

MRS Series

□ 250 mm – 120 mm Thick
 (□ 9.84 in. – 4.72 in. Thick)



Ambient Temperature: $-10\sim+60^{\circ}\text{C}$ ($+14\sim+140^{\circ}\text{F}$)
 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	Frequency	Current	Input	Speed	Max. Air Flow		Max. Static Pressure		Noise Level	Capacitor
Low-Speed Alarm		Standard Type						m ³ /min	CFM	Pa	inH ₂ O		
Electronic Alarm Type (Alarm specifications: ②)	Contact Alarm Type (Alarm specifications: ⑤)		VAC	Hz	A	W	r/min						
MRS25-BM	MRS25-BB	MRS25-B	Single-Phase 100	50	0.8	80	2800	21	742	290	1.16	58	16
			Single-Phase 100	60	1.1	110	3220	24	848	320	1.28	62	
			Single-Phase 110	60	1.1	120	3280	24	848	340	1.36	62	
			Single-Phase 115	60	1.1	125	3300	24	848	360	1.45	62	
MRS25-DM	MRS25-DB	MRS25-D	Single-Phase 200	50	0.4	85	2790	21	742	290	1.16	58	4.5
			Single-Phase 200	60	0.7	120	3220	24	848	320	1.28	62	
			Single-Phase 220	50	0.4	95	2820	21	742	310	1.24	58	
			Single-Phase 220	60	0.7	130	3260	24	848	360	1.45	62	
			Single-Phase 230	50	0.5	100	2830	21	742	320	1.28	58	
			Single-Phase 230	60	0.7	135	3290	24	848	360	1.45	62	
MRS25-TM	MRS25-TB	MRS25-T	Three-Phase 200	50	0.4	70	2830	21	742	310	1.24	58	-
			Three-Phase 200	60	0.4	100	3270	24	848	360	1.45	62	
			Three-Phase 220	50	0.4	80	2850	21	742	320	1.28	58	
			Three-Phase 220	60	0.4	105	3320	25	883	390	1.57	62	
			Three-Phase 230	60	0.4	105	3340	25	883	410	1.65	63	

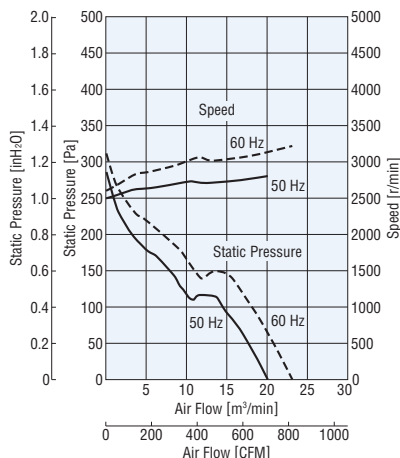
● How to read specifications → Page E-19 ● Alarm specifications ②, ⑤ → Page E-21 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-38

The following items are included in each product.

Fan, Capacitor*, Capacitor Cap*, Operating Manual
 *Single-phase fans only

Air Flow – Static Pressure Characteristics

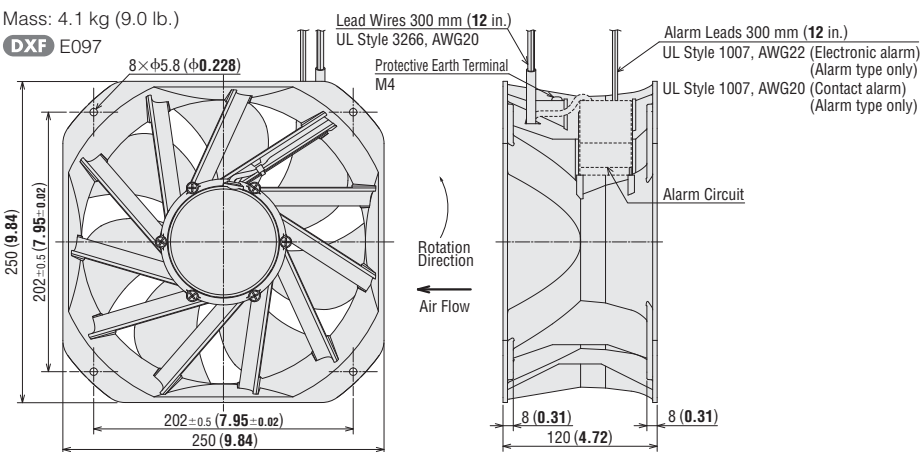
● How to read air flow – static pressure characteristics
 → Page E-20



Dimensions Unit = mm (in.)

Mass: 4.1 kg (9.0 lb.)

DXF E097



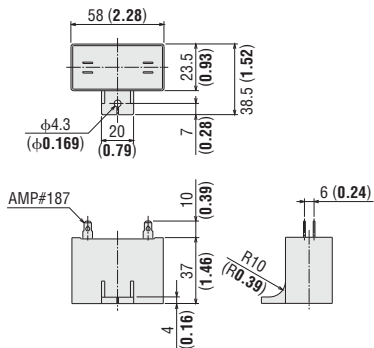
● Capacitor (Included)

◇ For **MRS25-B** and **MRS25-D**

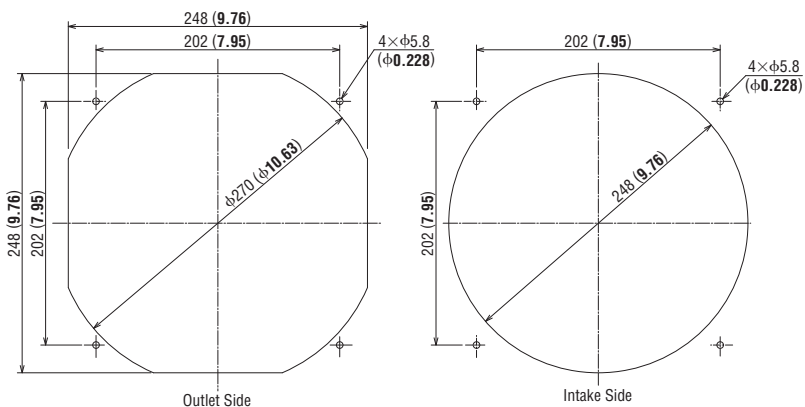
CH160CFAUL Mass: 75 g (2.6 oz.)

CH45BFAUL Mass: 73 g (2.6 oz.)

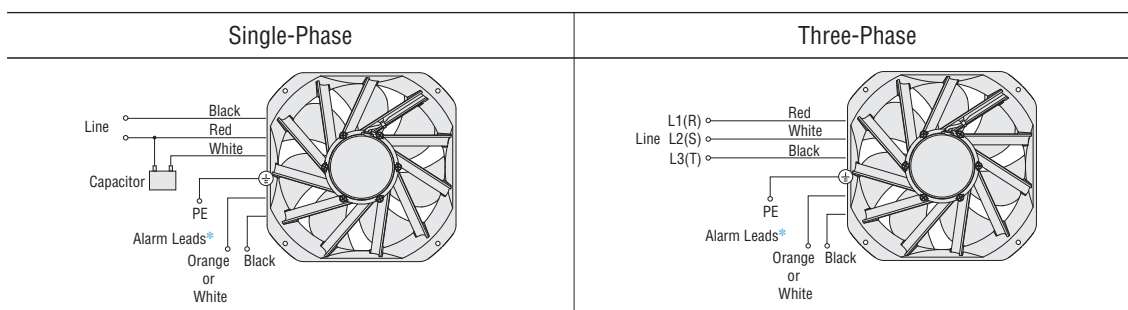
(A capacitor and capacitor cap are included with single-phase fans.)



■ Panel Cut-Out Unit = mm (in.)



■ Connection Diagrams



* Alarm type only

● How to connect a capacitor → Page E-158

■ Accessories

The following product is RoHS-Compliant.

Details → Page E-137

Product	Model	Safety Standards	Page
Finger Guard	FG25D	Conformed component	E-145

■ Thermostats

A thermostat makes it possible for fans to operate only when cooling is necessary, thereby conserving energy.



RoHS

Thermostats **AM1-WA1/AM1-XA1**

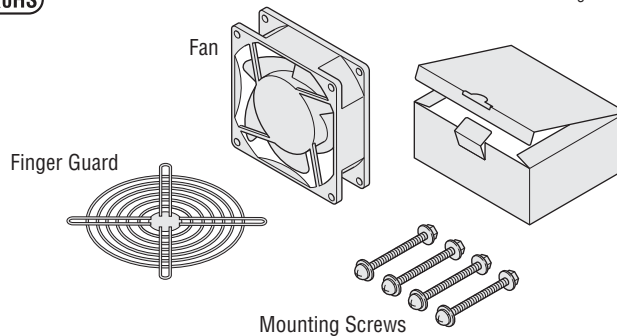
● Page → E-133

Fan Kit

The lineup includes a product configuration containing all necessary accessories in one package.

Details → Page E-138

RoHS



● Product Line

Fan Kit Model	
T-MRS25-BM-G	T-MRS25-TB-G
T-MRS25-DM-G	T-MRS25-B-G
T-MRS25-TM-G	T-MRS25-D-G
T-MRS25-BB-G	T-MRS25-T-G
T-MRS25-DB-G	-

MRS Series

□ 200 mm – 90 mm Thick
 (□ 7.87 in. – 3.54 in. Thick)



Ambient Temperature: $-10 \sim +60^{\circ}\text{C}$ ($+14 \sim +140^{\circ}\text{F}$)
 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	Frequency	Current	Input	Speed	Max. Air Flow		Max. Static Pressure		Noise Level	Capacitor
Low-Speed Alarm, Electronic Alarm Type (Alarm specifications: ②)	Standard Type						VAC	Hz	A	W		
MRS20-BM	MRS20-BUL	Single-Phase 100	50	0.8	75	2850	13.2	466	221	0.886	56	6.0
		Single-Phase 100	60	1.0	95	3350	15.5	547	186	0.746	60	
		Single-Phase 110	60	1.0	95	3400	15.5	547	255	1.02	61	
		Single-Phase 115	60	1.0	95	3400	15.5	547	265	1.06	61	
MRS20-DM	MRS20-DUL	Single-Phase 200	50	0.4	75	2850	13.2	466	221	0.886	56	6.0
		Single-Phase 200	60	0.5	95	3350	15.5	547	186	0.746	60	
		Single-Phase 230	60	0.5	95	3400	15.5	547	265	1.06	61	
MRS20-TM	MRS20-TUL	Three-Phase 200	50	0.4	75	2850	13.2	466	221	0.886	56	-
		Three-Phase 200	60	0.4	95	3350	15.5	547	265	1.06	60	
		Three-Phase 220	60	0.4	95	3400	15.5	547	265	1.06	61	
		Three-Phase 230	60	0.4	95	3400	15.5	547	265	1.06	61	

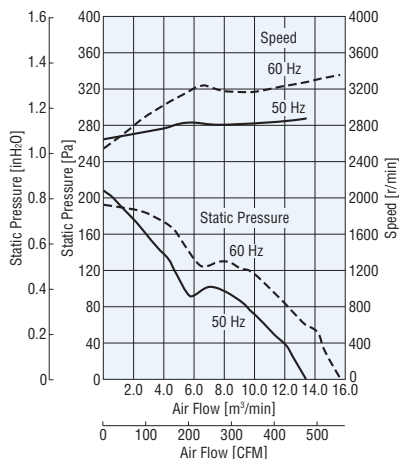
● How to read specifications → Page E-19 ● Alarm specifications ② → Page E-21 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-38

The following items are included in each product.

Fan, Capacitor*, Capacitor Cap*, Operating Manual
 *Single-phase fans only

Air Flow – Static Pressure Characteristics

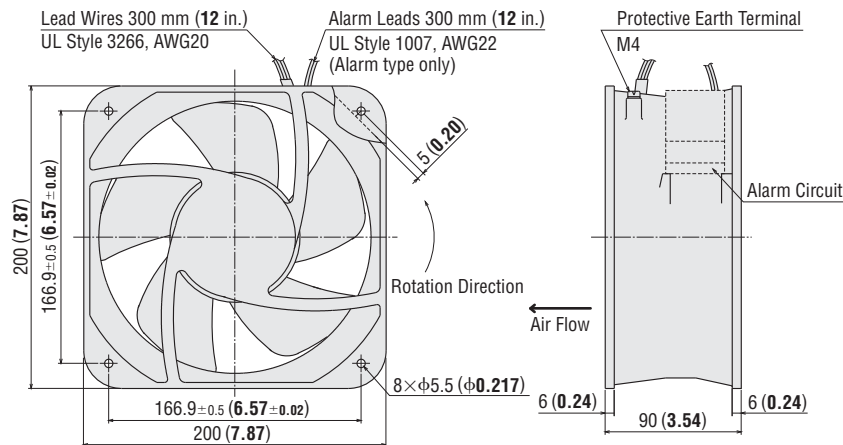
● How to read air flow – static pressure characteristics → Page E-20



Dimensions Unit = mm (in.)

Mass: 2.5 kg (5.5 lb.)

DXF E001

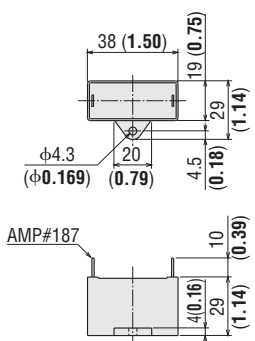


● Capacitor (Included)

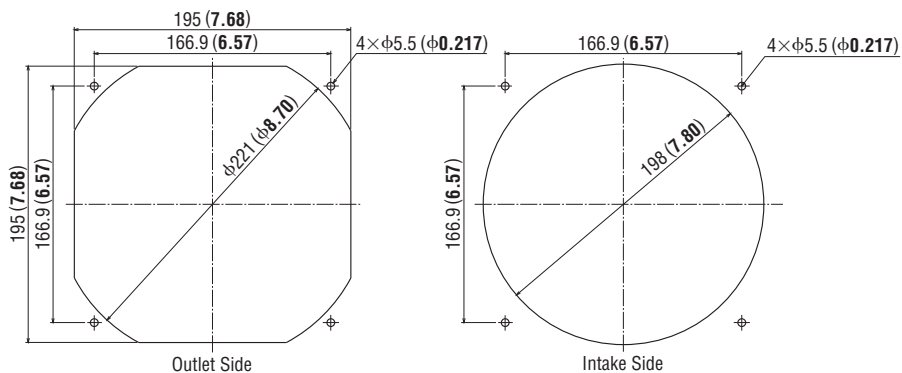
(A capacitor and capacitor cap are included with single-phase fans.)

◇ For **MRS20-B** and **MRS20-D**

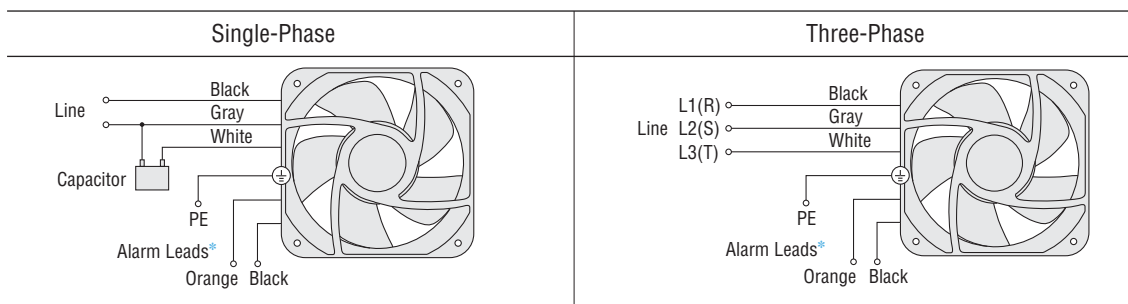
CH60UL Mass: 32 g (1.1 oz.)



■ Panel Cut-Out Unit = mm (in.)



■ Connection Diagrams



* Alarm type only
 ● How to connect a capacitor → Page E-158

■ Accessories

The following product is RoHS-Compliant.

Details → Page E-137

Product	Model	Safety Standards	Page
Finger Guard	FG20D	Conformed component	E-145

■ Thermostats

A thermostat makes it possible for fans to operate only when cooling is necessary, thereby conserving energy.



(RoHS)

Thermostats **AM1-WA1/AM1-XA1**

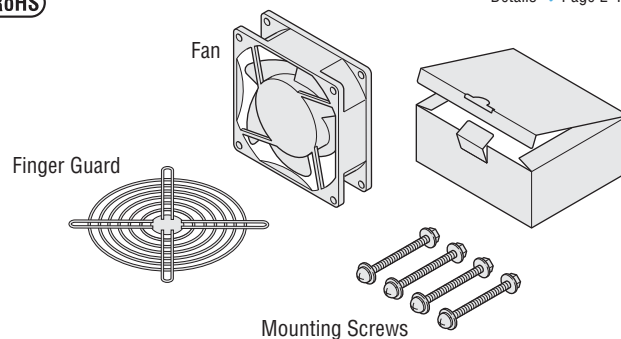
● Page → E-133

Fan Kit

The lineup includes a product configuration containing all necessary accessories in one package.

Details → Page E-138

(RoHS)



● Product Line

Fan Kit Model	
T-MRS20-BM-G	T-MRS20-BUL-G
T-MRS20-DM-G	T-MRS20-DUL-G
T-MRS20-TM-G	T-MRS20-TUL-G

MRS Series

□ **180 mm – 90 mm Thick**
 (□ **7.09 in. – 3.54 in. Thick**)



Connector Type

Terminal Box Type

Ambient Temperature: $-10\sim+60^{\circ}\text{C}$ ($+14\sim+140^{\circ}\text{F}$)
 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	Frequency	Current	Input	Speed	Max. Air Flow		Max. Static Pressure		Noise Level	Capacitor
Type	Connector Type	Terminal Box Type	VAC	Hz	A	W	r/min	m ³ /min	CFM	Pa	inH ₂ O	dB (A)	μF
Low-Speed Alarm, Electronic Alarm Type (Alarm specifications: ②)	MRS18-BMH	MRS18-BTM	Single-Phase 100	50	0.8	54.5	2850	11.0	388	196	0.786	56	6.0
			Single-Phase 100	60	1.0	76	3300	12.8	452	245	0.982	60	
			Single-Phase 110	60	1.0	81	3350	12.8	452	245	0.982	61	
			Single-Phase 115	60	1.0	84	3350	12.8	452	245	0.982	61	
	MRS18-DMH	MRS18-DTM	Single-Phase 200	50	0.4	54.5	2850	11.0	388	196	0.786	56	6.0
			Single-Phase 200	60	0.5	70	3300	12.8	452	245	0.982	60	
			Single-Phase 230	60	0.5	77	3350	12.8	452	245	0.982	61	
	MRS18-TMH	MRS18-TTM	Three-Phase 200	50	0.4	52	2850	11.0	388	196	0.786	56	-
			Three-Phase 200	60	0.4	70	3300	12.8	452	245	0.982	60	
			Three-Phase 220	60	0.4	74	3350	12.8	452	245	0.982	61	
			Three-Phase 230	60	0.4	76	3350	12.8	452	245	0.982	61	
	Standard Type	MRS18-BH	MRS18-BUL	Single-Phase 100	50	0.8	54.5	2850	11.0	388	196	0.786	56
Single-Phase 100				60	1.0	76	3300	12.8	452	245	0.982	60	
Single-Phase 110				60	1.0	81	3350	12.8	452	245	0.982	61	
Single-Phase 115				60	1.0	84	3350	12.8	452	245	0.982	61	
MRS18-DH		MRS18-DUL	Single-Phase 200	50	0.4	54.5	2850	11.0	388	196	0.786	56	6.0
			Single-Phase 200	60	0.5	70	3300	12.8	452	245	0.982	60	
			Single-Phase 230	60	0.5	77	3350	12.8	452	245	0.982	61	
MRS18-TH		MRS18-TUL	Three-Phase 200	50	0.4	52	2850	11.0	388	196	0.786	56	-
			Three-Phase 200	60	0.4	70	3300	12.8	452	245	0.982	60	
			Three-Phase 220	60	0.4	74	3350	12.8	452	245	0.982	61	
			Three-Phase 230	60	0.4	76	3350	12.8	452	245	0.982	61	

● Only terminal box type is VDE certified.

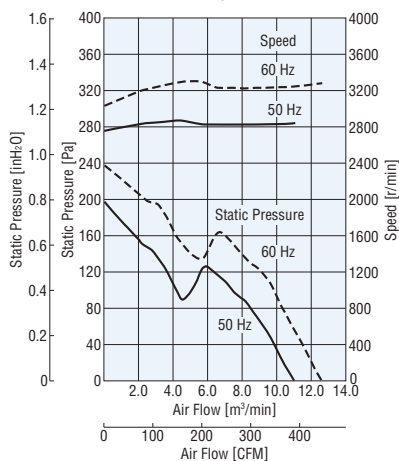
● How to read specifications → Page E-19 ● Alarm specifications ② → Page E-21 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-38

The following items are included in each product.

- **MRS18-□H**
Fan, Cable with Connector, Operating Manual
- **MRS18-□TM**
Fan, Capacitor*, Capacitor Cap*, Operating Manual
* Single-phase fans only
- **MRS18-□UL**
Fan, Operating Manual

Air Flow – Static Pressure Characteristics

● How to read air flow – static pressure characteristics → Page E-20

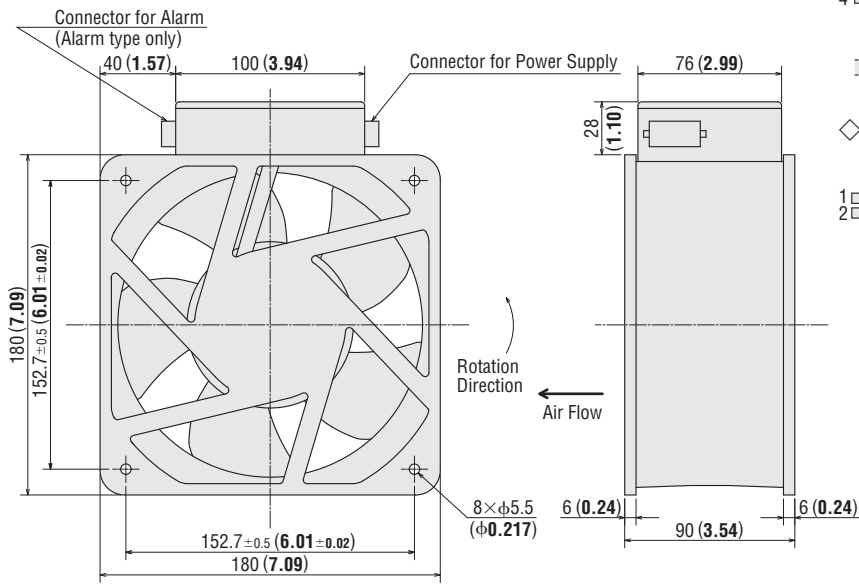


Dimensions Unit = mm (in.)

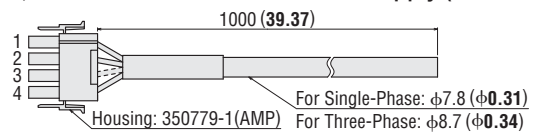
Connector Type

Fan

Mass: 2.5 kg (5.5 lb.)
 Alarm Type/ **DXF** E126
 Standard Type/ **DXF** E127

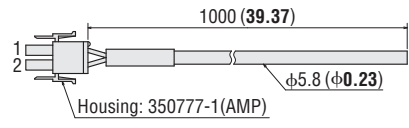


Cable for Connection to Power Supply (Included)



..... Only for three-phase

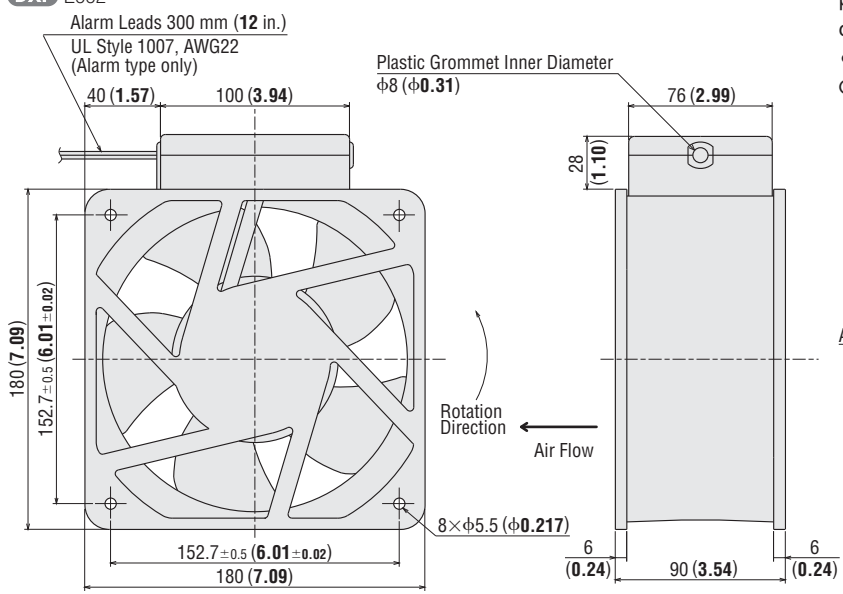
Cable for Alarm (Included with alarm type)



Terminal Box Type

Fan

Mass: 2.5 kg (5.5 lb.)
DXF E002

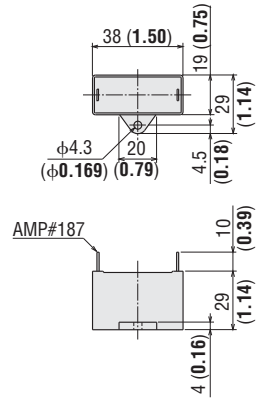


Capacitor (Included)

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

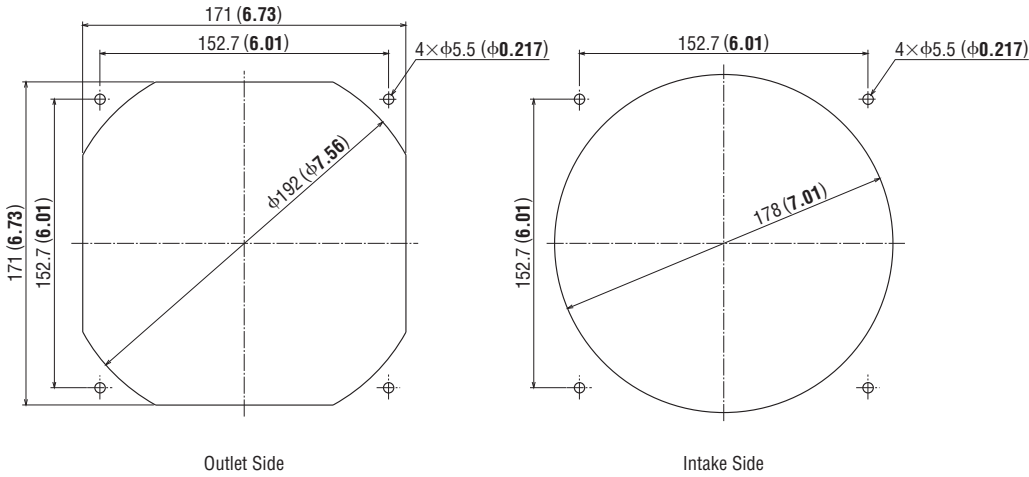
• For MRS18-BTM and MRS18-DTM

CH60UL Mass: 32 g (1.1 oz.)



Introduction
Cooling Module
FM
AC Input MRS
AC Input Variable Flow MRS
AC Input MU
DC Input Long-Life MDE
DC Input MDS/MD
AC Input MB
DC Input MBD
AC Input MF
DC Input MFD
Thermostats
Accessories
Installation

Panel Cut-Out Unit = mm (in.)



Connection Diagrams

● Connector Type

<p>MRS18-BMH MRS18-DMH</p>	<p>Alarm Cable Vout Orange 0 V Blue</p> <p>Power Supply Cable Black L White N Green/Yellow PE</p>	<p>MRS18-BH MRS18-DH</p>	<p>Power Supply Cable Black L White N Green/Yellow PE</p>
<p>MRS18-TMH</p>	<p>Alarm Cable Vout Orange 0 V Blue</p> <p>Power Supply Cable Red L1 (R) White L2 (S) Black L3 (T) Green/Yellow PE</p>	<p>MRS18-TH</p>	<p>Power Supply Cable Red L1 (R) White L2 (S) Black L3 (T) Green/Yellow PE</p>

● Terminal Box Type

<p>MRS18-BTM MRS18-DTM</p>	<p>Line</p> <p>Capacitor</p> <p>PE</p> <p>Orange Black Alarm Leads</p>	<p>MRS18-BUL MRS18-DUL</p>	<p>Line</p> <p>PE</p>	<p>Terminal Box</p> <p>Protective Earth Terminal M4</p> <p>Lead Wire Entry</p> <p>Terminal Attachment Screws 3×M4</p>
<p>MRS18-TTM</p>	<p>Line</p> <p>L1(R) L2(S) L3(T)</p> <p>PE</p> <p>Orange Black Alarm Leads</p>	<p>MRS18-TUL</p>	<p>Line</p> <p>L1(R) L2(S) L3(T)</p> <p>PE</p>	

● How to connect a capacitor → Page E-158

Accessories

The following products are RoHS-Compliant.

Details → Page E-137

Product	Model	Safety Standards	Page
Finger Guard	FG18D	Conformed component	E-145
Filter	FL18	–	E-147

Thermostats

A thermostat makes it possible for fans to operate only when cooling is necessary, thereby conserving energy.



RoHS

Thermostats **AM1-WA1/AM1-XA1**

● Page → E-133

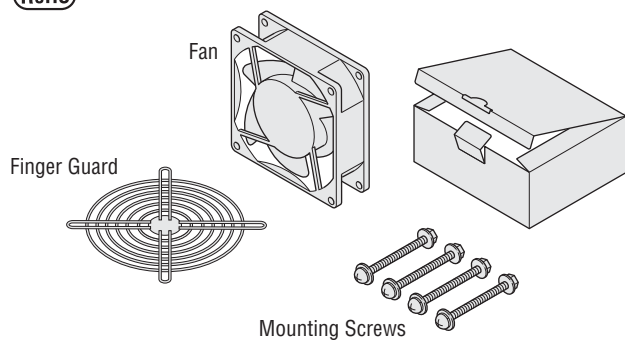
Fan Kit

The lineup includes a product configuration containing all necessary accessories in one package.

● Package Contents (Fan, Finger guard, Mounting screws)

RoHS

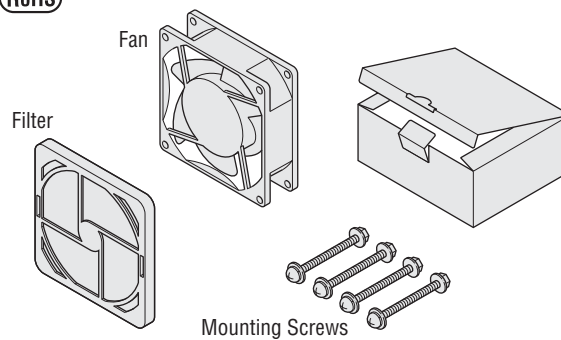
Details → Page E-138



● Package Contents (Fan, Filter, Mounting screws)

RoHS

Details → Page E-138



◇ Product Line

● Connector Type

Fan Kit Model
T-MRS18-BMHG
T-MRS18-DMHG
T-MRS18-TMHG
T-MRS18-BHG
T-MRS18-DHG
T-MRS18-THG

● Terminal Box Type

Fan Kit Model
T-MRS18-BTM-G
T-MRS18-DTM-G
T-MRS18-TTM-G
T-MRS18-BUL-G
T-MRS18-DUL-G
T-MRS18-TUL-G

◇ Product Line

● Connector Type

Fan Kit Model
T-MRS18-BMHF
T-MRS18-DMHF
T-MRS18-TMHF
T-MRS18-BHF
T-MRS18-DHF
T-MRS18-THF

● Terminal Box Type

Fan Kit Model
T-MRS18-BTM-F
T-MRS18-DTM-F
T-MRS18-TTM-F
T-MRS18-BUL-F
T-MRS18-DUL-F
T-MRS18-TUL-F

MRS Series

□ **160 mm – 62 mm Thick**
 (□ **6.30 in. – 2.44 in. Thick**)



Ambient Temperature: $-10\sim+60^{\circ}\text{C}$ ($+14\sim+140^{\circ}\text{F}$)
 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	Frequency	Current	Input	Speed	Max. Air Flow		Max. Static Pressure		Noise Level	Capacitor
Low-Speed Alarm		Standard Type						m ³ /min	CFM	Pa	inH ₂ O		
Electronic Alarm Type (Alarm specifications: ②)	Contact Alarm Type (Alarm specifications: ④)		VAC	Hz	A	W	r/min						
MRS16-BTM	MRS16-BTA	MRS16-BUL	Single-Phase 100	50	0.47	39	2800	6.2	219	127	0.509	49	3.0
			Single-Phase 100	60	0.46	41	3250	7.3	258	157	0.63	52	
			Single-Phase 110	60	0.48	48	3300	7.3	258	157	0.63	53	
			Single-Phase 115	60	0.49	51	3300	7.3	258	157	0.63	53	
MRS16-DTM	MRS16-DTA	MRS16-DUL	Single-Phase 200	50	0.24	39	2800	6.2	219	127	0.509	49	3.0
			Single-Phase 200	60	0.24	41	3250	7.3	258	157	0.63	52	
			Single-Phase 230	60	0.25	51	3300	7.3	258	157	0.63	53	
MRS16-TTM	MRS16-TTA	MRS16-TUL	Three-Phase 200	50	0.19	33	2800	6.2	219	127	0.509	49	-
			Three-Phase 200	60	0.17	37	3250	7.3	258	157	0.63	52	
			Three-Phase 220	60	0.18	41	3300	7.3	258	157	0.63	53	
			Three-Phase 230	60	0.18	43	3300	7.3	258	157	0.63	53	

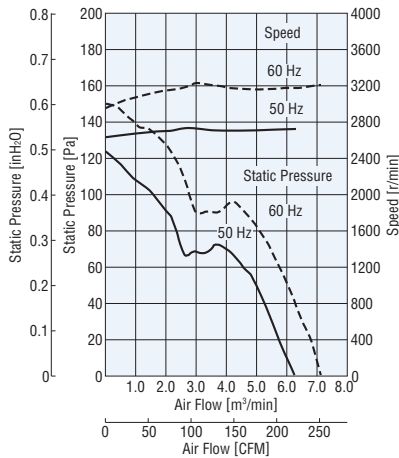
● How to read specifications → Page E-19 ● Alarm specifications ②, ④ → Page E-21 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-38

The following items are included in each product.

- **MRS16-□TM**
Fan, Capacitor*, Capacitor Cap*, Operating Manual
*Single-phase fans only
- **MRS16-□TA**
Fan, Capacitor*, Operating Manual
*Single-phase fans only
- **MRS16-□UL**
Fan, Operating Manual

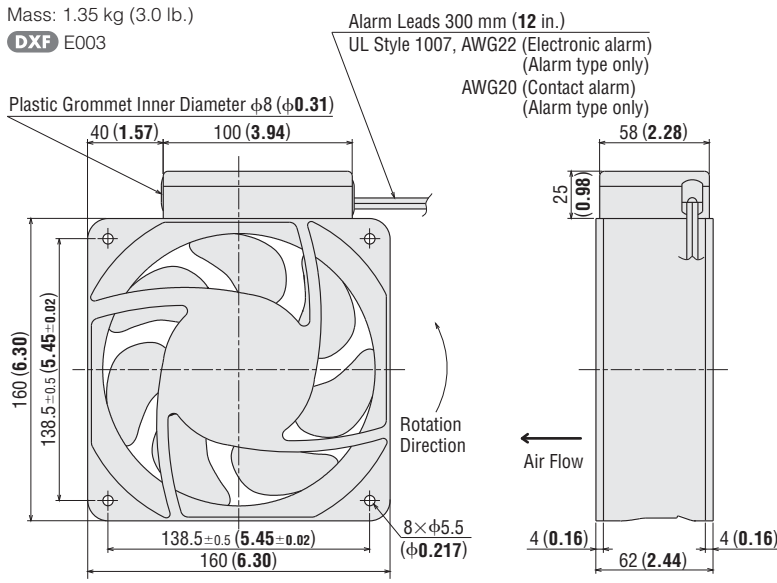
Air Flow – Static Pressure Characteristics

● How to read air flow – static pressure characteristics → Page E-20



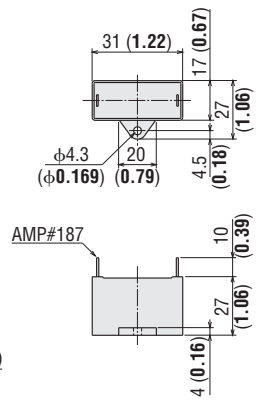
Dimensions Unit = mm (in.)

Mass: 1.35 kg (3.0 lb.)
DXF E003

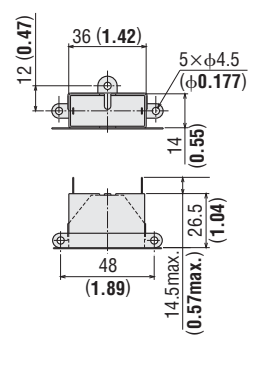


Capacitor (Included)

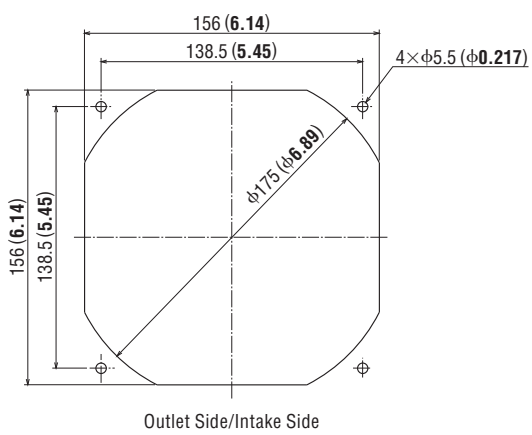
◇ For **MRS16-□TM**
 CH30UL Mass: 23 g (0.81 oz.)
 (A capacitor and capacitor cap are included with single-phase alarm type fans.)



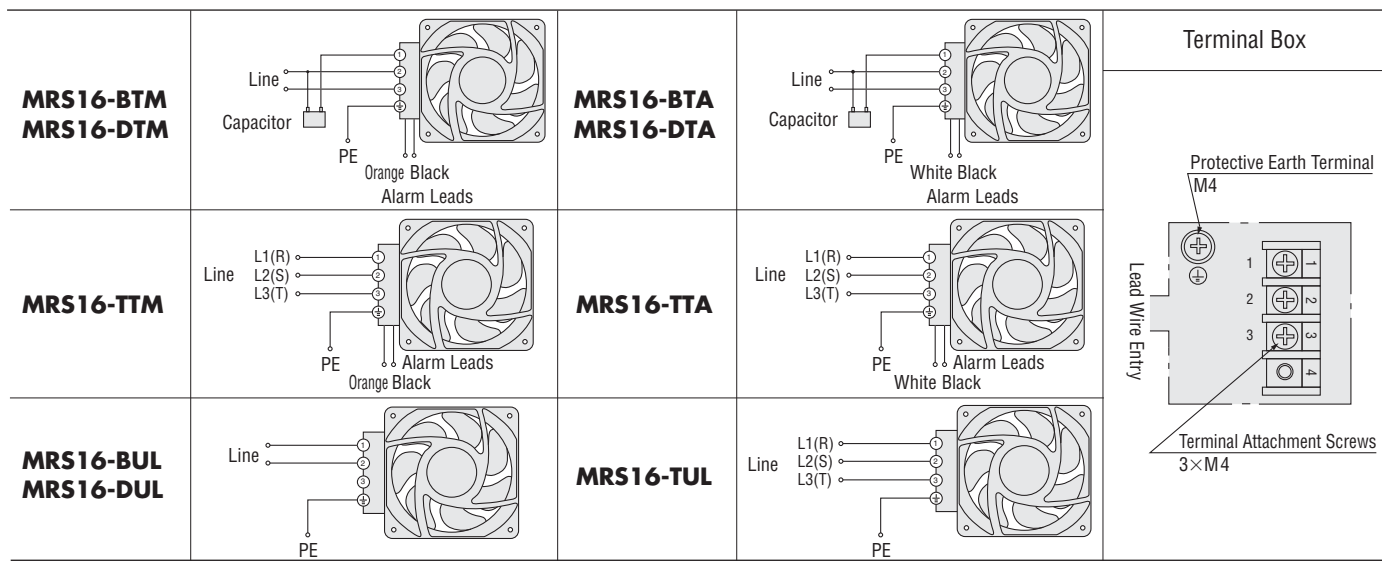
◇ For **MRS16-□TA**
 CH30 Mass: 30 g (1.1 oz.)
 (A capacitor is included with single-phase alarm type fans.
 A capacitor cap is sold separately.
 Details → Page E-152)



Panel Cut-Out Unit = mm (in.)



Connection Diagrams



● How to connect a capacitor → Page E-158

Accessories

The following products are RoHS-Compliant.

Details → Page E-137

Product	Model	Safety Standards	Page
Finger Guard	FG16D	Conformed component	E-145
Filter	FL16	—	E-147

Thermostats

A thermostat makes it possible for fans to operate only when cooling is necessary, thereby conserving energy.



RoHS

Thermostats **AM1-WA1/AM1-XA1**

● Page → E-133

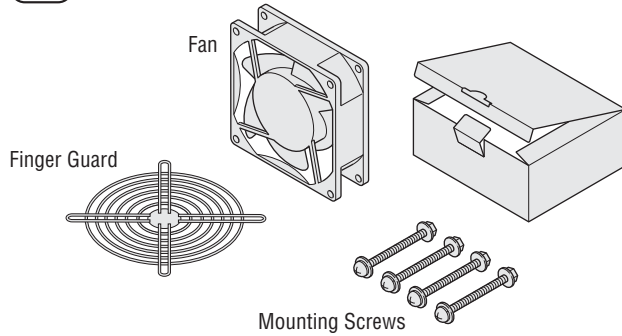
Fan Kit

The lineup includes a product configuration containing all necessary accessories in one package.

● Package Contents (Fan, Finger guard, Mounting screws)

RoHS

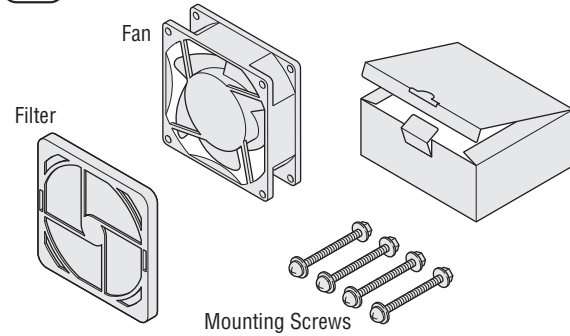
Details → Page E-138



● Package Contents (Fan, Filter, Mounting screws)

RoHS

Details → Page E-138



◇ Product Line

Fan Kit Model

T-MRS16-BTM-G
T-MRS16-DTM-G
T-MRS16-TTM-G
T-MRS16-BTA-G
T-MRS16-DTA-G
T-MRS16-TTA-G
T-MRS16-BUL-G
T-MRS16-DUL-G
T-MRS16-TUL-G

◇ Product Line

Fan Kit Model

T-MRS16-BTM-F
T-MRS16-DTM-F
T-MRS16-TTM-F
T-MRS16-BTA-F
T-MRS16-DTA-F
T-MRS16-TTA-F
T-MRS16-BUL-F
T-MRS16-DUL-F
T-MRS16-TUL-F

Introduction

FM
Cooling Module

AC Input
MRS

AC Input
Variable Flow
MRS

AC Input
MU

DC Input
Long-Life
MDE

DC Input
MDS/MD

AC Input
MB

DC Input
MBD

AC Input
MF

DC Input
MFD

Centrifugal Blowers

Cross Flow Fans

Thermostats

Accessories

Installation

MRS Series

□ **140 mm – 47 mm Thick**
 (□ **5.51 in. – 1.85 in. Thick**)



Ambient Temperature: $-10 \sim +60^{\circ}\text{C}$ ($+14 \sim +140^{\circ}\text{F}$)
 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	Frequency	Current	Input	Speed	Max. Air Flow		Max. Static Pressure		Noise Level
Low-Speed Alarm, Electronic Alarm Type (Alarm specifications: ③)	Standard Type						m ³ /min	CFM	Pa	inH ₂ O	
MRS14-TTM	MRS14-TUL	Three-Phase 200	50	0.08	14	2600	4.5	159	92	0.369	48
		Three-Phase 200	60	0.09	17	2650	4.6	162	81	0.325	49
		Three-Phase 220	60	0.09	19	2900	5.0	177	107	0.43	51
		Three-Phase 230	60	0.09	20	2950	5.0	177	109	0.437	51

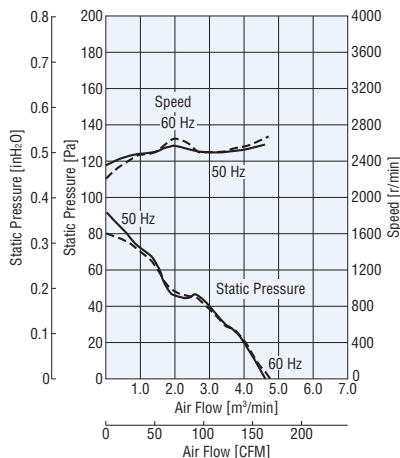
● How to read specifications → Page E-19 ● Alarm specifications ③ → Page E-21 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-38

The following items are included in each product.

Fan, Operating Manual

Air Flow – Static Pressure Characteristics

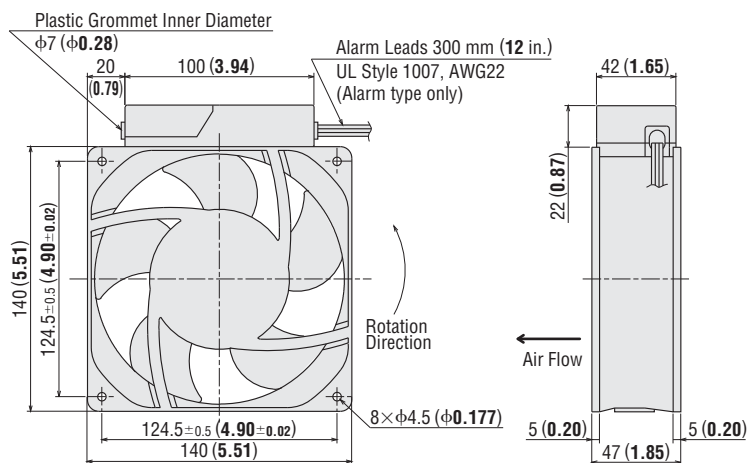
● How to read air flow – static pressure characteristics → Page E-20



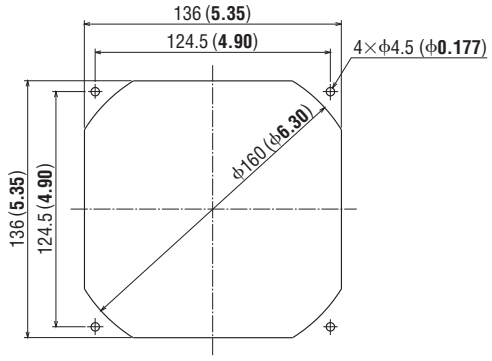
Dimensions Unit = mm (in.)

Mass: 0.9 kg (2.0 lb.)

DXF E004

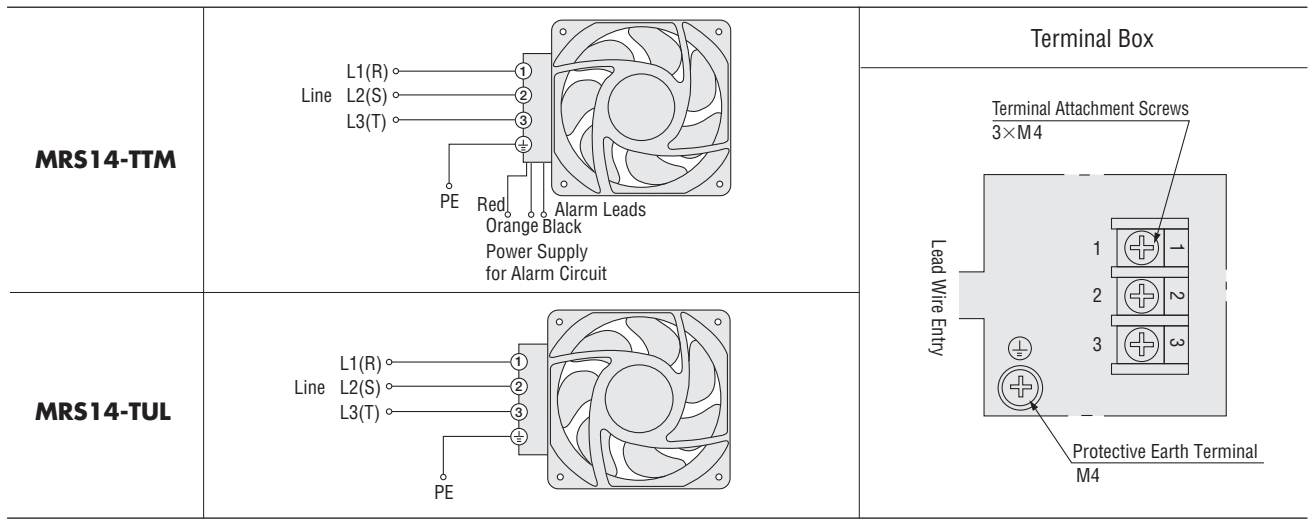


Panel Cut-Out Unit = mm (in.)



Outlet Side/Intake Side

Connection Diagrams



Accessories

The following products are RoHS-Compliant.
 Details → Page E-137

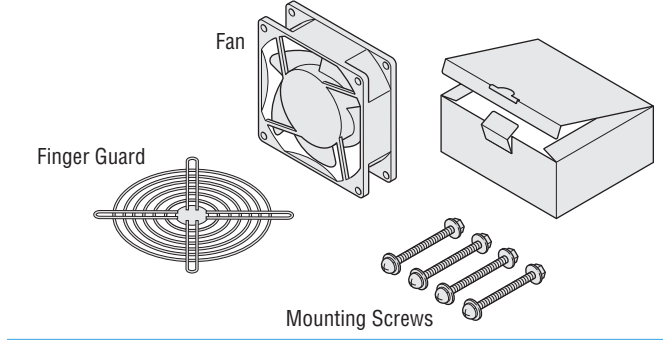
Product	Model	Safety Standards	Page
Finger Guard	FG14D	Conformed component	E-145
Filter	FL14	—	E-147

Fan Kit

The lineup includes a product configuration containing all necessary accessories in one package.



Details → Page E-138



Product Line

Fan Kit Model
T-MRS14-TTM-G
T-MRS14-TUL-G

VARIOFLOW

MRS Series Variable Flow Type

□ 180 mm – 90 mm Thick
(□ 7.09 in. – 3.54 in. Thick)



Ambient Temperature: $-10 \sim +60^{\circ}\text{C}$ ($+14 \sim +140^{\circ}\text{F}$)
 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



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

● How to read specifications → Page E-19 ● Details of safety standards → Page G-2

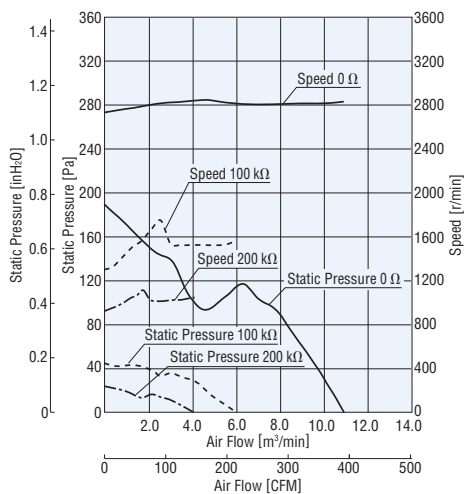
— The following items are included in each product. —

Fan, External Speed Potentiometer, Operating Manual

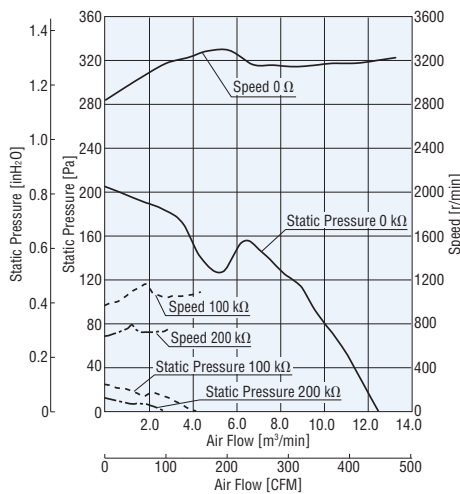
Air Flow – Static Pressure Characteristics

● How to read air flow – static pressure characteristics → Page E-20

● 50 Hz



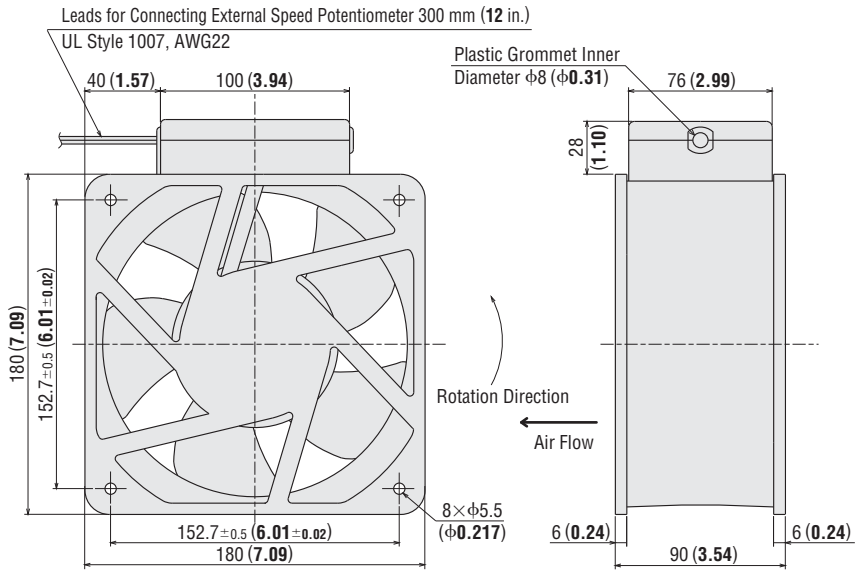
● 60 Hz



Dimensions Unit = mm (in.)

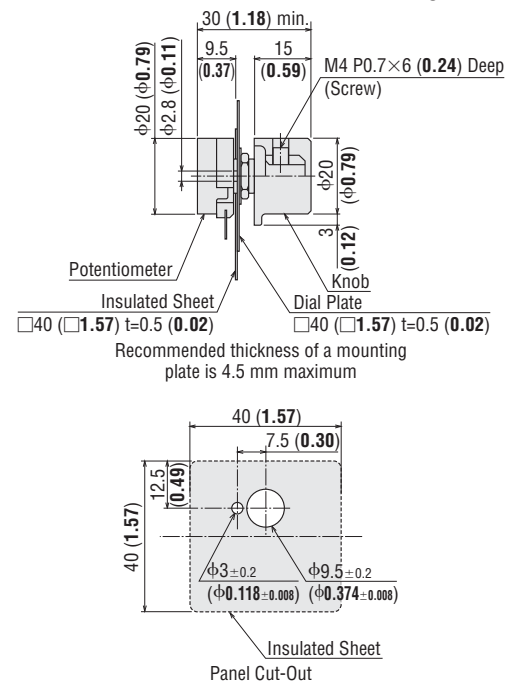
Mass: 2.5 kg (5.5 lb.)

DXF E002

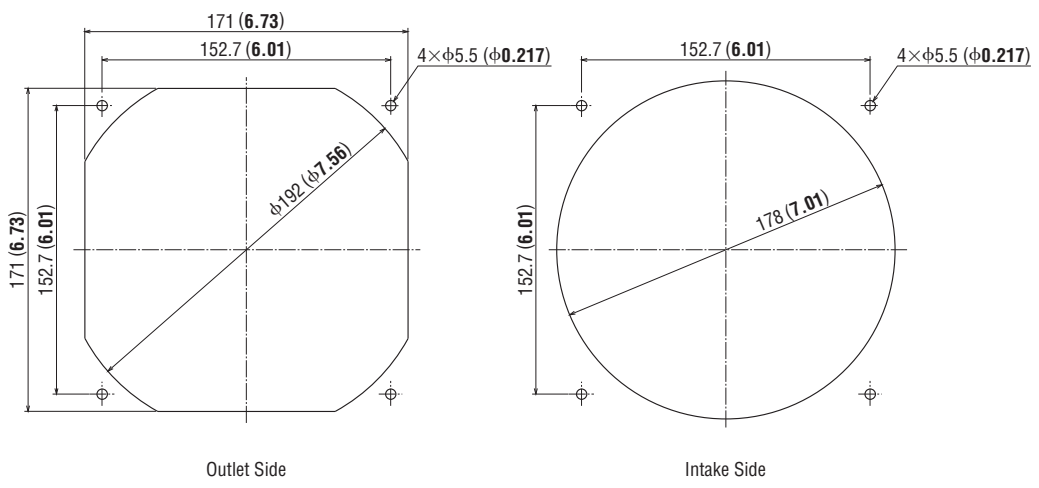


External Speed Potentiometer (Included)

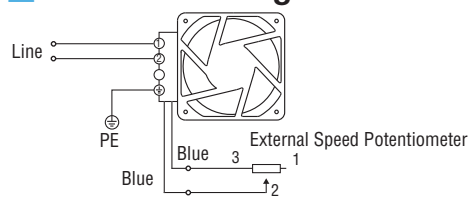
200 k Ω , 1/4 W with a linear resistance vs. angle curve



Panel Cut-Out Unit = mm (in.)



Connection Diagram



Leads for connecting external speed potentiometer

Accessories

The following products are RoHS-Compliant.

Details \rightarrow Page E-137

Product	Model	Safety Standards	Page
Finger Guard	FG18D	Conformed component	E-145
Filter	FL18	-	E-147

- Introduction
- Cooling Module
 - FM
 - AC Input MRS
 - AC Input Variable Flow MRS
 - AC Input MU
 - DC Input Long-Life MDE
 - DC Input MDS/MD
- Axial Flow Fans
 - AC Input MB
 - DC Input MBD
- Cross Flow Fans
 - AC Input MF
 - DC Input MFD
- Thermostats
- Accessories
- Installation

MU Series

□ **119 mm – 38 mm Thick**
 (□ **4.69 in. – 1.50 in. Thick**)



Ambient Temperature: $-10 \sim +60^{\circ}\text{C}$ ($+14 \sim +140^{\circ}\text{F}$)
 Operating Voltage Range: $\pm 10\%$
 Materials
 Frame: Die Cast Aluminum
 Blades: Polycarbonate (Flammability grade V-0)
 Overheat Protection: Impedance Protected
 Bearings: Ball Bearings

Specifications (RoHS)



Speed Type	Model	Voltage VAC	Frequency Hz	Current A	Input W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB (A)
							m ³ /min	CFM	Pa	inH ₂ O	
Standard Speed	MU1238A-21B	Single-Phase 115	50	0.20	14.0	2800	2.7	95.3	81	0.325	43
			60	0.18	13.0	3250	3.0	106	81	0.325	46
	MU1238A-51B	Single-Phase 220 Single-Phase 230 Single-Phase 230	50	0.10	13.5	2800	2.7	95.3	81	0.325	43
			50	0.11	16.0	2800	2.7	95.3	81	0.325	43
			60	0.10	13.5	3250	3.0	106	81	0.325	46
			60	0.10	13.5	3250	3.0	106	81	0.325	46
Middle Speed	MU1238B-21B	Single-Phase 115	50	0.16	12.5	2500	2.2	77.7	52	0.209	38
			60	0.15	11.5	2800	2.5	88.3	52	0.209	40
	MU1238B-51B	Single-Phase 220 Single-Phase 230 Single-Phase 230	50	0.09	11.5	2500	2.2	77.7	52	0.209	38
			50	0.09	14.0	2500	2.3	81.2	59	0.237	39
			60	0.09	11.5	2800	2.5	88.3	52	0.209	40
			60	0.09	11.5	2800	2.5	88.3	52	0.209	40
Low Speed	MU1238L-21B	Single-Phase 115	50	0.10	8.0	2100	1.9	67.1	34	0.137	33
			60	0.09	7.5	2100	1.8	63.5	27	0.11	32
	MU1238L-51B	Single-Phase 220 Single-Phase 230 Single-Phase 230	50	0.06	7.5	2100	1.85	65.3	34	0.137	33
			50	0.06	9.5	2100	1.9	67.1	34	0.137	34
			60	0.06	7.5	2200	1.9	67.1	29	0.118	33
			60	0.06	7.5	2200	1.9	67.1	29	0.118	33

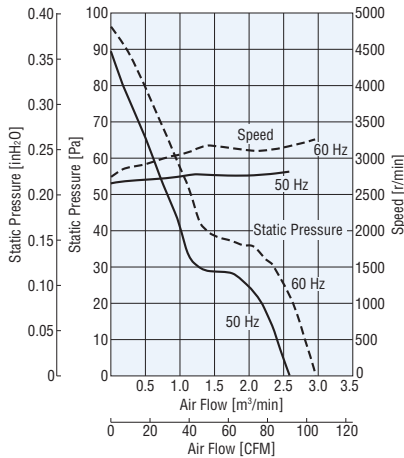
● How to read specifications → Page E-19 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-38

The following items are included in each product.
 Fan, Operating Manual

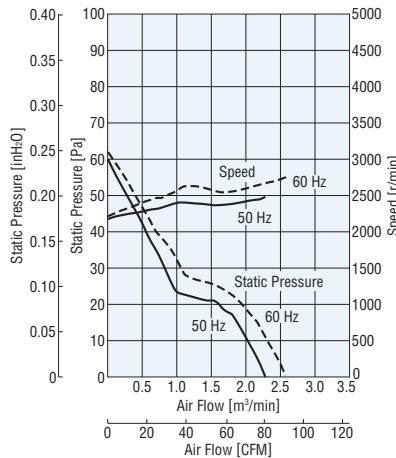
Air Flow – Static Pressure Characteristics

● How to read air flow – static pressure characteristics → Page E-20

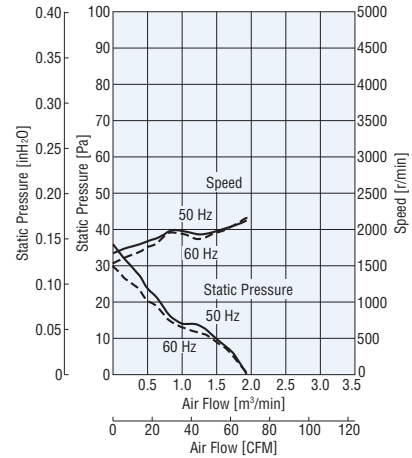
● MU1238A



● MU1238B



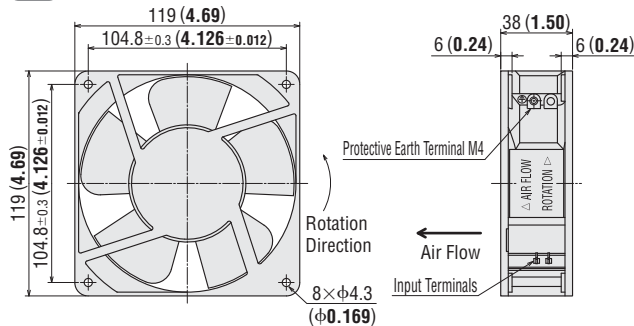
● MU1238L



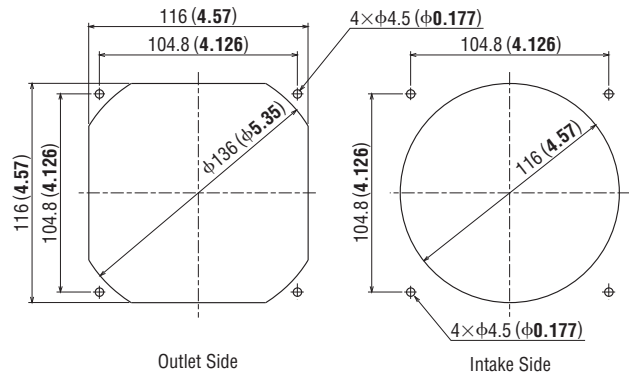
Dimensions Unit = mm (in.)

Mass: 0.53 kg (1.2 lb.)

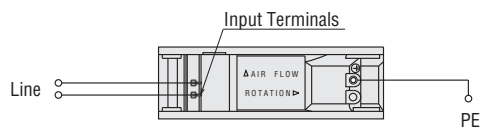
DXF E010



Panel Cut-Out Unit = mm (in.)



Connection Diagram



Accessories

The following products are RoHS-Compliant.

Details → Page E-137

Product	Model	Safety Standards	Page
Finger Guard	FG12D	Conformed component	E-145
Filter	FL12	—	E-147
Screen	FS12S	—	E-150
Plug Cord	PCA2B [1 m (3.3 ft.)]	Electrical Appliance and Material Safety Law-Compliant component (Japan) UL recognized component CSA certified component	E-151

Thermostats

A thermostat makes it possible for fans to operate only when cooling is necessary, thereby conserving energy.



RoHS

Thermostats **AM1-WA1/AM1-XA1**

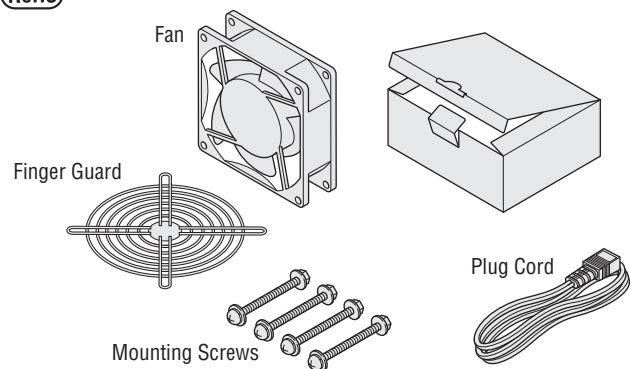
● Page → E-133

Fan Kit

The lineup includes a product configuration containing all necessary accessories in one package.

Details → Page E-140

RoHS



Product Line

Fan Kit Model

T-MU1238A-21-GP

T-MU1238A-51-GP

T-MU1238B-21-GP

T-MU1238B-51-GP

T-MU1238L-21-GP

T-MU1238L-51-GP

MU Series

□ **119 mm – 25 mm Thick**
 (□ **4.69 in. – 0.98 in. Thick**)



Ambient Temperature: $-10\sim+60^{\circ}\text{C}$ ($+14\sim+140^{\circ}\text{F}$)
 Operating Voltage Range: $\pm 10\%$
 Materials
 Frame: Die Cast Aluminum
 Blades: Polycarbonate (Flammability grade V-0)
 Overheat Protection: Impedance Protected
 Bearings: Ball Bearings



Specifications (RoHS)

Speed Type	Model	Voltage VAC	Frequency Hz	Current A	Input W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB (A)
							m ³ /min	CFM	Pa	inH ₂ O	
Standard Speed	MU1225S-21	Single-Phase 115	50	0.14	11.0	2500	1.6	56.5	49	0.196	36
			60	0.12	9.5	2950	1.9	67.1	44	0.176	40
	MU1225S-51	Single-Phase 220 Single-Phase 230 Single-Phase 230	50	0.07	10.5	2500	1.6	56.5	49	0.196	36
			50	0.08	12.0	2500	1.6	56.5	49	0.196	36
			60	0.07	10.0	2950	1.9	67.1	44	0.176	40
			60	0.07	10.0	2950	1.9	67.1	44	0.176	40
Middle Speed	MU1225M-21	Single-Phase 115	50	0.13	10.5	2250	1.4	49.4	32	0.129	33
			60	0.11	9.0	2600	1.7	60	31	0.125	37
	MU1225M-51	Single-Phase 220 Single-Phase 230 Single-Phase 230	50	0.07	10.0	2250	1.4	49.4	32	0.129	33
			50	0.07	12.0	2250	1.4	49.4	32	0.129	33
			60	0.07	9.5	2600	1.7	60	31	0.125	37
			60	0.07	9.5	2600	1.7	60	31	0.125	37

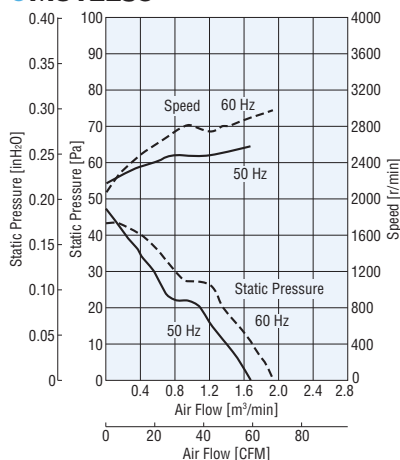
● How to read specifications → Page E-19 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-38

The following items are included in each product.
 Fan, Operating Manual

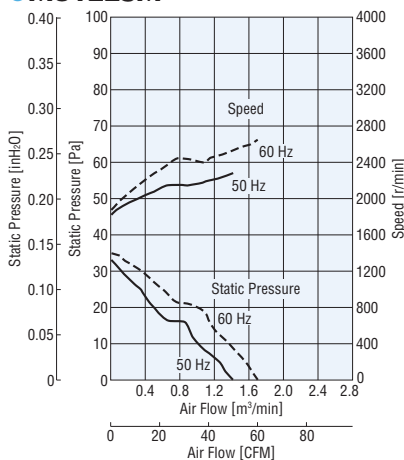
Air Flow – Static Pressure Characteristics

● How to read air flow – static pressure characteristics → Page E-20

● MU1225S



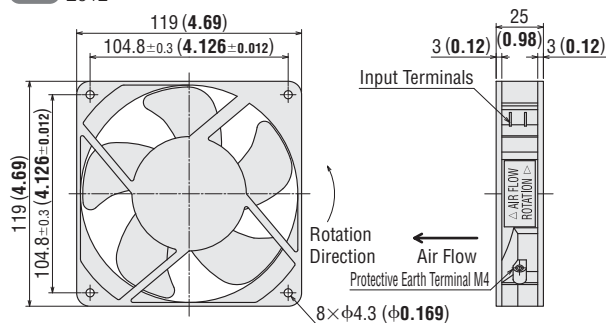
● MU1225M



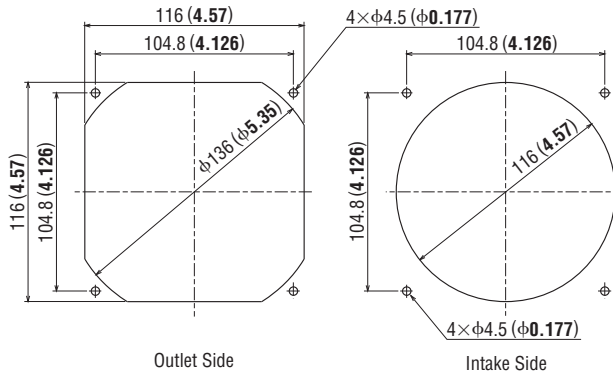
Dimensions Unit = mm (in.)

Mass: 0.31 kg (0.68 lb.)

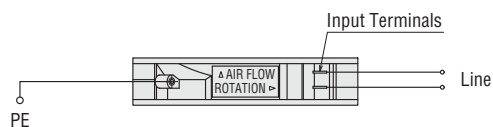
DXF E012



Panel Cut-Out Unit = mm (in.)



Connection Diagram



Accessories

The following products are RoHS-Compliant.

Details → Page E-137

Product	Model	Safety Standards	Page
Finger Guard	FG12D	Conformed component	E-145
Filter	FL12	—	E-147
Screen	F512S	—	E-150
Plug Cord	PCA2B [1 m (3.3 ft.)]	Electrical Appliance and Material Safety Law-Compliant component (Japan) UL recognized component CSA certified component	E-151

Thermostats

A thermostat makes it possible for fans to operate only when cooling is necessary, thereby conserving energy.



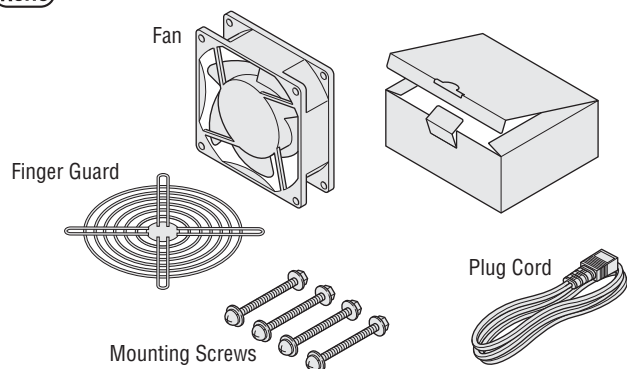
Thermostats **AM1-WA1/AM1-XA1**

● Page → E-133

Fan Kit

The lineup includes a product configuration containing all necessary accessories in one package.

Details → Page E-140



Product Line

Fan Kit Model
T-MU1225S-21-GP
T-MU1225S-51-GP
T-MU1225M-21-GP
T-MU1225M-51-GP

MU Series

□ 92 mm – 25 mm Thick
 (□ 3.62 in. – 0.98 in. Thick)



Ambient Temperature: $-10 \sim +60^{\circ}\text{C}$ ($+14 \sim +140^{\circ}\text{F}$)
 Operating Voltage Range: $\pm 10\%$
 Materials
 Frame: Die Cast Aluminum
 Blades: Polycarbonate (Flammability grade V-0)
 Overheat Protection: Impedance Protected
 Bearings: Ball Bearings

Specifications (RoHS)



Speed Type	Model	Voltage VAC	Frequency Hz	Current A	Input W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level
							m ³ /min	CFM	Pa	inH ₂ O	dB (A)
Standard Speed	MU925S-21	Single-Phase 115	50	0.11	9.5	2600	0.95	33.5	44	0.176	35
			60	0.10	8.0	3000	1.10	38.8	59	0.237	39
	MU925S-51	Single-Phase 220 Single-Phase 230	50	0.06	8.5	2600	0.95	33.5	44	0.176	35
			60	0.07 0.06	10.5 8.0	2600 3000	0.95 1.10	33.5 38.8	44 59	0.176 0.237	35 39
Middle Speed	MU925M-21	Single-Phase 115	50	0.11	9.0	2300	0.85	30.0	34	0.137	31
			60	0.10	8.0	2700	1.00	35.8	44	0.176	36
	MU925M-51	Single-Phase 220 Single-Phase 230	50	0.06	8.5	2300	0.85	30.0	34	0.137	31
			60	0.06 0.06	9.5 8.0	2300 2700	0.85 1.00	30.0 35.8	34 44	0.137 0.176	32 36

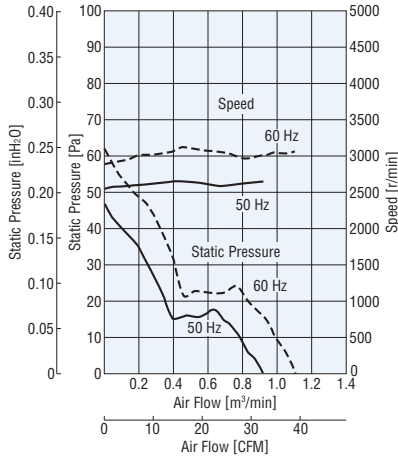
● How to read specifications → Page E-19 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-38

The following items are included in each product.
 Fan, Operating Manual

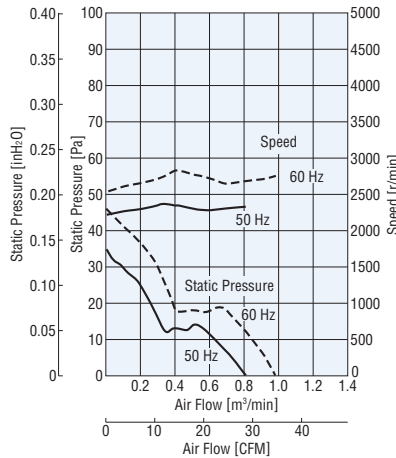
Air Flow – Static Pressure Characteristics

● How to read air flow – static pressure characteristics → Page E-20

● MU925S



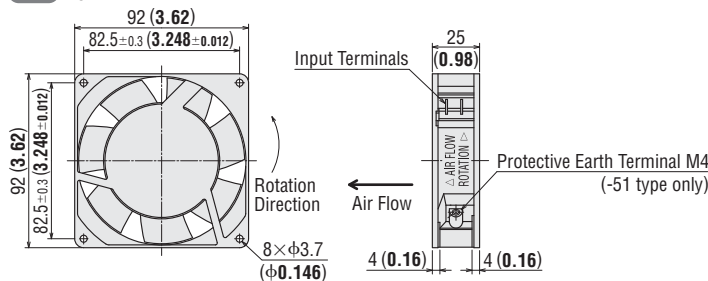
● MU925M



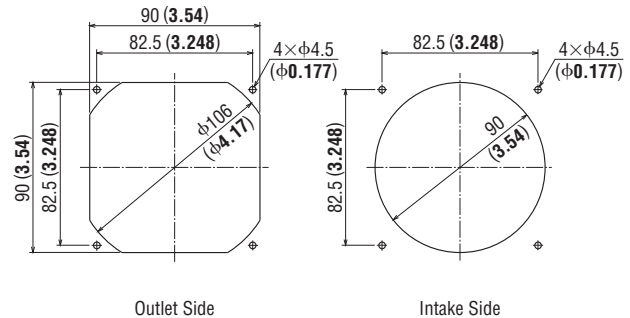
Dimensions Unit = mm (in.)

Mass: 0.27 kg (0.59 lb.)

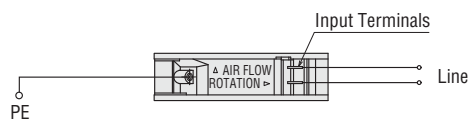
DXF E014



Panel Cut-Out Unit = mm (in.)



Connection Diagram



Accessories

The following products are RoHS-Compliant.

Details → Page E-137

Product	Model	Safety Standards	Page
Finger Guard	FG9D	Conformed component	E-145
Filter	FL9	—	E-147
Screen	FS9S	—	E-150
Plug Cord	PCA2B [1 m (3.3 ft.)]	Electrical Appliance and Material Safety Law-Compliant component (Japan) UL recognized component CSA certified component	E-151

Thermostats

A thermostat makes it possible for fans to operate only when cooling is necessary, thereby conserving energy.



RoHS

Thermostats **AM1-WA1/AM1-XA1**

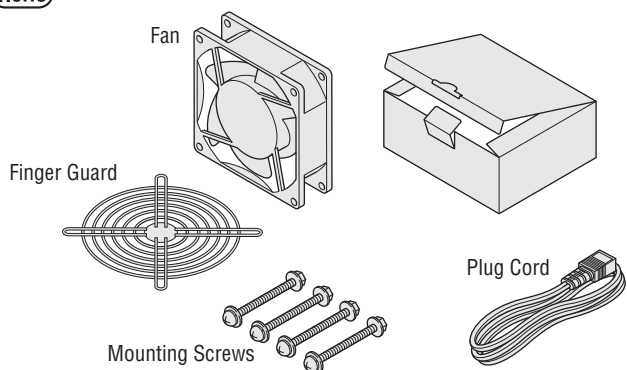
●Page → E-133

Fan Kit

The lineup includes a product configuration containing all necessary accessories in one package.

Details → Page E-140

RoHS



Product Line

Fan Kit Model
T-MU925S-21-GP
T-MU925S-51-GP
T-MU925M-21-GP
T-MU925M-51-GP

MU Series

□ 80 mm – 25 mm Thick
 (□ 3.15 in. – 0.98 in. Thick)



Ambient Temperature: $-10\sim+60^{\circ}\text{C}$ ($+14\sim+140^{\circ}\text{F}$)
 Operating Voltage Range: $\pm 10\%$
 Materials
 Frame: Die Cast Aluminum
 Blades: Polycarbonate (Flammability grade V-0)
 Overheat Protection: Impedance Protected
 Bearings: Ball Bearings

Specifications (RoHS)



Speed Type	Model	Voltage VAC	Frequency Hz	Current A	Input W	Speed r/min	Max. Air Flow		Max. Static Pressure		Noise Level dB (A)
							m ³ /min	CFM	Pa	inH ₂ O	
Standard Speed	MU8255-23	Single-Phase 115	50	0.11	9.5	2750	0.45	15.9	34	0.137	28
			60	0.09	8.0	3250	0.55	19.4	49	0.196	35
	MU8255-53	Single-Phase 220	50	0.06	8.5	2750	0.45	15.9	34	0.137	28
			50	0.07	10.5	2750	0.45	15.9	34	0.137	28
			60	0.06	8.0	3250	0.55	19.4	49	0.196	35
			60	0.06	8.0	3250	0.55	19.4	49	0.196	35

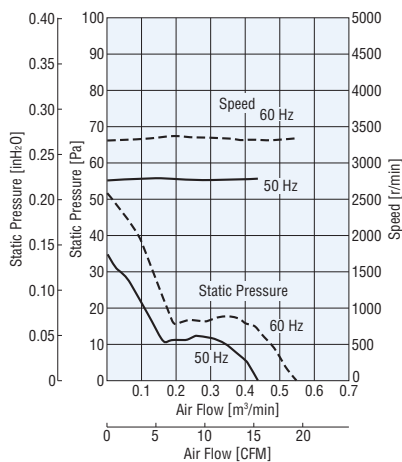
● How to read specifications → Page E-19 ● Details of safety standards → Page G-2 ● Details of RoHS Directive → Page G-38

The following items are included in each product.

Fan, Operating Manual

Air Flow – Static Pressure Characteristics

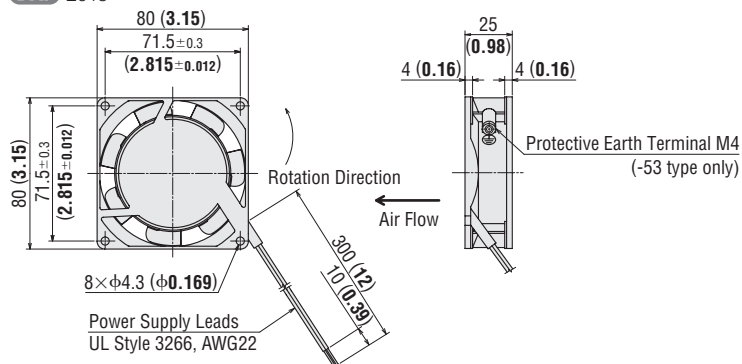
● How to read air flow – static pressure characteristics → Page E-20



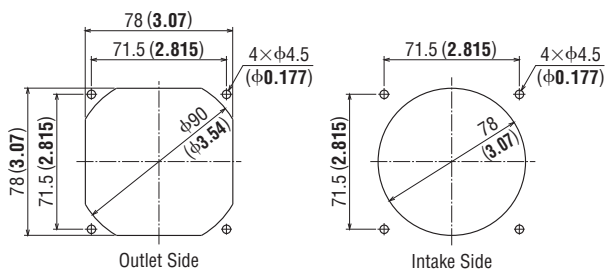
Dimensions Unit = mm (in.)

Mass: 0.25 kg (0.55 lb.)

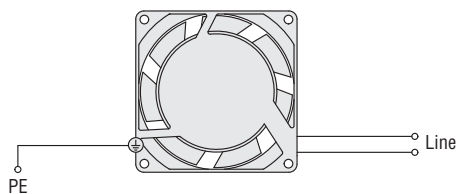
DXF E015



Panel Cut-Out Unit = mm (in.)



Connection Diagram



Accessories

The following products are RoHS-Compliant.

Details → Page E-137

Product	Model	Safety Standards	Page
Finger Guard	FG8D	Conformed component	E-145
Filter	FL8	–	E-147
Screen	FS8S	–	E-150

Thermostats

A thermostat makes it possible for fans to operate only when cooling is necessary, thereby conserving energy.



RoHS

Thermostats **AM1-WA1/AM1-XA1**

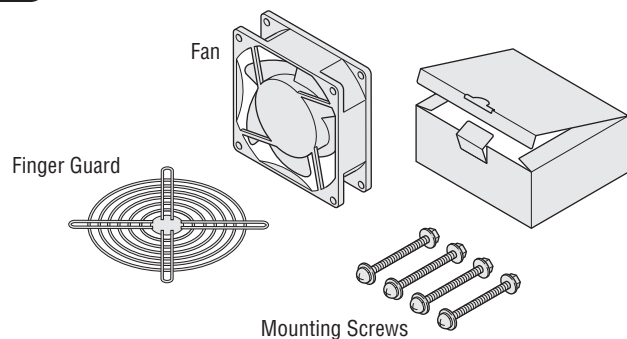
● Page → E-133

Fan Kit

The lineup includes a product configuration containing all necessary accessories in one package.

Details → Page E-140

RoHS



Product Line

Fan Kit Model

T-MU825S-23-G

T-MU825S-53-G