

INVERTER MULTI
AIR CONDITIONER
CASSETTE type

**SERVICE
MANUAL**



Models

Indoor unit

Outdoor unit

AUY12LBAB	┌ ├ └	AOY30LMAW4
AUY14LBAB		
AUY18LBAB		

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SPECIFICATIONS

INDOOR UNIT

TYPE	COOL & HEAT	
MODEL NAME	AUY12LBAB , AUY14LBAB	AUY18LBAB

ELECTRICAL DATA

POWER SOURCE	(V)	230	
FREQUENCY	(Hz)	50	
AIR CIRCULATION-Hi	(m³/hr)	550	600

FAN MOTOR

POWER SOURCE		(V)	230	
INDOOR UNIT	DISCRIMINATION		MFA-14GTCT	MFA-18GTBT
	HI-SPEED	(r.p.m.)	730	800
	MED-SPEED	(r.p.m.)	670	700
	LO-SPEED	(r.p.m.)	590	600

DIMENSIONS

INDOOR UNIT	H x W x D	(mm)	235 x 580 x 580 +70
GRILLE	H x W x D	(mm)	35 x 650 x 650

WEIGHT

INDOOR UNIT	NET / GROSS	(kg)	18 / 23
GRILLE	NET / GROSS	(kg)	2.2 / 4.3

OUTDOOR UNIT

TYPE		Cooling & Heating
MODEL NAME		AOY30LMAW4
COOLING CAPACITY	(kW)	8.0
HEATING CAPACITY	(kW)	9.6

ELECTRICAL SPECIFICATIONS

POWER SUPPLY (V)		(220) - 230 - (240)
FREQUENCY (Hz)		50
RUNNING CURRENT (A)	COOLING	9.7
	HEATING	10.5
INPUT (kW)	COOLING	2.22
	HEATING	2.40
EER (kW/kW)	COOLING	3.60
	HEATING	4.00
AIR CIRCULATION - Hi (m³/hr)		3,300

COMPRESSOR

TYPE		Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary
DISCRIMINATION		TNB220FPBM9
REFRIGERANT	R410 (g)	3,300

FAN MOTOR

DISCRIMINATION		MFE-60PO
HI-SPEED (COOL / HEAT)	(r.p.m.)	820 / 780

DIMENSIONS	H x W x D (mm)	830 x 900 x 330
WEIGHT	NET / GROSS (kg)	68 / 78

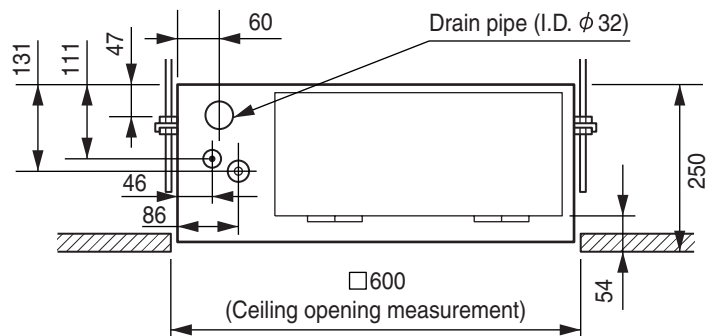
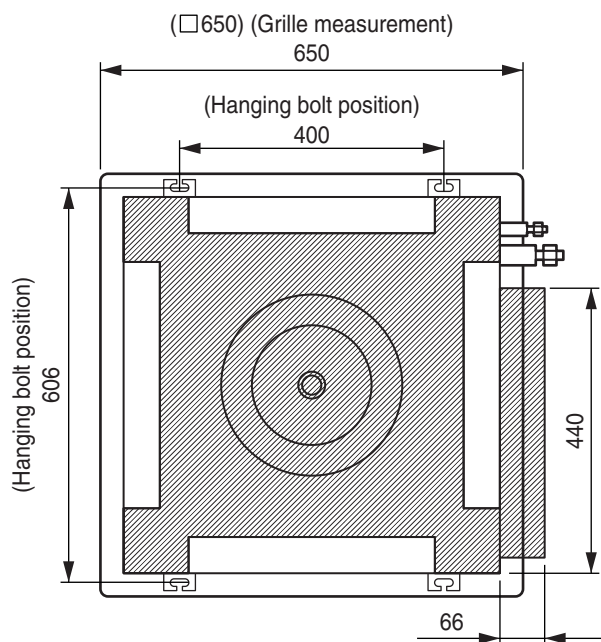
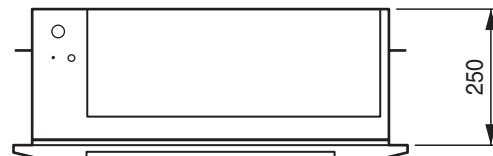
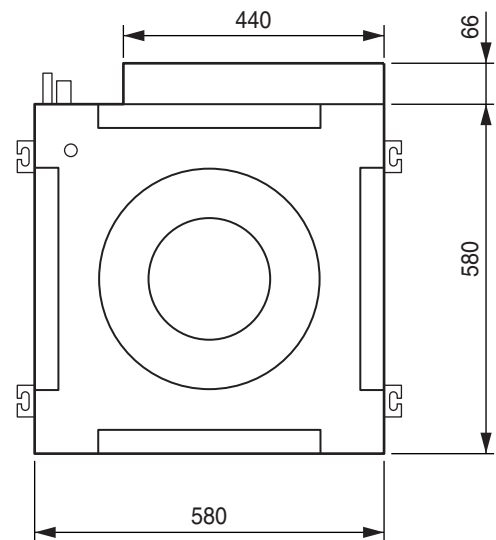
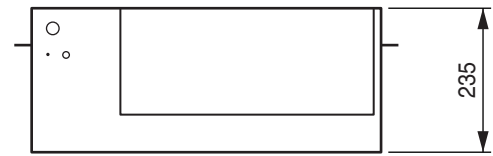
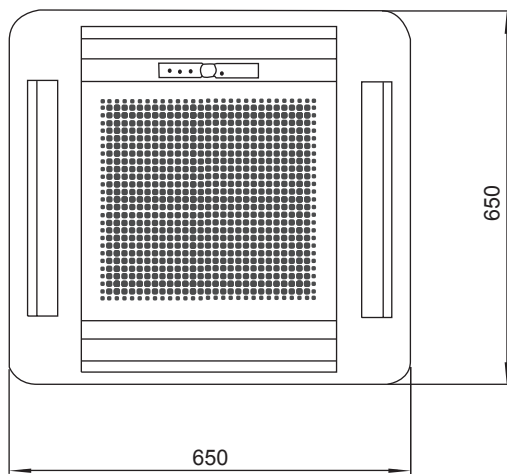
REFRIGERANT CHARGE (R410A)

FULL CHARGE AMOUNT	Total Pipe Length	50.0 m	3,300 g
		60.0 m	3,550 g
		70.0 m	3,800 g
ADDITIONAL CHARGE			25 g / m
CHARGELESS			50 m
MAX PIPE LENGTH (each unit)			25 m
MAX PIPE LENGTH (total)			70 m
MAX ELEVATION (between indoor units)			10 m
MAX ELEVATION (between indoor and outdoor units)			10 m
MIN. PIPE LENGTH (each unit)			5 m

OUTLINE AND DIMENSIONS

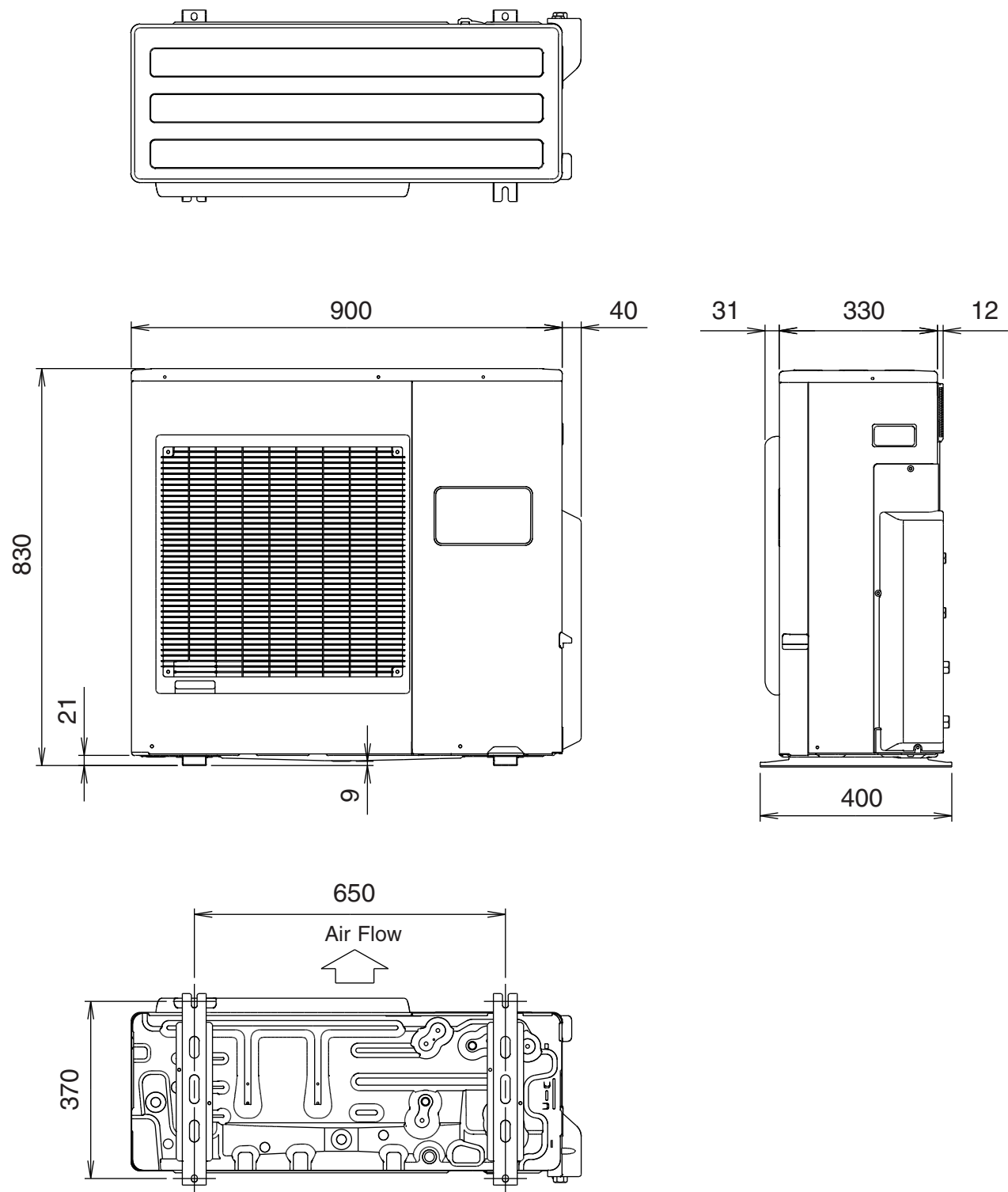
INDOOR UNIT

(unit : mm)



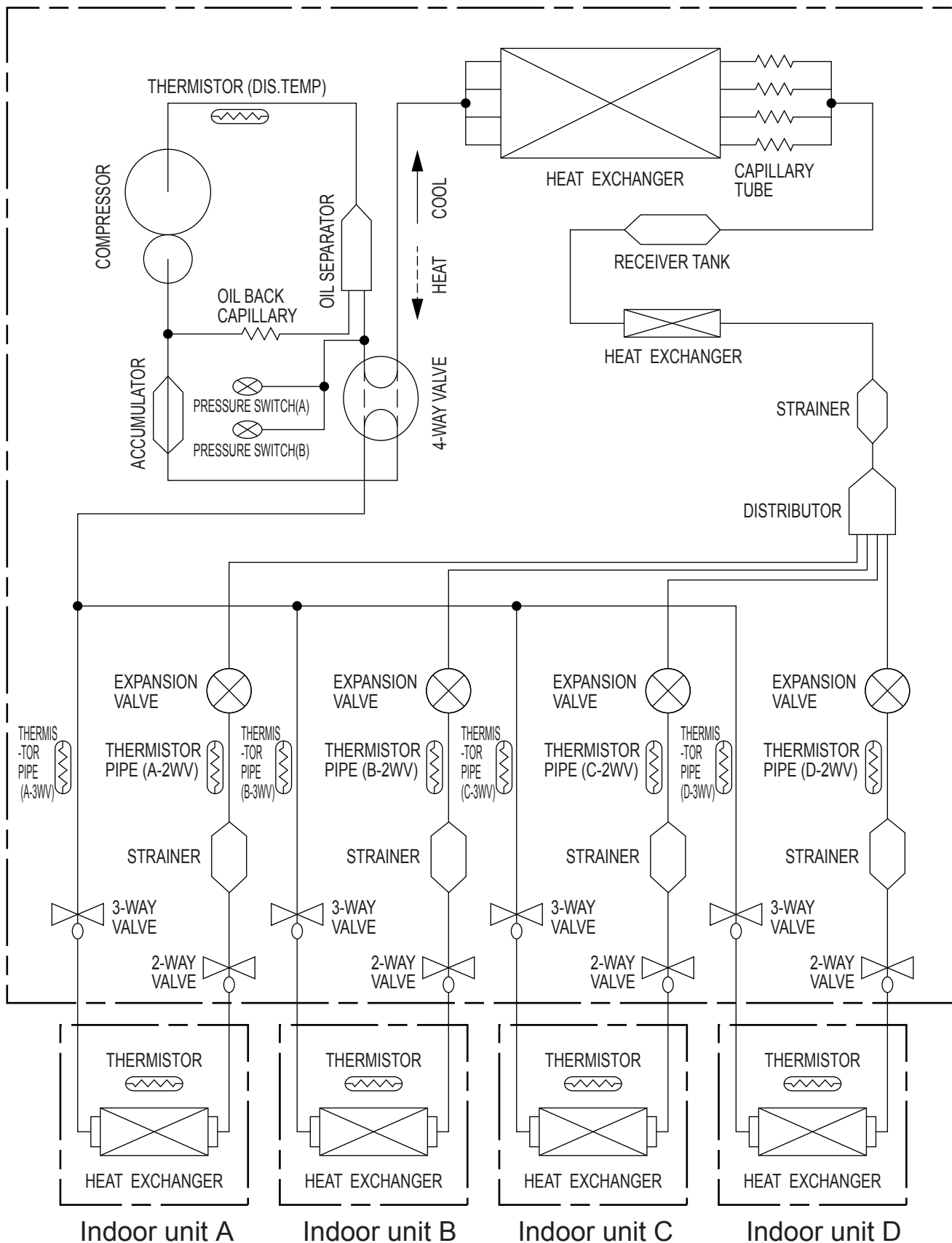
OUTDOOR UNIT (Unit : mm)

Model : AOY30LMAW4



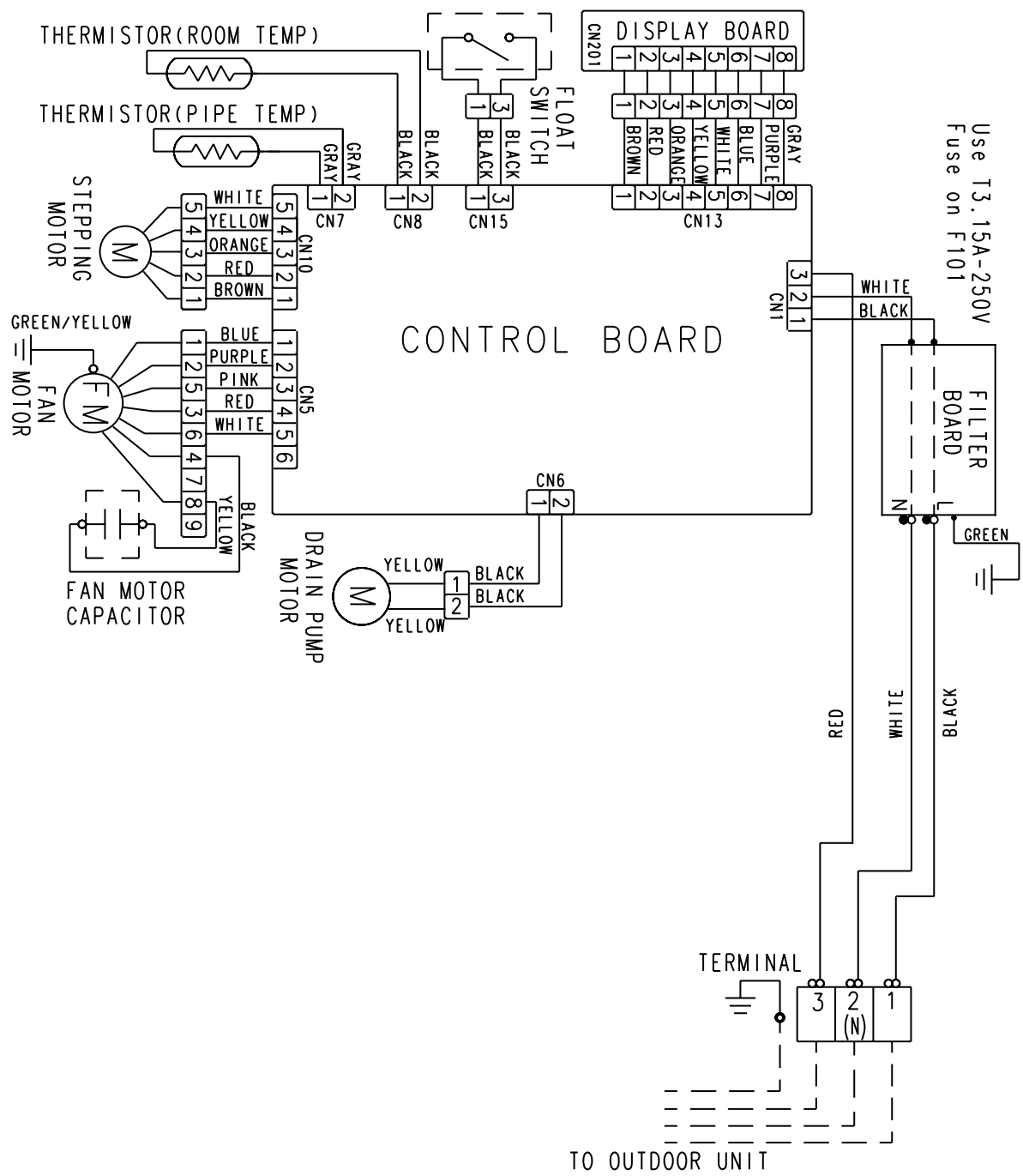
REFRIGERANT SYSTEM DIAGRAM

Outdoor unit

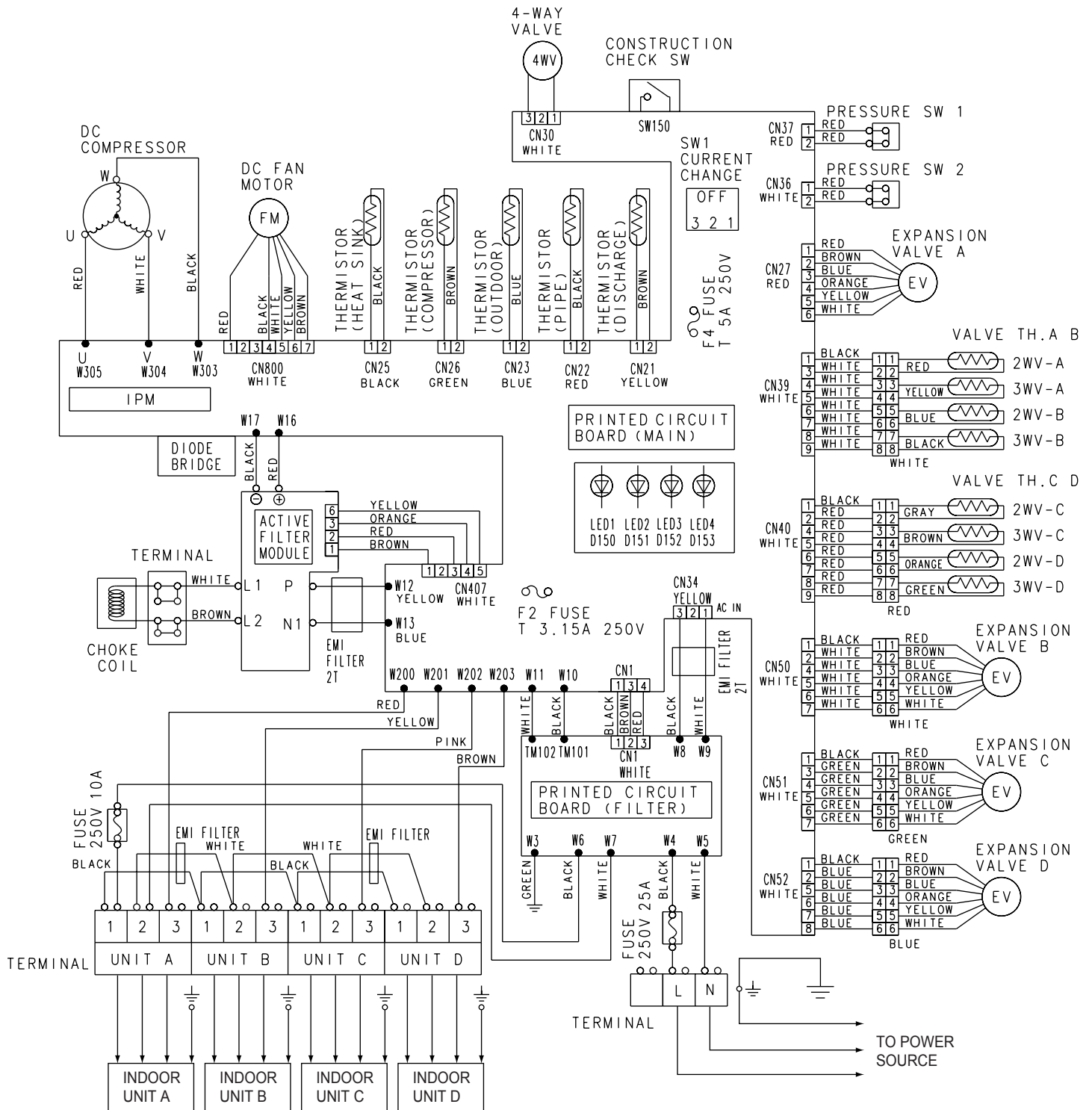


CIRCUIT DIAGRAM

INDOOR UNITS



Model : AOY30LMAW4

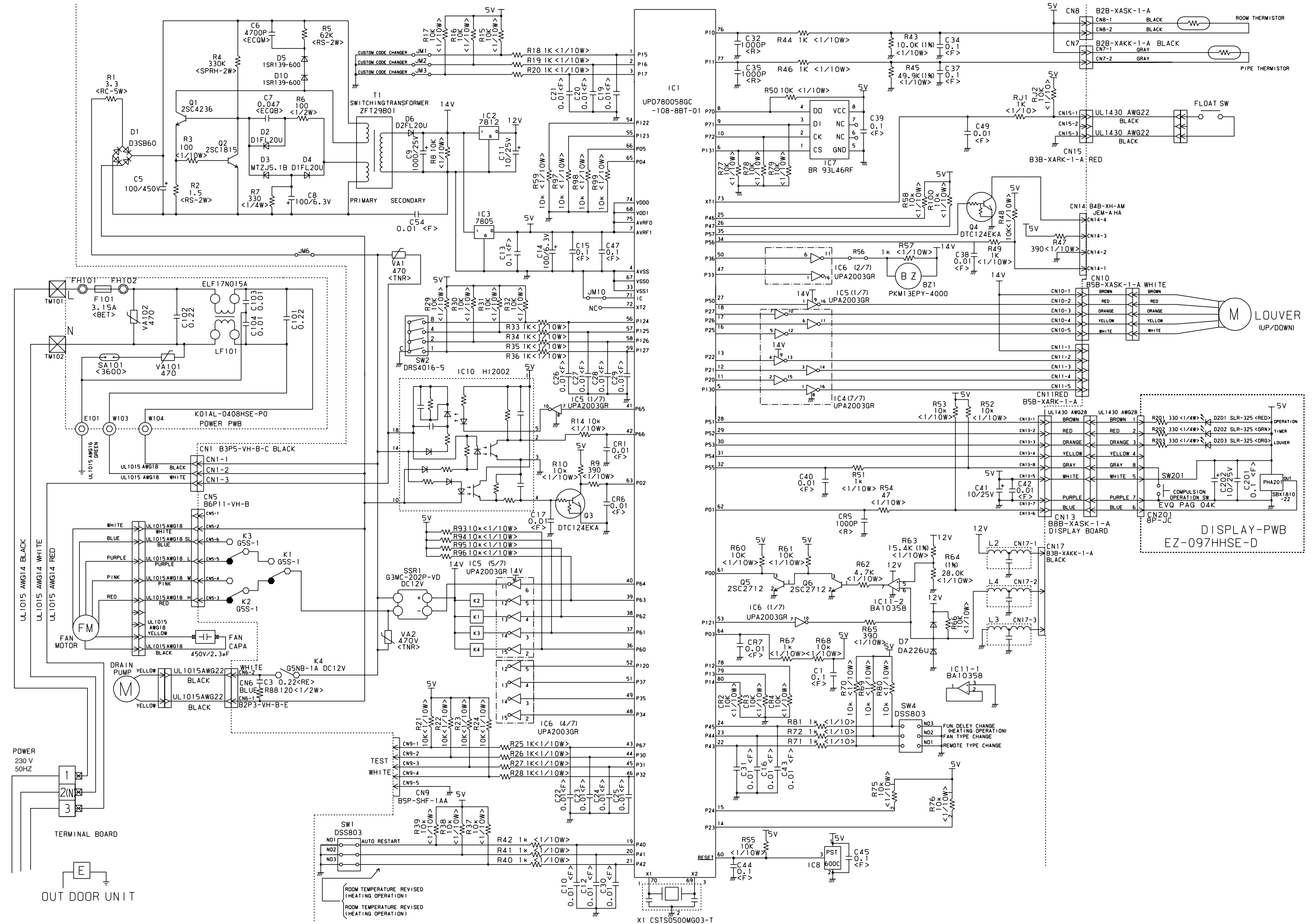


CONTROLLER PCB ASSY (MAIN PCB)

AUY12LBAB : K01AL-040THSE-C1

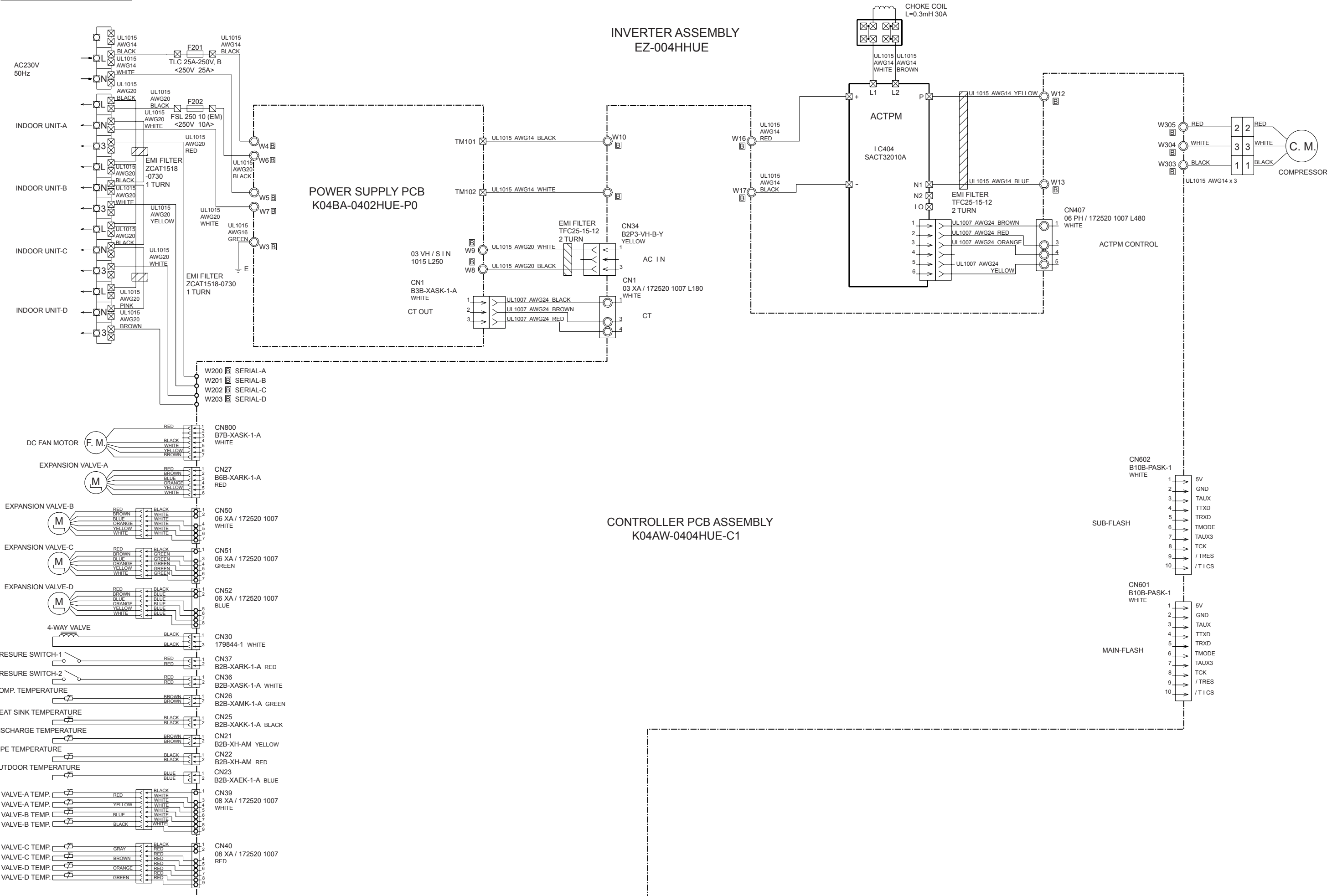
AUY14LBAB : K01AL-040WHSE-C1

AUY18LBAB : K01AL-040EHSE-C1



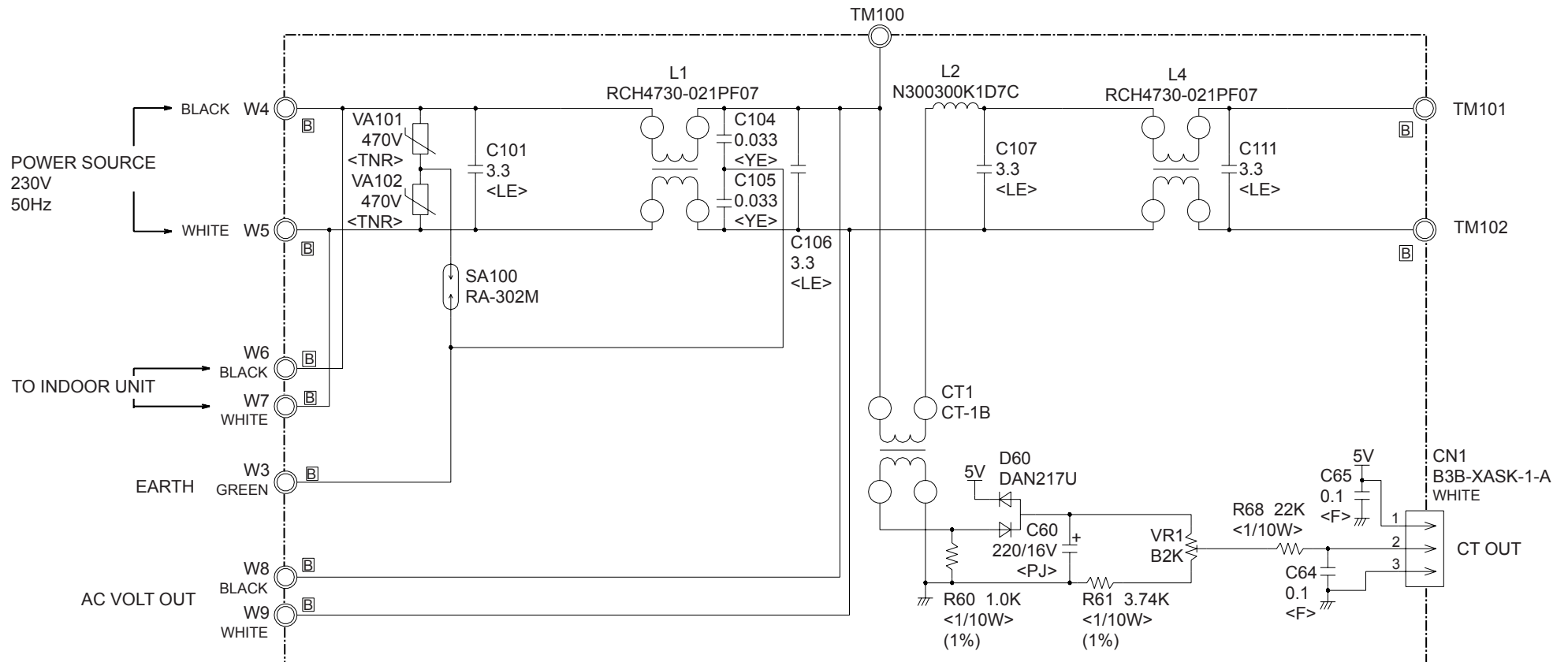
OUTDOOR PCB CIRCUIT DIAGRAM

Model : AOY30LMAW4





POWER SUPPLY PCB ASSEMBLY
K04BA-0400HUE-P0



ERROR CONTENTS

○ : Fast flashing

● : Slow flashing

— : Off

Error can be known by checking the three lamps on indoor unit.

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 LEDS

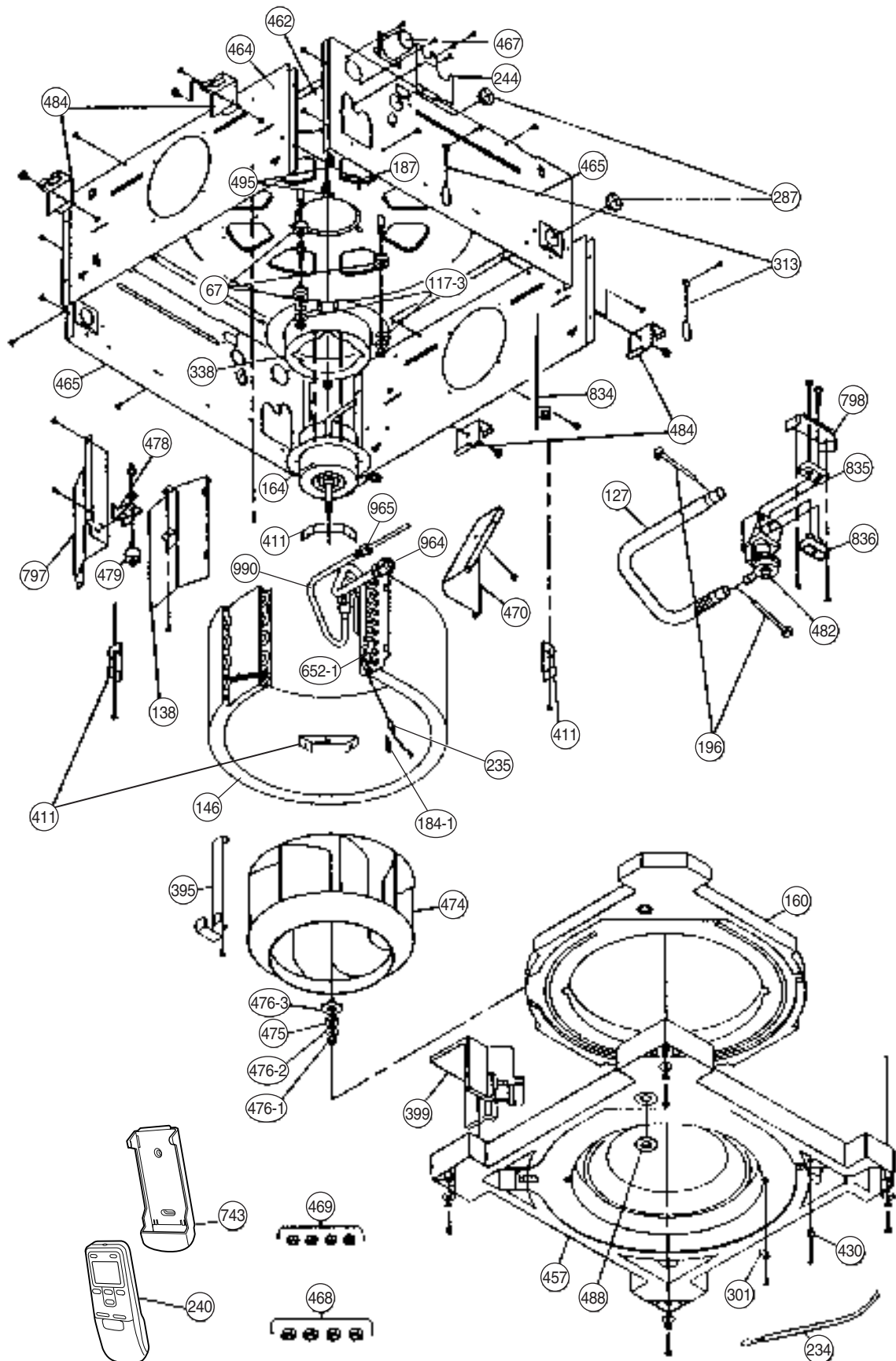
● : Slow flashing — : Off

	LED A	LED B	LED C	LED D
Communication error (indoor unit A to outdoor unit)	● 1 time	—	—	—
Communication error (indoor unit B to outdoor unit)	—	● 1 time	—	—
Communication error (indoor unit C to outdoor unit)	—	—	● 1 time	—
Communication error (indoor unit D to outdoor unit)	—	—	—	● 1 time
Discharge pipe temperature sensor	● 2 times	—	—	—
Outdoor heat exchanger temperature sensor	● 3 times	—	—	—
Outdoor temperature sensor	● 4 times	—	—	—
Outdoor 2way valve(A) temperature sensor	● 5 times	—	—	—
Outdoor 2way valve(B) temperature sensor	—	● 5 times	—	—
Outdoor 2way valve(C) temperature sensor	—	—	● 5 times	—
Outdoor 2way valve(D) temperature sensor	—	—	—	● 5 times
Outdoor 3way valve(A) temperature sensor	● 6 times	—	—	—
Outdoor 3way valve(B) temperature sensor	—	● 6 times	—	—
Outdoor 3way valve(C) temperature sensor	—	—	● 6 times	—
Outdoor 3way valve(D) temperature sensor	—	—	—	● 6 times
Compressor temperature sensor	● 7 times	—	—	—
Heatsink temperature sensor	● 8 times	—	—	—
Pressure switch A abnormal	● 9 times	—	—	—
Pressure switch B abnormal	● 10 times	—	—	—
Indoor unit connection capacity error	● 11 times	—	—	—
IPM error	● 12 times	—	—	—
Compressor loter location error	● 13 times	—	—	—
Compressor can not start to operate	● 14 times	—	—	—
Outdoor fan (upper) motor error	● 15 times	—	—	—
Outdoor fan (lower) motor error	● 16 times	—	—	—
Microcomputer error	● 17 times	—	—	—

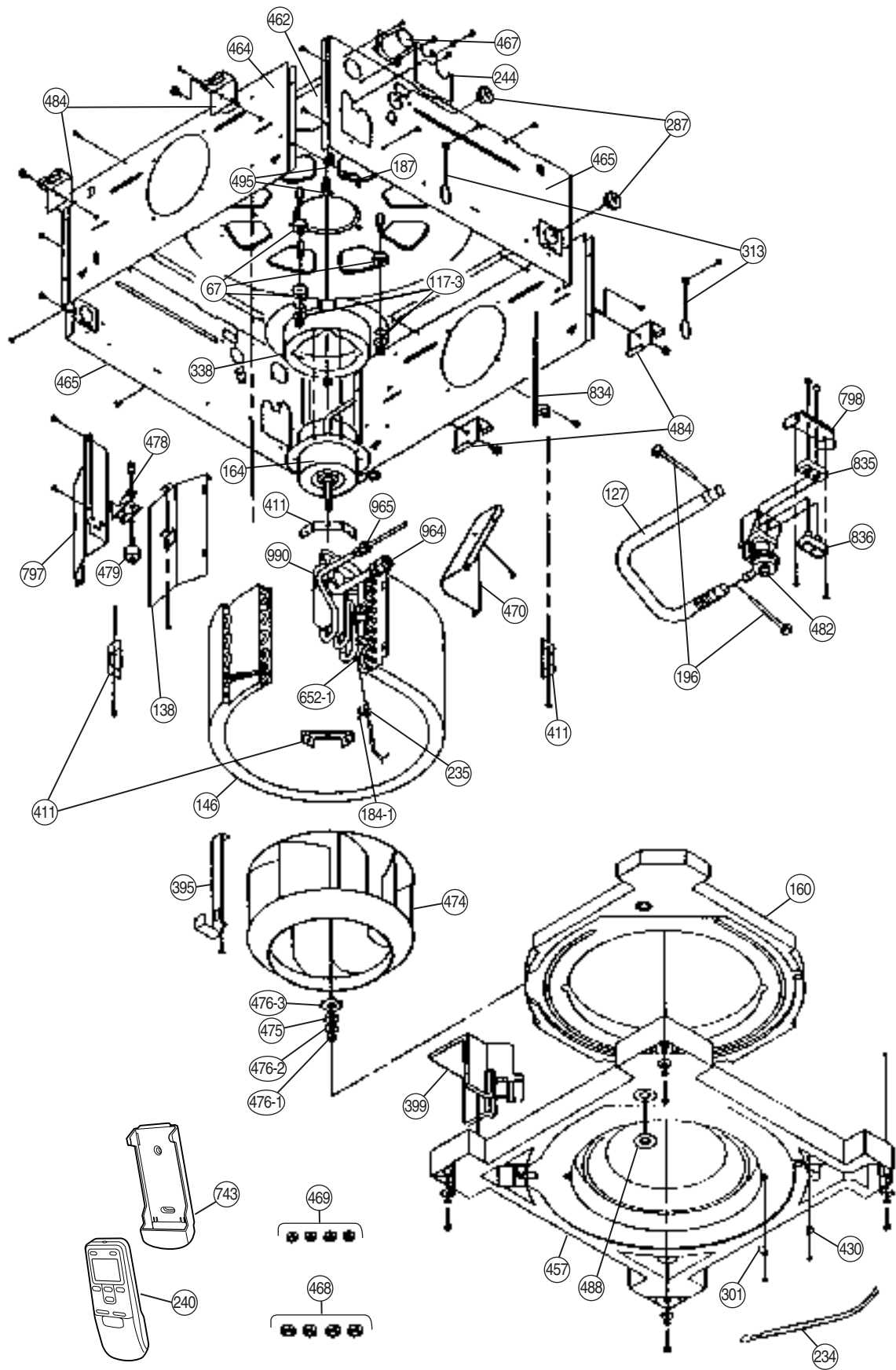
DISASSEMBLY ILLUSTRATION

INDOOR UNITS

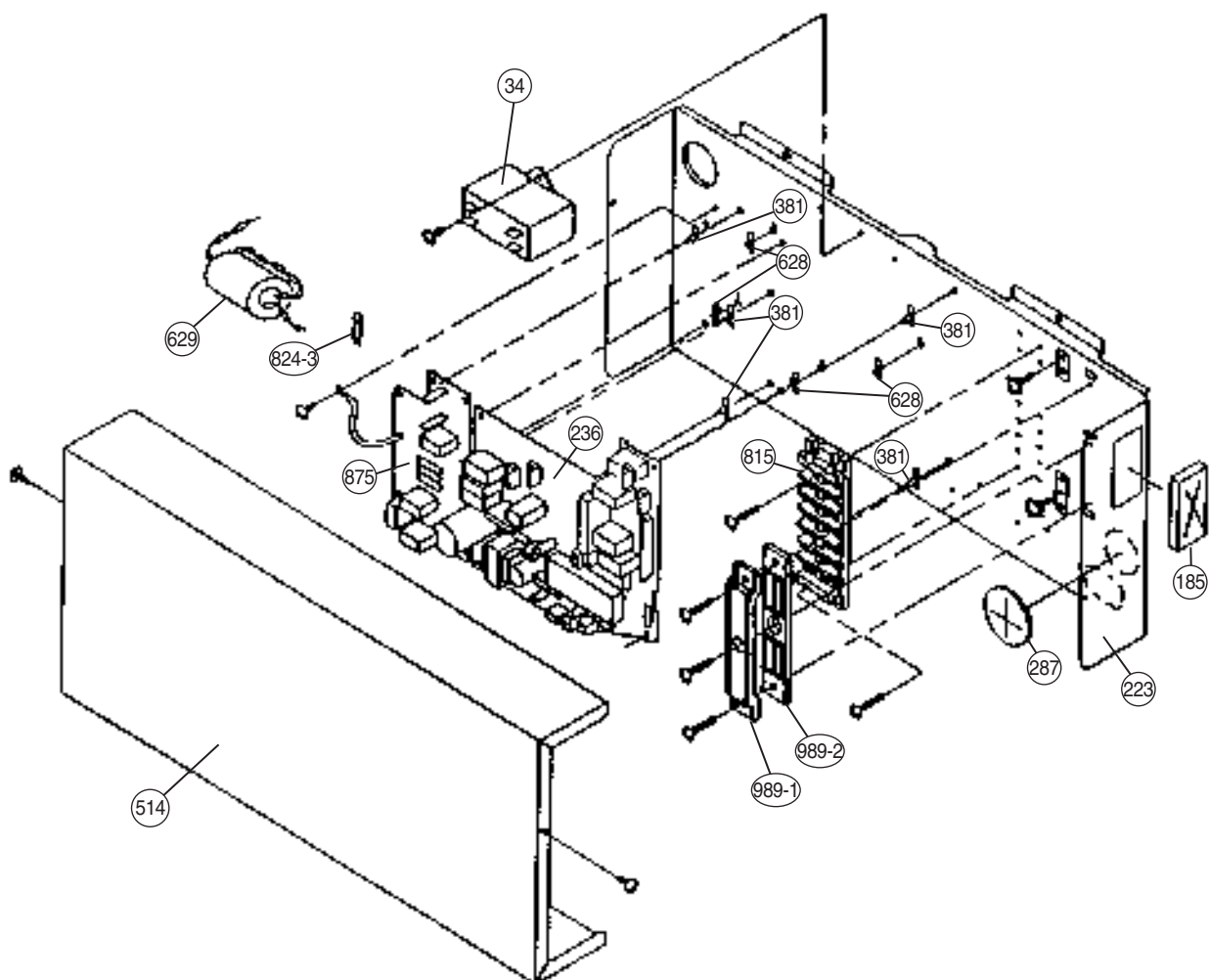
Models :
AUY12LBAB, AUY14LBAB

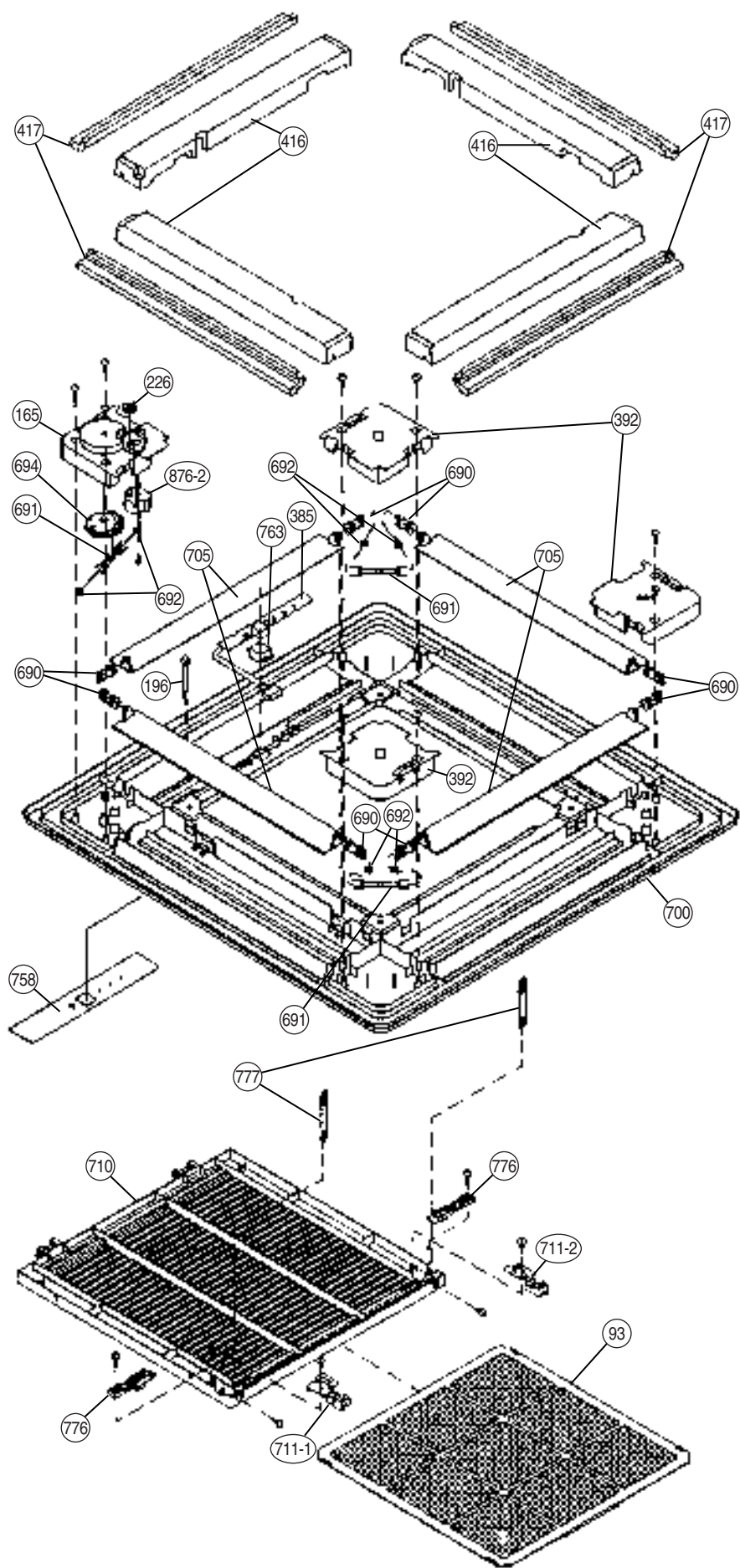


Model : AUY18LBAB



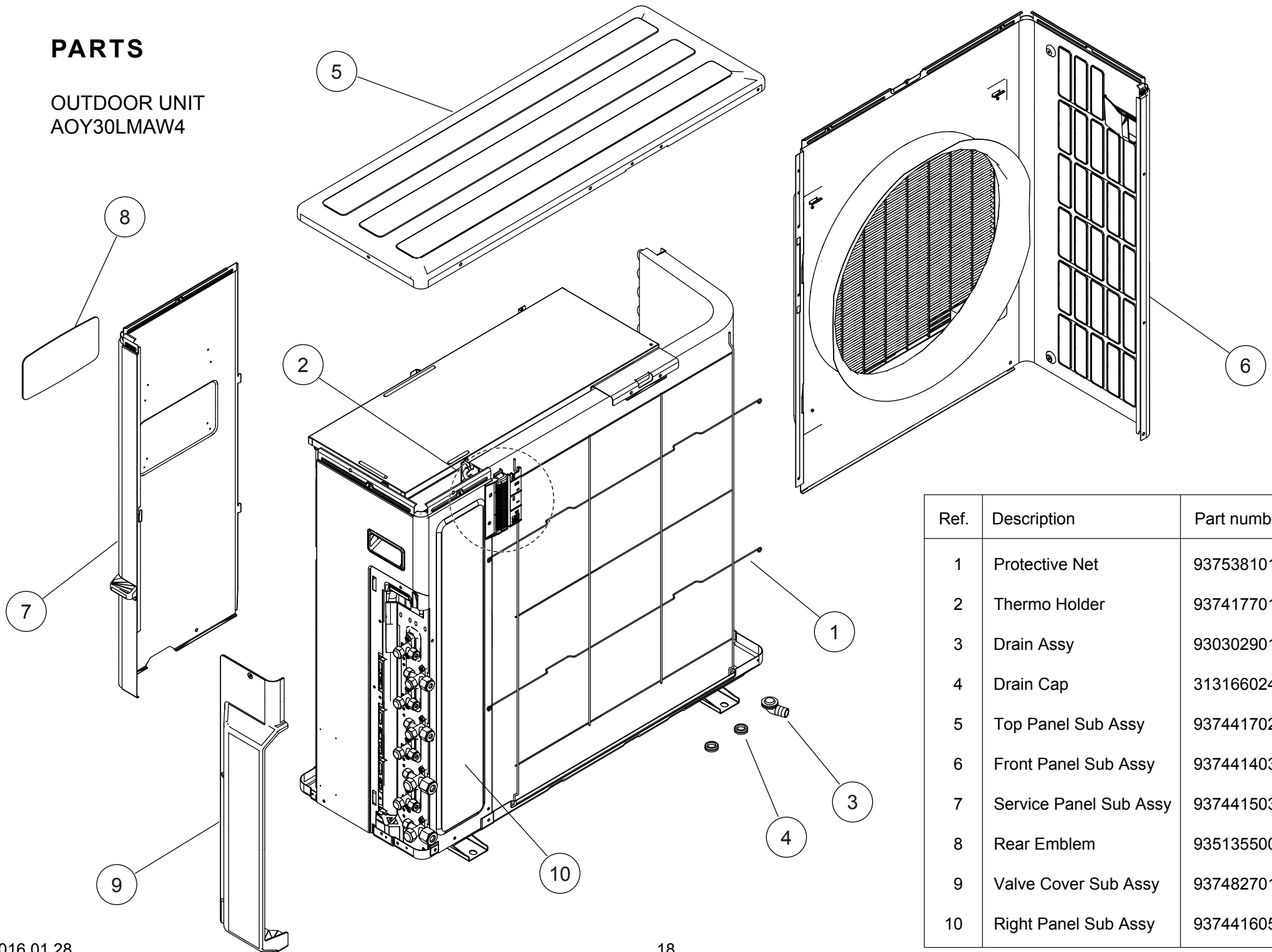
INDOOR UNIT





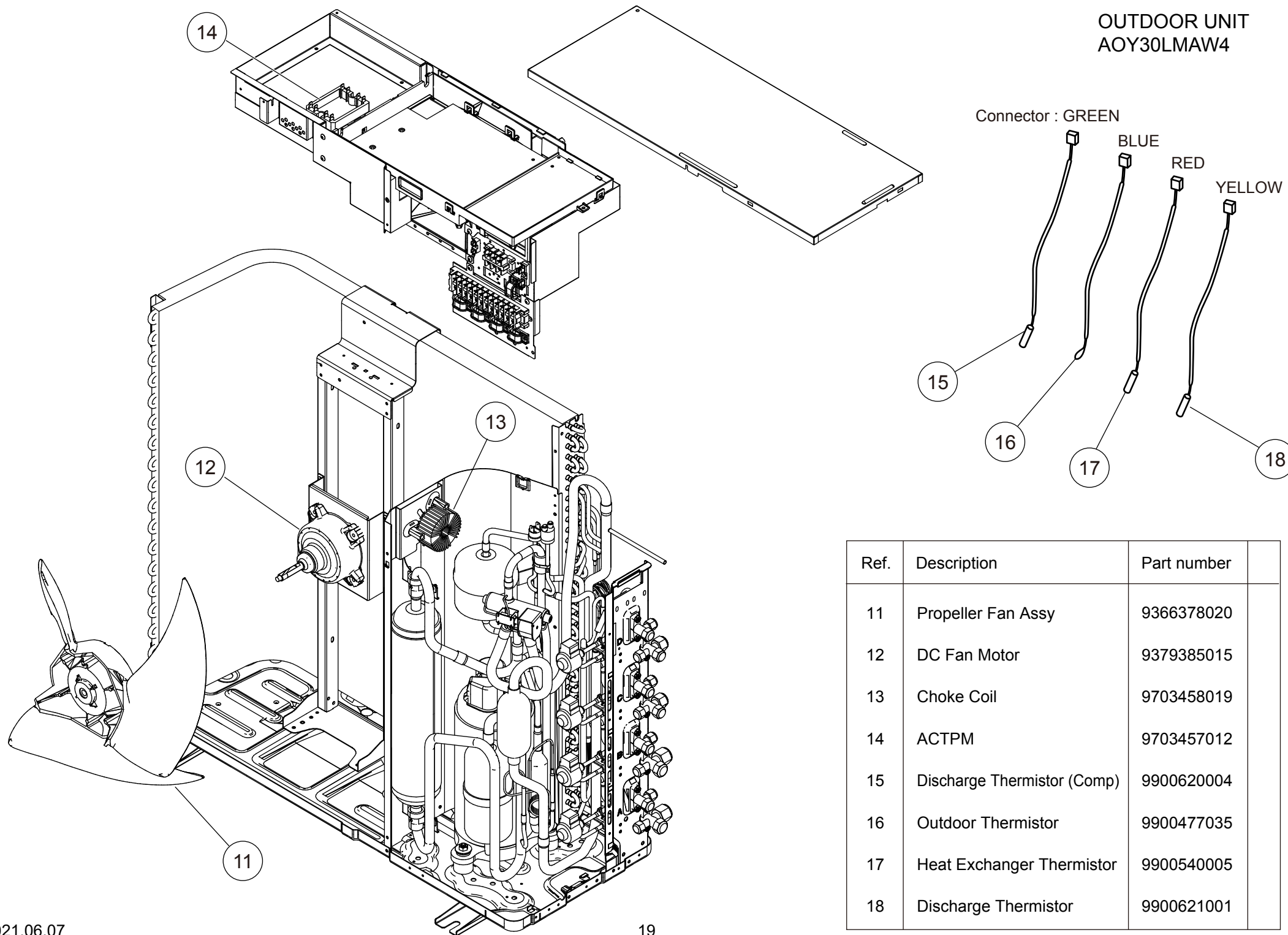
PARTS

OUTDOOR UNIT
AOY30LMAW4



Ref.	Description	Part number	
1	Protective Net	9375381011	
2	Thermo Holder	9374177011	
3	Drain Assy	9303029015	
4	Drain Cap	313166024302	
5	Top Panel Sub Assy	9374417025	
6	Front Panel Sub Assy	9374414031	
7	Service Panel Sub Assy	9374415038	
8	Rear Emblem	9351355005	
9	Valve Cover Sub Assy	9374827015	
10	Right Panel Sub Assy	9374416059	

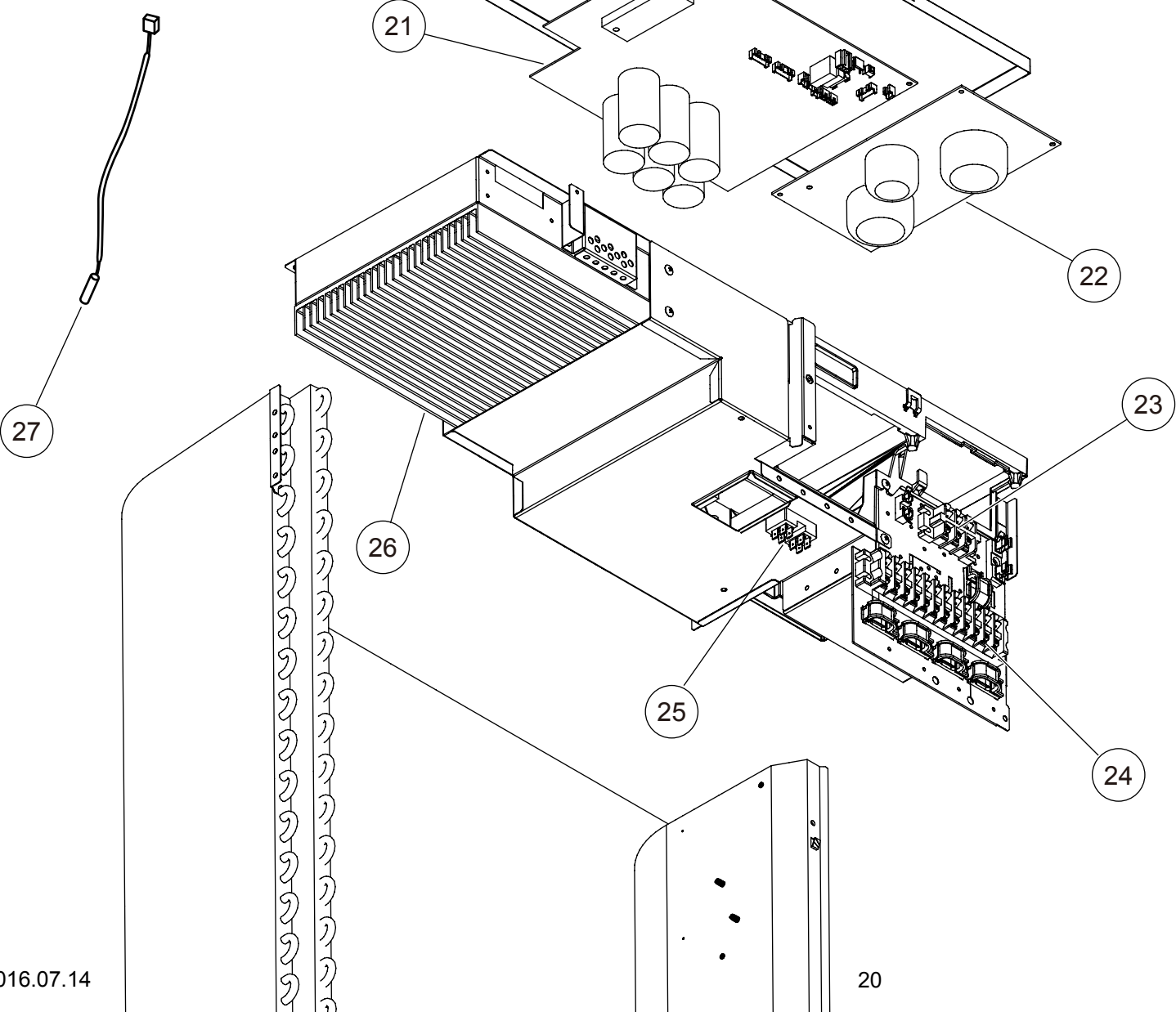
OUTDOOR UNIT AOY30LMAW4



Ref.	Description	Part number	
11	Propeller Fan Assy	9366378020	
12	DC Fan Motor	9379385015	
13	Choke Coil	9703458019	
14	ACTPM	9703457012	
15	Discharge Thermistor (Comp)	9900620004	
16	Outdoor Thermistor	9900477035	
17	Heat Exchanger Thermistor	9900540005	
18	Discharge Thermistor	9900621001	

Inverter Box Cover

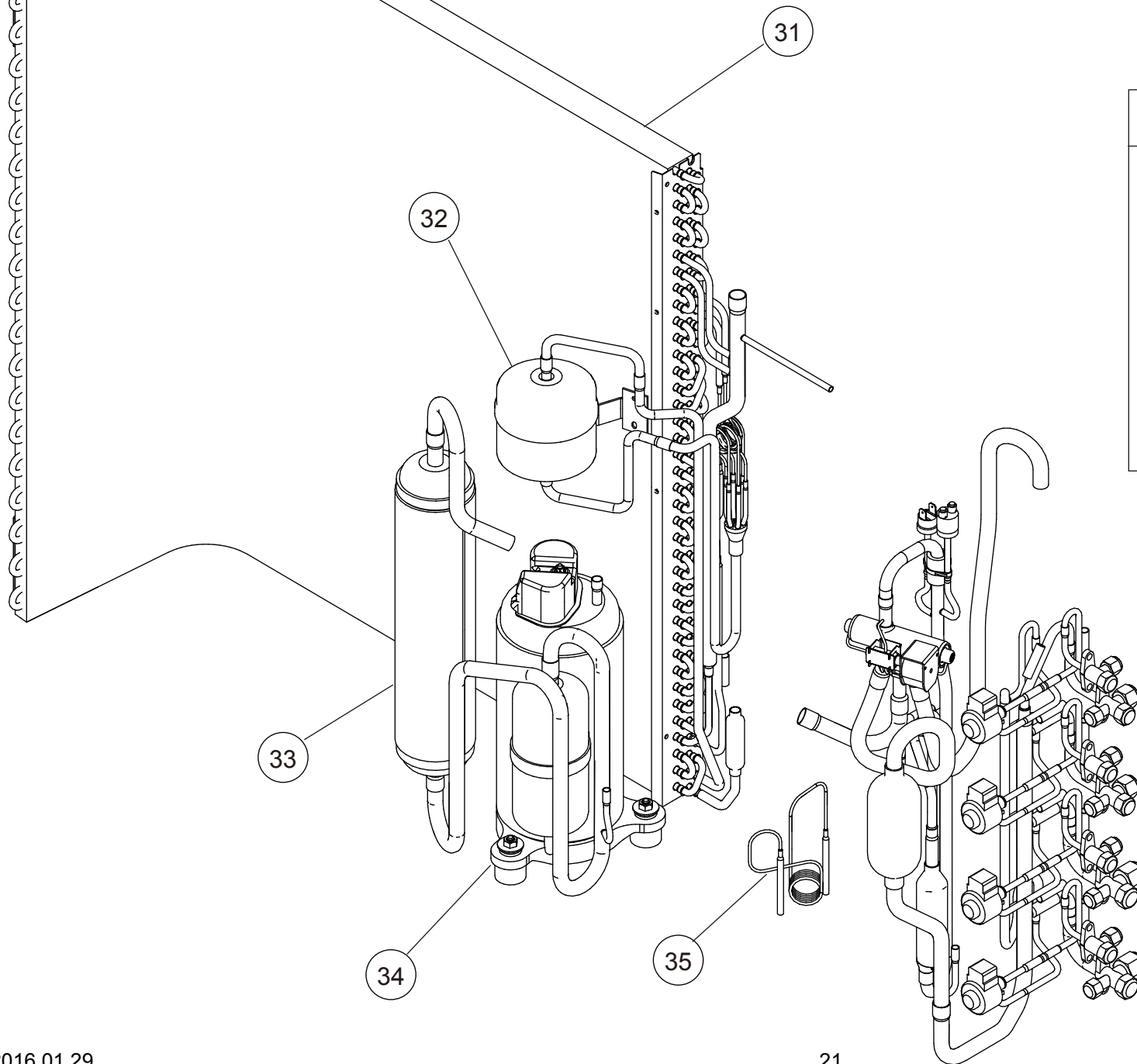
Connector : BLACK



OUTDOOR UNIT
AOY30LMAW4
Inverter assy

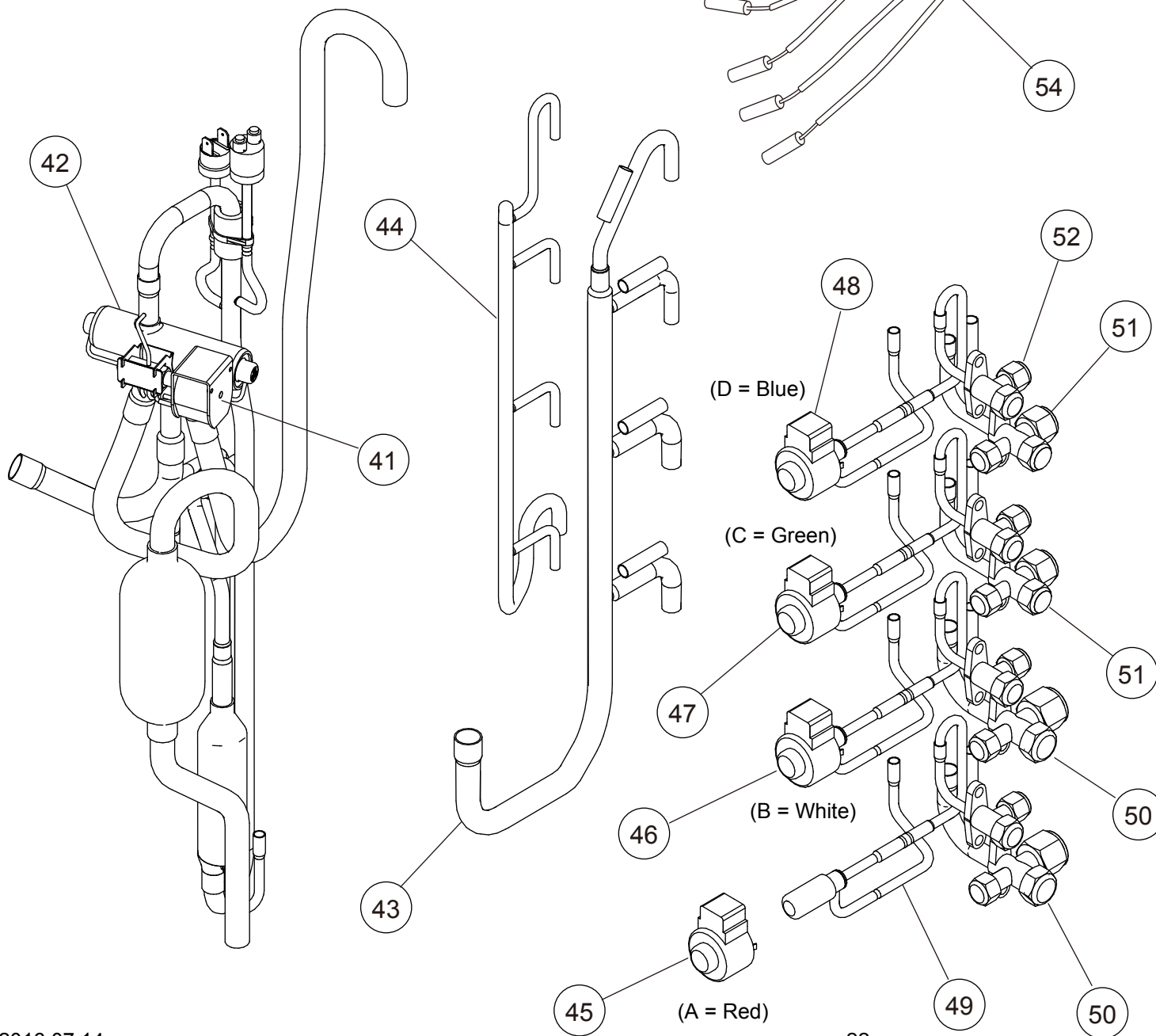
Ref.	Description	Part number
21	Controller PCB	9709907030
22	Power Supply PCB	9709893012
23	Terminal 3P	9900203016
24	Terminal 12P	9358660164
25	Terminal	9900433017
26	Heat Sink A	9374607013
27	Heat Sink Thermistor	9900311018

OUTDOOR UNIT AOY30LMAW4

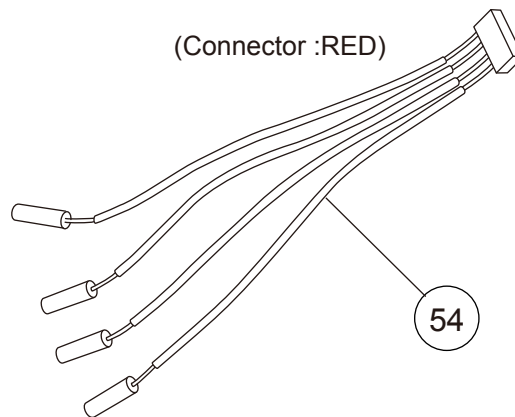


Ref.	Description	Part number	
31	Condenser A Sub Assy	9374420087	
32	Receiver Tank Sub Assy	9373426028	
33	Accumulator Sub Assy	9374426072	
34	Compressor Sub Assy	9374423194	
35	Capillary Assy	9372197370	

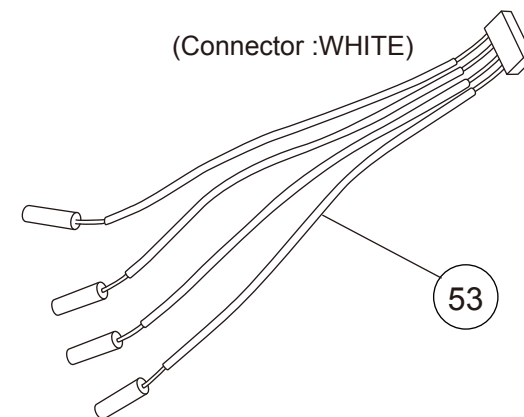
OUTDOOR UNIT AOY30LMAW4



(Connector :RED)



(Connector :WHITE)



Ref.	Description	Part number
41	Solenoid	9900165055
42	4-Way Valve Assy	9374425204
43	Joint Pipe (Valve) Assy	9374840151
44	Condensing Pipe C Assy	9375241032
45	Expansion Valve Coil	9970101069
46	Expansion Valve Coil	9970101038
47	Expansion Valve Coil	9970101045
48	Expansion Valve Coil	9970101052
49	Expansion Valve Assy	9370947151
50	3-Way Valve Assy (1/2")	9378282018
51	3-Way Valve Assy (3/8")	9377958013
52	2-Way Valve Assy	9375614027
53	Pipe Thermistor (White)	9900543020
54	Pipe Thermistor (Red)	9900543013

PARTS LIST

INDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		AUY12LBAB	AUY14LBAB	
34	Capacitor (Fan Motor)	9900284015	9900284015	
67	Rubber	9361279001	9361279001	
117-3	Special Washer M6	313306391007	313306391007	
127	Drain Hose	9359659013	9359659013	
138	Separate Wall-A	9359647003	9359647003	
146	Evaporator Assy-IN	9373214014	9373214014	
160	Drain Pan	9359651000	9359651000	
164	Fan Motor Assy-IN	9601040064	9601040064	
184-1	Thermo. Spring-A	313728262708	313728262708	
185	Rubber Bushing	313005066051	313005066051	
187	Clamp No. 1219	313361271706	313361271706	
196	Clamp SKB-150	313035356905	313035356905	
223	Control Box	9359661016	9359661016	
234	Thermistor Assy-Room	9703299032	9703299032	
235	Thermistor Assy-Pipe	9703297014	9703297014	
236	Controller PCB Assy	9704557933	9704557940	
240	Remote Control Unit	9371190037	9371190037	
244	Pipe Cover	9359646006	9359646006	
287	Cap (Power)	9352173011	9352173011	
301	Clamp NK-2N	313985355201	313985355201	
313	Hooking Wire	9359983002	9359983002	
338	Motor Fixture	9359656005	9359656005	
381	Locking Spacer	313209391506	313209391506	
395	Supporter (Eva.)	9373179016	9373179016	
399	Air Duct	9359660002	9359660002	
411	Supporter-A	9359655008	9359655008	
430	Clamp NK-7N	313095365602	313095365602	
457	Drain Pan Support	9359652007	9359652007	
462	Top Cover Plate	9359642015	9359642015	
464	Body-A	9359643005	9359643005	
465	Body-B	9359645009	9359645009	
467	Drain Port	313005415658	313005415658	
468	Special Nut-A (Large)	313005446653	313005446653	
469	Special Nut-B (Small)	313005446759	313005446759	
470	Separate Wall-B	9359648000	9359648000	
474	Turbo Fan	9359658009	9359658009	
475	Turbo Fan Rubber	9366013006	9366013006	
476-1	Special Nut M8	313005360755	313005360755	
476-2	Special Washer	301801185049	301801185049	
476-3	Special Washer	9359954002	9359954002	
478	Sensor M. Bracket	9359654001	9359654001	
479	Float Switch	313005416154	313005416154	
482	Pump Unit	9359974000	9359974000	
484	Hanger Metal	9359644002	9359644002	
488	Drain Pan Plug	9359653004	9359653004	
495	Clamp No. 2U46	9352715006	9352715006	
514	Control Box Cover	9359662006	9359662006	
628	Locking Spacer-B	313005446558	313005446558	
629	EMI Filter	0400197119	0400197119	
652-1	Therm. Holder Pipe	313806262805	313806262805	
743	Remote Control Holder Case	9305642014	9305642014	
797	Separate Wall-C	9359649007	9359649007	
798	Pump Hook Bracket	9359650003	9359650003	
815	Terminal-3P	9900203016	9900203016	
824-3	Fuse	0600222512	0600222512	
834	Wire Cover	9359878001	9359878001	
835	Cushion-A (For Pump)	9352211003	9352211003	
836	Cushion-B (For Pump)	9356084016	9356084016	
875	Filter PCB Assy	9704561213	9704561213	
964	Flare Nut-1/2	----	9373267010	
965	Flare Nut-B	9351062019	9351062019	
989-1	Cord Clamp-A	9359822011	9359822011	
989-2	Cord Clamp-B	9359823018	9359823018	
990	Distributor Assy	9373034049	9373034049	

INDOOR UNIT

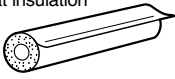
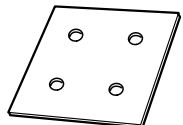
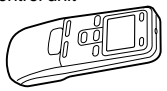
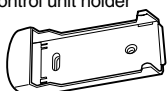
Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
		AUY18LBAB				AUY18LBAB	
34	Capacitor (Fan Motor)	9900270179		465	Body-B	9359645009	
67	Rubber	9361279001		467	Drain Port	313005415658	
117-3	Special Washer M6	313306391007		468	Special Nut-A (Large)	313005446653	
127	Drain Hose	9359659013		469	Special Nut-B (Small)	313005446759	
138	Separate Wall-A	9359647003		470	Separate Wall-B	9359648000	
146	Evaporator Assy-IN	9373214014		474	Turbo Fan	9359658009	
160	Drain Pan	9359651000		475	Turbo Fan Rubber	9366013006	
164	Fan Motor Assy-IN	9601040057		476-1	Special Nut M8	313005360755	
184-1	Thermo. Spring-A	313728262708		476-2	Special Washer	301801185049	
185	Rubber Bushing	313005066051		476-3	Special Washer	9359954002	
187	Clamp No. 1219	313361271706		478	Sensor M. Bracket	9359654001	
196	Clamp SKB-150	313035356905		479	Float Switch	313005416154	
223	Control Box	9359661016		482	Pump Unit	9359974000	
234	Thermistor Assy-Room	9703299032		484	Hanger Metal	9359644002	
235	Thermistor Assy-Pipe	9703297014		488	Drain Pan Plug	9359653004	
236	Controller PCB Assy	9704557797		495	Clamp No. 2U46	9352715006	
240	Remote Control Unit	9371190037		514	Control Box Cover	9359662006	
244	Pipe Cover	9359646006		628	Locking Spacer-B	313005446558	
287	Cap (Power)	9352173011		629	EMI Filter	0400197119	
301	Clamp NK-2N	313985355201		652-1	Therm. Holder Pipe	313806262805	
313	Hooking Wire	9359983002		743	Remote Control Holder Case	9305642014	
338	Motor Fixture	9359656005		797	Separate Wall-C	9359649007	
381	Locking Spacer	313209391506		798	Pump Hook Bracket	9359650003	
395	Supporter (Eva.)	9373179016		815	Terminal-3P	9900203016	
399	Air Duct	9359660002		824-3	Fuse	0600222512	
411	Supporter-A	9359655008		834	Wire Cover	9359878001	
430	Clamp NK-7N	313095365602		835	Cushion-A (for Pump)	9352211003	
457	Drain Pan Support	9359652007		836	Cushion-B (for Pump)	9356084016	
462	Top Cover Plate	9359642015		875	Filter PCB Assy	9704561213	
464	Body-A	9359643005		964	Flare Nut-1/2	9373267010	
				965	Flare Nut-B	9351062019	
				989-1	Cord Clamp-A	9359822011	
				989-2	Cord Clamp-B	9359823018	
				990	Distributor Assy	9373034117	

GRILLE ASSY (UTG-UDYD-W)

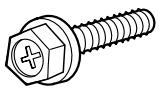
Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
93	Filter	9359632009		700	Panel	9359619017	
165	Motor Cover	9359623014		705	Louver	9359624011	
196	Clamp SKB-150	313035356905		710	Intake Grille	9370126006	
226	Motor Gear	9359629009		711-1	Filter Clamp-A	9359634003	
385	Indicator PCB Assy	9702224011		711-2	Filter Clamp-B	9359635000	
392	Cover-A	9359622017		758	Decoration Plate-A (UTG-UDYD-W)	9360039019	
416	Insulation (Panel)-A	9359620006		763	Receiver Cover	9359630005	
417	Insulation (Panel)-B	9359621003		776	Grille Stopper	9359633013	
690	Joint-A	9359626008		777	Grille Hook	9359761006	
691	Joint-B	9359627005		876-2	Step Motor-V	9360307019	
692	Joint Shaft	9359625001					
694	Cam Gear	9359628002					

STANDARD ACCESSORIES

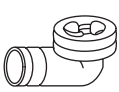
INDOOR UNIT ACCESSORIES

Name and Shape	Application	Part No.
Coupler heat insulation 	For indoor side pipe joint	9350716029
		9352766015
Special nut A (large flange) 	For installing indoor unit	313005446653
Special nut B (small flange) 	For installing indoor unit	313005446759
Template 	For ceiling hole cutting	9360256003
Remote control unit 	Use for air conditioner operation	9371190037
Battery (penlight) 	For remote control unit	0600185534
Remote control unit holder 	For mounting the remote control unit	9305642014
Tapping screw (φ3 x 12) 	For remote control unit holder installation	301141533125

GRILLE ASSY ACCESSORIES

Name and Shape	Application	Part No.
Bolt 	For opening the refrigerant valve on the outdoor unit	0700139116
Washer 	For mounting grille	301801155020
Blower cover insulation 	For discharged air	9360047007

OUTDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application	Name and Shape	Q'ty	Application
Drain pipe 	1	For outdoor unit drain piping work (May not be supplied, depending on the model.)	Adapter E (1/4"→3/8") 6.35mm → 9.52mm 	1	For connecting a pipe with different diameter to the outdoor unit.
Drain cap 	2		Adapter G (1/2"→5/8") 12.7mm → 15.88mm 	1	
Putty 	1	For filling in a gap at the entrance of connection cords.	Adapter D (1/2"→3/8") 12.7mm → 9.52mm 	2	

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