



# technical data

Concealed Ceiling Unit (Small)

FXDQ-M8V3B

air conditioning systems

*VRV*<sup>®</sup> III-S

*VRV*<sup>®</sup> III

*VRV*<sup>®</sup>-WII

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# 1 Specifications

1-1 TECHNICAL SPECIFICATIONS				FXDQ20M8V3B		FXDQ25M8V3B		
Nominal Capacity	Cooling	kW		2.20		2.80		
	Heating	kW		2.50		3.20		
Power input (Nominal)	Cooling	kW		0.050		0.050		
	Heating	kW		0.050		0.050		
Casing	Colour	Non painted						
	Material	Galvanised steel						
Dimensions	Packing	Height	mm	301		301		
		Width	mm	584		584		
		Depth	mm	753		753		
	Unit	Height	mm	230		230		
		Width	mm	502		502		
		Depth	mm	652		652		
Weight	Unit	kg		17		17		
	Packed unit	kg		18		18		
Required Ceiling Void		mm		250		250		
Heat Exchanger	Dimensions	Length	mm	430		430		
		Nr of Rows			2		2	
		Fin Pitch	mm	1.40		1.40		
		Nr of Passes			2		2	
		Face Area	m <sup>2</sup>	0.108		0.108		
		Nr of Stages			12		12	
		Empty Tubeplate Hole			4			
	Tube type		Hi-XSS (7)					
	Fin	Fin type		Symmetric waffle louvre				
		Treatment		Hydrophilic				
Fan	Type		Sirocco fan					
	Quantity			1		1		
Air Flow Rate	Cooling	High	m <sup>3</sup> /min	6.70		7.40		
		Low	m <sup>3</sup> /min	5.20		5.80		
	Heating	High	m <sup>3</sup> /min	6.70		7.40		
		Low	m <sup>3</sup> /min	5.20		5.80		
Fan	Motor	Quantity		1		1		
		Steps		step motor				
	Output (high)	W	10		10			
	Drive		Direct drive					
Refrigerant	Name		R-410A					
Sound Level	Cooling	Sound power (nominal)	dBA	50.0		50.0		
		Sound Pressure	High	dBA	37.0		37.0	
Heating	Low		dBA	32.0		32.0		
	Sound Pressure	High	dBA	37.0		37.0		
Low		dBA	32.0		32.0			
Piping connections	Liquid (OD)	Type		Flare connection				
		Diameter	mm	6.4		6.4		
	Gas	Type		Flare connection				
		Diameter	mm	12.7		12.7		
Drain	Diameter	mm	27.2		27.2			
Air Filter		Resin net with mold resistance						
Air direction control		Up and downwards						
Refrigerant control		Electronic expansion valve						
Temperature control		Microprocessor thermostat for cooling and heating						
Safety devices		PC board fuse						
		Fan motor thermal protector						

# 1 Specifications

1-1 TECHNICAL SPECIFICATIONS		FXDQ20M8V3B	FXDQ25M8V3B
Standard Accessories	Standard Accessories	Installation and operation manual	
		Fuse	
		Caution for servicing sticker	
		Suction air filter	
Notes		Nominal cooling capacities are based on : indoor temperature : 27°CDB, 19°CWB, outdoor temperature : 35°CDB, equivalent refrigerant piping : 8m, level difference : 0m.	
		Nominal heating capacities are based on : indoor temperature : 20°CDB, outdoor temperature : 7°CDB, 6°CWB, equivalent refrigerant piping : 8m, level difference : 0m.	
		Capacities are net, including a deduction for cooling (an addition for heating) for indoor fan motor heat.	

1-2 ELECTRICAL SPECIFICATIONS			FXDQ20M8V3B	FXDQ25M8V3B
Power Supply	Name		V1	
	Phase		1	1
	Frequency	Hz	50	50
	Voltage	V	230	230
Current	Minimum circuit amps (MCA)	A	0.20	0.20
	Maximum fuse amps (MFA)	A	16.00	16.00
	Full load amps (FLA)	A	0.10	0.10
Voltage range	Minimum	V	-10%	
	Maximum	V	+10%	
Power Supply Intake			Both indoor and outdoor unit	
Notes			Voltage range : units are suitable for use on electrical systems where voltage supplied to unit terminals 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 16A	
			select wire size based on the MCA	
			instead of a fuse, use a circuit breaker	
			For more details concerning conditional connections, see <a href="http://extranet.daikineurope.com">http://extranet.daikineurope.com</a> , select "E-Data Books". Finally, click on the document title of your choice.	

## 2 Safety device settings

		FXDQ20M8	FXDQ25M8
FAN MOTOR THERMAL PROTECTOR	°C	OFF:135 <sup>±8</sup> , (ON:87 <sup>±15</sup> )	
PC BOARD FUSE		250V 10A	

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### 3 Options

	FXDQ20M8	FXDQ25M8
WIRING ADAPTER (HOUR METER) (1)	EKRP1B2	
3TW25779-1D		
<p><b>NOTE</b></p> <p>1 Fixing box = KRP1A90</p>		

## 4 Control systems

### Individual control systems

		FXDQ20M8	FXDQ25M8
WIRED REMOTE CONTROL			BRC1D52
INFRARED REMOTE CONTROL	Heat pump		BRC4C62
	Cooling only		BRC4C64
SIMPLIFIED REMOTE CONTROL			BRC2A51
REMOTE CONTROL FOR HOTEL USE			BRC3A61

### Centralised control systems

		FXDQ20M8	FXDQ25M8
CENTRALISED REMOTE CONTROL			DCS302C51
UNIFIED ON/OFF CONTROL			DCS301B51
SCHEDULE TIMER			DST301B51

### Others

		FXDQ20M8	FXDQ25M8
WIRING ADAPTER			KRP1B61
WIRING ADAPTER FOR ELECTRICAL APPENDICES (1)			KRP2A51
WIRING ADAPTER FOR ELECTRICAL APPENDICES (2)			KRP4A51
REMOTE SENSOR			KRCS01-1
ELECTRICAL BOX WITH EARTH TERMINAL (3 BLOCKS)			KJB311A
ELECTRICAL BOX WITH EARTH TERMINAL (2 BLOCKS)			KJB212A
NOISE FILTER (FOR ELECTROMAGNETIC INTERFACE USE ONLY)			KEK26-1A
EXTERNAL CONTROL ADAPTER FOR OUTDOOR UNITS (INSTALLATION ON INDOOR UNIT)			DTA104A61

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# 5 Capacity tables

## 5 - 1 Cooling capacity tables

FXDQ-M8		TC: Total capacity;kW – SHC: Sensible capacity;kW														
Unit size	Nominal capacity	Outdoor air temp.	Indoor air temperature													
			14.OWB		16.OWB		18.OWB		19.OWB		20.OWB		22.OWB		24.OWB	
			20.ODB		23.ODB		26.ODB		27.ODB		28.ODB		30.ODB		32.ODB	
		°CDB	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
20	2.2	10.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.6	1.9	2.9	1.9
		12.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.6	1.9	2.9	1.9
		14.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.6	1.9	2.8	1.9
		16.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.6	1.9	2.8	1.8
		18.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.6	1.9	2.7	1.8
		20.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.6	1.9	2.7	1.8
		21.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.6	1.9	2.7	1.8
		23.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.6	1.9	2.6	1.7
		25.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.6	1.8	2.6	1.7
		27.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.5	1.8	2.6	1.7
		29.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.5	1.8	2.5	1.7
		31.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.4	1.8	2.5	1.7
		33.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.9	2.4	1.8	2.5	1.7
		35.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.8	2.4	1.8	2.4	1.7
		37.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.3	1.8	2.3	1.8	2.4	1.7
39.0	1.5	1.4	1.8	1.6	2.1	1.7	2.2	1.8	2.2	1.8	2.3	1.7	2.3	1.6		
25	2.8	10.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.4	2.3	3.7	2.3
		12.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.4	2.3	3.6	2.2
		14.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.4	2.3	3.6	2.2
		16.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.4	2.3	3.5	2.2
		18.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.4	2.3	3.5	2.2
		20.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.4	2.3	3.4	2.1
		21.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.4	2.3	3.4	2.1
		23.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.3	2.2	3.4	2.1
		25.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.3	2.2	3.3	2.1
		27.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.2	2.2	3.3	2.1
		29.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.2	2.2	3.2	2.0
		31.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.1	2.1	3.2	2.0
		33.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.1	2.1	3.1	2.0
		35.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	3.0	2.2	3.0	2.1	3.1	2.0
		37.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	2.9	2.2	3.0	2.1	3.0	2.0
39.0	1.9	1.7	2.3	1.9	2.6	2.0	2.8	2.1	2.9	2.2	2.9	2.1	3.0	2.0		

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# 5 Capacity tables

## 5 - 2 Heating capacity tables

FXDQ-M8		Indoor air temp.: °CDB							
Unit size	Nominal Capacity	Outdoor air temp		16.0	18.0	20.0	21.0	22.0	24.0
		(°CDB)	(°CWB)	KW	KW	KW	KW	KW	KW
20	2.5	-19.8	-20.0	1.5	1.5	1.5	1.5	1.5	1.5
		-18.8	-19.0	1.5	1.5	1.5	1.5	1.5	1.5
		-16.7	-17.0	1.6	1.6	1.6	1.6	1.6	1.6
		-14.7	-15.0	1.7	1.7	1.7	1.7	1.7	1.7
		-12.6	-13.0	1.8	1.8	1.8	1.8	1.8	1.8
		-10.5	-11.0	1.9	1.9	1.9	1.9	1.9	1.9
		-9.5	-10.0	1.9	1.9	1.9	1.9	1.9	1.9
		-8.5	-9.1	2.0	2.0	2.0	2.0	2.0	2.0
		-7.0	-7.6	2.0	2.0	2.0	2.0	2.0	2.0
		-5.0	-5.6	2.1	2.1	2.1	2.1	2.1	2.1
		-3.0	-3.7	2.2	2.2	2.2	2.2	2.2	2.2
		0.0	-0.7	2.3	2.3	2.3	2.3	2.3	2.3
		3.0	2.2	2.5	2.5	2.4	2.4	2.3	2.2
		5.0	4.1	2.5	2.5	2.5	2.4	2.3	2.2
		7.0	6.0	2.6	2.6	2.5	2.4	2.3	2.2
		9.0	7.9	2.7	2.7	2.5	2.4	2.3	2.2
		11.0	9.8	2.8	2.7	2.5	2.4	2.3	2.2
13.0	11.8	2.8	2.7	2.5	2.4	2.3	2.2		
15.0	13.7	2.8	2.7	2.5	2.4	2.3	2.2		
25	3.2	-19.8	-20.0	1.9	1.9	1.9	1.9	1.9	1.9
		-18.8	-19.0	1.9	1.9	1.9	1.9	1.9	1.9
		-16.7	-17.0	2.1	2.1	2.0	2.0	2.0	2.0
		-14.7	-15.0	2.2	2.2	2.2	2.2	2.2	2.1
		-12.6	-13.0	2.3	2.3	2.3	2.3	2.3	2.3
		-10.5	-11.0	2.4	2.4	2.4	2.4	2.4	2.4
		-9.5	-10.0	2.5	2.4	2.4	2.4	2.4	2.4
		-8.5	-9.1	2.5	2.5	2.5	2.5	2.5	2.5
		-7.0	-7.6	2.6	2.6	2.6	2.6	2.6	2.6
		-5.0	-5.6	2.7	2.7	2.7	2.7	2.7	2.7
		-3.0	-3.7	2.8	2.8	2.8	2.8	2.8	2.8
		0.0	-0.7	3.0	3.0	3.0	3.0	3.0	2.8
		3.0	2.2	3.1	3.1	3.1	3.1	3.0	2.8
		5.0	4.1	3.3	3.2	3.2	3.1	3.0	2.8
		7.0	6.0	3.4	3.4	3.2	3.1	3.0	2.8
		9.0	7.9	3.5	3.4	3.2	3.1	3.0	2.8
		11.0	9.8	3.6	3.4	3.2	3.1	3.0	2.8
13.0	11.8	3.6	3.4	3.2	3.1	3.0	2.8		
15.0	13.7	3.6	3.4	3.2	3.1	3.0	2.8		

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# 6 Dimensional drawing

## 6 - 1 Dimensional drawing

**FXDQ-M8**

The drawing includes three views of the FXDQ-M8 indoor unit:

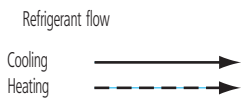
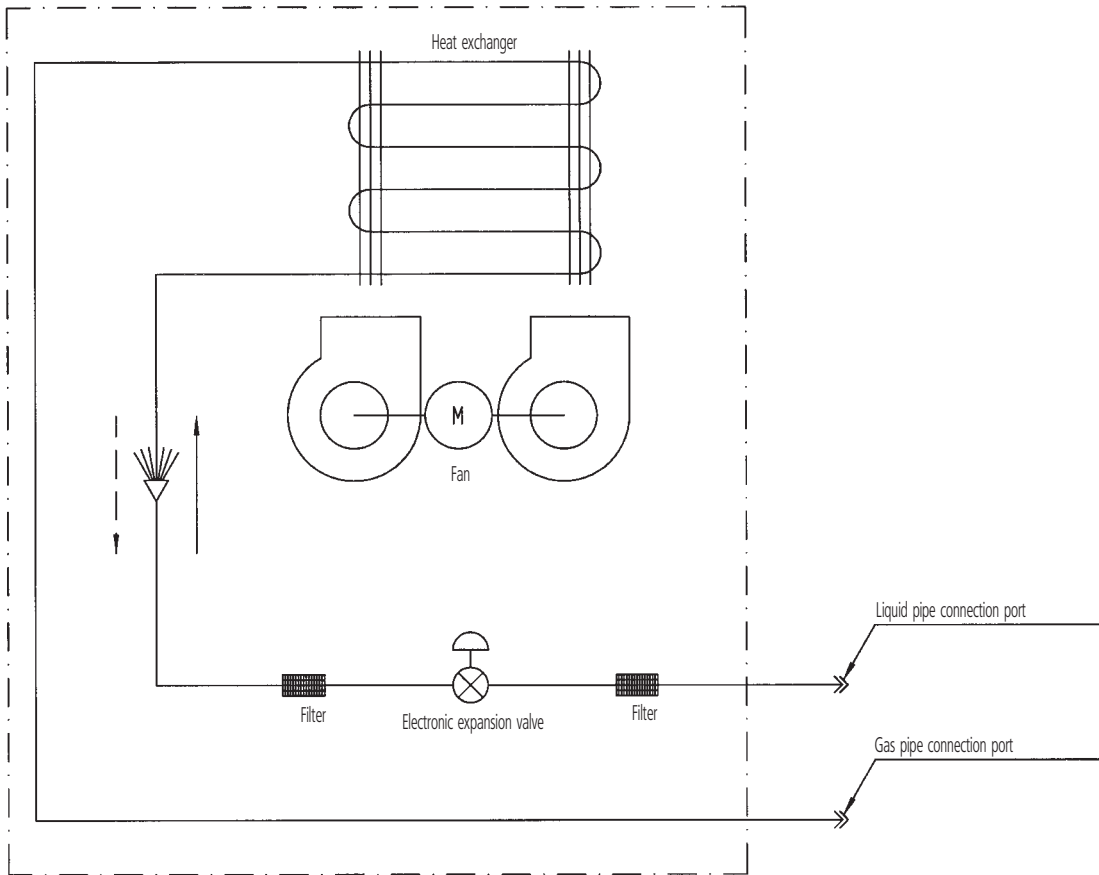
- Top View:** Shows a rectangular unit with a width of 508 mm. Suspension points are located 14 mm from the top and bottom edges. The height is 273 mm. The distance from the left suspension point to the center is 254 mm, and from the center to the right suspension point is 217 mm. The unit is shown with two suspension options: 2 x 150 x 300 mm and 3 x 130 x 390 mm.
- Side View:** Shows the unit's profile with a total height of 100 mm. The distance from the ceiling to the top of the unit is 91 mm, and from the ceiling to the bottom of the unit is 87 mm. The unit is 71 mm wide at the top and 29 mm wide at the bottom. The distance from the left edge to the center is 422 mm, and from the center to the right edge is 32 mm. The unit is 134 mm deep. The distance from the front edge to the center is 480 mm, and from the center to the back edge is 32 mm. The unit is 250 mm or more high from the ceiling. The distance from the front edge to the back edge is 651 mm. The distance from the front edge to the center is 425 mm, and from the center to the back edge is 230 mm. The distance from the front edge to the right edge is 300 mm or more.
- Front View:** Shows the unit's front face with a width of 460 mm and a height of 164 mm. The distance from the left edge to the center is 425 mm. The unit is 156 mm deep. The distance from the left edge to the center is 95 mm, and from the center to the right edge is 88 mm. The unit is 41 mm high from the ceiling. The distance from the front edge to the center is 425 mm, and from the center to the back edge is 230 mm. The distance from the front edge to the right edge is 300 mm or more.

Nr	Part name
1	Liquid pipe connection (ø 6.35)
2	Gas pipe connection (ø 12.7)
3	Drain hole (o.d. ø 27.2 - i.d. ø 21.6)
4	Transmission wiring port
5	Power supply wiring port
6	Service space
7	Switch box
8	Nameplate

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# 7 Piping diagram

FXDQ-M8



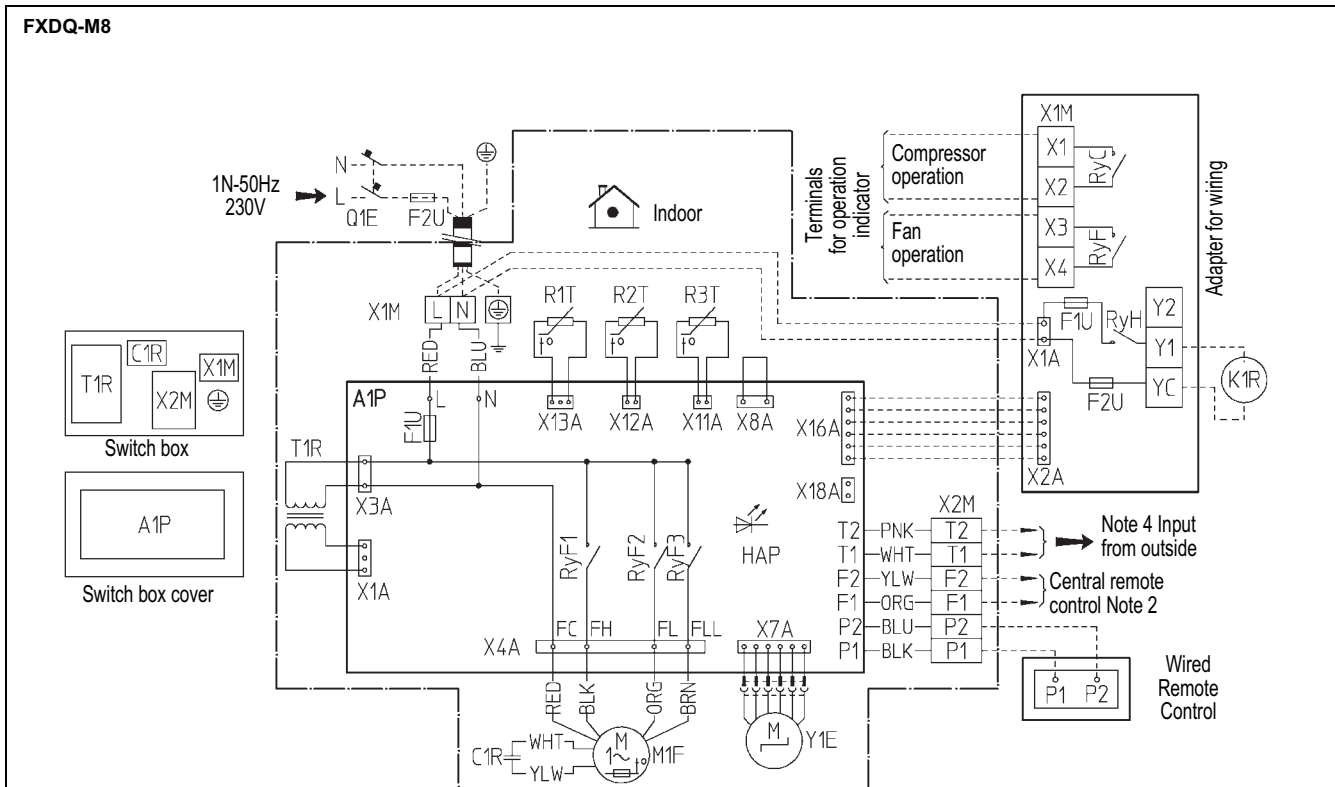
Piping connection diameters

Model	Gas	Liquid
FXDQ20,25M8	ø12.7	ø6.4

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# 8 Wiring diagram

## 8 - 1 Wiring diagram



A1P	Printed circuit board	T1R	Transformer (220-240V/22V)	F1U, F2U	Fuse (250V, 5A)
C1R	Capacitor (Fan)	X1M	Terminal strip (power)	X1A, X2A	Connector (Wiring adapter)
F1U	Fuse (250V, 10A)	X2M	Terminal strip (control)	X1M	Terminal strip
F2U	Field fuse	Y1E	Electronic expansion valve		Connector for optional parts
HAP	Light emitting diode (service monitor-green)	Optional parts		X16A	Connector (Wiring adapter)
M1F	Motor (Fan)	J1EH	Electric heater	X18A	Connector (Wiring adapter for electronal appendices)
Q1E	Earth Leak detector	K1R	Magnetic relay (J1EH)		
R1T	Thermistor (air)	Adapter for wiring			
R2T, R3T	Thermistor (Refrigerant)	RyC, RyF	Magnetic relay		
RyF1-3	Magnetic Relay (Fan)	RyH	Magnetic relay (J1EH)		

- : Field wiring
- : Connector
- Colors: BLK: Black      PNK: Pink
- L : Live
- : Wire Clamp
- BLU: Blue      RED: Red
- N : Neutral
- : Protective earth (screw)
- BRN: Brown      WHT: White
- ORG: Orange      YLW: Yellow

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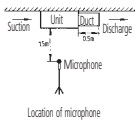
### NOTES

- 1 Use copper conductors only.
- 2 When using the central remote control, see manual for connection to the unit.
- 3 When installing the electric heater, change the wiring for the heater circuit. The main power supply has to be supplied independently.
- 4 When connecting the input wires from outside, "forced off" or "on/off" operation can be selected by the remote control. See installation manual for details.

## 9 Sound data

### 9 - 1 Sound level data

#### FXDQ-M8

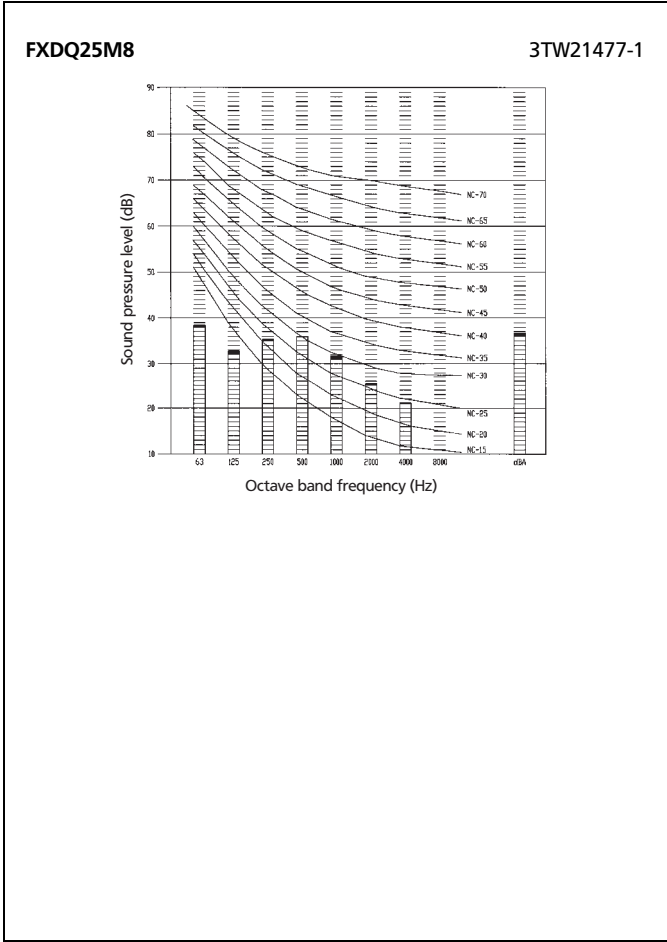
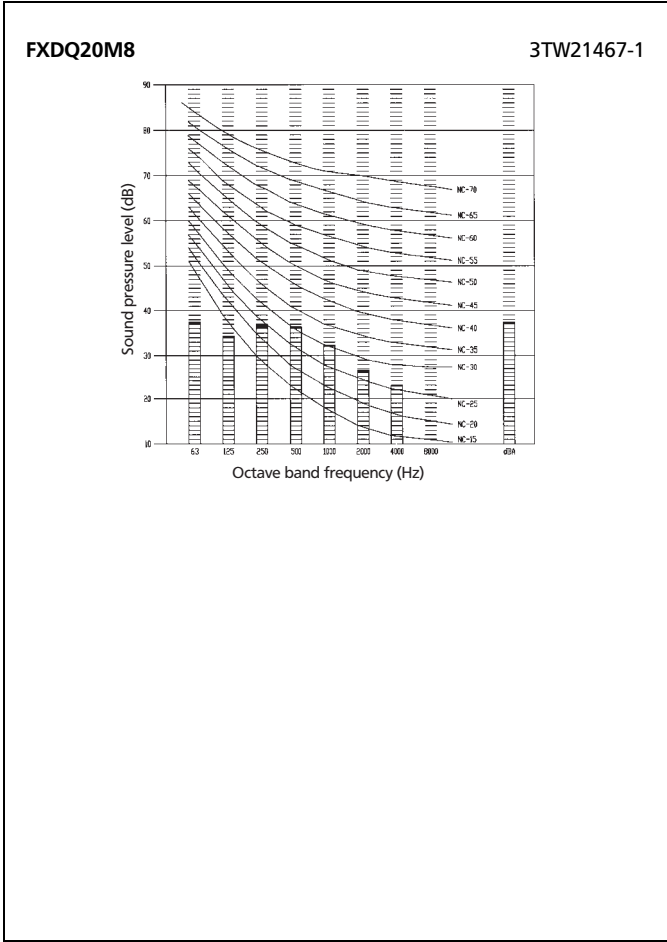
Model	Sound pressure level - 230V		Measuring location	Sound power level
	H	L		
FXDQ20M8	37	32		50
FXDQ25M8	37	32		50

#### NOTES

- 1 dBA = A-weighted sound pressure level (A-scale according to IEC).
- 2 Reference acoustic pressure 0 dB = 20 Pa.
- 3 These operating values were obtained using a power source of 230V/50Hz.
- 4 These operating values were obtained in a dead room (conversion values). Noise values will vary depending on a range of factors such as the construction of the particular room in which the equipment is installed.
- 5 Operating noise differs with operation and ambient conditions.

# 9 Sound data

## 9 - 2 Sound pressure spectrum





# 2

**VRV III-S**  
**VRV III**  
**VRV-WII**



Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.



Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.

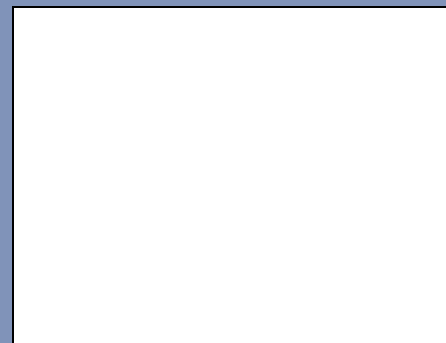


ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.



Daikin units comply with the European regulations that guarantee the safety of the product.

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