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:
10MΩ 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.



Features

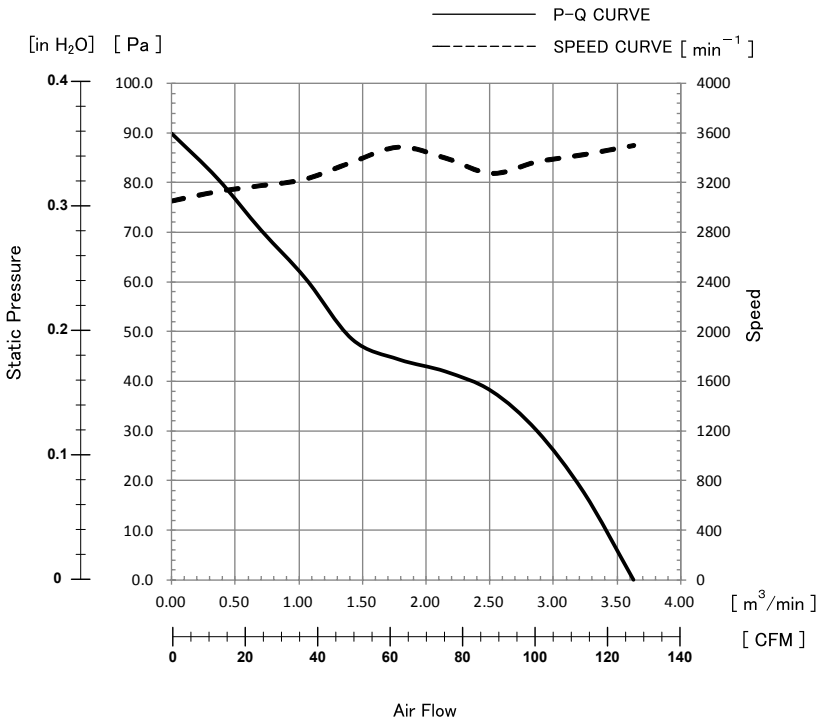
- Meets IP55 rating and below per IEC 60529 standard
- Long life and high reliability with NMB rust resistant precision ball bearings
- Open Drain Tacho Signal output for fan speed

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

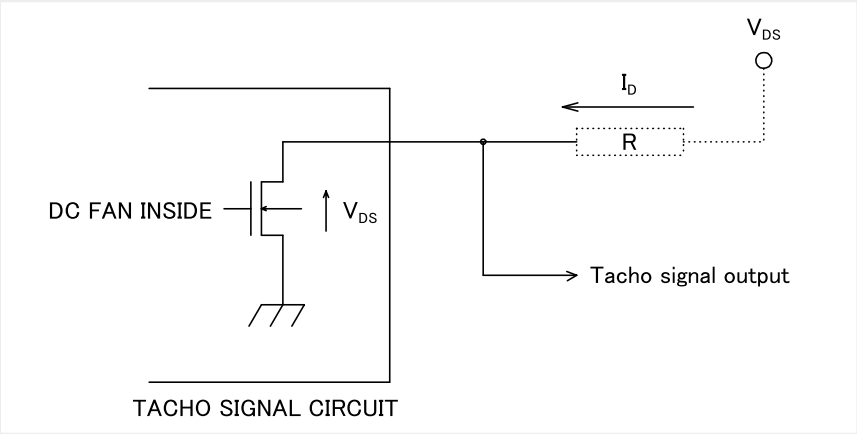
MODEL	Rating Voltage	Operating Voltage	Current		Input Power		Speed	Max. Air Flow		Max. Static Pressure		Noise	Mass
			Avg	Max	Avg	Max							
	(V)	(V)	(A)*1	(A)*1	(W)*1	(W)*1	(min⁻¹)*1	(CFM)	(m³/min)	(in H_2O)	(Pa)	(dB)*1	(g)
11925SE-12R-FTD-W	12	7.0-13.8	0.62	0.86	7.44	10.32	3500	128.2	3.63	0.357	89	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

TACHO Specifications

Tachometer Signal

1. Output Circuit: Open Drain
2. Specification

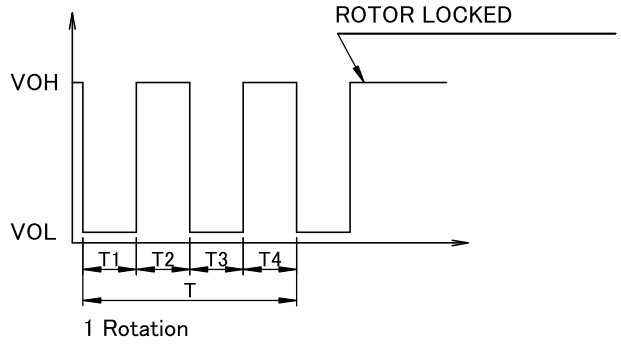
Absolute Maximum Ratings at Ta=25°C
V_{DS}max: +15V
$I_D$max: 5mA[V_{DS}(sat)max=0.5V]



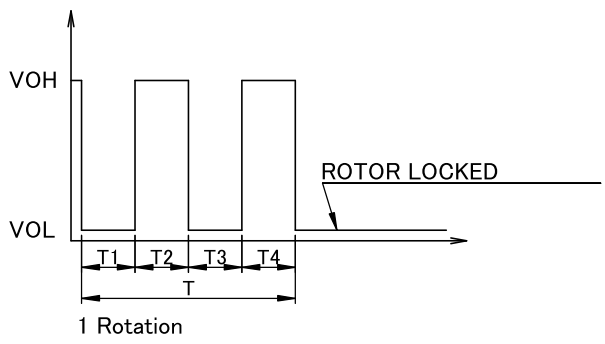
3. Output Waveform: At Rated Voltage

Output Signal Voltage

Case-1



Case-2



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 rotation

m: Fan Speed (min^{-1})

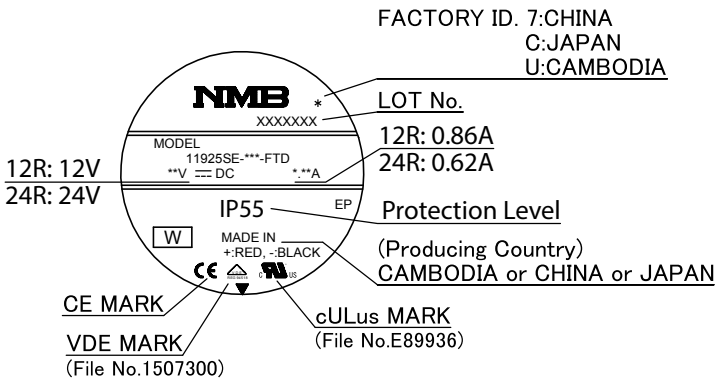
Tacho Duty Cycle=50%±10%

Up to IP 55 Protected/Tacho Output Brushless DC Fan

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Outlines

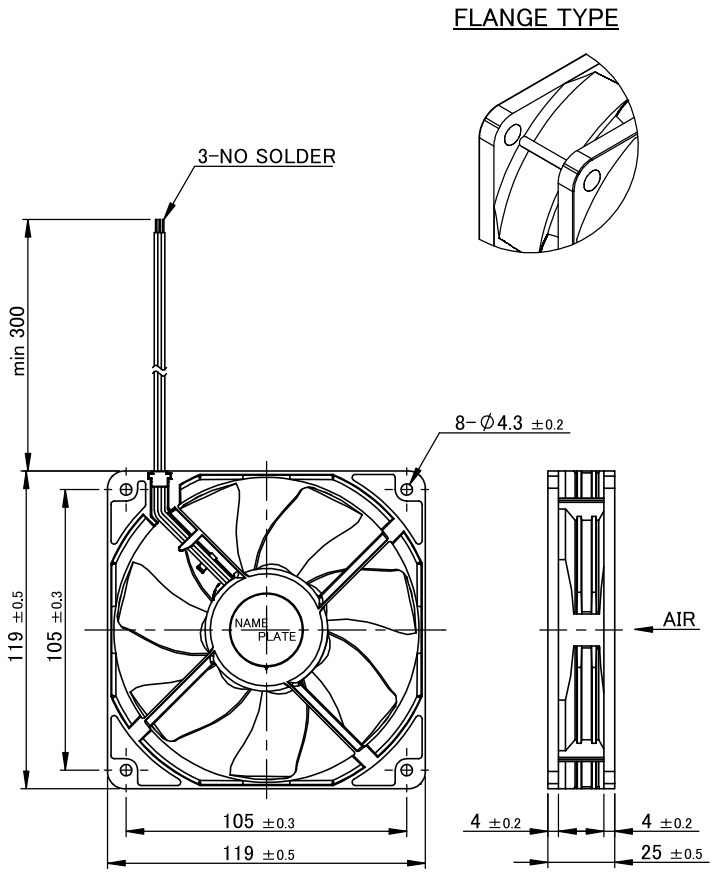
(Name Plate)



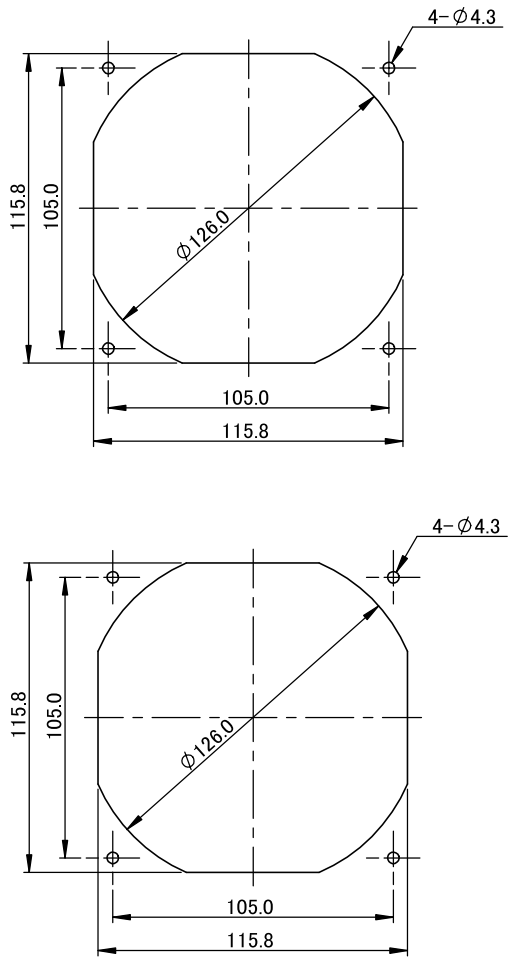
Materials

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.