

# How to Read Specifications

## MRS Series (Example)

□ 200 mm-90 mm thick

### Specifications

Model		① Voltage	② Frequency	③ Current	④ Input Power	⑤ Speed	⑥ Maximum Air Flow	⑦ Maximum Static Pressure		⑧ Noise Level	⑨ Capacitor	
⑩	Low-speed Alarm, Electronic Alarm Type	Standard Type	VAC	Hz	A	W	r/min	m³/min	Pa	mmH₂O	dB (A)	μF
	<Alarm Specifications: 2>											
MRS20-BM	MRS20-BUL	Single-phase 100	50	0.8	75	2850	13.2	221	22.5	56	6.0	
		Single-phase 100	60	1.0	95	3350	15.5	186	19.0	60		
		Single-phase 115	60	1.0	95	3400	15.5	265	27.0	61		
MRS20-DM	MRS20-DUL	Single-phase 200	50	0.4	75	2850	13.2	221	22.5	56	6.0	
		Single-phase 200	60	0.5	95	3350	15.5	186	19.0	60		
		Single-phase 230	60	0.5	95	3400	15.5	265	27.0	61		
MRS20-TM	MRS20-TUL	Three-phase 200	50	0.4	75	2850	13.2	221	22.5	56	—	
		Three-phase 200	60	0.4	95	3350	15.5	265	27.0	60		
		Three-phase 230	60	0.4	95	3400	15.5	265	27.0	61		
MRS20-EM	MRS20-E	Single-phase 230	50	0.4	75	2850	13.2	221	22.5	56	6.0	
		Single-phase 230	60	0.5	95	3400	15.5	226	23.0	60		

① Voltage: Power supply voltage needed to operate the fans. Varies with the type of fan: single-phase 100 VAC, 115 VAC, 200 VAC, 230 VAC and three-phase 200 VAC, 230 VAC for AC power supply, and 12 VDC, 24 VDC, 48 VDC for DC power supply.

② Frequency: For AC fans, rotation speed varies depending on the frequency.

③ Current: The current when the fan is at rated rotation speed.

④ Input Power: The input power when the fan is at rated rotation speed.

⑤ Speed: The fan's rated rotation speed.

⑥ Max. Air Flow: Maximum air flow that the fan can produce when at rated rotation speed.\*1

⑦ Max. Static Pressure: Maximum static pressure that the fan can produce when at rated rotation speed.\*2

\*1, 2 Values for maximum air flow and maximum static pressure are measured by the double-chamber method.

⑧ Noise Level: Noise level when the fan is at rated rotation speed.\*3

\*3 Noise level is measured in the A range, at a distance of 1 m from the fan intake side.

⑨ Capacitor: Capacitance required to operate single-phase 100 VAC and 200 VAC fans.

(Capacitor is included or built-in for all single-phase products.)

⑩ Alarm Specifications: Indicate the types of fan alarm. Types of fan alarms include: Stall Alarm (Electronic Alarm Type), Low-Speed Alarm (Contact Alarm Type, Electronic Alarm Type), Pulse Sensor Type.

There are nine alarm specifications, which are described by the numbers to < > in the specifications tables. These numbers correspond to the numbers in the "Specifications for Fans with Alarms" (Pages F-17 to F-18). Refer to these pages for details.

### Overheat Protection

- Built-in thermal protector → The fan uses a thermal protector for overheat protection. Once the temperature reaches a specified level, the internal thermal protector that has an automatic-return feature is triggered to stop the fan operation. Be sure to turn off the power when checking the thermal protector.
- Impedance protection → These products are impedance-protected to prevent the windings from burning.
- Built-in overheat protection → A function for overheat protection is installed to prevent the windings from burning.

### Fan Operation

Do not touch the fan blades when the fan is in operation. The use of a finger guard (accessory) is recommended to ensure protection.

(A convenient fan kit product is also available. → Page F-110)

### CE Marking

Fans bearing the CE mark should only be used with class I equipment. When installing into equipment either ground the fan or ensure that there is no contact with bare hands. (See page H-2 for details on safety standards.)

### Air Flow-Static Pressure Characteristics

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### Frequency-Audible Noise Level (dB)

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