

# 11925SA (旧4710SB)

## DC Axial Fan Ball Bearing

# 119<sup>□</sup>X25<sup>L</sup>



### General Specifications

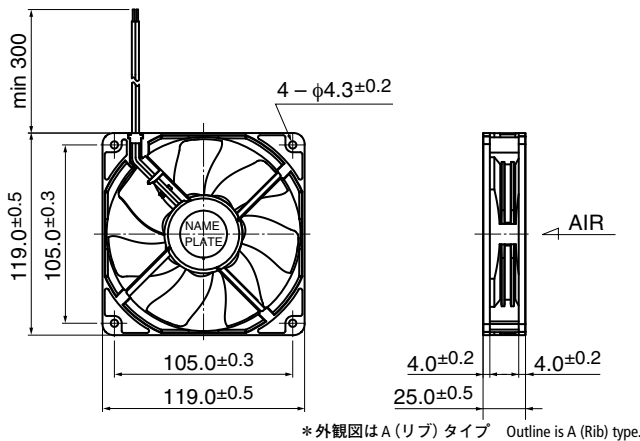
Motor Protection Auto Restart / Polarity Protection  
 Insulation Resistance 10MΩ or over with a DC500V Megger  
 Dielectric Withstand Voltage : AC700V 1s

: L, M, N Class : -10°C ~ +70°C (Operating) R Class : -10°C ~ +60°C (Operating)  
 : -10°C ~ +6°C (Operating)

Allowable Ambient Temperature Range : -40°C ~ +70°C (Storage)  
 実用上さしつかえない状態で結露無きこと  
 non-condensing environment

期待できる寿命 ※故障率 10% (L10 Life)  
 Expected Life ※ Failure Rate: 10% (L10 Life)  
 60°C 40,000 時間 (Hours)

### 外観図 Outline

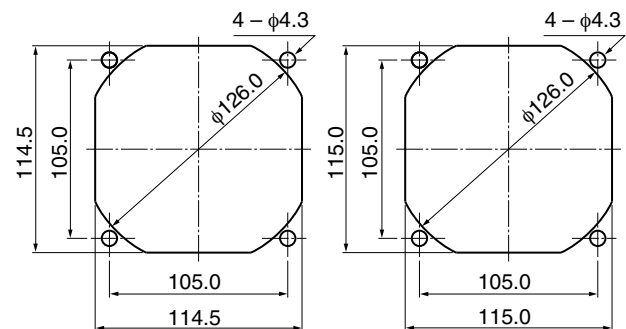


\*外観図は A (リブ) タイプ Outline is A (Rib) type.

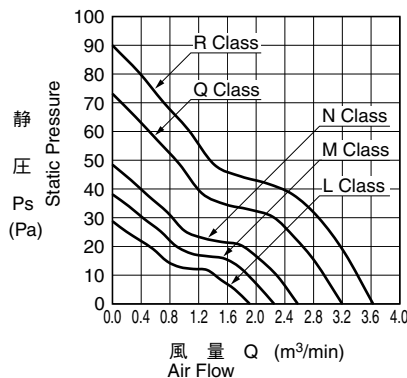
### 取付穴参考図 Panel Out-cuts

吸入側 (Inlet Side)

吐出側 (Outlet Side)



### 特性曲線 Characteristic Curves



### 材質 Material

ケーシング : プラスチック (ブラック) UL94V-0  
 インペラー : プラスチック (ブラック) UL94V-0  
 軸受 : ボールベアリング  
 リード線 : UL3385 AWG26 + : 赤 - : 黒

Casing : Plastic (Black) UL94V-0  
 Impeller : Plastic (Black) UL94V-0  
 Bearing : Ball Bearing  
 Lead Wire : UL3385 AWG26 + : Red, - : Black

### 仕様 Specifications

□=ケーシング形状 Casing Form --- A : リブタイプ Rib Type、E : フランジタイプ Flange Type

型式 Model	管理番号 Product No.	定格電圧	使用電圧範囲	定格電流	定格入力	定格回転速度	最大風量		最大静圧		騒音	質量		
		Rating Voltage (V)	Operating Voltage (V)	Current (A)*1	Input Power (W)*1	Speed (min <sup>-1</sup> )*1	Max. Air Flow (m <sup>3</sup> /min)*1	(CFM)*1	Max. Static Pressure (Pa)*1	(In H <sub>2</sub> O)*1	Noise (dB)*1	Mass (g)		
11925SA-12L-□AD-	0	12	7.0 ~ 13.8	0.13	1.56	1900	1.90	67.1	28.5	0.11	30.0	165		
11925SA-12M-□AD-	0			0.16	1.92	2200	2.25	79.4	38.0	0.15	33.5			
11925SA-12N-□AD-	0			0.24	2.88	2500	2.58	91.1	48.0	0.19	37.0			
11925SA-12R-□AD-	0	7.0 ~ 13.2	7.0 ~ 13.2	0.62	7.44	3500	3.63	128.2	89.0	0.36	47.0			
11925SA-24L-□AD-	0			24	12.0 ~ 27.6	0.06	1.44	1900	1.90	67.1	28.5		0.11	30.0
11925SA-24M-□AD-	0					0.08	1.92	2200	2.25	79.4	38.0		0.15	33.5
11925SA-24N-□AD-	0	0.11	2.64			2500	2.58	91.1	48.0	0.19	37.0			
11925SA-24Q-□AD-	0			0.20	4.80	3100	3.20	113.0	73.0	0.29	44.0			

回転方向 : ラベルから見て時計方向 Rotation: Clockwise as seen from the label side  
 風吹き出し方向 : ラベル側 Airflow Outlet: Label side

\*1: Average Values in Free Air

## 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 DC500V Megger

Dielectric Withstand Voltage:

AC 700V 1s or 500V 1min

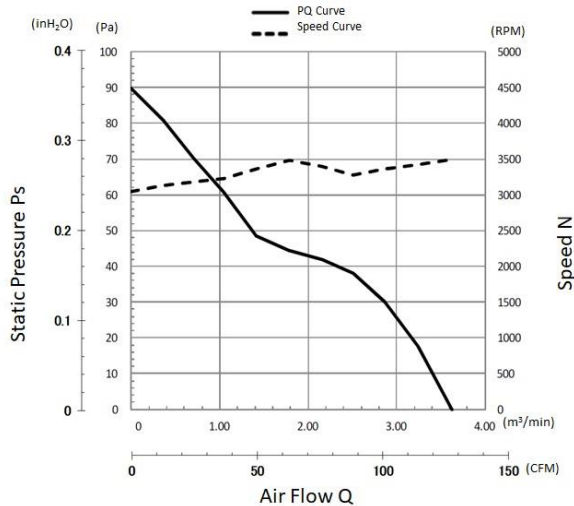
Allowable Ambient Temperature Range:

-10°C ~ +60°C (Operating)

-40°C ~ +70°C (Storage)

(non-condensing environment)

## Characteristics Curves



## PWM Benefits & Applications

### PWM Benefits

- Increased Life Expectancy
- Energy Saving
- Lower Vibration
- Lower Noise
- Current Spike Prevention

### PWM Applications

- Routers
- Switches
- Storage
- Data Centers
- Optical Repeaters
- Broadcast Equipment
- Inverters
- UPS
- Battery Chargers
- Fuel Cells
- Industrial Power Supplies
- Welders
- Plasma Cutters
- Instrumentation
- Test Equipment
- Enclosures and more

- Customized fan performances at multiple operating points.
- Peak efficiency resulting in lower total ownership costs.
- Cost effective and better reliability.

## Life Expectancy L10

60°C 40,000 Hours

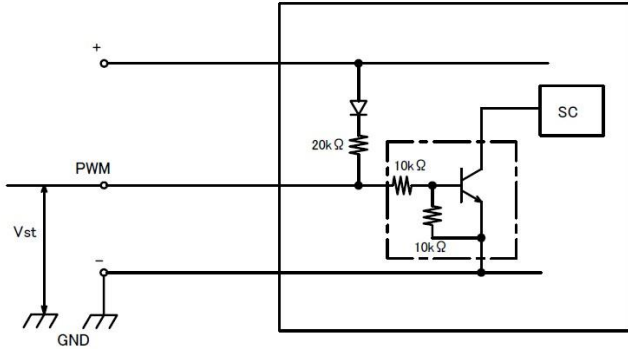
## Specifications

MODEL	Rated Voltage	Operating Voltage	Current		Input Power		Speed	Max. Air Flow		Max. Static Pressure		Noise	Mass
	(V)	(V)	Avg	Max	Avg	Max	(min <sup>-1</sup> ) <sup>1</sup>	(CFM)	(m <sup>3</sup> /min)	(inH <sub>2</sub> O)	(Pa)	(dB) <sup>1</sup>	(g)
	(V)	(V)	(A) <sup>-1</sup>	(A) <sup>-1</sup>	(W) <sup>-1</sup>	(W) <sup>-1</sup>	(min <sup>-1</sup> ) <sup>1</sup>	(CFM)	(m <sup>3</sup> /min)	(inH <sub>2</sub> O)	(Pa)	(dB) <sup>1</sup>	(g)
11925SA-12R-EUD-1	12	7.0~13.2	0.62	0.86	7.44	10.32	3500	128.2	3.63	0.36	89	47.0	165

\*1: Values in Free Air

## PWM Specifications

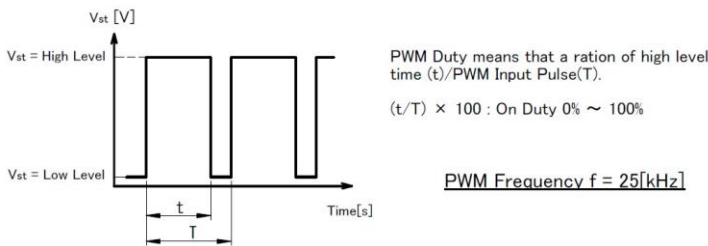
### PWM CONTROL CONNECTION



#### 1. PWM Control

- V<sub>st</sub> = Low Level (0V~0.4V) → Stop(On Duty 0%)
- V<sub>st</sub> = High Level (4.0V~5.0V) → Full Speed(On Duty 100%)
- V<sub>st</sub> = Open → Full Speed

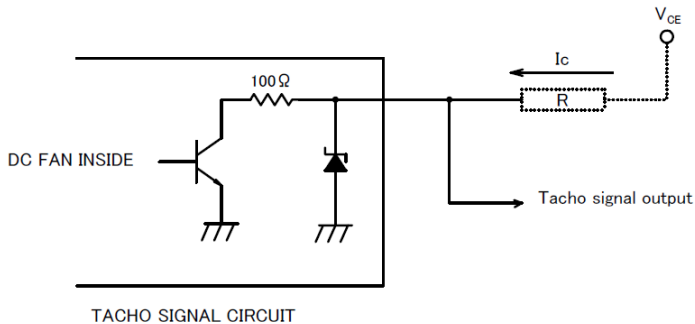
#### 2. PWM Duty & PWM Input Pulse



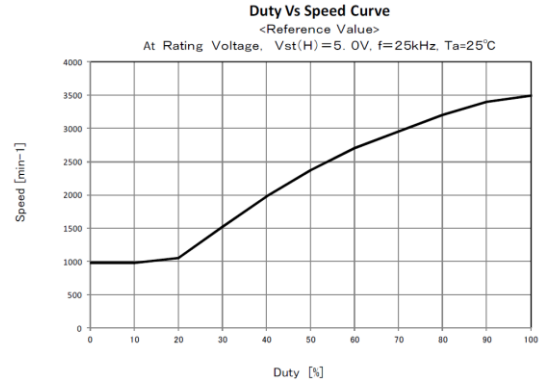
## TACHO Specifications

### TACHOMETER SIGNAL

1. OUTPUT CIRCUIT : OPEN COLLECTOR
2. SPECIFICATION
  - Ta=25°C
  - Absolute Maximum Ratings at Ta=25°C
  - V<sub>CE</sub> max : +15V
  - I<sub>c</sub> max : 5mA [V<sub>CE(sat)</sub>max = 1.0V]



## PWM Characteristics Curve



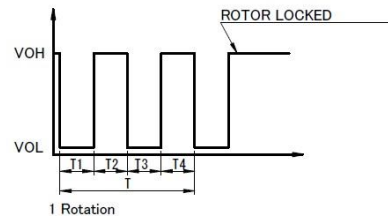
#### 3. The condition for PWM control are as follows.

- When you use this under PWM control, always be sure the motor's operation under practical mounting state. Fan motor may not start up caused by PWM control at very low speed condition.
- To run at Rating Voltage.

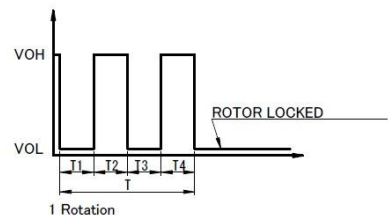
#### 3. OUTPUT WAVEFORM : AT RATED VOLTAGE

#### 4. OUTPUT SIGNAL VOLTAGE

##### 3-1 Case-1



##### 3-2 Case-2

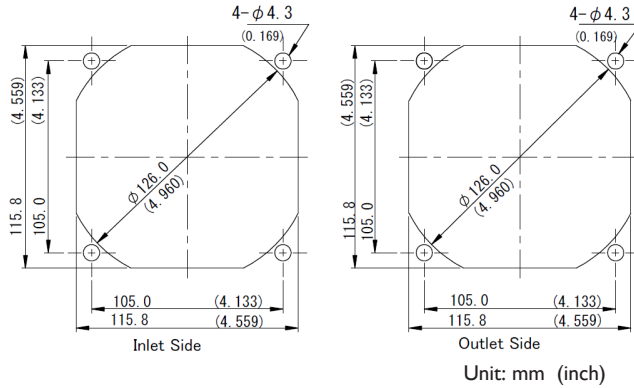


- 1) When the rotor is locked at V<sub>OH</sub> position of signal, signal keeps V<sub>OH</sub> position.
- 2) When the rotor is locked at V<sub>OL</sub> position of signal, signal keeps V<sub>OL</sub> position.
- 3) T=T<sub>1</sub>+T<sub>2</sub>+T<sub>3</sub>+T<sub>4</sub>=60°/m=1 rotation

m : min-1

Tach Duty Cycle=50%±10%

## Panel Cut-Outs

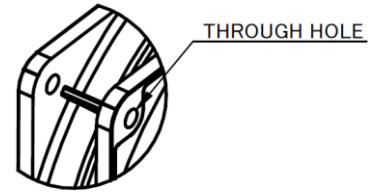
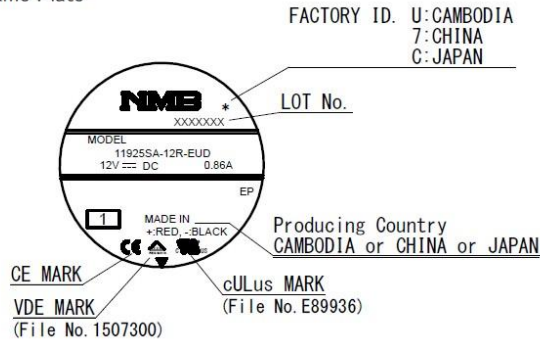


## Materials

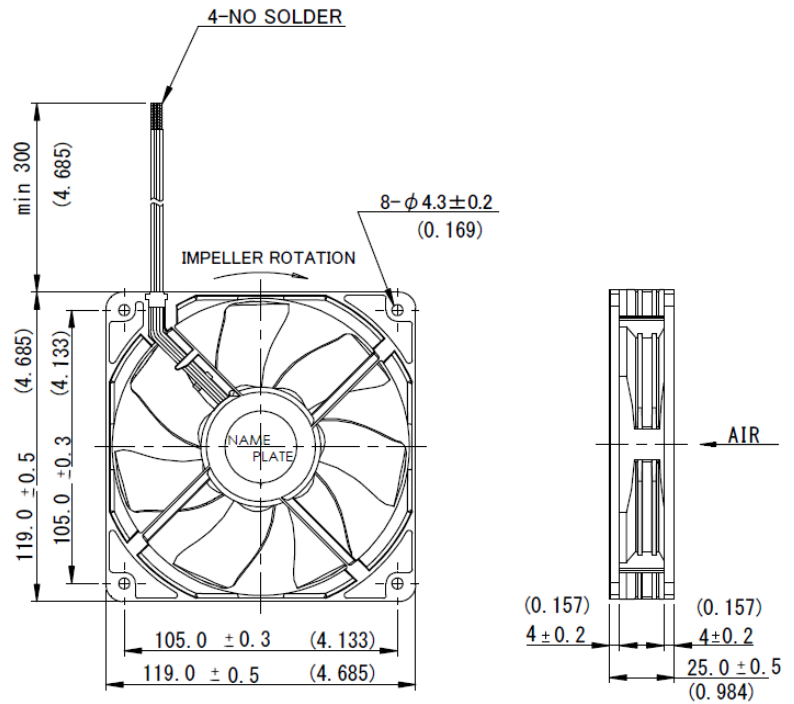
- Casing : Plastic (Black UL94V-0)
- Impeller : Plastic (Black UL94V-0)
- Bearing : Ball Bearing
- Lead Wire : UL3385 AWG26
- (+) : Red (-) : Black
- PWM : Brown Tach : White

## Outline

Name Plate



FLANGE TYPE



Unit: mm (inch)

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## NMB Technologies:

<a href="#"><u>11925SA-12L-AL-D0</u></a>	<a href="#"><u>11925SA-12L-AT-D0</u></a>	<a href="#"><u>11925SA-12L-EL-D0</u></a>	<a href="#"><u>11925SA-12L-ET-D0</u></a>	<a href="#"><u>11925SA-12M-EA-D0</u></a>
<a href="#"><u>11925SA-12M-ET-D0</u></a>	<a href="#"><u>11925SA-12N-AT-D0</u></a>	<a href="#"><u>11925SA-12N-EA-D0</u></a>	<a href="#"><u>11925SA-12N-ET-D0</u></a>	<a href="#"><u>11925SA-24L-EA-D0</u></a>
<a href="#"><u>11925SA-24L-ET-D0</u></a>	<a href="#"><u>11925SA-24M-AL-D0</u></a>	<a href="#"><u>11925SA-24M-AT-D0</u></a>	<a href="#"><u>11925SA-24M-EA-D0</u></a>	<a href="#"><u>11925SA-24M-ET-D0</u></a>
<a href="#"><u>11925SA-24P-AT-D0</u></a>	<a href="#"><u>11925SA-24Q-AT-D0</u></a>	<a href="#"><u>11925SA-12L-AA-D0</u></a>	<a href="#"><u>11925SA-12M-AA-D0</u></a>	<a href="#"><u>11925SA-12N-AA-D0</u></a>
<a href="#"><u>11925SA-24L-AA-D0</u></a>	<a href="#"><u>11925SA-24M-AA-D0</u></a>	<a href="#"><u>11925SA-24N-AA-D0</u></a>	<a href="#"><u>11925SA-24N-EA-D0</u></a>	<a href="#"><u>11925SA-24P-AA-D0</u></a>
<a href="#"><u>11925SA-24Q-AA-D0</u></a>	<a href="#"><u>11925SA-24Q-EA-D0</u></a>	<a href="#"><u>11925SA-12L-EA-D0</u></a>		