

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE



SERVICE MANUAL



Indoor unit	Outdoor unit
ASYG12LLCE	AOYG12LLCE

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SPECIFICATIONS

ELECTRICAL DATA

INDOOR UNIT		ASYG12LLCE
OUTDOOR UNIT		AOYG12LLCE
POWER SOURCE		230 V 50 Hz Single phase
Cooling	CAPACITY	3.40 kW
	POWER CONSUMPTION	1.08 kW
	EER	3.15 kW/kW
	RUNNING CURRENT	5.2 A
	MAXIMUM CURRENT	6.5 A
	MOISTURE REMOVAL	1.8 L/h
Heating	CAPACITY	4.00 kW
	POWER CONSUMPTION	1.13 kW
	COP	3.54 kW/kW
	RUNNING CURRENT	5.4 A
	MAXIMUM CURRENT	9.0 A

DIMENSIONS

INDOOR UNIT	H x W x D	262 x 820 x 206 mm
OUTDOOR UNIT	H x W x D	535 x 663 x 293 mm

WEIGHT

INDOOR UNIT	Net / Shipping	7.0 kg / 9.0 kg
OUTDOOR UNIT	Net / Shipping	26 kg / 29 kg

FAN MOTOR

INDOOR UNIT'S Discrimination		MFD-12BYW
OUTDOOR UNIT'S Discrimination		MFE-22AVAL
INDOOR UNIT Cooling	High	1,320 rpm
	Medium	1,120 rpm
	Low	840 rpm
	Quiet	700 rpm
INDOOR UNIT Heating	High	1,360 rpm
	Medium	1,120 rpm
	Low	900 rpm
	Quiet	700 rpm
OUTDOOR UNIT Cooling		860 rpm
OUTDOOR UNIT Heating		760 rpm

AIRFLOW

INDOOR UNIT Cooling	High	720 m ³ /h
	Medium	600 m ³ /h
	Low	420 m ³ /h
	Quiet	325 m ³ /h
INDOOR UNIT Heating	High	740 m ³ /h
	Medium	600 m ³ /h
	Low	450 m ³ /h
	Quiet	325 m ³ /h
OUTDOOR UNIT Cooling		1,830 m ³ /h
OUTDOOR UNIT Heating		1,600 m ³ /h

NOISE LEVEL

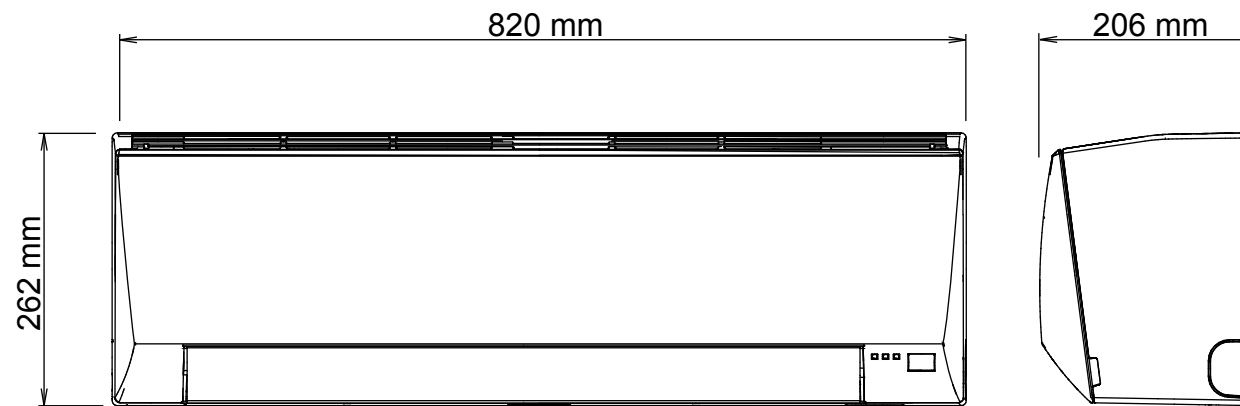
INDOOR UNIT Cooling	High	43 dB
	Medium	38 dB
	Low	33 dB
	Quiet	22 dB
OUTDOOR UNIT Heating	High	43 dB
	Medium	38 dB
	Low	33 dB
	Quiet	22 dB
OUTDOOR UNIT Cooling		50 dB
OUTDOOR UNIT Heating		51 dB

COMPRESSOR AND REFRIGERANT

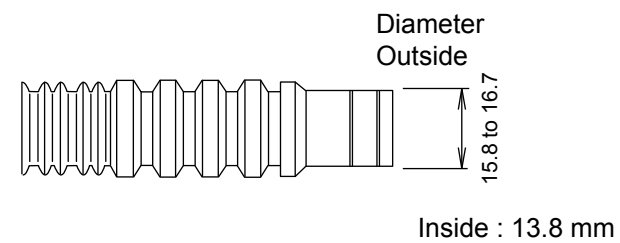
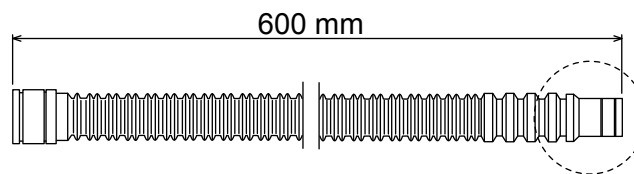
COMPRESSOR TYPE		Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary
DISCRIMINATION		ASM98D10UFZA
WEIGHT (with oil)		8.9 kg
PRECHARGED REFRIGERANT		850 g
REFRIGERANT TYPE		R410A
FULL CHARGE	Pipe length 15 m	850 g
	20 m	950 g
ADDITIONAL CHARGE		20 g/m
MAXIMUM PIPING HEIGHT		15m

DIMENSIONS

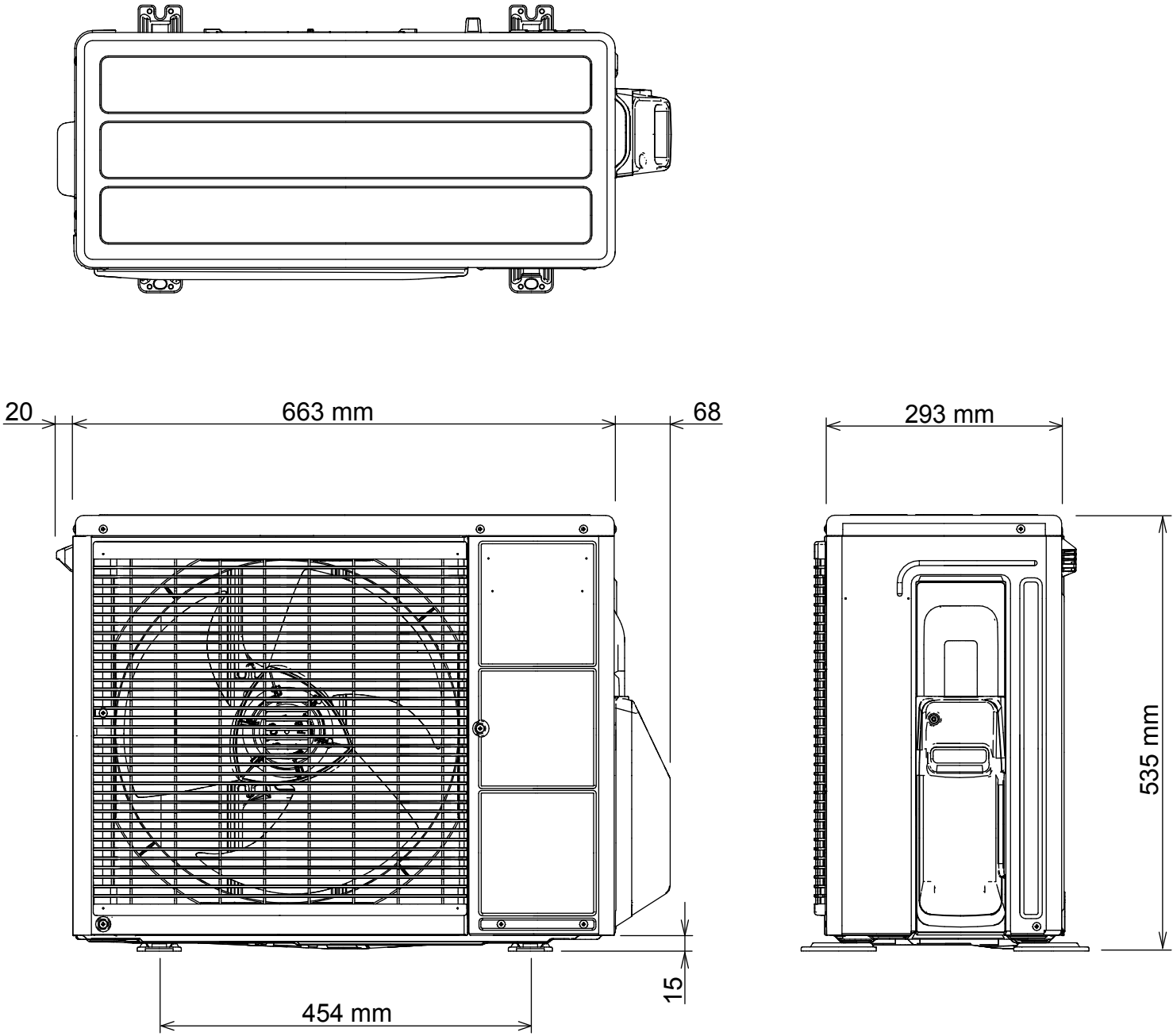
INDOOR UNIT



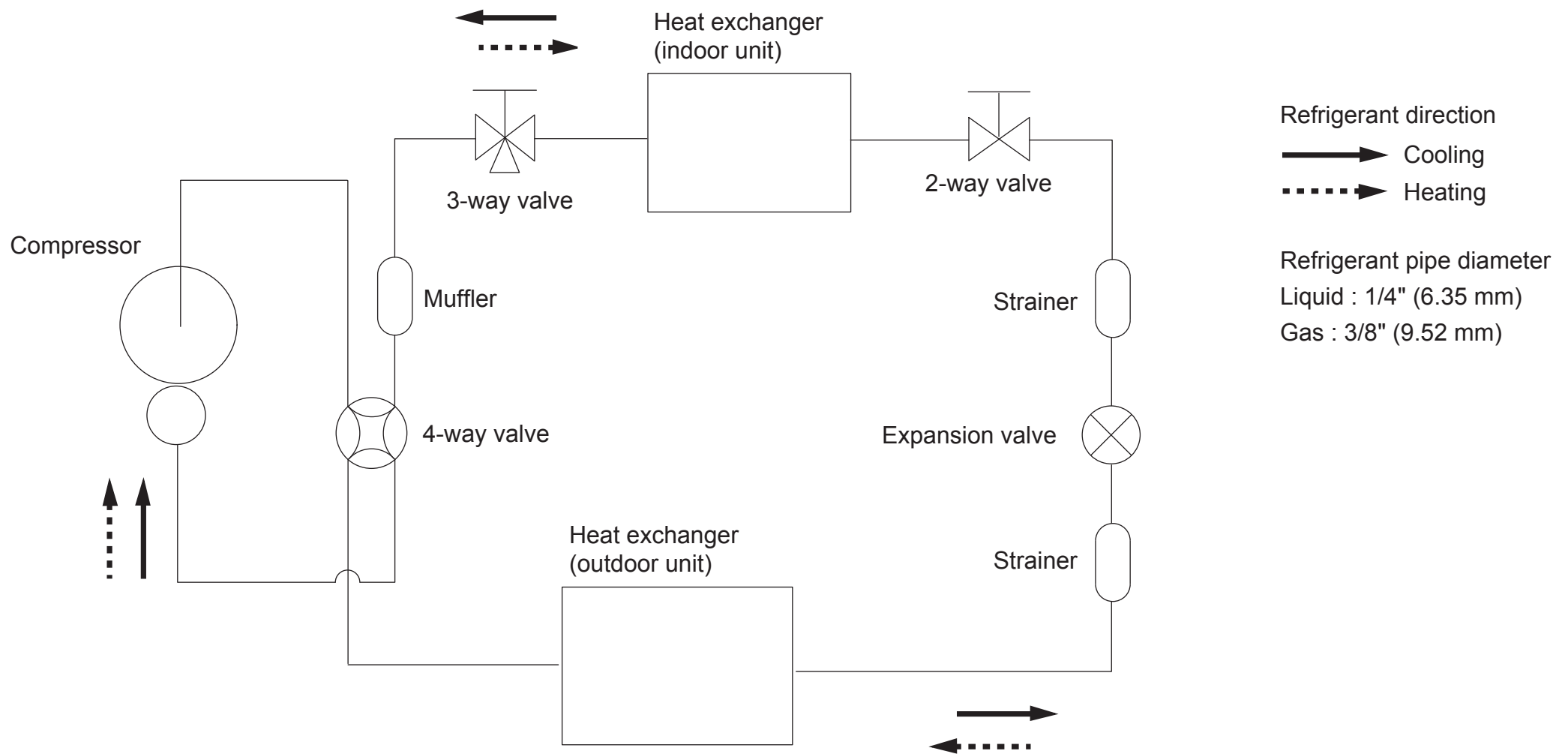
Drain hose



OUTDOOR UNIT



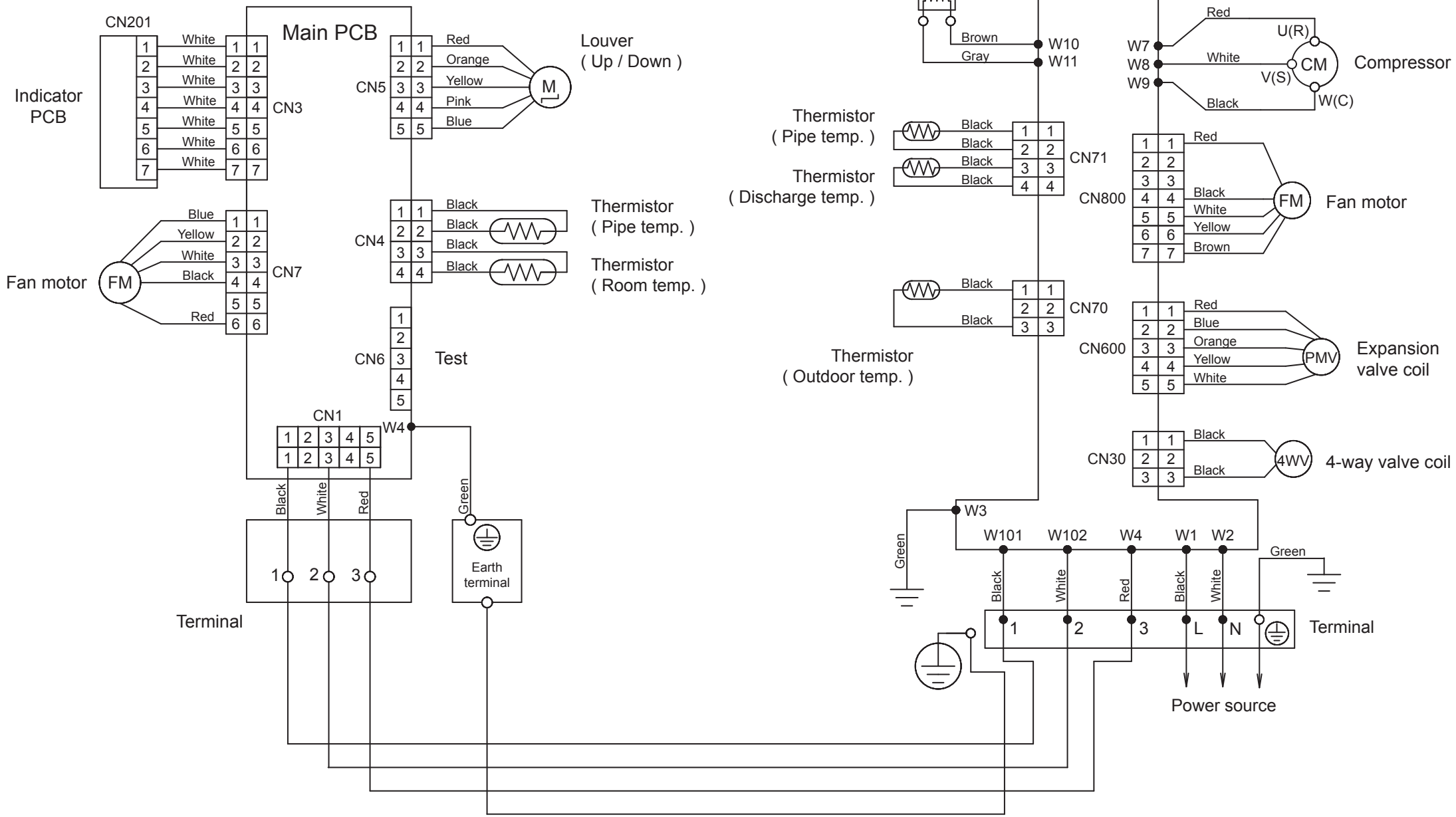
REFRIGERANT SYSTEM DIAGRAM



CIRCUIT DIAGRAM

OUTDOOR UNIT

INDOOR UNIT



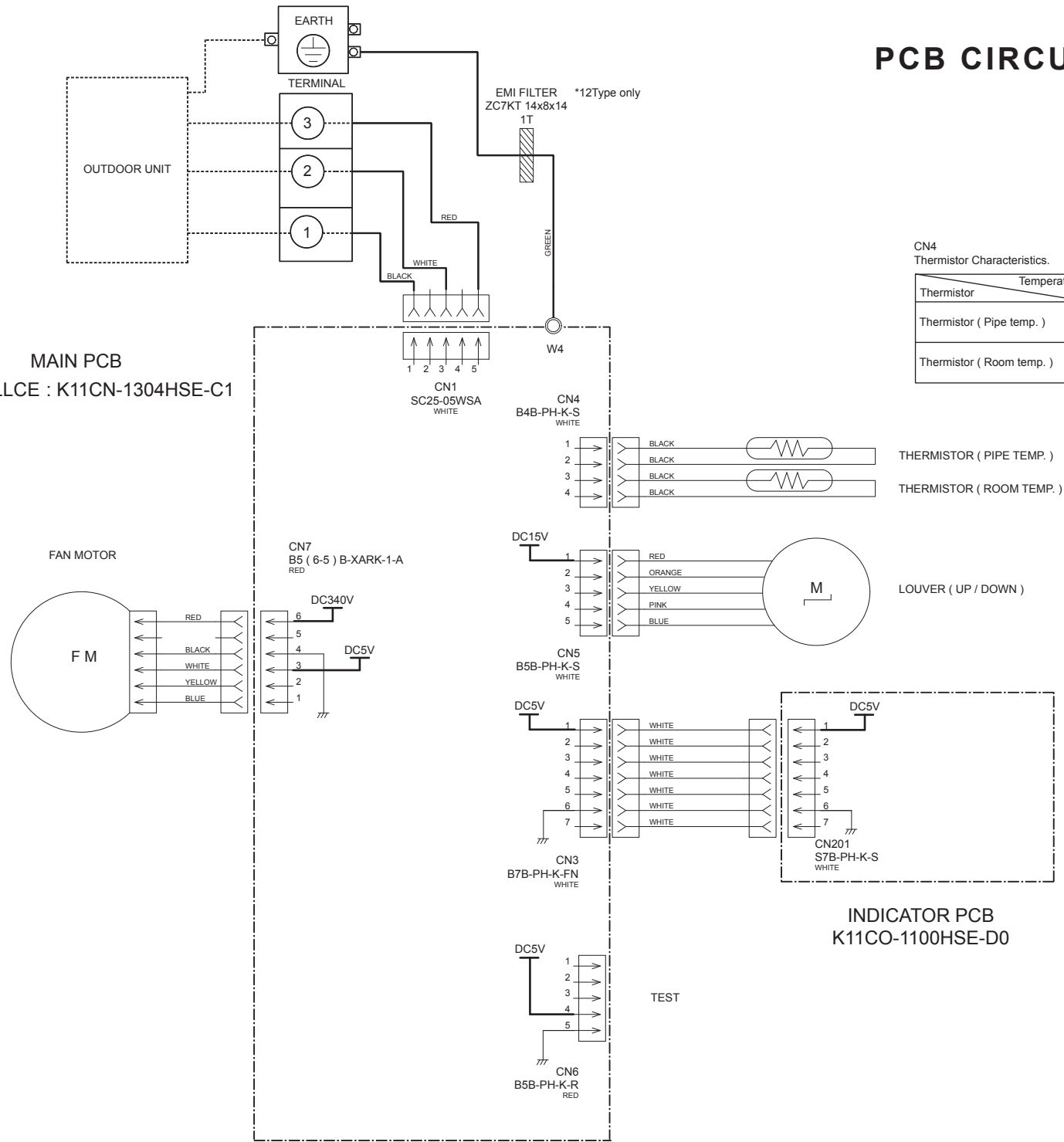
CONTROL UNIT
ASYG12LLCE : EZ-0131LHSE

PCB CIRCUIT DIAGRAM

MAIN PCB
ASYG12LLCE : K11CN-1304HSE-C1

CN7

Pin No.	Terminal code	Function of terminal	Lead wire color
6	Vm	Motor power voltage input	Red
5	—	—	—
4	GND	GND	Black
3	Vcc	Control power voltage input	White
2	Vsp	Speed control voltage input	Yellow
1	FG	Revolution pulse output	Blue



CN4
Thermistor Characteristics.

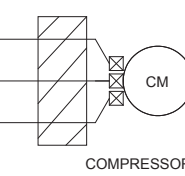
Thermistor	Temperature (0°C)	(20°C)	(30°C)
Thermistor (Pipe temp.)	176.0 k Ω 1.1 V	62.9 k Ω 2.2 V	39.6 k Ω 2.8 V
Thermistor (Room temp.)	33.6 k Ω 1.1 V	12.5 k Ω 2.2 V	8.0 k Ω 2.8 V

INVERTER ASSEMBLY
AOYG12LLCE : EZ-0131RHUE

Compressor
Winding resistance

U-V	1.30 Ω (20℃)
V-W	
U-W	

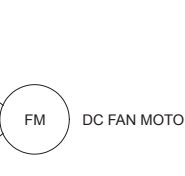
EMI FILTER
ESD-R-16C e.t.c.
2 TURNS



4-WAY VALVE COIL
DC Resistance 1320 Ω ± 10% (20℃)



CN800
B5 (7-2.3) B-XASK-1-A
NATURAL



DC FAN MOTOR

CN600
B5B-PH-K-S
WHITE



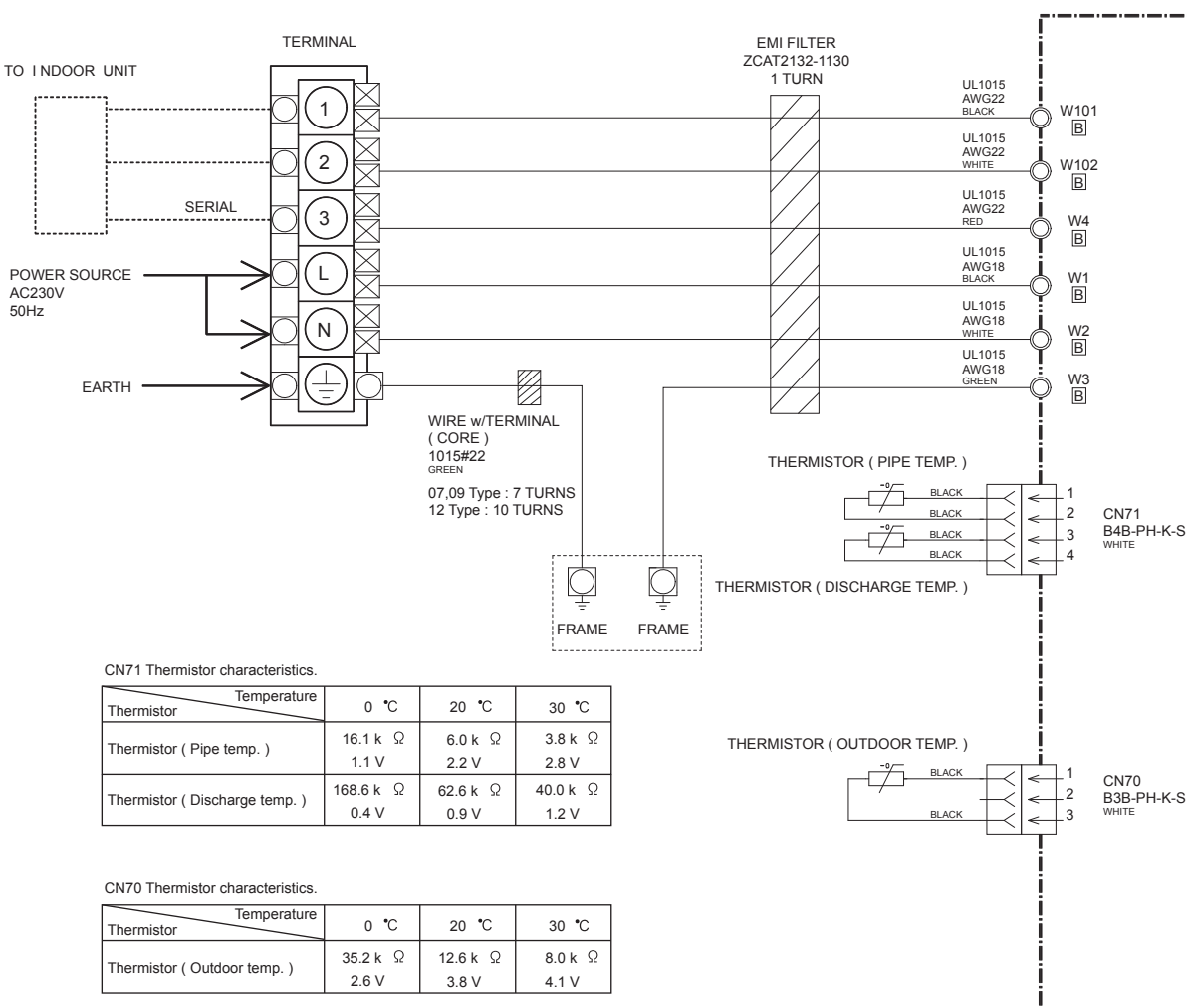
EXPANSION
VALVE COIL

CN600 Expansion valve coil
recommended drive condition
Unipolar drive, 1-2 phase excitation.

1(Red) - 2(Blue)	Coil resistance ≒ 46.0 Ω (20℃)
1(Red) - 3(Orange)	
1(Red) - 4(Yellow)	
1(Red) - 5(White)	

CN800 DC Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	Vm	Motor power voltage input	Red
2	—	—	—
3	—	—	—
4	GND	GND	Black
5	Vcc	Control power voltage input	White
6	Vsp	Speed control voltage input	Yellow
7	FG	Revolution pulse output	Brown



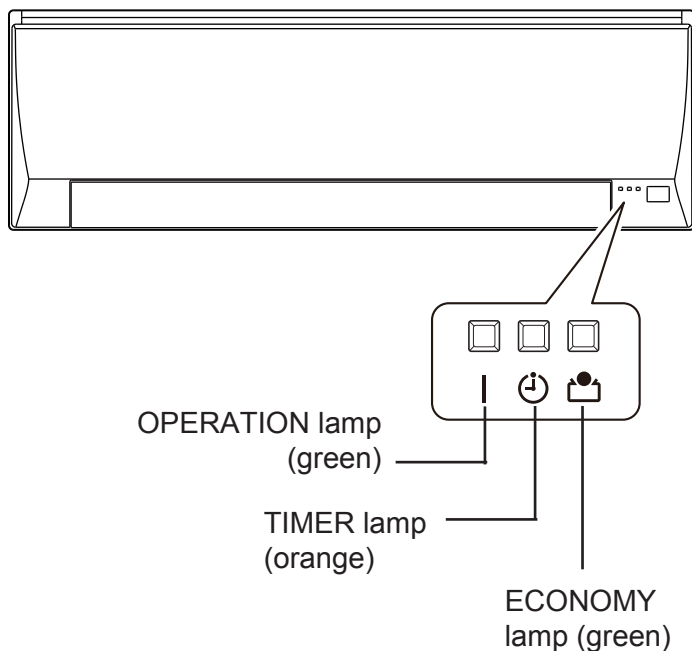
CN71 Thermistor characteristics.

Thermistor \ Temperature	0 ℃	20 ℃	30 ℃
Thermistor (Pipe temp.)	16.1 k Ω 1.1 V	6.0 k Ω 2.2 V	3.8 k Ω 2.8 V
Thermistor (Discharge temp.)	168.6 k Ω 0.4 V	62.6 k Ω 0.9 V	40.0 k Ω 1.2 V

CN70 Thermistor characteristics.

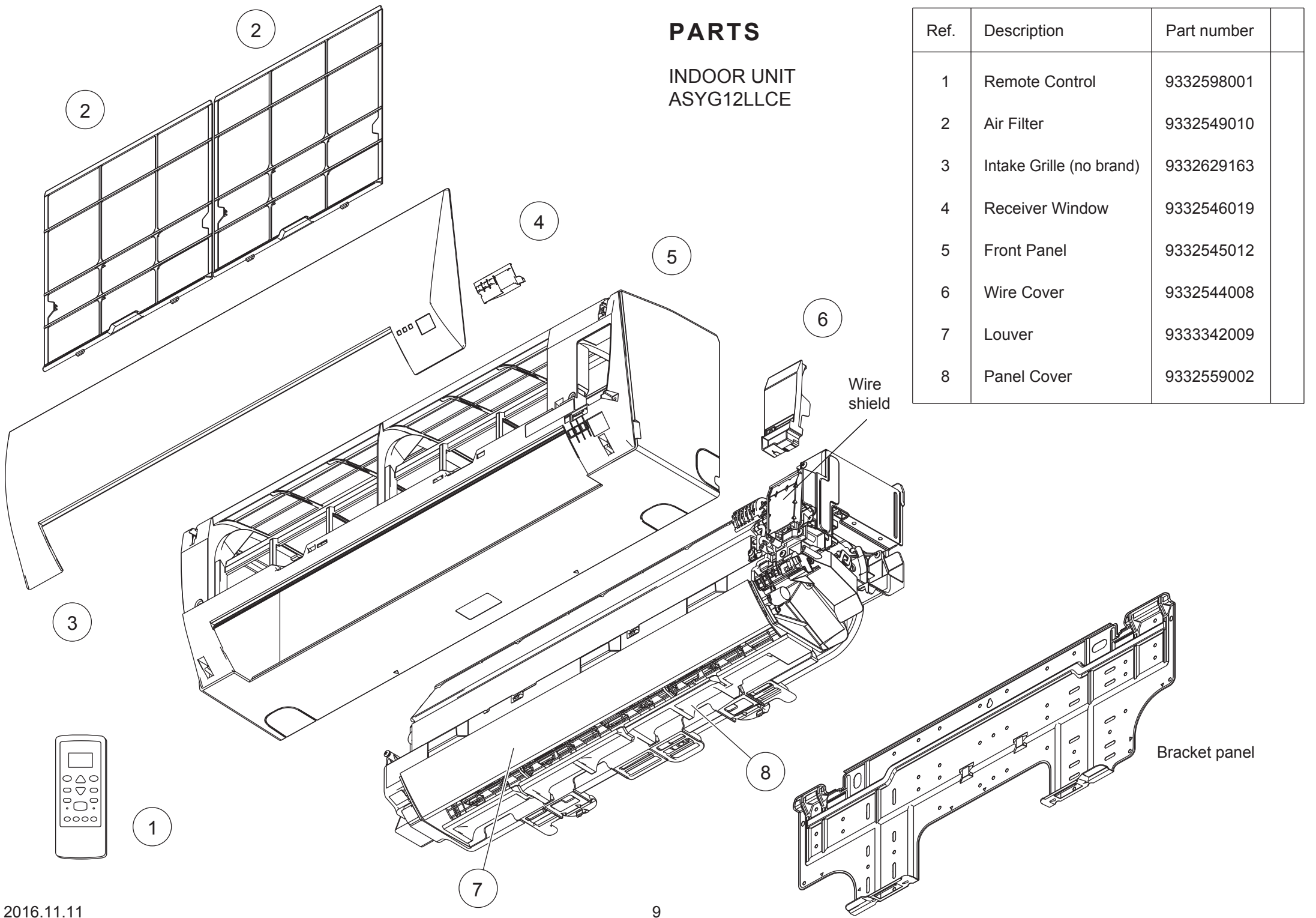
Thermistor \ Temperature	0 ℃	20 ℃	30 ℃
Thermistor (Outdoor temp.)	35.2 k Ω 2.6 V	12.6 k Ω 3.8 V	8.0 k Ω 4.1 V

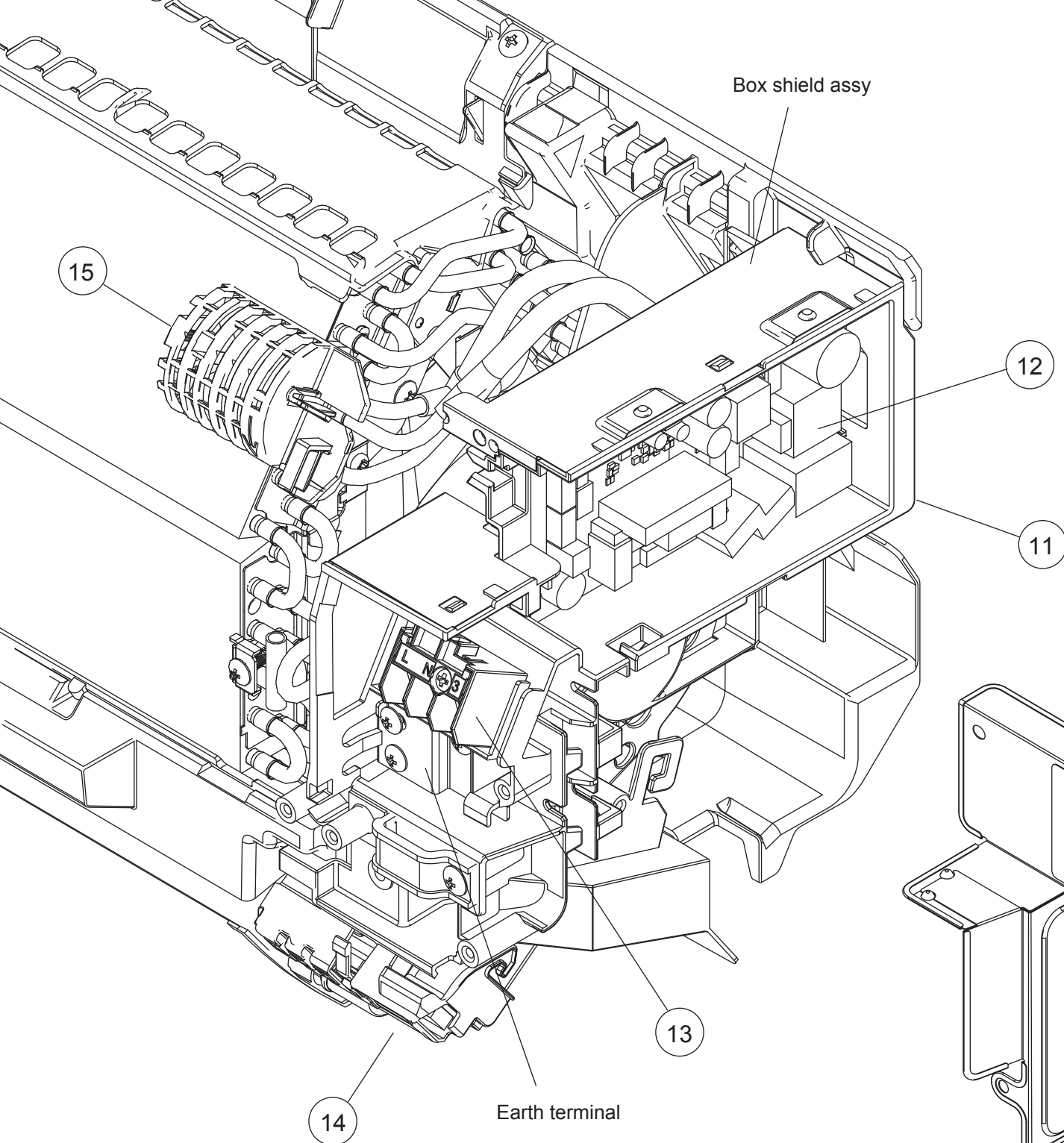
ERROR DETECTION



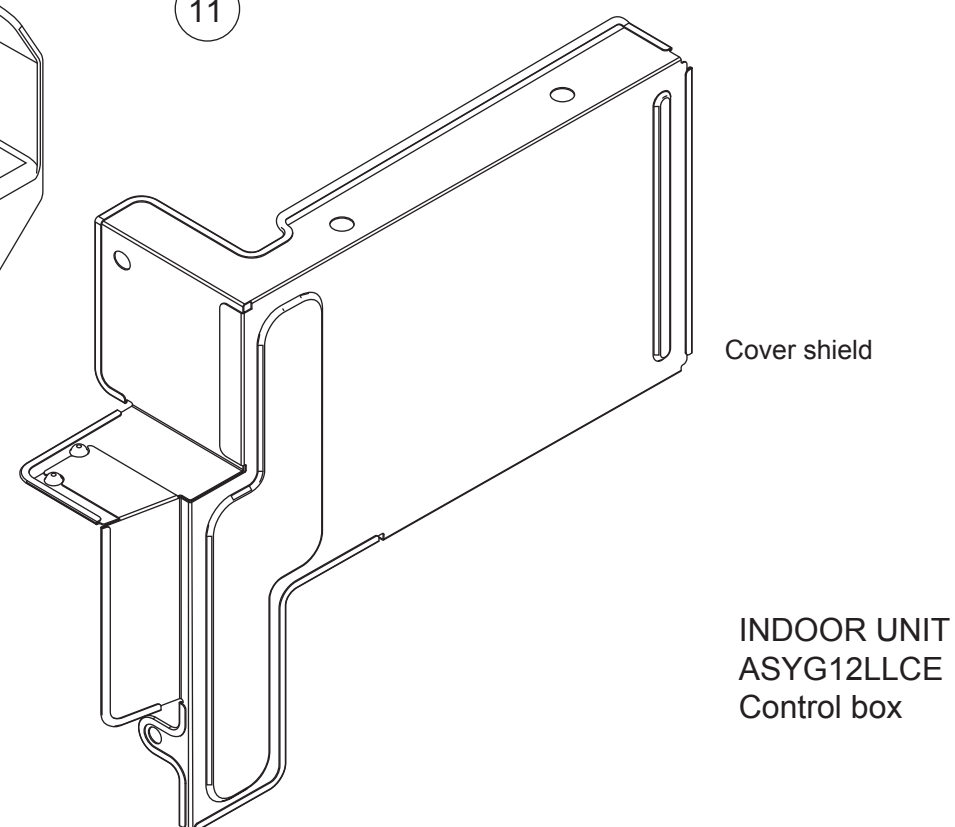
	OPERATION	TIMER	ECONOMY
Serial communication error	1 flash	1 flash	Rapid flash (0.1s on / 0.1s off)
Indoor unit PCB model information error	3	2	
Manual auto switch error	3	5	
Room temp. sensor error	4	1	
Indoor unit Heat Ex. Middle temp.sensor error	4	2	
Indoor unit fan motor error	5	1	
Indoor unit error	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)



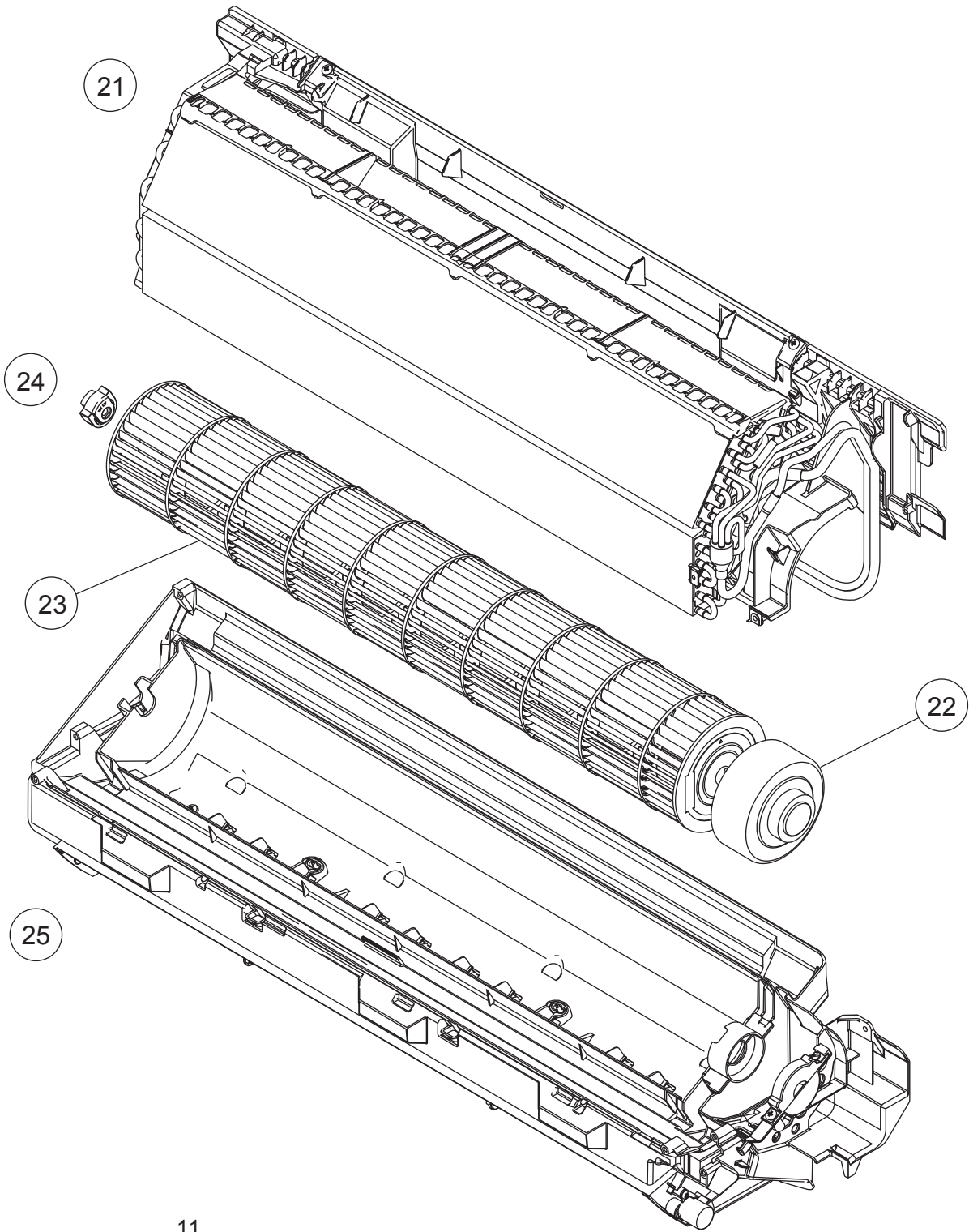


Ref.	Description	Part number	
11	Control Box	9332542004	
12	Main PCB	9709170199	
13	Terminal	9900720001	
14	Display Assy	9709173015	
15	Room Thermistor Holder	9316895003	
--	Thermistor Assy	9900938017	

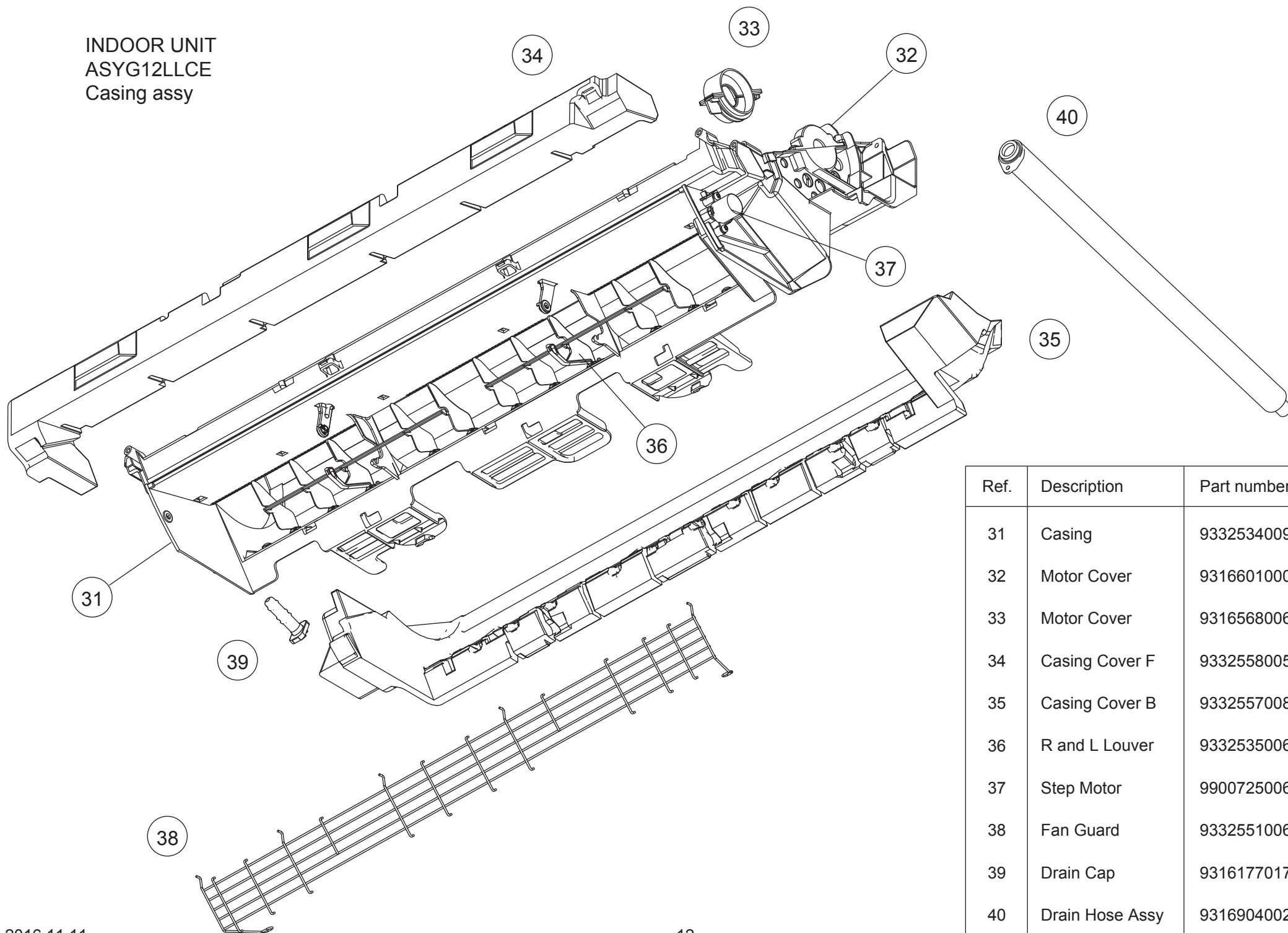


INDOOR UNIT
ASYG12LLCE
Evaporator
Fan

Ref.	Description	Part number	
21	Evaporator Total Assy	9316893207	
22	Fan Motor	9603180003	
23	Crossflow Fan Assy	9316830004	
24	Bearing C Assy	9306628017	
25	Casing Assy	9332613018	



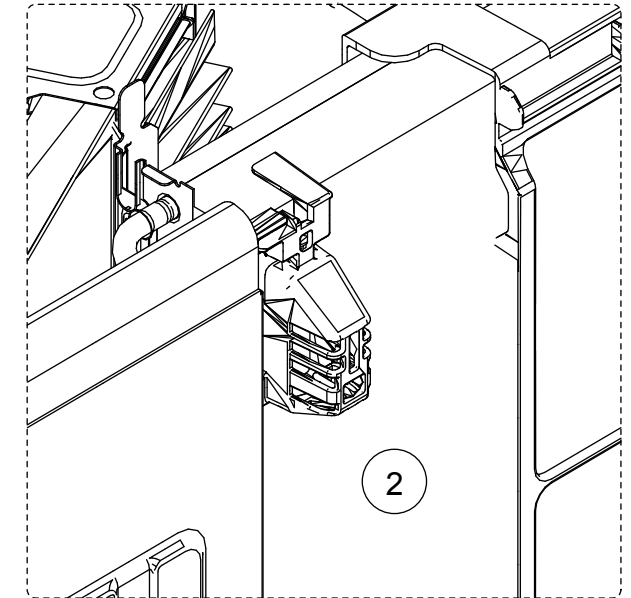
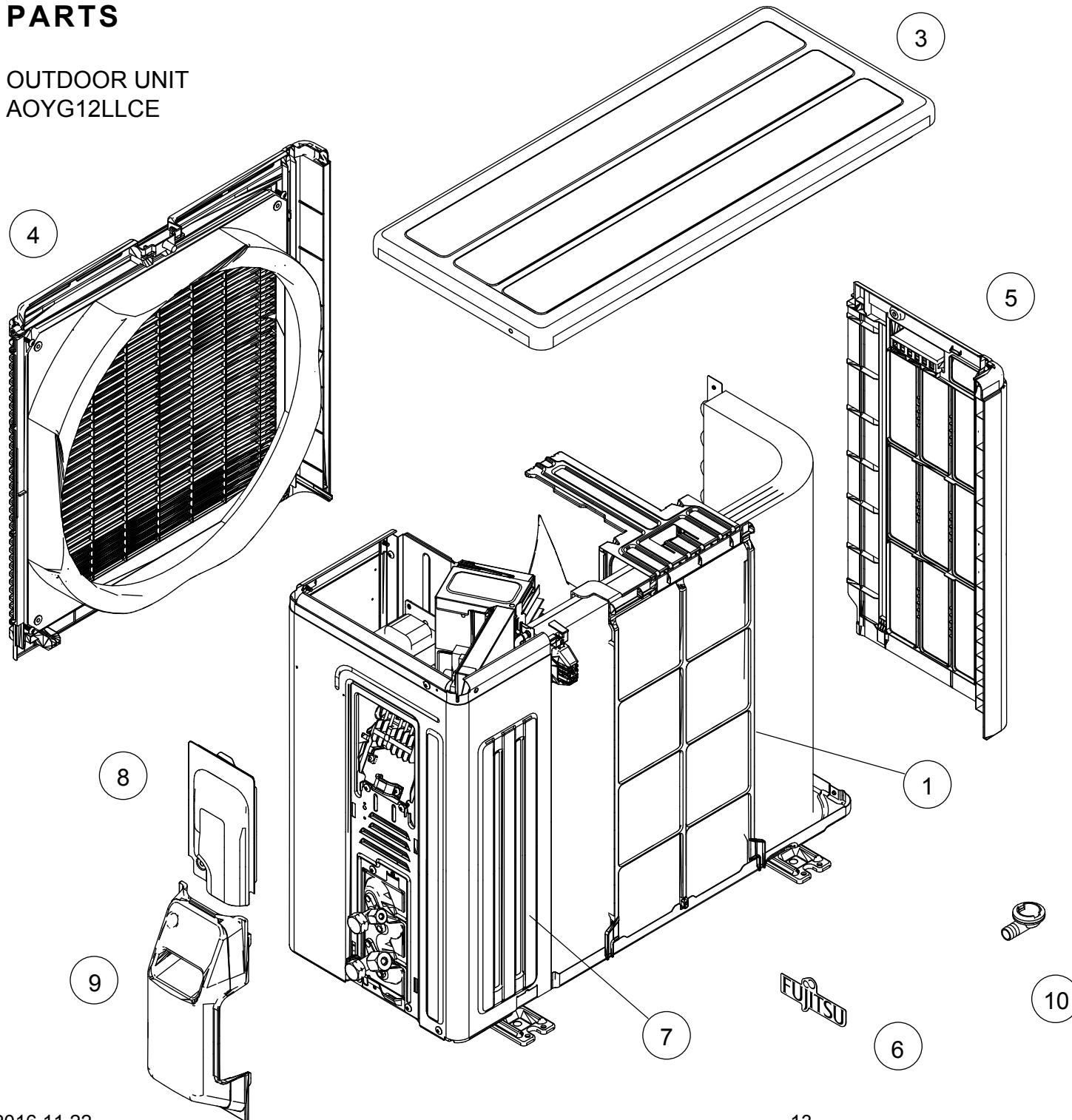
INDOOR UNIT
ASYG12LLCE
Casing assy



Ref.	Description	Part number	
31	Casing	9332534009	
32	Motor Cover	9316601000	
33	Motor Cover	9316568006	
34	Casing Cover F	9332558005	
35	Casing Cover B	9332557008	
36	R and L Louver	9332535006	
37	Step Motor	9900725006	
38	Fan Guard	9332551006	
39	Drain Cap	9316177017	
40	Drain Hose Assy	9316904002	

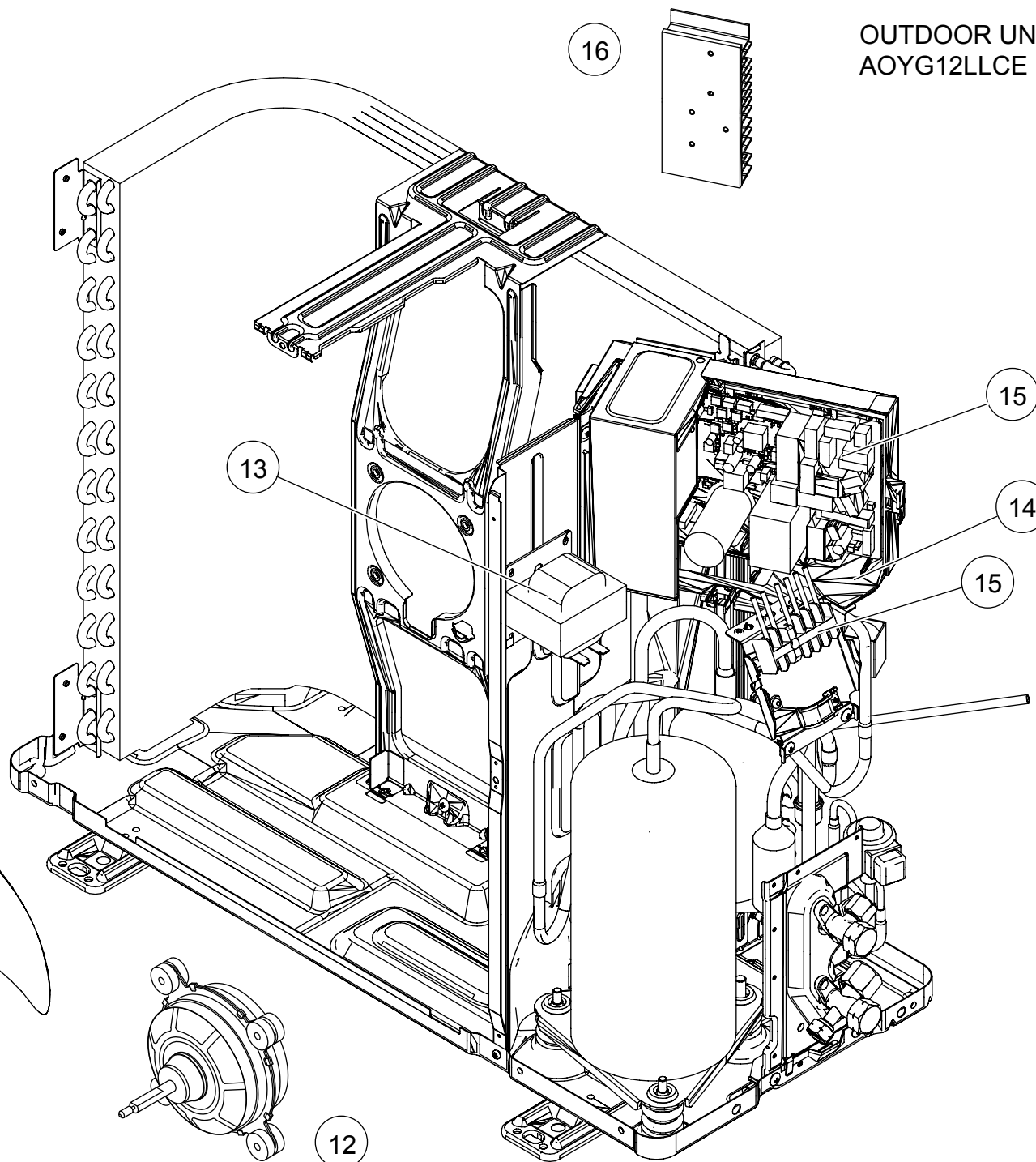
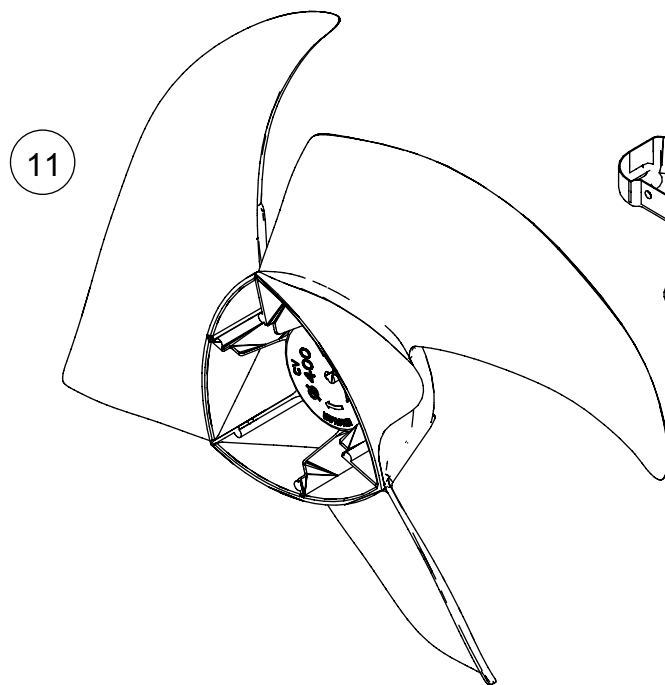
PARTS

OUTDOOR UNIT
AOYG12LLCE



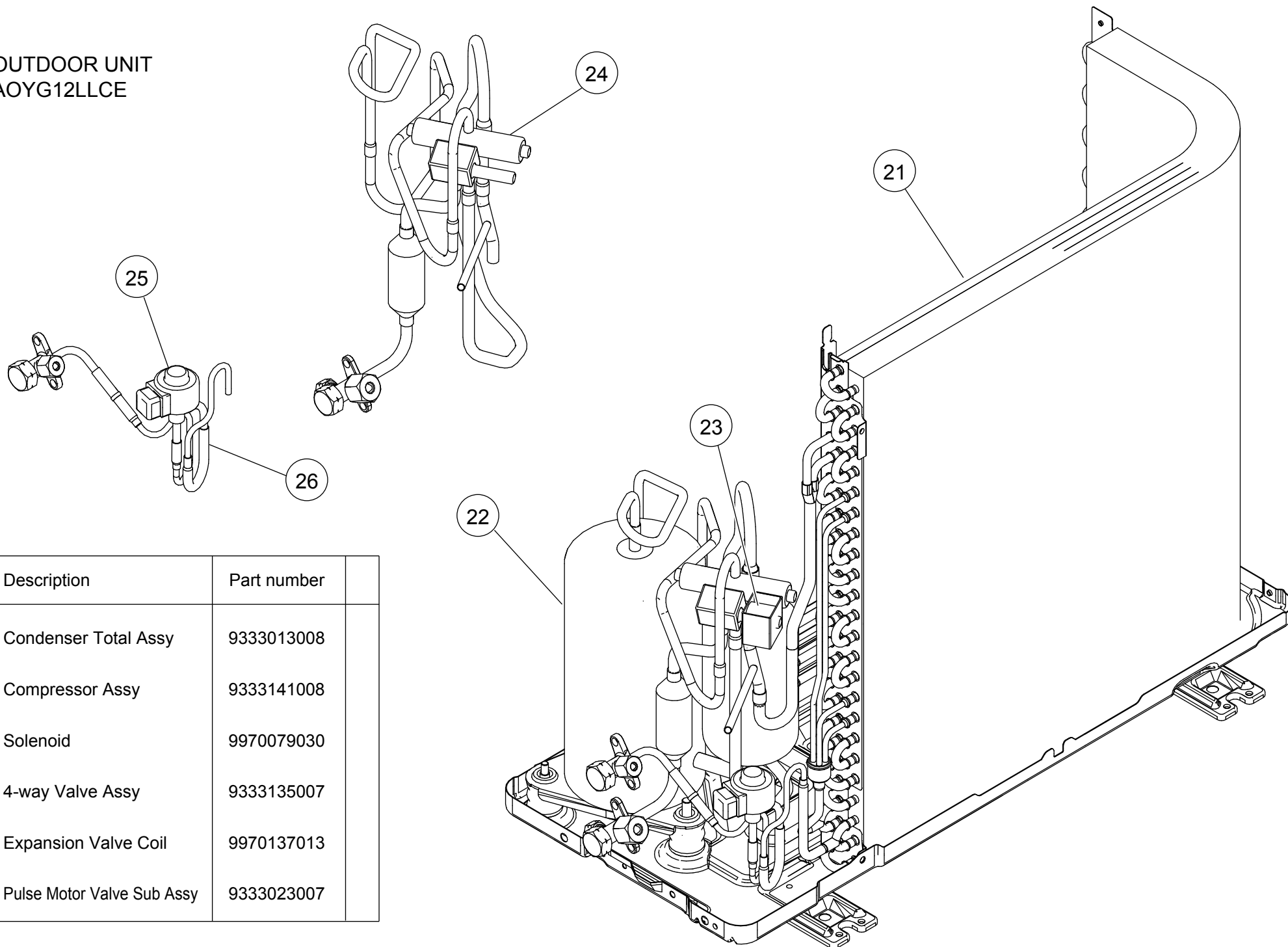
Ref.	Description	Part number
1	Protective Net	9332855005
2	Thermistor Holder	9332505009
3	Top Panel Assy	9332977004
4	Front Panel Assy	9332965001
5	Cabinet Left Assy	9332962000
6	Emblem	9319396019
7	Cabinet Right Assy	9332963007
8	Switch Cover A Assy	9332964011
9	Switch Cover B	9332843002
10	Drain Assy	9332574005

Ref.	Description	Part number	
11	Propeller Fan	9309909014	
12	Fan Motor	9603074012	
13	Reactor Assy	9900787028	
14	PCB Holder	9332506013	
15	Main PCB with Terminal	9709434239	
16	Heat Sink B	9332522006	
--	Thermistor Assy	9900901011	
--	Thermistor	9900880019	



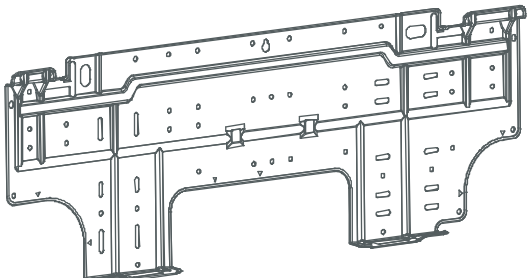
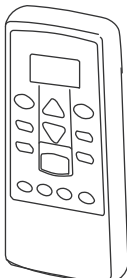
OUTDOOR UNIT
AOYG12LLCE

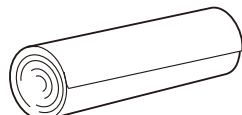
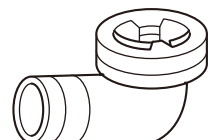
OUTDOOR UNIT
AOYG12LLCE



Ref.	Description	Part number	
21	Condenser Total Assy	9333013008	
22	Compressor Assy	9333141008	
23	Solenoid	9970079030	
24	4-way Valve Assy	9333135007	
25	Expansion Valve Coil	9970137013	
26	Pulse Motor Valve Sub Assy	9333023007	

ACCESSORIES

Name and Shape	Part number
Wall hook bracket 	9332556001
Remote control 	9332598001

Name and Shape	Part number
Battery (penlight) 	0600185541
Cloth tape 	9310519004
Tapping screw (big) (φ 4 x 25) 	0700076046
Drain pipe assy 	9332574005

