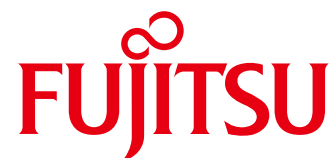


Split type room air conditioner
Duct type (50Hz)



SERVICE MANUAL



Indoor unit	Outdoor unit
ARXG22KMLA	AOYG22KBTB

CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS.....	4
REFRIGERANT SYSTEM DIAGRAM.....	6
INDOOR PCB CIRCUIT DIAGRAM.....	7
OUTDOOR PCB CIRCUIT DIAGRAM.....	8
ERROR DETECTION.....	9
PARTS (INDOOR UNIT).....	10
PARTS (OUTDOOR UNIT).....	14
ACCESSORIES.....	20

Specifications (Indoor unit)

Type				Duct		
				Inverter heat pump		
Model name				ARXG22KMLA		
Power supply				230 V ~ 50 Hz		
Power supply intake				Outdoor unit		
Available voltage range				198—264 V		
Capacity	Cooling	Rated	kW	6.0		
			Btu/h	20,500		
		Min.—Max.	kW	0.9—6.7		
			Btu/h	3,100—22,900		
	Heating	Rated	kW	7.00		
			Btu/h	23,900		
Min.—Max.		kW	0.90—8.00			
		Btu/h	3,100—27,300			
Input power	Cooling	Rated	kW	1.78		
		Max.		2.90		
	Heating	Rated		1.87		
		Max.		2.90		
Current	Cooling	Rated	A	7.8		
	Heating			8.2		
Power factor	Cooling	99.2				
	Heating	99.2				
EER	Cooling	3.37				
COP	Heating	3.74				
Moisture removal			L/h (pints/h)	2.1 (3.7)		
Maximum operating current *1	Cooling	12.6				
	Heating	12.6				
Fan	Airflow rate	Cooling	HIGH	m ³ /h	1,100	
			MED		910	
			LOW		750	
			QUIET		580	
		Heating	HIGH		1,100	
			MED		910	
			LOW		750	
			QUIET		580	
	Type × Q'ty			Sirocco fan × 2		
	Motor output			W	106	
Recommended static pressure range			Pa	30 to 150		
Sound pressure level *2	Cooling	HIGH	dB (A)	31		
		MED		29		
		LOW		27		
		QUIET		25		
	Heating	HIGH		31		
		MED		29		
		LOW		27		
		QUIET		25		
Heat exchanger type	Dimensions (H × W × D)		mm	294 × 1,000 × 39.9		
	Fin pitch			1.40		
	Rows × Stages			3 × 14		
	Pipe type			Copper tube		
Fin type		Aluminum				
Enclosure Material		Steel sheet				
Color		—				
Dimensions (H × W × D)	Net		mm	270 × 1,135 × 700		
	Gross			300 × 1,320 × 790		
Weight	Net		kg	35		
	Gross			43		
Connection pipe	Size	Liquid	mm (in)	Ø 6.35 (Ø 1/4)		
		Gas		Ø 12.70 (Ø 1/2)		
Method		Flare				
Drain port Material		Steel				
Size		mm	Ø 35.7 (I.D.), Ø 38.1 (O.D.)			
Operation range	Cooling	°C	18 to 32			
		%RH	80 or less			
Heating		°C	16 to 30			
Remote control (Option)			Wired remote controller, Wireless remote controller, Mobile app*3 (FGLair™)			
NOTES:						
<ul style="list-style-type: none"> • Specifications are based on the following conditions: <ul style="list-style-type: none"> – Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB. – Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB. – Standard static pressure: 35 Pa. – Pipe length: 5 m, Height difference: 0 m. (Between outdoor unit and indoor unit.) • Protective function might work when using it outside the operation range. • *1: Maximum operating current is the total current of the indoor unit and the outdoor unit. • *2: Sound pressure level: <ul style="list-style-type: none"> – Measured values in manufacturer's anechoic chamber. – Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here. • *3: Available on Google Play™ store or on App Store®. Optional WLAN adapter is also required. For details, refer to the setting manual. 						

Specifications (Indoor unit) Continued

Specifications for ErP Lot10					
Model name			ARXG22KMLA		
Energy efficiency class	Cooling		A ⁺⁺		
	Heating (Average)		A ⁺		
Pdesign	Cooling	kW	6.00 (35°C)		
	Heating (Average)		4.80 (-10°C)		
SEER	Cooling	kWh/kWh	6.10		
SCOP	Heating (Average)		4.10		
Annual energy consumption	QCE		kWh/a	344	
	QHE (Average)			1,637	
Sound power level	Cooling	HIGH	dB (A)	60	
	Heating			62	

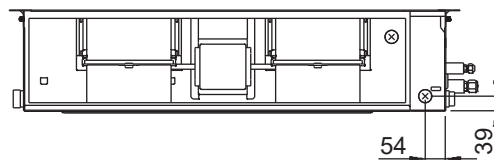
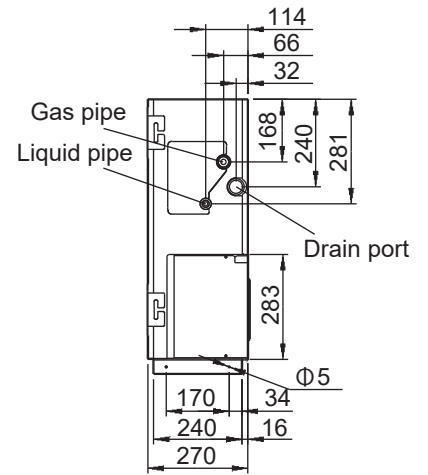
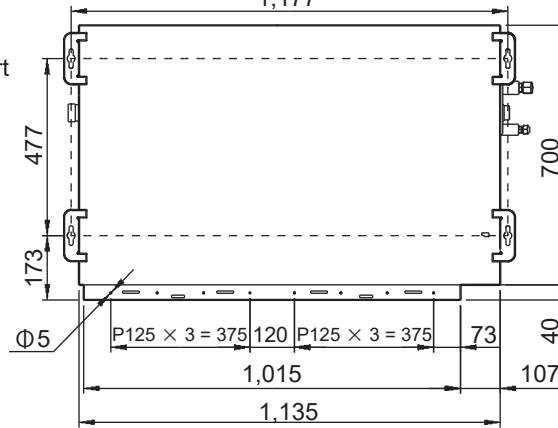
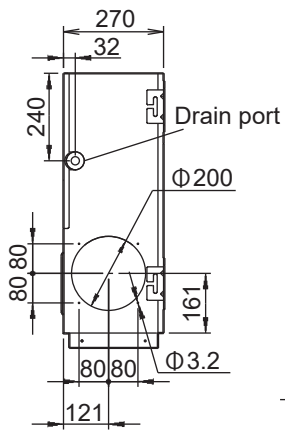
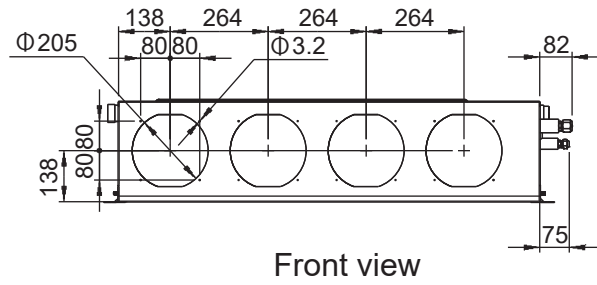
Specifications (Outdoor unit)

Type				Inverter heat pump
Model name				AOYG22KBTB
Power supply				230 V ~ 50 Hz
Available voltage range				198—264 V
Starting current				8.2
Fan	Airflow rate	Cooling	m ³ /h	2,240
		Heating		1,960
	Type × Q'ty			Propeller fan × 1
	Motor output		W	49
Sound pressure level *1		Cooling	dB (A)	51
		Heating		51
Sound power level		Cooling	dB (A)	63
		Heating		63
Heat exchanger type	Dimensions (H × W × D)		mm	588 × 881 × 18.19
	Fin pitch			1.3
	Rows × Stages			2 × 28
	Pipe type			Copper tube
	Fin type	Type (Material)		Aluminum
		Surface treatment		PC fin
Compressor	Type × Q'ty		W	DC Twin rotary × 1
	Motor output			1,060
Refrigerant	Type (Global warming potential)			R32 (675)
	Charge		g	1,250
Refrigerant oil	Type			RmM68AF
	Amount		cm ³	400
Enclosure	Material			Steel sheet
	Color			Beige Approximate color of Munsell 10YR 7.5/1.0
Dimensions (H × W × D)	Net		mm	632 × 799 × 290
	Gross			692 × 940 × 375
Weight	Net		kg	38
	Gross			42
Connection pipe	Size	Liquid	mm (in)	Ø 6.35 (Ø 1/4)
		Gas		Ø 12.70 (Ø 1/2)
	Method			Flare
	Pre-charge length		m	20
	Max. length			30
	Max. height difference			25
Operation range		Cooling	°C	-15 to 46
		Heating		-15 to 24
Drain hose	Material			PP
	Size		mm	Ø 13.0 (I. D.), Ø 16.0 to Ø 16.8 (O. D.)
NOTES:				
<ul style="list-style-type: none"> • Specifications are based on the following conditions: <ul style="list-style-type: none"> – Cooling: Indoor temperature of 27 °CDB/19 °CWB, and outdoor temperature of 35 °CDB/24 °CWB. – Heating: Indoor temperature of 20 °CDB/15 °CWB, and outdoor temperature of 7 °CDB/6 °CWB. – Pipe length: 5 m, Height difference: 0 m. • Protective function might work when using it outside the operation range. • *1: Sound pressure level <ul style="list-style-type: none"> – Measured values in manufacturer's anechoic chamber. – Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here. 				

Dimensions (Indoor unit)

Model: ARXG22KMLA

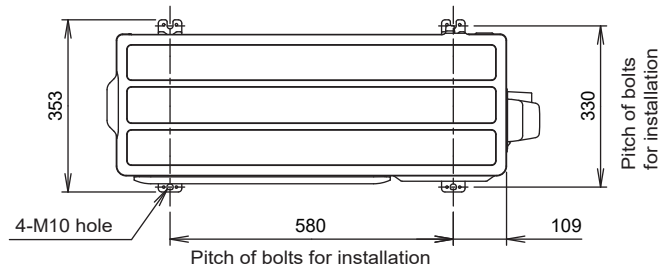
Unit: mm



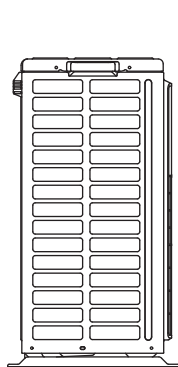
Dimensions (Outdoor unit)

Model: AOYG22KBTB

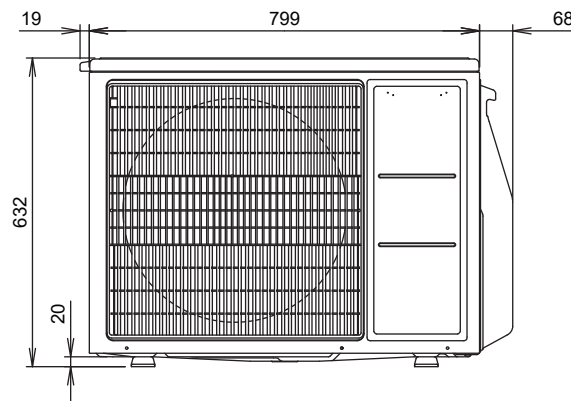
Unit: mm



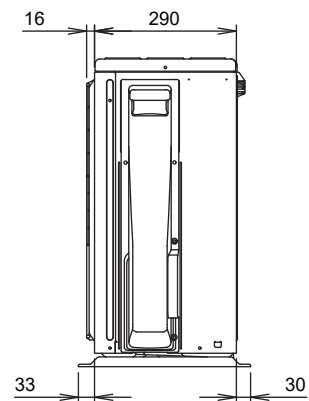
Top view



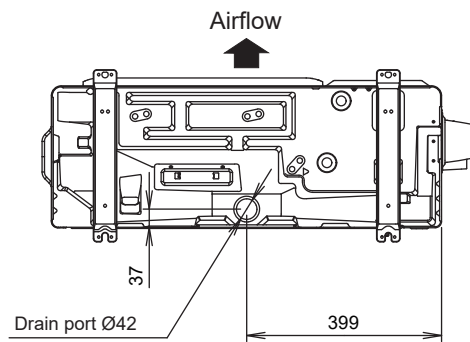
Side view



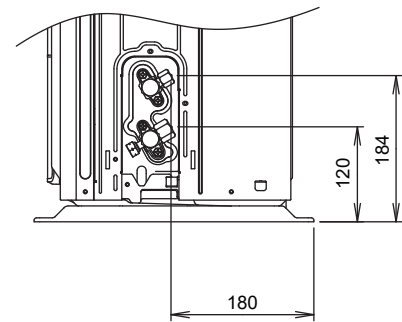
Front view



Side view



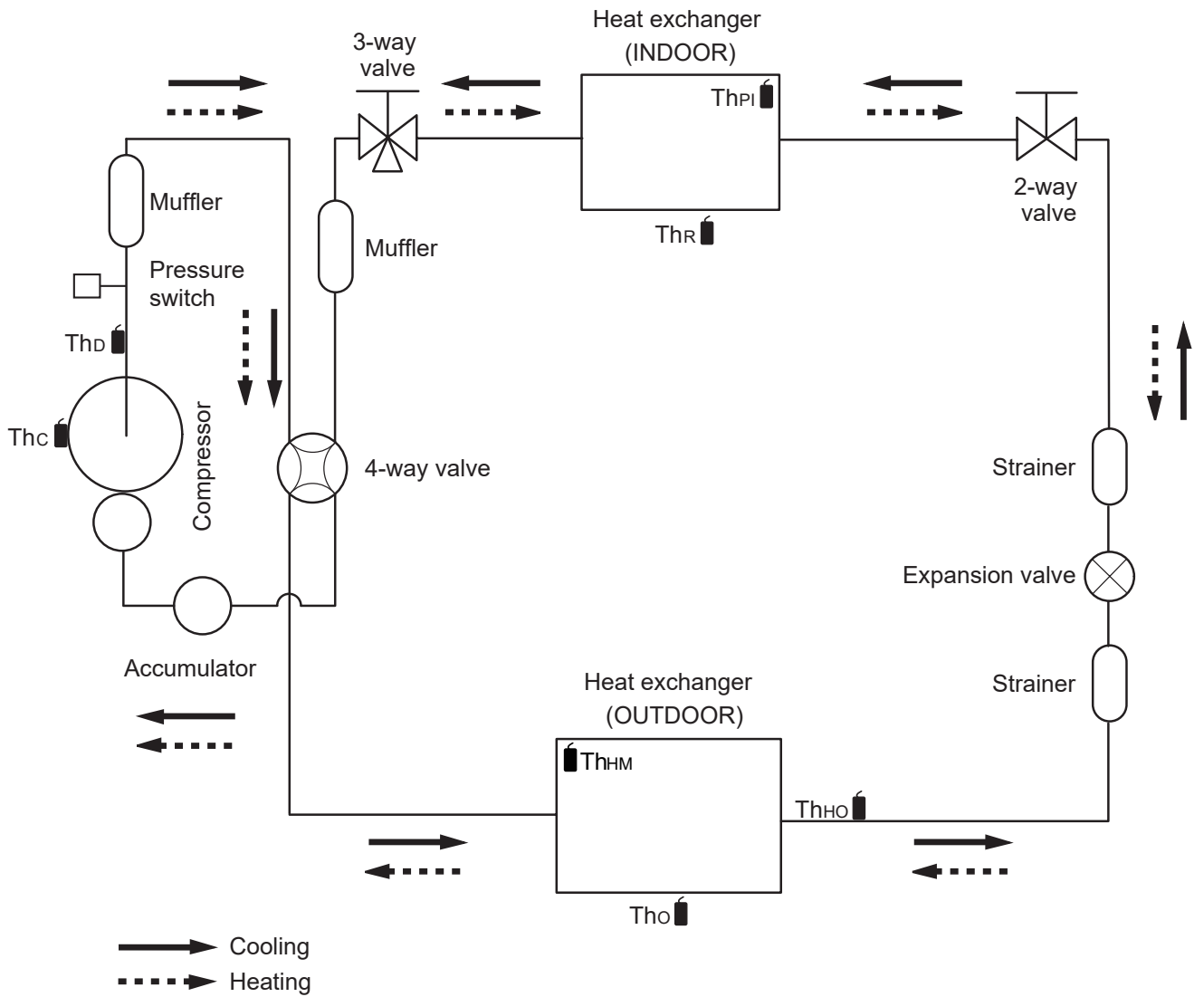
Bottom view



Side view (Valve part)

Refrigerant circuit

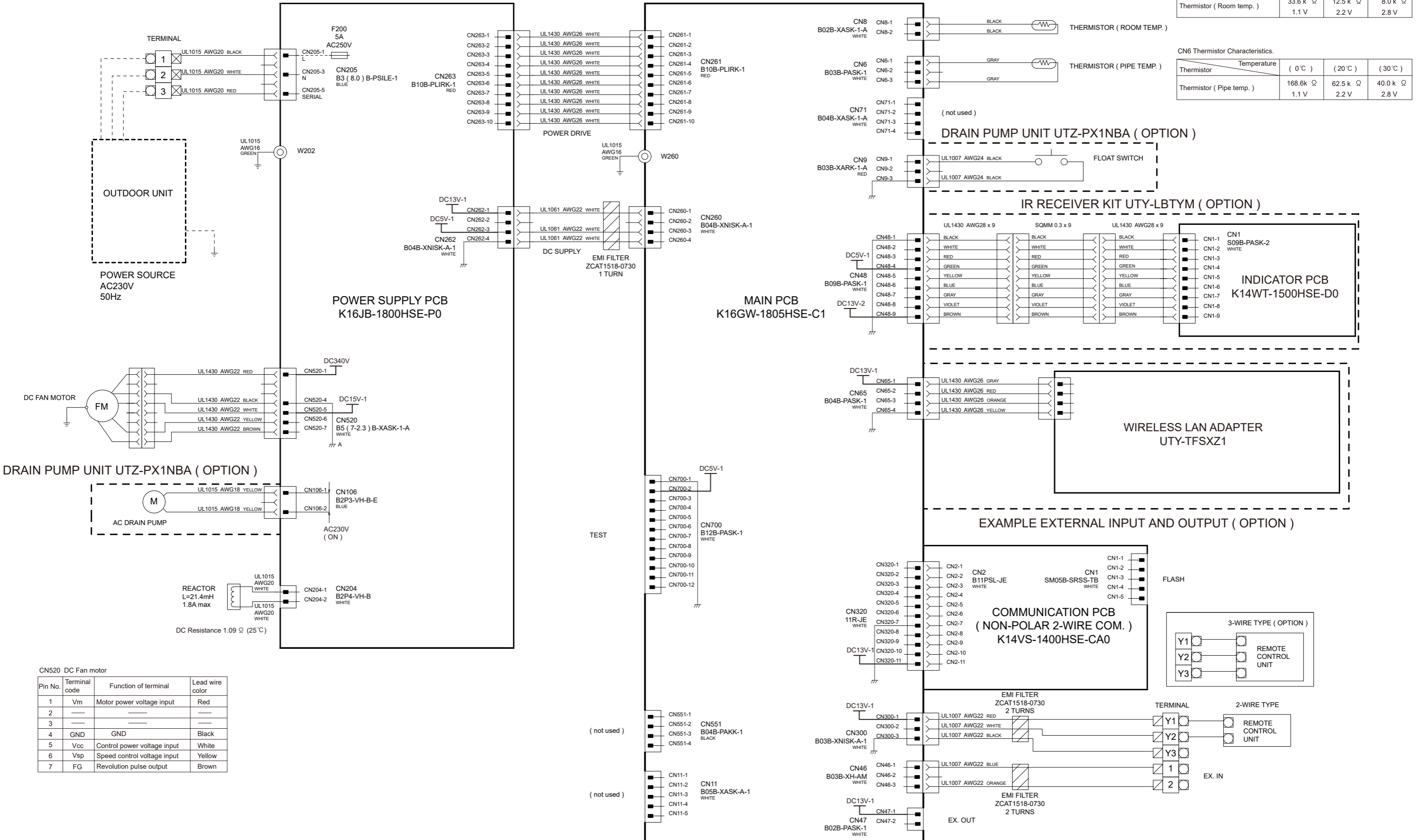
Models: ARXG22KMLA/AOYG22KBTB



INDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

Model : ARXG22KMLA

CONTROL UNIT EZ-01811HSE



CN8 Thermistor Characteristics.

Thermistor	Temperature	(0°C)	(20°C)	(30°C)
Thermistor (Room temp.)		33.6 k Ω	12.5 k Ω	8.0 k Ω
		1.1 V	2.2 V	2.8 V

CN6 Thermistor Characteristics.

Thermistor	Temperature	(0°C)	(20°C)	(30°C)
Thermistor (Pipe temp.)		168.6 k Ω	62.5 k Ω	40.0 k Ω
		1.1 V	2.2 V	2.8 V

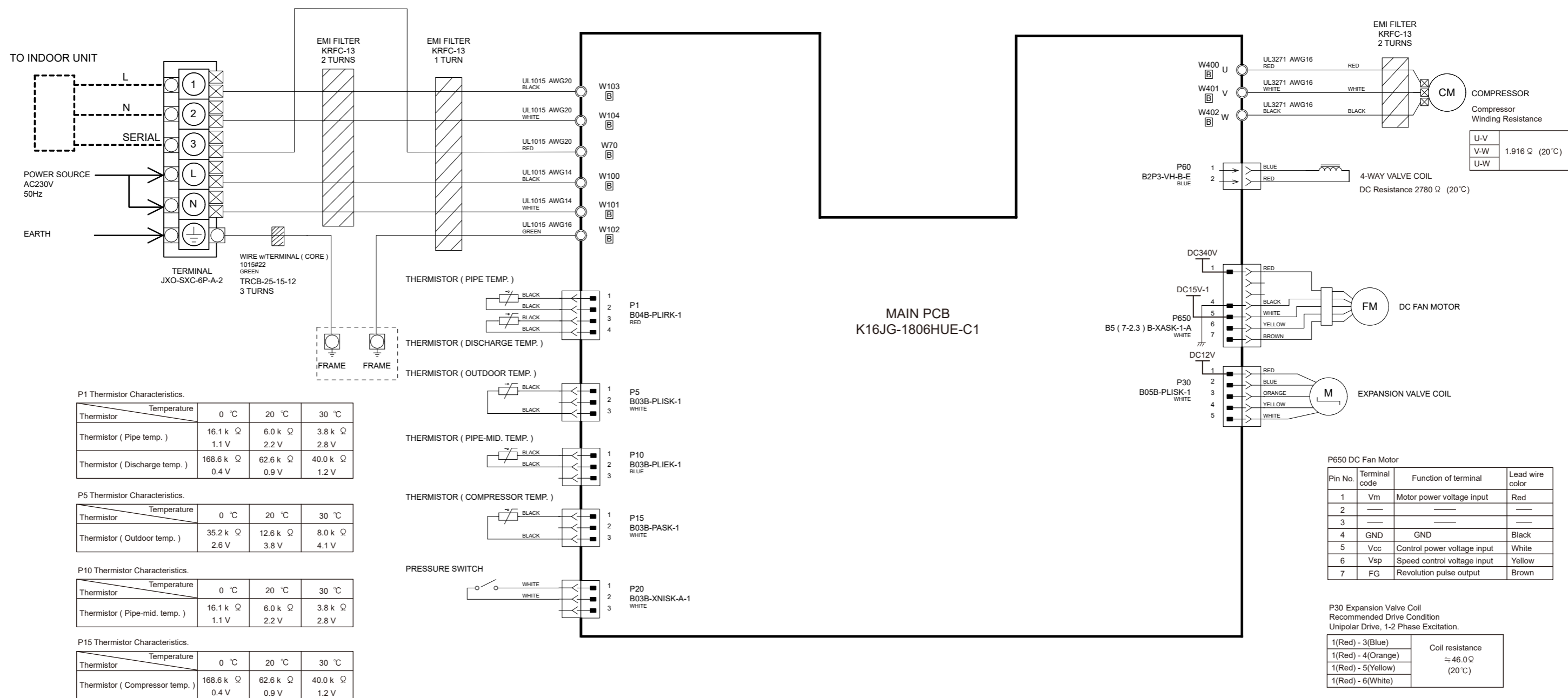
CN520 DC Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	Vm	Motor power voltage input	Red
2	---	---	---
3	---	---	---
4	GND	GND	Black
5	Vcc	Control power voltage input	White
6	Vsp	Speed control voltage input	Yellow
7	FG	Revolution pulse output	Brown

OUTDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

Model : AOYG22KBTB

INVERTER ASSEMBLY
EZ-0118YHUE



P1 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor (Pipe temp.)		16.1 k Ω 1.1 V	6.0 k Ω 2.2 V	3.8 k Ω 2.8 V
Thermistor (Discharge temp.)		168.6 k Ω 0.4 V	62.6 k Ω 0.9 V	40.0 k Ω 1.2 V

P5 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor (Outdoor temp.)		35.2 k Ω 2.6 V	12.6 k Ω 3.8 V	8.0 k Ω 4.1 V

P10 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor (Pipe-mid. temp.)		16.1 k Ω 1.1 V	6.0 k Ω 2.2 V	3.8 k Ω 2.8 V

P15 Thermistor Characteristics.

Thermistor	Temperature	0 °C	20 °C	30 °C
Thermistor (Compressor temp.)		168.6 k Ω 0.4 V	62.6 k Ω 0.9 V	40.0 k Ω 1.2 V

P650 DC Fan Motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	Vm	Motor power voltage input	Red
2	—	—	—
3	—	—	—
4	GND	GND	Black
5	Vcc	Control power voltage input	White
6	Vsp	Speed control voltage input	Yellow
7	FG	Revolution pulse output	Brown

P30 Expansion Valve Coil
Recommended Drive Condition
Unipolar Drive, 1-2 Phase Excitation.

1(Red) - 3(Blue)	Coil resistance ≈ 46.0 Ω (20 °C)
1(Red) - 4(Orange)	
1(Red) - 5(Yellow)	
1(Red) - 6(White)	

COMPRESSOR
Compressor Winding Resistance

U-V	1.916 Ω (20 °C)
V-W	
U-W	

Error codes

If you use a wired type remote controller, error codes will appear on the remote controller display. If you use a wireless remote controller, the lamps on the IR receiver unit will output error codes by way of blinking patterns. See the lamp blinking patterns and error codes in the table below. An error display is displayed only during operation.

Error display			Wired remote controller Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(1)	●(1)	◇	11	Serial communication error
●(1)	●(2)	◇	12	Wired remote controller communication error
●(1)	●(5)	◇	15	Check run unfinished
●(2)	●(1)	◇	21	Unit number or Refrigerant circuit address setting error [Simultaneous Multi]
●(2)	●(2)	◇	22	Indoor unit capacity error
●(2)	●(3)	◇	23	Combination error
●(2)	●(4)	◇	24	• Connection unit number error (indoor secondary unit) [Simultaneous Multi] • Connection unit number error (indoor unit or branch unit) [Flexible Multi]
●(2)	●(7)	◇	27	Primary unit, secondary unit setup error [Simultaneous Multi]
●(3)	●(1)	◇	31	Power supply interruption error
●(3)	●(2)	◇	32	Indoor unit PCB model information error
●(3)	●(5)	◇	35	Manual auto switch error
●(4)	●(1)	◇	41	Room temp. sensor error
●(4)	●(2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
●(5)	●(1)	◇	51	Indoor unit fan motor error
●(5)	●(3)	◇	53	Drain pump error
●(5)	●(7)	◇	57	Damper error
●(5)	●(15)	◇	5U	Indoor unit error
●(6)	●(2)	◇	62	Outdoor unit main PCB model information error or communication error
●(6)	●(3)	◇	63	Inverter error
●(6)	●(4)	◇	64	Active filter error, PFC circuit error
●(6)	●(5)	◇	65	Trip terminal L error
●(6)	●(10)	◇	6A	Display PCB microcomputers communication error
●(7)	●(1)	◇	71	Discharge temp. sensor error
●(7)	●(2)	◇	72	Compressor temp. sensor error
●(7)	●(3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error

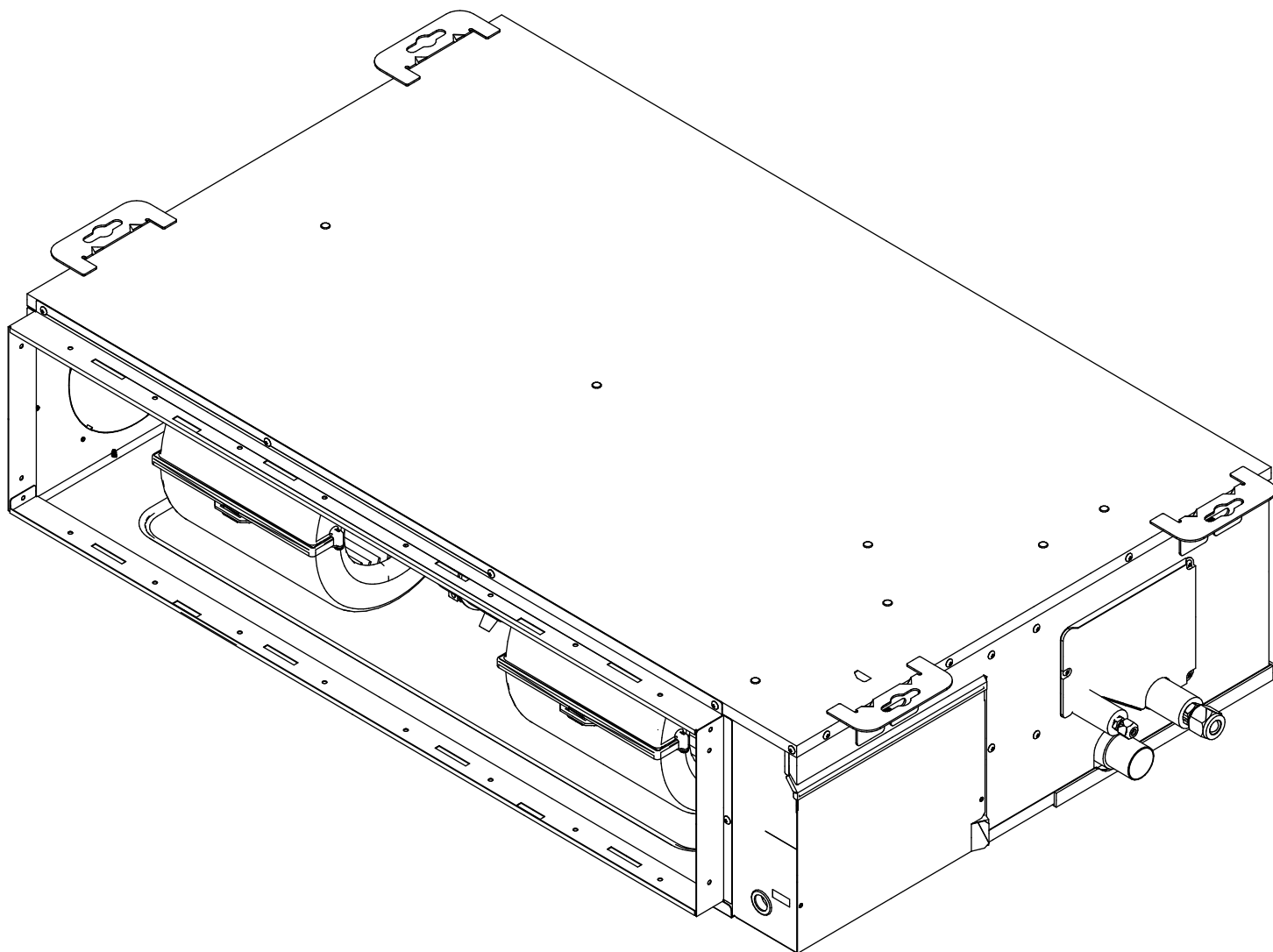
Error display			Wired remote controller Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(7)	●(4)	◇	74	Outdoor temp. sensor error
●(7)	●(5)	◇	75	Suction Gas temp. sensor error
●(7)	●(6)	◇	76	• 2-way valve temp. sensor error • 3-way valve temp. sensor error
●(7)	●(7)	◇	77	Heat sink temp. sensor error
●(8)	●(2)	◇	82	• Sub-cool Heat Ex. gas inlet temp. sensor error • Sub-cool Heat Ex. gas outlet temp. sensor error
●(8)	●(3)	◇	83	Liquid pipe temp. sensor error
●(8)	●(4)	◇	84	Current sensor error
●(8)	●(6)	◇	86	• Discharge pressure sensor error • Suction pressure sensor error • High pressure switch error
●(9)	●(4)	◇	94	Trip detection
●(9)	●(5)	◇	95	Compressor rotor position detection error (permanent stop)
●(9)	●(7)	◇	97	Outdoor unit fan motor 1 error
●(9)	●(8)	◇	98	Outdoor unit fan motor 2 error
●(9)	●(9)	◇	99	4-way valve error
●(9)	●(10)	◇	9A	Coil (expansion valve) error
●(10)	●(1)	◇	A1	Discharge temp. error
●(10)	●(3)	◇	A3	Compressor temp. error
●(10)	●(4)	◇	A4	High pressure error
●(10)	●(5)	◇	A5	Low pressure error
●(13)	●(2)	◇	J2	Branch boxes error [Flexible Multi]

Display mode ● : 0.5s ON / 0.5s OFF
◇ : 0.1s ON / 0.1s OFF
() : Number of flashing

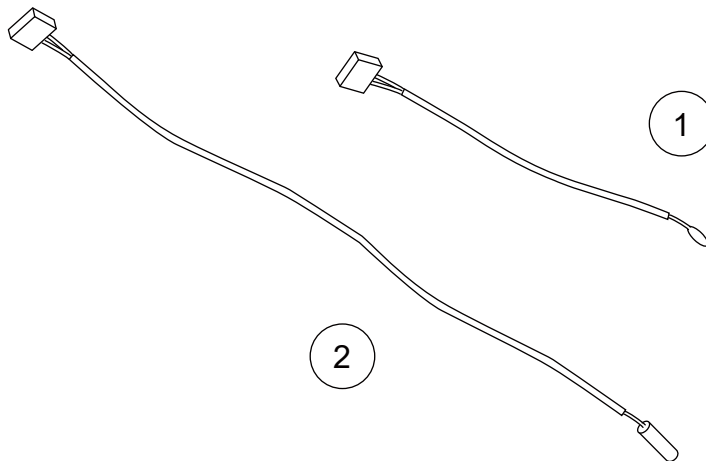
Parts

INDOOR UNIT
ARXG22KMLA

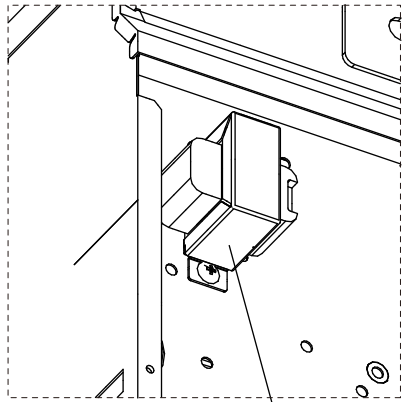
Hook metal



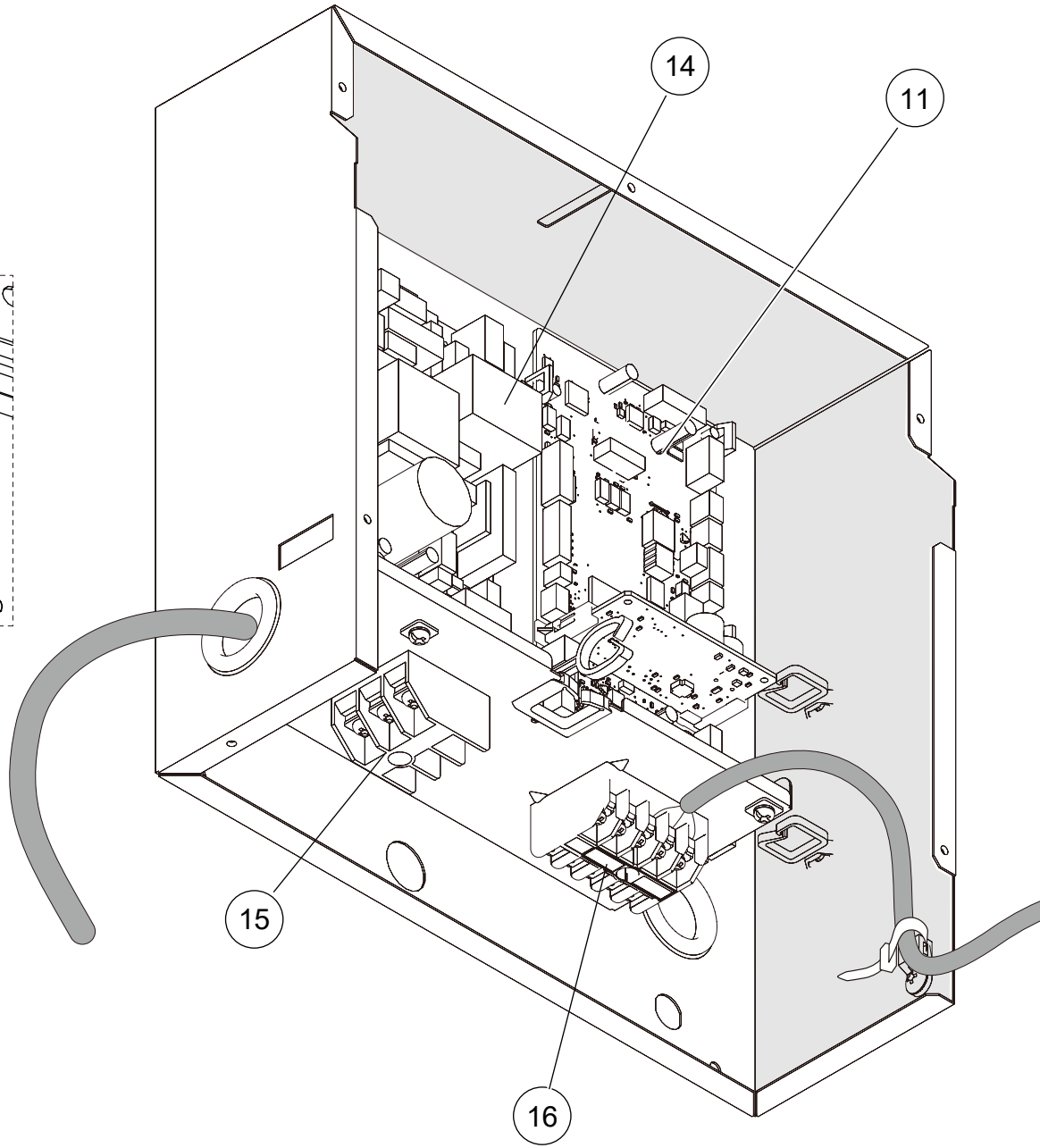
Ref.	Description	Part number
1	Room thermistor	9900826048
2	Pipe thermistor	9900942045



INDOOR UNIT
ARXG22KMLA



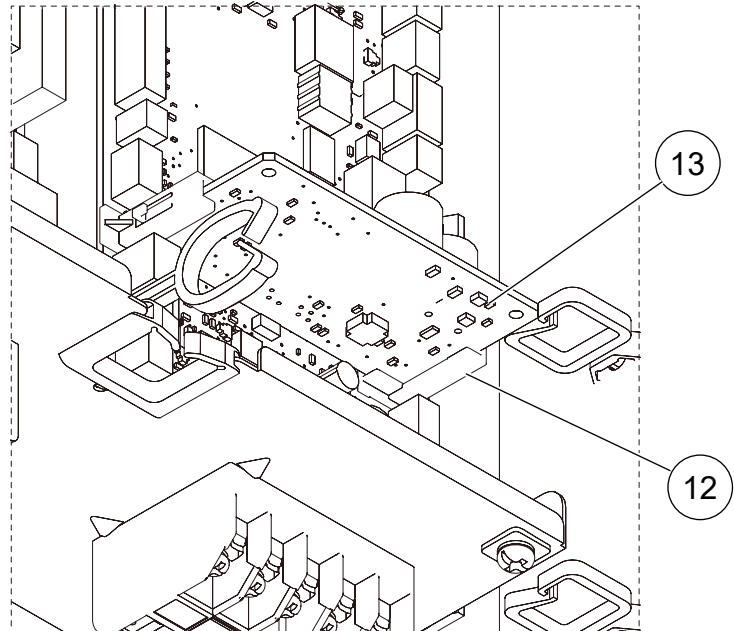
15



15

16

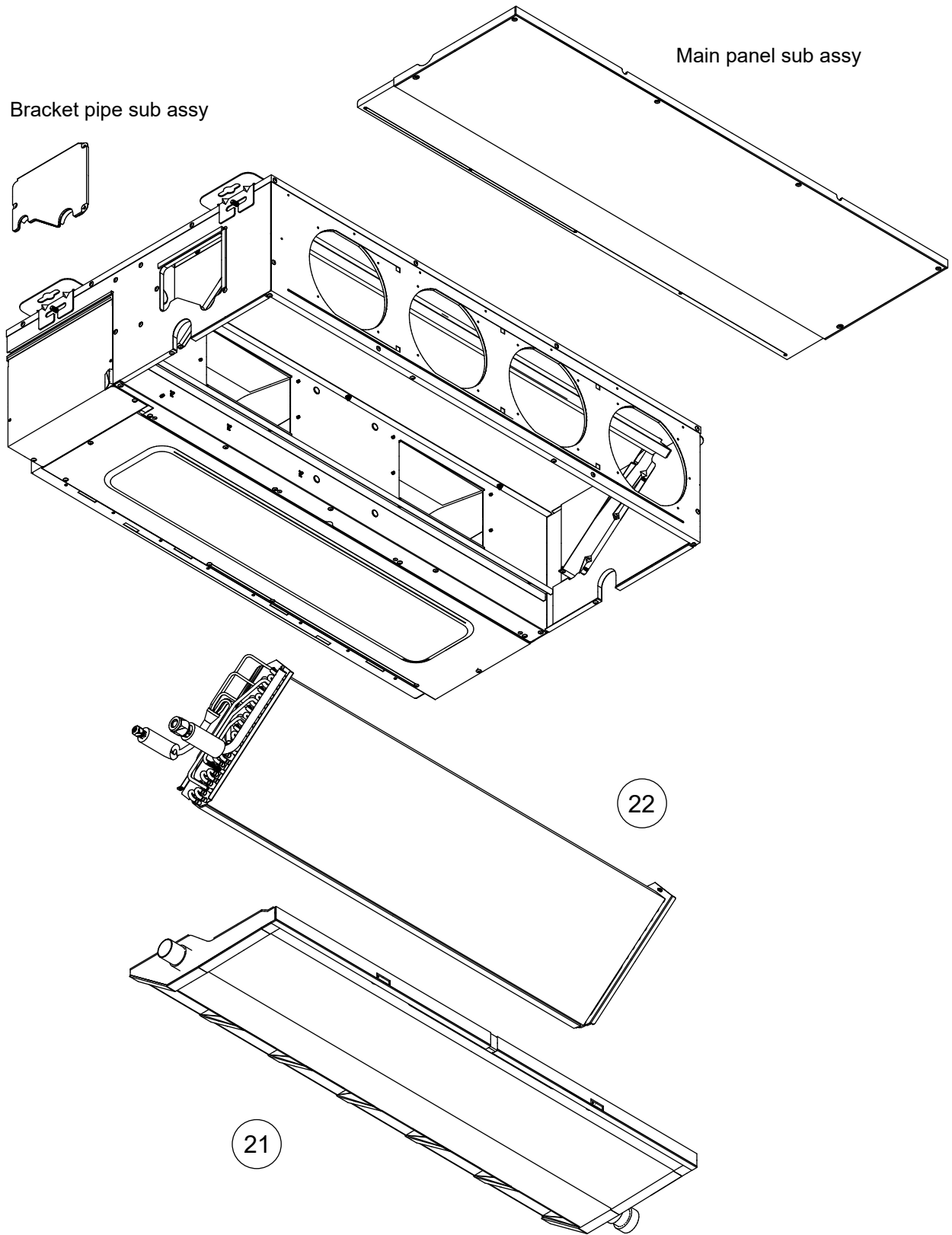
Ref.	Description	Part number
11	Main PCB	9710624124
12	Holder	0600063023
13	Communication PCB	9710019005
14	Power supply PCB	9710661013
15	Terminal 3P	9306489045
16	Terminal 5P	9900896003
17	Reactor assy	9707457049



13

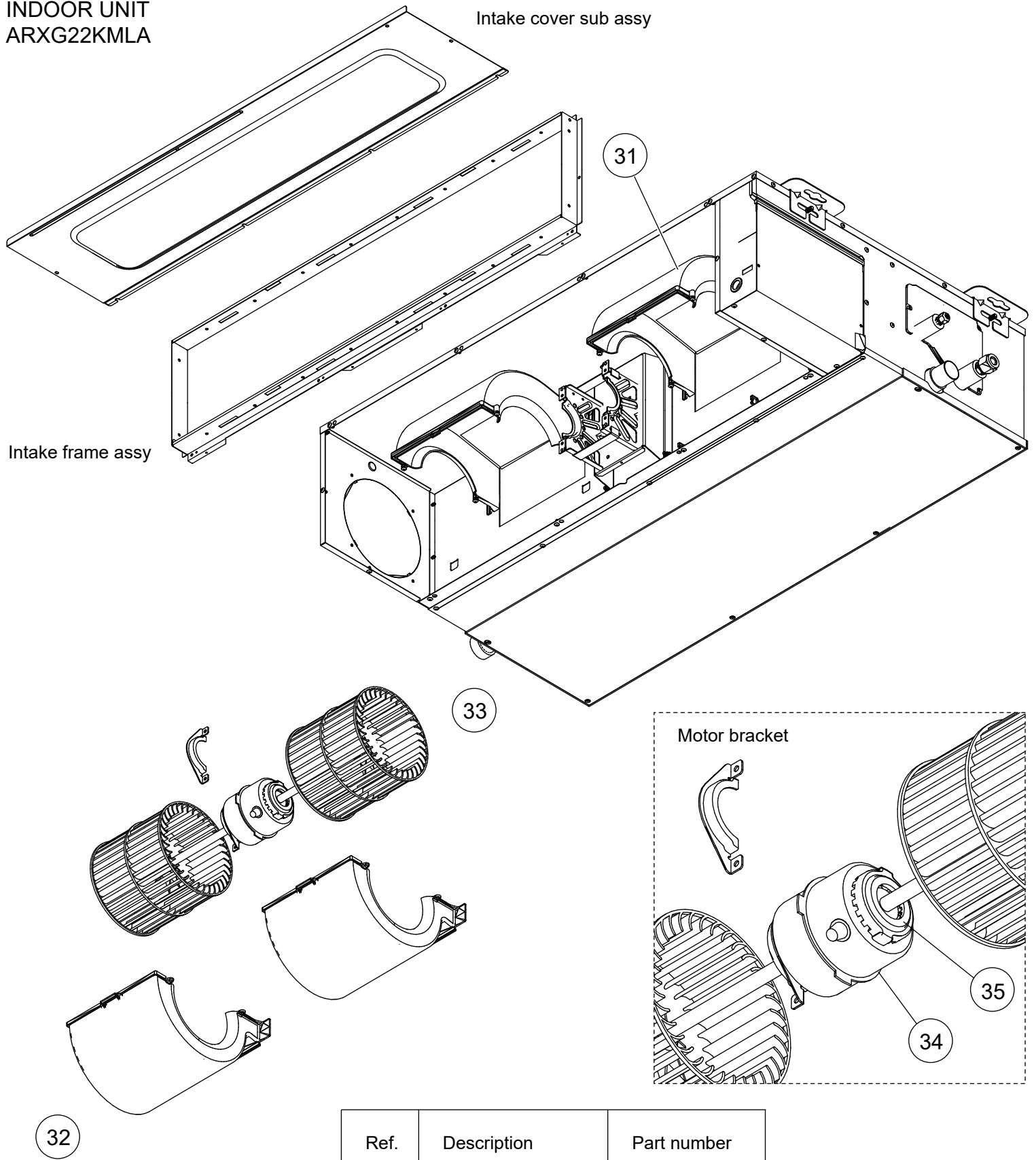
12

INDOOR UNIT
ARXG22KMLA



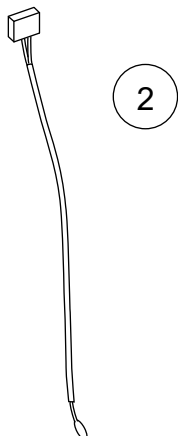
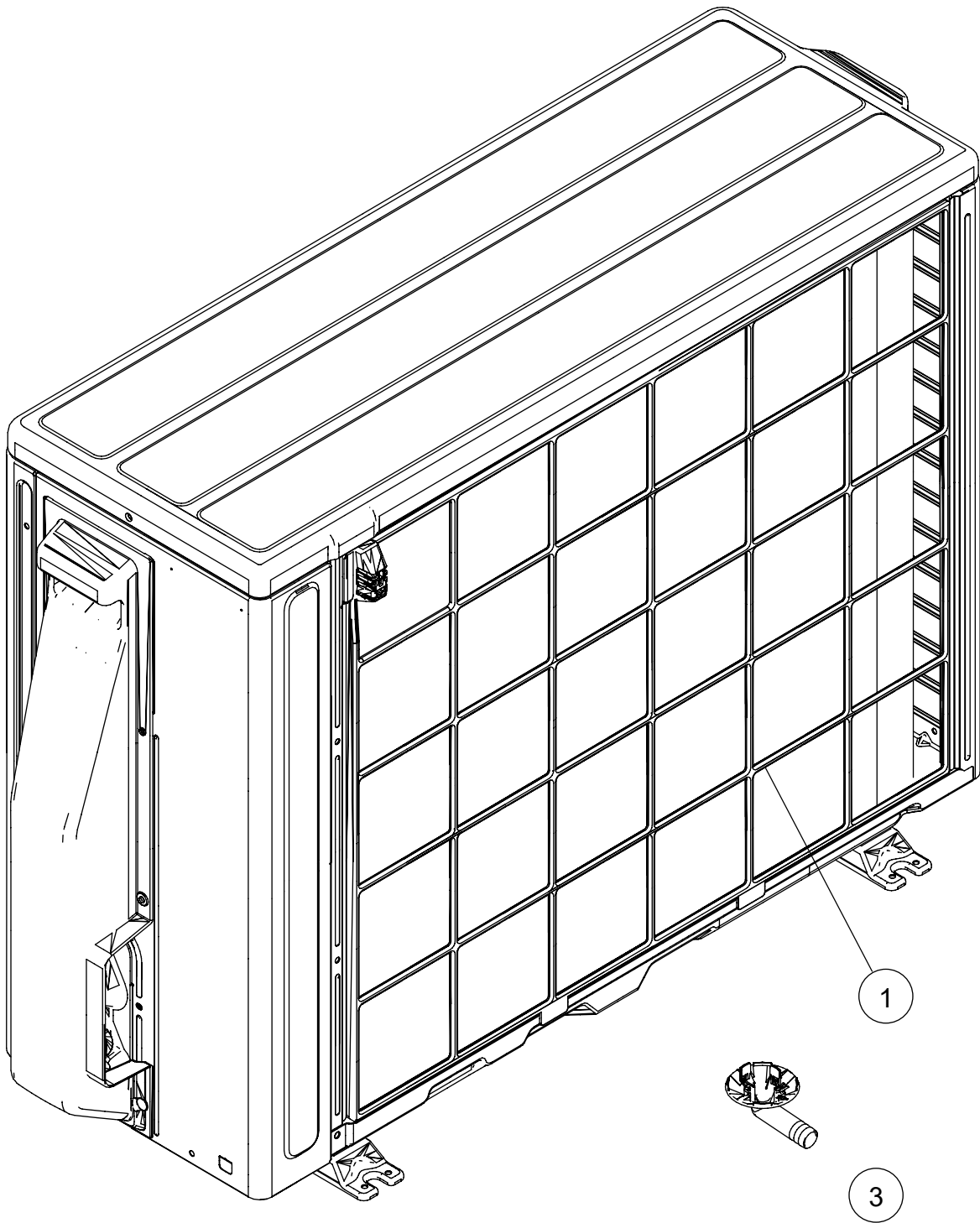
Ref.	Description	Part number
21	Drain pan sub assy	9374513017
22	Evaporator Total Assy	9374517978

INDOOR UNIT
ARXG22KMLA



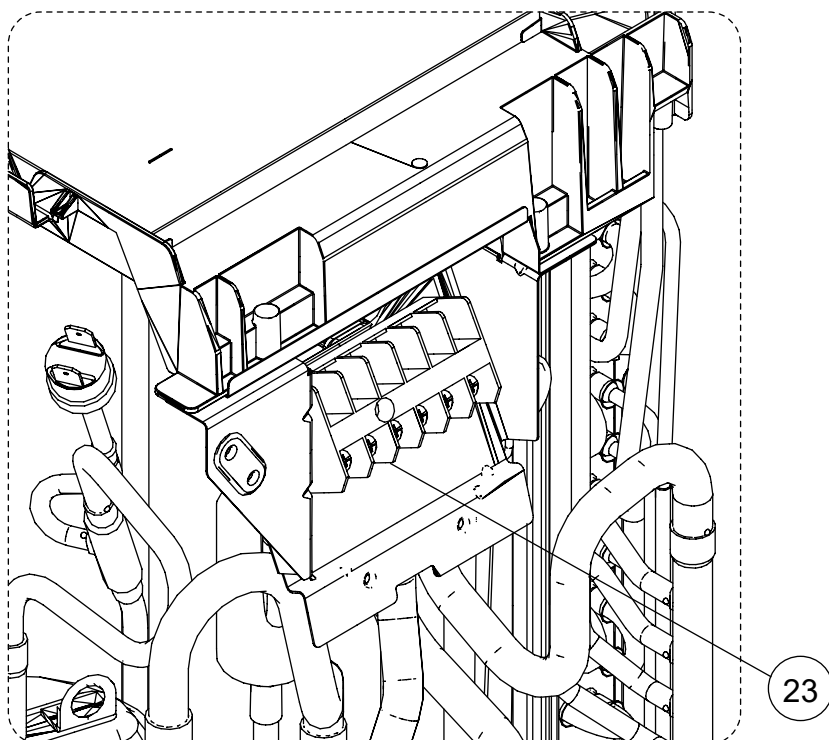
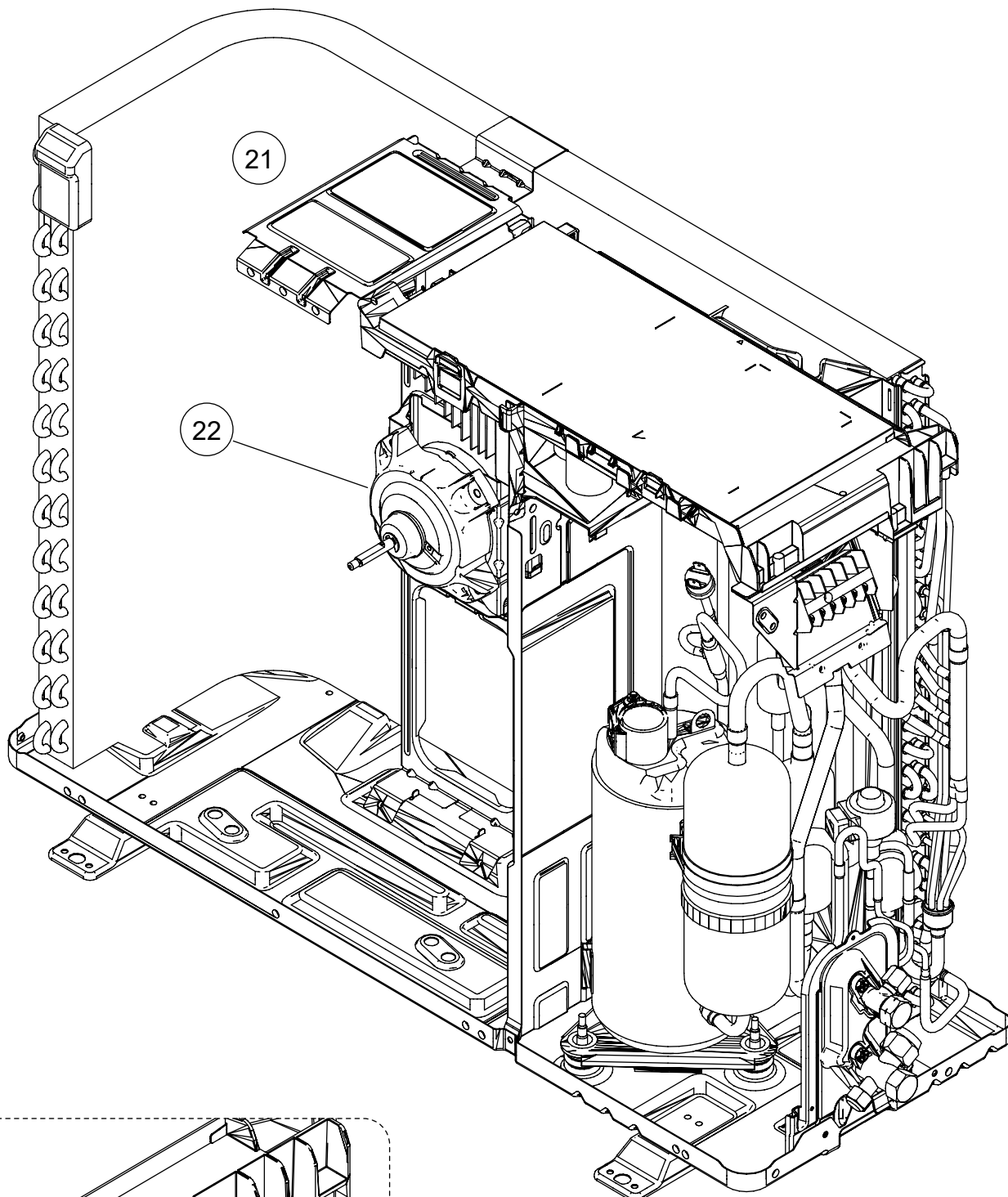
Ref.	Description	Part number
31	Casing A	9374233021
32	Casing B	9374234028
33	Sirocco fan assy	9356531060
34	Fan motor assy	9380718031
35	Rubber	9385102002

OUTDOOR UNIT
AOYG22KBTB



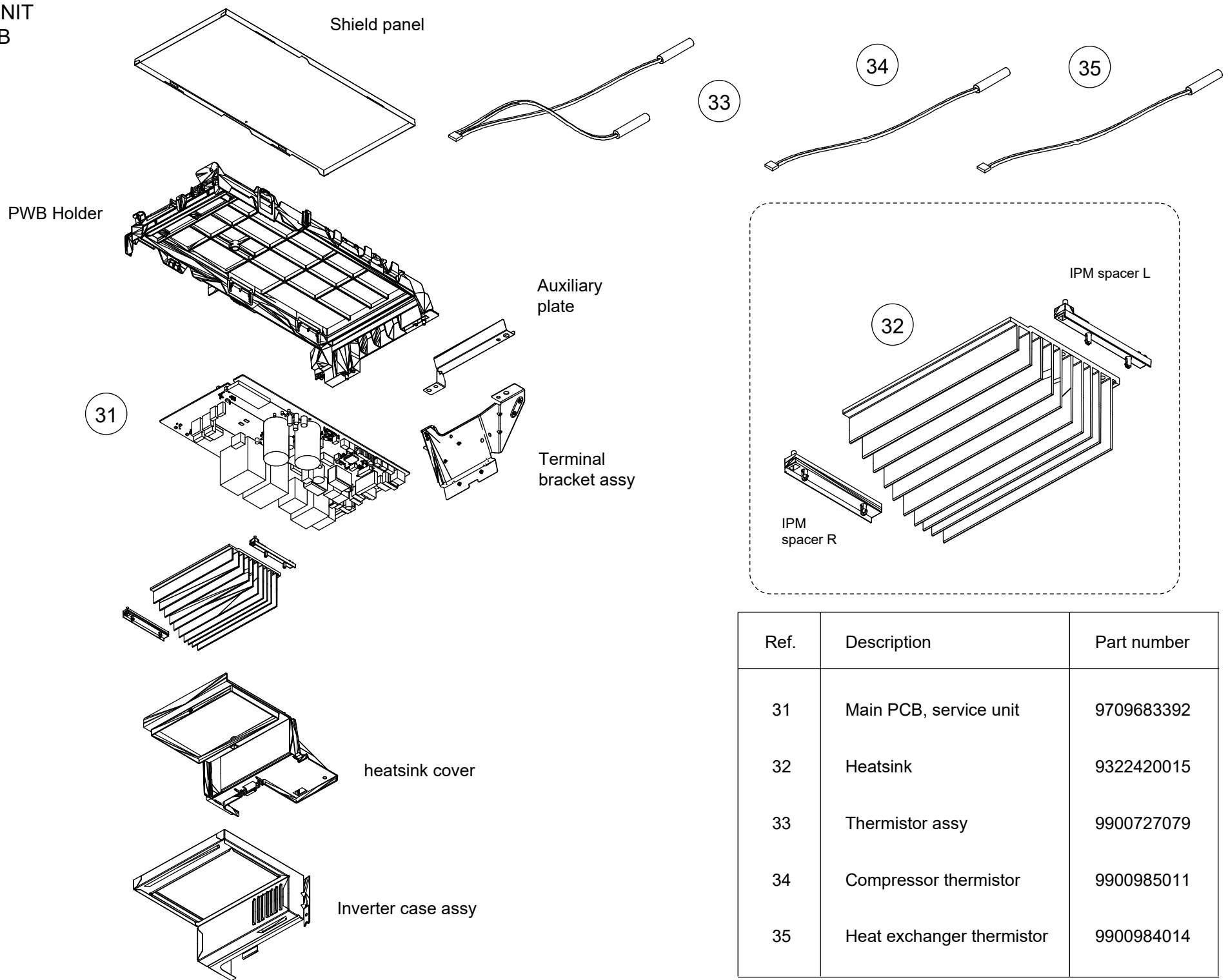
Ref.	Description	Part number
1	Protective net assy	9322811028
2	Outdoor thermistor	9900565060
3	Drain pipe	9322144003

OUTDOOR UNIT
AOYG22KBTB



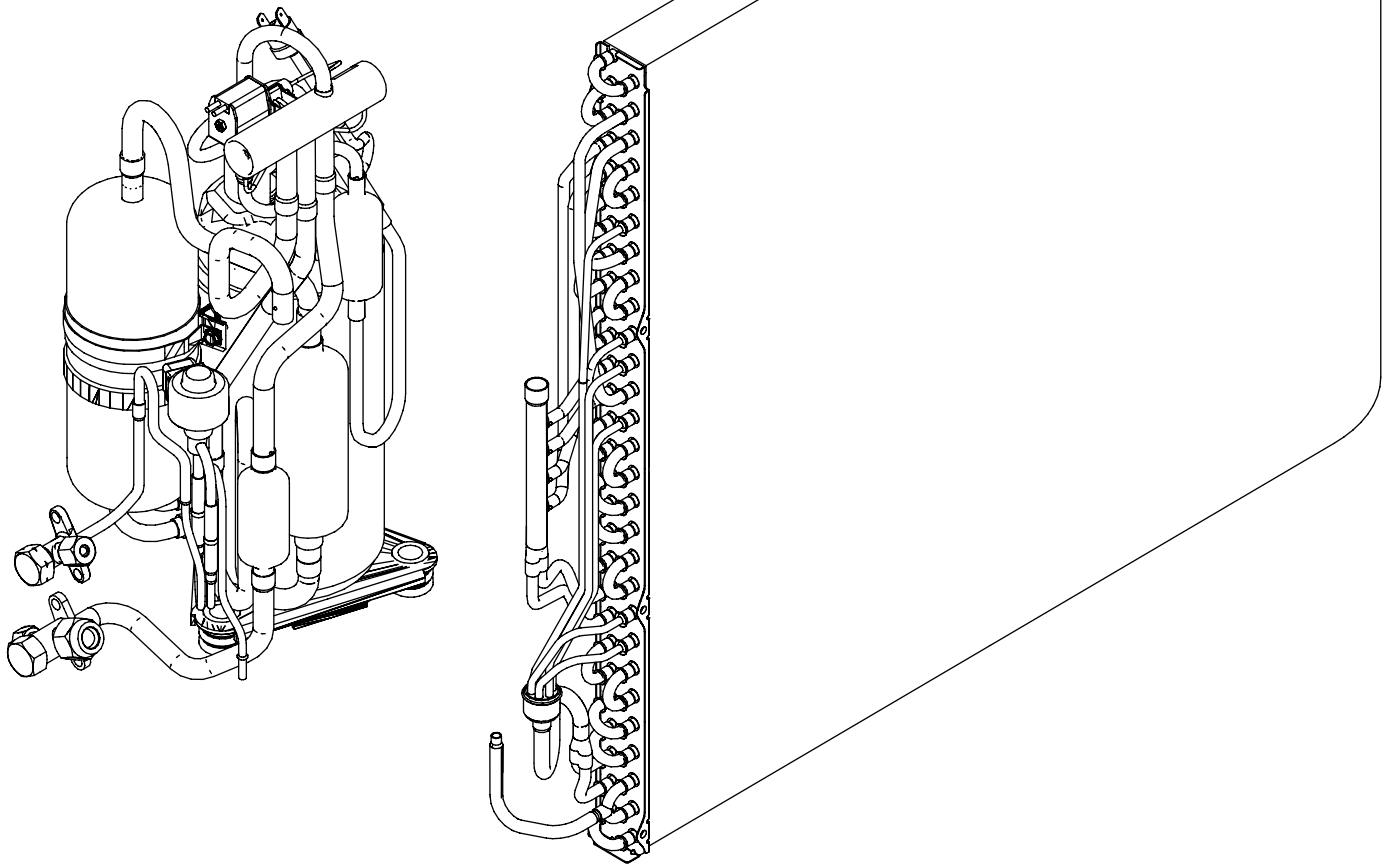
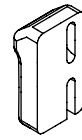
Ref.	Description	Part number
21	Motor bracket assy	9322553027
22	Brushless motor	9603601003
23	Terminal	9900435028

OUTDOOR UNIT
AOYG22KBTB



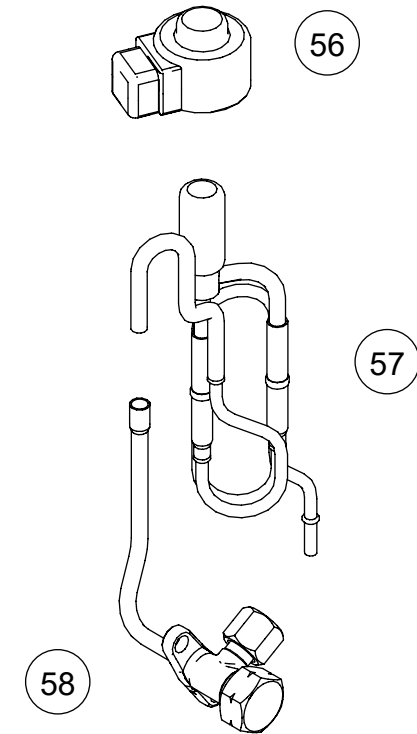
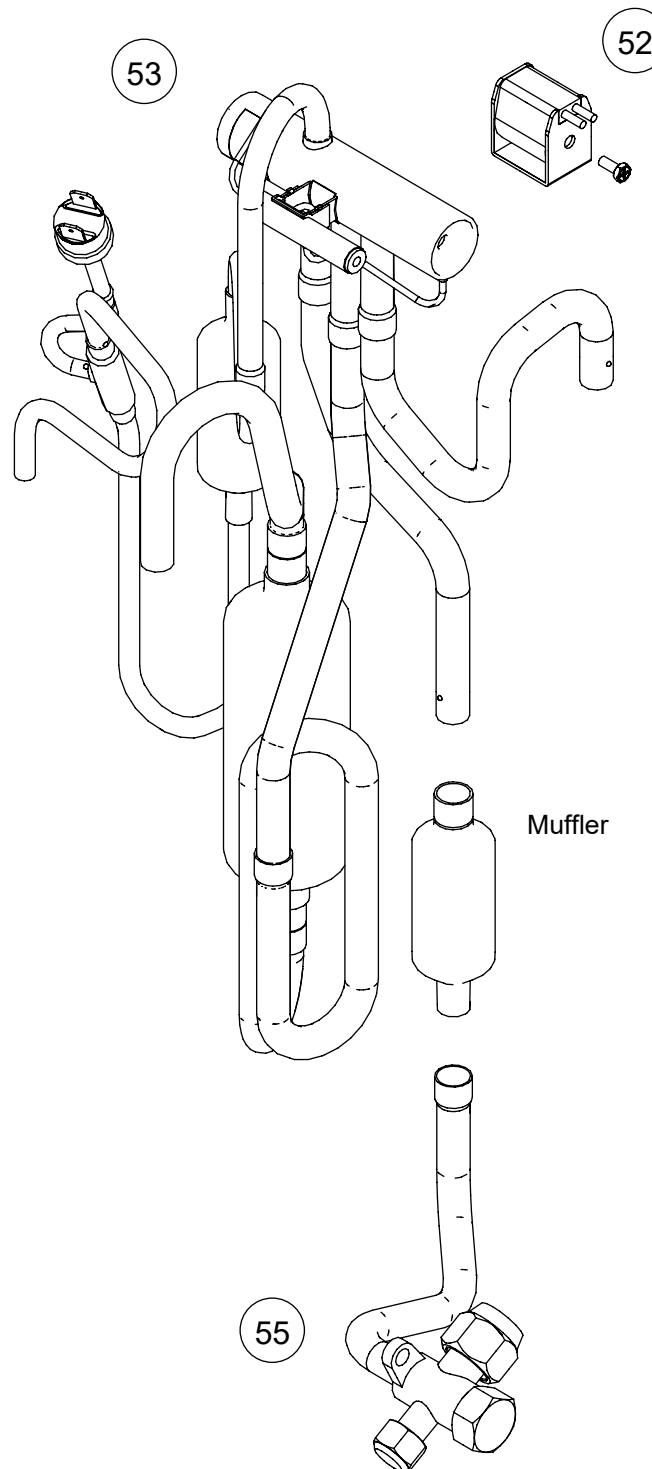
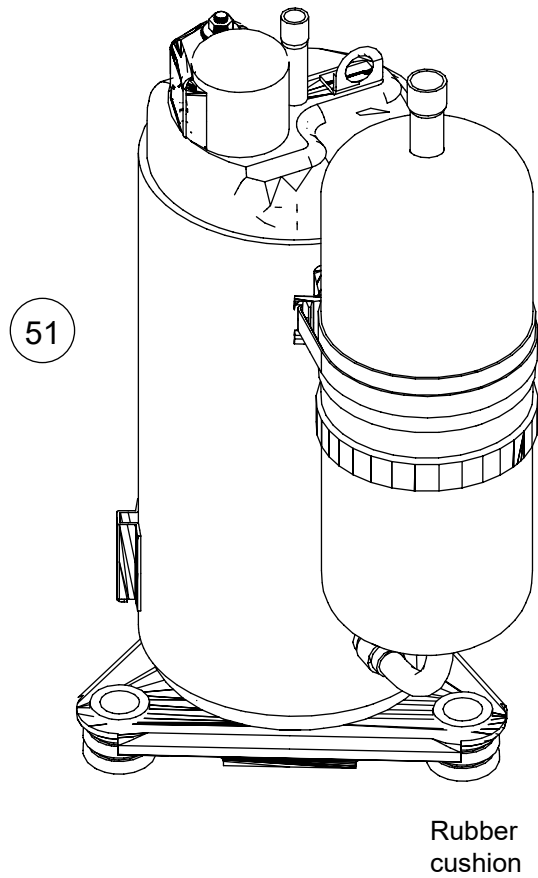
Ref.	Description	Part number
31	Main PCB, service unit	9709683392
32	Heatsink	9322420015
33	Thermistor assy	9900727079
34	Compressor thermistor	9900985011
35	Heat exchanger thermistor	9900984014

Hair pin
cushion



Ref.	Description	Part number
41	Condenser total assy	9317089654
-	S-insulator B	9322503008
-	S-insulator F	9322847003
-	S-insulator H	9322501004
-	S-insulator V	9323045002
-	S-insulator K	9322824004



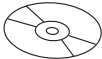


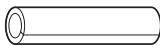
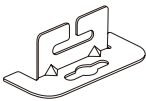
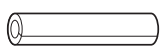
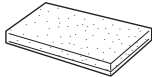



OUTDOOR UNIT
AOYG22KBTB





Ref.	Description	Part number
51	Compressor	9810521002
52	Solenoid	9970195006
53	4-way valve assy	9383129018
55	3-way valve assy	9387831016
56	Expansion valve coil	9970173028
57	Pulse motor valve assy	9322463029
58	2-way valve assy	9322474001

Accessories

Model: ARXG22KMLA

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Operating manual		1	Cable tie (medium)		1
Operating manual (CD-ROM)		1	Cable tie (small)		1
Installation manual		1	Coupler heat insulation (large)		1
Hanger		4	Coupler heat insulation (small)		1
Drain hose insulation		1	M10 nut A (with flange)		4
Cable tie (large)		1	M10 nut B (with spring lock washer)		4

Model: AOYG22KBTB

Part name	Exterior	Q'ty	Part name	Exterior	Q'ty
Installation manual		1	Drain pipe		1

1903G4804