

INVERTER MULTI
AIR CONDITIONER
FLOOR CONSOLE /
UNDER CEILING
DUAL TYPE

SERVICE MANUAL



Indoor unit		Outdoor unit
ABY14LBAJ	—	AOY18LMAK2
ABY14LBAJ	}	AOY24LMAM2
ABY18LBAJ		

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SPECIFICATIONS

INDOOR UNIT

ELECTRICAL DATA

TYPE	COOL & HEAT	
MODEL NAME	ABY14LBAJ	ABY18LBAJ
COOLING CAPACITY	4.2 kW	5.0 kW
HEATING CAPACITY	4.9 kW	6.1 kW
MOISTURE REMOVAL	1.5 L/hr	1.7 L/hr
AIR CIRCULATION HIGH	640 m3/hr	780 m3/hr

FAN MOTOR

POWER SOURCE		230 V	
DISCRIMINATION		MFA-14JTT	MFA-18JTT
FAN SPEED	High speed	850 r.p.m.	1,030 r.p.m.
	Middle speed	760 r.p.m.	890 r.p.m.
	Low speed	670 r.p.m.	770 r.p.m.
NOISE LEVEL	High speed	36 dB	43 dB
	Middle speed	33 dB	40 dB
	Low speed	29 dB	35 dB

MEASUREMENT

DIMENSIONS	H x W x D	199 x 990 x 655 mm	
WEIGHT	Gross / Net	36 kg / 27 kg	37 kg / 28 kg

OUTDOOR UNIT

ELECTRICAL DATA

TYPE		COOL & HEAT	
MODEL NAME		AOY18LMAK2	AOY24LMAM2
POWER SOURCE		230 V	230 V
FREQUENCY		50 Hz	50 Hz
COOLING CAPACITY (Max)		5.8 kW (7.8 kW)	5.5 kW (6.5 kW)
HEATING CAPACITY (Max)		6.4 kW (9.0 kW)	6.4 kW (7.1 kW)
RUNNING CURRENT (Max)	Cooling	7.6 A (12.2 A)	7.5 A (9.7 A)
	Heating	7.2 A (12.2 A)	8.0 A (9.7 A)
INPUT WATTS (Max)	Cooling	1.73 kW (2.77 kW)	1.73 kW (2.22 kW)
	Heating	1.64 kW (2.77 kW)	1.84 kW (2.22 kW)
E.E.R.	Cooling	3.35 kW/kW	3.18 kW/kW
	Heating	3.90 kW/kW	3.48 kW/kW

COMPRESSOR

TYPE		Hermetic type, Inverter, 4 poles, Three phase, DC motor, Rotary
DISCRIMINATION		TNB 220 FPCM
REFRIGERANT	R410A	1,900 g

FAN MOTOR

POWER SOURCE		230 V
FAN SPEED		780 r.p.m.
NOISE LEVEL	Cooling	49 dB
	Heating	50 dB

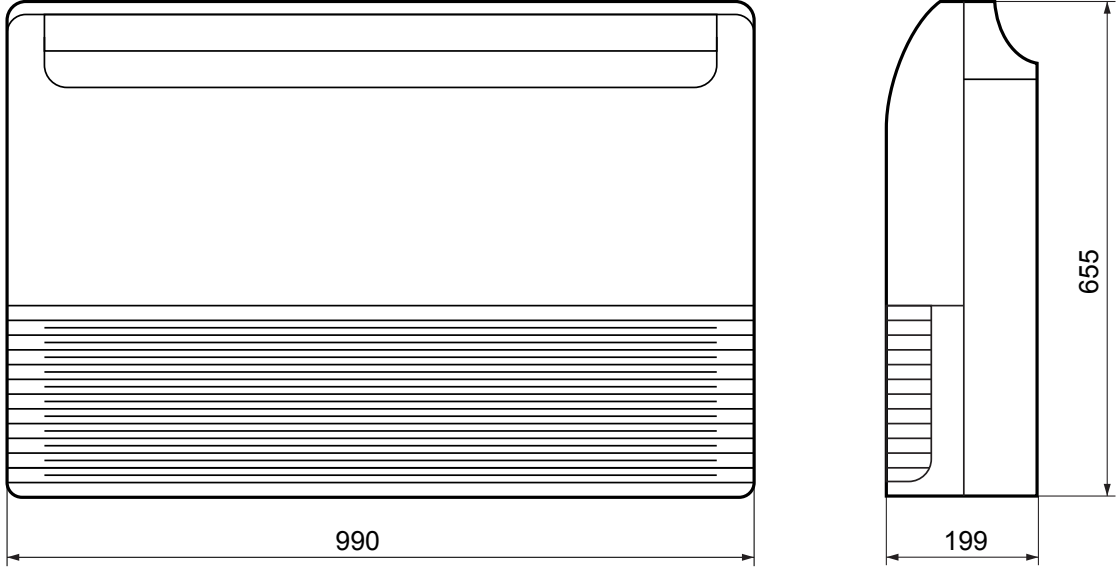
MEASUREMENT

DIMENSIONS	H x W x D	650 x 830 x 320 mm
WEIGHT	Gross / Net	62 kg / 56 kg

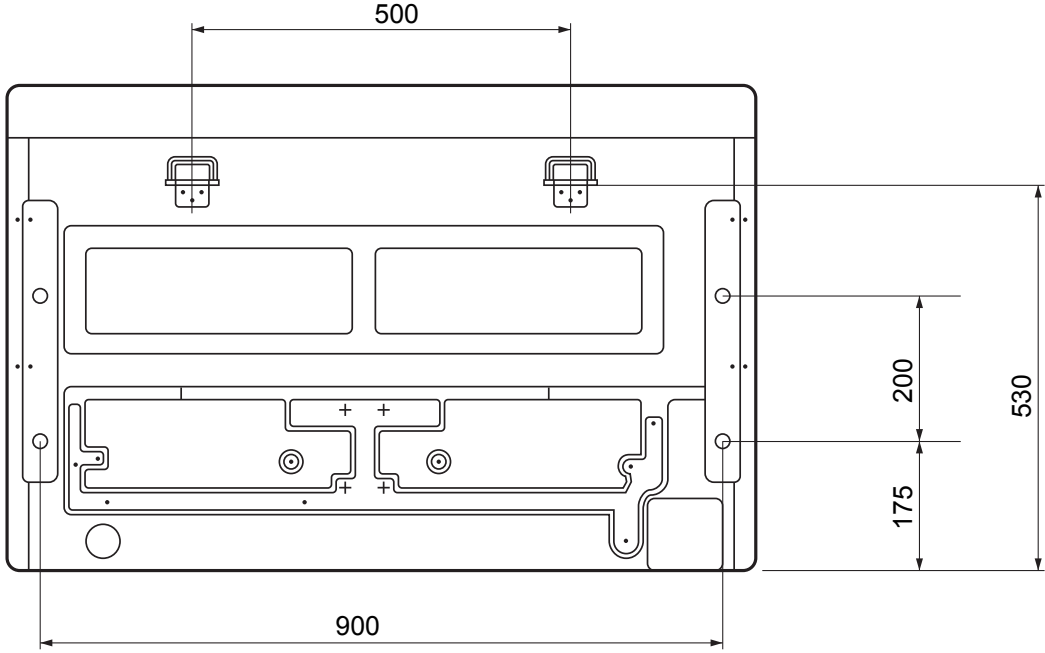
OUTLINE AND DIMENSIONS

INDOOR UNIT

Unit : mm

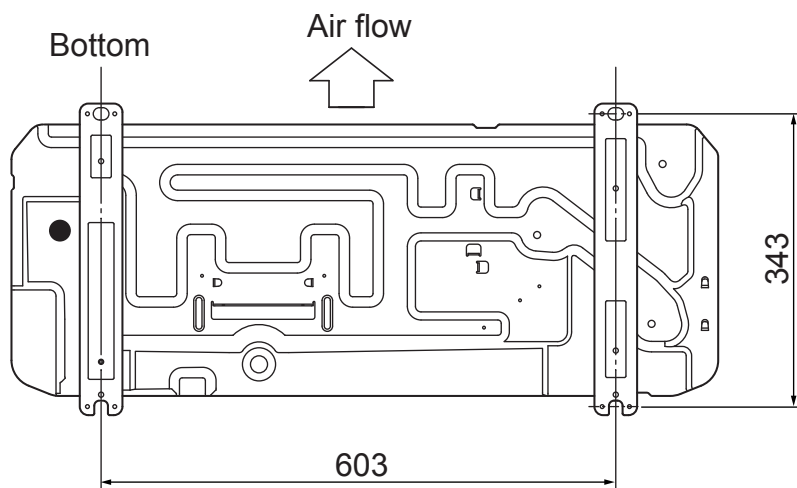
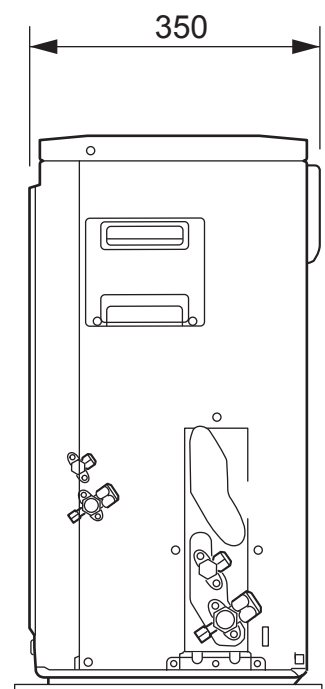
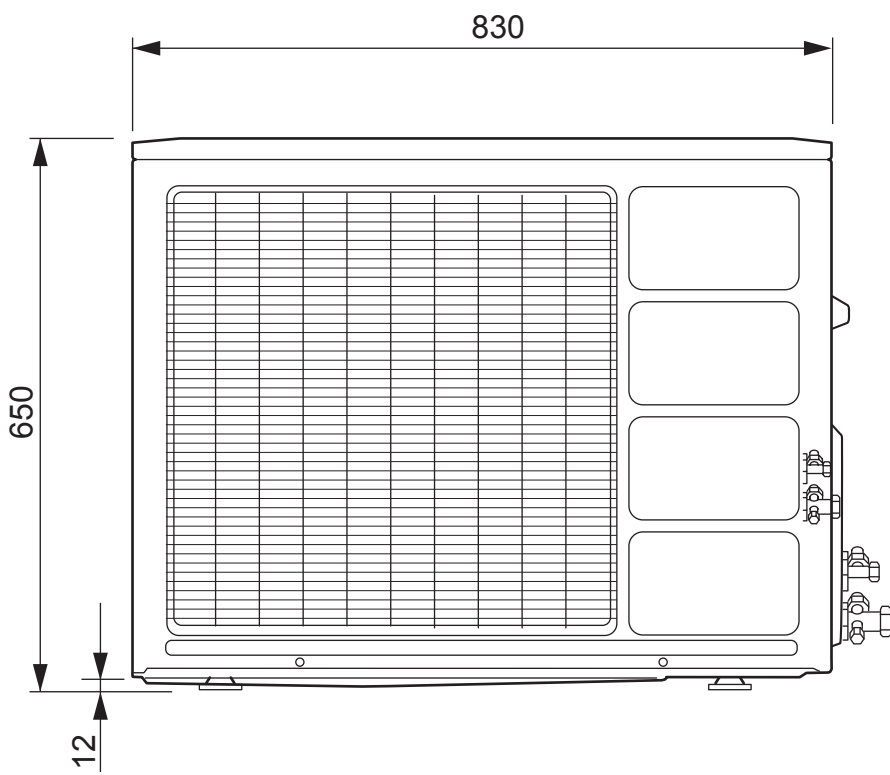
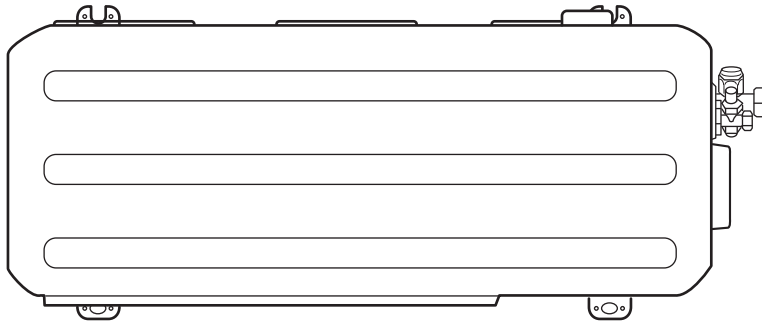


(rear view)

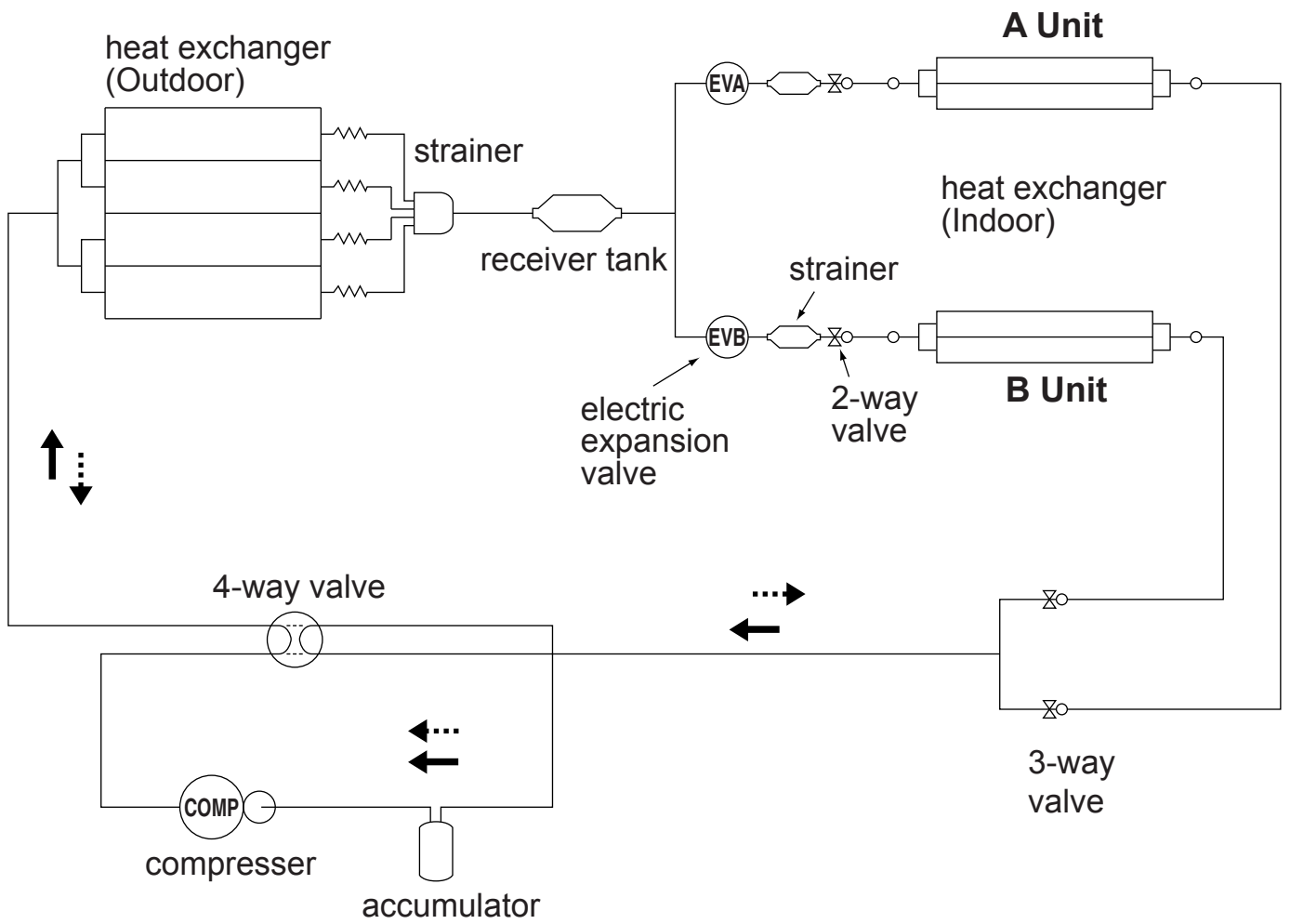


OUTDOOR UNIT

Unit : mm



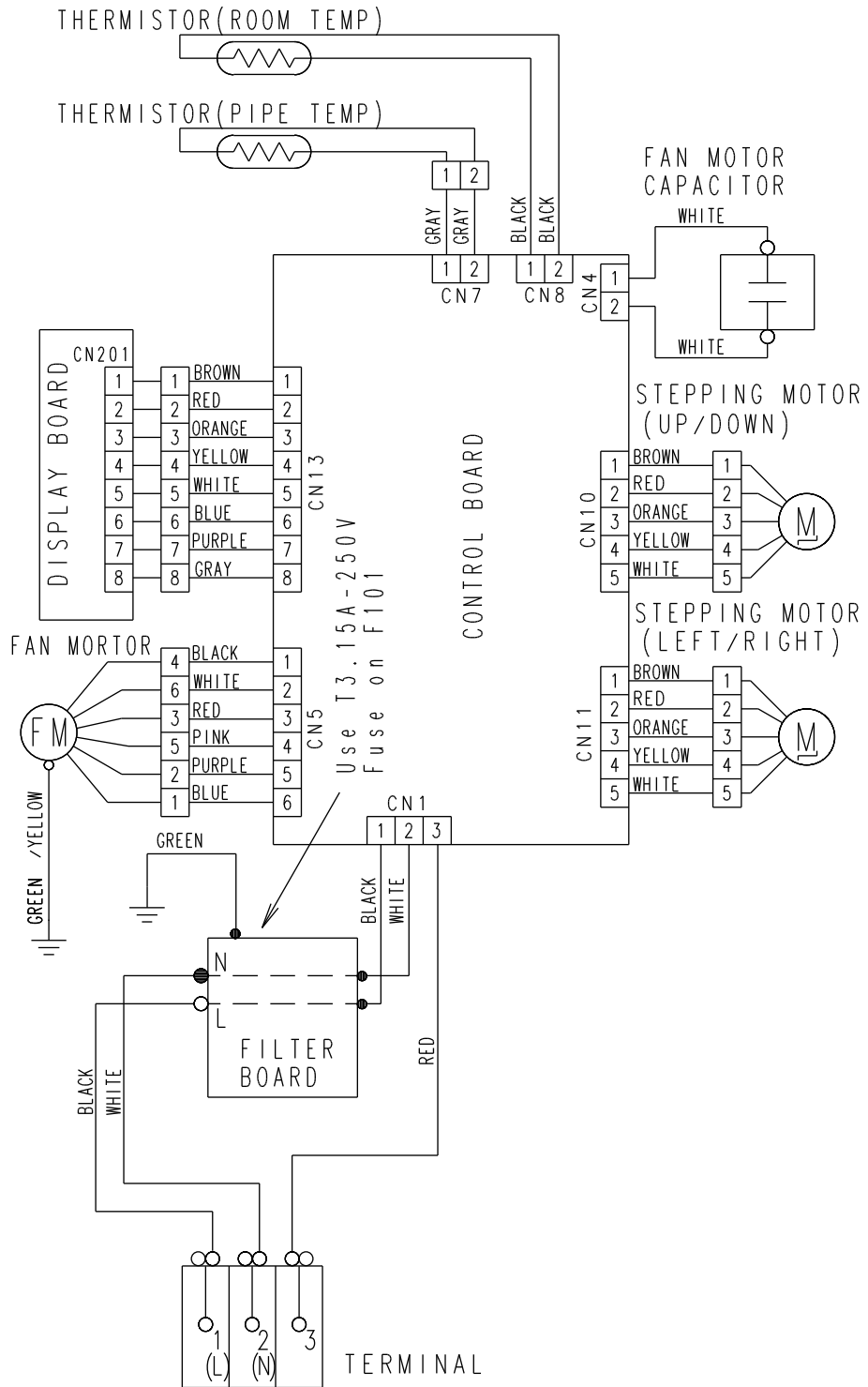
REFRIGERANT SYSTEM DIAGRAM



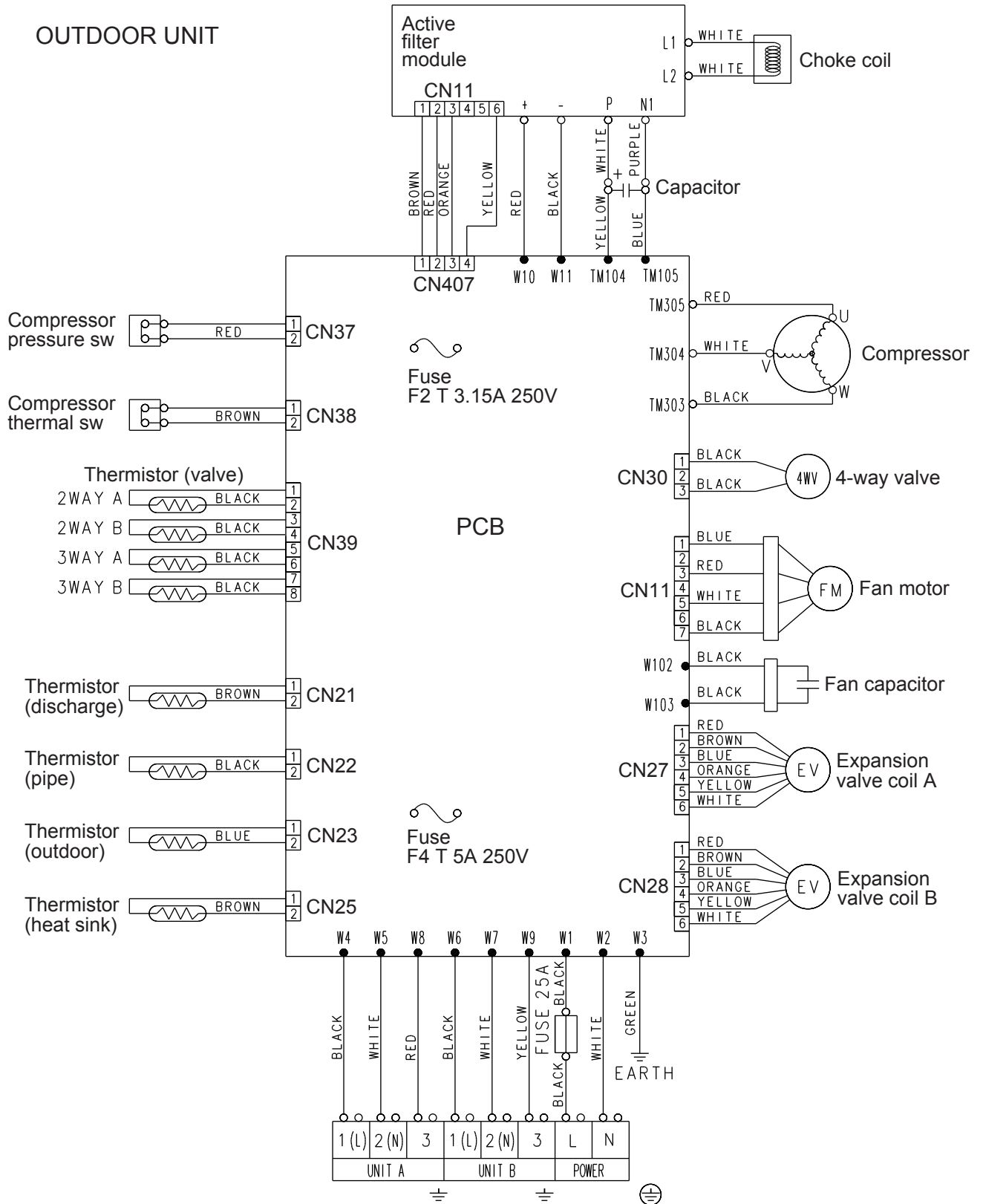
←···· HEAT
 ←···· COOL

CIRCUIT DIAGRAM

INDOOR UNIT

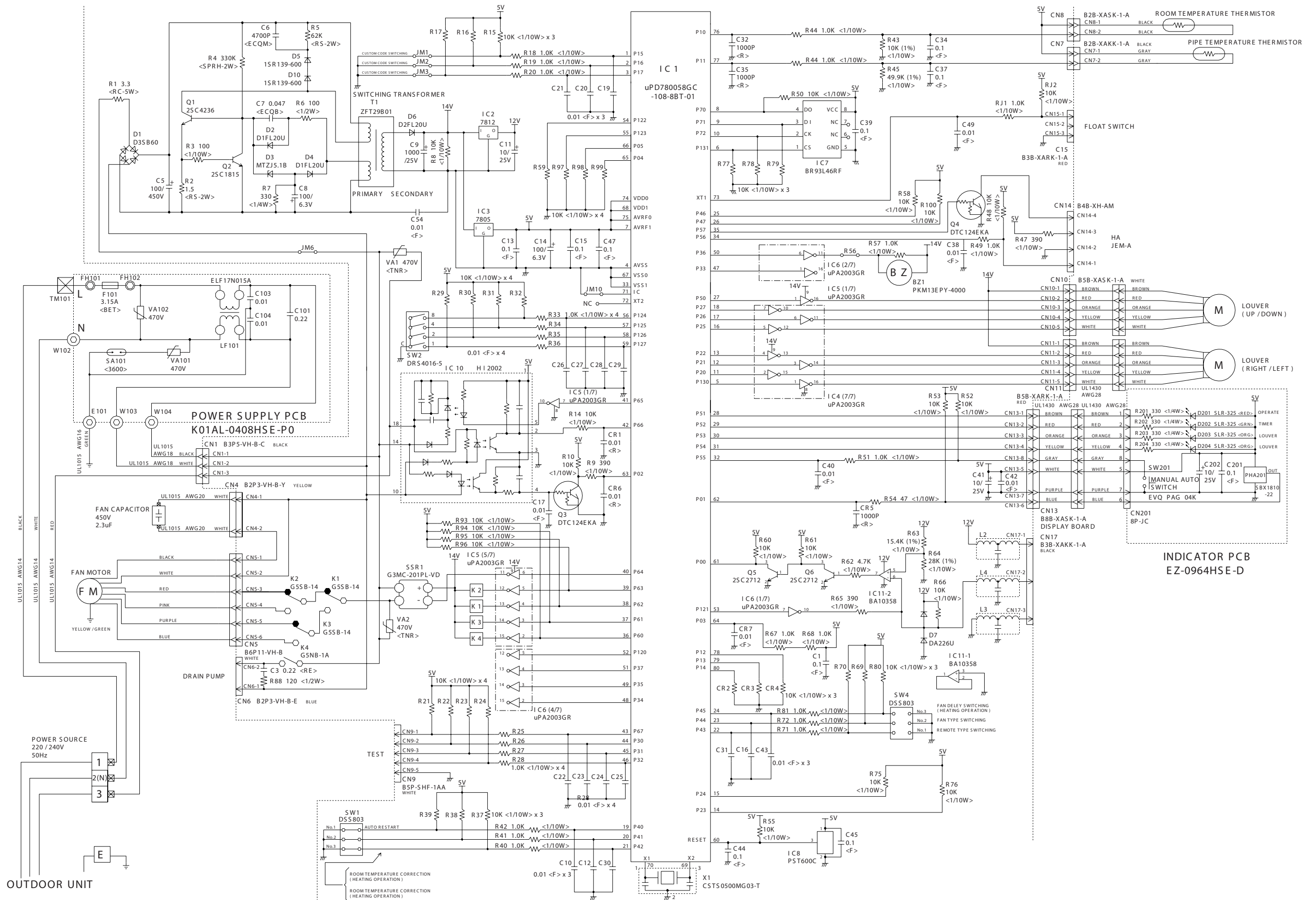


OUTDOOR UNIT



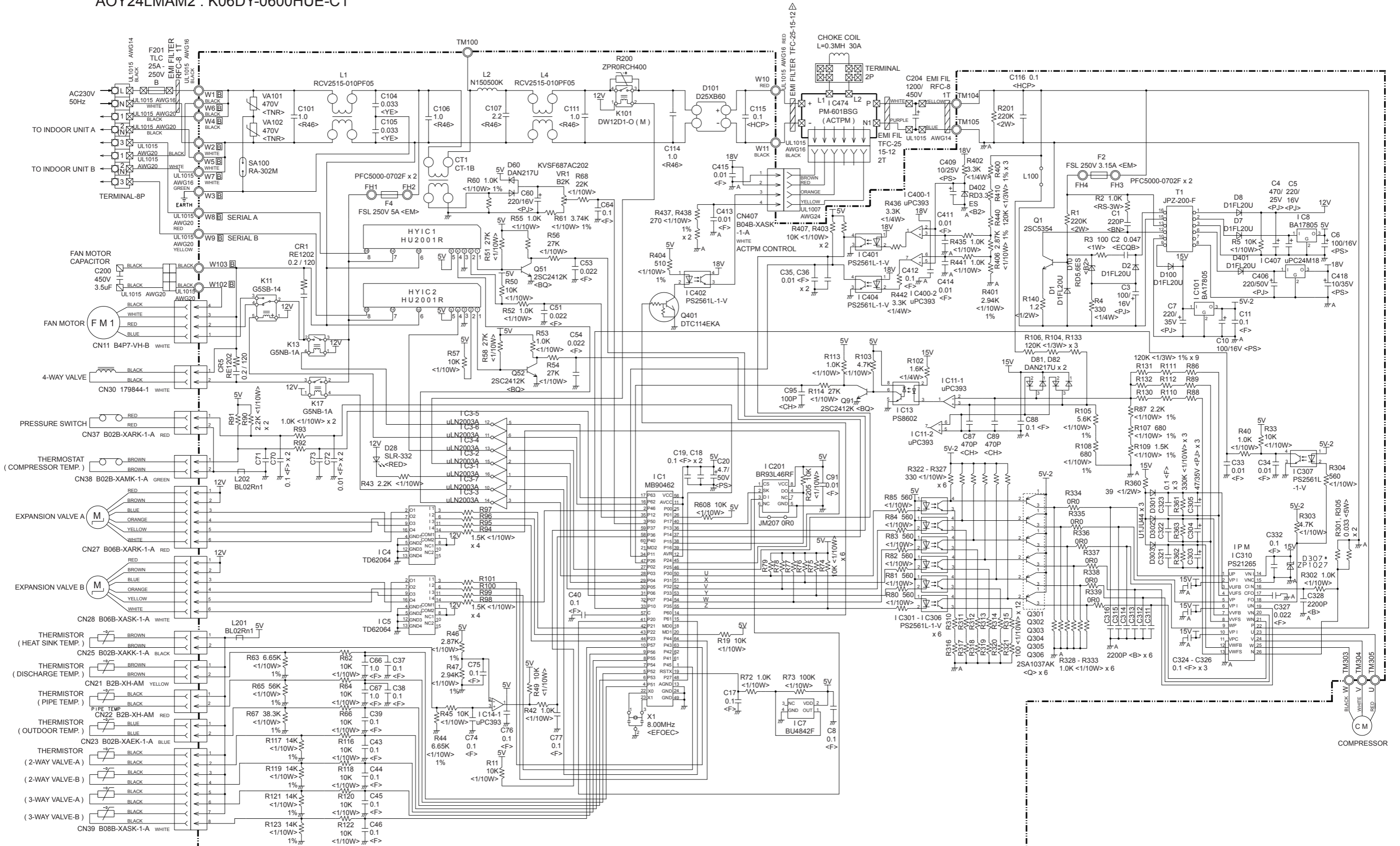
INDOOR PCB CIRCUIT DIAGRAM

CONTROLLER PCB ASSY
 ABY14LBAJ : K01AL-0414HSE-F1
 ABY18LBAJ : K01AL-040DHSE-F1



OUTDOOR PCB CIRCUIT DIAGRAM

CONTROLLER PCB ASSEMBLY
AOY18LMAK2 : K06DY-0602HUE-C1
AOY24LMAM2 : K06DY-0600HUE-C1



COMPRESSOR

ERROR DETECTION

○ : Fast flashing

● : Slow flashing

– : Off

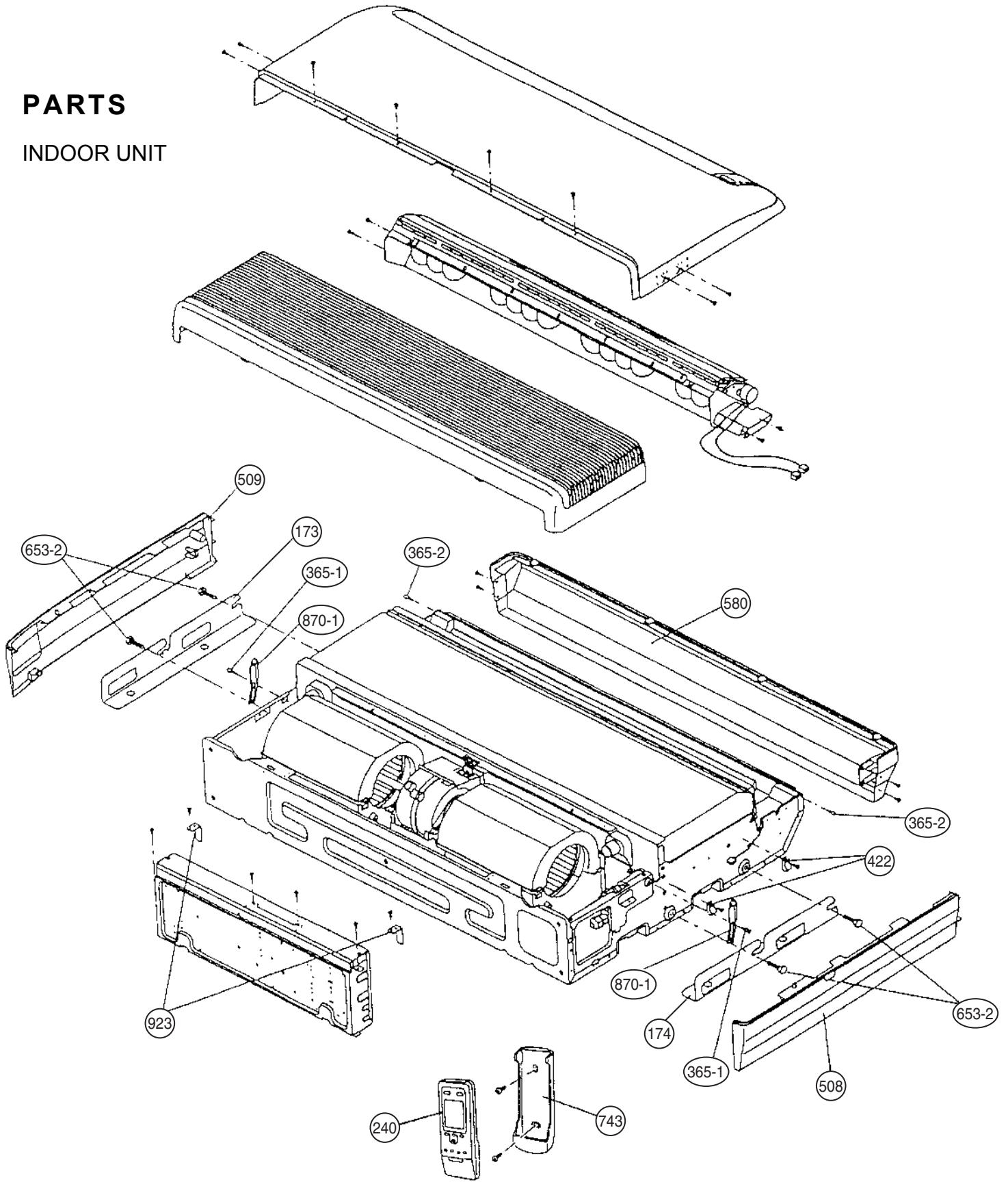
Error contents	Error display		
	OPERATION (RED)	TIMER (GREEN)	SWING (ORANGE)
Indoor unit EEPROM error	○	○	–
Indoor unit room temperature thermistor opened	2 times ●	○	–
Indoor unit room temperature thermistor short-circuited	2 times ●	○	○
Indoor unit heat exchanger thermistor opened	3 times ●	○	–
Indoor unit heat exchanger thermistor short-circuited	3 times ●	○	○
Outdoor unit → Indoor unit communication error	5 times ●	○	–
Indoor unit → Outdoor unit communication error	5 times ●	○	○
Indoor unit fan error	6 times ●	○	–
Outdoor unit heat exchanger thermistor error	○	3 times ●	–
Outdoor unit outdoor temperature thermistor error	○	4 times ●	–
Outdoor unit discharge thermistor error	○	5 times ●	–
Outdoor unit compressor thermistor error	○	8 times ●	–
Outdoor unit pressure switch error	○	9 times ●	–
Outdoor unit 2 way valve thermistor error	○	–	2 times ●
Outdoor unit 3 way valve thermistor error	○	–	3 times ●
Indoor unit distinction error	○	–	4 times ●
Current trip	○	10 times ●	–
Compressor loter location error	○	13 times ●	–
Outdoor fan motor error	○	14 times ●	–

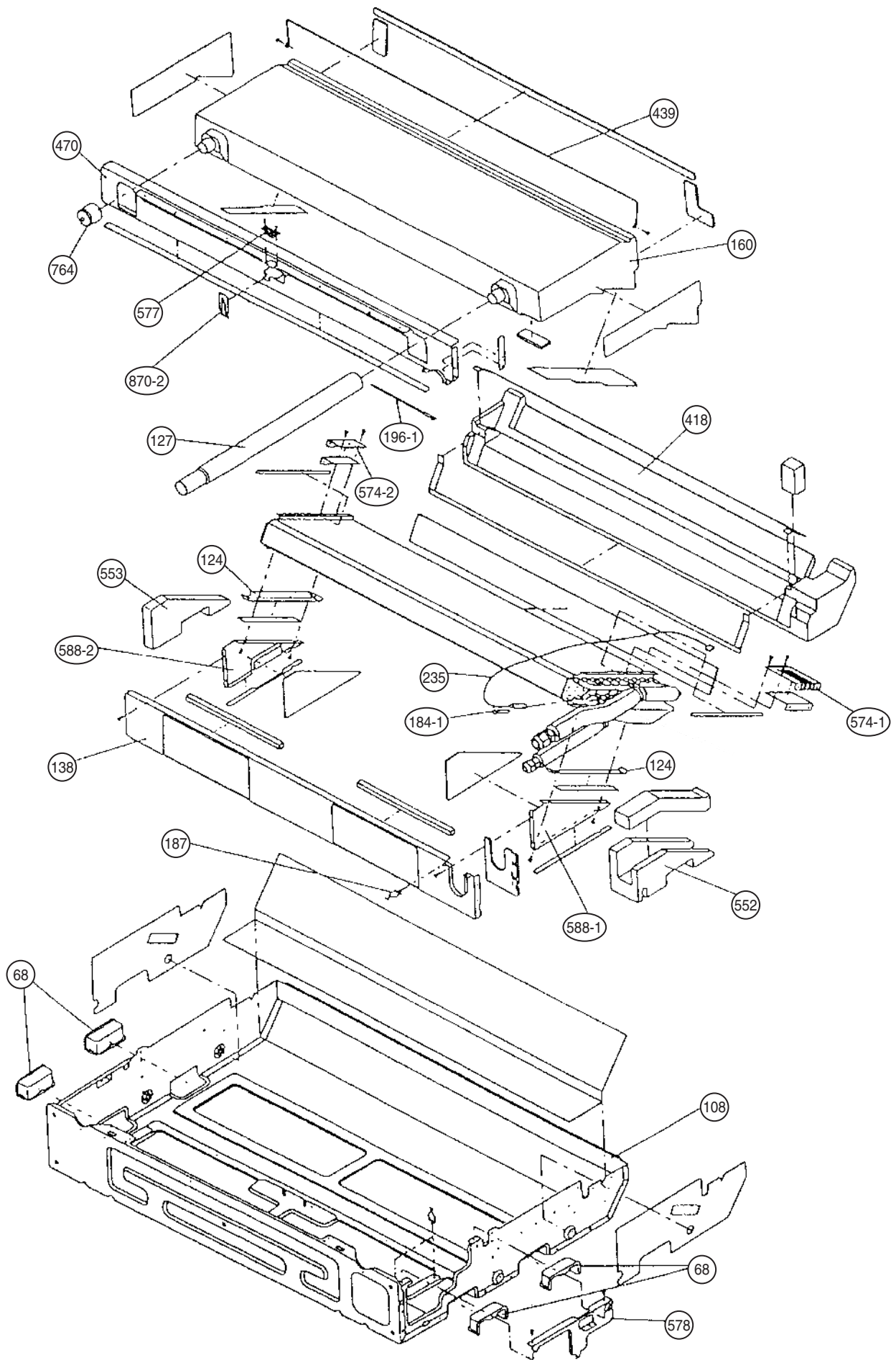
OUTDOOR UNIT

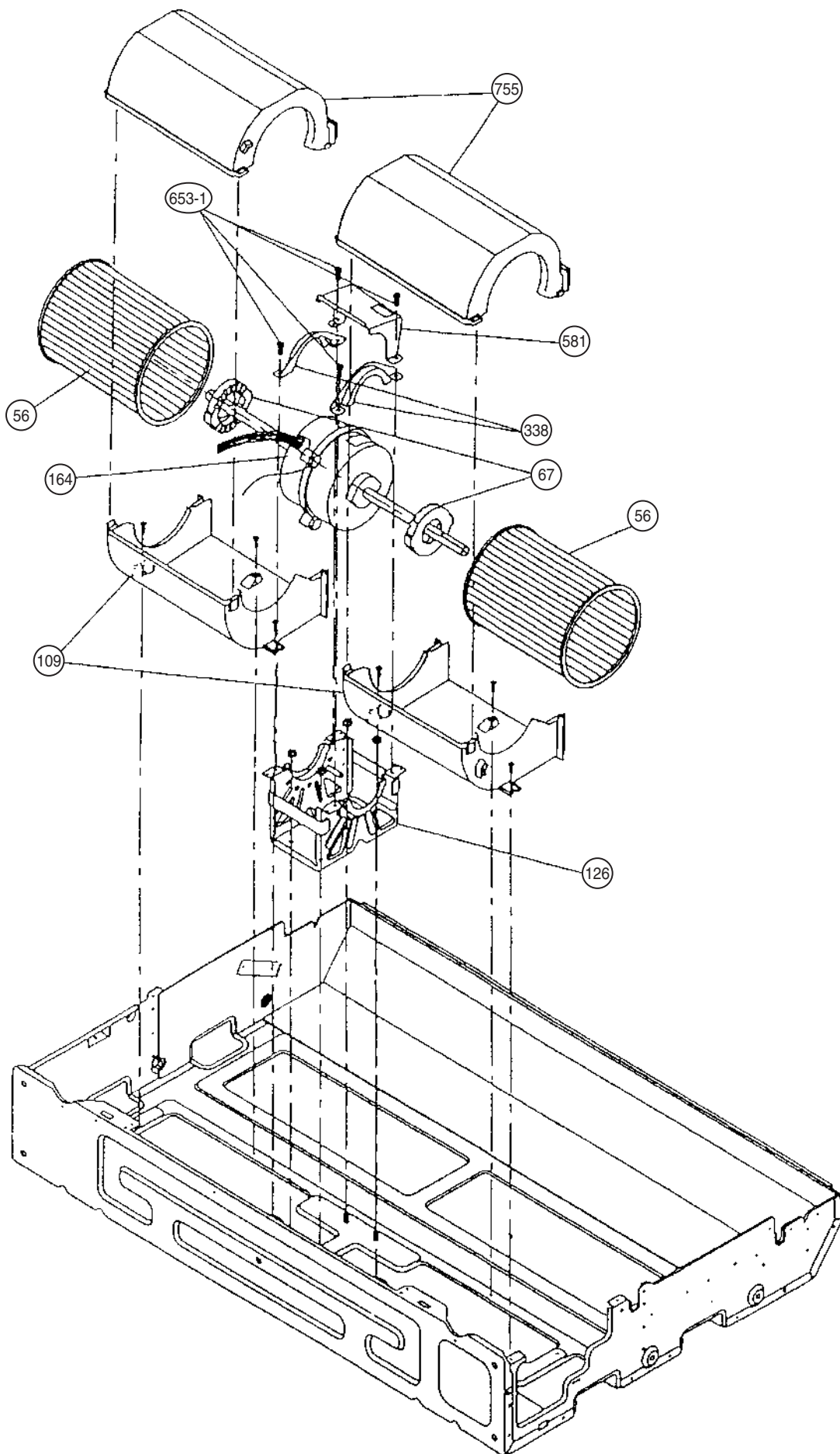
LED	Condition
1 flash	Communication abnormal
2 flashes	Discharge pipe thermistor abnormal
3 flashes	Heat exchanger thermistor abnormal
4 flashes	Outdoor air thermistor abnormal
5 flashes	2-way valve (A, B) thermistor abnormal
6 flashes	3-way valve (A, B) thermistor abnormal
7 flashes	Compressor thermistor abnormal
8 flashes	Pressure switch abnormal
9 flashes	Indoor units connection abnormal
10 flashes	Current trip (permanent stop)
11 flashes	CT abnormal (permanent stop)
12 flashes	Compressor location detection abnormal (permanent stop)
13 flashes	Compressor does not start (permanent stop)
14 flashes	Timer reduction

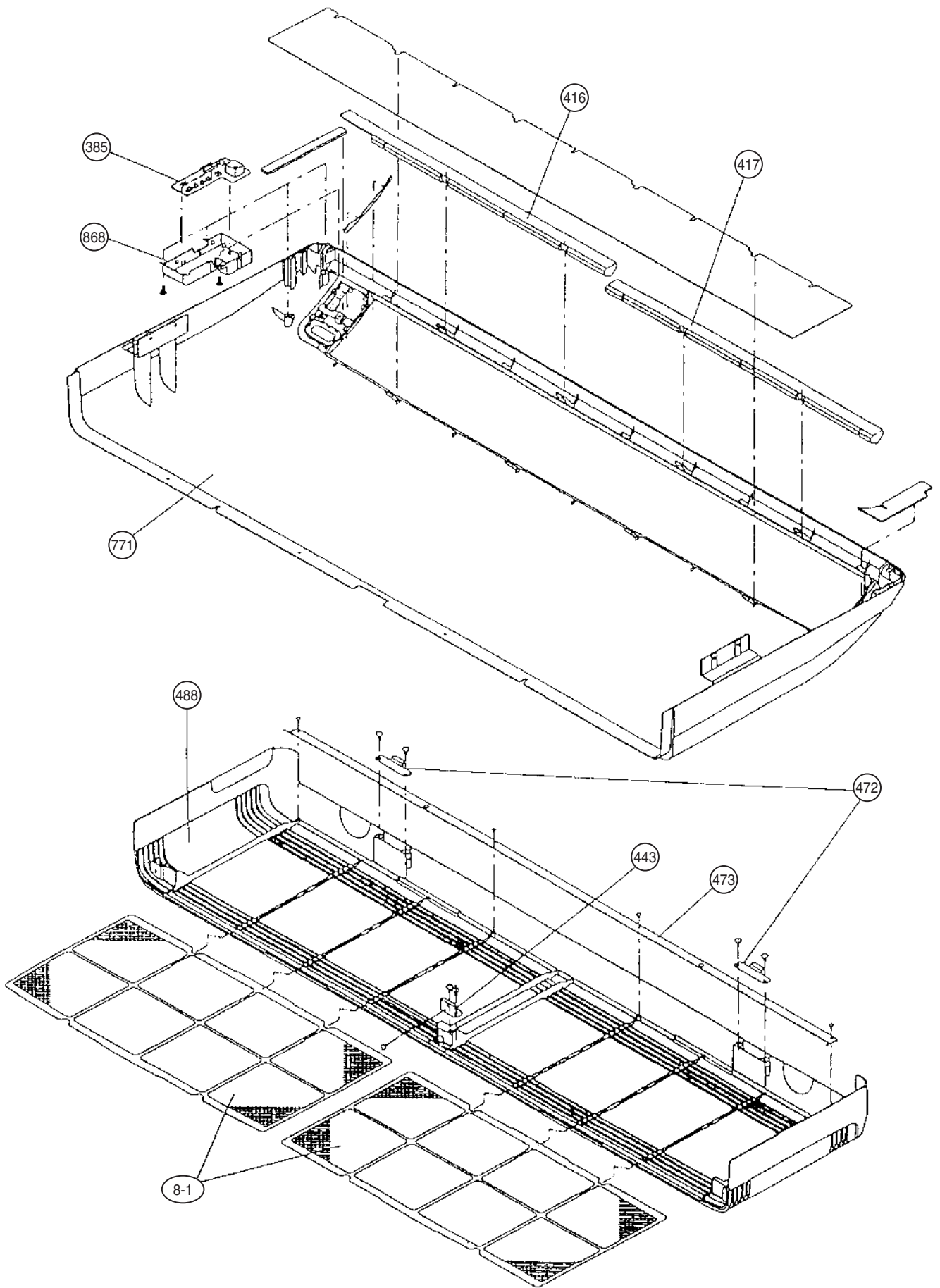
PARTS

INDOOR UNIT

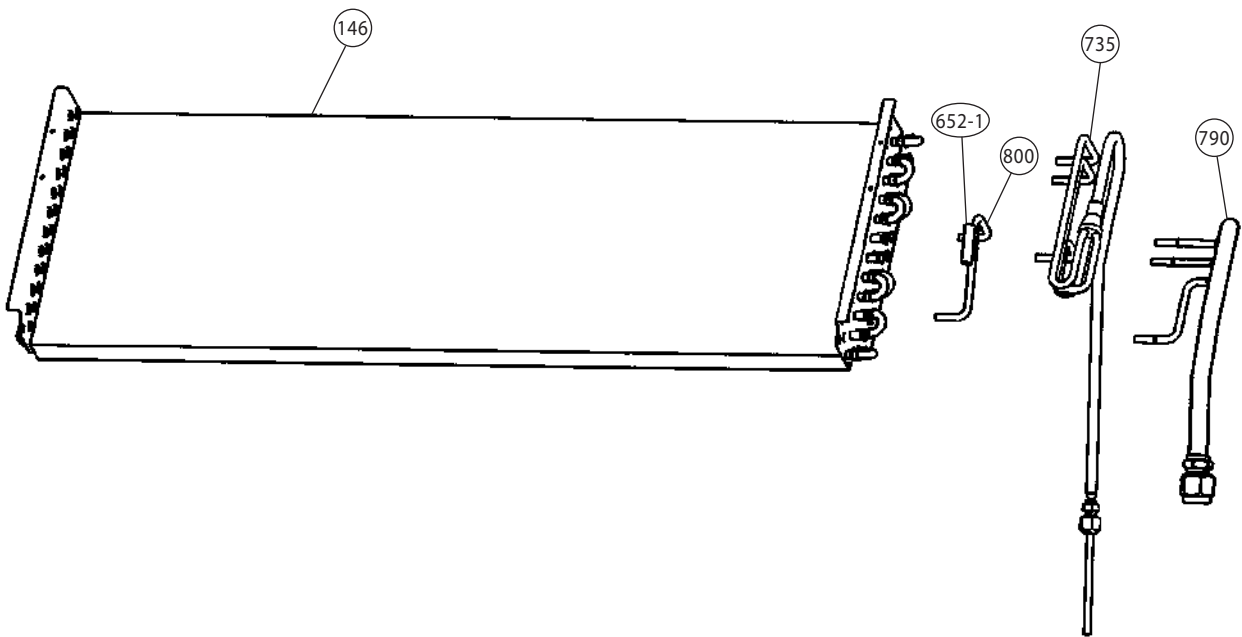




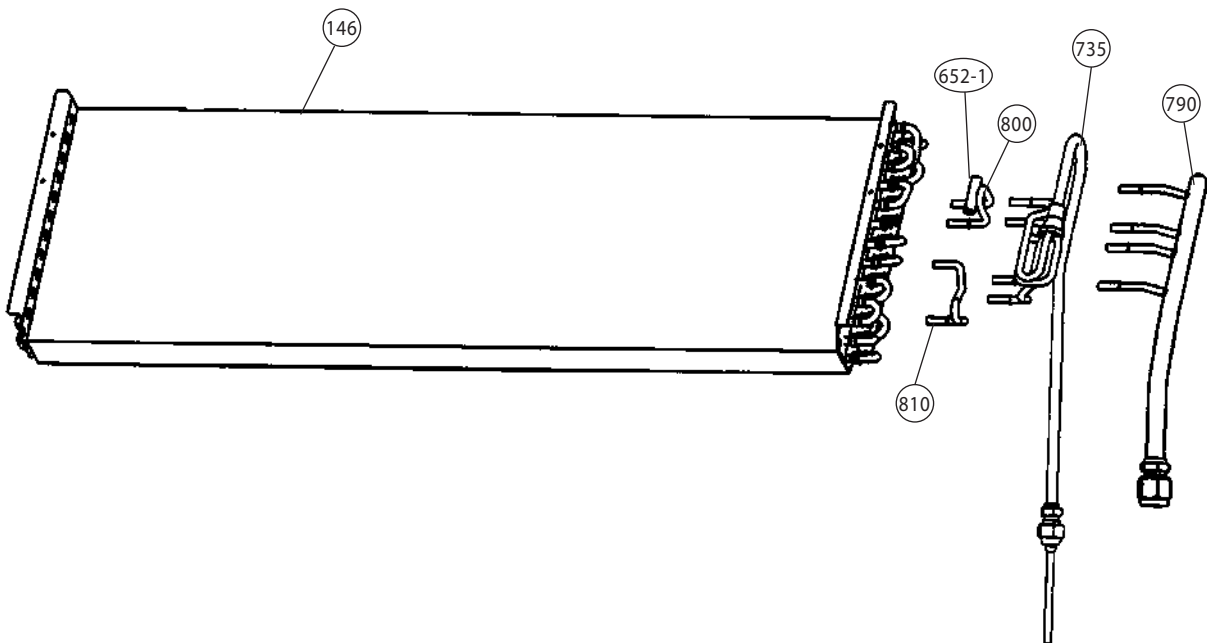


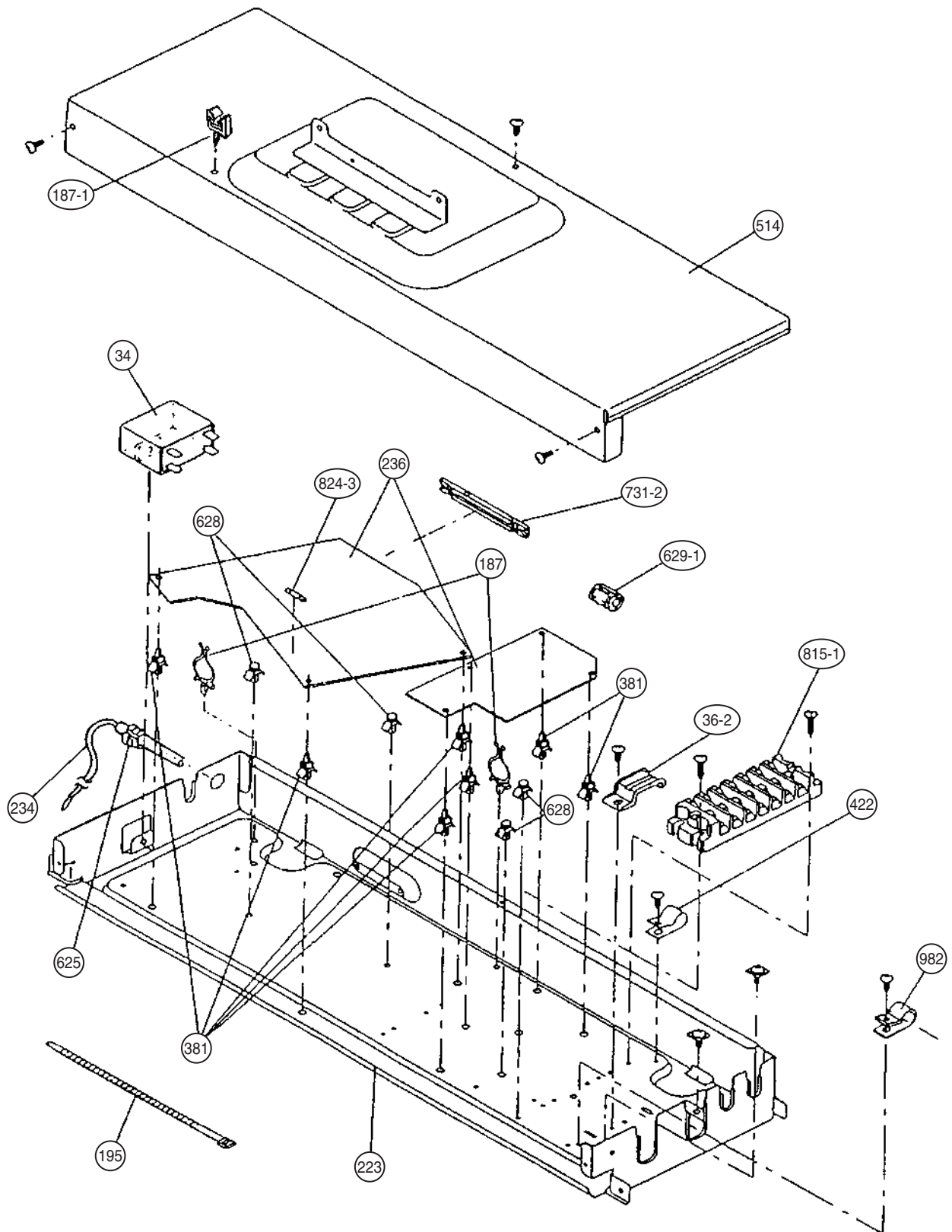


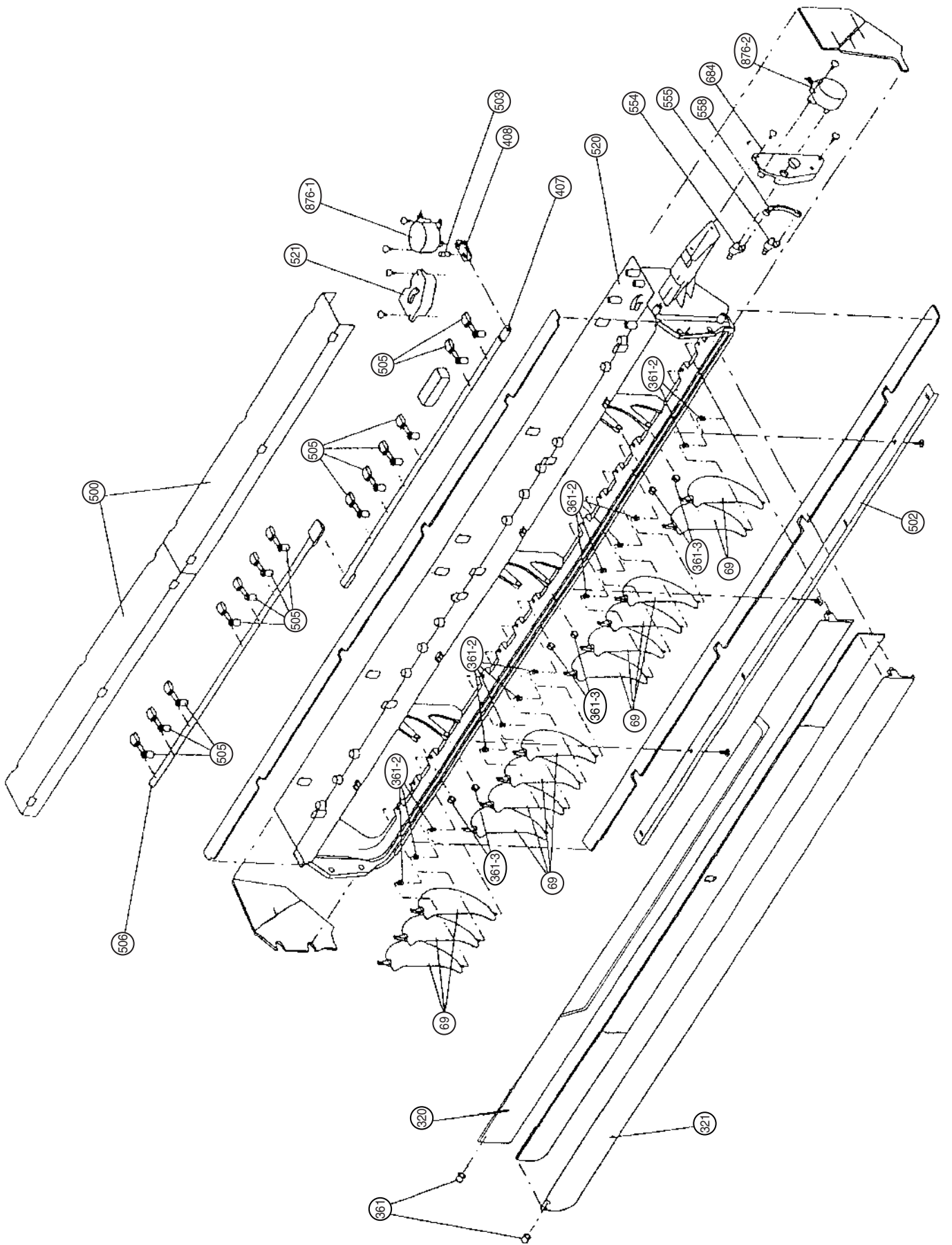
Model : ABY14LBAJ



Model : ABY18LBAJ







PARTS LIST

INDOOR UNIT

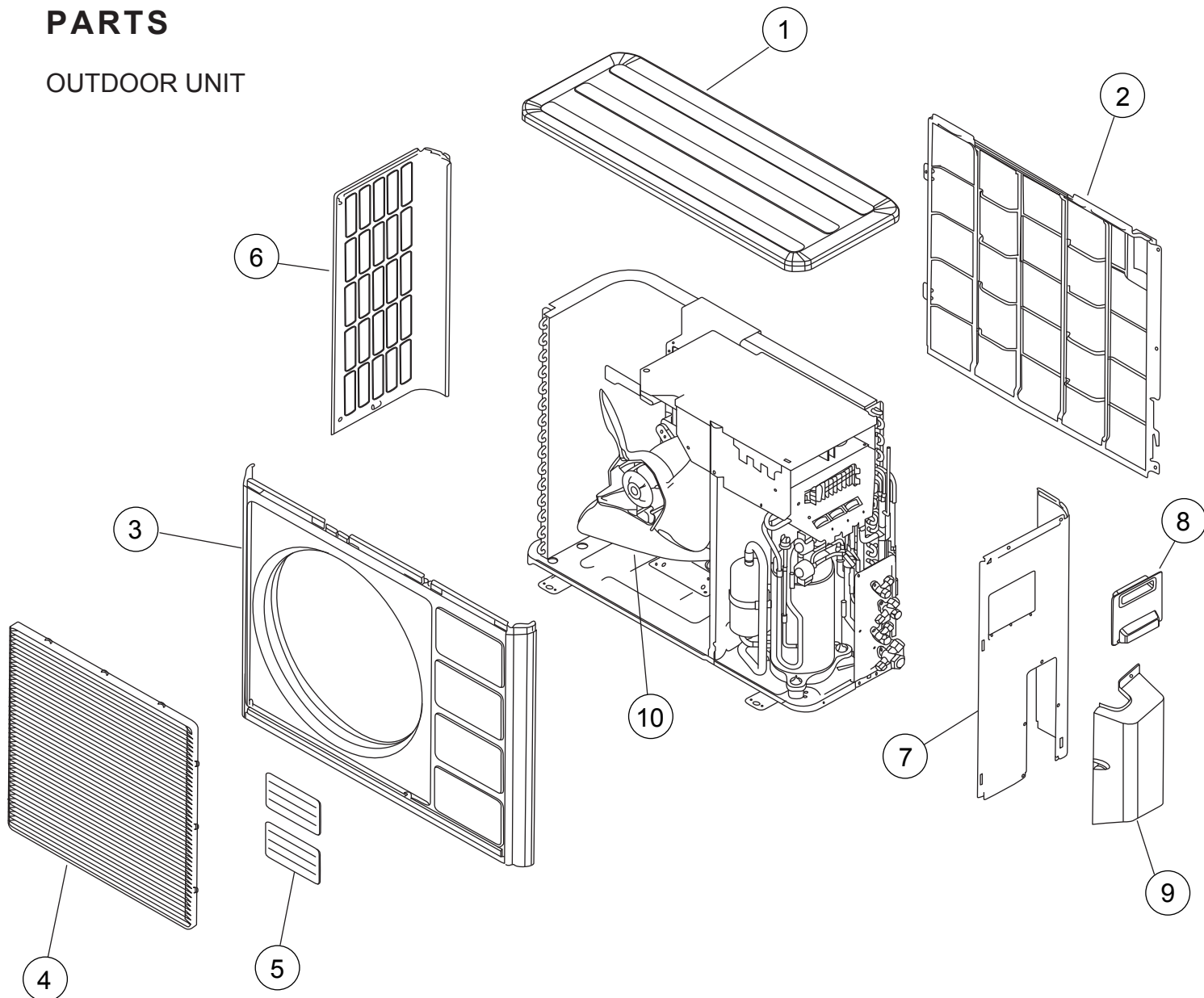
Ref.	Description	Part No.	
		ABY14LBAJ	ABY18LBAJ
8-1	Air Filter	9358567029	9358567029
34	Capacitor (Fan Motor) 1.6μF/400V	9900270018	-----
34	Capacitor (Fan Motor) 2.3μF/450V	-----	9900270179
36-2	Cord Holder Metal	9356362008	9356362008
56	Sirocco Fan Assy	9385258006	9385258006
67	Rubber (Vibration-proof)	9385102002	9385102002
69	Louver	9358561010	9358561010
68	Cap, Plastic	9358563007	9358563007
108	Base Assy	9359061038	9359061038
109	Casing, Plastic	9358543009	9358543009
124	Dew Proof Plate	9359196006	9359196006
126	Motor Fixing Table Assy	9358591000	9358591000
127	Drain Hose Assy	9359242000	9359242000
138	Separate Wall-A	9358584002	9358584002
146	Evaporator Assy	9362513029	9362513036
160	Drain Pan Assy	9358568002	9358568002
164	Fan Motor Assy-IN	9601527039 (MFA-14JTT)	9601527022 (MFA-18JTT)
173	Hanger Bracket-L	9358596005	9358596005
174	Hanger Bracket-R	9358595008	9358595008
184-1	Thermistor Spring-A	313728262708	313728262708
187	Clamp No. 1219	313361271706	313361271706
187-1	Clip (Cable)	9352715006	9352715006
195	Clamp SKB-100	313361275805	313361275805
196-1	Clamp SKB-3M	312300787605	312300787605
223	Control Box	9358600016	9358600016
234	Thermistor Assy-Room	9703299087	9703299087
235	Thermistor Assy-Pipe	9900022020	9900022020
236	Controller PCB Assy	9705914018 (K01AL-0414HSE-F1)	9704557780 (K01AL-040DHSE-F1)
240	Remote Control Unit AR-JW1	9371190013	9371190013
320	Flap (Upper)-F	9358538012	9358538012
321	Flap (Lower)	9358541012	9358541012
338	Motor Fixture	9358594001	9358594001
361	Bushing	9357942001	9357942001
361-2	Bushing-B, Plastic	9358554005	9358554005
361-3	Bushing-C, Plastic	9358553008	9358553008
365-1	Special Screw	9359092001	9359092001
365-2	Special Screw	9359091004	9359091004
381	Locking Spacer, KGLS-4S	313209391506	313209391506
385	Indicator PCB Assy EZ-0964HSE-D	9701873012	9701873012
407	Motor Rod	9358560006	9358560006
408	Louver Link	9358556009	9358556009
416	Insulation (Panel)-A	9358574003	9358574003
417	Insulation (Panel)-B	9358914007	9358914007
418	Insulation (Flap Base)	9358572009	9358572009
422	Clamp NK-10N	9359183006	9359183006
439	Drain Pan Wire	9358598009	9358598009
443	Arm Bracket	9359281009	9359281009
470	Separate Wall-B	9358585009	9358585009

INDOOR UNIT (Continued)

Ref.	Description	Part No.	
		ABY14LBAJ	ABY18LBAJ
472	Grille Support	9358602003	9358602003
473	Filter Bracket	9358607008	9358607008
488	Grill-F	9358532010	9358532010
500	Protect Cover	9358564004	9358564004
502	Support Stay	9358599006	9358599006
503	Louver Shaft	9358557006	9358557006
505	Louver Stopper	9358555002	9358555002
506	Louver Rod	9358559000	9358559000
508	Cosmetic Panel-R	9358535011	9358535011
509	Cosmetic Panel-L	9358536018	9358536018
514	Control Box Cover	9359097006	9359097006
520	Flap Base	9358537015	9358537015
521	Louver Link Cover	9358558003	9358558003
552	Insulation (Eva.)-R	9358575000	9358575000
553	Insulation (Eva.)-L	9358857007	9358857007
554	Flap Link-Upper (Step Motor-V)	9358551004	9358551004
555	Flap Link-Lower (Step Motor-V)	9358552001	9358552001
558	Motor Rod-A (Step Motor-V)	9358550007	9358550007
574-1	Evaporator Fixture-R (Bracket)	9358589007	9358589007
574-2	Evaporator Fixture-L (Bracket)	9358590003	9358590003
577	Catch TL-119	9359096009	9359096009
578	Base Bracket (Reinforcement Metal)	9358586006	9358586006
580	Top Cover	9358534014	9358534014
581	Protector, Metal (Fan Motor)	9359282006	9359282006
588-1	Evaporator Bracket-R	9358587003	9358587003
588-2	Evaporator Bracket-L	9358588000	9358588000
625	Cord Bushing KR-51	9359240006	9359240006
628	Locking Spacer-B	313005446558	313005446558
629-1	EMI Filter	0400247074	0400247074
652-1	Thermistor Holder Pipe	313806262805	313806262805
653-1	Bolt (Fan Motor Fixing)	0700156014	0700156014
653-2	Bolt	0700190018	0700190018
684	Motor Base	9358562000	9358562000
731-2	Holder (Guide Rail)	0600241018	0600241018
735	Distributor As	9373034018	9373034032
743	Remote Control Unit Holder	9305642014	9305642014
755	Casing Cover	9358544006	9358544006
764	Drain Cap	9358746004	9358746004
771	Panel Assy	9359076117	9359076117
790	Coupling Pipe Assy	-----	9373038153
800	Bypass Pipe Assy	9373032014	9373032021
810	Bypass pipe B	-----	9371346038
815-1	Terminal 3P	9900203016	9900203016
824-3	Fuse BET3.15A - 250V	0600222512	0600222512
868	PCB Holder	9358547007	9358547007
870-1	Arm	9358565001	9358565001
870-2	Center Arm	9359280002	9359280002
875	Power Supply PCB Assy	9704561190	9704561190
		(K01AL-0408HSE-PO)	(K01AL-0408HSE-PO)
876-1	Step Motor-H	9359106012	9359106012
876-2	Step Motor-V	9359105015	9359105015
923	Control Box Bracket	9358717004	9358717004
982	Cord Clamp	9357886008	9357886008
---	Evaporator Sub Assy	9359051190	9359051206

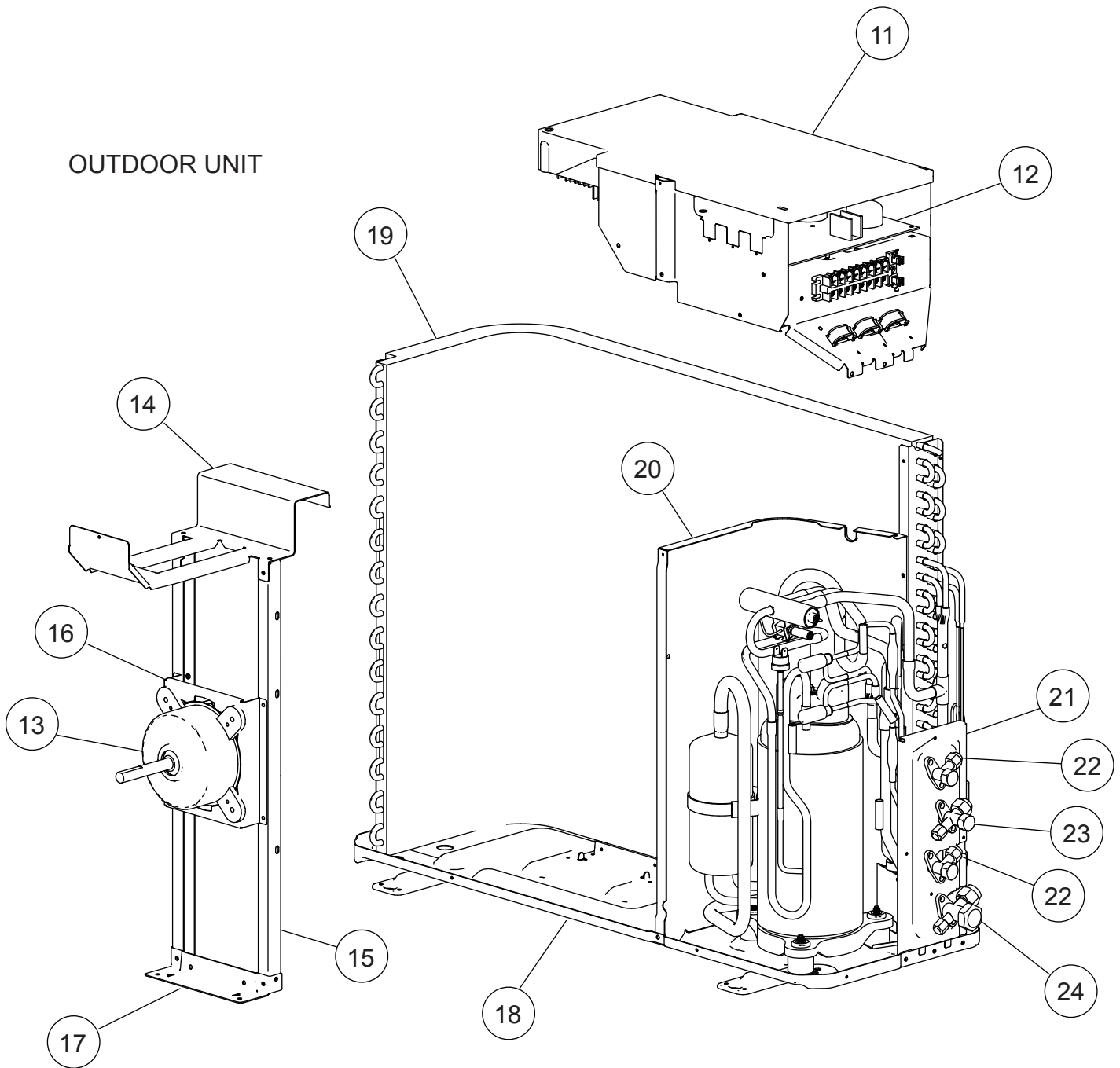
PARTS

OUTDOOR UNIT



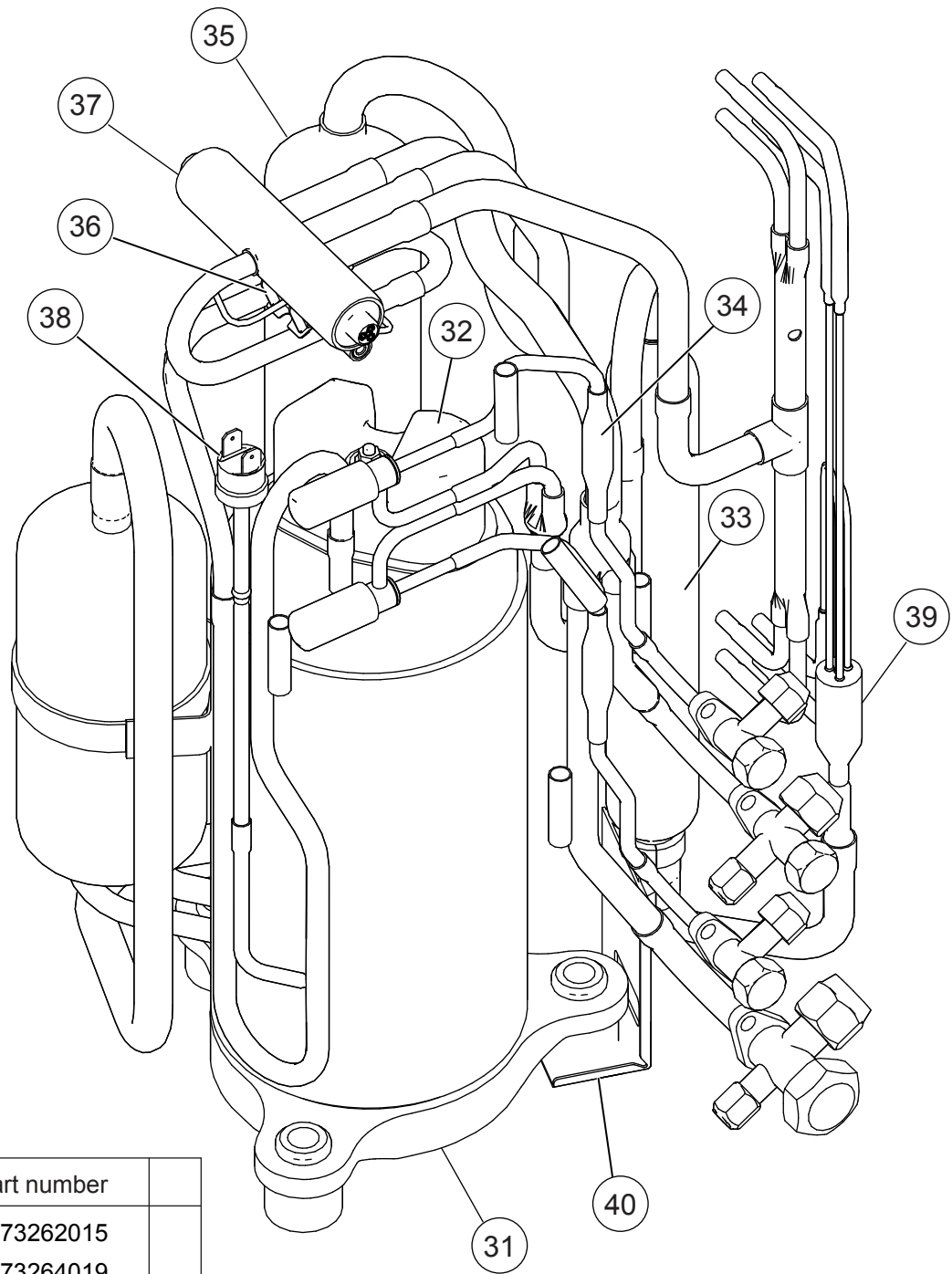
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1	Top Panel	9371925011
2	Protective Net	9371934013
3	Front Panel	9371924014
4	Fan Guard	9371187013
5	Emblem	9351355005
6	Side Panel L	9371926018
7	Side Panel R Sub Assy	9372306048
8	Connecteur Cover	9366398004
9	Valve Cover	9372796016
10	Propeller Fan Assy	9366378013

OUTDOOR UNIT



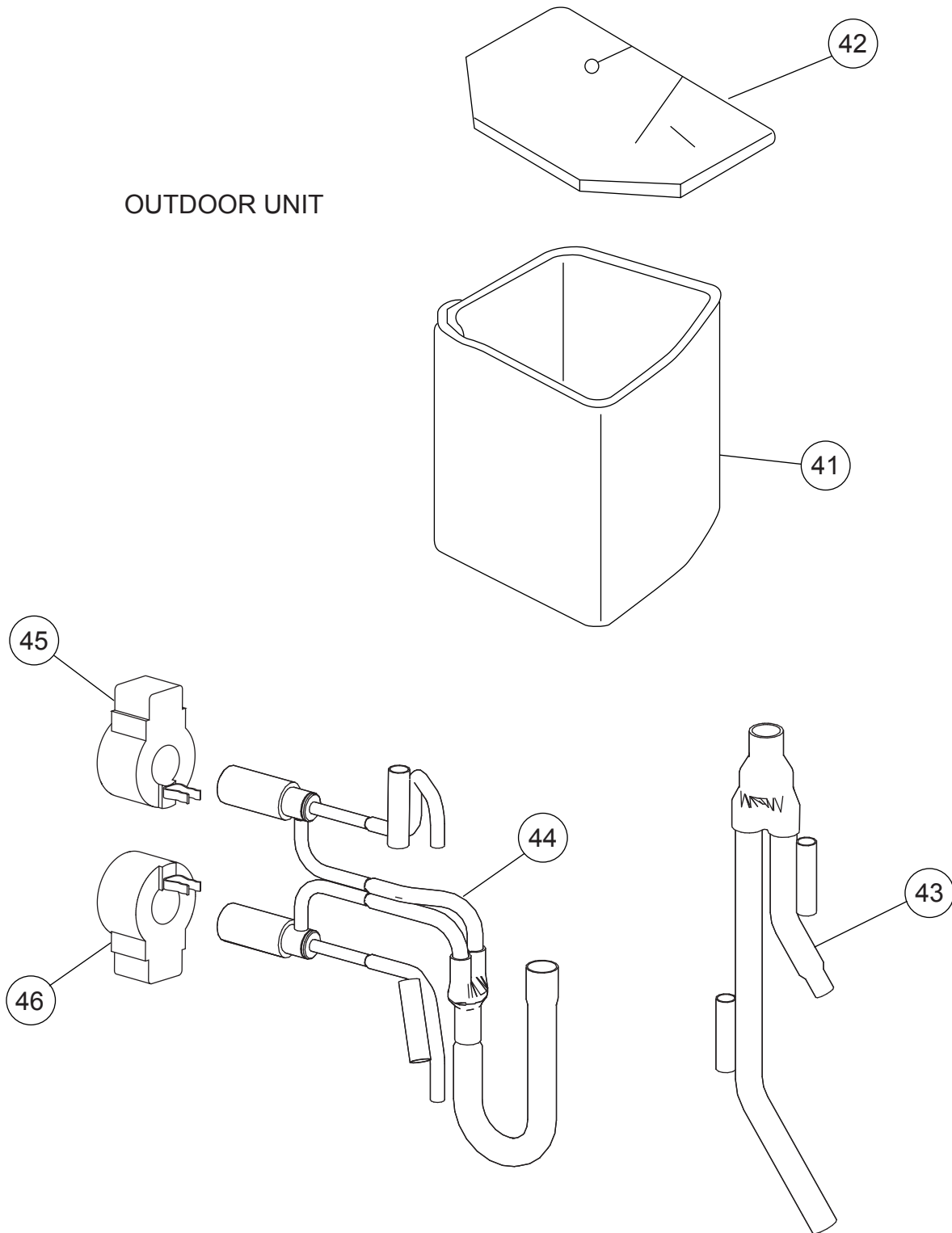
Ref.	Description	Part number	Ref.	Description	Part number
11	Control Cover	9372792018	--	Heat Exchanger Thermistor	9704220059
12	Controller PCB Assy (18LMAK2)	9707560039	--	Thermistor Outdoor	9703516047
12	Controller PCB Assy (24LMAM2)	9707560015	--	Thermistor Heat Sink	9900195014
13	Motor Induct	9601671046	--	Relay	9900117016
14	Motor Bracket Top	9371931012	--	ACTPM	9703457012
15	Motor Bracket	9371929019	--	Capacitor for PCB	9705387010
16	Motor Bracket Center	9371930015	--	Fan Capacitor	9900270049
17	Motor Bracket Bottom	9371932019	--	Fuse	0600086039
18	Base Assy	9371920078	--	Terminal 8P	9900203047
19	Condenser Assy	9372181096	--	Fuse Holder	0501454012
20	Separate Wall	9372795019	--	Terminal 2P	9701971015
21	Valve Plate	9371928036			
22	2-Way Valve	9372204054			
23	3-Way Valve	9372205044			
24	3-Way Valve	9372205051			

OUTDOOR UNIT



Ref.	Description	Part number
31	Compressor Assy	9373262015
32	Terminal Cover (Comp)	9373264019
33	Receiver Tank Assy	9373426011
34	Strainer Assy	9366602019
35	Accumulator	9368391003
36	Solenoid	9900165079
37	4-Way Valve	9900163013
38	Pressure Switch Assy	9373729044
39	Capillary Assy	9373729211
40	Accum Support Assy	9372252017
--	Thermal Switch	9377956019
--	Gasket (Comp)	9373266013
--	Compressor Pressure Switch	9900186012
--	Compressor Thermal Switch	9373263012
--	Thermistor Valve	9900194017
--	Thermistor Discharge	9704219039
--	Special Nut M8 (Comp)	9355091008
--	Thermister Holder Pipe	313714262805

OUTDOOR UNIT




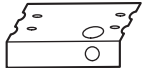
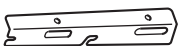
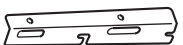
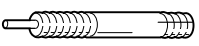



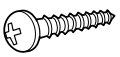
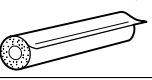



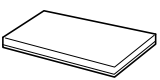



Ref.	Description	Part number
41	Compressor Cover A	9373730019
42	Compressor Cover B	9373730026
43	Joint Pipe (3Way) Assy	9373729129
44	Expansion Valve Assy	9373729068
45	Expansion Valve Coil (White connector)	9900197018
46	Expansion Valve Coil (Red connector)	9900057022

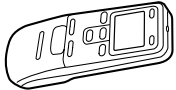

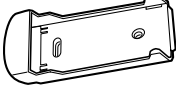

ACCESSORIES

The following installation parts are furnished. Use them as required.

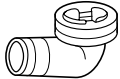


INDOOR UNIT

Name and Shape	Q'ty	Application	Part No.
Cosmetic Panel-L 	1		9358536018
Cosmetic Panel-R 	4		9358535011
Tapping screw (φ 4 x 10) 	2		301171164104
Installation template 	1	For positioning the indoor unit. For under ceiling type.	9359107002
Hanger bracket (left) 	1	For suspending the indoor unit from ceiling.	9358596005
Hanger bracket- (right) 	1		9358595008
Anchor bolt (M12) 	4		313806339400
Special nut 	4		
Spring washer 	4		301821112213
Wall bracket 	2	For suspending the indoor unit on the wall.	9358597002
Tapping screw (φ 4 x 20) 	6	For fixing the wall bracket.	301141164200
Coupler heat insulator (large) 	1	For indoor side pipe joint. (Large pipe)	9350716012
Coupler heat insulator (small) 	1	For indoor side pipe joint. (Small pipe)	313209328104
Nylon fastener (small) 	1	For fixing the drain hose.	312300787605
Drain hose 	1		9359242000
Insulation (drain hose) 	1	Adhesive type 70 x 230	9359225003
VT wire 	1	For fixing the drain hose L 280 mm	313806350303

REMOTE CONTROL

Name and Shape	Q'ty	Application	Part No.
Remote control unit 	1	Use for air conditioner operation (AR-JW1)	9371190013
Battery (penlight) 	2	For remote control unit	0600185534
Remote control unit holder 	1	For mounting the remote control unit	9305642014
Tapping screw (φ 3 x 12) 	2	For remote control unit holder installation	301141533125

OUTDOOR UNIT

Name and Shape	Part No.
Drain pipe 	9303029015
Drain cap 	313166024302
Adapter D (1/2" → 3/8") 12.7mm → 9.52mm 	9370244007

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