

# AC Input/Low-Power Consumption EMU Series

<Additional Information>

- Technical reference → Page H-1
- Regulations & Standards → Page I-2



● For detailed information about regulations and standards, please see the Oriental Motor website.



View Expanded Product Information, Specifications, CAD, Accessories & more online. Visit [www.orientalmotor.com/catalog](http://www.orientalmotor.com/catalog) or use the QR code and select "EMU Series".

Reduced power consumption through the use of a built-in brushless motor. With support for a wide voltage range, the fans can use single-phase 100-240 VAC (50/60 Hz). The same characteristics can be achieved regardless of the frequency used.

## Features

### Low-Power Consumption

By using brushless motors, power consumption is reduced by approximately 68%\*.

### Lifetime of 60,000 hours (approx. 6 years)

By using brushless motors, heat generation can be reduced and unit life is increased 2.2 times\*.

\*Compared to **MU1238A-21B**.

### Wide Voltage Support

Can be used with single-phase 100-240 VAC (50/60 Hz) power supply. The same characteristics can be achieved regardless of the frequency used.

### Lightweight

The mass of the fan has been lightened by approximately 45%\* by using resin for the frame.

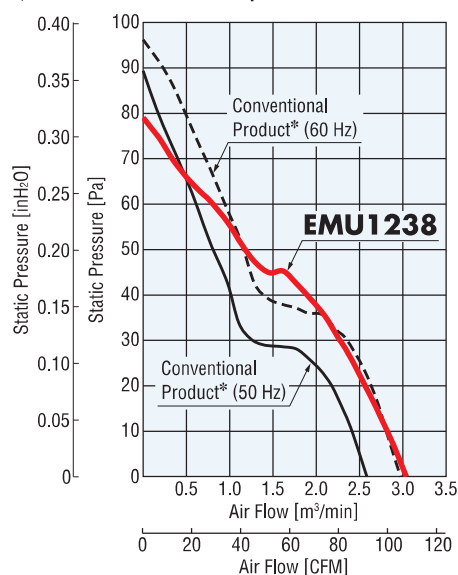
## Comparison of Specifications and Characteristics between the EMU Series and Conventional Products

### ◇ Specification Comparison

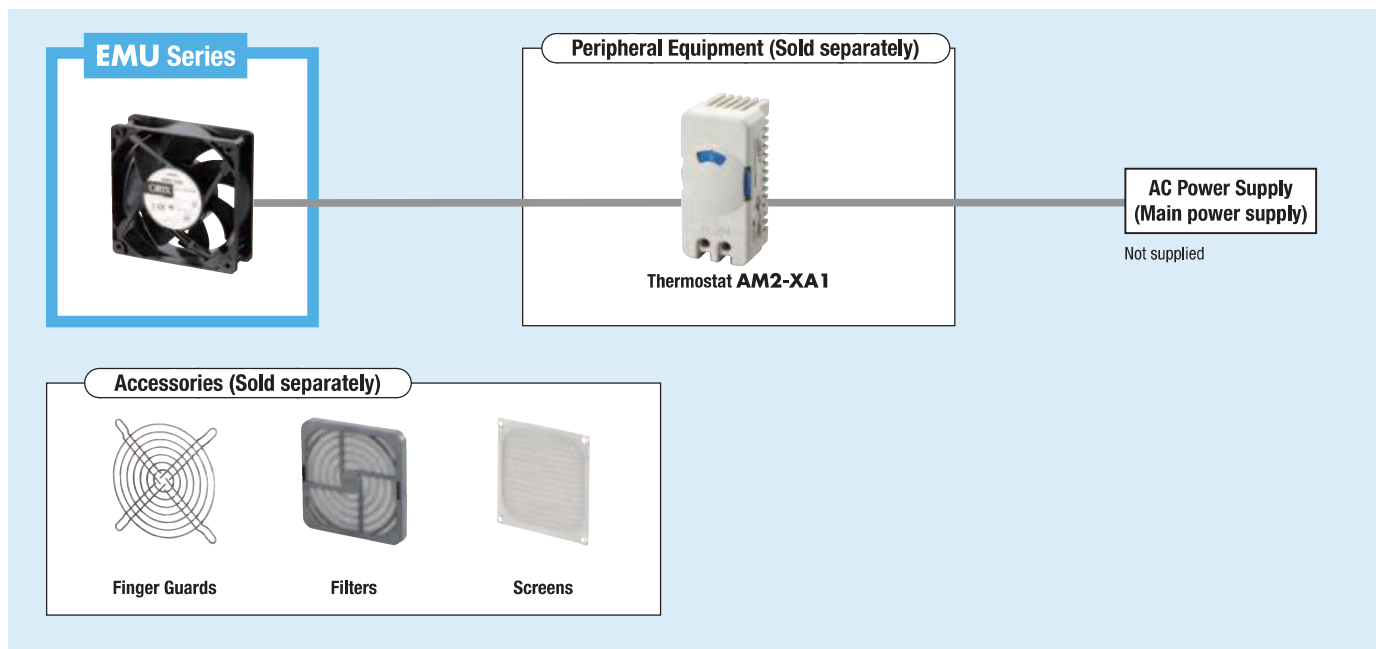
Item	Product	EMU1238-□	Conventional Product* 50/60 Hz
Power Consumption [W]		<b>4.4</b>	14/13
Speed [r/min]		3250	2800/3250
Max. Air Flow [m <sup>3</sup> /min (CFM)]		3 (106)	2.7/3 (95.3/106)
Max. Static Pressure [Pa (inH <sub>2</sub> O)]		84 (0.337)	81/81 (0.325/0.325)
Noise Level [dB]		42	43/46
Mass [kg (lb.)]		<b>0.29 (0.64)</b>	0.53 (1.2)

\*MU1238A-21B

### ◇ Characteristics Comparison



## System Configuration



### ● Example of System Configuration

Fan	Sold Separately	
	Thermostat	Finger Guard
<b>EMU1238-1</b>	<b>AM2-XA1</b>	<b>FG12D</b>
\$52.00	\$35.00	\$6.00

● The system configuration shown above is an example. Other combinations are also available.

## Product Number

### ● Fan Only

**EMU 12 38 - 1**

①      ②      ③      ④

①	Series	<b>EMU: EMU Series</b>
②	Frame Size	<b>12:</b> 120 mm (4.72 in.)
③	Frame Thickness	<b>38:</b> 38 mm (1.50 in.)
④	Plug Cord Length (Included)	<b>1:</b> 1 m (3.3 ft.), <b>2:</b> 2 m (6.6 ft.)

### ● Fan Kit

**T - EMU1238-1 - G**

①      ②      ③

①	Fan Kit Order Code
②	Fan Product Name
③	<b>G:</b> With finger guard and installation screws

Overview, Product Series

Axial Flow Fans

AC Input Low-Power Consumption **EMU**

AC Input Compact Size **MU**

AC Input Large Size, Large Air Flow **MRS**

AC Input Long-Life **MRE**

DC Input **MDS MD**

DC Input Alarm **MDA**

DC Input Variable Flow **MDV**

DC Input Long-Life **MDE**

DC Input Splash Proof **MDP**

Centrifugal Blowers

AC Input **MB**  
DC Input **MBD**

Cross Flow Fans

AC Input **MF**  
DC Input **MFD**

Enclosure Fan Modules

Thermostat

Accessories

Installation

## EMU Series

120 mm – 38 mm Thick  
( 4.72 in. – 1.50 in. Thick)



Operating Voltage Range: ±10%  
Overheat Protection: Built-in Overheat Protection Circuit  
Color  
Frame: Black    Blades: Black  
Materials  
Frame: PBT (Flammability grade V-0)  
Blades: Polyphenylene Oxide (Flammability grade V-1)

80 mm  
( 3.15 in.)

92 mm  
( 3.62 in.)

120 mm  
( 4.72 in.)

140 mm  
( 5.51 in.)

160 mm  
( 6.30 in.)

180 mm  
( 7.09 in.)

200 mm  
( 7.87 in.)

250 mm  
( 9.84 in.)



### Specifications

Product Name	Voltage VAC	Frequency Hz	Current A	Input W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB (A)
						m <sup>3</sup> /min	CFM	Pa	inH <sub>2</sub> O	
<b>EMU1238-</b> <input type="checkbox"/>	Single-Phase 100-240	50/60	0.08	4.4	3250	3	106	84	0.337	42

● A number indicating the desired length of **1** [1 m (3.3 ft.)] or **2** [2 m (6.6 ft.)] is entered where the box  is located within the product name when the plug cord included with the product.

### Product Line

#### ● Fan Only

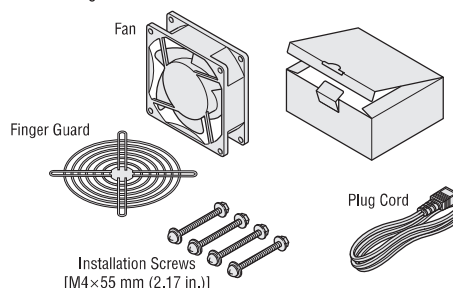
Product Name	List Price
<b>EMU1238-1</b>	\$52.00
<b>EMU1238-2</b>	\$52.00

#### ● Fan Kit

Product Name	List Price
<b>T-EMU1238-1-G</b>	\$58.00
<b>T-EMU1238-2-G</b>	\$58.00

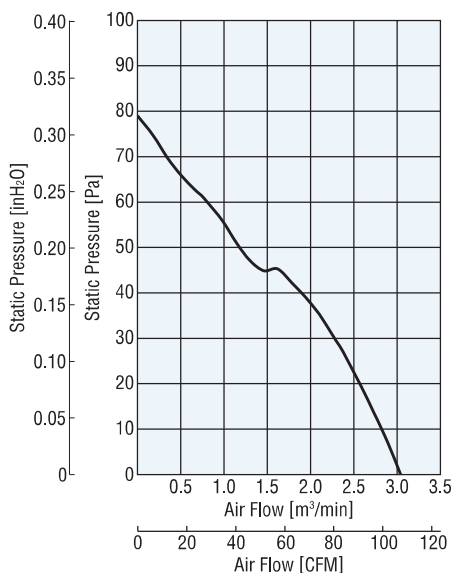
The following items are included with each product.  
Fan, Plug Cord for Connection to Power Supply,  
Operating Manual

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### Air Flow – Static Pressure Characteristics

(The characteristics are applicable for the fan only.)

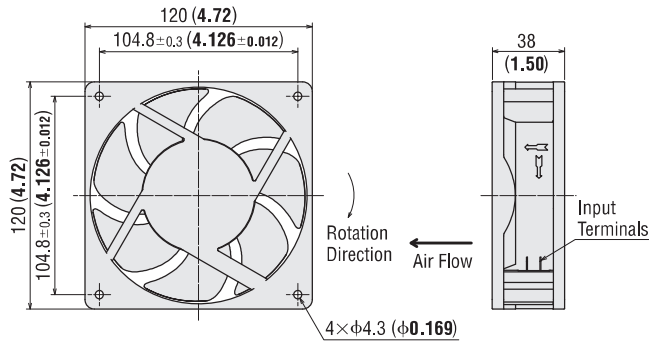


## Dimensions Unit = mm (in.)

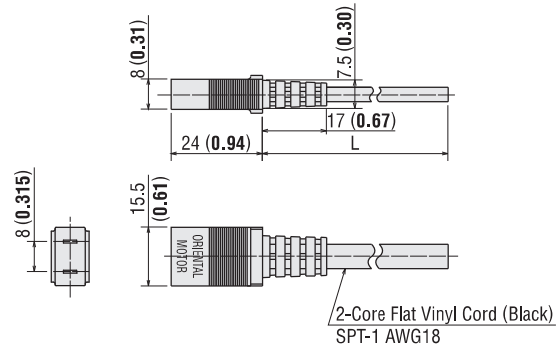
### Fan

Mass: 0,29 kg (0,64 lb.)

2D CAD E228 3D CAD

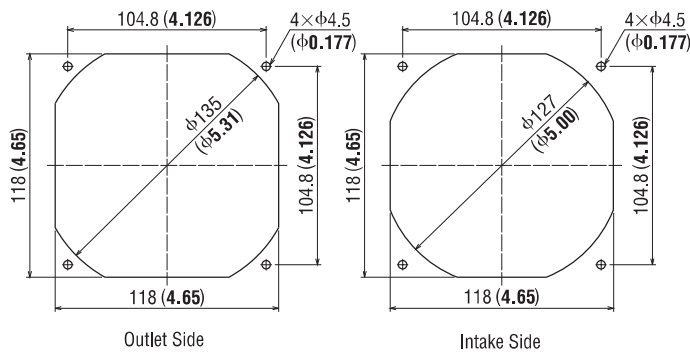


### Plug Cord for Connection to Power Supply (Included)

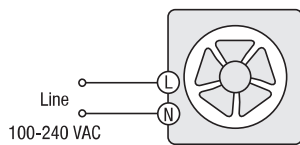


Product Name	L [mm (ft.)]
<b>EMU1238-1</b>	1000 (3.3 ft.)
<b>EMU1238-2</b>	2000 (6.6 ft.)

## Panel Cut-Out Unit = mm (in.)



## Connecting Diagram



## Thermostat

The thermostat automatically controls the operation of the fan in accordance with temperature fluctuations inside the equipment. This helps improve the equipment's "environmental" performance relative to energy savings, noise reduction, etc.



Thermostat **AM2-XA1**  
 Number of Connectable Fans: 9  
 ● Page → G-104

## Accessories

Product	Product Name	Page
Finger Guard	<b>FG12D</b>	G-108
Filter	<b>FL12</b>	G-111
Screen	<b>FS12S</b>	G-113

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