



SPLIT TYPE  
ROOM AIR CONDITIONER  
WALL MOUNTED TYPE

# SERVICE MANUAL



Indoor unit	Outdoor unit
ASHG07LMCA	AOHG07LMCA
ASHG09LMCA	AOHG09LMCA
ASHG12LMCA	AOHG12LMCA

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# SPECIFICATIONS

## ELECTRICAL DATA

TYPE		Cool & heat inverter		
INDOOR UNIT		ASHG07LMCA	ASHG09LMCA	ASHG12LMCA
OUTDOOR UNIT		AOHG07LMCA	AOHG09LMCA	AOHG12LMCA
COOLING CAPACITY		2.00 kW	2.50 kW	3.40 kW
HEATING CAPACITY		3.00 kW	3.20 kW	4.00 kW
POWER SOURCE		230 V		
FREQUENCY		50 Hz		
RUNNING CURRENT	Cooling	2.5 A	3.2 A	4.6 A
	Heating	3.3 A	3.5 A	4.8 A
INPUT WATTS	Cooling	0.47 kW	0.65 kW	0.97 kW
	Heating	0.77 kW	0.73 kW	1.02 kW
EER	Cooling	4.30 kW/kW	3.85 kW/kW	3.50 kW/kW
COP	Heating	3.90 kW/kW	4.38 kW/kW	3.92 kW/kW
MOISTURE REMOVAL		1.0 L/h	1.3 L/h	1.8 L/h
AIR CIRCULATION HIGH		750 m <sup>3</sup> /h		
MAXIMUM CURRENT	Cooling	6.0 A		6.5 A
	Heating	7.5 A		9.0 A

## FAN MOTOR

POWER SOURCE		230 V	
INDOOR UNIT Cooling	High	1,320 r.p.m.	
	Medium	1,160 r.p.m.	
	Low	930 r.p.m.	
	Quiet	680 r.p.m.	
INDOOR UNIT Heating	High	1,320 r.p.m.	
	Medium	1,160 r.p.m.	
	Low	980 r.p.m.	
	Quiet	710 r.p.m.	
OUTDOOR UNIT	Cooling	730 r.p.m.	860 r.p.m.
	Heating	650 r.p.m.	760 r.p.m.

## NOISE LEVEL

INDOOR UNIT Cooling	High	43 dB	
	Medium	40 dB	
	Low	32 dB	
	Quiet	21 dB	
INDOOR UNIT Heating	High	43 dB	
	Medium	38 dB	
	Low	33 dB	
	Quiet	22 dB	
OUTDOOR UNIT	Cooling	45 dB	50 dB
	Heating	45 dB	50 dB

## COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary	
DISCRIMINATION		5SS072XHA01	ASM89D10UFZ
WEIGHT (with oil)		6.0 kg	8.9 kg
PRECHARGED REFRIGERANT		700 g	850 g
REFRIGERANT TYPE		R410A	
FULL CHARGE	Pipe length 15 m	700 g	850 g
	20 m	800 g	950 g
ADDITIONAL CHARGE		20 g/m	
MAXIMUM PIPING HEIGHT		15 m	

## DIMENSIONS

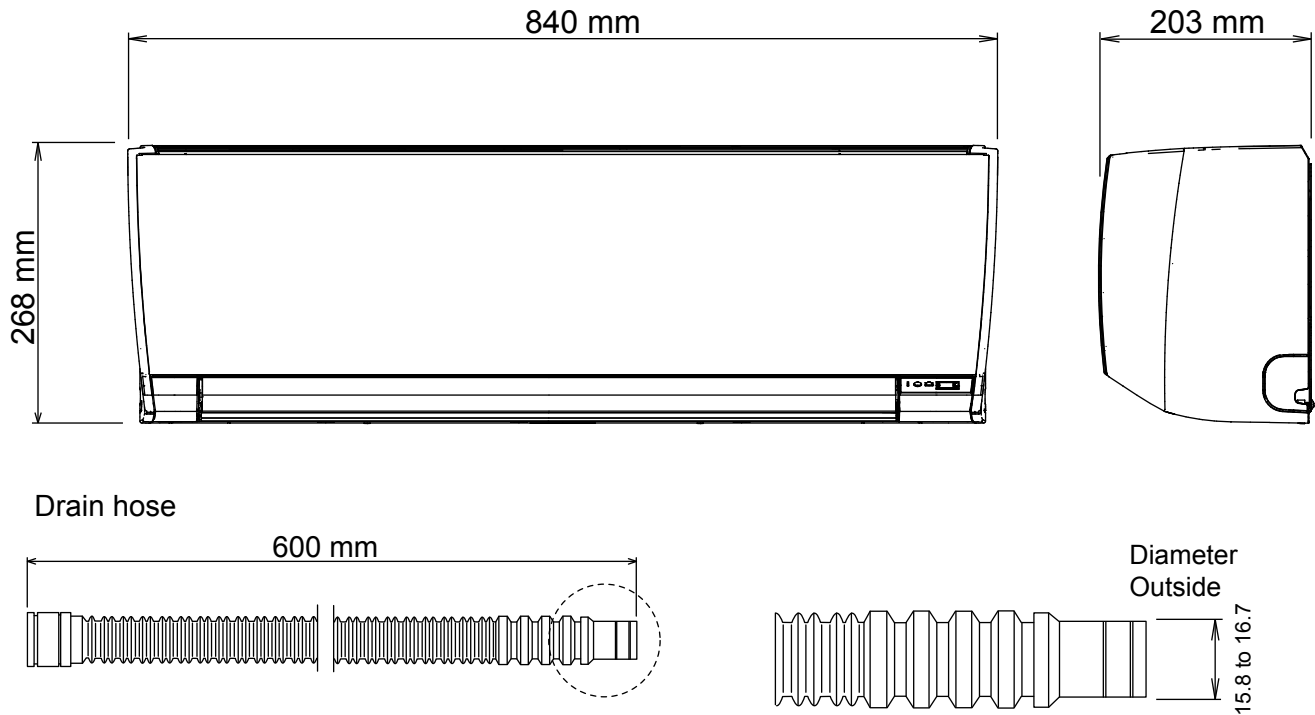
INDOOR UNIT H x W x D	268 x 840 x 203 mm
OUTDOOR UNIT H x W x D	535 x 663 x 293 mm

## WEIGHT

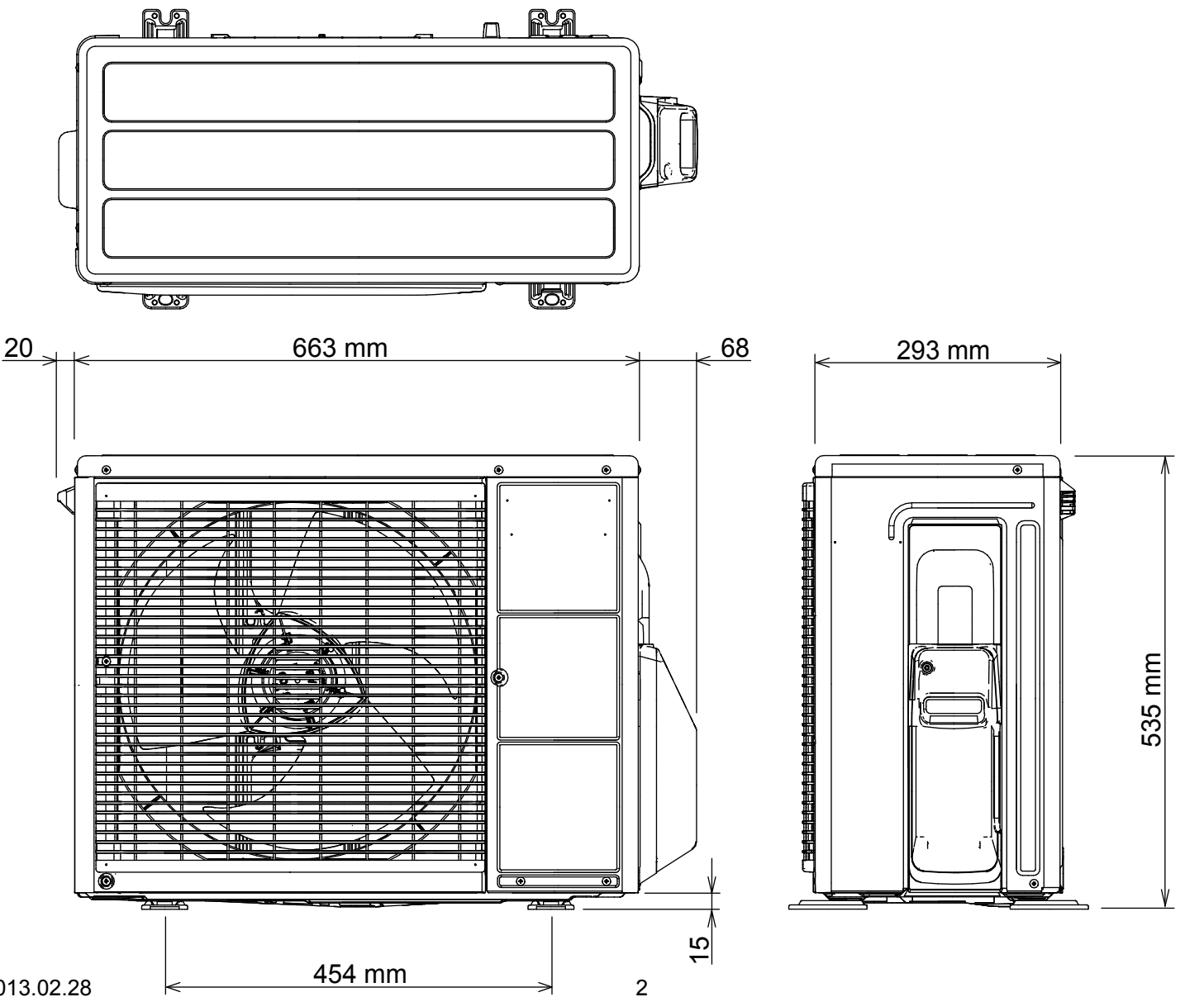
INDOOR UNIT Net / Shipping	8.5 kg / 10.5 kg	
OUTDOOR UNIT Net / Shipping	21 kg / 25 kg	26 / 30

# DIMENSIONS

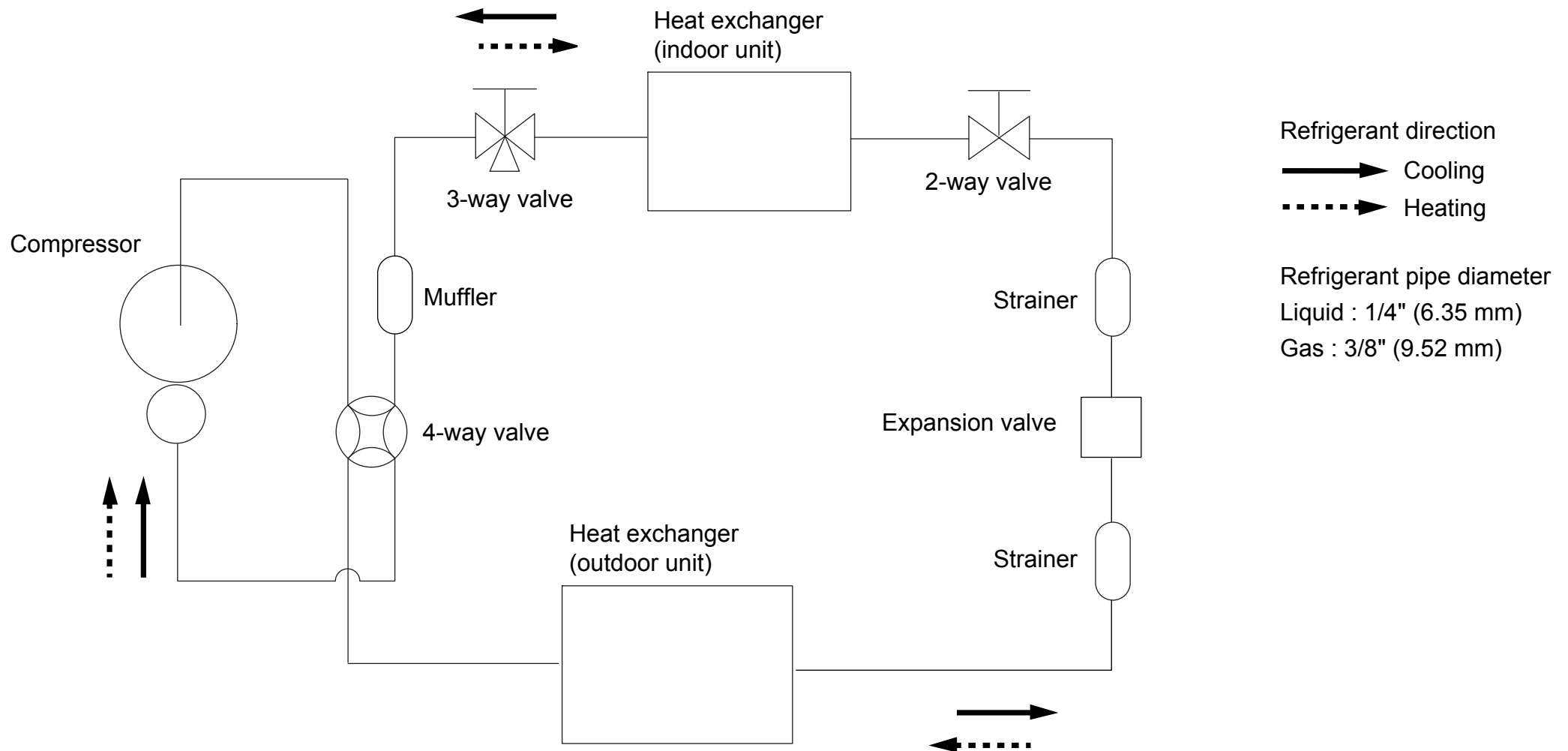
## INDOOR UNIT



## OUTDOOR UNIT



# REFRIGERANT SYSTEM DIAGRAM



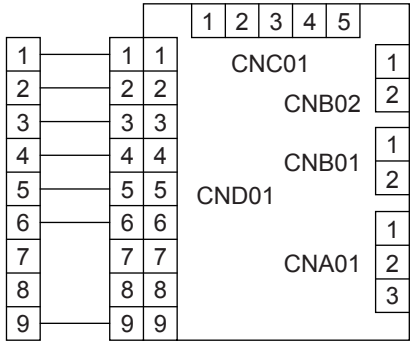


CIRCUIT  
DIAGRAM

UTY-XCBXZ2 (OPTION)  
COMMUNICATION PCB

REMOTE CONTROL  
(OPTION)

TO MAIN PCB



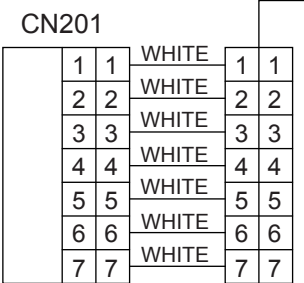
EX OUT (OPTION)  
ERROR STATUS

EX OUT (OPTION)  
OPERATION STATUS

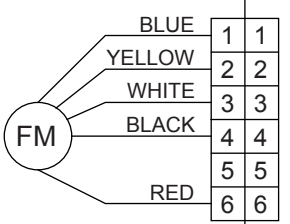
EX IN (OPTION)

INDOOR UNIT

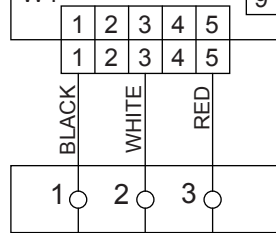
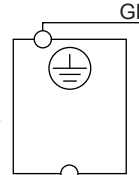
INDICATOR PCB



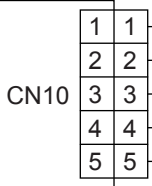
MAIN PCB



EARTH TERMINAL

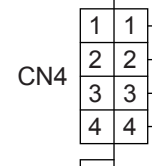


TERMINAL



LOUVER  
(UP / DOWN)

TEST

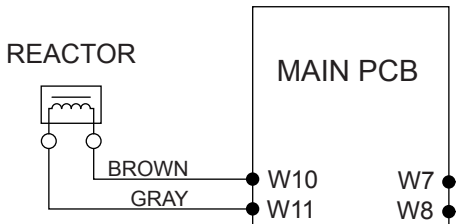


THERMISTOR  
(PIPE TEMP.)

THERMISTOR  
(ROOM TEMP.)

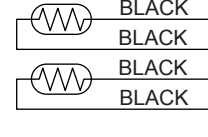
TO COMMUNICATION KIT  
(OPTION)

OUTDOOR UNIT

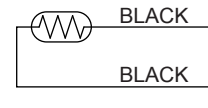


THERMISTOR  
(PIPE TEMP.)

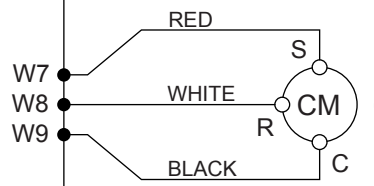
THERMISTOR  
(DISCHARGE TEMP.)



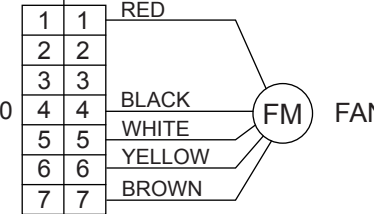
THERMISTOR  
(OUTDOOR TEMP.)



MAIN PCB



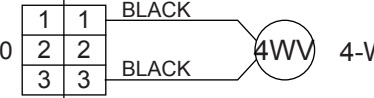
AOYG07LMCA  
AOYG09LMCA



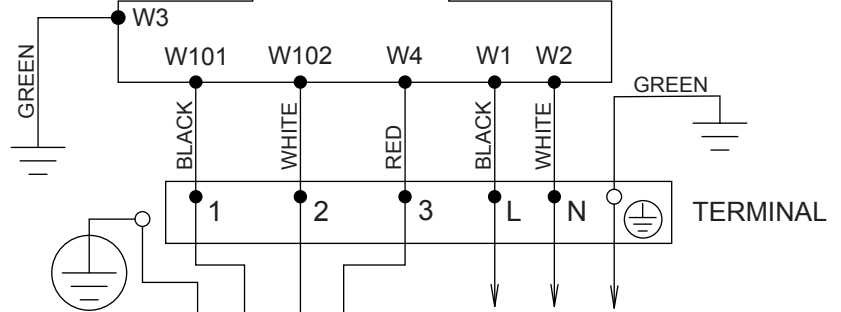
FAN MOTOR



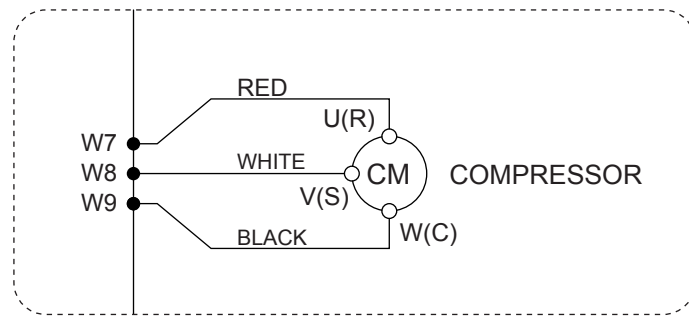
EXPANSION VALVE



4-WAY VALVE

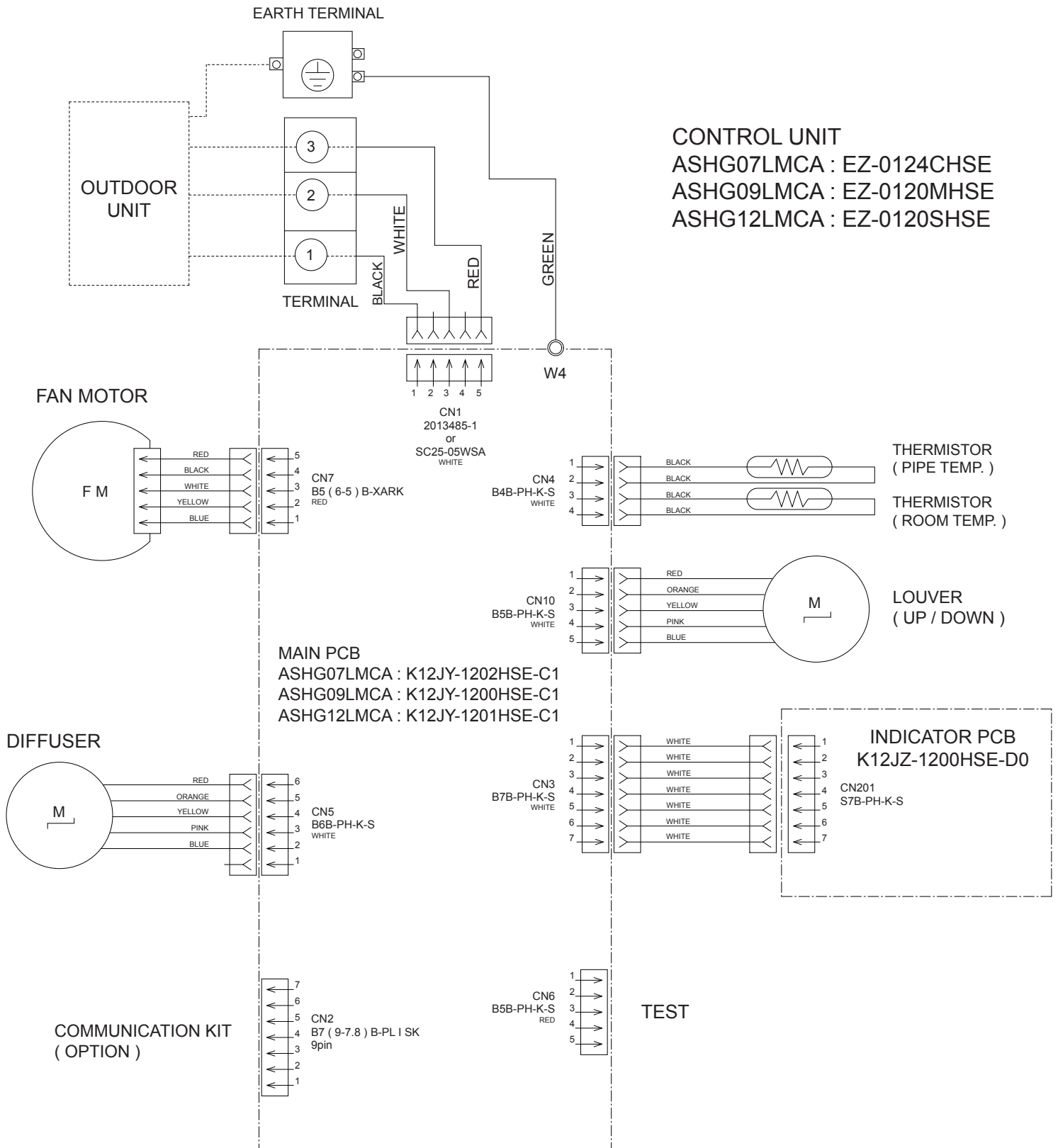


POWER SOURCE

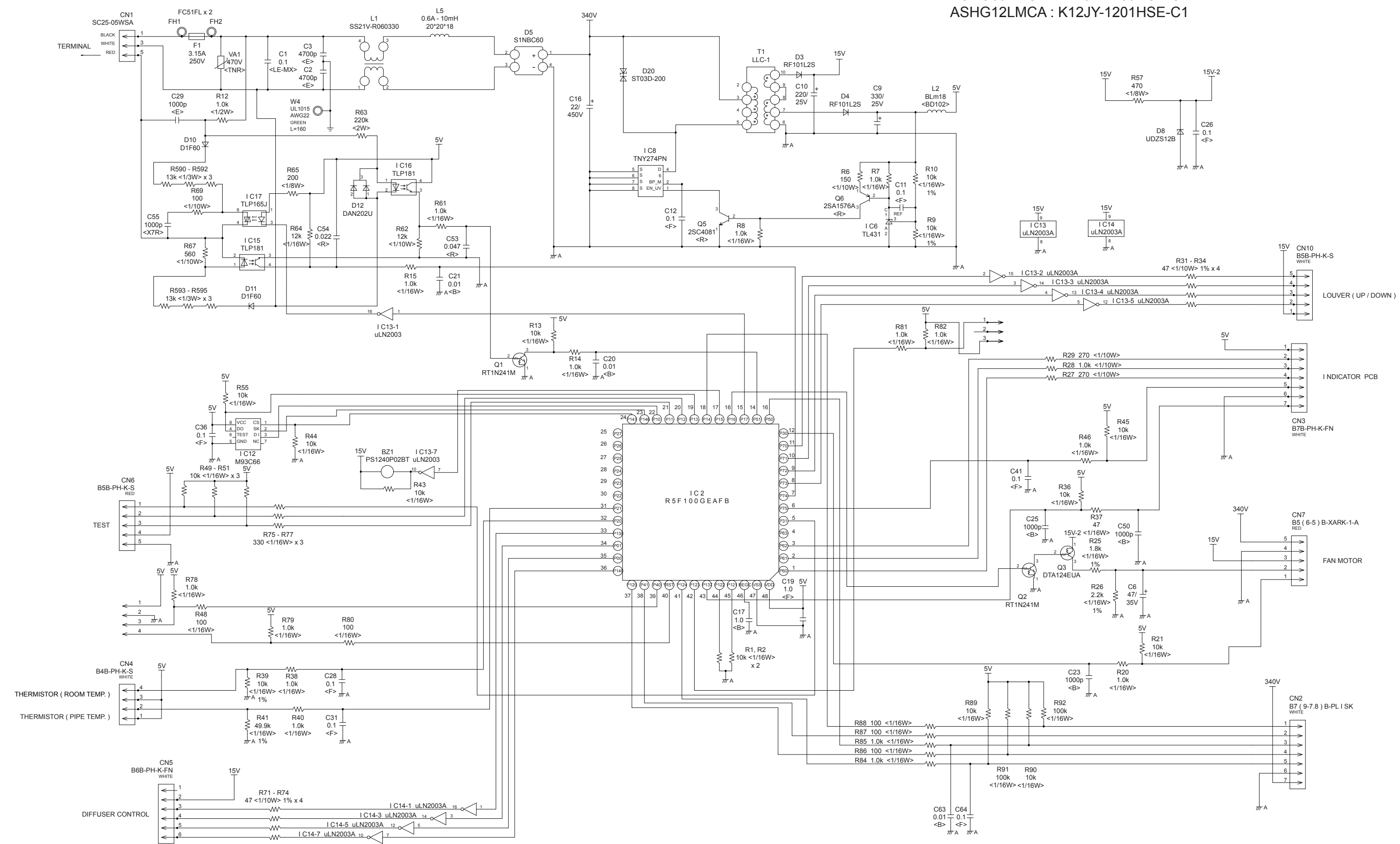


AOYG12LMCA

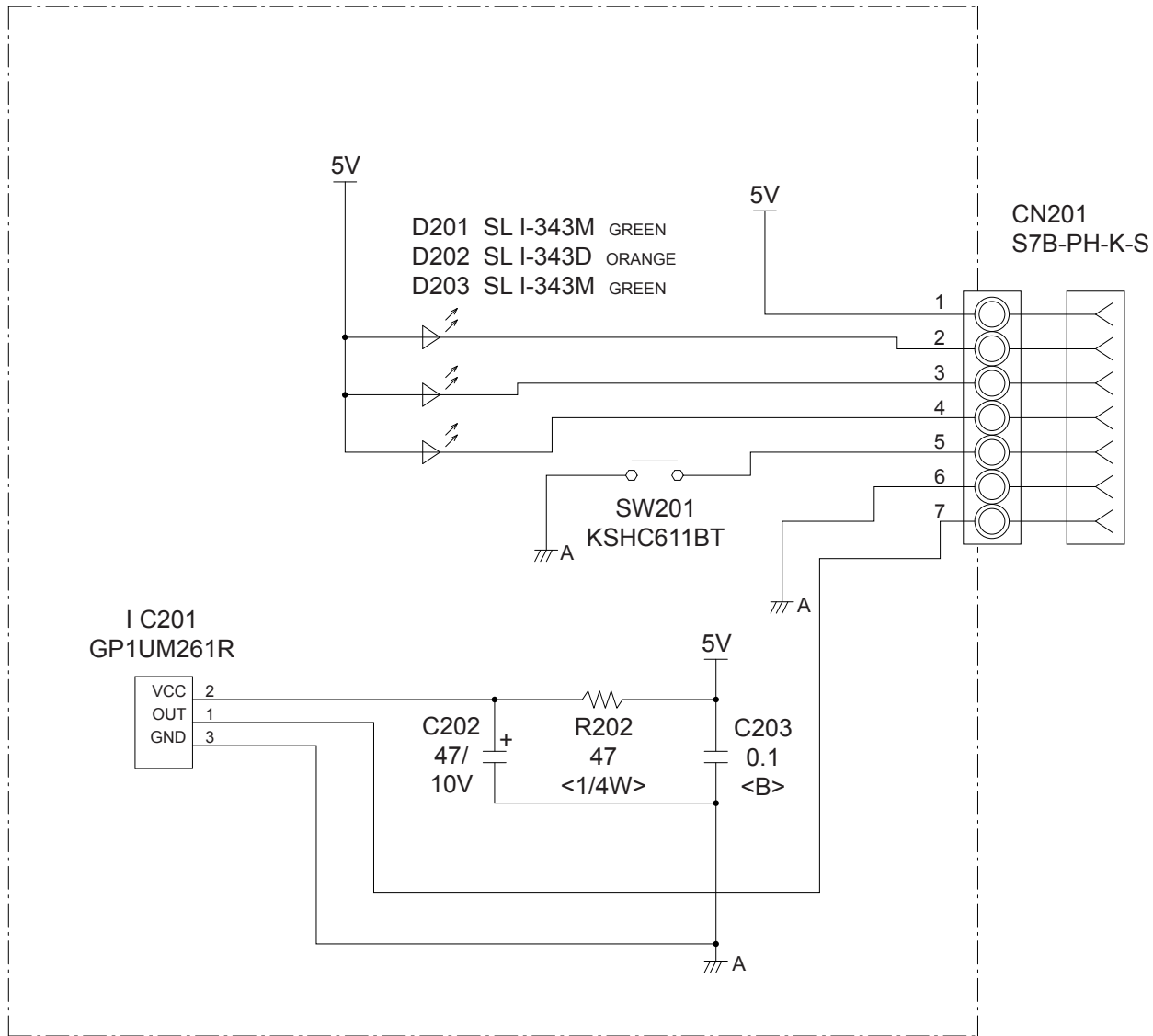
# INDOOR PCB CIRCUIT DIAGRAM

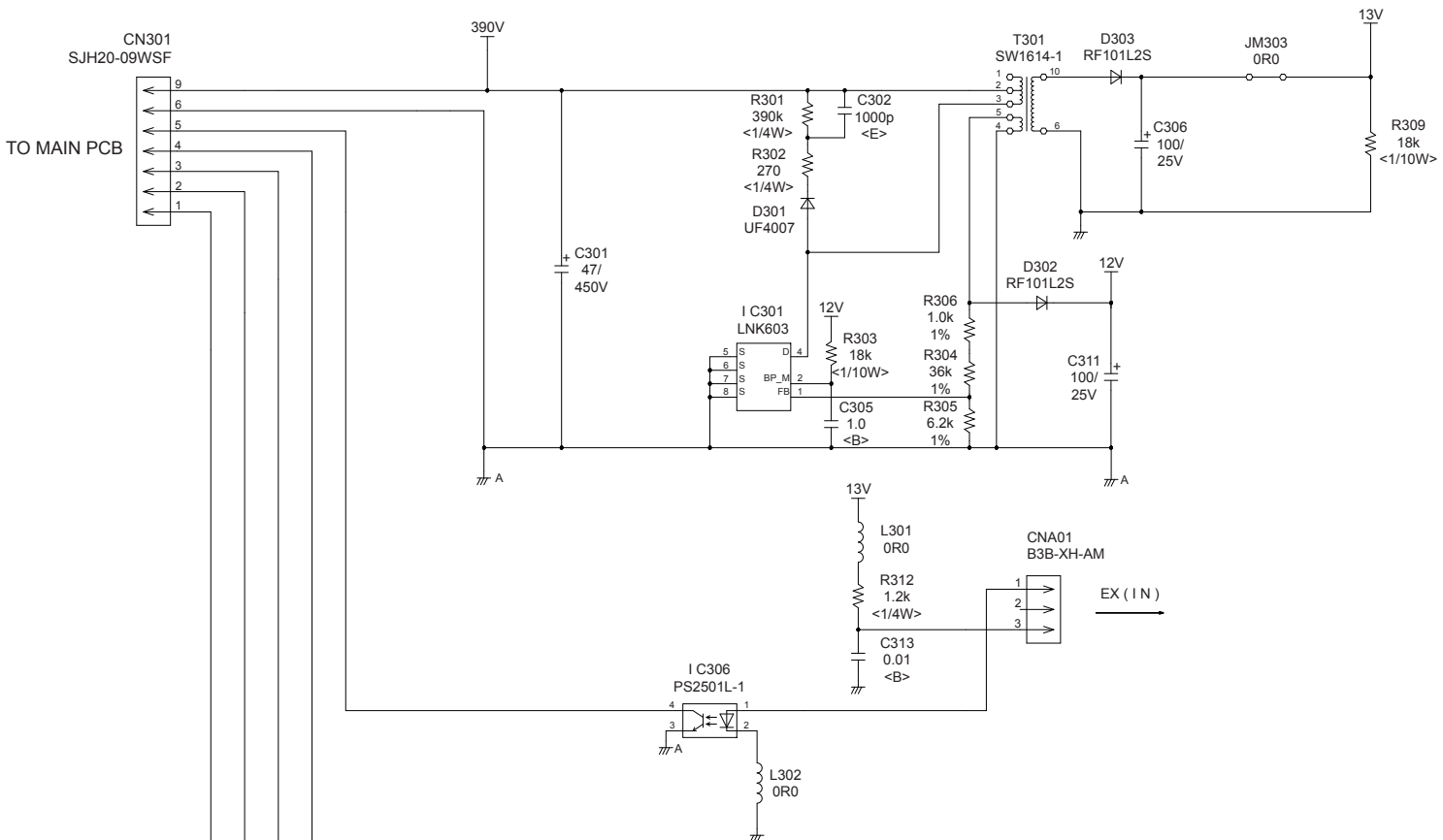


INDOOR UNIT  
MAIN PCB  
ASHG07LMCA : K12JY-1202HSE-C2  
ASHG09LMCA : K12JY-1200HSE-C1  
ASHG12LMCA : K12JY-1201HSE-C1



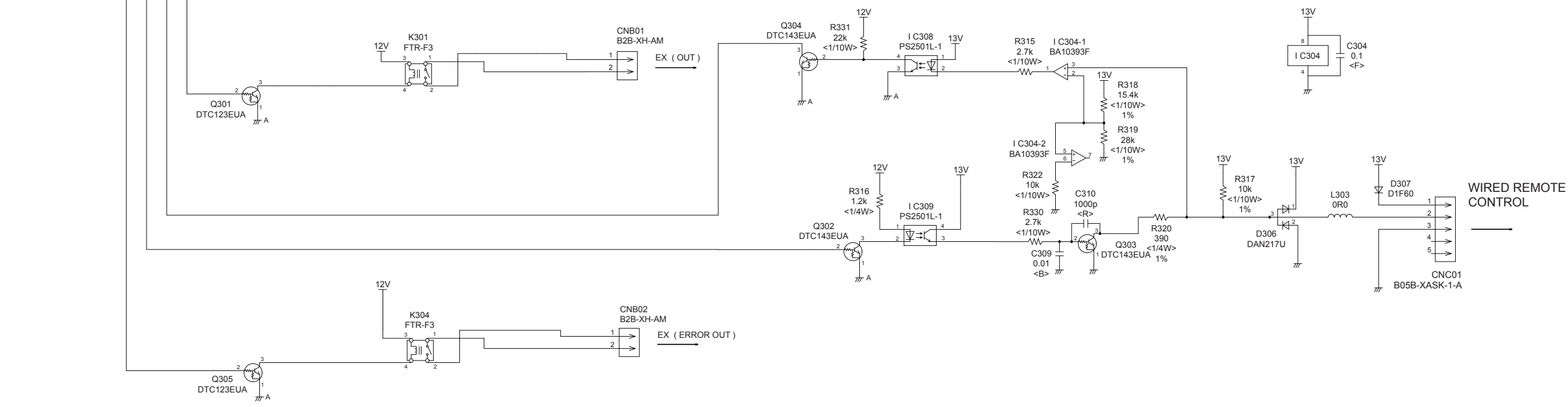
INDOOR UNIT  
INDICATOR PCB  
K12JZ-1200HSE-D0





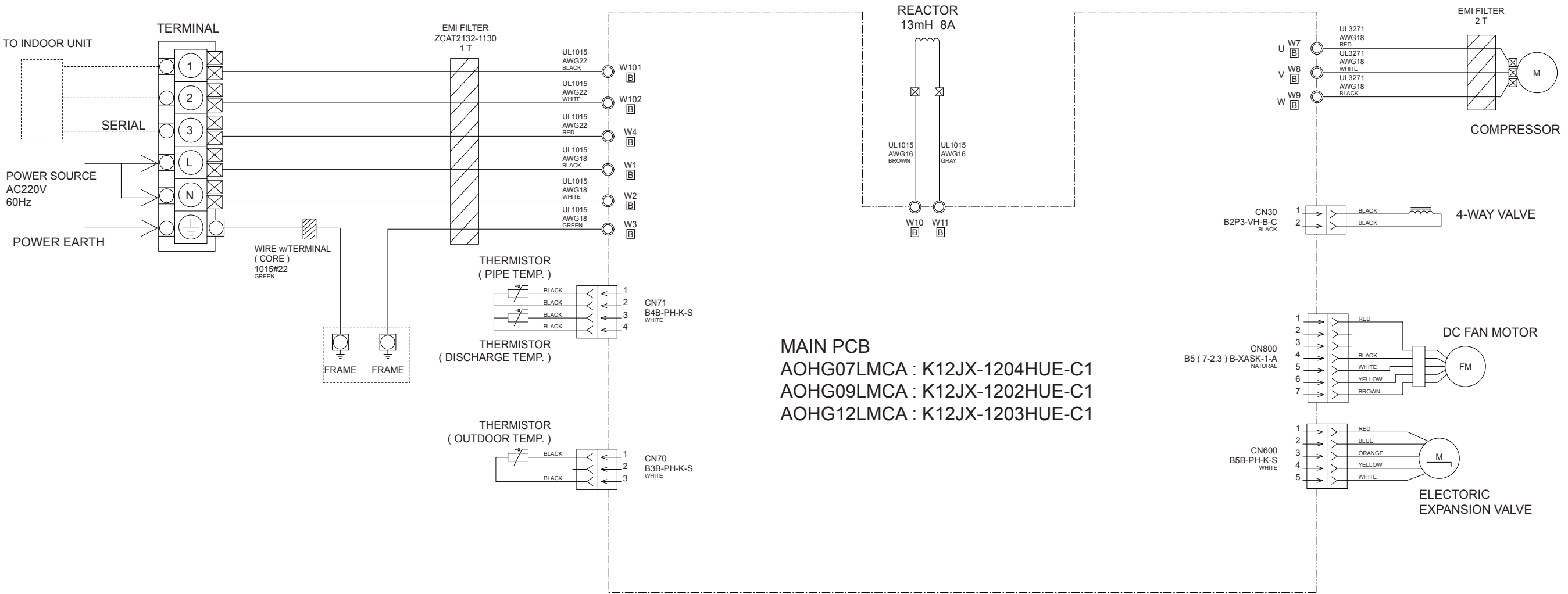
(Option)  
Communication kit  
UTY-XCBXZ2

Communication PCB  
K10DC-1000HSE-CA0



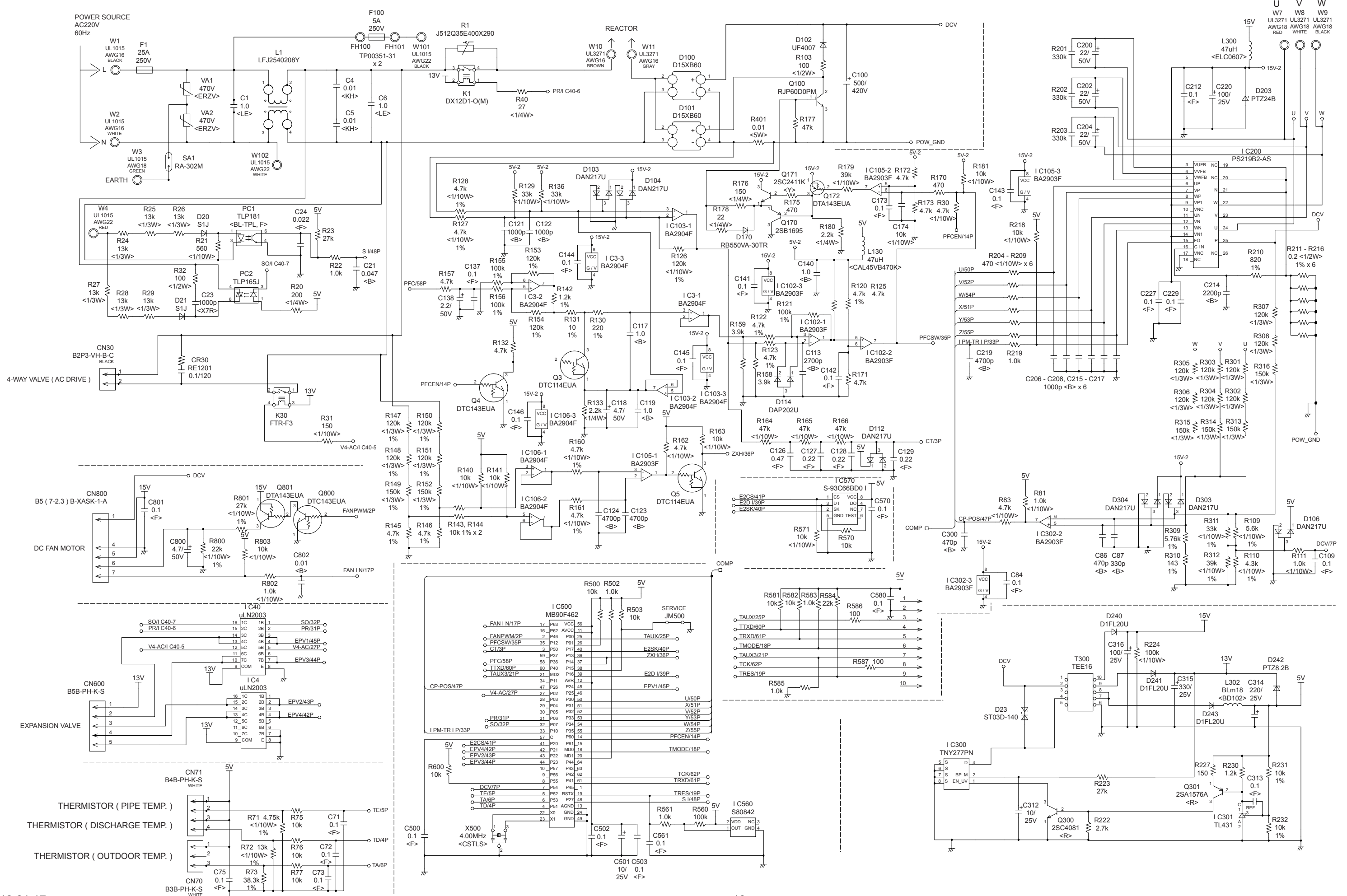
OUTDOOR PCB  
CIRCUIT DIAGRAM

INVERTER ASSEMBLY  
AOHG07LMCA : EZ-0122CHUE  
AOHG09LMCA : EZ-012PHUE  
AOHG12LMCA : EZ-012RHUE



MAIN PCB  
AOHG07LMCA : K12JX-1204HUE-C1  
AOHG09LMCA : K12JX-1202HUE-C1  
AOHG12LMCA : K12JX-1203HUE-C1

OUTDOOR UNIT  
MAIN PCB  
AOHG07LMCA : K12JX-1204HUE-C1  
AOHG09LMCA : K12JX-1202HUE-C1  
AOHG12LMCA : K12JX-1203HUE-C1





# ERROR DETECTION

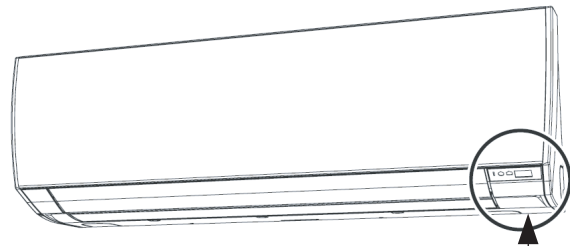
## INDOOR UNIT REMOTE CONTROL

If you use a wireless remote control, the lamp on the photo detector unit will output error codes by way of blinking patterns.

If you use a wired remote control, error codes will appear on the remote control display.

See the lamp blinking patterns and error codes in the table.

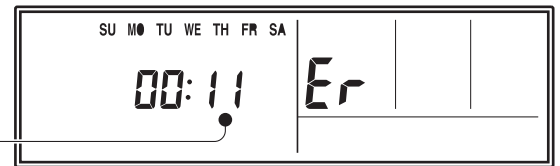
An error display is displayed only during operation.



OPERATION indicator lamp (green) —  
TIMER indicator lamp (orange) —  
ECONOMY indicator lamp (green) —

Wired remote control display (Option)

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



Error code

● : 0.5s ON / 0.5s OFF

◇ : 0.1s ON / 0.1s OFF

( ) : Number of flashing

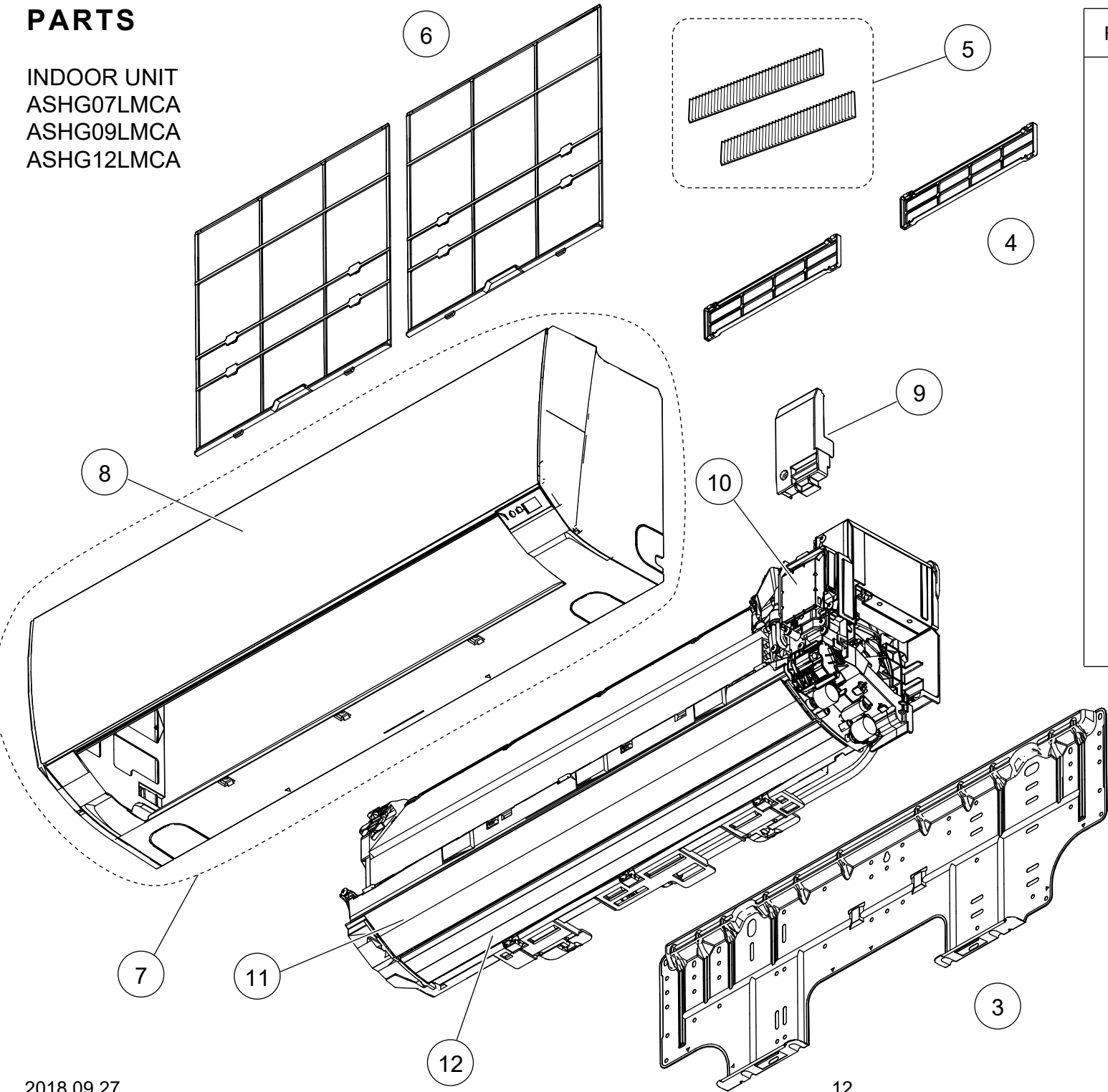
Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
● (1)	● (1)	◇	11	Serial communication error
● (1)	● (2)	◇	12	Wired remote control communication error
● (1)	● (5)	◇	15	Check run unfinished
● (2)	● (1)	◇	21	Unit number or Refrigerant circuit address setting error [Simultaneous Multi]
● (2)	● (2)	◇	22	Indoor unit capacity error
● (2)	● (3)	◇	23	Combination error
● (2)	● (4)	◇	24	•Connection unit number error (indoor unit) [Simultaneous Multi] •Connection unit number error (indoor unit or branch unit) [Flexible Multi]
● (2)	● (7)	◇	27	Master unit, slave unit set-up error [Simultaneous Multi]
● (3)	● (2)	◇	32	Indoor unit PCB model information error
● (3)	● (5)	◇	35	Manual auto switch error
● (4)	● (1)	◇	41	Room temp. sensor error
● (4)	● (2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
● (5)	● (1)	◇	51	Indoor unit fan motor error
● (5)	● (3)	◇	53	Drain pump error
● (5)	● (7)	◇	57	Damper error
● (5)	● (8)	◇	58	Intake grill error
● (5)	● (15)	◇	50	Indoor unit error
● (6)	● (2)	◇	62	Outdoor unit main PCB model information error or communication error
● (6)	● (3)	◇	63	Inverter error
● (6)	● (4)	◇	64	Active filter error, PFC circuit error
● (6)	● (5)	◇	65	Trip terminal L error

Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
● (6)	● (10)	◇	6A	Display PCB microcomputers communication error
● (7)	● (1)	◇	71	Discharge temp. sensor error
● (7)	● (2)	◇	72	Compressor temp. sensor error
● (7)	● (3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
● (7)	● (4)	◇	74	Outdoor temp. sensor error
● (7)	● (5)	◇	75	Suction Gas temp. sensor error
● (7)	● (6)	◇	76	• 2-way valve temp. sensor error • 3-way valve temp. sensor error
● (7)	● (7)	◇	77	Heat sink temp. sensor error
● (8)	● (2)	◇	82	• Sub-cool Heat Ex. gas inlet temp. sensor error • Sub-cool Heat Ex. gas outlet temp. sensor error
● (8)	● (3)	◇	83	Liquid pipe temp. sensor error
● (8)	● (4)	◇	84	Current sensor error
● (8)	● (6)	◇	86	• Discharge pressure sensor error • Suction pressure sensor error • High pressure switch error
● (9)	● (4)	◇	94	Trip detection
● (9)	● (5)	◇	95	Compressor rotor position detection error (permanent stop)
● (9)	● (7)	◇	97	Outdoor unit fan motor error
● (9)	● (9)	◇	99	4-way valve error
● (10)	● (1)	◇	A1	Discharge temp. error
● (10)	● (3)	◇	A3	Compressor temp. error
● (10)	● (4)	◇	A4	High pressure error
● (10)	● (5)	◇	A5	Low pressure error
● (13)	● (2)	◇	J2	Branch boxes error

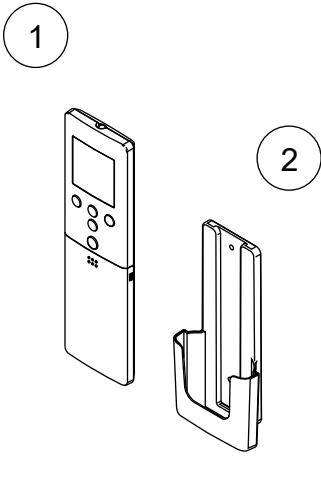


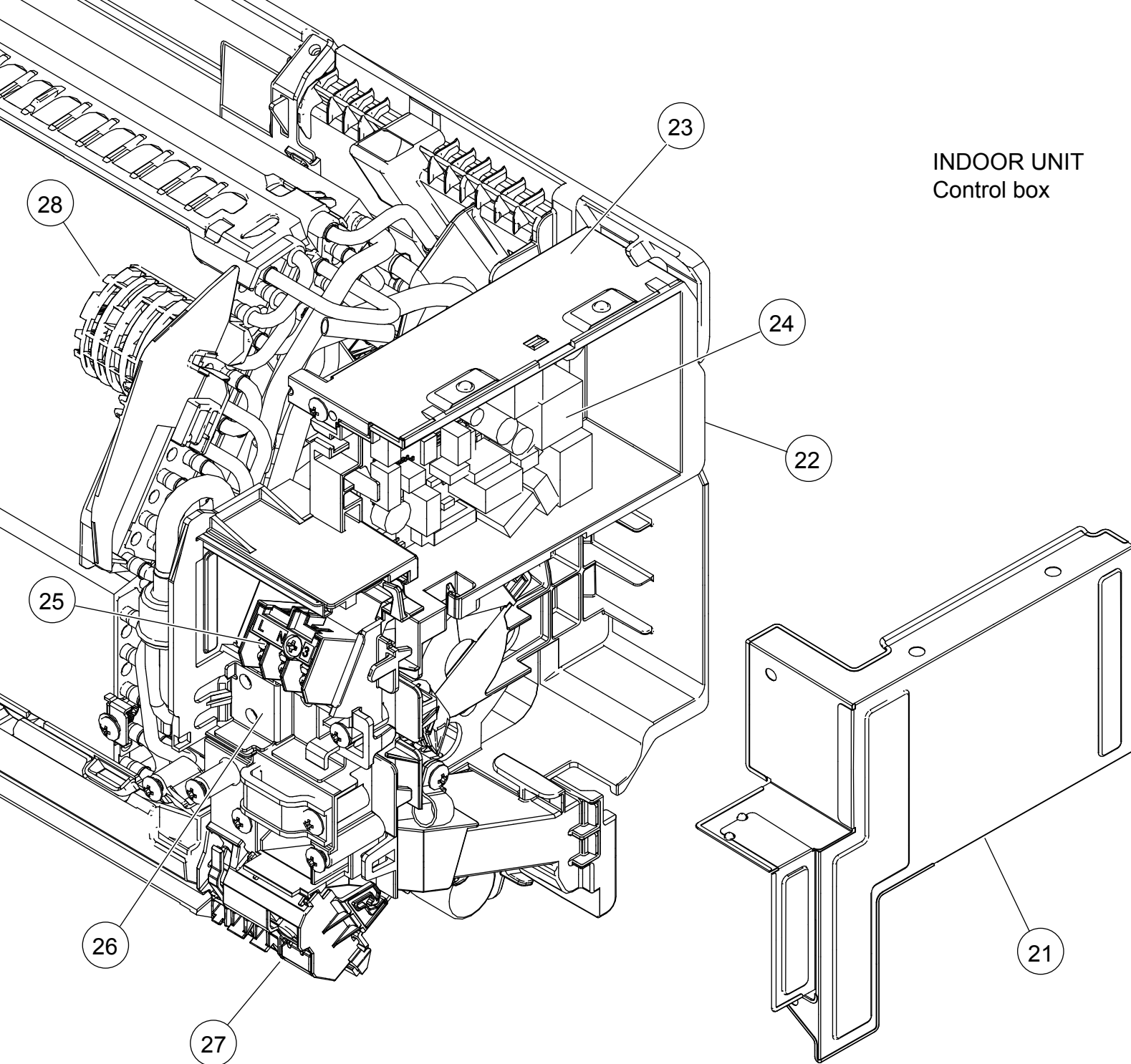
PARTS

INDOOR UNIT  
ASHG07LMCA  
ASHG09LMCA  
ASHG12LMCA



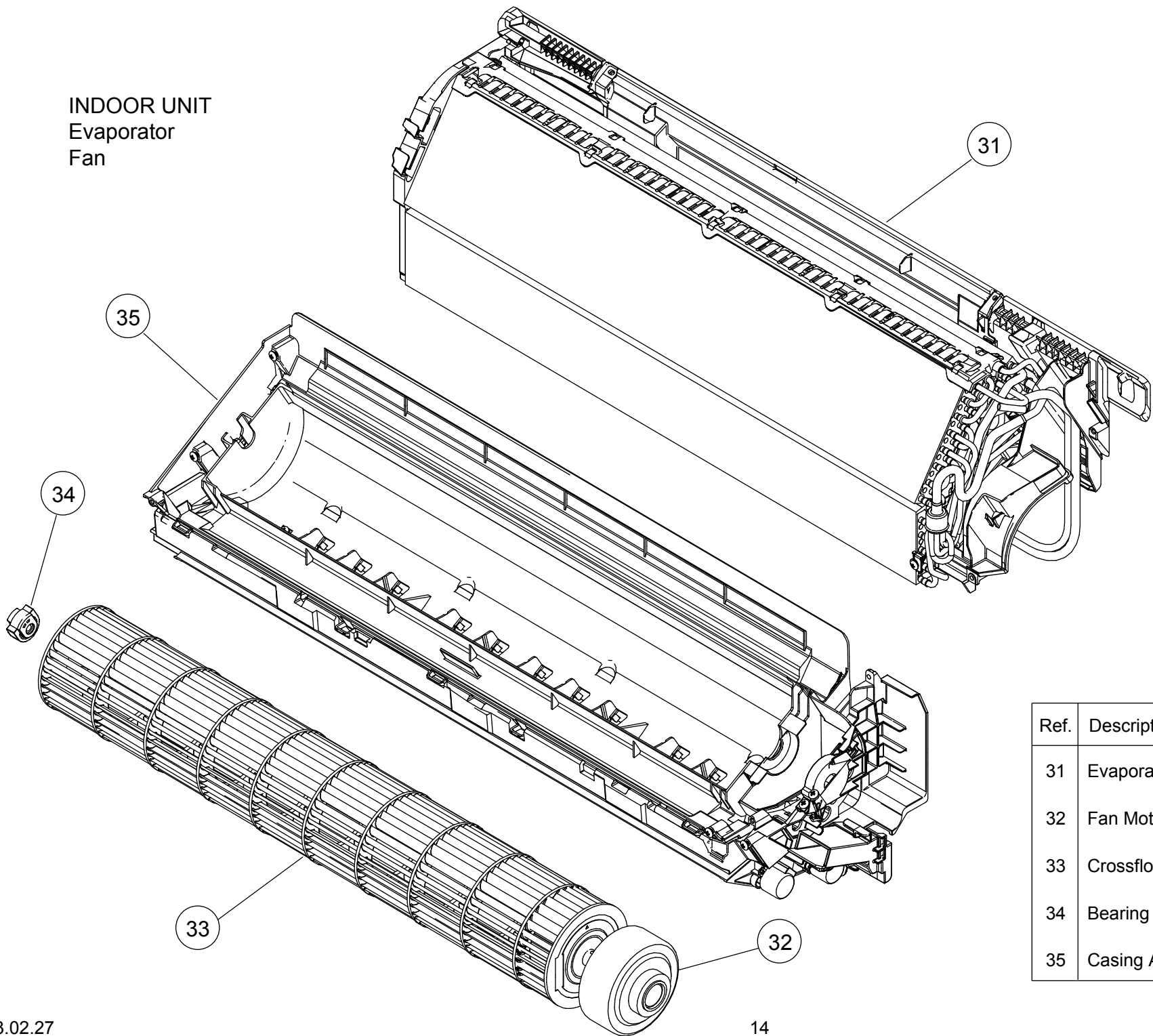
Ref.	Description	Part number
1	Remote Control	9319208008
2	Remote Control Holder	9318912005
3	Bracket Panel	9332882018
4	Electric Filter Holder	9332911008
5	Air Clean Filter Assy	9317250009
6	Air Filter	9332875003
7	Front Panel Sub Assy (GENERAL)	9332994018
8	Intake Grille (GENERAL)	9333052014
9	Wire Cover	9332894004
10	Wire Shield	9332906004
11	Louver with Shaft cover	9333353005
12	Diffuser Assy	9332998009
13	Screw cap	9309002081





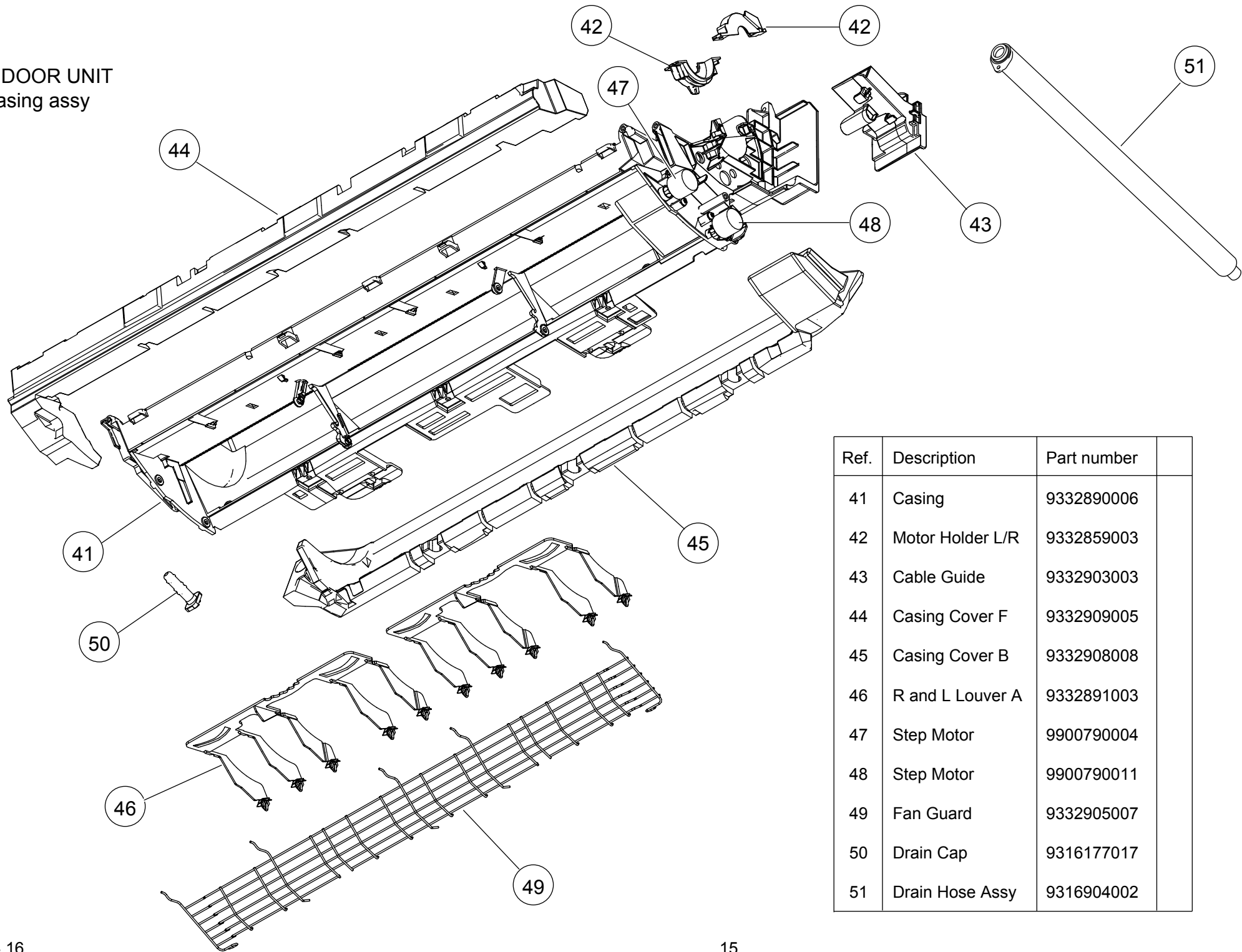
Ref.	Description	Part number	
21	Cover Shield	9332915006	
22	Control Box	9332892000	
23	Box Shield Assy	9332877007	
24	Main PCB (07)	9709427033	
24	Main PCB (09)	9709427019	
24	Main PCB (12)	9709427026	
25	Terminal	9900720001	
26	Earth Terminal	9332880007	
27	Display Assy	9709430019	
28	Room Thermistor Holder	9332868005	
--	Thermistor Assy	9900714024	

INDOOR UNIT  
Evaporator  
Fan



Ref.	Description	Part number	
31	Evaporator Total Assy	9332989007	
32	Fan Motor	9603269005	
33	Crossflow Fan Assy	9316830004	
34	Bearing C Assy	9306628017	
35	Casing Assy	9333009001	

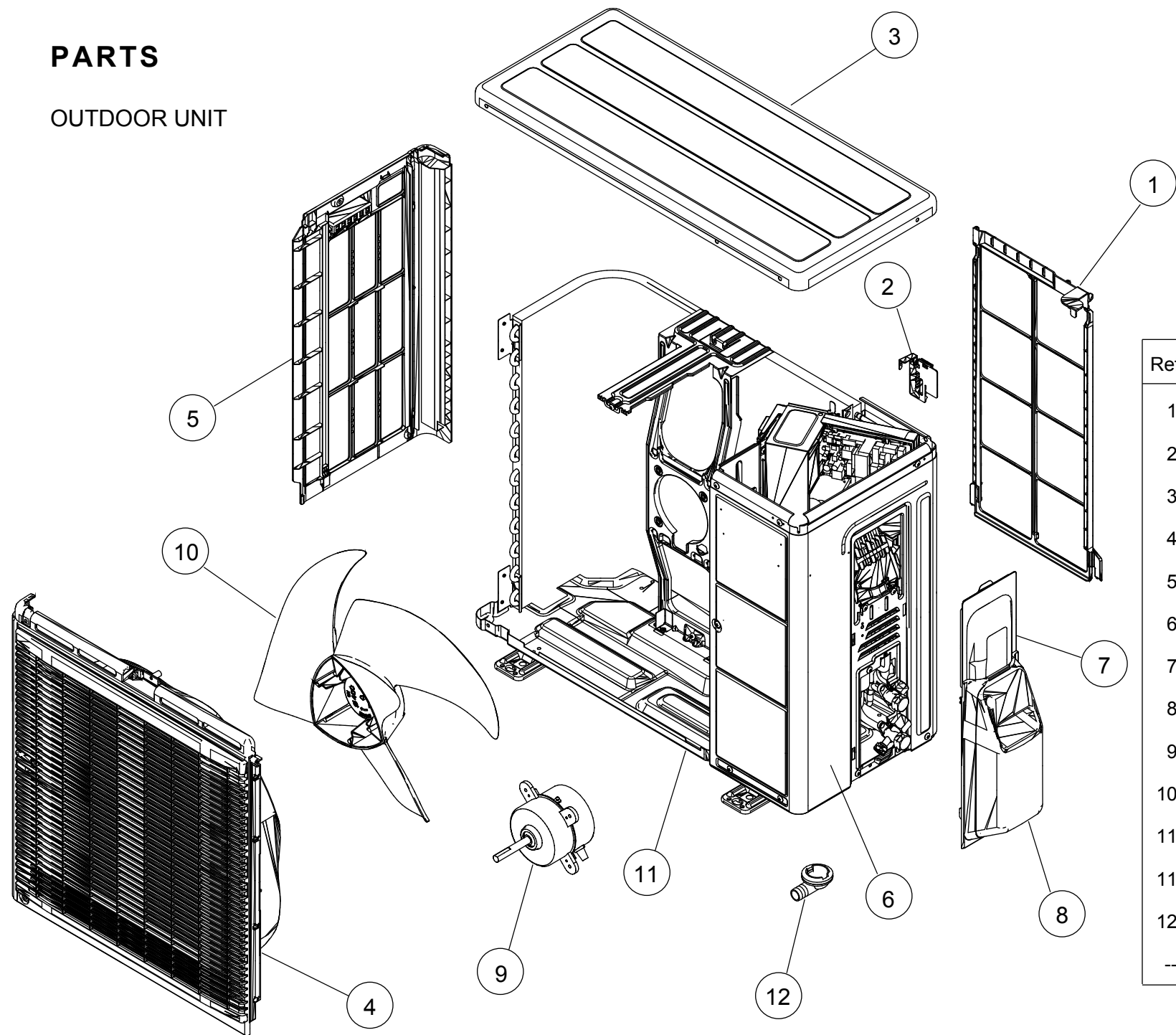
INDOOR UNIT  
Casing assy



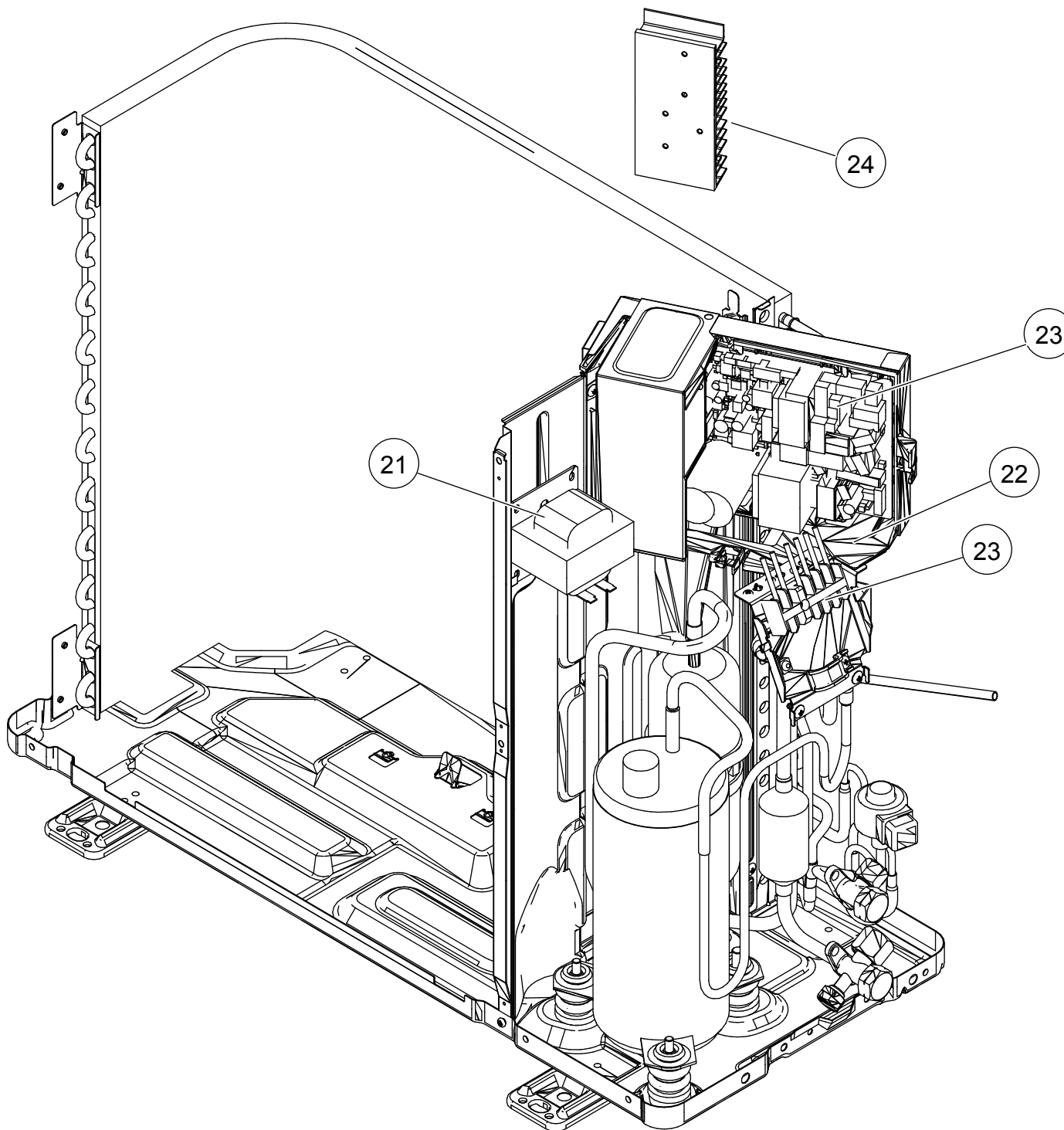
Ref.	Description	Part number	
41	Casing	9332890006	
42	Motor Holder L/R	9332859003	
43	Cable Guide	9332903003	
44	Casing Cover F	9332909005	
45	Casing Cover B	9332908008	
46	R and L Louver A	9332891003	
47	Step Motor	9900790004	
48	Step Motor	9900790011	
49	Fan Guard	9332905007	
50	Drain Cap	9316177017	
51	Drain Hose Assy	9316904002	

PARTS

OUTDOOR UNIT



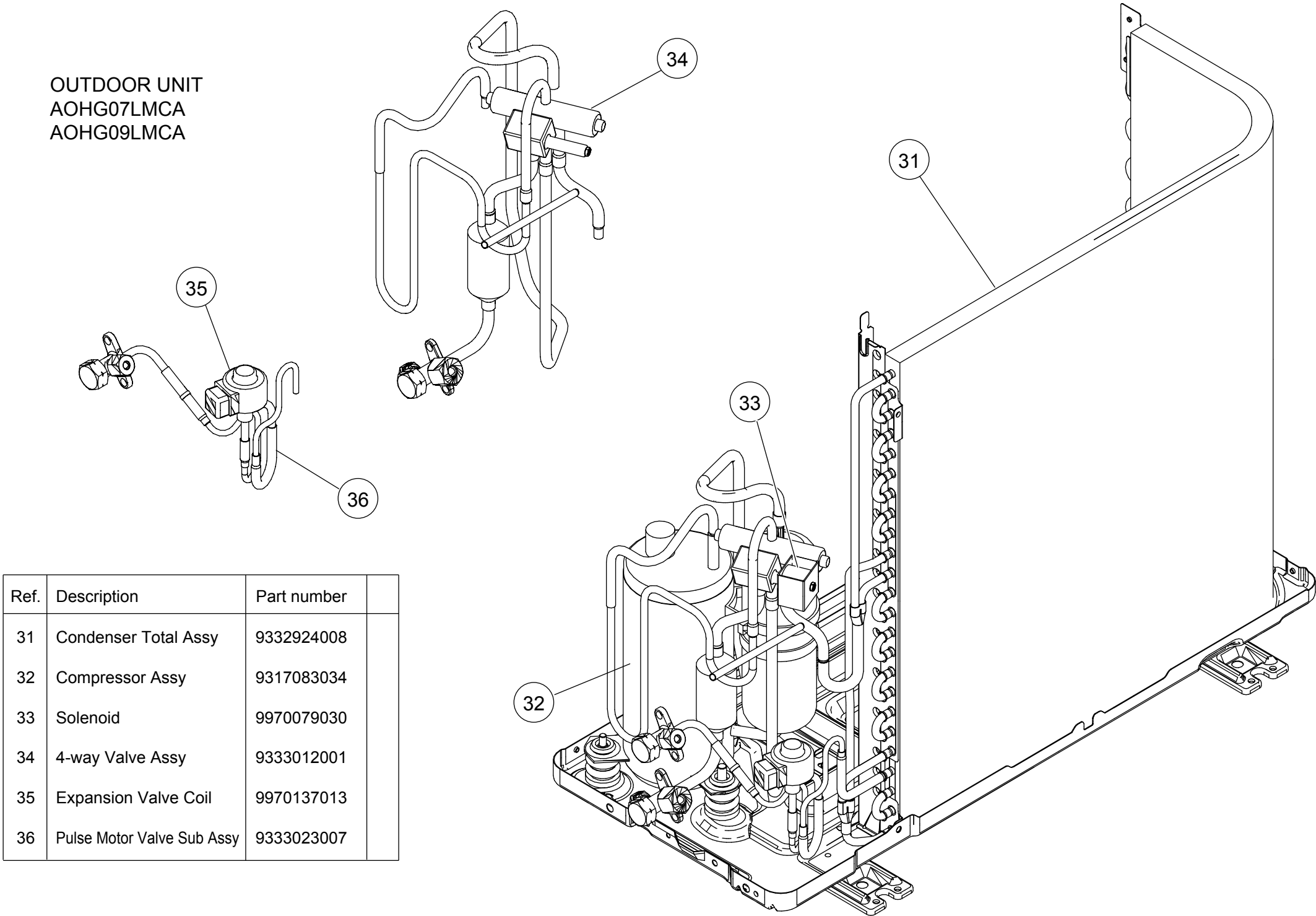
Ref.	Description	Part number	
1	Protective Net	9332855005	
2	Thermistor Holder	9332505009	
3	Top Panel Assy	9332977004	
4	Front Panel Assy	9332965001	
5	Cabinet Left Assy	9332962000	
6	Cabinet Right Assy	9332963007	
7	Switch Cover A Assy	9332964004	
8	Switch Cover B	9332843002	
9	Fan Motor	9603074043	
10	Propeller Fan	9309909014	
11	Base Assy (07, 09)	9332888003	
11	Base Assy (12)	9332888010	
12	Drain Assy	9332574005	
--	Emblem	9319157009	



## OUTDOOR UNIT

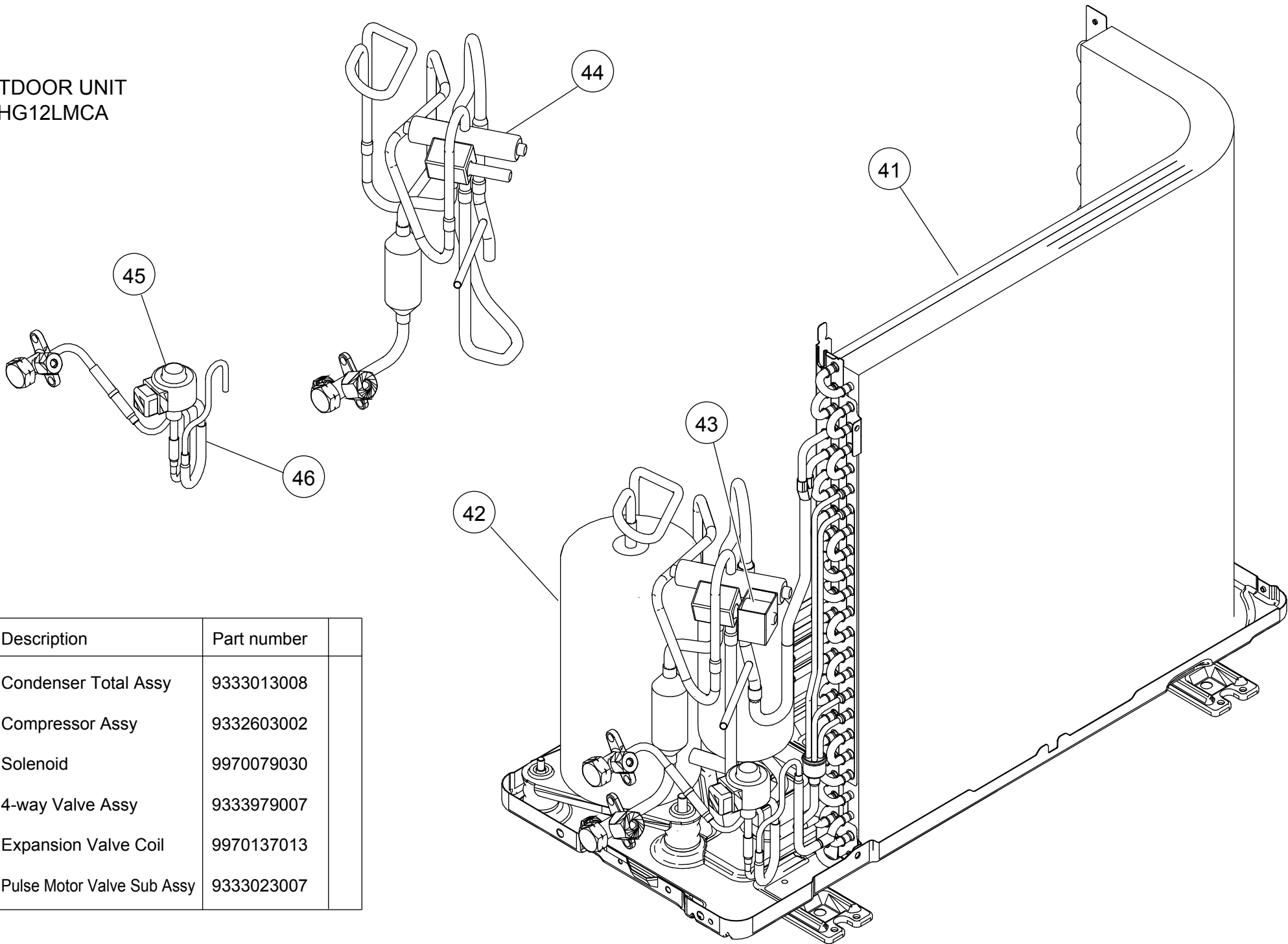
Ref.	Description	Part number	
21	Reactor Assy	9900787028	
22	PCB Holder	9332506006	
23	Main PCB with Terminal (07)	9709435052	
23	Main PCB with Terminal (09)	9709435038	
23	Main PCB with Terminal (12)	9709435045	
24	Heat Sink B	9332522006	
--	Thermistor Assy	9900719029	
--	Thermistor	9900717025	

OUTDOOR UNIT  
AOHG07LMCA  
AOHG09LMCA



Ref.	Description	Part number	
31	Condenser Total Assy	9332924008	
32	Compressor Assy	9317083034	
33	Solenoid	9970079030	
34	4-way Valve Assy	9333012001	
35	Expansion Valve Coil	9970137013	
36	Pulse Motor Valve Sub Assy	9333023007	

OUTDOOR UNIT  
AOHG12LMCA

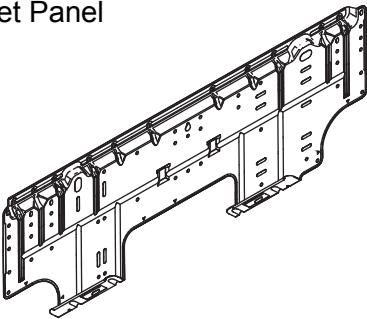
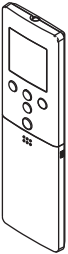
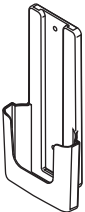
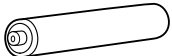


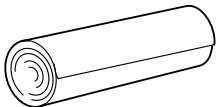


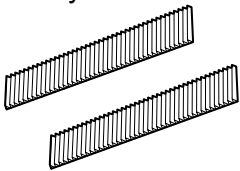
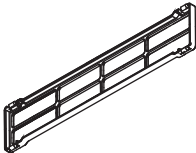
Ref.	Description	Part number	
41	Condenser Total Assy	9333013008	
42	Compressor Assy	9332603002	
43	Solenoid	9970079030	
44	4-way Valve Assy	9333979007	
45	Expansion Valve Coil	9970137013	
46	Pulse Motor Valve Sub Assy	9333023007	



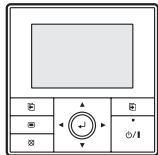
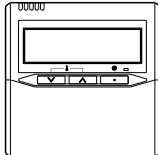

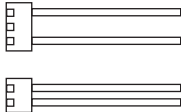
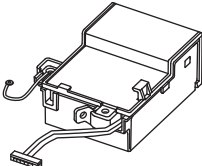
# ACCESSORIES

## INDOOR UNIT

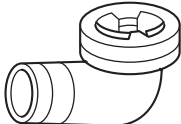
Name and Shape	Part number
Bracket Panel 	9332882018
Remote Control 	9319208008
Remote Control Holder 	9318912005
Battery (penlight) 	0600185541

Name and Shape	Part number
Cloth tape 	9310519004
Tapping screw (M4 x 25 mm) 	0700076046
Tapping screw (M3 x 12 mm) 	0700019036
Air cleaning filter assy 	9317250009
Filter holder 	9332911008

## OPTIONAL PARTS

Name and Shape	
Wired remote control UTY-RVNYM 	
Wired remote control UTY-RNNYM 	
Simple remote Control UTY-RSNYM 	
External connect kit UTY-XWZXZ5 	
Communication kit UTY-XCBXZ2 	

## OUTDOOR UNIT

Name and Shape	Part number
Drain pipe assy 	9332574005

