

AC Input/Long-Life MRE 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.



These are long life AC power supply input axial flow fans with an expected life of 100,000 hours. The product lineup has 3 available frame sizes: □160 mm, □180 mm and □200 mm.

Features

Long-Life

By using long life fans with an expected life of 100,000 hours (approximately 11 years), the maintenance interval can be extended, and the number of times the cooling fans are replaced can also be reduced. In addition to reducing running costs, this also reduces scrapped parts, which can contribute to both financial and environmental gains.

Expected Service Life

The expected service life indicates that at least 90% of the fans will satisfy the following criteria when the acceleration test is performed at an ambient temperature of 60°C.

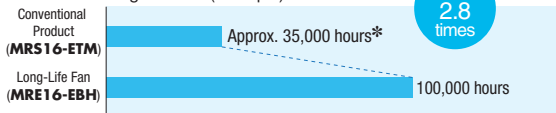
Criteria

- Speed (at rated voltage): 70% or more of rated value
- Input current (at rated voltage): 130% or less of rated value

◇ Lower Maintenance Costs and Overall Costs

A long-life axial flow fan has an expected service life of 100,000 hours. Compared to conventional products, they require fewer replacements, resulting in reduction of the overall costs.

▼ Service Life Comparison between Conventional Product and Long-Life Fan (Example)



*Estimated life is 35,000 hours when the ambient temperature is 60°C. The estimated life is an estimated value calculated using the formula for the life of the bearing grease. The estimated life varies depending on the product.

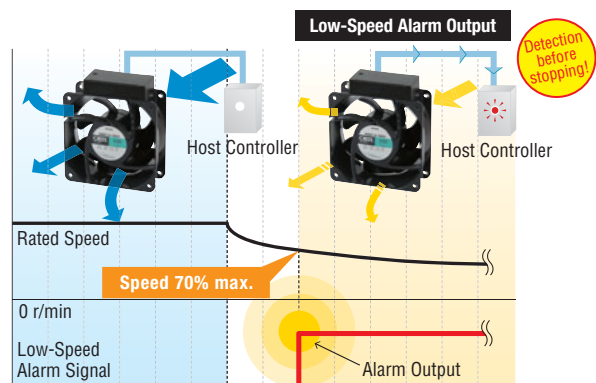
Three-Phase Power Supply Input Saves Energy with Speed Control Operation by Inverter

The air flow is adjustable with speed control operation by an inverter. Having the flexibility to operate the fan as needed helps to save energy and reduce noise.

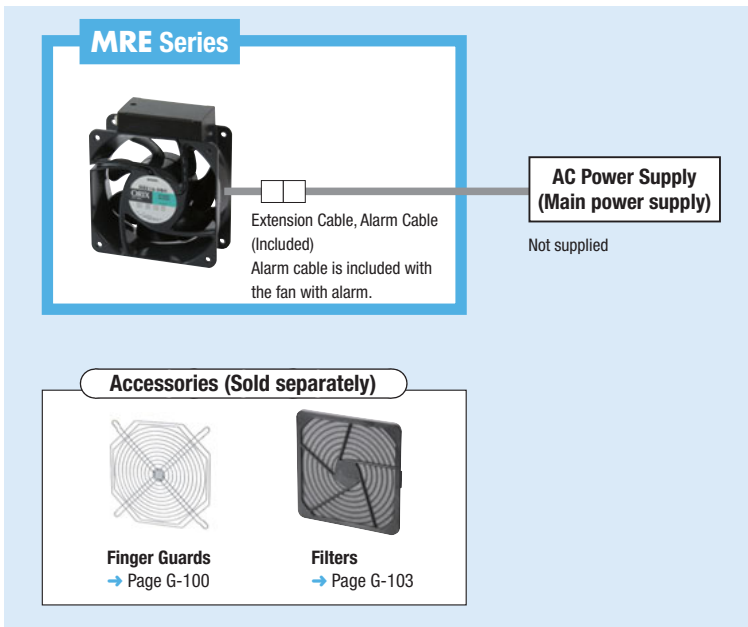
Fans with Low-Speed Alarms

An alarm is output when the fan speed drops due to the service life of the fan or the ingress of foreign objects.

This makes it possible to order and replace the fan with a new one before it stops. If multiple cooling fans are being used, it is possible to only replace the cooling fan with decreased cooling capacity thus minimizing the effect on the equipment.



System Configuration



● Example of System Configuration

Fan	Sold Separately
MRE16-EH €110.00	Finger Guard FG16D €9.00

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

Product Number

● Fan Only

MRE 16 - E B H

① ② ③ ④ ⑤

MRE 16 - T H 2

① ② ③ ⑤ ⑥

①	Series	MRE: MRE Series
②	Frame Size	16: 160 mm, 18: 180 mm, 20: 200 mm
③	Power Supply Voltage	T: Three-phase 220/230 VAC E: Single-phase 220/230/240 VAC
④	Additional Function	Blank: No additional functions A: Low-Speed Alarm, Contact Alarm Type (Normal Operation: Contact OFF) B: Low-Speed Alarm, Contact Alarm Type (Normal Operation: Contact ON) M: Low-Speed Alarm, Electronic Alarm Type
⑤	Connection Type	H: With Extension Cable
⑥	Reference Number	

● Fan Kit

T - MRE16-EBH - G

① ② ③

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

Product Line

Size	Power Supply Voltage VAC	Fan Only		Fan Kit	
		Product Name	List Price	Product Name	List Price
□ 160 mm - 62 mm thick	Three-Phase 220/230	MRE16-TH2	€110.00	T-MRE16-TH2-G	€115.00
		MRE16-TBH	€147.00	T-MRE16-TBH-G	€152.00
	Single-Phase 220/230/240	MRE16-EH	€110.00	T-MRE16-EH-G	€115.00
		MRE16-EBH	€147.00	T-MRE16-EBH-G	€152.00
□ 180 mm - 90 mm thick	Three-Phase 220/230	MRE18-TH	€167.00	T-MRE18-TH-G	€176.00
		MRE18-TBH	€204.00	T-MRE18-TBH-G	€213.00
	Single-Phase 220/230/240	MRE18-EH	€167.00	T-MRE18-EH-G	€176.00
		MRE18-EBH	€204.00	T-MRE18-EBH-G	€213.00
	Three-Phase 220/230	MRE20-TH	€207.00	T-MRE20-TH-G	€217.00
		MRE20-TBH	€244.00	T-MRE20-TBH-G	€254.00

Overview, Product Series

Axial Flow Fans

AC Input Energy Saving **EMU**

AC Input Energy Saving, Variable Flow **EMR**

AC Input Compact Size **MU**

AC Input Long-Life **MRE**

DC Input **MDS MD**

DC Input Alarm **MDA**

DC Input Long-Life **MDE**

Centrifugal Blowers

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

Cross Flow Fans

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

Accessories

Installation

Long-Life
MRE Series

160 mm – 62 mm Thick



With Alarm

Operating Voltage Range: ±10%
Overheat Protection: Built-in Thermal Protector
Color
Frame: Dark Gray Blades: Black
Materials
Frame: Die Cast Aluminum
Blades: Polycarbonate (Flammability grade V-0)

Expected Life: 100,000 hours

Long Life → Page G-9

A three-phase 200 VAC fan can be combined with an inverter.

Specifications



Product Name		Voltage	Frequency	Current	Input	Speed	Max. Air Flow	Max. Static Pressure	Noise Level
Standard Type	Low-Speed Alarm, Contact Alarm Type (Alarm specifications: ⑥)								
MRE16-TH2	MRE16-TBH	Three-Phase 220	60	0.14	41	3300	7.3	157	53
		Three-Phase 230	60	0.15	43	3300	7.3	157	53
MRE16-EH	MRE16-EBH	Single-Phase 220	50	0.16	36	2800	6.2	127	49
		Single-Phase 220	60	0.20	41	3200	7.3	157	53
		Single-Phase 230	50	0.17	39	2800	6.2	127	49
		Single-Phase 230	60	0.20	43	3200	7.3	157	54
		Single-Phase 240	50	0.18	43	2850	6.4	130	51
		Single-Phase 240	60	0.20	45	3300	7.6	170	54

● Alarm specifications ⑥ → Page G-14 ● Details of regulations and standards → Page I-2

Product Line

Standard Type

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE16-TH2	€110.00	T-MRE16-TH2-G	€115.00
MRE16-EH	€110.00	T-MRE16-EH-G	€115.00

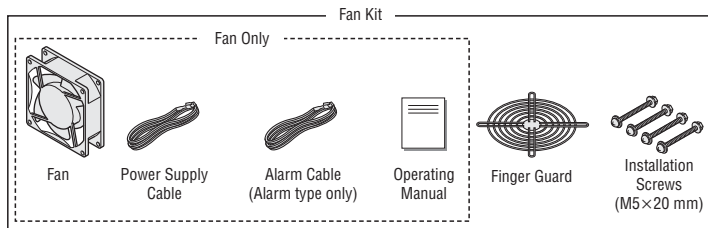
● The fan kit includes a finger guard **FG16D** (€9.00).

Low-Speed Alarm, Contact Alarm Type (Contact ON at Normal Operation)

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE16-TBH	€147.00	T-MRE16-TBH-G	€152.00
MRE16-EBH	€147.00	T-MRE16-EBH-G	€152.00

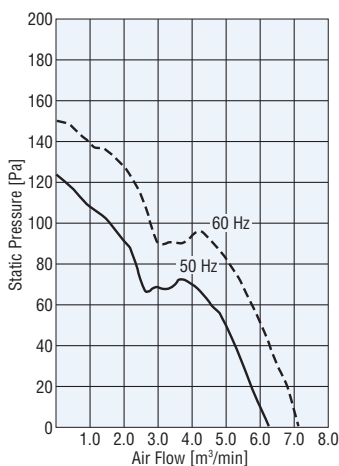
● The fan kit includes a finger guard **FG16D** (€9.00).

The following items are included with each products.

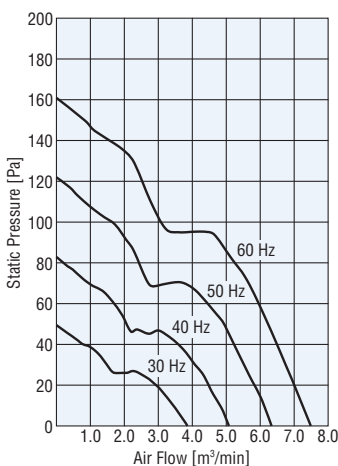


Air Flow – Static Pressure Characteristics

(The characteristics are applicable for the fan only.)



When Operating with an Inverter (Reference Values)

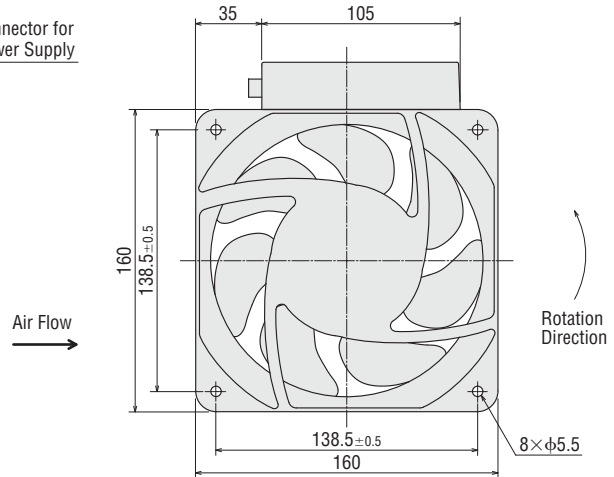
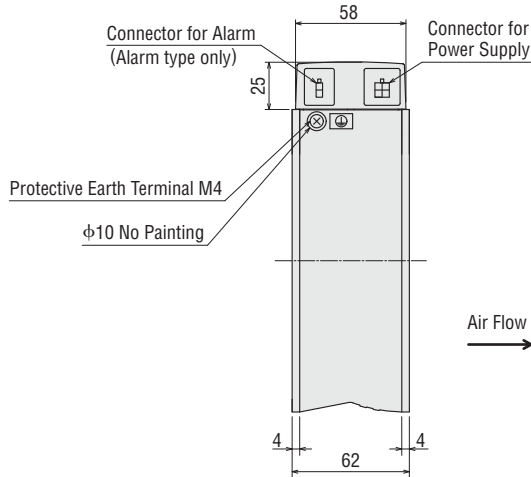


- The value when a general inverter is used at factory settings. The characteristics vary depending on the type and settings of the inverter.
- Use 60 Hz or less for the inverter's setting frequency and 240 VAC or less for the inverter's input voltage.
- If an inverter is connected to an alarm type fan and the setting frequency is set to lower value, the rotation speed may be reduced and the alarm may be activated.

Dimensions Unit: mm

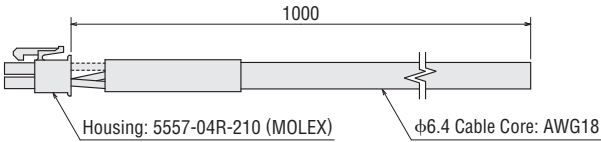
Fan

Mass: 1.35 kg



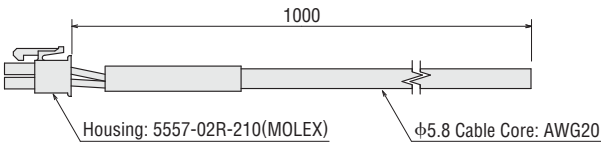
Extension Cable (Included)

Power Supply Cable

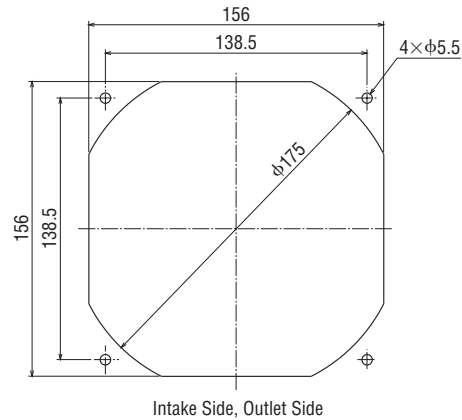


● Only for three-phase

Alarm Cable (Included with an alarm type)

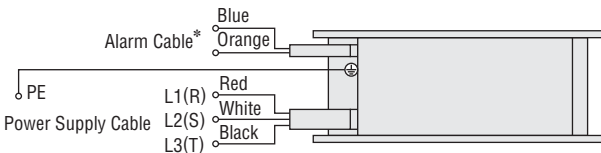


Panel Cut-Out Unit: mm

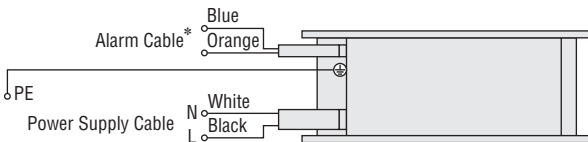


Connection Diagrams

For Three-Phase



For Single-Phase



*Included with an alarm type

Accessories

Product	Product Name	List Price	Page
Finger Guard	FG16D	€9.00	G-100
Stainless Steel Finger Guard	FG16S	€10.00	G-102
Filter	FL16	€14.00	G-104

Low-Speed Alarm Types

For details on the following low-speed alarm products of **MRE** Series, please refer to our website. www.orientalmotor.eu

Electronic Alarm Type

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE16-TMH	€147.00	T-MRE16-TMH-G	€152.00
MRE16-EMH	€147.00	T-MRE16-EMH-G	€152.00

● The fan kit includes a finger guard **FG16D** (€9.00).

Low-Speed Alarm, Contact Alarm Type

(Contact OFF at Normal Operation)

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE16-TAH	€178.00	T-MRE16-TAH-G	€183.00
MRE16-EAH	€178.00	T-MRE16-EAH-G	€183.00

● The fan kit includes a finger guard **FG16D** (€9.00).

Overview, Product Series

Axial Flow Fans

AC Input Energy Saving **EMU**

AC Input Energy Saving, Variable Flow **EMR**

AC Input Compact Size **MU**

AC Input Long-Life **MRE**

DC Input **MDS MD**

DC Input Alarm **MDA**

DC Input Long-Life **MDE**

Centrifugal Blowers

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

Cross Flow Fans

AC Input **MF**
DC Input **MBD**

Accessories

Installation

Long-Life
MRE Series

180 mm – 90 mm Thick



With Alarm
 Operating Voltage Range: ±10%
 Overheat Protection: Built-in Thermal Protector
 Color
 Frame: Dark Gray Blades: Black
 Materials
 Frame: Die Cast Aluminum
 Blades: Polycarbonate (Flammability grade V-0)

- 80 mm
- 92 mm
- 104 mm
- 119 mm
- 140 mm
- 160 mm
- 180 mm
- 200 mm

Expected Life: 100,000 hours
 Long Life → Page G-9
 A three-phase 200 VAC fan can be combined with an inverter.

Specifications



Product Name		Voltage	Frequency	Current	Input	Speed	Max. Air Flow	Max. Static Pressure	Noise Level
Standard Type	Low-Speed Alarm, Contact Alarm Type (Alarm specifications: ⑥)								
		VAC	Hz	A	W	r/min	m ³ /min	Pa	dB (A)
MRE18-TH	MRE18-TBH	Three-Phase 220	60	0.25	74	3350	12.8	245	61
		Three-Phase 230	60	0.26	76	3350	12.8	245	61
MRE18-EH	MRE18-EBH	Single-Phase 220	50	0.25	55	2850	11	196	56
		Single-Phase 220	60	0.36	76	3300	12.5	245	60
		Single-Phase 230	50	0.25	58	2850	11	196	56
		Single-Phase 230	60	0.36	77	3300	12.5	245	60
		Single-Phase 240	50	0.25	62	2850	11	196	57
		Single-Phase 240	60	0.36	79	3350	12.8	270	61

● Alarm specifications ⑥ → Page G-14 ● Details of regulations and standards → Page I-2

Product Line

Standard Type

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE18-TH	€167.00	T-MRE18-TH-G	€176.00
MRE18-EH	€167.00	T-MRE18-EH-G	€176.00

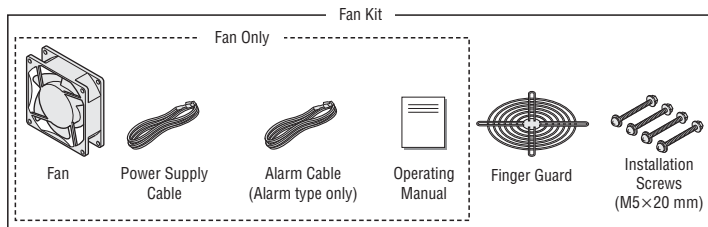
● The fan kit includes a finger guard **FG18D** (€14.00).

Low-Speed Alarm, Contact Alarm Type (Contact ON at Normal Operation)

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE18-TBH	€204.00	T-MRE18-TBH-G	€213.00
MRE18-EBH	€204.00	T-MRE18-EBH-G	€213.00

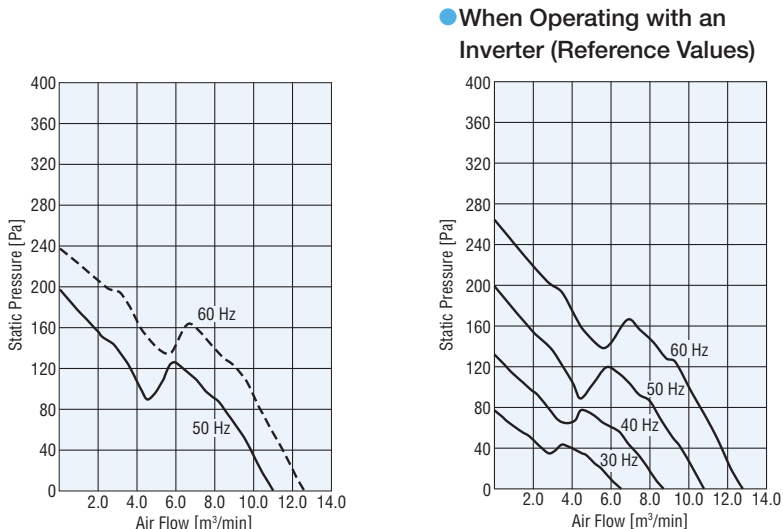
● The fan kit includes a finger guard **FG18D** (€14.00).

The following items are included with each products.



Air Flow – Static Pressure Characteristics

(The characteristics are applicable for the fan only.)

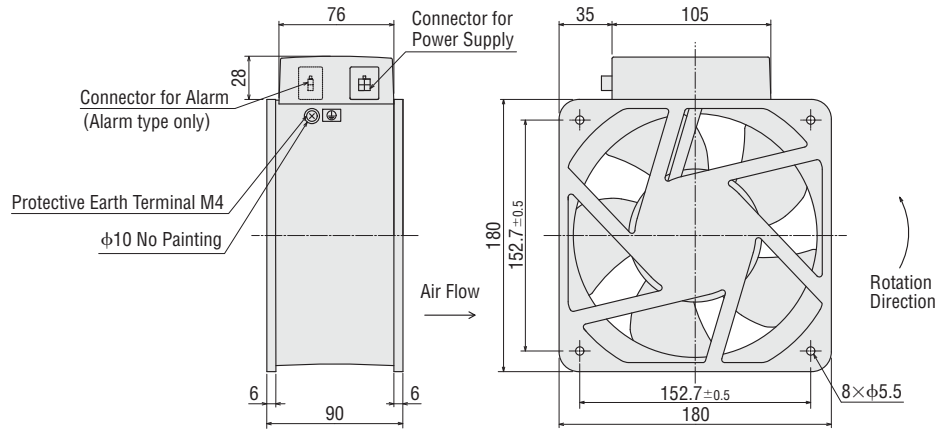


- The value when a general inverter is used at factory settings. The characteristics vary depending on the type and settings of the inverter.
- Use 60 Hz or less for the inverter's setting frequency and 240 VAC or less for the inverter's input voltage.
- If an inverter is connected to an alarm type fan and the setting frequency is set to lower value, the rotation speed may be reduced and the alarm may be activated.

Dimensions Unit: mm

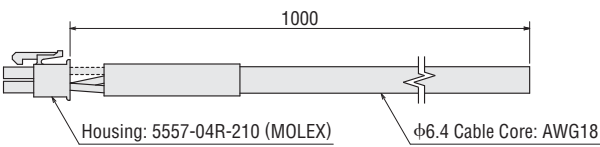
Fan

Mass: 2.5 kg



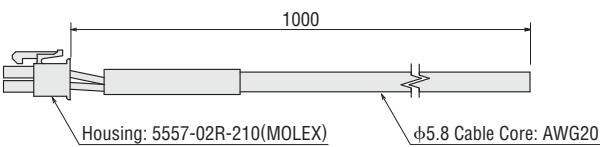
Extension Cable (Included)

Power Supply Cable

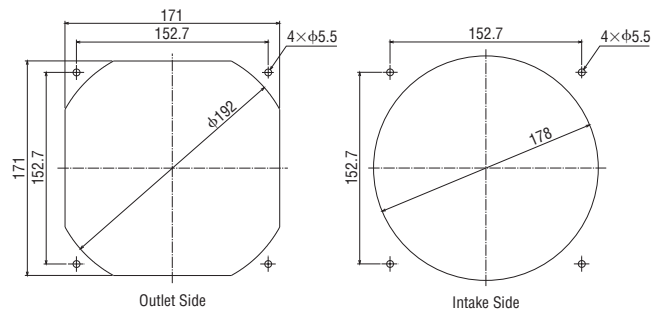


● Only for three-phase

Alarm Cable (Included with an alarm type)

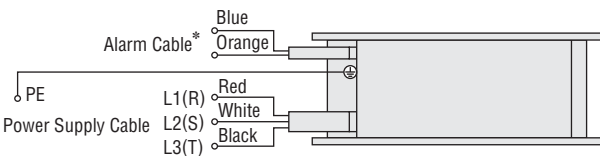


Panel Cut-Out Unit: mm

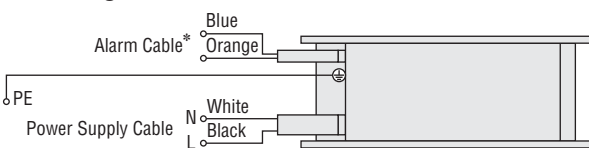


Connection Diagrams

For Three-Phase



For Single-Phase



*Included with an alarm type

Accessories

Product	Product Name	List Price	Page
Finger Guard	FG18D	€14.00	G-101
Stainless Steel Finger Guard	FG18S	€15.00	G-102
Filter	FL18	€24.00	G-104

Overview, Product Series

Axial Flow Fans

AC Input Energy Saving **EMU**

AC Input Energy Saving, Variable Flow **EMR**

AC Input Compact Size **MU**

AC Input Long-Life **MRE**

DC Input **MDS MD**

DC Input Alarm **MDA**

DC Input Long-Life **MDE**

Centrifugal Blowers

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

Cross Flow Fans

AC Input **MF**
DC Input **MG**

Accessories

Installation

Low-Speed Alarm Types

For details on the following low-speed alarm products of **MRE** Series, please refer to our website. www.orientalmotor.eu

Electronic Alarm Type

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE18-TMH	€204.00	T-MRE18-TMH-G	€213.00
MRE18-EMH	€204.00	T-MRE18-EMH-G	€213.00

● The fan kit includes a finger guard **FG18D** (€14.00).

Low-Speed Alarm, Contact Alarm Type

(Contact OFF at Normal Operation)

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE18-TAH	€252.00	T-MRE18-TAH-G	€260.00
MRE18-EAH	€252.00	T-MRE18-EAH-G	€260.00

● The fan kit includes a finger guard **FG18D** (€14.00).

Long-Life MRE Series

200 mm – 90 mm Thick



With Alarm

Operating Voltage Range: ±10%
Overheat Protection: Built-in Thermal Protector

Color
Frame: Dark Gray Blades: Black

Materials
Frame: Die Cast Aluminum
Blades: Polycarbonate (Flammability grade V-0)

80 mm

Expected Life: 100,000 hours

Long Life → Page G-9

92 mm

A three-phase 200 VAC fan can be combined with an inverter.

104 mm

Specifications



119 mm

Product Name		Voltage	Frequency	Current	Input	Speed	Max. Air Flow	Max. Static Pressure	Noise Level	
Standard Type	Low-Speed Alarm, Contact Alarm Type (Alarm specifications: ⑥)									
MRE20-TH	MRE20-TBH	VAC	50	0.25	48	2850	13.2	221	56	
			60	0.33	66	3350	15.5	265	60	
			Three-Phase 220	60	0.31	69	3400	16	290	61
			Three-Phase 230	60	0.31	72	3400	16	300	61

● Alarm specifications ⑥ → Page G-14 ● Details of regulations and standards → Page I-2

180 mm

Product Line

Standard Type

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE20-TH	€207.00	T-MRE20-TH-G	€217.00

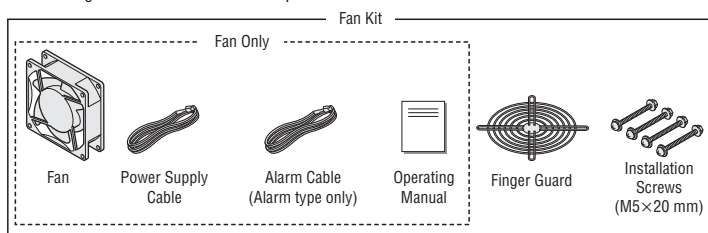
● The fan kit includes a finger guard **FG20D** (€17.00).

Low-Speed Alarm, Contact Alarm Type (Contact ON at Normal Operation)

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE20-TBH	€244.00	T-MRE20-TBH-G	€254.00

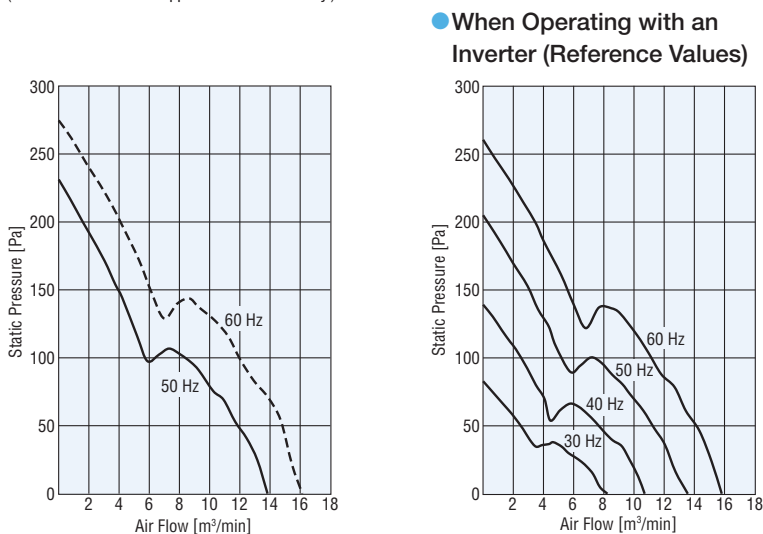
● The fan kit includes a finger guard **FG20D** (€17.00).

The following items are included with each products.



Air Flow – Static Pressure Characteristics

(The characteristics are applicable for the fan only.)



- The value when a general inverter is used at factory settings. The characteristics vary depending on the type and settings of the inverter.
- Use 60 Hz or less for the inverter's setting frequency and 240 VAC or less for the inverter's input voltage.
- If an inverter is connected to an alarm type fan and the setting frequency is set to lower value, the rotation speed may be reduced and the alarm may be activated.

Low-Speed Alarm Types

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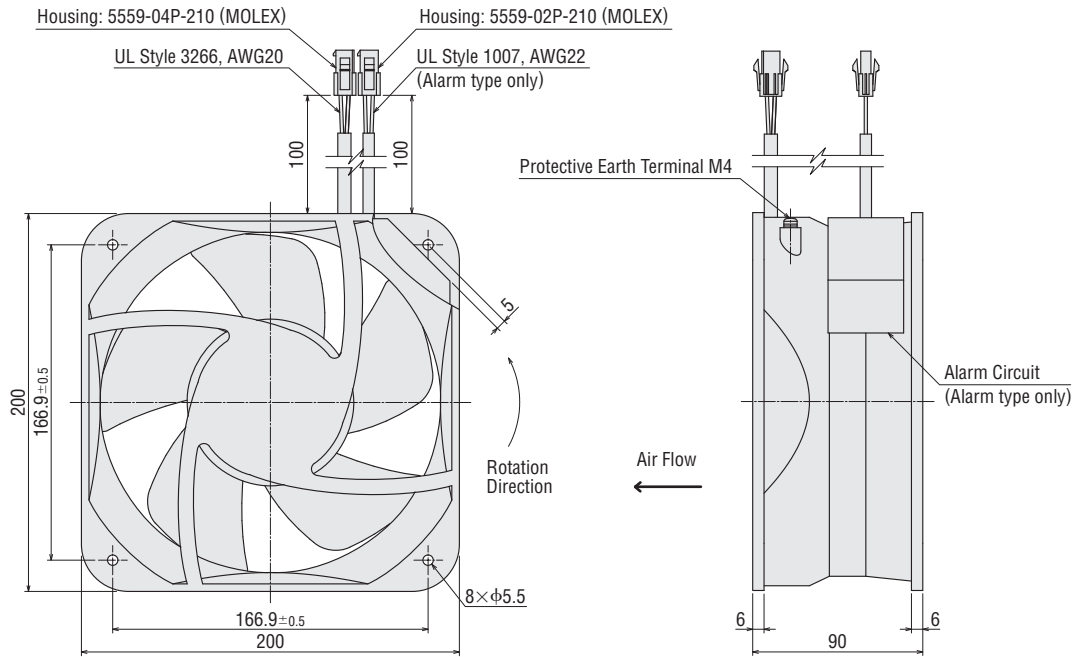
Electronic Alarm Type

Fan Only		Fan Kit	
Product Name	List Price	Product Name	List Price
MRE20-TMH	€244.00	T-MRE20-TMH-G	€254.00

● The fan kit includes a finger guard **FG20D** (€17.00).

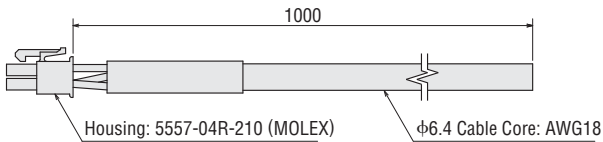
Dimensions Unit: mm

Mass: 2.5 kg

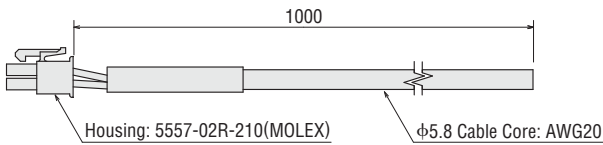


● Extension Cable (Included)

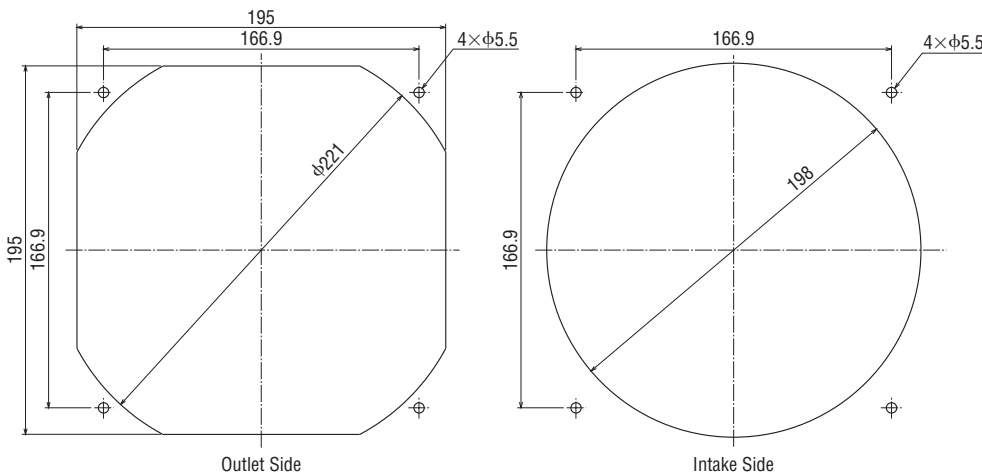
◇ Power Supply Cable



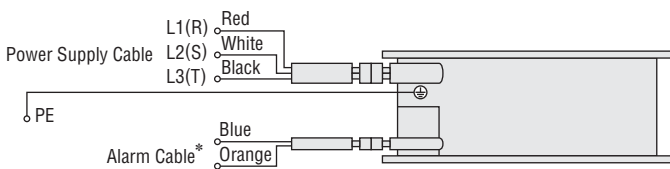
◇ Alarm Cable (Included with an alarm type)



Panel Cut-Out Unit: mm



Connection Diagrams



*Included with an alarm type

Accessories

Product	Product Name	List Price	Page
Finger Guard	FG20D	€17.00	G-101
Stainless Steel Finger Guard	FG20S	€18.00	G-102

Overview,
Product
Series

Axial
Flow
Fans

AC Input
Energy Saving
EMU

AC Input
Energy Saving,
Variable Flow
EMR

AC Input
Compact Size
MU

AC Input
Long-Life
MRE

DC Input
MDS
MD

DC Input
Alarm
MDA

DC Input
Long-Life
MDE

Centrifugal
Blowers

AC Input
MB
DC Input
MBD

Cross Flow Fans

AC Input
MF
DC Input
MGD

Accessories

Installation