



Cross Flow Fans

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MF Series	E-88
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Cross Flow Fans

Cross flow fans employ a specifically designed blade to create parallel air movement that reaches even distant objects in a wide, uniform pattern. These fans provide right-angle airflow and rectangular shape, allowing for installation in corners and space savings in applications such as circuit board cooling and air curtains.



Safety Standards and CE Marking

Model	Standards	Certification Body	Standards File No.	CE Marking
MF Series	UL507	UL	E58377	Low Voltage Directives
	CSA C22.2 No.113			
	EN60950	VDE	5854	

- [Details of Safety Standard](#) → Page G-2
- [List of Safety Standard Approved Products](#) → Page G-24

System Configuration



Finger Guards (Accessories)
Protect Against the hazards posed by rotating fan blades.
(→ Page E-102)

Finger Guard

*The photo shows two optional finger guards, **FG915D**.

Thermostats
Thermostats make it possible for fans to operate only when cooling is necessary, thereby conserving energy.
(→ Page E-97)



Product Number Code

MF 9 30 B - B C

C: Built-in capacitor

Voltage

B: Single-phase 100/110/115 VAC

D: Single-phase 200/220/230 VAC

24: 24 VDC

24A: 24 VDC Low-speed alarm type

48: 48 VDC

48S: 48 VDC Pulse sensor type

Letter Designation

No letter: Motor is on left when viewing the mounting holes

B: Motor is on right when viewing the mounting holes

Length of Impeller

30: 11.81 in. (300 mm)

15: 5.91 in. (150 mm)

Frame Size

9: 3.54 in. sq. (90 mm sq.)

Series

MF: AC Cross Flow Fans

MFD: DC Cross Flow Fans

Types of Cross Flow Fans

Length of Impeller	Voltage				Page	
	Single-Phase 100/110/115 VAC	Single-Phase 200/220/230 VAC	24 VDC	48 VDC	AC	DC
11.81 in. (300 mm)	MF930(B)-BC	MF930(B)-DC	MFD930(B)-24, 24A	MFD930(B)-48, 48S	E-88	E-92
5.91 in. (150 mm)	MF915(B)-BC	MF915(B)-DC	MFD915(B)-24, 24A	MFD915(B)-48, 48S	E-90	E-94

General Specifications

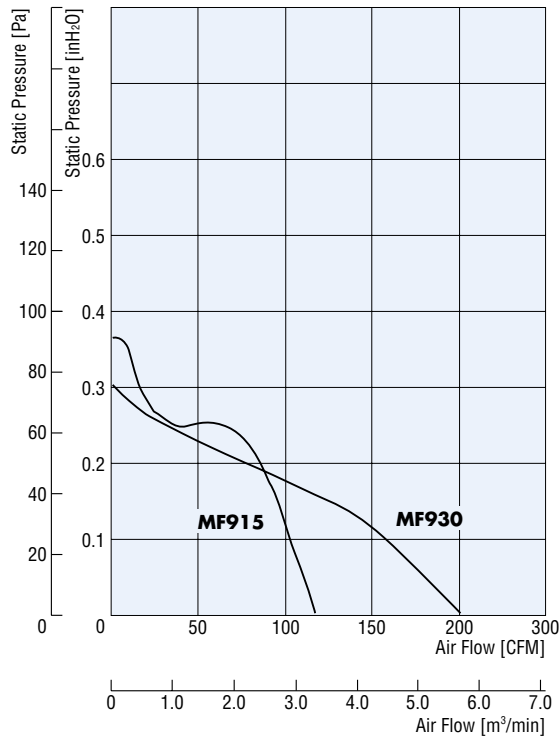
Item	Specifications
Insulation Resistance	100 MΩ or more when 500 VDC is applied between the windings and the frame under normal ambient temperature and humidity. (MFD Series: 10 MΩ or more, 250 VDC) MFD915-48, 24A, 48S, MFD930-48, 24A, 48S: 10MΩ or more, 500 VDC)
Dielectric Strength	Sufficient to withstand 1.5 kV at 50 Hz applied between the windings and the frame for 1 minute under normal ambient temperature and humidity. (MFD Series: 500 V · 50 Hz, 1 minute)
Temperature Rise	81°F (45°C) or less measured by the thermometer method after the temperature of the coil has stabilized under normal operation at the rated voltage and frequency. (MFD Series: 27°F (15°C) or less)
Operating Voltage Range	AC Cross Flow Fans: ±10% of the rated voltage. DC Cross Flow Fans: ±10% of the rated voltage.
Insulation Class	Class E (248°F [120°C]) [Recognized as Class A (221°F [105°C]) by UL and CSA standards.]
Overheat Protection	MF Series has built-in thermal protector (automatic reset) Operating temperature open: 248°F±9°F (120°C±5°C), close: 170.6°F±27°F (77°C±15°C) MFD Series has an overheat protection function installed.
Ambient Temperature	14°F~140°F (-10°C~+60°C)
Ambient Humidity	0~85% (noncondensing)
Color	Black

Air Flow–Static Pressure

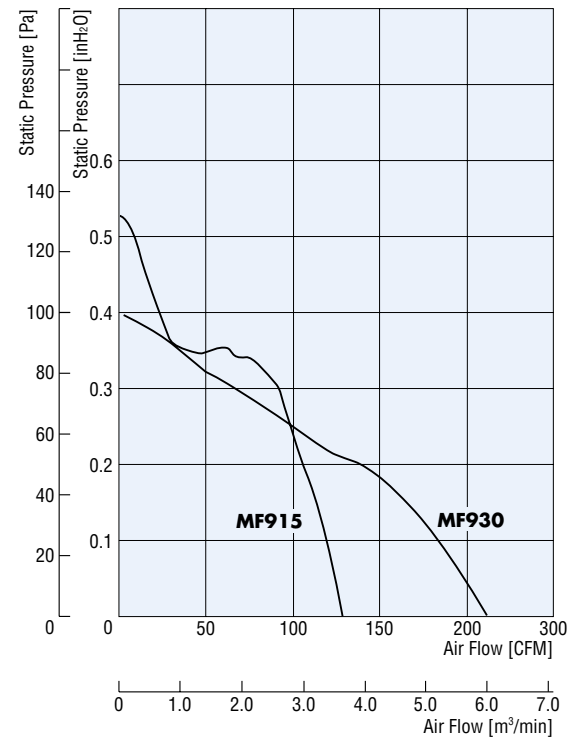
● AC Cross Flow Fans

◆ MF Series

● 50 Hz

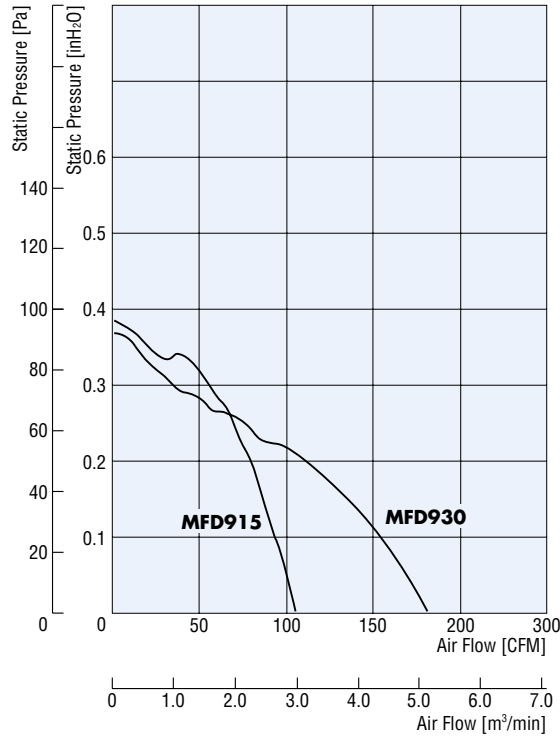


● 60 Hz



● DC Cross Flow Fans

◆ MFD Series



Introduction	Axial Flow Fans		Centrifugal Blowers		Cross Flow Fans		Thermostats	Accessories	Before Using a Fan
MRS	AC Input Variable Flow	MU	DC Input Long Life MDE	MBS	AC Input	MFB			
			MDS · MD	MDB	DC Input	MFD			

MF Series

AC Cross Flow Fans

Length of Impeller 11.81 in. (300 mm)



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

Materials

- Motor Case: Die Cast Aluminum
- Casing: Steel
- Impeller: Aluminum
- Overheat Protection: Built-in Thermal Protector
- Bearings: Ball Bearings

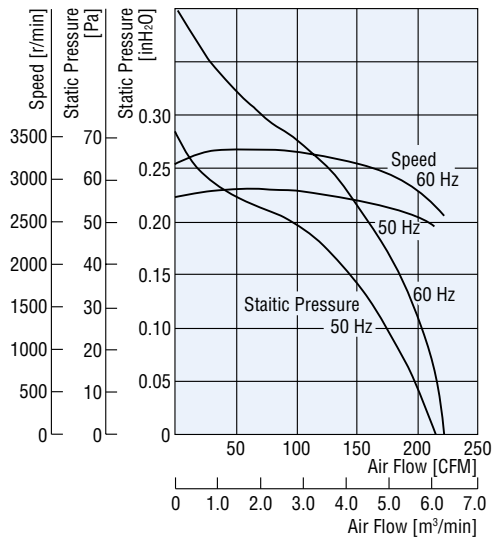
Specifications



Model	Voltage VAC	Frequency Hz	Current A	Input Power W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB(A)
						CFM	m³/min	inH ₂ O	Pa	
MF930-BC MF930B-BC	Single-Phase 100	50	0.40	35	2500	212	6.0	0.297	74	58
	Single-Phase 100	60	0.50	45	2700	219	6.2	0.413	103	60
	Single-Phase 110	60	0.50	48	2950	233	6.6	0.425	106	62
	Single-Phase 115	60	0.50	50	3000	240	6.8	0.425	106	63
MF930-DC MF930B-DC	Single-Phase 200	50	0.20	35	2500	212	6.0	0.297	74	58
	Single-Phase 200	60	0.25	45	2700	219	6.2	0.413	103	60
	Single-Phase 220	60	0.25	48	2950	233	6.6	0.425	106	62
	Single-Phase 230	50	0.20	40	2700	219	6.2	0.313	78	60
	Single-Phase 230	60	0.25	50	3000	240	6.8	0.425	106	63

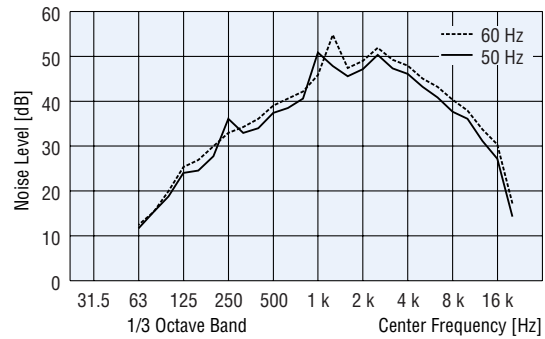
•How to read the specifications →Page E-13 •Details of safety standards →Page G-2

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

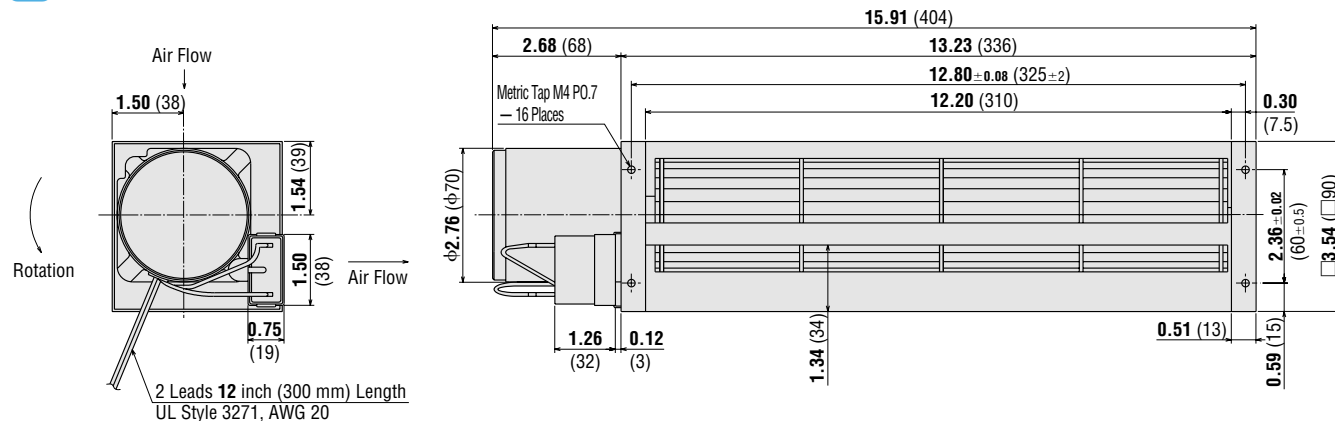


Dimensions Scale 1/4, Unit = inch (mm)

● MF930

Weight: 4.2 lb. (1.9 kg)

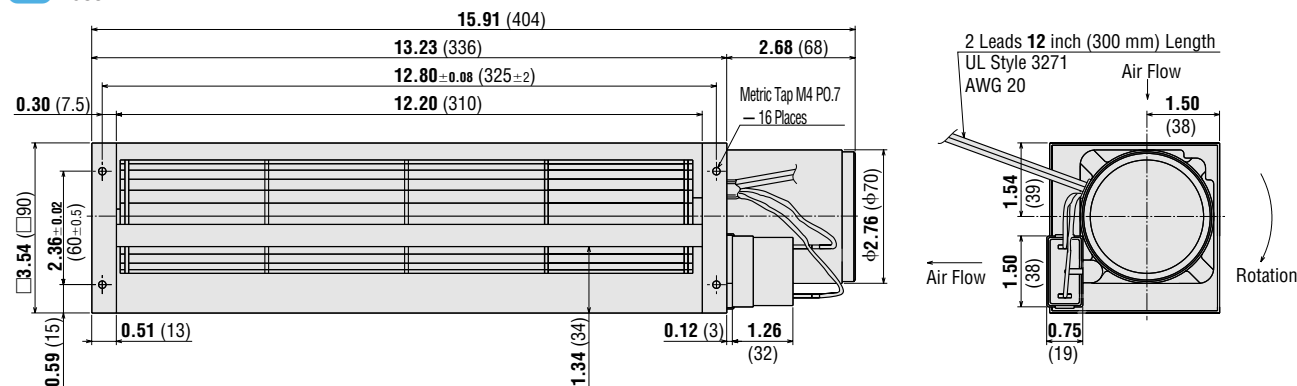
DXF E034



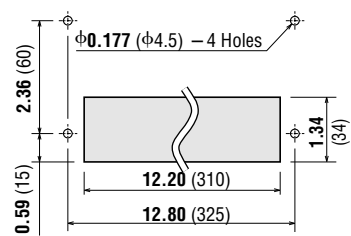
● MF930B

Weight: 4.2 lb. (1.9 kg)

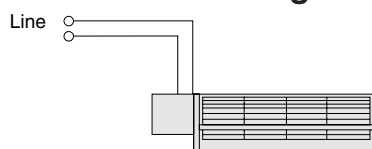
DXF E035



Panel Cut-Out Unit = inch (mm)



Connection Diagram



Thermostats (Sold Separately)

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



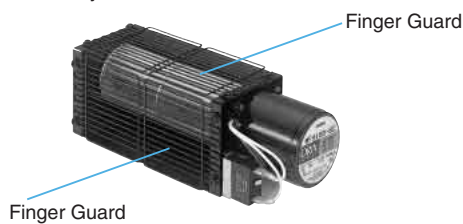
Thermostats: **AM1-WA1**
AM1-XA1

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Accessories (Sold Separately)

Item	Model	Safety Standards	Page
Finger Guard	FG930D	*	E-104

* 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**.



The photo shows two finger guards.

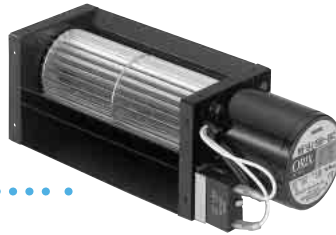
Introduction							
MRS							
Variable Flow	AC Input	Axial Flow Fans					
MU	DC Input						
Long Life							
MDFE	DC Input						
MDS - MD	AC Input	Centrifugal Blowers					
MB	DC Input						
MBD	AC Input						
MF	DC Input	Cross Flow Fans					
MFD							
Thermostats							
Accessories							
Before Using a Fan							

MF Series

AC Cross Flow Fans

Length of Impeller

5.91 in. (150 mm)



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

Materials

Motor Case: Die Cast Aluminum
Casing: Steel
Impeller: Aluminum
Overheat Protection: Built-in Thermal Protector
Bearings: Ball Bearings

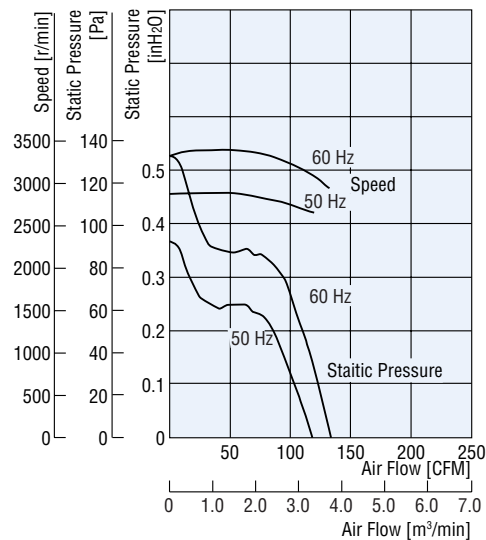
Specifications



Model	Voltage VAC	Frequency Hz	Current A	Input Power W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB(A)
						CFM	m ³ /min	inH ₂ O	Pa	
MF915-BC MF915B-BC	Single-Phase 100	50	0.35	30	2650	120	3.4	0.353	88	60
	Single-Phase 100	60	0.45	40	2950	131	3.7	0.509	127	63
	Single-Phase 110	60	0.45	42	3200	141	4.0	0.529	132	64
	Single-Phase 115	60	0.45	43	3250	145	4.1	0.529	132	64
MF915-DC MF915B-DC	Single-Phase 200	50	0.20	30	2650	120	3.4	0.353	88	60
	Single-Phase 200	60	0.25	40	2950	131	3.7	0.509	127	63
	Single-Phase 220	60	0.25	42	3200	141	4.0	0.529	132	64
	Single-Phase 230	50	0.20	33	2800	127	3.6	0.369	92	61
	Single-Phase 230	60	0.25	43	3250	145	4.1	0.529	132	64

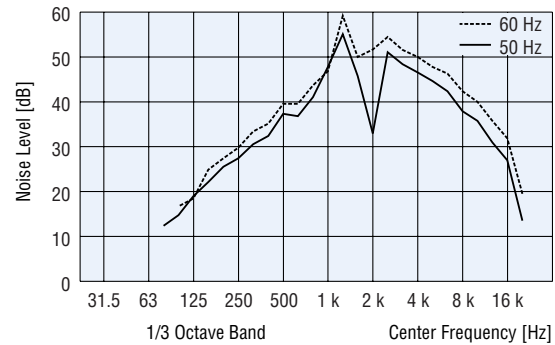
•How to read the specifications →Page E-13 •Details of safety standards →Page G-2

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

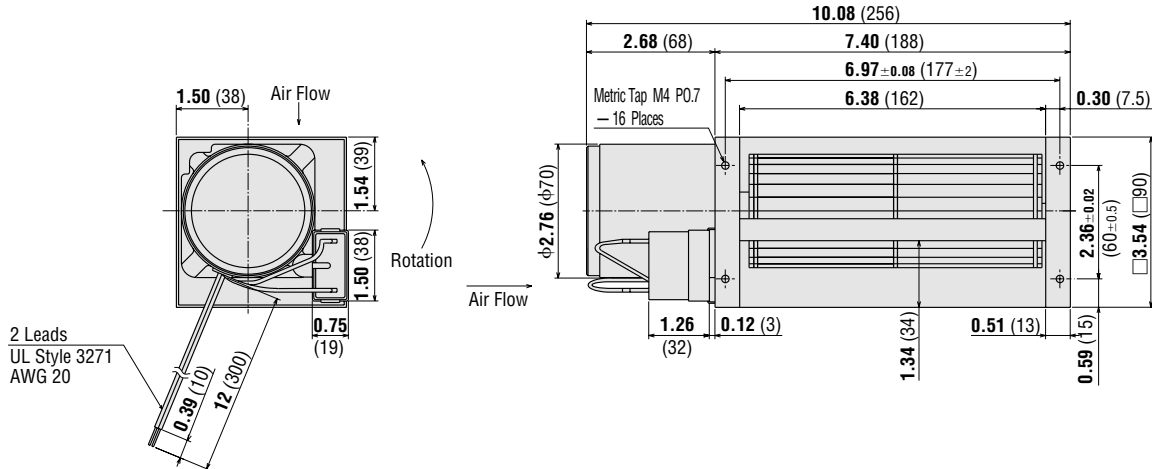


Dimensions Scale 1/4, Unit = inch (mm)

MF915

Weight: 3.7 lb. (1.7 kg)

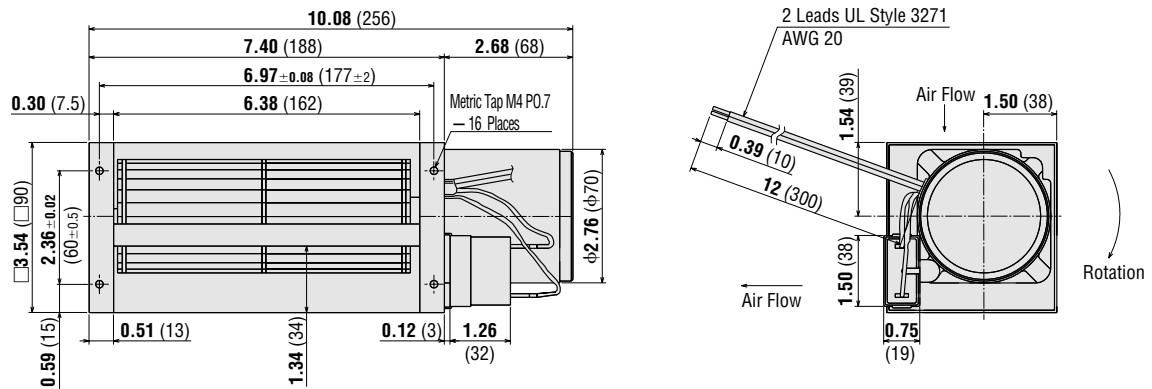
DXF E036



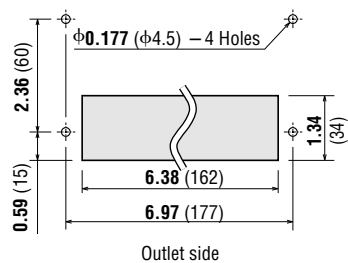
MF915B

Weight: 3.7 lb. (1.7 kg)

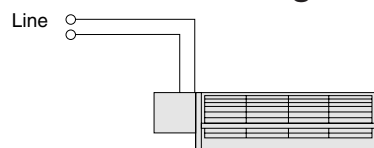
DXF E037



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



Connection Diagram



Thermostats (Sold Separately)

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



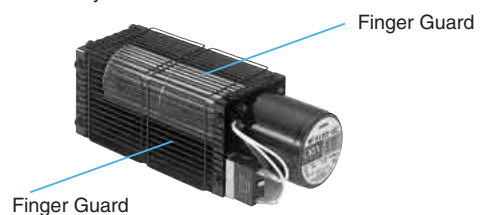
Thermostats: **AM1-WA1**
AM1-XA1

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Accessories (Sold Separately)

Item	Model	Safety Standards	Page
Finger Guard	FG915D	*	E-104

* 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**.



The photo shows two finger guards.

Introduction

MRS

Variable
Flow

MU

Long Life
MDE

MDS - MD

MB

MDB

MF

MFD

Thermostats

Accessories

Before Using
a Fan

MFD Series

DC Cross Flow Fans

Length of Impeller 11.81 in. (300 mm)



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

Materials

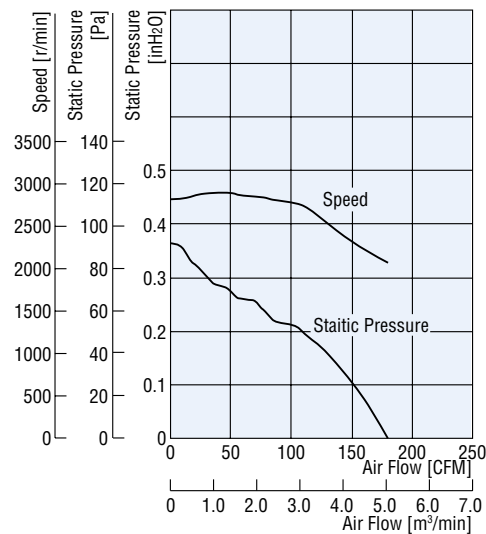
Motor Case: Die Cast Aluminum
Casing: Steel
Impeller: Aluminum
Overheat Protection: Built-in Overheat Protection Circuit
Bearings: Ball Bearings

Specifications

Model	Voltage VDC	Current A	Speed r/min	Max. Air Flow CFM m ³ /min	Max. Static Pressure inH ₂ O Pa	Noise Level dB (A)
Low Speed Alarm, Contact Alarm Type ⑦	24	1.0	2100	184 5.2	0.333 83	60
MFD930-24A MFD930B-24A						
Standard Type	48	0.7	2100	184 5.2	0.333 83	60
Pulse Sensor Type ⑨						
Standard Type	MFD930-48S MFD930B-48S					
Standard Type	MFD930-48 MFD930B-48					

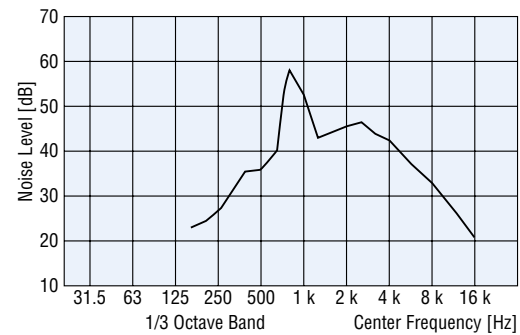
• How to read the specifications → Page E-13 • Alarm Specifications ⑦, ⑨ → Page E-16

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

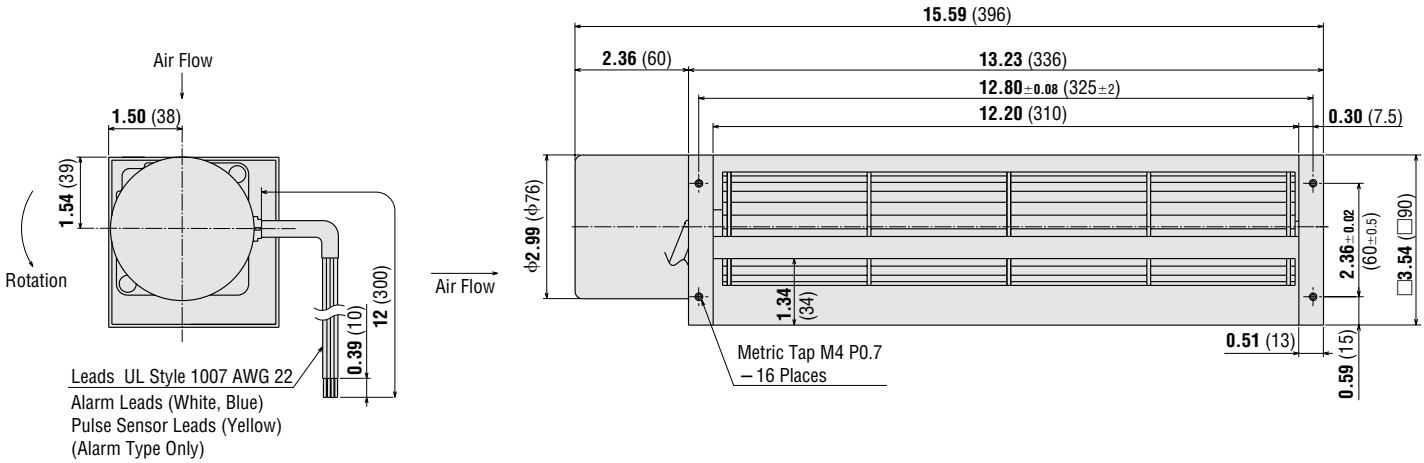


■ Dimensions Scale 1/4, Unit = inch (mm)

● MFD930

Weight: 3.5 lb. (1.6 kg)

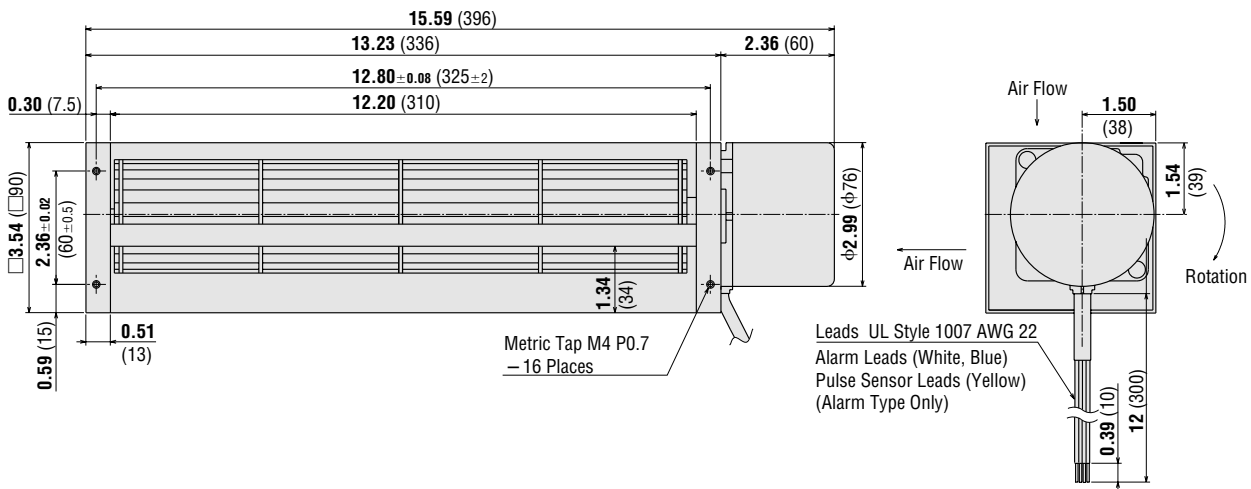
DXF E038



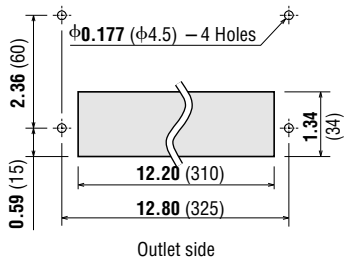
● MFD930B

Weight: 3.5 lb. (1.6 kg)

DXF E039



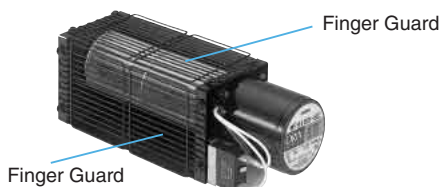
■ Panel Cut-Out Unit = inch (mm)



■ Accessories (Sold separately)

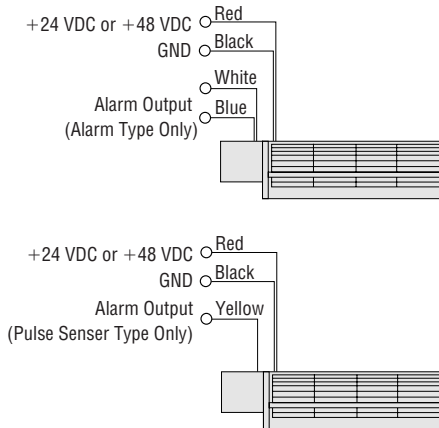
Item	Model	Safety Standards	Page
Finger Guard	FG930D	*	E-104

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The photo shows two finger guards.

■ Connection Diagrams



Axial Flow Fans			Centrifugal Blowers			Cross Flow Fans	
Introduction	MRS	Variable Flow	DC Input	MDS - MD	MB	MFB	MFD
MRS	Variable Flow	MU	DC Input	MDS - MD	MB	MFB	MFD
MRS	Variable Flow	MU	DC Input	MDS - MD	MB	MFB	MFD

Thermostats	Accessories	Before Using a Fan
Thermostats	Accessories	Before Using a Fan

MFD Series

DC Cross Flow Fans

Length of Impeller

5.91 in. (150 mm)



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

Materials

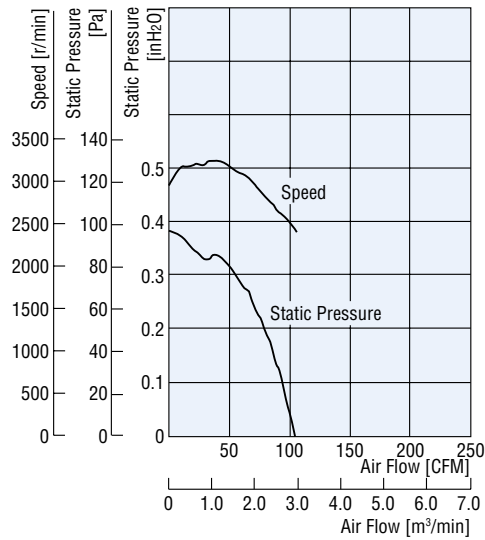
Motor Case: Die Cast Aluminum
Casing: Steel
Impeller: Aluminum
Overheat Protection: Built-in Overheat Protection Circuit
Bearings: Ball Bearings

Specifications

Model	Voltage VDC	Current A	Speed r/min	Max. Air Flow CFM	Max. Air Flow m ³ /min	Max. Static Pressure inH ₂ O	Max. Static Pressure Pa	Noise Level dB(A)
Low Speed Alarm, Contact Alarm Type ⑦	MFD915-24A	24	1.0	2500	106	3.0	0.393	98
	MFD915B-24A							
Standard Type	MFD915-24	48	0.7	2500	106	3.0	0.393	98
	MFD915B-24							
Pulse Sensor Type ⑨	MFD915-48S	48	0.7	2500	106	3.0	0.393	98
	MFD915B-48S							
Standard Type	MFD915-48	48	0.7	2500	106	3.0	0.393	98
	MFD915B-48							

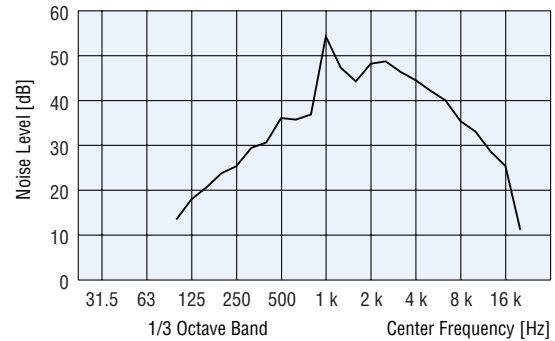
• How to read the specifications → Page E-13 • Alarm Specifications ⑦, ⑨ → Page E-16

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

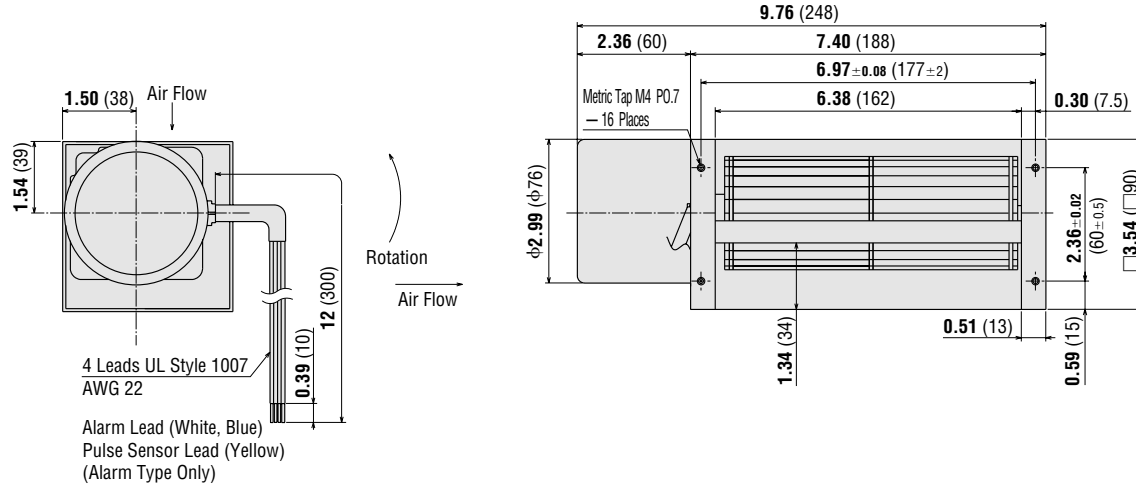


Dimensions Scale 1/4, Unit = inch (mm)

MFD915

Weight: 3.1 lb. (1.4 kg)

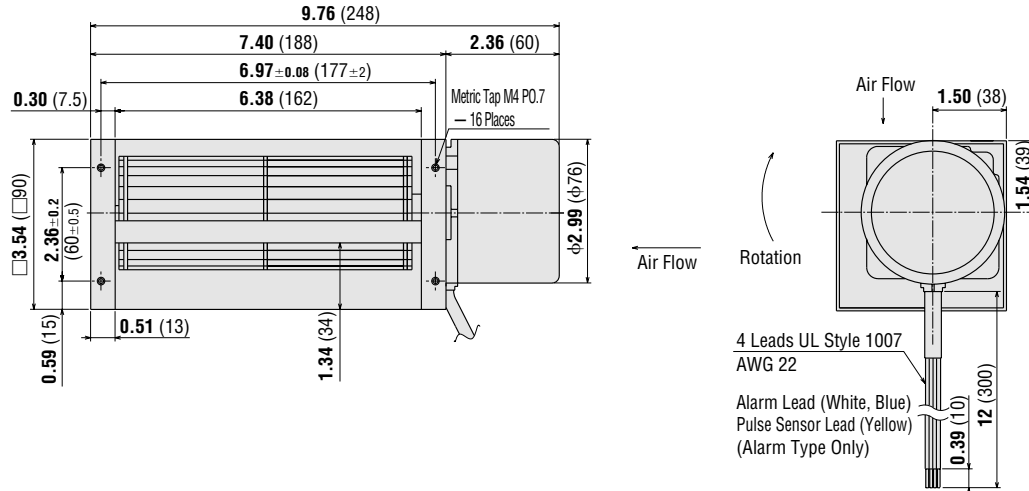
DXF E040



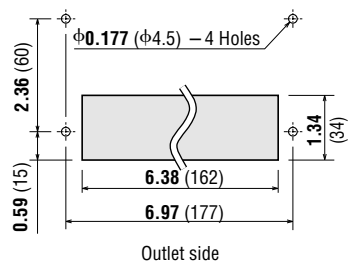
MFD915B

Weight: 3.1 lb. (1.4 kg)

DXF E041



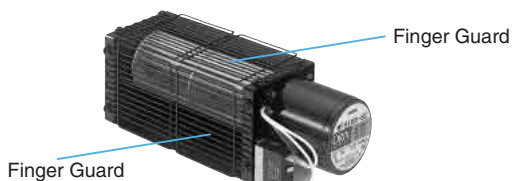
Panel Cut-Out Unit = inch (mm)



Accessories (Sold Separately)

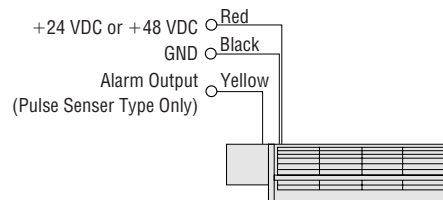
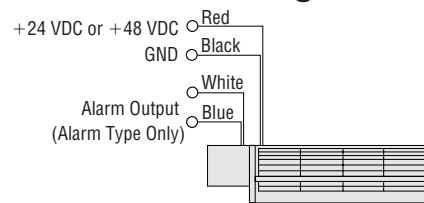
Item	Model	Safety Standards	Page
Finger Guard	FG915D	*	E-104

* 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**.



The photo shows two finger guards.

Connection Diagrams



Introduction

MRS

Variable Flow

MU

Long Life MDE

MDS - MD

MB

MBD

MF

MFD

Thermostats

Accessories

Before Using a Fan

