

MRS Series

□ 200 mm – 90 mm Thick



Fans with Alarms

Ambient Temperature: -10~+60°C

Operating Voltage Range: ±10%

Materials

Frame: Die Cast Aluminum

Blades: Polycarbonate (Flammability grade V-0)

Overheat Protection: Built-in Thermal Protector

Bearings: Ball Bearings



Specifications (RoHS)

Model		Voltage VAC	Frequency Hz	Current A	Input W	Speed r/min	Max. Air Flow		Max. Static Pressure Pa	Noise Level dB (A)	Capacitor μF
Low-Speed Alarm, Electronic Alarm Type (Alarm specifications: ②)	Standard Type						m³/min	m³/h			
MRS20-EM	MRS20-E	Single-Phase 220	50	0.39	70	2850	13.2	792	210	56	6.0
		Single-Phase 220	60	0.5	91	3400	15.5	930	210	60	
		Single-Phase 230	50	0.4	75	2850	13.2	792	221	56	
		Single-Phase 230	60	0.5	95	3400	15.5	930	226	60	
MRS20-BM	MRS20-BUL	Single-Phase 100	50	0.8	75	2850	13.2	792	221	56	6.0
		Single-Phase 100	60	1.0	95	3350	15.5	930	186	60	
		Single-Phase 110	60	1.0	95	3400	15.5	930	255	61	
		Single-Phase 115	60	1.0	95	3400	15.5	930	265	61	

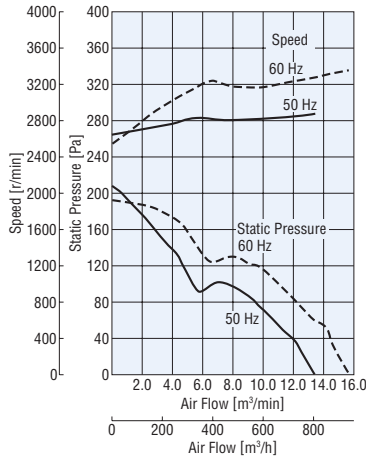
● How to read specifications → Page E-17 ● Alarm specifications ② → Page E-19 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-23

The following items are included in each product.

- **MRS20-BM, MRS20-BUL**
Fan, Capacitor, Capacitor Cap, Operating Manual
- **MRS20-EM, MRS20-E**
Fan, Capacitor, Operating Manual

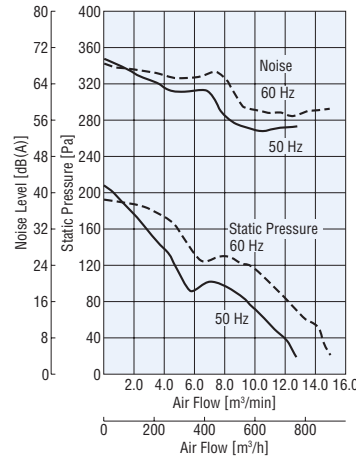
Air Flow – Static Pressure Characteristics

● How to read air flow – static pressure characteristics → Page E-18



Load Noise Characteristics

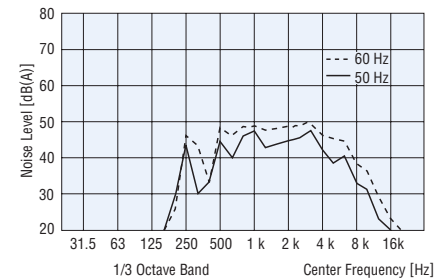
● How to read load noise characteristics → Page E-18



Frequency – Audible Noise Level (dB)

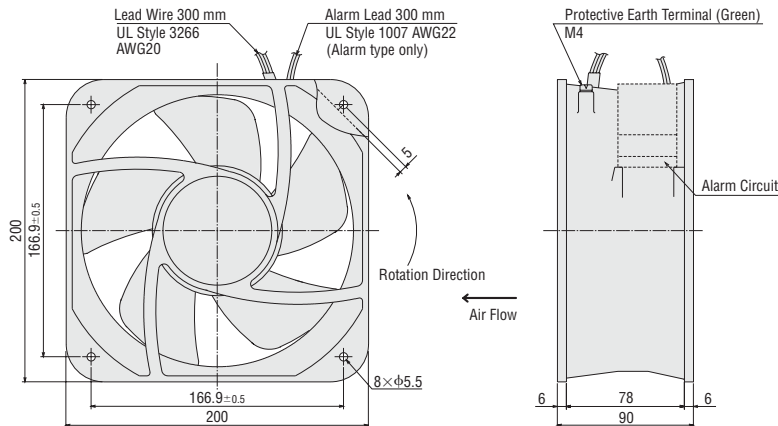
(Measured at a distance of 1 m from the intake side of fan)

● How to read frequency – audible noise level → Page E-18



Dimensions (Unit = mm)

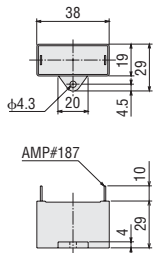
Mass: 2.5 kg



● Capacitor (Included)

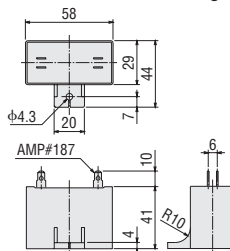
◇ For **MRS20-B** □ □

CH60UL Mass: 32 g
(A capacitor and capacitor cap are included.)

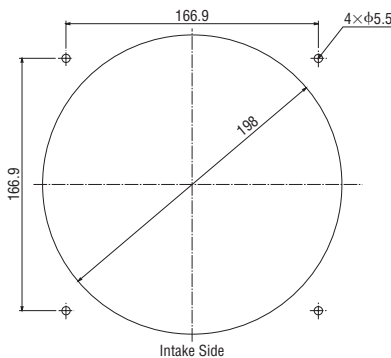
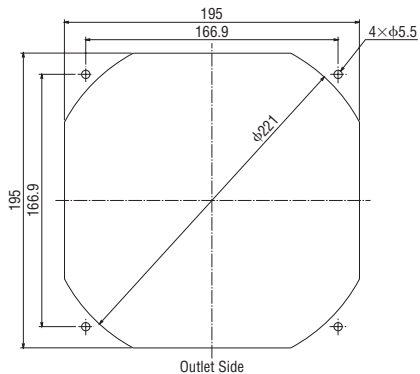


◇ For **MRS20-E** □

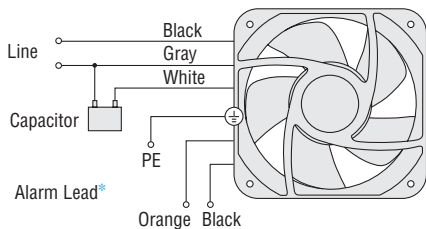
CH60BFAUL Mass: 85 g



■ Panel Cut-Out (Unit = mm)



■ Connection Diagram



- * Alarm type only
- How to connect a capacitor → Page E-129

■ Accessories

The following product is RoHS-Compliant.

Details → Page E-117

Product	Model	Safety Standards	Page
Finger Guard	FG20D	Conformed product	E-118

MRS Series

□ **180 mm – 90 mm Thick**



Fans with Alarms

Ambient Temperature: $-10 \sim +60^{\circ}\text{C}$
 Operating Voltage Range: $\pm 10\%$
 Materials
 Frame: Die Cast Aluminum
 Blades: Polycarbonate (Flammability grade V-0)
 Overheat Protection: Built-in Thermal Protector
 Bearings: Ball Bearings



Specifications (RoHS)

Model		Voltage VAC	Frequency Hz	Current A	Input W	Speed r/min	Max. Air Flow		Max. Static Pressure Pa	Noise Level dB (A)	Capacitor μF
Type	Terminal Box						m^3/min	m^3/h			
Low-Speed Alarm, Electronic Alarm Type (Alarm specifications: ②)	MRS18-ETM	Single-Phase 220	50	0.4	53	2850	11.0	660	196	56	6.0
		Single-Phase 220	60	0.5	70	3300	12.5	750	245	60	
		Single-Phase 230	50	0.4	57	2850	11.0	660	196	56	
		Single-Phase 230	60	0.5	73	3350	12.5	750	245	60	
	MRS18-BTM	Single-Phase 100	50	0.8	54.5	2850	11.0	660	196	56	6.0
		Single-Phase 100	60	1.0	76	3300	12.8	768	245	60	
		Single-Phase 110	60	1.0	81	3350	12.8	768	245	61	
		Single-Phase 115	60	1.0	84	3350	12.8	768	245	61	
Standard Type	MRS18-E	Single-Phase 220	50	0.4	53	2850	11.0	660	196	56	6.0
		Single-Phase 220	60	0.5	70	3300	12.5	750	245	60	
		Single-Phase 230	50	0.4	57	2850	11.0	660	196	56	
		Single-Phase 230	60	0.5	73	3350	12.5	750	245	60	
	MRS18-BUL	Single-Phase 100	50	0.8	54.5	2850	11.0	660	196	56	6.0
		Single-Phase 100	60	1.0	76	3300	12.8	768	245	60	
		Single-Phase 110	60	1.0	81	3350	12.8	768	245	61	
		Single-Phase 115	60	1.0	84	3350	12.8	768	245	61	

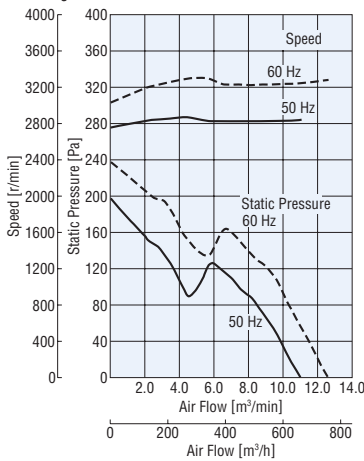
● How to read specifications → Page E-17 ● Alarm specifications ② → Page E-19 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-23

The following items are included in each product.

- **MRS18-BTM**
Fan, Capacitor, Capacitor Cap, Operating Manual
- **MRS18-ETM**
Fan, Capacitor, Operating Manual
- **MRS18-BUL, MRS18-E**
Fan, Operating Manual

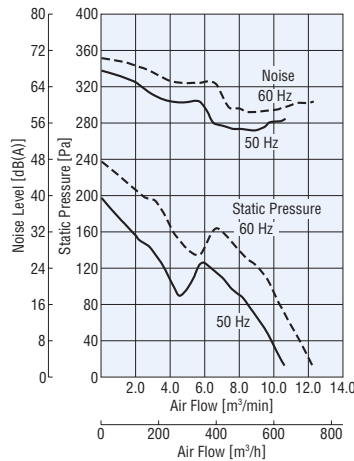
Air Flow – Static Pressure Characteristics

● How to read air flow – static pressure characteristics → Page E-18



Load Noise Characteristics

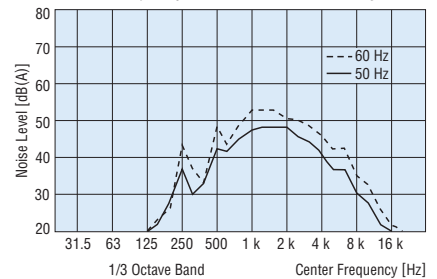
● How to read load noise characteristics → Page E-18



Frequency – Audible Noise Level (dB)

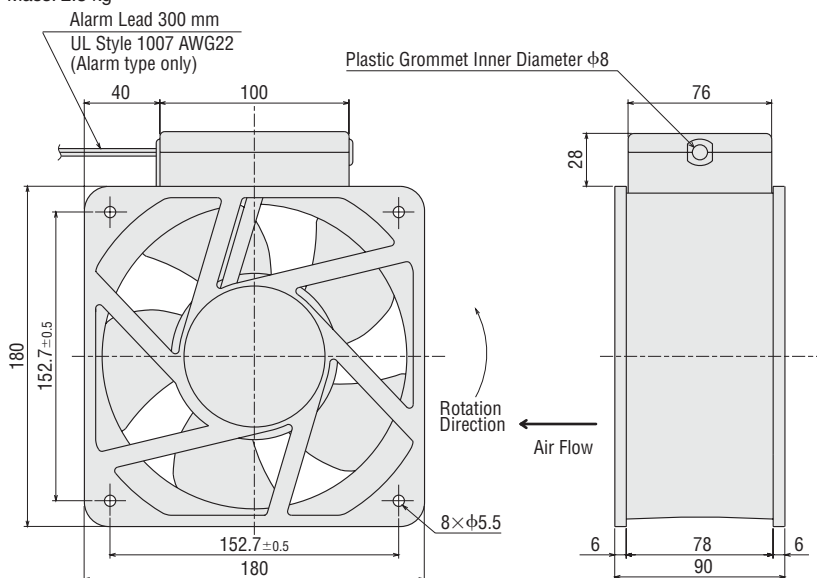
(Measured at a distance of 1 m from the intake side of fan)

● How to read frequency – audible noise level → Page E-18



Dimensions (Unit = mm)

Mass: 2.5 kg

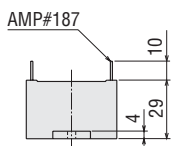
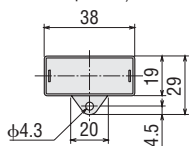


Capacitor (Included)

For MRS18-BTM

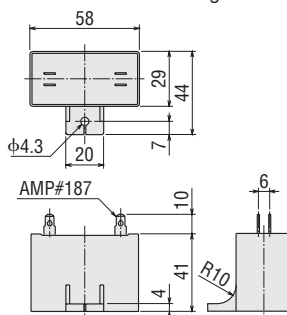
CH60UL Mass: 32 g

(A capacitor and capacitor cap are included with alarm type fans. Standard type fans have a built-in capacitor.)

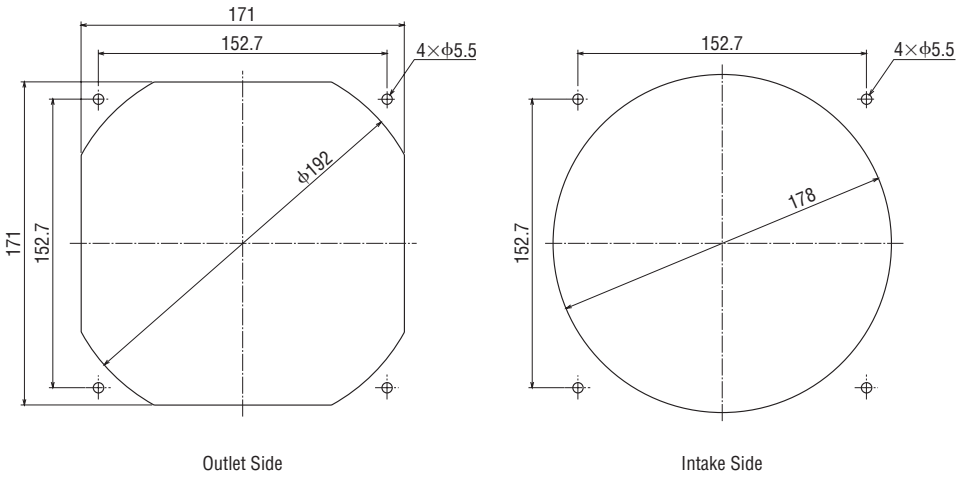


For MRS18-ETM

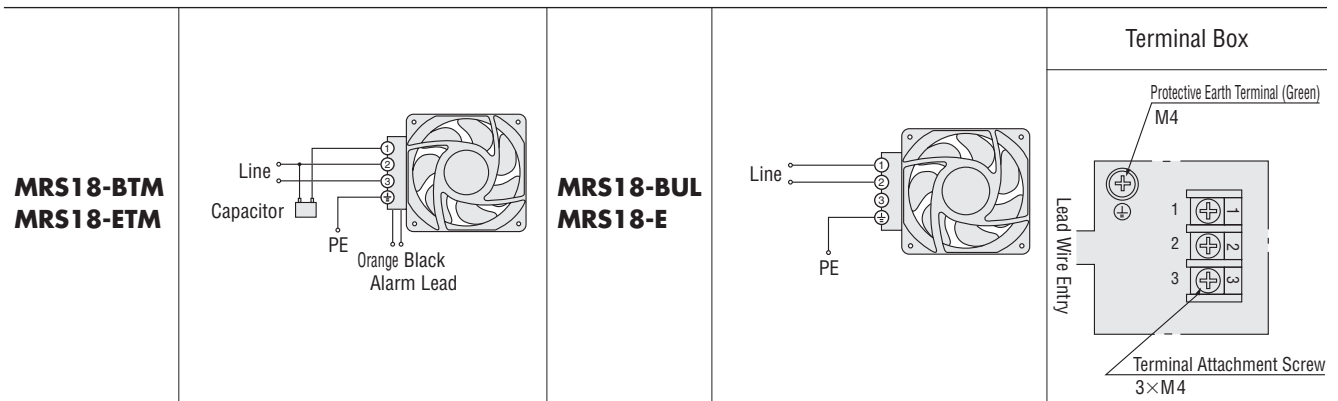
CH60BFAUL Mass: 85 g



Panel Cut-Out (Unit = mm)



Connection Diagram



● How to connect a capacitor → Page E-129

Accessories

The following products are RoHS-Compliant.

Details → Page E-117

Product	Model	Safety Standards	Page
Finger Guard	FG18D	Conformed product	E-118
Filter	FL18	—	E-120

● The filter can be installed in place of the finger guard.

MRS Series

□ **160 mm – 62 mm Thick**



Fans with Alarms

Ambient Temperature: $-10 \sim +60^{\circ}\text{C}$
 Operating Voltage Range: $\pm 10\%$
 Materials
 Frame: Die Cast Aluminum
 Blades: Polycarbonate (Flammability grade V-0)
 Overheat Protection: Built-in Thermal Protector
 Bearings: Ball Bearings



Specifications RoHS

Model		Voltage VAC	Frequency Hz	Current A	Input W	Speed r/min	Max. Air Flow		Max. Static Pressure Pa	Noise Level dB (A)	Capacitor μF
Low-Speed Alarm, Electronic Alarm Type (Alarm specifications: ②)	Standard Type						m^3/min	m^3/h			
MRS16-ETM	MRS16-E	Single-Phase 220	50	0.20	38	2800	6.2	372	127	49	3.0
		Single-Phase 220	60	0.21	40	3250	7.3	438	157	53	
		Single-Phase 230	50	0.21	42	2800	6.2	372	127	49	
		Single-Phase 230	60	0.21	42	3300	7.3	438	157	54	
MRS16-BTM	MRS16-BUL	Single-Phase 100	50	0.47	39	2800	6.2	372	127	49	3.0
		Single-Phase 100	60	0.46	41	3250	7.3	438	157	52	
		Single-Phase 110	60	0.48	48	3300	7.3	438	157	53	
		Single-Phase 115	60	0.49	51	3300	7.3	438	157	53	

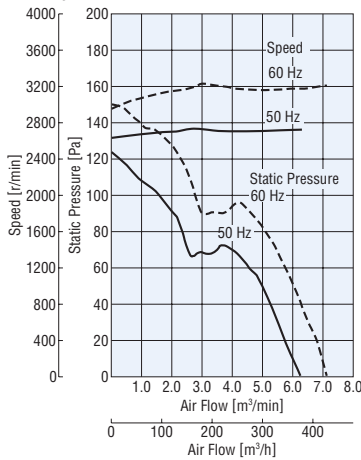
● How to read specifications → Page E-17 ● Alarm specifications ② → Page E-19 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-23

The following items are included in each product.

- **MRS16-BTM**
Fan, Capacitor, Capacitor Cap, Operating Manual
- **MRS16-ETM**
Fan, Capacitor, Operating Manual
- **MRS16-BUL, MRS16-E**
Fan, Operating Manual

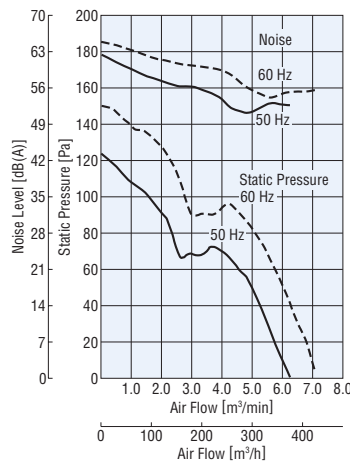
Air Flow – Static Pressure Characteristics

● How to read air flow – static pressure characteristics → Page E-18



Load Noise Characteristics

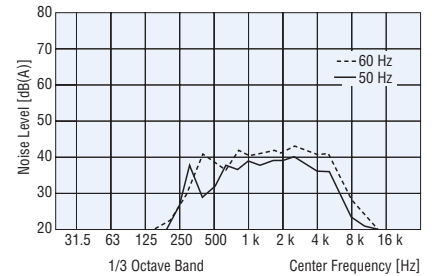
● How to read load noise characteristics → Page E-18



Frequency – Audible Noise Level (dB)

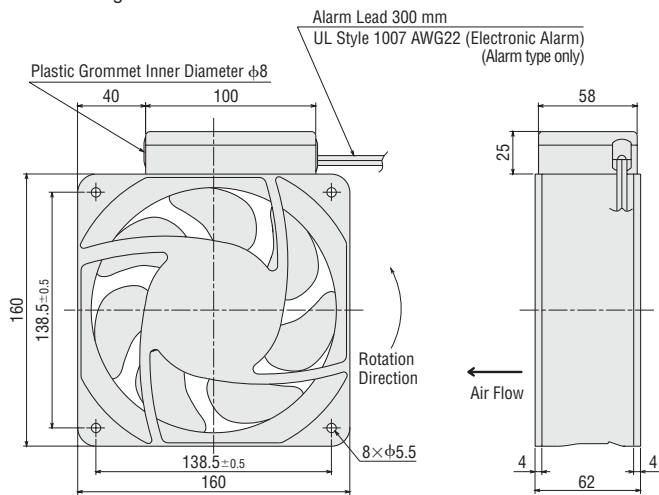
(Measured at a distance of 1 m from the intake side of fan)

● How to read frequency – audible noise level → Page E-18



Dimensions (Unit = mm)

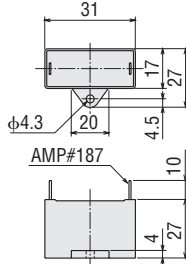
Mass: 1.35 kg



Capacitor (Included)

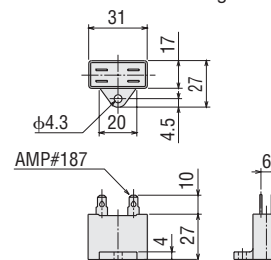
◇ For MRS16-BTM

CH30UL Mass: 23 g
(A capacitor and capacitor cap are included with alarm type fans.)

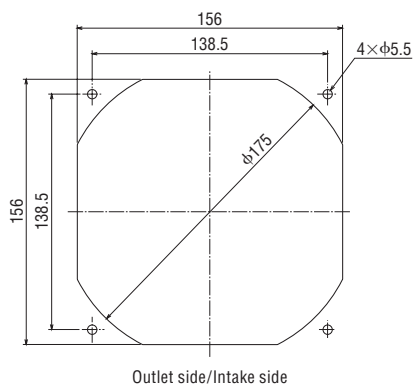


◇ For MRS16-ETM

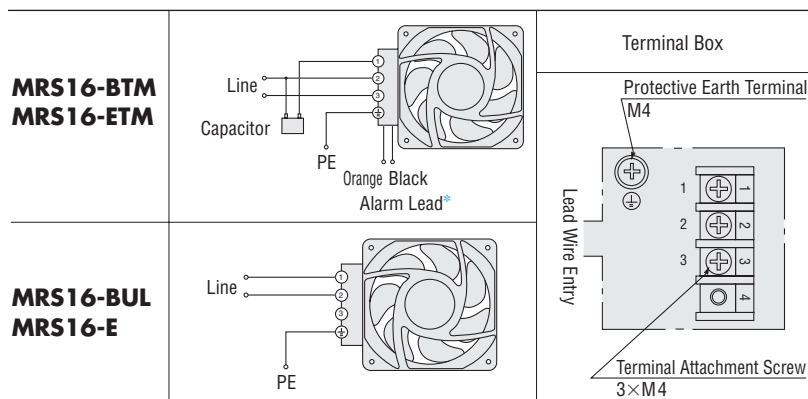
CH30FAUL2 Mass: 22 g



Panel Cut-Out (Unit = mm)



Connection Diagram



* Alarm type only

● How to connect a capacitor → Page E-129

Accessories

The following products are RoHS-Compliant.

Details → Page E-117

Product	Model	Safety Standards	Page
Finger Guard	FG16D	Conformed product	E-118
Filter	FL16	—	E-120

● The filter can be installed in place of the finger guard.