

1 Specifications

1-1 TECHNICAL SPECIFICATIONS				FXDQ20M9V3B		FXDQ25M9V3B		
Capacity	Cooling	kW		2.2		2.8		
	Heating	kW		2.5		3.2		
Power Input (50Hz)	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				
Heat Exchanger	Dimensions	Length	mm	430		430		
		Nr of Rows		2		2		
		Fin Pitch	mm	1.4		1.4		
		Nr of Passes		2		2		
		Face Area	m ²	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			
Cooling	High	m ³ /min		6.7		7.4		
	Low	m ³ /min		5.2		5.8		
Heating	High	m ³ /min		6.7		7.4		
	Low	m ³ /min		5.2		5.8		
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		50		
		Sound Pressure	High	dBA	37		37	
Heating	Low		dBA	32		32		
	Sound Pressure	High	dBA	37		37		
Low		dBA	32		32			
Piping connections	Liquid (OD)	Type		Flare connection				
		Diameter	mm	6.35		6.35		
	Gas	Type		Flare connection				
		Diameter	mm	12.7		12.7		
	Drain	Diameter		I.D. 21.6, O.D. 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	FXDQ20M9V3B	FXDQ25M9V3B
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 (50HZ)			FXDQ20M9V3B	FXDQ25M9V3B
Power Supply	Name		V1	
	Phase		1~	
	Frequency	Hz	50	50
	Voltage	V	230	230
Current	Minimum circuit amps (MCA)	A	0.2	0.2
	Maximum fuse amps (MFA)	A	16	16
	Full load amps (FLA)	A	0.1	0.1
Voltage range	Minimum	V	-10%	
	Maximum	V	+10%	
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			

2 Safety device settings

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		FXDQ20M9	FXDQ25M9
FAN MOTOR THERMAL PROTECTOR	°C	OFF:135 ^{±8} , (ON:87 ^{±15})	
PC BOARD FUSE		250V 10A	

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3 Options

	FXDQ20M9	FXDQ25M9
WIRING ADAPTER (HOUR METER) (1)	EKRP1B2	
3TW25779-1D		
<p>NOTE</p> <p>1 Fixing box = KRP1A90</p>		

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4 Control systems

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Individual control systems

		FXDQ20M9	FXDQ25M9
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

		FXDQ20M9	FXDQ25M9
CENTRALISED REMOTE CONTROL			DCS302C51
UNIFIED ON/OFF CONTROL			DCS301B51
SCHEDULE TIMER			DST301B51

Others

		FXDQ20M9	FXDQ25M9
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-M9		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

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FXDQ-M9

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		

3TW25512-2A

6 Dimensional drawing & centre of gravity

6 - 1 Dimensional drawing

FXDQ-M9

The drawing includes three views of the FXDQ-M9 indoor unit:

- Top View:** Shows a rectangular unit with a width of 508 mm (suspension position) and a height of 273 mm. It features two suspension points, each 14 mm from the side edge. The bottom edge has two rows of mounting holes: 2 x 150 + 300 mm and 3 x 130 + 390 mm. Other dimensions include 502 mm total height, 254 mm height to the top of the unit, 126 mm height to the bottom of the unit, 247 mm height to the bottom of the suspension points, 39 mm, 81 mm, and 128 mm dimensions for the bottom right corner.
- Side View:** Shows the unit's profile with a depth of 100 mm. The top edge has a 91 mm height to the top of the unit and an 87 mm height to the top of the suspension points. The bottom edge has a 32 mm height to the bottom of the unit and a 230 mm height to the bottom of the suspension points. The total depth is 651 mm. The unit is shown mounted to a ceiling with a 71 mm gap to the left and a 29 mm gap to the right. The bottom edge has a 134 mm height to the bottom of the unit and a 250 mm or more height to the bottom of the suspension points. The bottom edge is 300 mm or more wide.
- Front View:** Shows the unit's front face with a width of 460 mm and a height of 166 mm. It features a liquid pipe connection (1), a gas pipe connection (2), a drain hole (3), a transmission wiring port (4), a power supply wiring port (5), a service space (6), a switch box (7), and a nameplate (8). The distance between the liquid and gas pipe connections is 95 mm. The distance between the gas pipe connection and the drain hole is 88 mm. The distance between the drain hole and the transmission wiring port is 425 mm. The distance between the transmission wiring port and the power supply wiring port is 460 mm. The distance between the power supply wiring port and the service space is 41 mm.

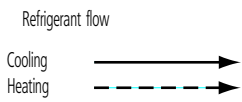
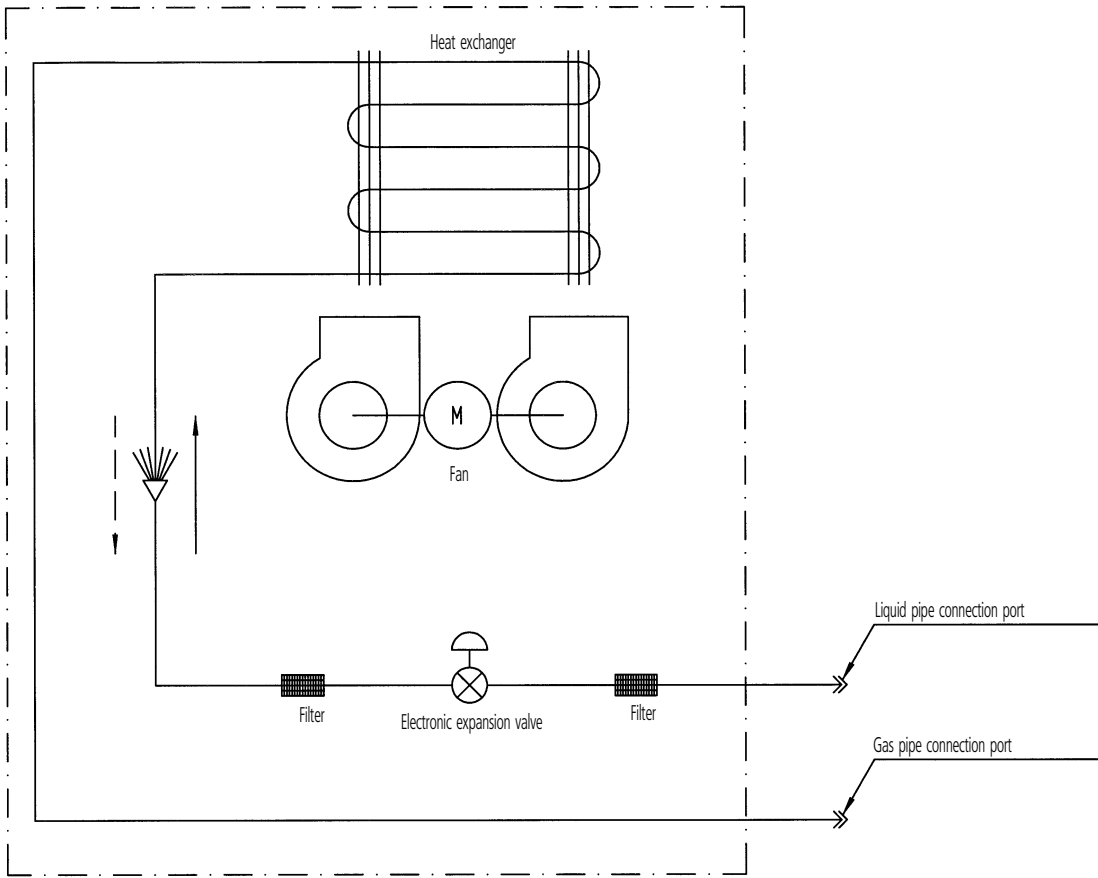
Nr	Part name
1	Liquid pipe connection (ø 6.35)
2	Gas pipe connection (ø 12.7)
3	Drain hole (o.d. ø 27.2 - i.d. ø 21.6)
4	Transmission wiring port
5	Power supply wiring port
6	Service space
7	Switch box
8	Nameplate

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7 Piping diagram

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FXDQ-M9



Piping connection diameters

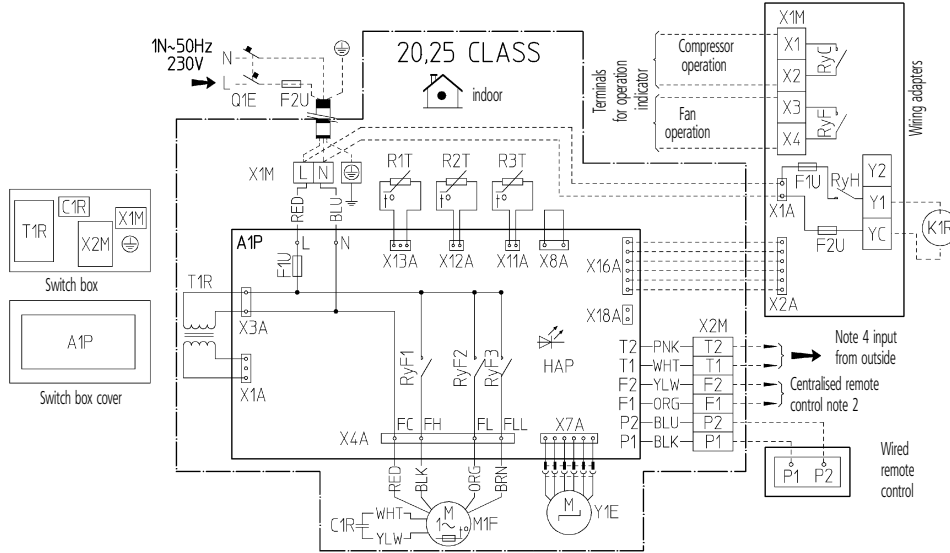
Model	Gas	Liquid
FXDQ20,25M9	ø12.7	ø6.4

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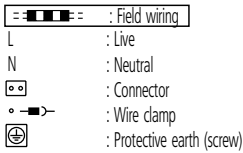
8 Wiring diagram

8 - 1 Wiring diagram

FXDQ-M9



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			



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

NOTES

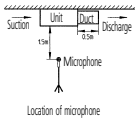
- 1 Use copper conductors only.
- 2 When using a centralised remote control, see manual for connection to the unit.
- 3 When installing the electric heater change the wiring for the heater circuit. The main power supply has to be supplied independently.
- 4 When connecting the input wires from the outdoor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

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9 Sound data

9 - 1 Sound level data

FXDQ-M9

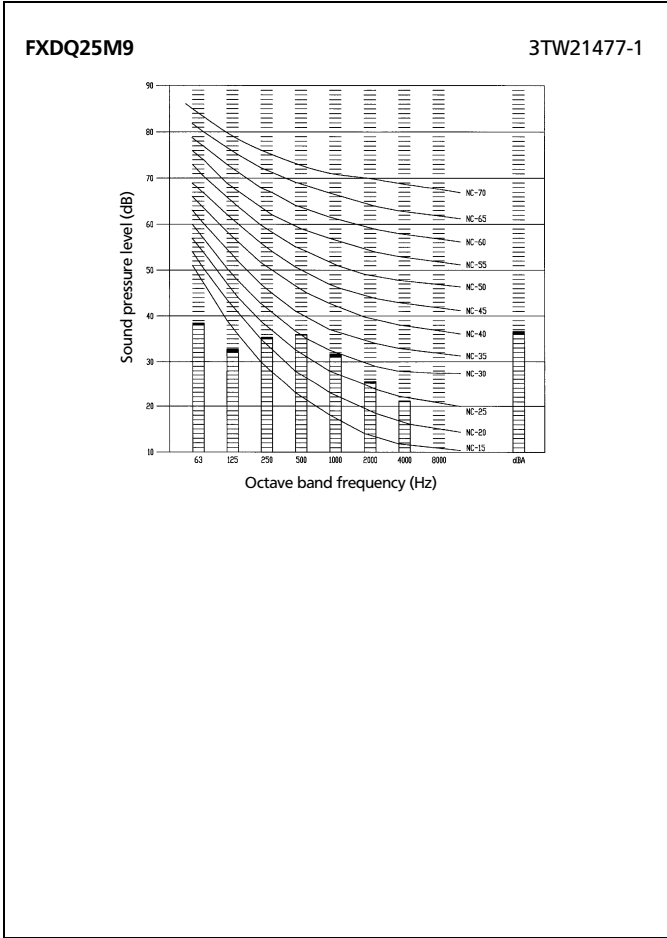
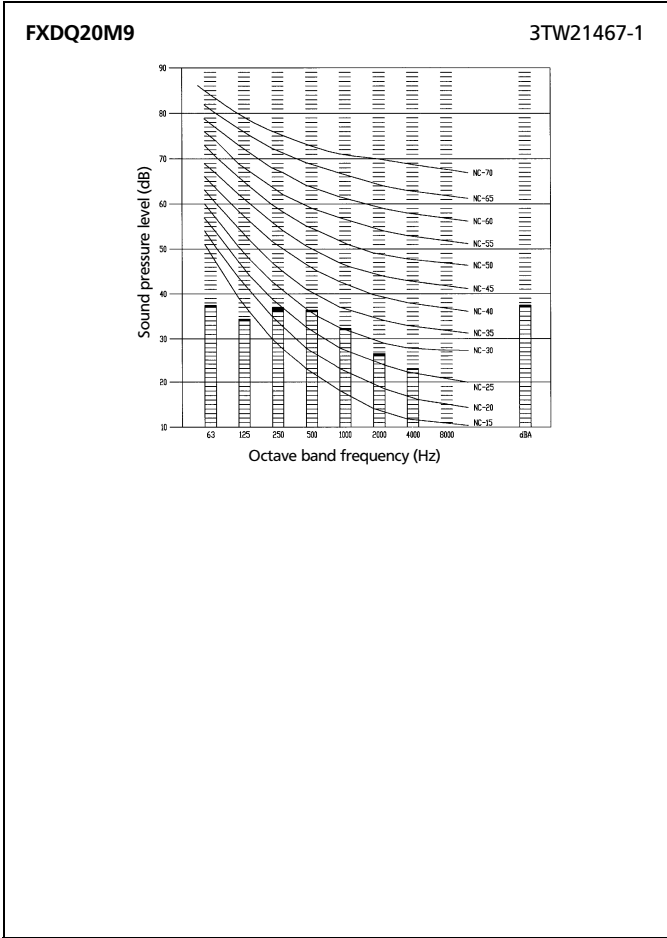
Model	Sound pressure level - 230V			Sound power level
	H	L	Measuring location	
FXDQ20M9	37	32		50
FXDQ25M9	37	32		50

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



9 Sound data

9 - 2 Sound pressure spectrum

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