



Air Conditioning Technical Data

Concealed ceiling unit with high ESP



EEDEN15-100

FDQ-C

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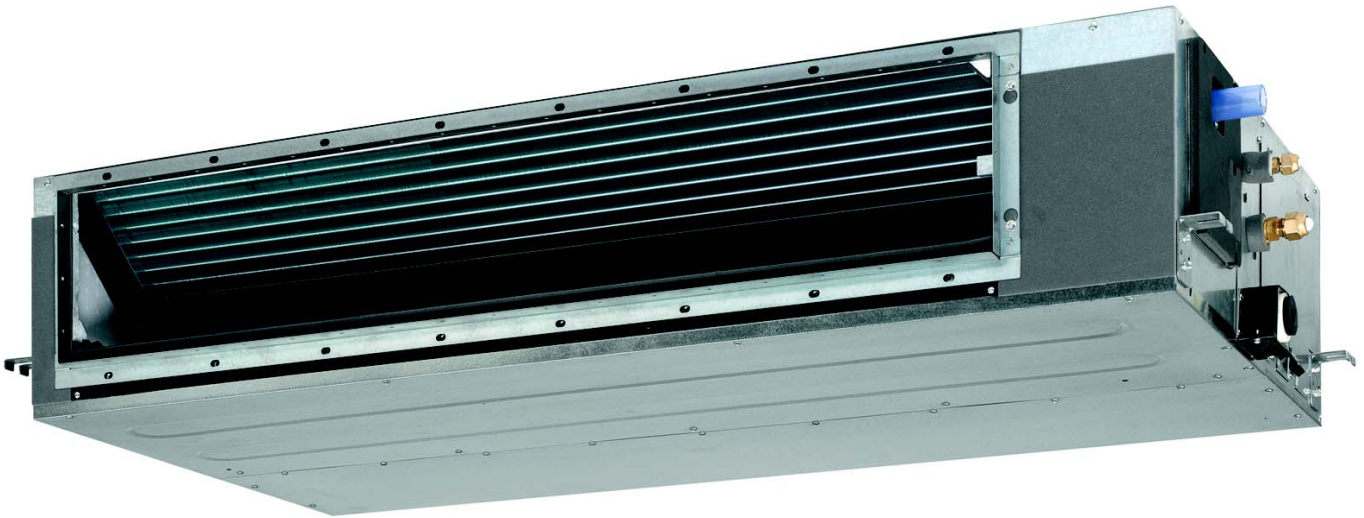
FDQ-C

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1 Features

ESP up to 200, ideal for large sized spaces

- Automatic air flow adjustment function measures the air volume and static pressure and adjusts it towards the nominal air flow, whatever the length of duct, making installation easier and guaranteeing comfort. Moreover, the ESP can be changed via the wired remote control to optimize the supply air volume
- High external static pressure up to 200Pa facilitates using flexible ducts of varying lengths
- Discretely concealed in the ceiling: only the suction and discharge grilles are visible
- Reduced energy consumption thanks to specially developed DC fan motor
- Possibility to change ESP via wired remote control allows optimisation of the supply air volume
- Flexible installation, as the air suction direction can be altered from rear to bottom suction
- Standard built-in drain pump increases flexibility and installation speed
- No optional adapter needed for DIII-connection, link your unit into the wider building management system.



Home leave operation



Fan only



Auto cooling-heating changeover



Fan speed steps



Dry programme



Air filter



Weekly timer



Wired remote control



Centralised control



Auto-restart



Self diagnosis



Drain pump kit



Twin/triple/double twin application

2 Specifications

2-1 Technical Specifications				FDQ125C	
Cooling capacity	Nom.		kW	12.5 (1)	
Heating capacity	Nom.		kW	14.0 (2)	
Power input	Cooling	Nom.	kW	0.35	
	Heating	Nom.	kW	0.35	
Casing	Colour			Not painted (galvanised)	
Dimensions	Unit	Height/Width/Depth	mm	300/1,400/700	
	Packed unit	Height/Width/Depth	mm	355/1,620/900	
Required ceiling void >			mm	350	
Weight	Unit		kg	45	
	Packed unit		kg	53	
Decoration panel	Model			BYBS125DJW1	
	Colour			White (10Y9/0.5)	
	Dimensions	Height/Width/Depth	mm	55/1,500/500	
	Weight			kg	6.5
Heat exchanger	Length		mm	1,140	
	Rows	Quantity		3	
	Fin pitch		mm	1.75	
	Passes	Quantity		11	
	Face area		m ²	0.383	
	Stages	Quantity		16	
	Empty tubeplate hole	Quantity		0	
	Tube type			ø7 Hi-XSS	
	Fin	Type		Symmetric waffle louver	
		Treatment		Hydrophilic	
Air filter	Type			Resin net with mold resistance	
Fan	Type			Sirocco fan	
	Quantity			3	
	Air flow rate	Cooling	High	m ³ /min	39
			Low	m ³ /min	28
		Heating	High	m ³ /min	39
			Low	m ³ /min	28
	External static pressure	High	Pa	200	
		Nom.	Pa	50	
Fan motor	Quantity			1	
	Model			Brushless DC motor	
	Drive			Direct drive	
	Speed	Steps		9	
		Cooling	High/Low	rpm	1,218/920
			Heating	High/Low	rpm
	Output	High	W	350	
Sound power level	Cooling		dBA	66	
	Heating		dBA	-	
Sound pressure level	Cooling	High/Low	dBA	40/33	
	Heating	High/Low	dBA	40/33	
Control systems	Infrared remote control			BRC4C65	
	Wired remote control			BRC1D52 / BRC1E52A/B	
Refrigerant	Type			R-410A	
Piping connections	Liquid	Type/OD	mm	Flare connection/9.52	
	Gas	Type/OD	mm	Flare connection/15.9	
	Drain			VP25 (I.D. 25/O.D. 32)	
	Heat insulation			Both liquid and gas pipes	
Drain-up height			mm	625	
Safety devices	Item	01/02/03	PC board fuse/PC board fuse (fan driver)/Drain pump fuse		

2 Specifications

2-2 Electrical Specifications		FDQ125C
Power supply	Name	VE
	Phase	1~
	Frequency	Hz
	Voltage	V
		50/60
		220-240/220

2

Notes

(1) Cooling: indoor temp. 27°CDB, 19.0°CWB; outdoor temp. 35°CDB; equivalent piping length: 7.5m; level difference: 0m

(2) Heating: indoor temp. 20°CDB; outdoor temp. 7°CDB, 6°CWB; equivalent refrigerant piping: 7.5m; level difference: 0m

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

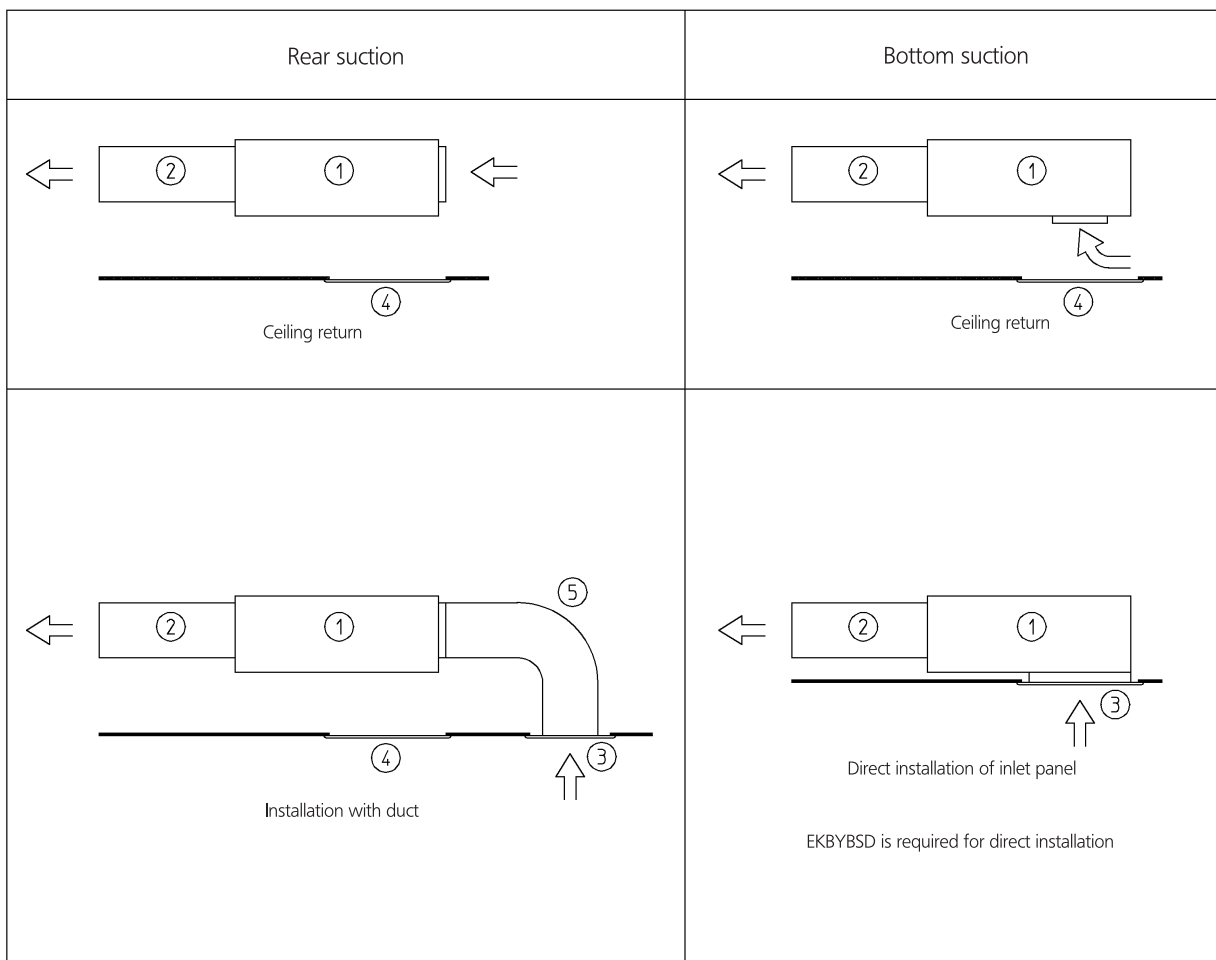
The sound pressure values are mentioned for a unit installed with rear suction.

PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC

3 General Characteristics

3 - 1 General characteristics

FDQ125C



Wide variety of installation methods

Number	Description	
1	Main body	
2	Air outlet duct	Field supply
3	Inlet panel	Optional accessory
4	Access panel	Optional accessory
5	Air inlet duct	Field supply

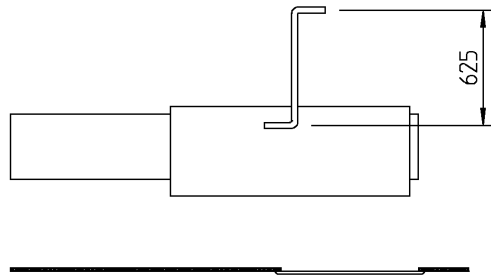
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3 General Characteristics

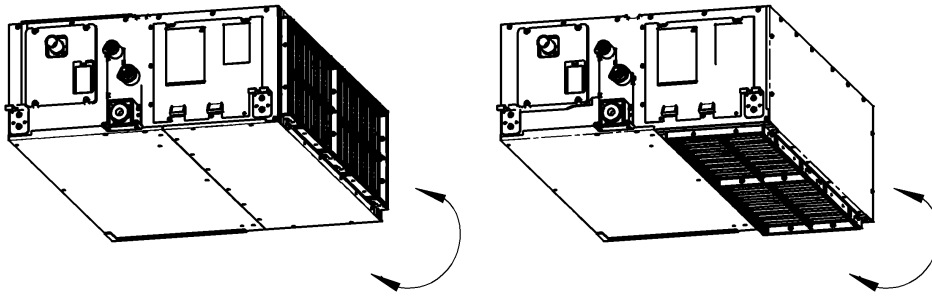
3 - 1 General characteristics

3

FDQ125C



Drain pump up height



Easy modification from rear to bottom suction

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4 Safety device settings

4 - 1 Safety Device Settings

FDQ125C

Safety devices		FDQ125C	
FDQ-C	PC board fuse		250V 3.15A
	PC board fuse (Fan driver)		250V 6.3A
	Fan motor thermal protector	°C	---
	Drain pump fuse	°C	145

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5 Options

5 - 1 Options

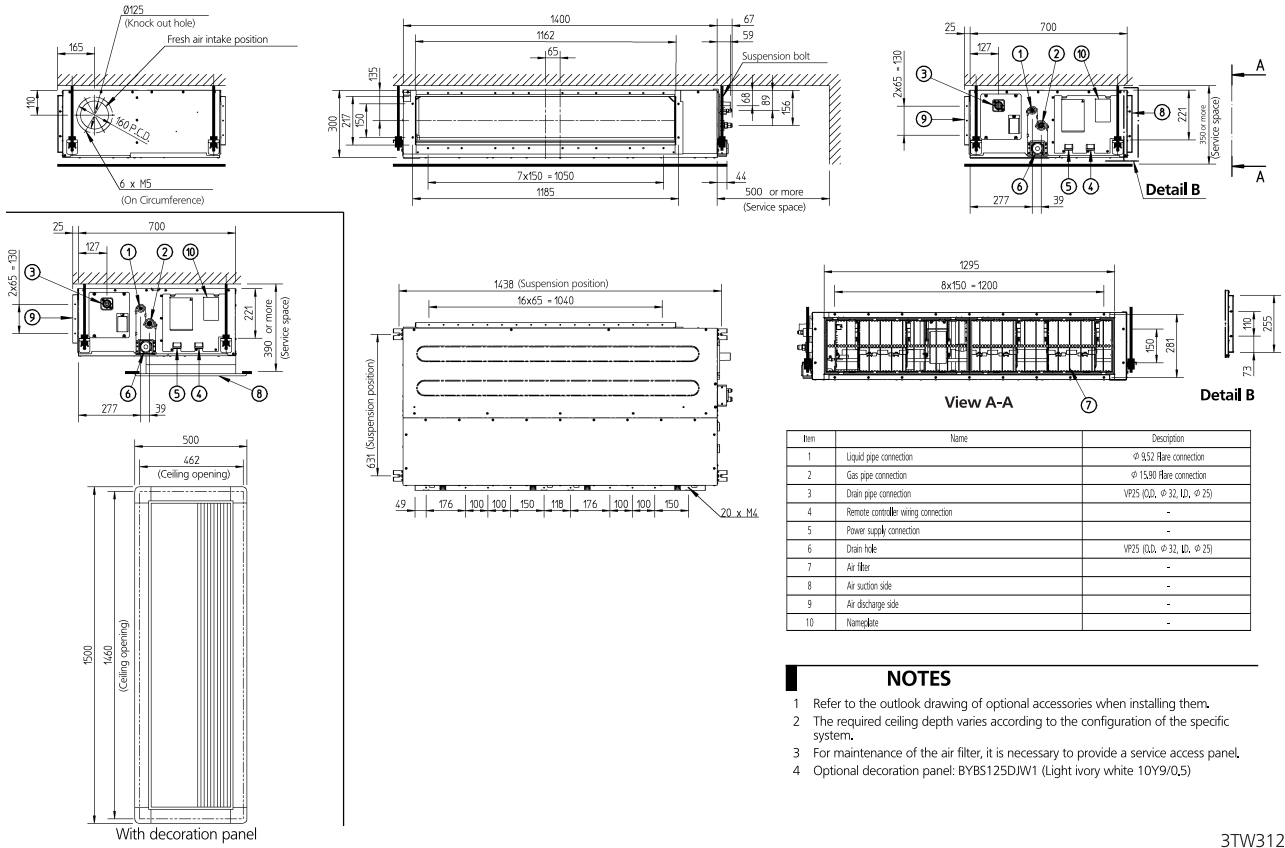
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FDQ125C			
Options			
No.	Item	Type	FDQ125
1	Decoration panel		BYBS125D (*4)
	Air discharge adapter for round ducts		KDAJ25K140A
	Decoration panel option		EKBYBSD
Operation control			
No.	Item	Type	FDQ125
1	Remote control	Wired	BRC1D528 • BRC1E52A7 (*5) • BRC1E52B7 (*6)
		Infrared	H/P C/O
			BRC4C65
			BRC4C66
2	Simplified remote control (with operation mode selector button)		BRC2E52C7 (*8)
3	Simplified remote control (without operation mode selector button)		BRC3E52C7 (*8)
4	Optional PCB for external electric heaters, humidifiers and/or hour meters		EKRP1B2A (*1) (*2) (*3)
5	Adapter for wiring (interlock for fresh air intake fan)		KRP1C64 (*3)
6	Wiring adapter for electrical appendices		KRP2A51 (*3)
7	Remote sensor		KRCS01-4B
8	Central remote control		DCS302CA51
9	Unified ON/OFF controller		DCS301BA51
10	Schedule timer		DST301BA51
11	Remote "ON/OFF" and "forced OFF" kit		EKROR03
12	Mounting plate for adapter PCB		KRP4A96
13	Digital input adapter		BRP7A54 (*3) (*7)
Contents of the accessory bag			
Description	Quantity		
	FDQ125		
Hexagon tapping screw (M5x16)	16		
Round plain washer for wood	8		
Installation and operation manual	1		
Hose band clamp	1		
Joint insulation (gas)	1		
Joint insulation (liquid)	1		
Drain hose	1		
Drain hose sealing material	1		
Sealing material	2		
NOTES			
<ol style="list-style-type: none"> Electric heaters and humidifiers are field-supplied. Do not install them inside the equipment (refer to installation manual EKRP1B2A). When installing electric heaters, an optional PCB for external electric heaters (EKRP1B2A) is required for each indoor unit. These options require mounting plate KRP4A96. Maximally 2 optional PCBs can be mounted. For directly mounting the decoration panel on the unit, decoration panel option EKBYBSD is required. Included languages are: English, German, French, Dutch, Spanish, Italian, Greek, Portuguese, Russian, Turkish and Polish. Included languages are: English, German, Albanian, Bulgarian, Croatian, Czech, Hungarian, Romanian, Serbian, Slovak and Slovenian. Only possible in combination with simplified remote control BRC2/3E52C7. Included languages are: Language pack 1: English, German, French, Dutch, Spanish, Italian and Portuguese. With PC cable EKPCAB3 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. 			
3TW33989-2C			

6 Dimensional drawings

6 - 1 Dimensional Drawings

FDQ125C



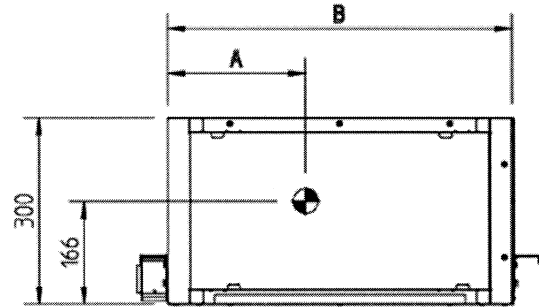
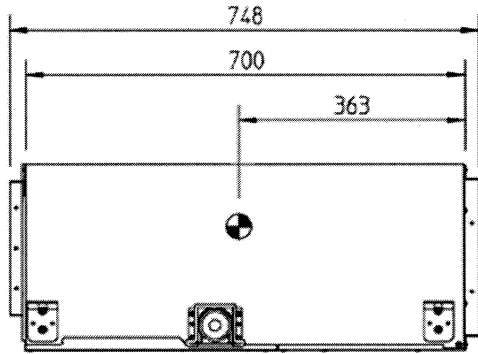
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7 Centre of gravity

7 - 1 Centre of Gravity

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FDQ125C

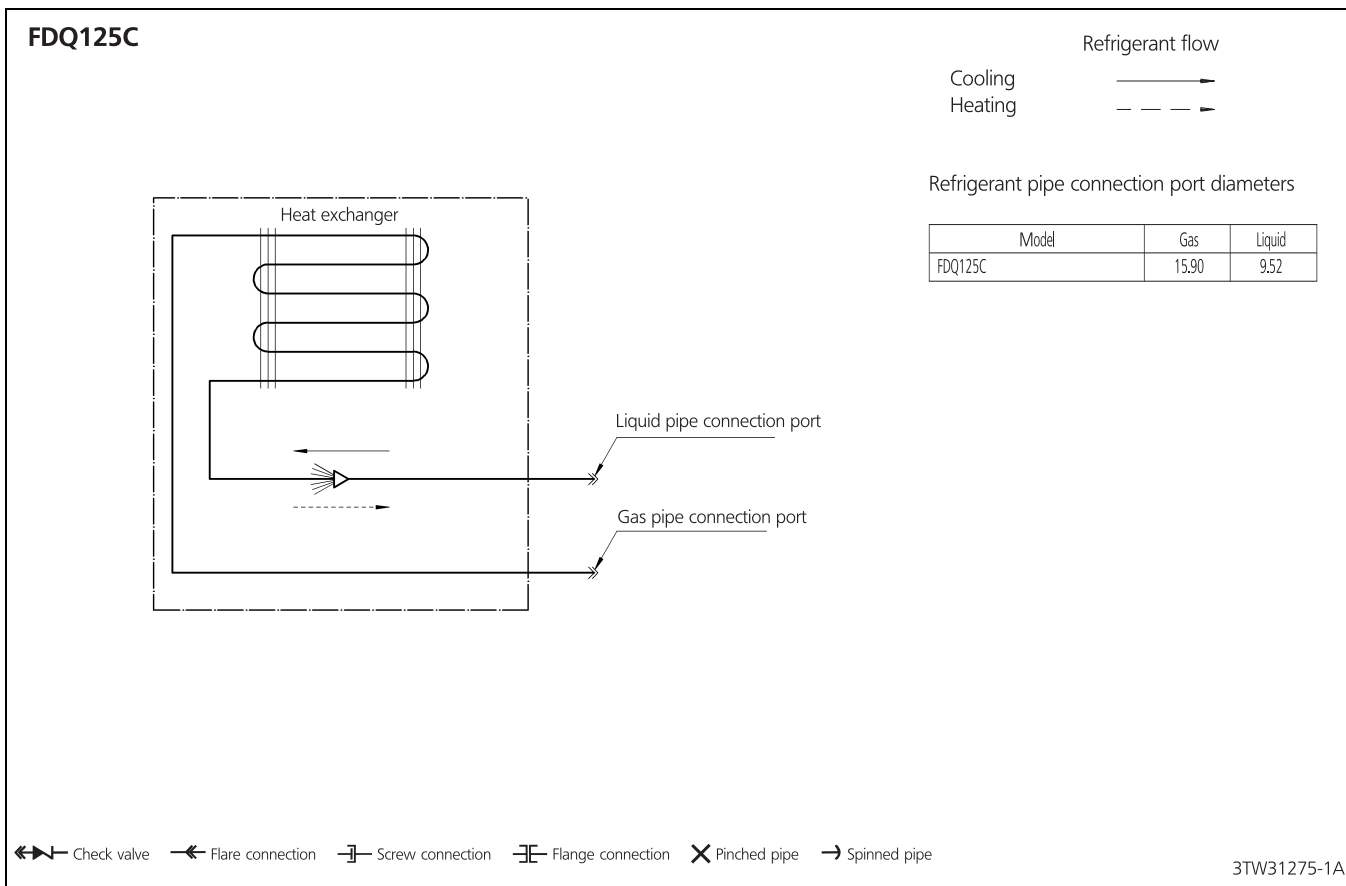


Model	A	B
FDQ125	619	1400

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8 Piping diagrams

8 - 1 Piping Diagrams



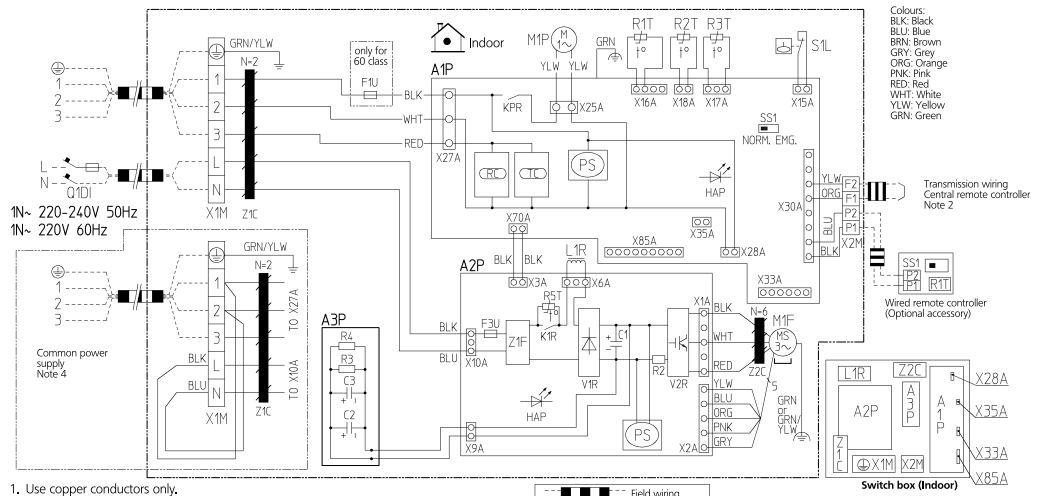
9 Wiring diagrams

9 - 1 Wiring Diagrams - Single Phase

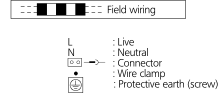
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FDQ125C

- Indoor unit**
- A1P : Printed circuit board
 - A2P : Printed circuit board (Fan)
 - A3P : Printed circuit board (Capacitor)
 - C1,C2,C3 : Capacitor
 - F1U : Fuse (T, 5A, 250V)
 - F3U : Fuse (T, 6.3A, 250V)
 - HAP : Light emitting diode (Service monitor-green)
 - KPR,K1R : Magnetic relay
 - L1R : Reactor
 - M1F : Motor (Fan)
 - M1P : Motor (Drain pump)
 - PS : Switching power supply
 - Q1DI : Earth leak detector
 - R2 : Current sensing device
 - R3,R4 : Resistor (Electric discharge)
 - R1T : Thermistor (Suction air)
 - R2T : Thermistor (Liquid)
 - R3T : Thermistor (Coil)
 - R5T : Thermistor NTC (current limiting)
 - SS1 : Selector switch (emergency)
 - S1L : Float switch
 - V1R : Diode bridge
 - V2R : Power module
 - X1M : Terminal strip (Power supply)
 - X2M : Terminal strip (Control)
 - Z1C,Z2C : Noise filter (feritic core)
 - Z1F : Noise filter
 - CRC : Signal receiver circuit
 - C1C : Signal transmission circuit
- Connector optional accessory**
- X28A : Connector (Power supply for wiring)
 - X33A : Connector (for wiring)
 - X35A : Connector (Adapter)
 - X85A : Connector (For multi zoning)
- Wired remote controller**
- R1T : Thermistor (air)
 - SS1 : Selector switch (main/sub)



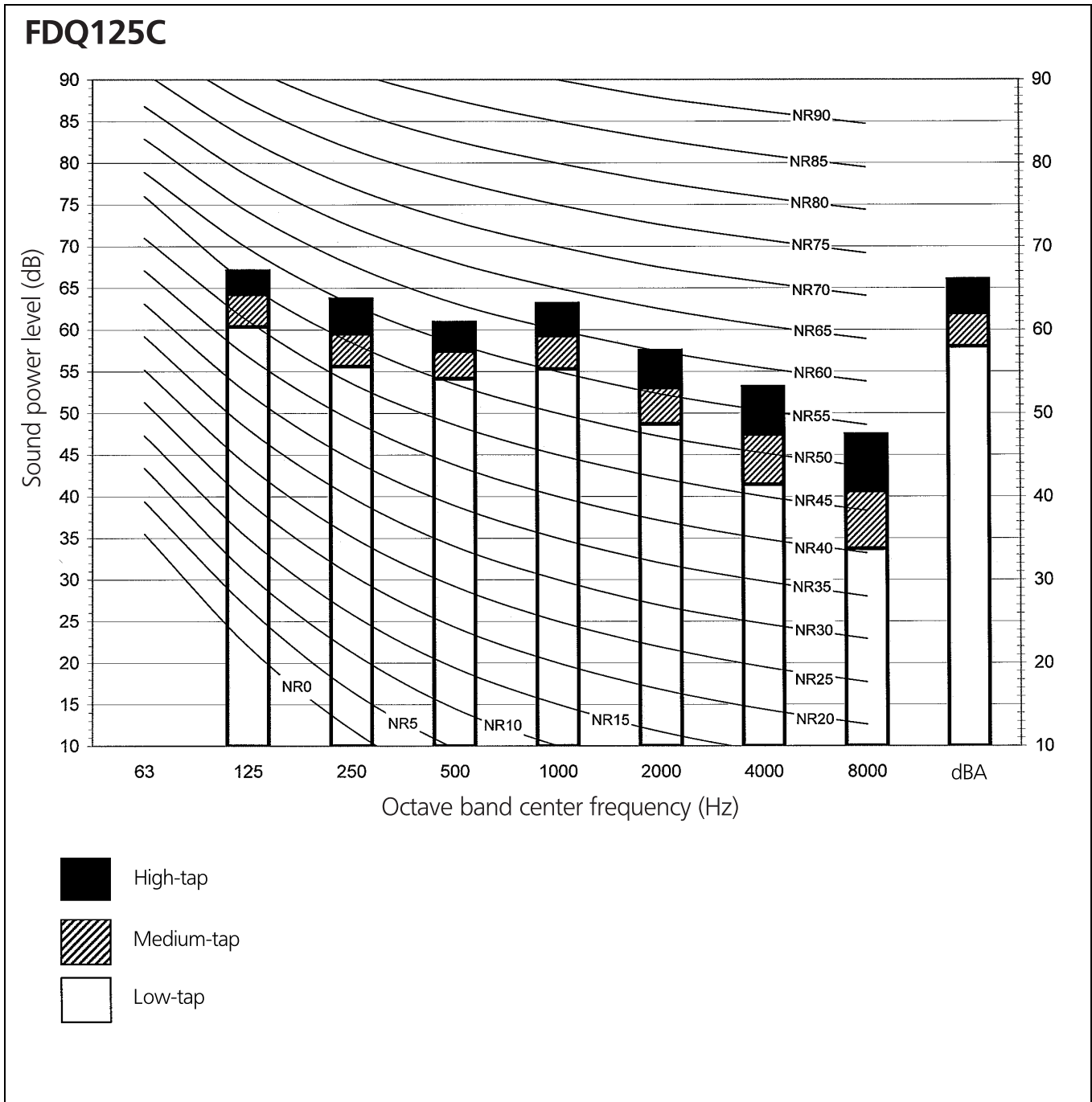
1. Use copper conductors only.
2. When using the central remote controller, see manual for connection to the unit.
3. The remote controller model varies according to the combination system, see technical materials and catalogues, etc, before connecting.
4. Refer to installation manual



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10 Sound data

10 - 1 Sound Power Spectrum



NOTES

- 1 dBA = A-weighted sound power level (A-scale according to IEC)
- 2 Reference acoustic intensity 0dB = 10E-6μW/m²
- 3 Measured according to ISO 3744

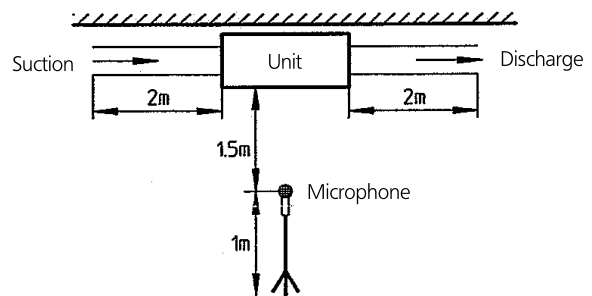
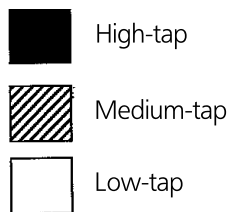
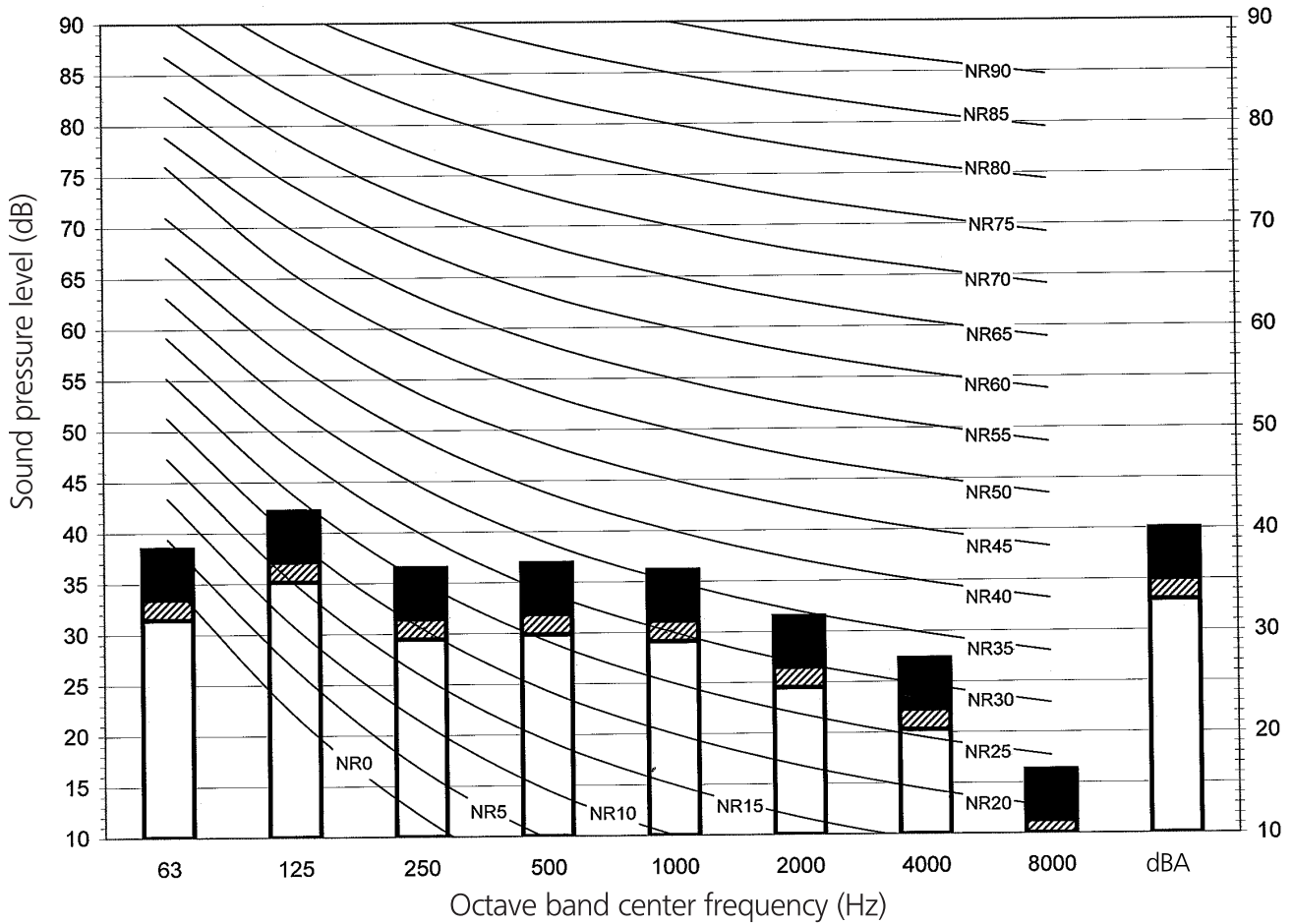
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10 Sound data

10 - 2 Sound Pressure Spectrum - Cooling

10

FDQ125C



NOTES

- 1 Data is valid at free field condition
- 2 Data is valid at nominal operation condition
- 3 dBA = A-weighted sound pressure level (A-scale according to IEC)
- 4 Reference acoustic pressure 0dB = 20μPa

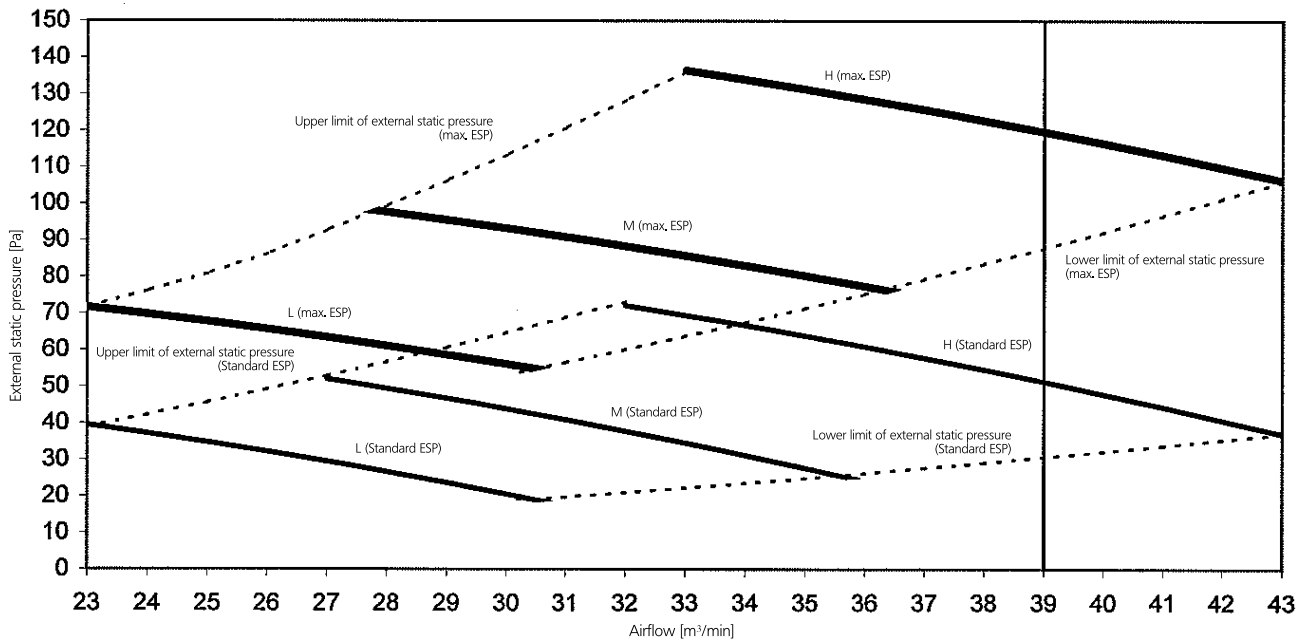
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11 Fan characteristics

11 - 1 Fan Characteristics

FDQ125C

Fan characteristics (1)



NOTES

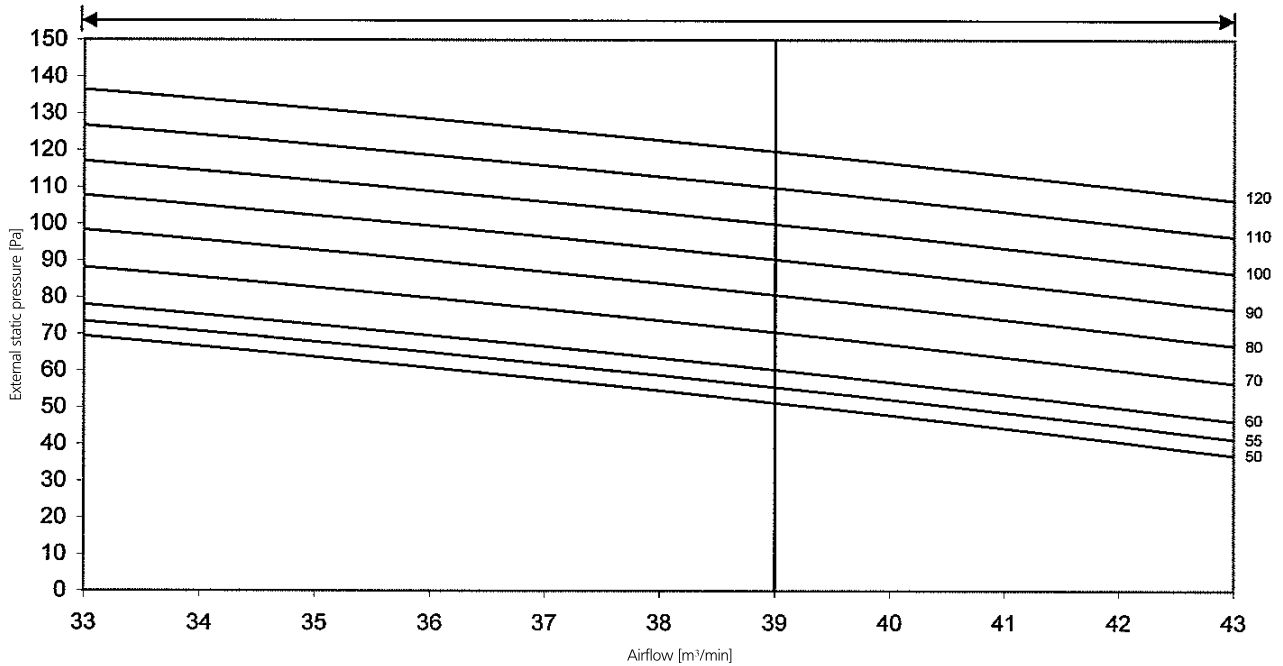
- 1 Fan characteristics as shown are in 'fan only' mode
- 2 ESP: External static pressure

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FDQ125C

Fan characteristics (2)
(Field setting with remote controller)

Range of available air flow rate (H)



NOTES

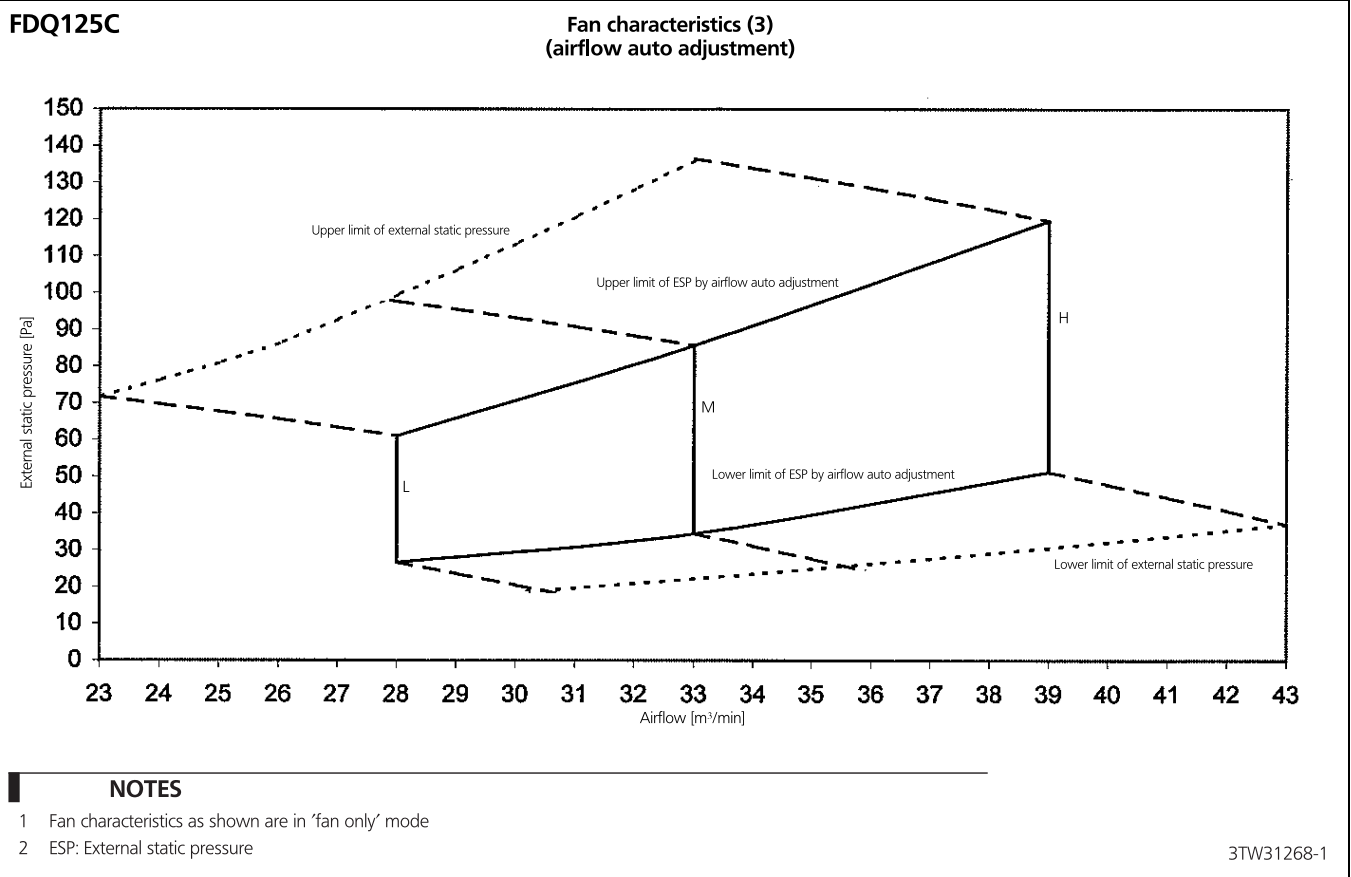
- 1 Fan characteristics as shown are in 'fan only' mode
- 2 ESP: External static pressure

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11 Fan characteristics

11 - 1 Fan Characteristics

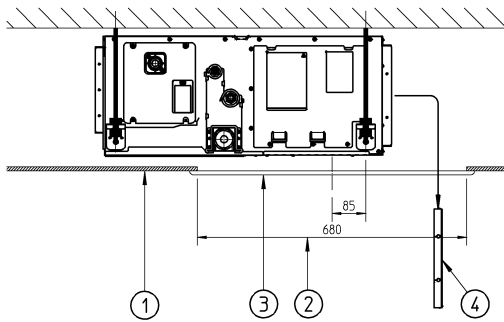
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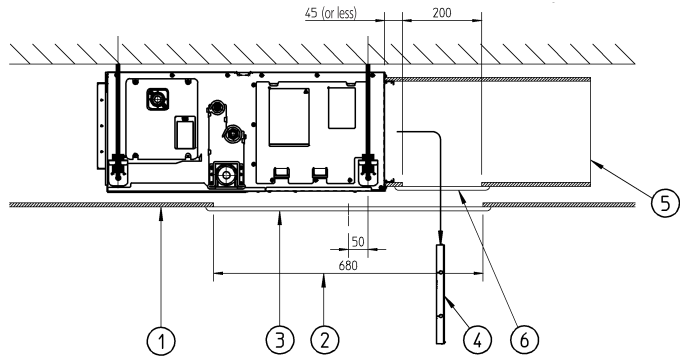
12 Installation

12 - 1 Installation Method

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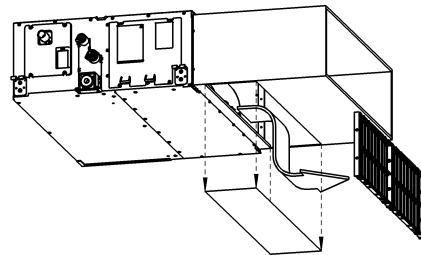


Installation without air inlet duct



Installation with air inlet duct

Number	Description
1	Suspended ceiling
2	Ceiling opening
3	Service access panel (optional)
4	Air filter
5	Air inlet duct
6	Duct service opening



NOTES

- 1 When installing the unit with rear suction, a service opening is necessary for the maintenance of the air filters.
- 2 When installing the unit with a suction duct, a service opening must be provided in the duct.

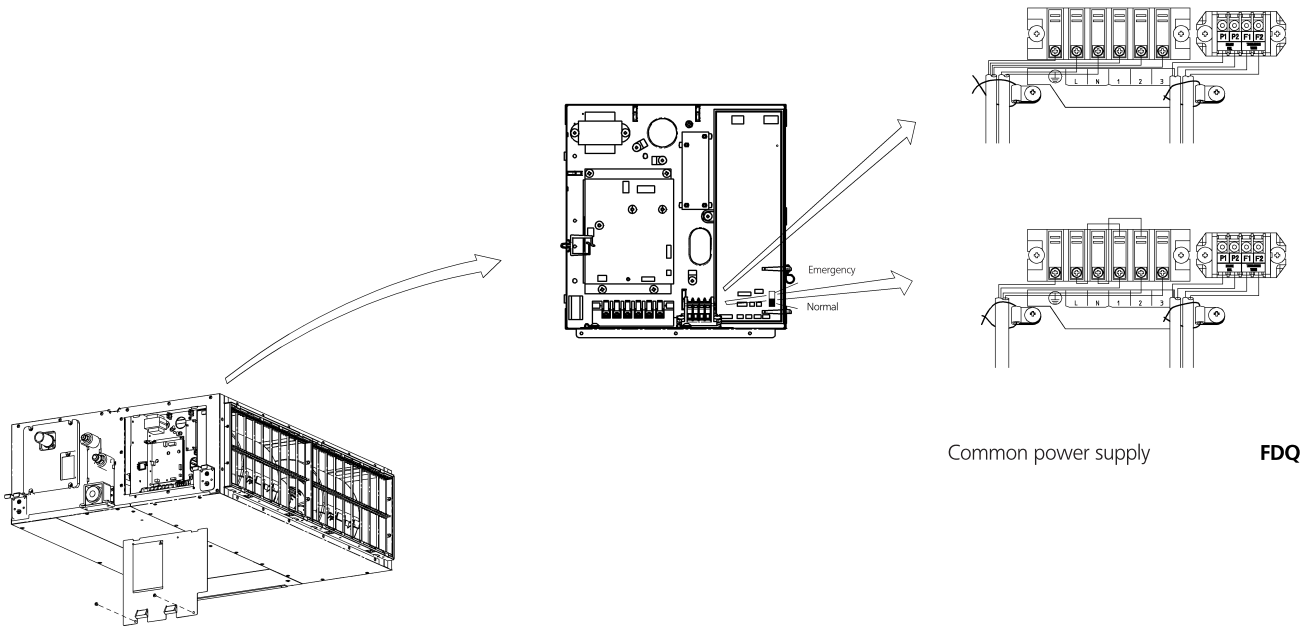
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12 Installation

12 - 2 Switch Box Connection

12

FDQ125C



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