

M1 TYPE

SLIM VARIABLE STATIC PRESSURE HIDE AWAY CONCEALED DUCT



The ultra slim M1 type is one of the leading products of its type in the industry. With a depth of only 200 mm it provides greater flexibility and can be used in far more applications. In addition, its high-efficiency and extremely quiet sound levels make it very popular with many users, including hotels and small offices.

Technical focus

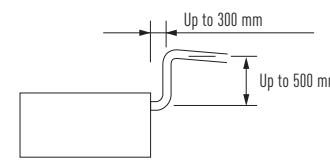
- Ultra-slim profile: 200 mm for all models
- DC fan motor greatly reduces power consumption
- Ideal for hotel application with very narrow false ceilings
- Anti-mould washable filters included
- Easy maintenance and service by external electrical box
- 40 Pa static pressure enables ductwork to be fitted.
- Includes drain pump

Ultra-slim profile for all models



Drain pump with increased power!

By adoption of a high-lift drain pump, the drain piping rise height can be increased to 785 mm from the lower surface of the body.



OPTIONAL CONTROLLER
Timer remote controller
CZ-RTC2



OPTIONAL CONTROLLER
Wireless remote controller
CZ-RWSC2



OPTIONAL CONTROLLER
Simplified remote controller
CZ-RE2C2

MODEL NAME		S-22MM1E51	S-28MM1E51	S-36MM1E51	S-45MM1E51	S-56MM1E51	
Power source		230 V / 1 phase / 50 Hz					
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	
Cooling power input	W	36	40	42	49	64	
Cooling operating current	A	0.26	0.30	0.31	0.37	0.48	
Heating capacity	kW	2.5	3.2	4.2	5.0	6.3	
Heating power input	W	26	30	32	39	54	
Heating operating current	A	0.23	0.27	0.28	0.34	0.45	
Fan	Type	Sirocco fan					
	Air flow rate (H/M/L)	m ³ /h	480 / 420 / 360	510 / 450 / 390	540 / 480 / 420	630 / 570 / 480	750 / 690 / 600
	External static pressure	Pa	10 (30)	15 (30)	15 (40)	15 (40)	15 (40)
Sound pressure level (L/M/H)	dB(A)	25 / 27 / 28 (27 / 29 / 30) ¹	27 / 29 / 30 (29 / 31 / 32) ¹	28 / 30 / 32 (30 / 32 / 34) ¹	30 / 32 / 34 (32 / 34 / 36) ¹	31 / 33 / 35 (32 / 35 / 37) ¹	
Dimensions	H x W x D	mm 200 x 750 x 640					
Pipe connections	Liquid	inches (mm)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)	1/4 (6.35)
	Gas	inches (mm)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)	1/2 (12.7)
	Drain piping		VP-20	VP-20	VP-20	VP-20	VP-20
Net weight	Kg	19					

1. With booster cable using short circuit connection.

Energy saving	Environmentally friendly refrigerant	Easy maintenance	For more comfort	Perfect humidity control	Practical operation	Comfort everywhere	Easy to install	Easy control
<small>INVERTER+</small>	<small>R410A</small>	<small>SELF-DIAGNOSING</small>	<small>AUTOMATIC FAN</small>	<small>MILD DRY</small>	<small>AUTOMATIC RESTART</small>	<small>AIR SWEEP</small>	<small>BUILT-IN DRAIN PUMP</small>	<small>CONNECTIVITY</small>

Rating Conditions: Cooling Indoor 27 °C DB / 19 °C WB. Cooling Outdoor 35 °C DB / 24 °C WB. Heating Indoor 20 °C DB. Cooling Outdoor 7 °C DB / 6 °C WB.
DB: Dry Bulb; WB: Wet Bulb

12. Slim Low Static Ducted Type (M1 Type)

12-1. Specifications

Unit specifications (A)

MODEL No.	Indoor Unit		S-22MM1E5					
POWER SOURCE			220 - 230 - 240 V, single-phase, 50/60 Hz					
PERFORMANCE			Cooling			Heating		
Capacity	kW		2.2			2.5		
	BTU / h		7,500			8,500		
Air circulation (Hi / Me / Lo)	m ³ / h		480 / 420 / 360					
Moisture removal (High)	Liters / h		0.3			-		
External static pressure (High)	Pa (mmAq)		10 (1.0): At shipment		30 (3.1): Using short circuit connection			
ELECTRICAL RATINGS								
Voltage rating	V		220	230	240	220	230	240
Available voltage range	V		198 - 264			198 - 264		
Running amperes	A		0.26	0.26	0.26	0.23	0.23	0.23
Power input	W		36	36	36	26	26	26
Power factor	%		63	60	58	51	49	47
Max. starting amperes	A		-	-	-	-	-	-
FEATURES								
Controls			Microprocessor					
Timer			ON / OFF Timer (Max. 72 hr)					
Fan speeds			3 and Automatic control					
Air filter			Field supply					
Refrigerant control			Electronic expansion valve					
Operation sound (Hi / Me / Lo)	dB-A		28 / 27 / 25					
Using short circuit connection (Hi / Me / Lo)	dB-A		30 / 29 / 27					
Refrigerant tubing connections			Flare type					
Refrigerant tube diameter	Liquid tube	mm (in.)	6.35 (1 / 4)					
	Gas tube	mm (in.)	12.7 (1 / 2)					
Drain connection			OD26 mm					
Drain pump			Max. head 500 mm above drain connection					
Remote controller			Optional (Wired / Wireless)					
Refrigerant tubing kit / Accessories			-					
Color (Approximate value)			-					
DIMENSIONS & WEIGHT			Unit dimensions			Package dimensions		
Unit dimensions	Height	mm (in.)	200 (7-7 / 8)			220 (8-21 / 32)		
	Width	mm (in.)	750 (29-17 / 32)			1030 (40-35 / 64)		
	Depth	mm (in.)	640 (25-13 / 64)			745 (29-21 / 64)		
Net weight		kg (lbs.)	19 (42)					
Shipping weight		kg (lbs.)	23 (51)					
Shipping volume		m ³ (cu.ft)	0.169 (5.97)					

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Rated conditions

Cooling: Indoor air temperature 27°C DB / 19°C WB; Outdoor air temperature 35°C DB

Heating: Indoor air temperature 20°C DB; Outdoor air temperature 7°C DB / 6°C WB

12. Slim Low Static Ducted Type (M1 Type)

Unit specifications (B)

MODEL No.	Indoor Unit		S-28MM1E5					
POWER SOURCE			220 - 230 - 240 V, single-phase, 50/60 Hz					
PERFORMANCE			Cooling			Heating		
Capacity	kW		2.8			3.2		
	BTU / h		9,600			11,000		
Air circulation (Hi / Me / Lo)	m ³ / h		510 / 450 / 390					
Moisture removal (High)	Liters / h		0.7			-		
External static pressure (High)	Pa (mmAq)		15 (1.5): At shipment		30 (3.1): Using short circuit connection			
ELECTRICAL RATINGS								
Voltage rating	V		220	230	240	220	230	240
Available voltage range	V		198 - 264			198 - 264		
Running amperes	A		0.30	0.30	0.30	0.27	0.27	0.27
Power input	W		40	40	40	30	30	30
Power factor	%		61	58	56	51	48	46
Max. starting amperes	A		-	-	-	-	-	-
FEATURES								
Controls			Microprocessor					
Timer			ON / OFF Timer (Max. 72 hr)					
Fan speeds			3 and Automatic control					
Air filter			Field supply					
Refrigerant control			Electronic expansion valve					
Operation sound (Hi / Me / Lo)	dB-A		30 / 29 / 27					
Using short circuit connection (Hi / Me / Lo)	dB-A		32 / 31 / 29					
Refrigerant tubing connections			Flare type					
Refrigerant tube diameter	Liquid tube	mm (in.)	6.35 (1 / 4)					
	Gas tube	mm (in.)	12.7 (1 / 2)					
Drain connection			OD26 mm					
Drain pump			Max. head 500 mm above drain connection					
Remote controller			Optional (Wired / Wireless)					
Refrigerant tubing kit / Accessories			-					
Color (Approximate value)			-					
DIMENSIONS & WEIGHT			Unit dimensions			Package dimensions		
Unit dimensions	Height	mm (in.)	200 (7-7 / 8)			220 (8-21 / 32)		
	Width	mm (in.)	750 (29-17 / 32)			1030 (40-35 / 64)		
	Depth	mm (in.)	640 (25-13 / 64)			745 (29-21 / 64)		
Net weight		kg (lbs.)	19 (42)					
Shipping weight		kg (lbs.)	23 (51)					
Shipping volume		m ³ (cu.ft)	0.169 (5.97)					

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Rated conditions

Cooling: Indoor air temperature 27°C DB / 19°C WB; Outdoor air temperature 35°C DB

Heating: Indoor air temperature 20°C DB; Outdoor air temperature 7°C DB / 6°C WB

12. Slim Low Static Ducted Type (M1 Type)

Unit specifications (C)

MODEL No.	Indoor Unit		S-36MM1E5					
POWER SOURCE			220 - 230 - 240 V, single-phase, 50/60 Hz					
PERFORMANCE			Cooling			Heating		
Capacity	kW		3.6			4.2		
	BTU / h		12,000			14,000		
Air circulation (Hi / Me / Lo)	m ³ / h		540 / 480 / 420					
Moisture removal (High)	Liters / h		1.2			-		
External static pressure (High)	Pa (mmAq)		15 (1.5): At shipment		40 (4.1): Using short circuit connection			
ELECTRICAL RATINGS								
Voltage rating	V		220	230	240	220	230	240
Available voltage range	V		198 - 264			198 - 264		
Running amperes	A		0.31	0.31	0.31	0.28	0.28	0.28
Power input	W		42	42	42	32	32	32
Power factor	%		62	59	56	52	50	48
Max. starting amperes	A		-	-	-	-	-	-
FEATURES								
Controls			Microprocessor					
Timer			ON / OFF Timer (Max. 72 hr)					
Fan speeds			3 and Automatic control					
Air filter			Field supply					
Refrigerant control			Electronic expansion valve					
Operation sound (Hi / Me / Lo)	dB-A		32 / 30 / 28					
Using short circuit connection (Hi / Me / Lo)	dB-A		34 / 32 / 30					
Refrigerant tubing connections			Flare type					
Refrigerant tube diameter	Liquid tube	mm (in.)	6.35 (1 / 4)					
	Gas tube	mm (in.)	12.7 (1 / 2)					
Drain connection			OD26 mm					
Drain pump			Max. head 500 mm above drain connection					
Remote controller			Optional (Wired / Wireless)					
Refrigerant tubing kit / Accessories			-					
Color (Approximate value)			-					
DIMENSIONS & WEIGHT			Unit dimensions			Package dimensions		
Unit dimensions	Height	mm (in.)	200 (7-7 / 8)			220 (8-21 / 32)		
	Width	mm (in.)	750 (29-17 / 32)			1030 (40-35 / 64)		
	Depth	mm (in.)	640 (25-13 / 64)			745 (29-21 / 64)		
Net weight		kg (lbs.)	19 (42)					
Shipping weight		kg (lbs.)	23 (51)					
Shipping volume		m ³ (cu.ft)	0.169 (5.97)					

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Rated conditions

Cooling: Indoor air temperature 27°C DB / 19°C WB; Outdoor air temperature 35°C DB

Heating: Indoor air temperature 20°C DB; Outdoor air temperature 7°C DB / 6°C WB

12. Slim Low Static Ducted Type (M1 Type)

Unit specifications (D)

MODEL No.	Indoor Unit		S-45MM1E5					
POWER SOURCE			220 - 230 - 240 V, single-phase, 50/60 Hz					
PERFORMANCE			Cooling			Heating		
Capacity	kW		4.5			5.0		
	BTU / h		15,000			17,000		
Air circulation (Hi / Me / Lo)	m ³ / h		630 / 570 / 480					
Moisture removal (High)	Liters / h		1.7			-		
External static pressure (High)	Pa (mmAq)		15 (1.5): At shipment		40 (4.1): Using short circuit connection			
ELECTRICAL RATINGS								
Voltage rating	V		220	230	240	220	230	240
Available voltage range	V		198 - 264			198 - 264		
Running amperes	A		0.37	0.37	0.37	0.34	0.34	0.34
Power input	W		49	49	49	39	39	39
Power factor	%		60	58	55	52	50	48
Max. starting amperes	A		-	-	-	-	-	-
FEATURES								
Controls			Microprocessor					
Timer			ON / OFF Timer (Max. 72 hr)					
Fan speeds			3 and Automatic control					
Air filter			Field supply					
Refrigerant control			Electronic expansion valve					
Operation sound (Hi / Me / Lo)		dB-A	34 / 32 / 30					
Using short circuit connection (Hi / Me / Lo)		dB-A	36 / 34 / 32					
Refrigerant tubing connections			Flare type					
Refrigerant tube diameter	Liquid tube	mm (in.)	6.35 (1 / 4)					
	Gas tube	mm (in.)	12.7 (1 / 2)					
Drain connection			OD26 mm					
Drain pump			Max. head 500 mm above drain connection					
Remote controller			Optional (Wired / Wireless)					
Refrigerant tubing kit / Accessories			-					
Color (Approximate value)			-					
DIMENSIONS & WEIGHT			Unit dimensions			Package dimensions		
Unit dimensions	Height	mm (in.)	200 (7-7 / 8)			220 (8-21 / 32)		
	Width	mm (in.)	750 (29-17 / 32)			1050 (40-35 / 64)		
	Depth	mm (in.)	640 (25-13 / 64)			745 (29-21 / 64)		
Net weight		kg (lbs.)	19 (42)					
Shipping weight		kg (lbs.)	23 (51)					
Shipping volume		m ³ (cu.ft)	0.169 (5.97)					

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Rated conditions

Cooling: Indoor air temperature 27°C DB / 19°C WB; Outdoor air temperature 35°C DB

Heating: Indoor air temperature 20°C DB; Outdoor air temperature 7°C DB / 6°C WB

12. Slim Low Static Ducted Type (M1 Type)

Unit specifications (E)

MODEL No.	Indoor Unit		S-56MM1E5					
POWER SOURCE			220 - 230 - 240 V, single-phase, 50/60 Hz					
PERFORMANCE			Cooling			Heating		
Capacity	kW		5.6			6.3		
	BTU / h		19,000			21,000		
Air circulation (Hi / Me / Lo)		m ³ / h	750 / 690 / 600					
Moisture removal (High)		Liters / h	2.3			-		
External static pressure (High)		Pa (mmAq)	15 (1.5): At shipment		40 (4.1): Using short circuit connection			
ELECTRICAL RATINGS								
Voltage rating		V	220	230	240	220	230	240
Available voltage range		V	198 - 264			198 - 264		
Running amperes		A	0.48	0.48	0.48	0.45	0.45	0.45
Power input		W	64	64	64	54	54	54
Power factor		%	61	58	56	55	52	50
Max. starting amperes		A	-	-	-	-	-	-
FEATURES								
Controls		Microprocessor						
Timer		ON / OFF Timer (Max. 72 hr)						
Fan speeds		3 and Automatic control						
Air filter		Field supply						
Refrigerant control		Electronic expansion valve						
Operation sound (Hi / Me / Lo)		dB-A	35 / 33 / 31					
Using short circuit connection (Hi / Me / Lo)		dB-A	37 / 35 / 32					
Refrigerant tubing connections		Flare type						
Refrigerant tube diameter	Liquid tube	mm (in.)	6.35 (1 / 4)					
	Gas tube	mm (in.)	12.7 (1 / 2)					
Drain connection		OD26 mm						
Drain pump		Max. head 500 mm above drain connection						
Remote controller		Optional (Wired / Wireless)						
Refrigerant tubing kit / Accessories		-						
Color (Approximate value)		-						
DIMENSIONS & WEIGHT			Unit dimensions			Package dimensions		
Unit dimensions	Height	mm (in.)	200 (7-7 / 8)			220 (8-21 / 32)		
	Width	mm (in.)	750 (29-17 / 32)			1050 (40-35 / 64)		
	Depth	mm (in.)	640 (25-13 / 64)			745 (29-21 / 64)		
Net weight		kg (lbs.)	19 (42)					
Shipping weight		kg (lbs.)	23 (51)					
Shipping volume		m ³ (cu.ft)	0.169 (5.97)					

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Rated conditions

Cooling: Indoor air temperature 27°C DB / 19°C WB; Outdoor air temperature 35°C DB

Heating: Indoor air temperature 20°C DB; Outdoor air temperature 7°C DB / 6°C WB

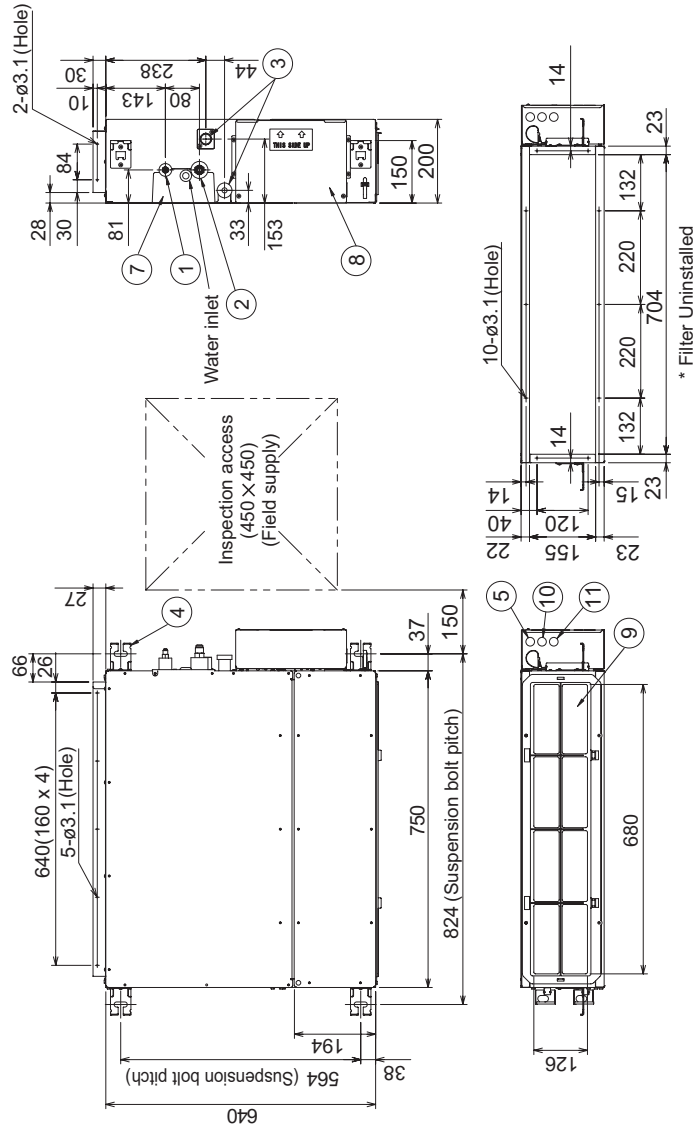
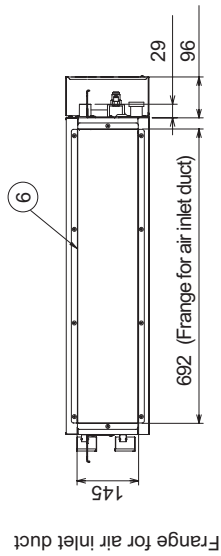
12. Slim Low Static Ducted Type (M1 Type)

12-3. Dimensional Data

Indoor unit: S-22MM1E5 / 28MM1E5 / 36MM1E5 / 45MM1E5 / 56MM1E5

unit : mm

①	Refrigerant tubing joint (narrow tube)
②	Refrigerant tubing joint (wide tube)
③	Upper and bottom drain port (O.D.26mm)
④	Suspension lug
⑤	Power supply outlet (ø17)
⑥	Frange for air inlet duct
⑦	PI cover
⑧	Electrical component box
⑨	Filter
⑩	Inter-unit control wiring and control wiring for group control outlet (ø15)
⑪	Remote control wiring outlet (ø15)

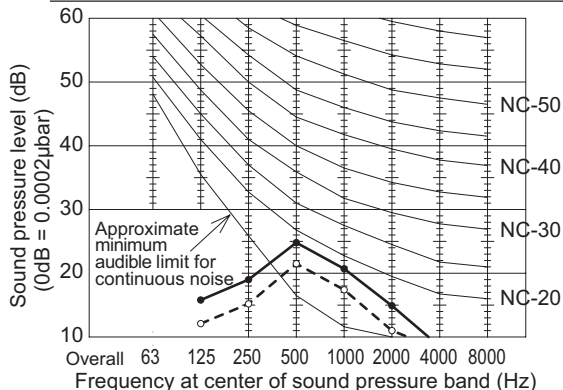


unit: mm

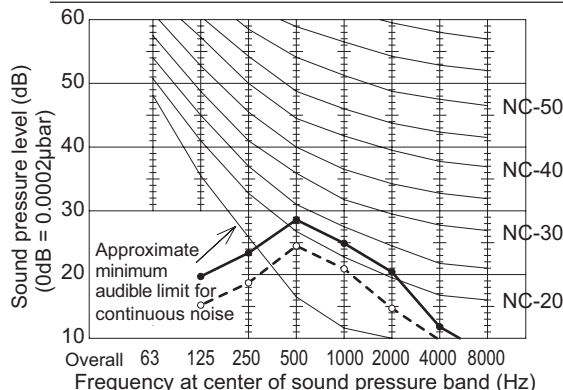
12. Slim Low Static Ducted Type (M1 Type)

12-4. Noise Criterion Curves

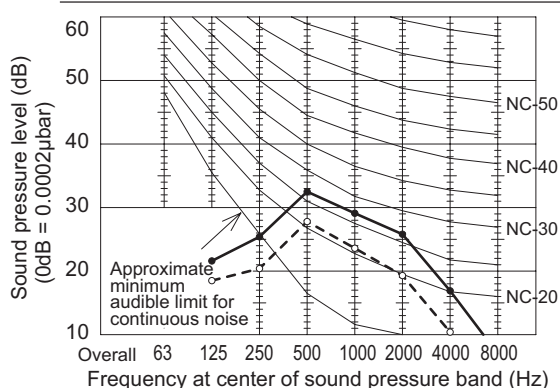
MODEL	: S-22MM1E5
SOUND LEVEL: STRONG	28 dB(A)
WEAK	25 dB(A)
CONDITION	: 1.5 m directly below unit



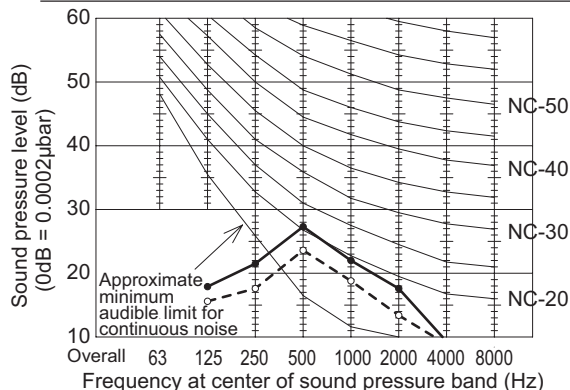
MODEL	: S-36MM1E5
SOUND LEVEL: STRONG	32 dB(A)
WEAK	28 dB(A)
CONDITION	: 1.5 m directly below unit



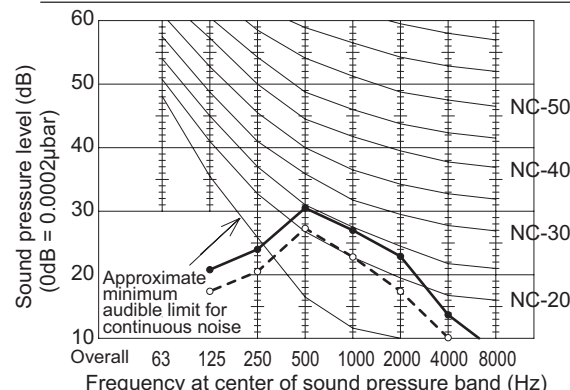
MODEL	: S-56MM1E5
SOUND LEVEL: STRONG	35 dB(A)
WEAK	31 dB(A)
CONDITION	: 1.5 m directly below unit



MODEL	: S-28MM1E5
SOUND LEVEL: STRONG	30 dB(A)
WEAK	27 dB(A)
CONDITION	: 1.5 m directly below unit



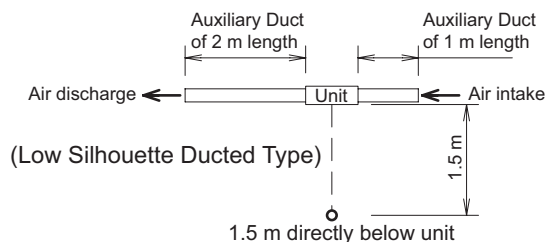
MODEL	: S-45MM1E5
SOUND LEVEL: STRONG	34 dB(A)
WEAK	30 dB(A)
CONDITION	: 1.5 m directly below unit



- REMARKS:**
- Value obtained in the actual place where the unit is installed may be slightly higher than the values shown in this graph because of the conditions of operation, the structure of the building, the backgroundnoise and other factors.
 - The test results were obtained from an anechoic room.
 - The layout of the testing condition is shown at right.

NOTE

To evaluate the noise level, the maximum value of the measured sound pressure level is used. Read the value at each frequency level (on horizontal axis, center of the sound pressure band) from 63 Hz to 8000 Hz, and select the corresponding maximum value indicated on the vertical axis.



12. Slim Low Static Ducted Type (M1 Type)

12-5. Increasing the Fan Speed

■ For Short Circuit Connection

- The standard (before shipment) external static pressure is shown in the table below.
- When using with a higher static pressure, it is necessary to change to the high static pressure mode.

External static pressure

Type	22	28	36	45	56
Standard	10	15	15	15	15
High static pressure	30	30	40	40	40

When using with high static pressure mode, set the indoor unit control board as shown at right.

Follow the below procedure while the unit is turned off.

- (1) Open the cover of the electrical box and confirm that it is the indoor unit control board.
 - (2) Connect the short circuit connector to the short circuit pin TP3 (2P: Yellow) of the indoor unit control board.
- In case of wired remote control setting, do not use the short circuit connector.

■ For Wired Remote Control

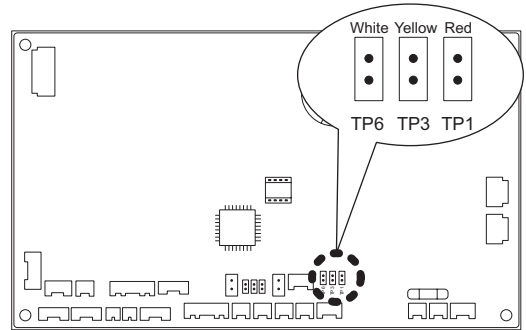
- ① Press and hold the , and buttons simultaneously for 4 seconds or longer.
- ② “SETTING,” unit No. “+ 1” (or “ALL” in the case of group control), item code “10,” and settings data “00XX” are displayed blinking on the remote controller LCD display.

At this time, the indoor unit fan (or all indoor unit fans in the case of group control) begins operating.

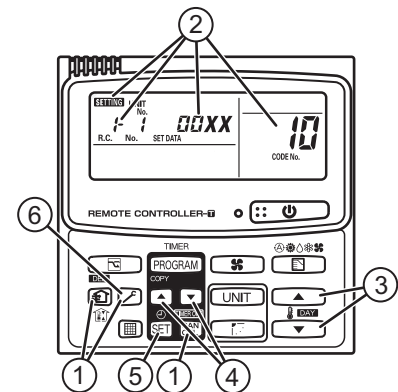
- ③ Press the temperature setting / buttons to select the item code “5d”.
- ④ Press the timer time / buttons to select the desired setting data.

* For item codes and setting data, refer to the right table.

- ⑤ Press the button.
(The display stops blinking and remains lit, and setting is completed.)
- ⑥ Press the button to return to normal remote controller display.



Indoor control board



Item code	No.	Description
5d	0000	Standard (setting at shipment)
	0003	High static-pressure

