

## AC Input/Long-Life MRE Series



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 (□6.30 in.), □180 mm (□7.09 in.) and □200 mm (□7.87 in.).

A three-phase 220/230 VAC fan can be used in combination with an inverter.



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

● Manual

● Specifications

● Dimensions

● CAD

● Characteristics

● Connection and Operation

### Features

#### Long-Life

A long-life axial flow fan has an expected service life of 100,000 hours (Approx. 11 years).

In addition to the reduction of the temperature rise in the bearings, grease deterioration is suppressed. Furthermore, vibration resistance and shock resistance have been improved by using larger bearings. Measures have been taken for longer service life of circuit/coupling and reduction of failure rate. The products are designed to avoid not only initial failure but also random failure and abrasion failure, so that continuous operation of 100,000 hours or more (retention rate of 90% or more) is achieved.

#### 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 (140°F).

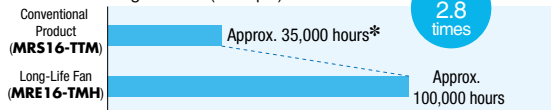
#### Criteria

- 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)

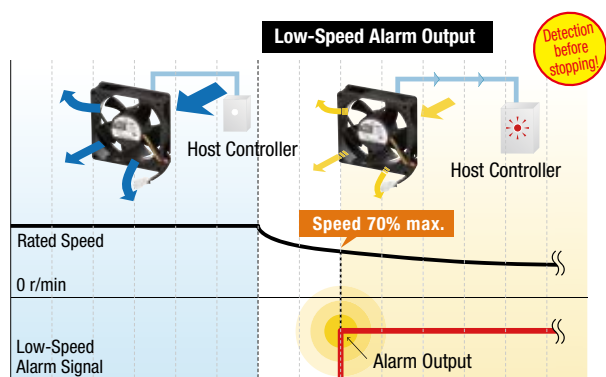


\*Estimated life is 35,000 hours when the ambient temperature is 60°C (140°F). The estimated life is an estimated value calculated using the formula for the life of the bearing grease. The estimated life varies depending on the product.

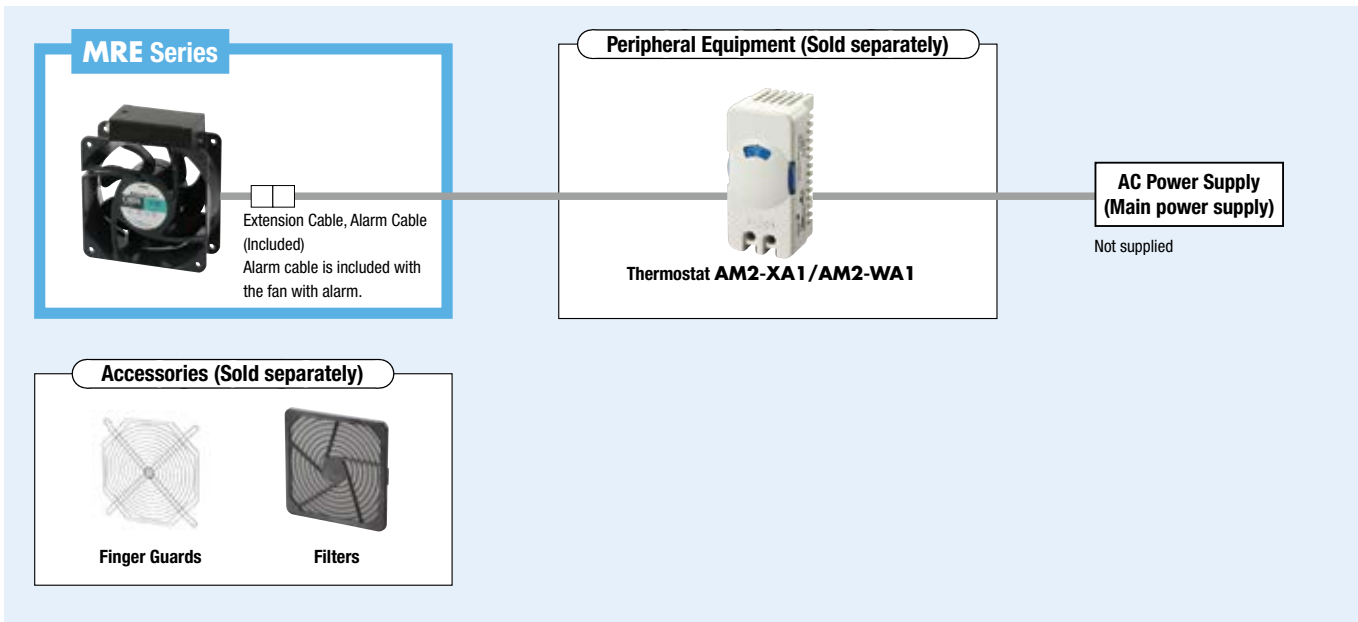
#### Fans with Low-Speed Alarms

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



## Product Number

### Fan Only

**MRE 16 - B B H**

①      ②      ③      ④      ⑤

**MRE 16 - T H 2**

①      ②      ③      ⑤      ⑥

### Fan Kit

**T - MRE16-BBH - G**

①      ②      ③

|   |                      |   |
|---|----------------------|---|
| ① | Series               | <b>MRE: MRE Series</b>  |
| ② | Frame Size           | <b>16:</b> 160 mm (6.30 in.), <b>18:</b> 180 mm (7.09 in.),<br><b>20:</b> 200 mm (7.87 in.)   |
| ③ | Power Supply Voltage | <b>T:</b> Three-phase 220/230 VAC<br><b>B:</b> Single-phase 110/115 VAC<br><b>E:</b> Single-phase 220/230/240 VAC   |
| ④ | Additional Function  | Blank: No additional functions<br><b>A:</b> Low-Speed Alarm, Contact Alarm Type (Normal Operation: Contact OFF)<br><b>B:</b> Low-Speed Alarm, Contact Alarm Type (Normal Operation: Contact ON)<br><b>M:</b> Low-Speed Alarm, Electronic Alarm Type |
| ⑤ | Connection Type      | <b>H:</b> With Extension Cable  |
| ⑥ | Reference Number     |   |

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

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

**Product line**

● **Standard Type**

| Size  | Power Supply Voltage<br>VAC | Fan Only         |            | Fan Kit              |            |
|---|-----------------------------|------------------|------------|----------------------|------------|
|   |                             | Product Name     | List Price | Product Name         | List Price |
| □160 mm - 62 mm Thick<br>(□6.30 in. - 2.44 in. Thick) | Three-Phase 220/230         | <b>MRE16-TH2</b> | \$159.00   | <b>T-MRE16-TH2-G</b> | \$166.00   |
|   | Single-Phase 110/115        | <b>MRE16-BH</b>  | \$159.00   | <b>T-MRE16-BH-G</b>  | \$166.00   |
|   | Single-Phase 220/230/240    | <b>MRE16-EH</b>  | \$159.00   | <b>T-MRE16-EH-G</b>  | \$166.00   |
| □180 mm - 90 mm Thick<br>(□7.09 in. - 3.54 in. Thick) | Three-Phase 220/230         | <b>MRE18-TH</b>  | \$242.00   | <b>T-MRE18-TH-G</b>  | \$254.00   |
|   | Single-Phase 110/115        | <b>MRE18-BH</b>  | \$242.00   | <b>T-MRE18-BH-G</b>  | \$254.00   |
|   | Single-Phase 220/230/240    | <b>MRE18-EH</b>  | \$242.00   | <b>T-MRE18-EH-G</b>  | \$254.00   |
| □200 mm - 90 mm Thick<br>(□7.87 in. - 3.54 in. Thick) | Three-Phase 220/230         | <b>MRE20-TH</b>  | \$299.00   | <b>T-MRE20-TH-G</b>  | \$314.00   |

● **Low-Speed Alarm Type**

| Size  | Additional Function                                   | Power Supply Voltage<br>VAC | Fan Only         |            | Fan Kit              |            |
|---|---|-----------------------------|------------------|------------|----------------------|------------|
|   |   |                             | Product Name     | List Price | Product Name         | List Price |
| □160 mm - 62 mm Thick<br>(□6.30 in. - 2.44 in. Thick) | Contact Alarm Type<br>(Normal Operation: Contact ON)  | Three-Phase 220/230         | <b>MRE16-TBH</b> | \$212.00   | <b>T-MRE16-TBH-G</b> | \$220.00   |
|   | Electronic Alarm Type                                 | Three-Phase 220/230         | <b>MRE16-TMH</b> | \$257.00   | <b>T-MRE16-TMH-G</b> | \$265.00   |
|   | Contact Alarm Type<br>(Normal Operation: Contact OFF) | Three-Phase 220/230         | <b>MRE16-TAH</b> | \$257.00   | <b>T-MRE16-TAH-G</b> | \$265.00   |
|   | Contact Alarm Type<br>(Normal Operation: Contact ON)  | Single-Phase 110/115        | <b>MRE16-BBH</b> | \$212.00   | <b>T-MRE16-BBH-G</b> | \$220.00   |
|   | Electronic Alarm Type                                 | Single-Phase 110/115        | <b>MRE16-BMH</b> | \$257.00   | <b>T-MRE16-BMH-G</b> | \$265.00   |
|   | Contact Alarm Type<br>(Normal Operation: Contact OFF) | Single-Phase 110/115        | <b>MRE16-BAH</b> | \$257.00   | <b>T-MRE16-BAH-G</b> | \$265.00   |
|   | Contact Alarm Type<br>(Normal Operation: Contact ON)  | Single-Phase 220/230/240    | <b>MRE16-EBH</b> | \$212.00   | <b>T-MRE16-EBH-G</b> | \$220.00   |
|   | Electronic Alarm Type                                 | Single-Phase 220/230/240    | <b>MRE16-EMH</b> | \$257.00   | <b>T-MRE16-EMH-G</b> | \$265.00   |
| □180 mm - 90 mm Thick<br>(□7.09 in. - 3.54 in. Thick) | Contact Alarm Type<br>(Normal Operation: Contact ON)  | Three-Phase 220/230         | <b>MRE18-TBH</b> | \$295.00   | <b>T-MRE18-TBH-G</b> | \$307.00   |
|   | Electronic Alarm Type                                 | Three-Phase 220/230         | <b>MRE18-TMH</b> | \$364.00   | <b>T-MRE18-TMH-G</b> | \$376.00   |
|   | Contact Alarm Type<br>(Normal Operation: Contact OFF) | Three-Phase 220/230         | <b>MRE18-TAH</b> | \$364.00   | <b>T-MRE18-TAH-G</b> | \$376.00   |
|   | Contact Alarm Type<br>(Normal Operation: Contact ON)  | Single-Phase 110/115        | <b>MRE18-BBH</b> | \$295.00   | <b>T-MRE18-BBH-G</b> | \$307.00   |
|   | Electronic Alarm Type                                 | Single-Phase 110/115        | <b>MRE18-BMH</b> | \$364.00   | <b>T-MRE18-BMH-G</b> | \$376.00   |
|   | Contact Alarm Type<br>(Normal Operation: Contact OFF) | Single-Phase 110/115        | <b>MRE18-BAH</b> | \$364.00   | <b>T-MRE18-BAH-G</b> | \$376.00   |
|   | Contact Alarm Type<br>(Normal Operation: Contact ON)  | Single-Phase 220/230/240    | <b>MRE18-EBH</b> | \$295.00   | <b>T-MRE18-EBH-G</b> | \$307.00   |
|   | Electronic Alarm Type                                 | Single-Phase 220/230/240    | <b>MRE18-EMH</b> | \$364.00   | <b>T-MRE18-EMH-G</b> | \$376.00   |
| □200 mm - 90 mm Thick<br>(□7.87 in. - 3.54 in. Thick) | Contact Alarm Type<br>(Normal Operation: Contact ON)  | Three-Phase 220/230         | <b>MRE20-TBH</b> | \$353.00   | <b>T-MRE20-TBH-G</b> | \$368.00   |
|   | Electronic Alarm Type                                 | Three-Phase 220/230         | <b>MRE20-TMH</b> | \$353.00   | <b>T-MRE20-TMH-G</b> | \$368.00   |

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)

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