

IP55 Protected/Tacho Output Brushless DC Fan

11925SE

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 ~ + 60°C (Operating)

-40°C ~ + 70°C (Storage)

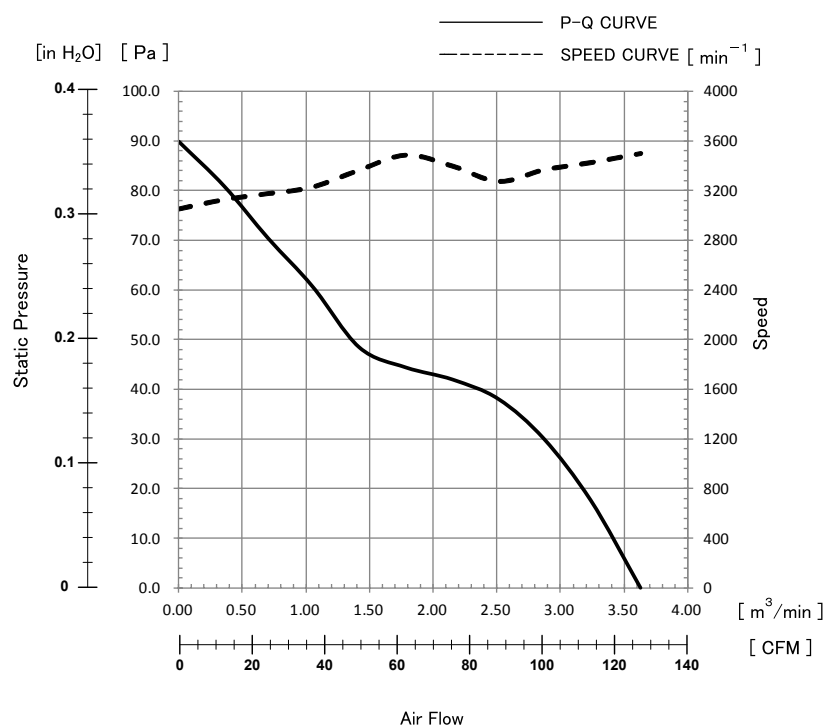
(non-condensing environment)

Installation:

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



Characteristic Curves



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*

Specifications

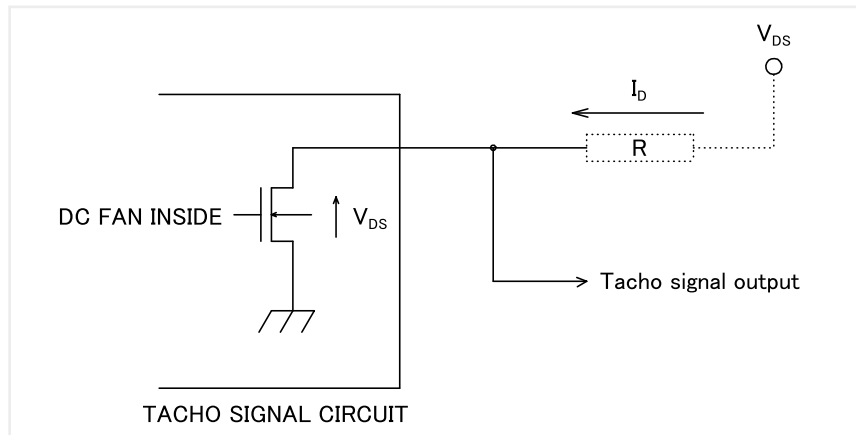
MODEL	Rating Voltage	Operating Voltage	Current		Input Power		Speed	Max. Air Flow		Max. Static Pressure		Noise	Mass
			Avg	Max	Avg	Max		(CFM)	(m³/min)	(in H₂O)	(Pa)		
	(V)	(V)	(A)*¹	(A)*¹	(W)*¹	(W)*¹	(min⁻¹)*¹	(CFM)	(m³/min)	(in H₂O)	(Pa)	(dB)*¹	(g)
11925SE-12R-FTD-W	12	7.0-13.8	0.62	0.86	7.44	10.32	3500	128.2	3.63	0.357	89	47.0	165
11925SE-24R-FTD-W	24	12.0-26.4	0.30	0.62	7.20	14.88	3500	128.2	3.63	0.357	89	47.0	165

*1: Values in Free Air

TACHO Specifications**Tachometer Signal**

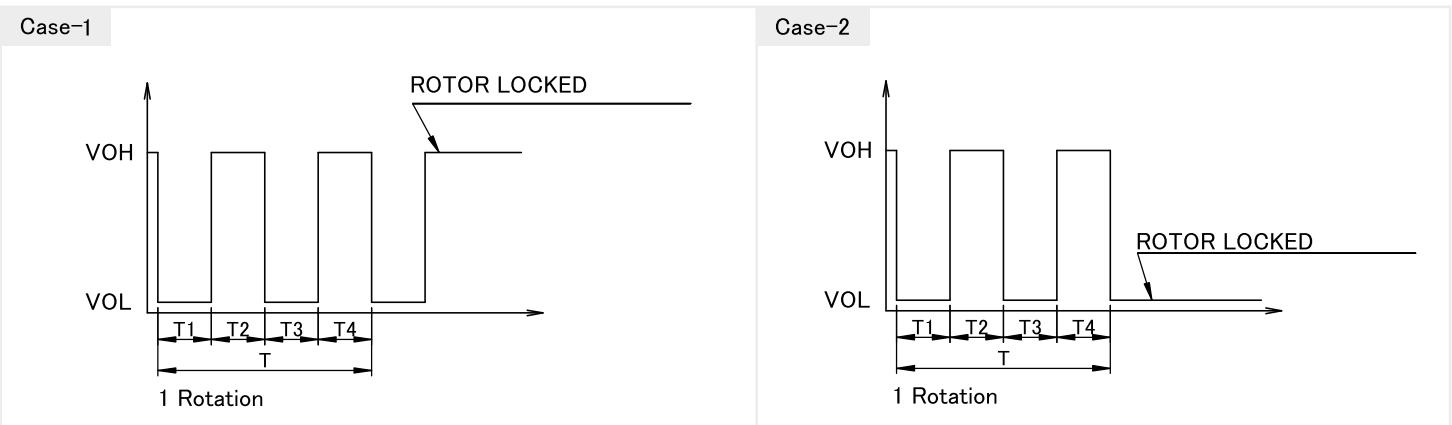
1. Output Circuit: Open Drain

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

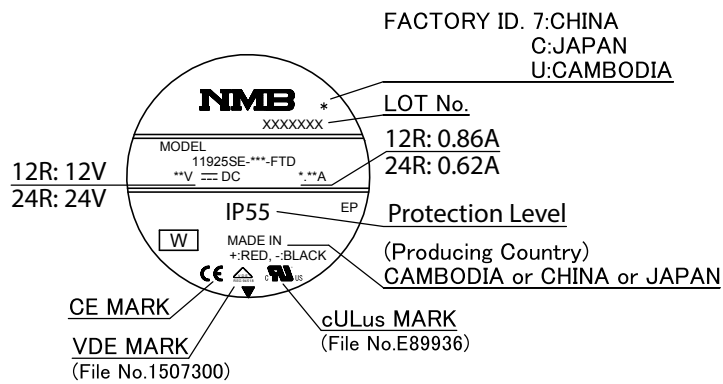
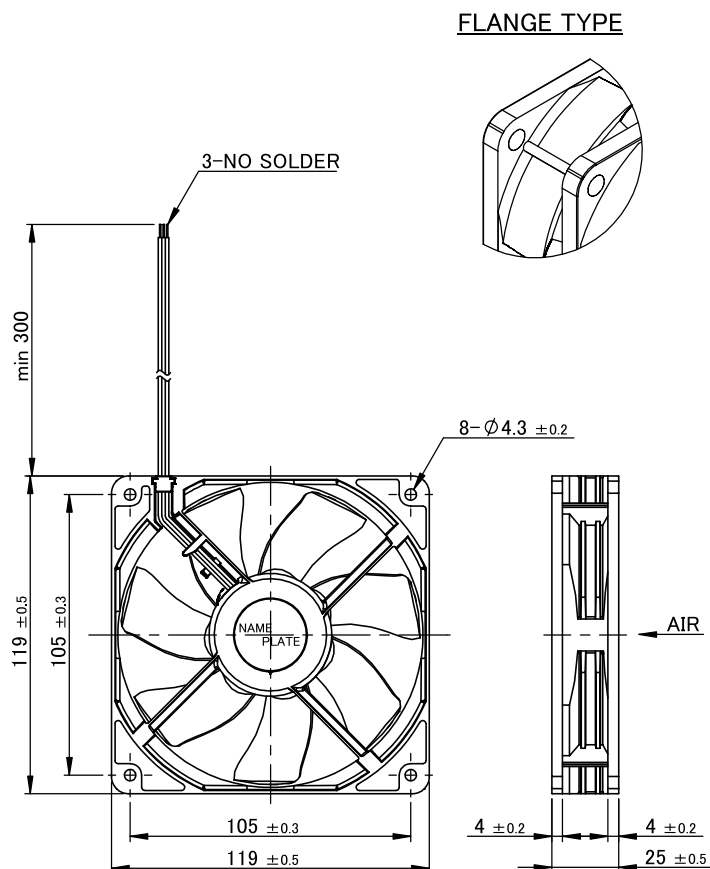
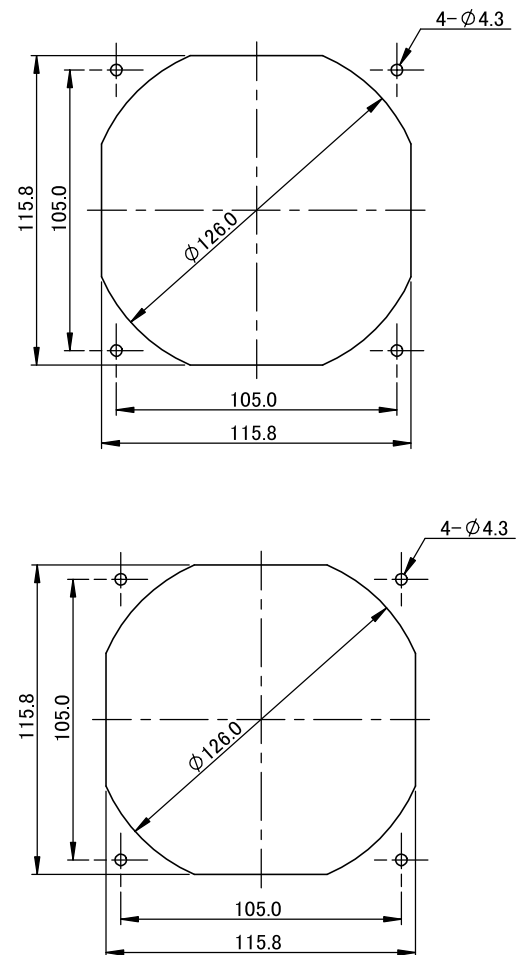
Output Signal Voltage



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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