



# technical data

**VRV<sup>®</sup> II** Systems

FXDQ-M7V1B

Concealed ceiling unit (small)

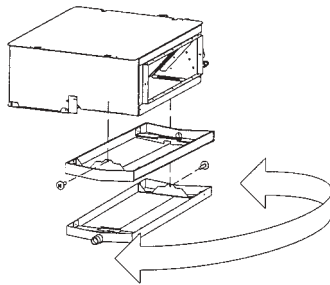
# FXDQ-M7V1B Concealed ceiling unit (small)



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# 1 Features

- Designed for hotel use: very compact dimensions (230mm high x 652mm wide)
- Can easily be mounted in a ceiling void.
- Since only the suction and discharge grilles are visible, the system will blend in any interior décor.
- The air suction direction can be altered from rear to bottom suction.
- Standard suction air filter.
- Low sound pressure level - 32dBA
- For easy mounting, the drain pan can be located to the left or right of the unit.



## 2 Specifications

### 2-1 Technical specifications

FXDQ-M7V1B				20	25
COOLING CAPACITY (1)		kW		2.2	2.8
HEATING CAPACITY (2)		kW		2.5	3.2
NOMINAL INPUT	Cooling	W		50	
	Heating	W		50	
DIMENSIONS		HxWxD	mm	230x652x502	
WEIGHT			kg	17	
CASING				galvanised steel, non painted	
SOUND LEVEL	Sound pressure	high	dB(A)	37	
		low	dB(A)	32	
	Sound power		dB(A)	50	
FAN	Air flow rate	high	m <sup>3</sup> /h	402	444
		low	m <sup>3</sup> /h	312	348
	Type			sirocco fan	
	Motor output	high	W	10	
	Drive			direct drive	
HEAT EXCHANGER	Rows x stages x fin pitch		mm	2x12x1.40	
	Face area		m <sup>2</sup>	0.108	
AIR FILTER				resin net with mold resistant	
REFRIGERANT CONTROL				electronic expansion valve	
TEMPERATURE CONTROL				microprocessor thermostat for cooling and heating	
PIPING CONNECTIONS	Liquid	flare	mm	ø 6.4	
	Gas	flare	mm	ø 12.7	
	Drain		mm	VP25, external diameter 27.2, internal diameter 21.6	

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#### 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.

### 2-2 Electrical specifications

FXDQ-M7V1B				20	25
CURRENT	Minimum circuit amps (MCA)	A		0.2	
	Maximum fuse amps (MFA) (5)	A		16	
POWER SUPPLY		V1		1 ~, 50Hz, 230V	
VOLTAGE RANGE	Min ~ max	V		207 ~ 253	
INDOOR FAN MOTOR	Fan motor rated output	W		10	
	Full load amps (FLA)	A		0.1	

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#### 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 <http://www.daikineurope.com/extranet>, select "Daikin Documentation" and select "conditional connection", "the requested product type" and "English" from the drop down lists, click the search button.  
Finally, click on the document title of your choice.

## 2-3 Safety device settings

FXDQ-M7V1B		20	25
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 Accessories

FXDQ-M7V1B		20	25
WIRING ADAPTER (HOUR METER) (1)		EKRP1B2	

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### NOTE

- 1 Fixing box = KRP1A90

## 4 Control systems

### 4-1 Individual control systems

WIRED REMOTE CONTROL		BRC1D517
INFRARED REMOTE CONTROL	Heat pump	BRC4C62
	Cooling only	BRC4C64
SIMPLIFIED REMOTE CONTROL		BRC2A51
REMOTE CONTROL FOR HOTEL USE		BRC3A61

### 4-2 Centralised control systems

3

CENTRALISED REMOTE CONTROL	DCS302B51
UNIFIED ON/OFF CONTROL	DCS301B51
SCHEDULE TIMER	DST301B51

### 4-3 Others

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)	KEK26-1
EXTERNAL CONTROL ADAPTER FOR OUTDOOR UNITS (INSTALLATION ON INDOOR UNIT)	DTA104A61

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# 5 Capacity tables

## 5-1 Cooling capacity

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

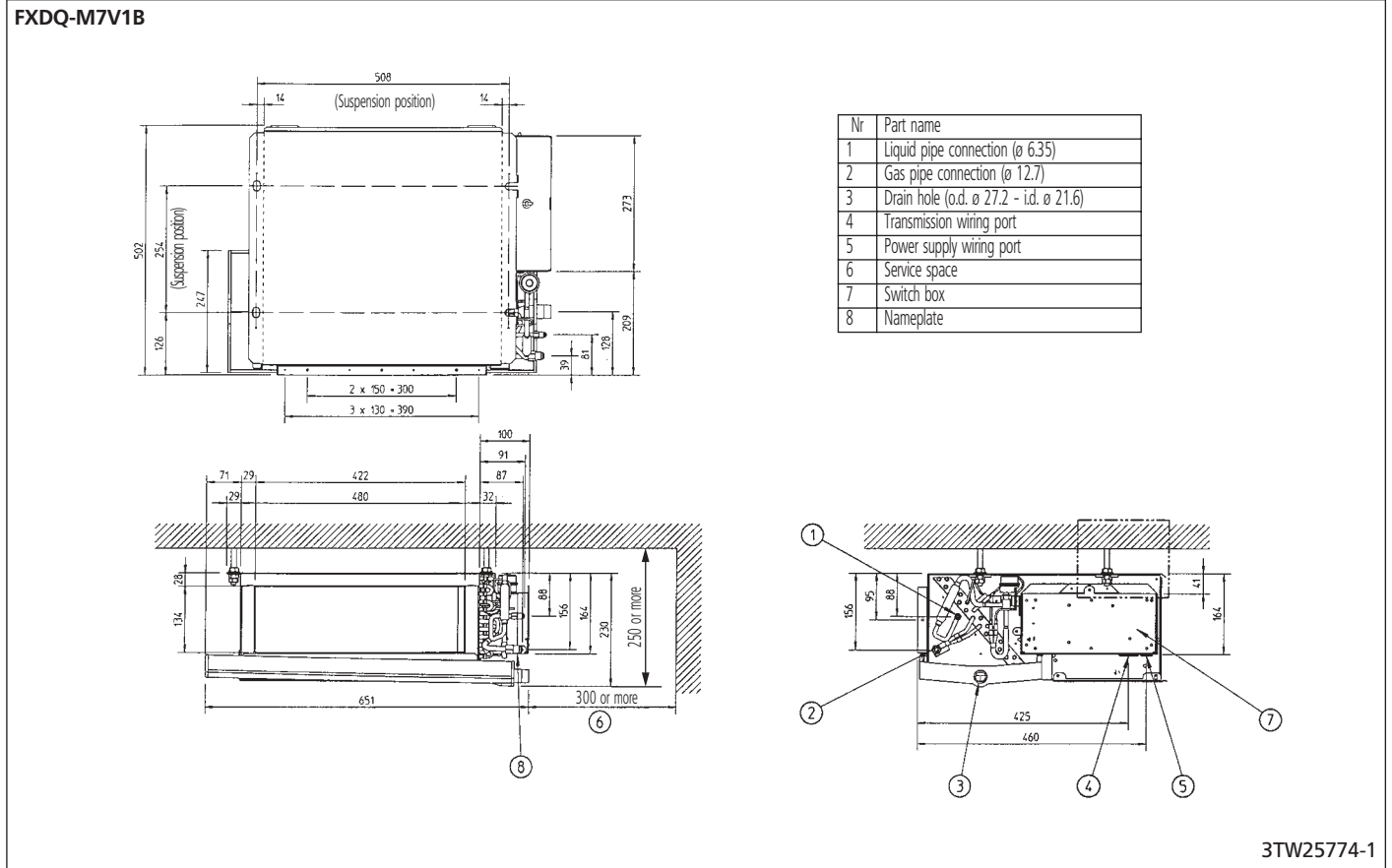
### 5-2 Heating capacity

Unit Size	Nominal capacity	Outdoor air temperature		Indoor air temperature °CDB					
				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	1.9	1.9	1.9	1.9
		-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	2.2
		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 Dimensions

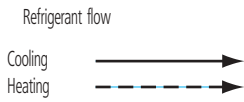
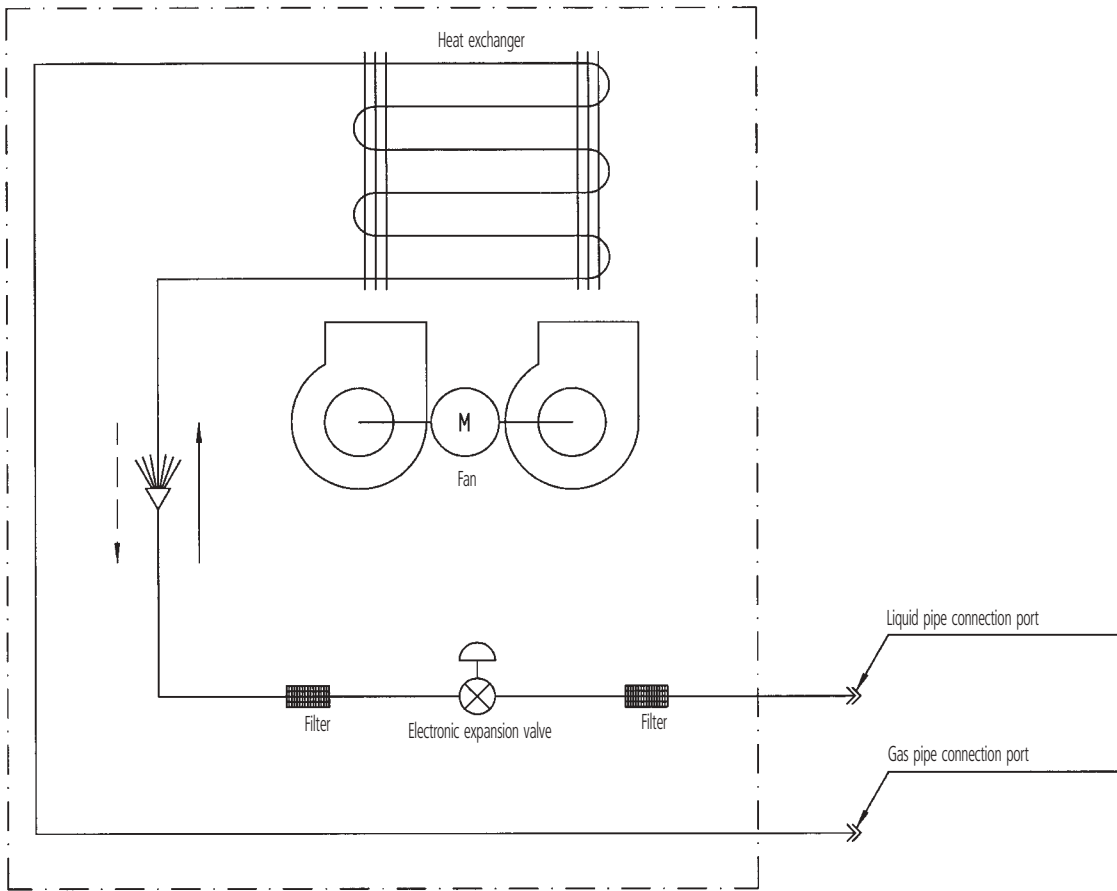
### 6-1 Dimensional drawings





# 7 Piping Diagram

FXDQ-M7V1B



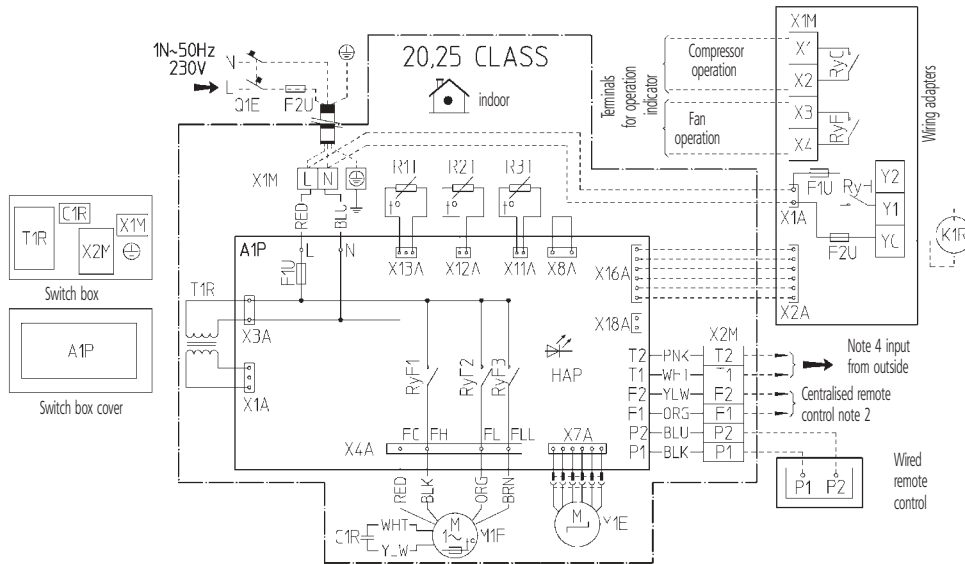
Piping connection diameters

Model	Gas	Liquid
FXDQ20,25M7V1B	ø12.7	ø6.4

- Check valve
- Flare connection
- Screw connection
- Flange connection
- Pinched pipe
- Spinned pipe

# 8 Wiring Diagrams

FXDQ-M7V1B



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

= ■ ■ ■ = : Field wiring  
 L : Live  
 N : Neutral  
□ □ : Connector  
 • —▶ : Wire clamp  
⊕ : Protective earth (screw)

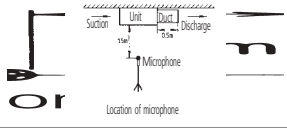
COLORS : BLK : Black      PNK : Pink  
           BLU : Blue        RED : Red  
           BRN : Brown      WHT : White  
           ORG : Orange     YLW : Yellow

## NOTES

- 1 Use copper conductors only.
- 2 When using a centralised 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 the outdoor unit 'forced off' or 'on/off' operation can be selected by the remote control. For more details see installation manual.

# 9 Sound level

## 9-1 Sound level data

Model	Sound pressure level - 230V		Measuring location 	Sound power level
	H	L		
FXDQ20M7V1B	37	32		50
FXDQ25M7V1B	37	32		50

### NOTES

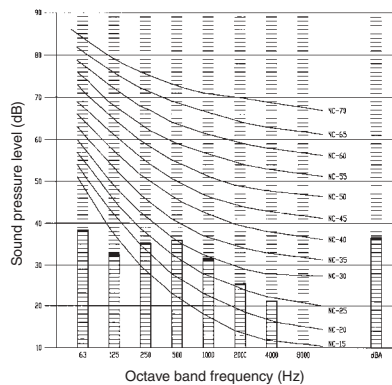
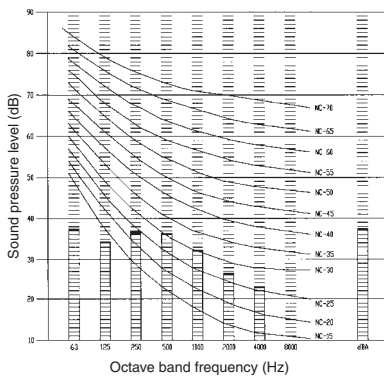
- 1 dBA = A-weighted sound pressure level (A-scale according to IEC).
- 2 Reference acoustic pressure 0 dB = 20 Pa.
- 3 These operating values were obtained using a power source of 230V/50Hz.
- 4 These operating values were obtained in a dead room (conversion values). Noise values will vary depending 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.

## 9-2 Sound pressure spectrums

FXDQ20M7V1B

3TW21467-1 FXDQ25M7V1B

3TW21477-1



# 2

## VRV II Systems



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.



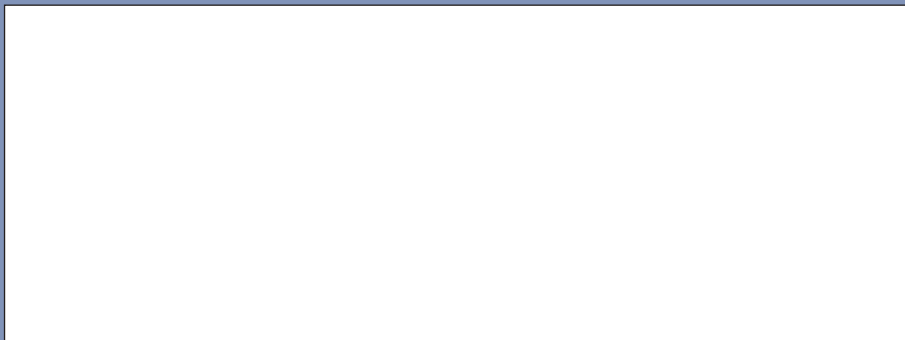
Daikin units comply with the European regulations that guarantee the safety of the product.



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.

VRV products are not within the scope of the Eurovent certification programme.

Specifications are subject to change without prior notice



### **DAIKIN EUROPE N.V.**

Zandvoordestraat 300  
B-8400 Ostend - Belgium  
Internet: <http://www.daikineurope.com>