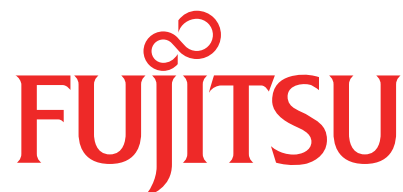


Split type air conditioner
Cassette type (50Hz)



SERVICE MANUAL



Indoor unit	Outdoor unit
AUYG24LVLA	AOYG24LBCB
UTG-UFYD-W	

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SPECIFICATIONS

ELECTRICAL DATA

INDOOR UNIT		AUYG24LVLA
DECORATION PANEL		UTG-UFYD-W
OUTDOOR UNIT		AOYG24LBCB
POWER SUPPLY		Single phase, 230 V, 50 Hz
Cooling	Capacity	6.80 kW
	Power consumption	2.21 kW
	EER	3.08 kW/kW
	Operating current	9.7 A
	Max operating current	14.7 A
	Dehumidification	2.7 L/h
Heating	Capacity	8.00 kW
	Power consumption	2.26 kW
	COP	3.54 kW/kW
	Operating current	9.9 A
	Max operating current	15.7 A

DIMENSIONS

H x W x D

INDOOR UNIT	245 x 570 x 570 mm
DECORATION PANEL	49 x 700 x 700 mm
OUTDOOR UNIT	716 x 820 x 315 mm

WEIGHT

Net / Shipping

INDOOR UNIT	16 kg / 19 kg
DECORATION PANEL	2.6 kg / 4.5 kg
OUTDOOR UNIT	42 kg / 47 kg

FAN MOTOR DISCRIMINATION

INDOOR UNIT	MFF-24RVL
OUTDOOR UNIT	MFE-S60VD2F

FAN SPEED

INDOOR UNIT Cool / Heat	High	960 rpm / 960 rpm
	Medium	850 rpm / 880 rpm
	Low	650 rpm / 740 rpm
	Quiet	500 rpm / 580 rpm
OUTDOOR UNIT	Cooling	1,000 rpm
	Heating	940 rpm

AIR CIRCULATION

INDOOR UNIT Cool / Heat	High	930 m ³ /h / 930 m ³ /h
	Medium	830 m ³ /h / 860 m ³ /h
	Low	600 m ³ /h / 700 m ³ /h
	Quiet	450 m ³ /h / 530 m ³ /h
OUTDOOR UNIT	Cooling	2,850 m ³ /h
	Heating	2,700 m ³ /h

NOISE LEVEL

INDOOR UNIT Cool / Heat	High	49 dB / 49 dB
	Medium	44 dB / 45 dB
	Low	36 dB / 40 dB
	Quiet	30 dB / 33 dB
OUTDOOR UNIT	Cooling	53 dB
	Heating	54 dB

COMPRESSOR

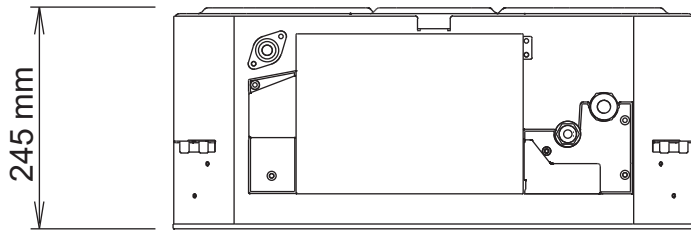
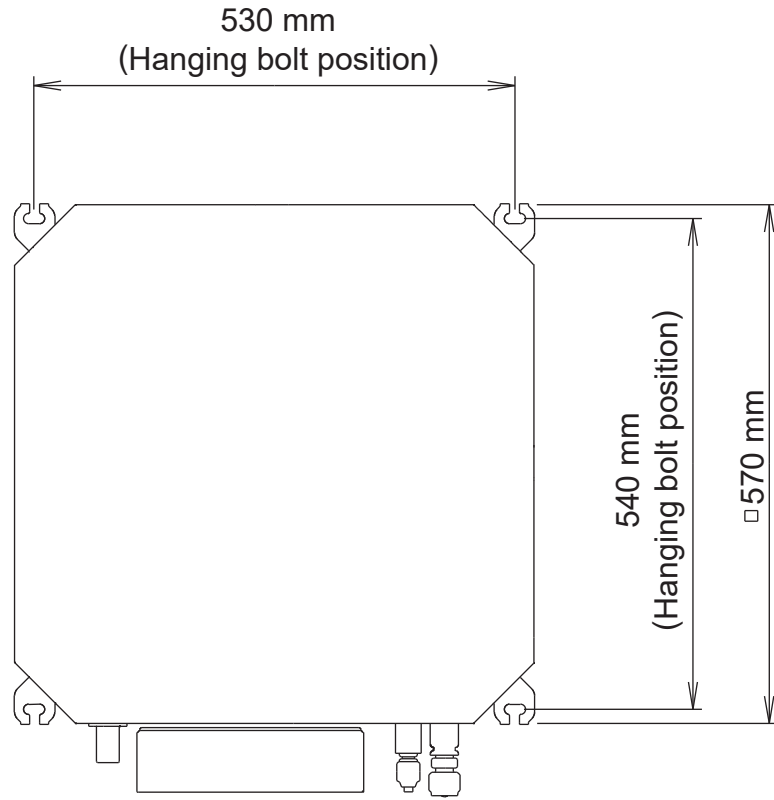
DISCRIMINATION	N-SF17ND2C
WEIGHT (with oil)	10.6 kg
DATA	Hermetic motor, 2-cylinder rotary compressor

REFRIGERANT

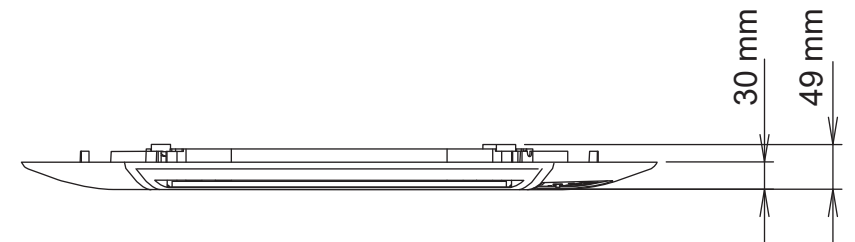
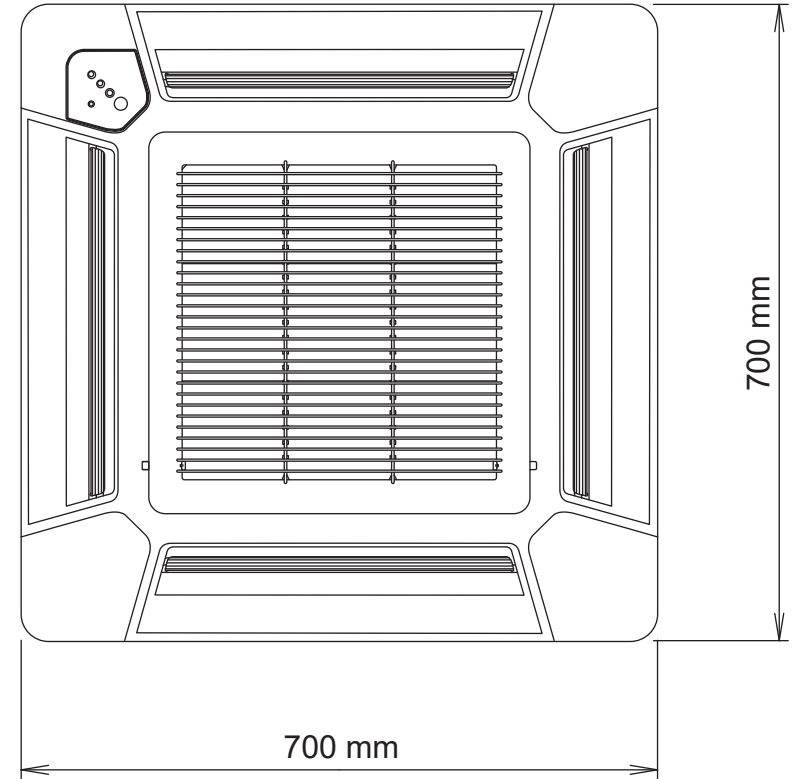
TYPE	R410A		
PRECHARGED	1,500 g		
FULL CHARGE	Pipe length	15 m	1,500 g
		20 m	1,600 g
		25 m	1,700 g
		30 m	1,800 g
ADDITIONAL CHARGE	20 g/m		
MAX PIPING HEIGHT DIFFERENCE	20 m		

DIMENSIONS

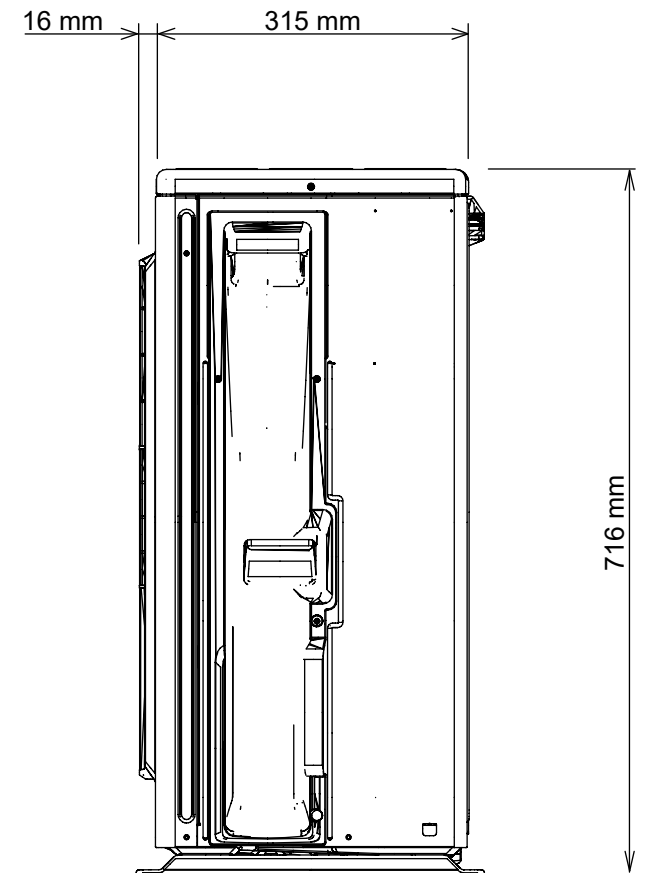
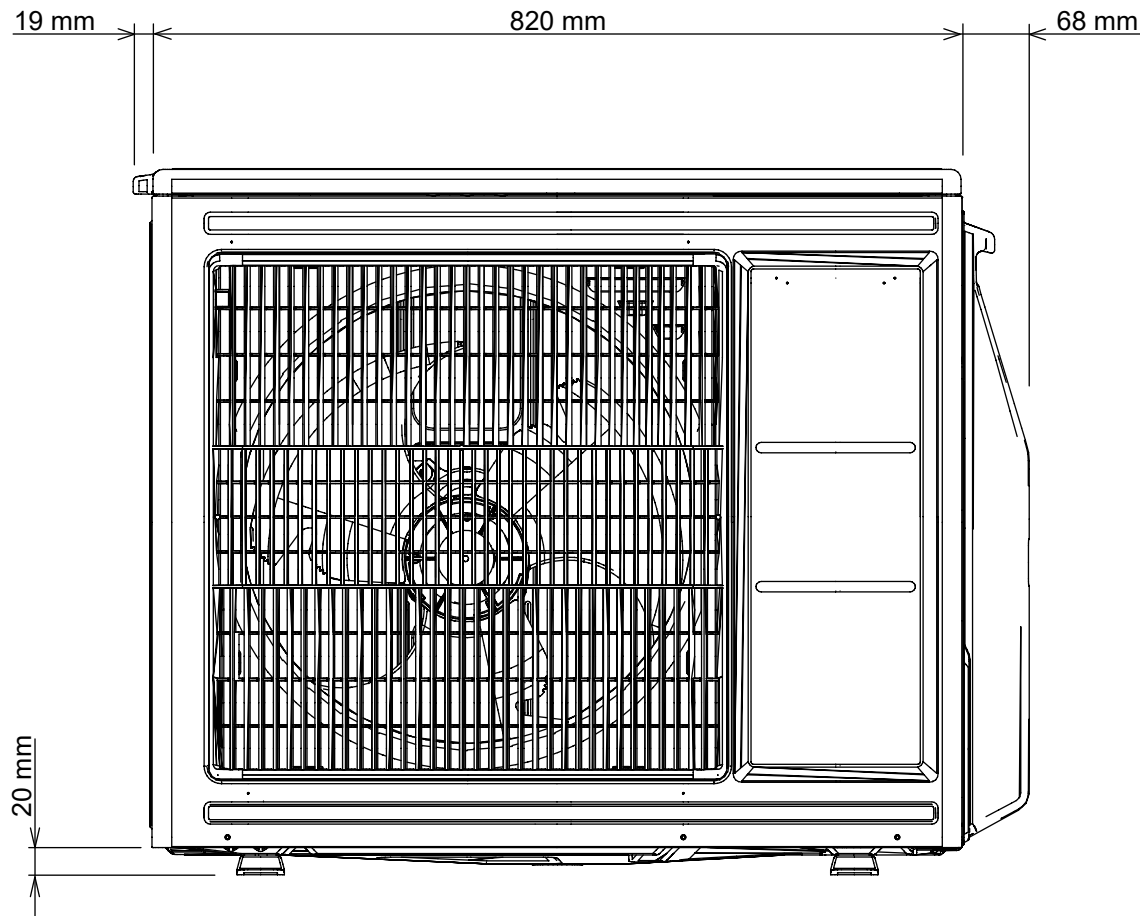
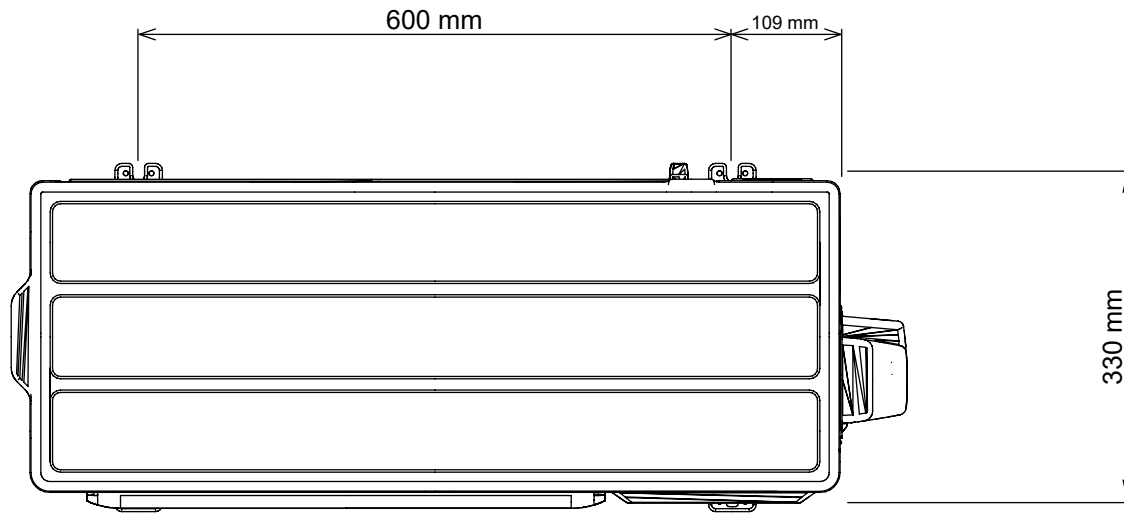
INDOOR UNIT
AUYG24LVLA



DECORATION PANEL
UTG-UFYD-W



OUTDOOR UNIT
AOYG24LBCB



REFRIGERANT SYSTEM DIAGRAM

Refrigerant direction

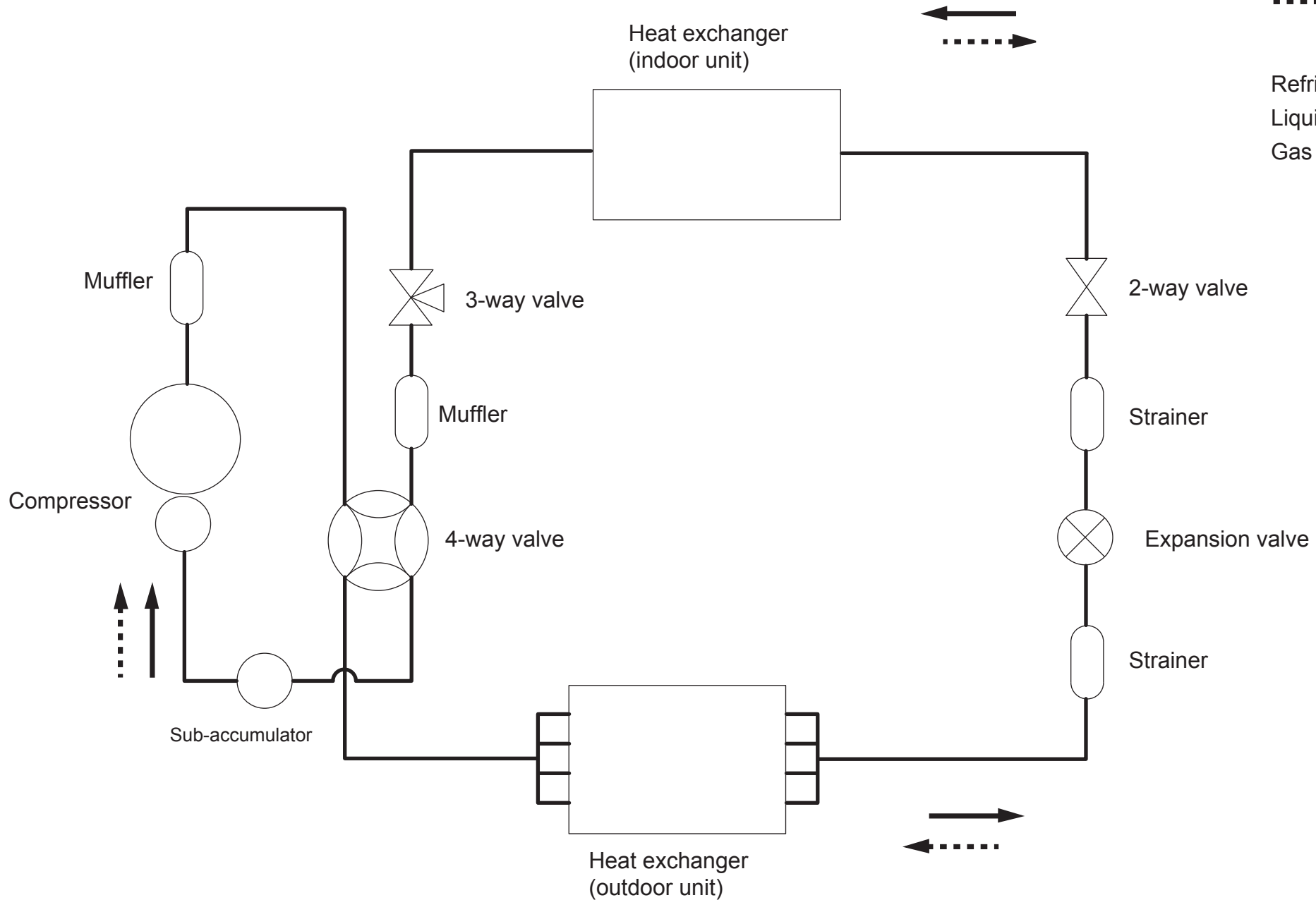
—————▶ Cooling

.....▶ Heating

Refrigerant pipe diameter

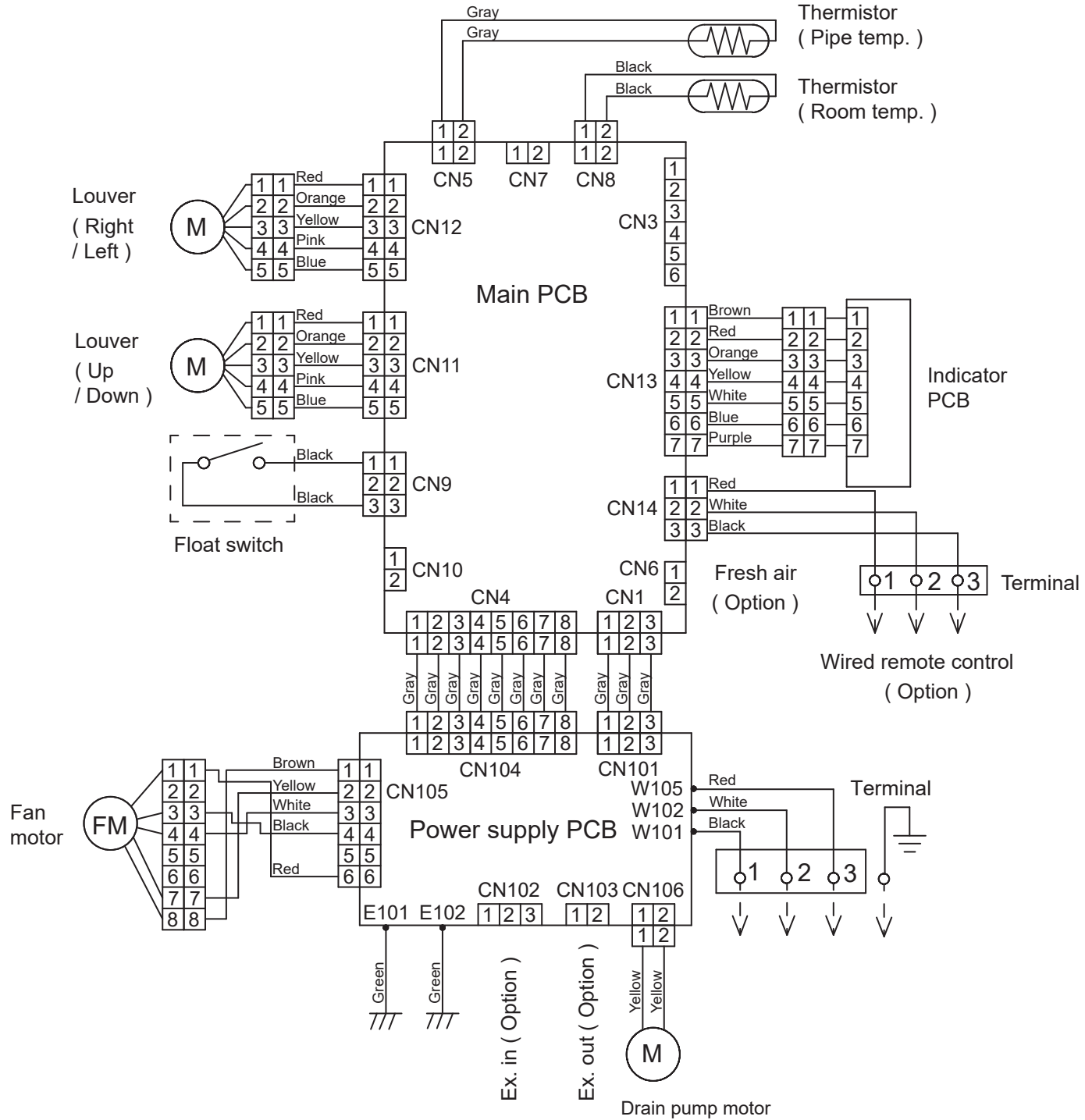
Liquid : 1/4" (6.35 mm)

Gas : 5/8" (15.88 mm)

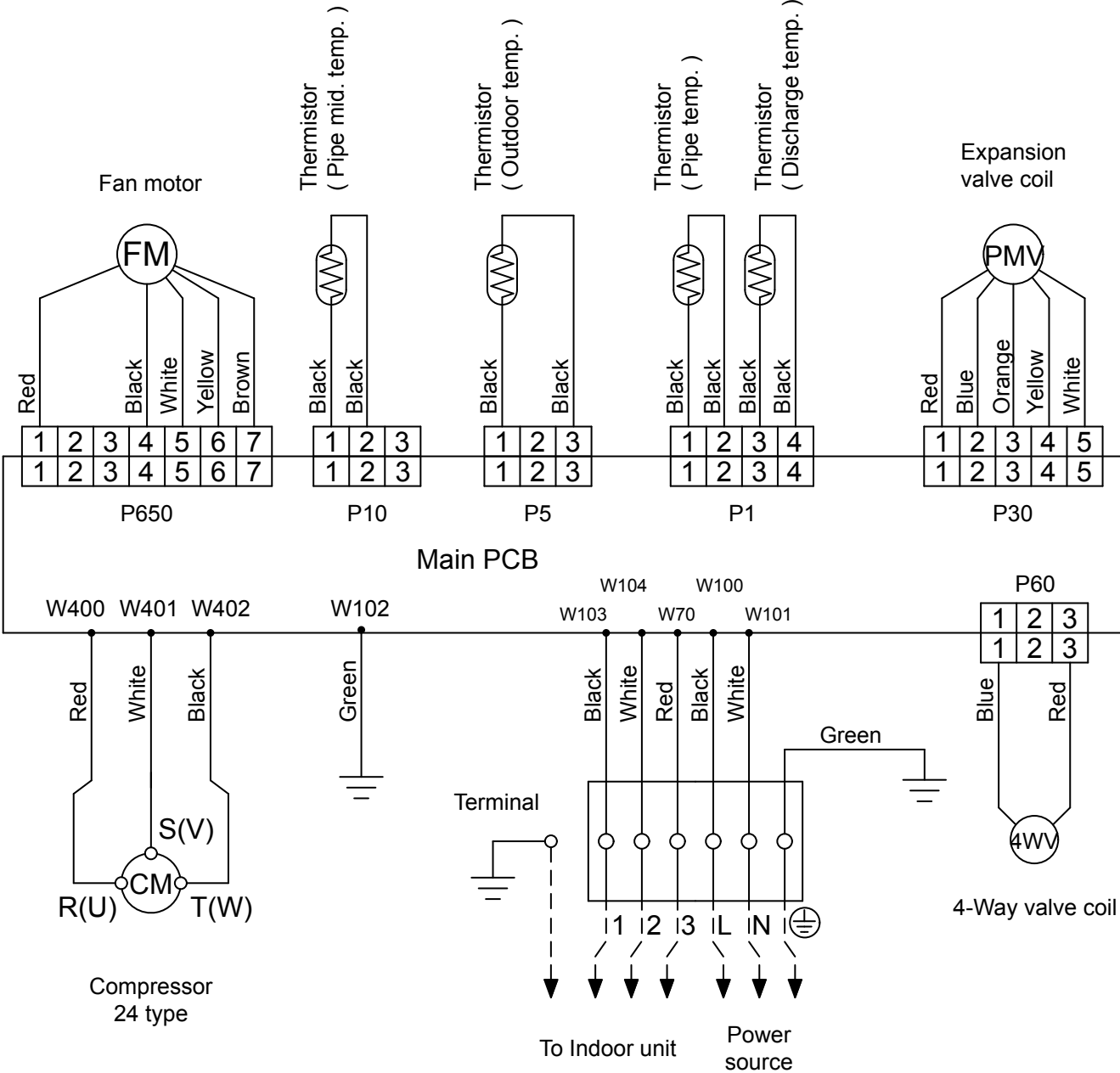


CIRCUIT DIAGRAM

AUYG24LVLA
UTG-UFYD-W



OUTDOOR UNIT
AOYG24LBCB



PCB CIRCUIT DIAGRAM

AUYG24LVLA
UTG-UFYD-W

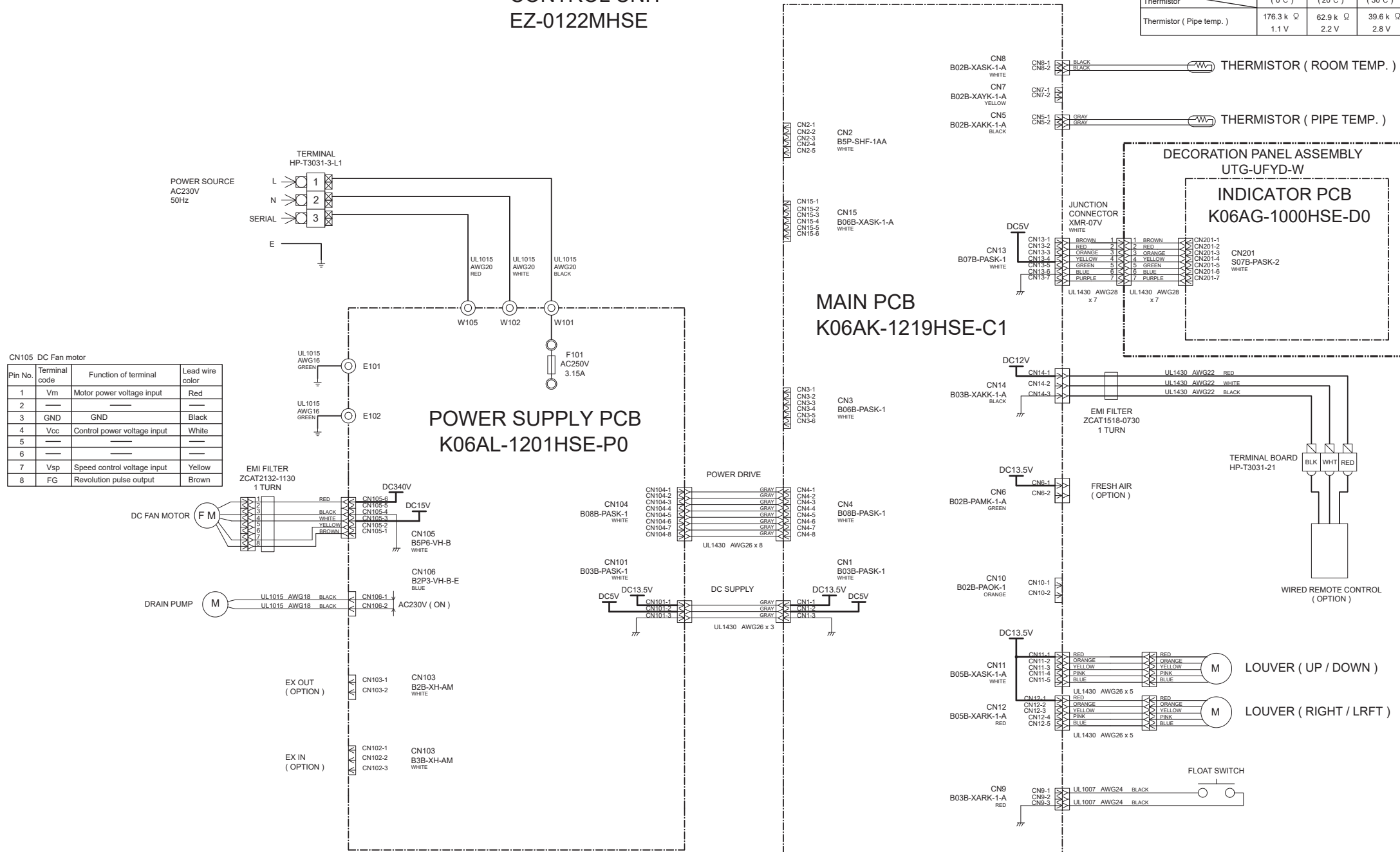
CONTROL UNIT
EZ-0122MHSE

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

CN5
Thermistor Characteristics.

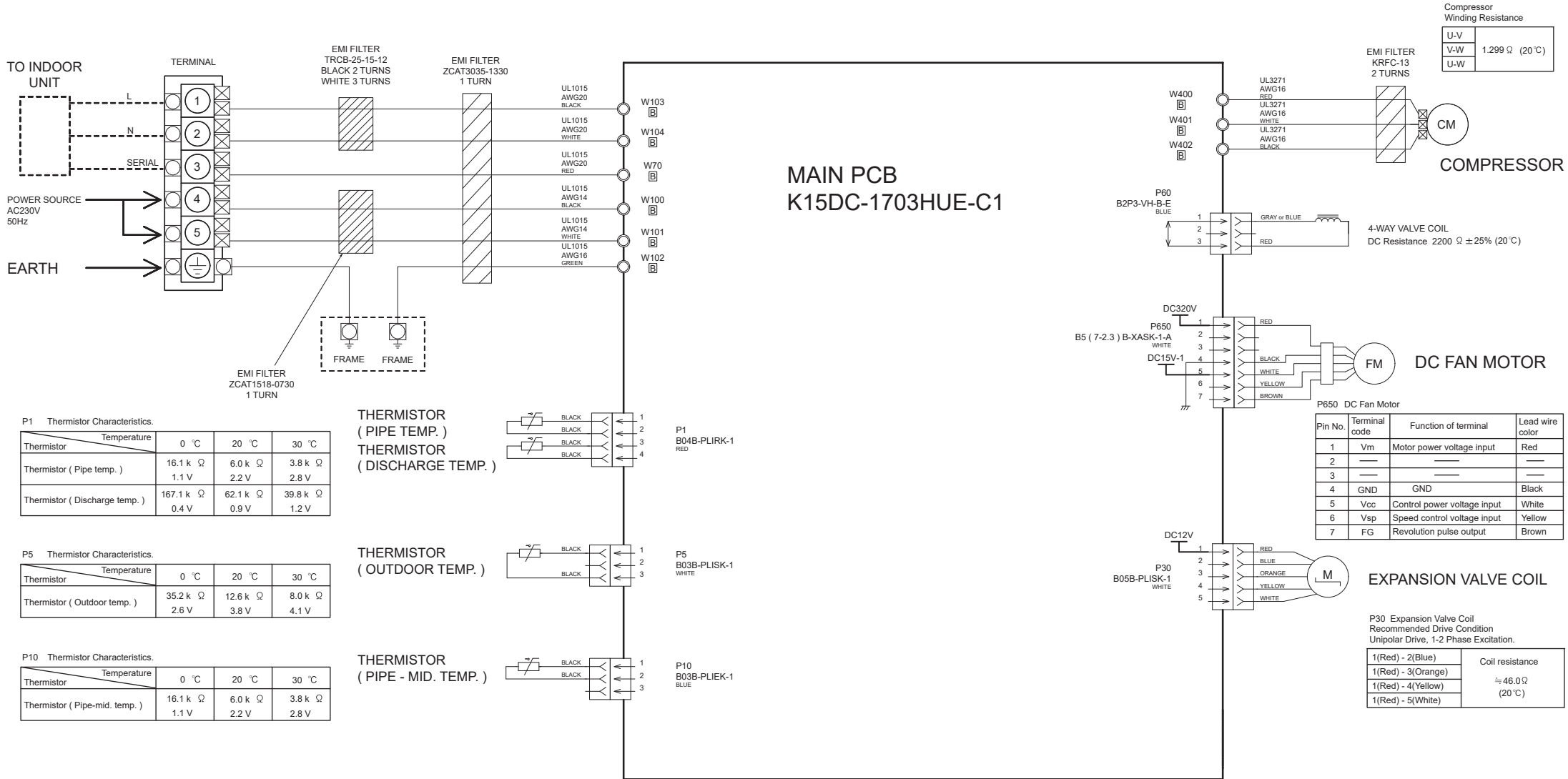
Thermistor	Temperature	(0°C)	(20°C)	(30°C)
Thermistor (Pipe temp.)		176.3 k Ω	62.9 k Ω	39.6 k Ω
		1.1 V	2.2 V	2.8 V



CN105 DC Fan motor

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

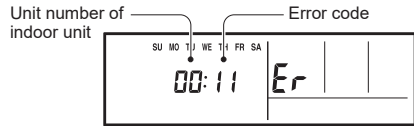
INVERTER ASSEMBLY
EZ-01704HUE



ERROR DETECTION

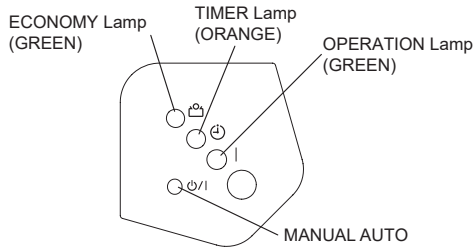
WIRED REMOTE CONTROL

This is possible only on a wired remote control.
If an error occurs, the following display will be shown.
("Er" will appear in the set room temperature display.)



EX. Self-diagnosis

INDOOR UNIT (CASSETTE)



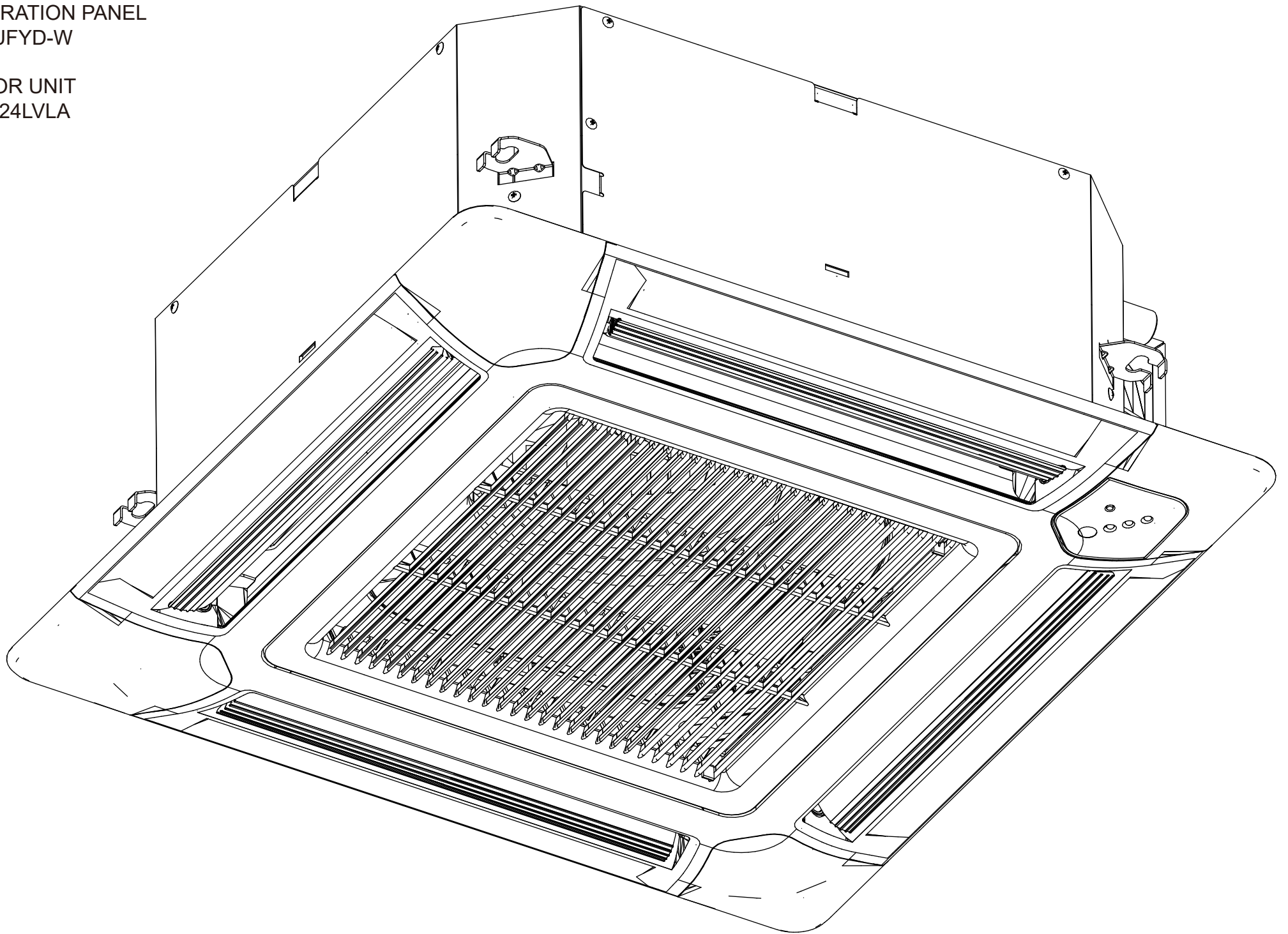
- : 0.5s on / 0.5s off
- ◇ : 0.1s on / 0.1s off
- () : Number of flashing

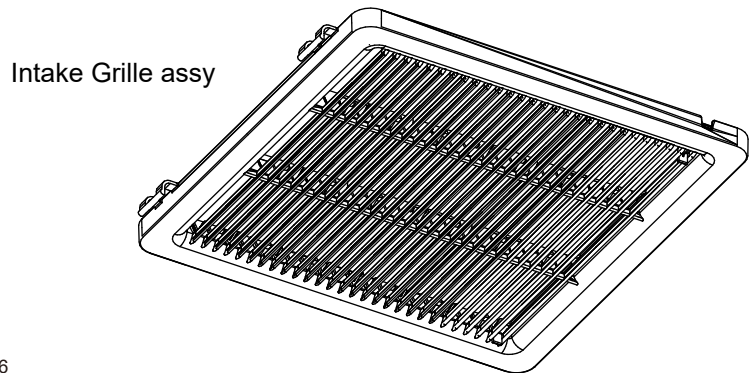
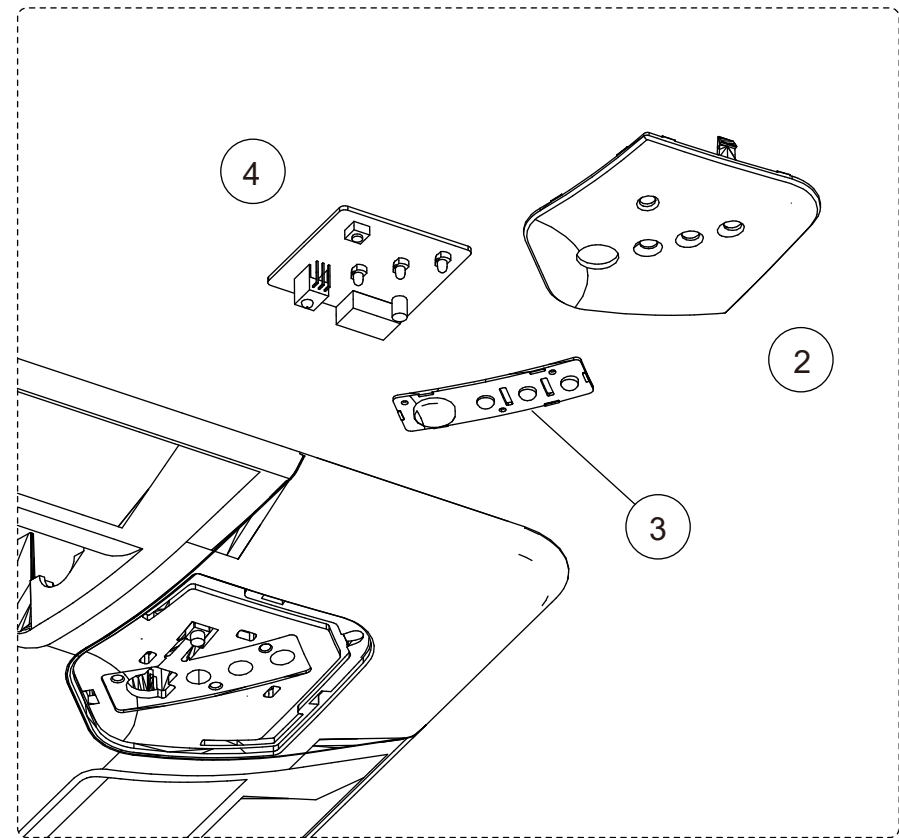
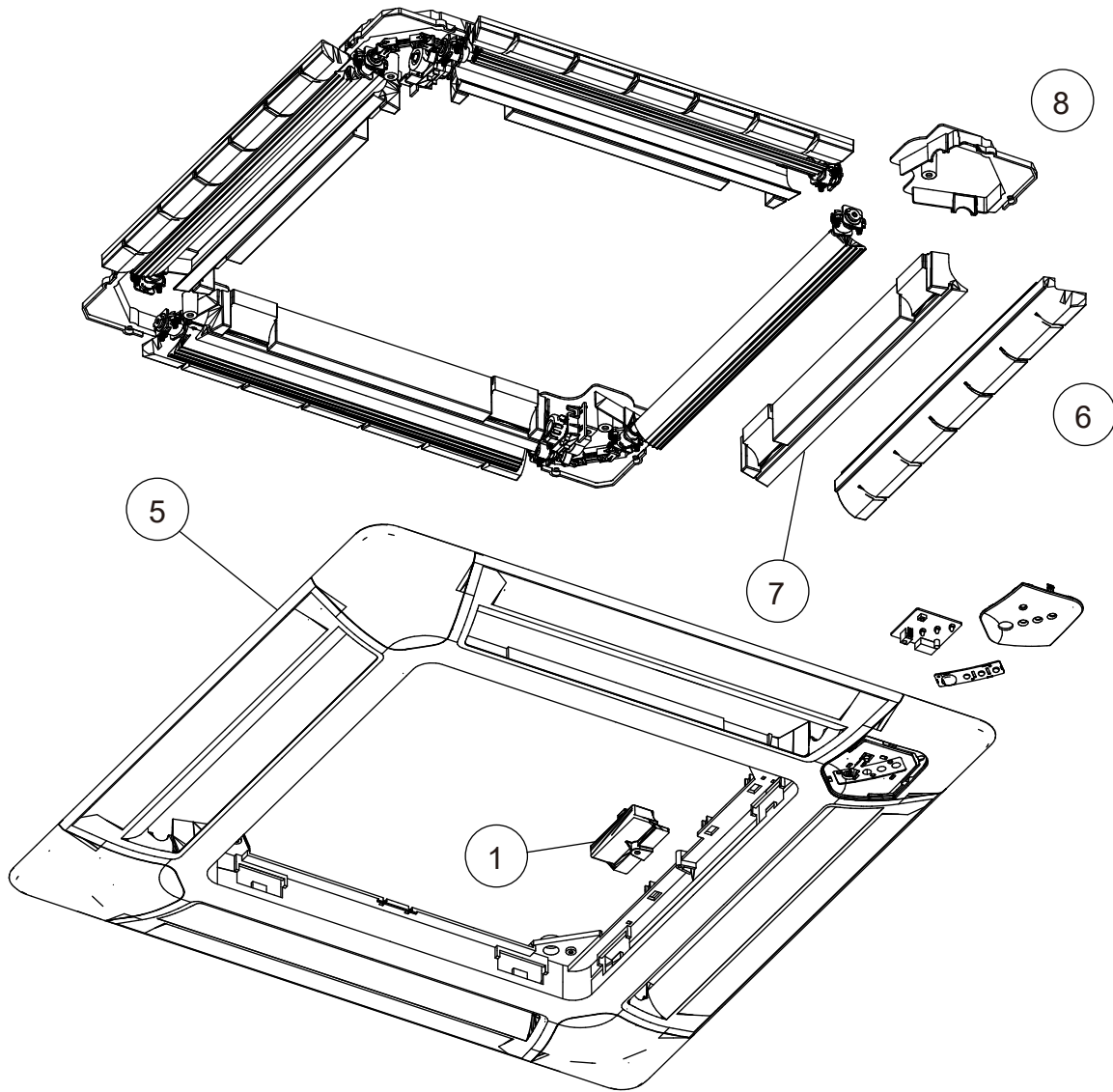
Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
● (1)	● (1)	◇	11	Serial communication error
● (1)	● (2)	◇	12	Wired remote control communication error
● (1)	● (5)	◇	15	Check run unfinished
● (2)	● (1)	◇	21	Unit number or Refrigerant circuit 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 slave unit) [Simultaneous Multi] • Connection unit number error (indoor unit or branch unit) [Flexible Multi]
● (2)	● (7)	◇	27	Master unit, slave unit set-up 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	Inlet air 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 Error
● (6)	● (10)	◇	6A	Display PCB microcomputers communication error

Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
● (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
● (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 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]

DECORATION PANEL
UTG-UFYD-W

INDOOR UNIT
AUYG24LVLA

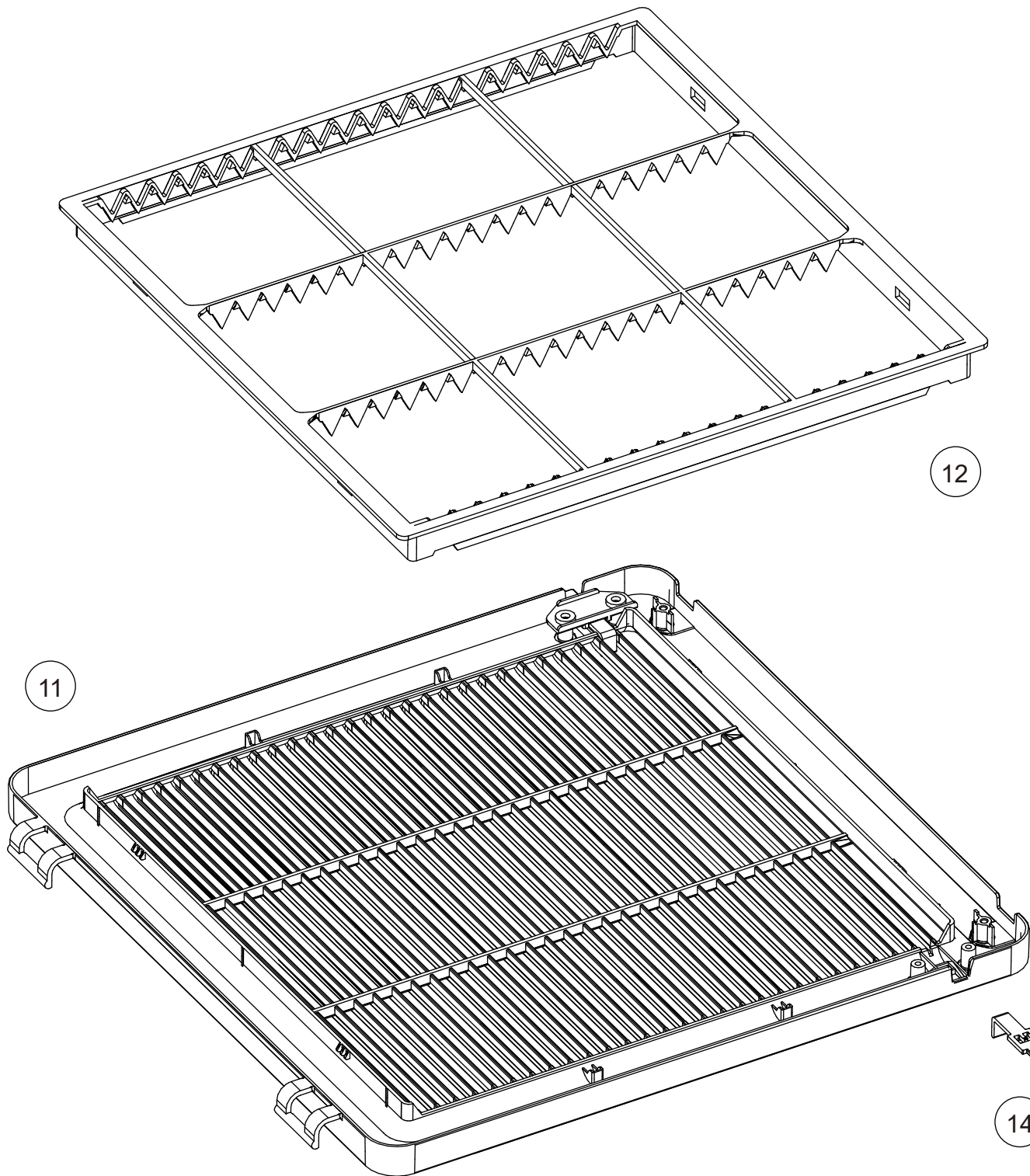




DECORATION PANEL
UTG-UFYD-W

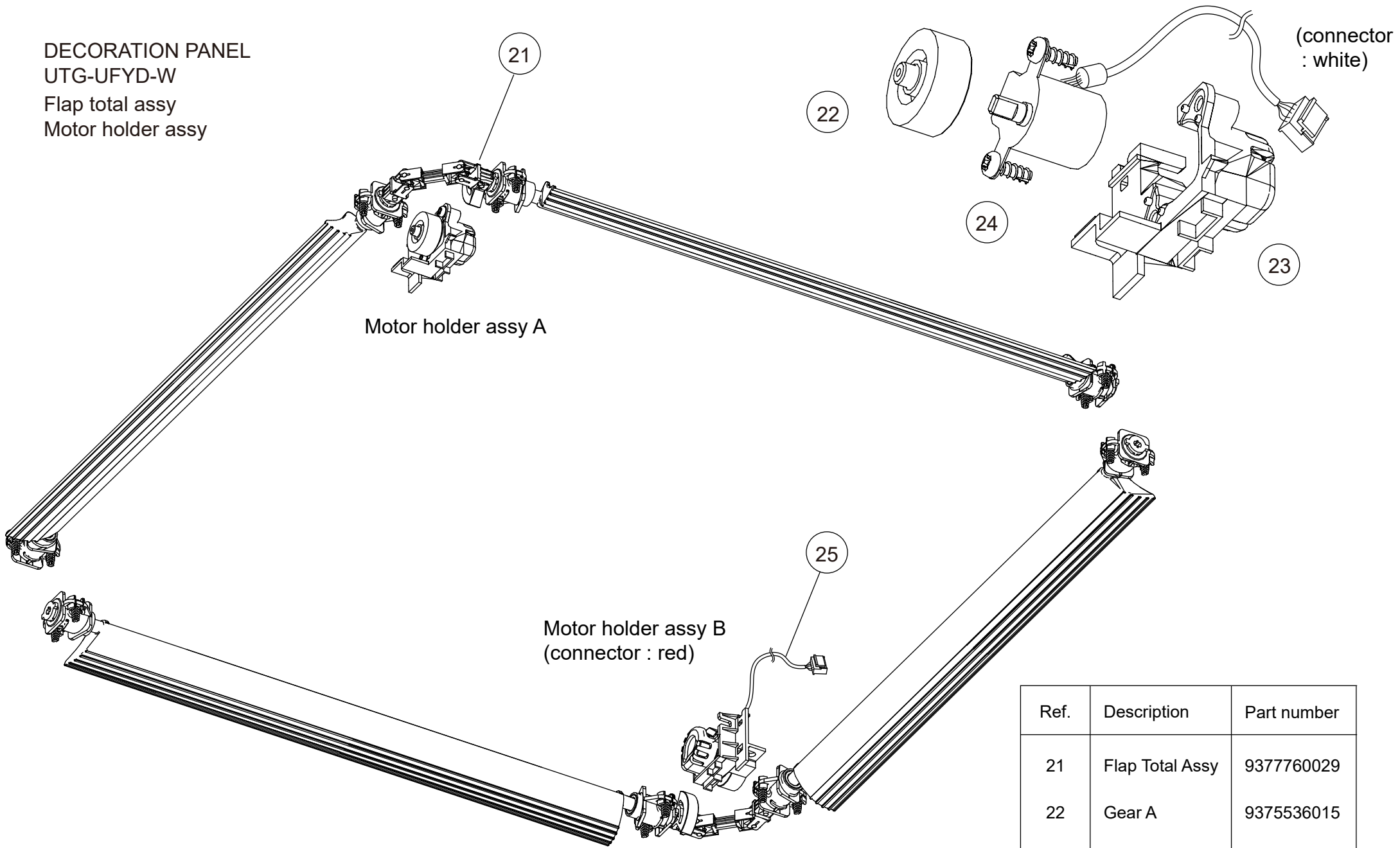
Ref.	Description	Part number
1	Connector Cover	9375549015
2	Display Panel	9375529123
3	Receiver Window	9375547011
4	Indicator PCB	9707371031
5	Decoration Panel	9375525040
6	Panel Insulation A	9375526016
7	Panel Insulation B	9375527013
8	Panel Cover	9375530013

DECORATION PANEL
 UTG-UFYD-W
 Intake grille assy



Ref.	Description	Part number
11	Intake Grille	9375531027
12	Long Life Filter	9375533014
13	Hook Bracket	9375546014
14	Grille Hook	9375532024

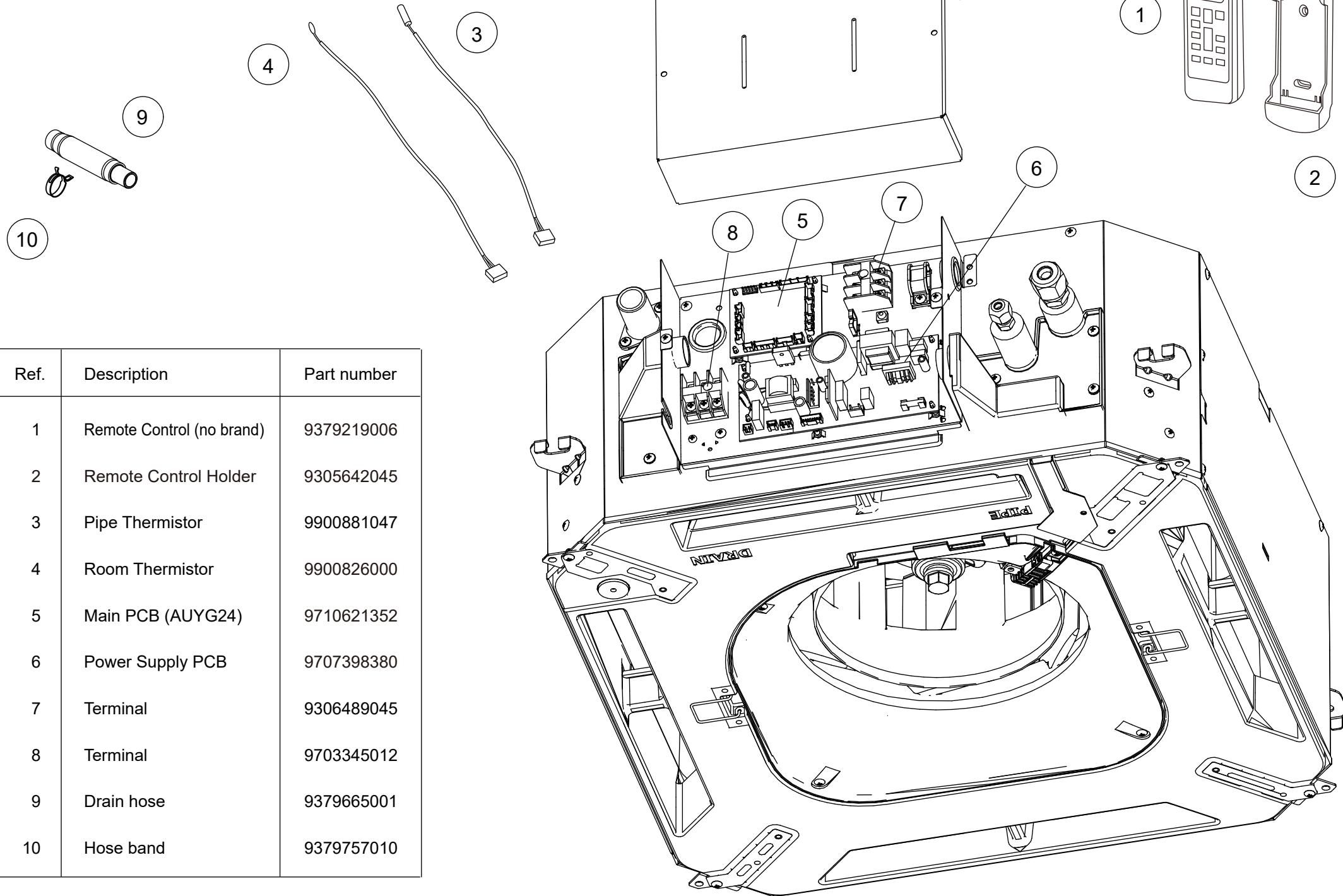
DECORATION PANEL
 UTG-UFYD-W
 Flap total assy
 Motor holder assy



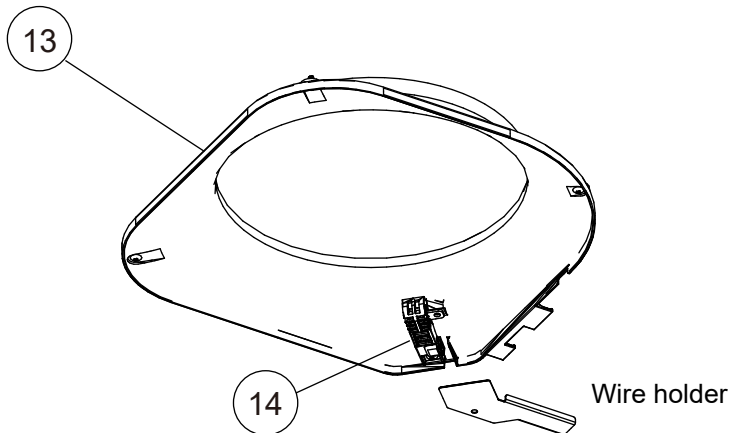
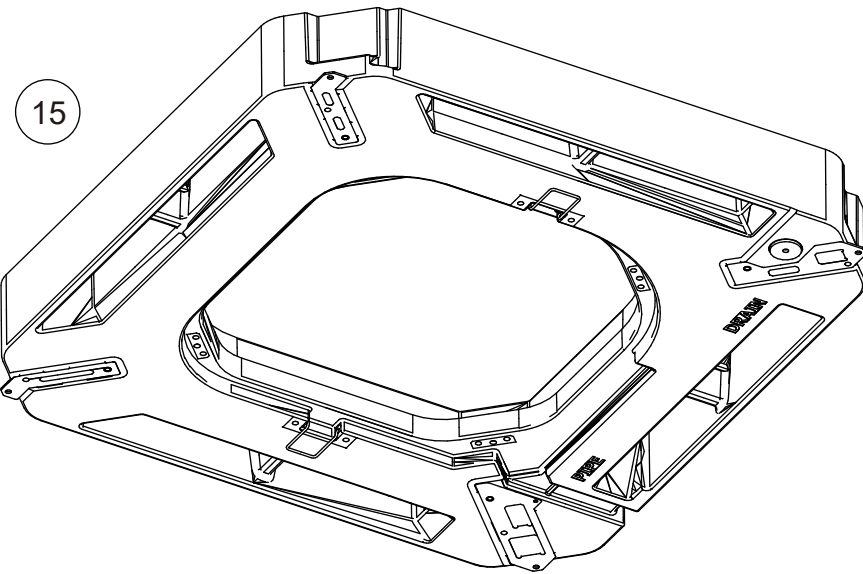
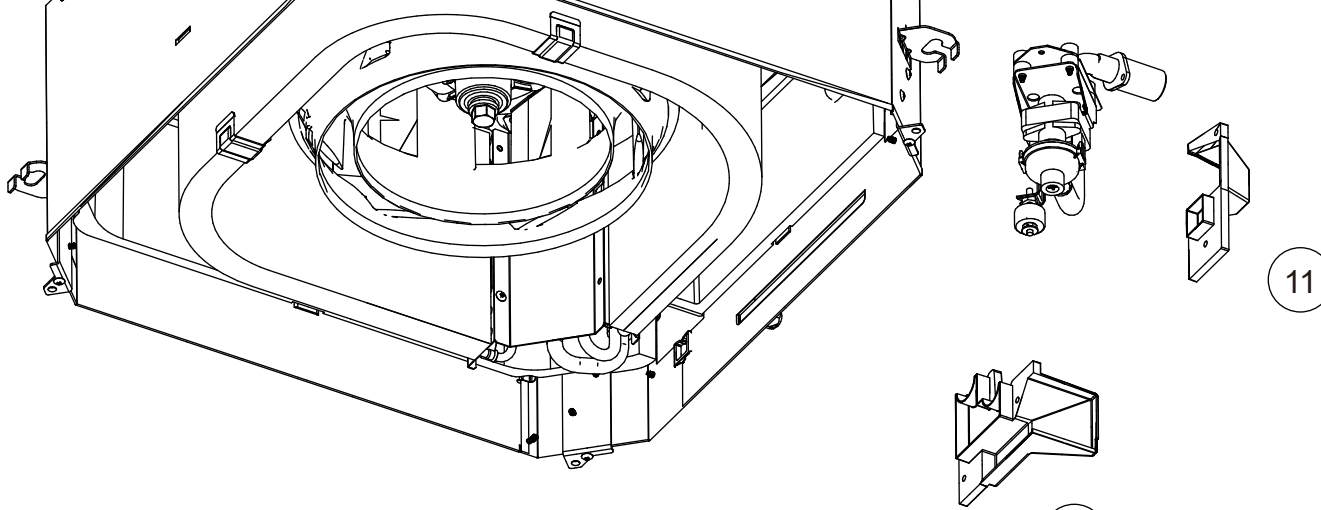
Ref.	Description	Part number
21	Flap Total Assy	9377760029
22	Gear A	9375536015
23	Motor Holder	9375535018
24	Step Motor	9900139070
25	Step Motor	9900139087

INDOOR UNIT
AUYG24LVLA

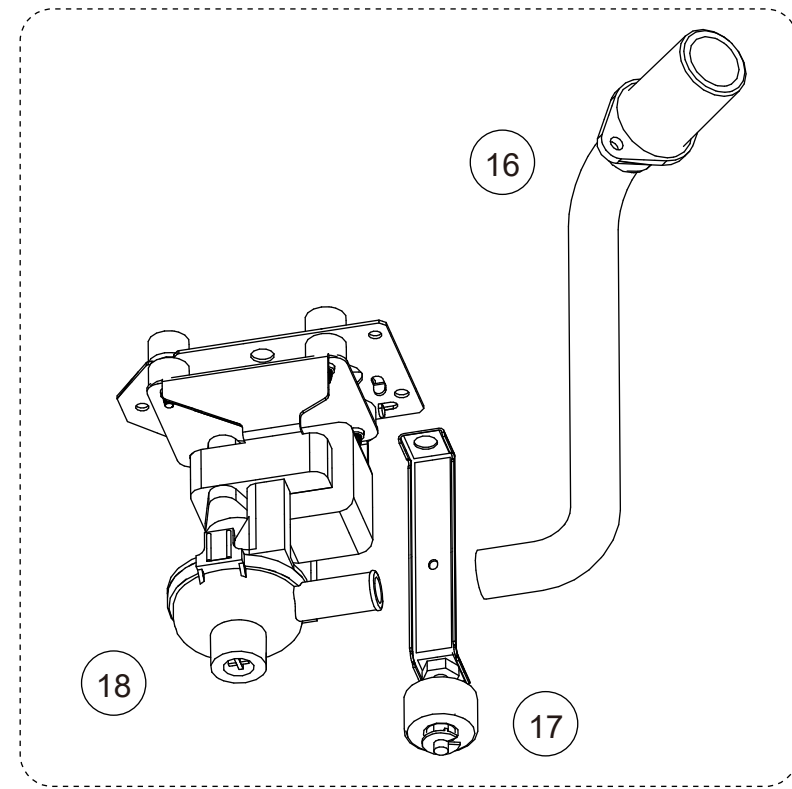
Control Box Cover



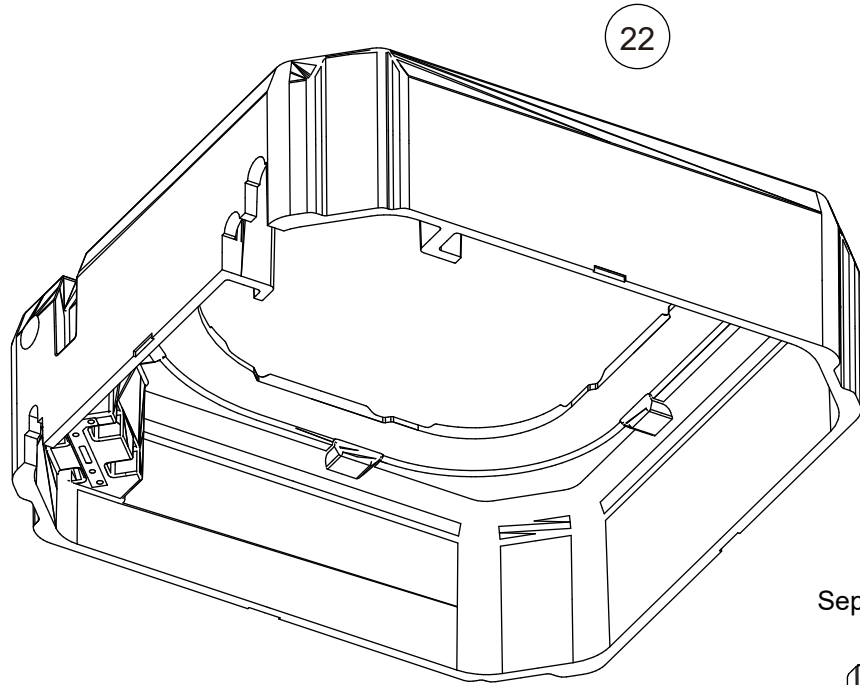
Ref.	Description	Part number
1	Remote Control (no brand)	9379219006
2	Remote Control Holder	9305642045
3	Pipe Thermistor	9900881047
4	Room Thermistor	9900826000
5	Main PCB (AUYG24)	9710621352
6	Power Supply PCB	9707398380
7	Terminal	9306489045
8	Terminal	9703345012
9	Drain hose	9379665001
10	Hose band	9379757010



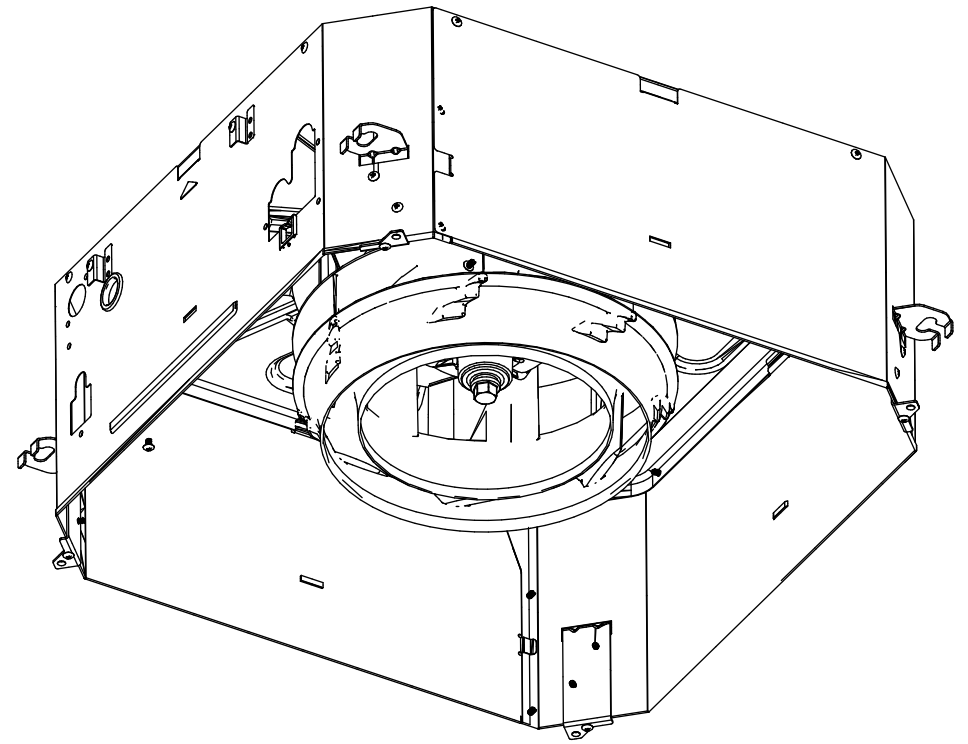
INDOOR UNIT
AUYG24LVLA



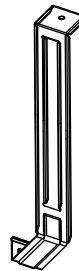
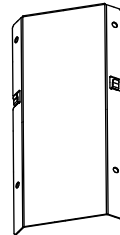
Ref.	Description	Part number
11	Wire cover	9375516017
12	Pipe cover	9375515010
13	Bellmouth	9375503017
14	Thermistor holder	9375477011
15	Drain pan sub assy	9377765017
16	Drain port sub assy	9375718015
17	Float switch sub assy	9375721039
18	Drain pump sub assy	9375717025



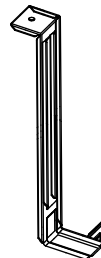
22



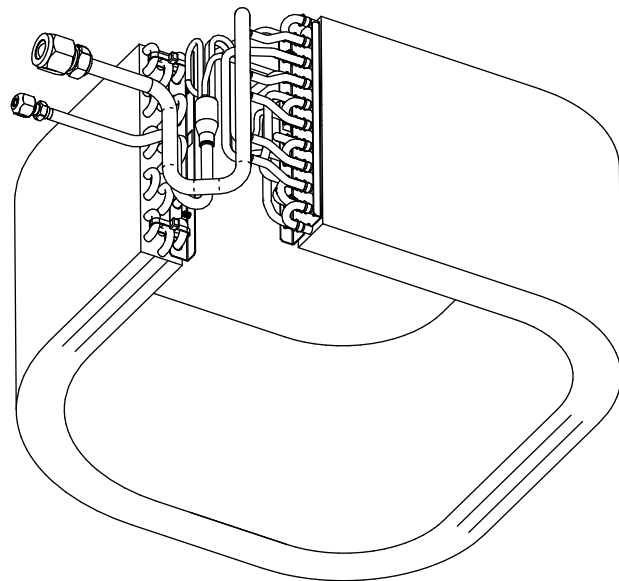
Separate wall



Evaporator
holder

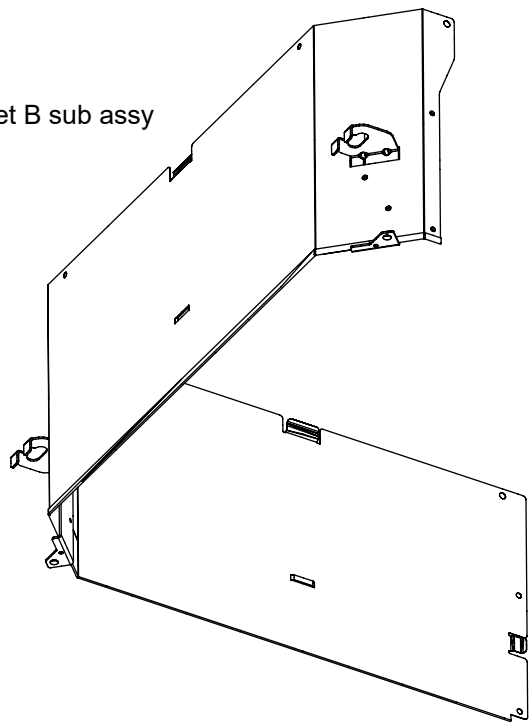


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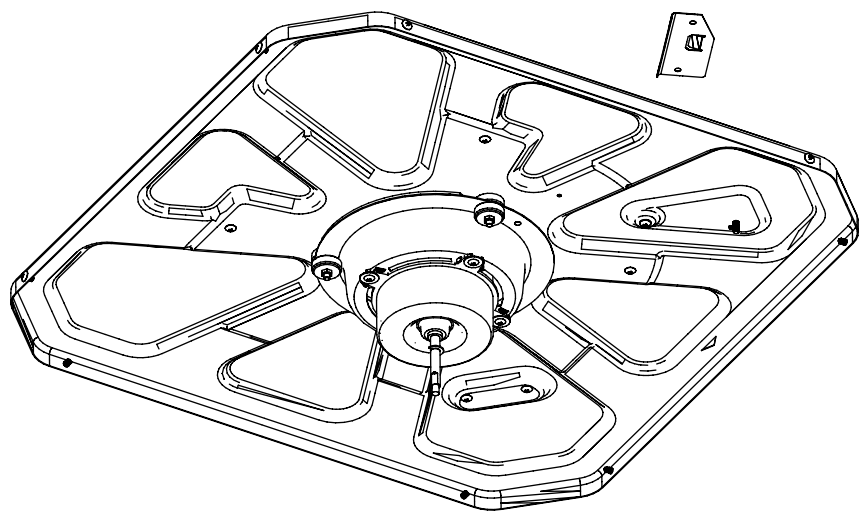


Ref.	Description	Part number
21	Evaporator total assy	9377914019
22	Insulation box sub assy	9377764058

Cabinet B sub assy



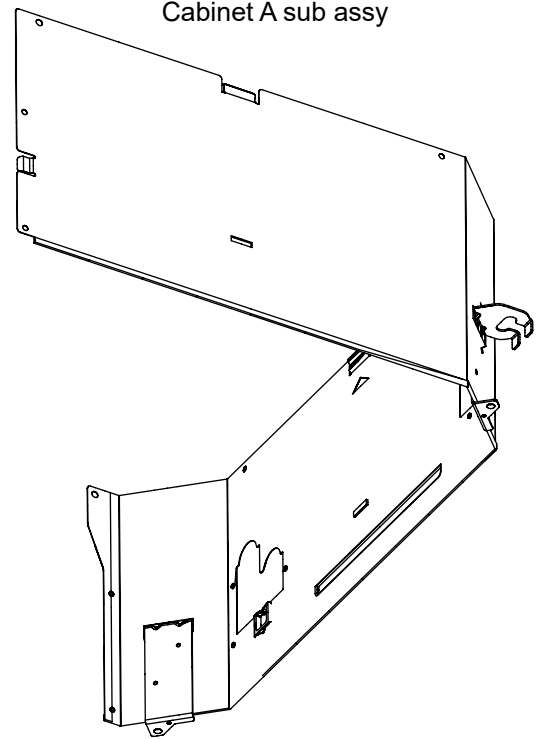
Top plate assy



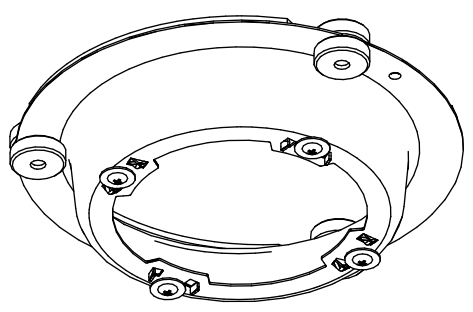
Motor wire holder



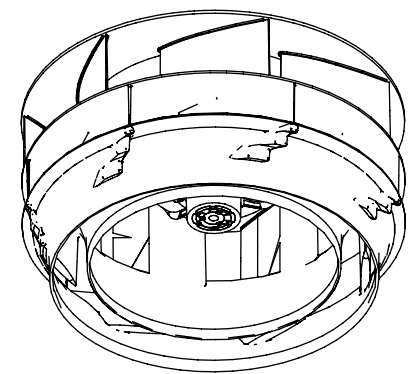
Cabinet A sub assy



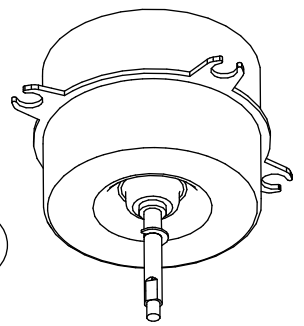
31



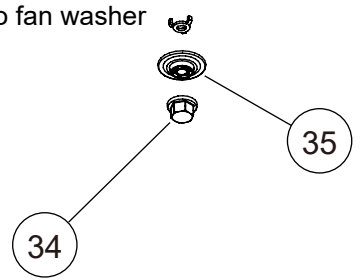
33



32



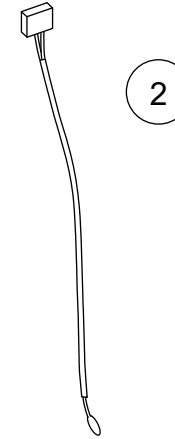
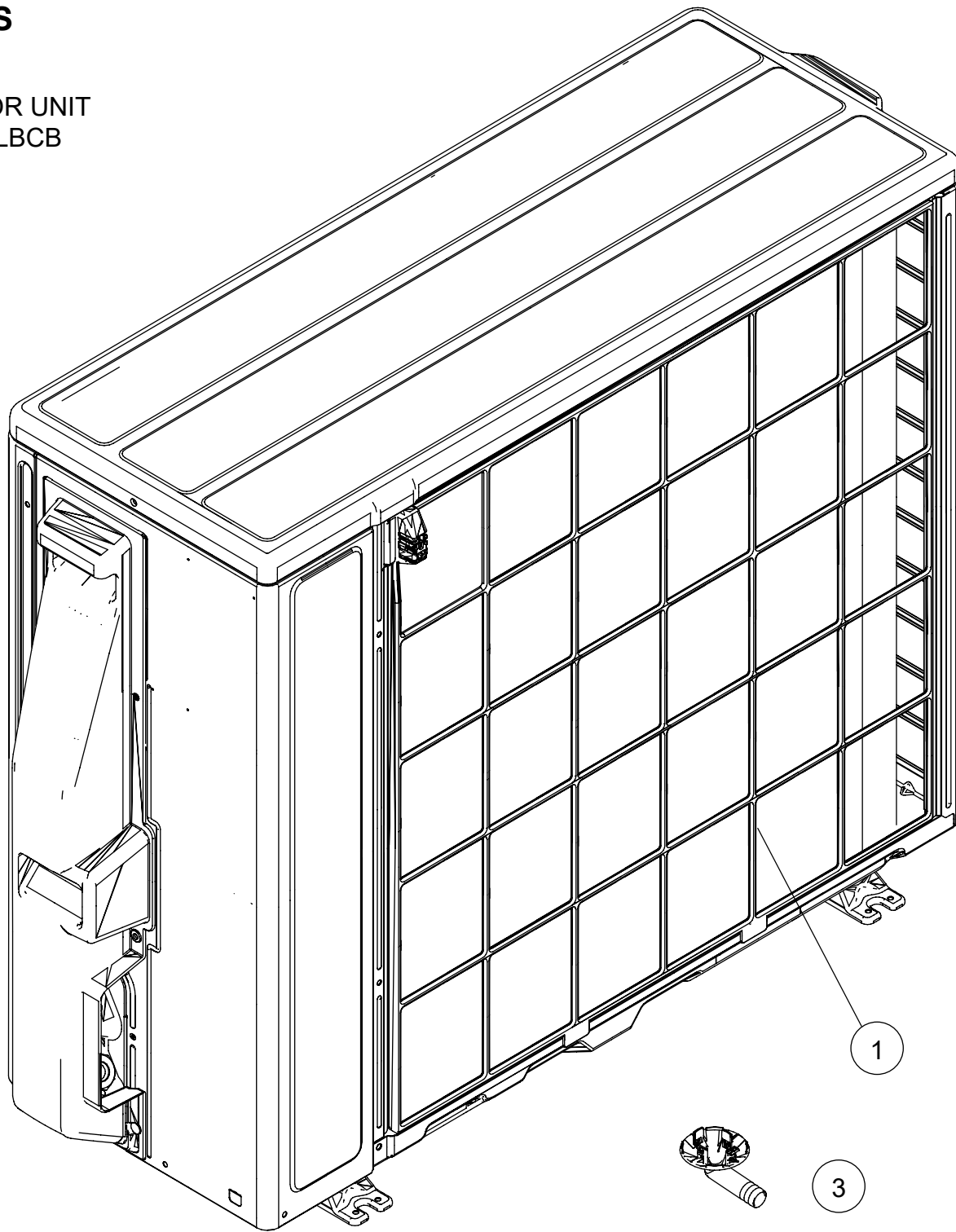
Turbo fan washer



Ref.	Description	Part number
31	Fan motor sub assy	9375719012
32	Fan motor	9602436019
33	2 stage turbo fan assy	9375480011
34	Shaft cap	9377807014
35	Washer cover	9377811011

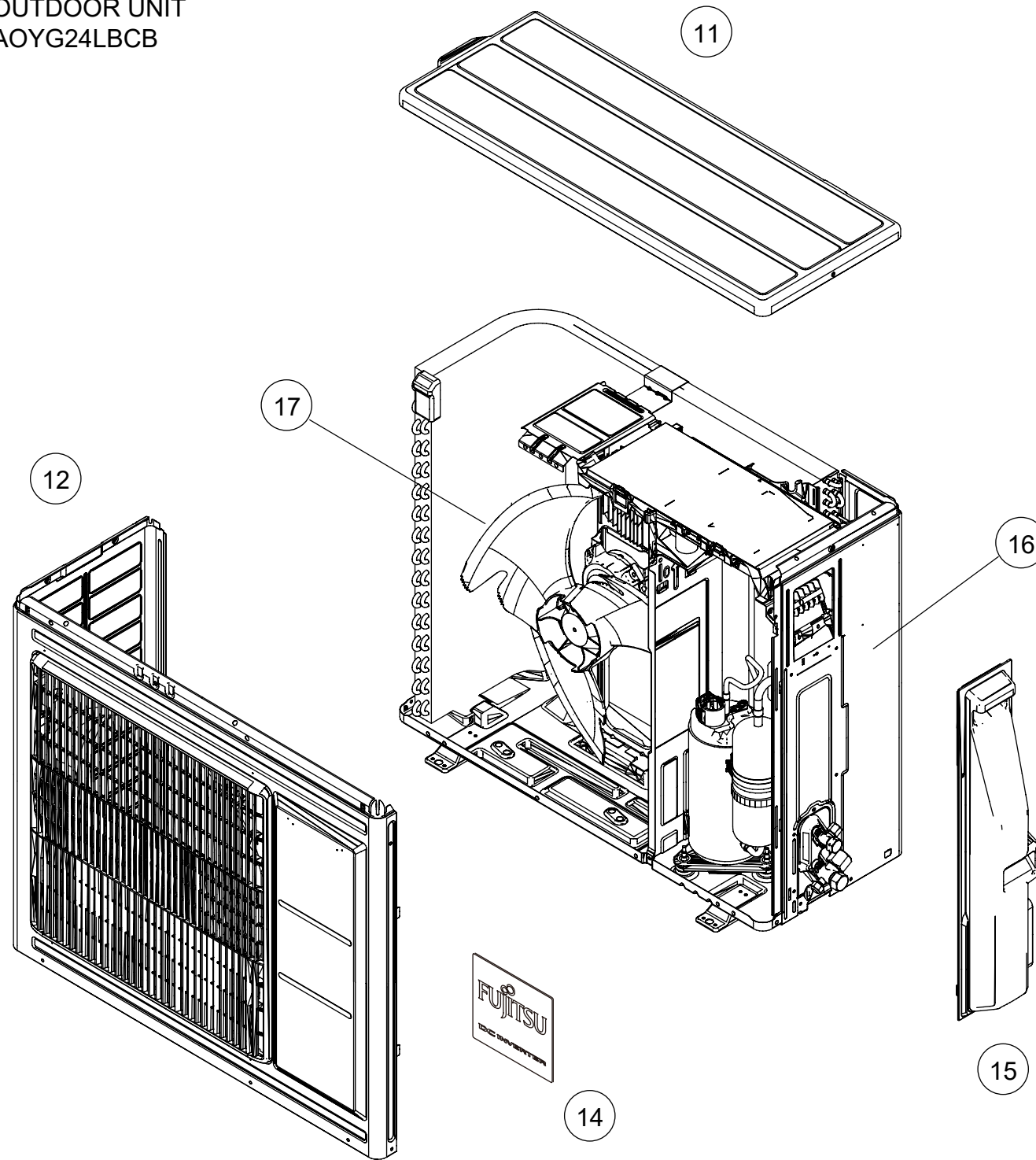
PARTS

OUTDOOR UNIT
AOYG24LBCB

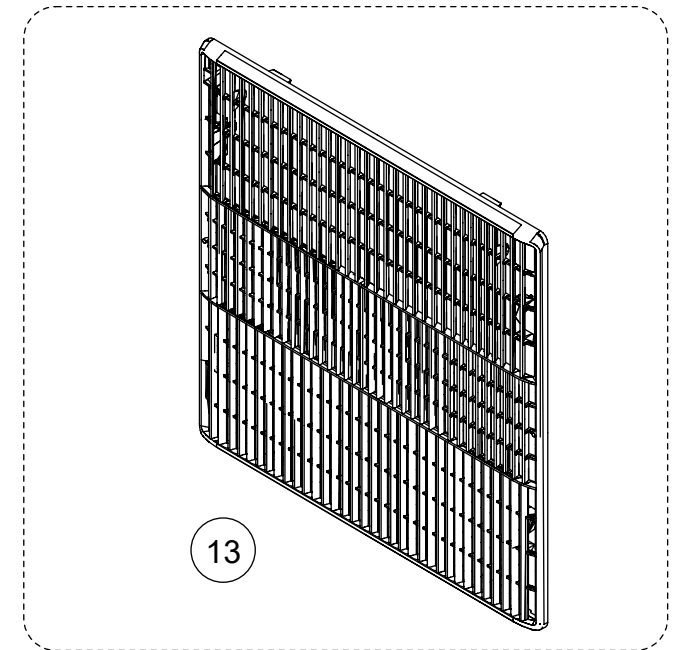


Ref.	Description	Part number
1	Protective net assy	9322811035
2	Outdoor thermistor	9900850012
3	Drain pipe	9322144003

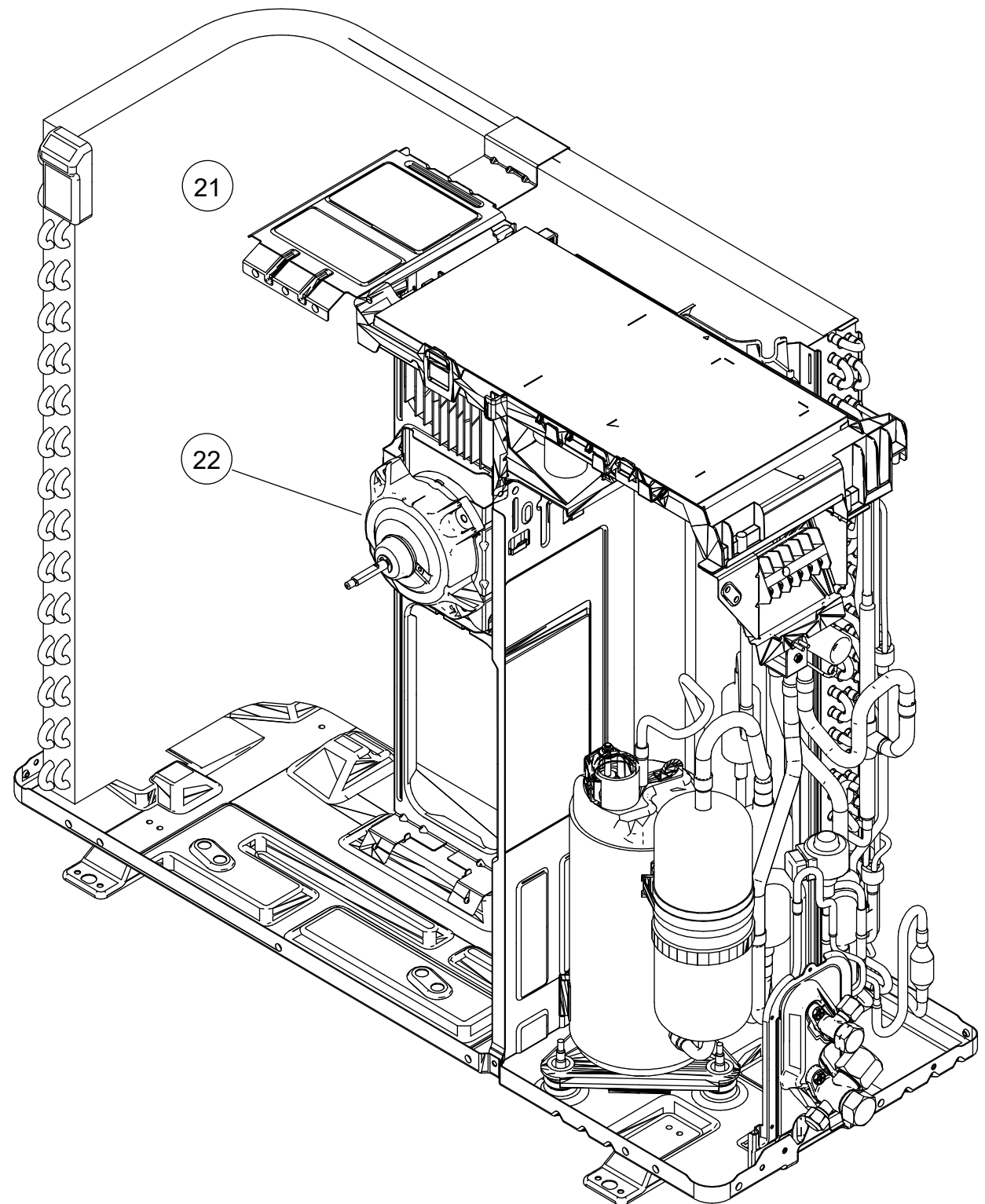
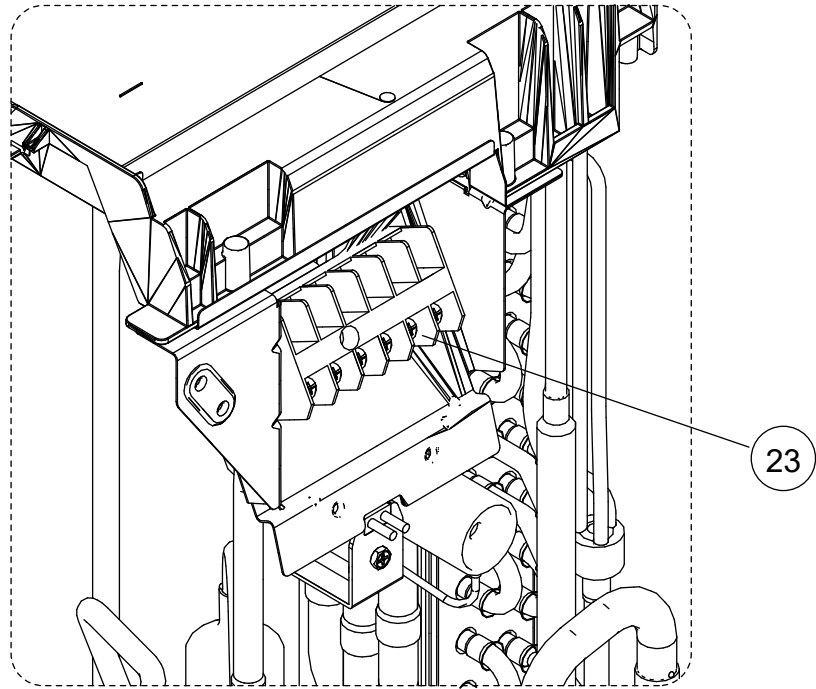
OUTDOOR UNIT
AOYG24LBCB



Ref.	Description	Part number
11	Top panel assy	9322556073
12	Front panel assy	9322555038
13	Blow grille	9322149008
14	Emblem	9319151007
15	Switch cover assy	9322570031
16	Cabinet right Assy	9322552082
17	Propeller fan	9322150004

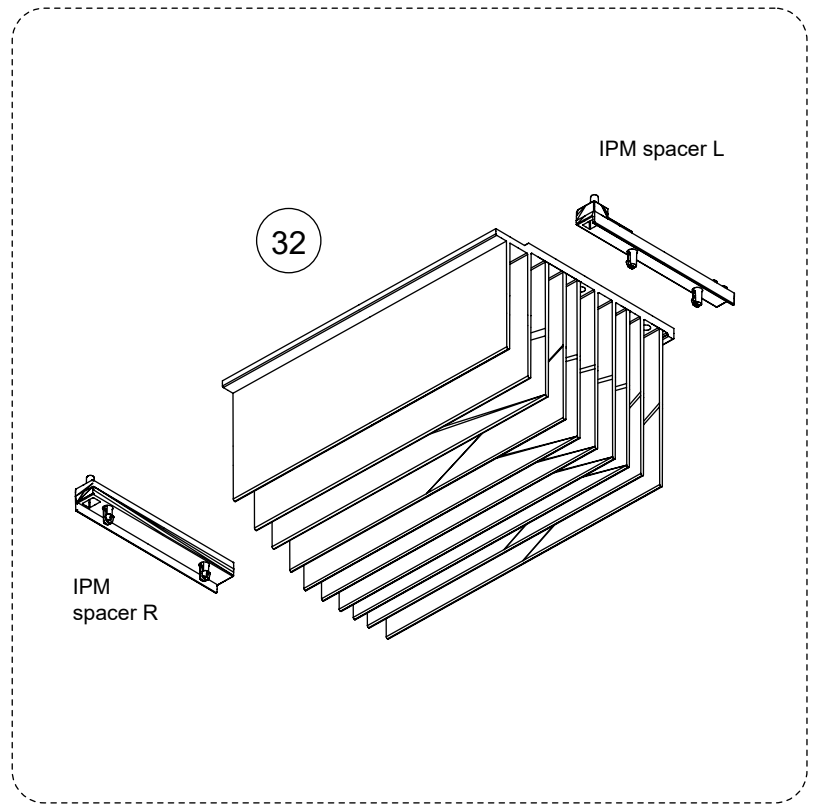
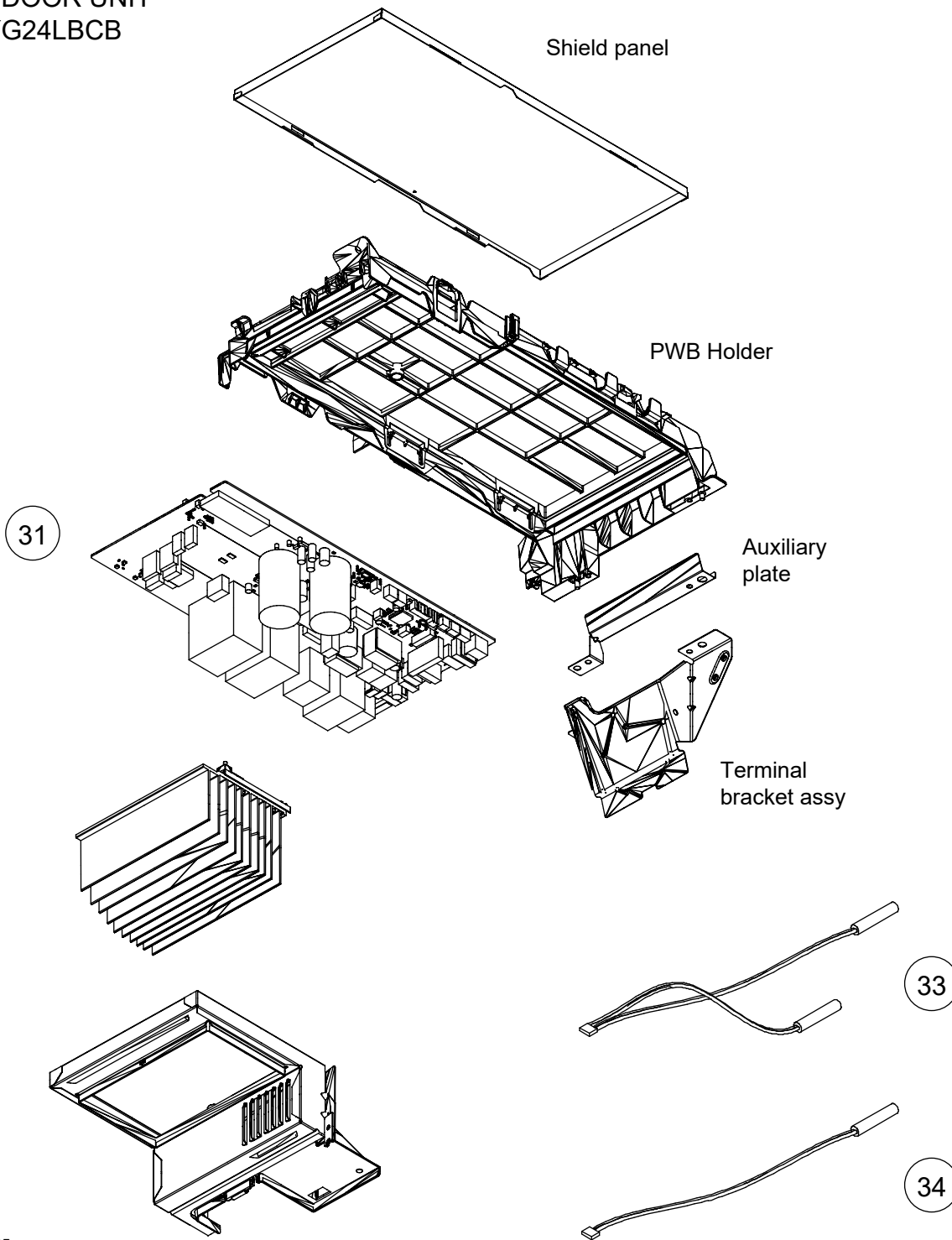


OUTDOOR UNIT
AOYG24LBCB



Ref.	Description	Part number
21	Motor bracket assy	9322553034
22	Brushless motor	9603601003
23	Terminal	9900435028

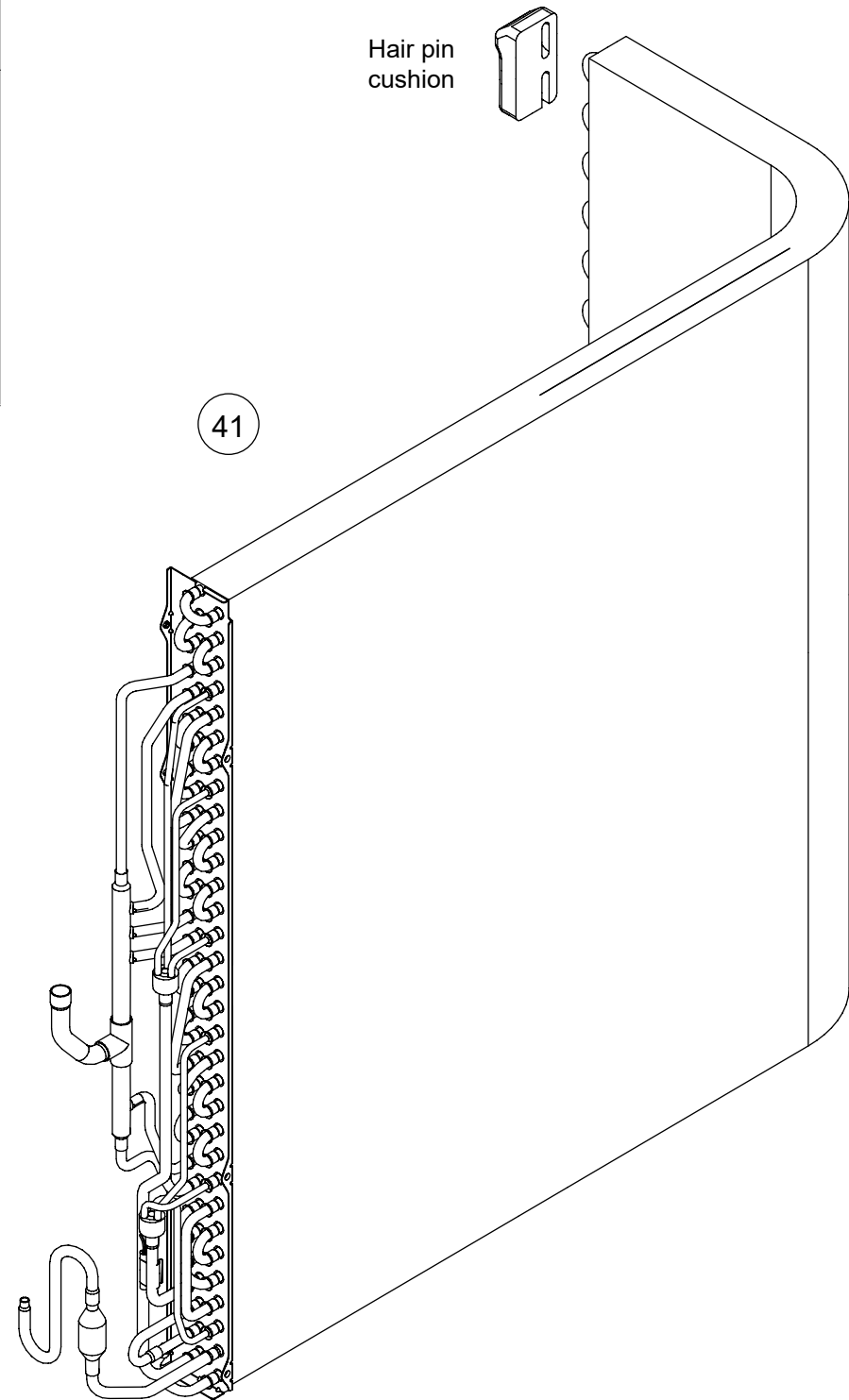
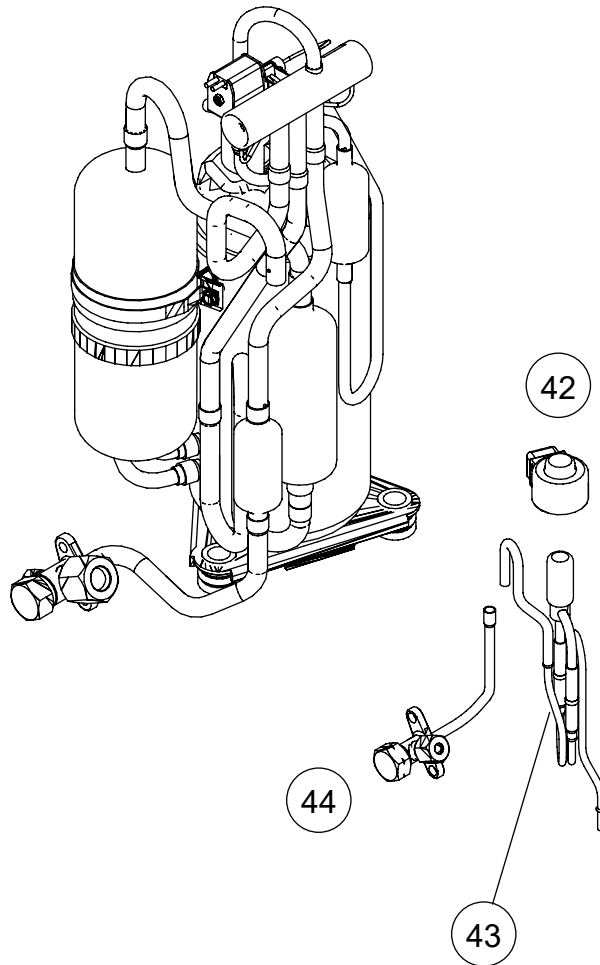
OUTDOOR UNIT
AOYG24LBCB



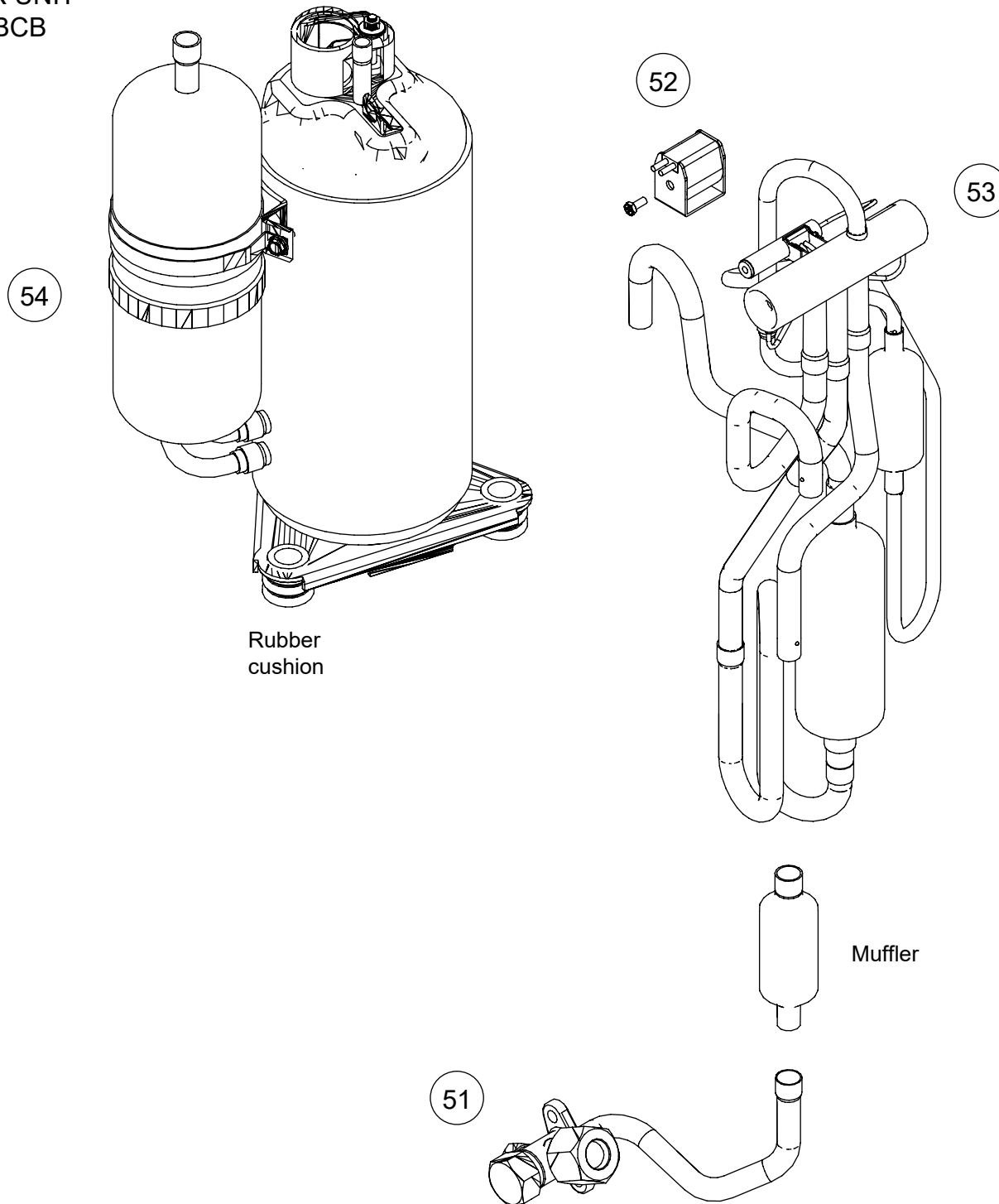
Ref.	Description	Part number
31	Main PCB	9710408069
32	Heatsink	9322421012
33	Thermistor assy	9900849030
34	Heat exchanger thermistor	9900984014

OUTDOOR UNIT
AOYG24LBCB

Ref.	Description	Part number
41	Condenser total assy	9317089630
42	Expansion valve coil	9970095122
43	Pulse motor valve assy	9322463005
44	2-way valve assy	9322476005



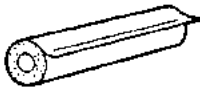
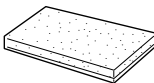






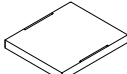

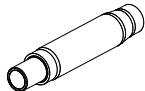



OUTDOOR UNIT
AOYG24LBCB



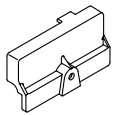



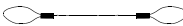


Ref.	Description	Part number
51	3-way valve assy	9322477019
52	Solenoid	9970195006
53	4-way valve assy	9322447005
54	Compressor	9810540003
-	S-insulator B	9322503008
-	S-insulator F	9322529008
-	S-insulator H	9322501004
-	S-insulator V	9323045002
-	S-insulator K	9322824004

ACCESSORIES

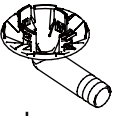
INDOOR UNIT AUYG24LVLA

Name and Shape	Q'ty	Name and Shape	Q'ty
Coupler heat insulation (Large)  For indoor side pipe joint (gas pipe)	1	Drain hose insulation  For installing drain pipe	1
Coupler heat insulation (Small)  For indoor side pipe joint (liquid pipe)	1	Remote control  1	1
Special nut A (Large flange)  For installing indoor unit	4	Battery  2	2
Special nut B (Small flange)  For installing indoor unit	4	Remote control holder  1	1
Template (Carton top)  For ceiling openings cutting Also used as packing	1	Tapping screw (M3 × 12mm)  Mounting the remote control holder	2
Drain hose  For installing drain pipe	1	Cable tie  For electrical wiring	2
Hose Band  For installing drain hose	1	Wire clammer  For electrical wiring	1

DECORATION PANEL UTG-UFYD-W

Name and Shape	Q'ty	Name and Shape	Q'ty
Connector cover  For covering connector	1	Tapping Screw (M5 × 12 mm)  Mounting decoration panel	4
Tapping Screw (M4 × 12 mm)  Mounting connector cover	1	L angle  Mounting the Hook Wire to the decoration panel	2
Hook wire  Suspending the decoration panel	2	Screw [pitch small] (M4 × 10 mm)  Mounting the Hook wire (for metals)	2
Screw [pitch large] (M4 × 10 mm)  Mounting the L angle and Hook wire (for resins)	4		

OUTDOOR UNIT AOYG24LBCB

Name and Shape	Q'ty
Drain pipe 9322144003  For drain piping work	1