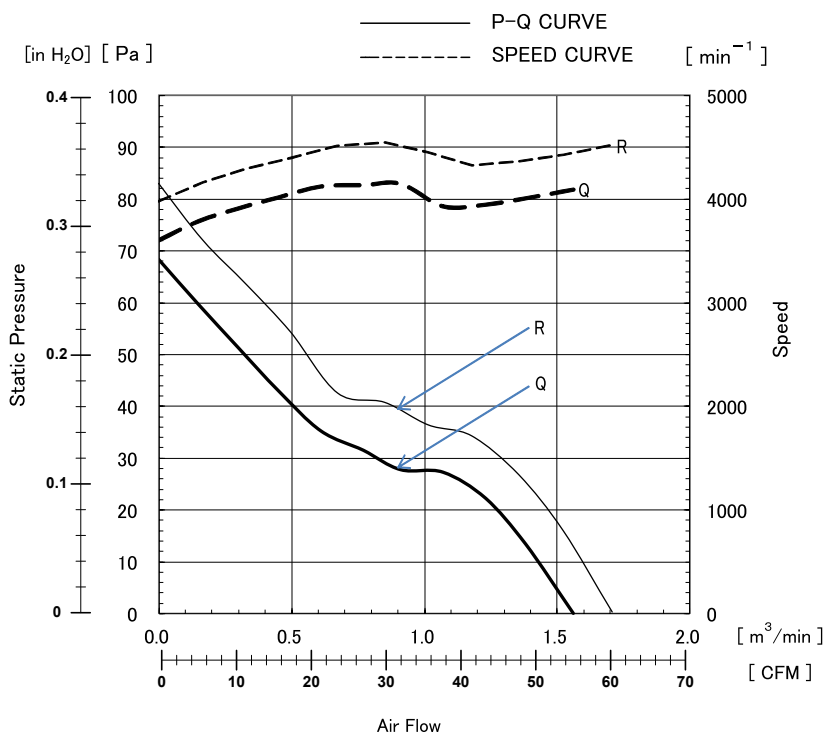
- Meets IP55 rating and below per IEC 60529 standard
- Long life and high reliability with NMB rust resistant precision ball bearings
- Open Drain Tacho Signal output for fan speed

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

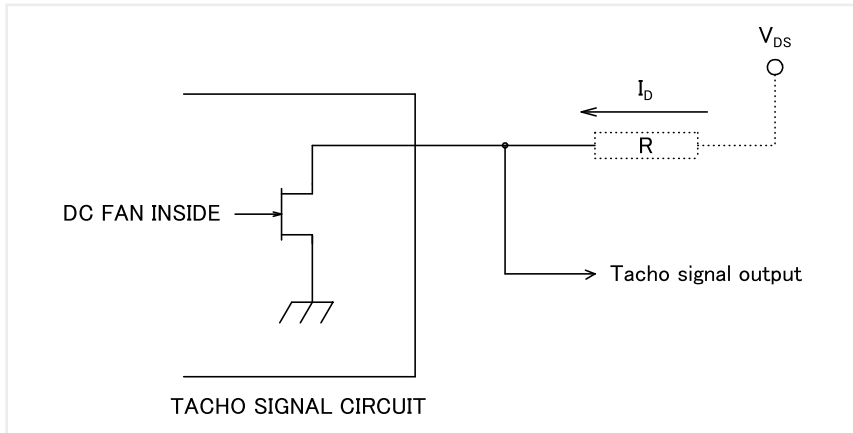
Specifications

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 ³ /min)	(in H ₂ O)	(Pa)		
	(V)	(V)	(A)*1	(A)*1	(W)*1	(W)*1		(min ⁻¹)*1	(CFM)	(m ³ /min)	(in H ₂ 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**

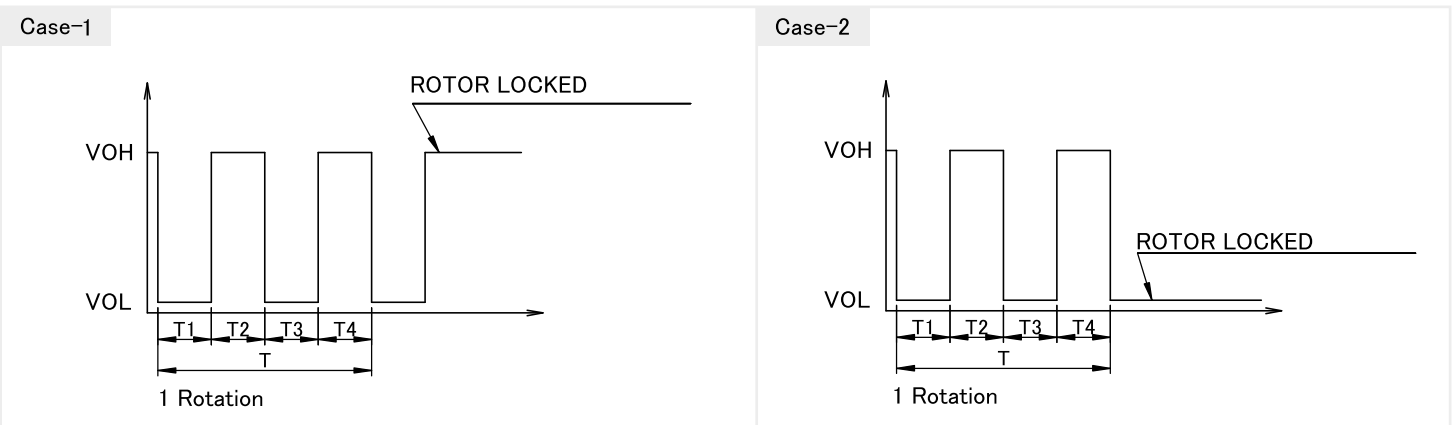
1. Output Circuit: Open Drain

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

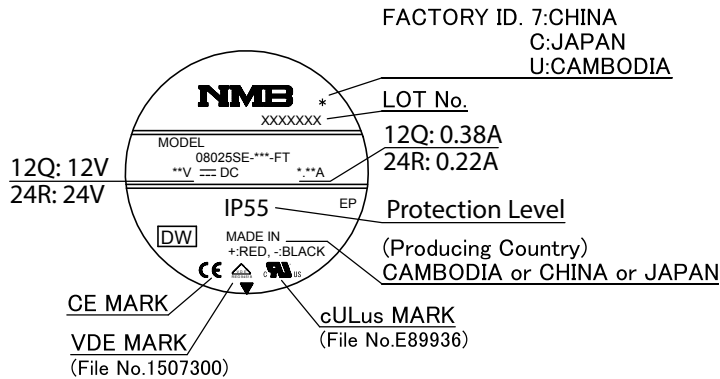


- 1) When the rotor is locked at VOH position of signal, signal keeps VOH position.
- 2) When the rotor is locked at VOL position of signal, signal keeps VOL position.
- 3) $T = T1 + T2 + T3 + T4 = 60/m = 1 \text{ rotation}$

m: Fan Speed (min^{-1})Tacho Duty Cycle = $50\% \pm 10\%$

Outlines

(Name Plate)



Materials

Casing: Plastic (Black UL94V-0)

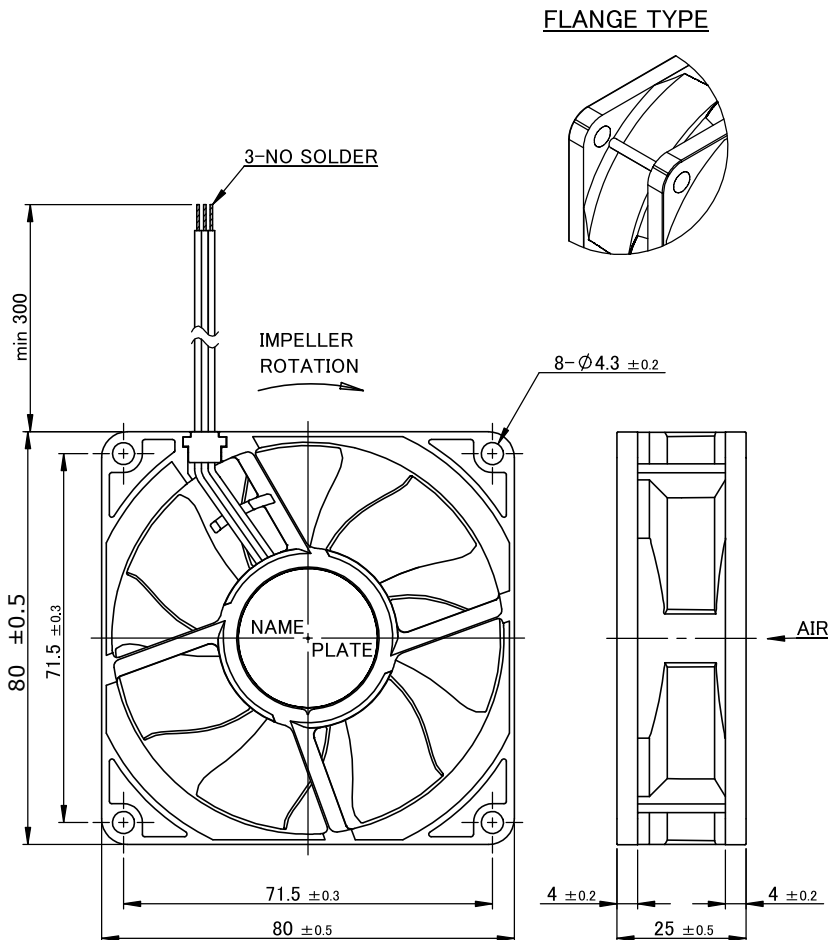
Impeller: Plastic (Black UL94V-0)

Bearing: Ball Bearing

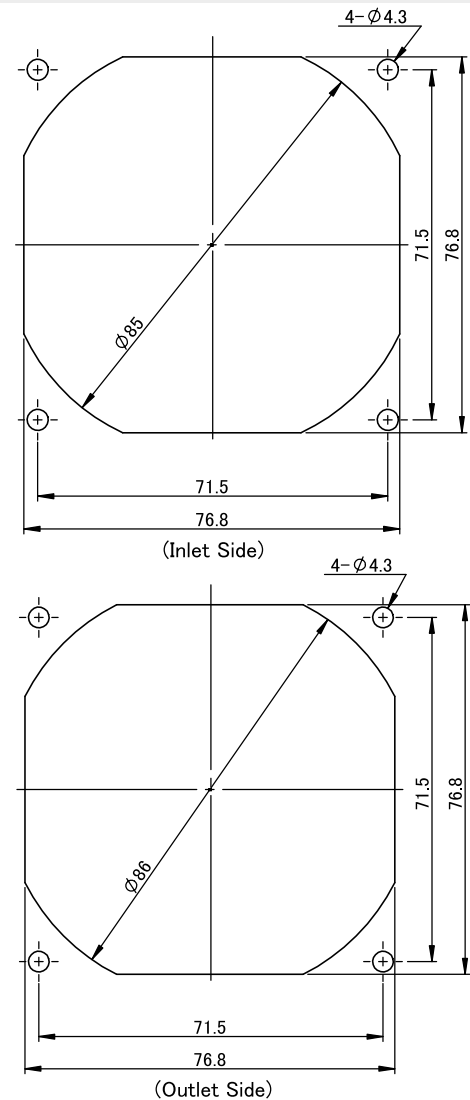
Lead Wire: (+): Red (-) Black

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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