

SERVICE MANUAL



Indoor unit	Outdoor unit
RSG07LMCA	ROHG07LMCA
RSG09LMCA	ROHG09LMCA
RSG12LMCA	ROHG12LMCA

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter		
INDOOR UNIT		RSG07LMCA	RSG09LMCA	RSG12LMCA
OUTDOOR UNIT		ROG07LMCA	ROG09LMCA	ROG12LMCA
COOLING CAPACITY		.10 kW	2.50 kW	3.40 kW
HEATING CAPACITY		.70 kW	3.20 kW	4.00 kW
POWER SOURCE		230 V		
FREQUENCY		50 Hz		
RUNNING CURRENT	Cooling	.0 A	3.2 A	4.6 A
	Heating	.4 A	3.5 A	4.8 A
INPUT WATTS	Cooling	.0 kW	0.65 kW	0.97 kW
	Heating	.0 kW	0.73 kW	1.02 kW
EER	Cooling	.82 kW/kW	3.85 kW/kW	3.50 kW/kW
COP	Heating	.29 kW/kW	4.38 kW/kW	3.92 kW/kW
MOISTURE REMOVAL		.0 L/h	1.3 L/h	1.8 L/h
AIR CIRCULATION HIGH		750 m ³ /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.	1,320 r.p.m.
	Medium		1,120 r.p.m.	1,120 r.p.m.
	Low		840 r.p.m.	860 r.p.m.
	Quiet		700 r.p.m.	700 r.p.m.
INDOOR UNIT Heating	High		1,360 r.p.m.	1,360 r.p.m.
	Medium		1,120 r.p.m.	1,120 r.p.m.
	Low		900 r.p.m.	900 r.p.m.
	Quiet		700 r.p.m.	700 r.p.m.
OUTDOOR UNIT	Cooling	740 r.p.m.		820 r.p.m.
	Heating	730 r.p.m.		810 r.p.m.

NOISE LEVEL

INDOOR UNIT	High	43 dB		
	Medium	38 dB		
	Low	33 dB		
	Quiet	22 dB		
OUTDOOR UNIT	Cooling	47 dB		51 dB
	Heating	48 dB		52 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary	
DISCRIMINATION		5SS072XHA01	
WEIGHT (with oil)		6.0 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

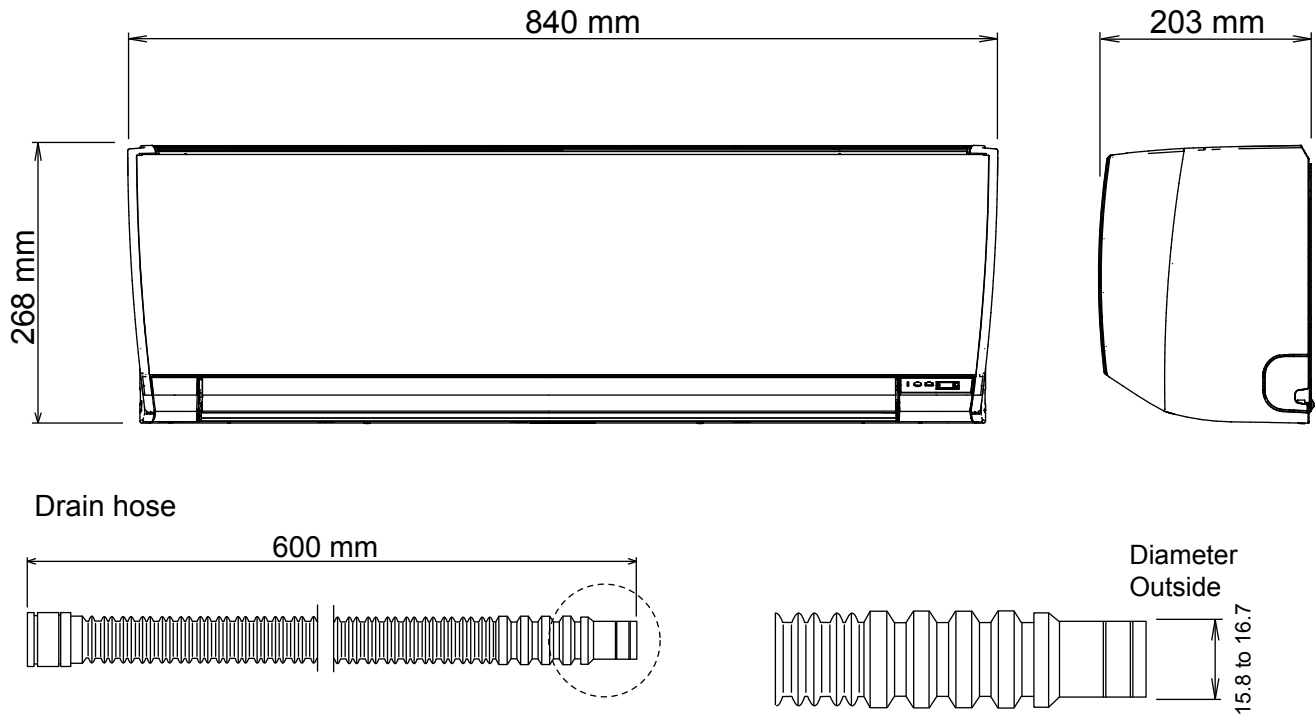
INDOOR UNIT H x W x D	268 x 840 x 203 mm
OUTDOOR UNIT H x W x D	535 x 663 x 293 mm

WEIGHT

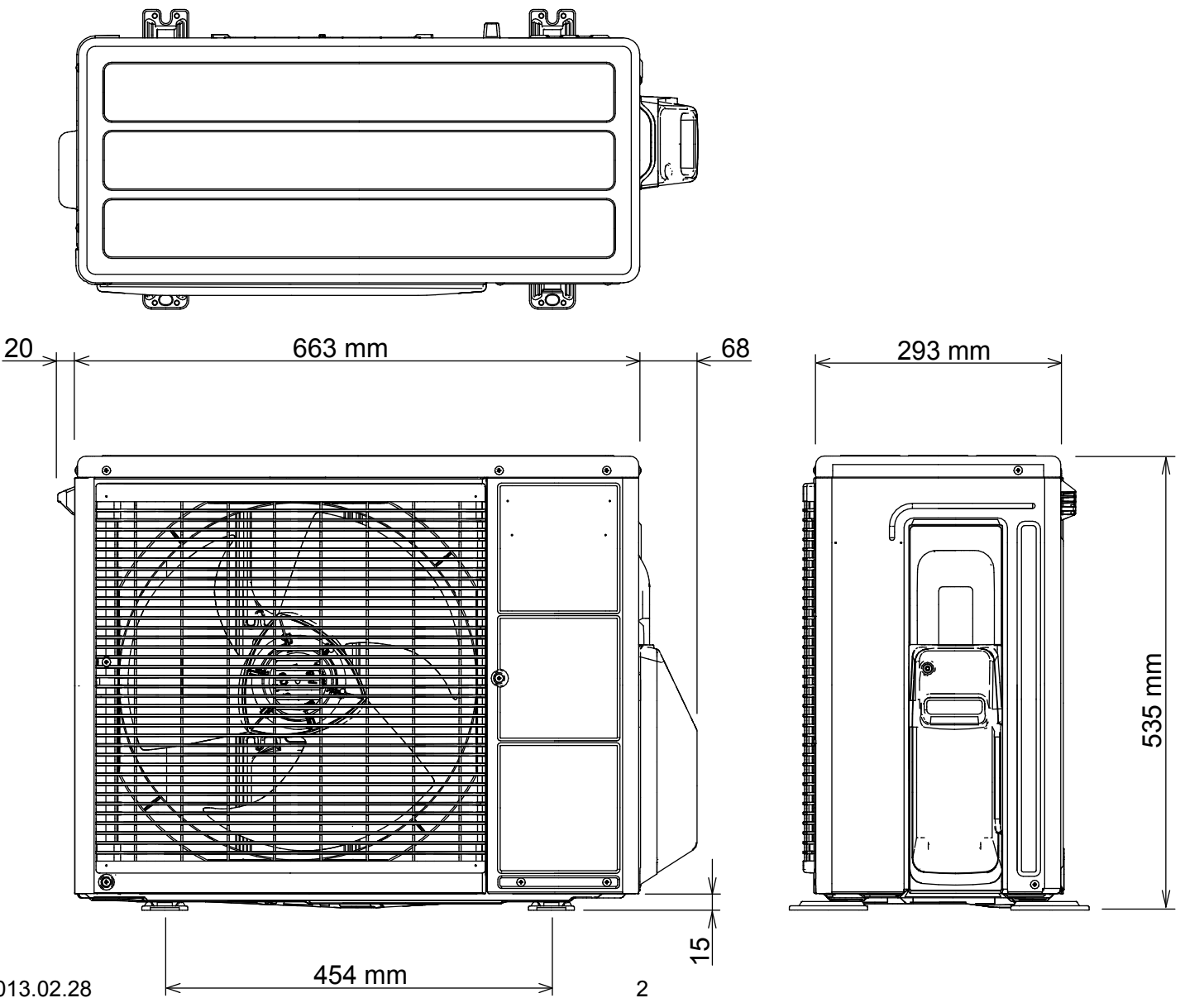
INDOOR UNIT Net / Shipping	8.5 kg / 10.5 kg
OUTDOOR UNIT Net / Shipping	21 kg / 24 kg 26 / 29

DIMENSIONS

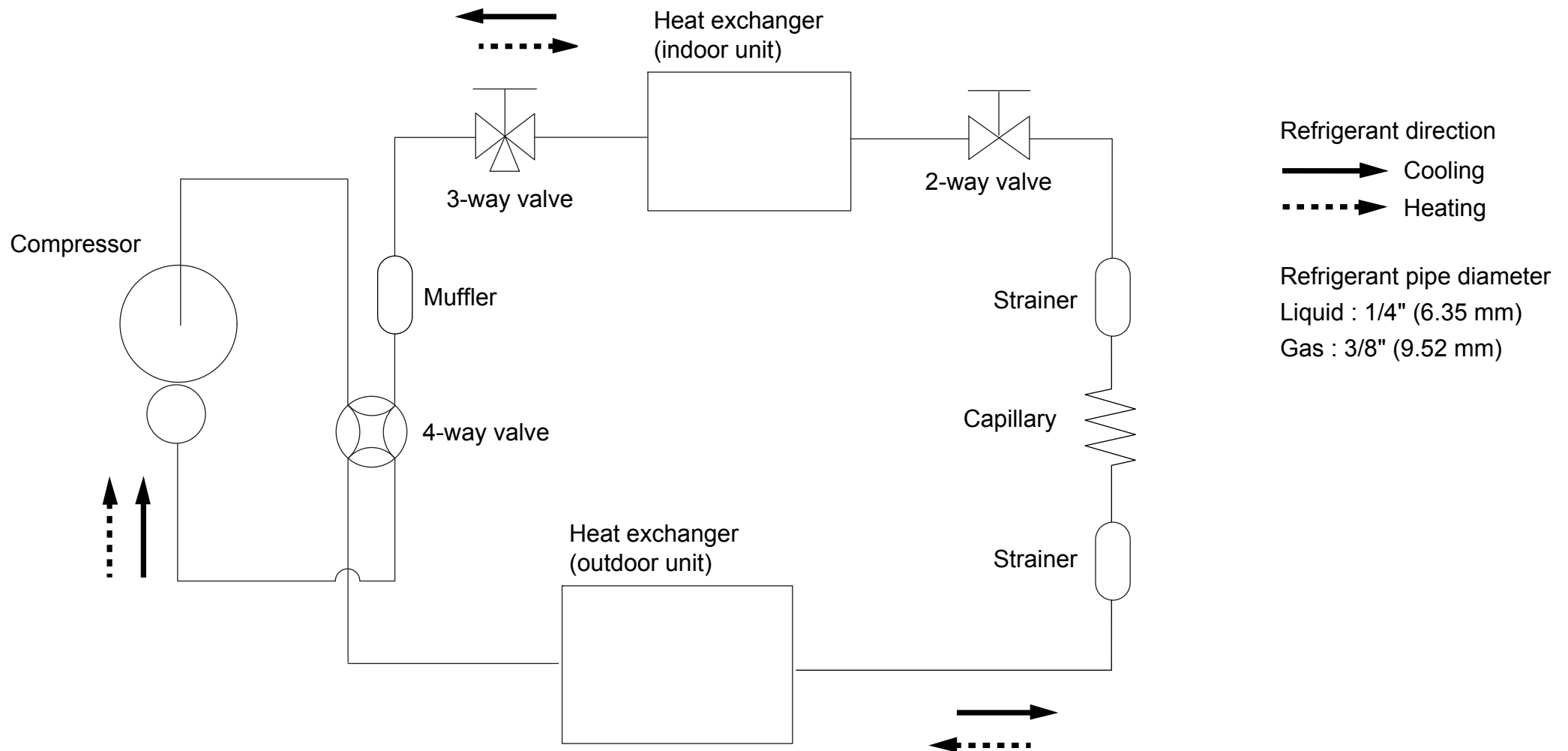
INDOOR UNIT



OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM

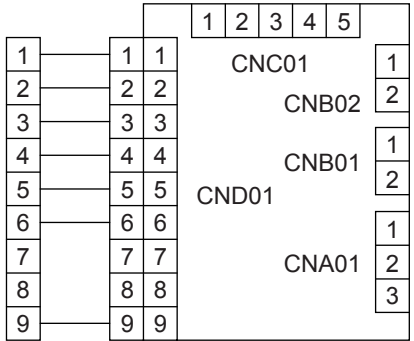


CIRCUIT
DIAGRAM

UTY-XCBXZ2 (OPTION)
COMMUNICATION PCB

REMOTE CONTROL
(OPTION)

TO MAIN PCB



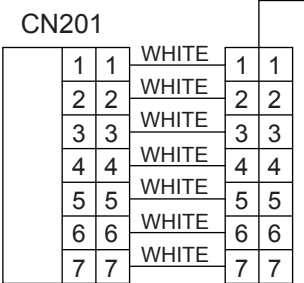
EX OUT (OPTION)
ERROR STATUS

EX OUT (OPTION)
OPERATION STATUS

EX IN (OPTION)

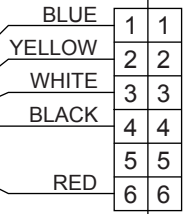
INDOOR UNIT

INDICATOR PCB

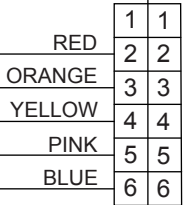


MAIN PCB

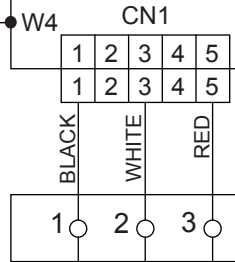
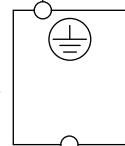
FAN MOTOR



DIFFUSER



EARTH TERMINAL



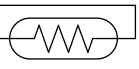
TERMINAL



LOUVER
(UP / DOWN)



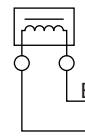
THERMISTOR
(PIPE TEMP.)



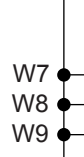
THERMISTOR
(ROOM TEMP.)

OUTDOOR UNIT

REACTOR



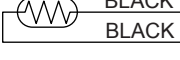
MAIN PCB



THERMISTOR
(PIPE TEMP.)



THERMISTOR
(DISCHARGE TEMP.)



THERMISTOR
(OUTDOOR TEMP.)



ROG12LMCA

ROG07LMCA
ROG09LMCA



COMPRESSOR



FAN MOTOR



EXPANSION VALVE



4-WAY VALVE



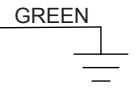
W101

W102

W4

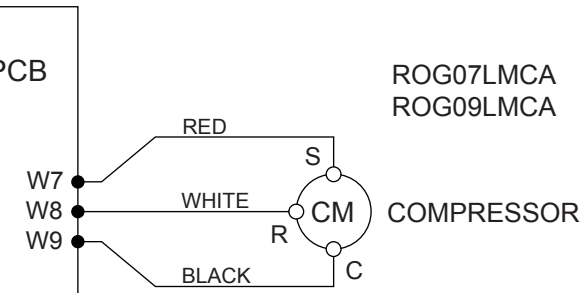
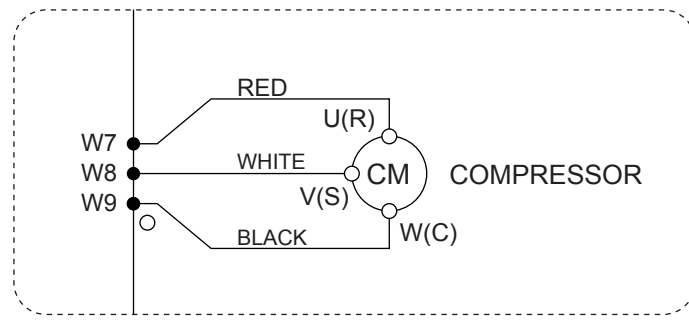
W1

W2

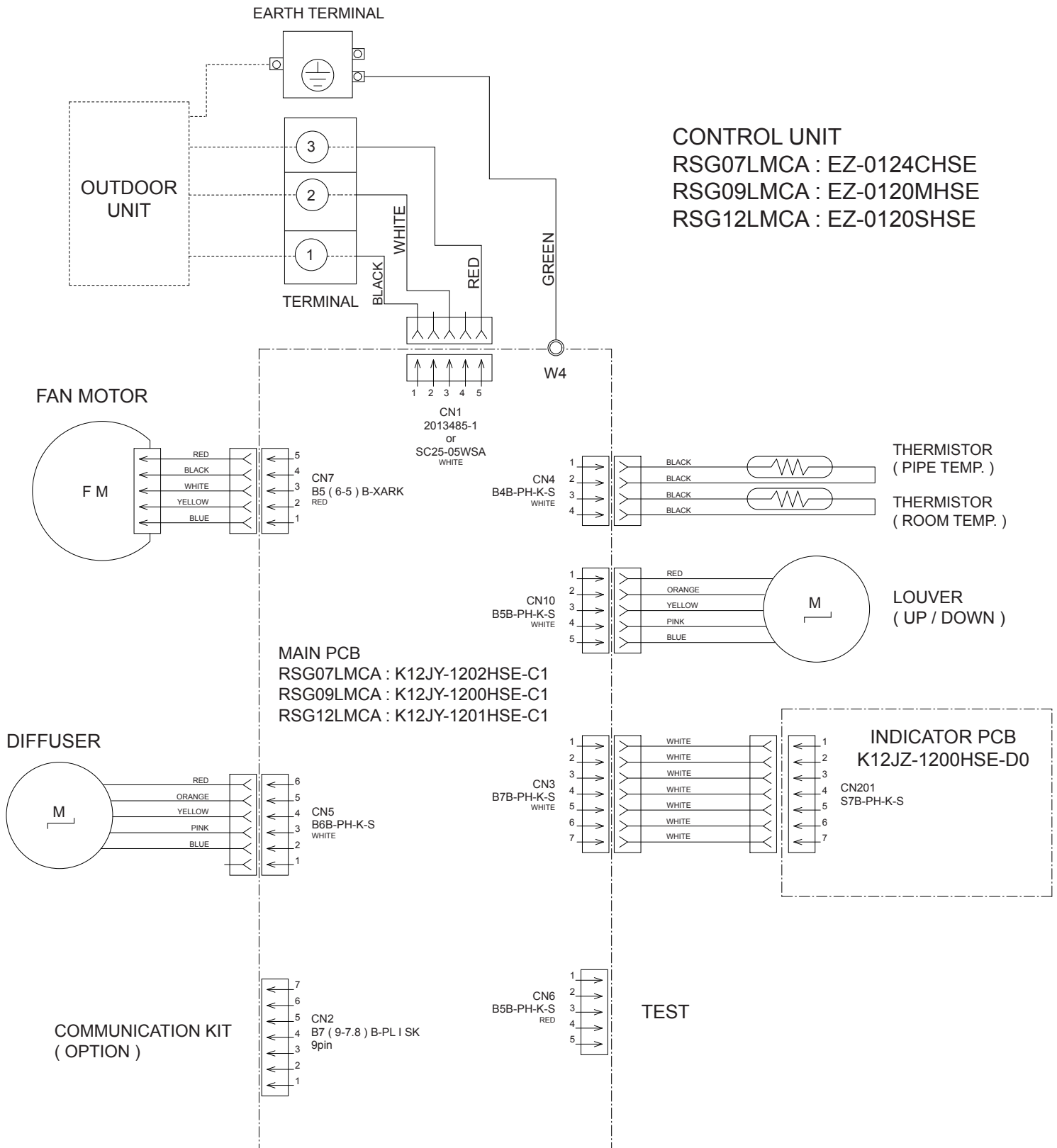


TERMINAL

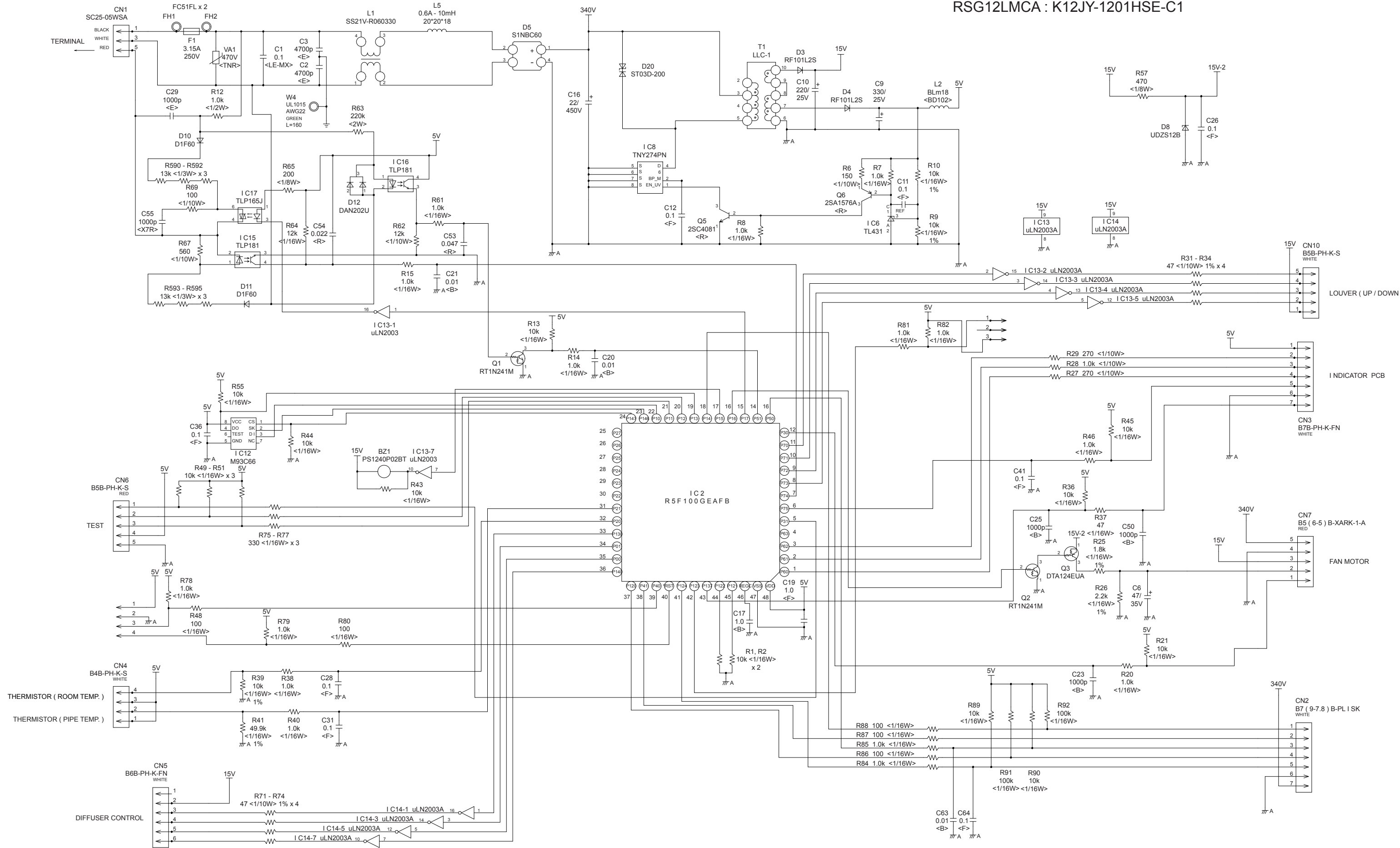
POWER SOURCE



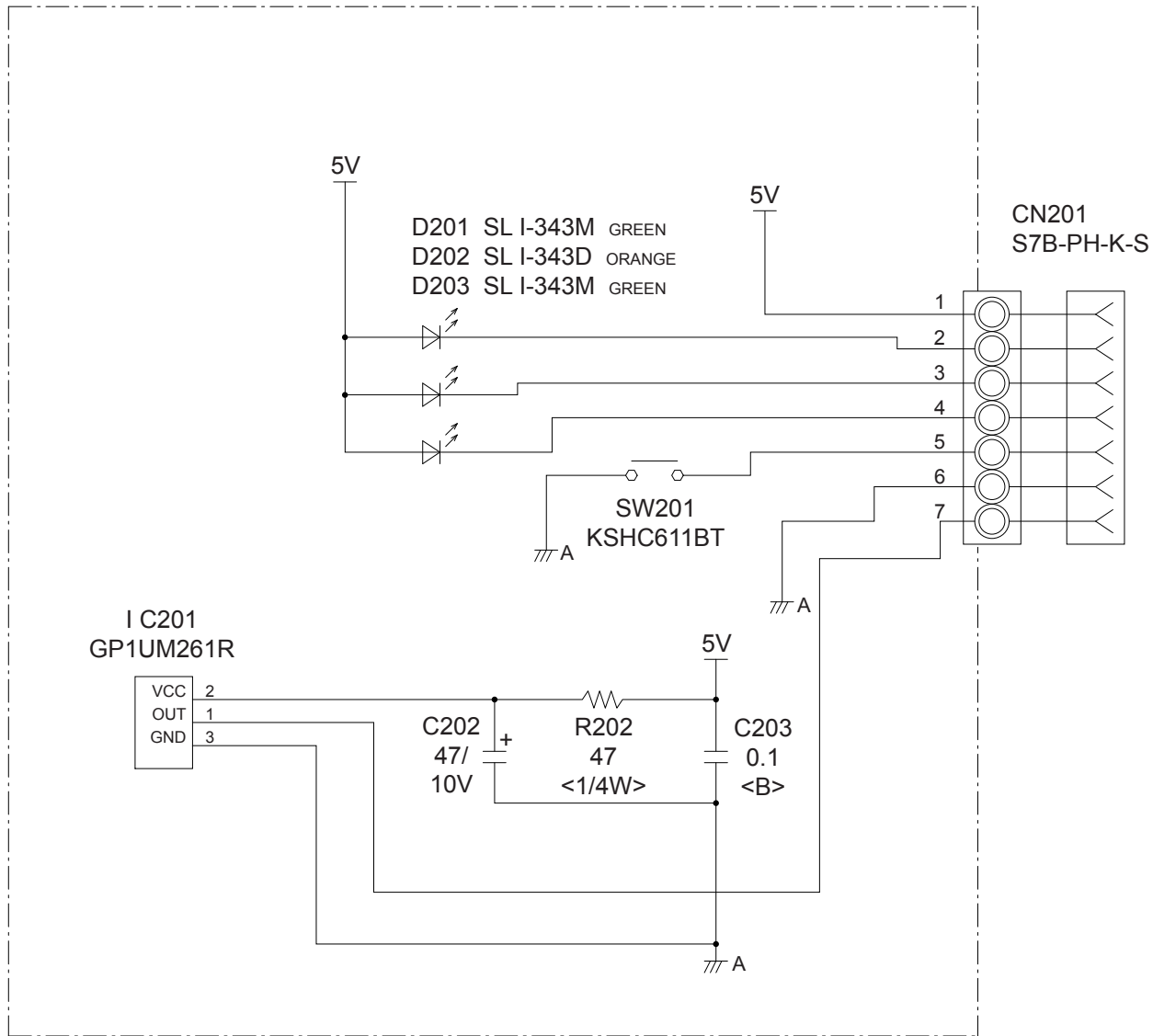
INDOOR PCB CIRCUIT DIAGRAM

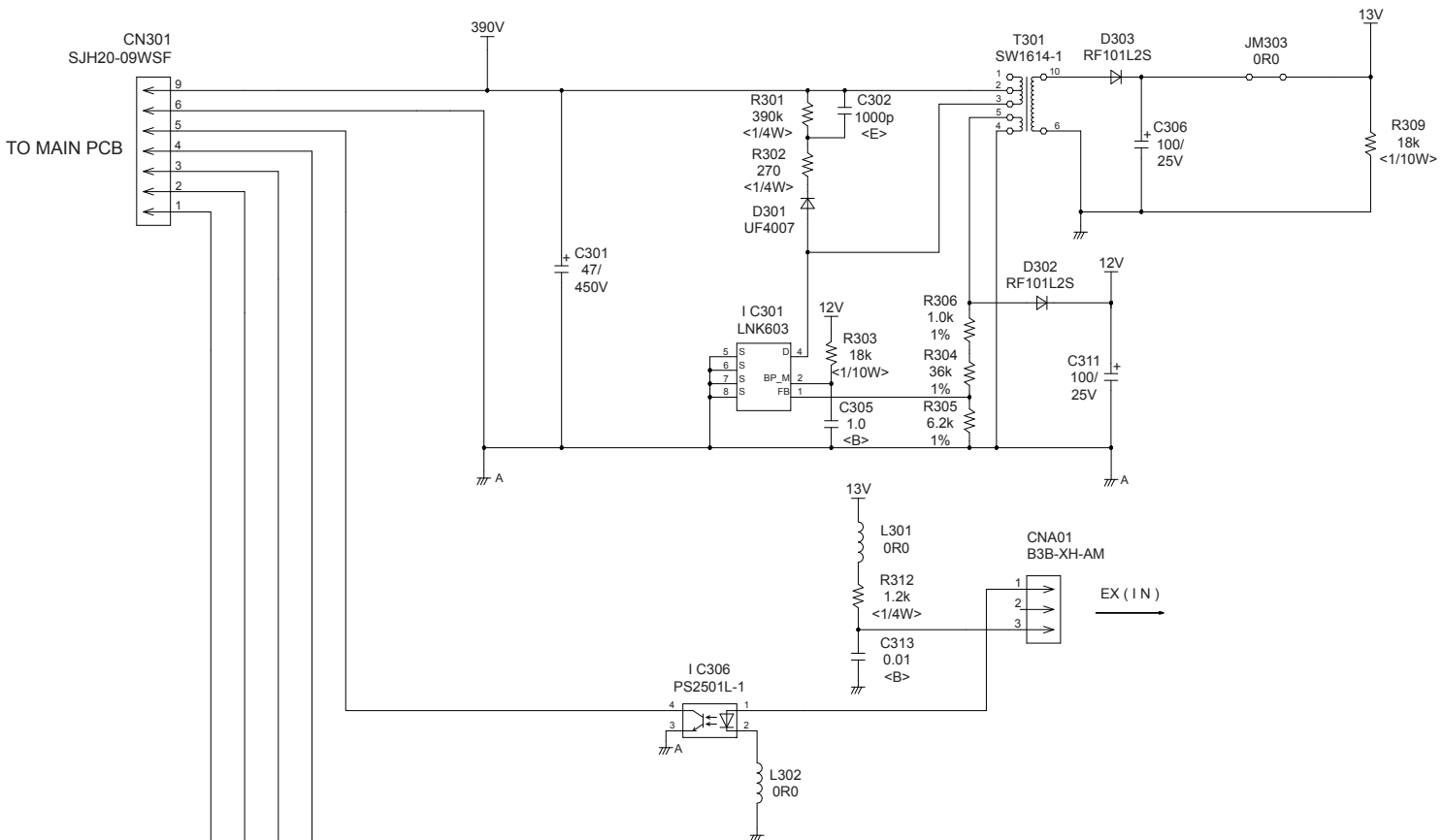


INDOOR UNIT
MAIN PCB
RSG07LMCA : K12JY-1202HSE-C2
RSG09LMCA : K12JY-1200HSE-C1
RSG12LMCA : K12JY-1201HSE-C1



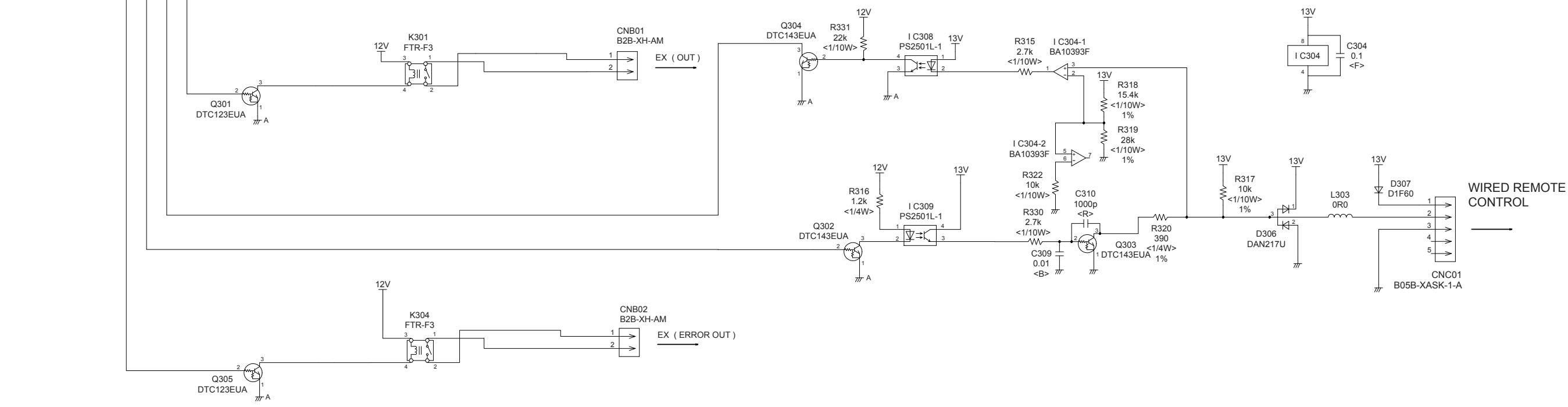
INDOOR UNIT
INDICATOR PCB
K12JZ-1200HSE-D0





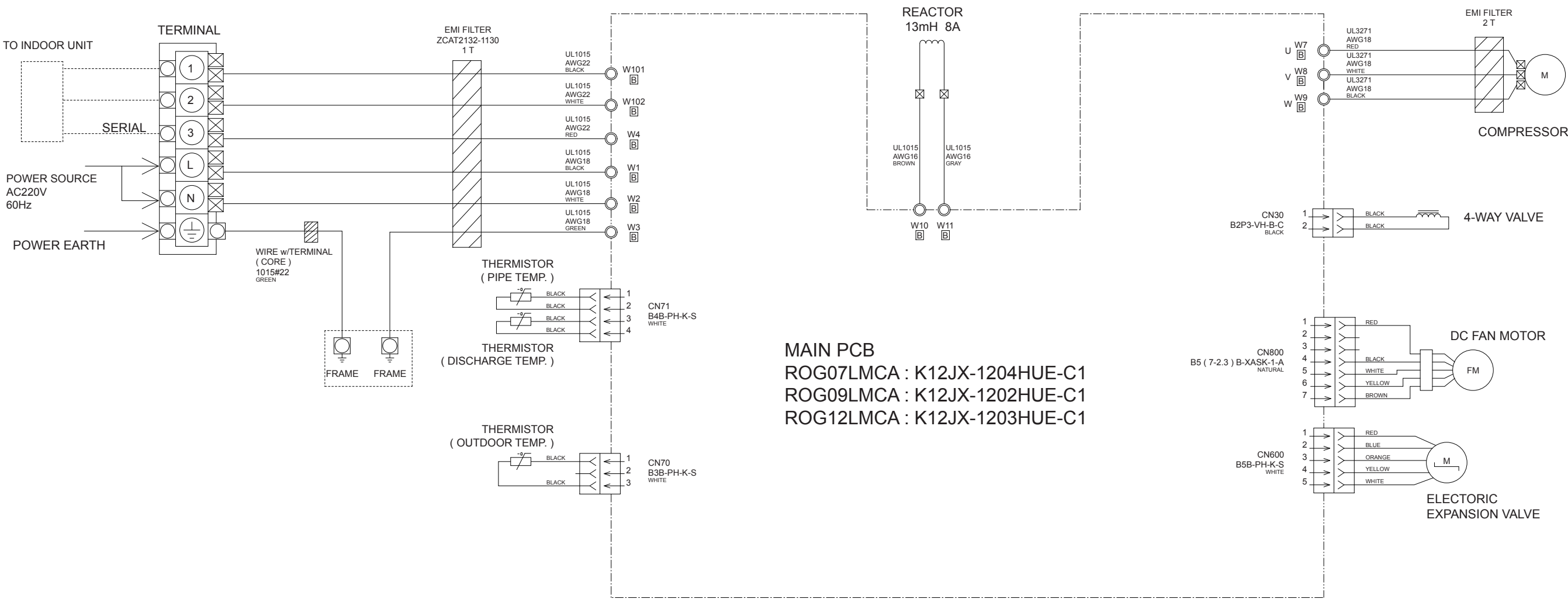
(Option)
Communication kit
UTY-XCBXZ2

Communication PCB
K10DC-1000HSE-CA0



OUTDOOR PCB
CIRCUIT DIAGRAM

INVERTER ASSEMBLY
ROG07LMCA : EZ-0122CHUE
ROG09LMCA : EZ-012PHUE
ROG12LMCA : EZ-012RHUE



ROG12LMCA : K12JX-1203HUE-C1



ERROR DETECTION

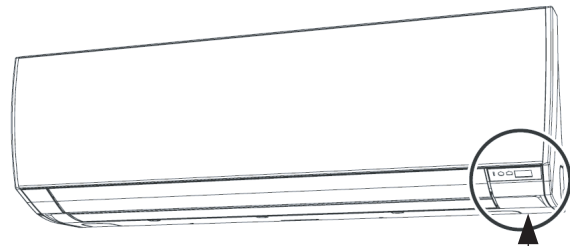
INDOOR UNIT REMOTE CONTROL

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.



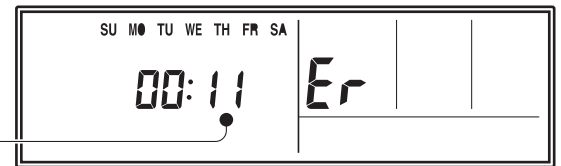
OPERATION indicator lamp (green)

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

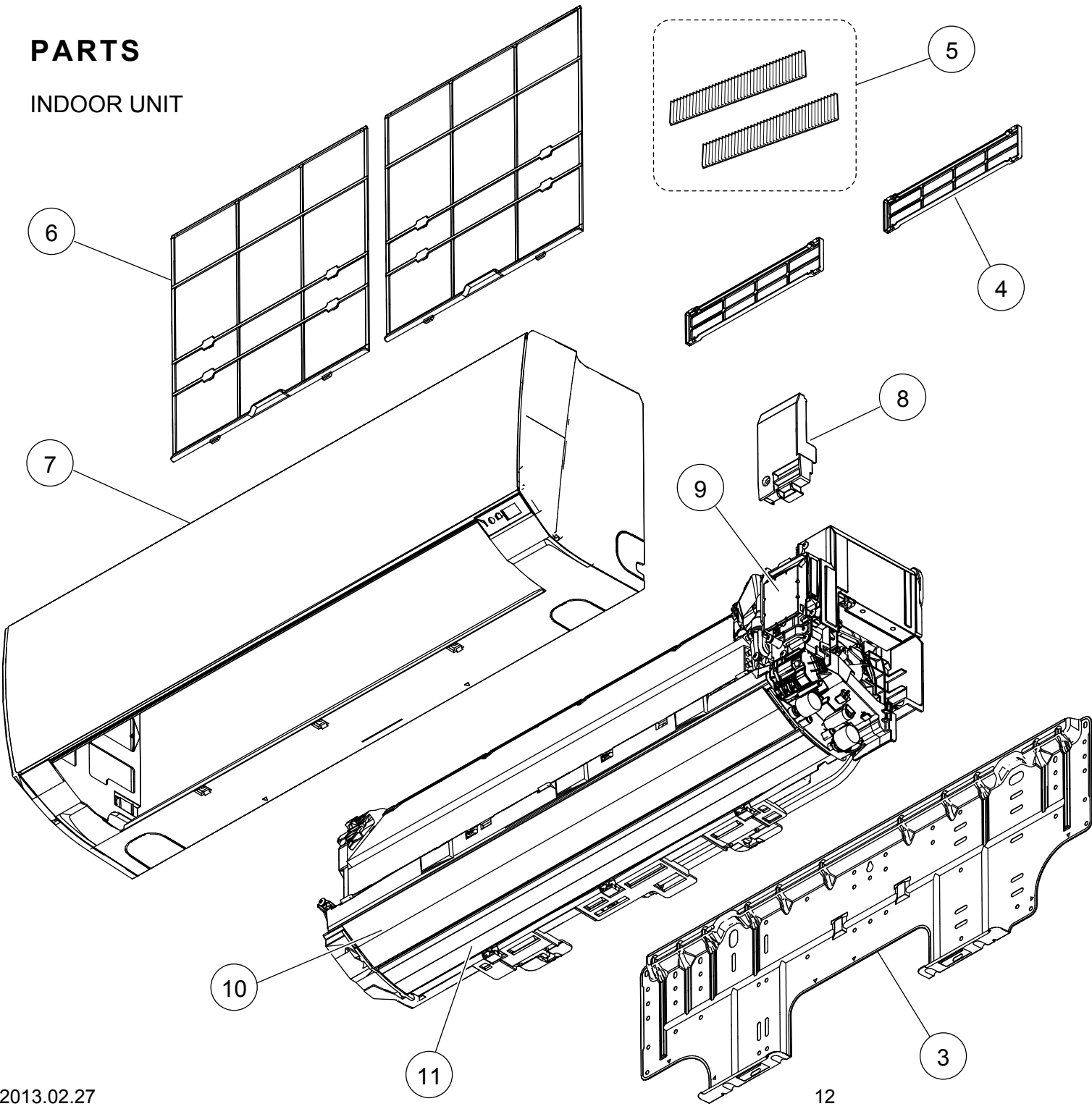
() : Number of flashing

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

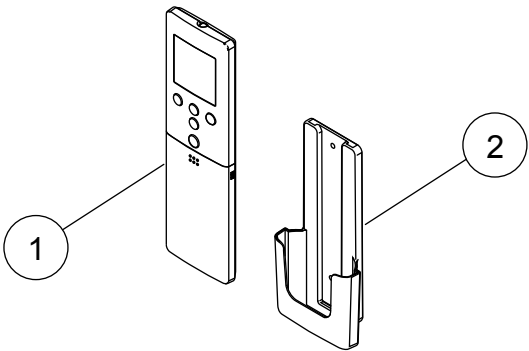
Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
● (6)	● (10)	◇	6A	Display PCB microcomputers communication error
● (7)	● (1)	◇	71	Discharge temp. sensor error
● (7)	● (2)	◇	72	Compressor temp. sensor error
● (7)	● (3)	◇	73	Outdoor unit Heat Ex.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

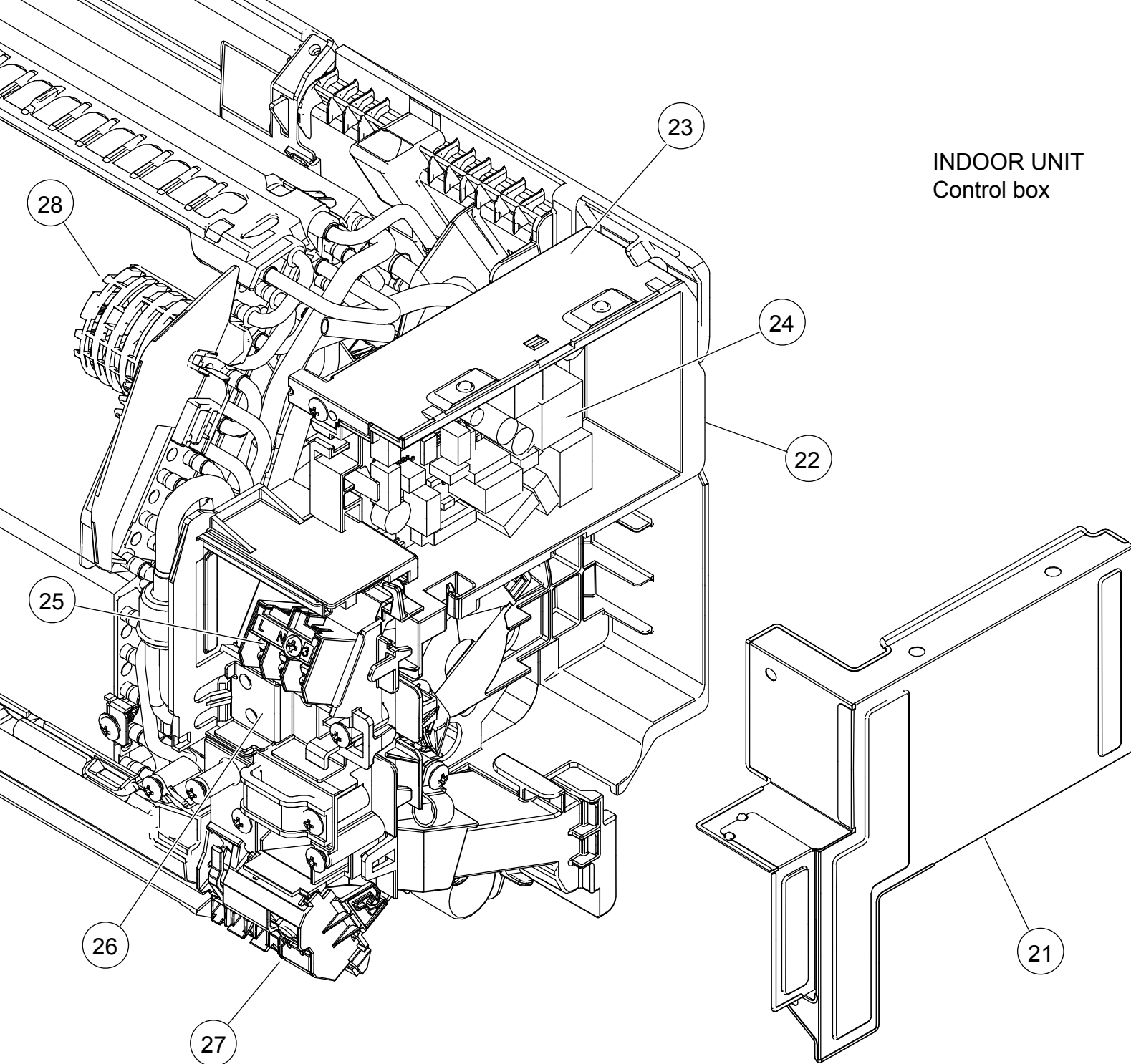
PARTS

INDOOR UNIT



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	9332994025	
8	Wire Cover	9332894004	
9	Wire Shield	9332906004	
10	Louver	9332900002	
11	Diffuser Assy	9332998009	

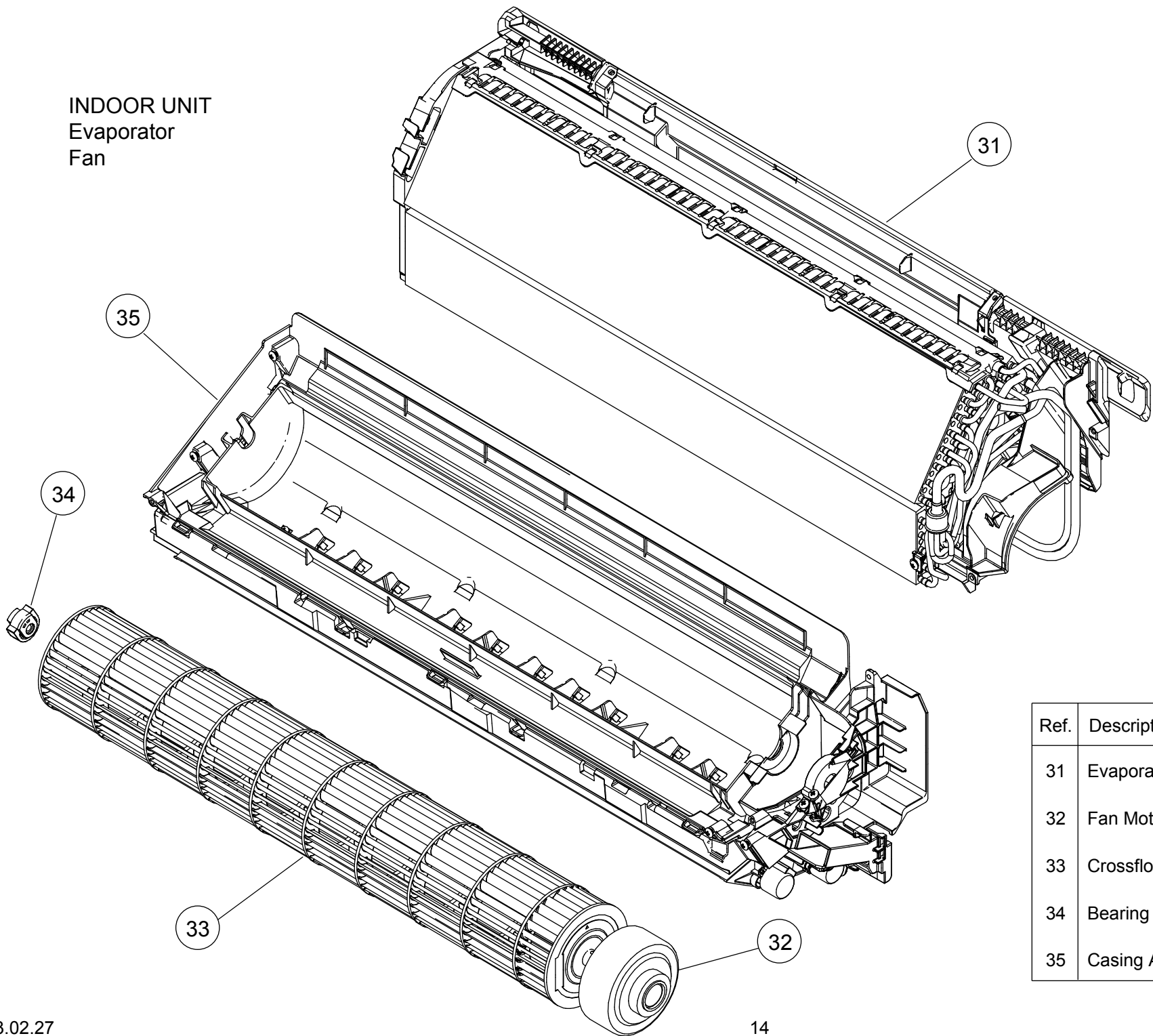




INDOOR UNIT Control box

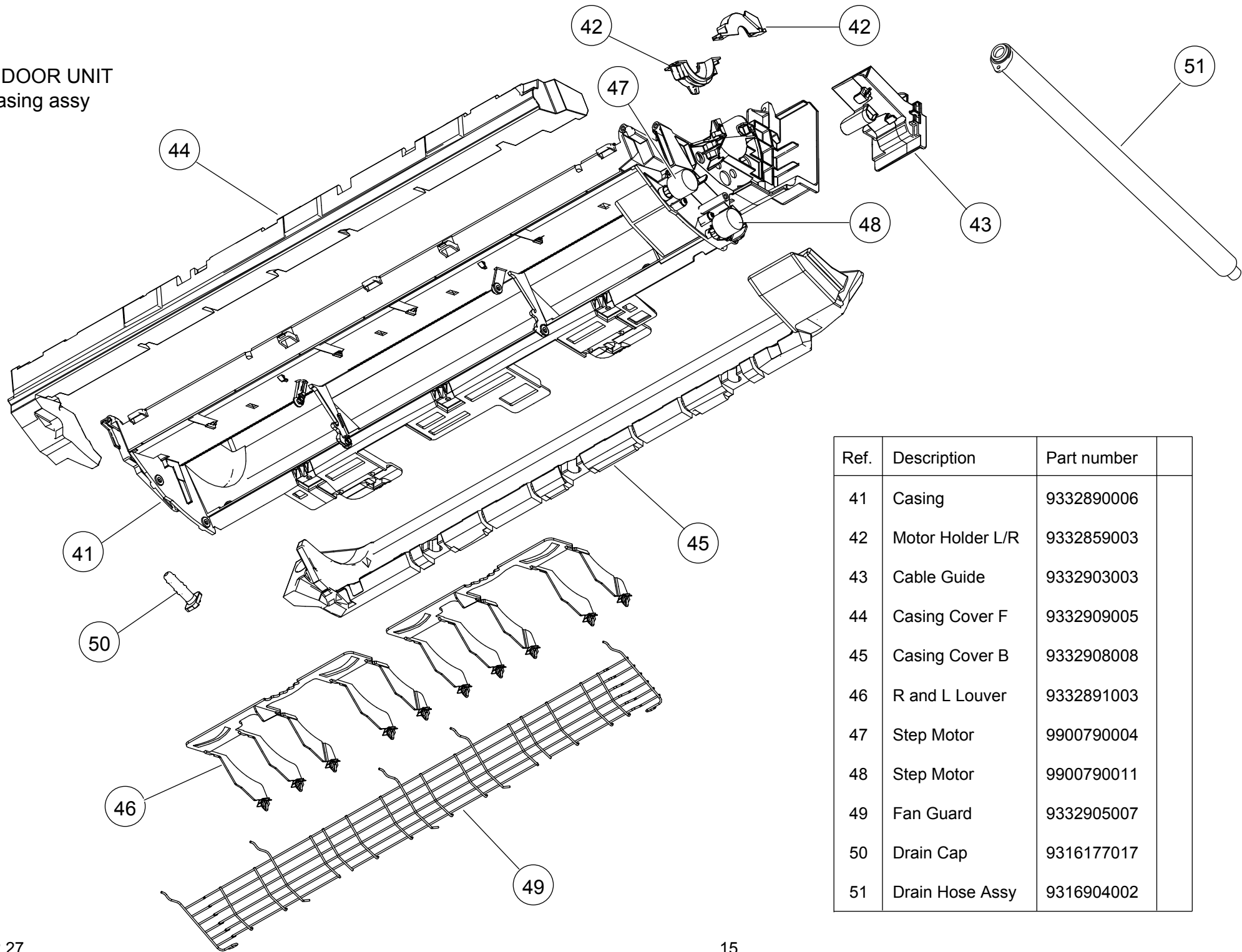
Ref.	Description	Part number	
21	Cover Shield	9332915006	
22	Control Box	9332892000	
23	Box Shield Assy	9332877007	
24	Main PCB (07)	9709427033	
24	Main PCB (09)	9709427019	
24	Main PCB (12)	9709427026	
25	Terminal	9900720001	
26	Earth Terminal	9332880007	
27	Display Assy	9709430019	
28	Room Thermistor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

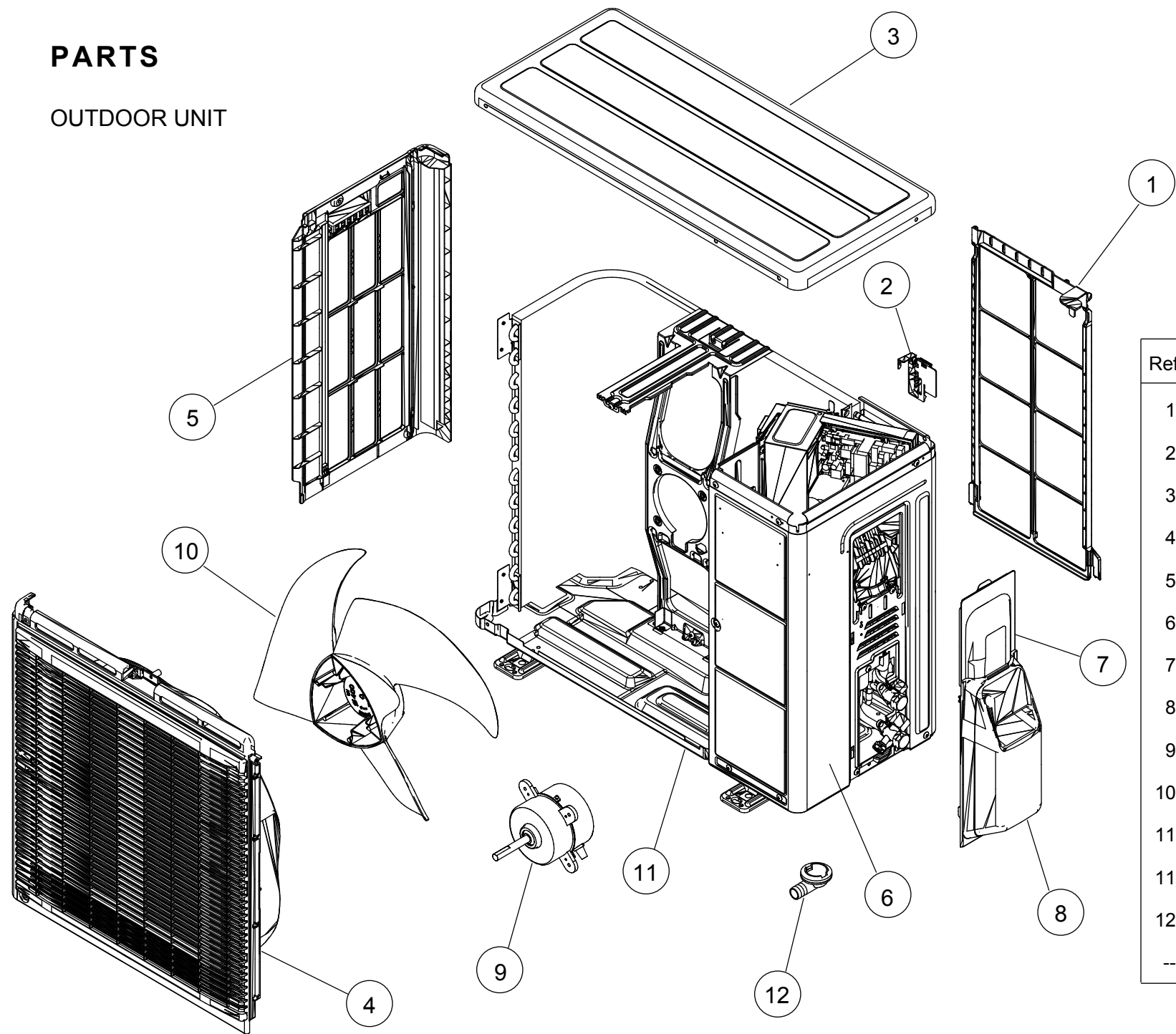
INDOOR UNIT
Casing assy



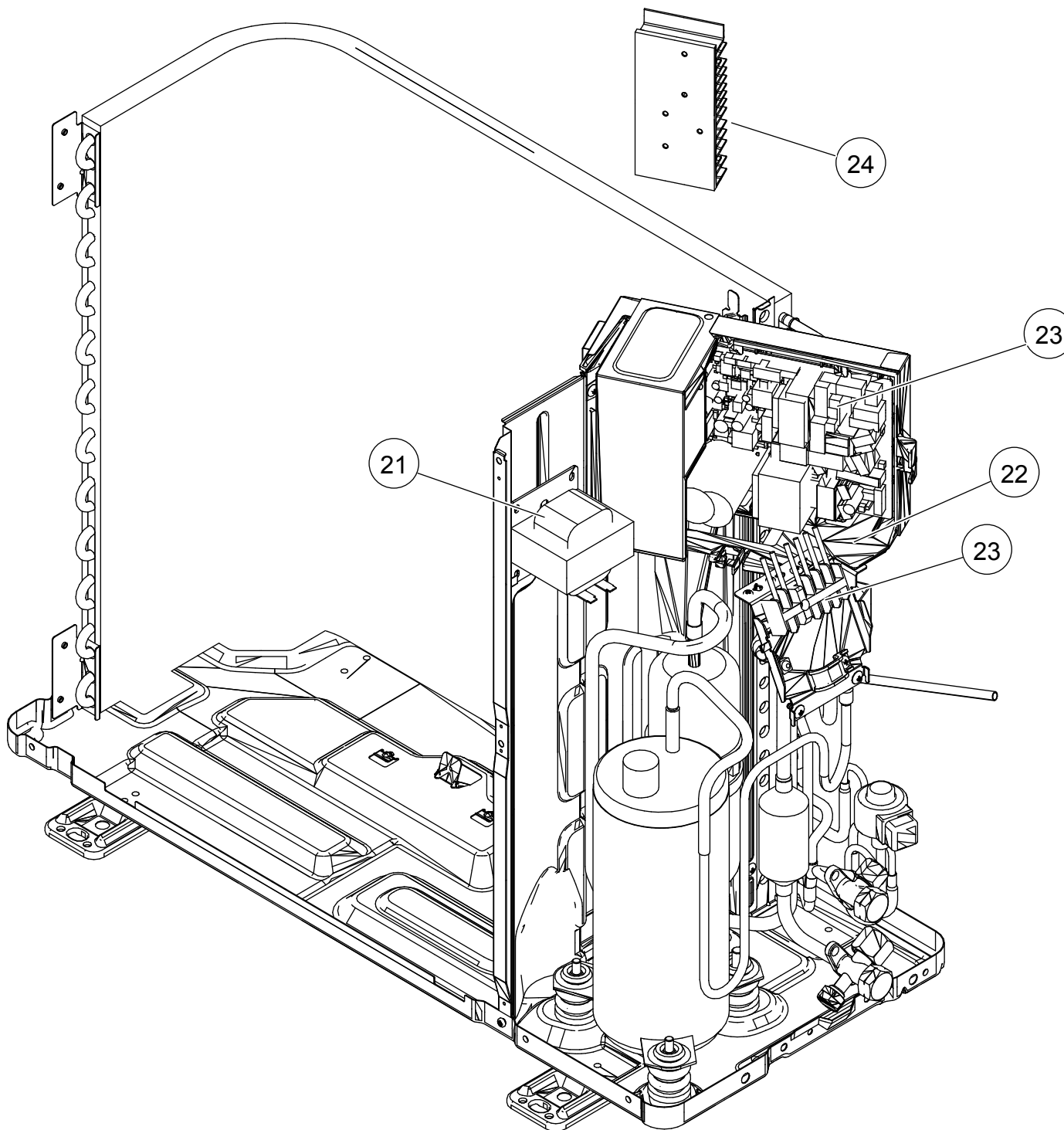
Ref.	Description	Part number	
41	Casing	9332890006	
42	Motor Holder L/R	9332859003	
43	Cable Guide	9332903003	
44	Casing Cover F	9332909005	
45	Casing Cover B	9332908008	
46	R and L Louver	9332891003	
47	Step Motor	9900790004	
48	Step Motor	9900790011	
49	Fan Guard	9332905007	
50	Drain Cap	9316177017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

PARTS

OUTDOOR UNIT



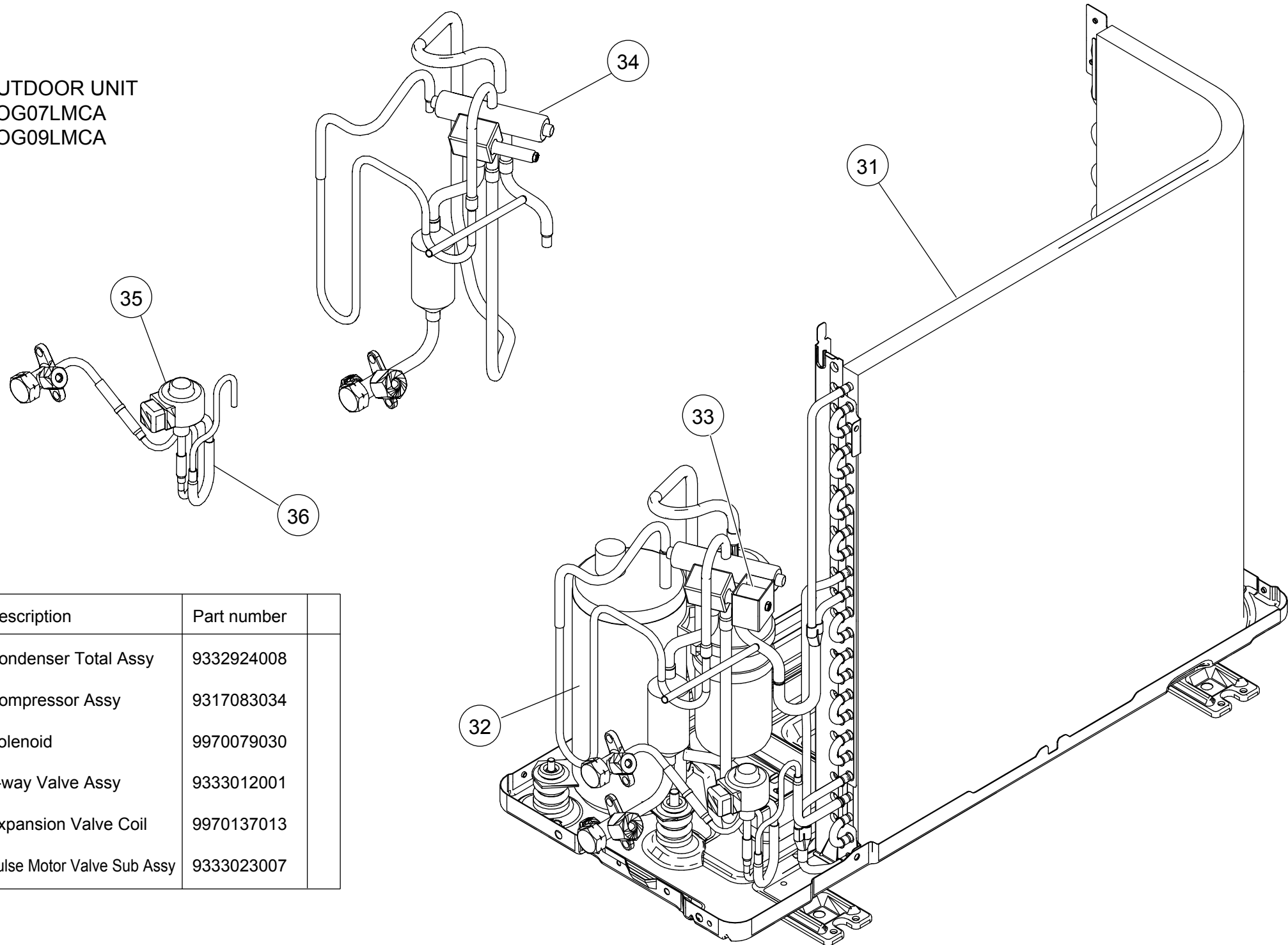
Ref.	Description	Part number	
1	Protective Net	9332855005	
2	Thermistor Holder	9332505009	
3	Top Panel Assy	9332977004	
4	Front Panel Assy	9332965001	
5	Cabinet Left Assy	9332962000	
6	Cabinet Right Assy	9332963007	
7	Switch Cover A Assy	9332964004	
8	Switch Cover B	9332843002	
9	Fan Motor	9603074012	
10	Propeller Fan	9309909014	
11	Base Assy (07, 09)	9332888003	
11	Base Assy (12)	9332888010	
12	Drain Assy	9332574005	
--	Emblem	9319158006	



OUTDOOR UNIT

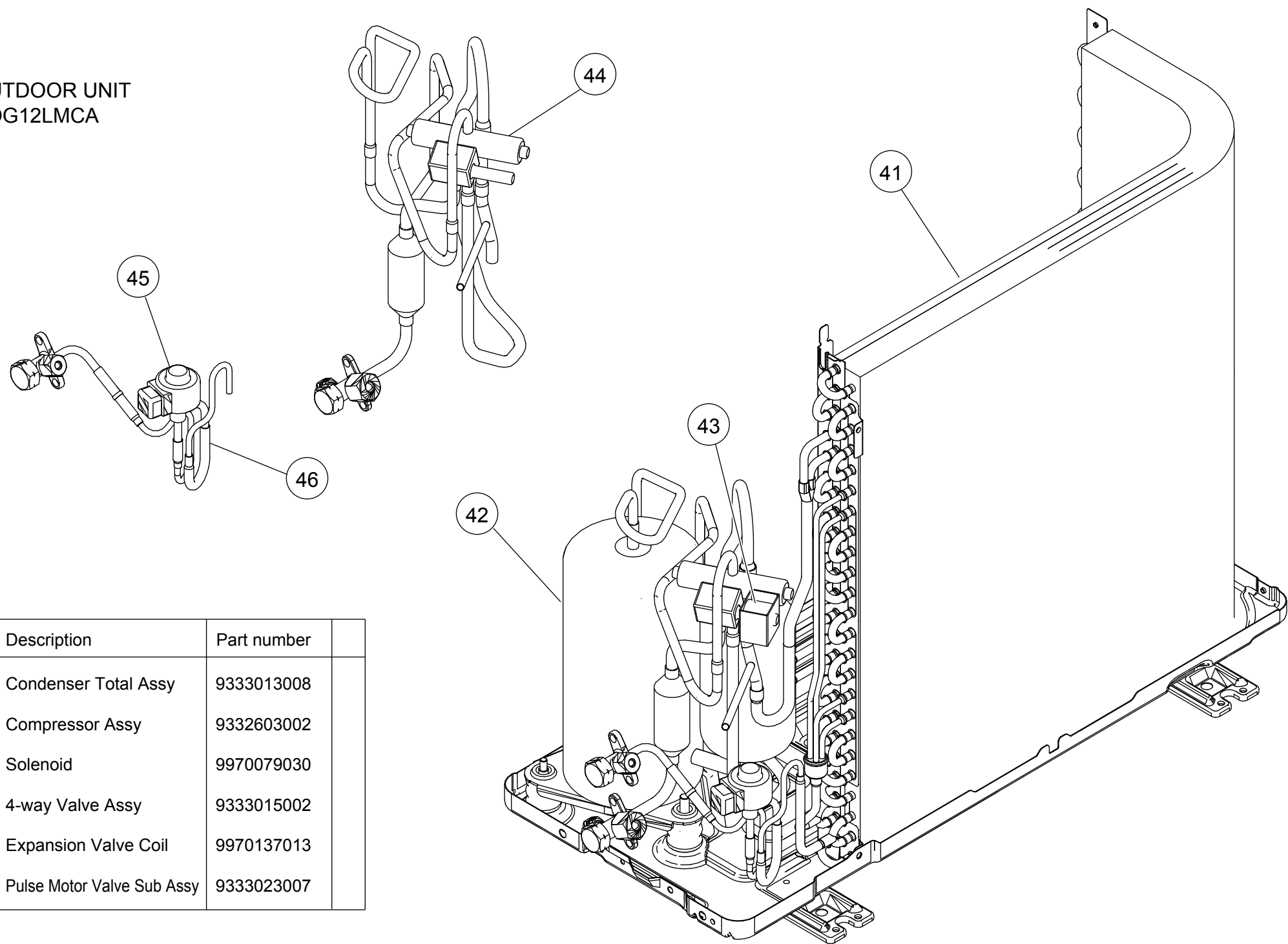
Ref.	Description	Part number	
21	Reactor Assy	9900787028	
22	PCB Holder	9332506006	
23	Main PCB with Terminal (07)	9709435052	
23	Main PCB with Terminal (09)	9709435038	
23	Main PCB with Terminal (12)	9709435045	
24	Heat Sink B	9332522006	
--	Thermistor Assy	9900719029	
--	Thermistor	9900717025	

OUTDOOR UNIT
ROG07LMCA
ROG09LMCA



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
ROG12LMCA

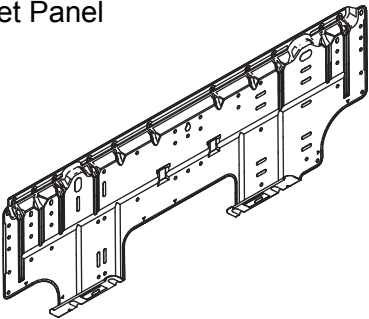
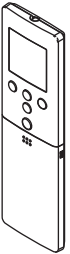
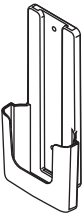
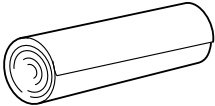


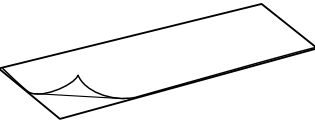
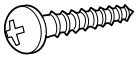
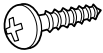
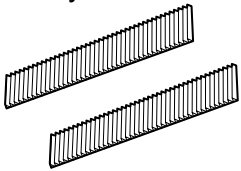
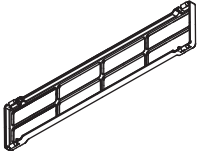
Ref.	Description	Part number	
41	Condenser Total Assy	9333013008	
42	Compressor Assy	9332603002	
43	Solenoid	9970079030	
44	4-way Valve Assy	9333015002	
45	Expansion Valve Coil	9970137013	
46	Pulse Motor Valve Sub Assy	9333023007	

ACCESSORIES

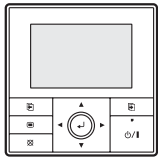
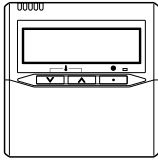
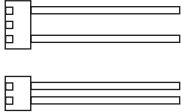
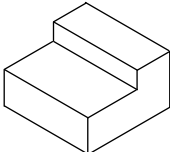
under confirmation

INDOOR UNIT

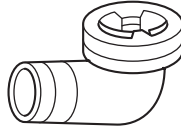
Name and Shape	Part number
Bracket Panel 	9332882018
Remote Control 	9319208008
Remote Control Holder 	9318912005
Battery (penlight) 	0600185541
Cloth tape 	9310519004

Name and Shape	Part number
Seal A 	
Tapping screw (ϕ 4 x 25 mm) 	0700076046
Tapping screw (ϕ 3 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

1303G4200