

SPLIT TYPE
AIR CONDITIONER
CASSETTE TYPE (50Hz)

SERVICE MANUAL



Indoor unit	Outdoor unit
AUYF12LAL	AOYA12LACL
AUYF12LAL	AOYA12LALL
AUYF12LAL	AOYB12LACL
AUYF12LAL	AOYB12LALL
AUYF14LAL	AOYA14LACL
AUYF14LAL	AOYA14LALL
AUYF14LAL	AOYB14LACL
AUYF14LAL	AOYB14LALL
AUYF18LAL	AOYA18LACL
AUYF18LAL	AOYA18LALL
AUYF18LAL	AOYB18LACL
AUYF18LAL	AOYB18LALL
AUYF18LBL	AOYA18LALL
AUYF18LBL	AOYB18LALL
AUYA24LBL	AOYA24LACL
AUYA24LBL	AOYA24LALL
AUYA24LBL	AOYB24LACL
AUYA24LBL	AOYB24LALL
AUYF24LBL	AOYA24LALL
AUYF24LBL	AOYB24LALL

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Inverter cooling & heating							
INDOOR UNIT		AUYF12LAL		AUYF14LAL		AUYF18L_L		AUY_24LBL	
OUTDOOR UNIT		AOYA12LA_L	AOYB12LA_L	AOYA14LA_L	AOYB14LA_L	AOYA18LA_L	AOYB18LA_L	AOYA24LA_L	AOYB24LA_L
COOLING CAPACITY		3.50 kW		4.30 kW		5.20 kW		7.10 kW	
HEATING CAPACITY		4.10 kW		5.00 kW		6.00 kW		8.00 kW	
POWER SOURCE		230 V 50 Hz		230 V 50 Hz		230 V 50 Hz		230 V 50 Hz	
RUNNING CURRENT	Cooling	4.6 A	4.9 A	5.8 A	6.2 A	7.1 A	7.4 A	9.7 A	10.1 A
	Heating	4.9 A	5.1 A	5.9 A	6.2 A	7.3 A	7.7 A	9.7 A	10.2 A
INPUT WATTS	Cooling	1.05 kW	1.11 kW	1.33 kW	1.41 kW	1.62 kW	1.70 kW	2.21 kW	2.32 kW
	Heating	1.11 kW	1.17 kW	1.34 kW	1.42 kW	1.66 kW	1.75 kW	2.21 kW	2.33 kW
E.E.R.	Cooling	3.33 kW/kW	3.15 kW/kW	3.21 kW/kW	3.05 kW/kW	3.21 kW/kW	3.06 kW/kW	3.21 kW/kW	3.06 kW/kW
COP	Heating	3.69 kW/kW	3.50 kW/kW	3.71 kW/kW	3.52 kW/kW	3.61 kW/kW	3.43 kW/kW	3.61 kW/kW	3.43 kW/kW
MOISTURE REMOVAL		1.2 L/hr		1.5 L/hr		2.2 L/hr		2.7 L/hr	
AIR CIRCULATION (HIGH)	Cooling	600 m³/hr		680 m³/hr		680 m³/hr		930 m³/hr	
	Heating	600 m³/hr		800 m³/hr		800 m³/hr		930 m³/hr	
MAXIMUM CURRENT		10.0 A		12.5 A		12.5 A		13.5 A	

FAN MOTOR

INDOOR UNIT (cool / heat)	Discrimination	MFF-24RVL			
	High speed	650 r.p.m. / 650 r.p.m.	730 r.p.m. / 830 r.p.m.	730 r.p.m. / 830 r.p.m.	1,050 r.p.m. / 1,030 r.p.m.
	Med speed	580 r.p.m. / 580 r.p.m.	630 r.p.m. / 730 r.p.m.	630 r.p.m. / 730 r.p.m.	850 r.p.m. / 880 r.p.m.
	Low speed	520 r.p.m. / 520 r.p.m.	540 r.p.m. / 630 r.p.m.	540 r.p.m. / 630 r.p.m.	650 r.p.m. / 740 r.p.m.
	Quiet	460 r.p.m. / 460 r.p.m.	460 r.p.m. / 500 r.p.m.	460 r.p.m. / 500 r.p.m.	500 r.p.m. / 580 r.p.m.
OUTDOOR UNIT (cool / heat)		770 r.p.m. / 700 r.p.m.	820 r.p.m. / 750 r.p.m.	860 r.p.m. / 820 r.p.m.	1,050 r.p.m. / 1,050 r.p.m.

NOISE LEVEL

INDOOR UNIT (cool / heat)	High speed	37 dB / 37 dB	38 dB / 43 dB	38 dB / 43 dB	49 dB / 49 dB
	Med speed	34 dB / 34 dB	34 dB / 38 dB	34 dB / 38 dB	44 dB / 45 dB
	Low speed	30 dB / 31 dB	30 dB / 34 dB	30 dB / 34 dB	36 dB / 40 dB
	Quiet	27 dB / 29 dB	27 dB / 30 dB	26 dB / 30 dB	30 dB / 33 dB
OUTDOOR UNIT (cool / heat)		47 dB / 48 dB	49 dB / 49 dB	50 dB / 50 dB	52 dB / 53 dB

DIMENSIONS

INDOOR UNIT	H x W x D	245 x 570 x 570 mm
PANEL	H x W x D	50 x 700 x 700 mm
OUTDOOR UNIT	H x W x D	578 x 790 x 300 mm 578 x 790 x 315 mm

WEIGHT

INDOOR UNIT	Net / Shipping	15 kg / 18 kg	17 kg / 20 kg
PANEL	Net / Gross	2.6 kg / 4.5 kg	
OUTDOOR UNIT	Net / Gross	40 kg / 44 kg	44 kg / 48 kg

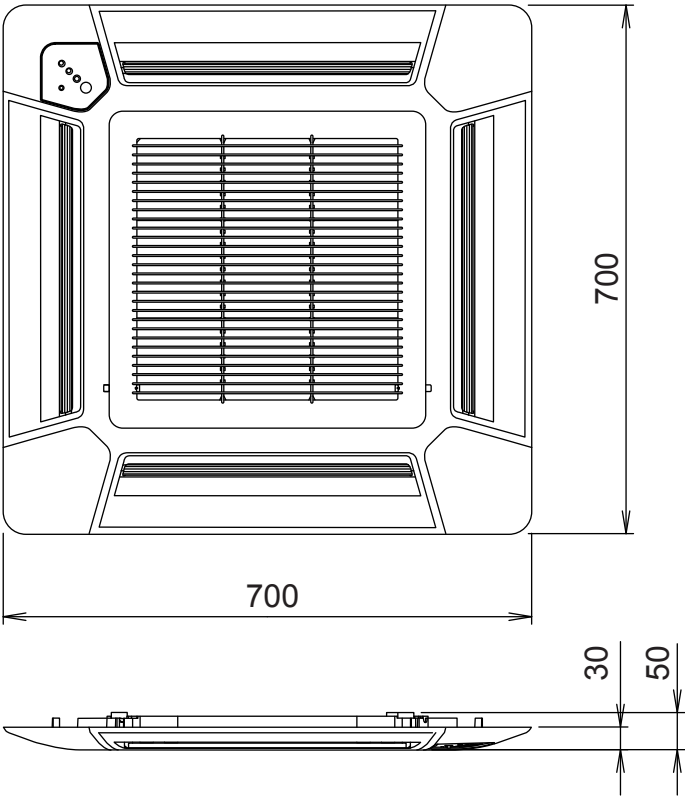
REFRIGERANT (R410A)

COMPRESSOR		DA130A1F-25NA			DA150A1F-20NA
COMPRESSOR WEIGHT (with oil)		9.6 kg			10.0 kg
FULL CHARGE	Pipe Length 15 m	1,150 g	1,250 g	1,250 g	1,700 g
	20 m	1,250 g	1,350 g	1,350 g	1,800 g
	25 m	1,350 g	1,450 g	1,450 g	1,900 g
	30 m	---	---	---	2,000 g
ADDITIONAL REFRIGERANT		20 g/m	20 g/m	20 g/m	20 g/m

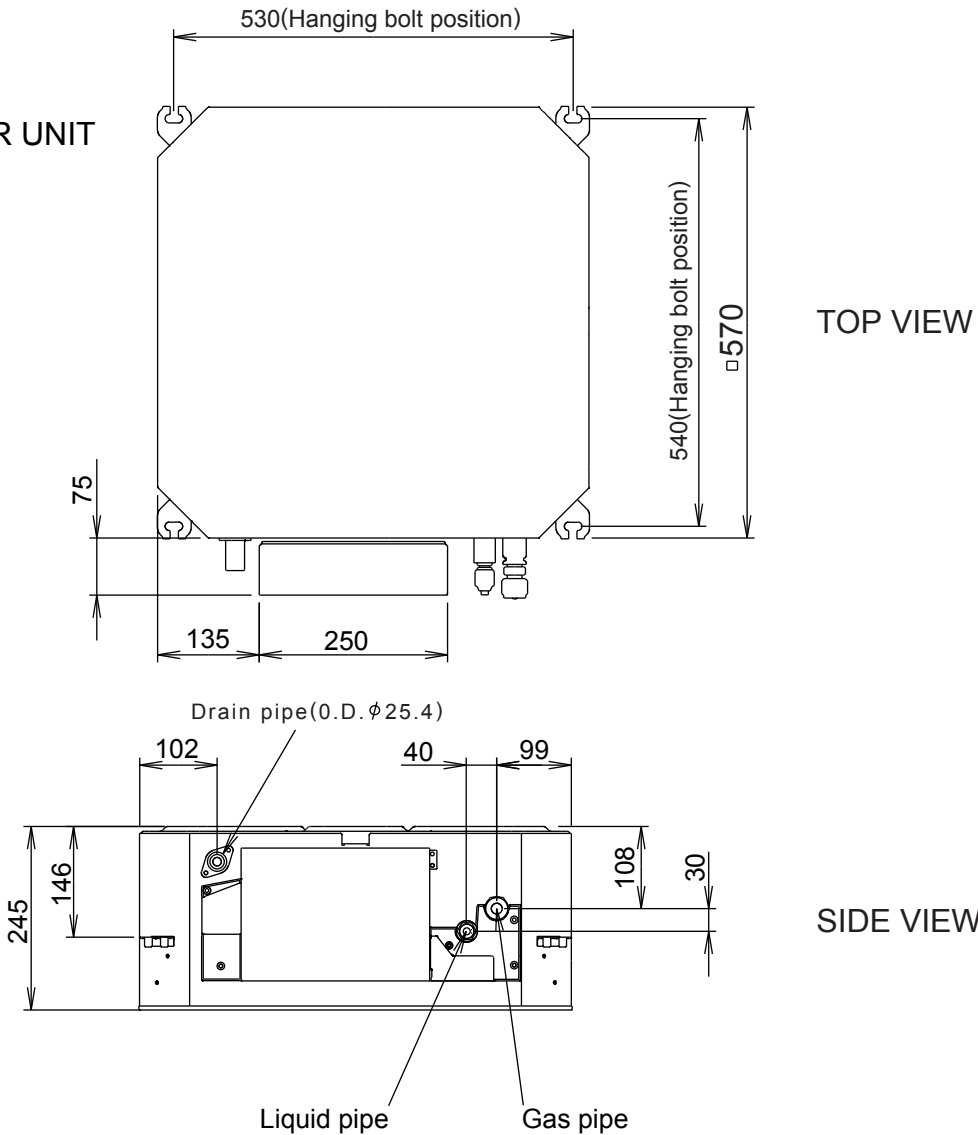
OUTLINE AND DIMENSIONS

Unit : mm

DECORATION PANEL



INDOOR UNIT



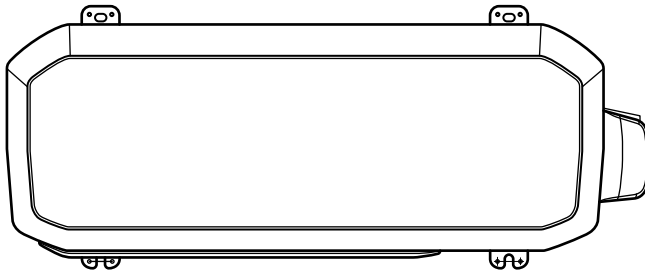
OUTDOOR UNIT

AOY_12LA_L

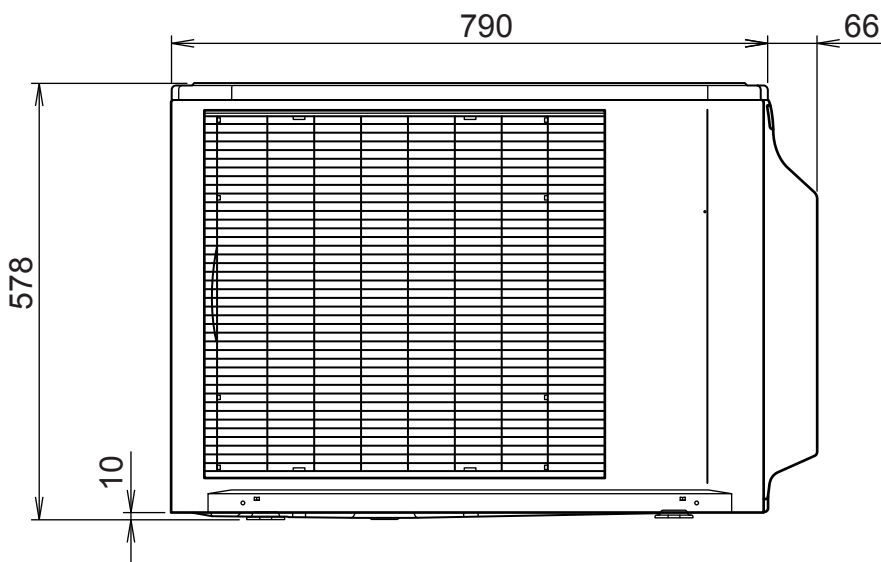
AOY_14LA_L

AOY_18LA_L

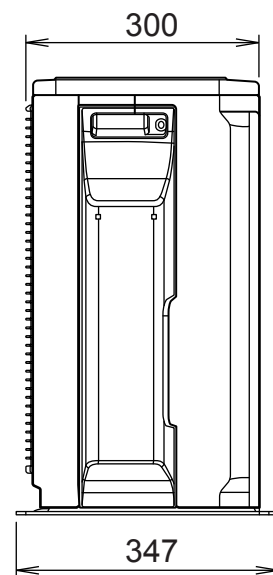
Unit : mm



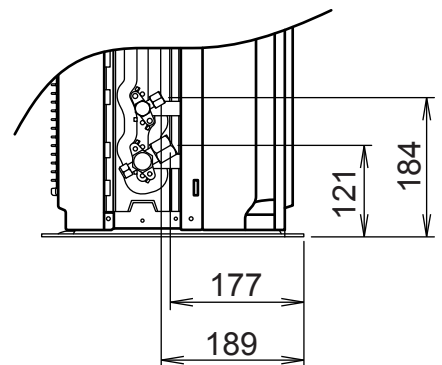
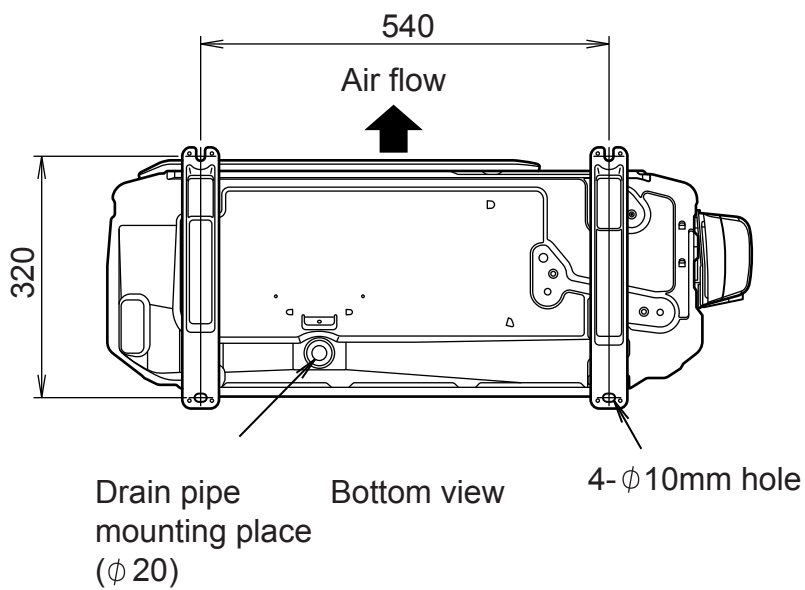
Top view



Front view

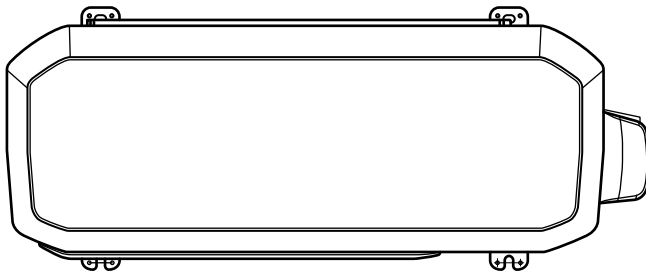


Side view

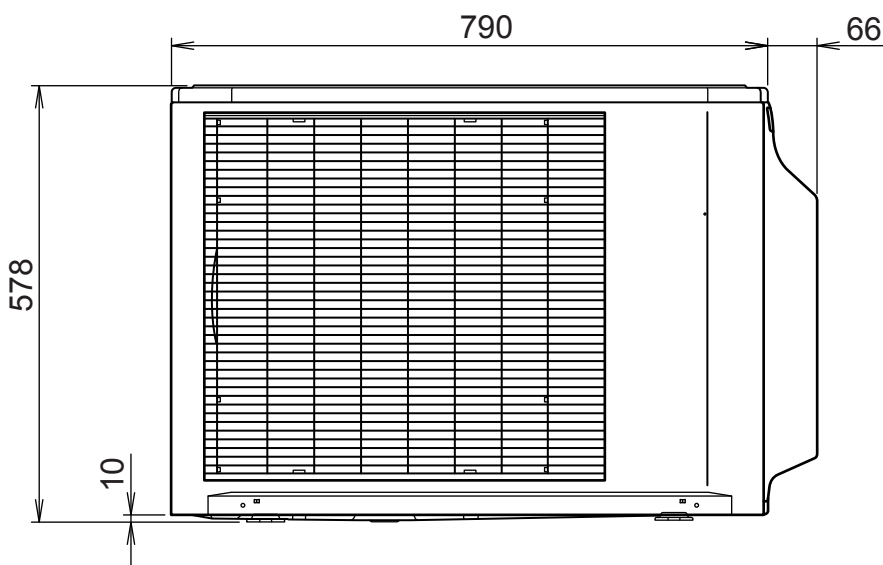


OUTDOOR UNIT
AOY_24LA_L

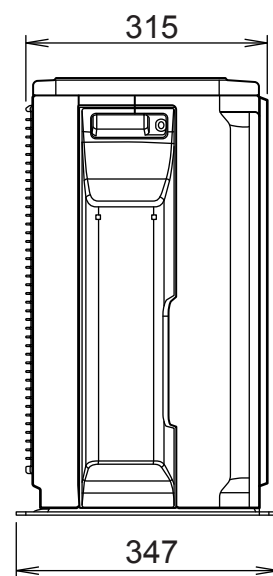
Unit : mm



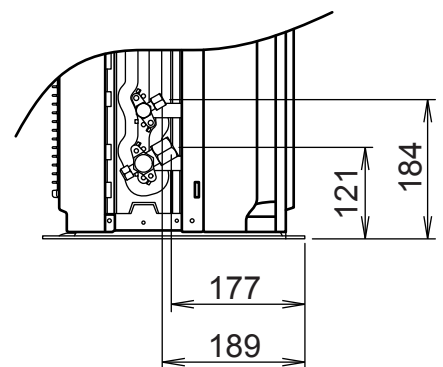
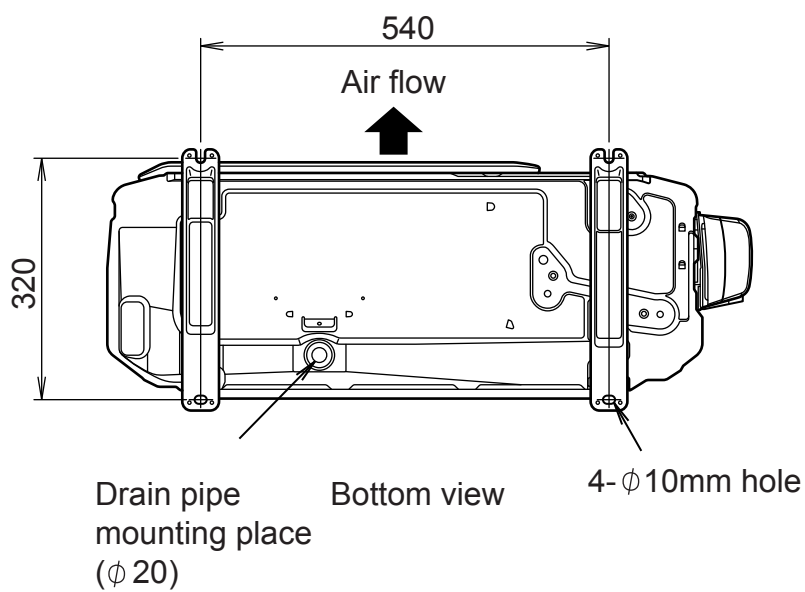
Top view



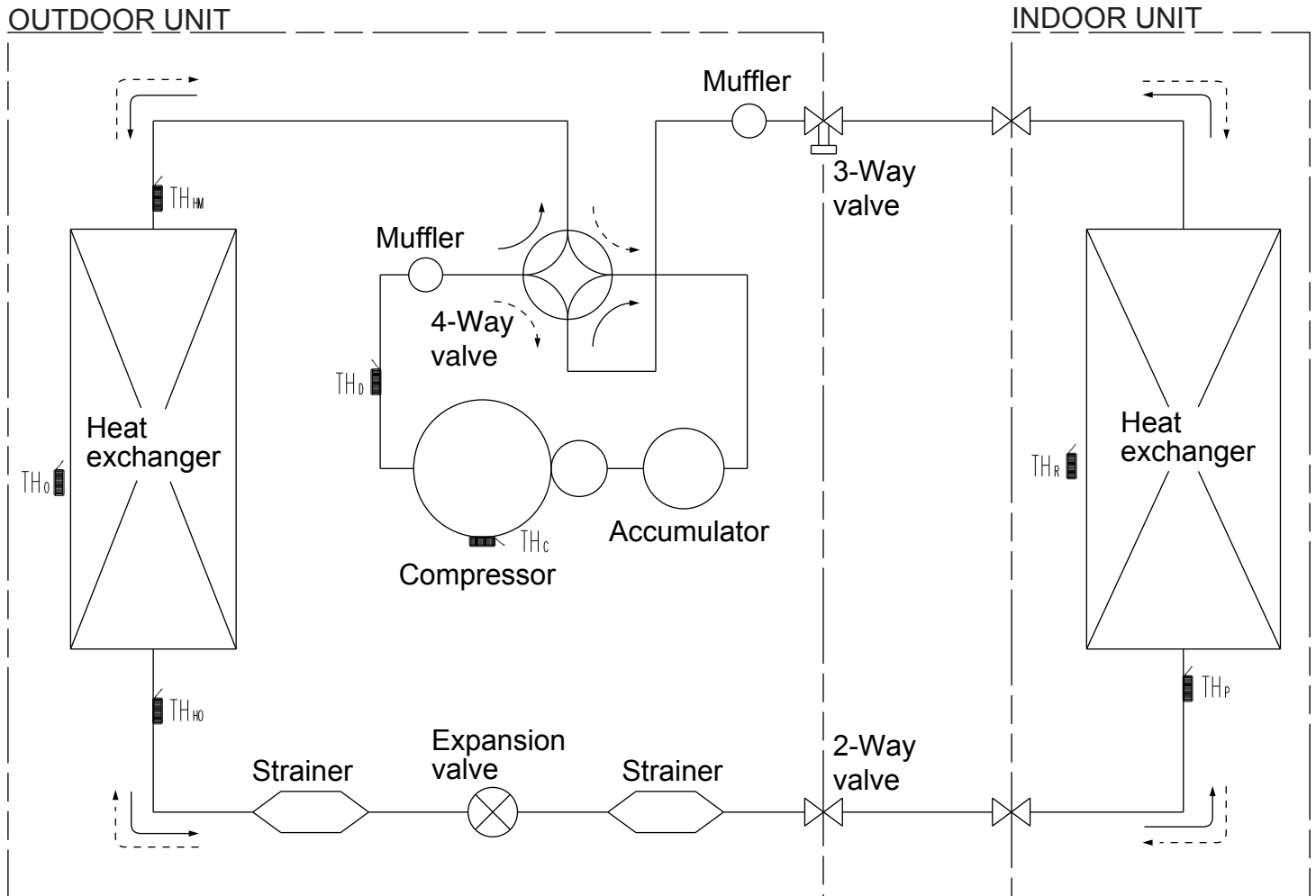
Front view



Side view



REFRIGERANT SYSTEM DIAGRAM



TH_c : Compressor thermistor
 TH_o : Discharge pipe thermistor
 TH_H : Heat exchanger thermistor (Middle)
 TH_O : Heat exchanger thermistor (Out)
 TH_o : Outdoor thermistor

TH_p : Pipe thermistor
 TH_R : Room thermistor

<Refrigerant pipe diameter>

AUYF12LAL / AOY_12LA_L

Liquid : 1/4" (6.35 mm)

Gas : 3/8" (9.52 mm)

AUYF14LAL / AOY_14LA_L

AUYF18LAL / AOY_18LA_L

Liquid : 1/4" (6.35 mm)

Gas : 1/2" (12.70 mm)

AUYA24LBL / AOY_24LA_L

Liquid : 1/4" (6.35 mm)

Gas : 5/8" (15.88 mm)

<Refrigerant direction>

————→ Cooling

-----→ Heating

CIRCUIT DIAGRAM

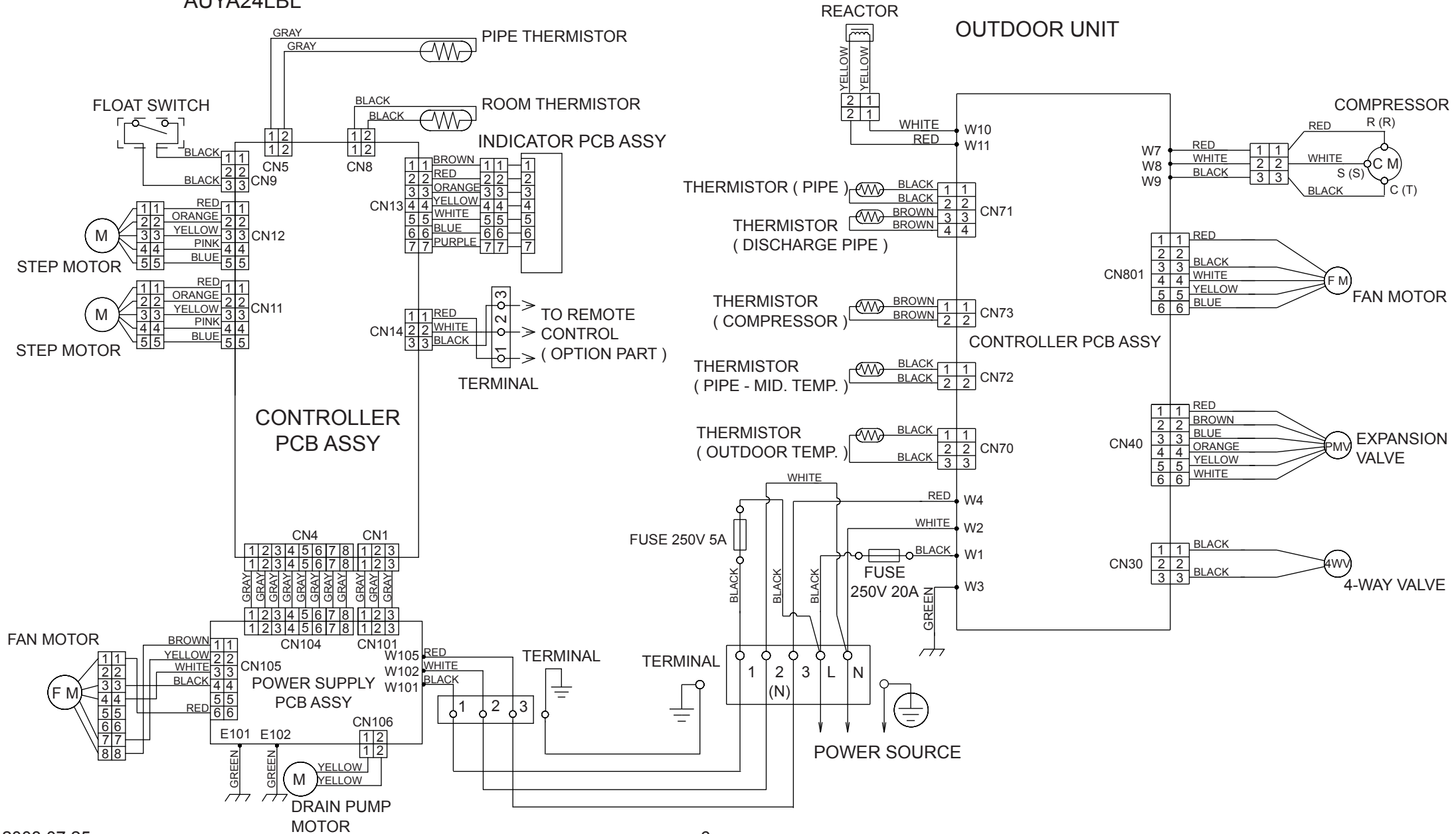
INDOOR UNIT

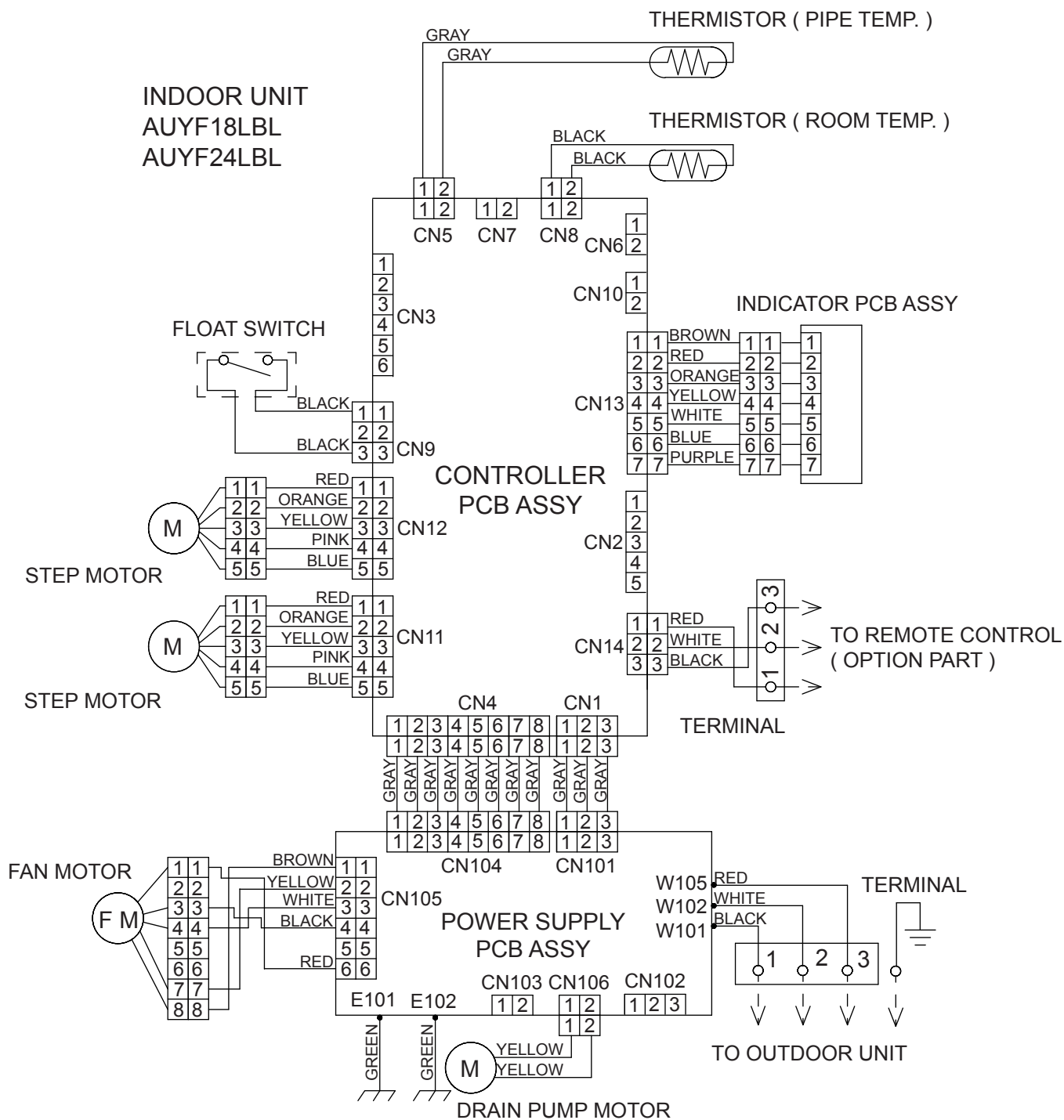
AUYF12LAL

AUYF14LAL

AUYF18LAL

AUYA24LBL





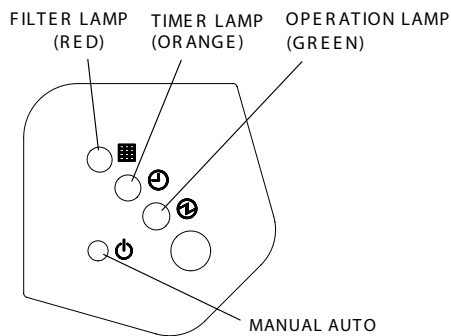
PCB Circuit Diagrams

not available at time of publication

ERROR CONTENTS

INDOOR UNIT

Troubleshooting at the indoor unit display
(Troubleshooting at the display is available
either on the wired or wireless remote control.)



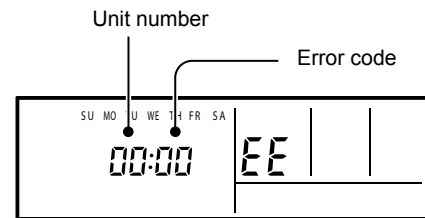
The OPERATION, TIMER and FILTER lamp operate as follows table
according to the error contents.

Error contents	OPERATION lamp (Green)	TIMER lamp (Orange)	FILTER lamp (Red)
Indoor signal error	×	○	×
Wired remote controller abnormal	×	(8 times) ○	×
Indoor room temperature sensor error	(2 times) ○	(2 times) ○	×
Indoor heat exchanger temperature sensor (middle) error	(2 times) ○	(3 times) ○	×
Indoor heat exchanger temperature sensor (inlet) error	(2 times) ○	(4 times) ○	×
Float switch operated	(2 times) ○	(6 times) ○	×
Outdoor discharge pipe temperature sensor error	(3 times) ○	(2 times) ○	×
Outdoor heat exchanger temperature sensor (outlet) error	(3 times) ○	(3 times) ○	×
Outdoor temperature sensor error	(3 times) ○	(4 times) ○	×
Compressor temperature sensor error	(3 times) ○	(8 times) ○	×
2-way valve temperature sensor error	(3 times) ○	×	(2 times) ○
3-way valve temperature sensor error	(3 times) ○	×	(3 times) ○
Outdoor heat exchanger temperature sensor (middle) error	(3 times) ○	×	(4 times) ○
Indoor manual auto switch abnormal	(4 times) ○	(2 times) ○	×
Power supply frequency detection error	(4 times) ○	(4 times) ○	×
IPM protection	(5 times) ○	(2 times) ○	×
CT error	(5 times) ○	(3 times) ○	×
Compressor location error	(5 times) ○	(5 times) ○	×
Outdoor fan error	(5 times) ○	(6 times) ○	×
Connected indoor unit abnormal	(5 times) ○	(7 times) ○	×
Outdoor unit computer communication error	(5 times) ○	(8 times) ○	×
Indoor fan abnormal	(6 times) ○	(2 or 3 times) ○	×
Discharge temperature error	(7 times) ○	(2 times) ○	×
Excessive high pressure protection on cooling	(7 times) ○	(3 times) ○	×
4-way valve abnormal	(7 times) ○	(4 times) ○	×
Pressure switch abnormal	(7 times) ○	(5 times) ○	×
Compressor temperature error	(7 times) ○	(6 times) ○	×
Active filter abnormal	(8 times) ○	(2 or 3 times) ○	×
PFC circuit error	(8 times) ○	(4 times) ○	×

○ : 0.5s ON/0.5s OFF (Flash) × : OFF

Troubleshooting at the wired remote control LCD
Self diagnosis

If an error occurs, the following display will be shown.
("EE" will appear in the set room temperature display.)



Ex. Self-diagnosis

Error code	Error contents
01 13 26 27	Indoor signal error
00	Wired remote controller abnormal
02	Indoor room temperature sensor error
04	Indoor heat exchanger temperature sensor (middle) error
28	Indoor heat exchanger temperature sensor (inlet) error
09	Float switch operated
0C	Outdoor discharge pipe temperature sensor error
06	Outdoor heat exchanger temperature sensor (outlet) error
0A	Outdoor temperature sensor error
15	Compressor temperature sensor error
1d	2-way valve temperature sensor error
1E	3-way valve temperature sensor error
29	Outdoor heat exchanger temperature sensor (middle) error
20	Indoor manual auto switch abnormal
2A	Power supply frequency detection error
17	IPM protection
18	CT error
1A	Compressor location error
1b	Outdoor fan error
1F	Connected indoor unit abnormal
1c	Outdoor unit computer communication error
12	Indoor fan abnormal
0F	Discharge temperature error
24	Excessive high pressure protection on cooling
2c	
16	
2b	
19	
25	

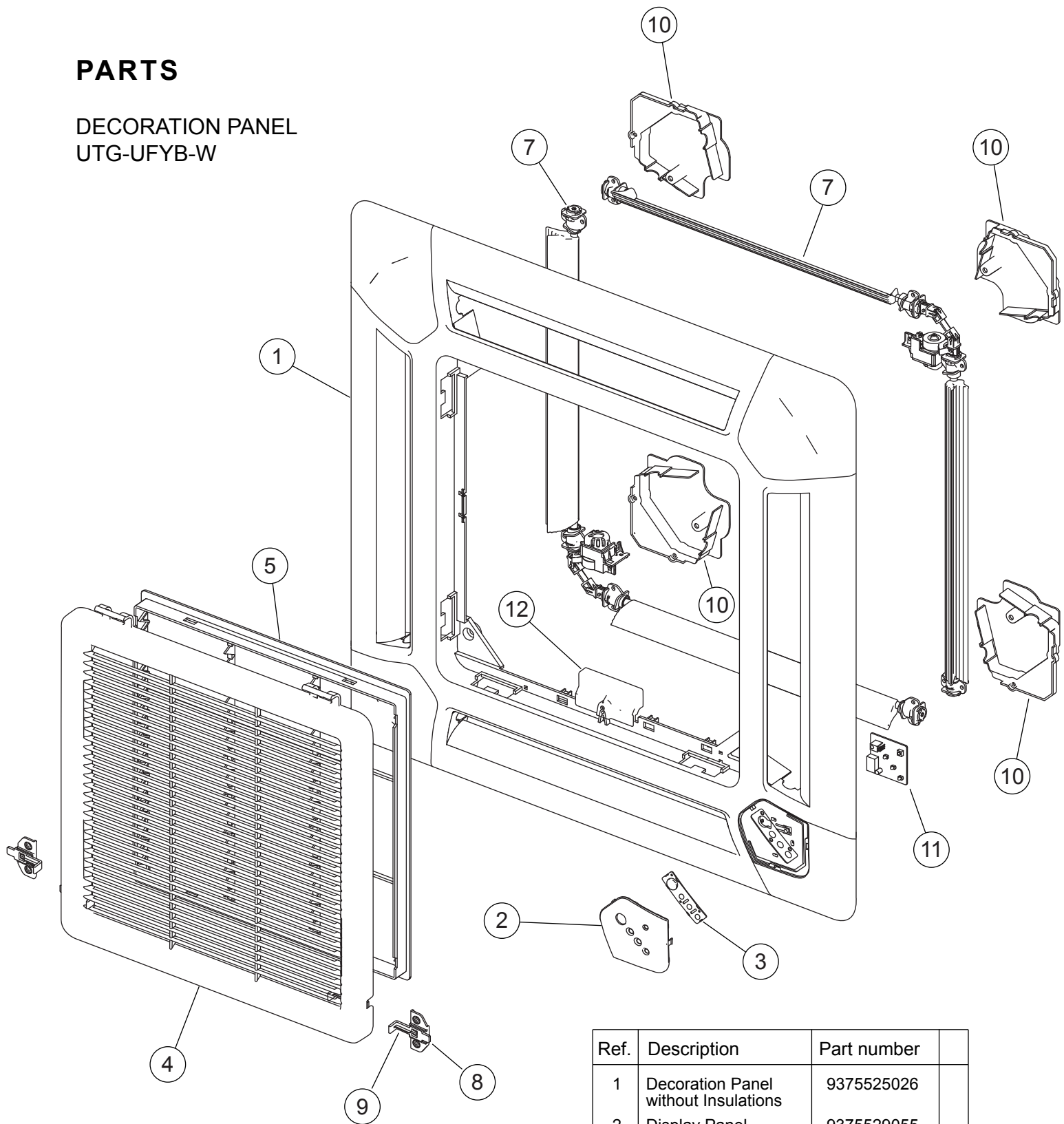
If "CO" appears in the unit number display, there is a remote controller
error. Refer to the installation instruction sheet included with the remote
controller.

OUTDOOR UNIT

Error contents	LED
Thermistor malfunction	on 0.1 sec / off 0.1 sec
Abnormal discharge temperature	on
Current surge protection	on 0.5 sec / off 0.5 sec
CT abnormality	on 2.0 sec / off 2.0 sec
Compressor position detection malfunction	on 0.1 sec / off 2.0 sec
Fan malfunction	on 5.0 sec / off 5.0 sec
PAM voltage abnormality	on 5.0 sec / off 0.1 sec
Timer short	on 1.0 sec / off 1.0 sec
Compressor temperature protection (permanent stop)	on 2.0 sec / off 5.0 sec
PFC surge protection (permanent stop)	on 5.0 sec / off 2.0 sec

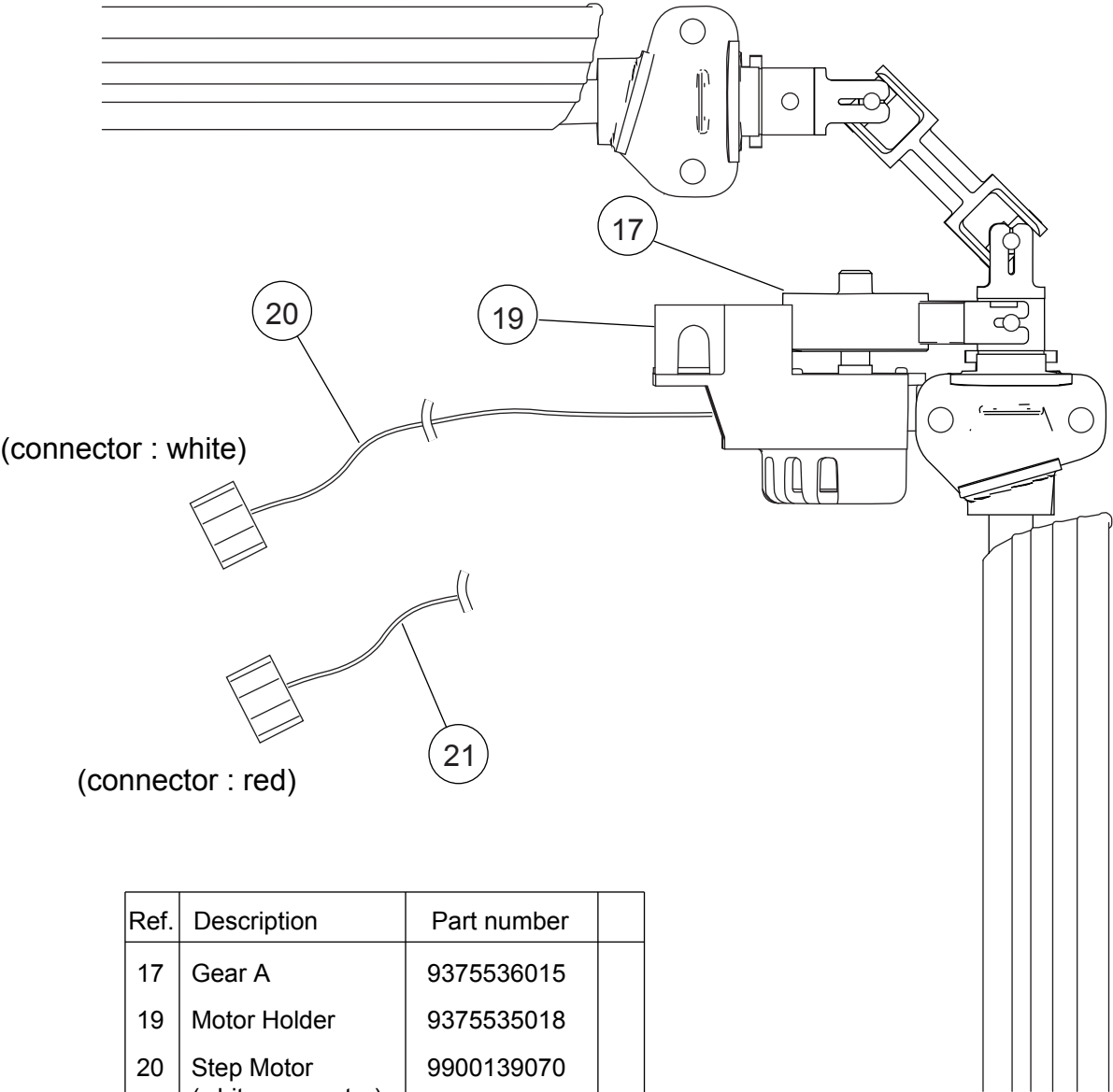
PARTS

DECORATION PANEL
UTG-UFYB-W



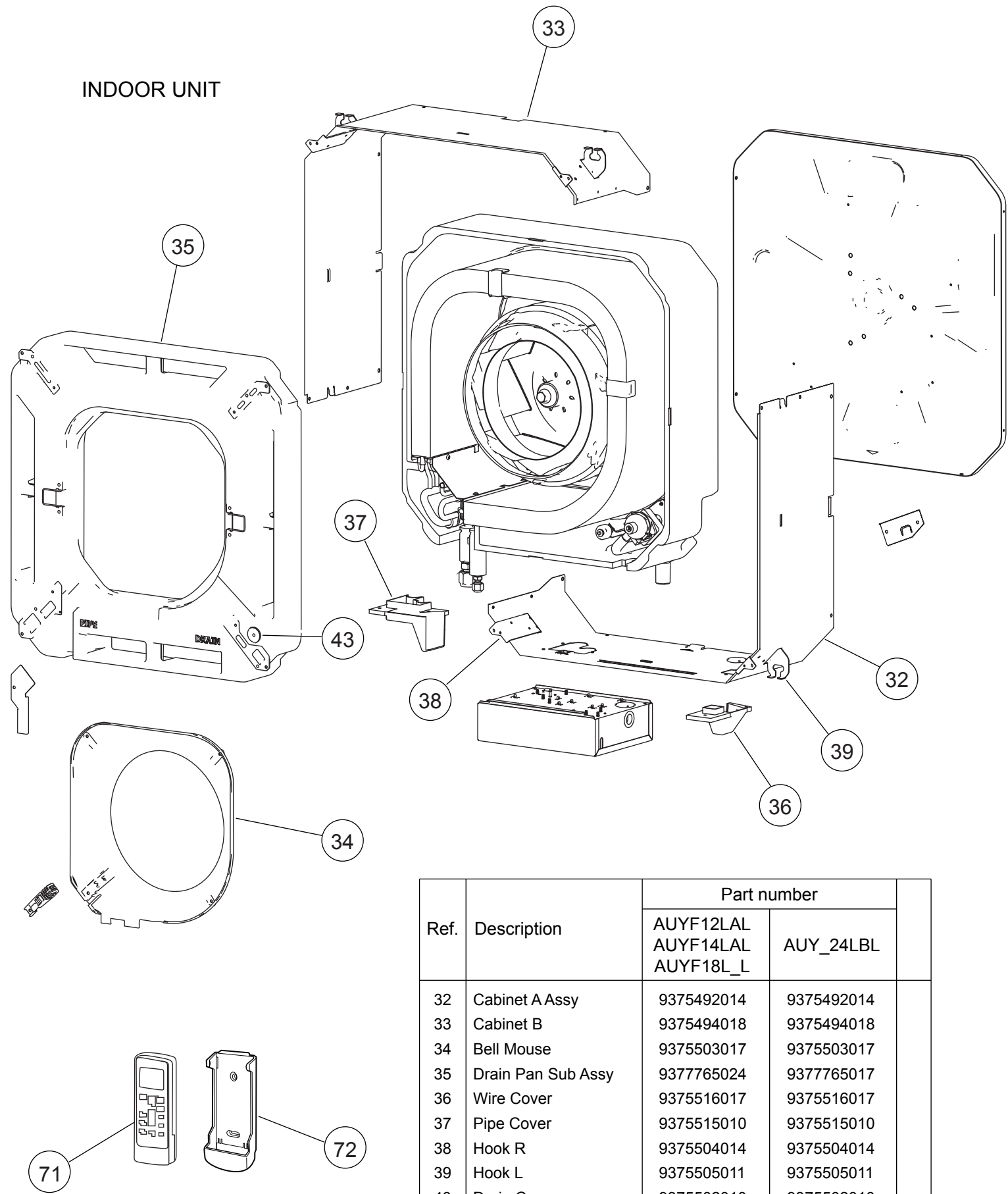
Ref.	Description	Part number
1	Decoration Panel without Insulations	9375525026
2	Display Panel	9375529055
3	Receiver Window	9375547011
4	Intake Grille	9375531027
5	Long Life Filter	9375533014
7	Flap Total Assy	9377760029
8	Hook Bracket	9375546014
9	Grille Hook	9375532024
10	Panel Cover without Insulations	9375530013
11	Indicator PCB Assy	9707371024
12	Connector Cover	9375549015

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



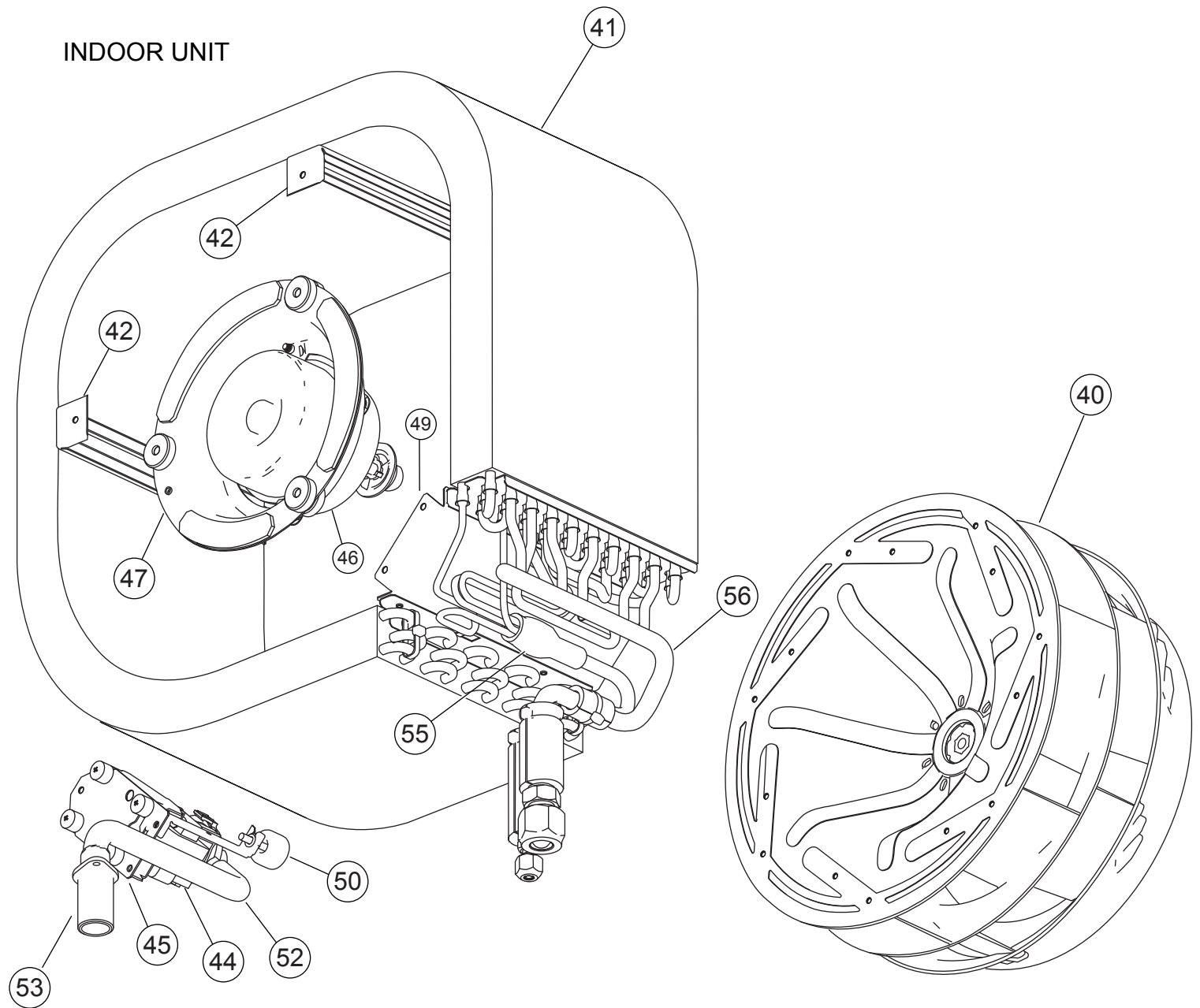
Ref.	Description	Part number	
17	Gear A	9375536015	
19	Motor Holder	9375535018	
20	Step Motor (white connector)	9900139070	
21	Step Motor (red connector)	9900139087	

INDOOR UNIT



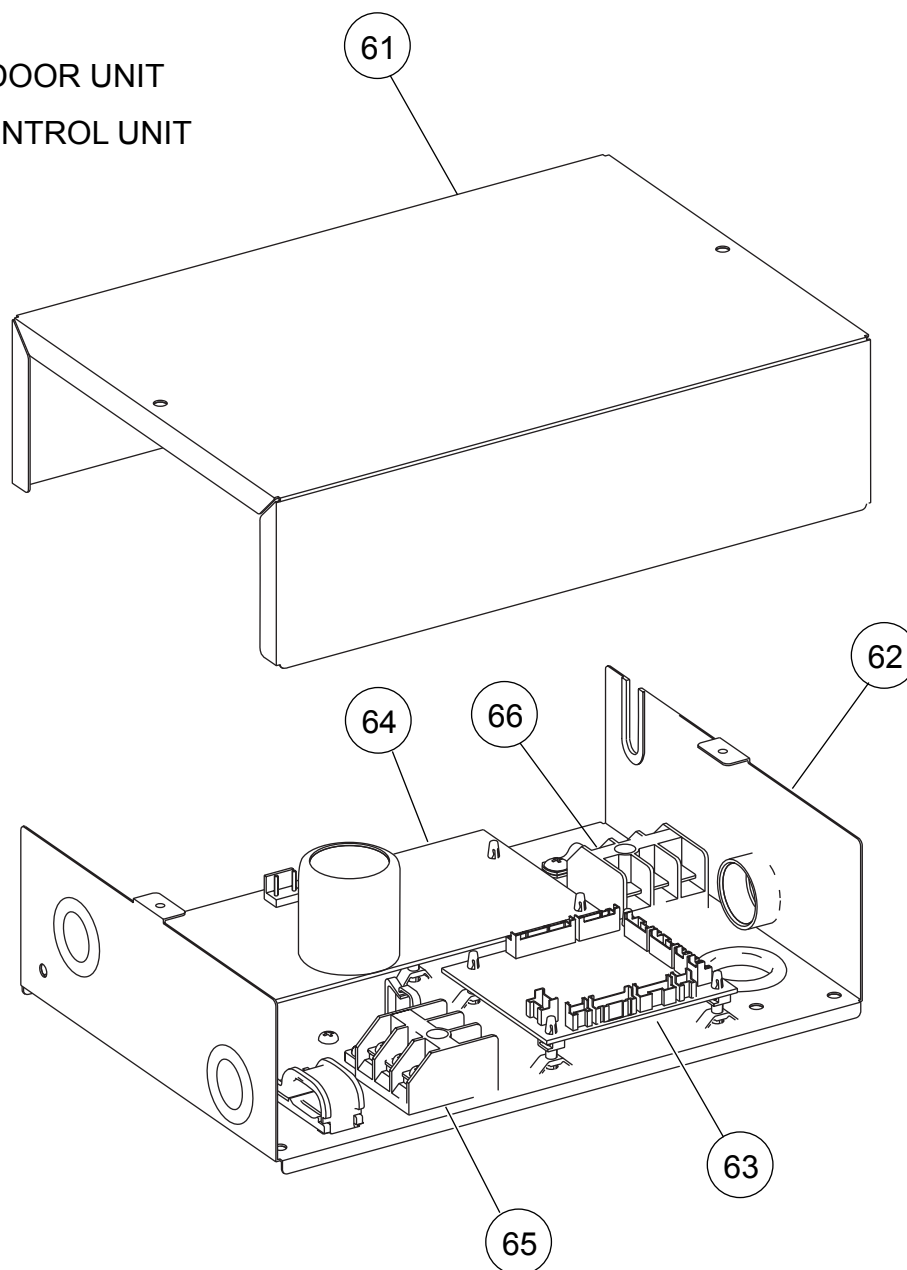
Ref.	Description	Part number	
		AUYF12LAL AUYF14LAL AUYF18L_L	AUY_24LBL
32	Cabinet A Assy	9375492014	9375492014
33	Cabinet B	9375494018	9375494018
34	Bell Mouse	9375503017	9375503017
35	Drain Pan Sub Assy	9377765024	9377765017
36	Wire Cover	9375516017	9375516017
37	Pipe Cover	9375515010	9375515010
38	Hook R	9375504014	9375504014
39	Hook L	9375505011	9375505011
43	Drain Cap	9375502010	9375502010
71	Remote Control	9315885012	9315885012
72	Remote Control Holder	9305642045	9305642045

INDOOR UNIT



Ref.	Description	Part number			
		AUYF12LAL	AUYF14LAL AUYF18L_L	AUY_24LBL	
40	2 Stage Turbo Fan Assy	9375480011	9375480011	9375480011	
41	Evaporator Assy	9372585085	9372585054	9372585061	
42	Evaporator Holder	9375508012	9375508012	9375507015	
44	Pump Assy	9900360047	9900360047	9900360047	
45	Drain Pump Holder B	9375518011	9375518011	9375518011	
46	Fan Motor	9602436019	9602436019	9602436019	
47	Fan Motor Holder	9375552015	9375552015	9375552015	
49	Separate Wall	9375506018	9375506018	9375506018	
50	Float Switch	9900361037	9900361037	9900361037	
52	Drain Hose	9375519018	9375519018	9375519018	
53	Drain Port	9375520014	9375520014	9375520014	
55	Distributor Assy	9371325316	9371325316	9371325330	
56	Coupling Pipe Assy	9373038412	9373038368	9373038375	

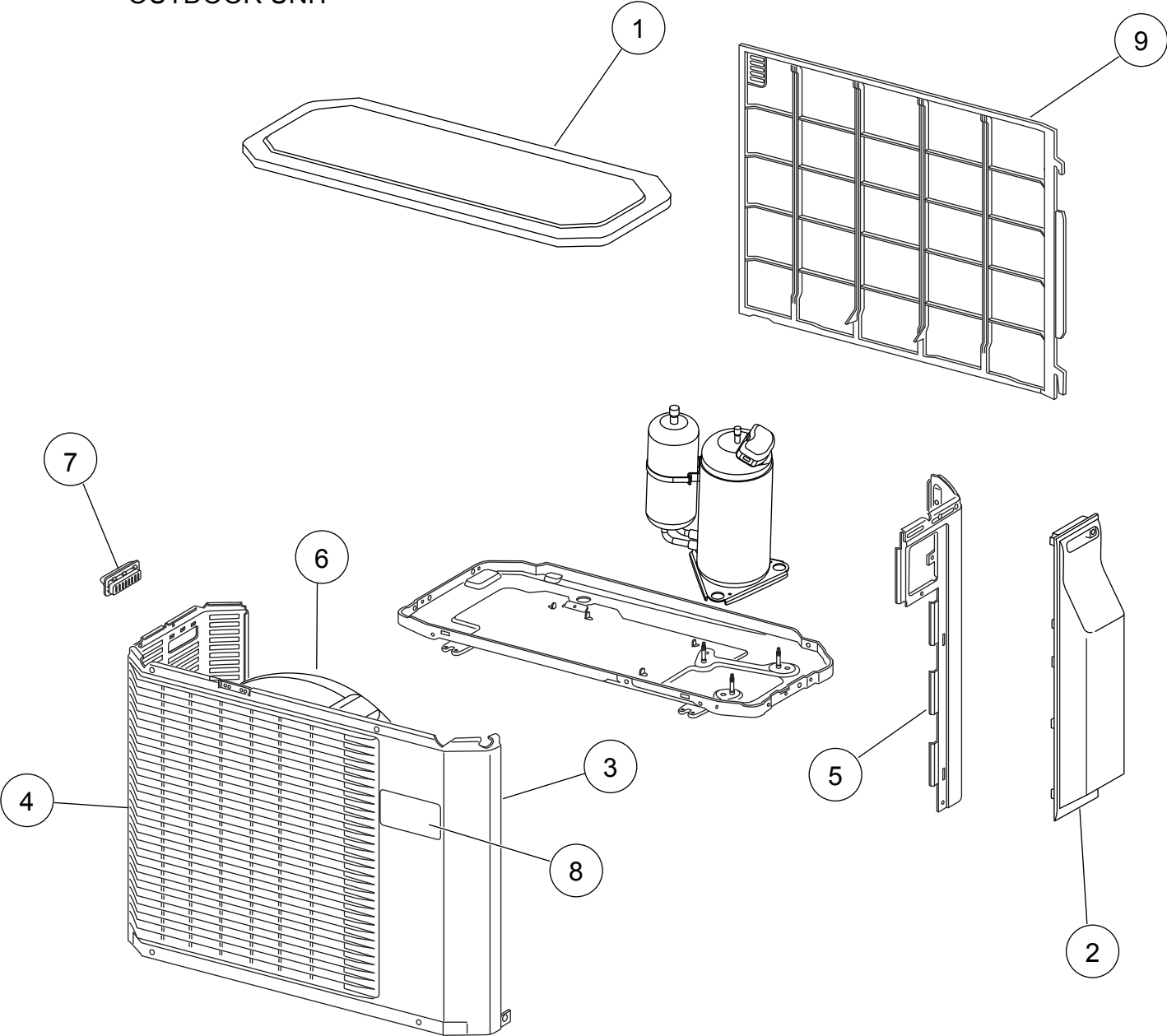
INDOOR UNIT
CONTROL UNIT



Ref.	Description	Part number	
61	Control Box Cover	9375512019	
62	Control Box A	9375511012	
63	Controller PCB Assy (12)	9707393200	
63	Controller PCB Assy (14)	9707393217	
63	Controller PCB Assy (18LAL)	9707393224	
63	Controller PCB Assy (18LBL)	9707393538	
63	Controller PCB Assy (AUYA24)	9707393033	
63	Controller PCB Assy (AUYF24)	9707393514	
64	Puwer Supply PCB Assy (12, 14, 18LAL, AUYA24)	9707398021	
64	Puwer Supply PCB Assy (18LBL, AUYF24)	9707398120	
65	Terminal	9306489045	
66	Terminal	9703345012	
--	Pipe Thermistor	9703297014	
--	Room Thermistor	9900502003	

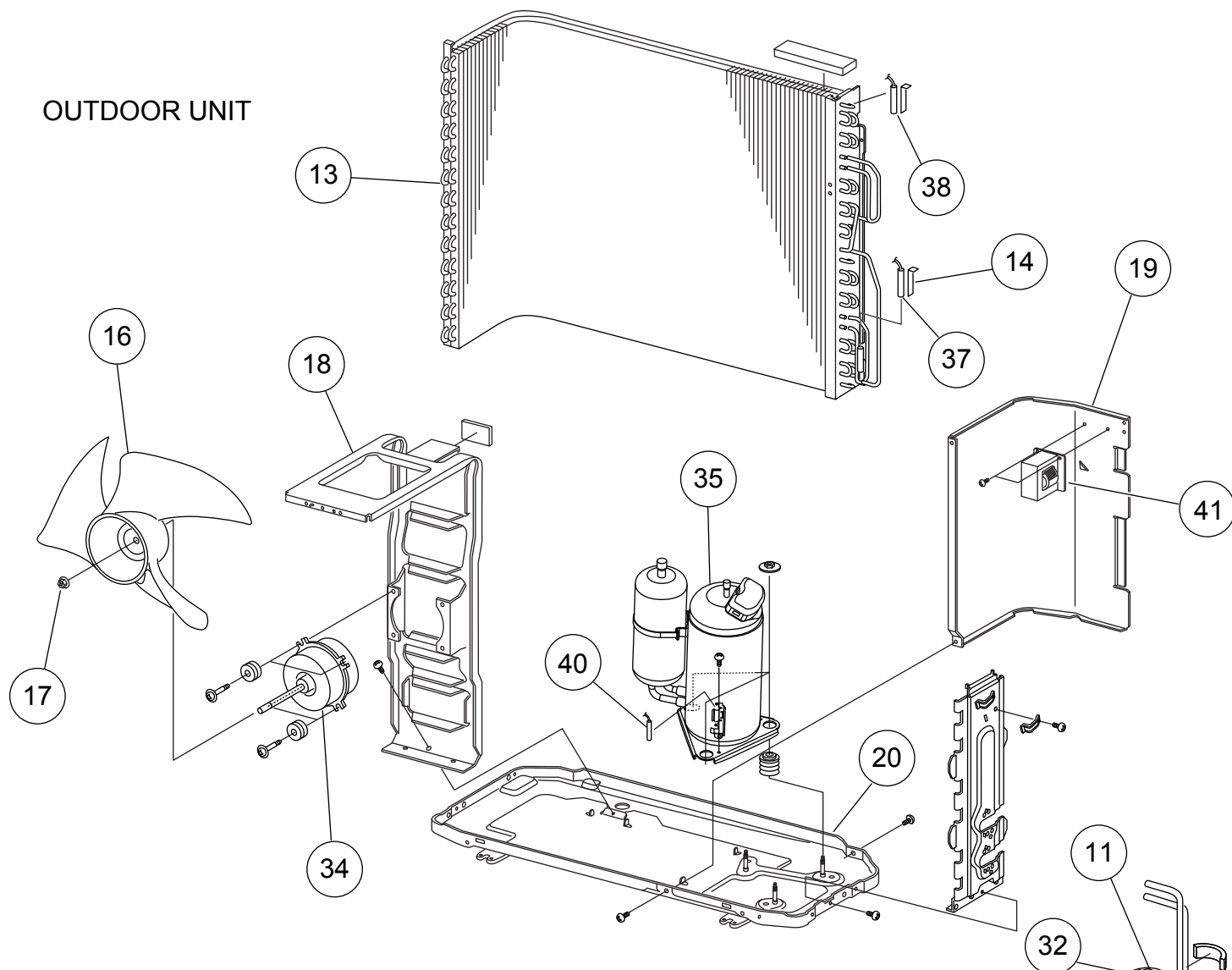
PARTS

OUTDOOR UNIT

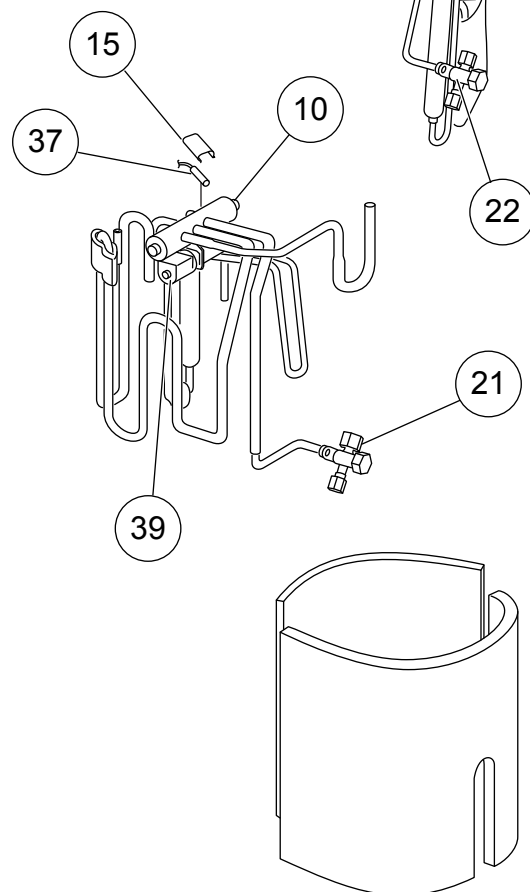


Ref.	Description	Part number		
		AOY_12LA_L AOY_14LA_L AOY_18LA_L	AOY_24LA_L	
1	Top Panel Assy	9309230057	9309230057	
2	Cover (Switch) Assy	9309237032	9309237032	
3	Cabinet Assy	9314809040	9314809019	
4	Blow Down Grille	9308884015	9308884015	
5	Cabinet Right Assy	9309236011	9309236028	
6	Fan Ring	9308885012	9308885012	
7	Grip	9308880017	9308880017	
8	Emblem	9315210012	9315210012	
9	Protective Net	9315319012	9315033017	

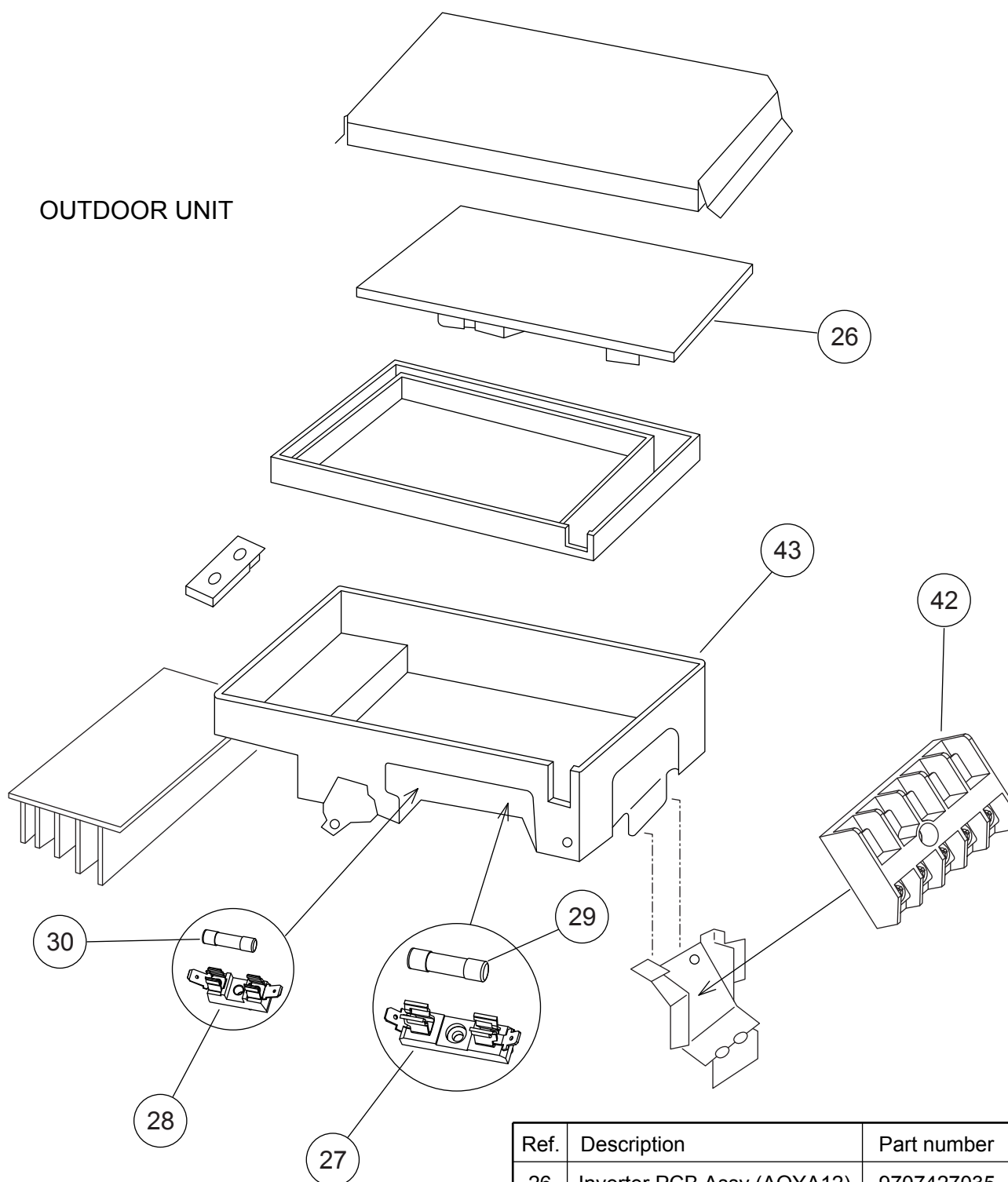
OUTDOOR UNIT



Ref.	Description	Part number	
		AOY_12, 14, 18LA_L	AOY_24LA_L
10	4-Way Valve	9900047016	9900163013
11	Pulse Motor Valve Assy	9311641018	9315310019
13	Condenser Assy	9311382027	9315302014
14	Thermistor Spring A	313728262708	313728262708
15	Thermistor Holder	9300089012	9357804002
16	Propeller Fan	9309909014	9309909014
17	Nut	9304902003	9304902003
18	Motor Bracket	9308872012	9308872029
19	Separator Assy	9312971015	9312971015
20	Base Assy	9308869081	9315296030
21	3-Way Valve Assy	9970092015	9315414014
22	2-Way Valve Assy	9970093012	9313062019
32	Expansion Valve Coil	9900057039	9900057039
34	Fan Motor	9602133017	9602451012
35	Compressor Assy	9313763039	9315297037
37	Thermistor Assy	9900148027	9900148027
38	Heat Exchanger Thermistor	9900403010	9900403010
39	Solenoid Coil	9970033018	9970055010
40	Compressor Thermistor	9900156046	9900156046
41	Reactor Assy	9900354015	9900354015
--	Outdoor Thermistor	9900210045	9900210045
--	Condenser Assy B	---	9315303011



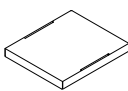
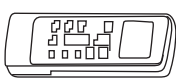
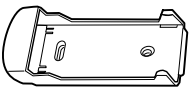
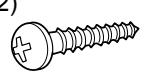
OUTDOOR UNIT



Ref.	Description	Part number	
26	Inverter PCB Assy (AOYA12)	9707427035	
26	Inverter PCB Assy (AOYB12)	9707427134	
26	Inverter PCB Assy (AOYA14)	9707427042	
26	Inverter PCB Assy (AOYB14)	9707427141	
26	Inverter PCB Assy (AOYA18)	9707427011	
26	Inverter PCB Assy (AOYB18)	9707427110	
26	Inverter PCB Assy (AOYA24)	9707427028	
26	Inverter PCB Assy (AOYB24)	9707427127	
27	Fuse Holder	0501454012	
28	Fuse Holder	0501456016	
29	Fuse	0600382018	
30	Fuse	0600372163	
42	Terminal	9703874031	
43	Inverter Case Assy	9315690012	

ACCESSORIES

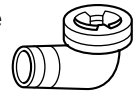
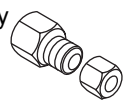
INDOOR UNIT

Name and Shape	Q'ty	Application
Coupler heat insulation 	2	For indoor side pipe joint (Gas pipe side : 9378173569 Liquid pipe side : 9378173521)
Special nut A (large flange) 	4	For installing indoor unit 313005446653
Special nut B (small flange) 	4	For installing indoor unit 313005446759
Template (Carton top) 	1	For ceiling openings cutting Also used as packing 9377971012
Remote control 	1	For air conditioner operation 9315885012
Remote control holder 	1	For installing remote control on the wall 9305642045
Battery 	2	For remote control 0600185541
Screw (M3 x 12) 	2	For mounting the remote control holder 0700019098

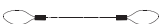
OPTIONAL PARTS

Name and Shape	Application
Wired remote control UTB-GUD 	Unit control is performed by wired remote control. 9077030002
Air outlet shutter plate UTR-YDZB 	Install the plate at outlet when carrying out 3-way direction operation. 9032724007

OUTDOOR UNIT

Name and Shape	Q'ty	Application
Drain pipe 	1	For drain piping work. 9303029015
Adapter assy 	1	To connect 12,000 BTU model 9370244007

DECORATION PANEL

Name and Shape	Q'ty	Application
Connector cover 	1	For covering connector 9375549015
Screw (M5 x 12) 	4	For mounting decoration panel 0700139192
Screw (M4 x 12) 	1	For mounting connector cover 0700009051
L angle 	2	For mounting hook wire to intake grille 9378596016
Hook wire 	2	For suspending intake grille 9378597013
Screw (Pitch small) 	2	For mounting hook wire (for metals) 0700094071
Screw (Pitch large) 	4	For mounting the L angle and hook wire (for resins) 0700009037

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