

SPLIT TYPE
AIR CONDITIONER
CASSETTE TYPE (50Hz)

SERVICE MANUAL



Indoor unit	Outdoor unit
AUXG45LRLB	AOYG45LBTA
AUXG54LRLB	AOYG54LBTA
UTG-UKYA-W	

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cooling & Heating	
INDOOR UNIT		AUXG45LRLB	AUXG54LRLB
DECORATION PANEL		UTG-UKYA-W	
OUTDOOR UNIT		AOYG45LBTA	AOYG54LBTA
POWER SOURCE		230 V, 50 Hz, Single phase	
Cooling	CAPACITY	12.5 kW	13.3 kW
	POWER CONSUMPTION	3.85 kW	4.38 kW
	EER	3.25 kW/kW	3.04 kW/kW
	OPERATING CURRENT	16.8 A	19.1 A
	MAXIMUM CURRENT	20.5 A	21.5 A
	DEHUMIDIFICATION	4.5 L/h	5.0 L/h
Heating	CAPACITY	14.0 kW	15.8 kW
	POWER CONSUMPTION	3.73 kW	4.58 kW
	COP	3.75 kW/kW	3.45 kW/kW
	OPERATING CURRENT	16.3 A	20.0 A
	MAXIMUM CURRENT	20.5 A	21.5 A

FAN MOTOR

INDOOR UNIT	MFF-T80VA2F
OUTDOOR UNIT	MFE-45VVT

FAN REVOLUTION

INDOOR UNIT	High	700 r.p.m.	740 r.p.m.
	Medium	590 r.p.m.	630 r.p.m.
	Low	530 r.p.m.	570 r.p.m.
	Quiet	470 r.p.m.	480 r.p.m.
OUTDOOR UNIT Cooling	Upper fan	850 r.p.m.	
	Lower fan	800 r.p.m.	
OUTDOOR UNIT Heating	Upper fan	780 r.p.m.	850 r.p.m.
	Lower fan	750 r.p.m.	830 r.p.m.

AIR CIRCULATION

INDOOR UNIT	High	2,000 m3/h	2,100 m3/h
	Medium	1,650 m3/h	1,780 m3/h
	Low	1,460 m3/h	1,600 m3/h
	Quiet	1,300 m3/h	1,320 m3/h
OUTDOOR UNIT	Cooling	6,750 m3/h	
	Heating	6,200 m3/h	6,850 m3/h

NOISE LEVEL

INDOOR UNIT	High	46 dB	47 dB
	Medium	42 dB	43 dB
	Low	39 dB	40 dB
	Quiet	35 dB	36 dB
OUTDOOR UNIT	Cooling	55 dB	
	Heating	55 dB	57 dB

COMPRESSOR AND REFRIGERANT

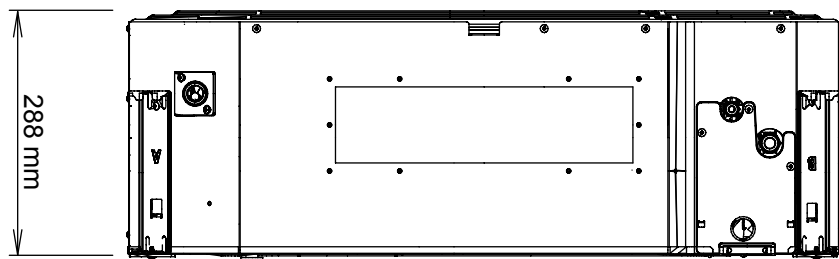
COMPRESSOR TYPE		Hermetic rotary type, 6 pole, Single phase, DC brushless motor	
DISCRIMINATION		N-TF30HD1A	
WEIGHT (with oil)		15.4 kg	
PRECHARGED REFRIGERANT		3,350 g	
REFRIGERANT TYPE		R410A	
FULL CHARGE	Piping length	20 m	3,350 g
		30 m	3,750 g
		40 m	4,150 g
		50 m	4,550 g
ADDITIONAL CHARGE		40 g/m	
MAXIMUM PIPING HEIGHT DIFFERENCE		30 m	

DIMENSIONS

INDOOR UNIT	H x W x D	288 x 840 x 840 mm
DECORATION PANEL	H x W x D	53 x 950 x 950 mm
OUTDOOR UNIT	H x W x D	1,290 x 900 x 330 mm

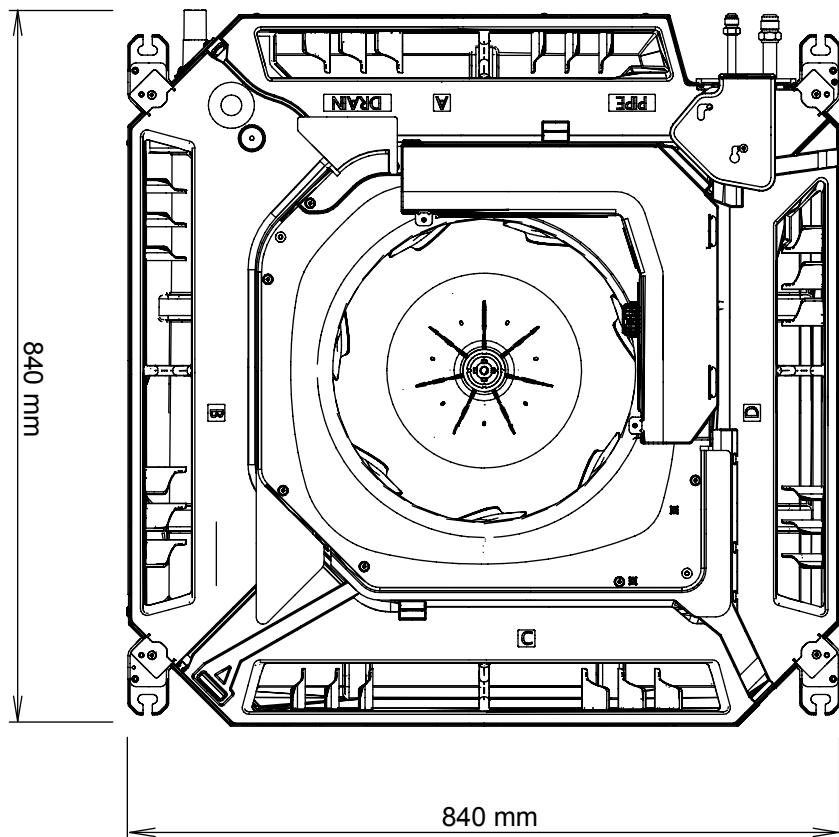
WEIGHT

INDOOR UNIT	Net / Shipping	29 kg / 34 kg
DECORATION PANEL	Net / Shipping	6.0 kg / 10.5 kg
OUTDOOR UNIT	Net / Shipping	86 kg / 94 kg



INDOOR UNIT

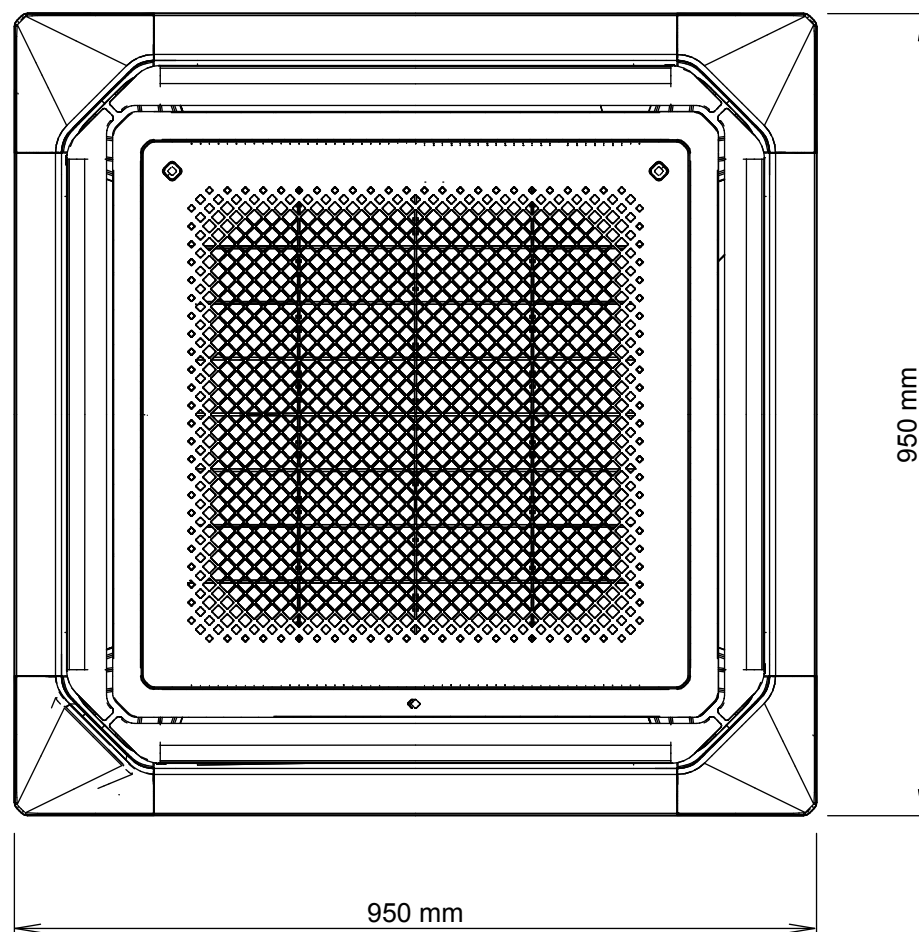
Drain pipe diameter
Inside : 20 mm
Outside : 26 mm



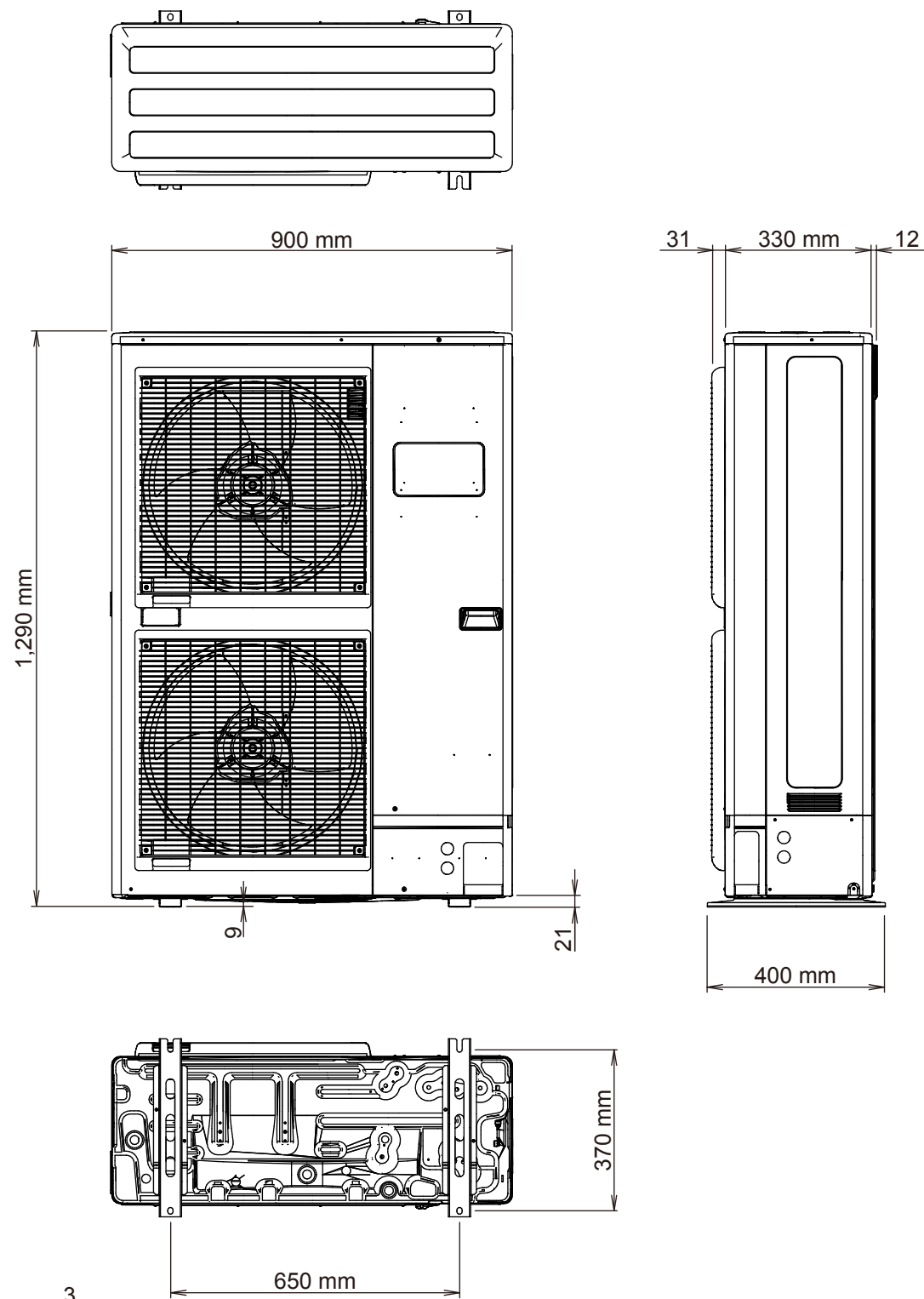
DIMENSIONS



DECORATION PANEL



OUTDOOR UNIT

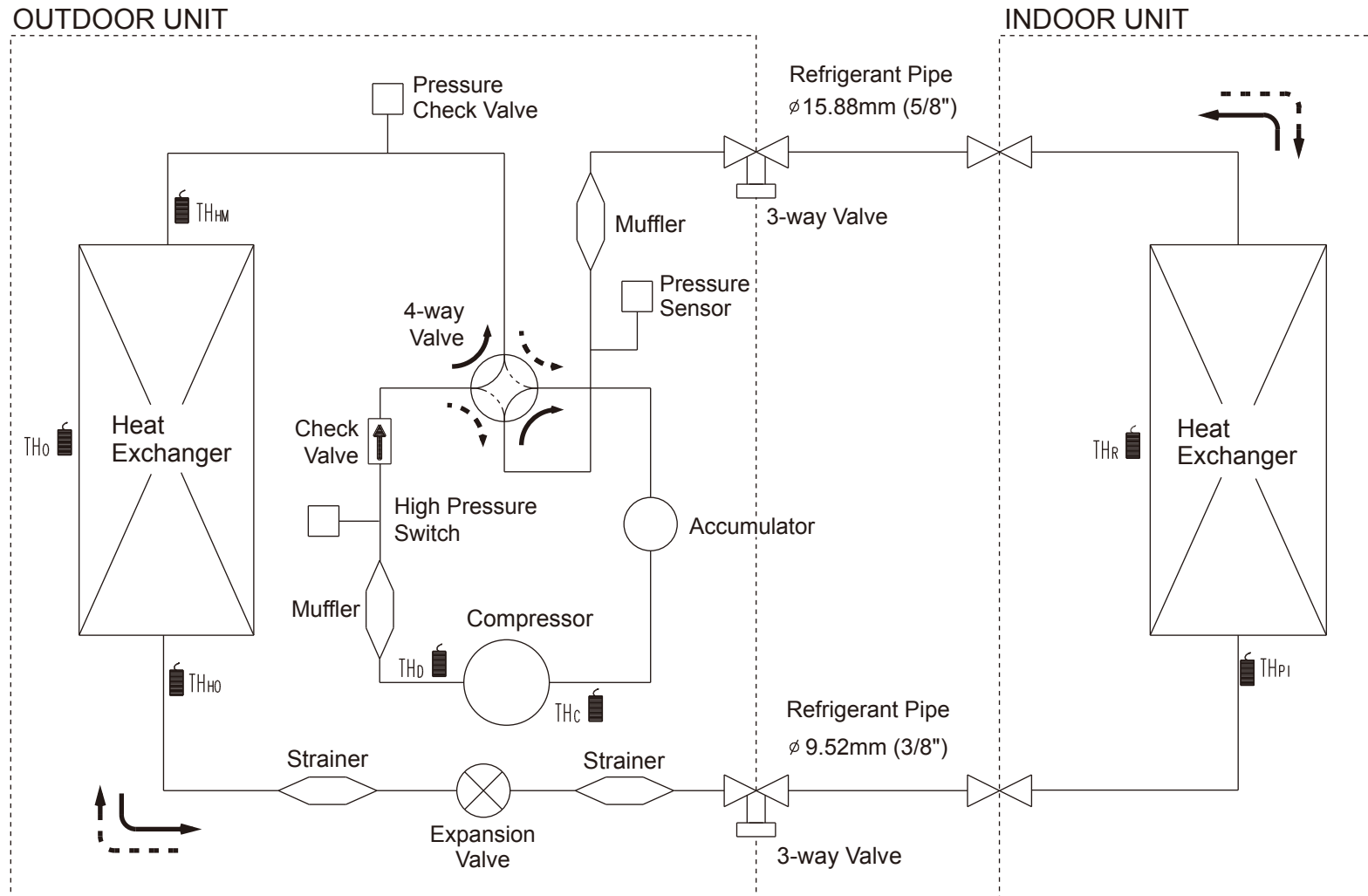


REFRIGERANT SYSTEM DIAGRAM

Refrigerant direction

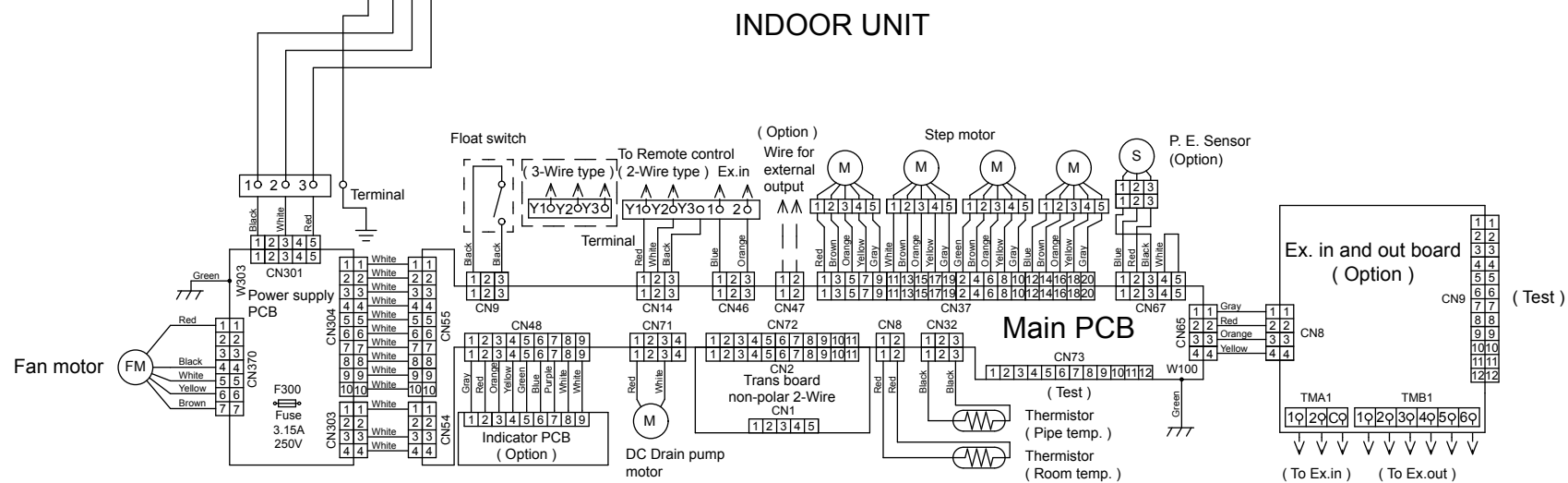
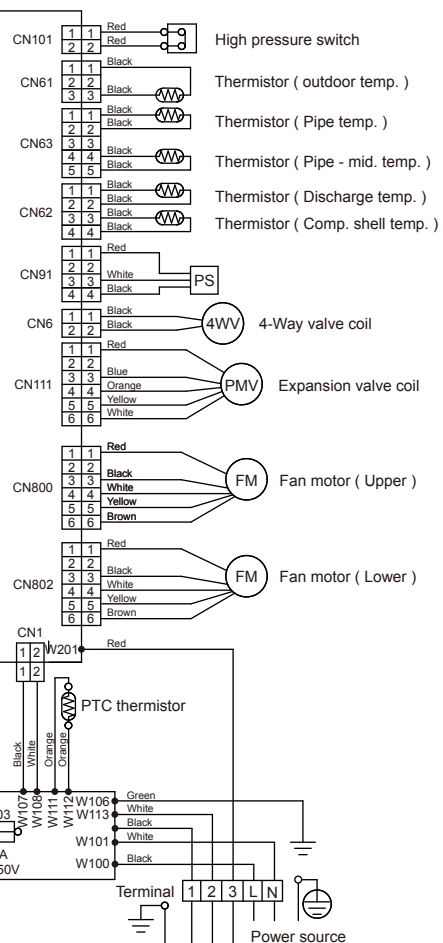
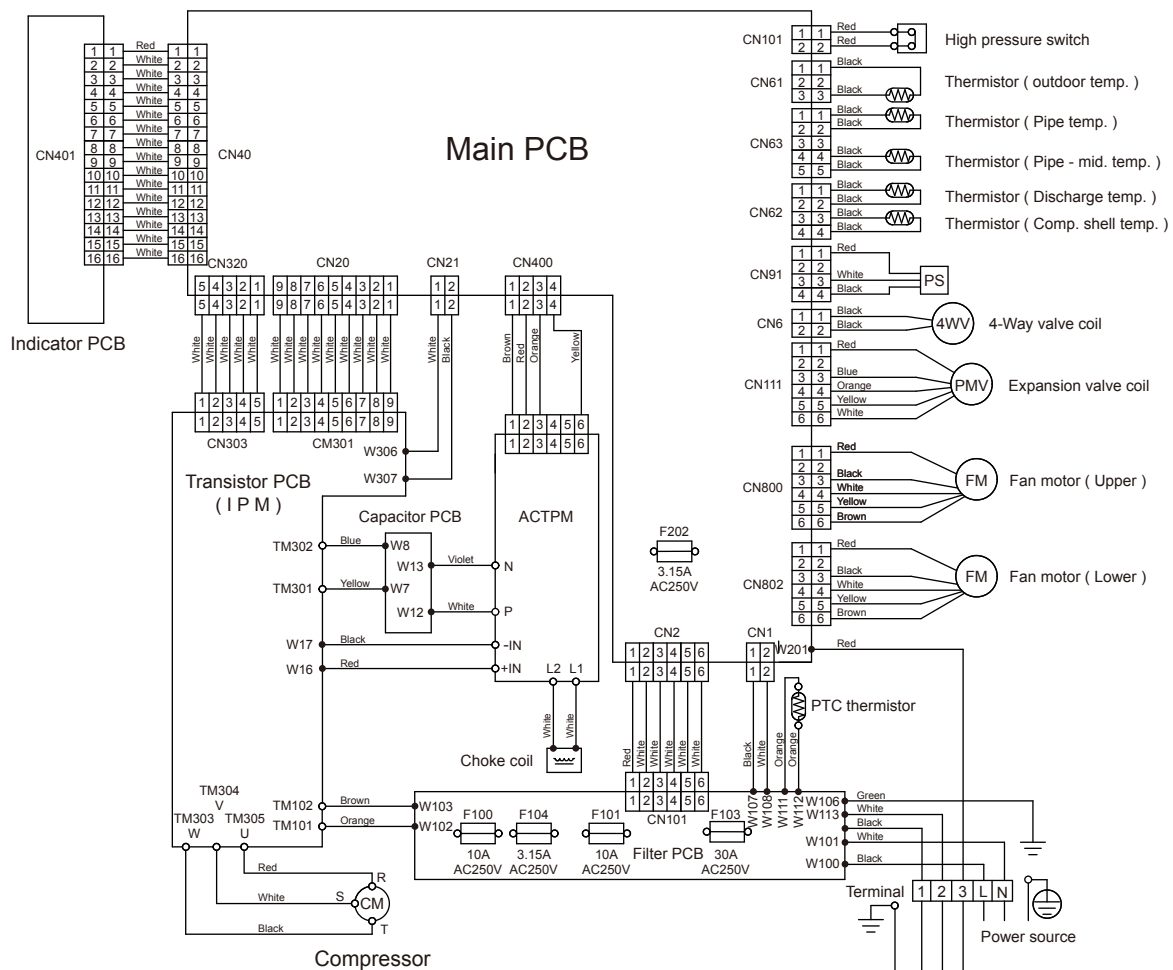
→ Cool

---→ Heat

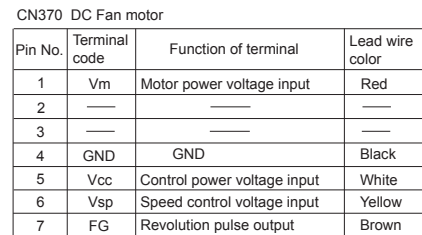


TH_c : Thermistor (Compressor)
 TH_d : Thermistor (Discharge)
 TH_{HM} : Thermistor (Heat Exchanger Med)
 TH_{H0} : Thermistor (Heat Exchanger Out)
 TH_o : Thermistor (Outdoor)

TH_R : Thermistor (Room)
 TH_{PI} : Thermistor (Pipe)

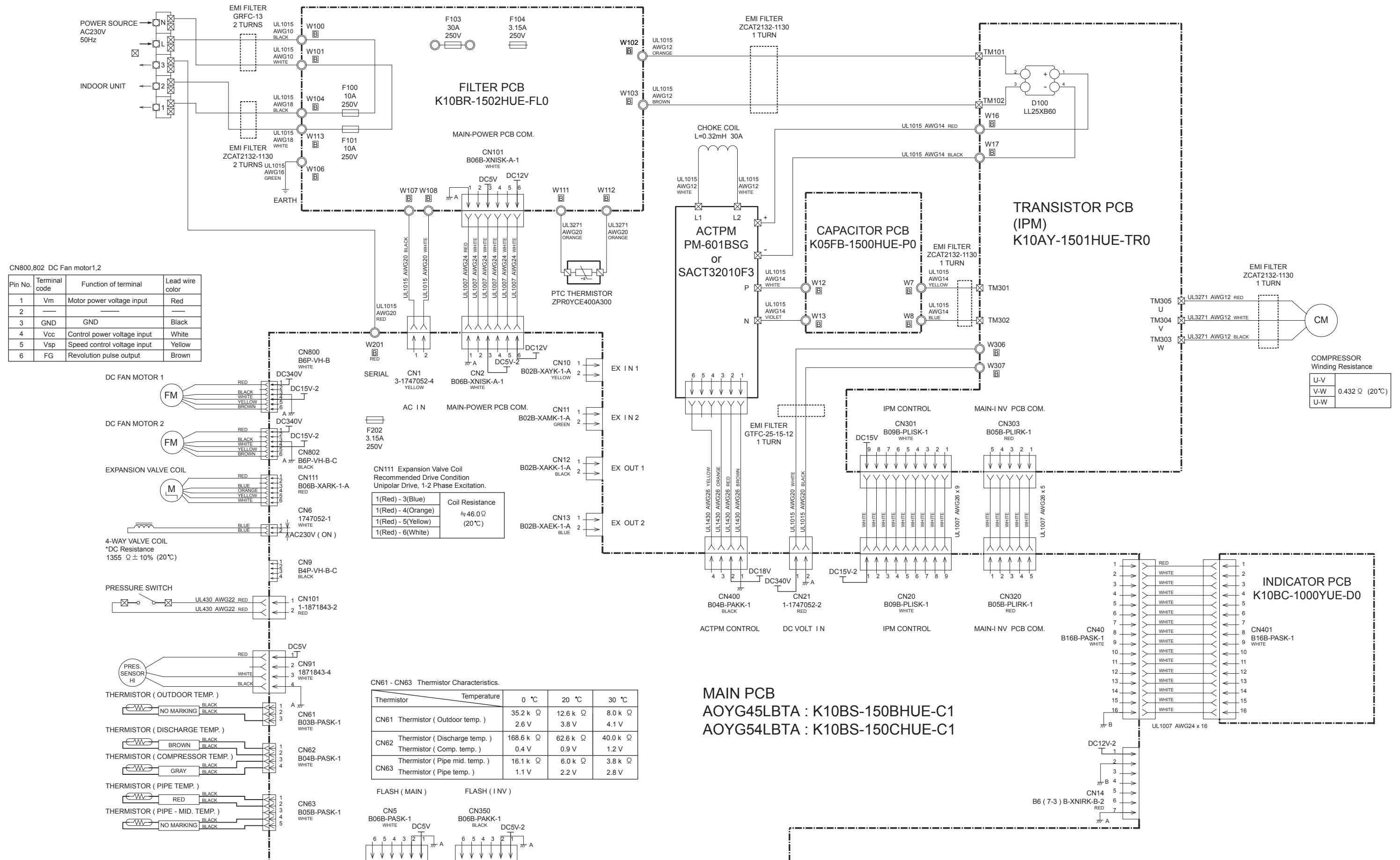


INDOOR UNIT



OUTDOOR UNIT

INVERTER ASSEMBLY
AOYG45LBTA : EZ-015LHUE
AOYG54LBTA : EZ-015MHUE

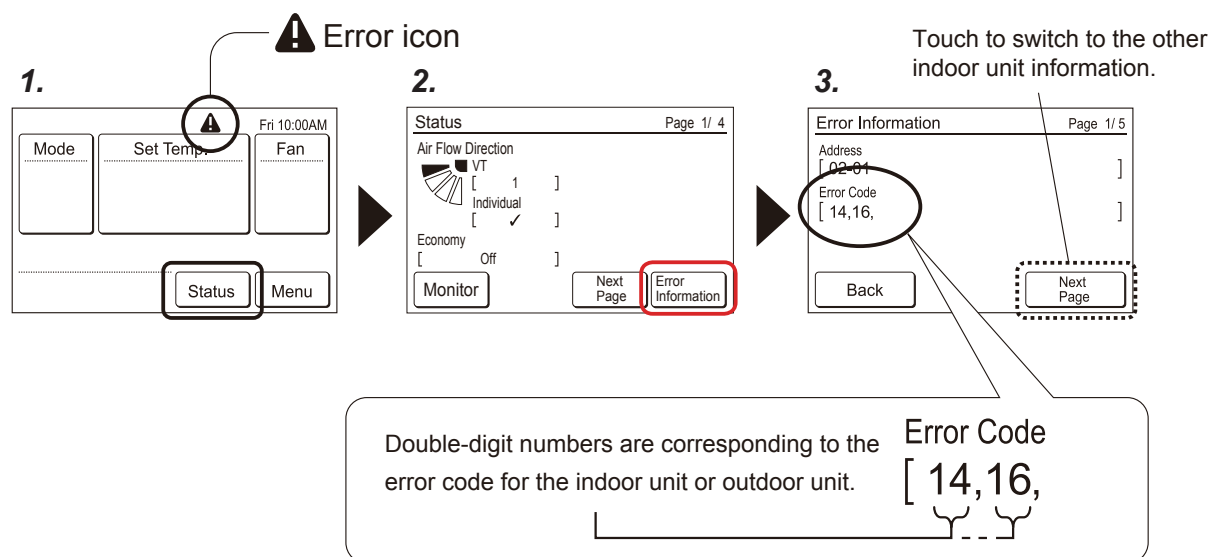


ERROR DETECTION

Troubleshooting at the remote control LCD

UTY-RNRYZ1 (2-wire type)

1. If an error occurs, an error icon appears on the “Monitor mode screen”.
Touch the [Status] button. The “Status” screen is displayed.
2. Touch the [Error Information] button. The “Error Information” screen is displayed.
(When there are no errors, the [Error Information] will not be displayed.)
3. Double-digit numbers correspond to the error code in the table next page.
Touch the [Next page] (or [Previous page]) to switch to the other connected indoor units.

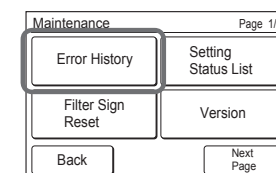


Triple-digit error code means the error of remote control itself.

Error code	Contents
CC.1	Sensor error
C2.1	Transmission PCB error
12.1	Wired remote control communication error
12.3	Number excess of device in wired remote control system
12.4	Wired remote control system start-up error
26.4	Address duplication in wired remote control system
26.5	Address setting error in wired remote control system
15.4	Data acquisition error

Error History (Triple-digit)

- (1) Touch the [Error History] on the “Maintenance” screen.



- (2) “Error History” screen is displayed. When the screen has multiple pages, they can be switched by touching the [Next Page] or [Previous Page].

No.	Date	Time	Address	Code
1	2015/ 8/ 1	11:00AM	002-01	141
2	2015/ 7/30	2:53AM	002-02	143
3	2015/ 7/25	8:53AM	002-02	143
4	2015/ 7/22	11:00AM	002-01	141
5	2015/ 7/22	11:00AM	002-01	141
6	2015/ 7/21	11:00AM	002-01	141

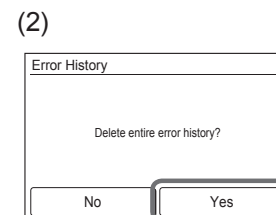
No.	Date	Time	Address	Code
7	2015/ 7/ 1	11:00AM	002-01	141
8	2015/ 7/10	2:53AM	002-02	143
9	2015/ 7/ 5	8:53AM	002-02	143
10	2015/ 7/ 2	11:00AM	002-01	141
11	2015/ 7/ 2	11:00AM	002-01	141

- (3) When the [Back] is touched after verification, the display returns to the “Maintenance” screen.

Erase the Error History

- (1) Touch the [Erase All] on the “Error History” screen.
- (2) A verification screen is displayed. When the [Yes] is touched after the history is cleared, the display returns to the “Error History” screen.

No.	Date	Time	Address	Code
1	2015/ 8/ 1	11:00AM	002-01	141
2	2015/ 7/30	2:53AM	002-02	143
3	2015/ 7/25	8:53AM	002-02	143
4	2015/ 7/22	11:00AM	002-01	141
5	2015/ 7/22	11:00AM	002-01	141
6	2015/ 7/21	11:00AM	002-01	141



If you use a wired type remote control, error codes will appear on the remote control display.

When you use a wireless remote control, 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.

An error display is displayed only during running.

UTY-RNRYZ1

Double-digit error code means the error for the indoor unit or outdoor unit.

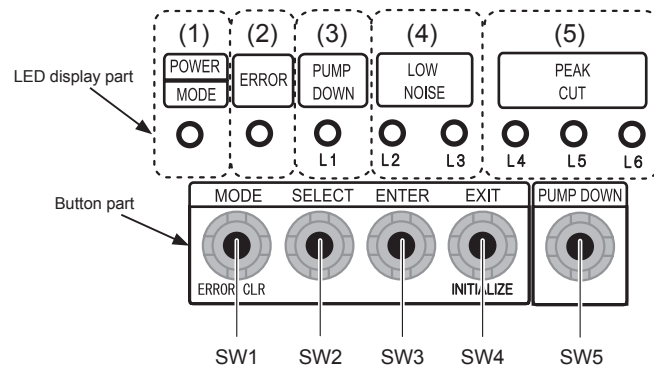
Error display			Wired remote controller Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(1)	●(1)	◇	11	Serial communication error
●(1)	●(2)	◇	12	Wired remote controller communication error
●(1)	●(5)	◇	15	Check run unit finished
●(1)	●(6)	◇	16	Peripheral unit transmission PCB connection error
●(1)	●(8)	◇	18	External communication error
●(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)	●(6)	◇	26	Indoor unit address setting error
●(2)	●(7)	◇	27	Primary unit, secondary unit setup error [Simultaneous Multi]
●(2)	●(9)	◇	29	Connection unit number error in wired remote controller system
●(3)	●(1)	◇	31	Power supply interruption error
●(3)	●(2)	◇	32	Indoor unit PCB model information error
●(3)	●(5)	◇	35	Manual auto switch error
●(3)	●(10)	◇	3A	Indoor unit communication circuit (wired remote controller) error
●(4)	●(1)	◇	41	Room temp. sensor error
●(4)	●(2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
●(4)	●(4)	◇	44	Human 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)	●(1)	◇	61	Outdoor unit reverse/missing phase and wiring error
●(6)	●(2)	◇	62	Outdoor unit main PCB model information error or communication error

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

Error display			Wired remote control Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(6)	●(3)	◇	63	Inverter error
●(6)	●(4)	◇	64	Active filter error, PFC circuit error
●(6)	●(5)	◇	65	Trip terminal L error
●(6)	●(8)	◇	68	Outdoor unit rush current limiting resistor temp. rise 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
●(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]

OUTDOOR UNIT ERROR CODE DISPLAY

You can determine the operating status by the lighting up and blinking of the LED lamp.



Display when an error occurs

POWER	ERROR	PUMP DOWN	LOW NOISE			PEAK CUT	
MODE		(L1)	(L2)	(L3)	(L4)	(L5)	(L6)
●	Blink (Hi speed)	○	○	○	○	○	○

Sign "○": Lights off, "●": Lights on

- (1) Check that the "ERROR" LED blinks, then press the [Enter] button once.
- (2) For details, refer to the following table.

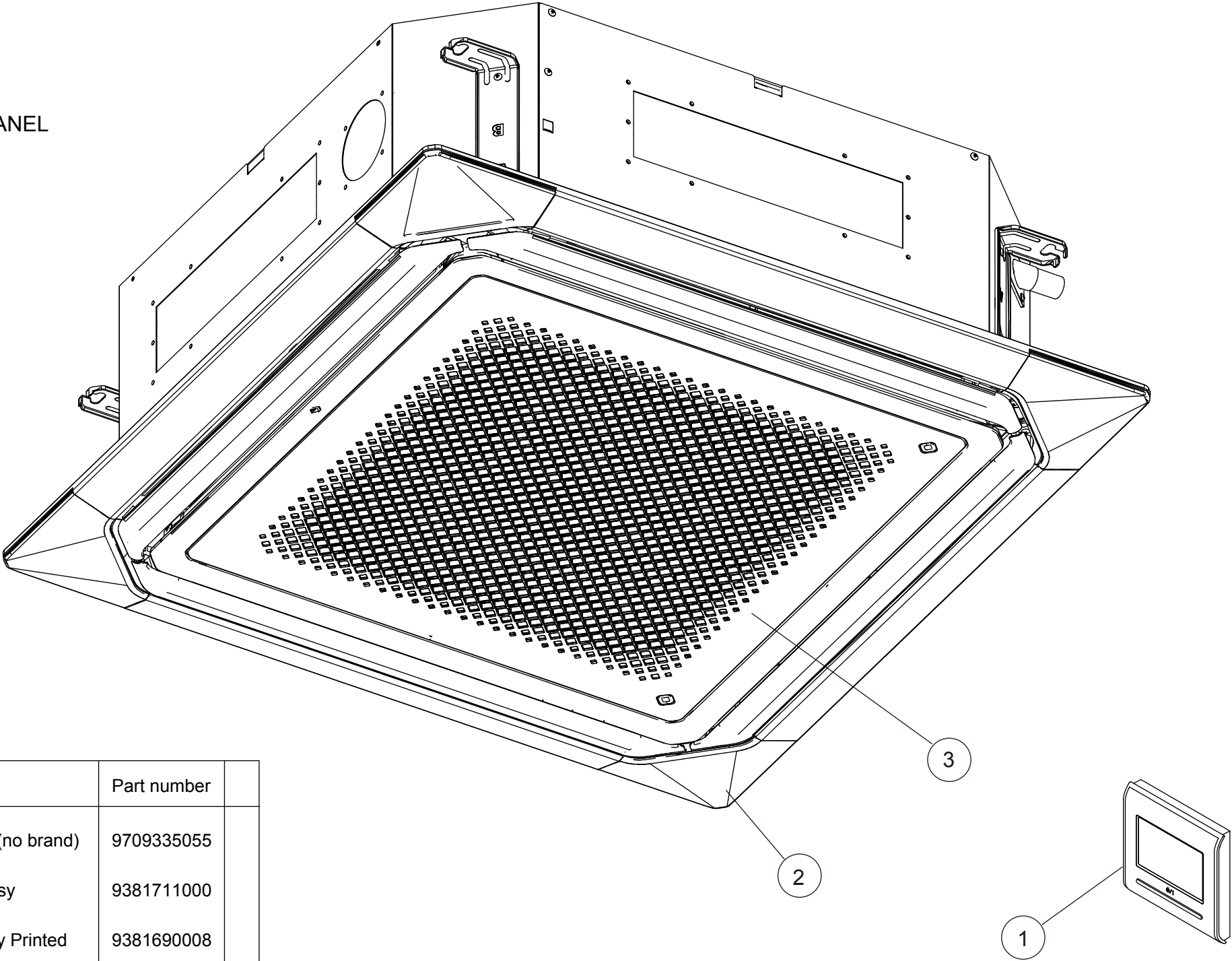
Display mode ● : ON
○ : OFF
◆ : Blink (0.5s ON / 0.5s OFF)
() : Number of flashing

Error code check table

LED display								DESCRIPTION	REMARK
POWER MODE	ERROR	PUMP DOWN	LOW NOISE		PEAK CUT				
			(L1)	(L2)	(L3)	(L4)	(L5)		
◆(2)	●	◆(1)	◆(1)	○	○	●	●	Serial communication error	Serial forward transmission error immediately after operation
◆(2)	●	◆(1)	◆(1)	○	●	○	○		Serial forward transmission error during operation
◆(2)	●	◆(2)	◆(2)	○	○	○	●	Indoor unit capacity error	Indoor unit capacity error
◆(2)	●	◆(5)	◆(15)	○	○	○	●	Indoor unit error	Indoor unit error
◆(2)	●	◆(6)	◆(2)	○	○	○	●	Outdoor unit main PCB error	Outdoor unit PCB model information error
◆(2)	●	◆(6)	◆(3)	○	○	○	●	Inverter PCB error	Inverter error
◆(2)	●	◆(6)	◆(5)	○	○	●	●	IPM error	Trip terminal L error
◆(2)	●	◆(7)	◆(1)	○	○	○	●	Discharge temp. sensor error	Discharge temp. sensor 1 error
◆(2)	●	◆(7)	◆(2)	○	○	○	●	Compressor temp. sensor error	Compressor temp. sensor 1 error
◆(2)	●	◆(7)	◆(3)	○	○	●	○	Outdoor unit Heat Ex. sensor error	Heat Ex. middle temp. sensor error
◆(2)	●	◆(7)	◆(3)	○	○	●	●		Outdoor unit Heat Ex. liquid temp. sensor error
◆(2)	●	◆(7)	◆(4)	○	○	○	●	Outdoor temp. sensor error	Outdoor temp. sensor error
◆(2)	●	◆(7)	◆(7)	○	○	○	●	Heat sink temp. sensor error	Heat sink temp. sensor error
◆(2)	●	◆(8)	◆(4)	○	○	○	●	Current sensor error	Current sensor 1 error (stoppage permanently)
◆(2)	●	◆(8)	◆(6)	○	●	○	○	Pressure sensor error	High pressure switch 1 error
◆(2)	●	◆(8)	◆(6)	○	●	●	○		Pressure sensor error
◆(2)	●	◆(9)	◆(4)	○	○	○	●	Trip detection	Trip detection
◆(2)	●	◆(9)	◆(5)	○	○	○	●	Compressor motor control error	Rotor position detection error (stoppage permanently)
◆(2)	●	◆(9)	◆(7)	○	○	●	●	Outdoor unit fan motor 1 error	Duty error
◆(2)	●	◆(9)	◆(8)	○	○	●	●	Outdoor unit fan motor 2 error	Duty error
◆(2)	●	◆(9)	◆(9)	○	○	○	●	4-way valve error	4-way valve error
◆(2)	●	◆(10)	◆(1)	○	○	○	●	Discharge temp. 1 error	Discharge temp. 1 error
◆(2)	●	◆(10)	◆(3)	○	○	○	●	Compressor temp. error	Compressor 1 temp. error
◆(2)	●	◆(10)	◆(5)	○	○	○	●	Pressure error 2	Low pressure error

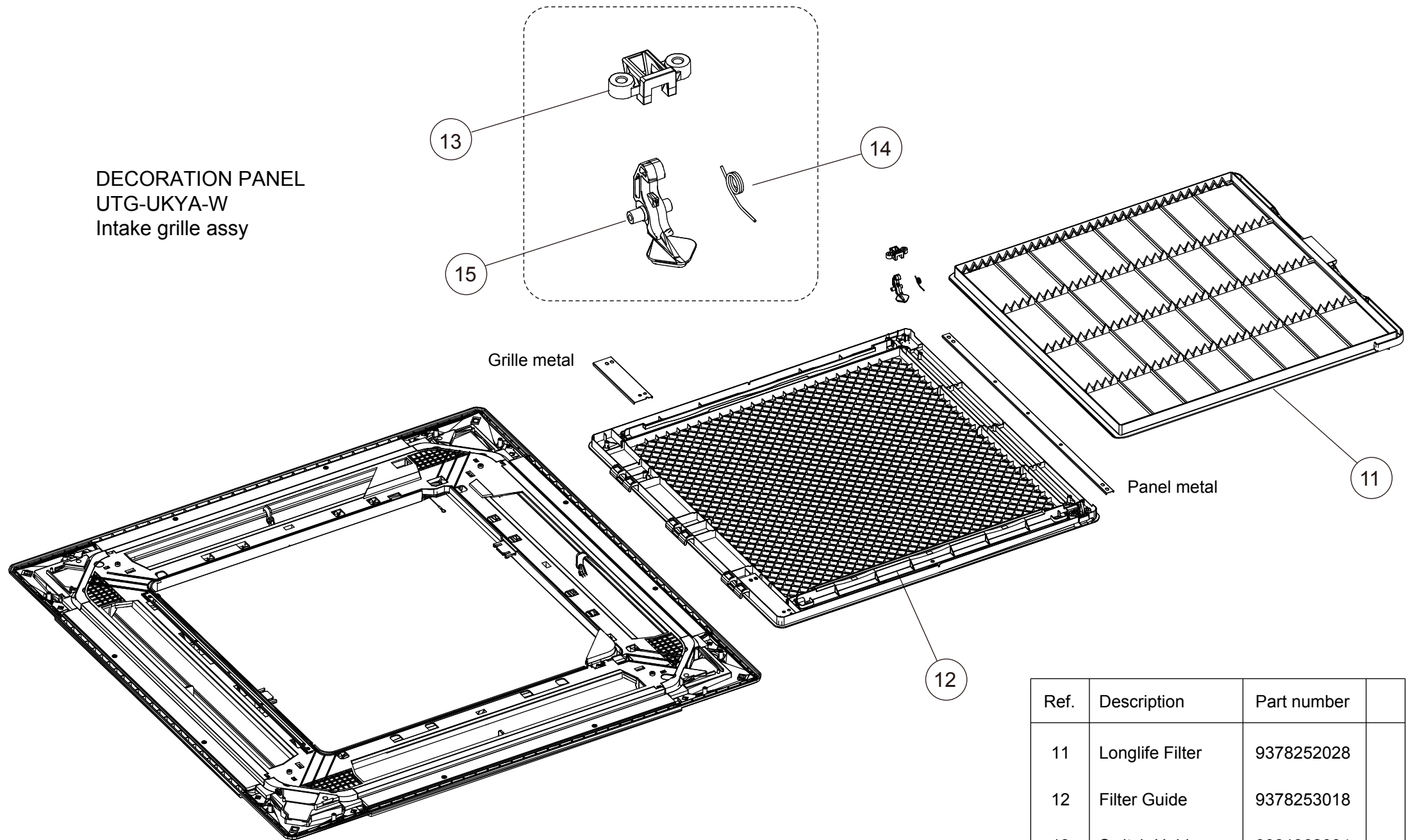
PARTS

DECORATION PANEL
UTG-UKYA-W

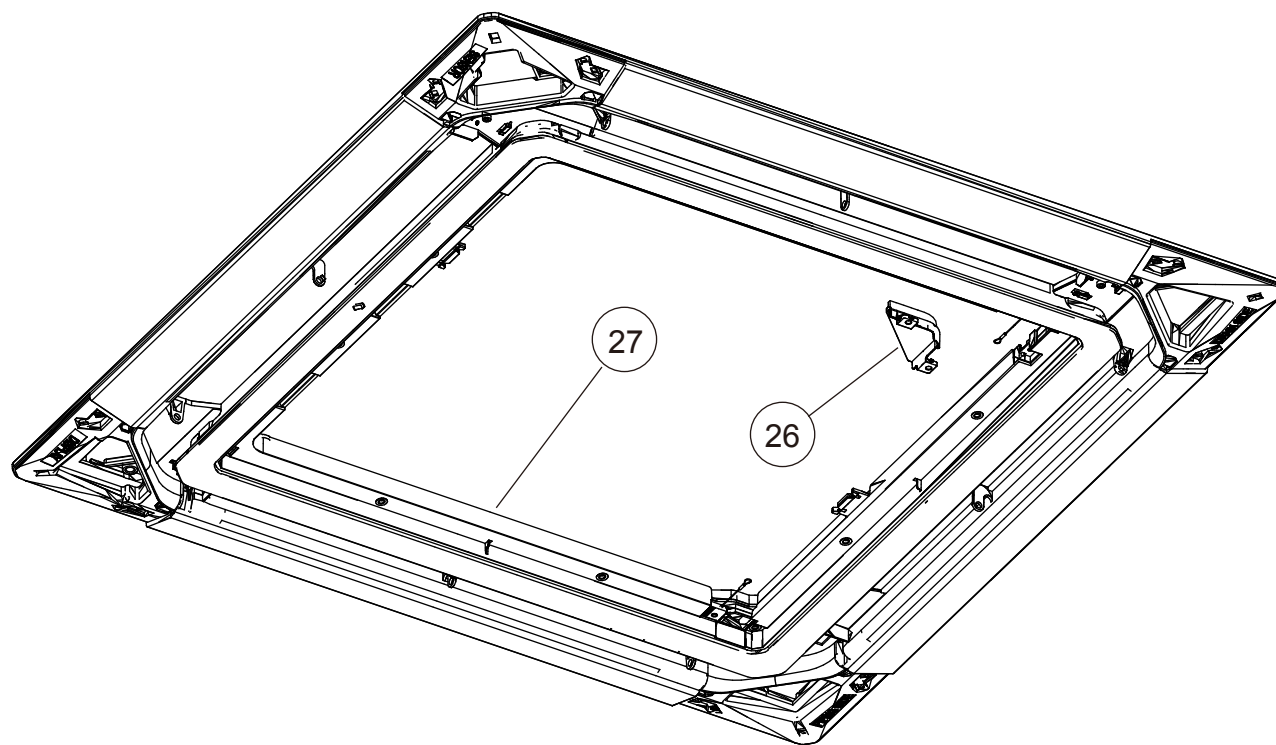


Ref.	Description	Part number	
1	Remote Control (no brand)	9709335055	
2	Corner Panel Assy	9381711000	
3	Intake Grille Assy Printed	9381690008	

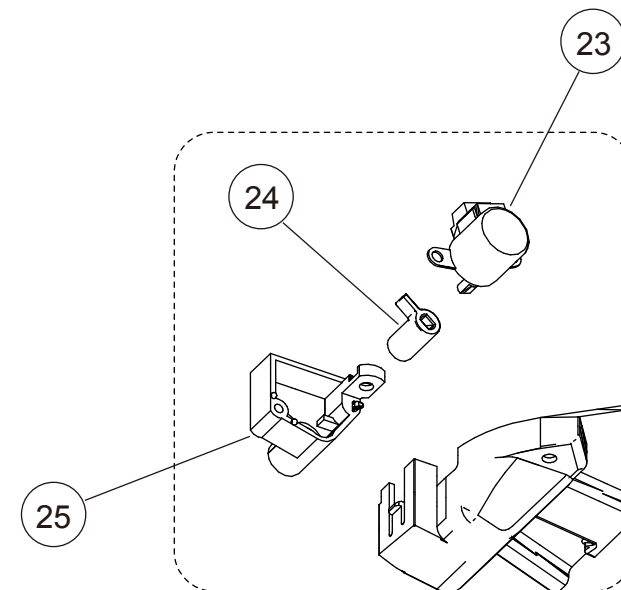
DECORATION PANEL
UTG-UKYA-W
Intake grille assy



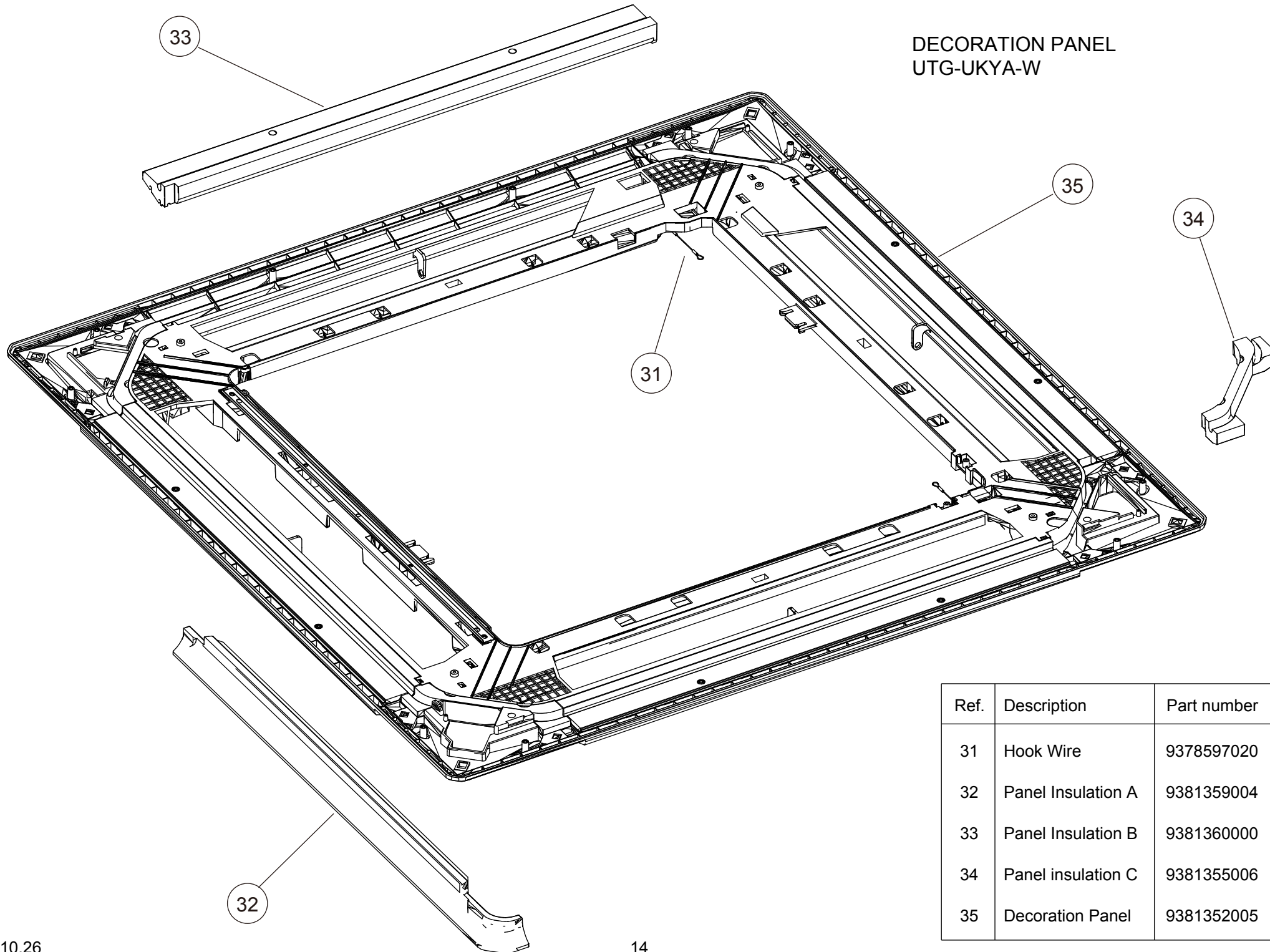
Ref.	Description	Part number	
11	Longlife Filter	9378252028	
12	Filter Guide	9378253018	
13	Switch Holder	9381362004	
14	Switch Spring	9381688005	
15	Switch	9381363001	



DECORATION PANEL UTG-UKYA-W



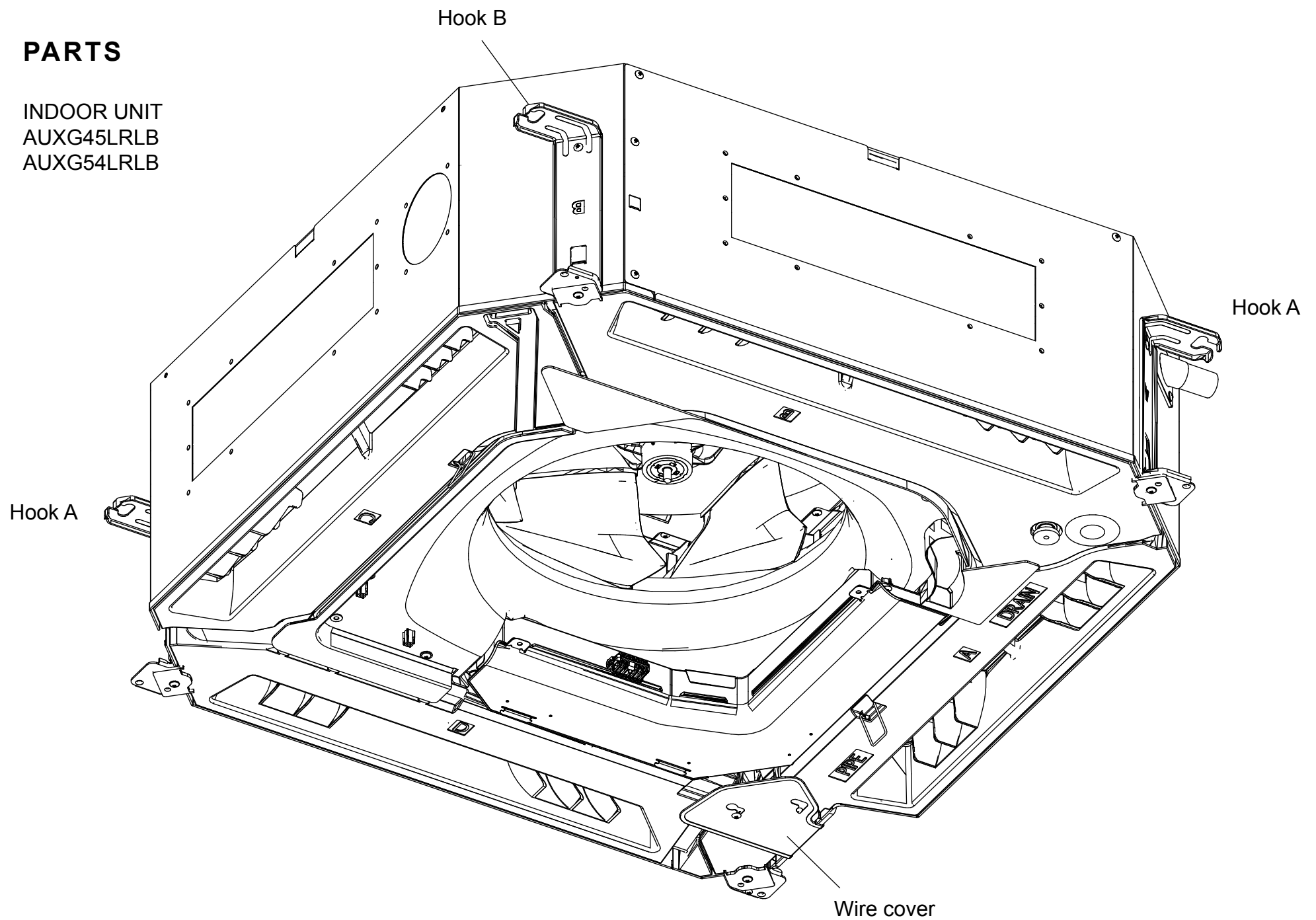
Ref.	Description	Part number
21	Louver Assy	9381693009
22	Motor Cover	9381354009
23	Step Motor	9900885007
24	Shaft Cover	9381357000
25	Motor Case	9381356003
26	Drain Cover Assy	9381713004
27	Bezel	9381353002

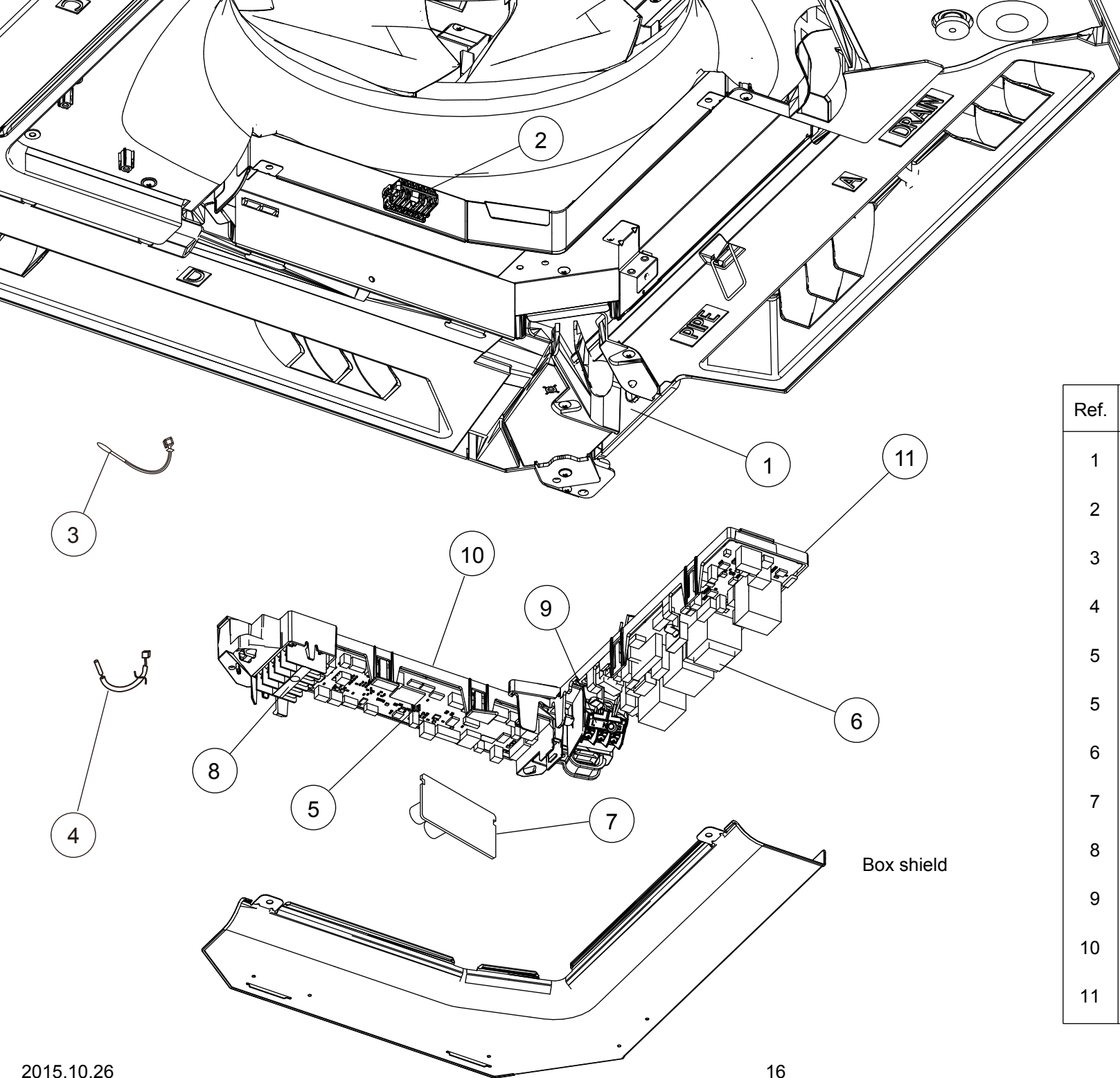


Ref.	Description	Part number	
31	Hook Wire	9378597020	
32	Panel Insulation A	9381359004	
33	Panel Insulation B	9381360000	
34	Panel insulation C	9381355006	
35	Decoration Panel	9381352005	

PARTS

INDOOR UNIT
AUXG45LRLB
AUXG54LRLB



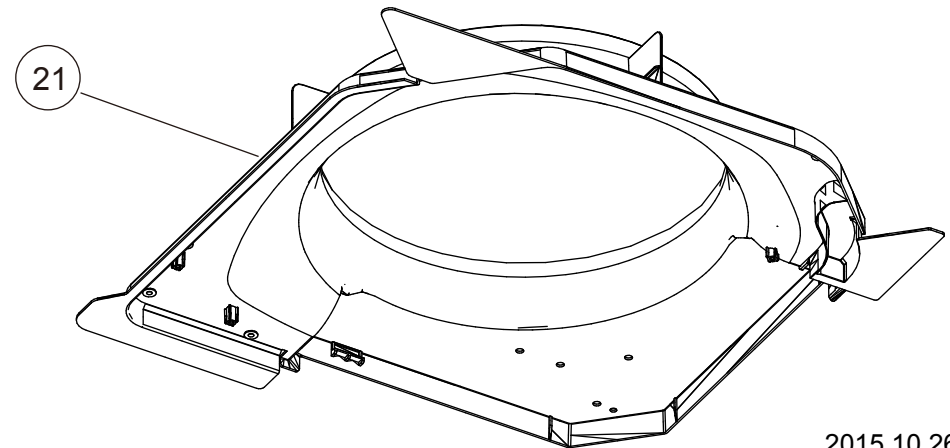
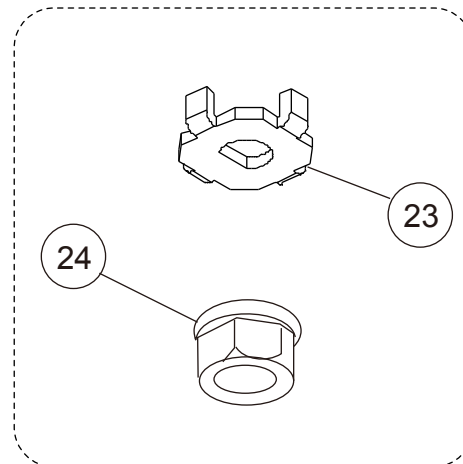
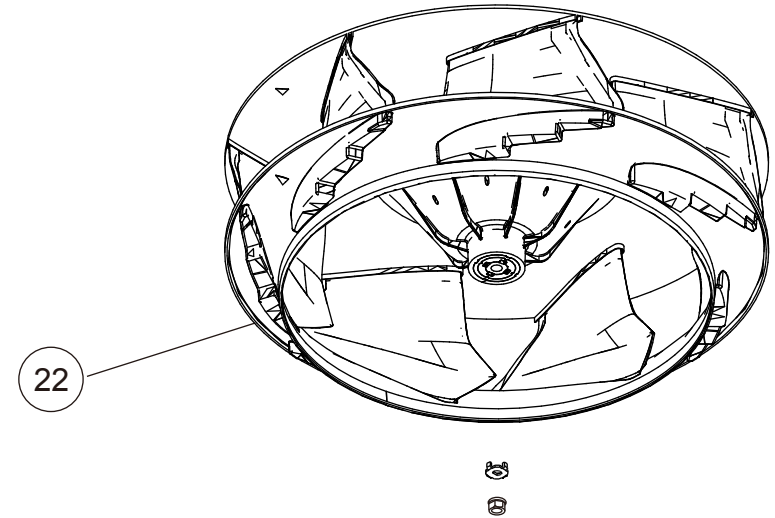
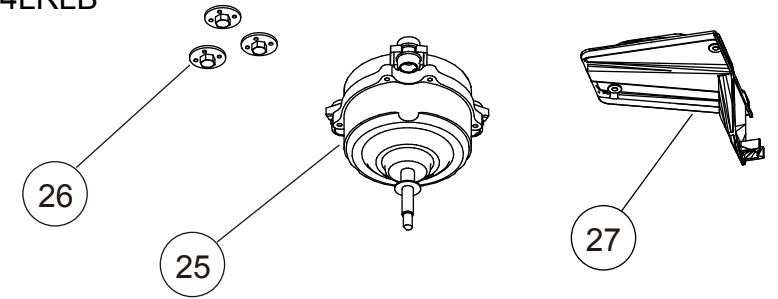
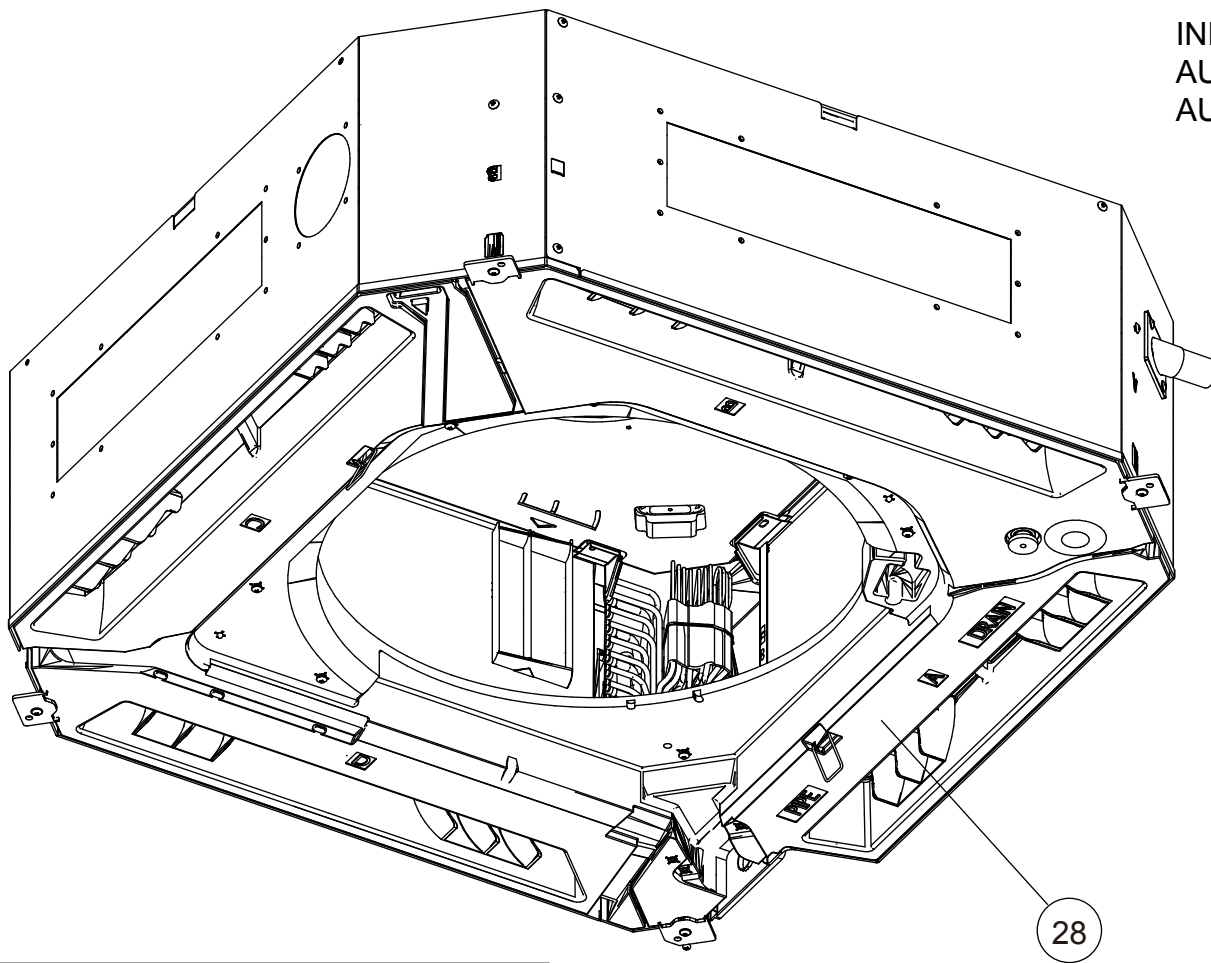


INDOOR UNIT
AUXG45LRLB
AUXG54LRLB

Ref.	Description	Part number	
1	Cable Guide	9381376001	
2	Room Thermistor Holder	9381348008	
3	Room Thermistor	9900822002	
4	Pipe Thermistor	9900903008	
5	Main PCB (AUXG45LRLB)	9710016202	
5	Main PCB (AUXG54LRLB)	9710016219	
6	Power PCB	9710022005	
7	PCB (Non-polar 2-wire)	9710019005	
8	Remote Terminal 5P	9900896003	
9	Power Terminal 3P	9900720032	
10	Main PCB Holder	9381350001	
11	Power PCB Holder	9381349005	

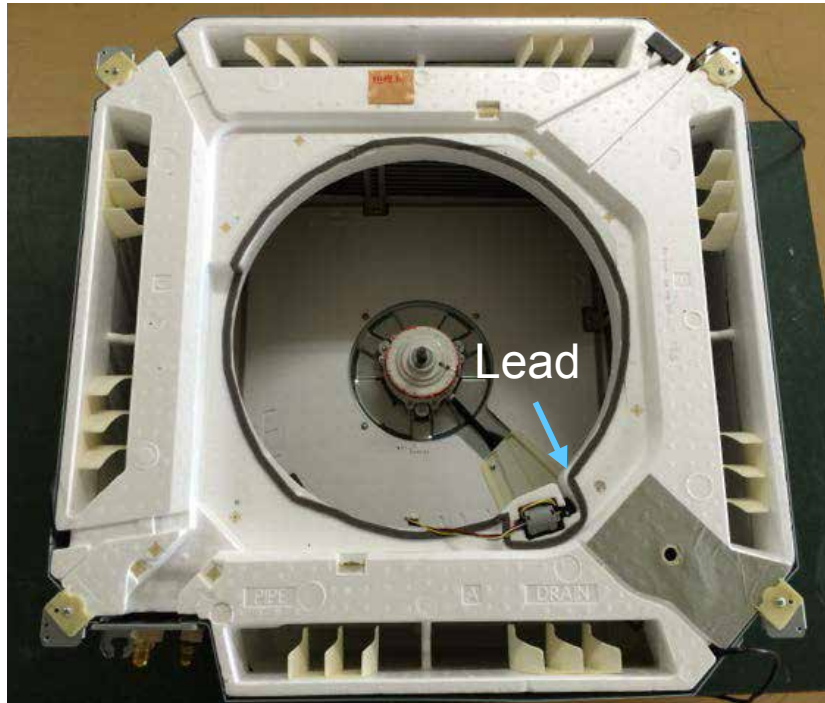
Box shield

INDOOR UNIT
AUXG45LRLB
AUXG54LRLB

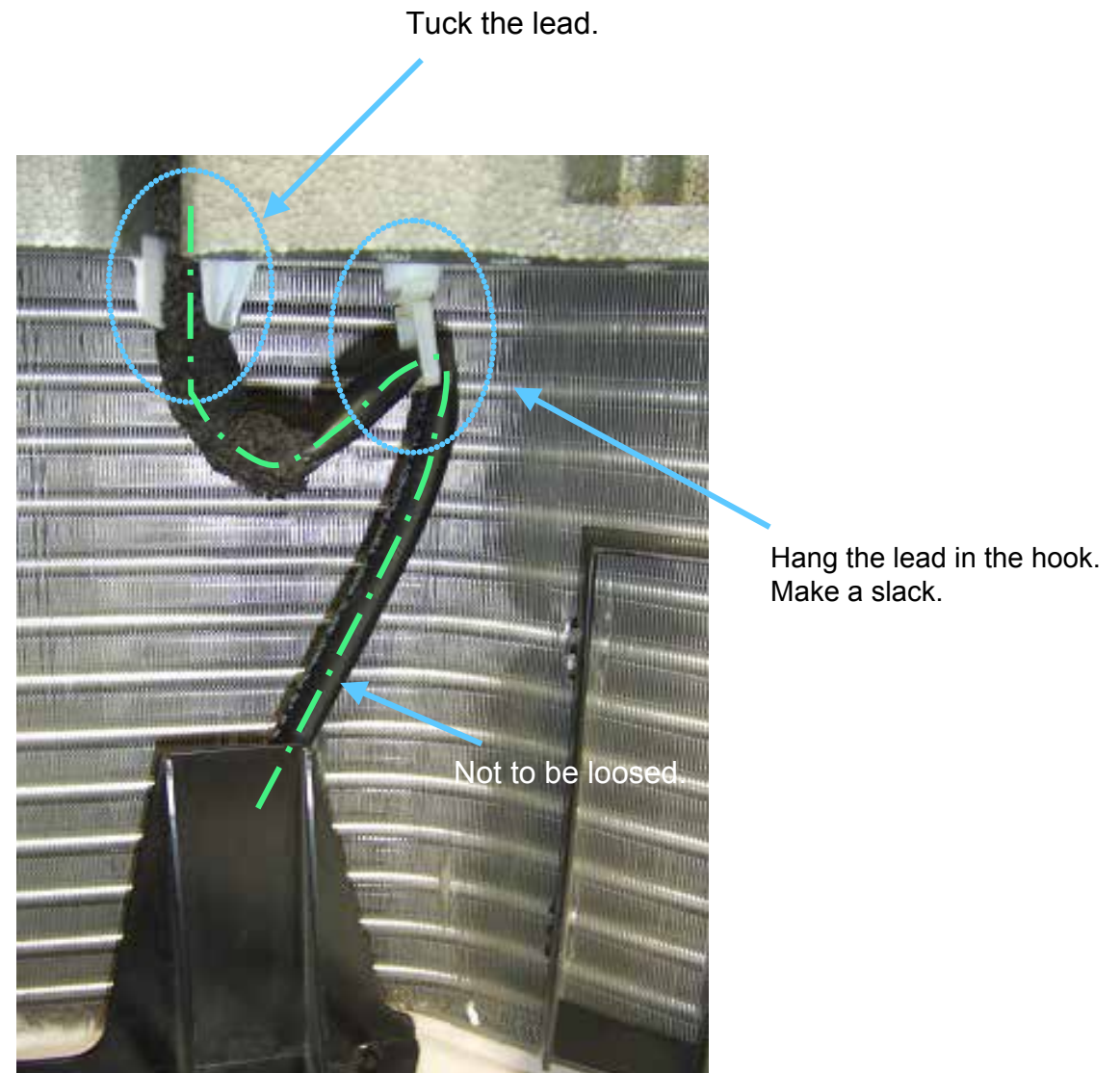


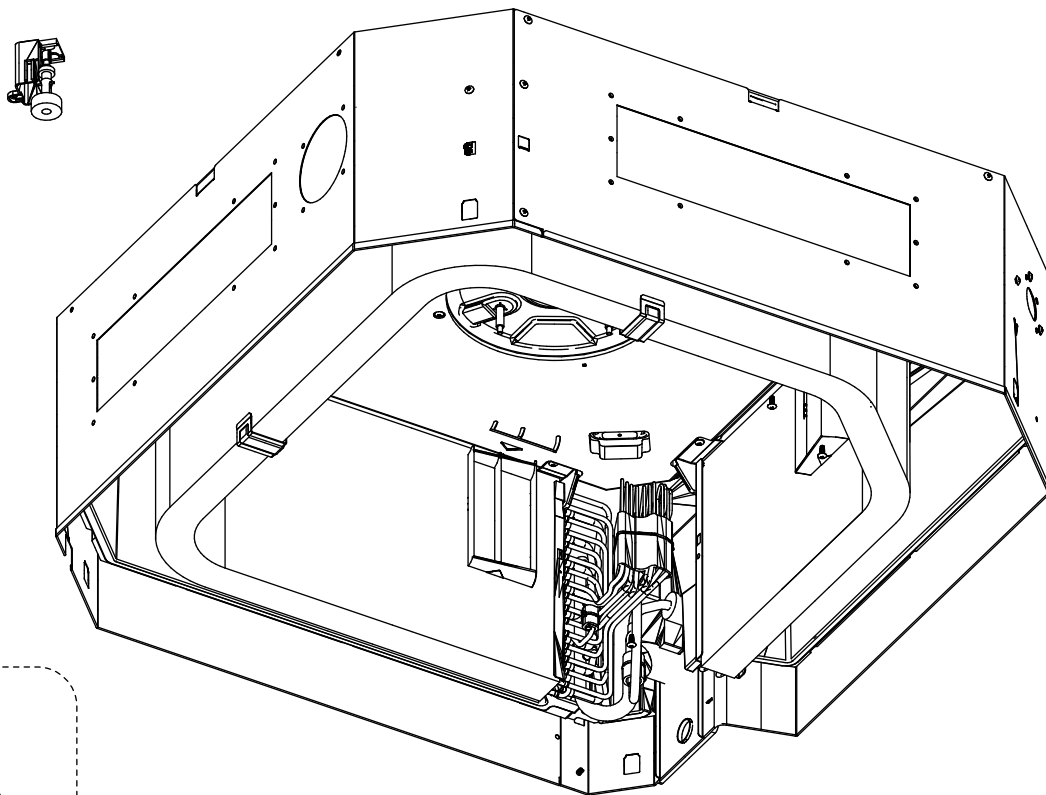
Ref.	Description	Part number
21	Bellmouth	9381345007
22	Turbo Fan Assy	9381303007
23	Turbo Fan Washer	9378394018
24	Nut	9356998009
25	Brushless Motor	9603443009
26	Special Nut	9378388017
27	Motor Wire Holder	9381351008
28	Drain Pan Sub Assy	9381789009

Drain pan

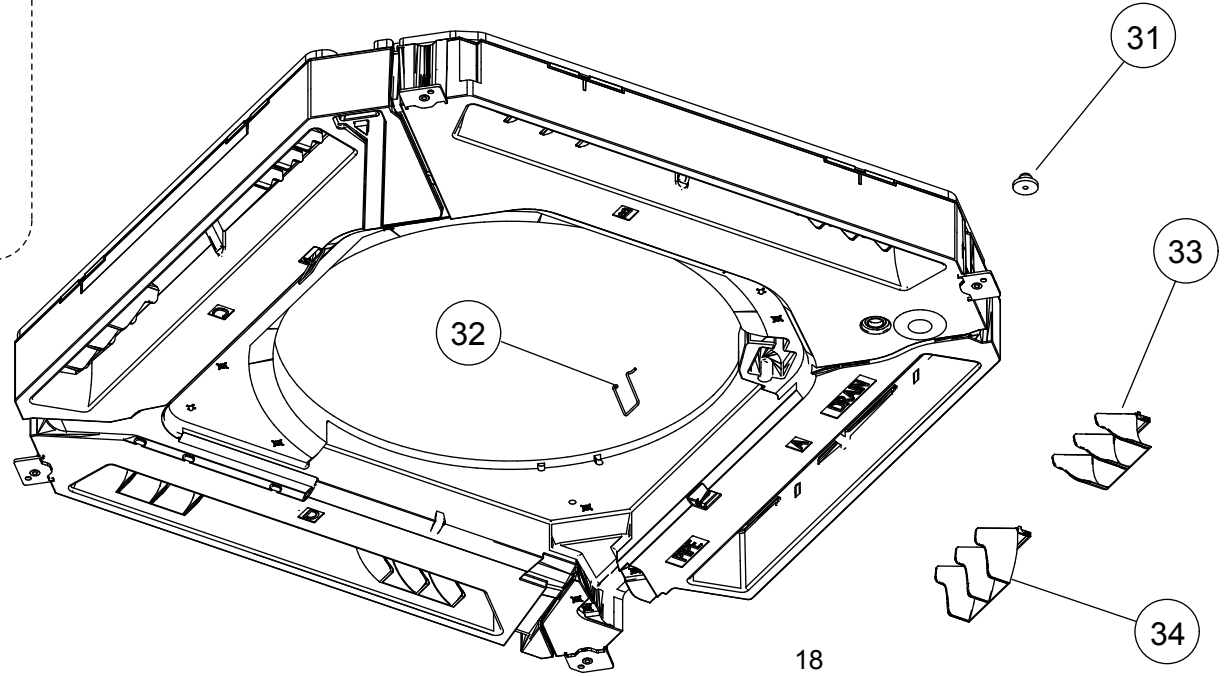
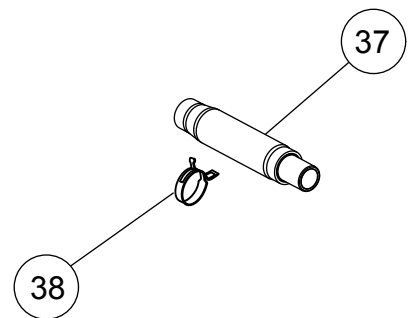
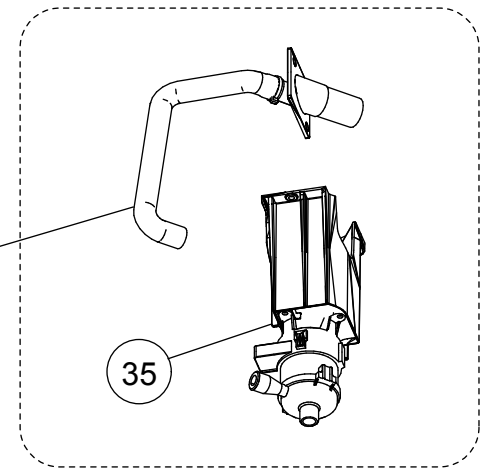


Hang the fan motor lead in the drain pan hooks.
(when it is maintained)

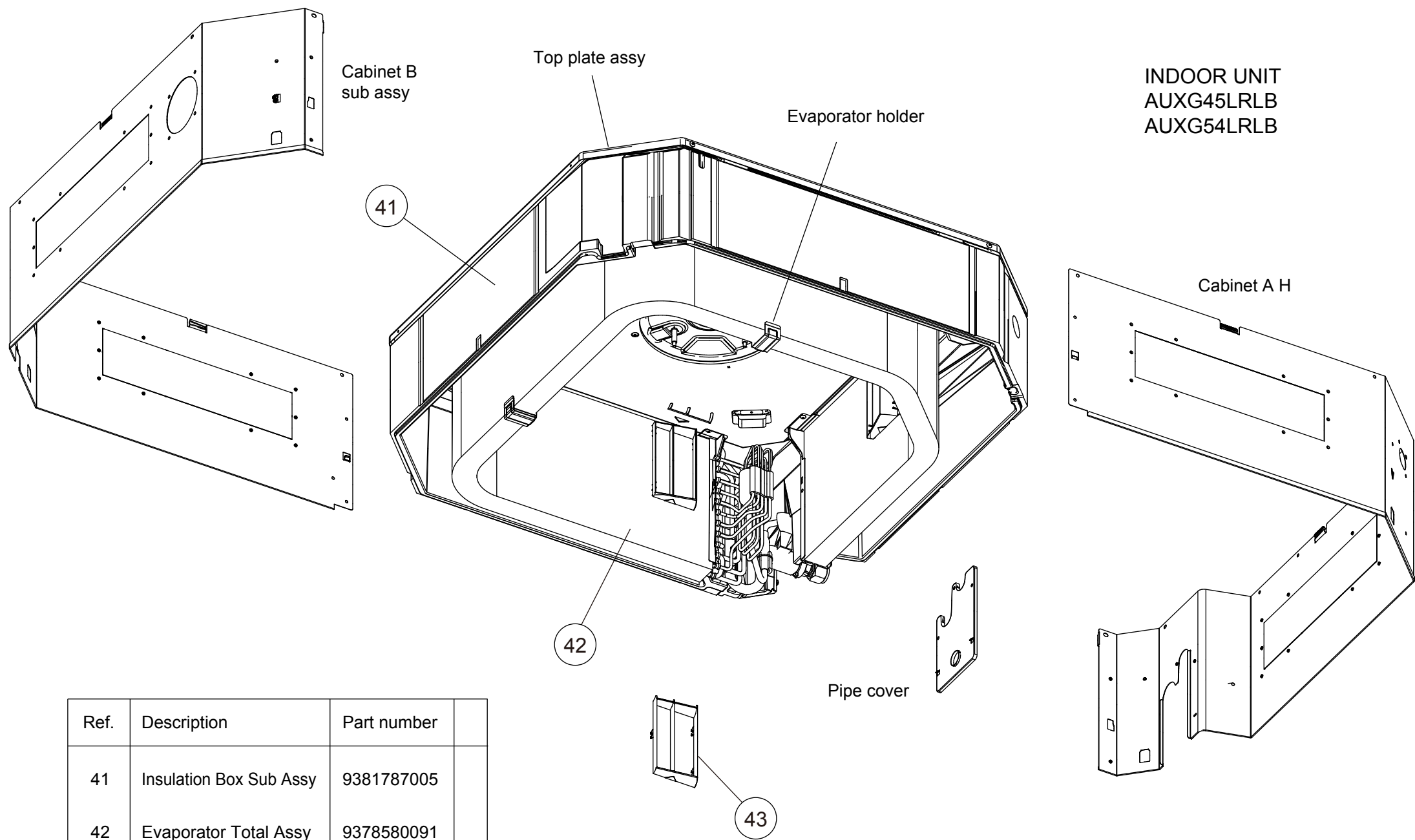




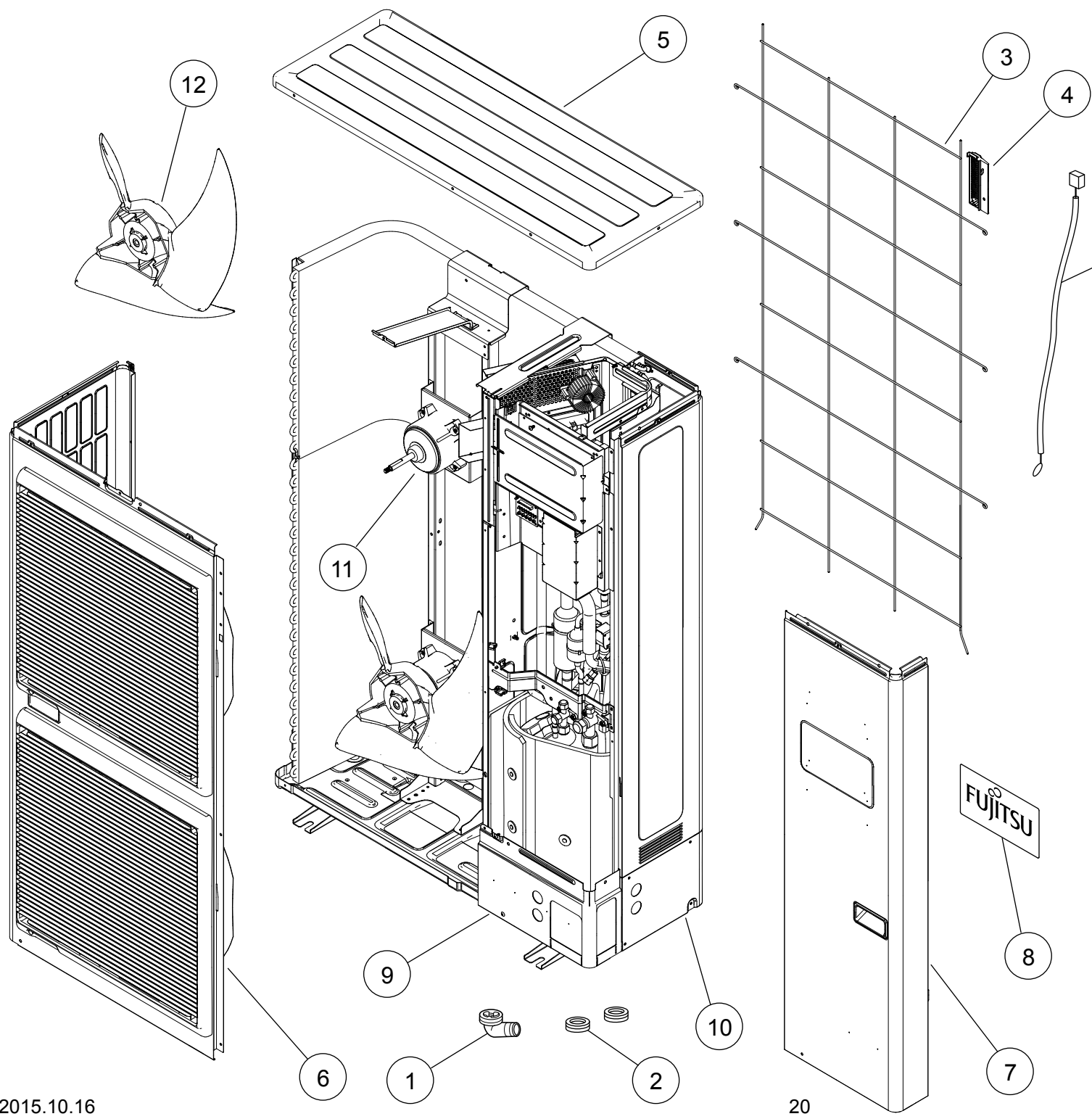
INDOOR UNIT
AUXG45LRLB
AUXG54LRLB



Ref.	Description	Part number	
31	Drain Cap	9375502010	
32	Panel Hook	9375671013	
33	Vane L	9381745012	
34	Vane R	9381744008	
35	Drain Pump Sub Assy	9381793006	
36	Drain Port Sub Assy	9381788002	
37	Drain Hose	9379665001	
38	Hose Band	9379757010	
39	Float Switch Sub Assy	9381794003	



Ref.	Description	Part number	
41	Insulation Box Sub Assy	9381787005	
42	Evaporator Total Assy	9378580091	
43	Wind Guide Board	9382125004	

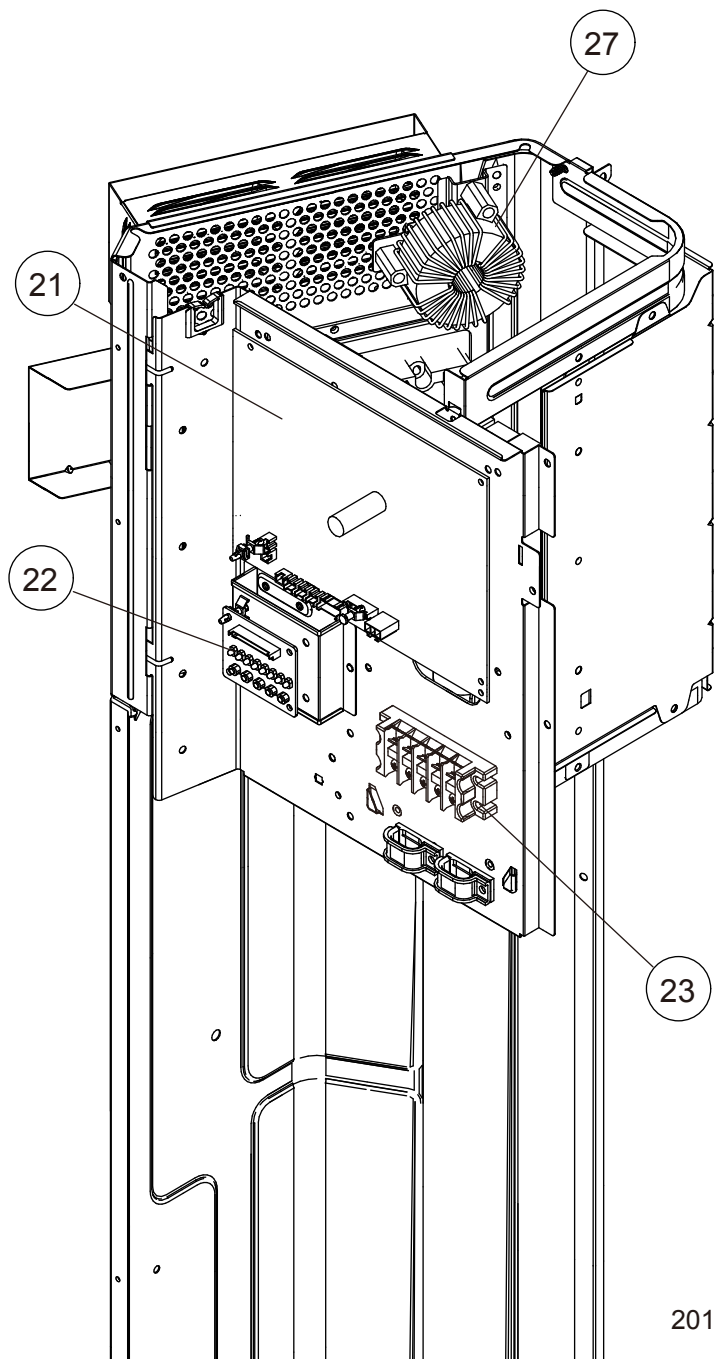


PARTS

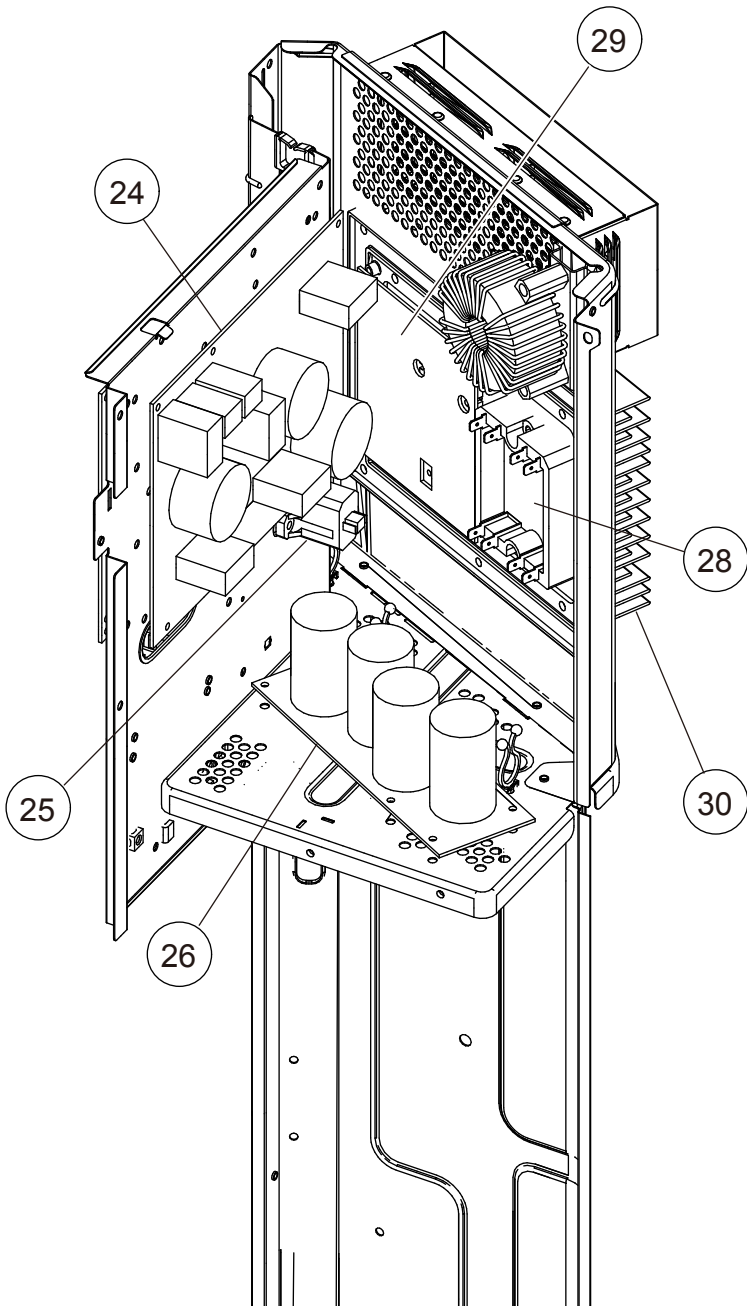
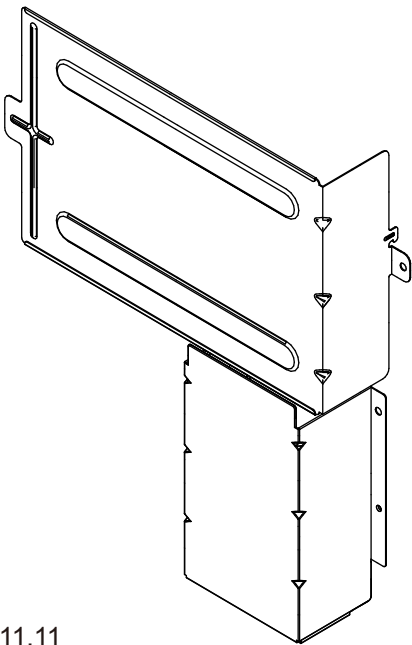
OUTDOOR UNIT
AOYG45LBTA
AOYG54LBTA

Ref.	Description	Parts number	
1	Drain Assy	9303029015	
2	Drain Cap	313166024302	
3	Protective Net	9375381042	
4	Thermo Holder	9375211011	
5	Top Panel Sub Assy	9374417056	
6	Front Panel Sub Assy	9374414154	
7	Sevice Panel Sub Assy	9374415090	
8	Emblem Rear	9351355005	
9	Pipe Cover Front	9378861015	
10	Right Panel Sub Assy	9374416233	
11	Motor DC Brushless	9602843039	
12	Propeller Fan Assy	9366378020	
13	Outdoor Thermistor	9900210069	

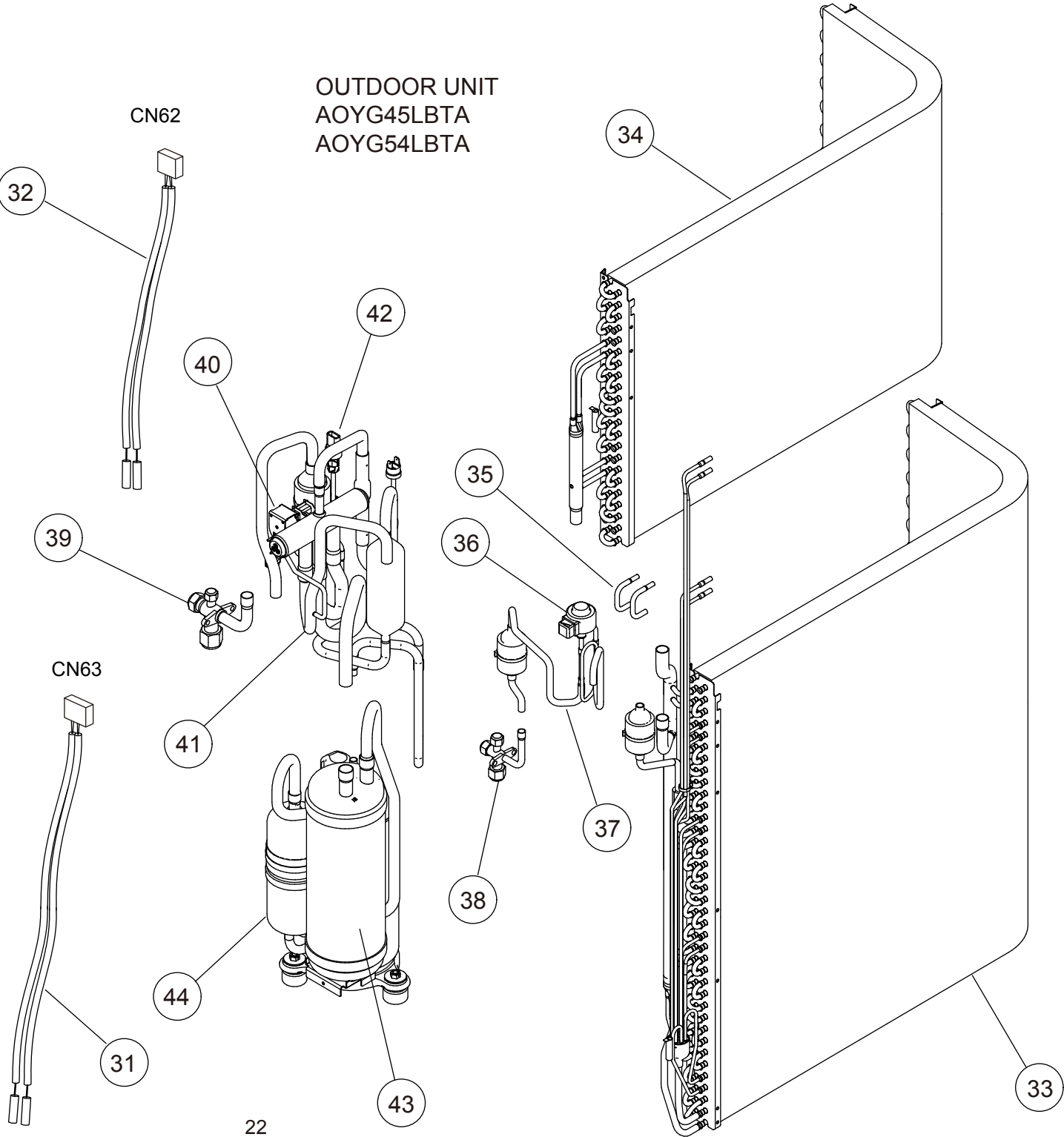
OUTDOOR UNIT
AOYG45LBTA
AOYG54LBTA
Control box



Ref.	Description	Parts number
21	Main PCB (45)	9709904282
21	Main PCB (54)	9709904299
22	Display PCB	9708678016
23	Terminal	9900203023
24	Filter PCB	9709903056
25	Thermistor	9704265012
26	Capacitor PCB	9709894101
27	Choke Coil	9900624019
28	ACTPM	9707592016
29	Transistor PCB	9708646138
30	Heat Sink	9380358008

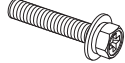
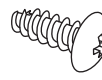
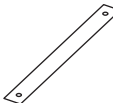


Ref.	Description	Parts number	
31	Thermistor Assy (5 pins)	9900599027	
32	Thermistor Assy (4 pins)	9900598013	
33	Condenser A Sub Assy	9374420261	
34	Condenser B Sub Assy	9374422081	
35	Bypass Pipe A	9371324043	
36	Expansion Valve Coil	9970096044	
37	Expansion Valve Assy	9370947243	
38	3-way Valve Assy	9379077002	
39	3-way Valve Assy	9379079006	
40	Solenoid	9970055072	
41	4-way Valve Assy	9374425235	
42	Sensor	9900505080	
43	Accumulator Assy	9375250065	
44	Compressor	9810153005	

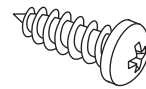


ACCESSORIES

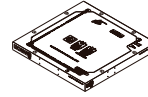
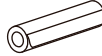
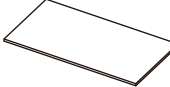
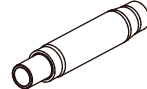
DECORATION PANEL UTG-UKYA-W

Name and shape	Q'ty	Description
Hexagon Screw 	4	For mounting decoration panel
Washer 	4	For mounting decoration panel
Tapping screw 	2	For installing grille holding wire
Strap 	4	For installing corner panel

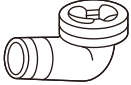
WIRED REMOTE CONTROL

Name and shape	Q'ty	Name and shape	Q'ty
Wired remote control 	1	Screw (M4 × 16mm)  For installing the remote control	2
		Cable tie  For remote control and remote control cable binding	1

INDOOR UNIT AUXG45LRLB AUXG54LRLB

Name and Shape	Q'ty	Description
Template (Carton top) 	1	For installing indoor unit
Washer 	8	For installing indoor unit
Coupler heat insulation (Large) 	1	For indoor side pipe joint (Gas pipe)
Coupler heat insulation (Small) 	1	For indoor side pipe joint (Liquid pipe)
Insulation 	1	For installing drain pipe
Drain hose 	1	For installing drain pipe VP25 (O.D.32, I.D.25)
Hose Band 	1	For installing drain hose
Drain hose heat insulation 	1	For installing drain pipe
Cable tie (Large) 	4	For fixing the connection pipe
Cable tie (Small) 	2	For electrical wiring

OUTDOOR UNIT

Name and shape	Q'ty	Description
Drain pipe 	1	For outdoor unit drain piping work
Drain cap 	2	
One-touch bush 	2	For power supply cable and connection cable installation