

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
ASYG07LMCA	AOYG07LMCA
ASYG09LMCA	AOYG09LMCA
ASYG12LMCA	AOYG12LMCA

CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS.....	2
REFRIGERANT SYSTEM DIAGRAM... .	3
CIRCUIT DIAGRAM.....	4
INDOOR PCB CIRCUIT DIAGRAM.....	5
OUTDOOR PCB CIRCUIT DIAGRAM... .	9
ERROR DETECTION.....	11
PARTS (INDOOR UNIT).....	12
PARTS (OUTDOOR UNIT).....	16
ACCESSORIES.....	20

SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter		
INDOOR UNIT		ASYG07LMCA	ASYG09LMCA	ASYG12LMCA
OUTDOOR UNIT		AOYG07LMCA	AOYG09LMCA	AOYG12LMCA
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

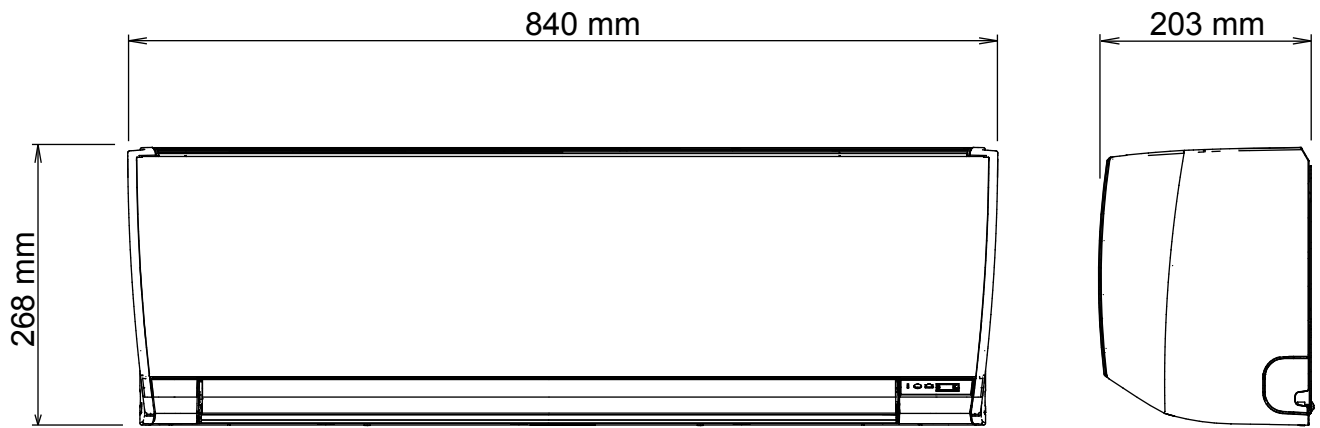
INDOOR UNIT H x W x D	268 x 840 x 203 mm
OUTDOOR UNIT H x W x D	535 x 663 x 293 mm

WEIGHT

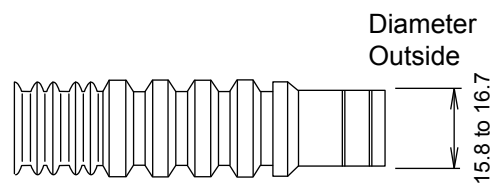
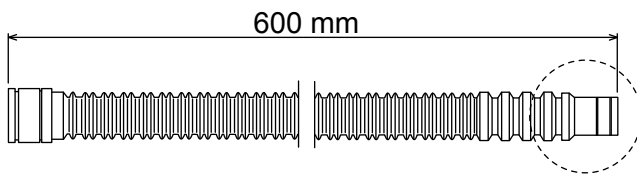
INDOOR UNIT Net / Shipping	8.5 kg / 10.5 kg
OUTDOOR UNIT Net / Shipping	21 kg / 24 kg 26 / 29

DIMENSIONS

INDOOR UNIT

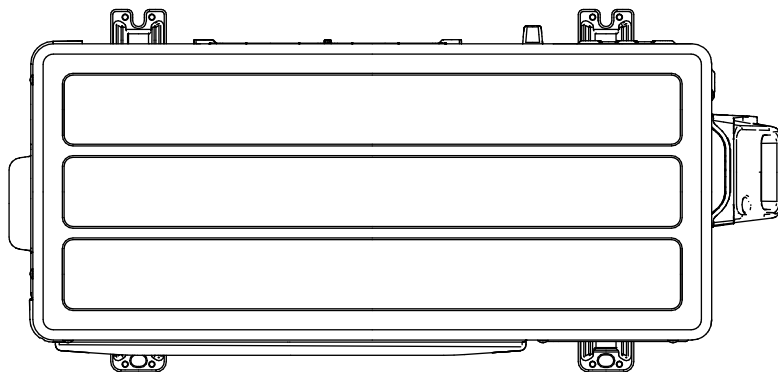


Drain hose

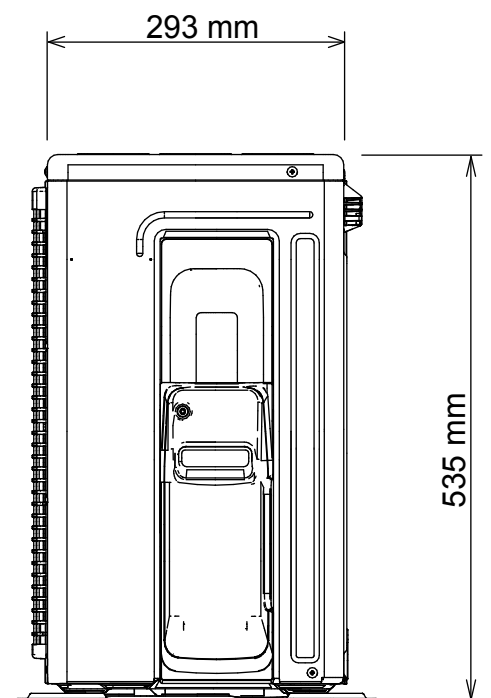
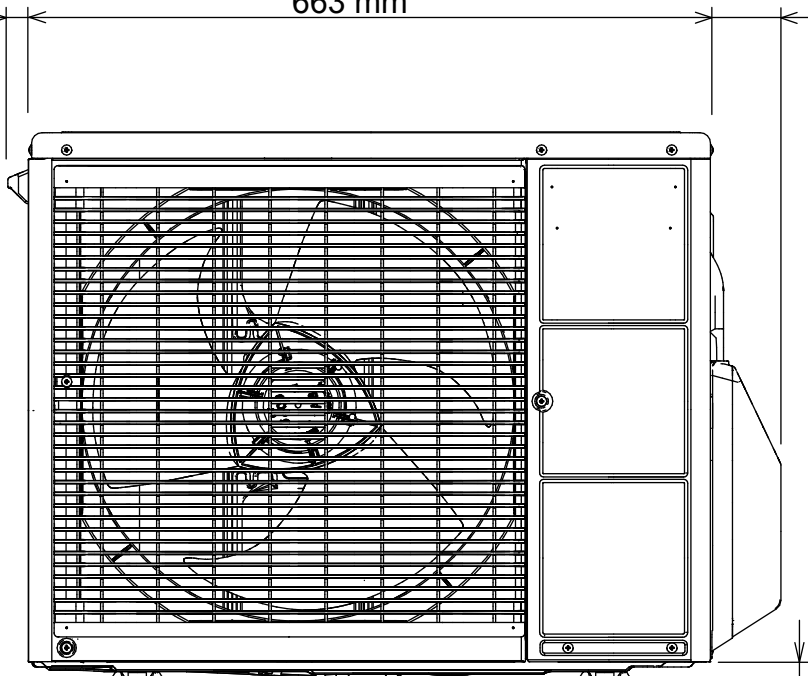


Inside : 13.8 mm

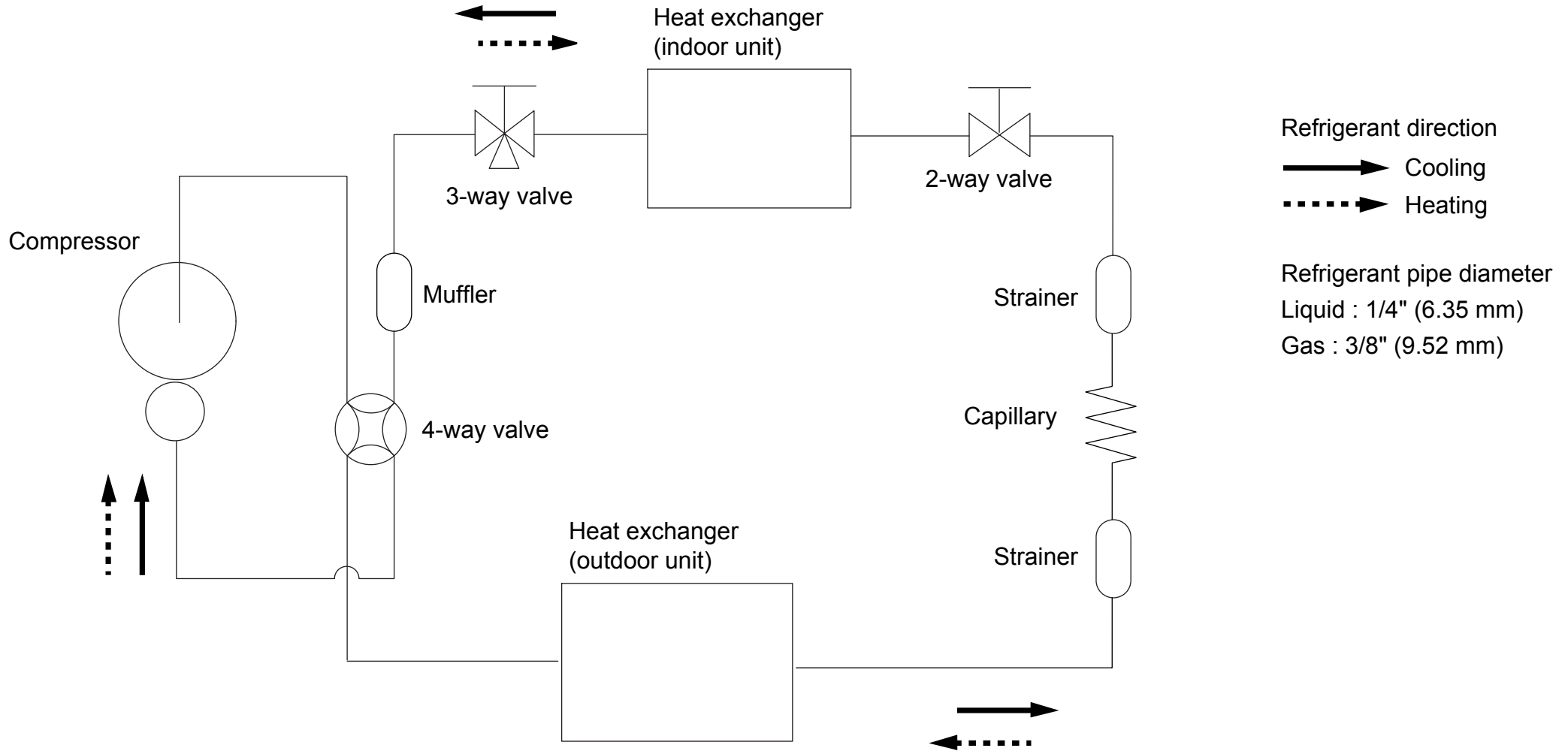
OUTDOOR UNIT



20 663 mm 68



REFRIGERANT SYSTEM DIAGRAM

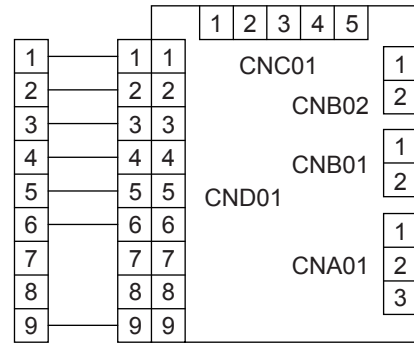


CIRCUIT DIAGRAM

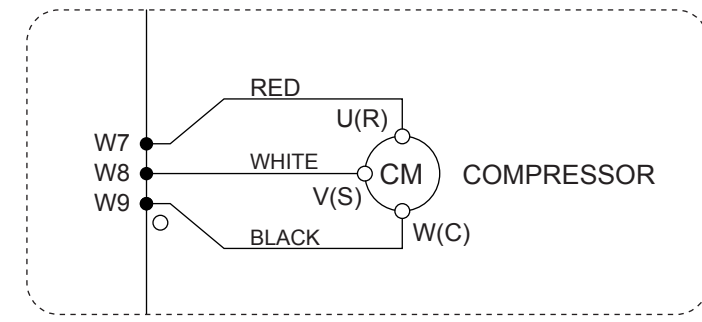
UTY-XCBXZ2 (OPTION)
COMMUNICATION PCB

REMOTE CONTROL
(OPTION)

TO MAIN PCB



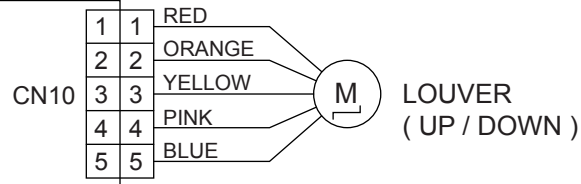
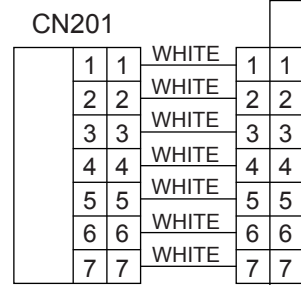
CNC01 1 EX OUT (OPTION)
CNB02 2 ERROR STATUS
CNB01 1 EX OUT (OPTION)
2 OPERATION STATUS
CND01 1
CNA01 2 EX IN (OPTION)
3



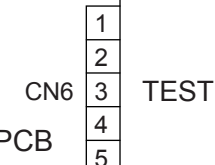
AOYG12LMCA

INDOOR UNIT

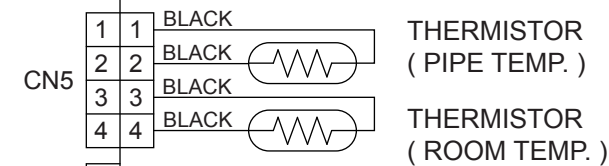
INDICATOR PCB



CN3



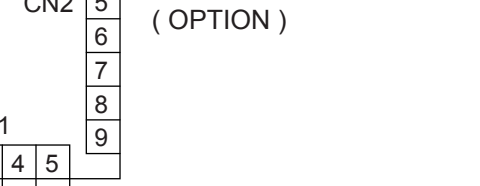
MAIN PCB



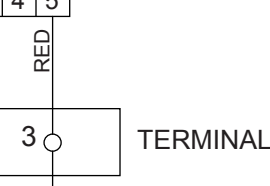
CN5



CN2



CN1



BLACK

WHITE

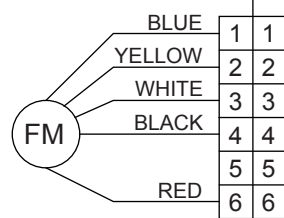
RED

1

2

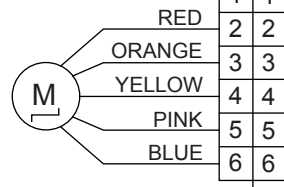
3

FAN MOTOR



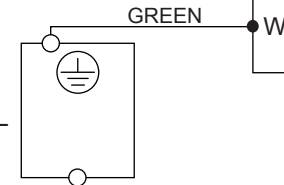
CN7

DIFFUSER



CN5

EARTH TERMINAL



GREEN

W4

BLACK

WHITE

RED

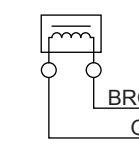
1

2

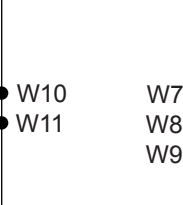
3

OUTDOOR UNIT

REACTOR

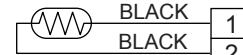


MAIN PCB



AOYG07LMCA
AOYG09LMCA

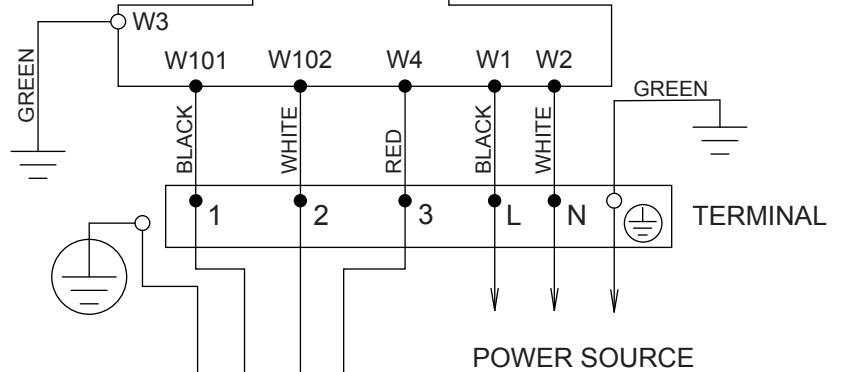
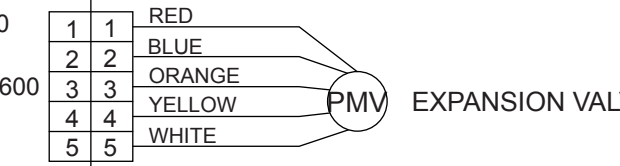
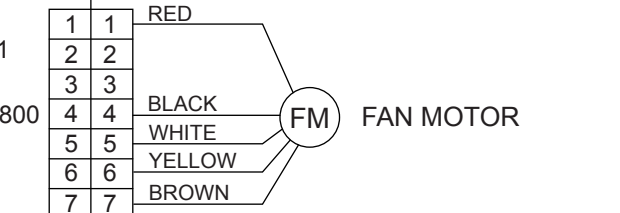
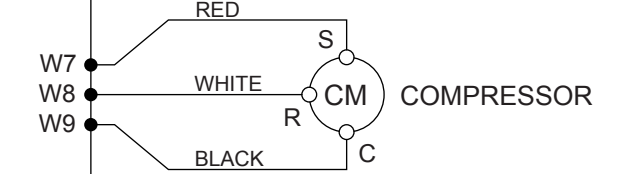
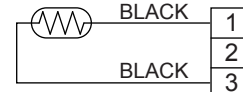
THERMISTOR
(PIPE TEMP.)



THERMISTOR
(DISCHARGE TEMP.)

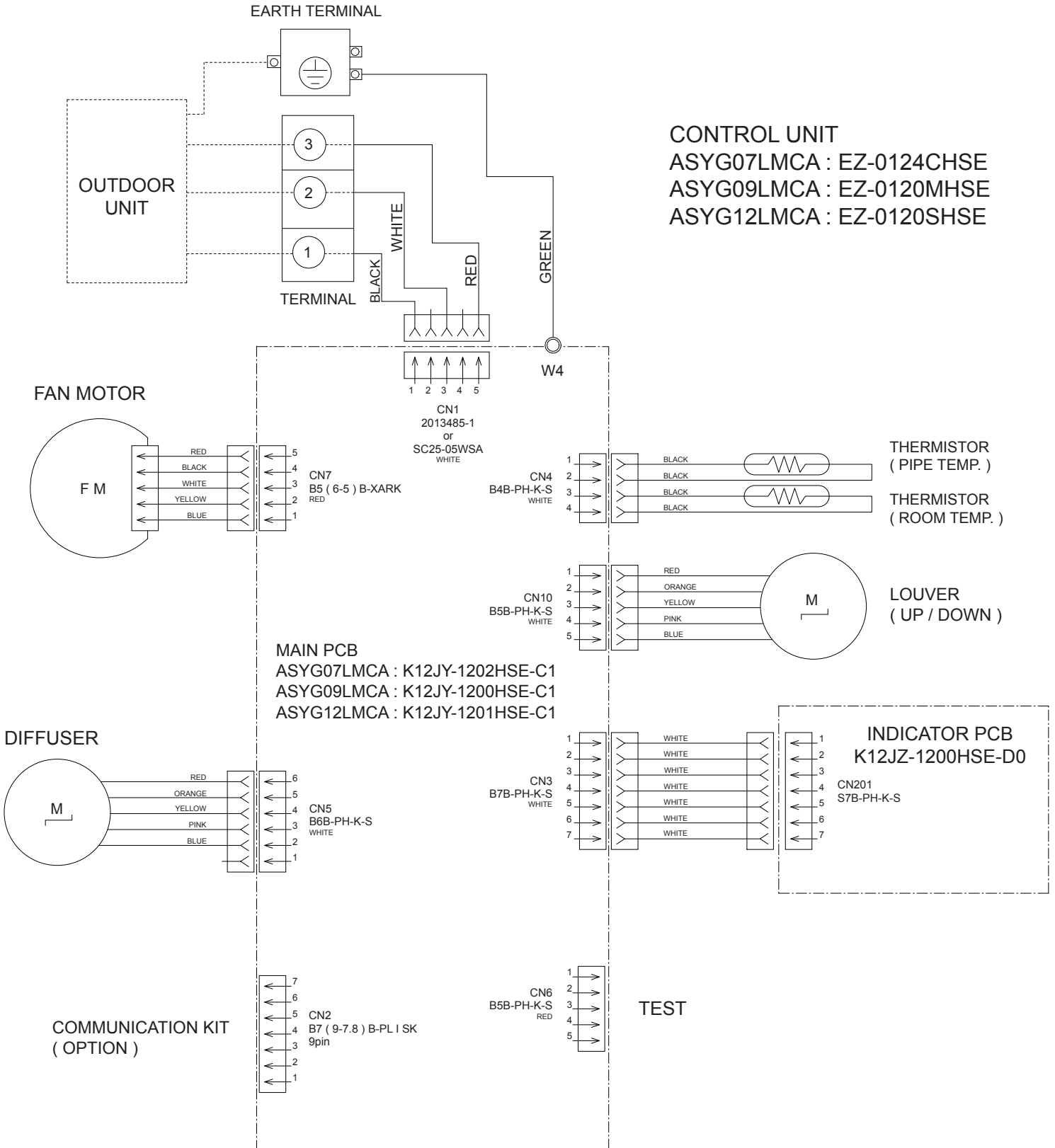


THERMISTOR
(OUTDOOR TEMP.)

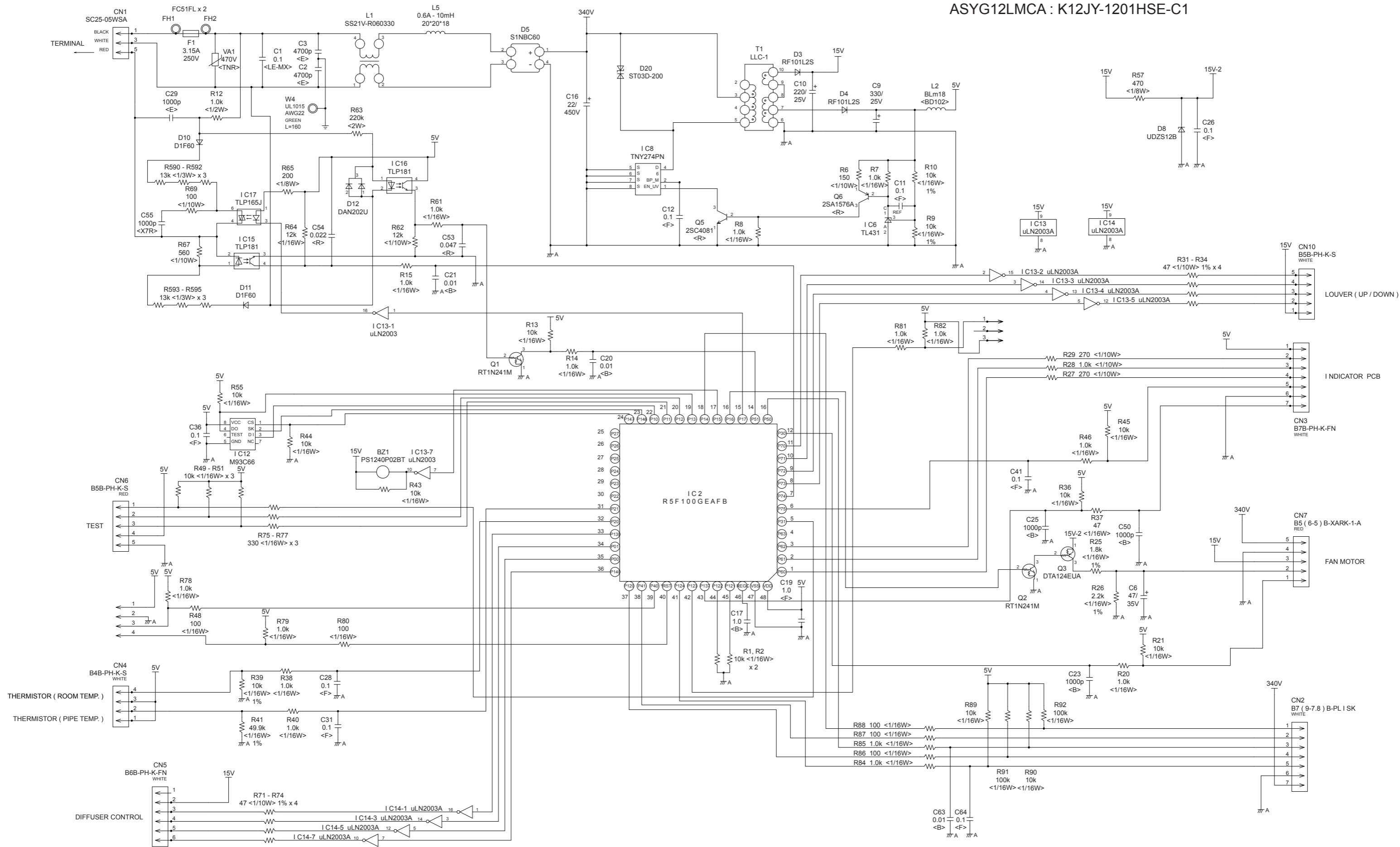


POWER SOURCE

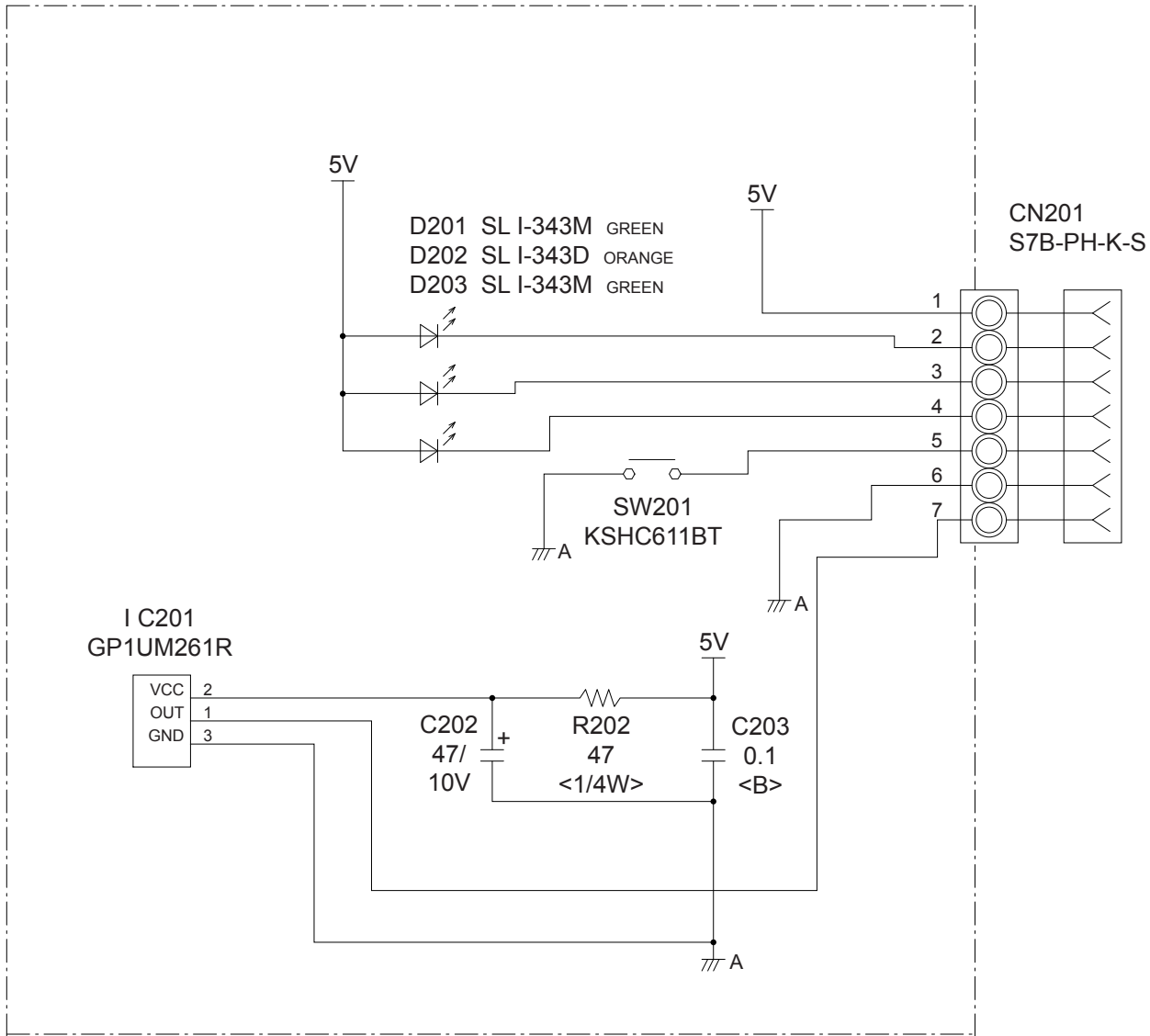
INDOOR PCB CIRCUIT DIAGRAM

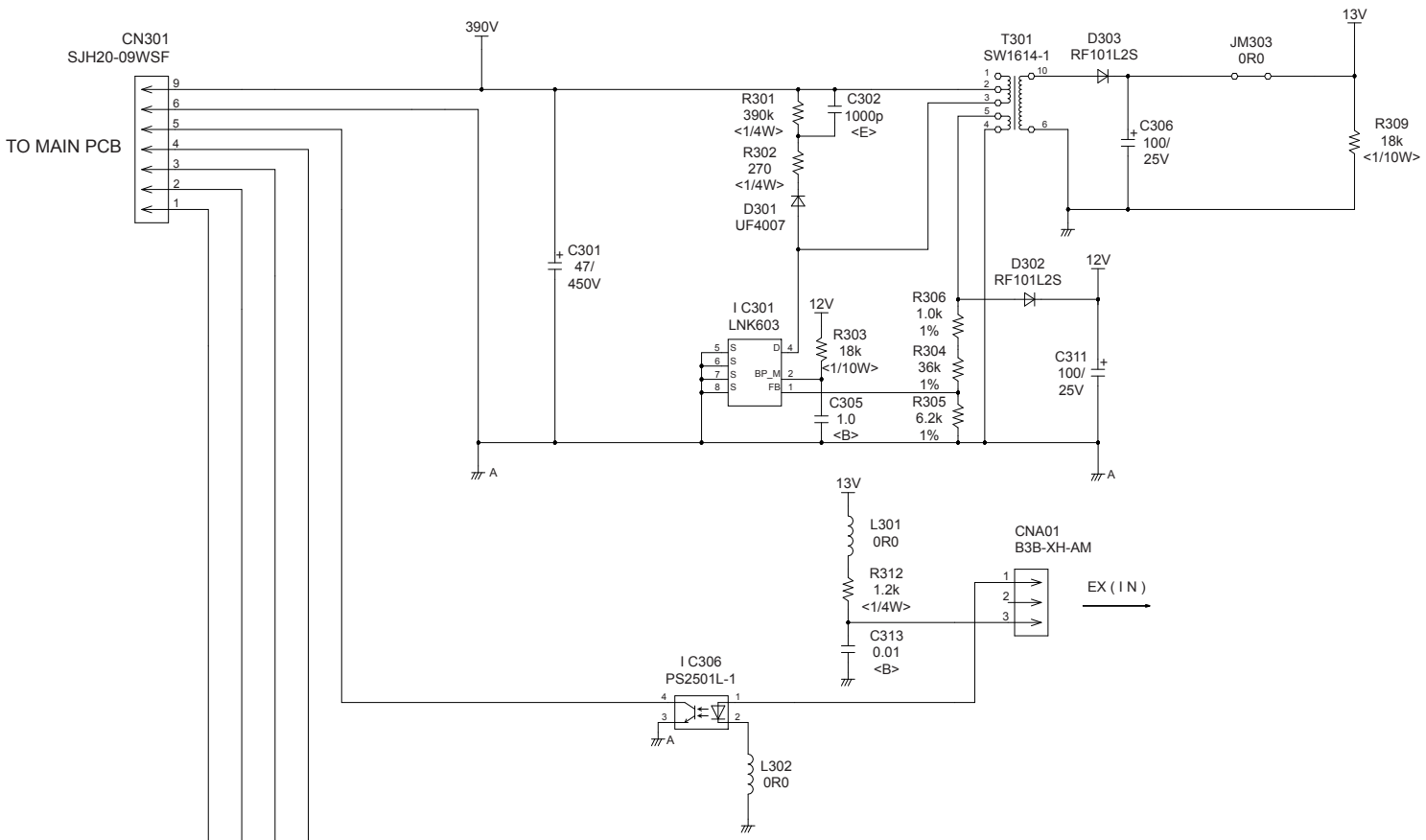


INDOOR UNIT
 MAIN PCB
 ASYG07LMCA : K12JY-1202HSE-C2
 ASYG09LMCA : K12JY-1200HSE-C1
 ASYG12LMCA : K12JY-1201HSE-C1



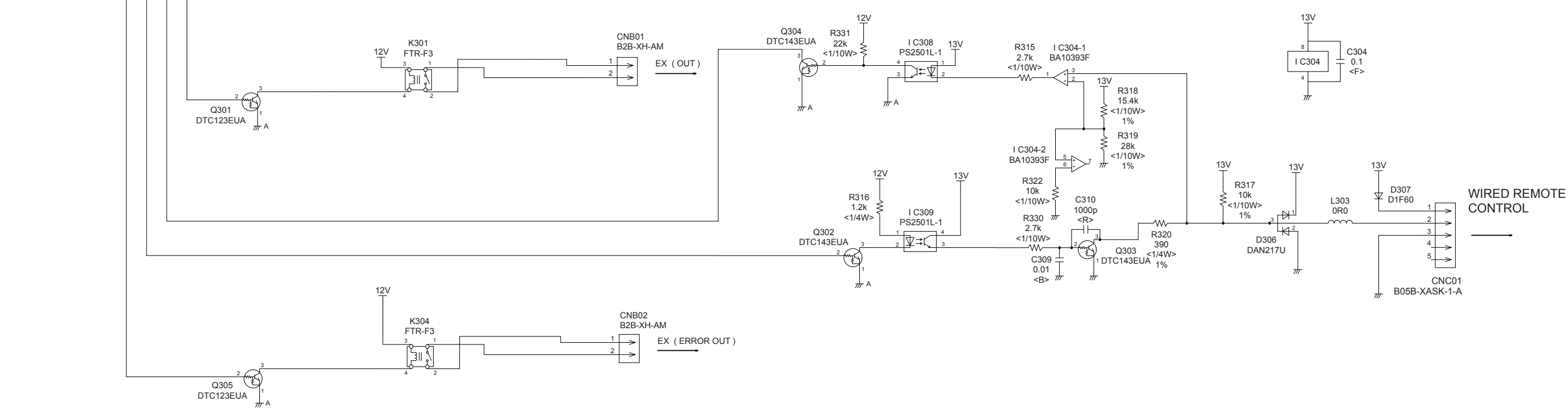
INDOOR UNIT
 INDICATOR PCB
 K12JZ-1200HSE-D0





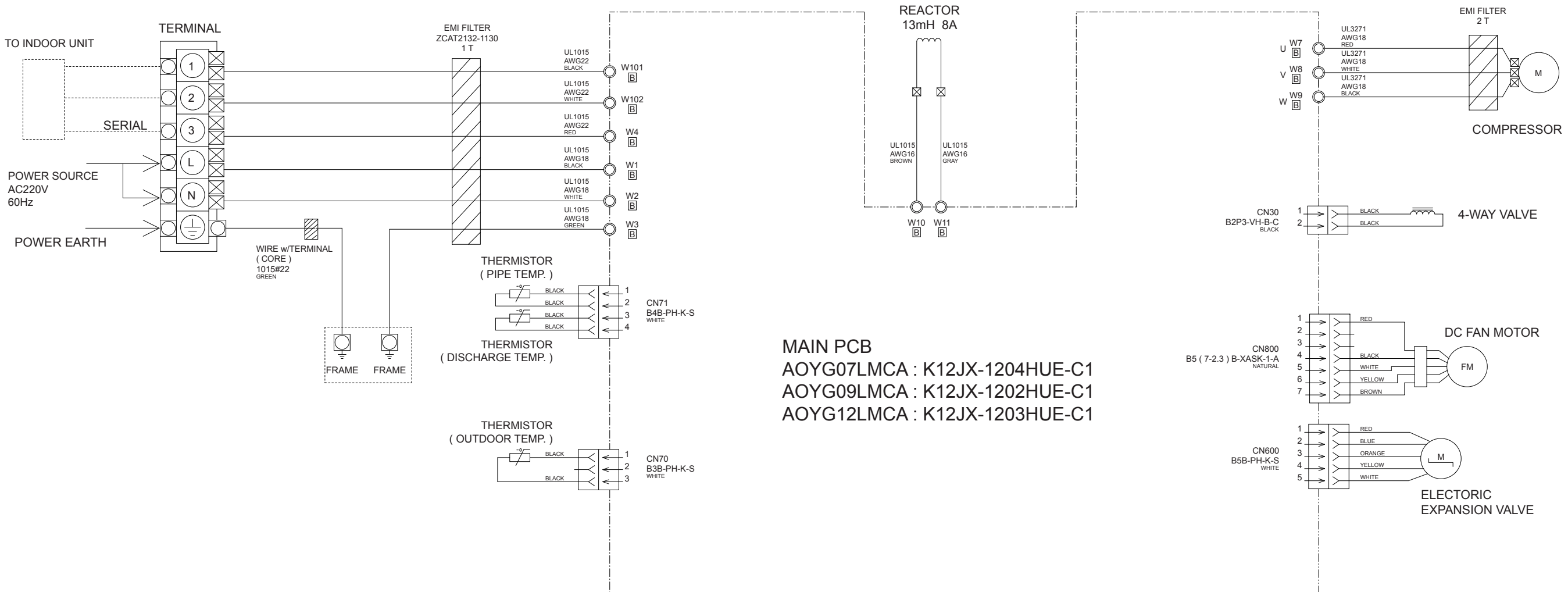
(Option)
 Communication kit
 UTY-XCBXZ2

Communication PCB
 K10DC-1000HSE-CA0

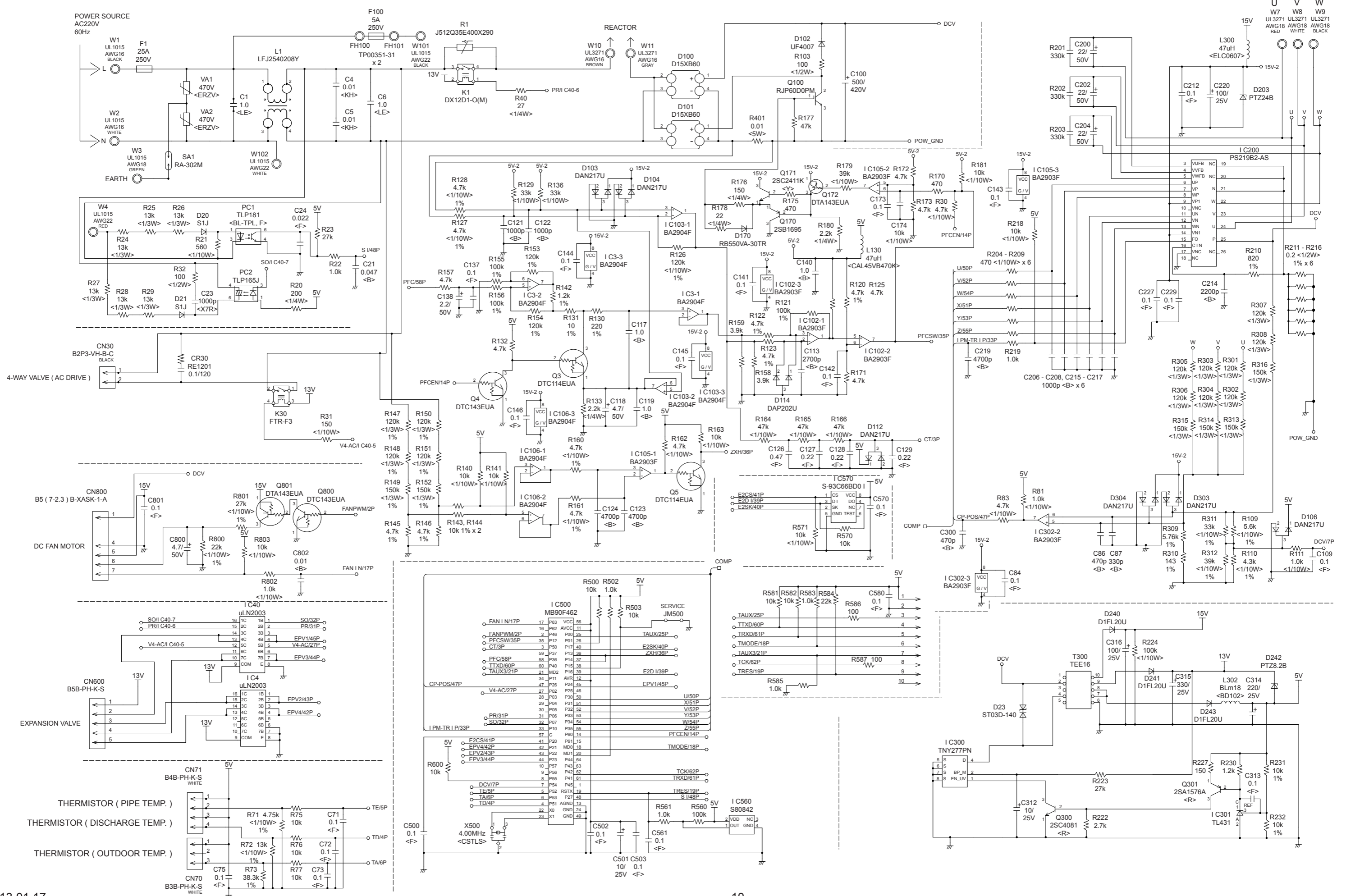


OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
 AOYG07LMCA : EZ-0122CHUE
 AOYG09LMCA : EZ-012PHUE
 AOYG12LMCA : EZ-012RHUE



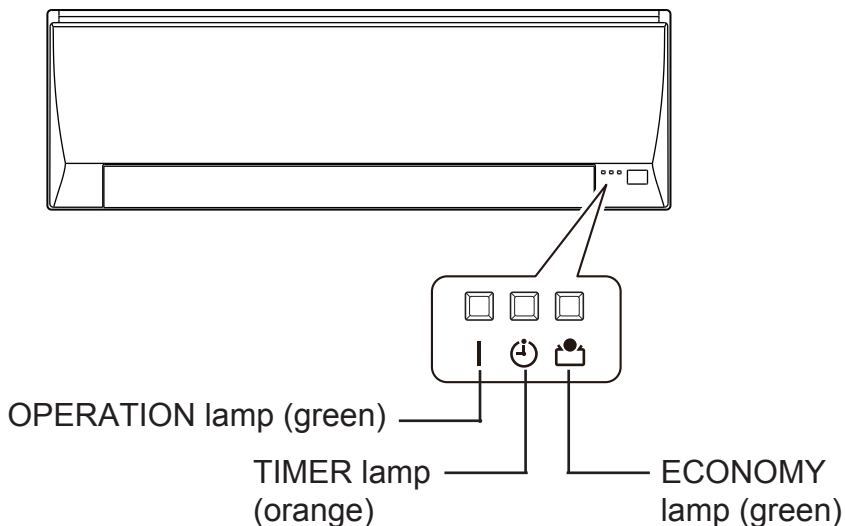
**OUTDOOR UNIT
MAIN PCB**
 AOYG07LMCA : K12JX-1204HUE-C1
 AOYG09LMCA : K12JX-1202HUE-C1
 AOYG12LMCA : K12JX-1203HUE-C1



ERROR DETECTION

Under confirmation

TROUBLESHOOTING
with the indoor unit display

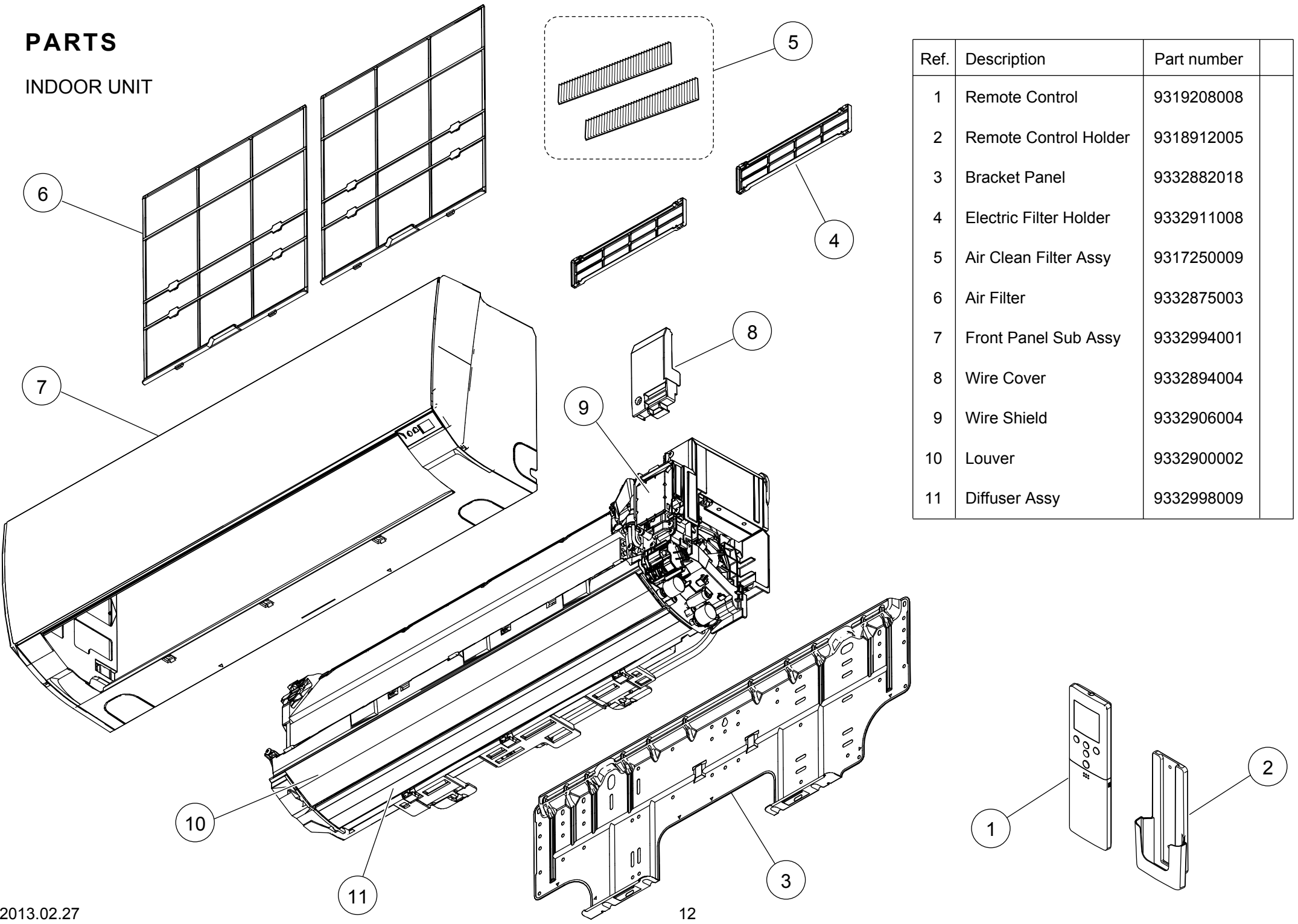


Error	OPERATION	TIMER	ECONOMY
Serial communication error	1 flash	1 flash	Rapid flash (0.1s on / 0.1s off)
Indoor unit PCB model information error	3	2	
Manual auto switch error	3	5	
Room temp. sensor error	4	1	
Indoor unit Heat Ex. Middle temp.sensor error	4	2	
Indoor unit fan motor error	5	1	
Indoor unit error	5	15	
Outdoor unit main PCB model information error or communication error	6	2	
Inverter error	6	3	
Active filter error, PFC circuit error	6	4	
Trip terminal L error	6	5	
Display PCB microcomputers communication error	6	10	
Discharge temp. sensor error	7	1	
Outdoor unit Heat Ex. liquid temp. sensor error	7	3	
Outdoor temp. sensor error	7	4	
Current sensor error	8	4	
Trip detection	9	4	
Compressor rotor position detection error	9	5	
4-way valve error	9	9	
Discharge temp. error	10	1	

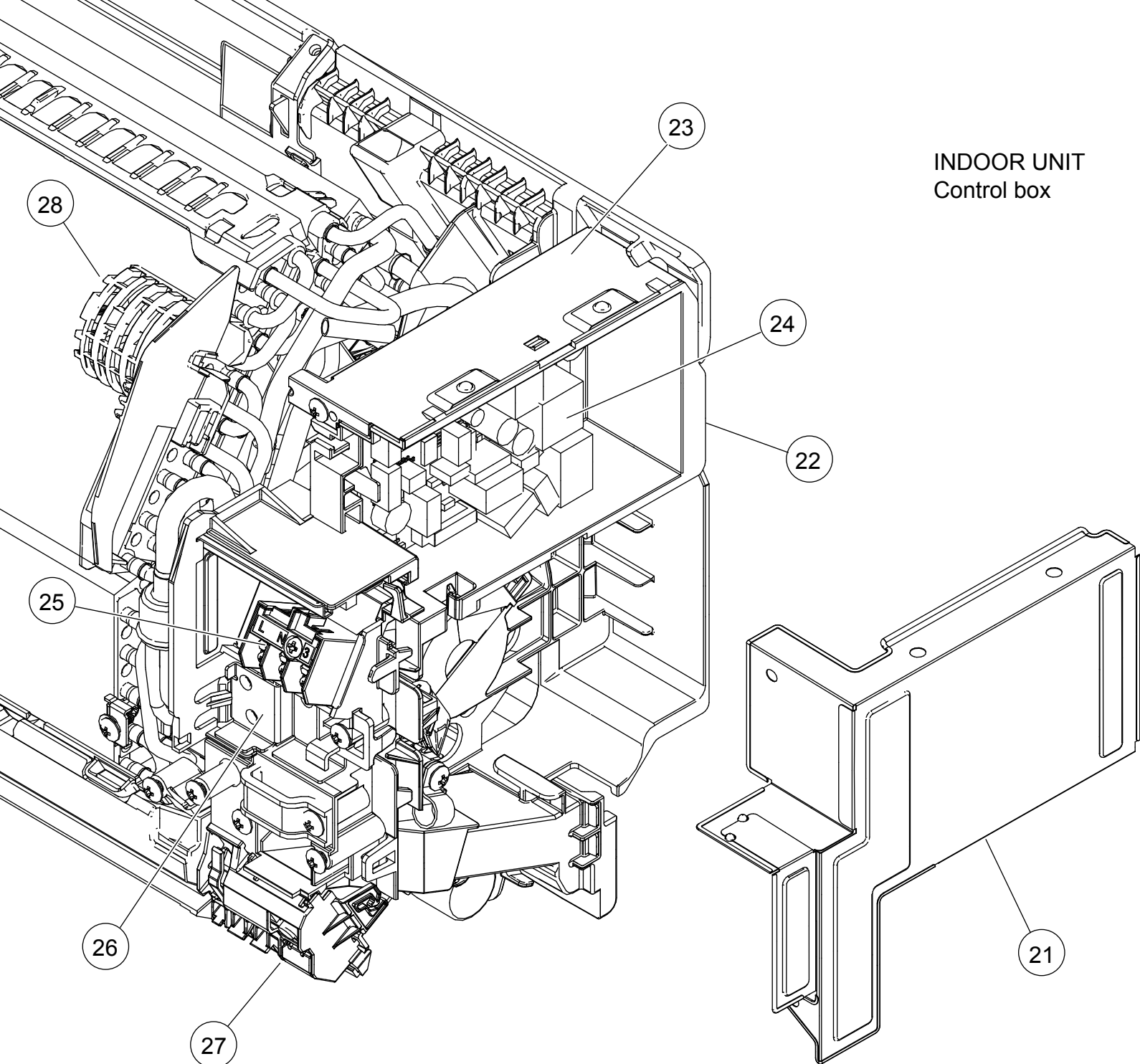
(0.5s on / 0.5s off)

PARTS

INDOOR UNIT



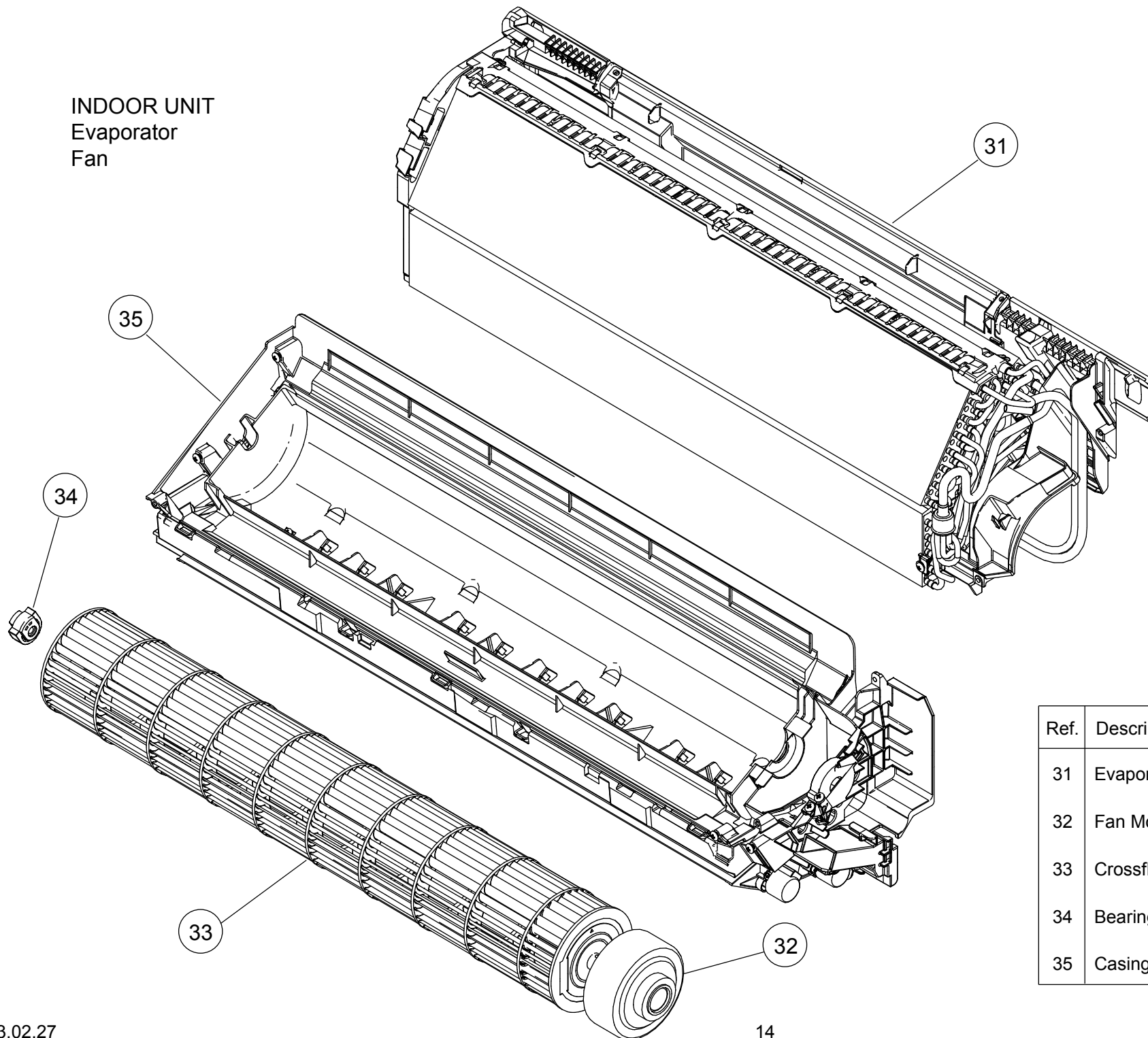
Ref.	Description	Part number
1	Remote Control	9319208008
2	Remote Control Holder	9318912005
3	Bracket Panel	9332882018
4	Electric Filter Holder	9332911008
5	Air Clean Filter Assy	9317250009
6	Air Filter	9332875003
7	Front Panel Sub Assy	9332994001
8	Wire Cover	9332894004
9	Wire Shield	9332906004
10	Louver	9332900002
11	Diffuser Assy	9332998009



INDOOR UNIT
Control box

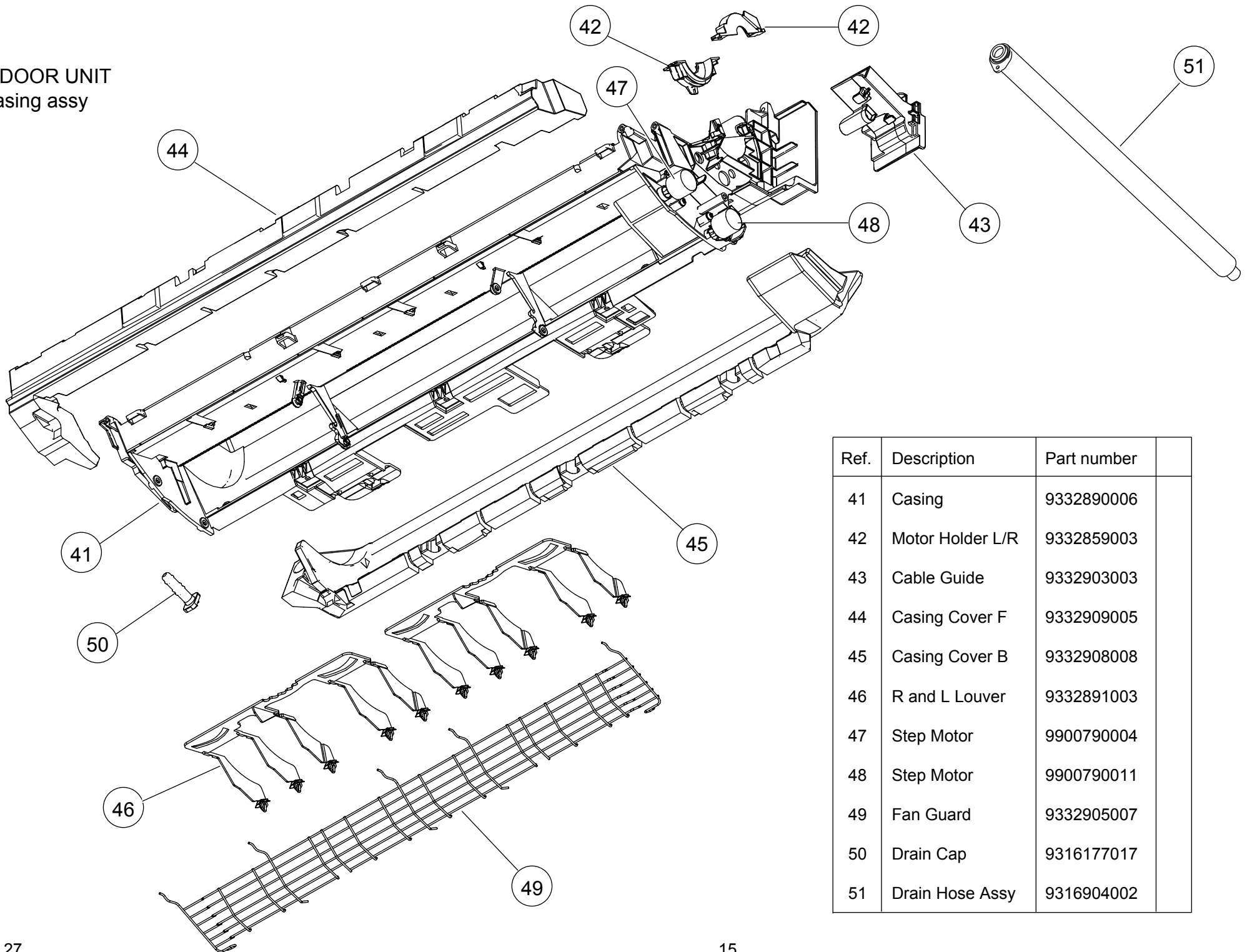
Ref.	Description	Part number	
21	Cover Shield	9332915006	
22	Control Box	9332892000	
23	Box Shield Assy	9332877007	
24	Main PCB (07)	9709427033	
24	Main PCB (09)	9709427019	
24	Main PCB (12)	9709427026	
25	Terminal	9900720001	
26	Earth Terminal	9332880007	
27	Display Assy	9709430019	
28	Room Thermistor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

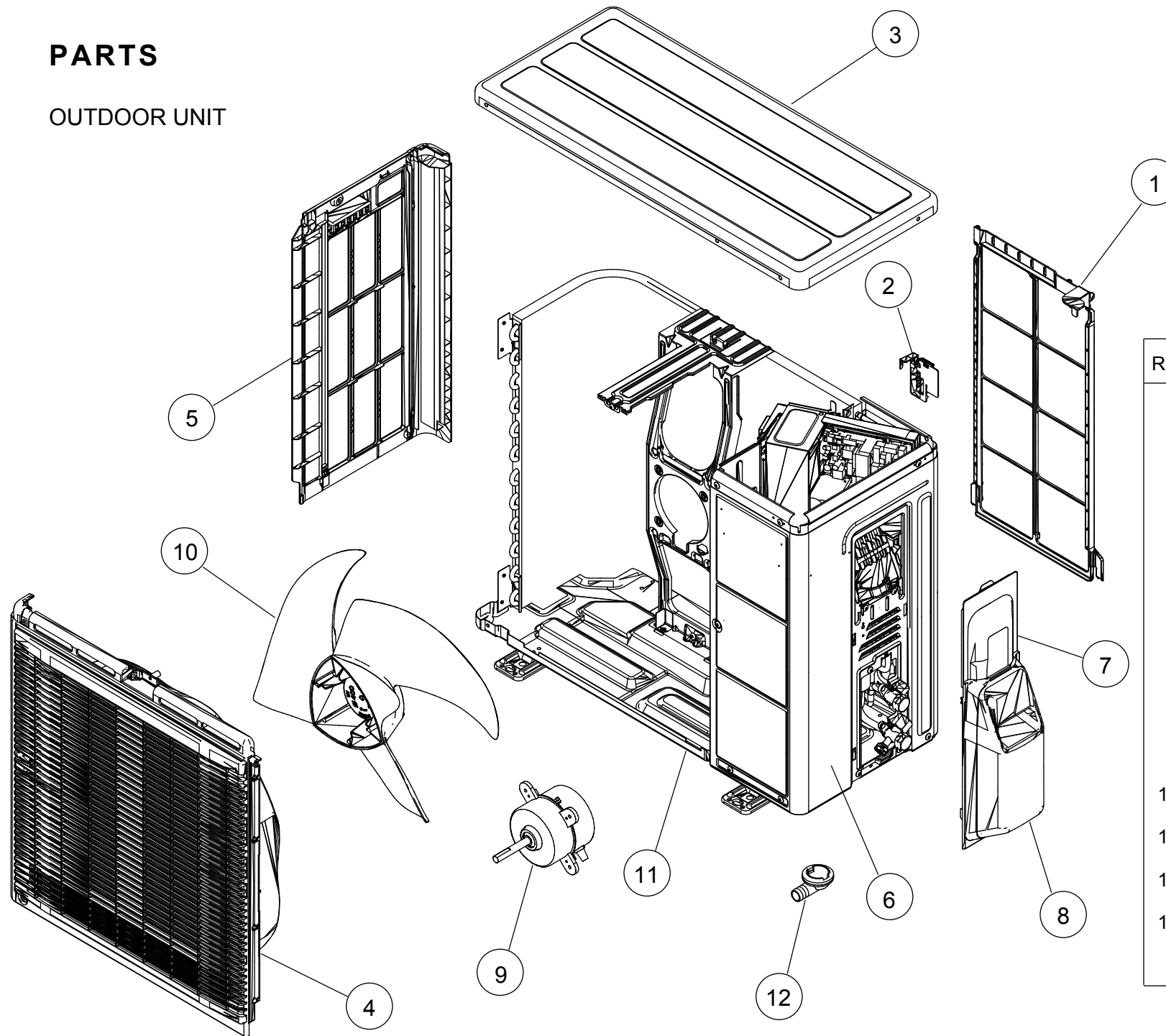
INDOOR UNIT
Casing assy



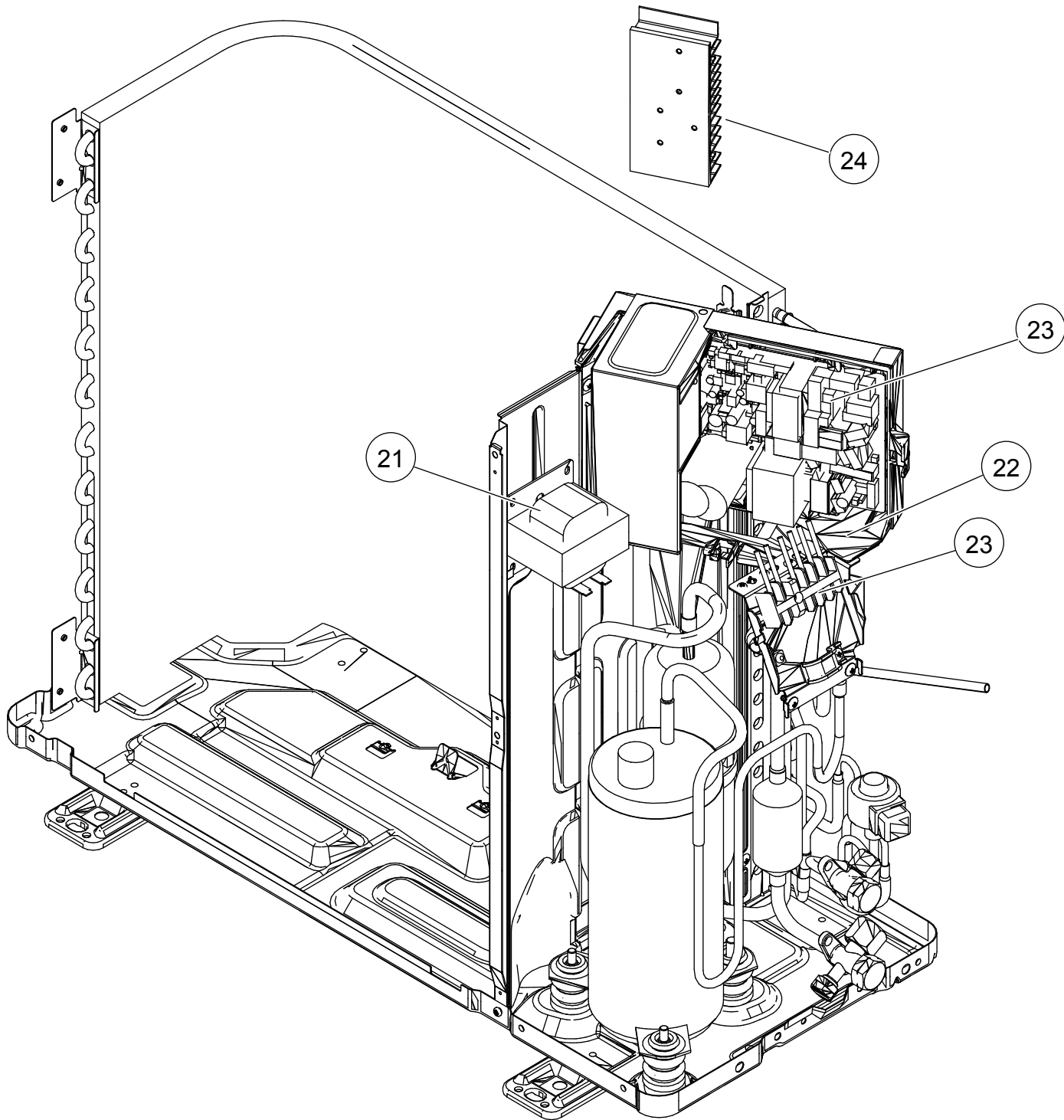
Ref.	Description	Part number
41	Casing	9332890006
42	Motor Holder L/R	9332859003
43	Cable Guide	9332903003
44	Casing Cover F	9332909005
45	Casing Cover B	9332908008
46	R and L Louver	9332891003
47	Step Motor	9900790004
48	Step Motor	9900790011
49	Fan Guard	9332905007
50	Drain Cap	9316177017
51	Drain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

PARTS

OUTDOOR UNIT



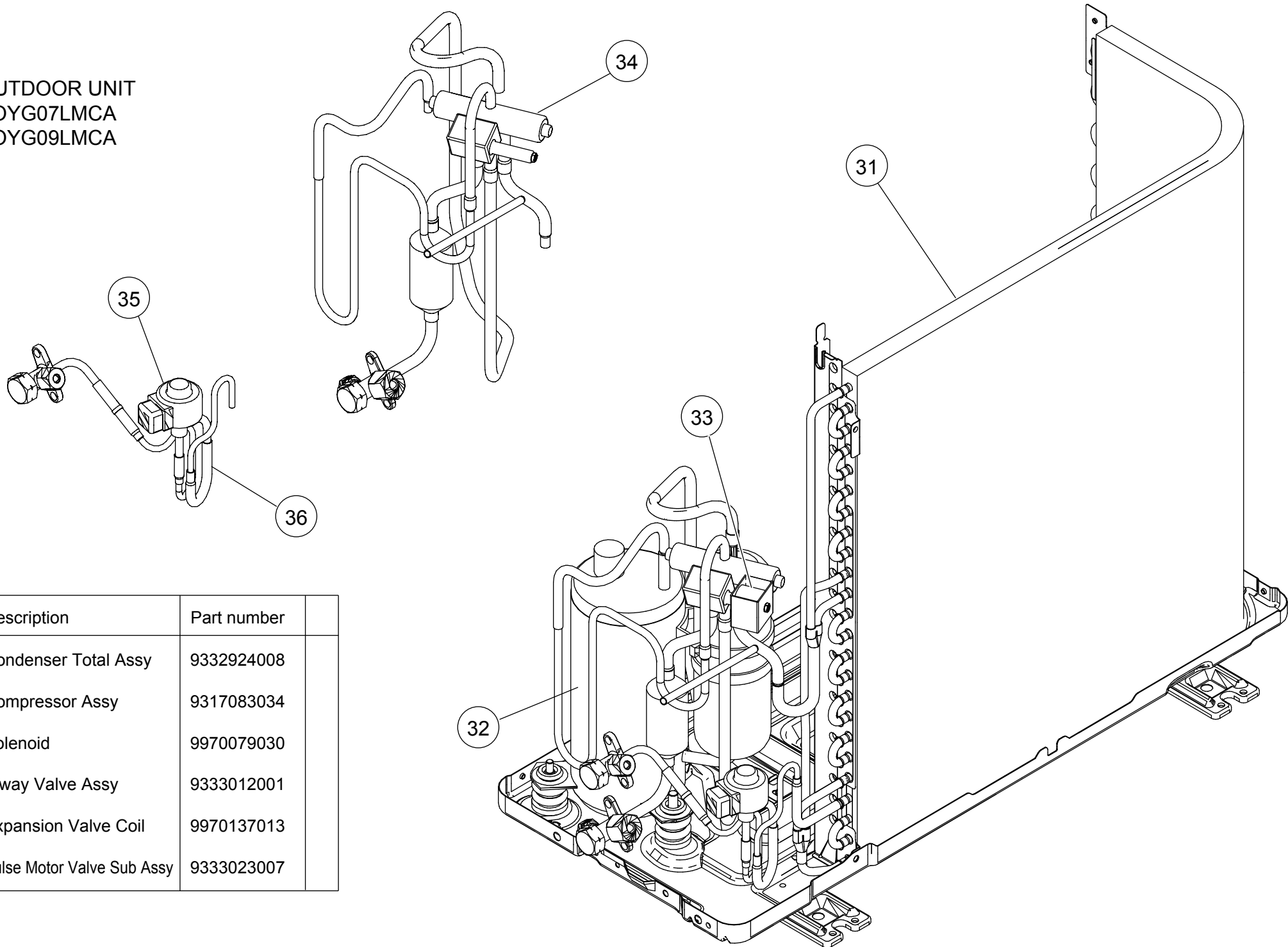
Ref.	Description	Part number
1	Protective Net	9332855005
2	Thermistor Holder	9332505009
3	Top Panel Assy	9332977004
4	Front Panel Assy	9332965001
5	Cabinet Left Assy	9332962000
6	Cabinet Right Assy	9332963007
7	Switch Cover A Assy	9332964004
8	Switch Cover B	9332843002
9	Fan Motor	9603074012
10	Propeller Fan	9309909014
11	Base Assy (07, 09)	9332888003
11	Base Assy (12)	9332888010
12	Drain Assy	9332574005
--	Emblem	9319151007



OUTDOOR UNIT

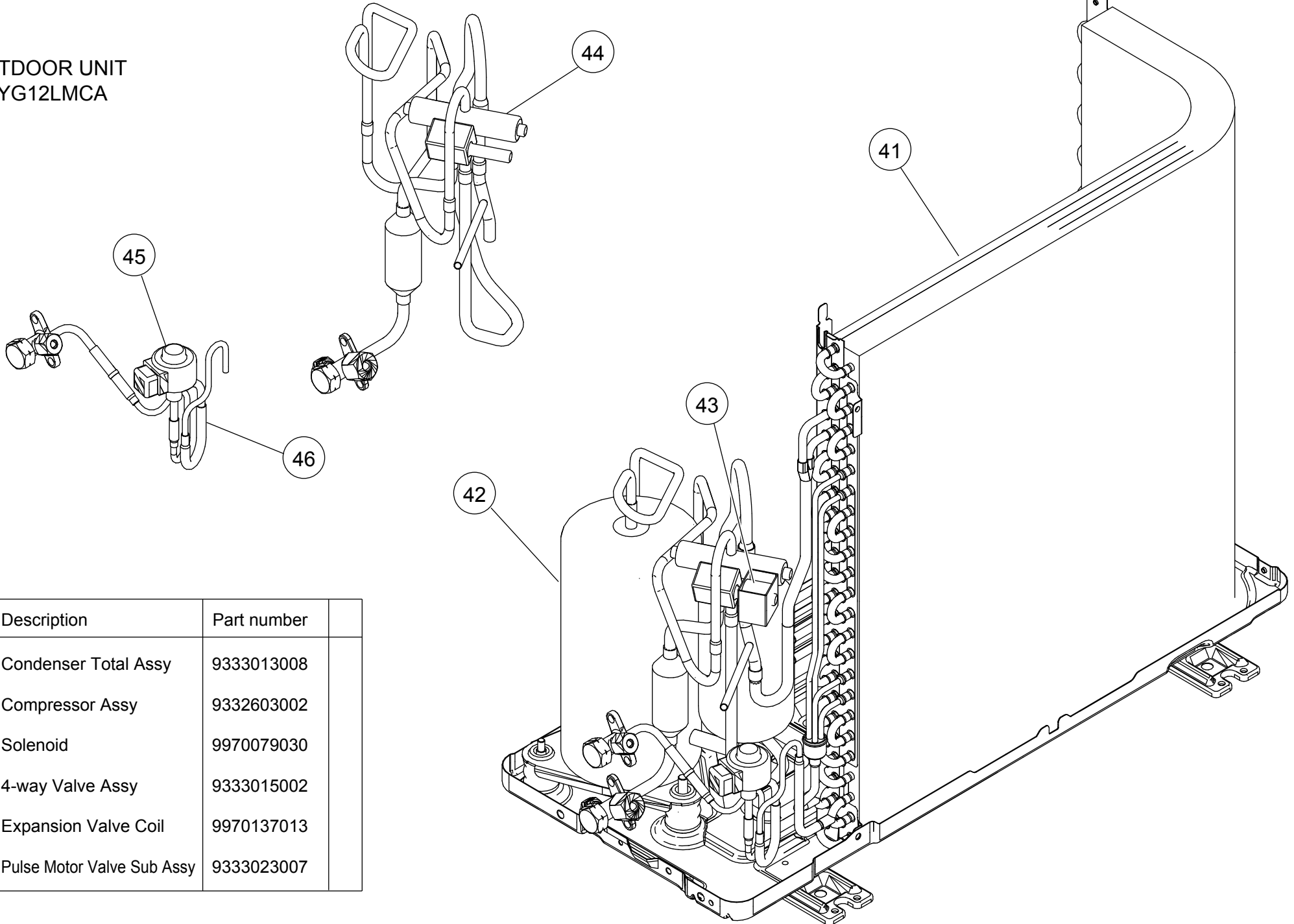
Ref.	Description	Part number
21	Reactor Assy	9900787028
22	PCB Holder	9332506006
23	Main PCB with Terminal (07)	9709435052
23	Main PCB with Terminal (09)	9709435038
23	Main PCB with Terminal (12)	9709435045
24	Heat Sink B	9332522006
--	Thermistor Assy	9900719029
--	Thermistor	9900717025

OUTDOOR UNIT
 AOYG07LMCA
 AOYG09LMCA



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

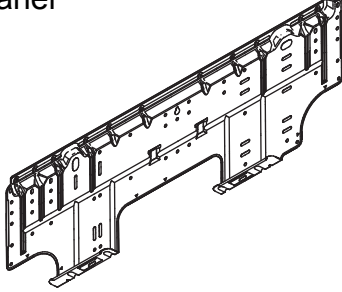
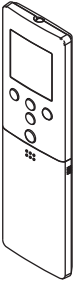


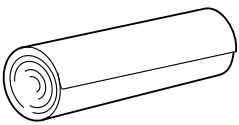
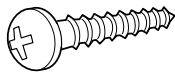
OUTDOOR UNIT
AOYG12LMCA



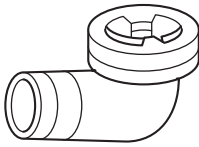
Ref.	Description	Part number
41	Condenser Total Assy	9333013008
42	Compressor Assy	9332603002
43	Solenoid	9970079030
44	4-way Valve Assy	9333015002
45	Expansion Valve Coil	9970137013
46	Pulse Motor Valve Sub Assy	9333023007

ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
Bracket Panel 	9332882018
Remote Control 	9319208008
Remote Control Holder 	9318912005
Battery (penlight) 	0600185541
Cloth tape 	9310519004
Tapping screw (big) (ϕ 4 x 25) 	0700076046

OUTDOOR UNIT

Name and Shape	Part number
Drain pipe assy 	9332574005

1302G4184