



# MULTI AIR CONDITIONER WALL MOUNTED CASSETTE type

# SERVICE MANUAL



## Models

Indoor unit

Outdoor unit

ASH12FMBD

AOH20FSBV2

ASH7FMBD

AUH12FMAB

AOH20FSBV2

ASH7FMBD

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# SPECIFICATIONS

## ELECTRICAL DATA

TYPE	COOL		
INDOOR UNIT	ASH12FMBD	ASH7FMBD	AUH12FMAB
OUTDOOR UNIT	AOH20FSBV2		
COOLING CAPACITY	3.50 kW	2.40 kW	3.50 kW
POWER SOURCE	230 V		
FREQUENCY	50 Hz		
RUNNING CURRENT	5.9 A	3.9 A	5.9 A
INPUT WATTS	1.32 kW	0.85 kW	1.32 kW
E.E.R.	2.65 kW/kW	2.82 kW/kW	2.65 kW/kW
MOISTURE REMOVAL	1.3 L/hr	0.8 L/hr	1.3 L/hr
AIR CIRCULATION-High	520 m <sup>3</sup> /hr	450 m <sup>3</sup> /hr	550 m <sup>3</sup> /hr

## ELECTRICAL DATA (Combination)

TYPE	COOL	
INDOOR UNIT	ASH12FMBD + ASH7FMBD	AUH12FMAB + ASH7FMBD
OUTDOOR UNIT	AOH20FSBV2	
COOLING CAPACITY	6.00 kW	6.00 kW
POWER SOURCE	230 V	
FREQUENCY	50 Hz	
RUNNING CURRENT	9.1 A	9.1 A
INPUT WATTS	1.99 kW	1.99 kW
E.E.R.	3.02 kW/kW	3.02 kW/kW
MOISTURE REMOVAL	2.1 L/hr	2.1 L/hr
AIR CIRCULATION-High	520 + 450 m <sup>3</sup> /hr	550 + 450 m <sup>3</sup> /hr

# SPECIFICATIONS

## INDOOR UNIT

MODEL NAME		ASH12FMBD	ASH7FMBD	AUH12FMAB
FAN MOTOR (cool / heat)	HIGH-SPEED	1,310 r.p.m.	1,310 r.p.m.	760 r.p.m.
	MED-SPEED	1,230 r.p.m.	1,230 r.p.m.	690 r.p.m.
	LOW-SPEED	1,150 r.p.m.	1,150 r.p.m.	610 r.p.m.
	QUIET	1,080 r.p.m.	1,080 r.p.m.	-----
DIMENSIONS	H x W x D	257 x 808 x 187 mm	257 x 808 x 187 mm	235 x 580 x 580 + 70 mm
WEIGHT	GROSS / NET	10 kg / 8 kg	10 kg / 8 kg	23 kg / 18 kg
NOISE LEVEL	HIGH-SPEED	40 dB	39 dB	42 dB
	MED-SPEED	38 dB	37 dB	39 dB
	LOW-SPEED	36 dB	35 dB	36 dB
	QUIET	35 dB	33 dB	-----

## OUTDOOR UNIT

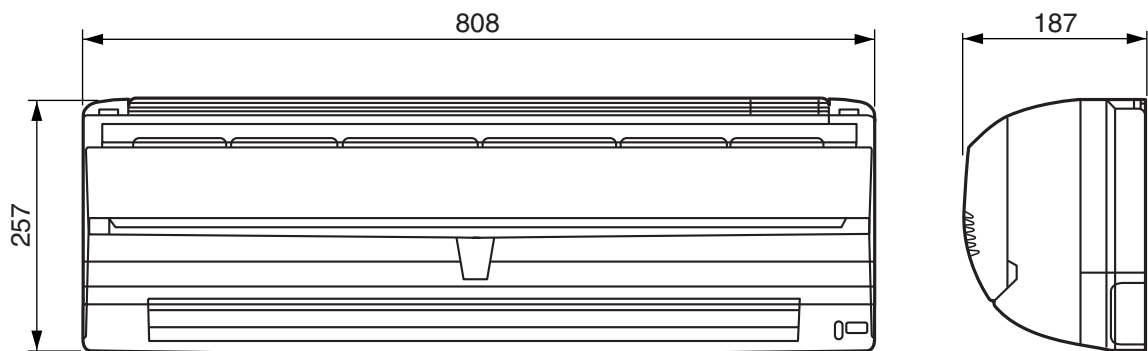
MODEL NAME	AOH20FSBV2	
COMPRESSOR TYPE	Hermetic type, Permanent split condenser, 2 pole, Single phase, Induction motor, Rotary	
COMPRESSOR DISCRIMINATION	Comp A : 802 354 35B, Comp B : 802 100 65B	
REFRIGERANT	R410A	Compressor A : 800 g, Compressor B : 650 g
ADDITIONAL CHARGE	10 g/m	
CHARGELESS PIPE LENGTH	7.5 m	
MAXIMUM PIPE LENGTH	15 m	
POWER SOURCE	230V - 50Hz	
FAN MOTOR	780 r.p.m.	
DIMENSIONS	H x W x D	700 x 900 x 330 mm
WEIGHT	GROSS / NET	71 kg / 64 kg
NOISE LEVEL	52 dB	

## OUTLINE AND DIMENSIONS

INDOOR UNIT (Wall mounted type)

Models : ASH12FMBD, ASH7FMBD

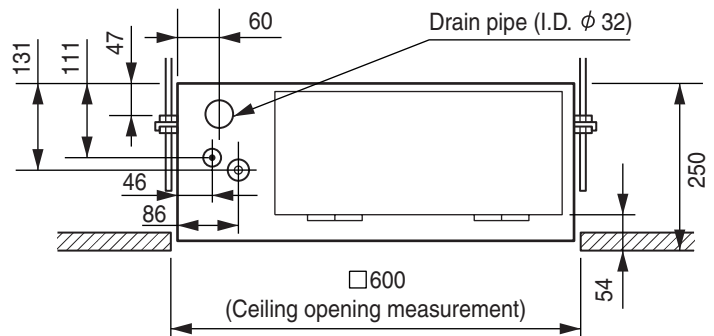
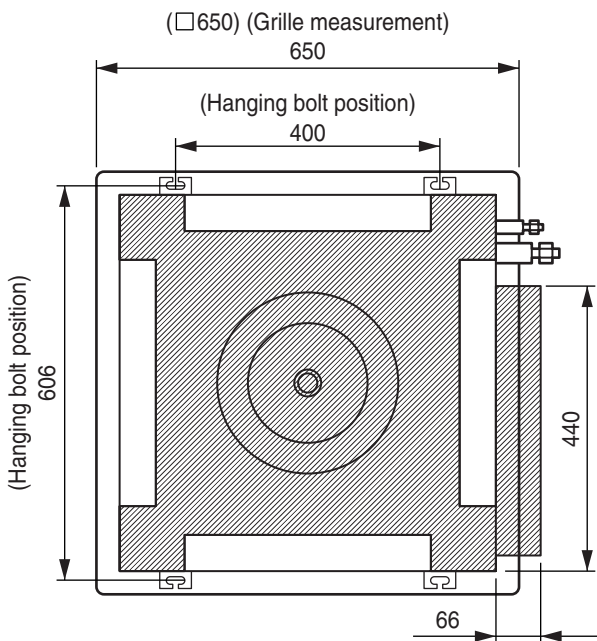
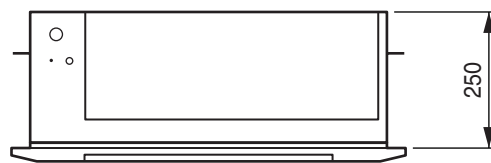
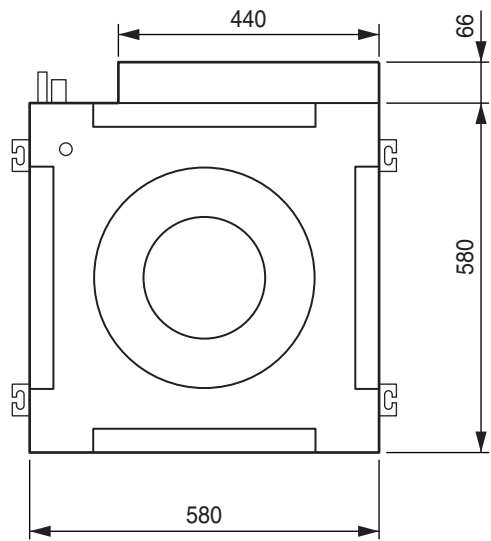
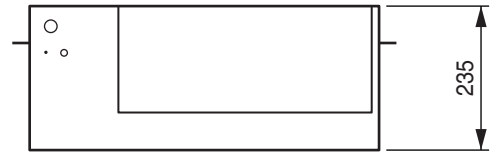
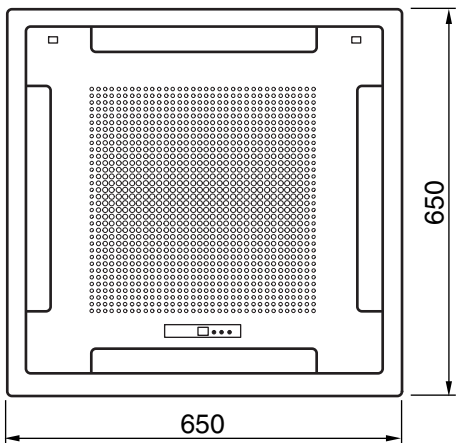
(Unit : mm)



INDOOR UNIT (Cassette type)

Model : AUH12FMAB

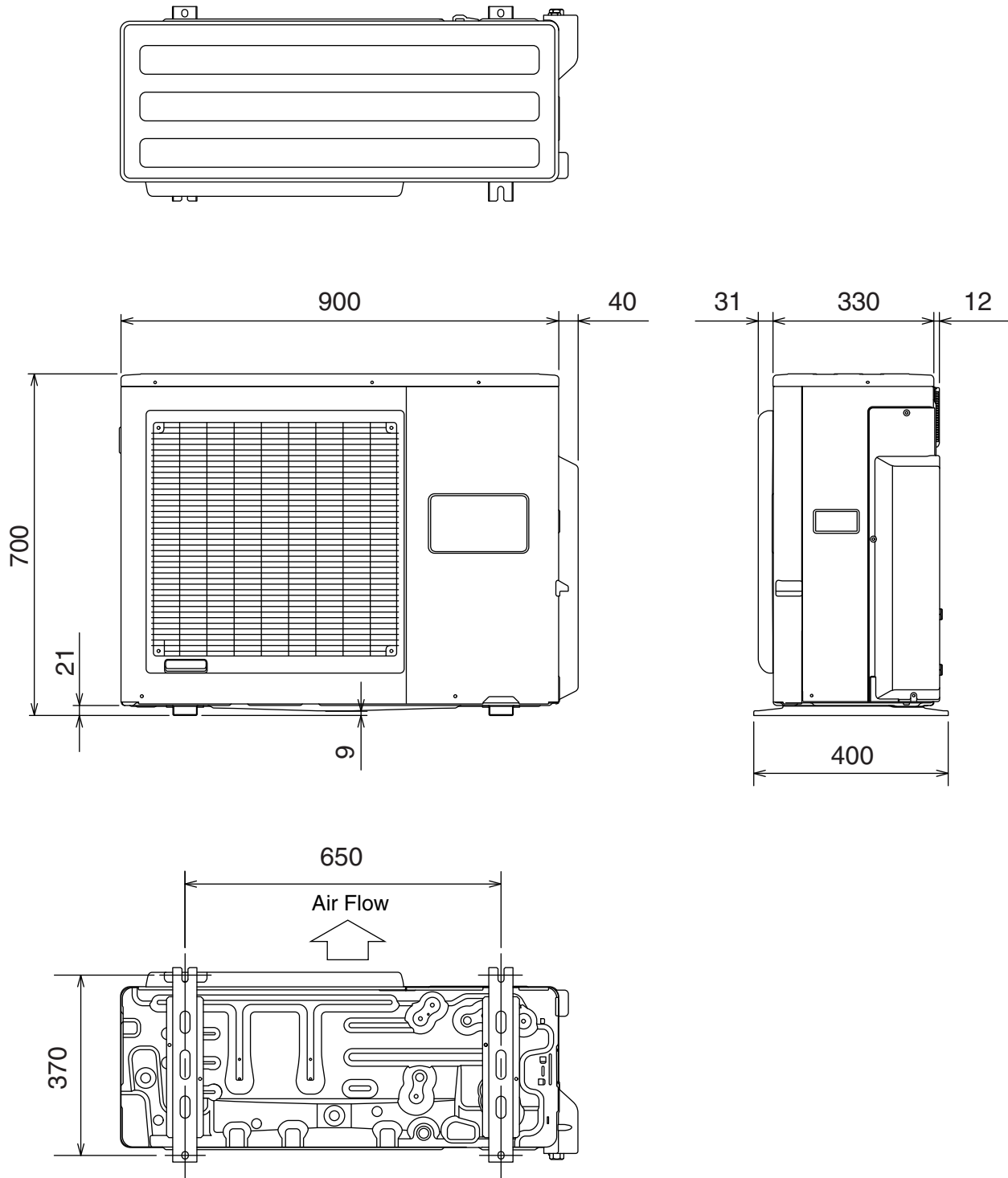
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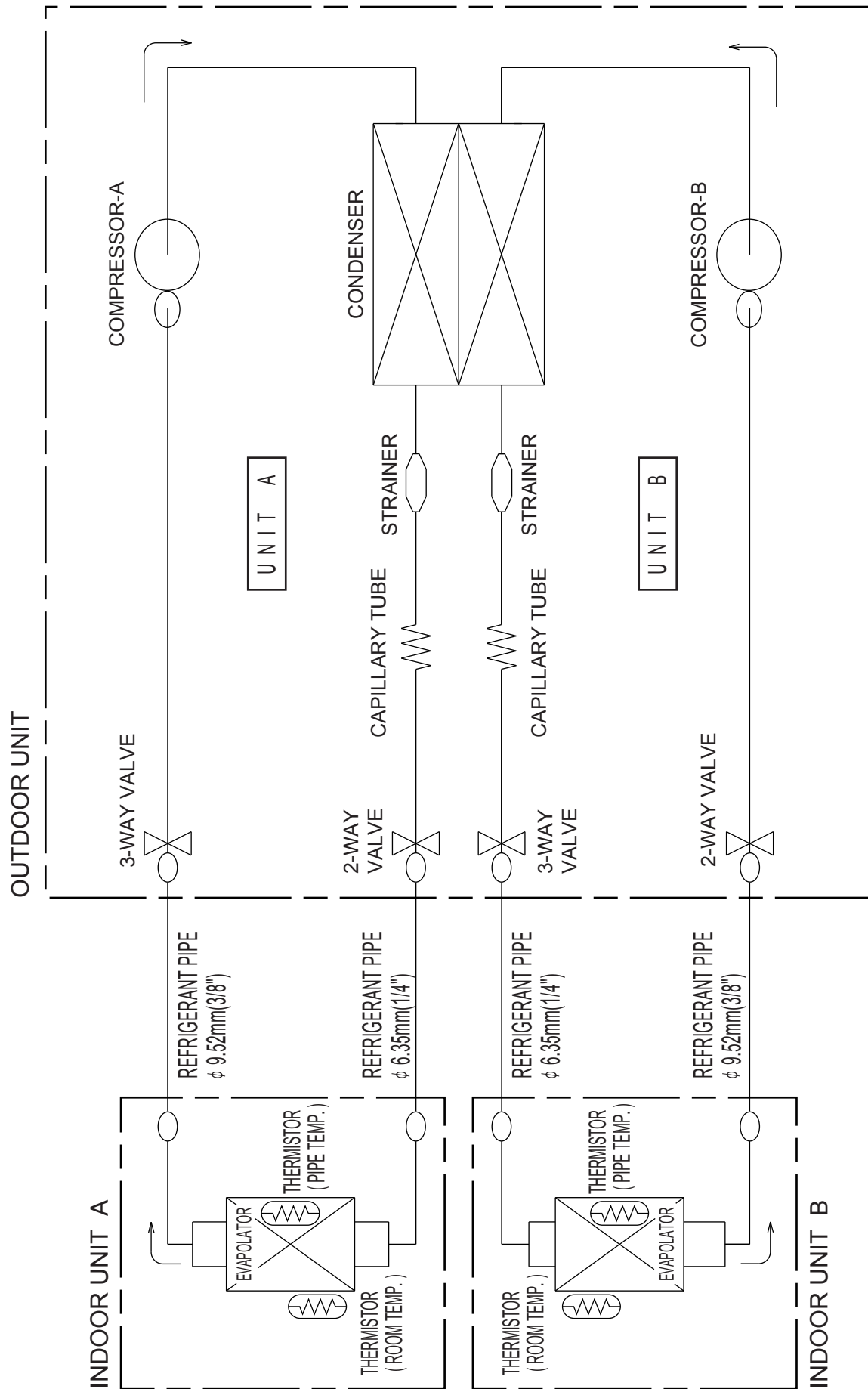
OUTDOOR UNIT

Model : AOH20FSBV2

(Unit : mm)



# REFRIGERANT SYSTEM DIAGRAM

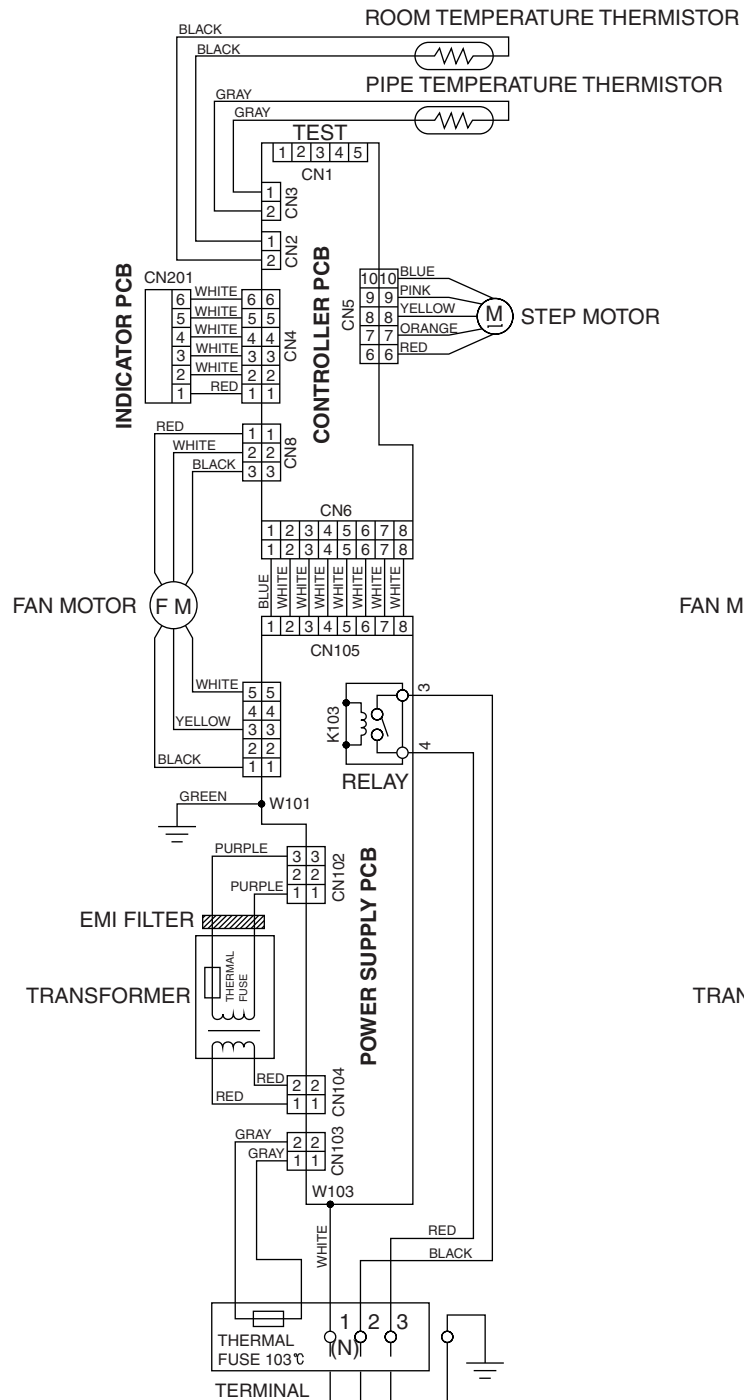


# CIRCUIT DIAGRAM

Models :  
ASH12FMBD, ASH7FMBD / AOH20FSBV2

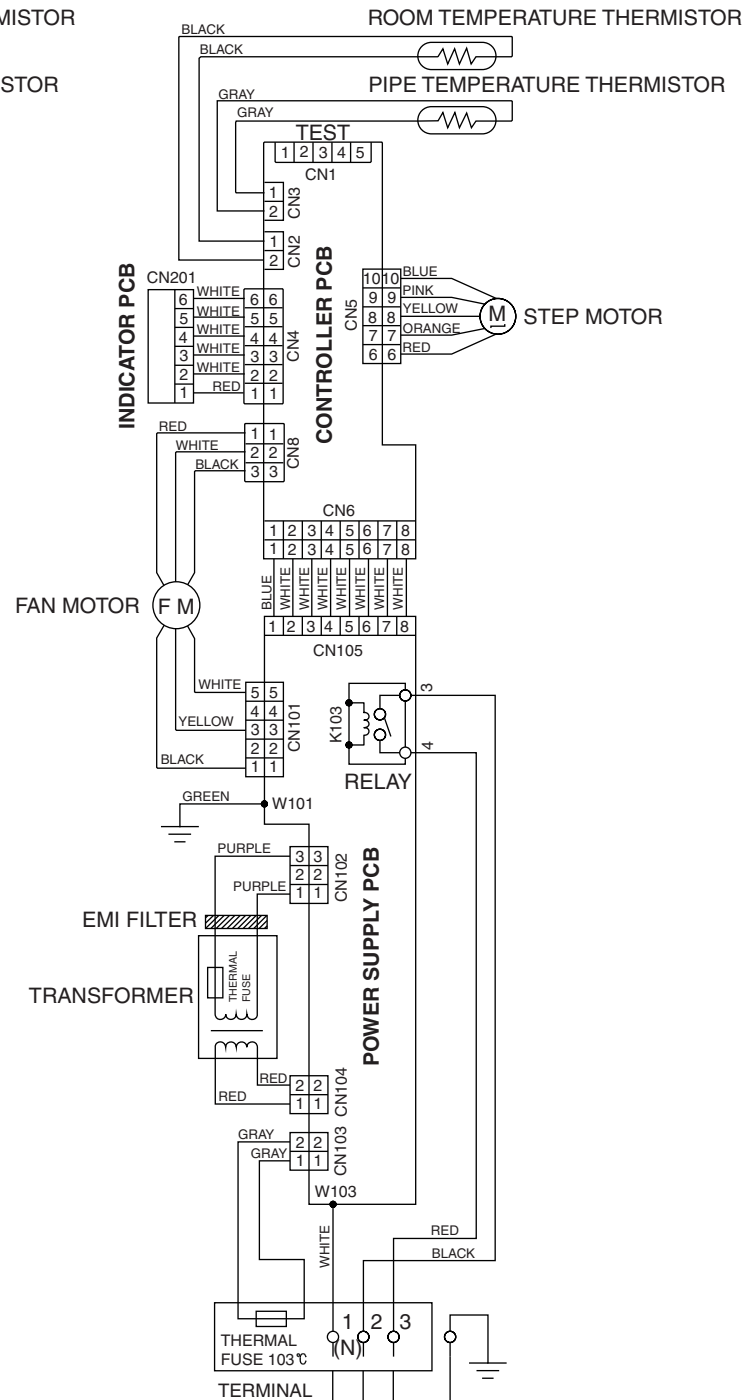
## INDOOR UNIT

### Wall Mounted type (ASH12FMBD)



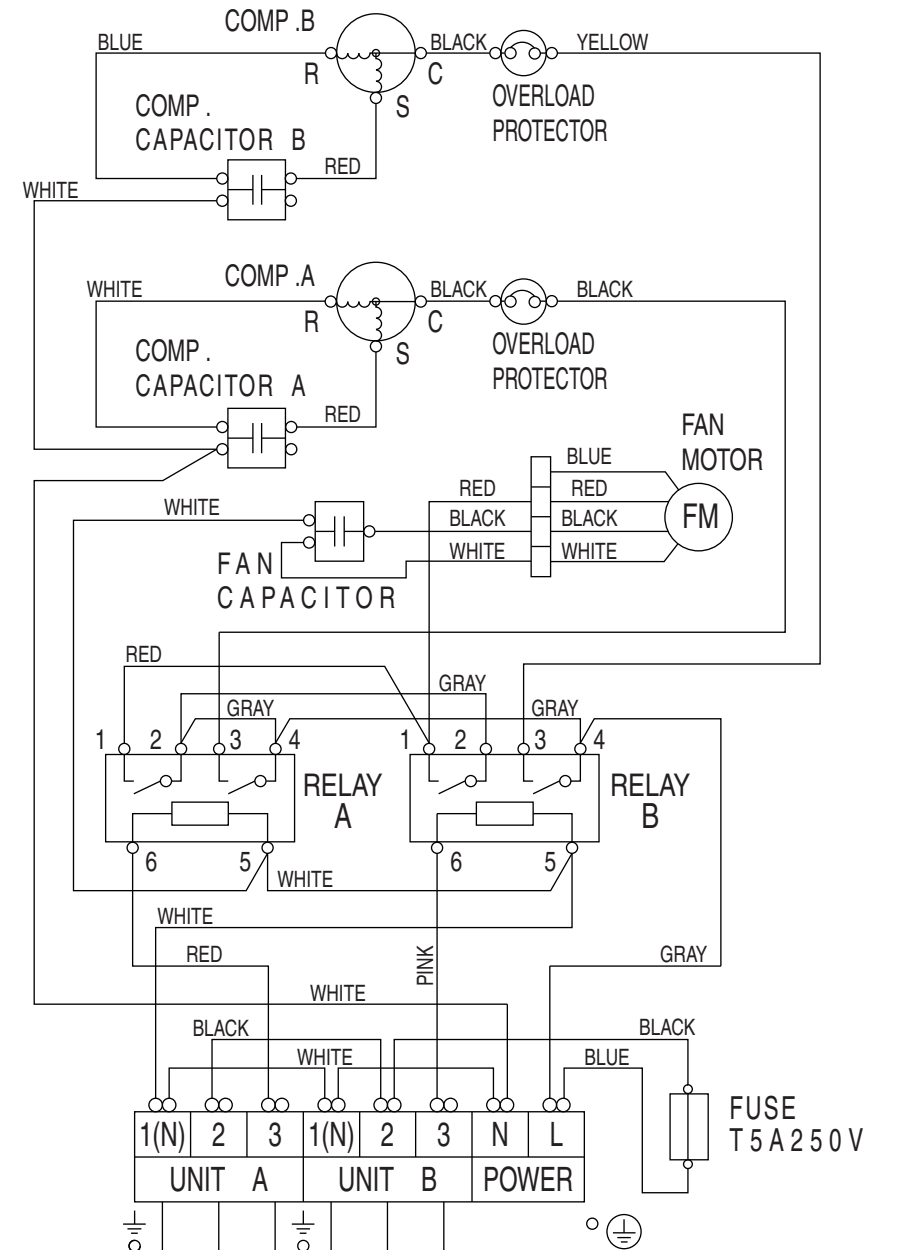
UNIT A

### Wall Mounted type (ASH7FMBD)



UNIT B

## OUTDOOR UNIT





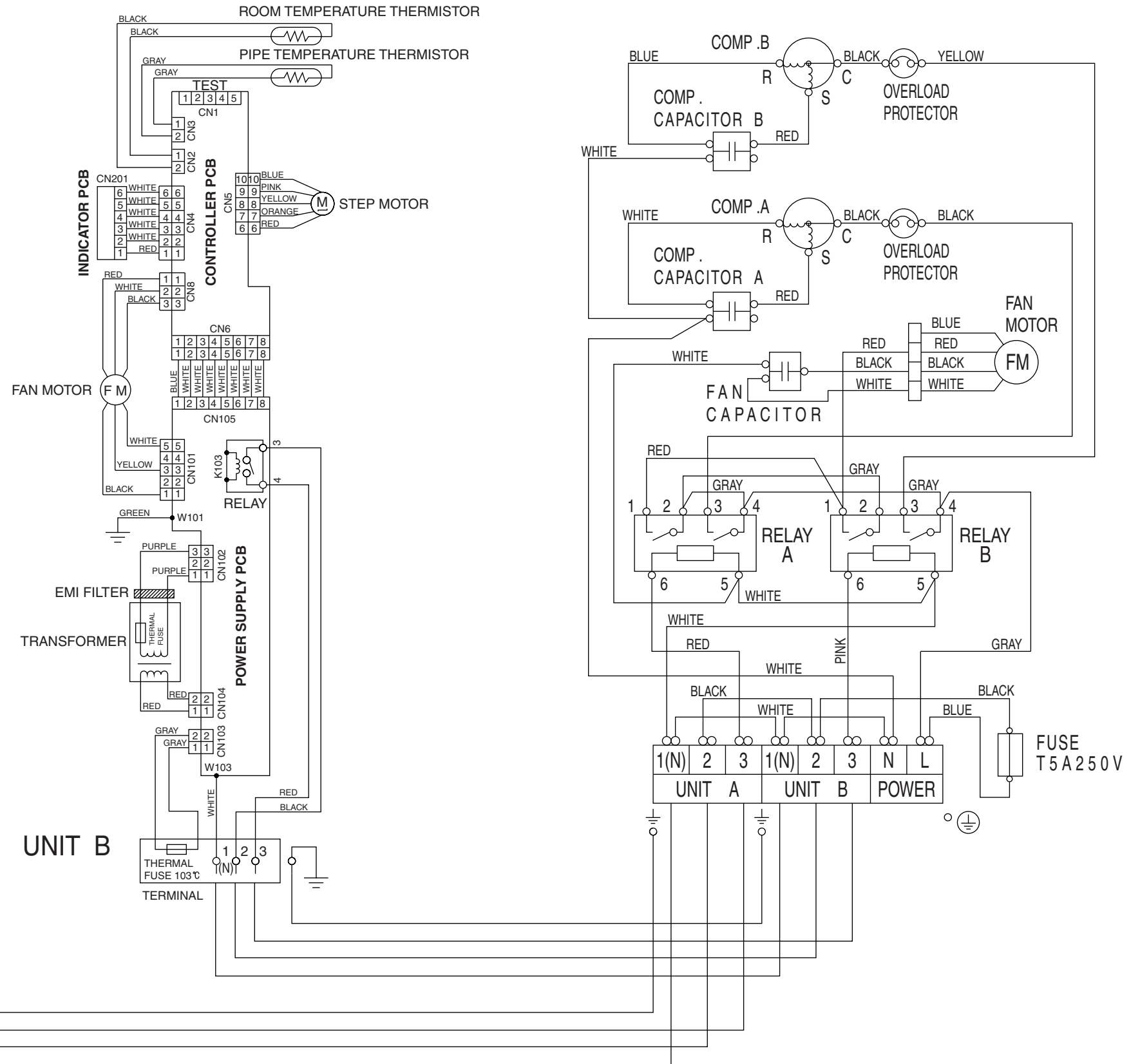
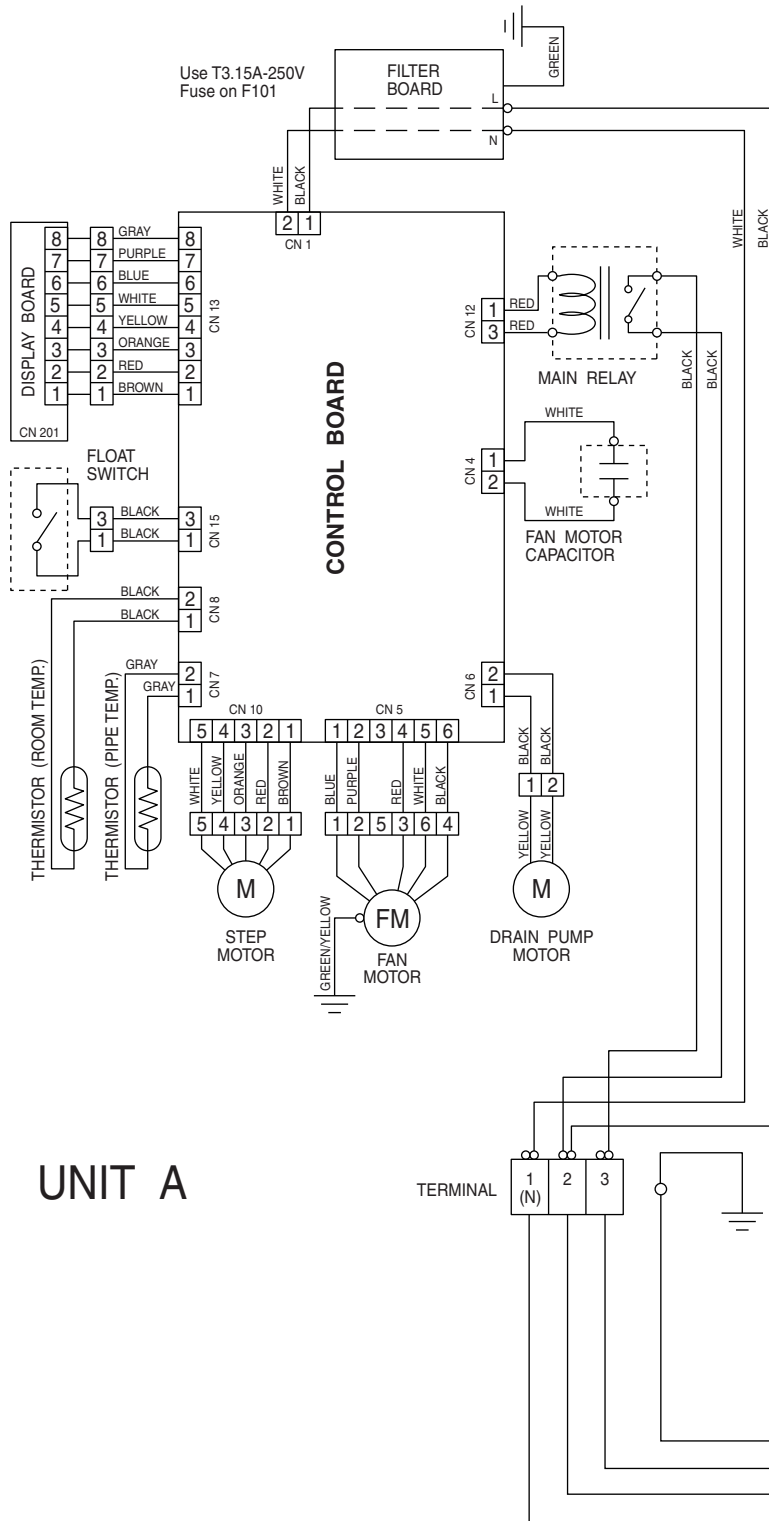
Models :  
 AUH12FMAB, ASH7FMBD / AOH20FSBV2

INDOOR UNIT

Wall Mounted type  
 (ASH7FMBD)

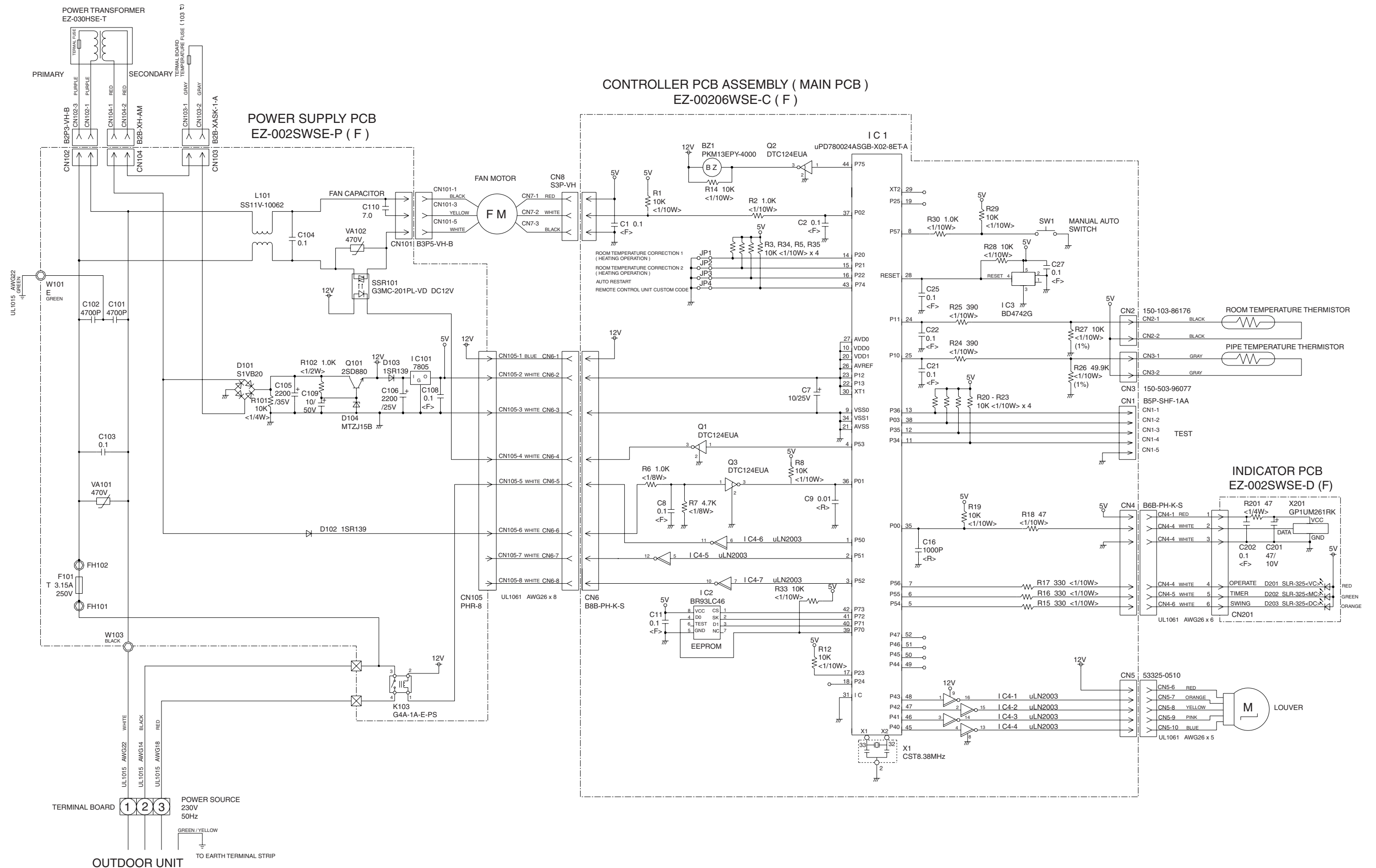
OUTDOOR UNIT

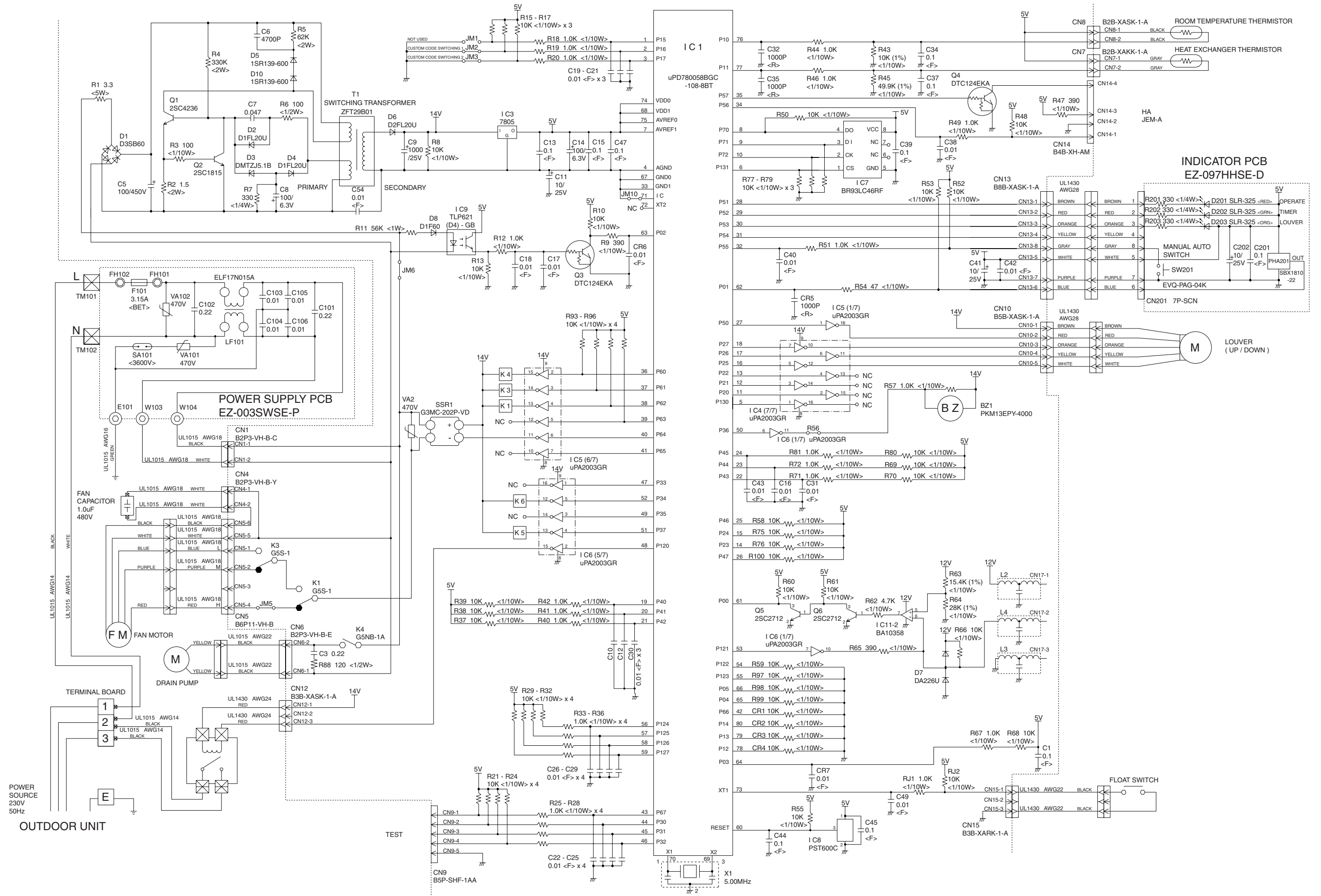
Cassette type  
 (AUH12FMAB)



# INDOOR PCB CIRCUIT DIAGRAM

Models : ASH12FMBD, ASH7FMBD





# ERROR CONTENTS

## INDOOR UNIT (Wallmounted type)

○ : Fast flashing      ● : Slow flashing

Operation lamp : Red lamp

Timer lamp : Green lamp

Large division indication			Small division indication		
Error contents	LED indication		Error contents	LED indication	
circuit board error (indoor unit)	Red lamp Green lamp	○ ○	----	----	----
thermistor error	Red lamp Green lamp	● (2 times) ○	thermistor error (room temp.)	Red lamp Green lamp	○ ● (2 times)
			thermistor error (heat exchanger)	Red lamp Green lamp	○ ● (3 times)
control unit error (indoor unit)	Red lamp Green lamp	● (4 times) ○	MANUAL AUTO button error	Red lamp Green lamp	○ ● (2 times)
			power source Hz decision error	Red lamp Green lamp	○ ● (4 times)
fan motor error (indoor unit)	Red lamp Green lamp	● (6 times) ○	lock error	Red lamp Green lamp	○ ● (2 times)
			r.p.m error	Red lamp Green lamp	○ ● (3 times)

When an error occurs, "Large division indication" is indicated first.

Secondly, "Small division indication" is indicated by pushing "Test" button of remote controller.

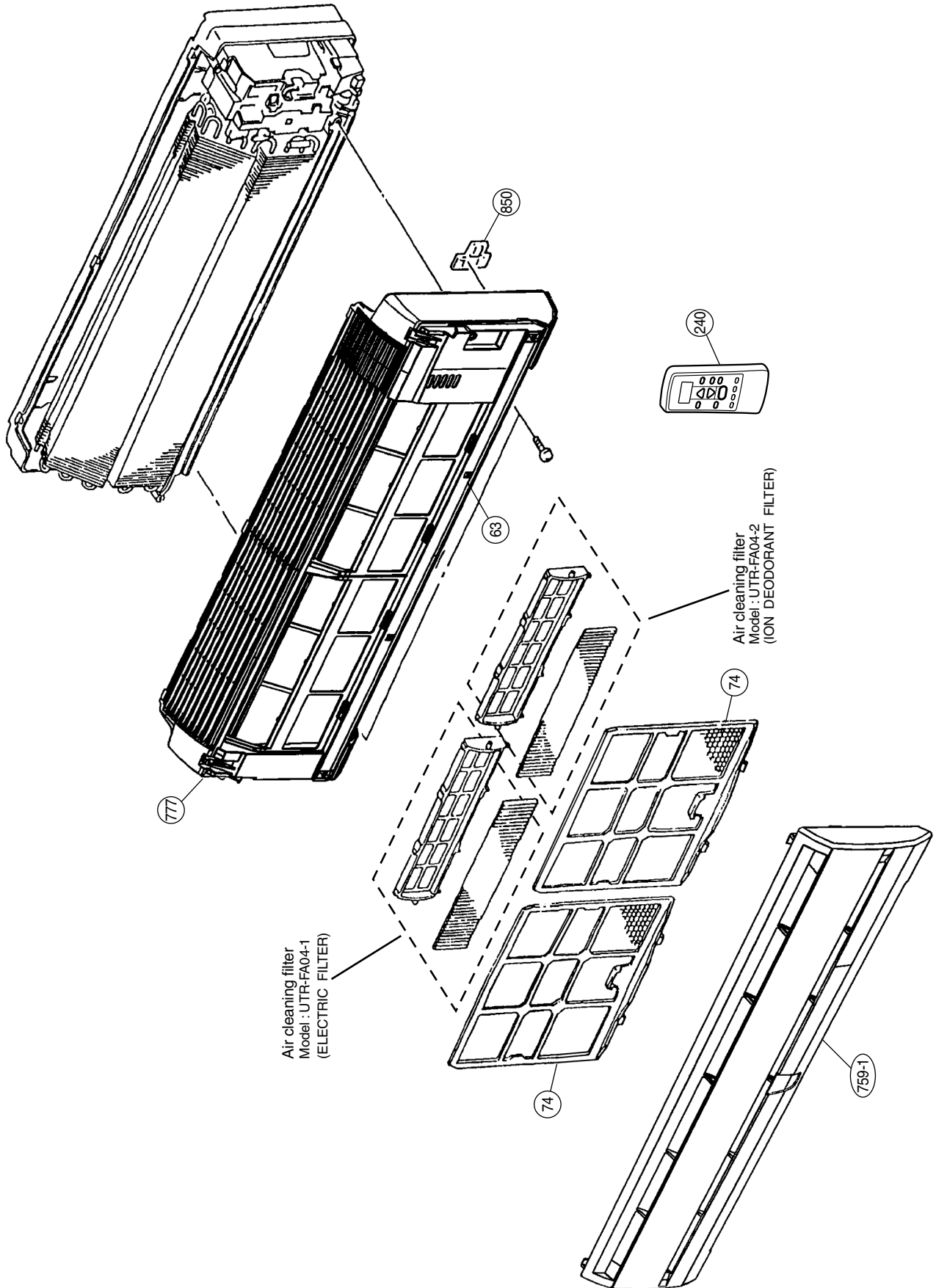
## INDOOR UNIT (Cassette type)

○ : Fast flashing      ● : Slow flashing

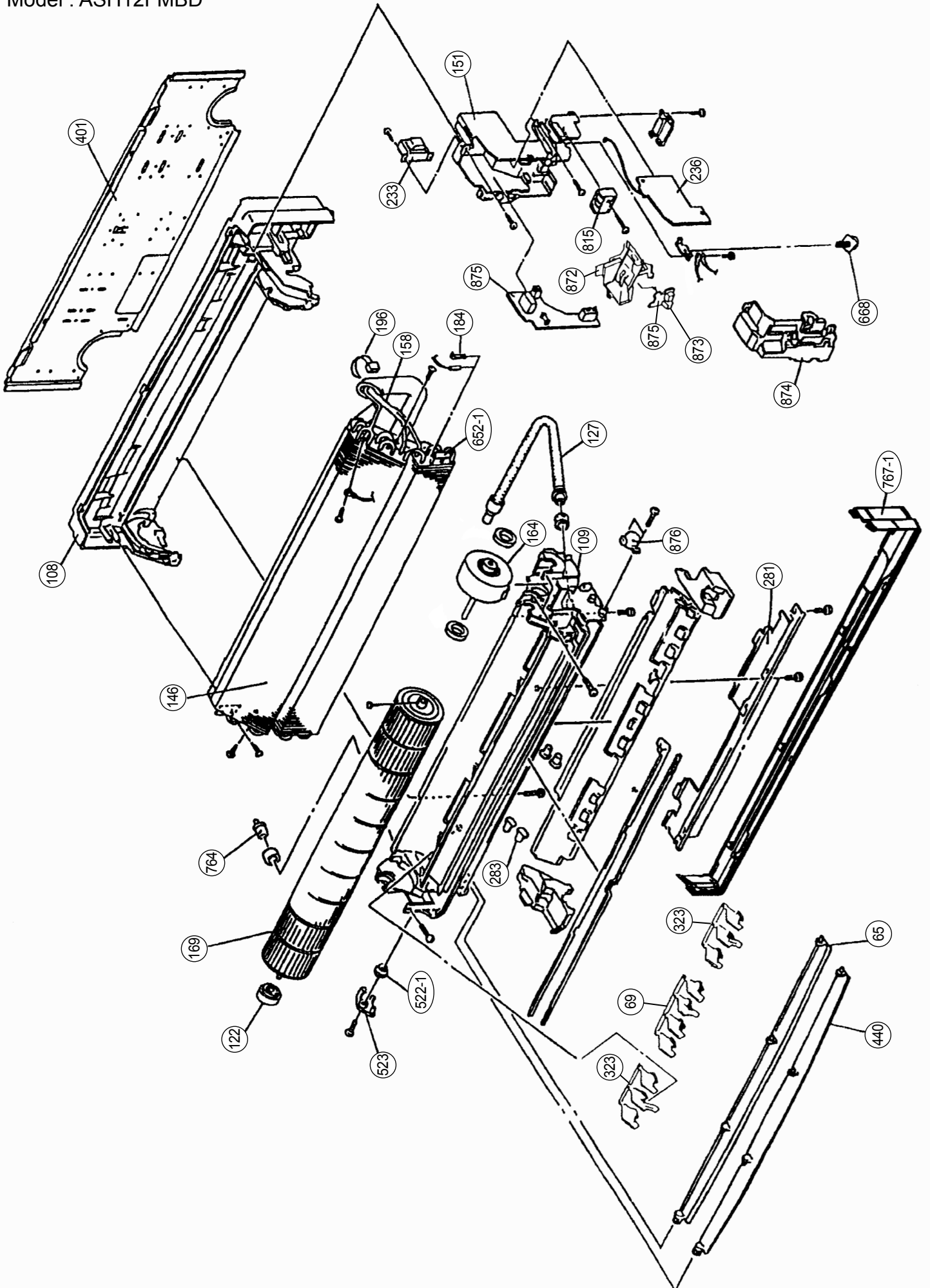
Error display			Error contents
OPERATION lamp	TIMER lamp	SWING lamp	
○	○	Goes off	Model information abnormal (permanent type)
● 4 times	○	Goes off	Drain abnormal (permanent type)
● 6 times	○	Goes off	Indoor fan abnormal
● 2 times	○	Goes off	Room air temperature thermistor open circuit
		○	Room air temperature thermistor short circuit
● 3 times	○	Goes off	Piping thermistor open circuit
		○	Piping thermistor short circuit

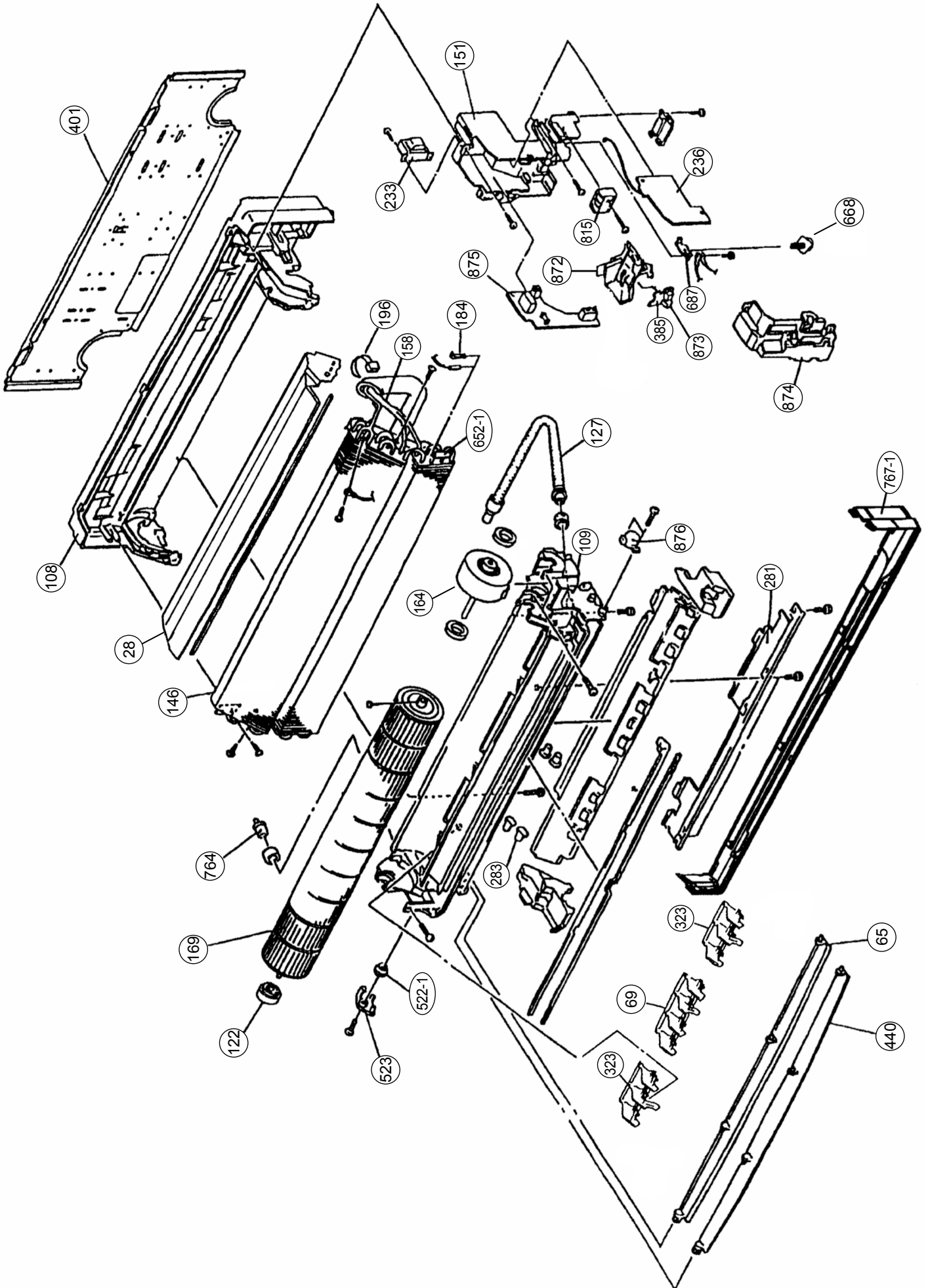
# DISASSEMBLY ILLUSTRATION

Models :  
ASH12FMBD  
ASH7FMBD

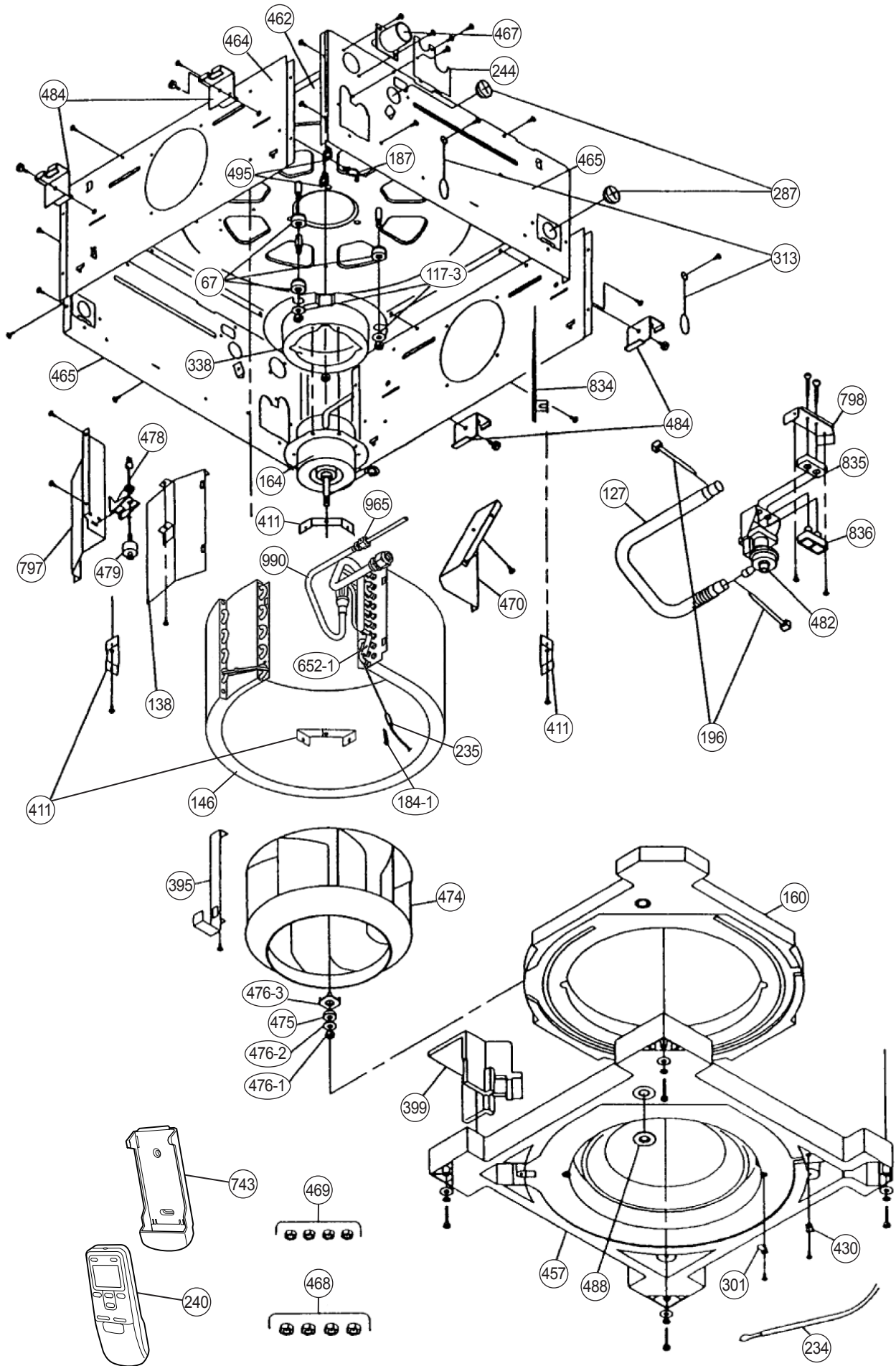


Model : ASH12FMBD



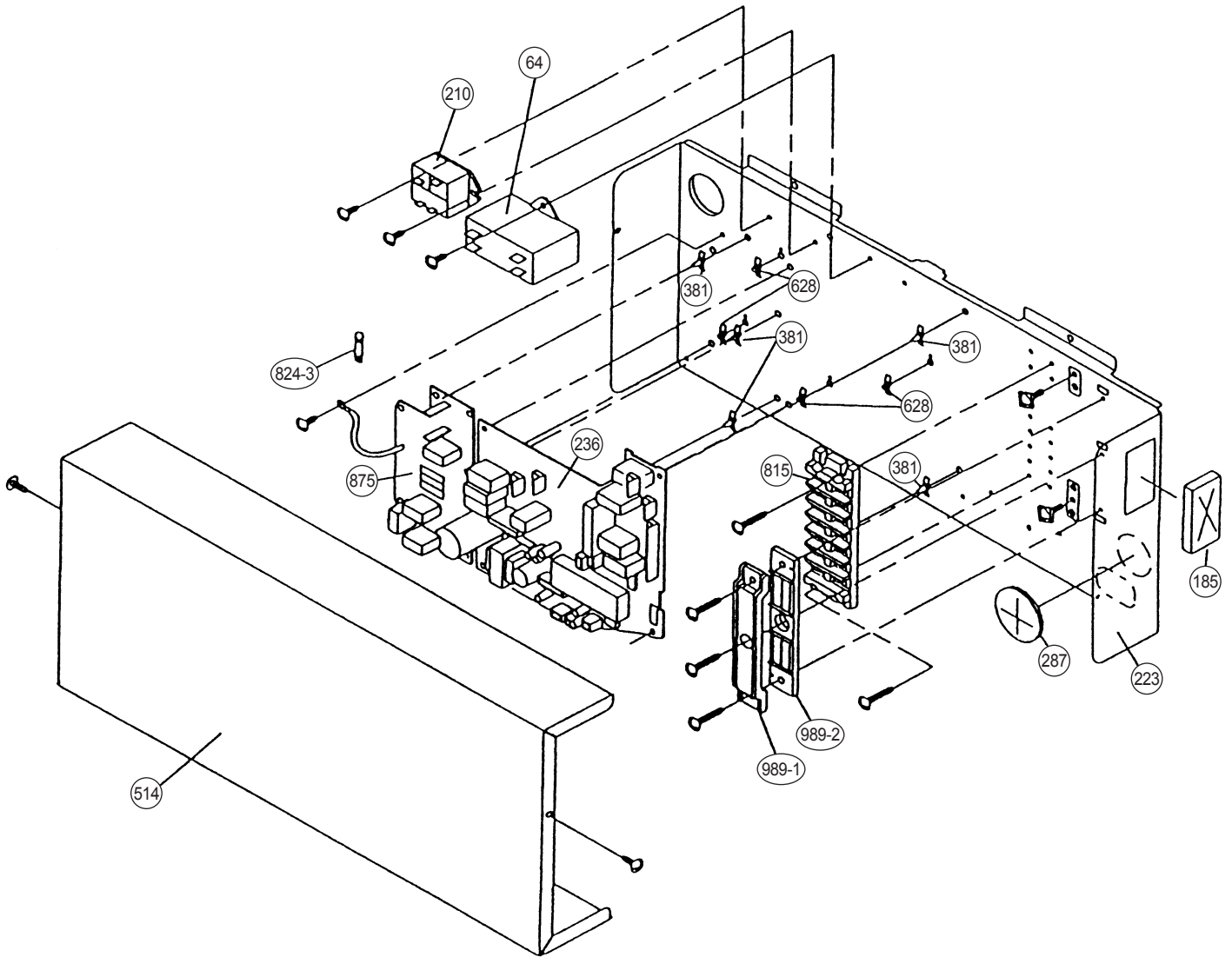


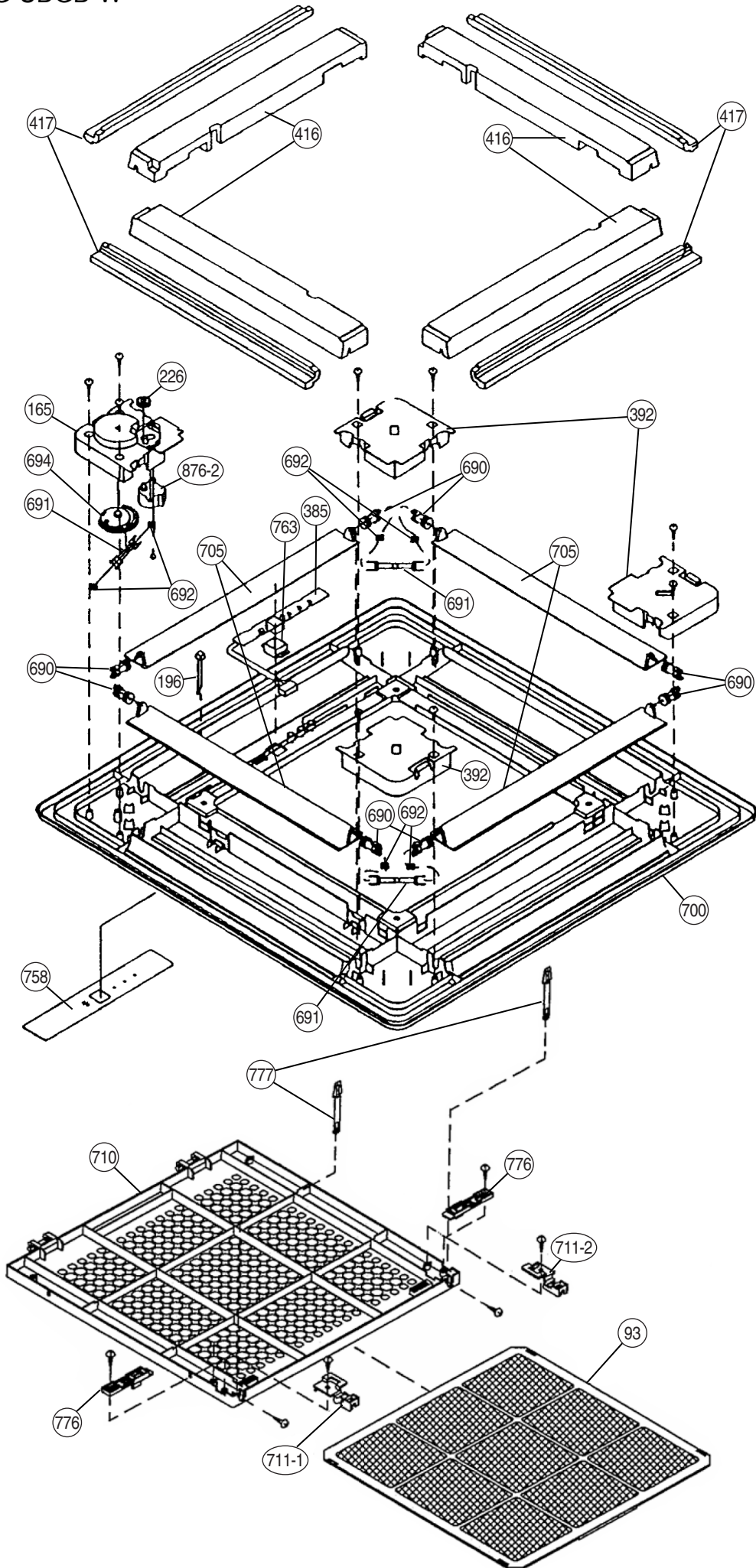
Model : AUH12FMAB



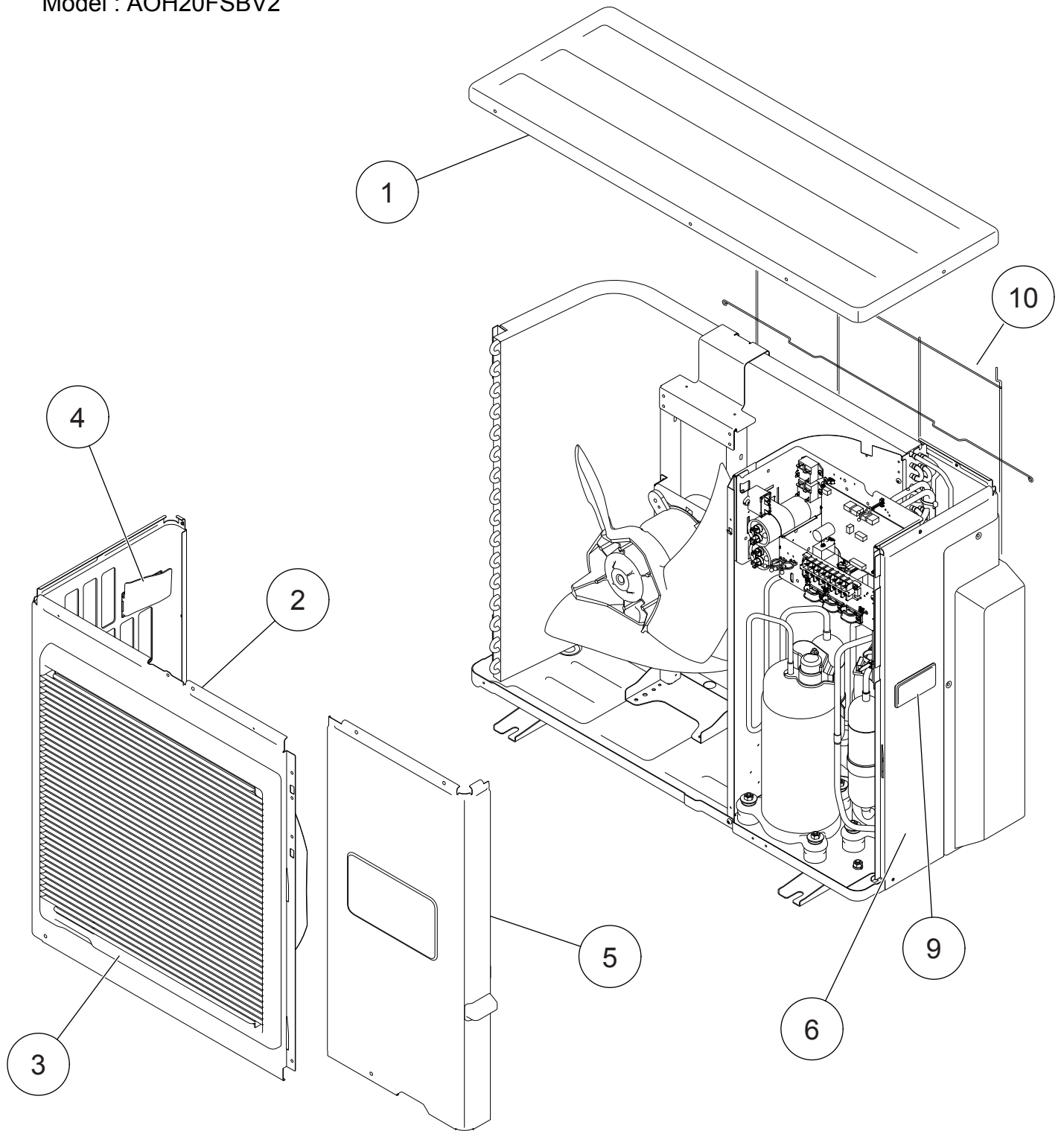


Model : AUH12FMAB

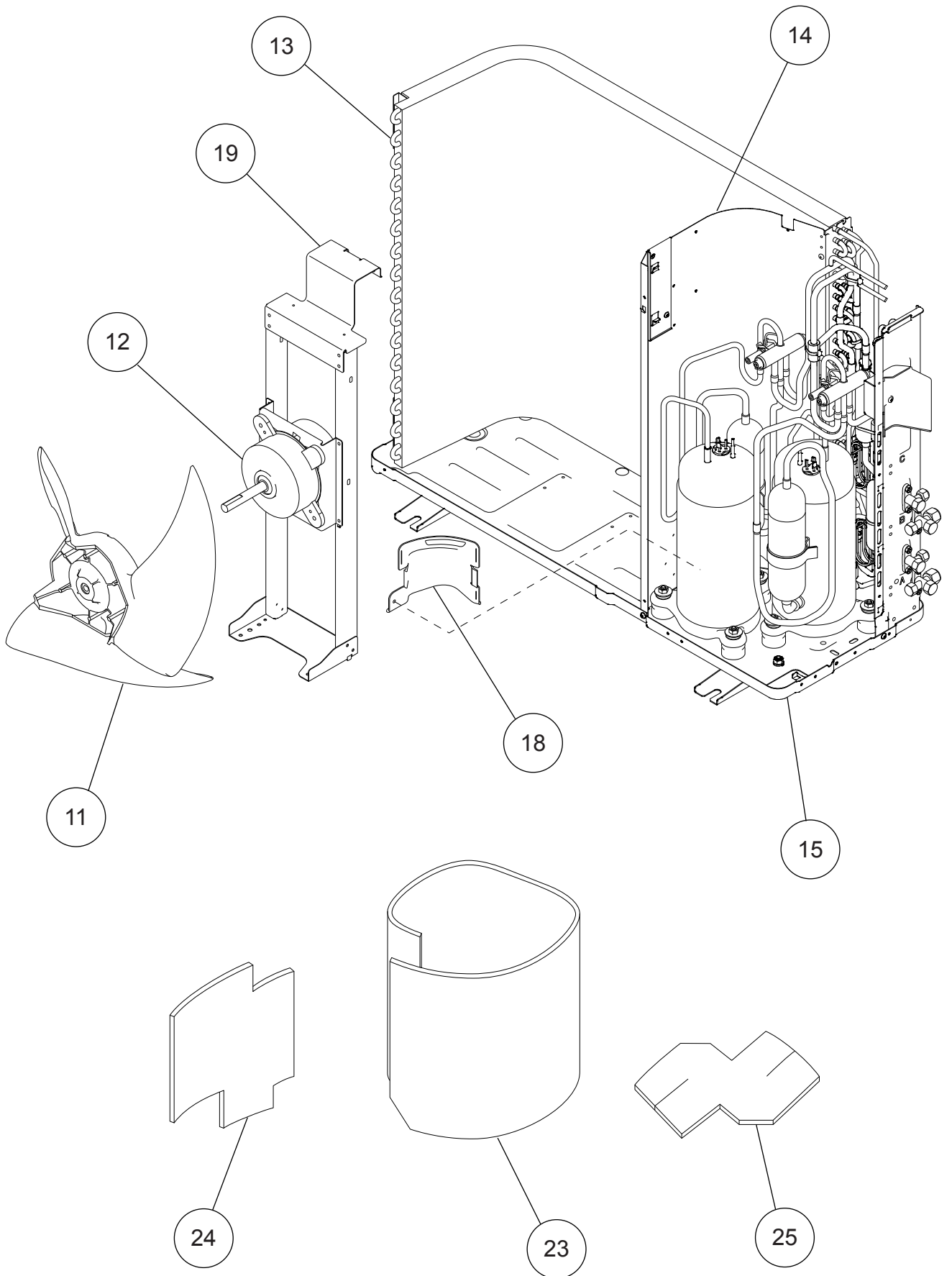




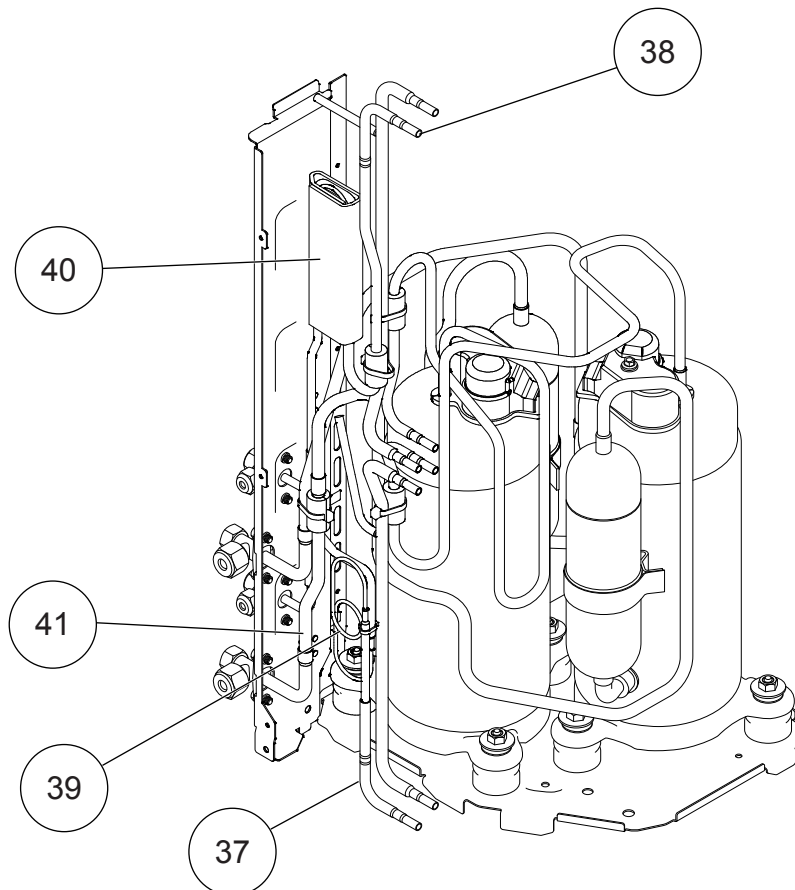
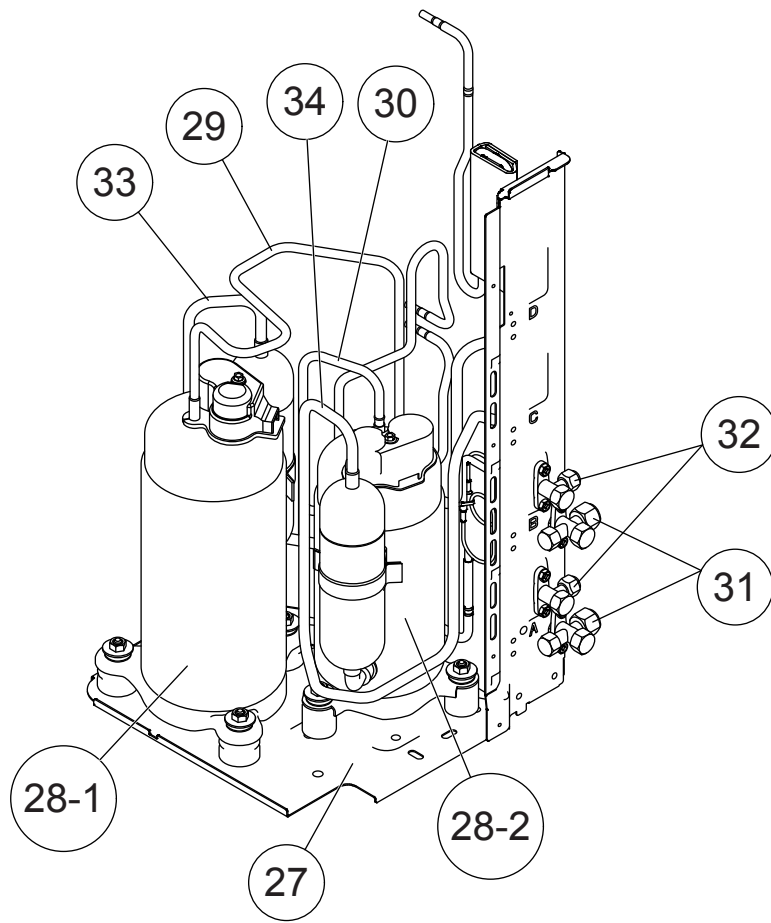
Model : AOH20FSBV2



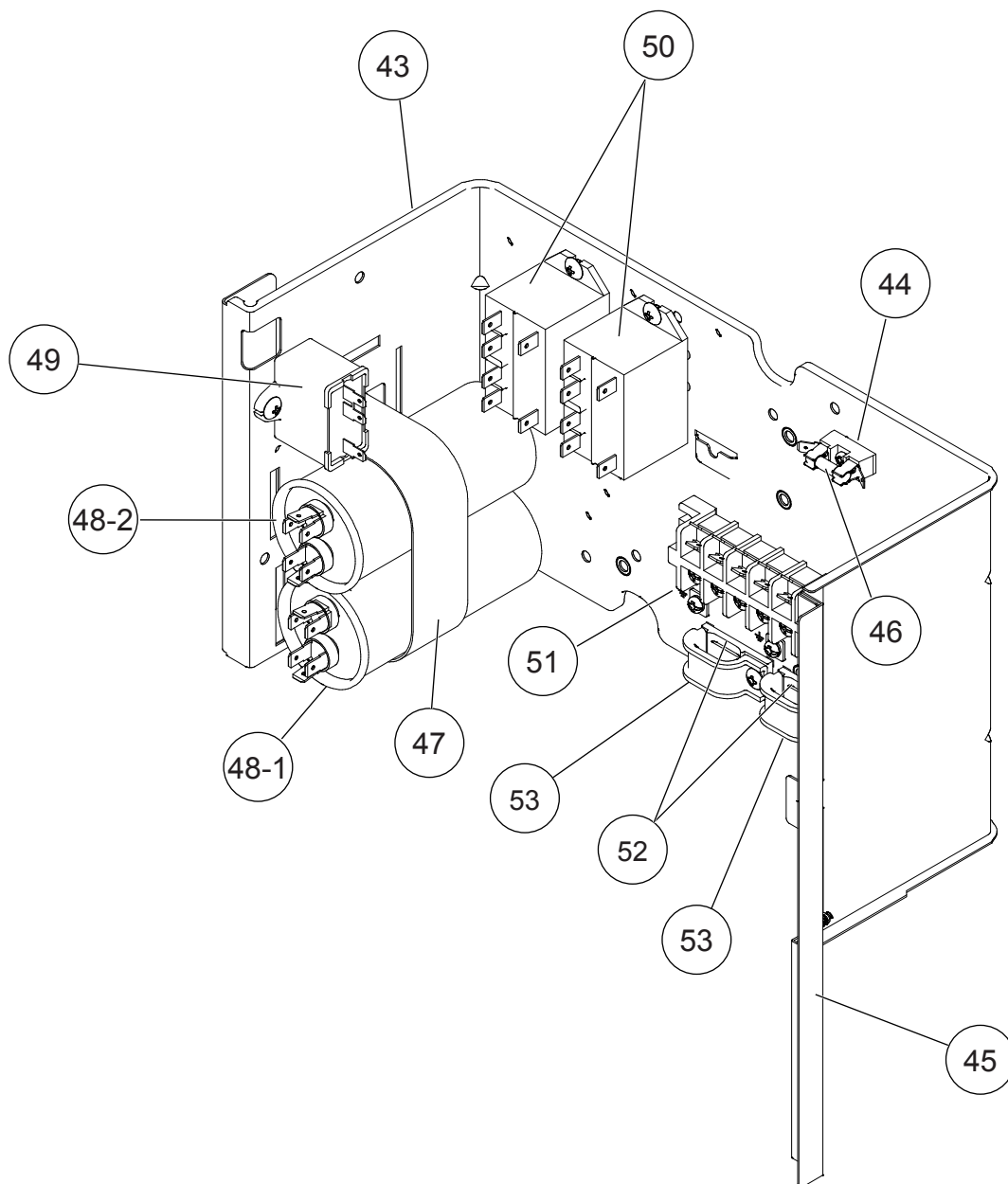
Model : AOH20FSBV2

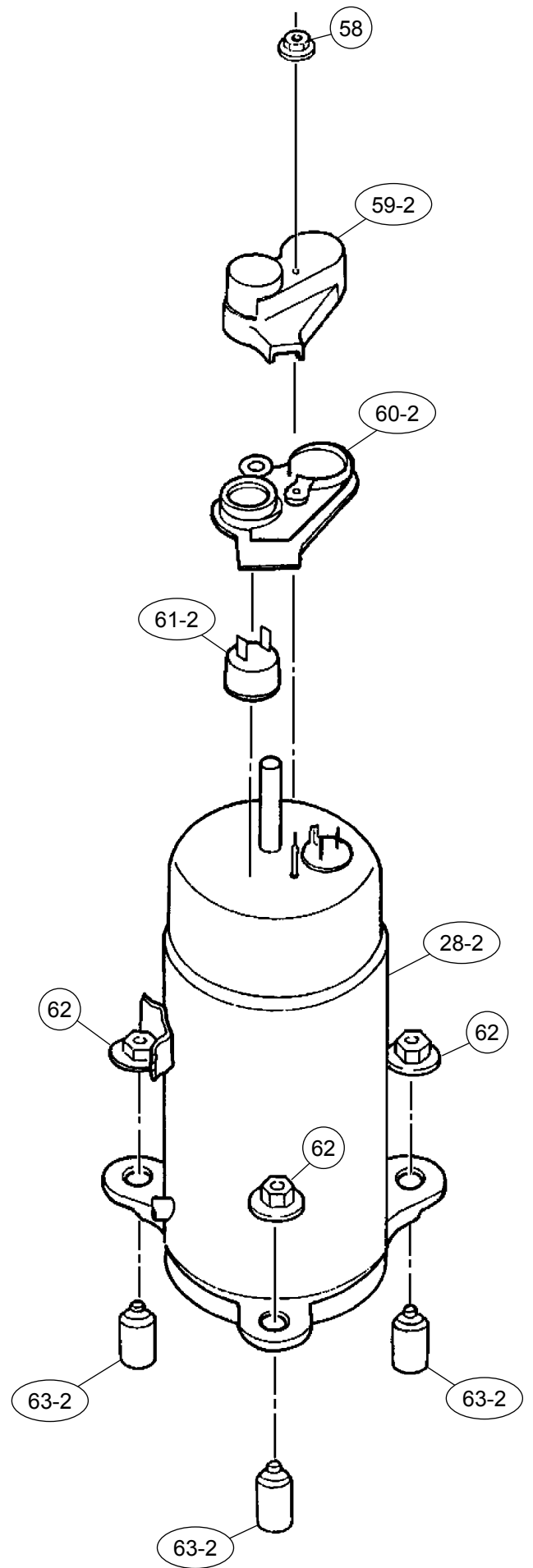
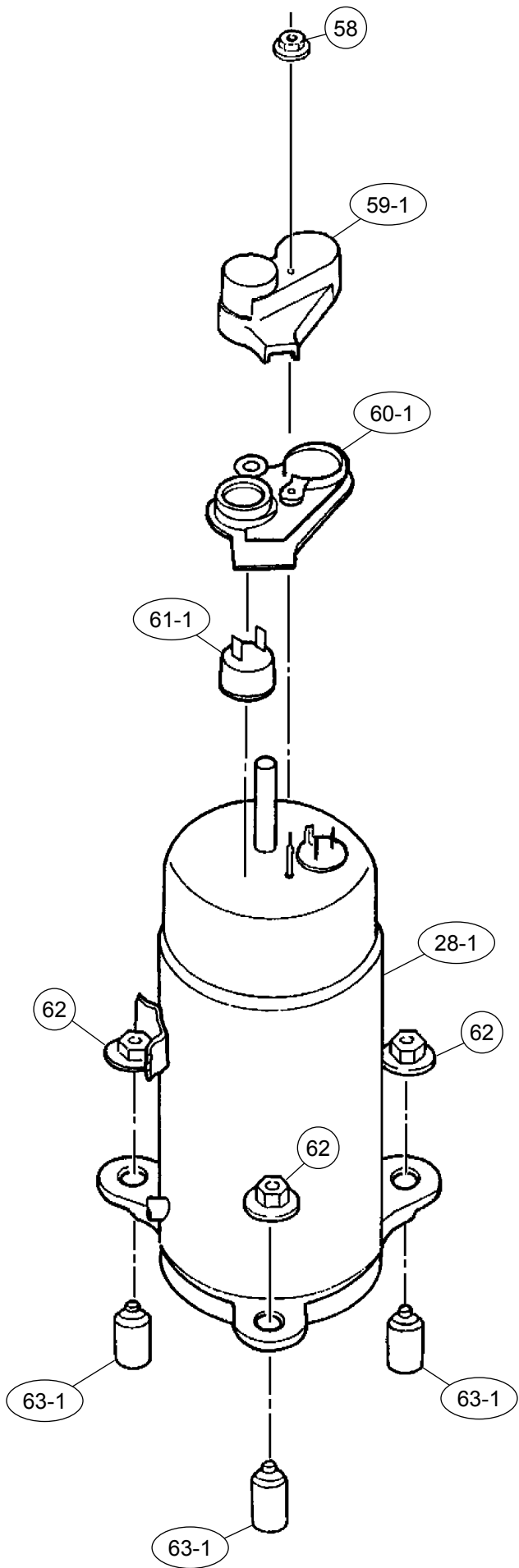


Model : AOH20FSBV2



Model : AOH20FSBV2





# PARTS LIST

## INDOOR UNIT (Wall Mounted type)

Ref. No.	Description	Part No.		Ord. Q'ty
		ASH12FMBD	ASH7FMBD	
28	Blower Cover	-----	9306462000	
63	Front Panel Assy	9312172085	9312172085	
65	Flow Control Panel-Z	9306058043	9306058043	
69	Louver-A	9306055028	9306055028	
74	Filter	9305444014	9305444014	
108	Base	9309755062	9309755062	
109	Casing	9306052027	9306052027	
122	Shaft Holder-B	9303066010	9303066010	
127	Drain Hose Assy	9305550029	9305550029	
146	Evaporator Assy	9373044017	9308559036	
151	Control Box	9330007017	9330007017	
158	Connecting Pipe Assy	9306416010	9306699000	
164	Fan Motor Assy-IN	9601844013	9601844013	
169	Cross-Flow Fan Assy	9307836015	9307836015	
184	Thermistor Spring	313728262708	313728262708	
196	Clamp SKB-150	313035356905	313035356905	
233	Power Transformer	9701803026	9701803026	
236	Controller PCB Assy (EZ-00206WSE-C)	9704865052	9704865052	
240	Remote Control Unit	9312058037	9312058037	
281	Bracket (Pipe)	9330011014	9330011014	
283	Bushing-A	9303529010	9303529010	
323	Louver-B	9306056025	9306056025	
401	Wall Hook Bracket	9304358008	9304358008	
440	Flow Control Panel-U	9306057046	9306057046	
522-1	Gear-A	9306062002	9306062002	
523	Gear Bracket	9306407001	9306407001	
652-1	Thermistor Holder Pipe	313714262805	313714262805	
668	Screw w/Washer	9372808023	9372808023	
759-1	Intake Grille	9330002012	9330002012	
764	Drain Cap Assy	9304150008	9304150008	
767-1	Bottom Cover	9330004016	9330004016	
777	Clamper (Grill)	9306755010	9306755010	
815	Terminal	9900040055	9900040055	
850	Window (Receiver)	9330003019	9330003019	
872	Indicator Case	9330009011	9330009011	
873	Lamp Cover	9330014015	9330014015	
874	Control Box Cover	9330008014	9330008014	
875	PCB Assy (Power+Indicator)	9704871053	9704871053	
876	Step Motor	9900139018	9900139018	



## INDOOR UNIT (Cassette type)

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
		AUH12FMAB				AUH12FMAB	
64	Capacitor (FanMotor)	9900284015		462	Top Cover Plate	9359642015	
67	Rubber (Vibration-proof)	9361279001		464	Body-A	9359643005	
117-3	Special Washer M6	0700132247		465	Body-B	9359645009	
127	Drain Hose	9359659013		467	Drain Port	313005415658	
138	Special Wall-A	9359647003		468	Special Nut-A (Large)	313005446653	
146	Evaporator Assy	9373214014		469	Special Nut-B (Small)	313005446759	
160	Drain Pan	9359651000		470	Separate Wall-B	9359648000	
164	Fan Motor Assy-In	9601040019		474	Turbo Fan	9359658009	
184-1	Thermo. Spring-A	313728262708		475	Cushion(Turbo Fan)	9366013006	
185	Rubber Bushing	313005066051		476-1	Special Nut M8	0700005534	
187	Clamp No. 1219	313361271706		476-2	Special Washer	0700132223	
196	Clamp SKB-150	313035356905		476-3	Special Washer	9359954002	
210	Main Relay	9900264017		478	Sensor M. Bracket	9359654001	
223	Control Box	9359661016		479	Float Switch	9900361013	
234	Thermistor Assy-Room	9703299032		482	Pump Unit	9900360016	
235	Thermistor Assy-Pipe	9703297014		484	Hanger Metal	9359644002	
236	Control PCB Assy (K01AL-040FWSE-C1)	9704557841		488	Drain Pan Plug	9359653004	
240	Remocon Assy	9371190044		495	Clamp No. 2U46	9352715006	
244	Pipe Cover	9359646006		514	Control Box Cover	9359662006	
287	Cap (Power)	9352173011		628	Locking Spacer-B	313005446558	
301	Clamp NK-2N	313985355201		652-1	Thermistor Holder Pipe	313806262805	
313	Hooking Wire	9359983002		743	Remocon Holder	9305642014	
338	Motor Fixture	9359656005		797	Separate Wall-C	9359649007	
381	Locking Spacer	313209391506		798	Pump Hook Bracket	9359650003	
395	Eva Holder	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	
				875	Filter PCB Assy	9704561169	
				965	Flare Nut-B	9351062019	
				989-1	Cord Clamp-A	9359822011	
				989-2	Cord Clamp-B	9359823018	
				990	Distributor Assy	9373034049	

## GRILLE ASSY (UTG-UDGD-W)

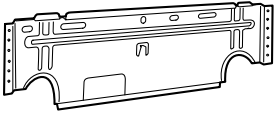
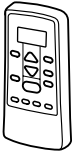


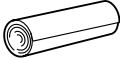


Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
93	Filter	9359632009		694	Cam Gear	9359628002	
165	Motor Cover	9359623014		700	Panel	9359619017	
196	Clamp SKB-150	313035356905		705	Louver	9359624011	
226	Motor Gear	9359629009		710	Intake Grille	9370126006	
385	Indicator PCB Assy	9702224011		711-1	Filter Clamp-A	9359634003	
392	Cover-A	9359622017		711-2	Filter Clamp-B	9359635000	
416	Insulation (Panel)-A	9359620006		758	Decoration Plate	9360039026	
417	Insulation (Panel)-B	9359621003		763	Receiver Cover	9359630005	
690	Joint-A	9359626008		776	Grille Stopper	9359633013	
691	Joint-B	9359627005		777	Grille Hook	9359761006	
692	Joint Shaft	9359625001		876-2	Step Motor	9900362027	

## OUTDOOR UNIT


Ref. No.	Description	Part No.	Ord. Q'ty
		AOH20FSBV2	
1	Top Panel Sub Assy	9374417018	
2	Front Panel S	9374094080	
3	Fan Guard	9374330010	
4	Grip Side	9374173013	
5	Service Panel Sub Assy	9374415045	
6	Right Panel	9374599042	
9	Grip	9374172016	
10	Print Net S	9374255047	
11	Propeller Fan Assy	9366378013	
12	Motor, Induction	9601671060	
13	Condenser A Assy	9374433124	
14	Separate Wall S	9374135042	
15	Base Assy	9374166121	
18	Cap Foot	9374345014	
19	Motor Bracket Sub Assy	9374418084	
23	Compressor Cover A	9375323028	
24	Compressor Cover B	9374431076	
25	Compressor Cover C	9372067055	
27	Compressor Plate Assy	9375221034	
28-1	Compressor Assy (unit A)	9373010036	
28-2	Compressor Assy (unit B)	9373010012	
29	Discharge Pipe A1	9372179444	
30	Discharge Pipe B1	9372180334	
31	3-Way Valve Assy	9375103019	
32	2-Way Valve Assy	9375102012	
33	Suction Pipe A1	9372176375	
34	Suction Pipe B1	9371275253	
37	Condensing Pipe A1	9372232088	
38	Condensing Pipe B1	9372231111	
39	Capillary A Assy	9375297053	
40	Capillary B Assy	9375298067	
41	Joint Pipe (Valve) A1	9372178164	
43	Control Box A	9375216016	
44	Fuse Holder	0501456016	
45	Control Box D	9375219017	
46	Fuse	0600376086	
47	Band (Capacitor)	9352123009	
48-1	Capacitor, Plastic (Comp.A)	9900269036	
48-2	Capacitor, Plastic (Comp.B)	9900269029	
49	Capacitor, Plastic (Fan)	9900270049	
50	Relay	9900239015	
51	Terminal	9900203047	
52	Clamp (Cord) C	9359677000	
53	Clamp (Cord)	9356857009	
58	Special Nut M5	313199233602	
59-1	Terminal Cover (Comp.A)	9351120009	
59-2	Terminal Cover (Comp.B)	9302419008	
60-1	Terminal Gasket (Comp.A)	9351121006	
60-2	Terminal Gasket (Comp.B)	9351505011	
61-1	OCR Assy (Comp.A)	9312899005	
61-2	OCR Assy (Comp.B)	9309128002	
62	Special Nut	9355091008	
63-1	Rubber Seat (Comp.A) A	9351813017	
63-2	Rubber Seat (Comp.B) A	9351507015	
---	Emblem Rear	9372171011	

# STANDARD ACCESSORIES




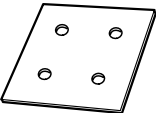




## INDOOR UNIT (ASH12FMDB, ASH7FMDB)

Name and Shape	Q'ty	Part No.
Wall hook bracket 	1	9304358008
Remote control unit 	1	9312094066 (AR-JE06)
Battery (penlight) 	1 set	0600185534
Remote control unit holder case 	1	9312653010
Cloth tape 	1	9310519004
Tapping screw (big) ( $\phi 4 \times 25$ ) 	8	0700076046
Tapping screw (small) ( $\phi 3 \times 12$ ) 	2	0700019036

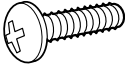


## OUTDOOR UNIT

Name and Shape	Q'ty	Part No.
Putty 	1	303020200114

## INDOOR UNIT (AUH12FMAB)

Name and Shape	Q'ty	Part No.
Coupler heat insulation 	1	9350716029
	1	9352766015
Special nut A (large flange) 	4	313005446653
Special nut B (small flange) 	4	313005446759
Template 	1	9360256003
Remote control unit 	1	9371190044 (AR-JW4)
Battery (penlight) 	1 set	0600185534
Remote control unit holder case 	1	9305642014
Tapping screw ( $\phi 3 \times 12$ ) 	3	0700019098

## GRILLE ASSY

Name and Shape	Q'ty	Part No.
screw ( $\phi 5 \times 24$ ) 	4	0700139116
Washer 	4	301801155020
Blower cover insulation 	2	9360047007

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