

Air Conditioning
Technical Data

FXXQ-MA



- > FXXQ25MAVE
- > FXXQ32MAVE
- > FXXQ40MAVE
- > FXXQ63MAVE

TABLE OF CONTENTS

FXKQ-MA

1	Features	2
2	Specifications	3
	Technical Specifications	3
	Electrical Specifications	4
3	Safety device settings.....	5
4	Options.....	6
5	Capacity tables	7
	Cooling Capacity Tables	7
	Heating Capacity Tables	8
6	Dimensional drawings	9
7	Centre of gravity	10
8	Piping diagrams	11
9	Wiring diagrams	12
	Wiring Diagrams - Single Phase	12
10	Sound data	13
	Sound Pressure Spectrum	13
11	Air flow patterns	14
	Air Flow Pattern - Heating	14

1 Features

1-way blow unit for corner installation

- Compact dimensions, can easily be mounted in a narrow ceiling void (only 220mm ceiling space required, 195 with panel spacer, available as accessory)
- Optimum air flow conditions are created by either downward air discharge or frontal air discharge (via optional grille) or a combination of both
- Maintenance operations can be performed by removing the front panel
- Standard drain pump with 330mm lift increases flexibility and installation speed



Inverter



Home leave operation



Fan only



Draught prevention



Auto cooling-heating changeover



Ceiling soiling prevention



Vertical auto swing



Fan speed steps



Dry programme



Air filter



Weekly timer



Infrared remote control



Wired remote control



Centralised control



Auto-restart



Self diagnosis



Drain pump kit

2 Specifications

2-1 Technical Specifications				FXKQ25MA	FXKQ32MA	FXKQ40MA	FXKQ63MA
Cooling capacity	Sensible capacity	Nom.	kW	2.4	2.7	3.2	5.1
	Latent capacity	Nom.	kW	0.4	0.9	1.3	2.0
	Total capacity	Nom.	kW	2.8 (1)	3.6 (1)	4.5 (1)	7.10 (1)
Heating capacity	Total capacity	Nom.	kW	3.2 (2)	4.0 (2)	5.0 (2)	8.00 (2)
Power input - 50Hz	Cooling	Nom.	kW	0.066		0.076	0.105
	Heating	Nom.	kW	0.046		0.056	0.085
Power input - 60Hz	Cooling	Nom.	kW	0.069		0.092	0.120
	Heating	Nom.	kW	0.049		0.072	0.100
Dimensions	Unit	Height	mm	215			
		Width	mm	1,110		1,310	
		Depth	mm	710			
Weight	Unit		kg	31		34	
Casing	Material	Galvanised steel plate					
Decoration panel	Model	BYK45FJW1				BYK71FJW1	
	Colour	White					
	Dimensions	Height	mm	70			
		Width	mm	1,240		1,440	
		Depth	mm	800			
	Weight		kg	8.5		9.5	
Heat exchanger	Rows	Quantity	2		3		
	Fin pitch		mm	1.75			
	Face area		m ²	0.180		0.226	
	Stages	Quantity	11				
	Type	Cross fin coil					
Fan	Type	Sirocco fan					
	Quantity	1					
	Air flow rate - 50Hz	Cooling	High	m ³ /min	11	13	18
			Low	m ³ /min	9	10	15
	Air flow rate - 60Hz	Cooling	High	m ³ /min	11	13	18
			Low	m ³ /min	8.5	10	13
Fan motor	Quantity	1					
	Model	3D12H1AN1V1		3D12H1AP1V1		4D12H1AJ1V1	
	Output	High	W	15	20	45	
	Drive	Direct drive					
Air filter	Type	Resin net with mold resistance					
Sound power level	Cooling	High	dBA	54	56	58	
		Low	dBA	49	50	53	
Sound pressure level	Cooling	Medium	dBA	-			
		High	dBA	38.0	40.0	42.0	
		Low	dBA	33.0	34.0	37.0	
Refrigerant	Type	R-410A					
	GWP	2,087.5					
	Control	Electronic expansion valve					
Piping connections	Liquid	Type	Flare connection				
		OD	mm	6.35		9.52	
	Gas	Type	Flare connection				
		OD	mm	12.7		15.9	
	Drain	VP25 (O.D. 32 / I.D. 25)					
Heat insulation	Foamed Polyethylene						
Temperature control	Microprocessor thermostat for cooling and heating						
Safety devices	Item	01	Fuse				
		02	Fan motor thermal fuse				
Control systems	Infrared remote control	BRC4C61					
	Wired remote control	BRC1E53A / BRC1E53B / BRC1E53C / BRC1D52					
	Simplified wired remote control for hotel applications	BRC2E52C (heat recovery type) / BRC3E52C (heat pump type)					

2 Specifications

Standard Accessories : Operation manual;
 Standard Accessories : Installation manual;
 Standard Accessories : Paper pattern for installation;
 Standard Accessories : Clamps;
 Standard Accessories : Insulation for hanger bracket;
 Standard Accessories : Positioning jig for installation;
 Standard Accessories : Drain hose;
 Standard Accessories : Clamp metal;
 Standard Accessories : Insulation for fitting;
 Standard Accessories : Sealing pads;
 Standard Accessories : Screws;
 Standard Accessories : Washer;
 Standard Accessories : Air outlet blocking pad;

2-2 Electrical Specifications				FXKQ25MA	FXKQ32MA	FXKQ40MA	FXKQ63MA
Power supply	Name		VE				
	Phase		1~				
	Frequency	Hz	50/60				
	Voltage	V	220-240/220				
Voltage range	Max.	%	10				
	Min.	%	-10				
Current - 50Hz	Minimum circuit amps (MCA)		A	0.3		0.5	
	Maximum fuse amps (MFA)		A	15			
	Full load amps (FLA)	Total	A	0.2		0.4	
Current - 60Hz	Minimum circuit amps (MCA)		A	0.4	0.5		0.6
	Maximum fuse amps (MFA)		A	15.0			
	Full load amps (FLA)	Total	A	0.3		0.4	0.5

Notes

(1) Cooling: indoor temp. 27°CDB, 19°CWB; outdoor temp. 35°CDB; equivalent piping length: 7.5m (horizontal)

(2) Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 7.5m (horizontal)

Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.

Voltage range: units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.

Maximum allowable voltage range variation between phases is 2%.

MCA/MFA: MCA = 1.25 x FLA

MFA ≤ 4 x FLA

Next lower standard fuse rating minimum 15A

Select wire size based on the value of MCA

Use a circuit breaker instead of a fuse.

Contains fluorinated greenhouse gases

3 Safety device settings

3 - 1 Safety Device Settings

FXKQ-MA

		25	32	40	63
FXMQ-MA	Safety devices				
	PC board fuse	250V 5A	250V 5A	250V 5A	250V 5A
	Fan motor thermal fuse	°C 146 ^{s3}	146 ^{s3}	-	-
	Fan motor thermal protector	°C -	-	Off: 120 ^{s5} (On: 105 or less)	Off: 120 ^{s5} (On: 105 or less)
Drain pump thermal fuse	°C 145	145	145	145	

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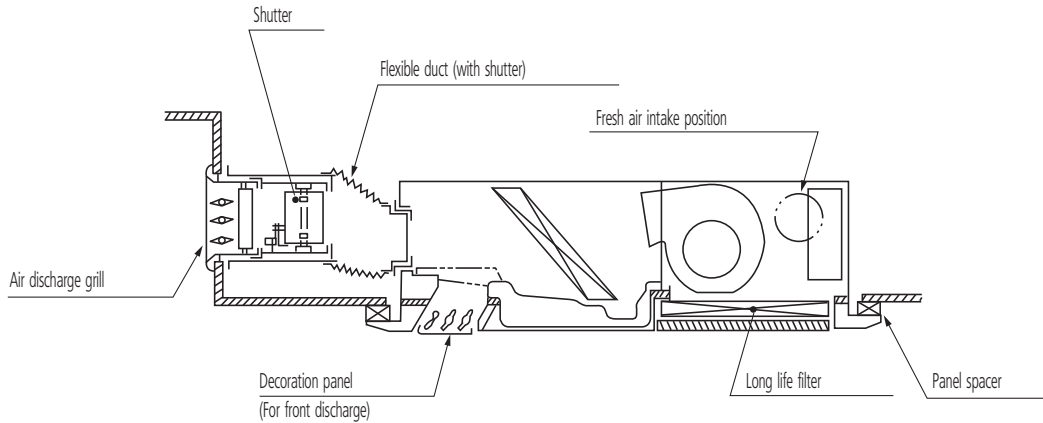
4 Options

4 - 1 Options

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	FXKQ25MA	FXKQ32MA	FXKQ40MA	FXKQ63MA
DECORATION PANEL		BYK45FJW1		BYK71FJW1
PANEL SPACER		KPBJ52F56W		KPBJ52F80W
LONG LIFE REPLACEMENT FILTER		KAFJ521F56		KAFJ521F80
AIR DISCHARGE GRILL		K-HV7AW		K-HV9AW
AIR DISCHARGE BLIND PANEL		KDBJ52F56W		KDBJ52F80W
FLEXIBLE DUCT (WITH SHUTTER)		KFDJ52F56		KFDJ52F80

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FXKQ-MA

No.	Item	Type		FXKQ-MA
1	Remote control	Infrared	H/P	BRC4C61
			C/O	BRC4C63
		Wired		BRC1D52 - BRC1E52A/B
2	Simplified remote control			-
3	Remote control for hotel use			-
4	Adapter for wiring			KRP1B61
5-1	Wiring adapter for electrical appendices (1)			KRP2A61
5-1	Wiring adapter for electrical appendices (2)			KRP4AA51
6	Remote sensor			KRCS01-1B
7	Installation box for adapter PCB.			-
8	Central remote control			DCS302CA61
8-1	Electrical box with earth terminal (3 blocks)			KJB311AA
9	Unified on/off controller			DCS301BA61
9-1	Electrical box with earth terminal (2 blocks)			KJB212AA
9-2	Noise filter (for electromagnetic interface use only)			KEK26-1A
10	Schedule timer			DST301BA61
11	Intelligent touch controller			DCS601C51
12	Intelligent touch manager			DCM601A51
13	External control adapter for outdoor unit (must be installed on indoor units)			DTA104A61
14	Simplified remote control (with operation mode selector button) (note 7)			BRC2E52C7
15	Simplified remote control (without operation mode selector button) (note 7)			BRC3E52C7
16	Digital input adapter (note 8)			BRP7A51

NOTES

- Installation box (No. 7) is necessary for each adapter marked *.
- Up to 2 adapters can be fixed for each installation box.
- Only one installation box can be installed for each indoor unit.
- Up to 2 installation boxes can be installed for each indoor unit.
- Installation box (No. 7) is necessary for second adapter.
- Installation box (No. 7) is necessary for each adapter.
- Included languages are:
 Language pack 1: English, German, French, Dutch, Spanish, Italian and Portuguese.
 With PC cable EKPCCAB3 in combination with the updater PC software, you can additionally change the language to:
 Language pack 2: English, Bulgarian, Croatian, Czech, Hungarian, Romanian and Slovenian.
 Language pack 3: English, Greek, Polish, Russian, Serbian, Slovak and Turkish.
- Only possible in combination with simplified remote control BRC2/3E52C7.

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5 Capacity tables

5 - 1 Cooling Capacity Tables

FXKQ-MA

TC: Total Capacity; kW - SHC: Sensible capacity; kW

Unit size	Nominal capacity	Outdoor air temp.	Indoor air temperature													
			14.0WB		16.0WB		18.0WB		19.0WB		20.0WB		22.0WB		24.0WB	
			20.0WB		23.0WB		26.0WB		27.0WB		28.0WB		30.0WB		32.0WB	
			°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC
25	2.8	35.0	1.9	1.9	2.3	2.2	2.6	2.3	2.8	2.4	3.0	2.5	3.0	2.4	3.1	2.3
32	3.6	35.0	2.4	2.2	2.9	2.5	3.4	2.6	3.6	2.7	3.8	2.9	3.9	2.7	4.0	2.6
40	4.5	35.0	3.0	2.6	3.6	2.8	4.2	3.2	4.5	3.2	4.7	3.3	4.9	3.2	5.0	3.0
63	7.1	35.0	4.8	4.0	5.7	4.5	6.6	5.0	7.1	5.1	7.5	5.2	7.7	5.0	7.8	4.8

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5 Capacity tables

5 - 2 Heating Capacity Tables

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FXKQ-MA

Unit size	Nominal capacity	Outdoor air temperature		Indoor air temperature °CDB					
		°CDB	°CWB	16.0	18.0	20.0	21.0	22.0	24.0
				kW	kW	kW	kW	kW	kW
25	3.2	7.0	6.0	3.4	3.4	3.2	3.1	3.0	2.8
32	4.0	7.0	6.0	4.2	4.2	4.0	3.9	3.7	3.5
40	5.0	7.0	6.0	5.2	5.2	5.0	4.8	4.7	4.4
63	8.0	7.0	6.0	8.4	8.4	8.0	7.7	7.5	7.0

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6 Dimensional drawings

6 - 1 Dimensional Drawings

FXKQ63MA

Required installation space

Nr.	Name	Description
1	Liquid pipe connection	ø 9.5 Flare connection
2	Gas pipe connection	ø 15.9 Flare connection
3	Drain pipe connection	VP25 (O.D. ø 32)
4	Wire intake	
5	Interunit wiring connection	
6	Grounding terminal	Inside switch box (M4)
7	Discharge	
8	Air suction grille	
9	Long life filter	
10	Suspension bolt	

NOTES

- Location of unit's name plate:
 - For main body: Bottom part of fan housing inside of air suction grille.
 - For decoration panel: Service lid face inside of air suction grille.
- When installing an optional accessory, refer to the installation drawings.

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FXKQ25,32,40MA

Required installation space

Nr.	Name	Description
1	Liquid pipe connection	ø 6.4 Flare connection
2	Gas pipe connection	ø 12.7 Flare connection
3	Drain pipe connection	VP25 (O.D. ø 32)
4	Wire intake	
5	Interunit wiring connection	
6	Grounding terminal	Inside switch box (M4)
7	Discharge	
8	Air suction grille	
9	Long life filter	
10	Suspension bolt	

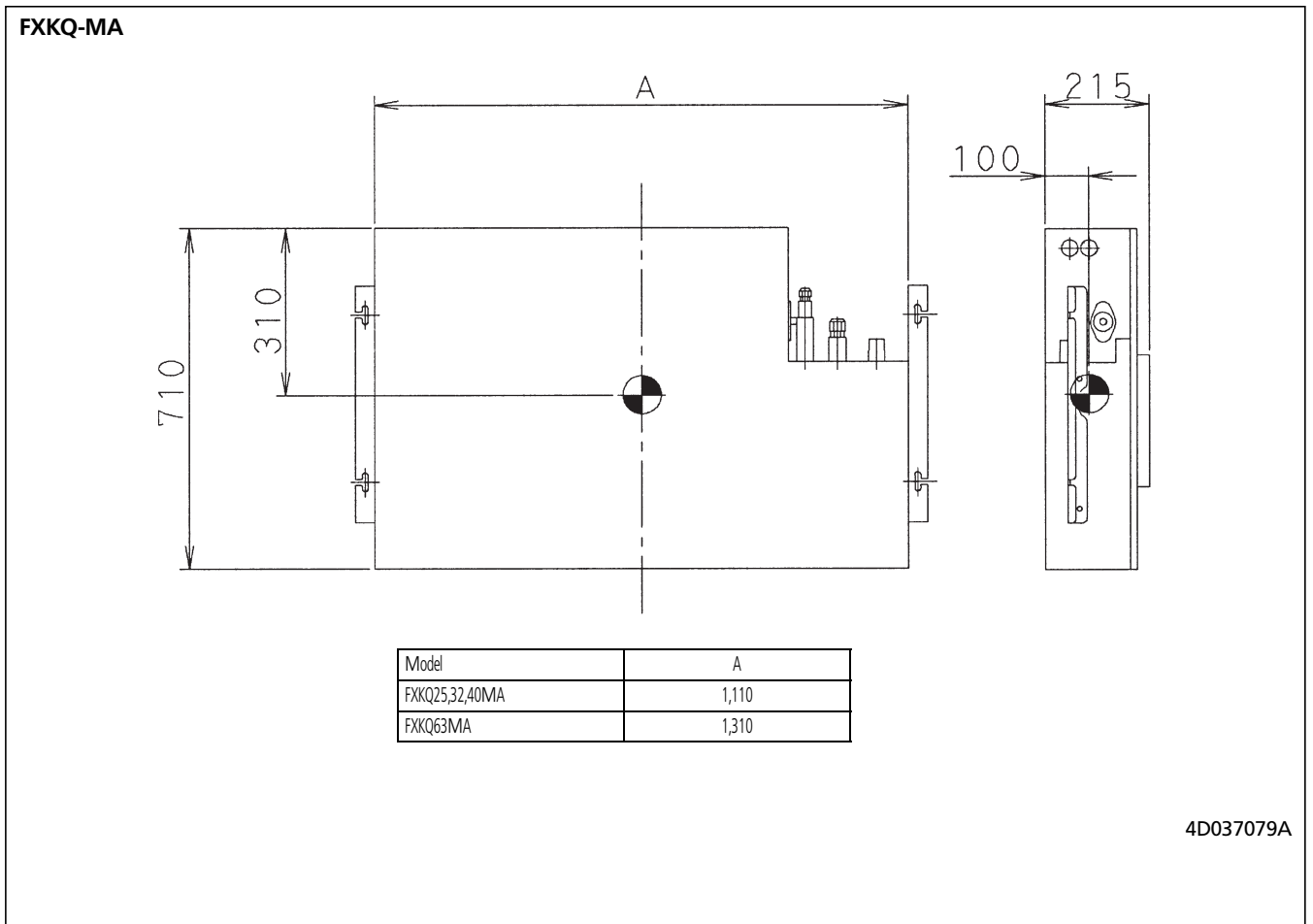
NOTES

- Location of unit's name plate:
 - For main body: Bottom part of fan housing inside of air suction grille.
 - For decoration panel: Service lid face inside of air suction grille.
- When installing an optional accessory, refer to the installation drawings.

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7 Centre of gravity

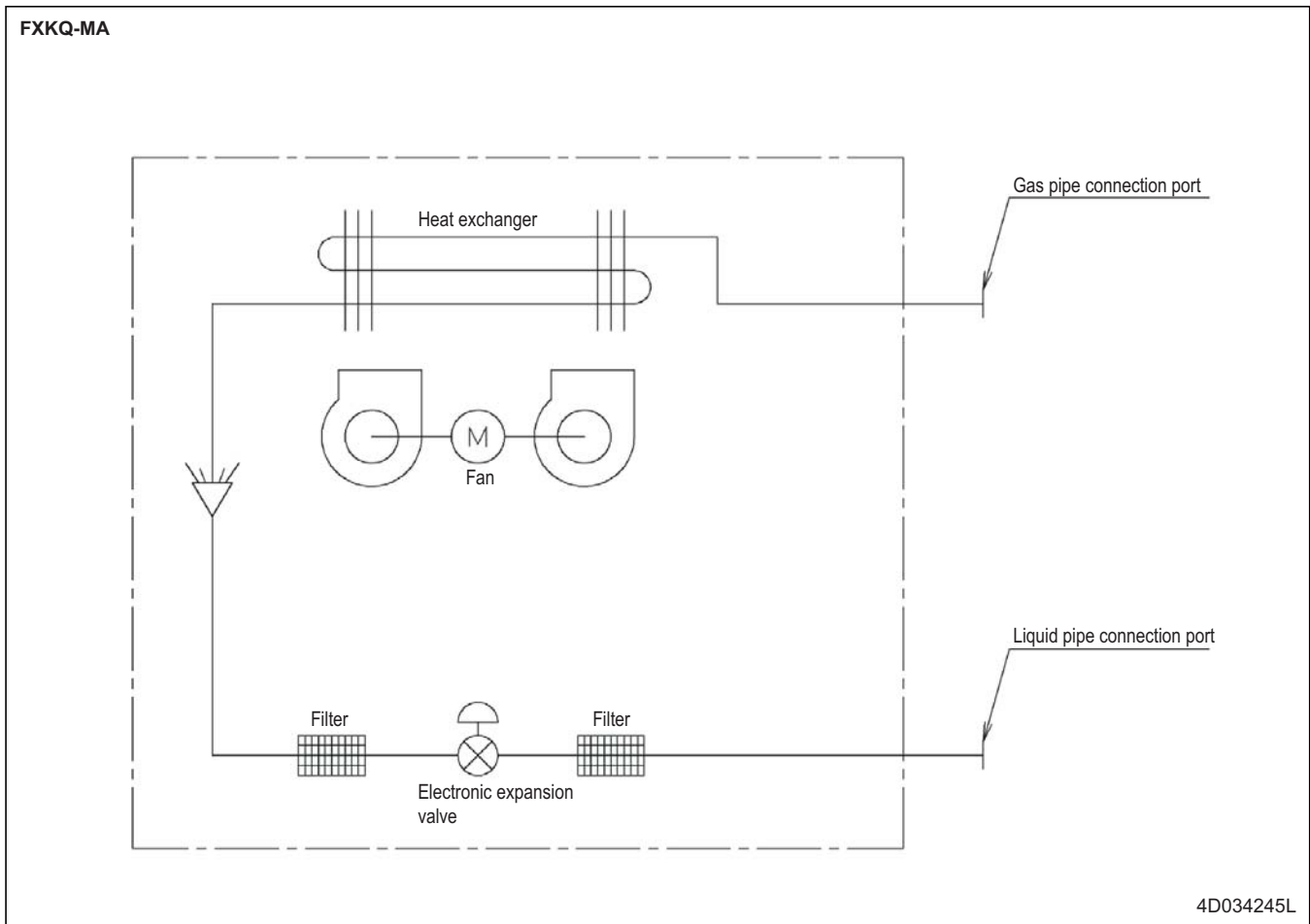
7 - 1 Centre of Gravity



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8 Piping diagrams

8 - 1 Piping Diagrams



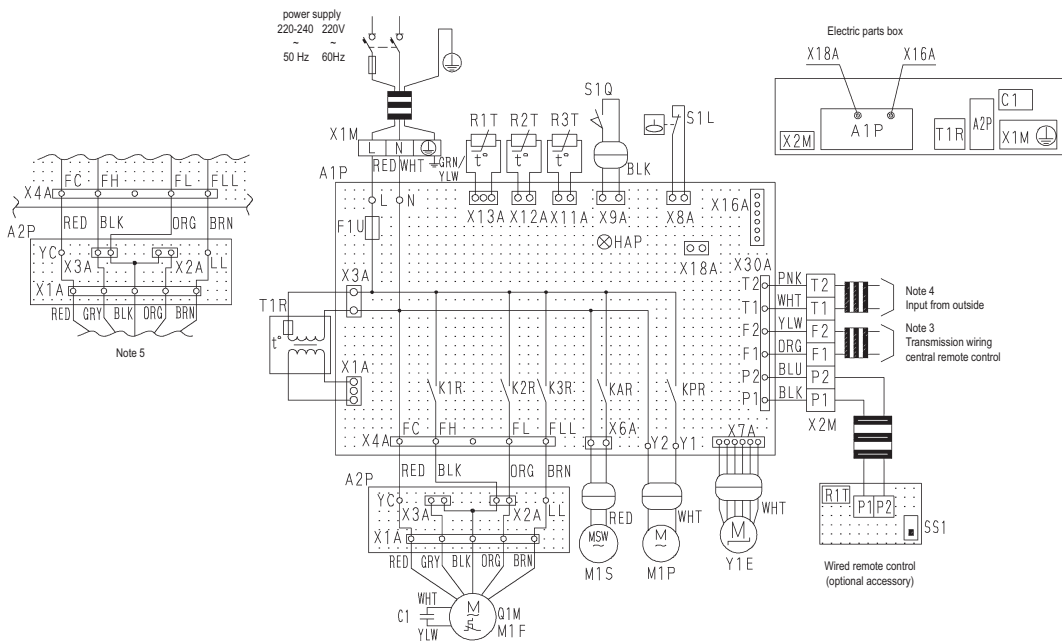
9 Wiring diagrams

9 - 1 Wiring Diagrams - Single Phase

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FXKQ-MA

WIRING DIAGRAM



Indoor unit		R1T	Thermistor (air)	Wired remote control	
A1P	Printed circuit board	R2T • R3T	Thermistor (coil)	R1T	Thermistor (air)
A2P	Terminal board	S1L	Float switch	SS1	Selector switch (main/sub)
C1	Capacitor (M1F)	S1Q	Limit switch (swing flap)	Connector (adaptor for wiring)	
F1U	Fuse (B, 5A, 250V)	T1R	Transformer (220-240V/22V)	X16A	Connector (adapter for wiring)
HAP	Light emitting diode (service monitor green)	X1M	Terminal block (power)	X18A	Connector (wiring adapter for electrical appendices)
K1R-K3R	Magnetic relay (M1F)	X2M	Terminal block (control)		
KAR	Magnetic relay (M1S)	Y1E	Electronic expansion valve		
KPR	Magnetic relay (M1P)				
M1F	Motor (indoor fan)				
M1P	Motor (drain pump)				
M1S	Motor (swing flap)				
Q1M	Thermo switch (M1F embedded)				

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NOTES

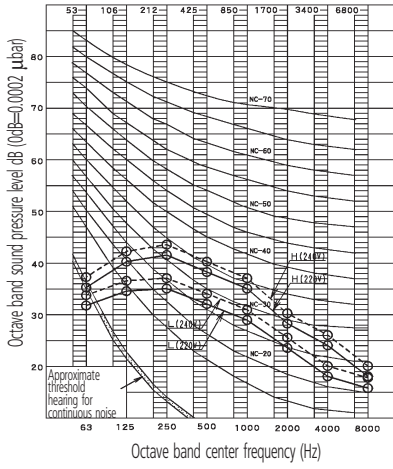
- Terminal strip □□□□ : connector ⊙ : terminal ⊕ : protective earth (screw)
- Field wiring
- In case using central remote control, connect to the unit in accordance with the attached instruction manual.
- When connecting the input wires from outside, forced OFF or ON/OFF control operation can be selected by remote control. In details, refer to the installation manual attached the unit.
- In case high E.S.P. operation, change over the wiring connecting from X2A to X3A.
- Symbols show as follows. (PNK: pink, WHT: white, YLW: yellow, ORG: Orange, BLU: blue, BLK: black, RED: red, BRN: brown, GRY: gray)
- Use copper conductors only.

10 Sound data

10 - 1 Sound Pressure Spectrum

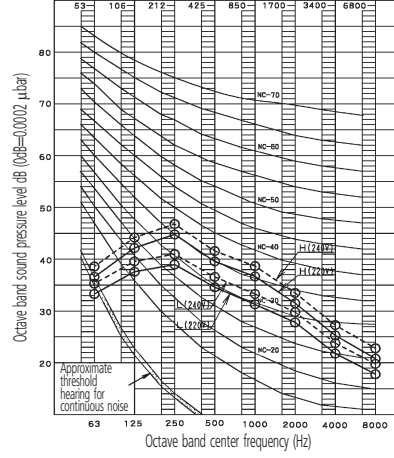
FXKQ40MA

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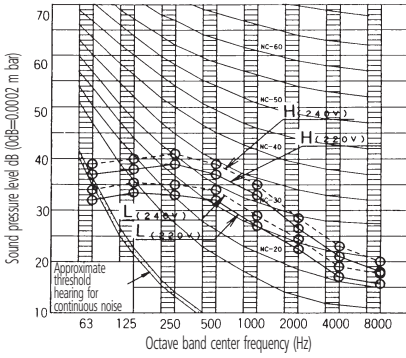
FXKQ63MA

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FXKQ25,32MA

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11 Air flow patterns

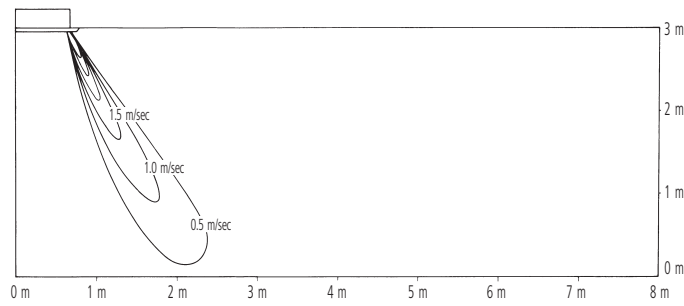
11 - 1 Air Flow Pattern - Heating

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FXKQ63MA

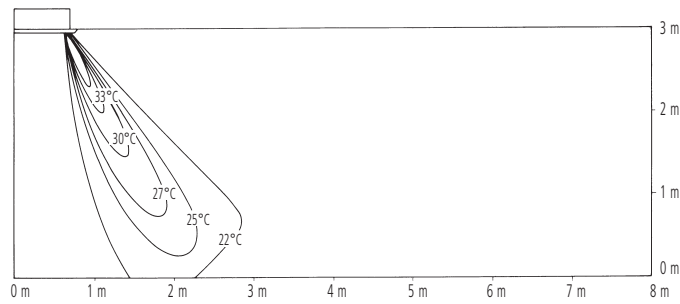
Heating air velocity distribution

Lower air blow



Heating temperature distribution

Lower air blow

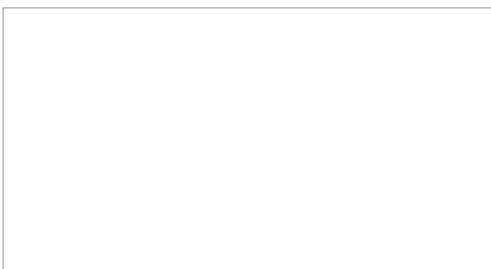


NOTES

- 1 The corner type is applicable on a high ceiling. The standard set-up height is 3 m. Shown here is the measurement distribution at the ceiling height of 3 m.



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