

13. WALL MOUNTED TYPE PACKAGED AIR-CONDITIONER (Split system, Air cooled) cooling only type

Alternative refrigerant R407C use models

**FDKNP208CEN-S
258CEN-S
308CEN-S
308CES-S**

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13.1 GENERAL INFORMATION

13.1.1 Specific features

- (1) Less refrigerant charge amount due to use of double phase refrigerant flow system. The total refrigerant charge amount has been reduced by more than 50%.
- (2) The indoor outdoor interconnection signal wiring has been done away with. The microcomputer chip is installed in the indoor unit. There is no need for the unit to communicate between the outdoor and indoor units so the unit is more resistant to electromagnetic noise thus the incidence of microcomputer malfunction has been reduced. The compressor in the outdoor unit has its own self protection function, that reacts according to abnormal high pressure and excessive high temperature.
- (3) There are only four power line between the outdoor and indoor unit. As no signal wire is used there is no need to separate the power line from the signal line. One cab tyre cable with 4 wires encased in one sheath is enough for conducting the wiring work between the outdoor unit and the indoor unit. This contributes to simpler wiring work in the field.
- (4) The operation modes are only cooling and fan operation for easier control.
- (5) All air supply ports have auto swing louvers. The indoor fan motor has two speeds of high and low.
- (6) The controls are wireless residential split air conditioner type remote controller with 4 malfunction modes.
- (7) All models have service valves protruding from the outdoor unit for faster flare connection work in the field.

(8) Aero trap louver

- (a) Pleasantness will be enhanced with the employment of aero trap louver. It has an excellent wind orientation and a homogeneous air conditioning feeling is ensured at every corner in a room with the auto swing blasting which can be adjusted the maximum 70° downward.
- (b) Louver angle can be adjusted to 4 fixed positions with the remote control. It can be adjusted at any optional angle during the manual operation. Sidewise blast is adjustable by 40° in each direction.

(9) Low noise

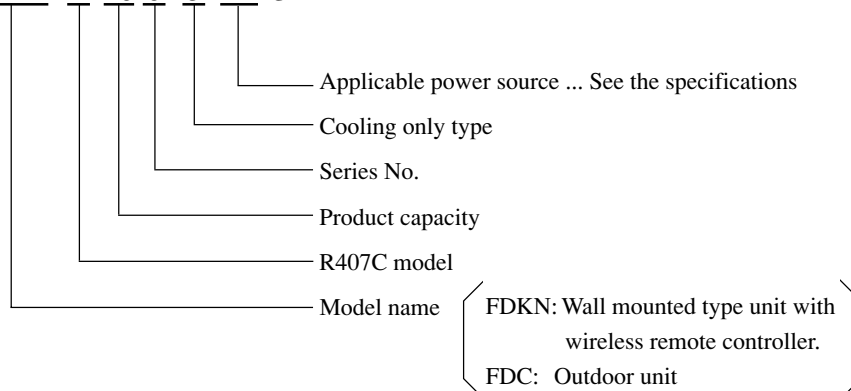
Specially developed silent fan is employed. A very gentle operation sound is assured because the noise like wind slashing sound are suppressed effectively.

(10) Thin and compact design

The unit measures 17.9 cm (208 type) or 19.6 cm (258, 308 type) in thickness and its size is so compact as a room air conditioner. Body of the unit is dinished in the ivory white color and a pleasant and simple design produces a very pleasant harmony for the interior design.

13.1.2 How to read the model name

Example: **FDKN P 20 8 C EN-S**



13.2 SELECTION DATA

13.2.1 Specifications

Model FDKNP208CEN-S

Item		Model	FDKNP208CEN-S	
			FDKN208C	FDCP208CEN3
Nominal cooling capacity⁽¹⁾		W	4850	
Power source			1 Phase, 220/240V, 50Hz	
Operation data⁽³⁾	Cooling input	kW	2.03/2.09	
	Running current (Cooling)	A	9.4/9.5	
	Power factor (Cooling)	%	98/92	
	Inrush current (L.R.A)	A	55	
	Noise level ⁽⁴⁾	dB(A)	Hi:45 Lo:38	52
Exterior dimensions		mm	275 × 790 × 179	
Height × Width × Depth			690 × 880 × 290	
Net weight		kg	10	
Refrigerant equipment			-	
Compressor type & Q'ty			RM5523HNE5 × 1	
Motor		kW	-	
Starting method			Line starting	
Heat exchanger			Louver fins & inner grooved tubing	
Refrigerant control			-	
Refrigerant			R407C	
Quantity		kg	Holding charged	
Refrigerant oil		ℓ	-	
High pressure control			-	
Air handling equipment			-	
Fan type & Q'ty			Tangential fan × 1	
Motor		W	26 × 1	
Starting method			Line starting	
Air flow (Standard)		CMM	Hi:16 Lo:10	
Fresh air intake			Unavailable	
Air filter, Q'ty			Long life filter × 2 (washable)	
Shock & vibration absorber			Rubber sleeve (for fan motor)	
Electric heater		W	-	
Operation control			-	
Operation switch			Wireless remote control switch	
Room temperature control			Thermostat by electronics	
Safety equipment			-	
Internal thermostat for fan motor.			Internal thermostat for fan motor.	
Frost protection thermostat.			Thermistor for discharge temperature.	
			High pressure switch for protection.	
Installation data		mm (in)	Liquid line: φ6.35 (1/4") Gas line: φ15.88 (5/8")	
Refrigerant piping size				
Connecting method			Flare piping	
Drain hose			(Connectable with VP20)	
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit. Wireless remote controller.	
Optional parts			-	

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Operation					
Cooling	27°C	19°C	35°C	24°C	ISO-T1, JIS B8616

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.

JIS B8616 "UNITARY AIR-CONDITIONERS"

(3) The operation data indicate when the air-conditioner is operated at 220/240V 50Hz.

(4) Indicates the value at mild mode.

Model FDKNP258CEN-S

Item		Model	FDKNP258CEN-S	
			FDKN258C	FDCP258CEN3
Nominal cooling capacity⁽¹⁾		W	5700	
Power source			1 Phase, 220/240V, 50Hz	
Operation data⁽³⁾	Cooling input	kW	2.34/2.53	
	Running current (Cooling)	A	11.2/12.3	
	Power factor (Cooling)	%	95/86	
	Inrush current (L.R.A)	A	63	
	Noise level ⁽⁴⁾	dB(A)	Hi:45 Lo:38	52
Exterior dimensions		mm	298 × 940 × 196	
Height × Width × Depth			845 × 880 × 340	
Net weight		kg	11	
Refrigerant equipment				
Compressor type & Q'ty			RM5526HNE5 × 1	
Motor		kW	1.9	
Starting method			Line starting	
Heat exchanger			Louver fins & inner grooved tubing	Slitted fins & bare tubing
Refrigerant control			–	Capillary tube
Refrigerant			R407C	
Quantity		kg	Holding charged	1.07 [Pre-charged up to the piping length of 5m]
Refrigerant oil		ℓ	–	0.7 (MA32)
High pressure control			–	
Air handling equipment				
Fan type & Q'ty			Tangential fan × 1	Propeller fan × 1
Motor		W	40 × 1	55 × 1
Starting method			Line starting	Line starting
Air flow (Standard)		CMM	Hi:17 Lo:10	58
Fresh air intake			Unavailable	–
Air filter, Q'ty			Long life filter × 2 (washable)	–
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber mount (for compressor)
Electric heater		W	–	20 (Crank case heater)
Operation control				
Operation switch			Wireless remote control switch	– (Indoor unit side)
Room temperature control			Thermostat by electronics	–
Safety equipment⁽⁴⁾			Internal thermostat for fan motor. Frost protection thermostat.	Internal thermostat for fan motor. Thermistor for discharge temperature. High pressure switch for protection.
Installation data		mm	Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8")	
Refrigerant piping size		(in)		
Connecting method			Flare piping	
Drain hose			(Connectable with VP16)	–
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit. Wireless remote controller. Drain hose	
Optional parts			–	

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27°C	19°C	35°C	24°C	ISO-T1, JIS B8616

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.

JIS B8616 "UNITARY AIR-CONDITIONERS"

(3) The operation data indicate when the air-conditioner is operated at 220/240V 50Hz.

(4) Indicates the value at mild mode.

Model FDKNP308CEN-S

Item		Model	FDKNP308CEN-S	
			FDKN308C	FDCP308CEN3
Nominal cooling capacity⁽¹⁾		W	7100	
Power source			1 Phase, 220/240V, 50Hz	
Operation data⁽³⁾	Cooling input	kW	3.18/3.33	
	Running current (Cooling)	A	14.8/15.2	
	Power factor (Cooling)	%	98/91	
	Inrush current (L.R.A)	A	95	
	Noise level ⁽⁴⁾	dB(A)	Hi:46 Lo:40	52
Exterior dimensions		mm	298 × 1155 × 196	
Height × Width × Depth			845 × 880 × 340	
Net weight		kg	11	
Refrigerant equipment				
Compressor type & Q'ty			GT-A5534HN41 × 1	
Motor		kW	2.5	
Starting method			Line starting	
Heat exchanger			Louver fins & inner grooved tubing	Slitted fins & bare tubing
Refrigerant control			–	Capillary tube
Refrigerant			R407C	
Quantity		kg	Holding charged	1.63 [Pre-charged up to the piping length of 5m]
Refrigerant oil		ℓ	–	1.45 (MA32)
High pressure control			–	
Air handling equipment				
Fan type & Q'ty			Tangential fan × 1	Propeller fan × 1
Motor		W	40 × 1	55 × 1
Starting method			Line starting	Line starting
Air flow (Standard)		CMM	Hi:21 Lo:15	58
Fresh air intake			Unavailable	–
Air filter, Q'ty			Long life filter × 2 (washable)	–
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber mount (for compressor)
Electric heater		W	–	33 (Crank case heater)
Operation control				
Operation switch			Wireless remote control switch	– (Indoor unit side)
Room temperature control			Thermostat by electronics	–
Safety equipment			Internal thermostat for fan motor. Frost protection thermostat.	Internal thermostat for fan motor. Thermistor for discharge temperature. High pressure switch for protection.
Installation data		mm	Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8")	
Refrigerant piping size		(in)		
Connecting method			Flare piping	
Drain hose			(Connectable with VP16)	–
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit. Wireless remote controller. Drain hose	
Optional parts			–	

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27°C	19°C	35°C	24°C	ISO-T1, JIS B8616

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.

JIS B8616 "UNITARY AIR-CONDITIONERS"

(3) The operation data indicate when the air-conditioner is operated at 220/240V 50Hz.

(4) Indicates the value at mild mode.

Model FDKNP308CES-S

Item		Model	FDKNP308CES-S	
			FDKN308C	FDCP308CES3
Nominal cooling capacity⁽¹⁾		W	7100	
Power source			3 Phase, 380/415V, 50Hz	
Operation data⁽³⁾	Cooling input	kW	3.10/3.25	
	Running current (Cooling)	A	5.4/5.7	
	Power factor (Cooling)	%	87/79	
	Inrush current (L.R.A)	A	43	
	Noise level ⁽⁴⁾	dB(A)	Hi:46 Lo:40	52
Exterior dimensions				
Height × Width × Depth		mm	298 × 1150 × 196	845 × 880 × 340
Net weight		kg	13.5	73
Refrigerant equipment				
Compressor type & Q'ty			–	GT-A5534HS41 × 1
Motor		kW	–	2.5
Starting method			–	Line starting
Heat exchanger			Louver fins & inner grooved tubing	Slitted fins & bare tubing
Refrigerant control			–	Capillary tube
Refrigerant			R407C	
Quantity		kg	Holding charged	1.63 [Pre-charged up to the piping length of 5m]
Refrigerant oil		ℓ	–	1.45 (MA32)
High pressure control			–	
Air handling equipment				
Fan type & Q'ty			Tangential fan × 1	Propeller fan × 1
Motor		W	40 × 1	55 × 1
Starting method			Line starting	Line starting
Air flow (Standard)		CMM	Hi:21 Lo:15	58
Fresh air intake			Unavailable	–
Air filter, Q'ty			Long life filter × 2 (washable)	–
Shock & vibration absorber			Rubber sleeve (for fan motor)	Rubber mount (for compressor)
Electric heater		W	–	33 (Crank case heater)
Operation control				
Operation switch			Wireless remote control switch	– (Indoor unit side)
Room temperature control			Thermostat by electronics	–
Safety equipment			Internal thermostat for fan motor. Frost protection thermostat.	Internal thermostat for fan motor. Thermistor for discharge temperature. High pressure switch for protection.
Installation data		mm	Liquid line: φ9.52 (3/8") Gas line: φ15.88 (5/8")	
Refrigerant piping size		(in)		
Connecting method			Flare piping	
Drain hose			(Connectable with VP16)	–
Insulation for piping			Necessary (both Liquid & Gas lines)	
Accessories			Mounting kit. Wireless remote controller. Drain hose	
Optional parts			–	

Notes (1) The data are measured at the following conditions.

Item	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27°C	19°C	35°C	24°C	ISO-T1, JIS B8616

(2) This packaged air-conditioner is manufactured and tested in conformity with the following standard.

JIS B8616 "UNITARY AIR-CONDITIONERS"

(3) The operation data indicate when the air-conditioner is operated at 380/415V 50Hz.

(4) Indicates the value at mild mode.

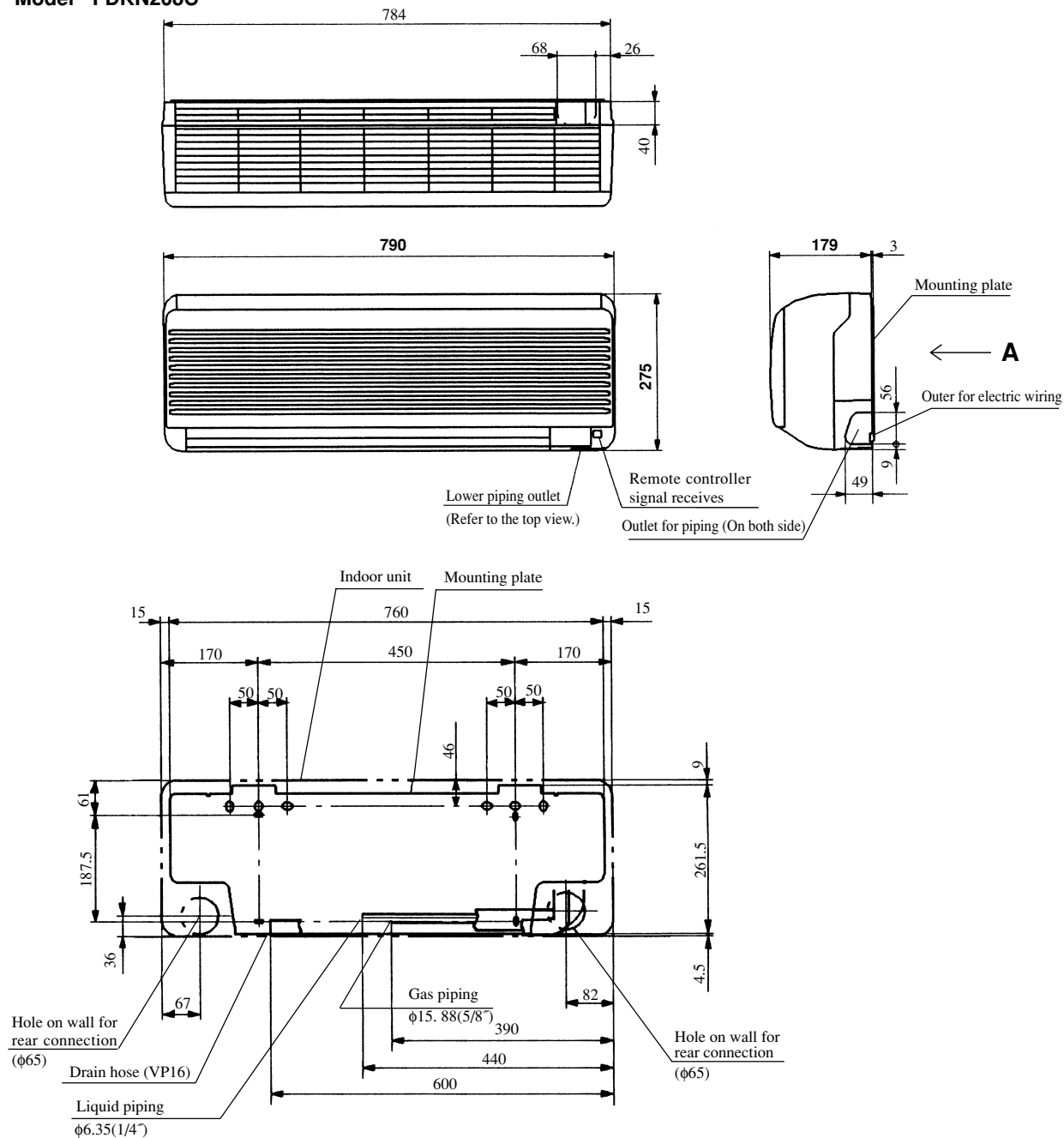
13.2.2 Range of usage & limitations

Item \ Models	FDKNP208, 258 type	FDKNP308 type
Indoor return air temperature (Upper, lower limits)	Refer to the selection chart	
Outdoor air temperature (Upper, lower limits)		
Refrigerant line (one way) length	Max. 30m	Max. 50m
Vertical height difference between outdoor unit and indoor unit	Max. 20m (Outdoor unit is higher) Max. 15m (Outdoor unit is lower)	Max. 30m (Outdoor unit is higher) Max. 15m (Outdoor unit is lower)
Power source voltage	Rating $\pm$ 10%	
Voltage at starting	Min. 85% of rating	
Frequency of ON-OFF cycle	Max. 10 times/h	
ON and OFF interval	Max. 3 minutes	

13.2.3 Exterior dimensions

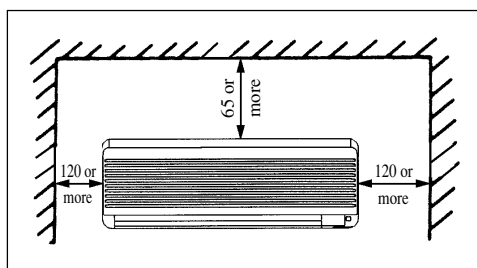
(1) Indoor unit Model FDKN208C

Unit: mm



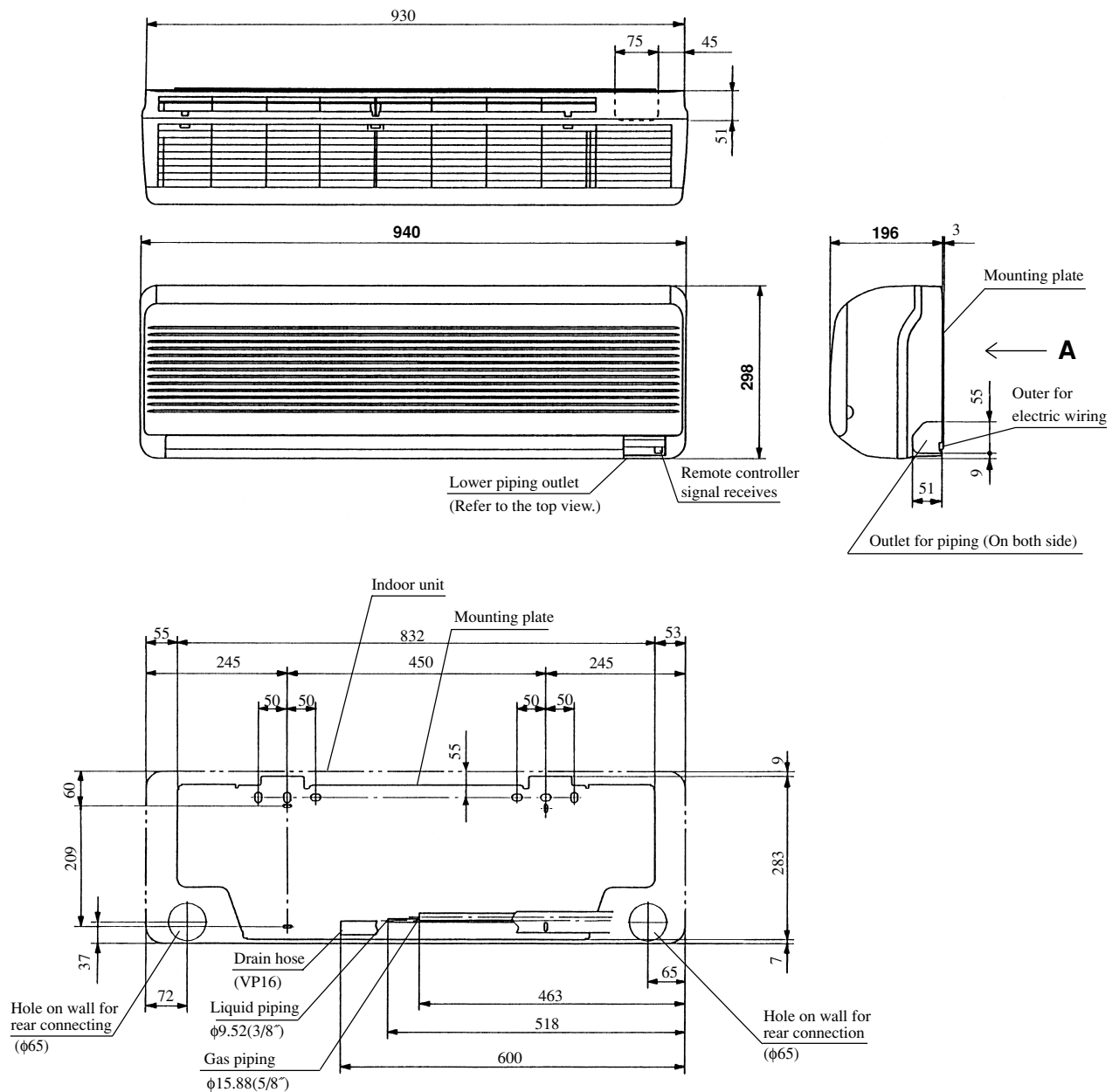
VIEW A (Rear side)

Space for installation and service



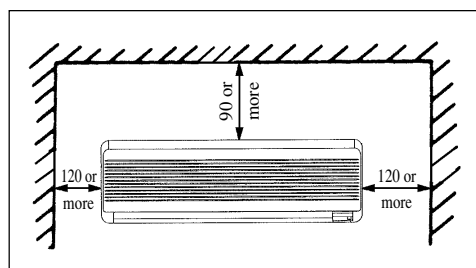
Model FDKN258C

Unit: mm



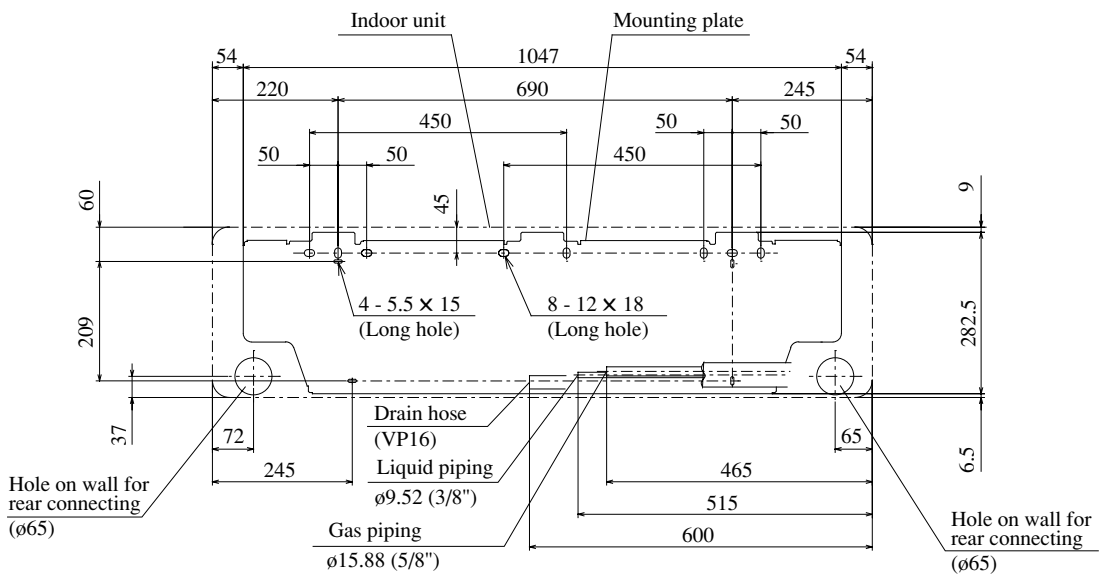
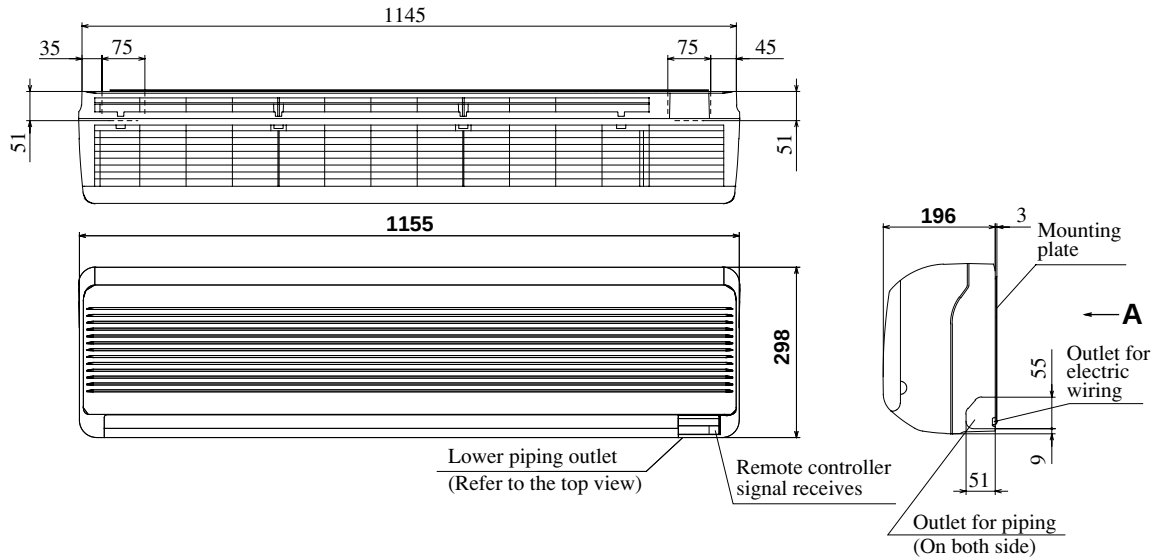
VIEW A (Rear side)

Space for installation and service



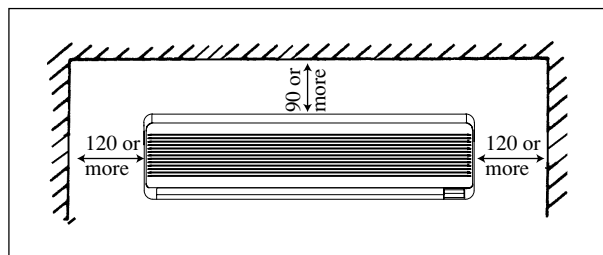
Model FDKN308C

Unit : mm



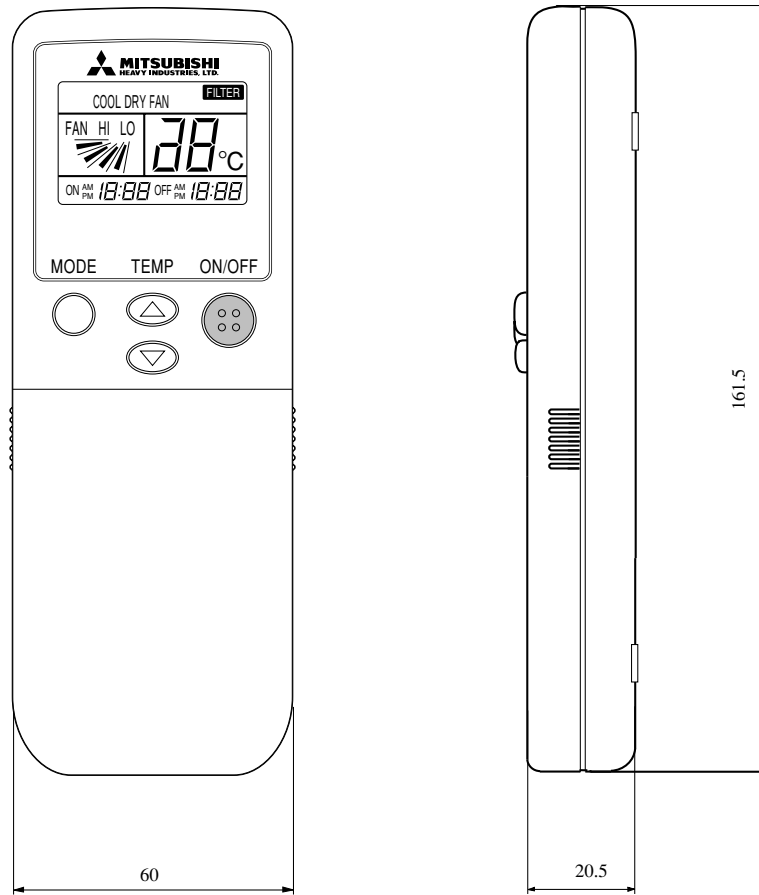
VIEW A (Rear side)

Space for installation and service

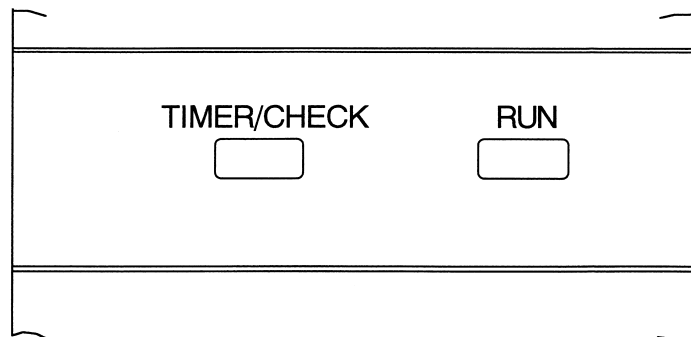


(2) Wireless remote controller

Unit : mm



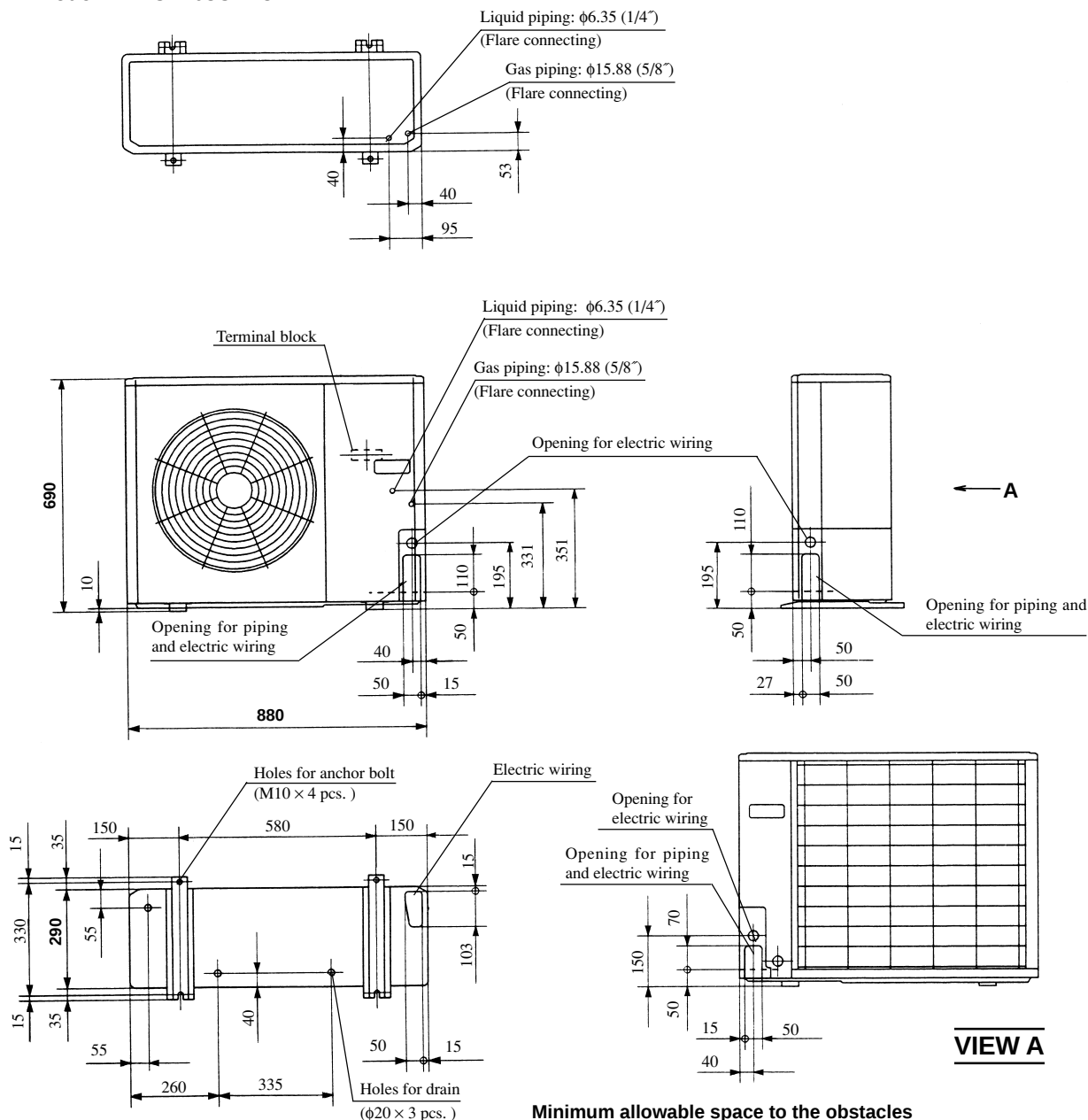
(3) Indication board of indoor unit



(4) Outdoor unit

Model FDCP208CEN3

Unit: mm



Minimum allowable space to the obstacles

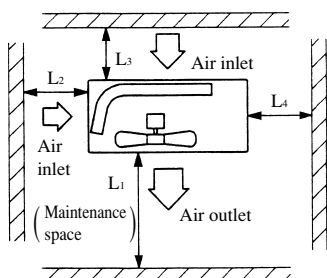
Unit: mm

Installation type	I	II	III
Mark			
L ¹	Open	Open	500
L ²	300	5	Open
L ³	100	150	100
L ⁴	5	5	5

Notes

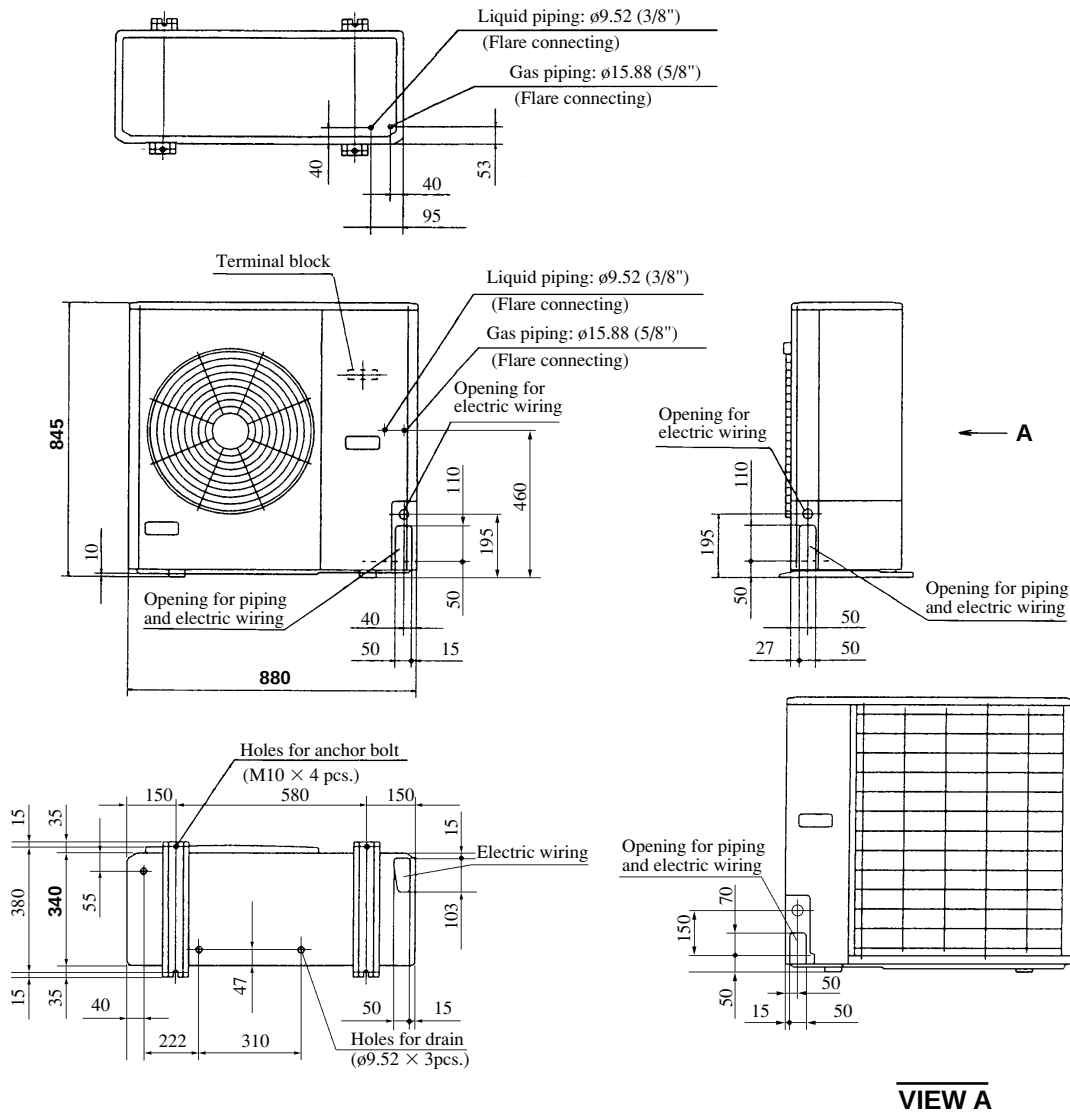
- (1) Avoid the location where four sides are entirely surrounded by walls.
- (2) Fix the unit by anchor bolts without fail. Restrict the protrusion length of anchor bolt to 15 mm and under.
- (3) When strong wind blows against the unit, direct the discharge port at a right angle to the wind direction.
- (4) Secure the space of 1 m and over at the top of unit.
- (5) Make the height of obstruction wall in front of discharge port lower than the height of unit.

Required space for maintenance and air flow



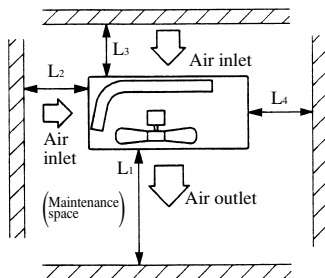
Models FDCP258CEN3, 308CEN3, 308CES3

Unit: mm



VIEW A

Required space for maintenance and air flow



Minimum allowable space to the obstacles

Unit:mm			
Installation type	I	II	III
Mark			
L ₁	Open	Open	500
L ₂	300	5	Open
L ₃	100	150	100
L ₄	5	5	5

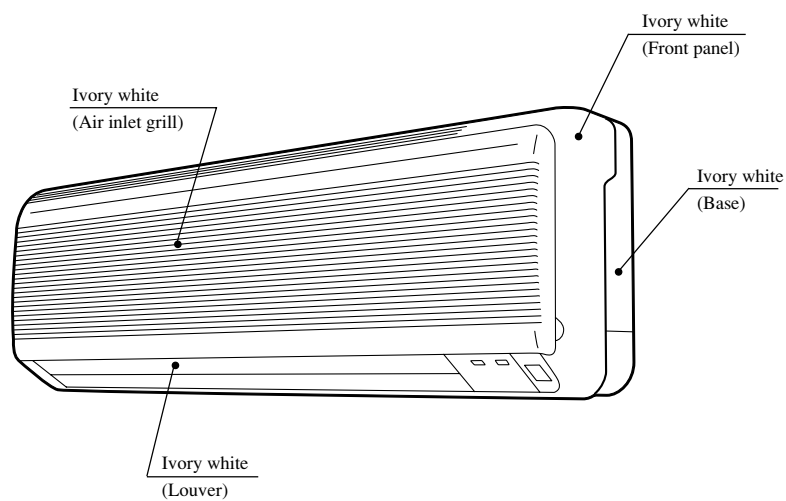
Notes

- (1) Avoid the location where four sides are entirely surrounded by walls.
- (2) Fix the unit by anchor bolts without fail. Restrict the protrusion length of anchor bolt to 15 mm and under.
- (3) When strong wind blows against the unit, direct the discharge port at a right angle to the wind direction.
- (4) Secure the space of 1 m and over at the top of unit.
- (5) Make the height of obstruction wall in front of discharge port lower than the height of unit.

13.2.4 Exterior appearance

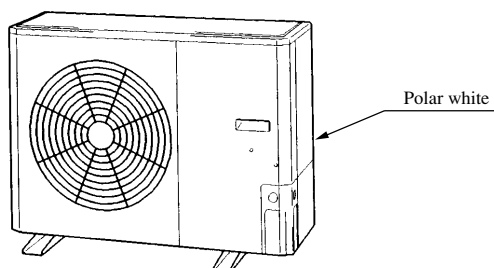
(1) Indoor unit

Models All models

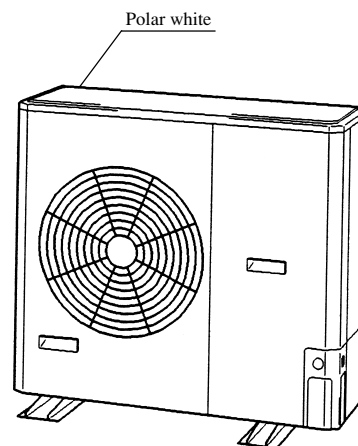


(2) Outdoor unit

Model FDCP208CEN3

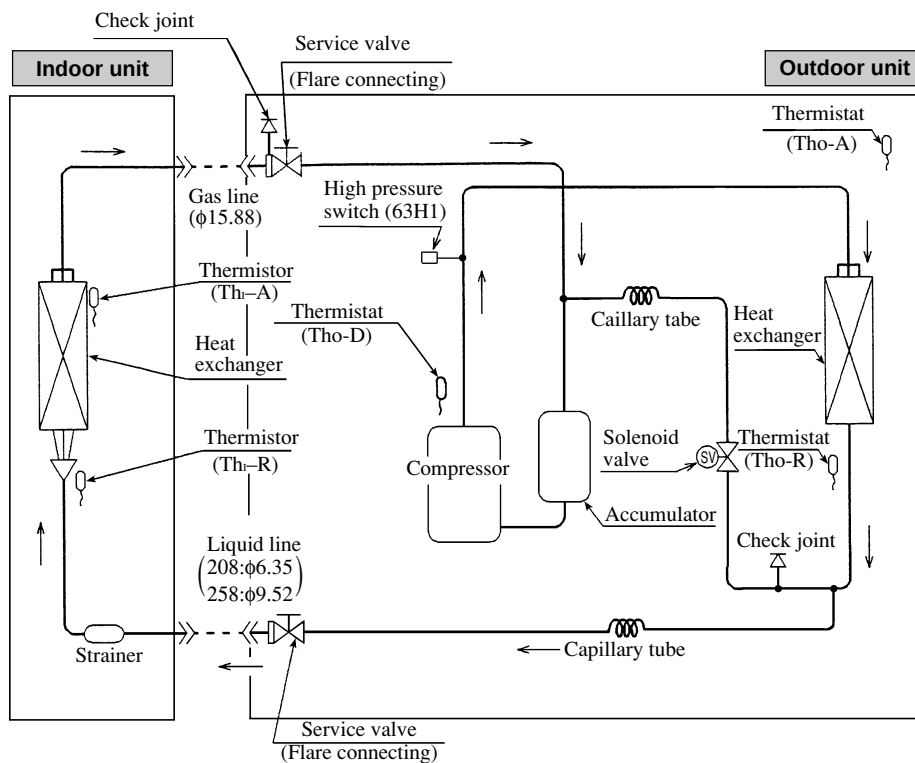


Models FDCP258CEN3, 308CEN3
308CES3

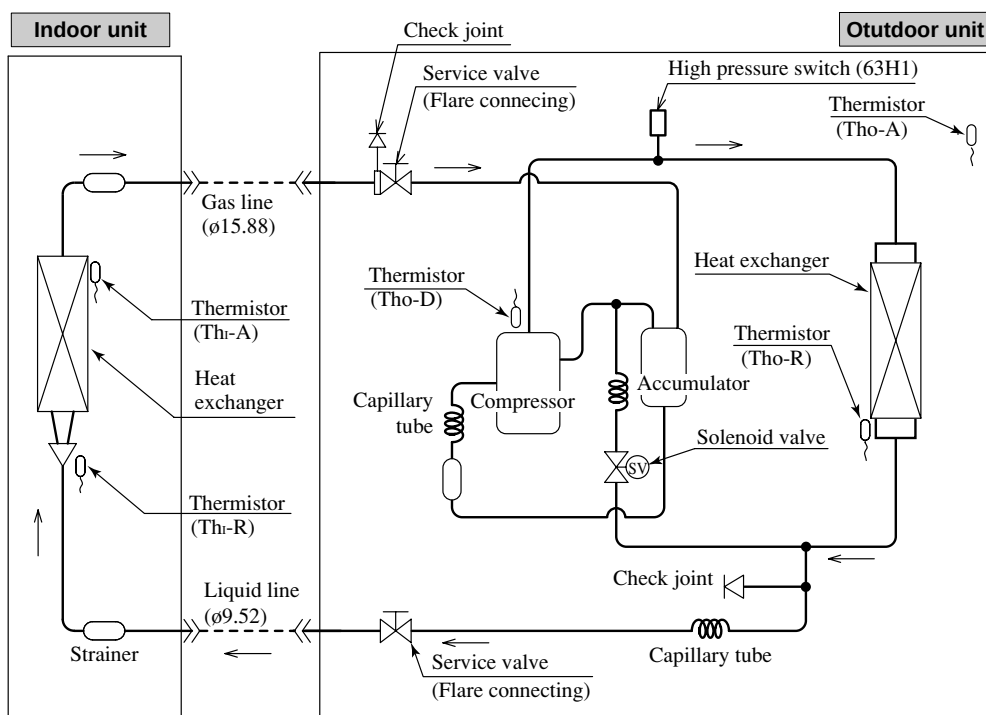


13.2.5 Piping system

Models FDKNP208CEN-S, 258CEN-S



Models FDKNP308CEN-S, 308CES-S



Preset point of the protective devices

Parts name	Mark	Equipped unit	All models
Thermistor (for frost prevention)	Thi-R	Indoor unit	OFF 2.5°C ON 10°C
Thermistor (for detecting discharge pipe temp.)	Tho-D	Outdoor unit	OFF 135°C ON 90°C
Thermistor (for detecting heat exchanger temp.)	Tho-R	Outdoor unit	OFF 70°C ON 60°C
High pressure switch (for protection)	63Hi	Outdoor unit	OFF 3.24MPa (33 Kgf/cm ²) ON 2.65MPa (27 kgf/cm ²)

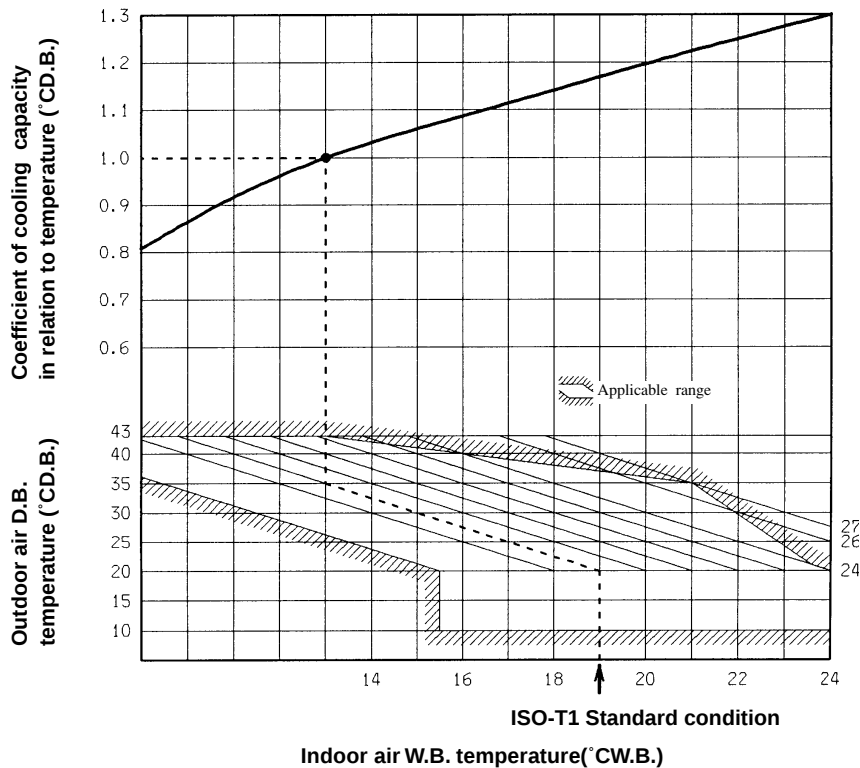
13.2.6 Selection chart

Correct the cooling capacity in accordance with the conditions as follows. The net cooling capacity can be obtained in the following way.

Net capacity = Capacity shown on specification × Correction factors as follows.

(1) Coefficient of cooling capacity in relation to temperatures

Models FDKNP208CEN-S, 258CEN-S



Models FDKNP308CEN-S, 308CES-S

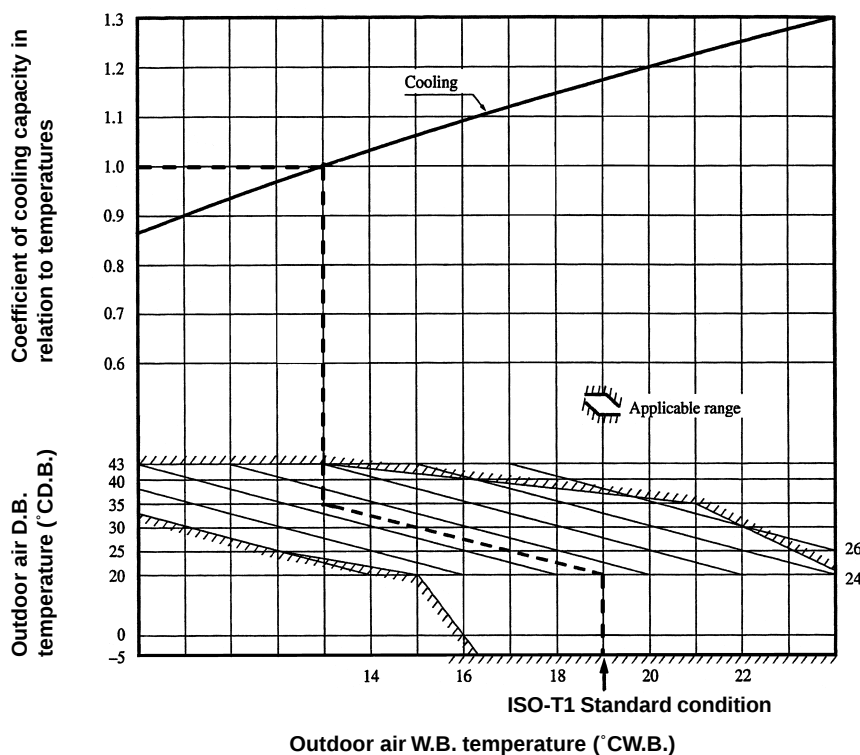


Table of bypass factor

Model		FDKN208C	FDKN258C	FDKN308C
Item	Model			
Air flow	Hi	0.03	0.03	0.04

(2) Correction of cooling capacity in relation to flow rate control (fan speed)

Coefficient: 1.00 at High, 0.95 at Low

(3) Correction of cooling capacity in relation to one way length of refrigerant piping

It is necessary to correct the cooling capacity in relation to the one way equivalent piping length between the indoor and outdoor units.

Equivalent length ⁽¹⁾ m		5	10	15	20	25	30	35	40	45	50	55
Cooling	208 type	1.0	0.995	0.995	0.99	0.985	0.985	0.98	—	—	—	—
	258 type	1.0	0.995	0.99	0.985	0.98	0.975	0.97	—	—	—	—
	308 type	1.0	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.9

Note (1) Equivalent piping length can be obtained by calculating as follows.

208, 258, 308 series [φ15.88(5/8")]: Equivalent piping length = Real piping length + (0.10 × Number of bends in piping)
 [Equivalent piping length < Limitation length of piping + 5m]

(4) When the outdoor unit is located at a lower height than the indoor unit in cooling operation, the following values should be subtracted from the values in the above table.

Height difference between the indoor unit and outdoor unit in the vertical height difference	5m	10m	15m
Adjustment coefficient	0.01	0.02	0.03

Piping length limitations

Item	Model	FDKNP208, 258 type	FDKNP308 type
Max.one way piping length		30m	50m
Max.vertical height difference		20m(Outdoor unit is higher) 15m(Outdoor unit is lower)	30m(Outdoor unit is higher) 15m(Outdoor unit is lower)

Note (1) Values in the table indicate the one way piping length between the indoor and outdoor units.

How to obtain the cooling capacity

Example : The net cooling capacity of the model FDKNP308CEN-S with the air flow "High", the piping length of 15m, the outdoor unit located 5m lower than the indoor unit, indoor wet-bulb temperature at 19.0 °C and outdoor dry-bulb temperature 35 °C is

$$\text{Net cooling capacity} = \underset{\substack{\uparrow \\ \text{FDKNP308CEN-S}}}{7100} \times \underset{\substack{\uparrow \\ \text{Air flow "High"}}}{1.00} \times \underset{\substack{\uparrow \\ \text{Length 15m.} \\ \text{Height difference 5 m}}}{(0.98 - 0.01)} \times \underset{\substack{\uparrow \\ \text{Factor by air} \\ \text{temperatures}}}{1.0} = \mathbf{6887 \text{ w}}$$

13.2.7 Noise level

Notes (1) The data are based on the following conditions.

Ambient air temperature:

Indoor unit 27°C DB, 19°C WB

Outdoor unit 35°C DB,

Indoor unit

Measured based on JIS B 8616

Mike position as below



Outdoor unit

Measured based on JIS B 8616

Mike position: at highest noise level
in position as below

Distance from front side 1 m

Height 1 m

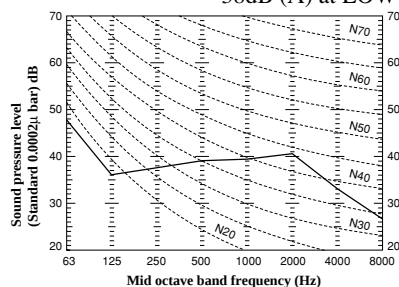
(2) The data in the chart are measured in an unechonic room.

(3) The noise levels measured in the field are usually higher than the data because of reflection.

(1) Indoor unit

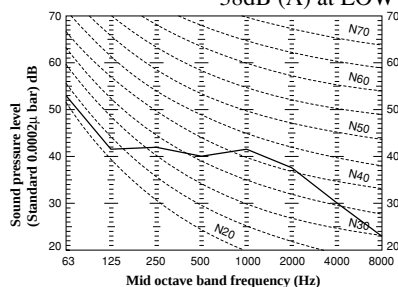
Model FDKN208C

Noise level 45dB (A) at HIGH
38dB (A) at LOW



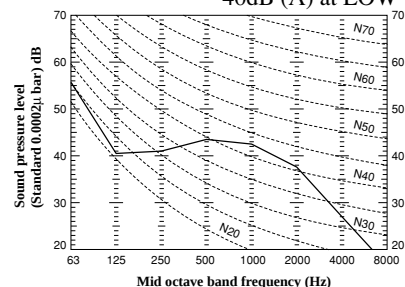
Model FDKN258C

Noise level 45dB (A) at HIGH
38dB (A) at LOW



Model FDKN308C

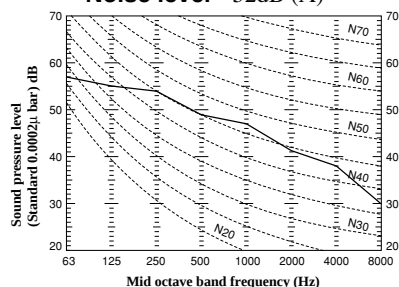
Noise level 46dB (A) at HIGH
40dB (A) at LOW



(2) Outdoor unit

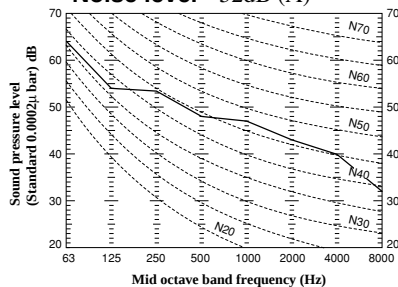
Model FDCP208CEN3

Noise level 52dB (A)



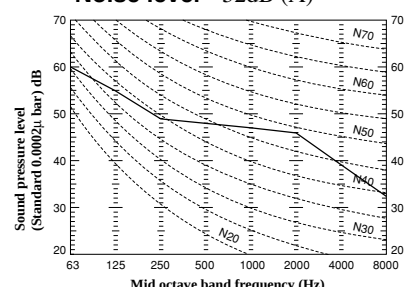
Model FDCP258CEN3

Noise level 52dB (A)



Models FDCP308CEN3, 308CES3

Noise level 52dB (A)

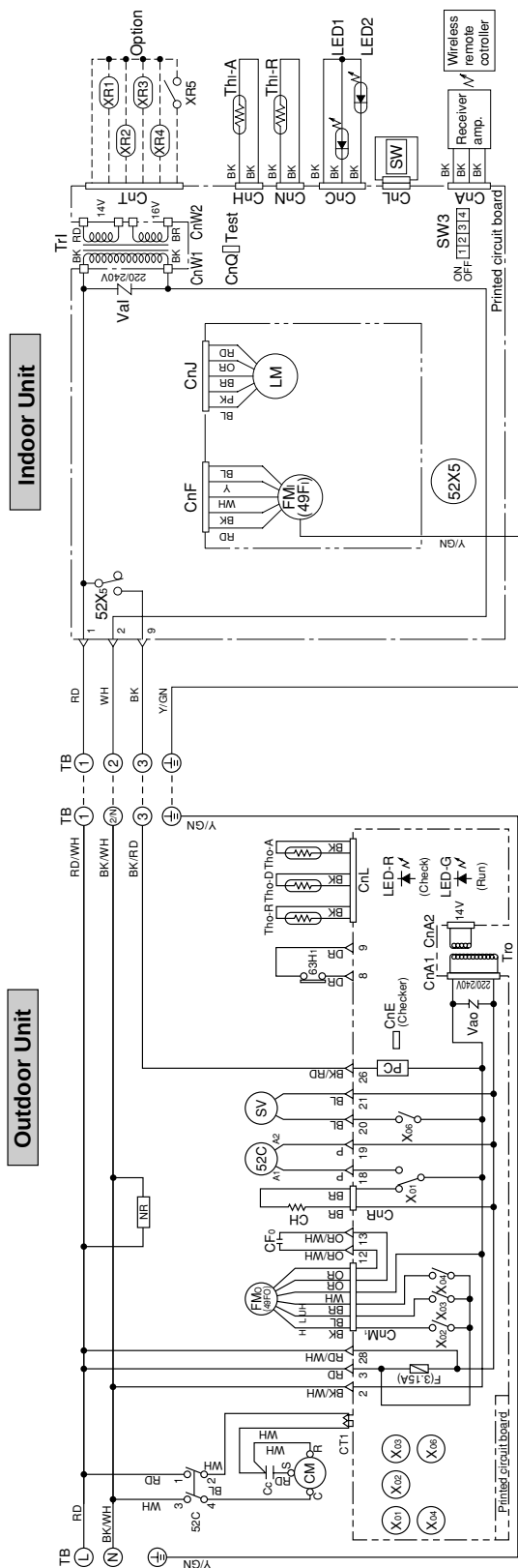


13.3 ELECTRICAL DATA

13.3.1 Electrical wiring

Model FDKNP208CEN-S

Power Source
1 Phase 220/240V 50Hz

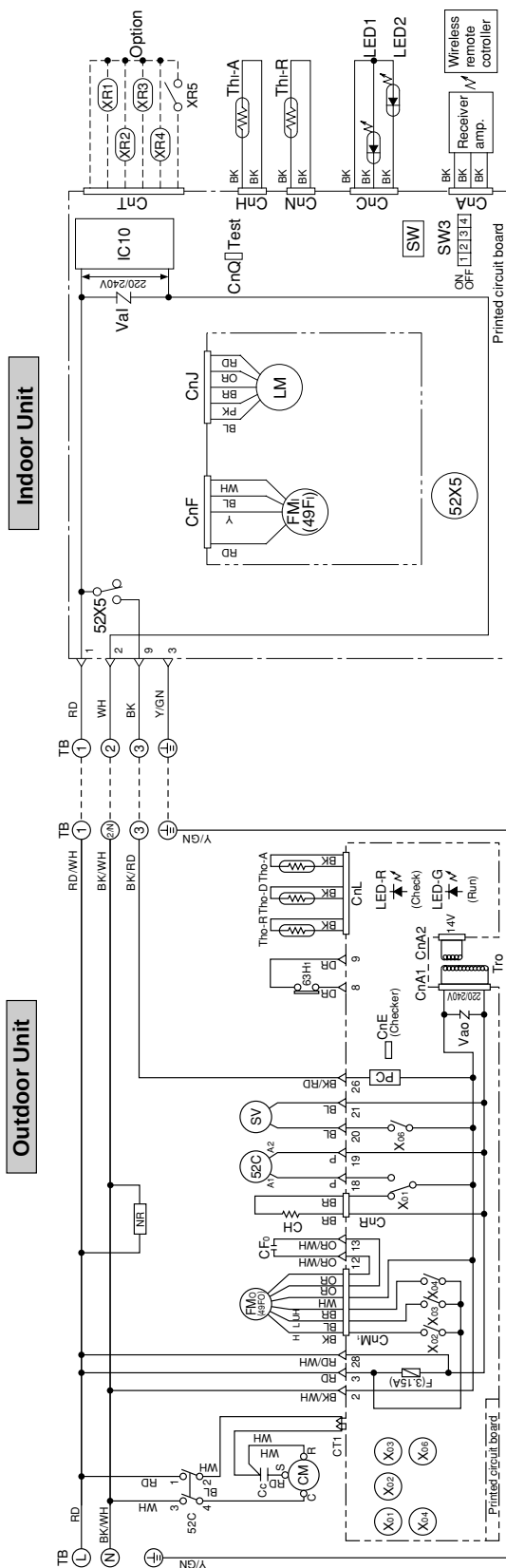


Meaning of marks

Mark	Parts name	Mark	Parts name
Cc	Capacitor for CM	TB	Terminal block (○mark)
CFo	Capacitor for FMo	Th-A	Thermistor
CH	Crankcase heater	Th-R	Thermistor
CM	Compressor motor	Tho-A	Thermistor
CnA-W	Connector	Tho-D	Thermistor
F	Fuse	Tho-R	Thermistor
Fm	Fan motor (Indoor unit)	Tr, Tro	Transformer
FMo	Fan motor (Outdoor unit)	Va, Vao	Varistor
LED1	Indication lamp (Green-Run)	49Fi	Internal thermostat for Fm1
LED2	Indication lamp (Yellow-Timer/Check)	49Fo	Internal thermostat for FMo
LED-G	Indication lamp (Green)	CT1	Current sensor
LED-R	Indication lamp (Red)	63H1	High pressure switch (for protection)
SV	Solenoid coil (for control)	52C	Magnetic contactor for CM
LM	Louver motor	52X5	Auxiliary relay
NR	Surge suppressor	X01-06	Terminal (F)
PC	Photo coupler	△	Connector
SW	Back up switch (ON/OFF)	■	Change over switch
SW3	Change over switch		

Color mark

Mark	Color	Mark	Color
BK	Black	BK/RD	Black/Red
BL	Blue	BK/WH	Black/White
BR	Brown	OR/WH	Orange/White
GR	Gray	RD/WH	Red/White
OR	Orange	Y/GN	Yellow/Green
P	Pink		
RD	Red		
WH	White		
Y	Yellow		

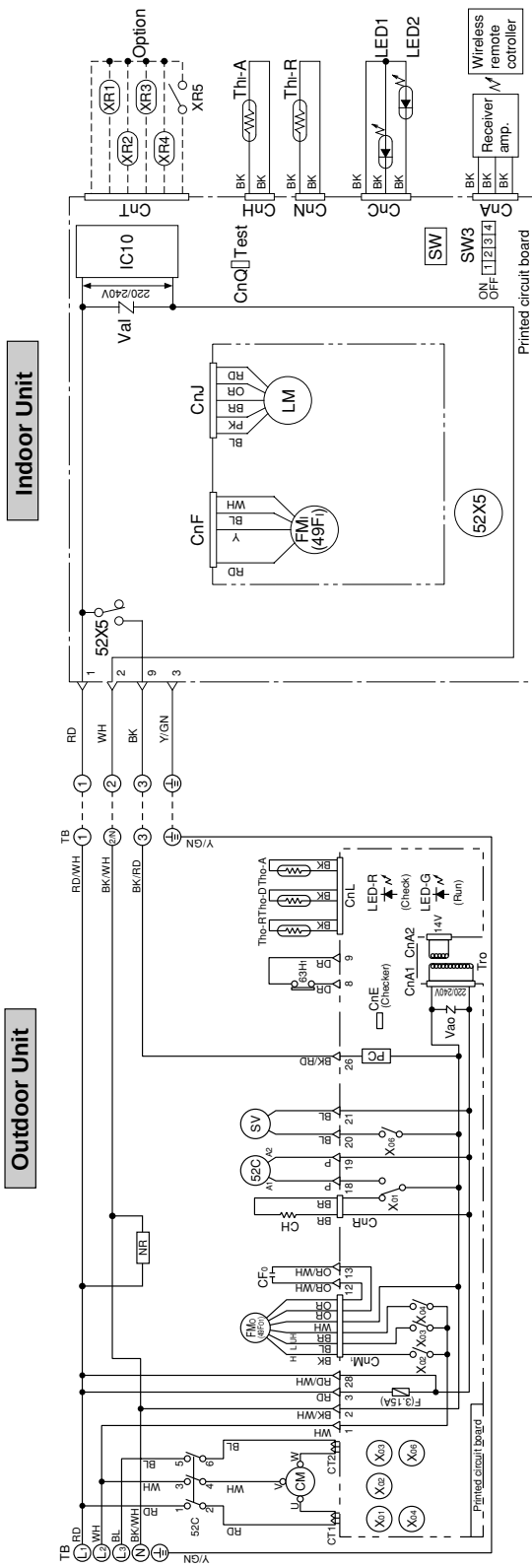


Meaning of marks		
Mark	Parts name	Mark
Cc	Capacitor for CM	TB
CFo	Capacitor for FMo	Thi-A
CH	Crankcase heater	Thi-R
CM	Compressor motor	Tho-A
CnA-W	Connector	Tho-D
F	Fuse	Tho-R
FMi	Fan motor (Indoor unit)	Tri, Tro
FMo	Fan motor (Outdoor unit)	Vai, Vao
LED1	Indication lamp (Green-Run)	49Fi
LED2	Indication lamp (Yellow-Timer/Check)	49Fo
LED-G	Indication lamp (Green)	CT1
LED-R	Indication lamp (Red)	63Hi
SV	Solenoid coil (for control)	52C
LM	Louver motor	52X5
NR	Surge suppressor	X01-06
PC	Photo coupler	▽
SW	Back up switch (ON/OFF)	■
SW3	Change over switch	
Mark	Parts name	Parts name
		Terminal block (O mark)
		Thermistor
		Thermistor
		Thermistor
		Thermistor
		Transformer
		Varistor
		Internal thermostat for FMi
		Internal thermostat for FMo
		Current sensor
		High pressure switch (for protection)
		Magnetic contactor for CM
		Auxiliary relay
		Auxiliary relay
		Terminal (F)
		Connector

Color mark			
Mark	Color	Mark	Color
BK	Black	BK/RD	Black/Red
BL	Blue	BK/WH	Black/White
BR	Brown	OR/WH	Orange/White
GR	Gray	RD/WH	Red/White
OR	Orange	Y/GN	Yellow/Green
P	Pink		
RD	Red		
WH	White		
Y	Yellow		

Model FDKNP308CES-S

Power Source
3 Phase 380/415V 50Hz



Meaning of marks

Mark	Parts name	Mark	Parts name
CFo	Capacitor for FMo	TB	Terminal block (○mark)
CH	Crankcase heater	Th-A	Thermistor
CM	Compressor motor	Th-R	Thermistor
CnA-W	Connector	Tho-A	Thermistor
F	Fuse	Tho-D	Thermistor
FMi	Fan motor (Indoor unit)	Tr, Tro	Transformer
FMo	Fan motor (Outdoor unit)	Vai, Vao	Varistor
LED1	Indication lamp (Green-Run)	49Fi	Internal thermostat for FMi
LED2	Indication lamp (Yellow-Timer/Check)	49Fo	Internal thermostat for FMo
LED-G	Indication lamp (Green)	CT1, 2	Current sensor
LED-R	Indication lamp (Red)	63H1	High pressure switch (for protection)
SV	Solenoid coil (for control)	52C	Magnetic contactor for CM
LM	Louver motor	52X5	Auxiliary relay
NR	Surge suppressor	X01-06	Auxiliary relay
PC	Photo coupler	△	Terminal (F)
SW	Back up switch (ON/OFF)	■	Connector
SW3	Change over switch		

Color mark

Mark	Color	Mark	Color
BK	Black	BK/IR	Black/Red
BL	Blue	BK/WH	Black/White
BR	Brown	OR/WH	Orange/White
GR	Gray	RD/WH	Red/White
OR	Orange	Y/GN	Yellow/Green
P	Pink		
RD	Red		
WH	White		
Y	Yellow		

13.4 OUTLINE OF OPERATION CONTROL BY MICROCOM-PUTER

Except for function relating to heating, same as the unit for FDT(N) heat pump type. See page 317.

13.5 APPLICATION DATA

The application data for the cooling only models are similar to those for the heat pump models. (See page 497.)

13.6 MAINTENANCE DATA

Same as the cooling/heating equipment for FDT(N) heat pump type. Refer to page 348.