

INVERTER MULTI  
AIR CONDITIONER  
WALL MOUNTED TYPE

# SERVICE MANUAL



Indoor unit	Outdoor unit
ASY7LMACW	AOY18LMAK2
ASY9LMACW	
ASY12LMACW	
ASY7LMACW	AOY24LMAM2
ASY9LMACW	
ASY12LMACW	

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# SPECIFICATIONS

## INDOOR UNIT

### ELECTRICAL DATA

TYPE	COOL & HEAT		
MODEL NAME	ASY7LMACW	ASY9LMACW	ASY12LMACW
COOLING CAPACITY	2.2 kW	2.7 kW	3.5 kW
HEATING CAPACITY	2.6 kW	3.2 kW	4.0 kW
MOISTURE REMOVAL	1.0 L/hr	1.2 L/hr	1.6 L/hr
AIR CIRCULATION HIGH	430 m3/hr	480 m3/hr	530 m3/hr

### FAN MOTOR

POWER SOURCE	230 V		
DISCRIMINATION	MFA-40GR		
HIGH SPEED	1,000 r.p.m.	1,200 r.p.m.	1,310 r.p.m.
MIDDLE SPEED	900 r.p.m.	1,100 r.p.m.	1,260 r.p.m.
LOW SPEED	850 r.p.m.	1,000 r.p.m.	1,190 r.p.m.
QUIET	800 r.p.m.	940 r.p.m.	1,100 r.p.m.

### NOISE LEVEL

HIGH SPEED	34 dB	36 dB	38 dB
LOW SPEED	29 dB	29 dB	33 dB

### MEASUREMENT

DIMENSIONS H x W x D	257 x 808 x 187 mm		
WEIGHT Net / Gross	8 kg / 10 kg		

## OUTDOOR UNIT

### ELECTRICAL SPECIFICATIONS

TYPE		Cooling & heating multi	
MODEL NAME		AOY18LMAK2	AOY24LMAM2
COOLING CAPACITY		5.5 kW	5.8 kW
HEATING CAPACITY		6.3 kW	6.4 kW
POWER SUPPLY		230 V	230 V
FREQUENCY		50 Hz	50 Hz
RUNNING CURRENT	Cooling	7.3 A	7.6 A
	Heating	7.3 A	7.2 A
INPUT	Cooling	1.65 kW	1.73 kW
	Heating	1.65 kW	1.64 kW
EER	Cooling	3.33 kW/kW	3.35 kW/kW
	Heating	3.82 kW/kW	3.90 kW/kW
AIR CIRCULATION HIGH		2,800 m <sup>3</sup> /hr	2,800 m <sup>3</sup> /hr
MAX CURRENT		10.5 A	12.5 A

### FAN MOTOR

DISCRIMINATION	MFB24JTAT
HIGH SPEED (COOL)	780 r.p.m.
HIGH SPEED (HEAT)	780 r.p.m.

### NOISE LEVEL

COOL	49 dB(A)
HEAT	50 dB(A)

### MEASUREMENT

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

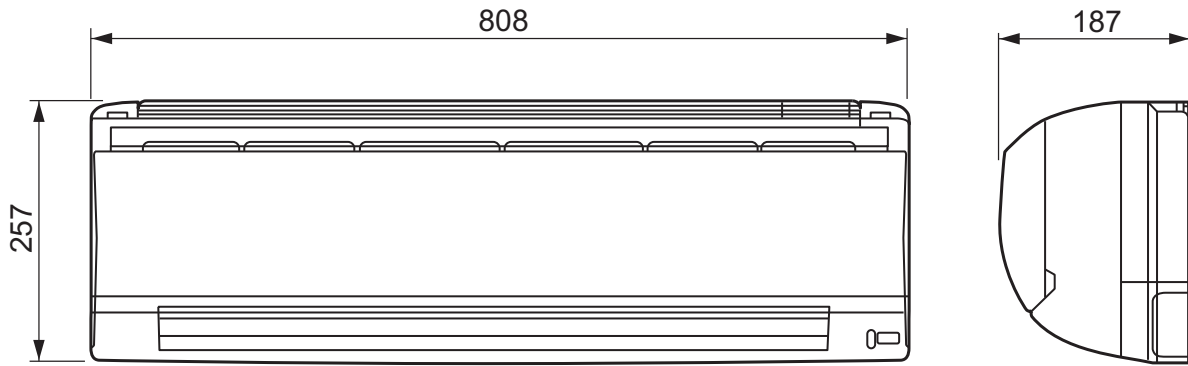
### COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE	Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary
DISCRIMINATION	TNB220FPCMT
WEIGHT (with oil)	14.1 kg
STANDARD REFRIGERANT	1,900 g
REFRIGERANT TYPE	R410A
ADDITIONAL CHARGE	Chargeless
MAX PIPE LENGTH (each unit)	20 m
MAX PIPE LENGTH (total)	30 m
MIN. PIPE LENGTH (each unit)	5 m
MIN. PIPE LENGTH (total)	10 m
MAX ELEVATION (between indoor units)	10 m
MAX ELEVATION (between indoor and outdoor)	10 m

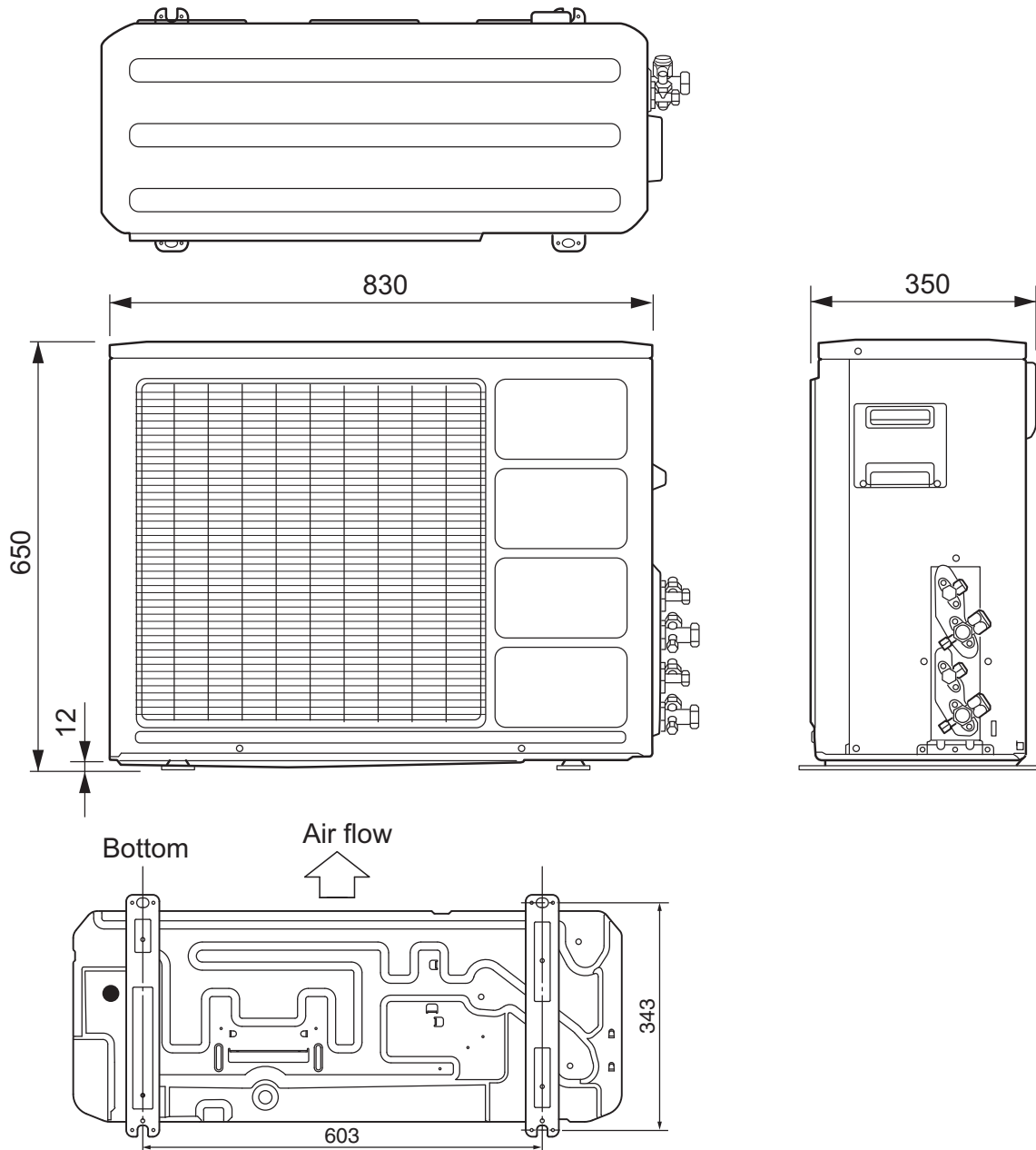
# OUTLINE AND DIMENSIONS

Unit : mm

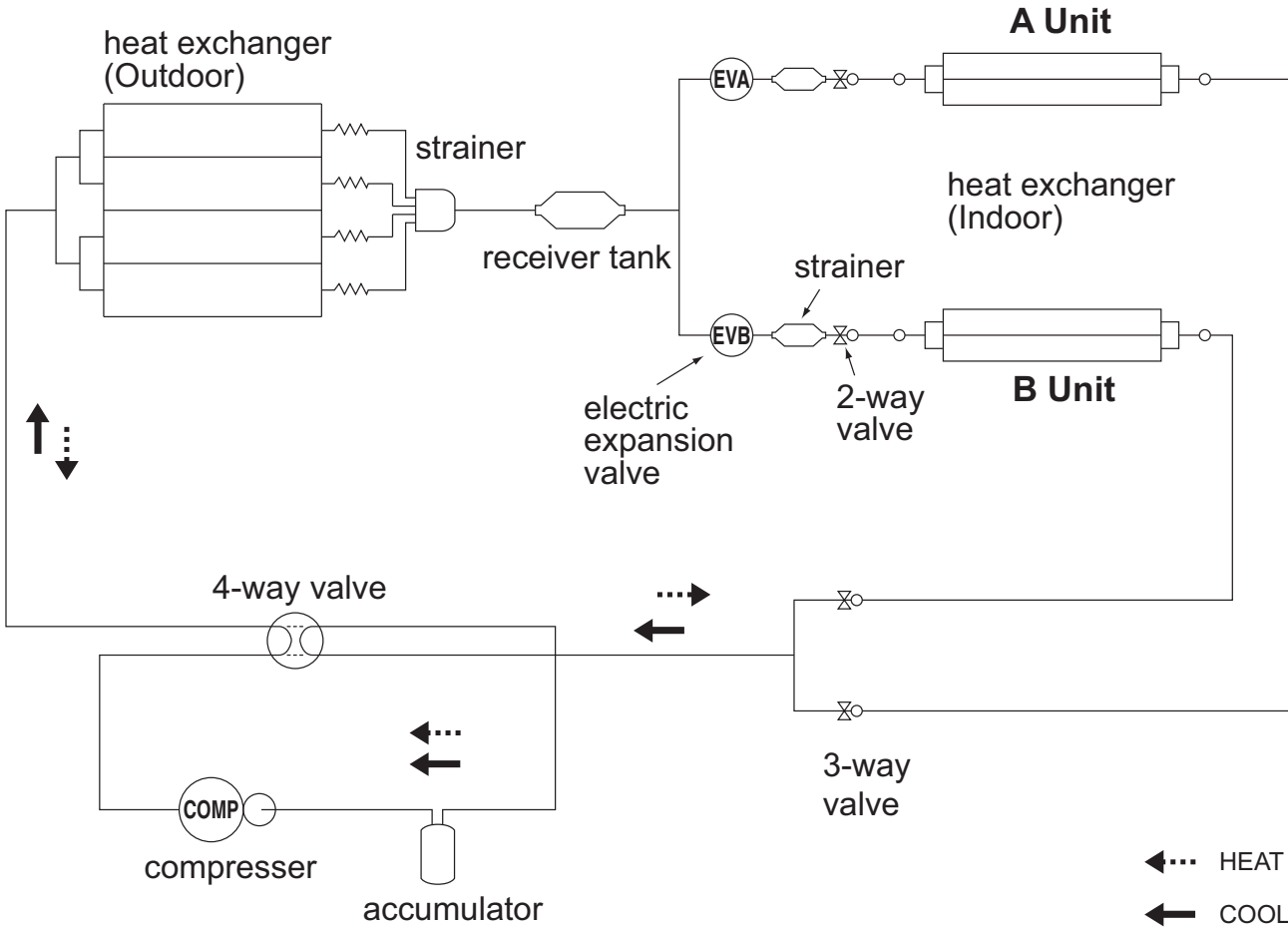
## INDOOR UNIT



## OUTDOOR UNIT

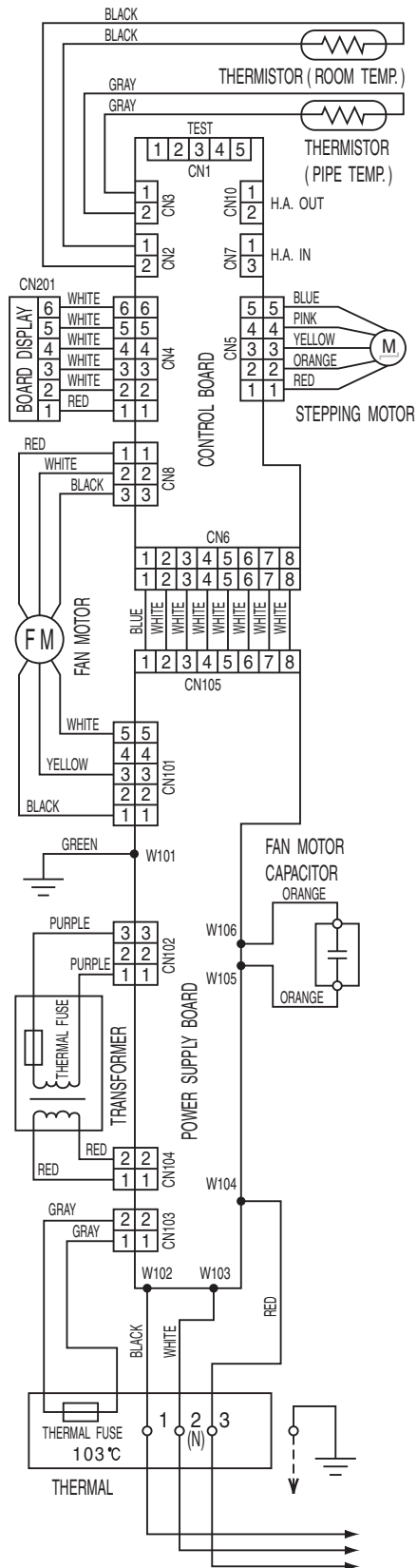


# REFRIGERANT SYSTEM DIAGRAM

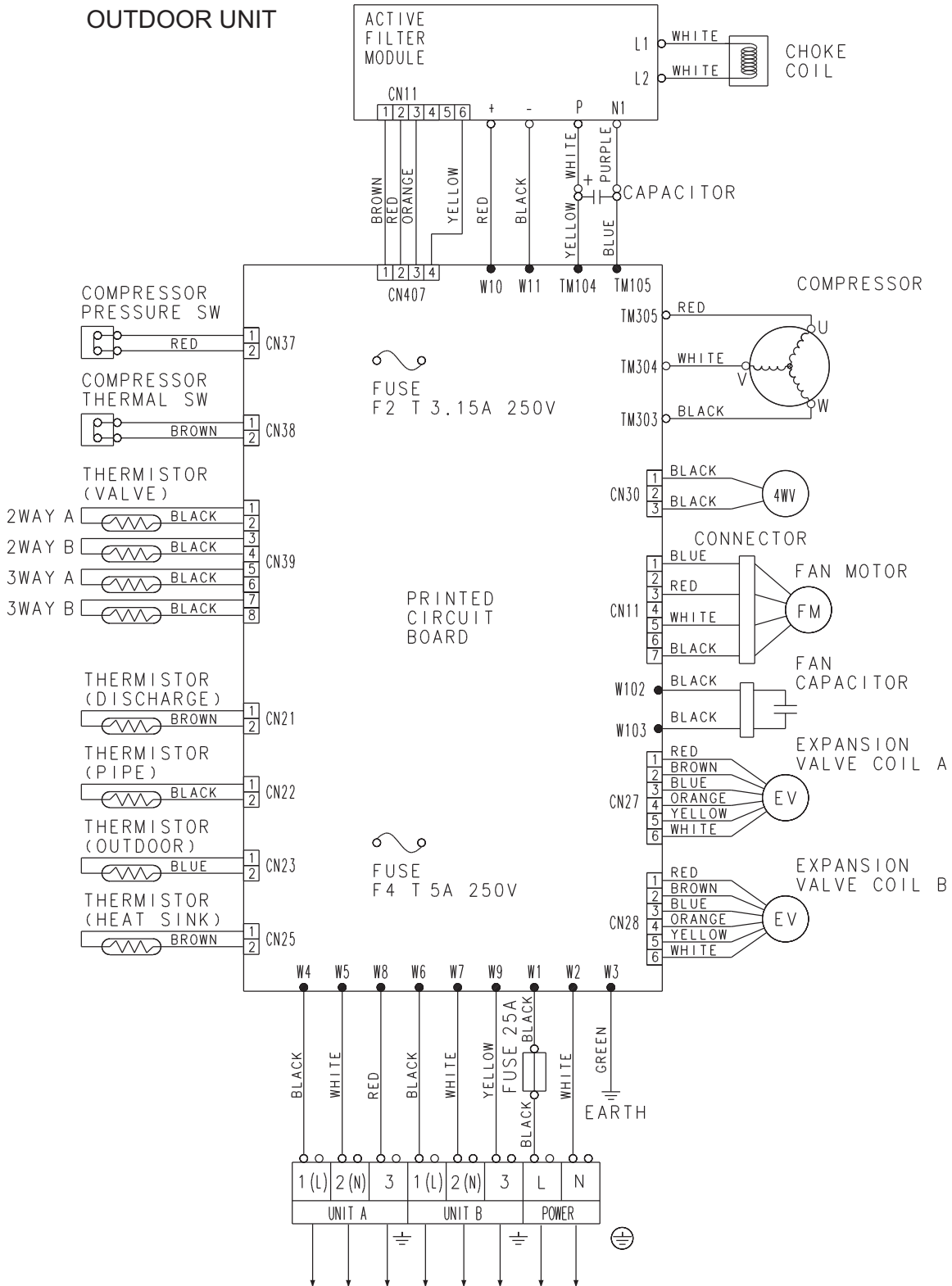


# CIRCUIT DIAGRAM

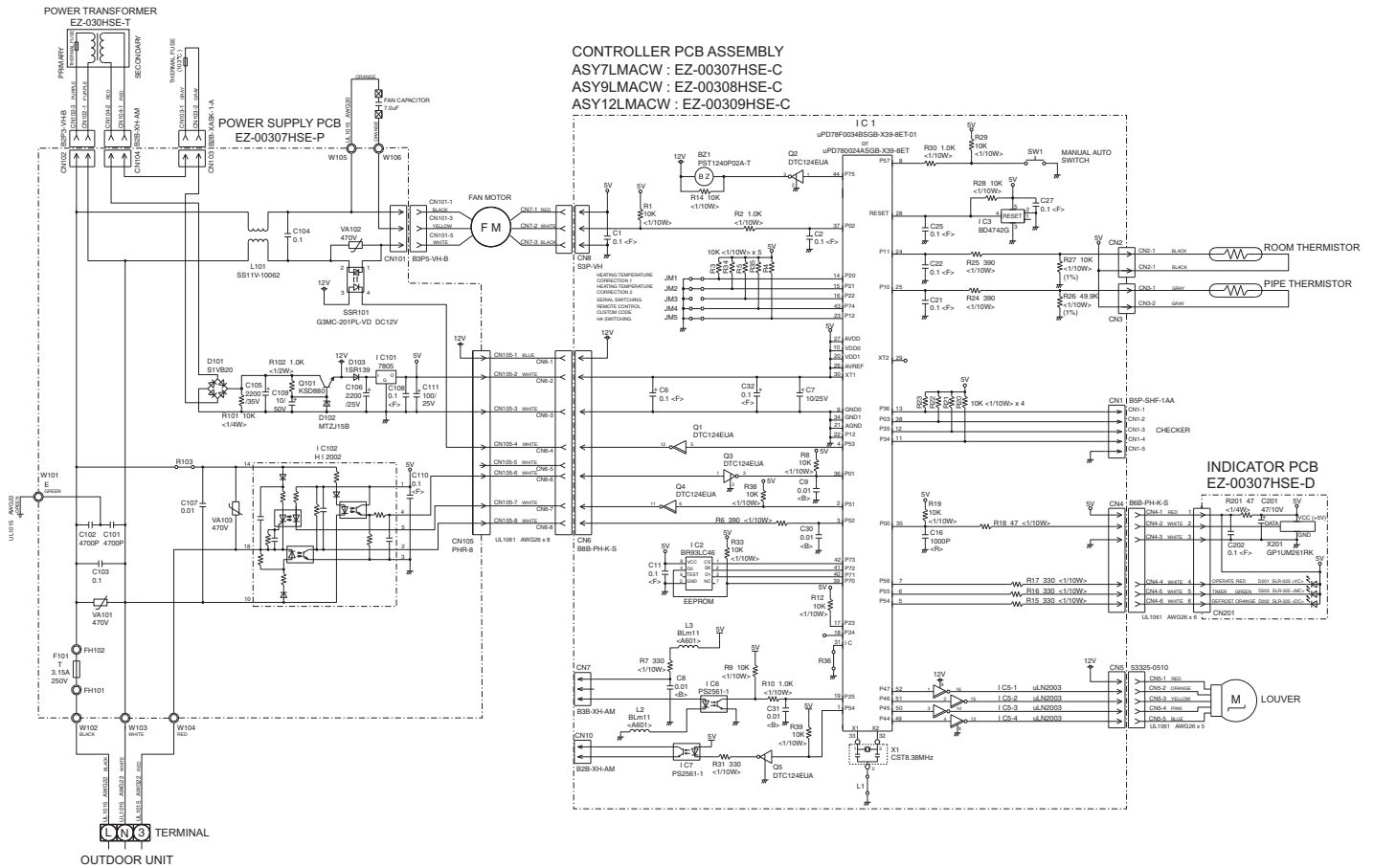
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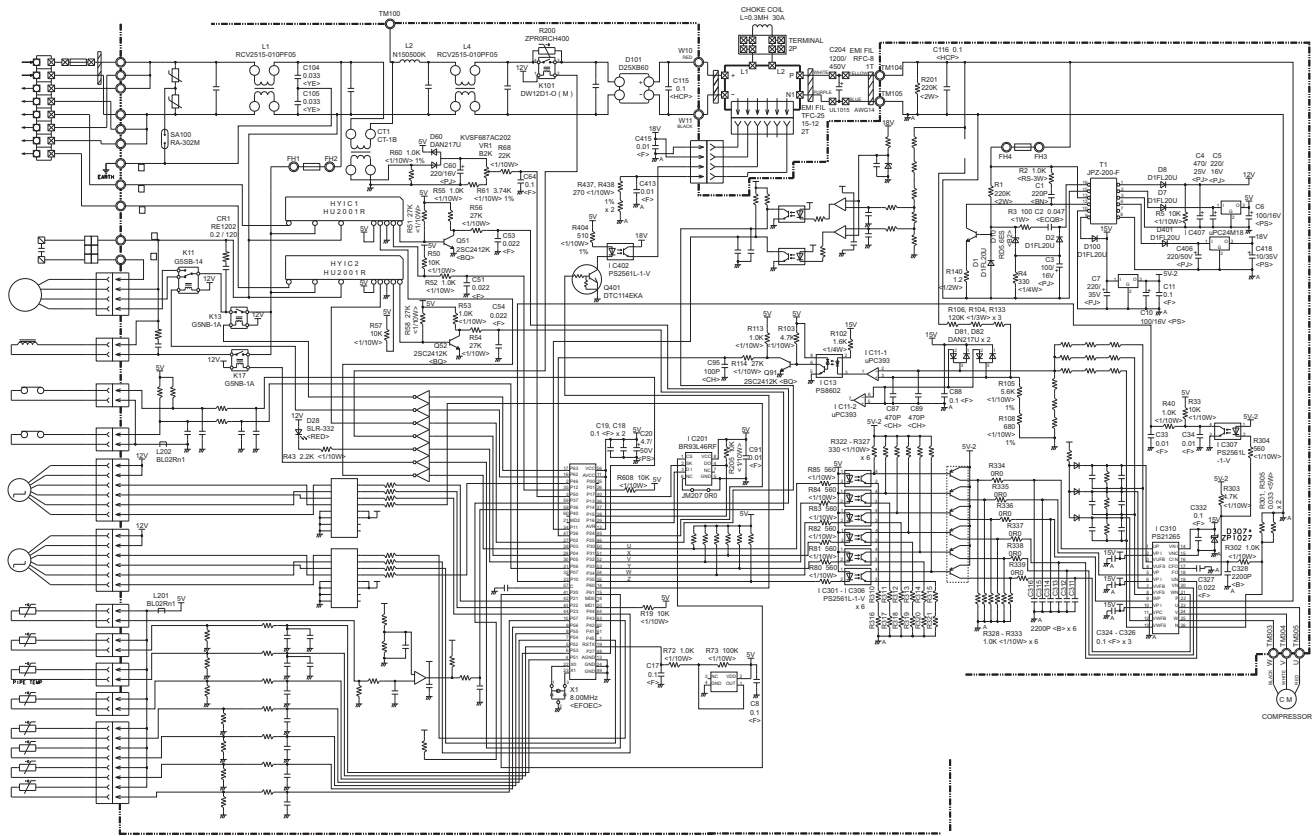
# OUTDOOR UNIT



# INDOOR PCB CIRCUIT DIAGRAM







△

COMPRESSOR

# ERROR CONTENTS

○ : Fast flashing

● : Slow flashing

## INDOOR UNIT

### Large division indication

### Small division indication

LED indication		Error contents
Operation (red)	Timer (green)	
● 2 times	○	Thermistor error (indoor unit)
● 4 times	○	Control unit error (indoor unit)
● 5 times	○	Serial error
● 6 times	○	Fan motor error (indoor unit)
○	● 2 times	Thermistor error (outdoor unit)
○	● 3 times	Pressure switch error
○	● 4 times	Control unit error (outdoor unit)
○	● 5 times	Inverter error

LED indication		Error contents
Operation (red)	Timer (green)	
○	● 2 times	Thermistor error (room temp.)
○	● 3 times	Thermistor error (heat exchanger)
○	● 2 times	MANUAL AUTO button error
○	● 4 times	Power source Hz decision error
○	● 2 times	Serial reverse transmission error
○	● 3 times	Serial order transmission error
○	● 2 times	Lock error
○	● 3 times	r.p.m error
● 2 times	○	Discharge thermistor error
● 4 times	○	Heat exchanger thermistor error
● 6 times	○	Outdoor temperature thermistor error
● 8 times	○	Compressor thermistor error
● 9 times	○	2 way valve thermistor error
● 10 times	○	3 way valve thermistor error
● 2 times	○	Pressure switch error
● 2 times	○	Capacity error of connecting indoor unit
● 2 times	○	Outdoor unit IPM error
● 5 times	○	Compressor later location error

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

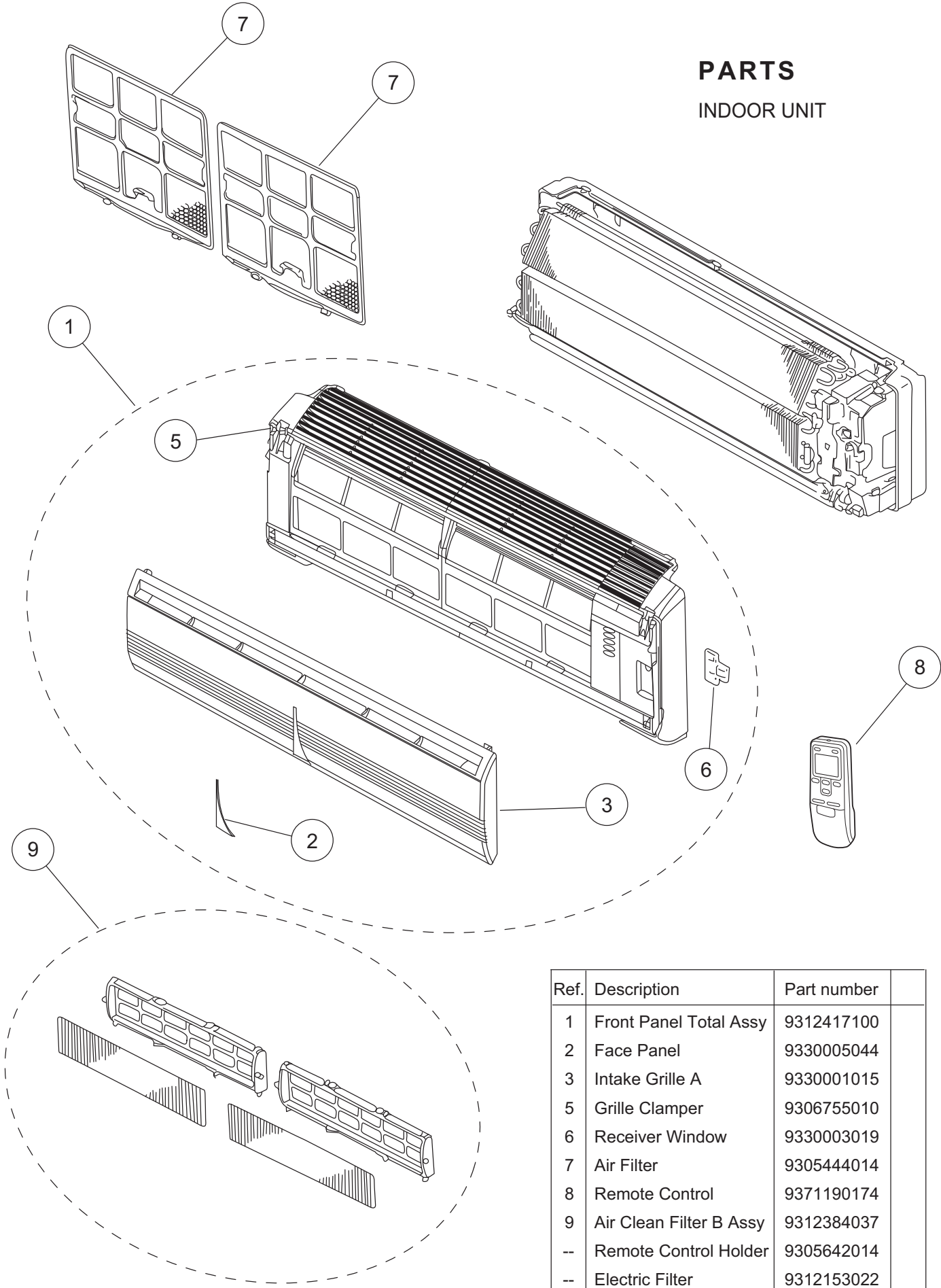
Secondly, "Small division indication" is indicated by pushing "Test run" button of remote controller.

## 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

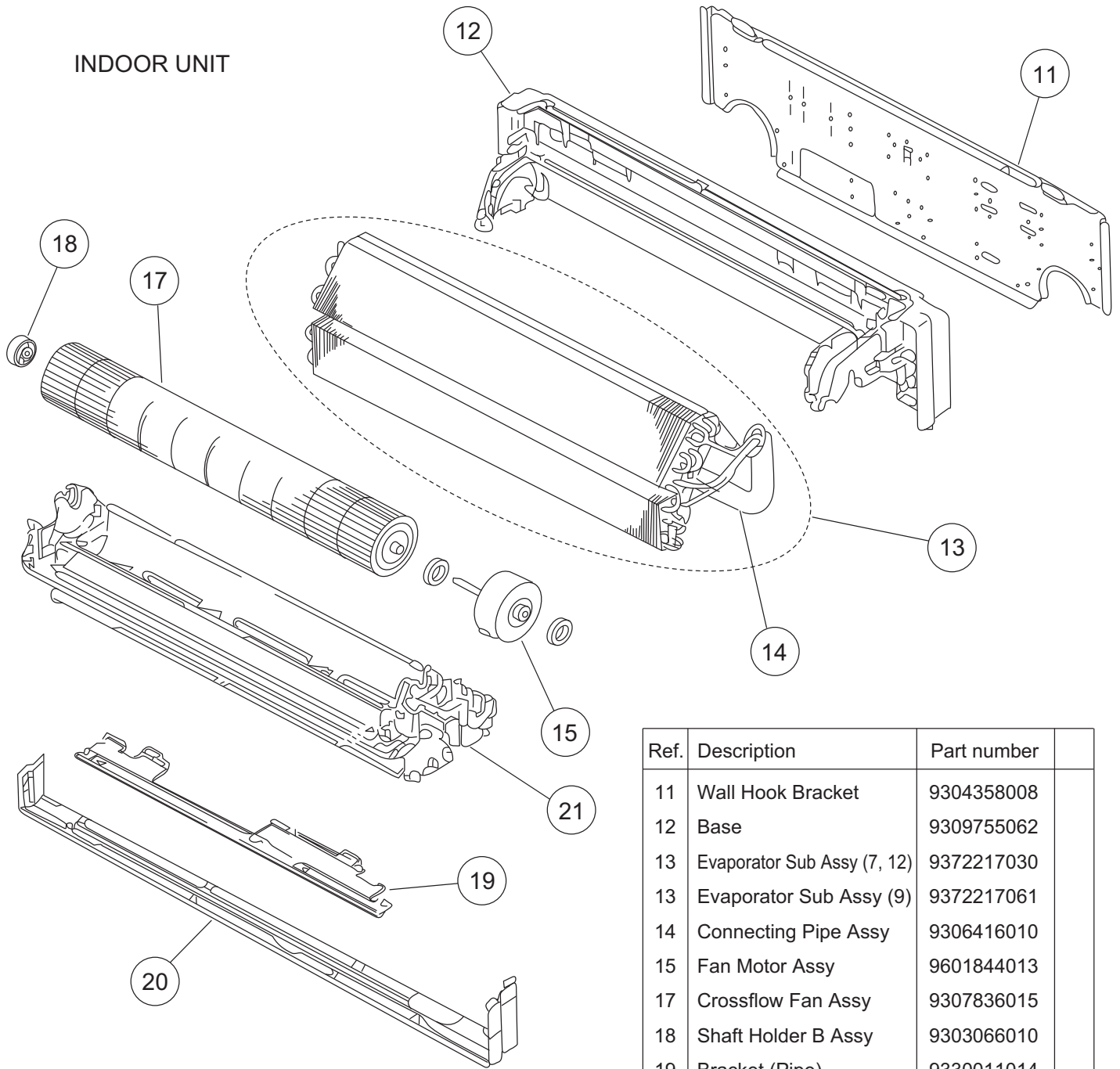
# PARTS

## INDOOR UNIT



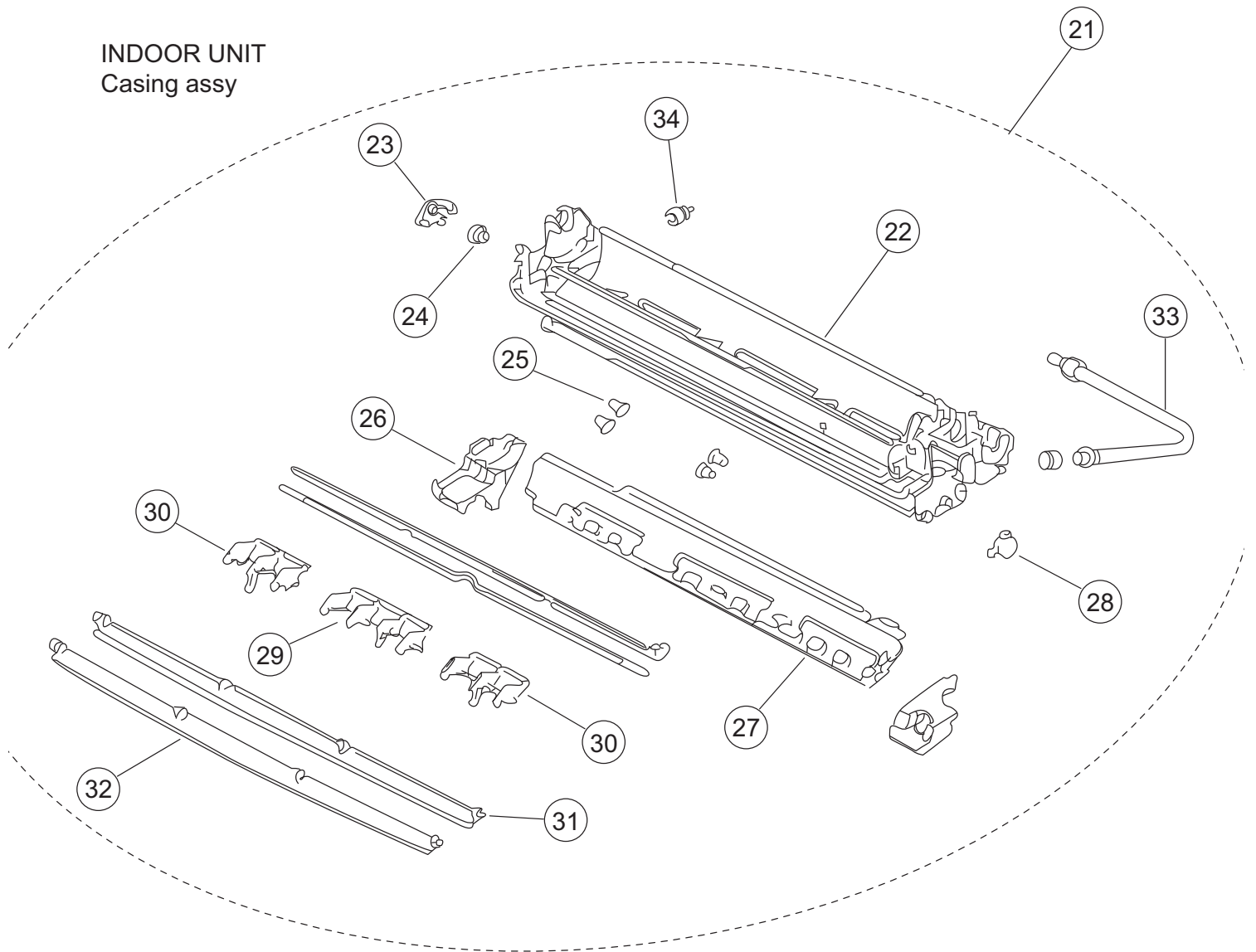
Ref.	Description	Part number
1	Front Panel Total Assy	9312417100
2	Face Panel	9330005044
3	Intake Grille A	9330001015
5	Grille Clasper	9306755010
6	Receiver Window	9330003019
7	Air Filter	9305444014
8	Remote Control	9371190174
9	Air Clean Filter B Assy	9312384037
--	Remote Control Holder	9305642014
--	Electric Filter	9312153022
--	Air Clean Filter Frame	9305445011

# INDOOR UNIT



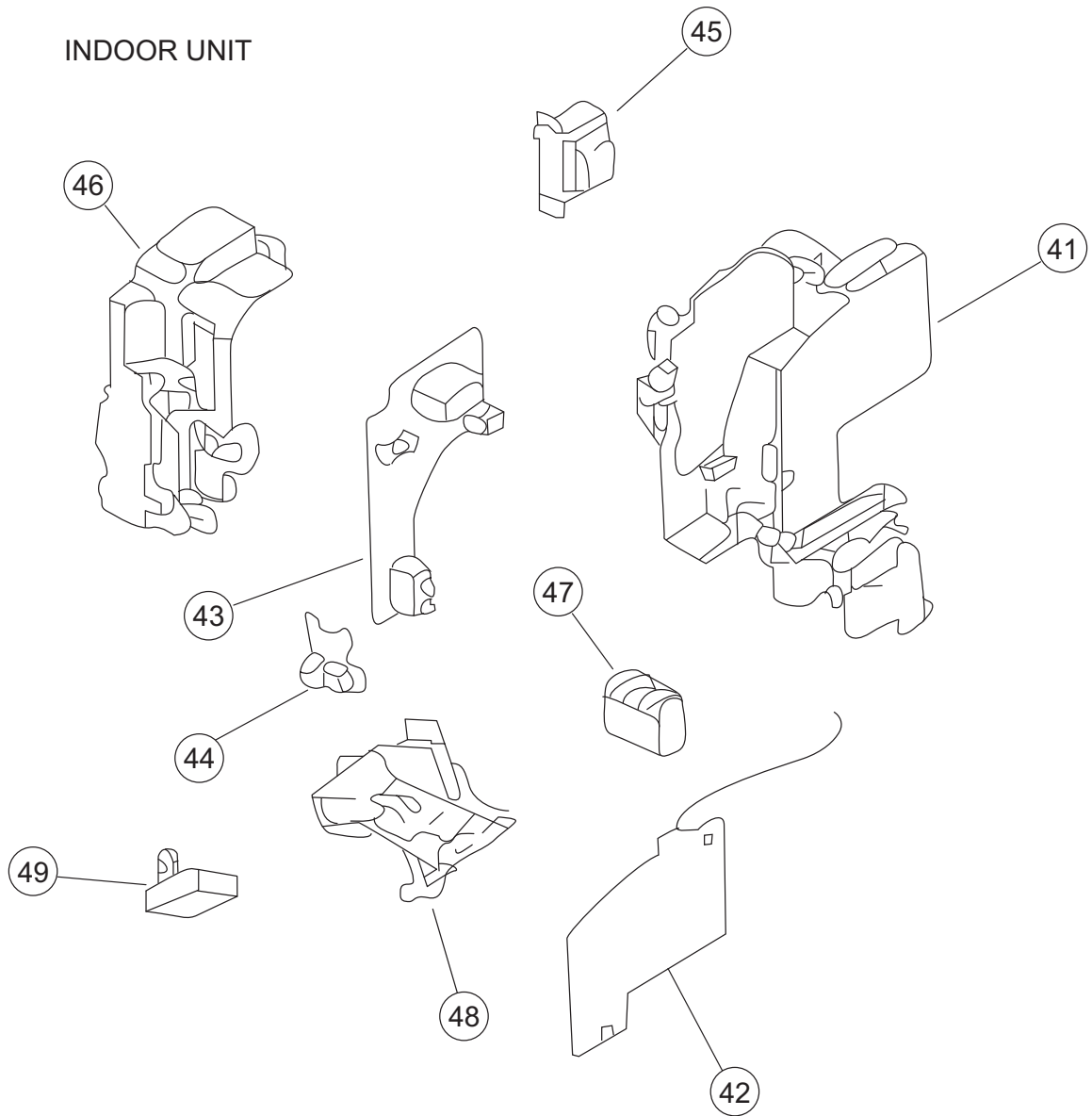
Ref.	Description	Part number
11	Wall Hook Bracket	9304358008
12	Base	9309755062
13	Evaporator Sub Assy (7, 12)	9372217030
13	Evaporator Sub Assy (9)	9372217061
14	Connecting Pipe Assy	9306416010
15	Fan Motor Assy	9601844013
17	Crossflow Fan Assy	9307836015
18	Shaft Holder B Assy	9303066010
19	Bracket (Pipe)	9330011014
20	Lower Cover	9330004016
21	Casing Assy	9312173037

INDOOR UNIT  
Casing assy



Ref.	Description	Part number
21	Casing Assy	9312173037
22	Casing	9306052027
23	Gear Bracet	9306407001
24	Gear A	9306062002
25	Bushing A	9303529010
26	Casing Cover LR	9306064006
27	Casing Cover B	9306121006
28	Step Motor	9900139018
29	Louver A	9306055028
30	Louver B	9306056025
31	Louver Z	9306058043
32	Louver U	9306057046
33	Drain Hose Assy	9310357026
34	Drain Cap	9304150008
--	Casing Cover F	9306066000

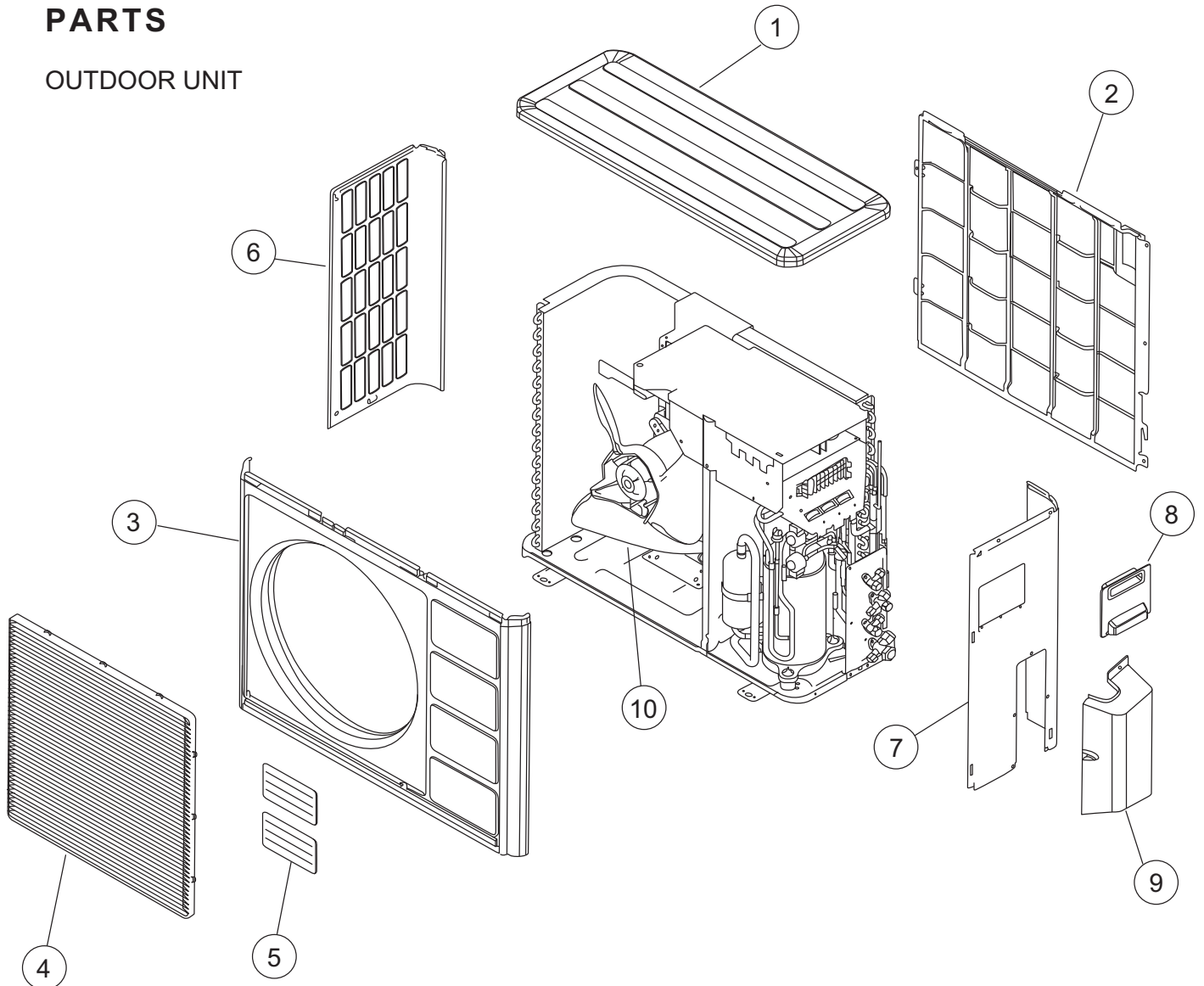
# INDOOR UNIT



Ref.	Description	Part number
41	Switch Box	9330007017
42	Controller PCB Assy (7)	9705289017
42	Controller PCB Assy (9)	9705289024
42	Controller PCB Assy (12)	9705289031
43	PCB Assy (Power & Indicator)	9705293014
44	Lamp Cover	9330014015
45	Power Transformer	9900028015
46	Control Box Cover	9330008014
47	Terminal	9900040055
48	Indicator Case	9330009011
49	Fan Capacitor	9900089061

# PARTS

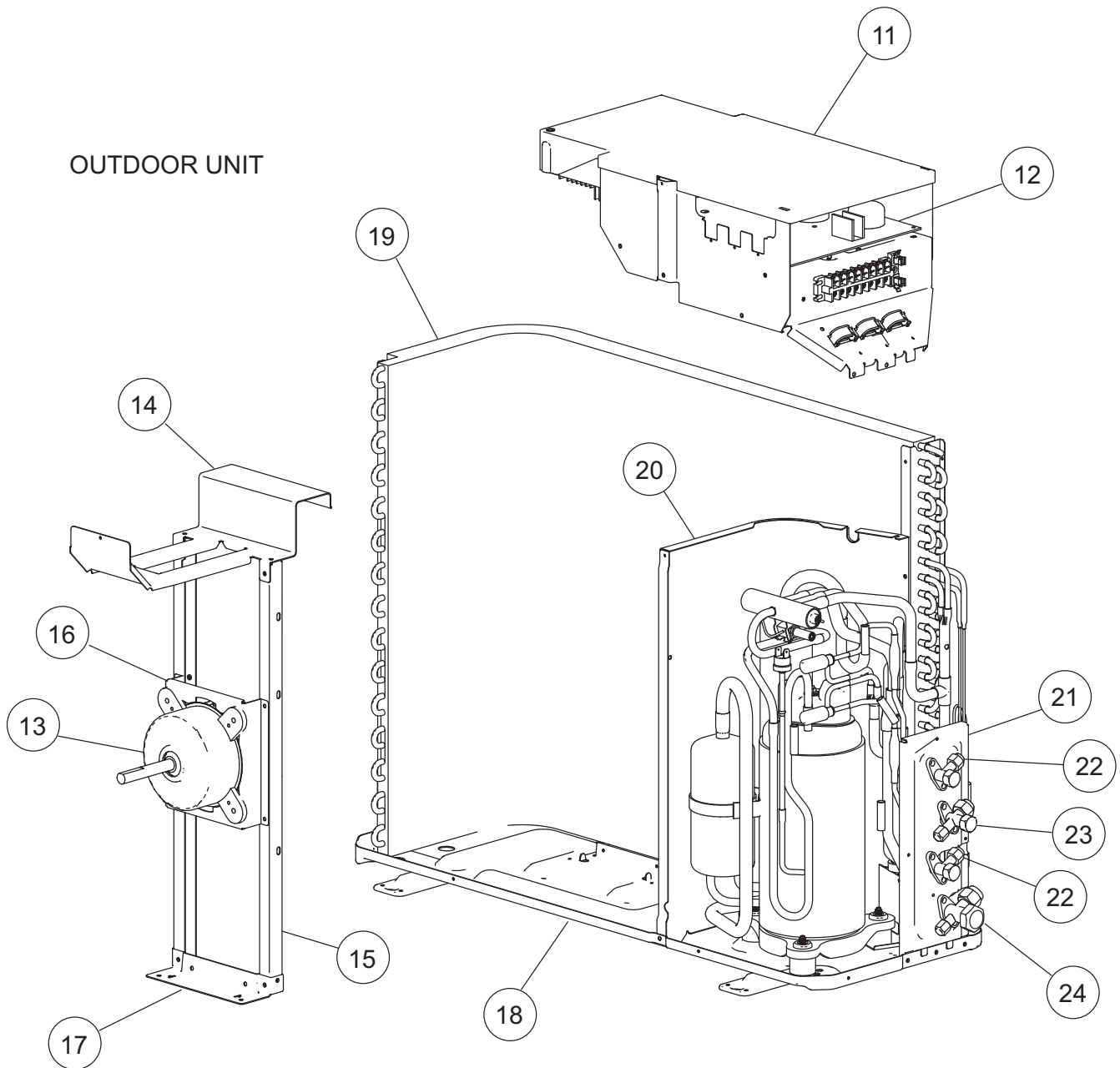
## OUTDOOR UNIT



Ref.	Description	Part number
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

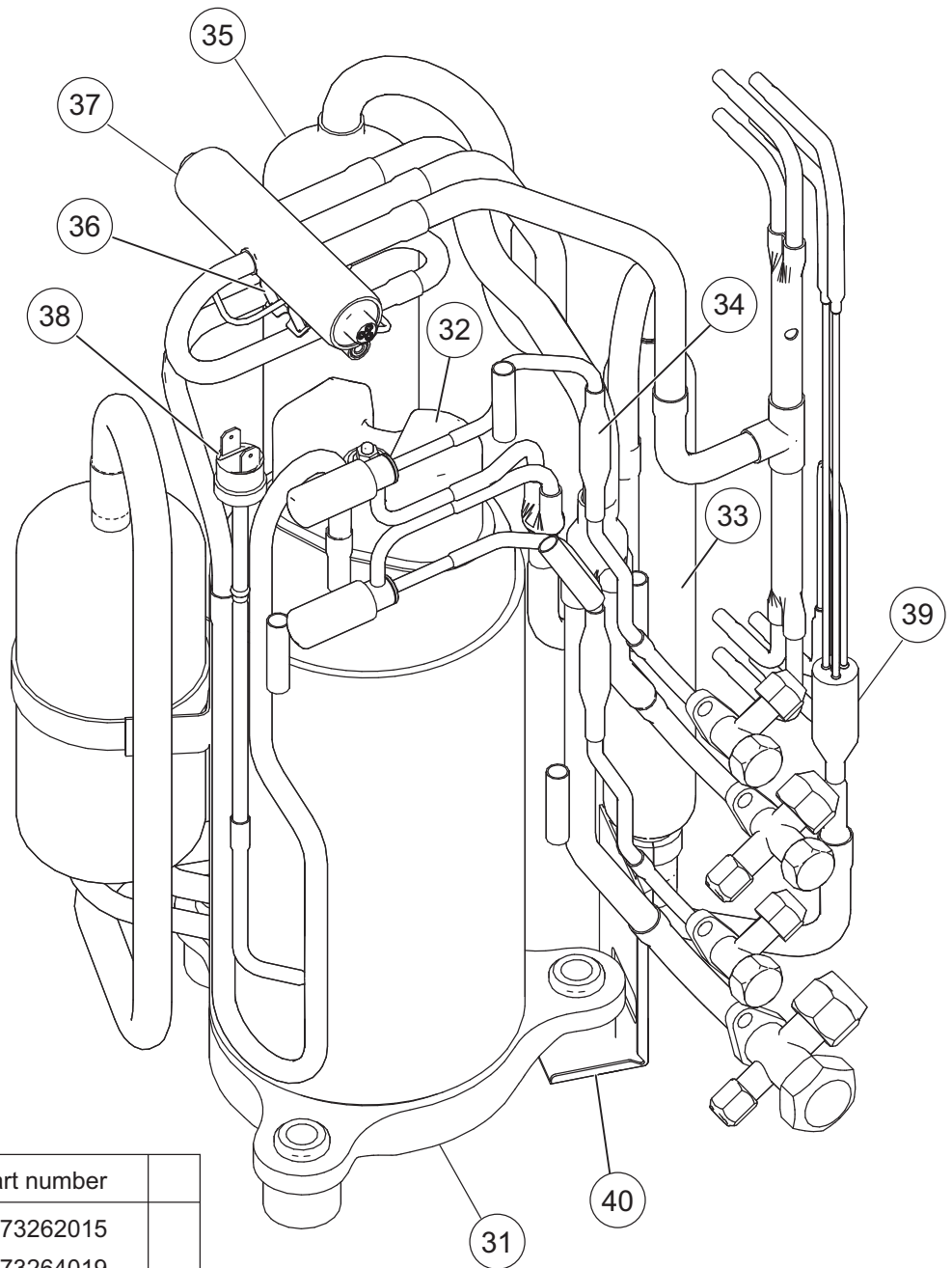


# OUTDOOR UNIT



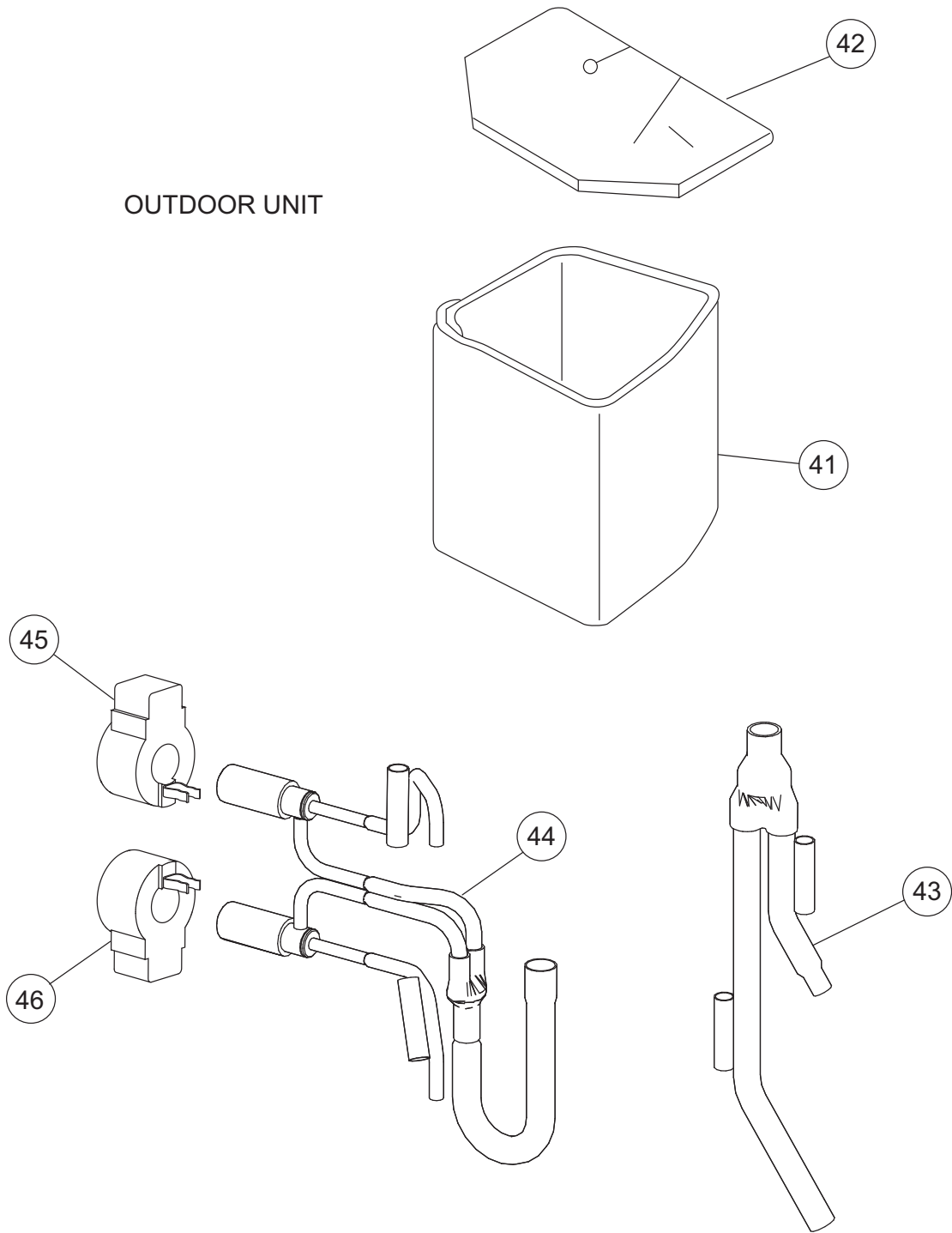
Ref.	Description	Part number	Ref.	Description	Part number
11	Control Cover	9372792018	--	Heat Exchanger Thermistor	9704220059
12	Controller PCB Assy (18LMAK2)	9707560039	--	Thermistor Outdoor	9703516047
12	Controller PCB Assy (24LMAM2)	9707560015	--	Thermistor Heat Sink	9900195014
13	Motor Induct	9601671046	--	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

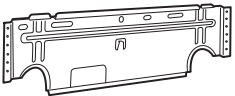

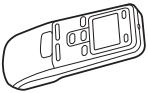

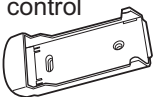
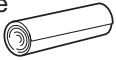
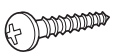

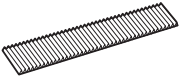
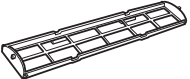

OUTDOOR UNIT



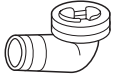


Ref.	Description	Part number	
41	Compressor Cover A	9373730019	
42	Compressor Cover B	9373730026	
43	Joint Pipe (3Way) Assy	9373729129	
44	Expansion Valve Assy	9373729068	
45	Expansion Valve Coil (White connector)	9900197018	
46	Expansion Valve Coil (Red connector)	9900057022	

# ACCESSORIES

## INDOOR UNIT

Name and Shape	Part number
Wall hook bracket 	9304358008
Wall cap-B 	313714296205
Remote control 	9371190174 (AR-JW17)
Battery (penlight) 	0600185534
Remote control holder 	9305642014
Cloth tape 	9308117007
Tapping screw (big) ( $\phi$ 4 x 20) 	301141164200
Tapping screw (small) ( $\phi$ 3 x 12) 	0700019036
Air cleaning filter 	DEODRANT FILTER 9310441015  ELECTRIC FILTER 9310442012
Air cleaning filter frame 	9305445011
Adapter D (1/2" $\rightarrow$ 3/8") 12.7 mm $\rightarrow$ 9.52 mm 	9L model only 9370244007

## OUTDOOR UNIT

Name and Shape	Part number
Drain pipe 	9303029015
Drain cap 	313166024302
Adapter D (1/2" $\rightarrow$ 3/8") 12.7mm $\rightarrow$ 9.52mm 	9370244007

0402G2536

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