

SPLIT TYPE  
ROOM AIR CONDITIONER  
WALL MOUNTED TYPE

# SERVICE MANUAL



Indoor unit	Outdoor unit
ASYG09LMCB	AOYG09LMCBN
ASYG12LMCB	AOYG12LMCBN

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# 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 <sup>3</sup> /h	750 m <sup>3</sup> /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

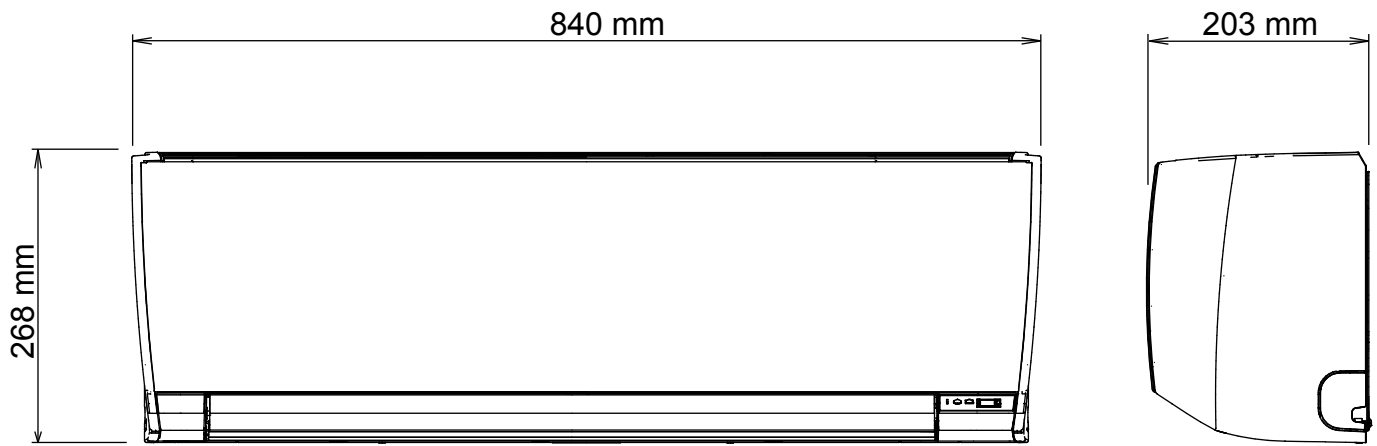
INDOOR UNIT	H x W x D	268 x 840 x 203 mm
OUTDOOR UNIT	H x W x D	540 x 790 x 290 mm

## WEIGHT

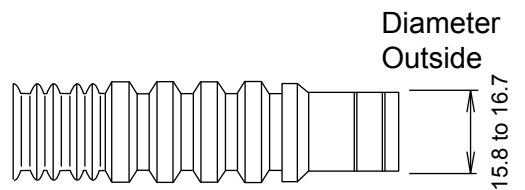
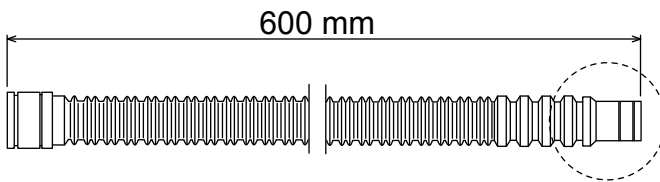
INDOOR UNIT	Shipping / Net	10.5 kg / 8.5 kg
OUTDOOR UNIT	Shipping / Net	40 kg / 36 kg    43 kg / 39 kg

# DIMENSIONS

## INDOOR UNIT

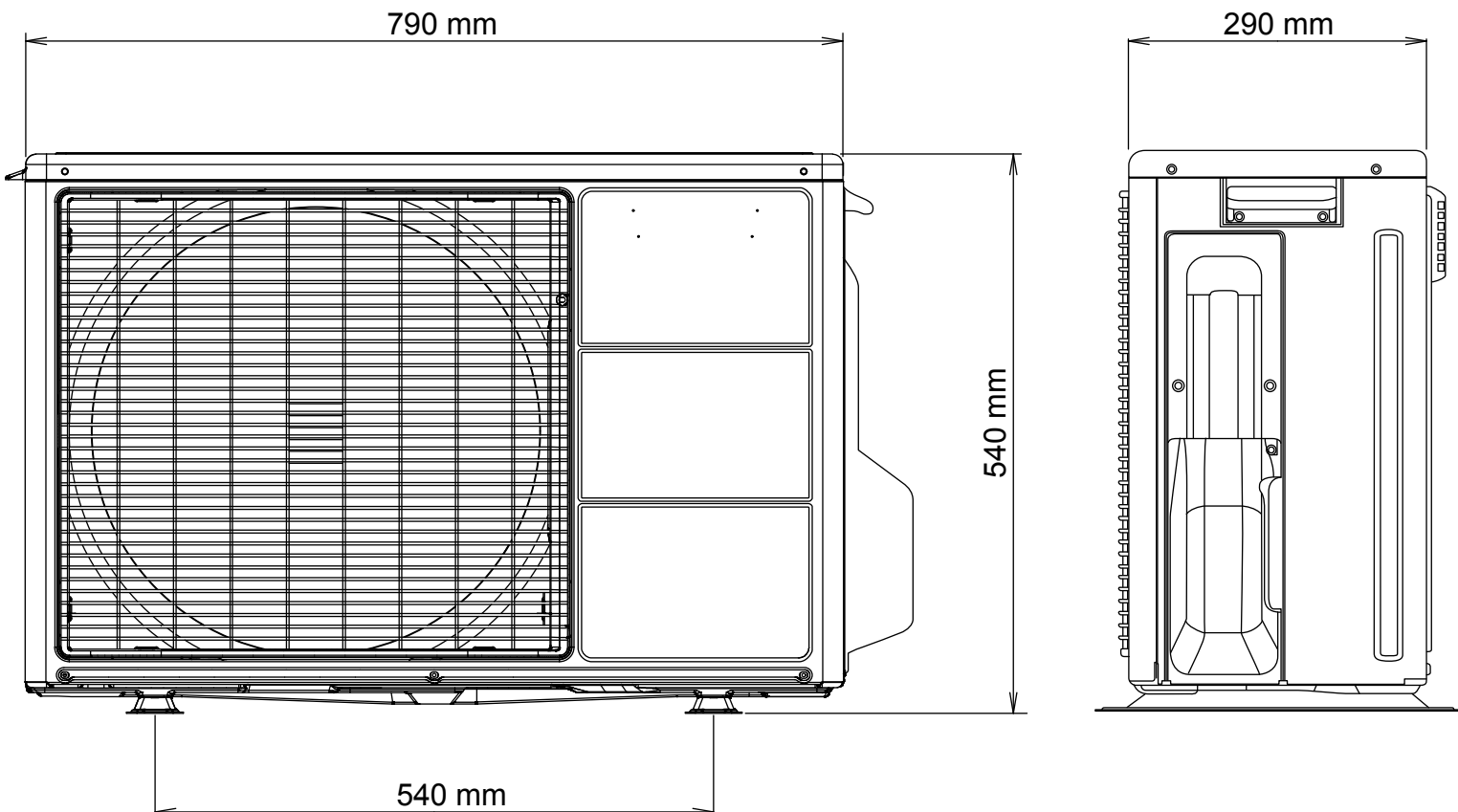


Drain hose

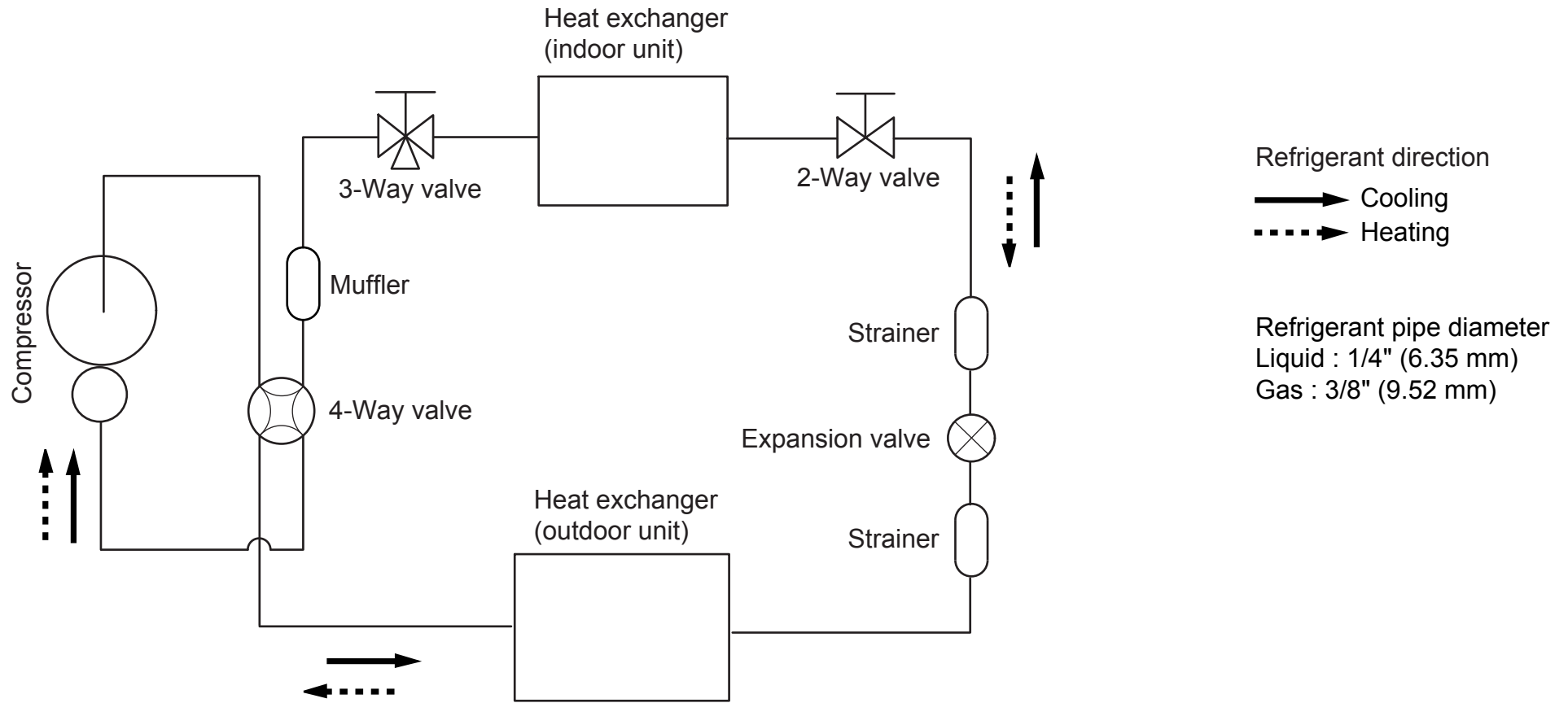


Inside : 13.8 mm

## OUTDOOR UNIT

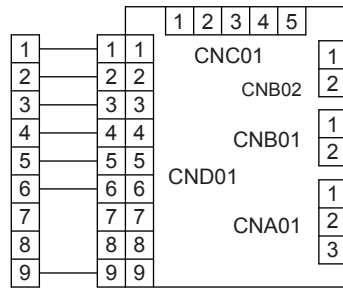


# REFRIGERANT SYSTEM DIAGRAM



UTY-TWBXF  
Communication PCB

Wired remote control  
(Option)



Ex. out (Option) Error status

Ex. out (Option)  
Operation status

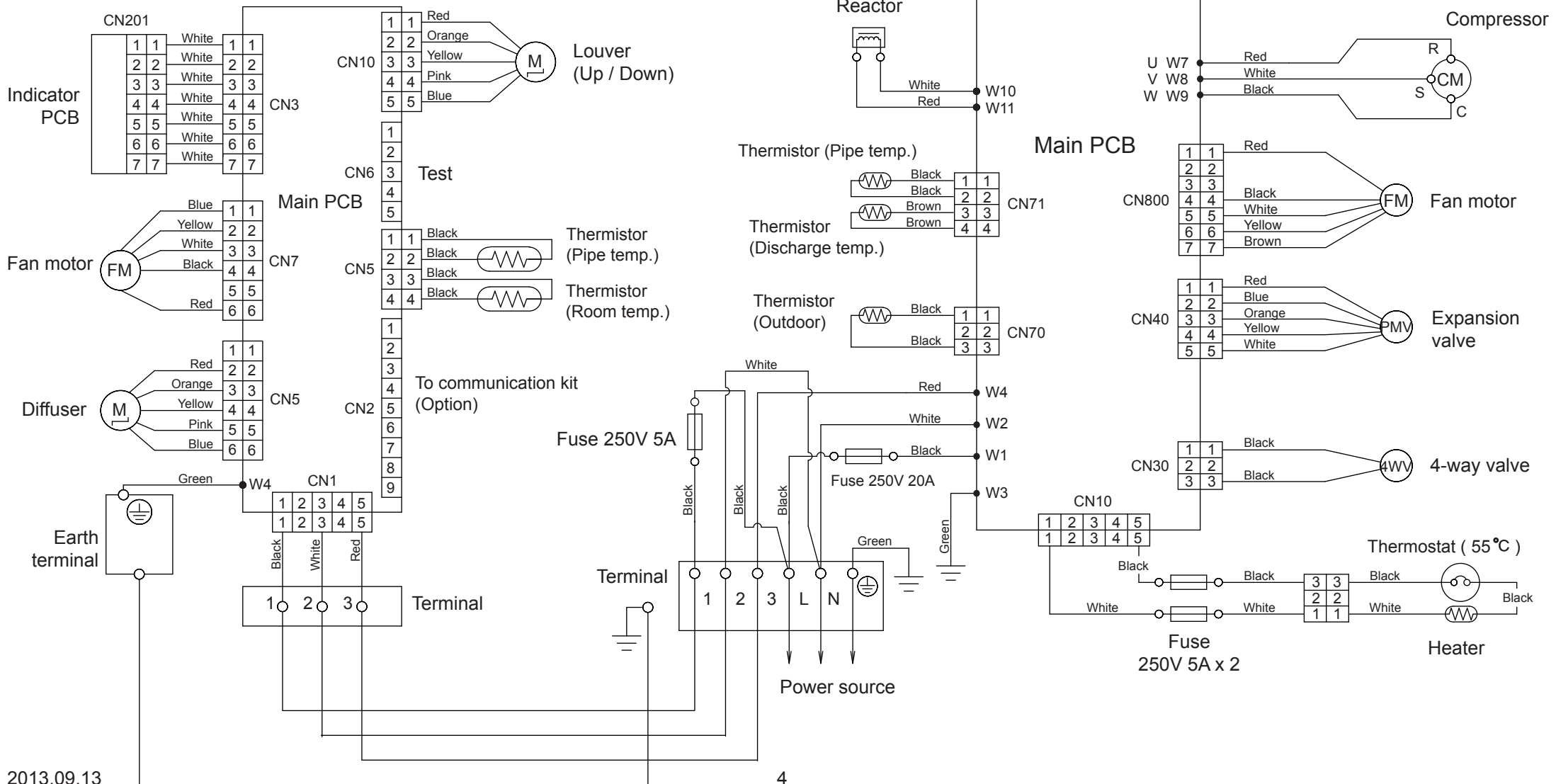
Ex. in (Option)

To main PCB

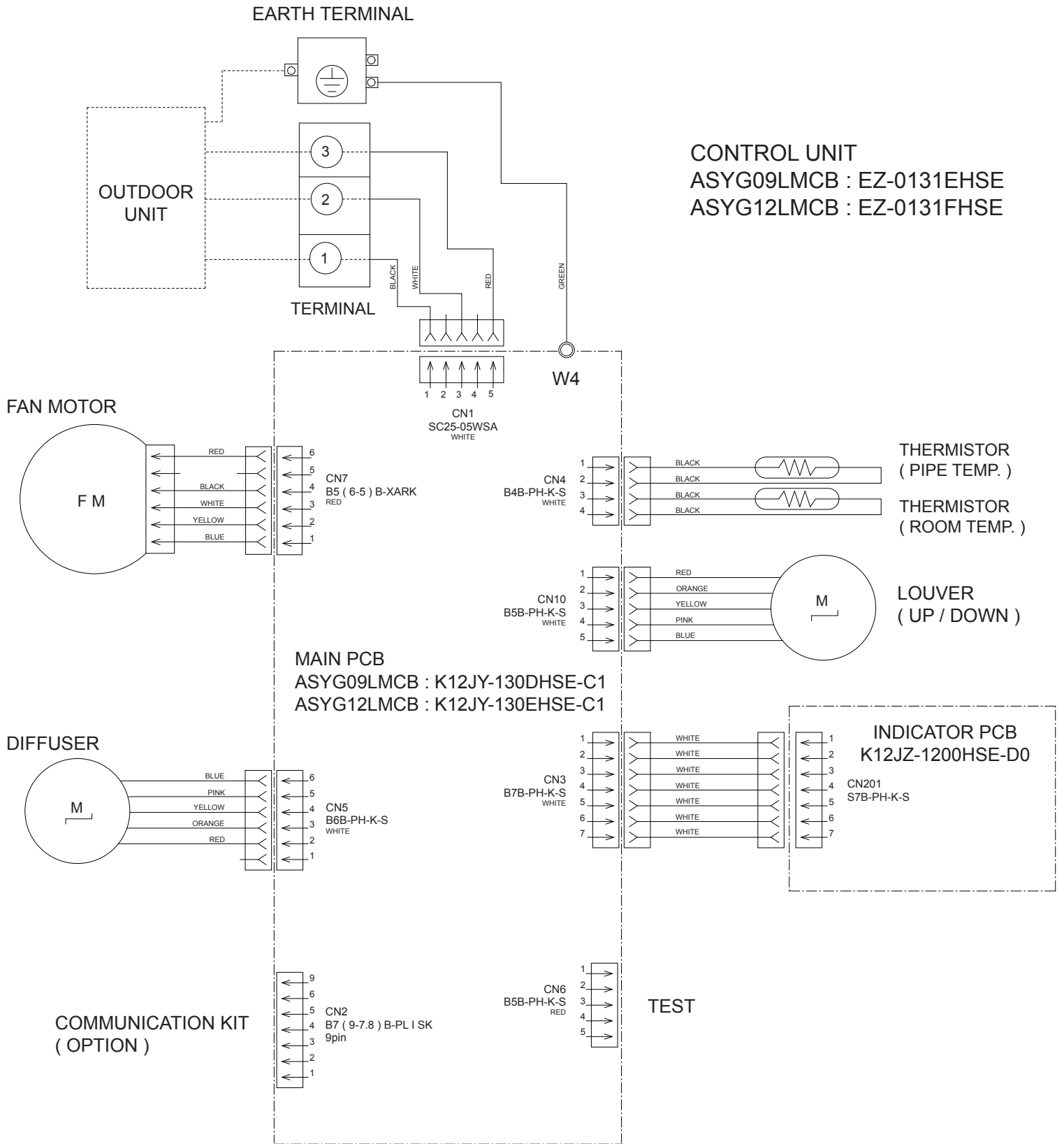
# CIRCUIT DIAGRAM

## INDOOR UNIT

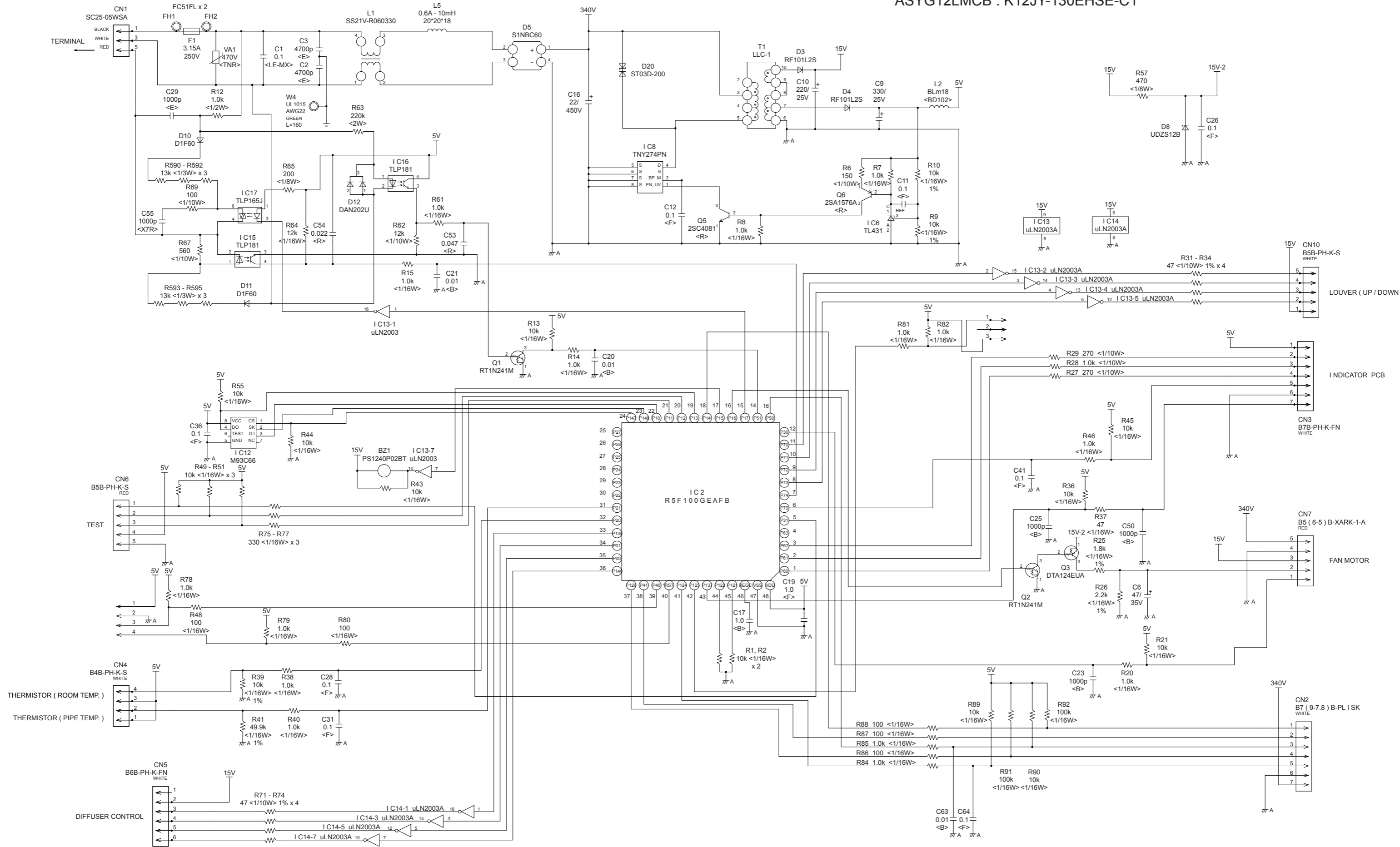
## OUTDOOR UNIT



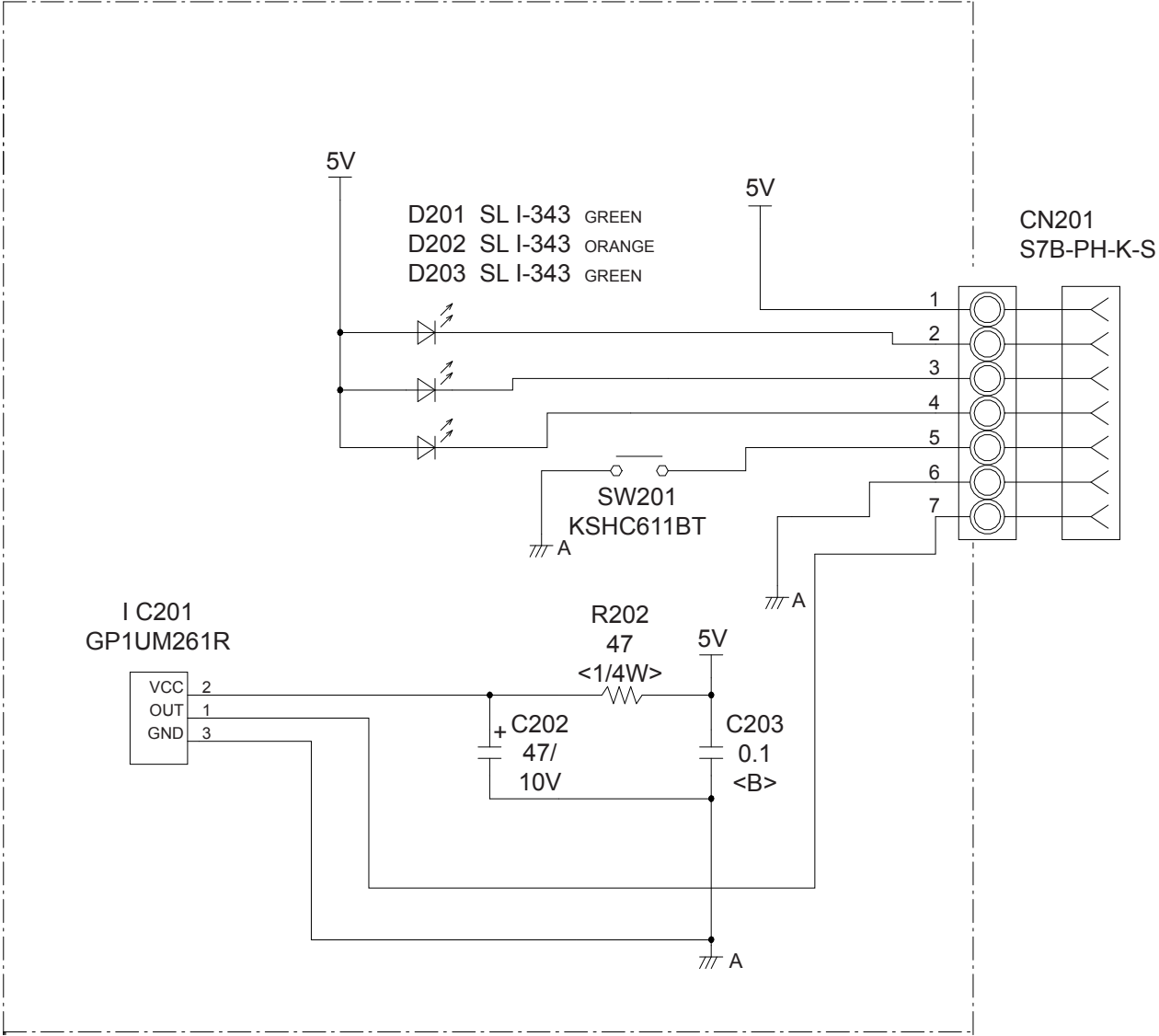
# INDOOR PCB CIRCUIT DIAGRAM



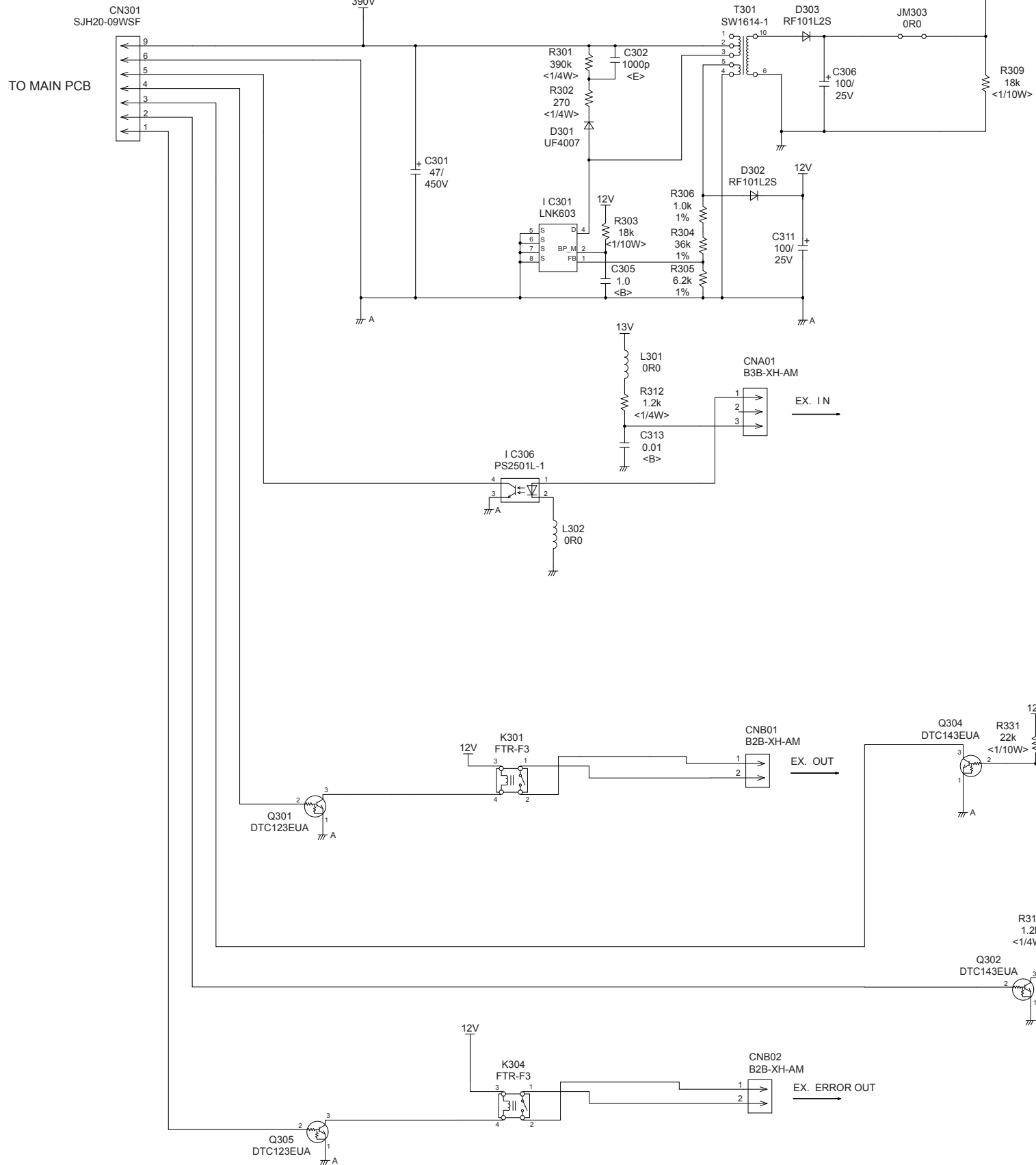
INDOOR UNIT  
 MAIN PCB  
 ASYG09LMCB : K12JY-130DHSE-C1  
 ASYG12LMCB : K12JY-130EHSE-C1



INDOOR UNIT  
 INDICATOR PCB  
 K12JZ-1200HSE-D0



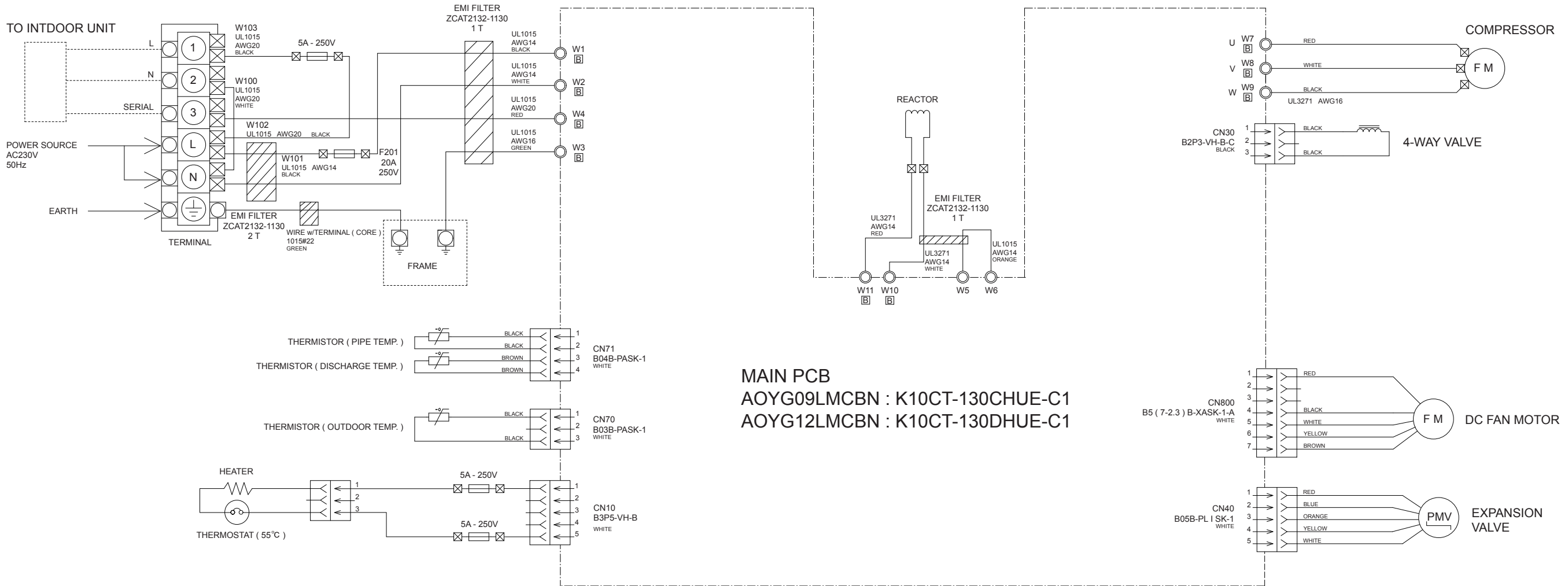




**UTY-TWBXF  
COMMUNICATION PCB  
K10DC-1000HSE-CA0**

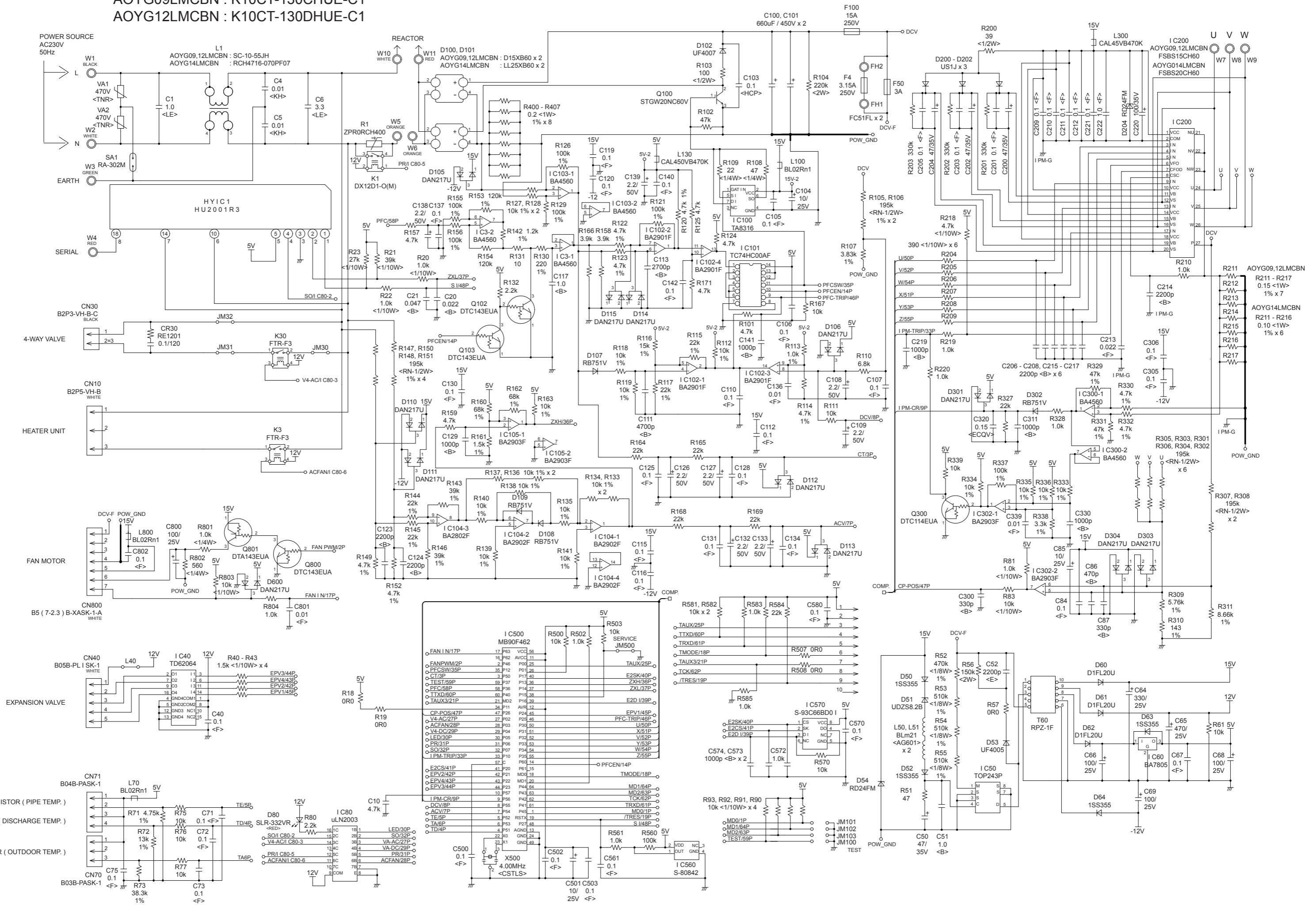
# OUTDOOR PCB CIRCUIT DIAGRAM

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

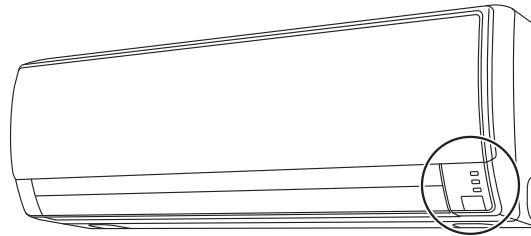


MAIN PCB  
 AOYG09LMCBN : K10CT-130CHUE-C1  
 AOYG12LMCBN : K10CT-130DHUE-C1

OUTDOOR UNIT  
 MAIN PCB  
 AOYG09LMCBN : 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.

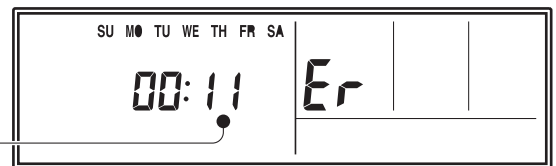
See the lamp blinking patterns and error codes in the table.

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

Error code

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

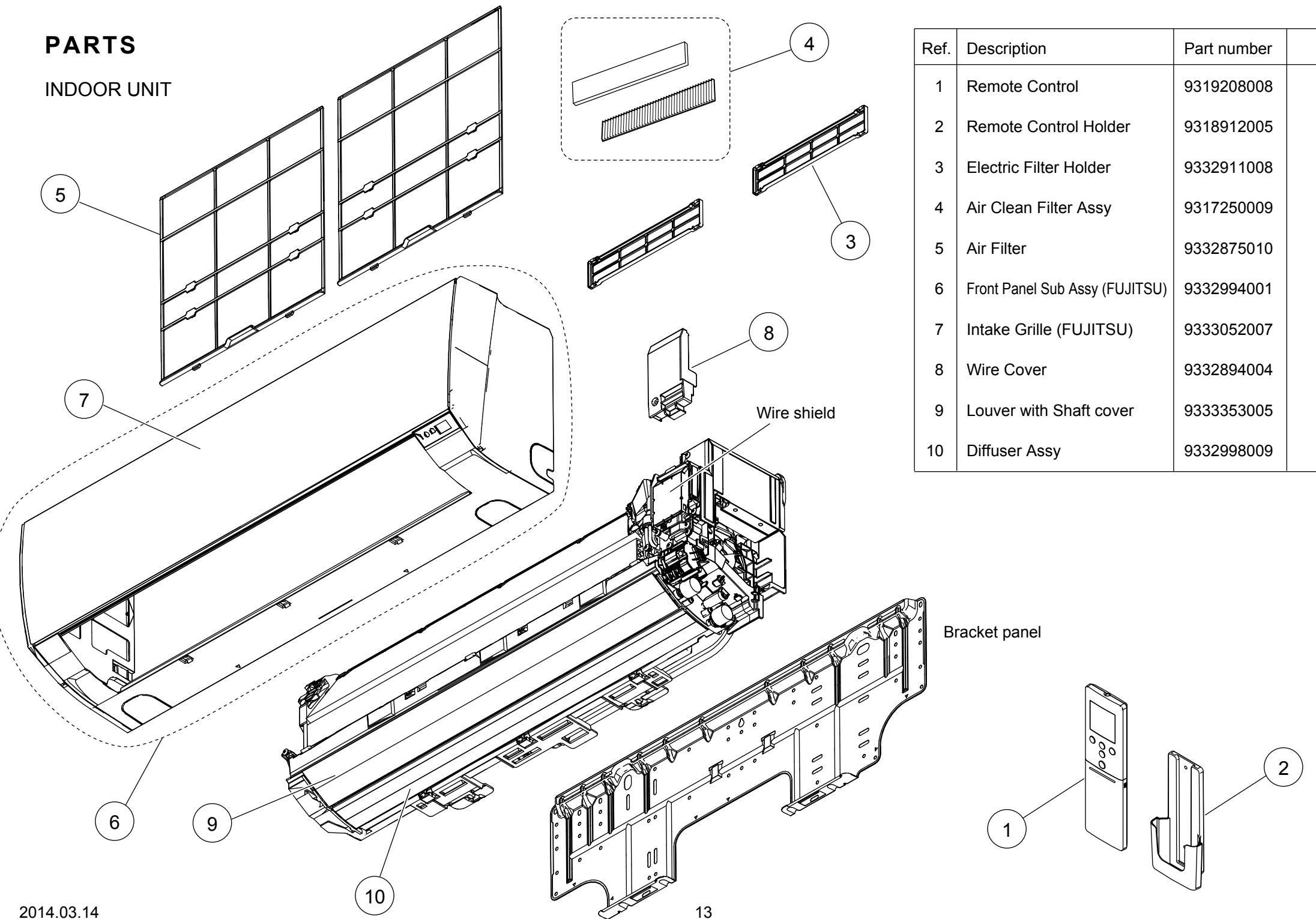
Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
● (6)	● (10)	◇	6A	Display PCB microcomputers communication error
● (7)	● (1)	◇	71	Discharge temp. sensor error
● (7)	● (2)	◇	72	Compressor temp. sensor error
● (7)	● (3)	◇	73	Outdoor unit Heat Ex.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

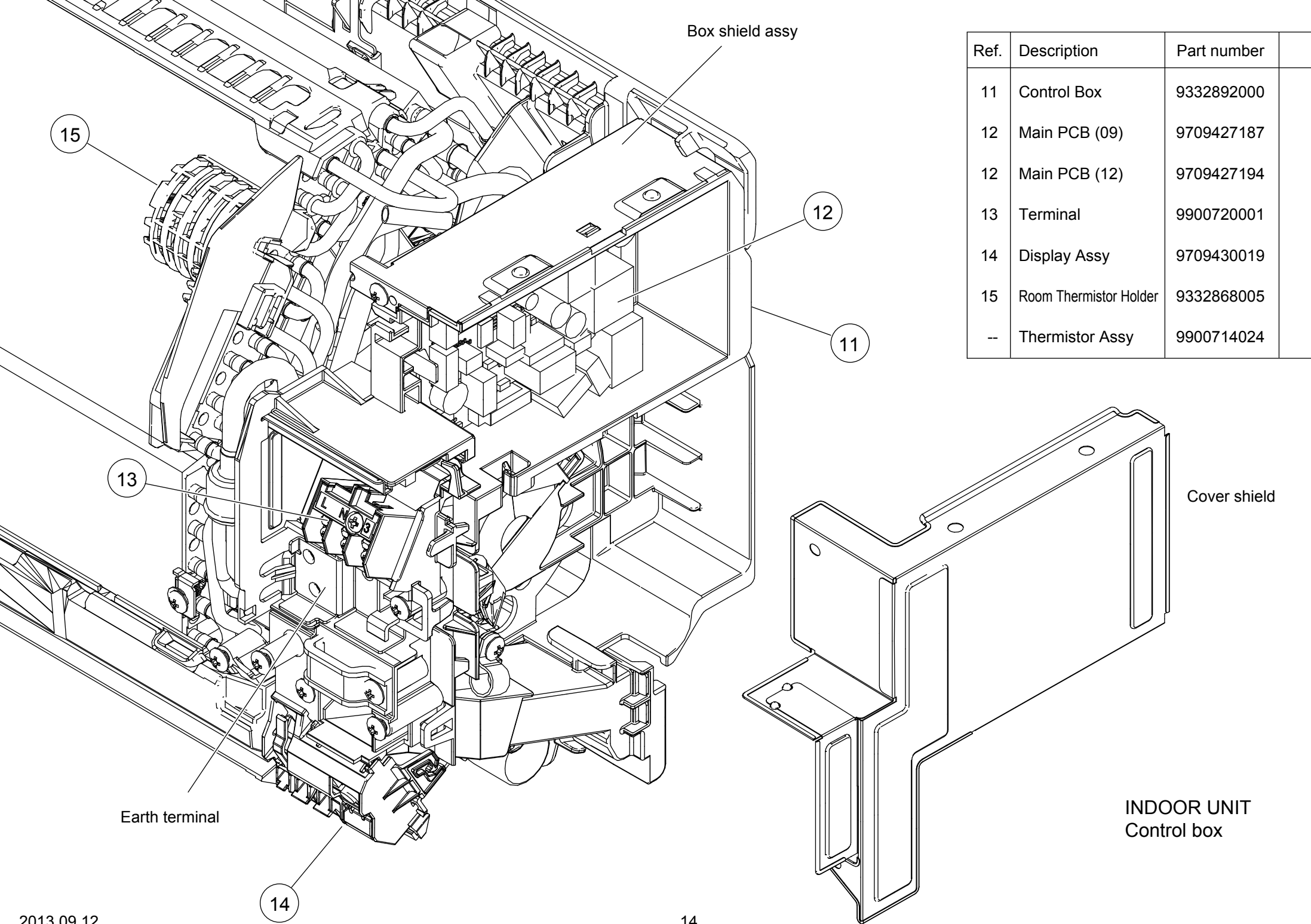
LED	ERROR
on	Discharge temperature abnormal
0.5 second on / 0.5 second off	IPM overcurrent protection
0.1 second on / 0.1 second off	Thermistor abnormal
2.0 second on / 2.0 second off	CT abnormal
0.1 second on / 2.0 second off	Compressor location abnormal
5.0 second on / 5.0 second off	Fan abnormal

# 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



Box shield assy

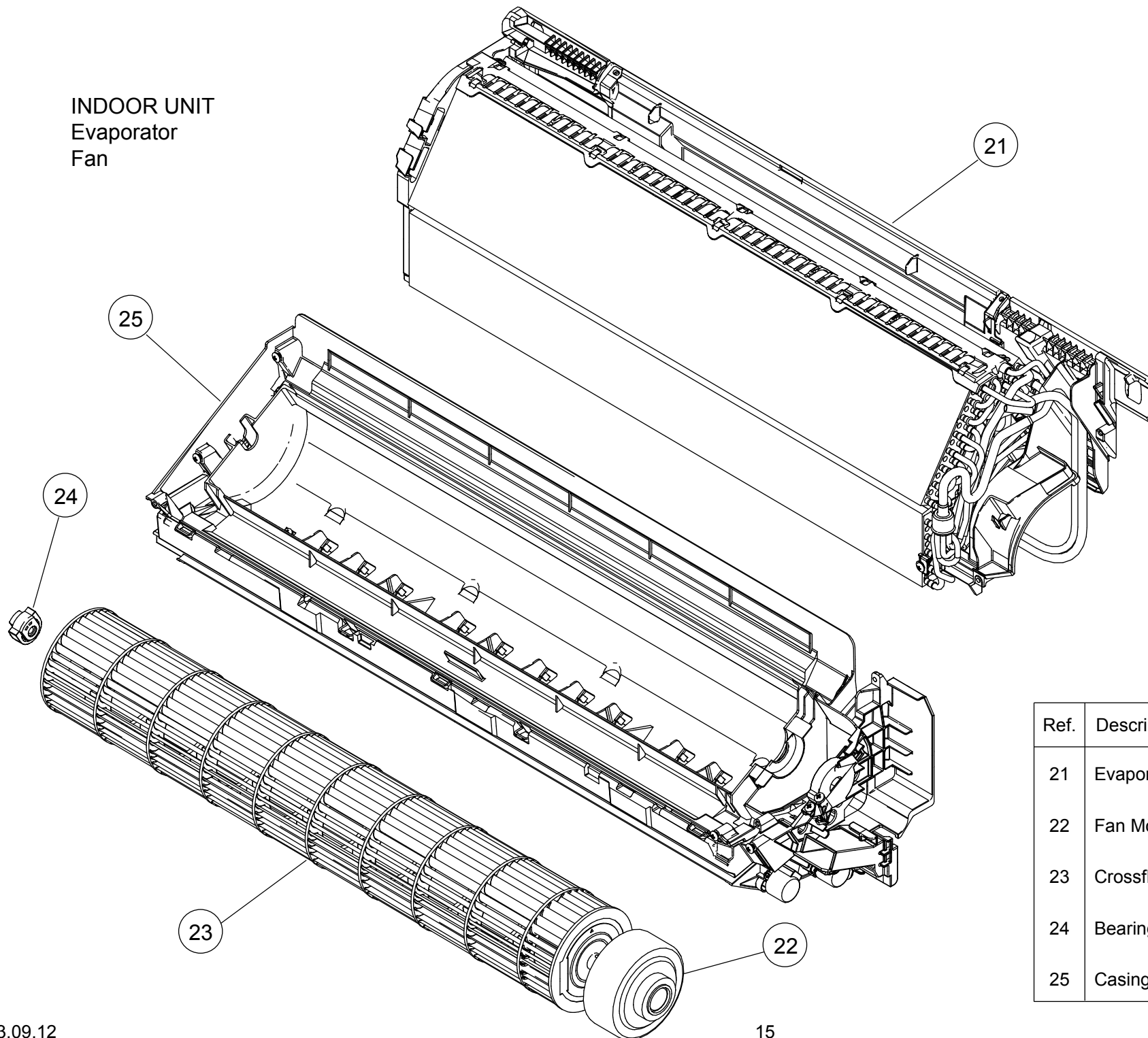
Ref.	Description	Part number
11	Control Box	9332892000
12	Main PCB (09)	9709427187
12	Main PCB (12)	9709427194
13	Terminal	9900720001
14	Display Assy	9709430019
15	Room Thermistor Holder	9332868005
--	Thermistor Assy	9900714024

Cover shield

INDOOR UNIT  
Control box

Earth terminal

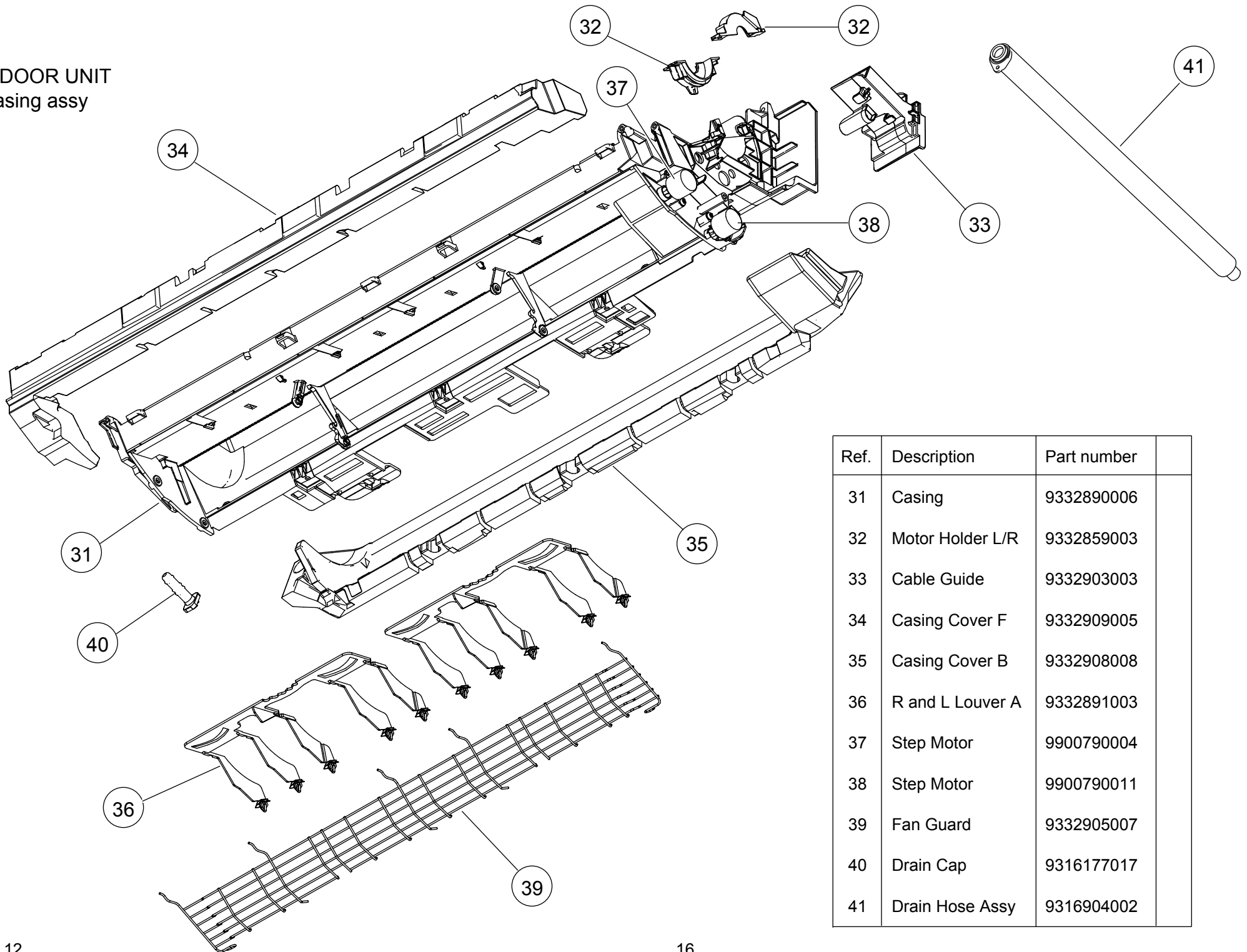
INDOOR UNIT  
Evaporator  
Fan



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



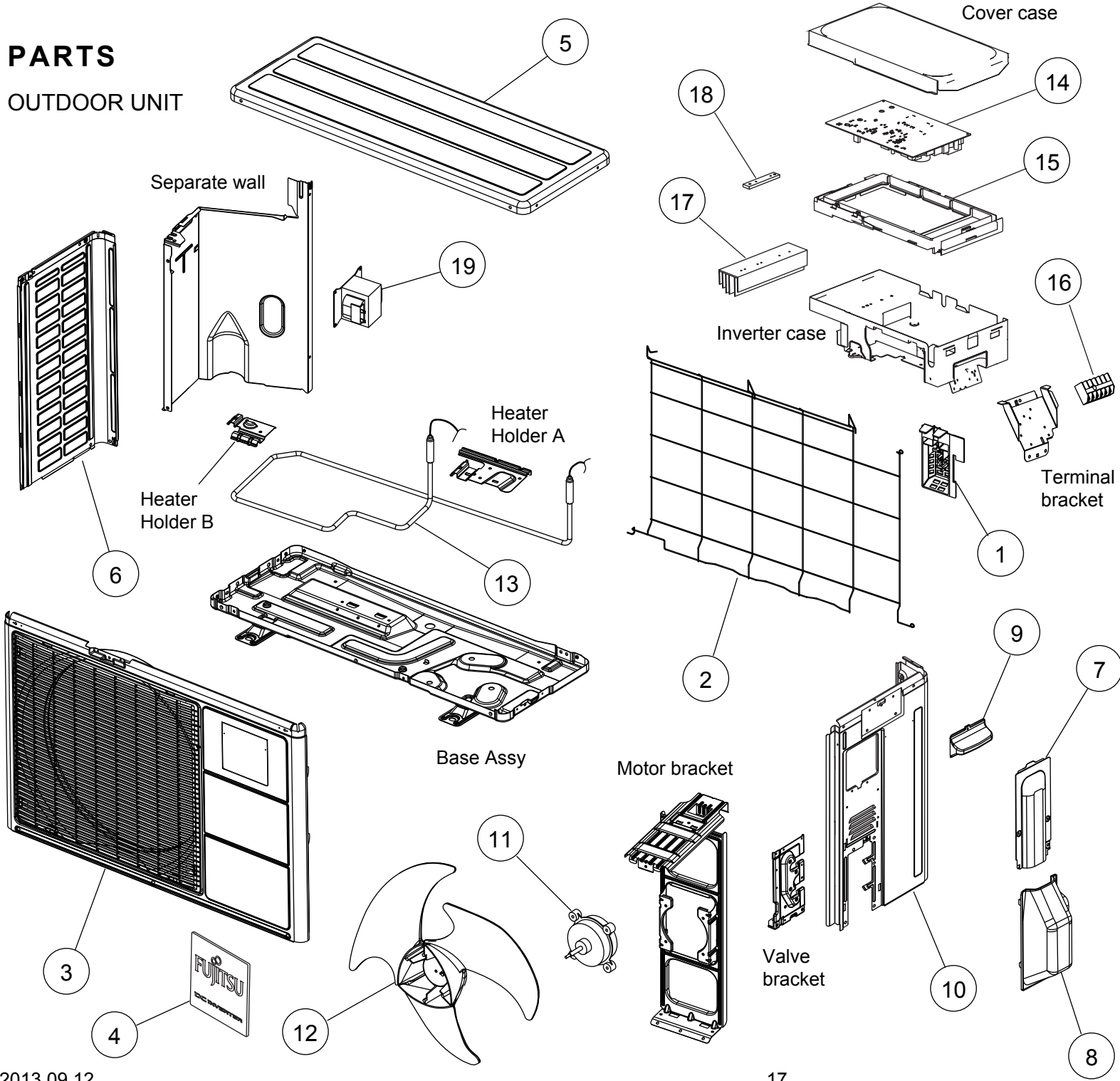
INDOOR UNIT  
Casing assy



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

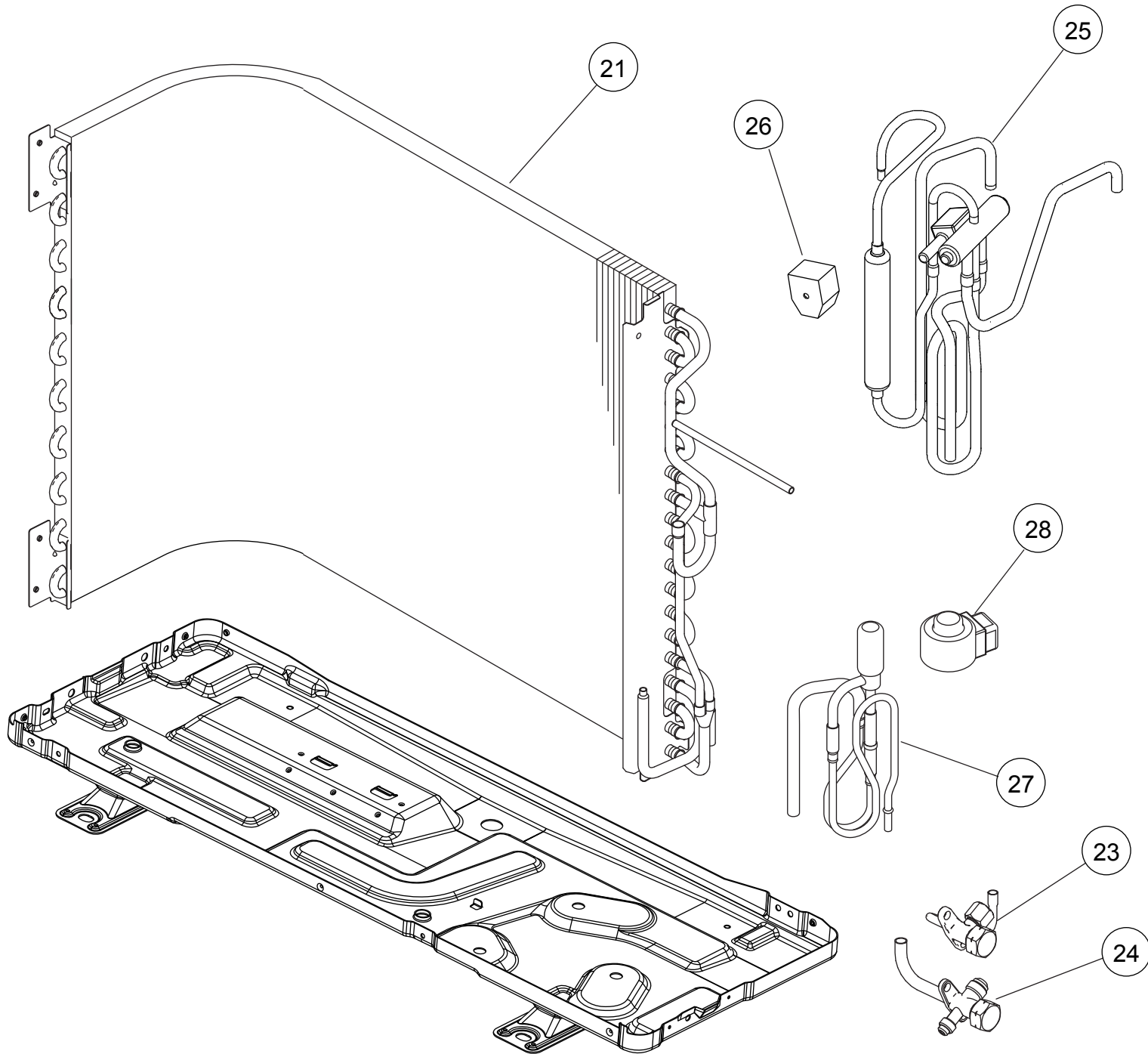
# PARTS

## OUTDOOR UNIT

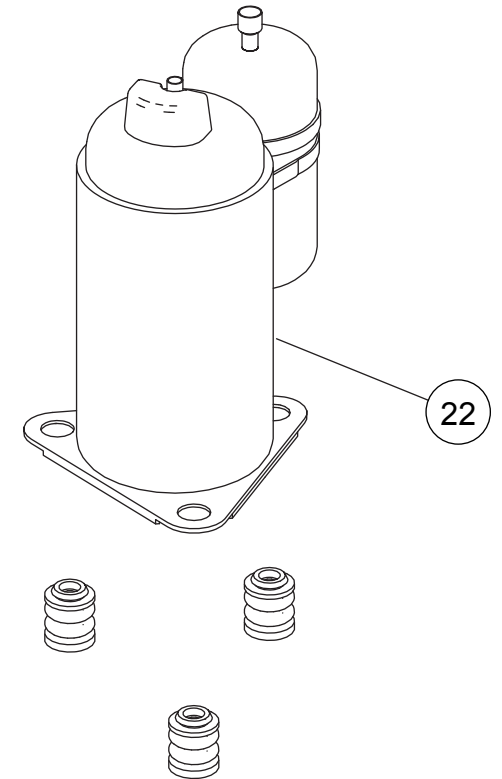


Ref.	Description	Part number
1	Thermistor Holder (09)	9313954048
1	Thermistor Holder (12)	9313954031
2	Protective Net	9318635003
3	Front Panel Assy	9317760041
4	Emblem	9319151007
5	Top Panel Assy	9317761017
6	Cabinet Left Assy	9318247008
7	Switch Cover A Assy	9317795005
8	Switch Cover B	9317582001
9	Grip	9317588003
10	Cabinet Right Assy	9317759007
11	Fan Motor	9602864003
12	Propeller Fan	9313808013
13	Heater Unit Assy	9900616007
14	Main PCB (AOYG09)	9708753492
14	Main PCB (AOYG12)	9708753508
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

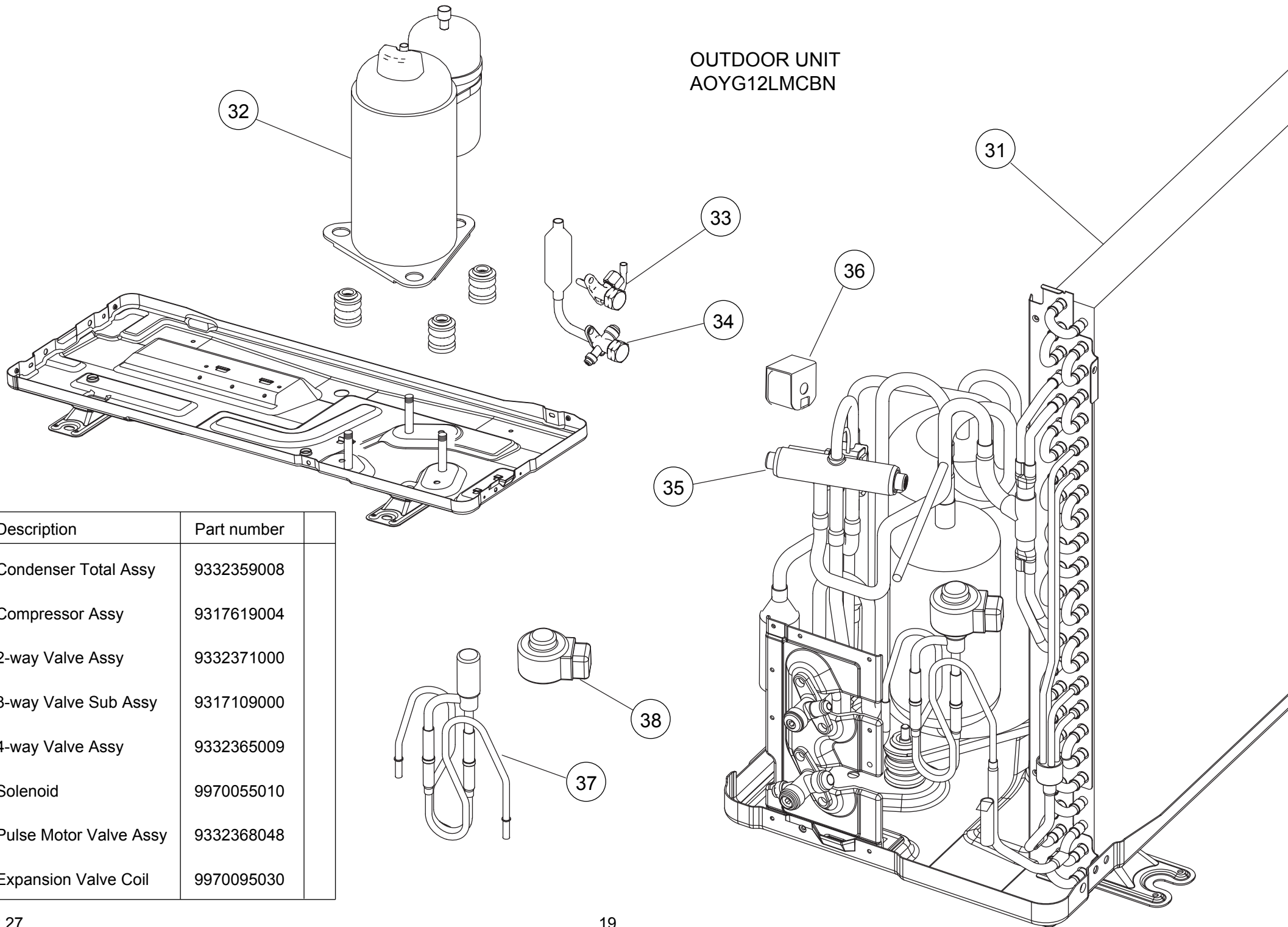
OUTDOOR UNIT  
AOYG09LMCBN



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



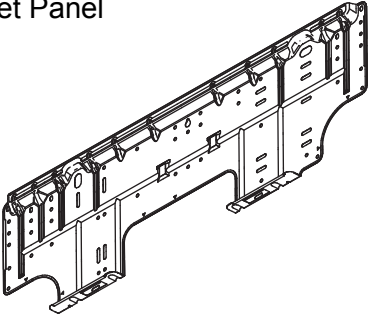
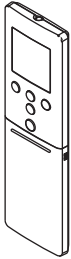
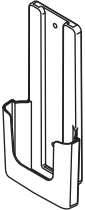
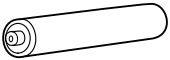
OUTDOOR UNIT  
AOYG12LMCBN

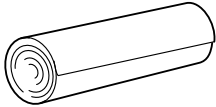
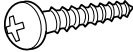

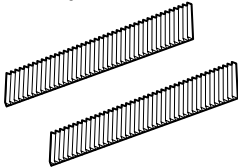
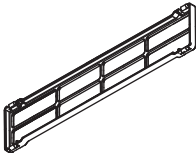


Ref.	Description	Part number
31	Condenser Total Assy	9332359008
32	Compressor Assy	9317619004
33	2-way Valve Assy	9332371000
34	3-way Valve Sub Assy	9317109000
35	4-way Valve Assy	9332365009
36	Solenoid	9970055010
37	Pulse Motor Valve Assy	9332368048
38	Expansion Valve Coil	9970095030

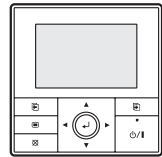
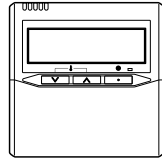

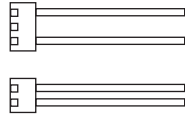
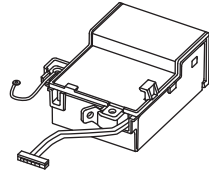
# ACCESSORIES

## INDOOR UNIT

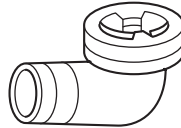
Name and Shape	Part number
Bracket Panel 	9332882018
Remote Control 	9319208008
Remote Control Holder 	9318912005
Battery (penlight) 	0600185541

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	Part number
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