

Cooling Fans

# Enclosure Fan Modules

Overview

Axial  
Flow  
FansAC 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  
BlowersAC Input  
**MB**  
DC Input  
**MBD**Cross  
Flow  
FansAC Input  
**MF**  
DC Input  
**MFD**

Enclosure Fan Modules

Enclosure  
Fan Modules

Thermostat

# Enclosure Fan Modules



These enclosure fan modules combine an axial flow fan with peripheral equipment, such as finger guard, filter media, frame and mounting hardware.

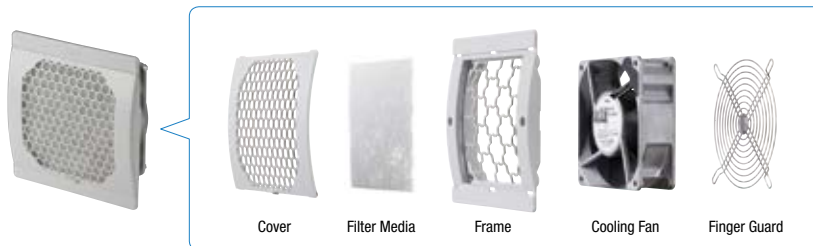


See Full Product Details Online  
[www.orientalmotor.com](http://www.orientalmotor.com)

- Manual
- Specifications
- Dimensions
- CAD
- Characteristics
- Connection and Operation







## What is an Enclosure Fan?

An Enclosure Fan is a combination package consisting of an axial flow fan and peripheral equipment (cover, filter media, frame and finger guard). It is suitable for cooling a control box or other enclosure.



● For finger guard IP2X type with filter, the product is delivered fully assembled.

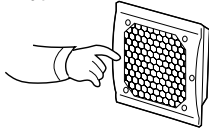
## Lineup

Module (Color) List Price	Module Dimensions W×H [mm (in.)]					
	129×134 (5.08×5.28)	157×170 (6.18×6.69)	161×158 (6.34×6.22)	180×180 (7.09×7.09)	209×226 (8.23×8.90)	284×284 (11.2×11.2)
Finger Guard IP2X Type (Light Gray) \$50.00~			 AC DC □119 mm (4.69 in.) Fan Max. Air Flow: 2.7 m <sup>3</sup> /min (95.3 CFM)			
Slit Metal Plate IP4X Type (Light Beige) \$94.00~				 AC DC □119 mm (4.69 in.) Fan Max. Air Flow: 1.1 m <sup>3</sup> /min (38.8 CFM)		 AC □180 mm (7.09 in.) Fan Max. Air Flow: 8.3 m <sup>3</sup> /min (293 CFM)
Dust and Water Resistant IP43 Type IP55 Type (Light Gray) \$84.00~	 AC □92 mm (3.62 in.) Fan Max. Air Flow: 0.49 m <sup>3</sup> /min (17.3 CFM)	 AC DC □119 mm (4.69 in.) Fan Max. Air Flow: 0.83 m <sup>3</sup> /min (29.3 CFM)			 AC DC □119 mm (4.69 in.) Fan Max. Air Flow: 1.5 m <sup>3</sup> /min (53.0 CFM)	

- For finger guard modules, enclosure fan modules that are equipped with filters and those that are not equipped with filters are available. Slit metal plate modules and dust and water resistant modules are equipped with filters.
- All modules are available in 2 types of air flow direction: suction type and exhaust type.
- Maximum air flow values are examples.

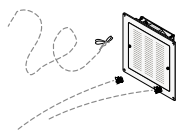
## Differentiating Features

Finger Guard  
IP2X Type



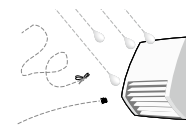
Can offer protection against finger contact.

Slit Metal Plate  
IP4X Type



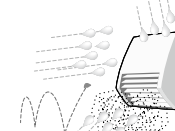
The equipment is protected against ingress of wires [with a diameter of 1 mm (0.04 in.) or more]

Dust and Water Resistant  
IP43 Type



The equipment is protected against ingress of wires [with a diameter of 1 mm (0.04 in.) or more] and sprayed water (coming from directions within a range of 60° relative to the vertical plane)

Dust and Water Resistant  
IP55 Type



The equipment is protected against the ingress of dust and water jets (from all directions)

For information about degree of protection → Website

Overview

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

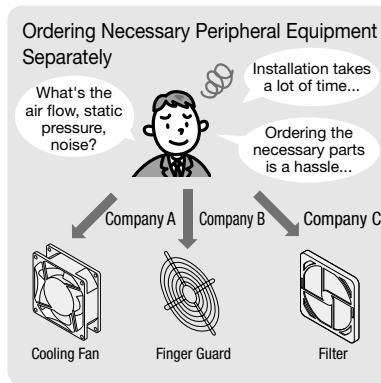
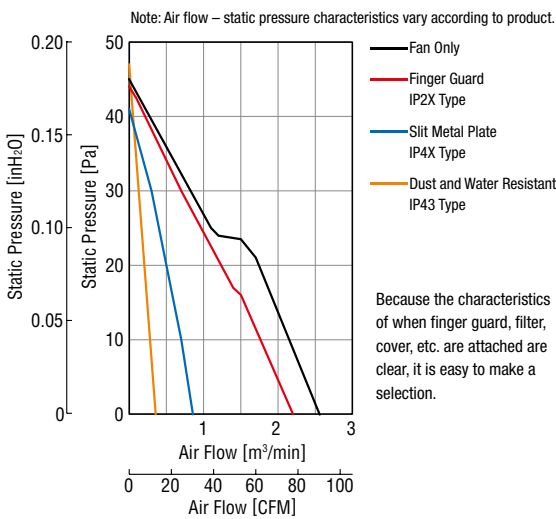
Thermostat

## Features

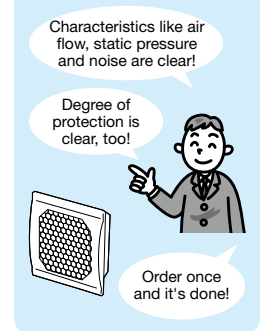
### Integrated Structure

Because the enclosure fan modules have an integrated structure, their characteristics are clear, and they are easy to select and easy to install. Also, their integrated structure makes them easy to order.

### Clearly Defined Characteristics Make Ordering Easy

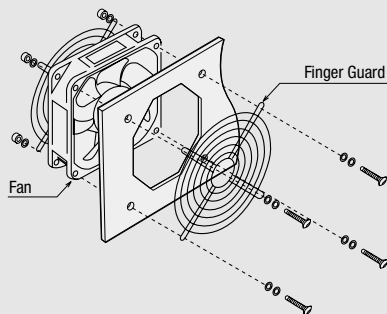


### Using an Enclosure Fan Module



### Easy Installation

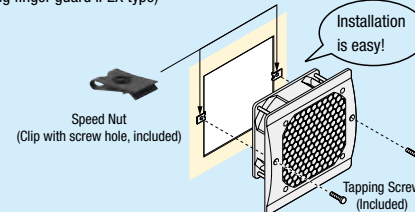
When Necessary Peripheral Equipment are Ordered Separately



Assembling multiple parts screw by screw takes time, and replacement is difficult.

Installation is Easy with the Integrated Structure of the Enclosure Fan Module

(When using finger guard IP2X type)

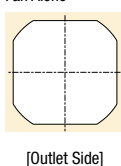


### Speed Nut Improves Work Efficiency

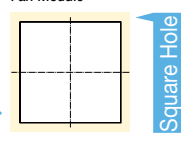
By inserting the speed nut into the installation plate, the fan module can be fixed with tapping screws from the exterior of the control box.

### Installation holes are easy-to-machine square holes.

Using Axial Flow Fan Alone

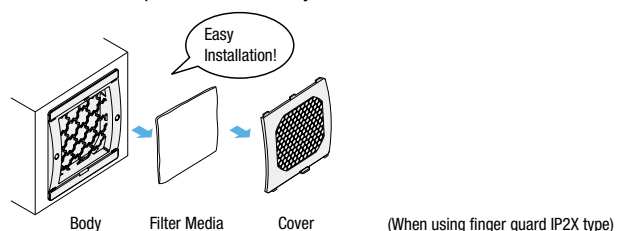


Using Enclosure Fan Module



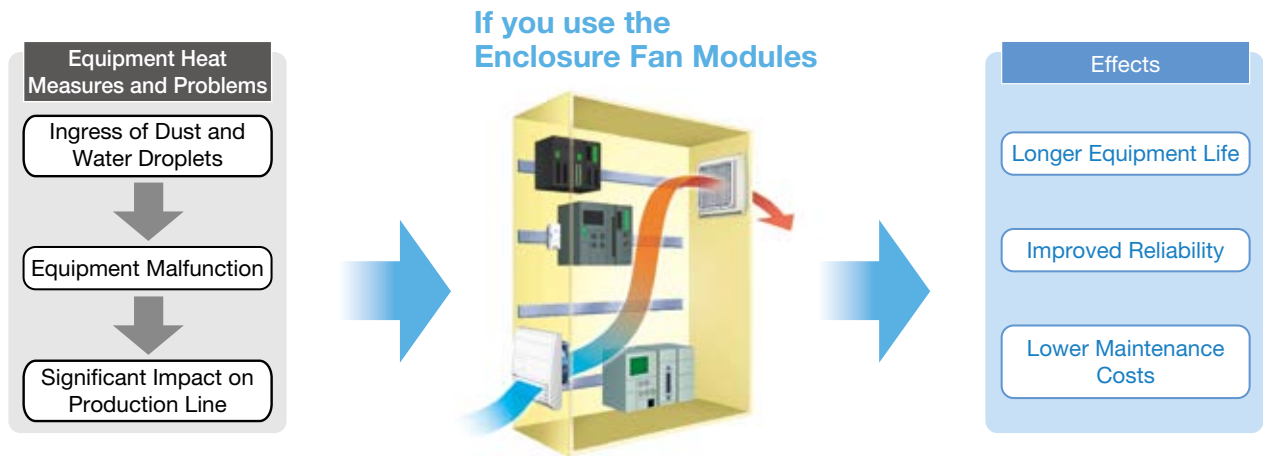
### Easy Maintenance

The body cover can be easily detached from the outside. Filter media replacement is easy.



### Improvement of Equipment Reliability (Slit Metal Plate IP4X Type, Dust and Water Resistant IP43-IP55 Type)

If dust or water droplets enter the control box, the internal devices may malfunction, which can affect the entire equipment system. The slit metal plate IP4X type modules and the dust and water resistant IP43-IP55 type modules prevent the infiltration of dust and water droplets, which improves the service life and reliability of the devices contained in the enclosure.

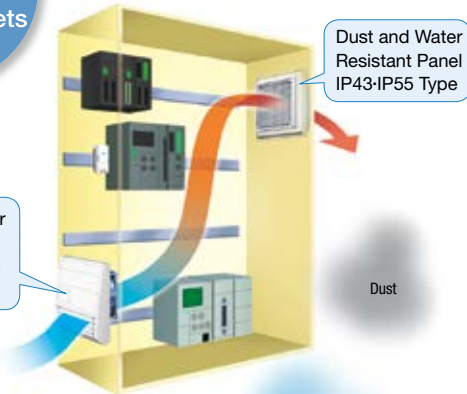


## Application Example

Environment with Dust and Water Droplets

Dust and Water Resistant IP43-IP55 Type Suction Type

Dust and Water Resistant Panel IP43-IP55 Type

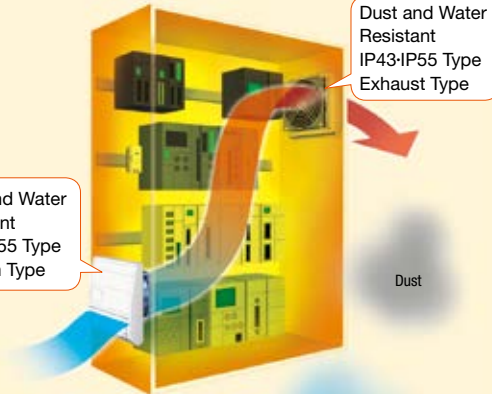


Air is suctioned using the fans at the bottom, and exhausted from the panel at the top. The pressure inside the enclosure is raised, so that dust does not easily enter the enclosure through gaps other than those on the suction intake side (such as through gaps at case joints and around cable holes).

Enclosure Contains Many Devices and Internal Temperature is High

Dust and Water Resistant IP43-IP55 Type Exhaust Type

Dust and Water Resistant IP43-IP55 Type Suction Type

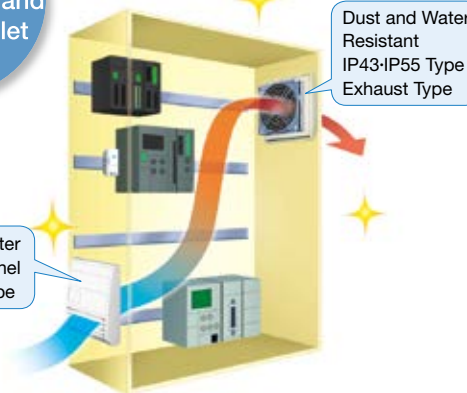


Air is suctioned using the fans at the bottom, and exhausted from the fans at the top. This method is suitable for applications where components are densely installed in the enclosure and the method on the left does not provide sufficient cooling.

Environment Free of Dust and Water Droplet

Dust and Water Resistant Panel IP43-IP55 Type

Dust and Water Resistant IP43-IP55 Type Exhaust Type



The pressure inside the enclosure is lowered, so that air does not easily leak out through gaps other than the outlet side (such as through gaps at case joints and around cable holes). Appropriate for use in an environment with no dust or water droplets nearby.

Overview

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

## Further Reduction in Power Consumption and Noise with the Use of a Fan Thermostat

What is a Fan Thermostat?

It is a switch that turns the contact ON when a set temperature is reached.

When used with a fan, it can control the ON/OFF state of the fan.

Reduced Power Consumption!

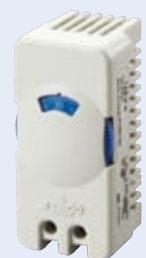
The fan operates only when necessary



Additional Benefits!

- Minimizes noise when the fan is rotating!
- Multiple fans can be controlled simultaneously!

Fan Thermostat  
**AM2-XA1**  
**AM2-WA1**



● For details, check page H-62.



## ◇ Fan and Slit Metal Plate IP4X Type

Module Dimensions W×H [mm (in.)]	Installed Fan	Power Supply Voltage VAC	Cooling Method	Product Name	List Price
180×180 (7.09×7.09)	□119 mm - 25 mm Thick (□4.69 in. - 0.98 in. Thick)	Single-Phase 115	Exhaust Type	<b>C-MU1225S-21-SEG</b>	\$105.00
			Suction Type	<b>C-MU1225S-21-SSG</b>	\$105.00
		Single-Phase 220/230	Exhaust Type	<b>C-MU1225S-51-SEG</b>	\$105.00
			Suction Type	<b>C-MU1225S-51-SSG</b>	\$105.00
	□119 mm - 38 mm Thick (□4.69 in. - 1.50 in. Thick)	Single-Phase 115	Exhaust Type	<b>C-MU1238A-21B-SEG</b>	\$104.00
			Suction Type	<b>C-MU1238A-21B-SSG</b>	\$104.00
		Single-Phase 220/230	Exhaust Type	<b>C-MU1238A-51B-SEG</b>	\$105.00
			Suction Type	<b>C-MU1238A-51B-SSG</b>	\$105.00
284×284 (11.2×11.2)	□180 mm - 90 mm Thick (□7.09 in. - 3.54 in. Thick)	Single-Phase 100/110/115	Exhaust Type	<b>C-MRS18-BH-SEG</b>	\$399.00
			Suction Type	<b>C-MRS18-BH-SSG</b>	\$399.00
		Single-Phase 200/220/230	Exhaust Type	<b>C-MRS18-DH-SEG</b>	\$409.00
			Suction Type	<b>C-MRS18-DH-SSG</b>	\$409.00

## ◇ Fan and Dust and Water Resistant IP43 Type

Module Dimensions W×H [mm (in.)]	Installed Fan	Power Supply Voltage VAC	Cooling Method	Product Name	List Price	
129×134 (5.08×5.28)	□92 mm - 25 mm Thick (□3.62 in. - 0.98 in. Thick)	Single-Phase 115	Exhaust Type	<b>C-MU925S-21-PEG</b>	\$84.00	
		Single-Phase 115	Suction Type	<b>C-MU925S-21-PSG</b>	\$84.00	
		Single-Phase 220/230	Exhaust Type	<b>C-MU925S-51-PEG</b>	\$85.00	
		Single-Phase 220/230	Suction Type	<b>C-MU925S-51-PSG</b>	\$85.00	
157×170 (6.18×6.69)	□119 mm - 38 mm Thick (□4.69 in. - 1.50 in. Thick)	Single-Phase 115	Exhaust Type	<b>C-MU1238B-21B-PEMG</b>	\$96.00	
<b>C-MU1238B-21B-PELG</b>				\$108.00		
Suction Type			<b>C-MU1238B-21B-PSMG</b>	\$96.00		
			<b>C-MU1238B-21B-PSLG</b>	\$108.00		
Single-Phase 220/230			Exhaust Type	<b>C-MU1238B-51B-PEMG</b>	\$97.00	
				<b>C-MU1238B-51B-PELG</b>	\$109.00	
Suction Type		<b>C-MU1238B-51B-PSMG</b>	\$97.00			
		<b>C-MU1238B-51B-PSLG</b>	\$109.00			
209×226 (8.23×8.90)						
157×170 (6.18×6.69)						
209×226 (8.23×8.90)						
157×170 (6.18×6.69)						
209×226 (8.23×8.90)						

## ◇ Fan and Dust and Water Resistant IP55 Type

Module Dimensions W×H [mm (in.)]	Installed Fan	Power Supply Voltage VAC	Cooling Method	Product Name	List Price	
129×134 (5.08×5.28)	□92 mm - 25 mm Thick (□3.62 in. - 0.98 in. Thick)	Single-Phase 115	Exhaust Type	<b>C-MU925S-21-PEWG</b>	\$93.00	
		Single-Phase 115	Suction Type	<b>C-MU925S-21-PSWG</b>	\$93.00	
		Single-Phase 220/230	Exhaust Type	<b>C-MU925S-51-PEWG</b>	\$94.00	
		Single-Phase 220/230	Suction Type	<b>C-MU925S-51-PSWG</b>	\$94.00	
157×170 (6.18×6.69)	□119 mm - 38 mm Thick (□4.69 in. - 1.50 in. Thick)	Single-Phase 115	Exhaust Type	<b>C-MU1238B-21B-PEWMG</b>	\$105.00	
<b>C-MU1238B-21B-PEWLG</b>				\$117.00		
Suction Type			<b>C-MU1238B-21B-PSWMG</b>	\$105.00		
			<b>C-MU1238B-21B-PSWLG</b>	\$117.00		
Single-Phase 220/230			Exhaust Type	<b>C-MU1238B-51B-PEWMG</b>	\$106.00	
				<b>C-MU1238B-51B-PEWLG</b>	\$118.00	
Suction Type		<b>C-MU1238B-51B-PSWMG</b>	\$106.00			
		<b>C-MU1238B-51B-PSWLG</b>	\$118.00			
209×226 (8.23×8.90)						

Overview

Axial  
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Variable Flow  
**MDV**DC Input  
Long-Life  
**MDE**DC Input  
Splash proof  
**MDP**Centrifugal  
BlowersAC Input  
**MB**  
DC Input  
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Flow  
FansAC Input  
**MF**  
DC Input  
**MFD**Enclosure  
Fan Modules

Thermostat

**● DC Input**
**◇ Fan and Finger Guard IP2X Type**

Module Dimensions W×H [mm (in.)]	Installed Fan	Power Supply Voltage VDC	Cooling Method	Product Name	List Price
161×158 (6.34×6.22)	□119 mm - 25.4 mm Thick (□4.69 in. - 1.00 in. Thick)	24	Exhaust Type	<b>C-MD1225-24H-GEG</b>	\$50.00
			Suction Type	<b>C-MD1225-24H-GSG</b>	\$50.00
			Exhaust Type	<b>C-MDS1225-24H-GEG</b>	\$58.00
			Suction Type	<b>C-MDS1225-24H-GSG</b>	\$58.00

**◇ Fan and Finger Guard IP2X Type with Filter**

Module Dimensions W×H [mm (in.)]	Installed Fan	Power Supply Voltage VDC	Cooling Method	Product Name	List Price
161×158 (6.34×6.22)	□119 mm - 25.4 mm Thick (□4.69 in. - 1.00 in. Thick)	24	Exhaust Type	<b>C-MD1225-24H-GEFG</b>	\$56.00
			Suction Type	<b>C-MD1225-24H-GSFG</b>	\$56.00
			Exhaust Type	<b>C-MDS1225-24H-GEFG</b>	\$64.00
			Suction Type	<b>C-MDS1225-24H-GSFG</b>	\$64.00

**◇ Fan and Slit Metal Plate IP4X Type**

Module Dimensions W×H [mm (in.)]	Installed Fan	Power Supply Voltage VDC	Cooling Method	Product Name	List Price
180×180 (7.09×7.09)	□119 mm - 25.4 mm Thick (□4.69 in. - 1.00 in. Thick)	24	Exhaust Type	<b>C-MD1225-24H-SEG</b>	\$94.00
180×180 (7.09×7.09)			Suction Type	<b>C-MD1225-24H-SSG</b>	\$94.00
			Exhaust Type	<b>C-MDS1225-24H-SEG</b>	\$104.00
			Suction Type	<b>C-MDS1225-24H-SSG</b>	\$104.00

**◇ Fan and Dust and Water Resistant IP43 Type**

Module Dimensions W×H [mm (in.)]	Installed Fan	Power Supply Voltage VDC	Cooling Method	Product Name	List Price
157×170 (6.18×6.69)	□119 mm - 25.4 mm Thick (□4.69 in. - 1.00 in. Thick)	24	Exhaust Type	<b>C-MD1225-24H-PEMG</b>	\$96.00
209×226 (8.23×8.90)				<b>C-MD1225-24H-PELG</b>	\$108.00
157×170 (6.18×6.69)			Suction Type	<b>C-MD1225-24H-PSMG</b>	\$96.00
209×226 (8.23×8.90)				<b>C-MD1225-24H-PSLG</b>	\$108.00

**◇ Fan and Dust and Water Resistant IP55 Type**

Module Dimensions W×H [mm (in.)]	Installed Fan	Power Supply Voltage VDC	Cooling Method	Product Name	List Price
157×170 (6.18×6.69)	□119 mm - 25.4 mm Thick (□4.69 in. - 1.00 in. Thick)	24	Exhaust Type	<b>C-MD1225-24H-PEWMG</b>	\$105.00
209×226 (8.23×8.90)				<b>C-MD1225-24H-PEWLG</b>	\$117.00
157×170 (6.18×6.69)			Suction Type	<b>C-MD1225-24H-PSWMG</b>	\$105.00
209×226 (8.23×8.90)				<b>C-MD1225-24H-PSWLG</b>	\$117.00

For details (specifications, characteristics, dimensions and more) on these products, please either refer to our website or contact technical support or your nearest Oriental Motor sales office.

[www.orientalmotor.com](http://www.orientalmotor.com)

