

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
ASYG09LMCB	AOYG09LMCBN
ASYG12LMCB	AOYG12LMCBN

CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS.....	2
REFRIGERANT SYSTEM DIAGRAM....	3
CIRCUIT DIAGRAM.....	4
INDOOR PCB CIRCUIT DIAGRAM.....	5
OUTDOOR PCB CIRCUIT DIAGRAM....	8
ERROR DETECTION.....	11
PARTS (INDOOR UNIT).....	13
PARTS (OUTDOOR UNIT).....	17
ACCESSORIES.....	21

SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter	
INDOOR UNIT		ASYG09LMCB	ASYG12LMCB
OUTDOOR UNIT		AOYG09LMCBN	AOYG12LMCBN
COOLING CAPACITY		2.50 kW	3.40 kW
HEATING CAPACITY		3.20 kW	4.00 kW
POWER SOURCE		230 V	230 V
FREQUENCY		50 Hz	50 Hz
RUNNING CURRENT	Cooling	3.2 A	4.4 A
	Heating	3.7 A	4.7 A
INPUT WATTS	Cooling	0.630 kW	0.925 kW
	Heating	0.750 kW	0.990 kW
EER	Cooling	3.97 kW/kW	3.68 kW/kW
COP	Heating	4.38 kW/kW	4.04 kW/kW
MOISTURE REMOVAL		1.3 L/h	1.8 L/h
AIR CIRCULATION		750 m ³ /h	750 m ³ /h
MAXIMUM CURRENT	Cooling	6.0 A	7.0 A
	Heating	9.5 A	11.0 A

FAN MOTOR

POWER SOURCE		230 V	230 V
INDOOR UNIT Cooling	High	1,320 r.p.m.	1,320 r.p.m.
	Medium	1,160 r.p.m.	1,160 r.p.m.
	Low	930 r.p.m.	930 r.p.m.
	Quiet	680 r.p.m.	680 r.p.m.
INDOOR UNIT Heating	High	1,320 r.p.m.	1,320 r.p.m.
	Medium	1,160 r.p.m.	1,160 r.p.m.
	Low	980 r.p.m.	980 r.p.m.
	Quiet	710 r.p.m.	710 r.p.m.
OUTDOOR UNIT Cooling		850 r.p.m.	870 r.p.m.
OUTDOOR UNIT Heating		750 r.p.m.	780 r.p.m.

NOISE LEVEL

INDOOR UNIT Cooling	High	43 dB	43 dB
	Medium	40 dB	40 dB
	Low	32 dB	32 dB
	Quiet	21 dB	21 dB
INDOOR UNIT Heating	High	43 dB	43 dB
	Medium	38 dB	38 dB
	Low	33 dB	33 dB
	Quiet	22 dB	22 dB
OUTDOOR UNIT Cooling		48 dB	49 dB
OUTDOOR UNIT Heating		47 dB	48 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, DC inverter motor, Rotary	
DISCRIMINATION		DA89X1C-20FZ2	
WEIGHT (with oil)		9.2 kg	
REFRIGERANT TYPE		R410A	
PRECHARGED REFRIGERANT		1,000 g	1,050 g
FULL CHARGE	Pipe length 15 m	1,000 g	1,050 g
	20 m	1,100 g	1,150 g
ADDITIONAL CHARGE		20 g/m	
MAXIMUM PIPING HEIGHT		15m	

DIMENSIONS

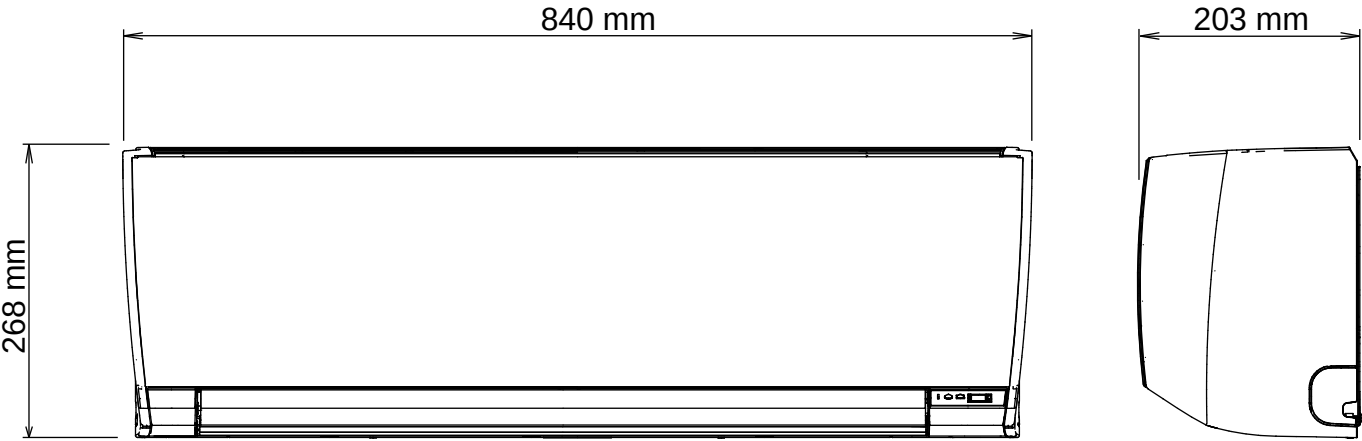
INDOOR UNIT	H x W x D	268 x 840 x 203 mm
OUTDOOR UNIT	H x W x D	540 x 790 x 290 mm

WEIGHT

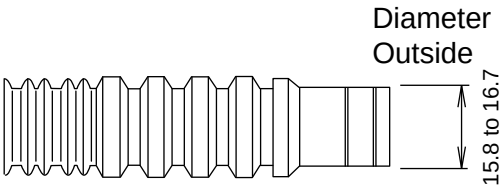
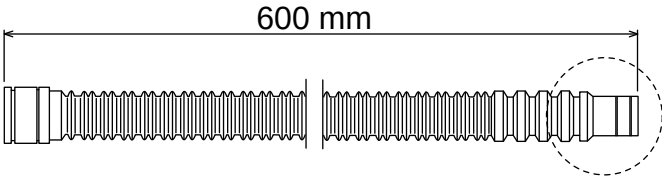
INDOOR UNIT	Shipping / Net	10.5 kg / 8.5 kg
OUTDOOR UNIT	Shipping / Net	40 kg / 36 kg 43 kg / 39 kg

DIMENSIONS

INDOOR UNIT

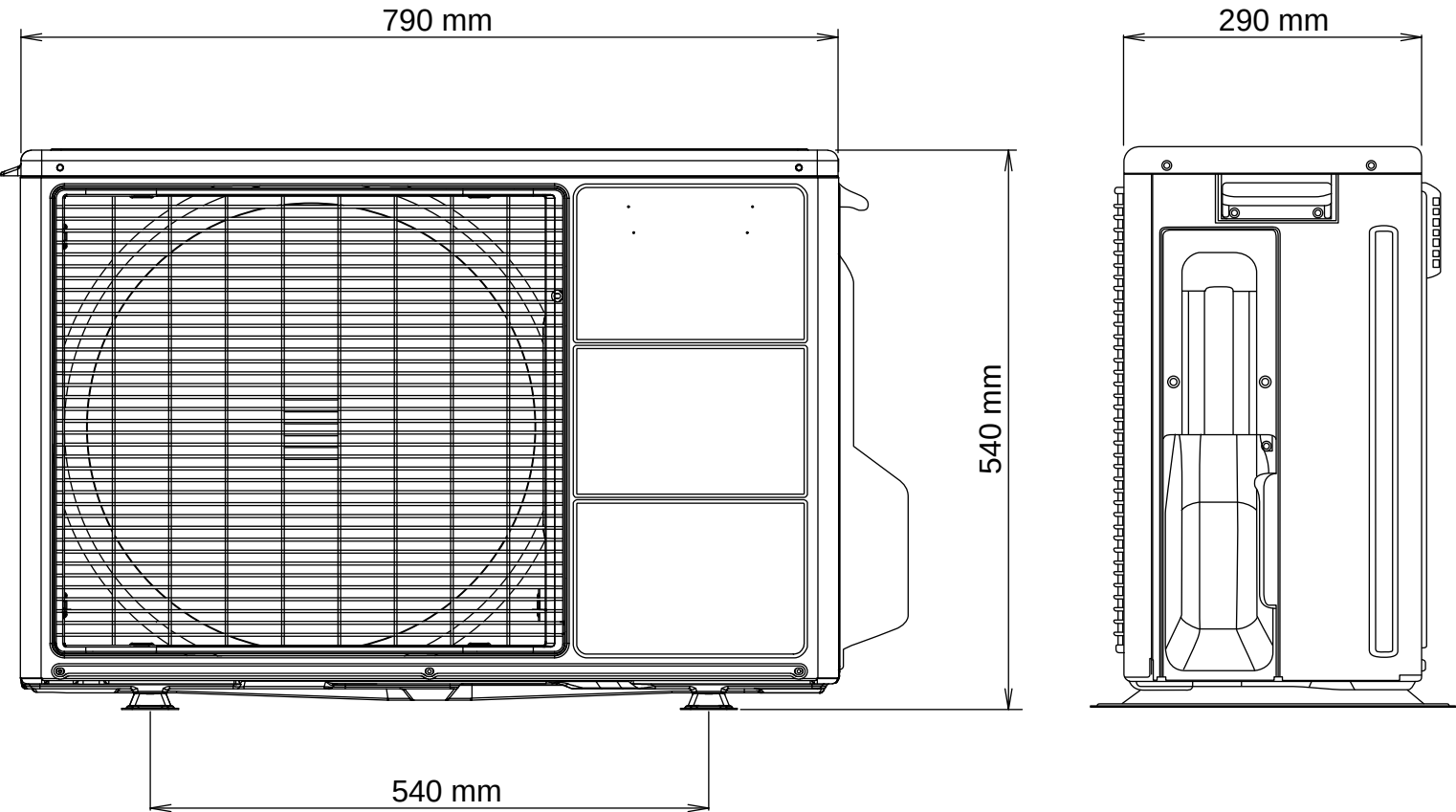


Drain hose

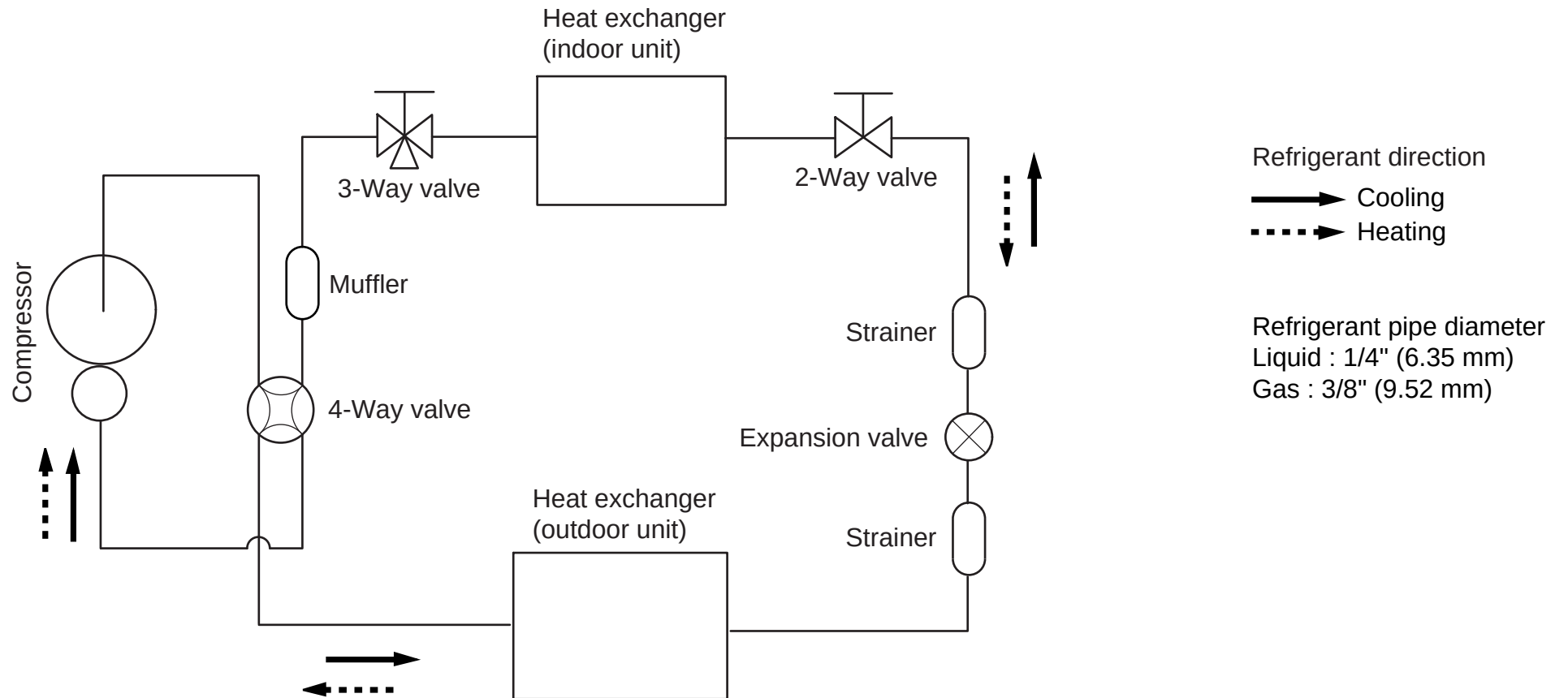


Inside : 13.8 mm

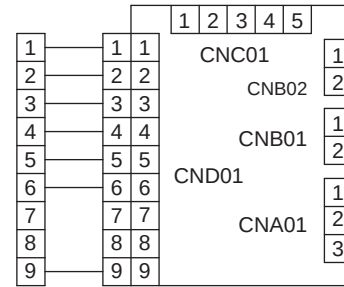
OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM



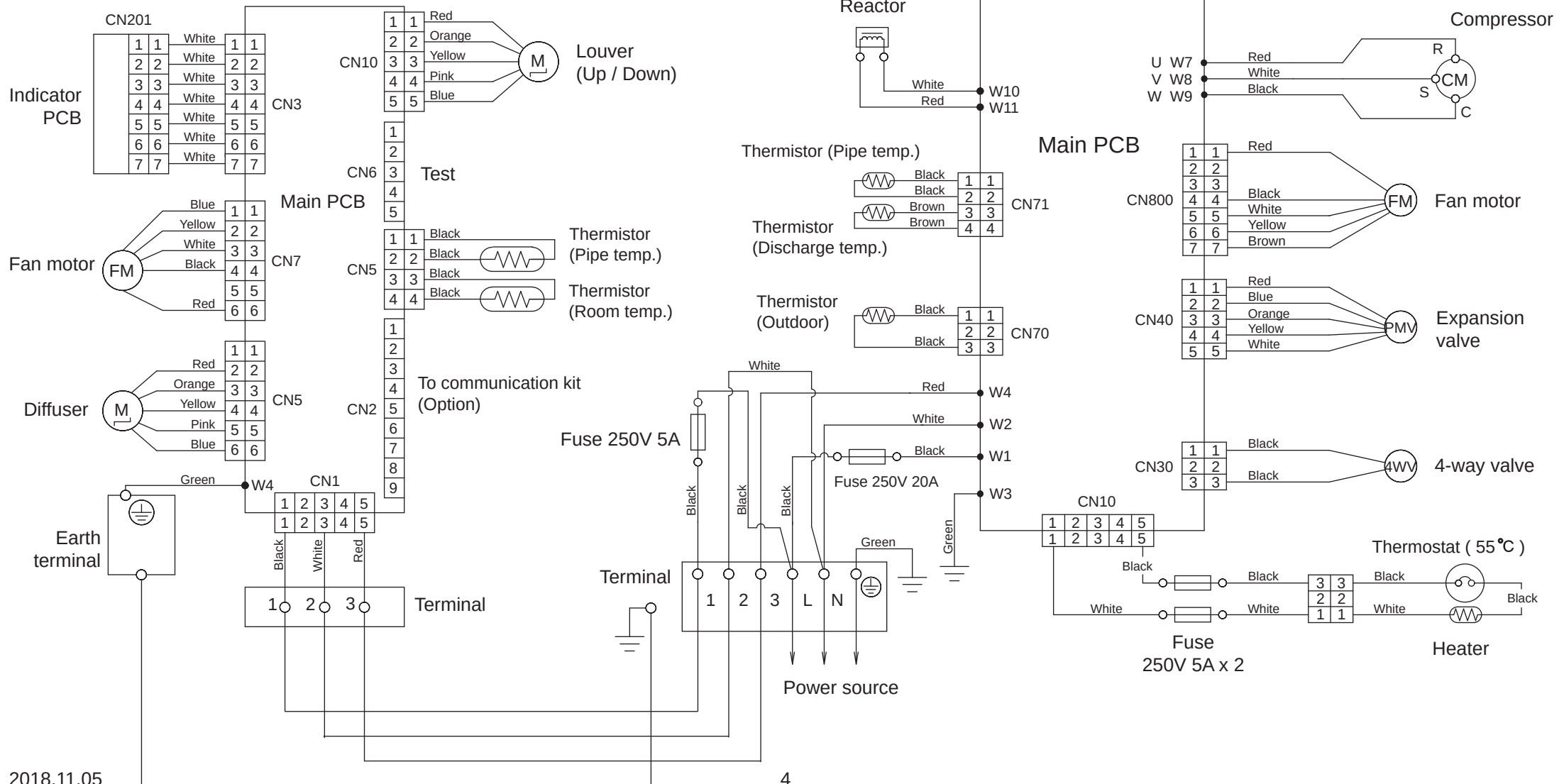
Wired remote control
(Option)



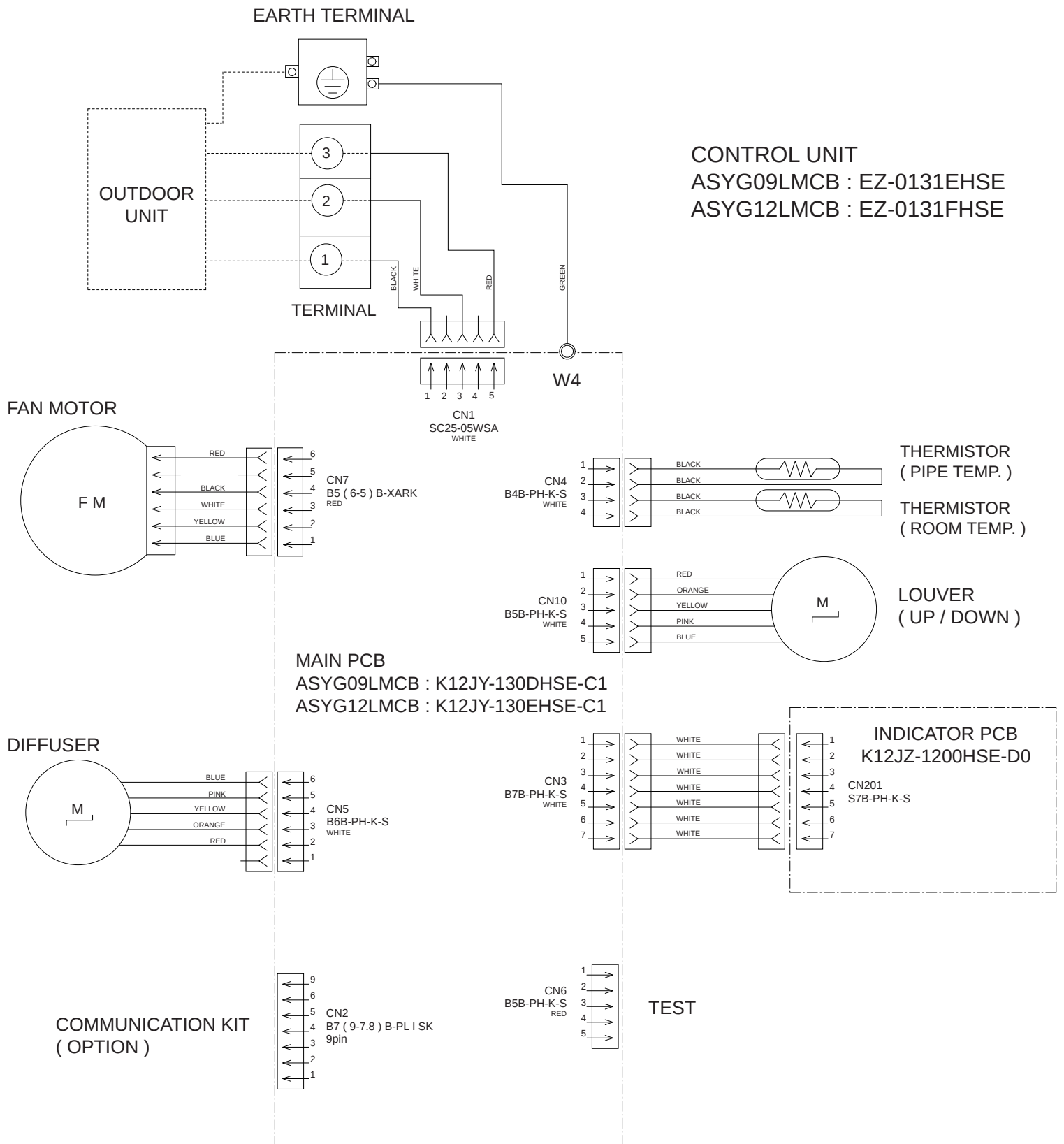
Ex. out (Option)
Operation status

Ex. in (Option)

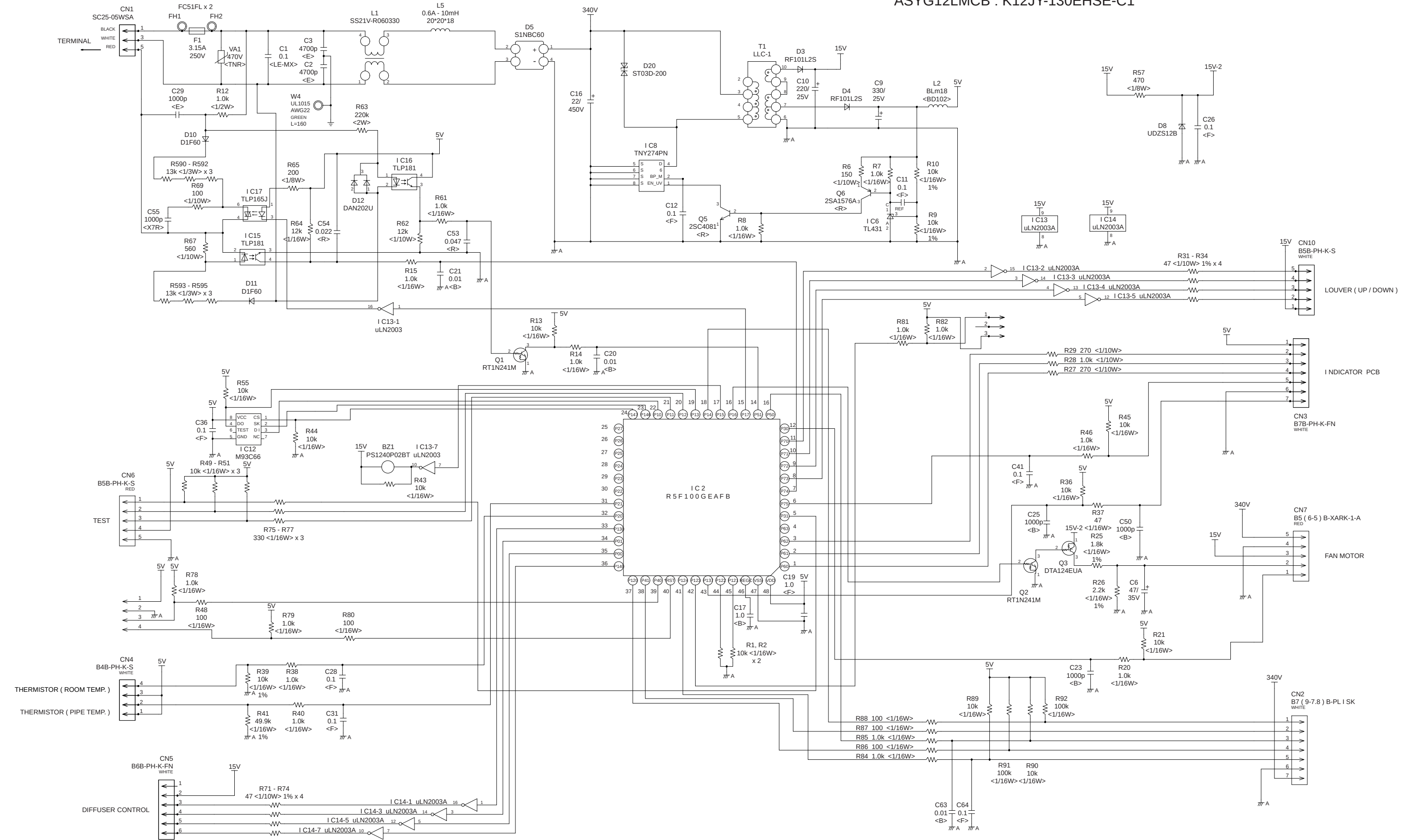
OUTDOOR UNIT



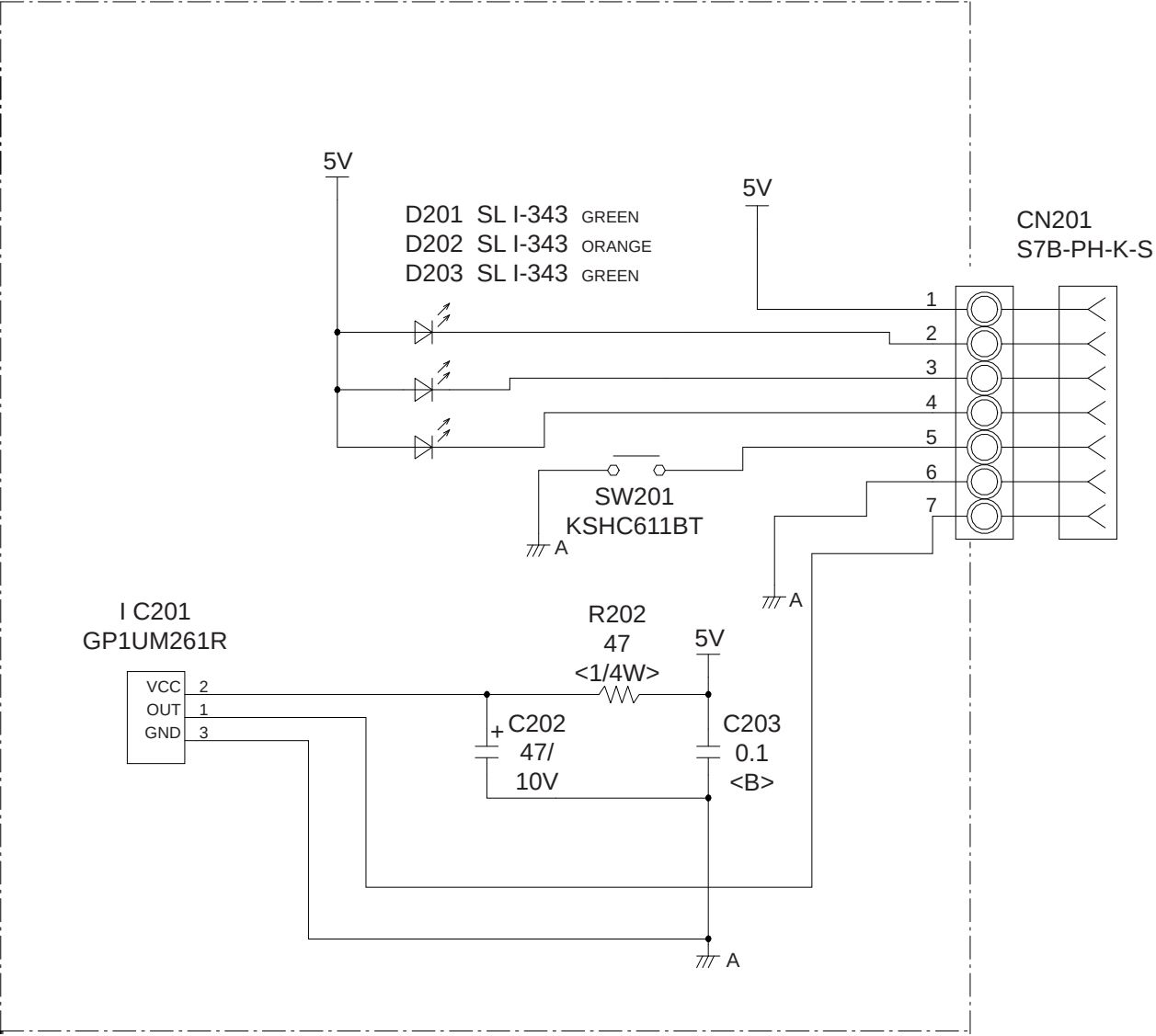
INDOOR PCB CIRCUIT DIAGRAM



INDOOR UNIT
MAIN PCB
ASYG09LMCB : K12JY-130DHSE-C1
ASYG12LMCB : K12JY-130EHSE-C1

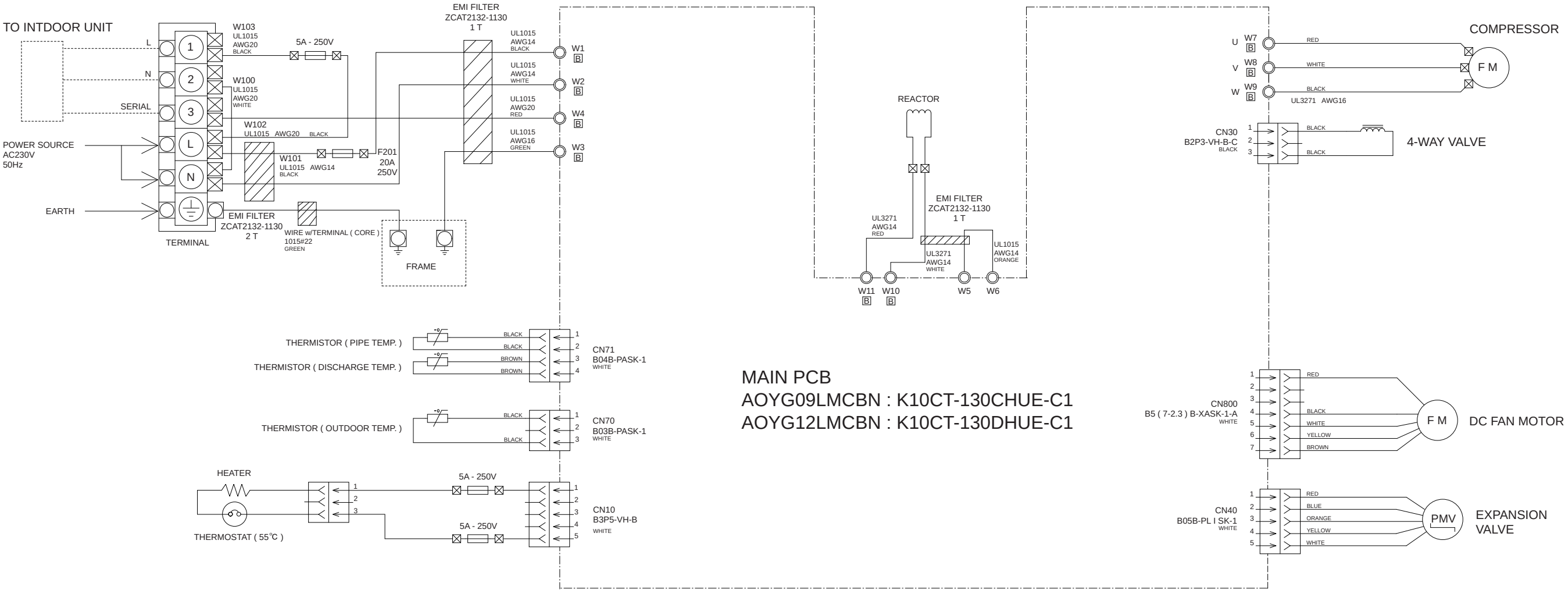


INDOOR UNIT
INDICATOR PCB
K12JZ-1200HSE-D0

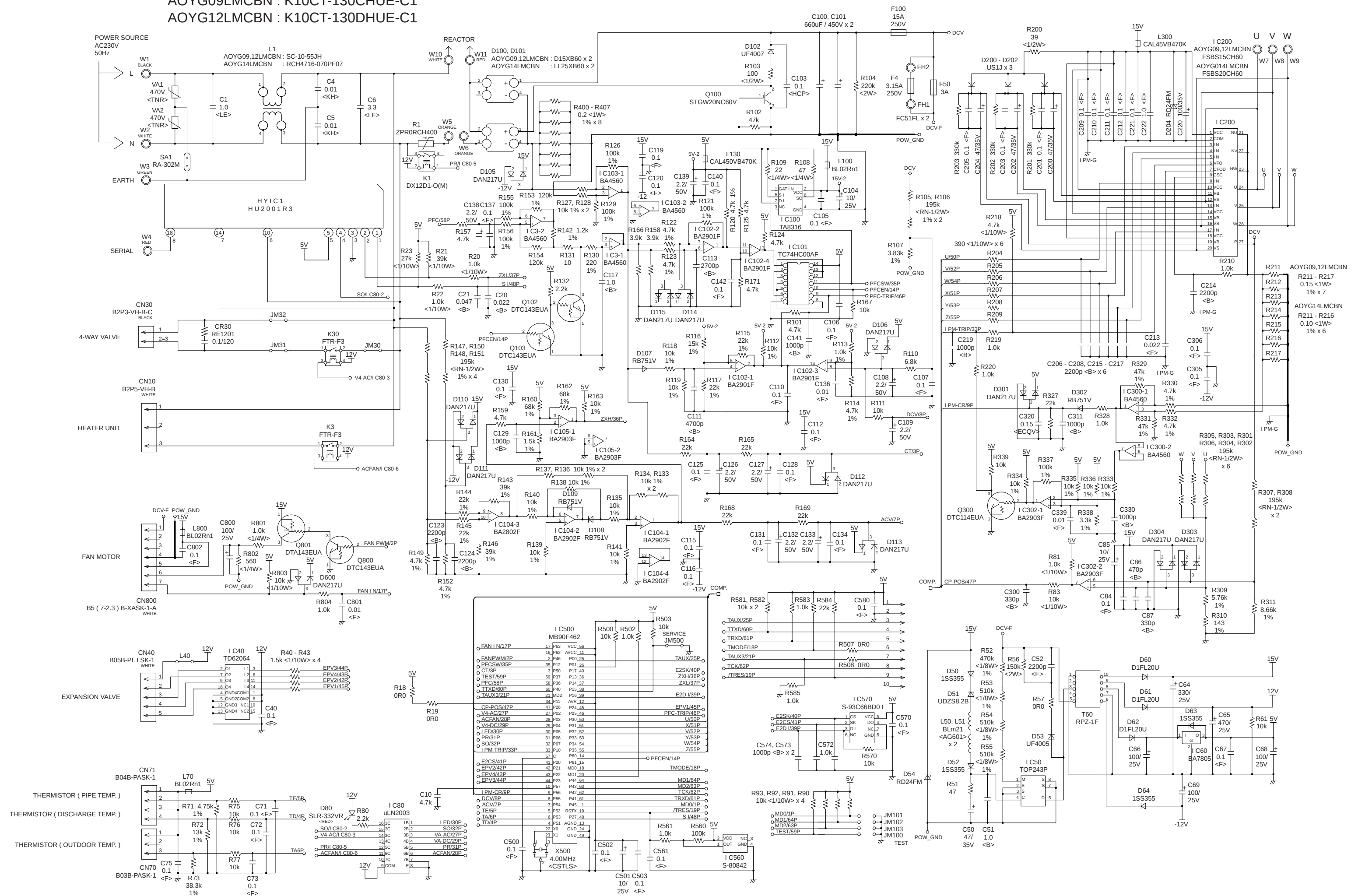


OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
AOYG09LMCBN : EZ-01315HUE
AOYG12LMCBN : EZ-01316HUE



OUTDOOR UNIT
MAIN PCB
AOYG09.12LMCBN : K10CT-130CHUE-C1
AOYG12LMCBN : K10CT-130DHUE-C1



ERROR DETECTION

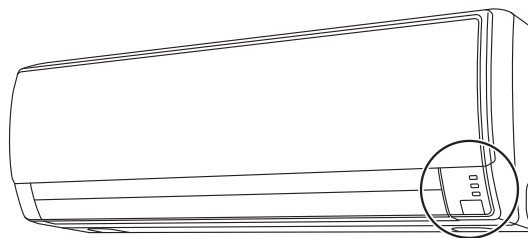
INDOOR UNIT REMOTE CONTROL

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.

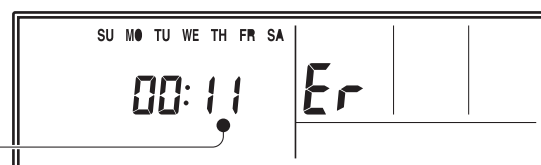
An error display is displayed only during operation.



OPERATION OPERATION lamp (green)
TIMER TIMER lamp (orange)
ECONOMY ECONOMY 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.)



● : 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)	◇	5U	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

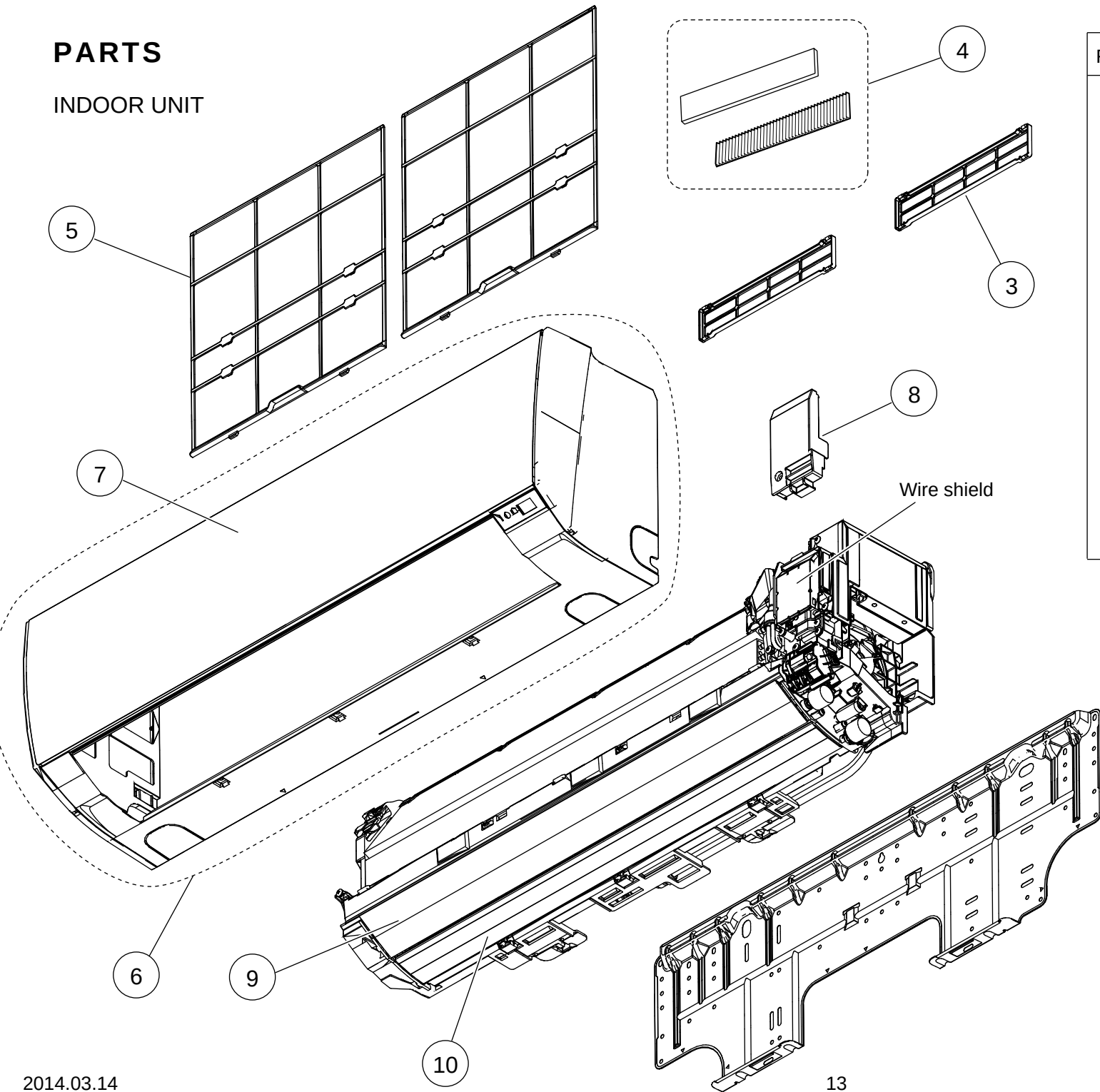
Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
● (6)	● (10)	◇	6A	Display PCB microcomputers communication error
● (7)	● (1)	◇	71	Discharge temp. sensor error
● (7)	● (2)	◇	72	Compressor temp. sensor error
● (7)	● (3)	◇	73	Outdoor unit Heat Ex. 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

OUTDOOR UNIT

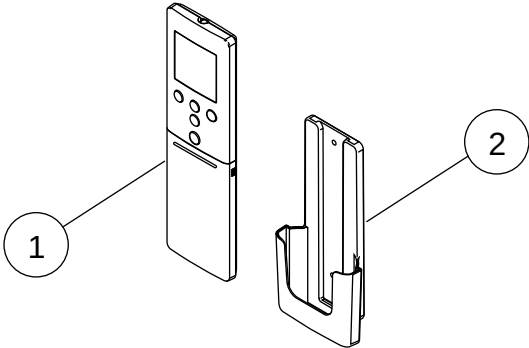
LED	ERROR
on	Discharge temperature abnormal
0.5 second on / 0.5 second off	IPM overcurrent protection
0.1 second on / 0.1 second off	Thermistor abnormal
2.0 second on / 2.0 second off	CT abnormal
0.1 second on / 2.0 second off	Compressor location abnormal
5.0 second on / 5.0 second off	Fan abnormal

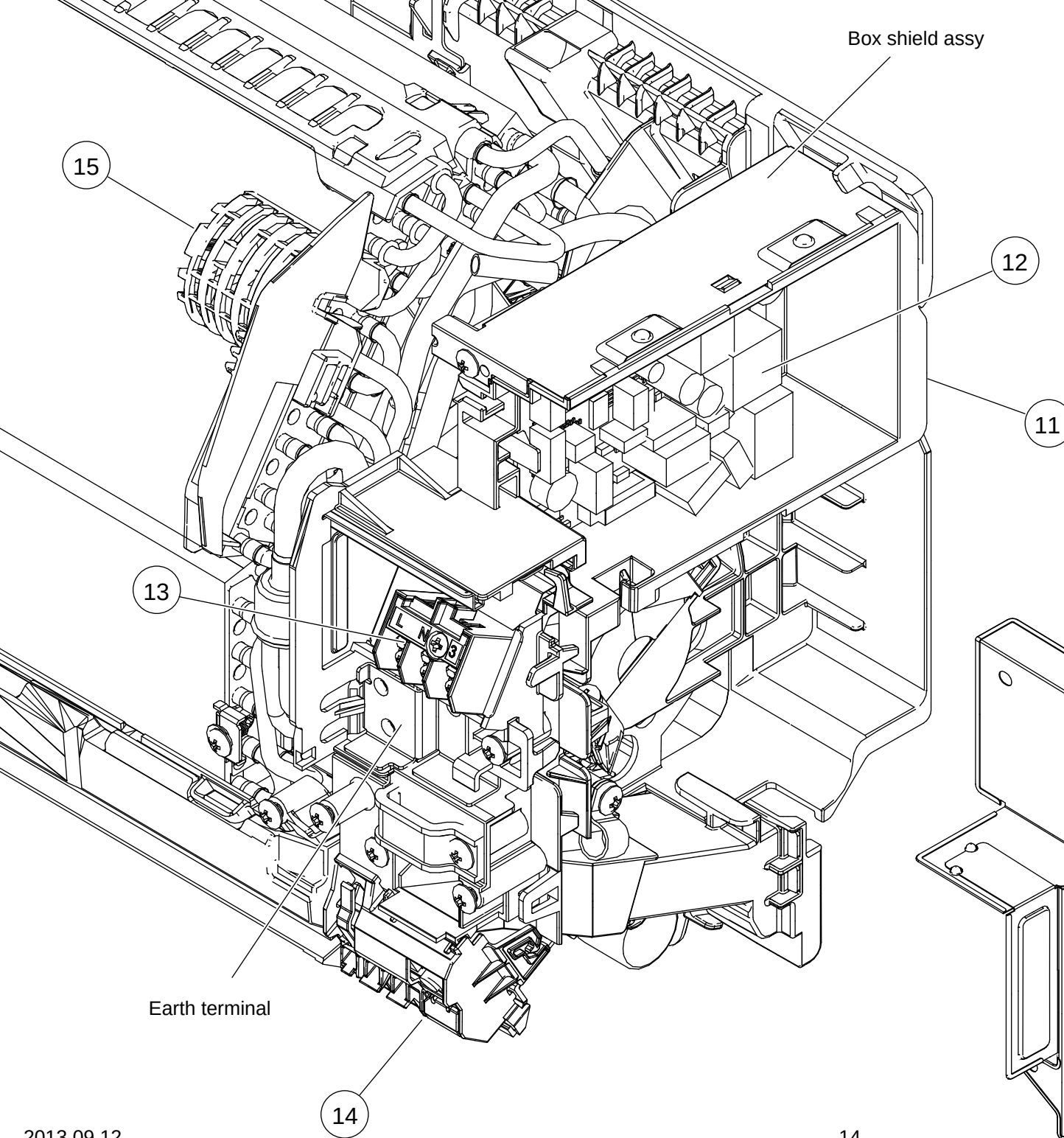
PARTS

INDOOR UNIT

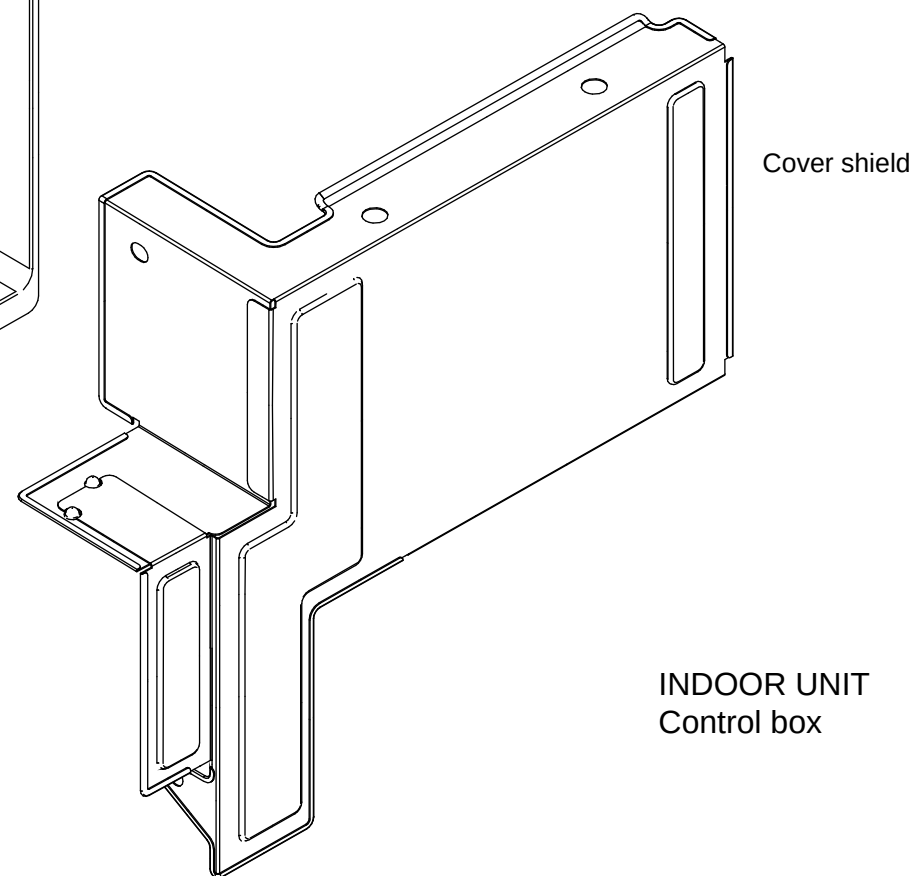


Ref.	Description	Part number	
1	Remote Control	9319208008	
2	Remote Control Holder	9318912005	
3	Electric Filter Holder	9332911008	
4	Air Clean Filter Assy	9317250009	
5	Air Filter	9332875010	
6	Front Panel Sub Assy (FUJITSU)	9332994001	
7	Intake Grille (FUJITSU)	9333052007	
8	Wire Cover	9332894004	
9	Louver with Shaft cover	9333353005	
10	Diffuser Assy	9332998009	

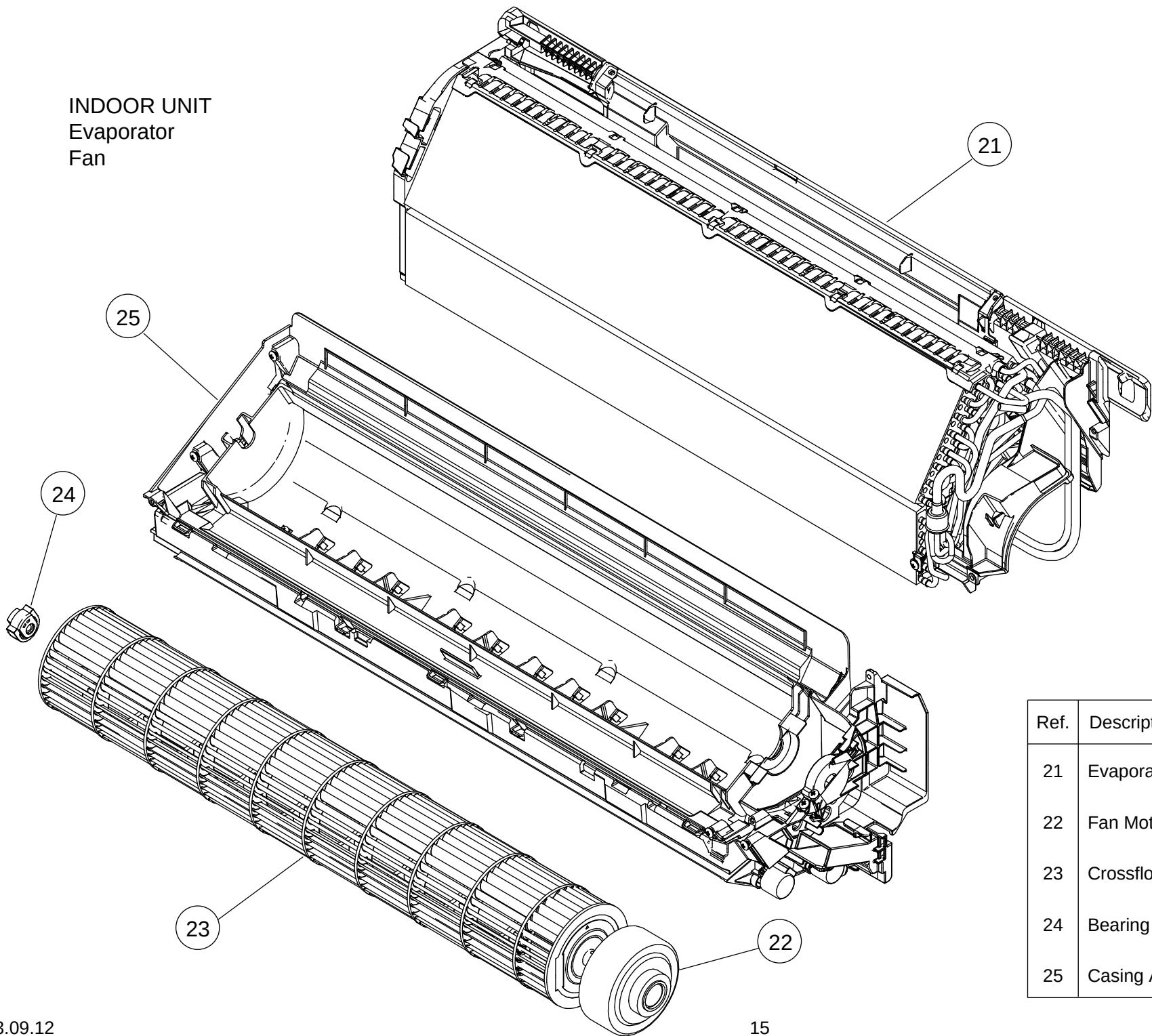




Ref.	Description	Part number	
11	Control Box	9332892000	
12	Main PCB (09)	9709427187	
12	Main PCB (12)	9709427194	
13	Terminal	9900720001	
14	Display Assy	9709430019	
15	Room Thermistor Holder	9332868005	
--	Thermistor Assy	9900714024	

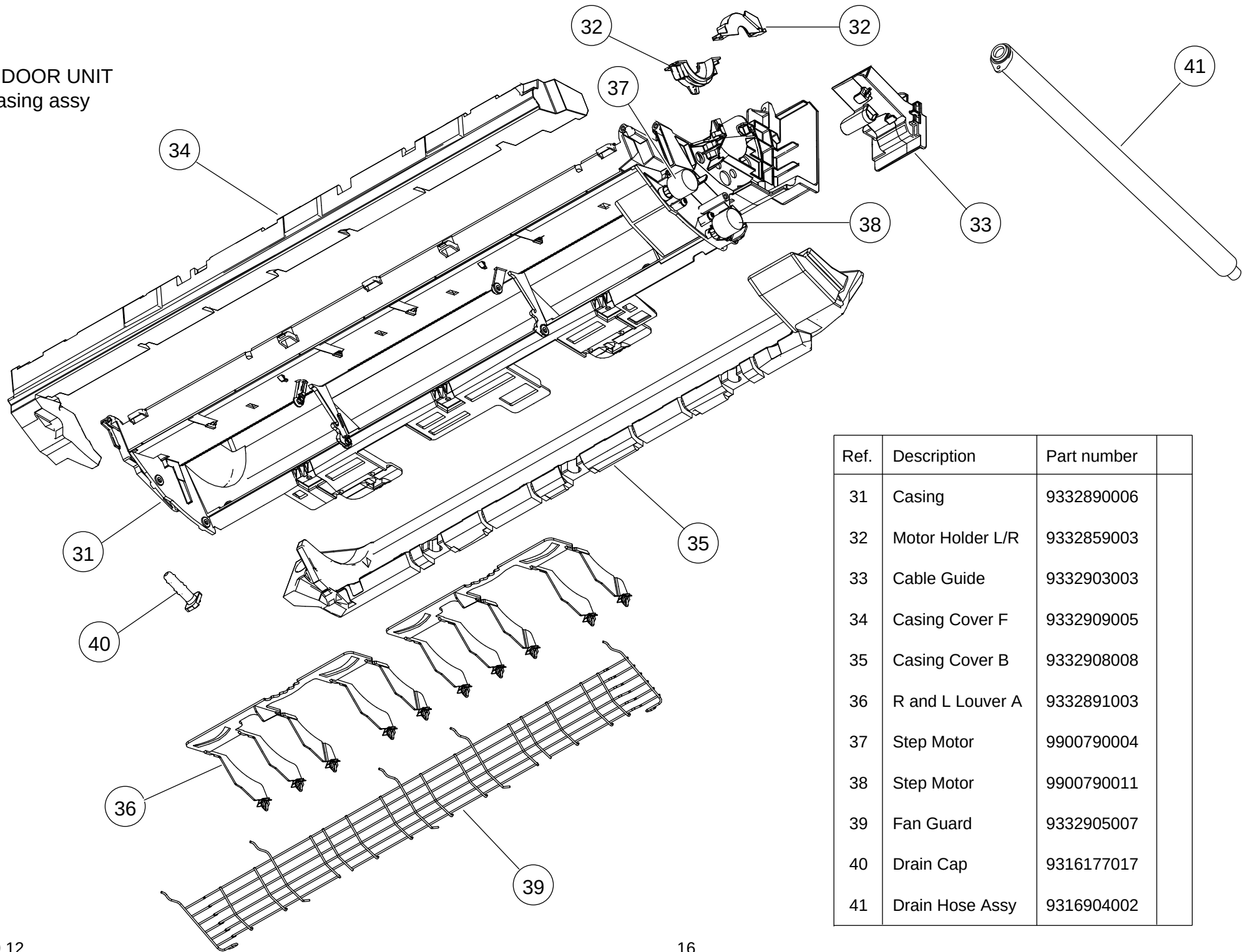


INDOOR UNIT
Evaporator
Fan



Ref.	Description	Part number	
21	Evaporator Total Assy	9332989007	
22	Fan Motor	9603269005	
23	Crossflow Fan Assy	9316830004	
24	Bearing C Assy	9306628017	
25	Casing Assy	9333009001	

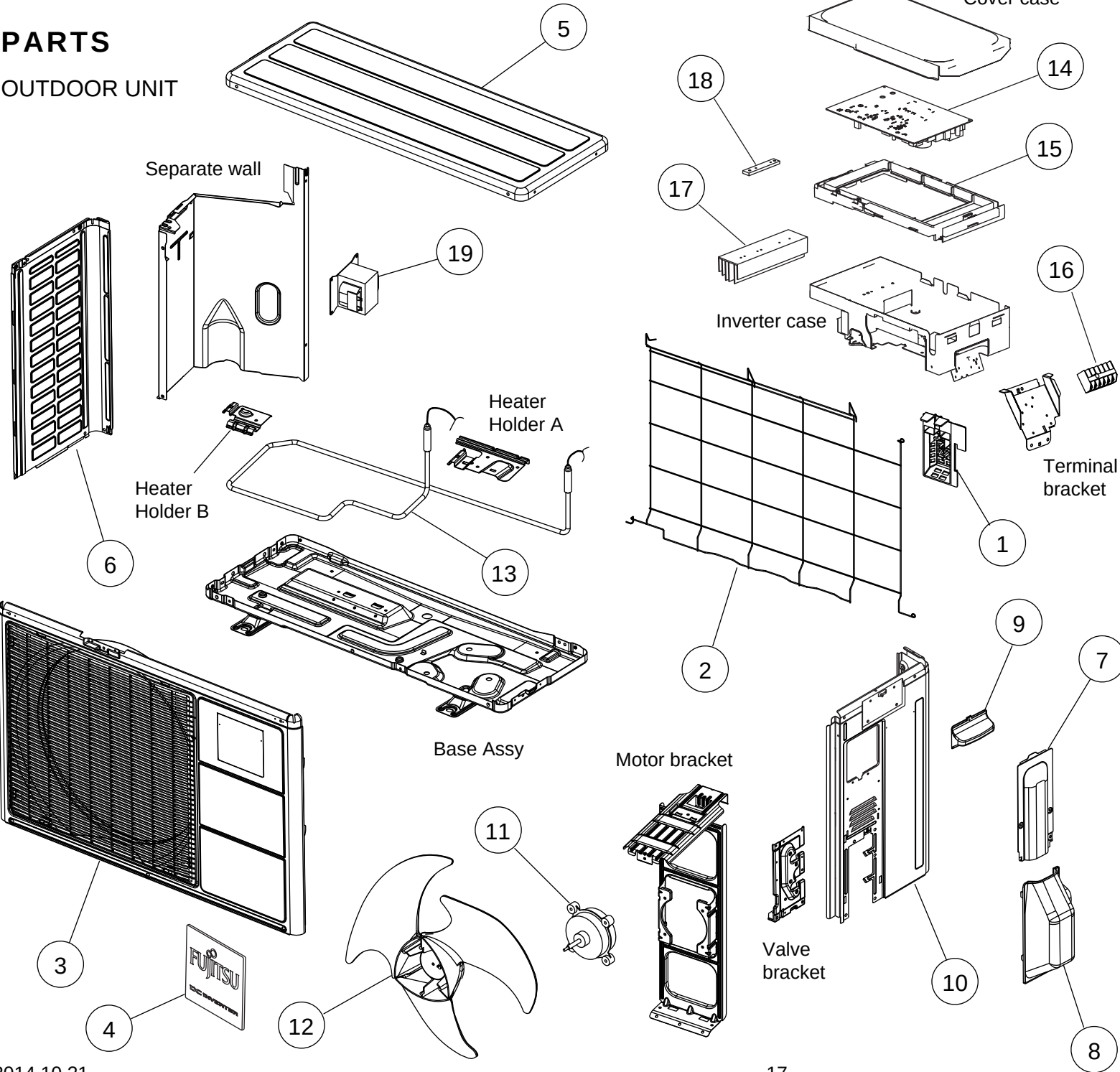
INDOOR UNIT
Casing assy



Ref.	Description	Part number	
31	Casing	9332890006	
32	Motor Holder L/R	9332859003	
33	Cable Guide	9332903003	
34	Casing Cover F	9332909005	
35	Casing Cover B	9332908008	
36	R and L Louver A	9332891003	
37	Step Motor	9900790004	
38	Step Motor	9900790011	
39	Fan Guard	9332905007	
40	Drain Cap	9316177017	
41	Drain Hose Assy	9316904002	

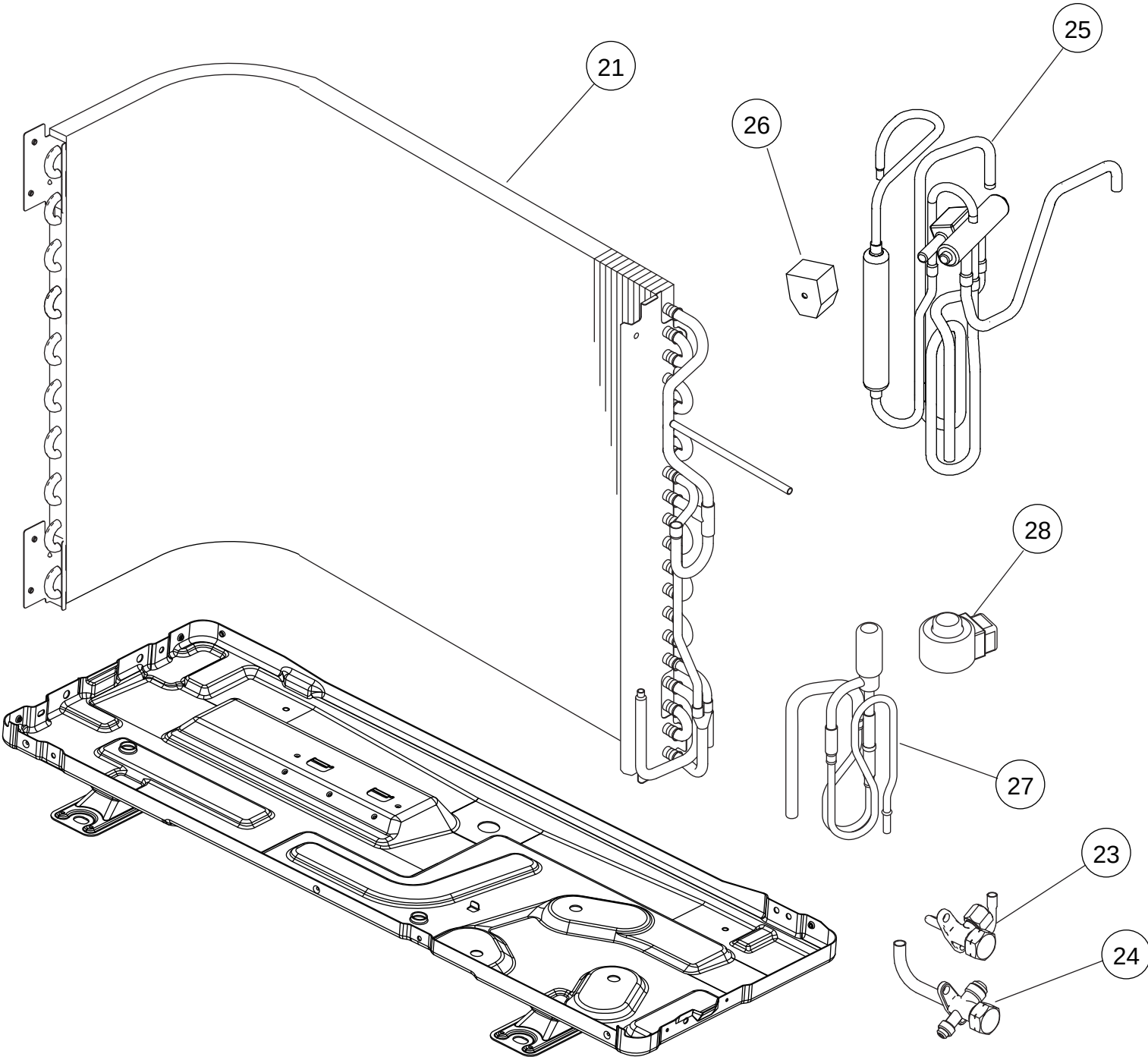
PARTS

OUTDOOR UNIT

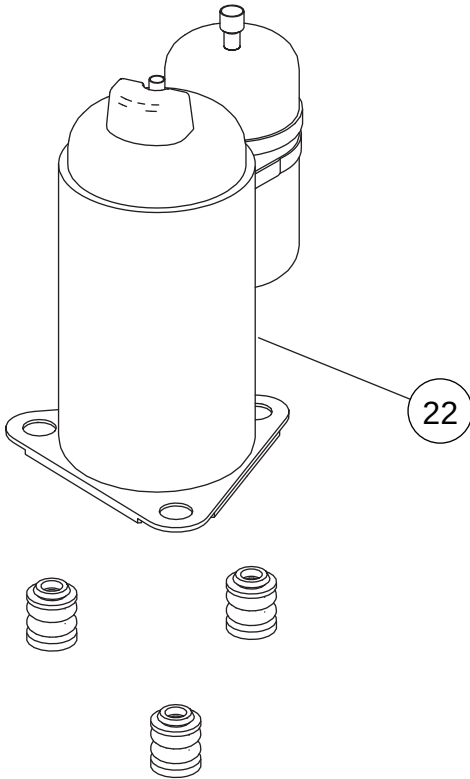


Ref.	Description	Part number	
1	Thermistor Holder (09)	9313954048	
1	Thermistor Holder (12)	9313954031	
2	Protective Net	9318635003	
3	Front Panel Assy	9317760041	
4	Emblem	9319151007	
5	Top Panel Assy	9317761017	
6	Cabinet Left Assy	9318247008	
7	Switch Cover A Assy	9317795005	
8	Switch Cover B	9317582001	
9	Grip	9317588003	
10	Cabinet Right Assy	9317759007	
11	Fan Motor	9602864003	
12	Propeller Fan	9313808013	
13	Heater Unit Assy	9900616007	
14	Main PCB with grease (09)	9709680568	
14	Main PCB with grease (12)	9709680575	
15	PCB Holder	9313074029	
16	Terminal	9900435028	
17	Heat Sink A	9314410017	
18	Heat Sink B	9314090011	
19	Reactor Assy	9900611019	
--	Outdoor Thermistor	9900544010	
--	Thermistor Assy	9900614003	

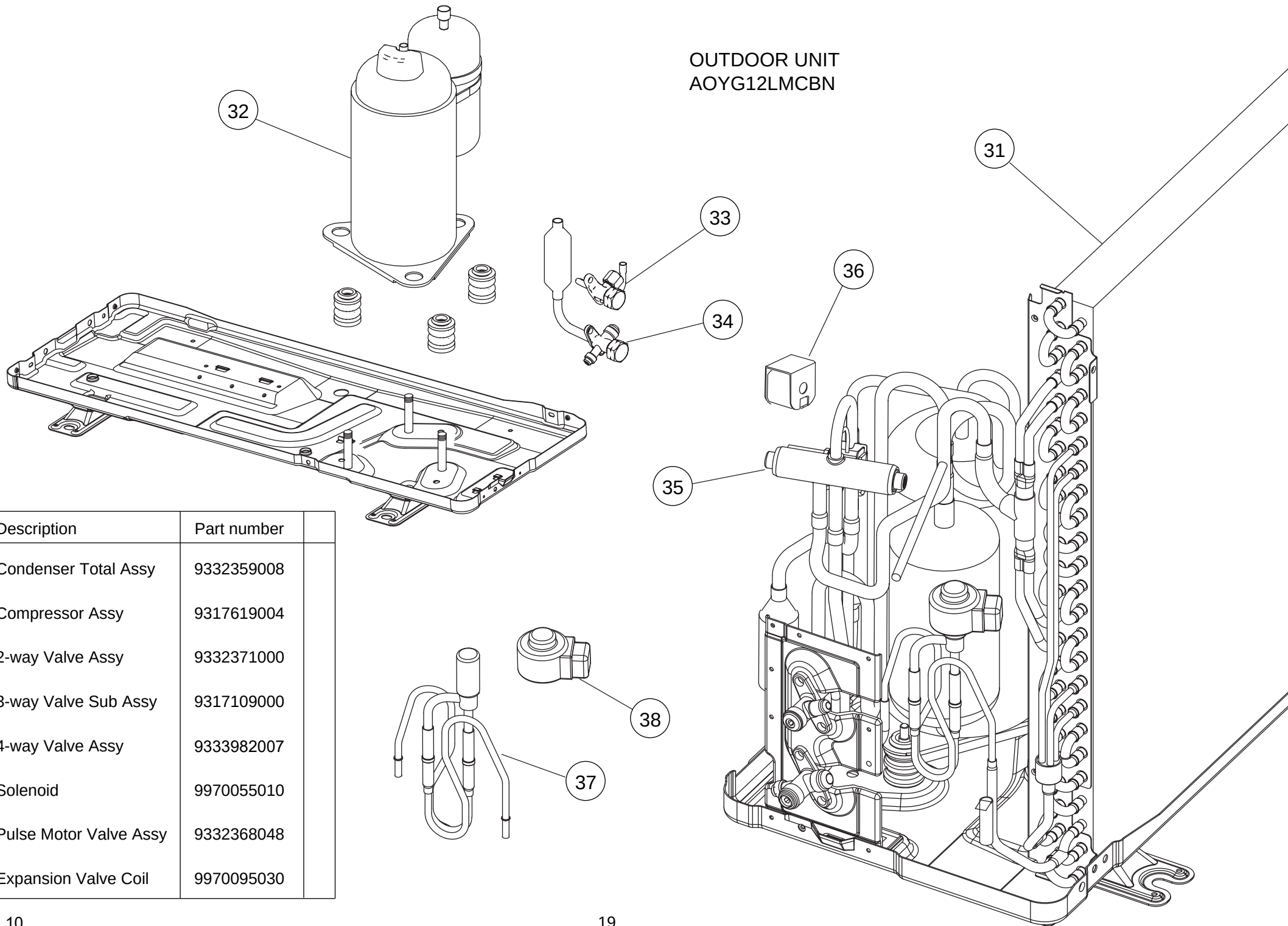
OUTDOOR UNIT
AOYG09LMCBN



Ref.	Description	Part number
21	Condenser Total Assy	9318711004
22	Compressor Assy	9317619004
23	2-way Valve Assy	9314554018
24	3-way Valve Assy	9314022012
25	4-way Valve Assy	9314093050
26	Solenoid	9970055010
27	Pulse Motor Valve Assy	9314557033
28	Expansion Valve Coil	9970095030



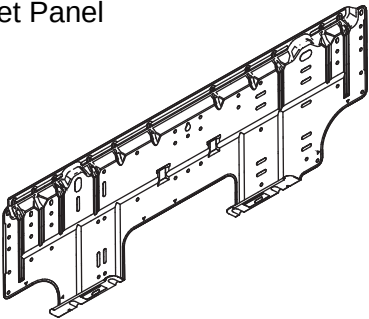
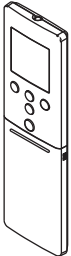
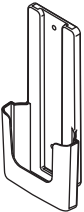
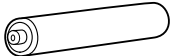
OUTDOOR UNIT
AOYG12LMCBN

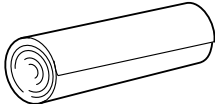
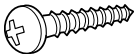
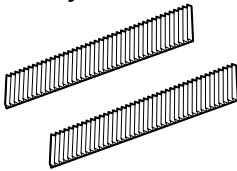
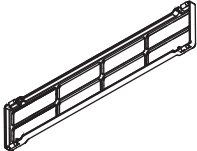


Ref.	Description	Part number	
31	Condenser Total Assy	9332359008	
32	Compressor Assy	9317619004	
33	2-way Valve Assy	9332371000	
34	3-way Valve Sub Assy	9317109000	
35	4-way Valve Assy	9333982007	
36	Solenoid	9970055010	
37	Pulse Motor Valve Assy	9332368048	
38	Expansion Valve Coil	9970095030	

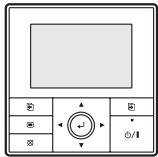
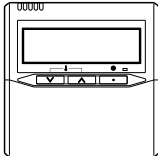
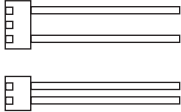
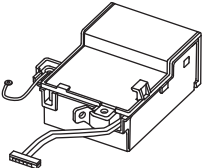
ACCESSORIES

INDOOR UNIT

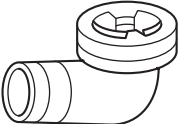
Name and Shape	Part number
Bracket Panel 	9332882018
Remote Control 	9319208008
Remote Control Holder 	9318912005
Battery (penlight) 	0600185541

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

1309G4250