

# MRS Series

## High-Efficiency, Low-Noise Models

□ 9.84 in. × 4.72 in. thick  
 (□ 250 mm × 120 mm thick)



Ambient Temperature: 14°F to 140°F (–10°C to +60°C)  
 Operating Voltage Range: ±10%

### Materials

Frame: Die Cast Aluminum  
 Blades: Resin  
 Flammability Grade: V-0  
 Overheat Protection: Built-in Thermal Protector  
 Bearings: Ball Bearings

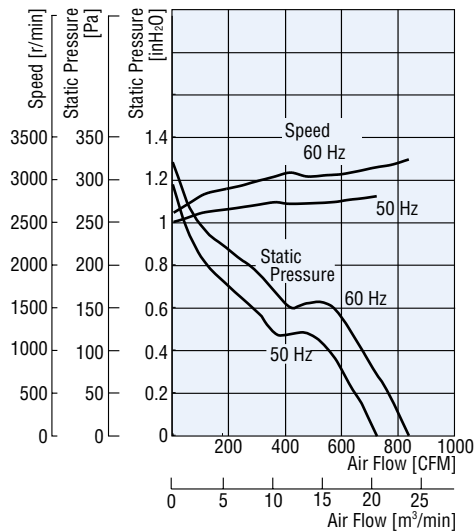


## Specifications

Model			Voltage VAC	Frequency Hz	Current A	Input Power W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB (A)	Capacitor $\mu$ F
Electronic Alarm Type	Contact Alarm Type	Standard Type						CFM	m <sup>3</sup> /min	inH <sub>2</sub> O	Pa		
<b>MRS25-BM</b>	<b>MRS25-BB</b>	<b>MRS25-B</b>	Single-Phase 100	50	0.8	80	2800	742	21.0	1.16	290	58	16.0
		Single-Phase 100	60	1.1	110	3220	848	24.0	1.28	320	62		
		Single-Phase 110	60	1.1	120	3280	848	24.0	1.36	340	62		
		Single-Phase 115	60	1.1	125	3300	848	24.0	1.45	360	62		
<b>MRS25-DM</b>	<b>MRS25-DB</b>	<b>MRS25-D</b>	Single-Phase 200	50	0.4	85	2790	742	21.0	1.16	290	58	4.5
		Single-Phase 200	60	0.7	120	3220	848	24.0	1.28	320	62		
		Single-Phase 220	50	0.4	95	2820	742	21.0	1.24	310	58		
		Single-Phase 220	60	0.7	130	3260	848	24.0	1.45	360	62		
		Single-Phase 230	50	0.5	100	2830	742	21.0	1.28	320	58		
Single-Phase 230	60	0.7	135	3290	848	24.0	1.45	360	62				
<b>MRS25-TM</b>	<b>MRS25-TB</b>	<b>MRS25-T</b>	Three-Phase 200	50	0.4	70	2830	742	21.0	1.24	310	58	—
		Three-Phase 200	60	0.4	100	3270	848	24.0	1.45	360	62		
		Three-Phase 220	50	0.4	80	2850	742	21.0	1.28	320	58		
		Three-Phase 220	60	0.4	105	3320	883	25.0	1.57	390	62		
Three-Phase 230	60	0.4	105	3340	883	25.0	1.65	410	63				

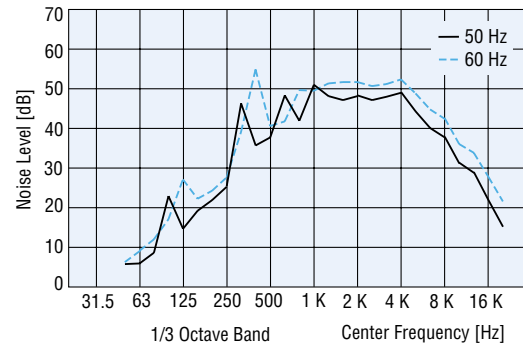
• How to read the specifications → Page E-13 • Alarm Specifications: ② → Page E-14, ⑤ → Page E-15 • Details of safety standards → Page G-2

## Air Flow — Static Pressure Characteristics



## Frequency — Audible Noise Level (dB)

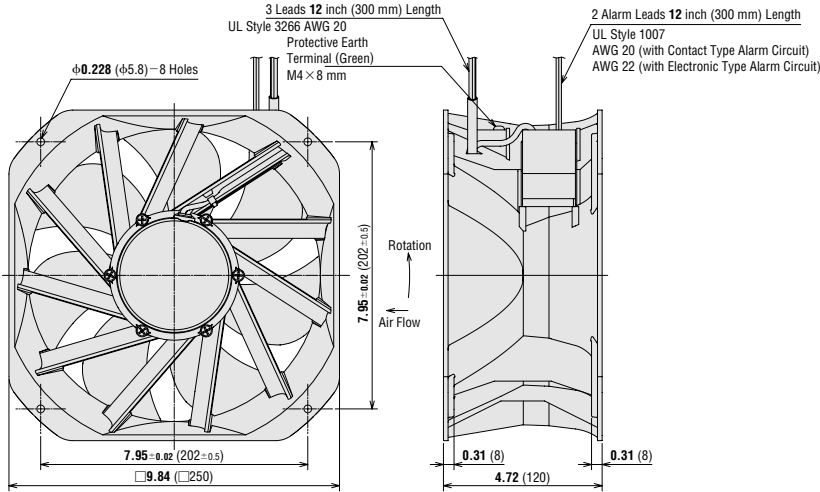
Measured at a distance of 3.3 feet (1 m) from the fan intake side



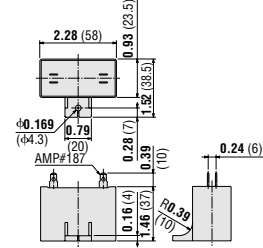
## Dimensions Scale 1/5, Unit = inch (mm)

Weight: 9.0 lb. (4.1 kg)

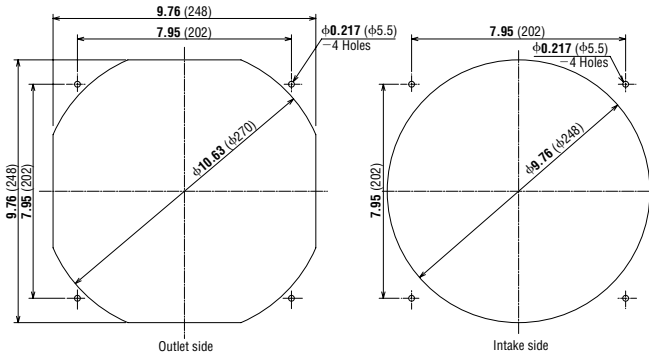
**DXF** E097



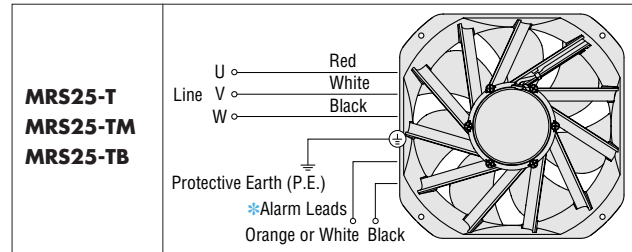
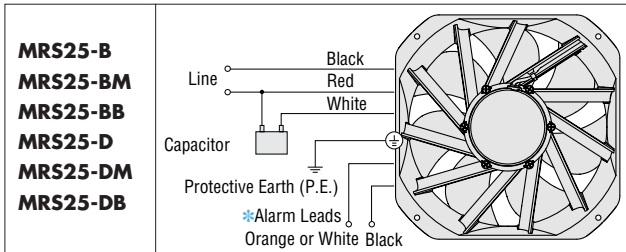
- Capacitor (included)  
CH160CFAUL for **MRS25-B, BM, BB**  
Weight: 2.6 oz. (75 g)  
CH45BFAUL for **MRS25-D, DM, DB**  
Weight: 2.6 oz. (73 g)  
(Capacitor and capacitor cap are included with single-phase fans.)



## Panel Cut-Out Scale 1/5, Unit = inch (mm)



## Connection Diagrams



\* Alarm type only.

● How to connect a capacitor → Page E-113

## Thermostats (Sold Separately)

Thermostats make it possible for fans to operate only when cooling is necessary, thereby conserving energy.



Thermostats: **AM1-WA1**  
**AM1-XA1**

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## Accessories (Sold Separately)

Item	Model	Safety Standards	Page
Finger Guard	<b>FG25D</b>	*	E-103

\* These products have been designed to pass tests set forth under the UL and CSA standards for equipment used in fans. They conform to the standards only when used with an **ORIX FAN**.



Finger Guard

Introduction

MRS

Variable Flow

MU

Long Life MDE

DC Input MDS - MD

MB

MBD

MF

MFD

Thermostats

Accessories

Before Using a Fan

Before Using a Fan

Before Using a Fan

Before Using a Fan

Before Using a Fan

Before Using a Fan

Before Using a Fan

Before Using a Fan

## MRS Series

### High-Efficiency, Low-Noise Models

□ 7.87 in.×3.54 in. thick

(□ 200 mm×90 mm thick)



Ambient Temperature: 14°F to 140°F (−10°C to +60°C)  
Operating Voltage Range: ±10%

#### Materials

Frame: Die Cast Aluminum

Blades: Resin

Flammability Grade: V-0

Overheat Protection: Built-in Thermal Protector

Bearings: Ball Bearings

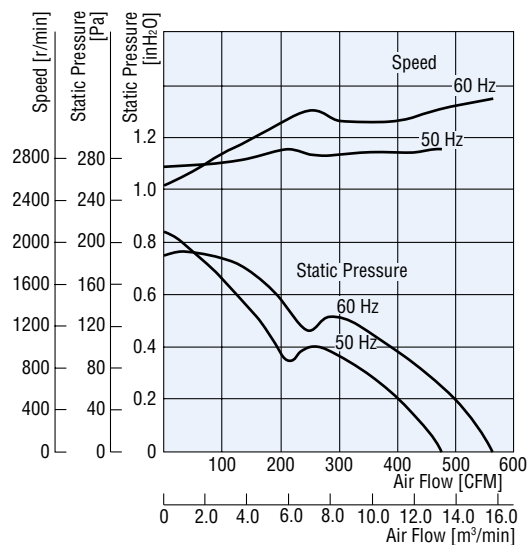
## Specifications



Model		Voltage VAC	Frequency Hz	Current A	Input Power W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB (A)	Capacitor μF
Low Speed Alarm, Electronic Alarm Type ②	Standard Type						CFM	m <sup>3</sup> /min	inH <sub>2</sub> O	Pa		
<b>MRS20-BM</b>	<b>MRS20-BUL</b>	Single-Phase 100	50	0.8	75	2850	466	13.2	0.886	221	56	6.0
		Single-Phase 100	60	1.0	95	3350	547	15.5	0.746	186	60	
		Single-Phase 110	60	1.0	95	3400	547	15.5	1.02	255	61	
		Single-Phase 115	60	1.0	95	3400	547	15.5	1.06	265	61	
<b>MRS20-DM</b>	<b>MRS20-DUL</b>	Single-Phase 200	50	0.4	75	2850	466	13.2	0.886	221	56	6.0
		Single-Phase 200	60	0.5	95	3350	547	15.5	0.746	186	60	
		Single-Phase 230	60	0.5	95	3400	547	15.5	1.06	265	61	
<b>MRS20-TM</b>	<b>MRS20-TUL</b>	Three-Phase 200	50	0.4	75	2850	466	13.2	0.886	221	56	—
		Three-Phase 200	60	0.4	95	3350	547	15.5	1.06	265	60	
		Three-Phase 220	60	0.4	95	3400	547	15.5	1.06	265	61	
		Three-Phase 230	60	0.4	95	3400	547	15.5	1.06	265	61	

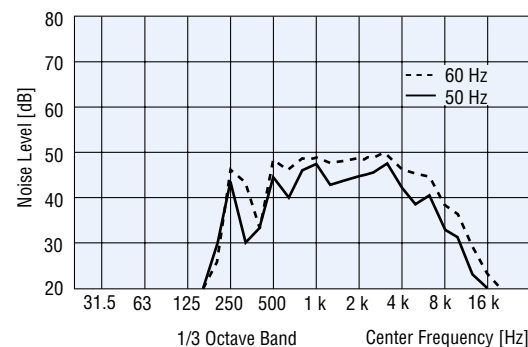
●How to read the specifications →Page E-13 ●Alarm Specifications: ②→Page E-14 ●Details of safety standards →Page G-2

## Air Flow — Static Pressure Characteristics



## Frequency — Audible Noise Level (dB)

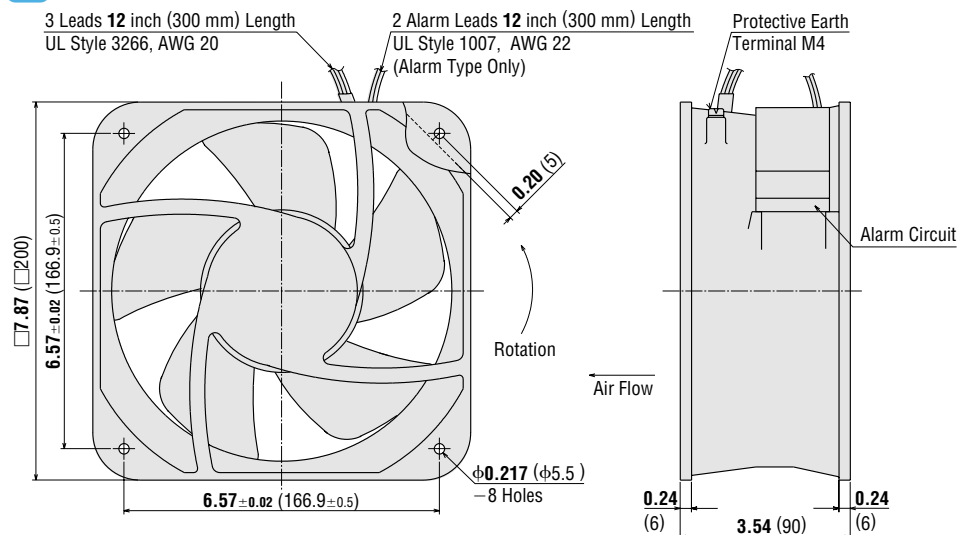
Measured at a distance of 3.3 feet (1 m) from the fan intake side



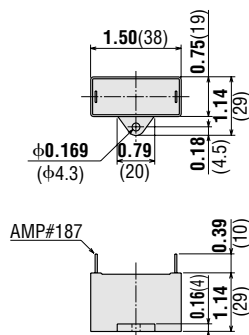
## Dimensions Scale 1/4, Unit = inch (mm)

Weight: 5.5 lb. (2.5 kg)

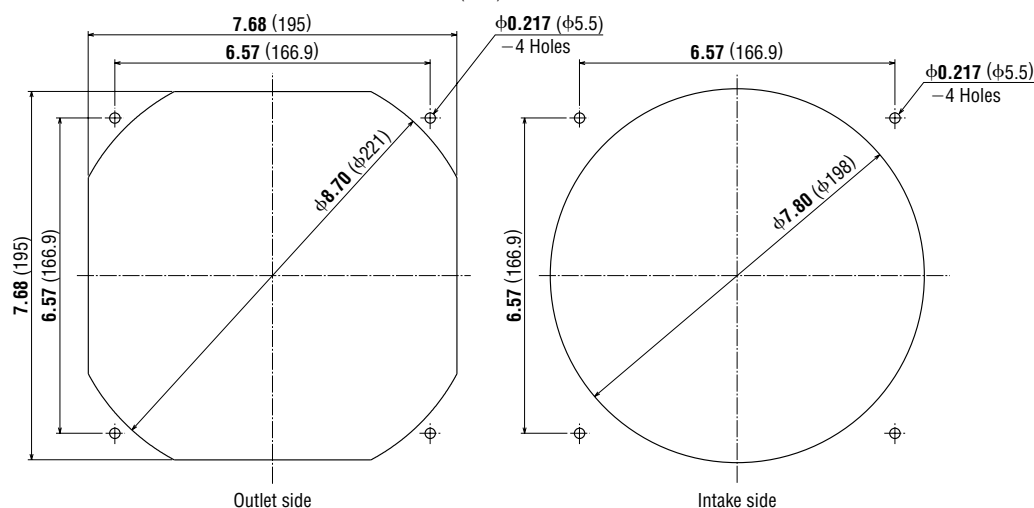
DXF E001



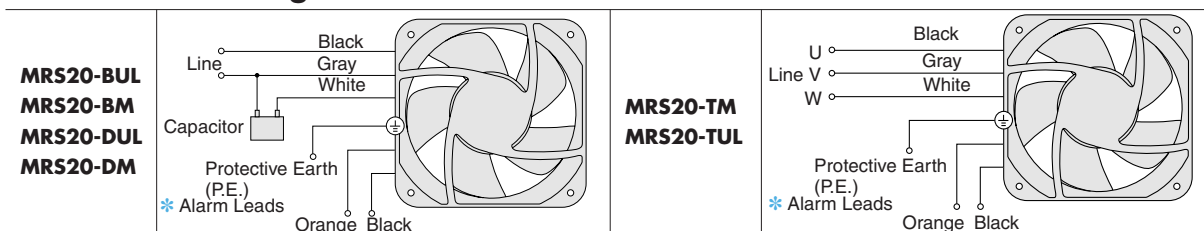
- Capacitor  
CH60UL  
Weight: 1.1 oz. (32 g)  
(Capacitor and capacitor cap are included with single-phase fans.)



## Panel Cut-Out Scale 1/4, Unit = inch (mm)



## Connection Diagrams



\* Alarm type only.

● How to connect a capacitor → Page E-113

## Thermostats (Sold Separately)

Thermostats make it possible for fans to operate only when cooling is necessary, thereby conserving energy.



Thermostats: **AM1-WA1**  
**AM1-XA1**

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## Accessories (Sold Separately)

Item	Model	Safety Standards	Page
Finger Guard	<b>FG20D</b>	*	E-103

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Finger Guard

Introduction

MMS

Variable Flow

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Long Life MDE

MDS - MD

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Accessories

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## MRS Series

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□ 7.09 in.×3.54 in. thick  
 (□ 180 mm×90 mm thick)



Ambient Temperature: 14°F to 140°F (−10°C to +60°C)  
 Operating Voltage Range: ±10%

#### Materials

Frame: Die Cast Aluminum  
 Blades: Resin  
 Flammability Grade: V-0  
 Overheat Protection: Built-in Thermal Protector  
 Bearings: Ball Bearings

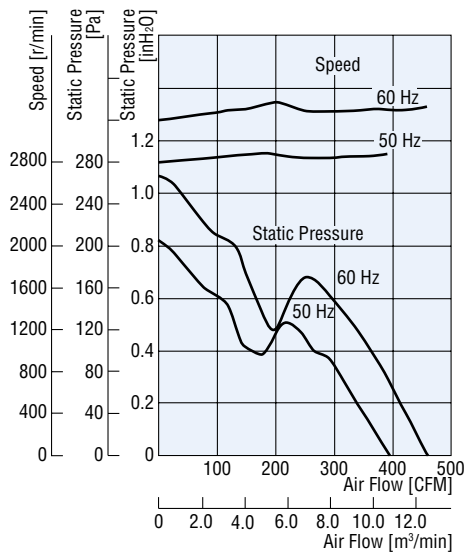
## Specifications



Model		Voltage VAC	Frequency Hz	Current A	Input Power W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB (A)	Capacitor $\mu$ F
Low Speed Alarm, Electronic Alarm Type ②	Standard Type						CFM	m <sup>3</sup> /min	inH <sub>2</sub> O	Pa		
<b>MRS18-BTM</b>	<b>MRS18-BUL</b>	Single-Phase 100	50	0.8	75	2850	388	11.0	0.786	196	56	6.0
		Single-Phase 100	60	1.0	95	3300	452	12.8	0.982	245	60	
		Single-Phase 115	60	1.0	95	3350	452	12.8	0.982	245	61	
<b>MRS18-DTM</b>	<b>MRS18-DUL</b>	Single-Phase 200	50	0.4	75	2850	388	11.0	0.786	196	56	6.0
		Single-Phase 200	60	0.5	95	3300	452	12.8	0.982	245	60	
		Single-Phase 230	60	0.5	95	3350	452	12.8	0.982	245	61	
<b>MRS18-TTM</b>	<b>MRS18-TUL</b>	Three-Phase 200	50	0.4	75	2850	388	11.0	0.786	196	56	—
		Three-Phase 200	60	0.4	95	3300	452	12.8	0.982	245	60	
		Three-Phase 230	60	0.4	95	3350	452	12.8	0.982	245	61	

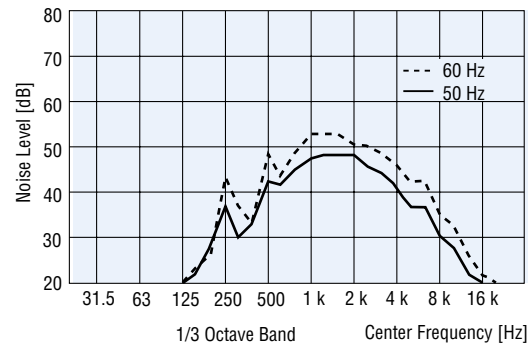
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## Air Flow — Static Pressure Characteristics



## Frequency — Audible Noise Level (dB)

Measured at a distance of 3.3 feet (1 m) from the fan intake side

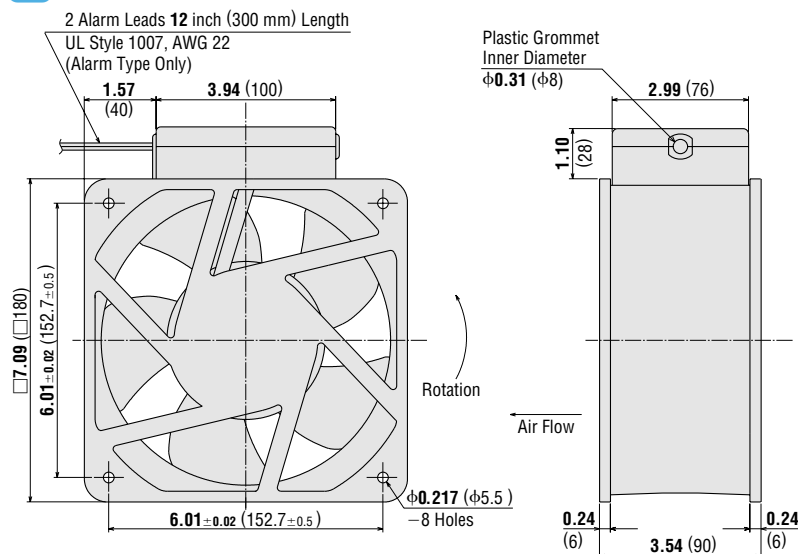


## Dimensions

Scale 1/4, Unit = inch (mm)

Weight: 5.5 lb. (2.5 kg)

DXF E002

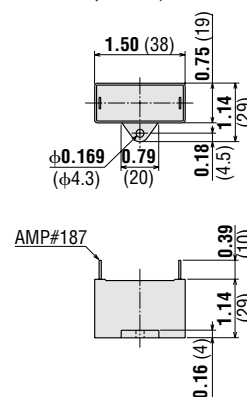


- Capacitor

CH60UL

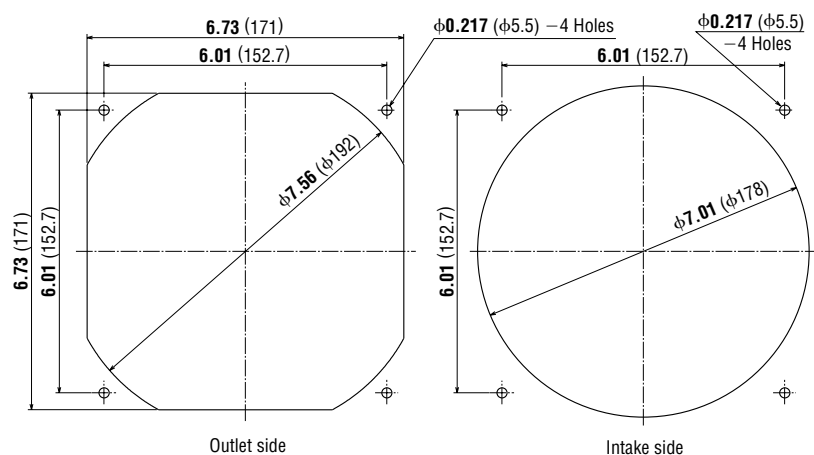
Weight: 1.1 oz. (32 g)

(Capacitor and capacitor cap are included with single-phase alarm type fans. Single-phase standard types of fans contain a built-in capacitor.)



## Panel Cut-Out

Scale 1/4, Unit = inch (mm)



## Accessories (Sold Separately)

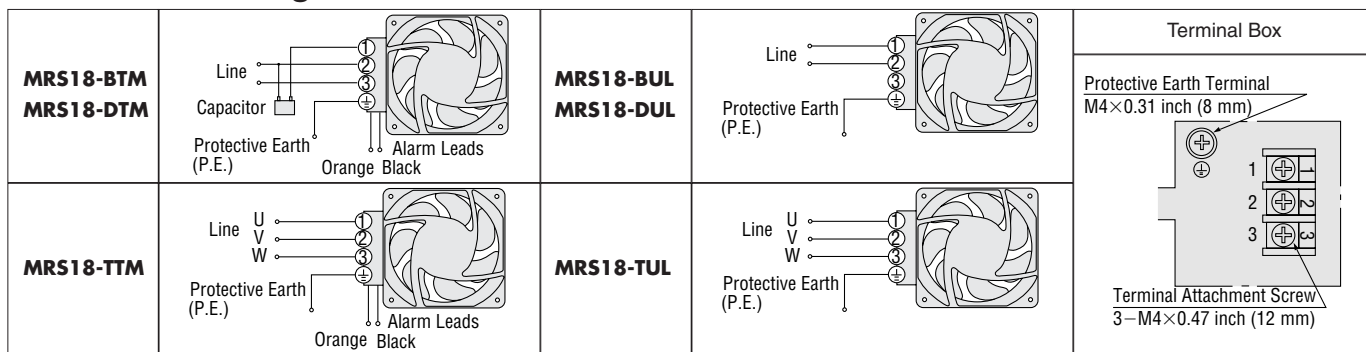
Item	Model	Safety Standards	Page
Finger Guard	<b>FG18D</b>	*	E-103
Filter	<b>FL18</b>	—	E-106

\* These products have been designed to pass tests set forth under the UL and CSA standards for equipment used in fans. They conform to the standards only when used with an **ORIX FAN**.



- A filter can be installed in place of the finger guard.

## Connection Diagrams



## Thermostats (Sold Separately)

Thermostats make it possible for fans to operate only when cooling is necessary, thereby conserving energy.



Thermostats: **AM1-WA1**  
**AM1-XA1**

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# MRS Series

## High-Efficiency, Low-Noise Models

□ 6.30 in. × 2.44 in. thick  
 (□ 160 mm × 62 mm thick)



Ambient Temperature: 14°F to 140°F (−10°C to +60°C)  
 Operating Voltage Range: ±10%

### Materials

Frame: Die Cast Aluminum  
 Blades: Resin  
 Flammability Grade: V-0  
 Overheat Protection: Built-in Thermal Protector  
 Bearings: Ball Bearings

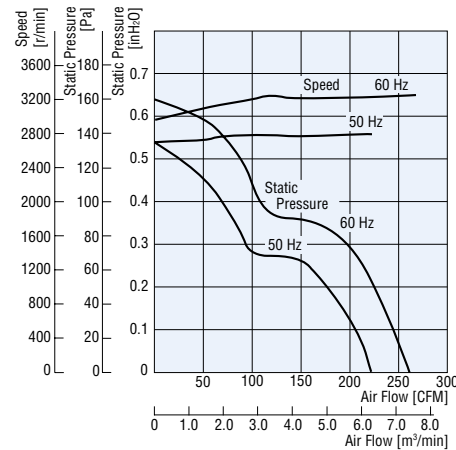


## Specifications

Model			Voltage VAC	Frequency Hz	Current A	Input Power W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB (A)	Capacitor $\mu$ F
Low Speed Alarm	Electronic Alarm Type	Contact Alarm Type						Standard Type	CFM	m <sup>3</sup> /min	inH <sub>2</sub> O		
	②	⑥											
<b>MRS16-BTM</b>	<b>MRS16-BTA</b>	<b>MRS16-BUL</b>	Single-Phase 100	50	0.47	45	2800	219	6.2	0.509	127	49	
			Single-Phase 100	60	0.46	45	3250	258	7.3	0.63	157	52	3.0
			Single-Phase 115	60	0.49	55	3300	258	7.3	0.63	157	53	
<b>MRS16-DTM</b>	<b>MRS16-DTA</b>	<b>MRS16-DUL</b>	Single-Phase 200	50	0.24	45	2800	219	6.2	0.509	127	49	
			Single-Phase 200	60	0.24	45	3250	258	7.3	0.63	157	52	3.0
			Single-Phase 230	60	0.25	55	3300	258	7.3	0.63	157	53	
<b>MRS16-TTM</b>	<b>MRS16-TTA</b>	<b>MRS16-TUL</b>	Three-Phase 200	50	0.19	38	2800	219	6.2	0.509	127	49	
			Three-Phase 200	60	0.17	41	3250	258	7.3	0.63	157	52	—
			Three-Phase 230	60	0.18	48	3300	258	7.3	0.63	157	53	

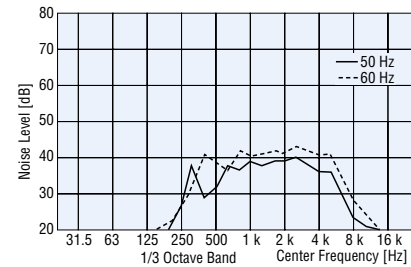
• How to read the specifications → Page E-13 • Alarm Specifications: ② → Page E-14, ⑥ → Page E-15 • Details of safety standards → Page G-2

## Air Flow — Static Pressure Characteristics



## Frequency — Audible Noise Level (dB)

Measured at a distance of 3.3 feet (1 m) from the fan intake side

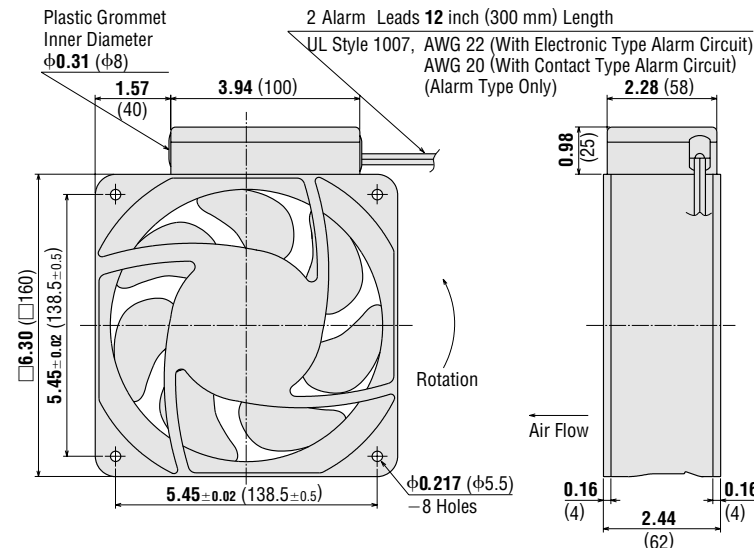


## Dimensions

Scale 1/4, Unit = inch (mm)

Weight: 3.0 lb. (1.35 kg)

DXF E003

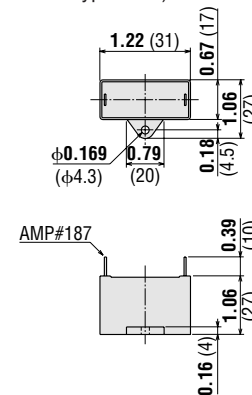


### Capacitor For MRS16-□TM

CH30UL

Weight: 0.81 oz. (23 g)

(Capacitor and capacitor cap are included with single-phase alarm type fans.)

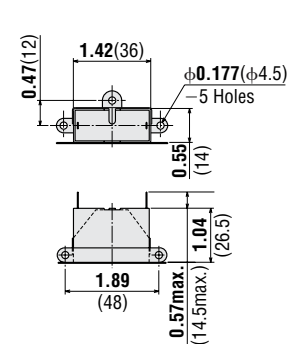


### Capacitor For MRS16-□TA

CH30

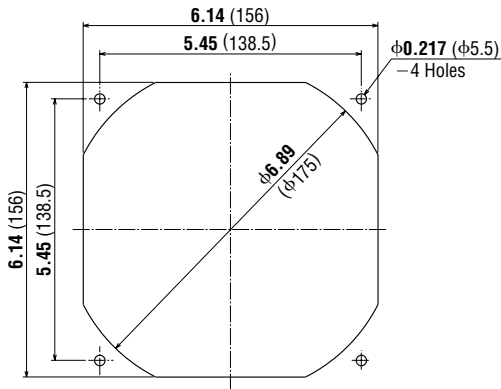
Weight: 1.1 oz. (30 g)

(Capacitor is included with the single-phase alarm type fans.)



## Panel Cut-Out

Scale 1/4, Unit = inch (mm)



Outlet side/Intake side

## Connection Diagrams

				Terminal Box
<b>MRS16-BTM</b> <b>MRS16-DTM</b>		<b>MRS16-BTA</b> <b>MRS16-DTA</b>		
<b>MRS16-TTM</b>		<b>MRS16-TTA</b>		
<b>MRS16-BUL</b> <b>MRS16-DUL</b>		<b>MRS16-TUL</b>		

• How to connect a capacitor → Page E-113

## Thermostats (Sold Separately)

Thermostats make it possible for fans to operate only when cooling is necessary, thereby conserving energy.



Thermostats: **AM1-WA1**  
**AM1-XA1**

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## Accessories (Sold Separately)

Item	Model	Safety Standards	Page
Finger Guard	<b>FG16D</b>	*	E-103
Filter	<b>FL16</b>	—	E-106

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Finger Guard

• A filter can be installed in place of the finger guard.



## MRS Series

### High-Efficiency, Low-Noise Models

□ 5.51 in.×1.85 in. thick  
 (□ 140 mm×47 mm thick)



Ambient Temperature: 14°F to 140°F (−10°C to +60°C)  
 Operating Voltage Range: ±10%

#### Materials

Frame: Die Cast Aluminum  
 Blades: Resin  
 Flammability Grade: V-0  
 Overheat Protection: Built-in Thermal Protector  
 Bearings: Ball Bearings

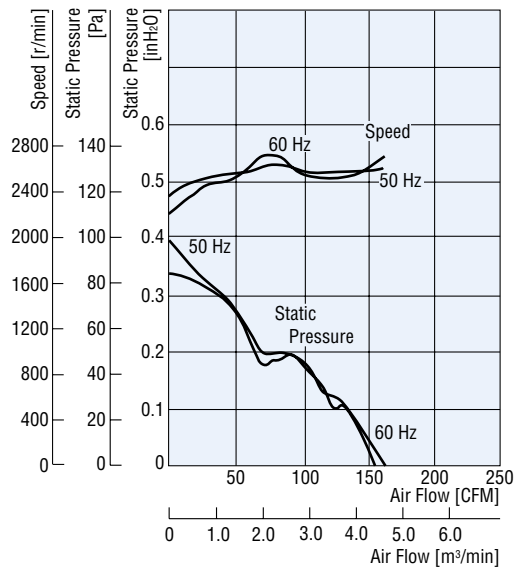
## Specifications



Model		Voltage VAC	Frequency Hz	Current A	Input Power W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB (A)
Low Speed Alarm, Electronic Alarm Type ③	Standard Type						CFM	m <sup>3</sup> /min	inH <sub>2</sub> O	Pa	
		Three-Phase 200	50	0.08	18.0	2600	159	4.5	0.369	92	48
<b>MRS14-TTM</b>	<b>MRS14-TUL</b>	Three-Phase 200	60	0.09	22.0	2650	162	4.6	0.325	81	49
		Three-Phase 230	60	0.09	24.5	2950	177	5.0	0.437	109	51

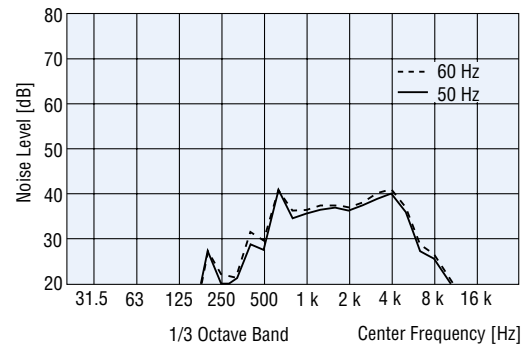
•How to read the specifications →Page E-13 •Alarm Specifications: ③→Page E-14 •Details of safety standards→Page G-2

## Air Flow — Static Pressure Characteristics



## Frequency — Audible Noise Level (dB)

Measured at a distance of 3.3 feet (1 m) from the fan intake side

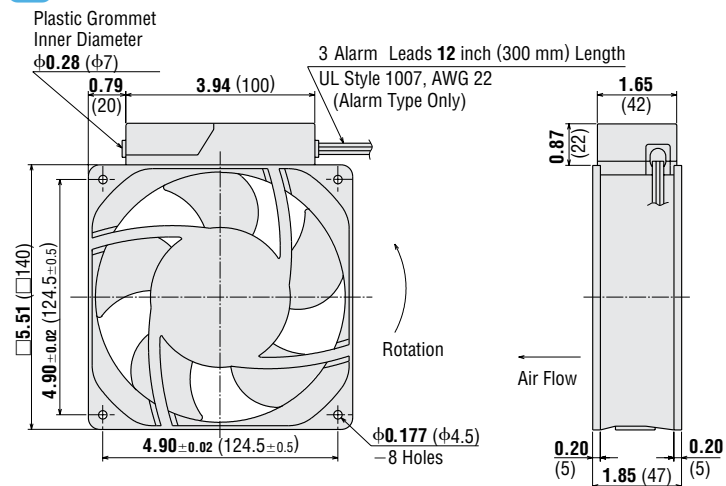


## Dimensions

Scale 1/4, Unit = inch (mm)

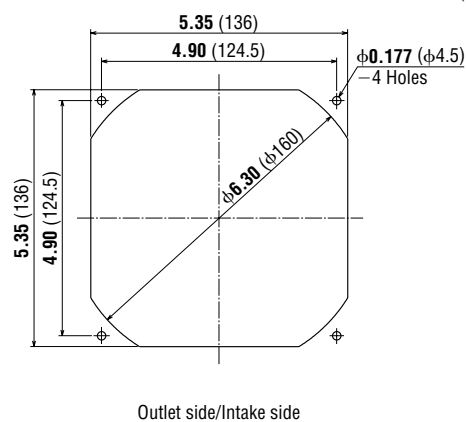
Weight: 2.0 lb. (0.9 kg)

DXF E004

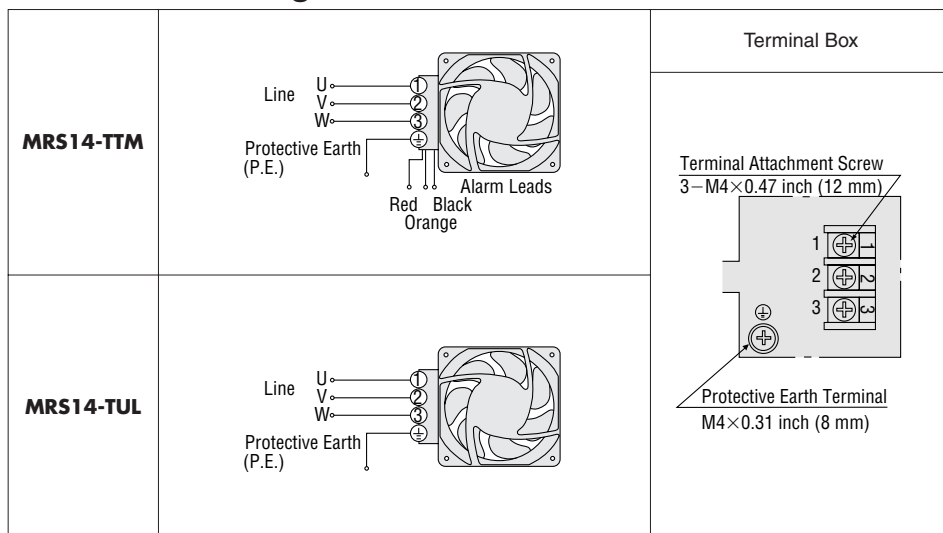


## Panel Cut-Out

Scale 1/4, Unit = inch (mm)



## Connection Diagrams



## Accessories (Sold Separately)

Item	Model	Safety Standards	Page
Finger Guard	<b>FG14D</b>	*	E-103

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# VARIOFLOW

## MRS Series

□ 7.09 in. × 3.54 in. thick  
 (□ 180 mm × 90 mm thick)



Ambient Temperature: 14°F to 140°F (−10°C to +60°C)  
 Operating Voltage Range: ±10%

### Materials

Frame: Die Cast Aluminum  
 Blades: Resin  
 Flammability Grade: V-0  
 Overheat protection: Built-in Thermal Protector  
 Bearings: Ball Bearings



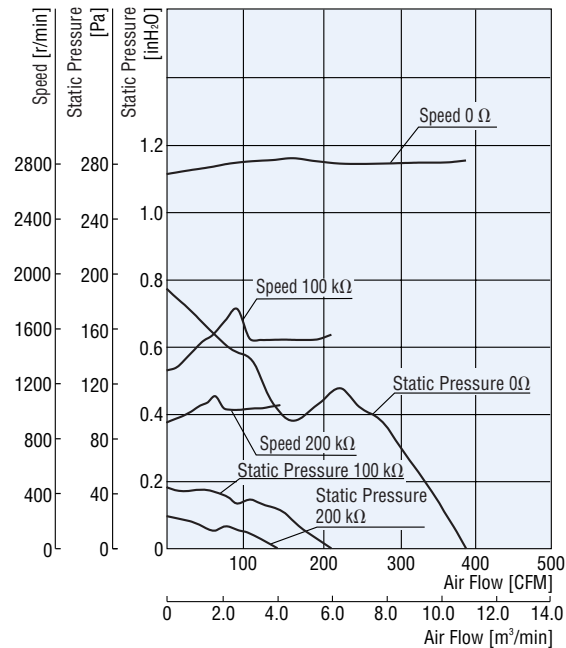
## Specifications

Model	Voltage VAC	Frequency Hz	Current A	Input Power W	Resistance kΩ	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB
							CFM	m <sup>3</sup> /min	inH <sub>2</sub> O	Pa	
<b>MRS18V2-B</b>	Single-Phase 100	50	1.2	74	0	2800	388	11.0	0.746	186	56
		60	1.4	100	200	1000	138	3.9	0.0786	19.6	46
	Single-Phase 115	60	1.4	100	0	3200	424	12.0	0.786	196	60
		60	1.4	100	200	750	98.8	2.8	0.0472	11.8	40
<b>MRS18V2-D</b>	Single-Phase 200	50	0.6	74	0	2800	388	11.0	0.746	186	56
		60	0.7	100	200	1000	138	3.9	0.0786	19.6	46
	Single-Phase 230	60	0.7	100	0	3200	424	12.0	0.786	196	60
		60	0.7	100	200	750	98.8	2.8	0.0472	11.8	40
	Single-Phase 230	50	0.6	84	0	2850	388	11.0	0.786	196	56
		60	0.7	100	200	1350	177	5.0	0.146	36.3	49
		60	0.7	100	0	3350	452	12.8	1.02	255	61
		60	0.7	100	200	1100	141	4.0	0.0942	23.5	44

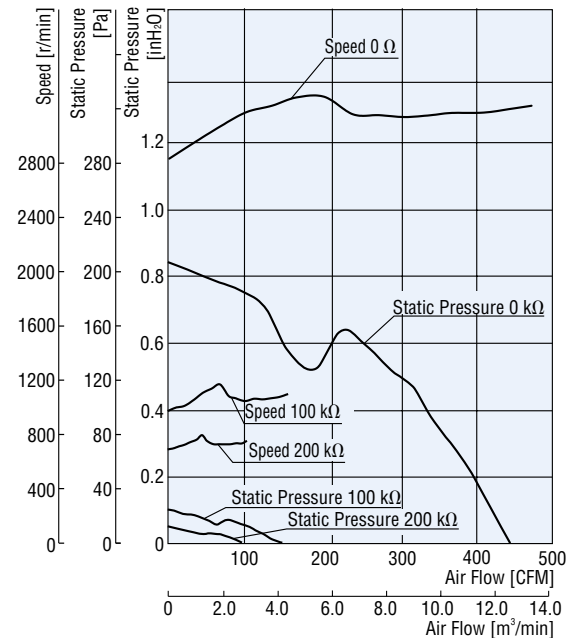
• How to read the specifications → Page E-13 • Details of safety standards → Page G-2

## Air Flow — Static Pressure Characteristics

### 50 Hz



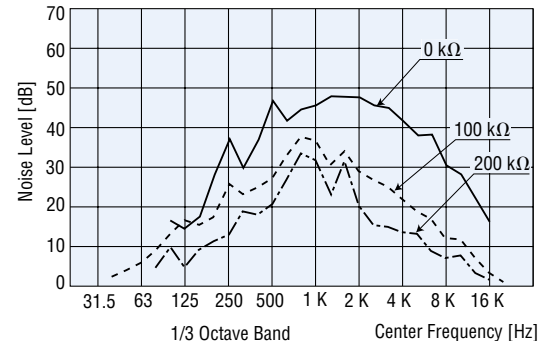
### 60 Hz



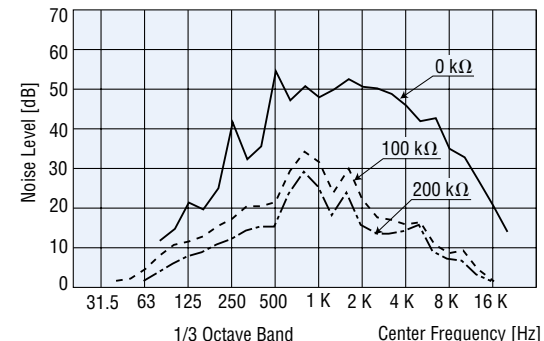
## Frequency — Audible Noise Level (dB)

Measured at a distance of 3.3 feet (1 m) from the fan intake side.

### 50 Hz



### 60 Hz

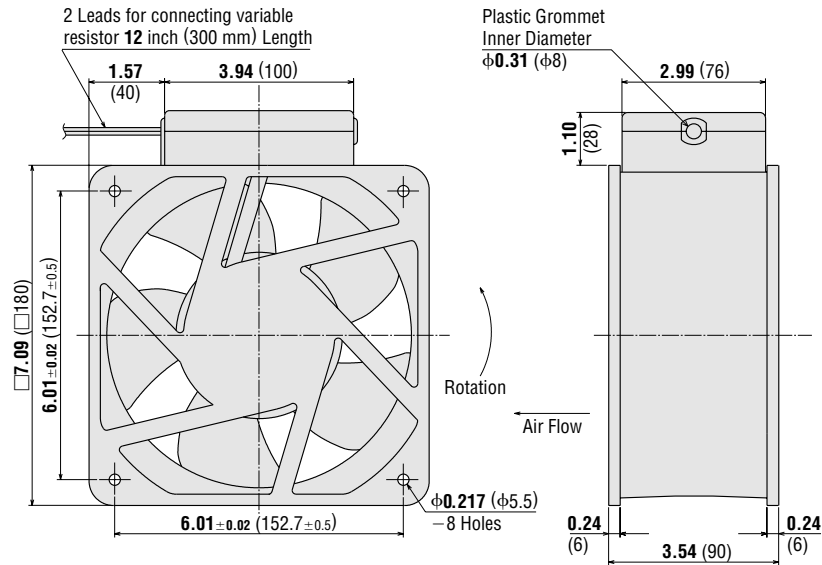


## Dimensions

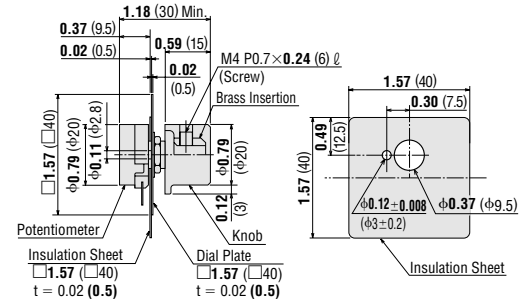
Scale 1/4, Unit = inch (mm)

Weight: 5.5 lb. (2.5 kg)

DXF E002

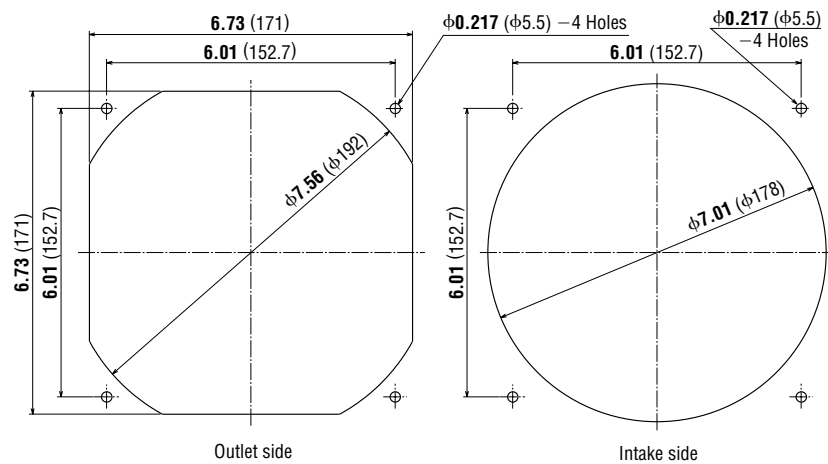


- Potentiometer (included)  
(200 k $\Omega$  1/4 W with a linear resistance vs. angle curve)

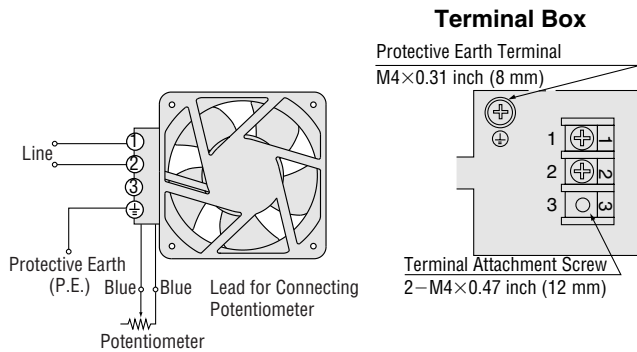


## Panel Cut-Out

Scale 1/4, Unit = inch (mm)



## Connection Diagram



## Accessories (Sold Separately)

Item	Model	Safety Standards	Page
Finger Guard	<b>FG18D</b>	*	E-103
Filter	<b>FL18</b>	-	E-106

\* These products have been designed to pass tests set forth under the UL and CSA standards for equipment used in fans. They conform to the standards only when used with an **ORIX FAN**.



## Thermostats (Sold Separately)

Thermostats make it possible for fans to operate only when cooling is necessary, thereby conserving energy.



Thermostats: **AM1-WA1**  
**AM1-XA1**

→ Page E-97

- A filter or screen can be installed in place of the finger guard.