

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
ASYG14LZCA	AOYG14LZCAN

CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS.....	2
REFRIGERANT SYSTEM DIAGRAM.....	4
CIRCUIT DIAGRAM.....	5
PCB CIRCUIT DIAGRAM.....	6
ERROR DETECTION.....	8
PARTS (INDOOR UNIT).....	10
PARTS (OUTDOOR UNIT).....	16
ACCESSORIES.....	20

SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter
INDOOR UNIT		ASYG14LZCA
OUTDOOR UNIT		AOYG14LZCAN
POWER SUPPLY		Single phase, 230 V, 50Hz
Cooling	CAPACITY	4.20 kW
	POWER CONSUMPTION	1.050 kW
	EER	4.00 kW/kW
	OPERATING CURRENT	4.8 A
	MAX OPERATING CURRENT	9.9 A
	DEHUMIDIFICATION	1.7 L/h
Heating	CAPACITY	5.40 kW
	POWER CONSUMPTION	1.170 kW
	COP	4.62 kW/kW
	OPERATING CURRENT	5.3 A
	MAX OPERATING CURRENT	14.9 A

FAN MOTOR DISCRIMINATION

INDOOR UNIT	MFD-71CXAL
OUTDOOR UNIT	MFE-71TVL

FAN MOTOR REVOLUTION

INDOOR UNIT	High	1,210 rpm
	Medium	1,040 rpm
	Low	880 rpm
	Quiet	680 rpm
OUTDOOR UNIT	Cooling	870 rpm
	Heating	780 rpm

AIR CIRCULATION

INDOOR UNIT	High	900 m ³ /h
	Medium	780 m ³ /h
	Low	630 m ³ /h
	Quiet	440 m ³ /h
OUTDOOR UNIT	Cooling	2,050 m ³ /h
	Heating	1,840 m ³ /h

NOISE LEVEL

INDOOR UNIT	High	C 45 dB / H 44 dB
	Medium	C 40 dB / H 39 dB
	Low	C 34 dB / H 33 dB
	Quiet	C 26 dB / H 27 dB
OUTDOOR UNIT	Cooling	49 dB
	Heating	49 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE	Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary	
DISCRIMINATION	808-213-80	
WEIGHT (with oil)	9.7 kg	
PRECHARGED REFRIGERANT	1,400 g	
REFRIGERANT TYPE	R410A	
FULL CHARGE	Pipe length 15 m	1,400 g
	20 m	1,500 g
ADDITIONAL CHARGE	20 g/m	
MAXIMUM PIPING HEIGHT	15 m	

DIMENSIONS

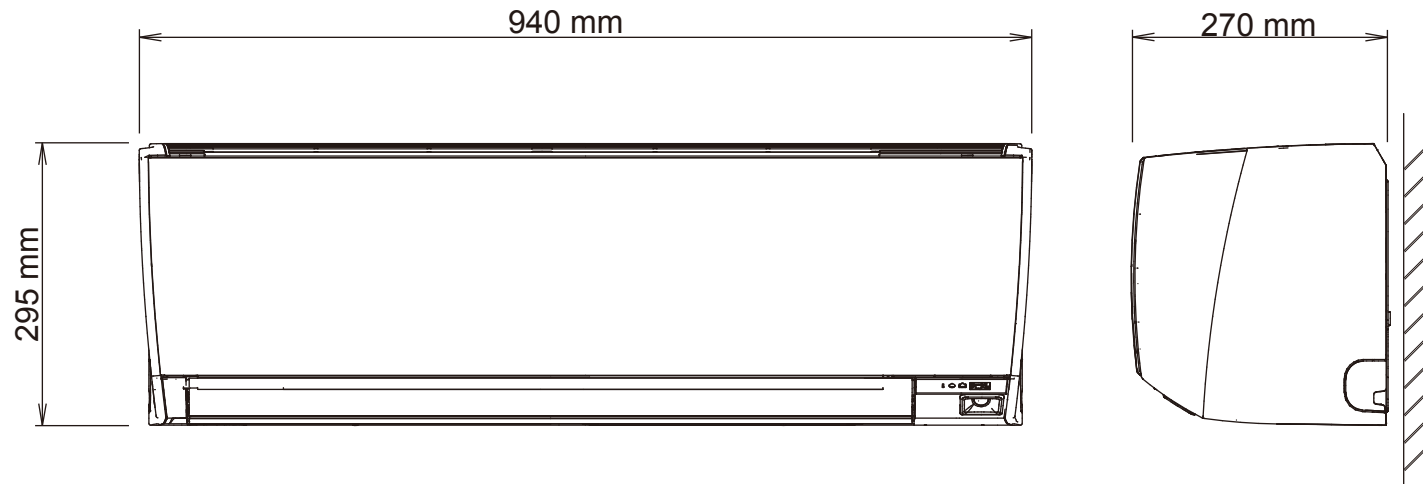
INDOOR UNIT H x W x D	295 x 940 x 270 mm
OUTDOOR UNIT H x W x D	620 x 790 x 290 mm

WEIGHT

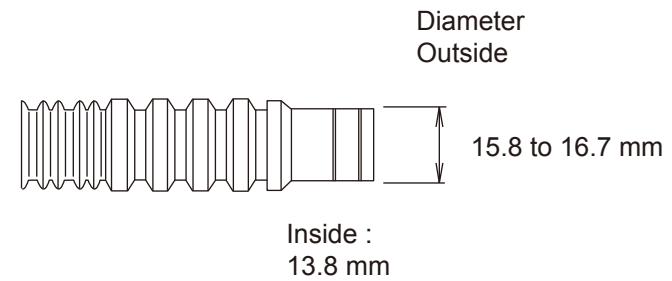
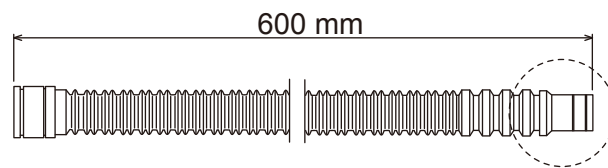
INDOOR UNIT Net / Shipping	14 kg / 17 kg
OUTDOOR UNIT Net / Shipping	40 kg / 43 kg

DIMENSIONS

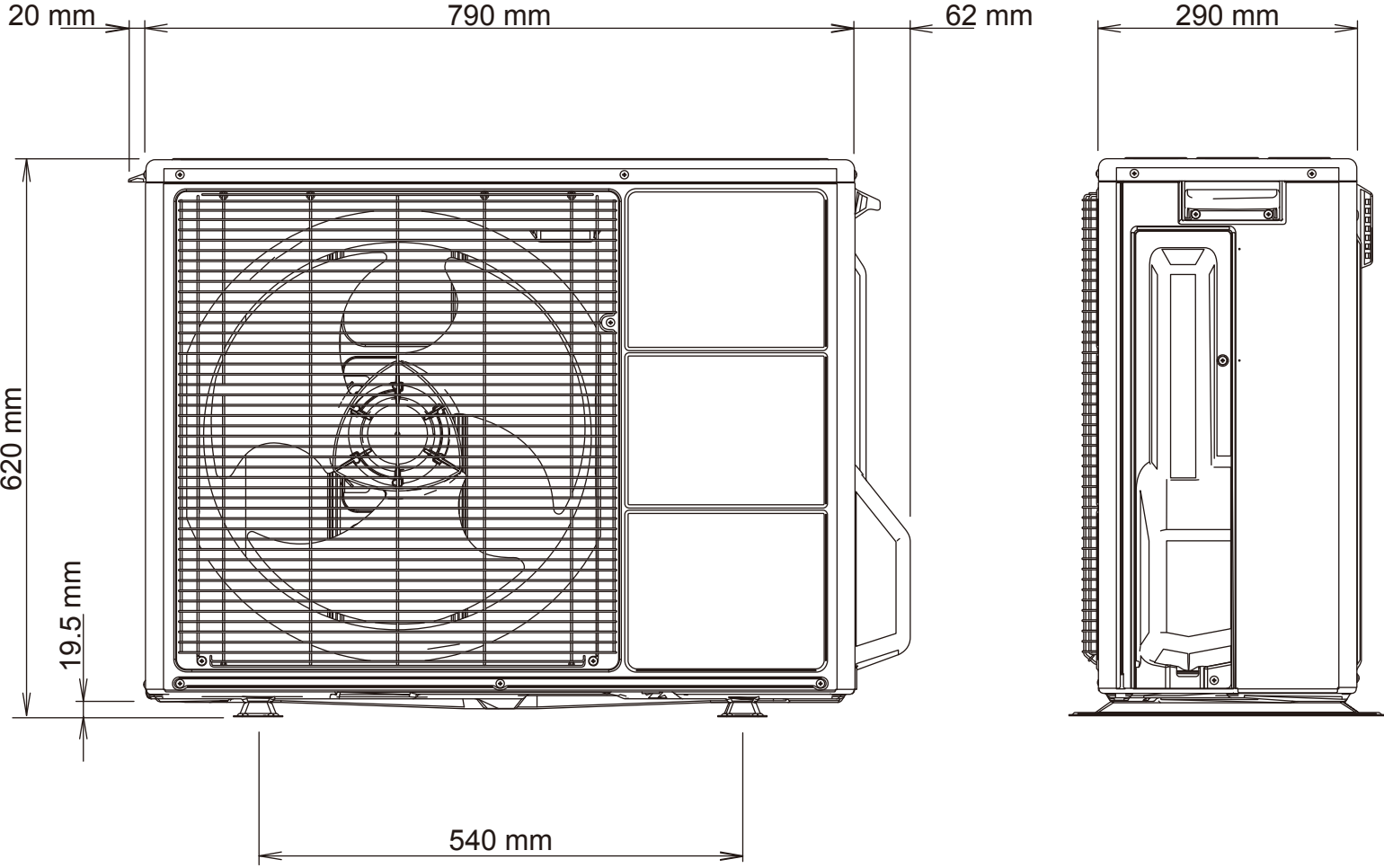
INDOOR UNIT



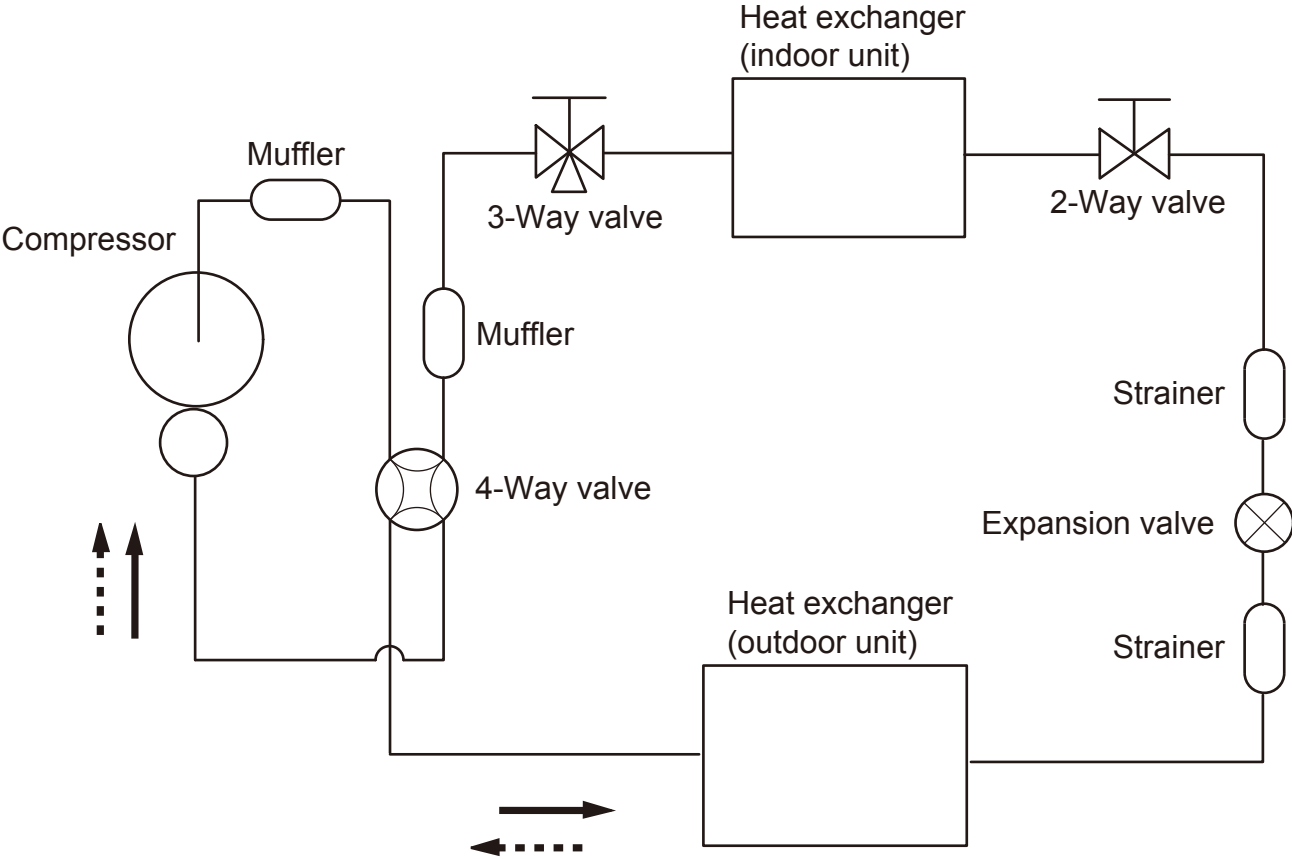
Drain hose



OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM



Refrigerant direction

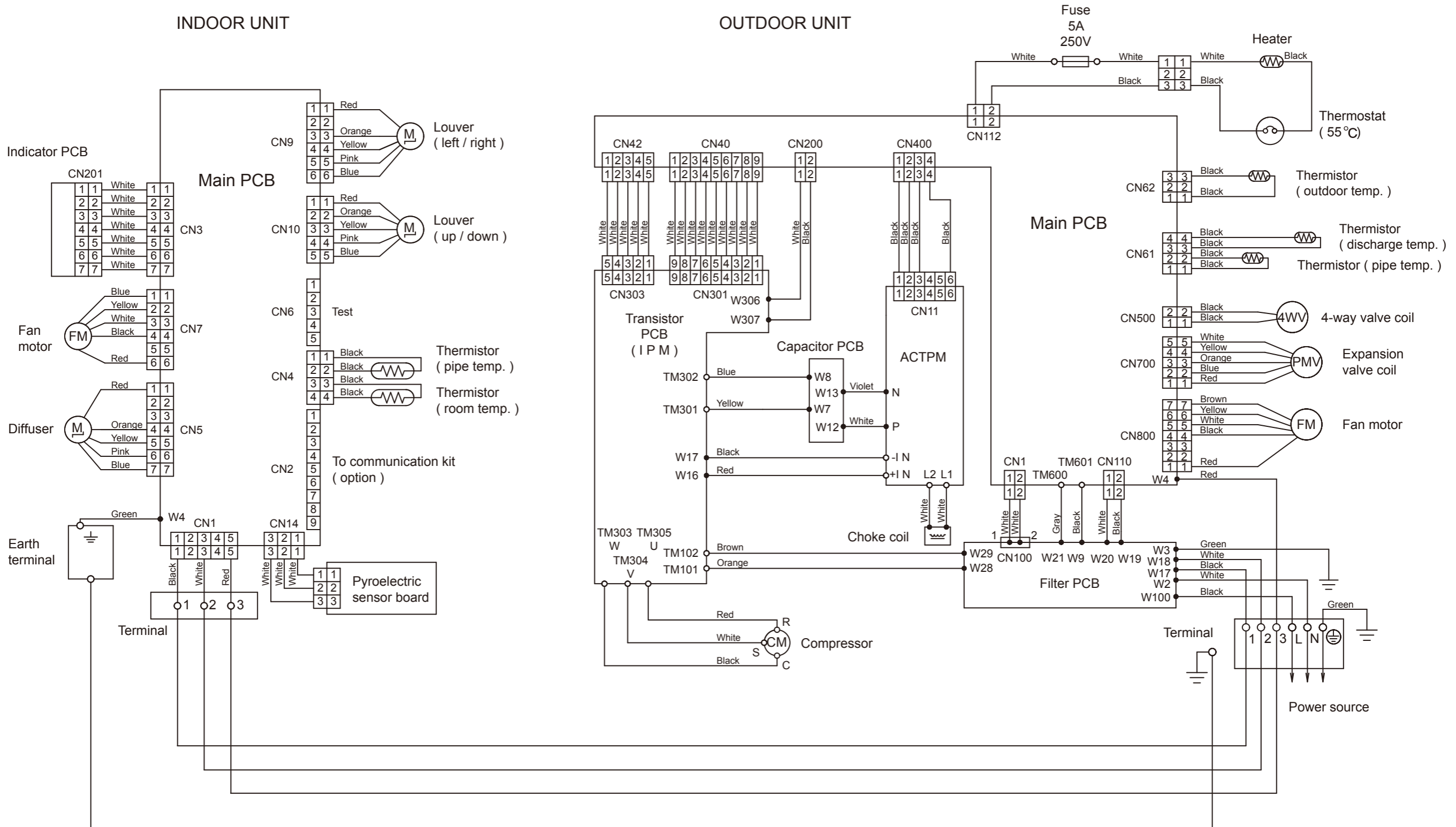
- Cooling
- - - -→ Heating

Refrigerant pipe diameter
 Liquid : 1/4" (6.35 mm)
 Gas : 1/2" (12.7 mm)

CIRCUIT DIAGRAM

INDOOR UNIT

OUTDOOR UNIT



PCB CIRCUIT DIAGRAM

INDOOR UNIT
CONTROL UNIT
EZ-0167HSE

OUTDOOR UNIT

EARTH TERMINAL

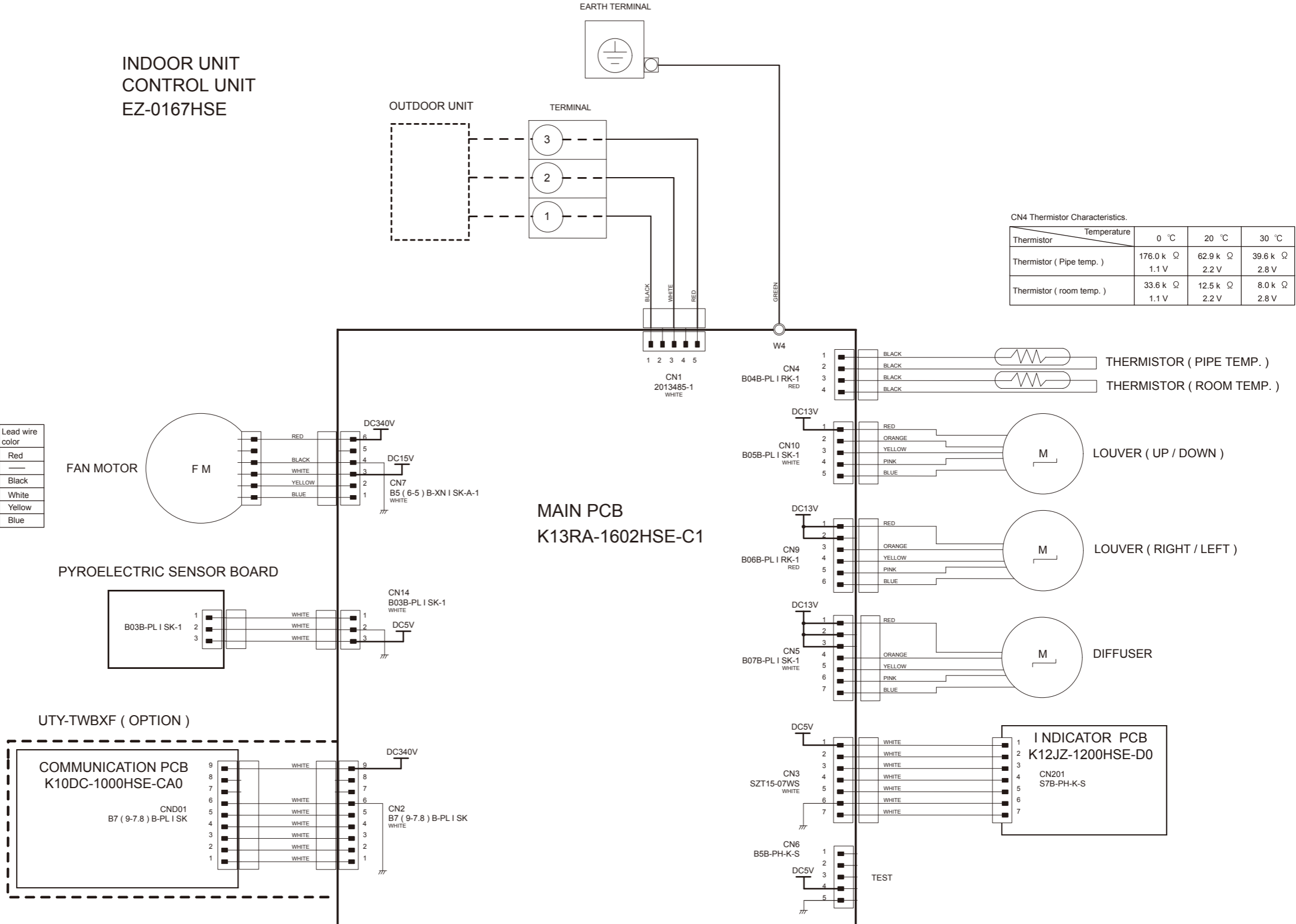
TERMINAL

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

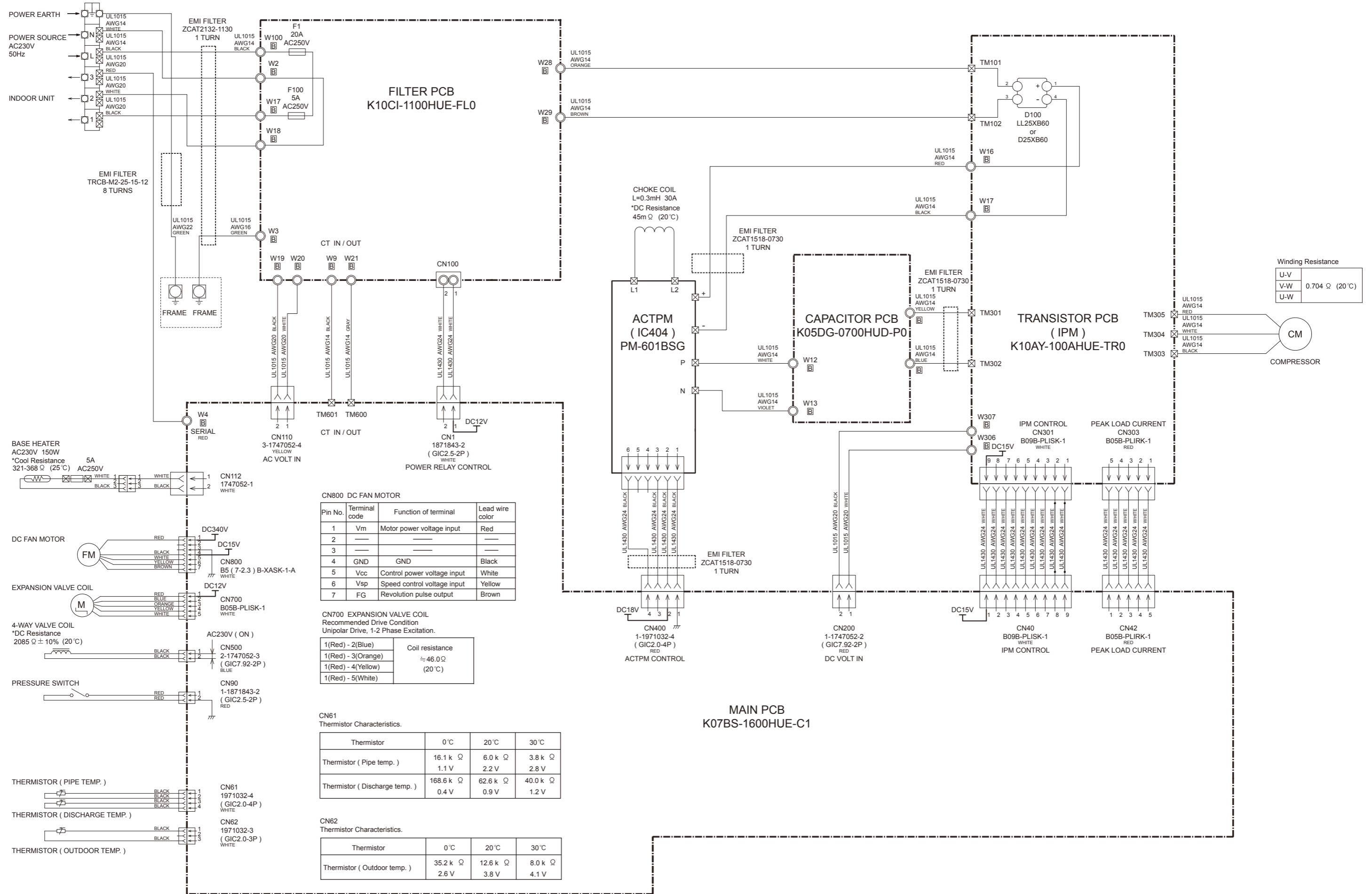
CN7 DC Fan motor

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	PG	Revolution pulse output	Blue



OUTDOOR UNIT

INVERTER ASSEMBLY EZ-0164HUE



Winding Resistance

U-V	0.704 Ω (20°C)
V-W	
U-W	

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

CN700 EXPANSION VALVE COIL
Recommended Drive Condition
Unipolar Drive, 1-2 Phase Excitation.

Terminal	Coil resistance
1(Red) - 2(Blue)	≈ 46.0 Ω (20°C)
1(Red) - 3(Orange)	
1(Red) - 4(Yellow)	
1(Red) - 5(White)	

CN61 Thermistor Characteristics.

Thermistor	0°C	20°C	30°C
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

CN62 Thermistor Characteristics.

Thermistor	0°C	20°C	30°C
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

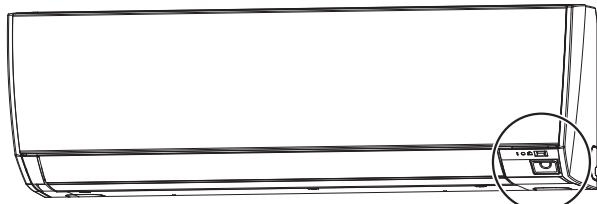
INDOOR UNIT REMOTE CONTROL

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.



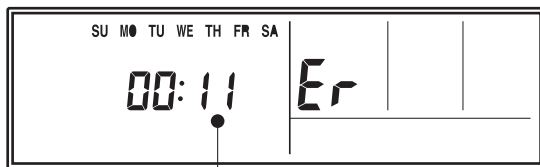
OPERATION indicator lamp (green)

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

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 orbranch 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

● : 0.5s ON / 0.5s OFF

◇ : 0.1s ON / 0.1s OFF

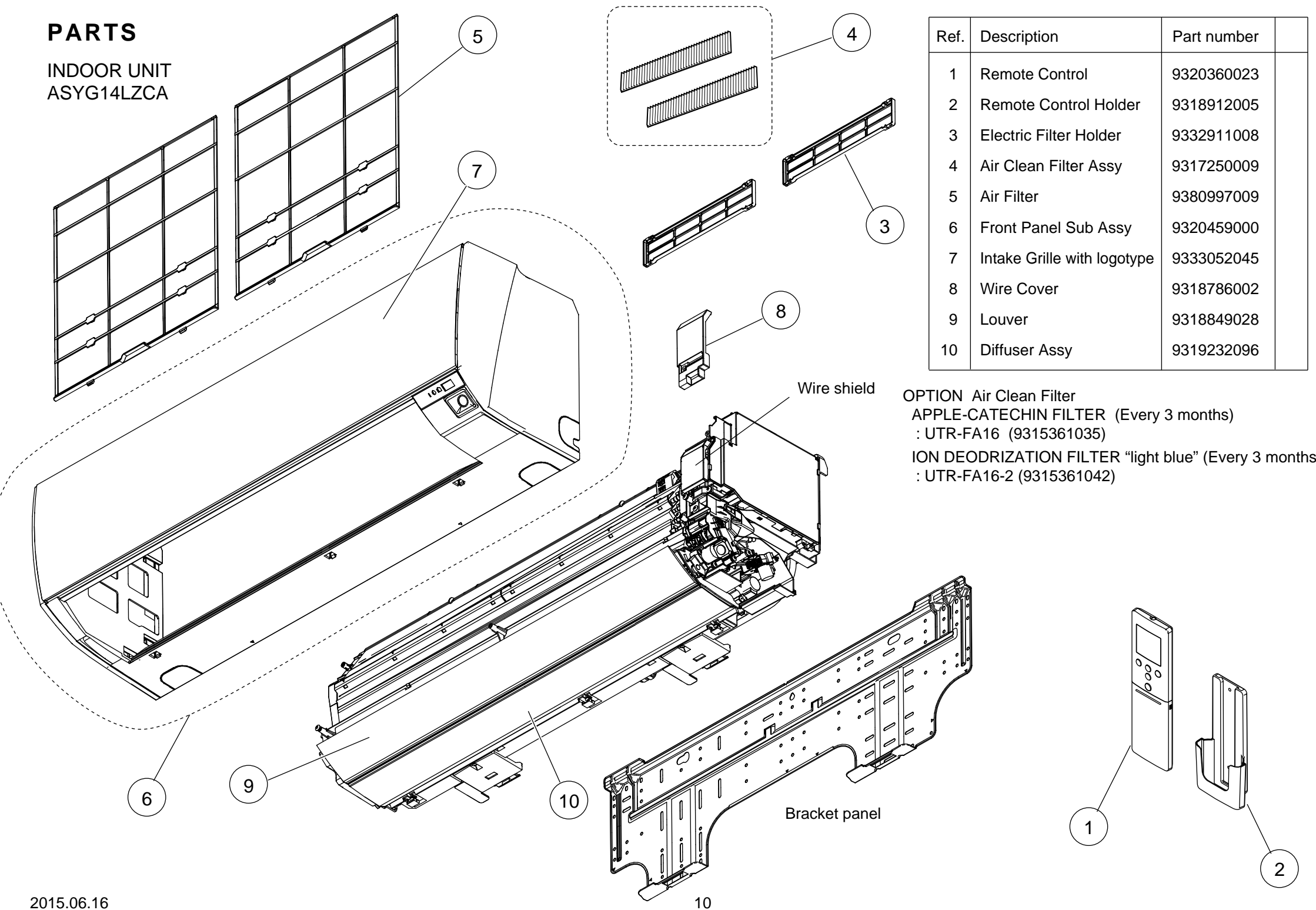
() : Number of flashing

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

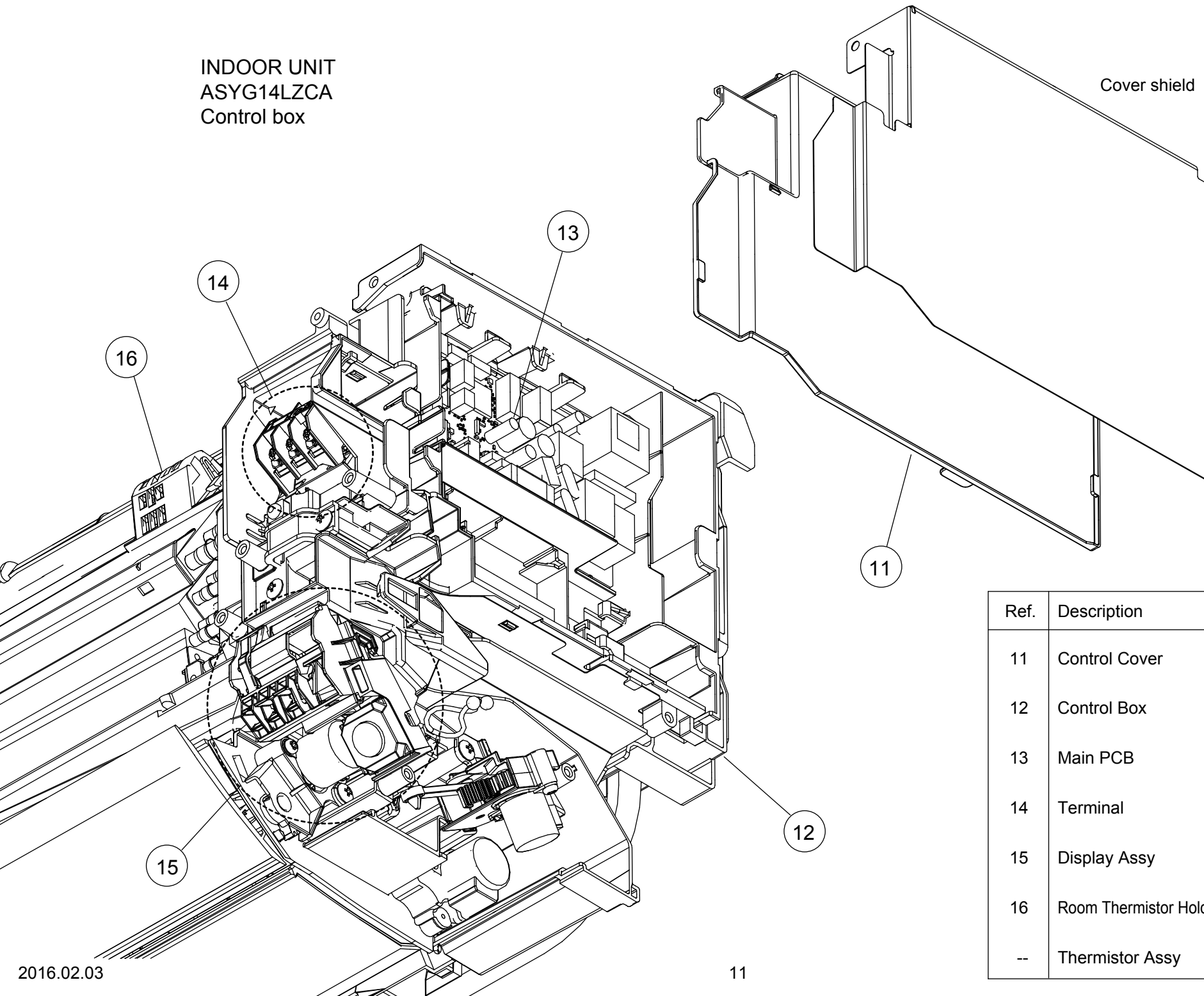
INDOOR UNIT
ASYG14LZCA



Ref.	Description	Part number
1	Remote Control	9320360023
2	Remote Control Holder	9318912005
3	Electric Filter Holder	9332911008
4	Air Clean Filter Assy	9317250009
5	Air Filter	9380997009
6	Front Panel Sub Assy	9320459000
7	Intake Grille with logotype	9333052045
8	Wire Cover	9318786002
9	Louver	9318849028
10	Diffuser Assy	9319232096

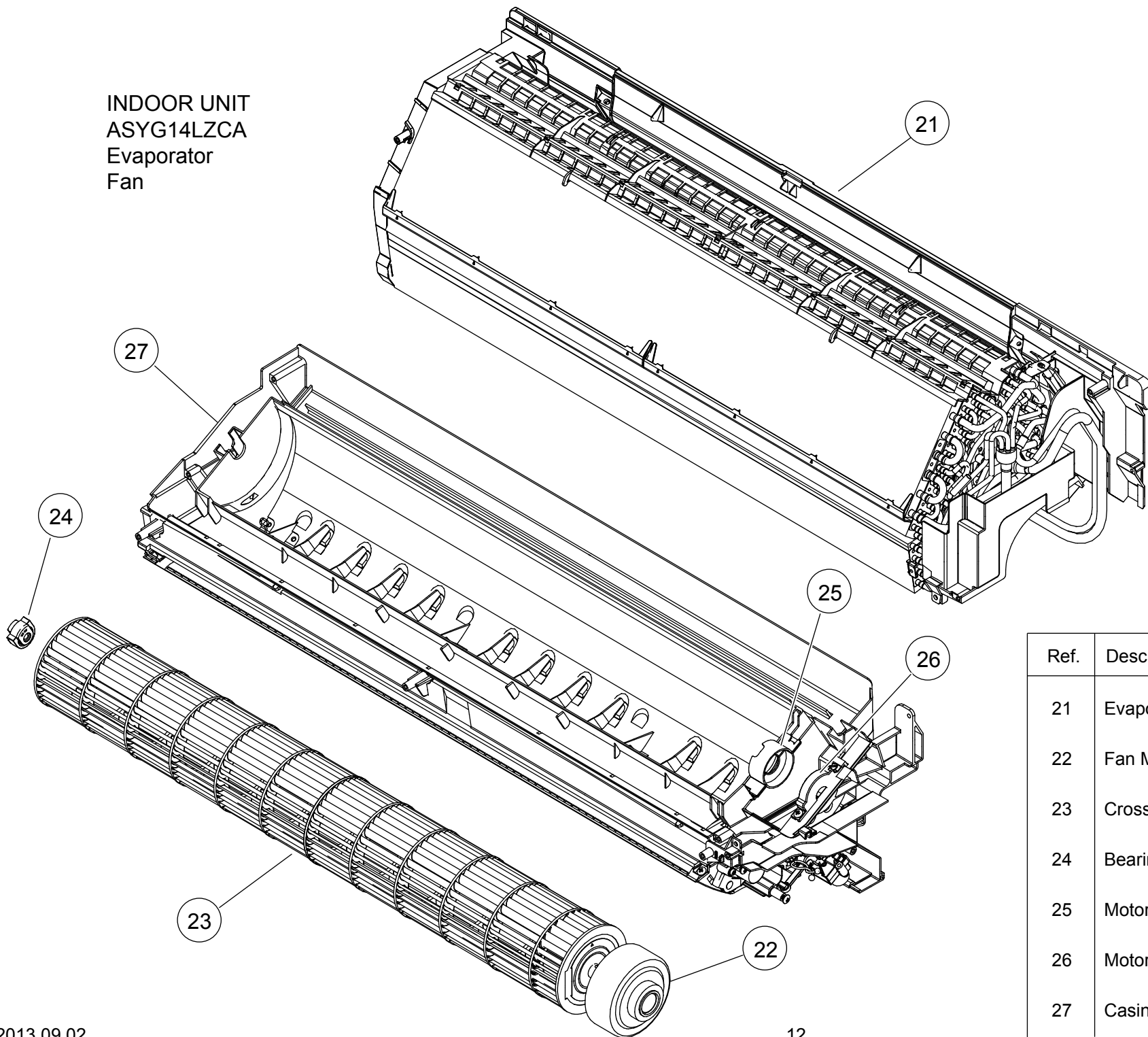
OPTION Air Clean Filter
 APPLE-CATECHIN FILTER (Every 3 months)
 : UTR-FA16 (9315361035)
 ION DEODRIZATION FILTER "light blue" (Every 3 months)
 : UTR-FA16-2 (9315361042)

INDOOR UNIT
 ASYG14LZCA
 Control box



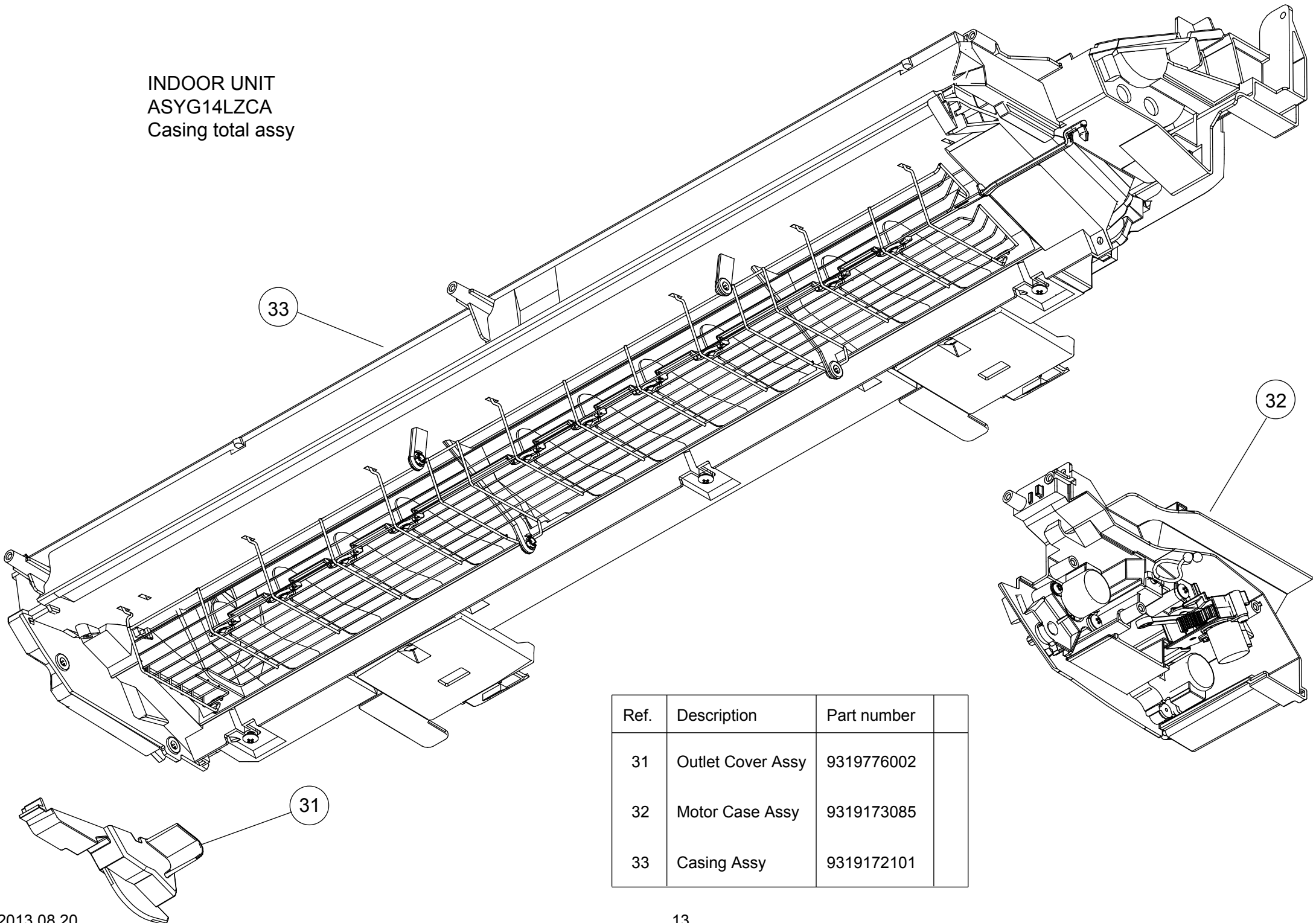
Ref.	Description	Part number
11	Control Cover	9318757019
12	Control Box	9380996002
13	Main PCB	9709622186
14	Terminal	9900720025
15	Display Assy	9709642023
16	Room Thermistor Holder	9379930000
--	Thermistor Assy	9900627003

INDOOR UNIT
ASYG14LZCA
Evaporator
Fan

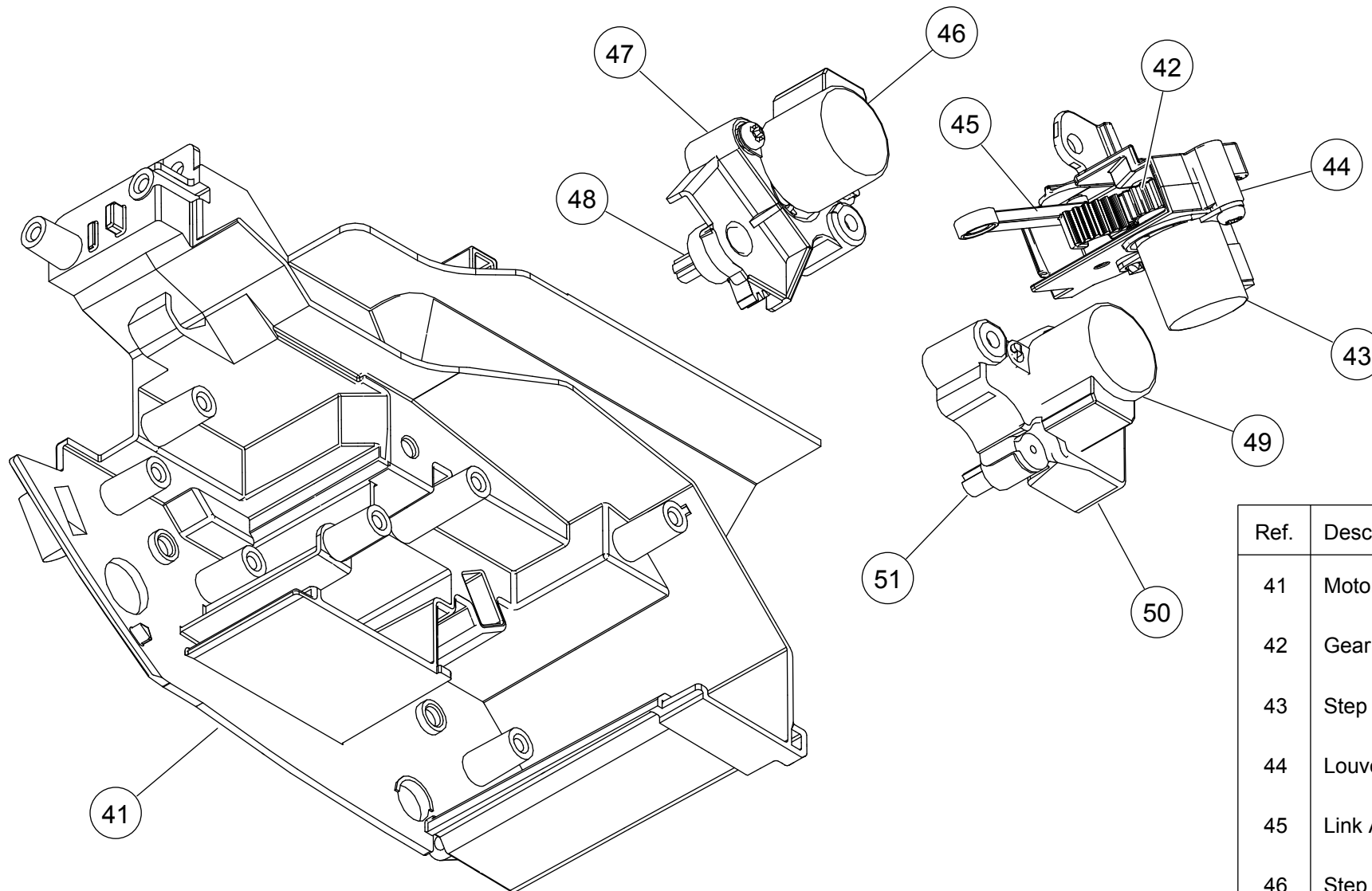


Ref.	Description	Part number
21	Evaporator Total Assy	9319254197
22	Fan Motor	9603253011
23	Crossflow Fan Assy	9315024060
24	Bearing C Assy	9306628017
25	Motor Cover	9316568006
26	Motor Cover	9316601000
27	Casing Total Assy	9319171180

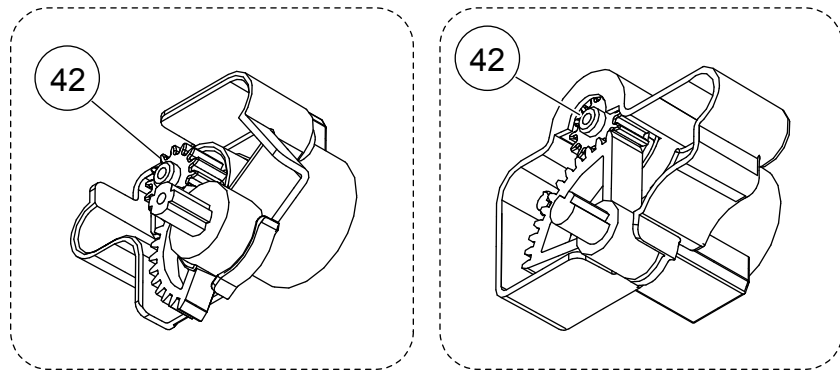
INDOOR UNIT
 ASYG14LZCA
 Casing total assy



Ref.	Description	Part number
31	Outlet Cover Assy	9319776002
32	Motor Case Assy	9319173085
33	Casing Assy	9319172101

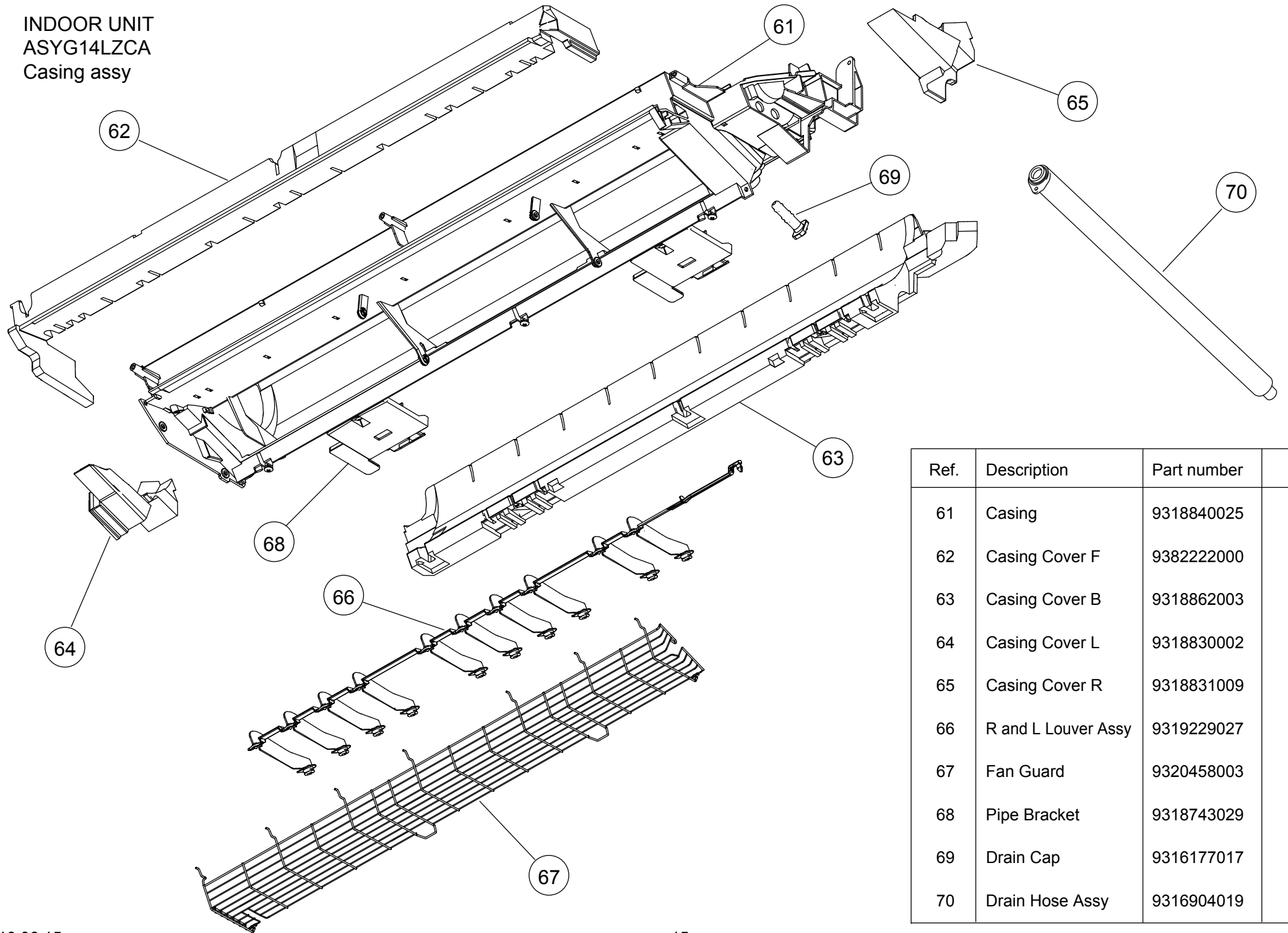


INDOOR UNIT
ASYG14LZCA
Motor case assy



Ref.	Description	Part number
41	Motor Case	9318746020
42	Gear A	9309994003
43	Step Motor (R&L)	9900139230
44	Louver Link Holder	9319150000
45	Link A	9317507004
46	Step Motor (Louver)	9900384135
47	Gear Cover A	9318748000
48	Louver Gear A	9318749007
49	Step Motor (Diffuser)	9900384142
50	Gear Cover B	9318750003
51	Louver Gear B	9316616004

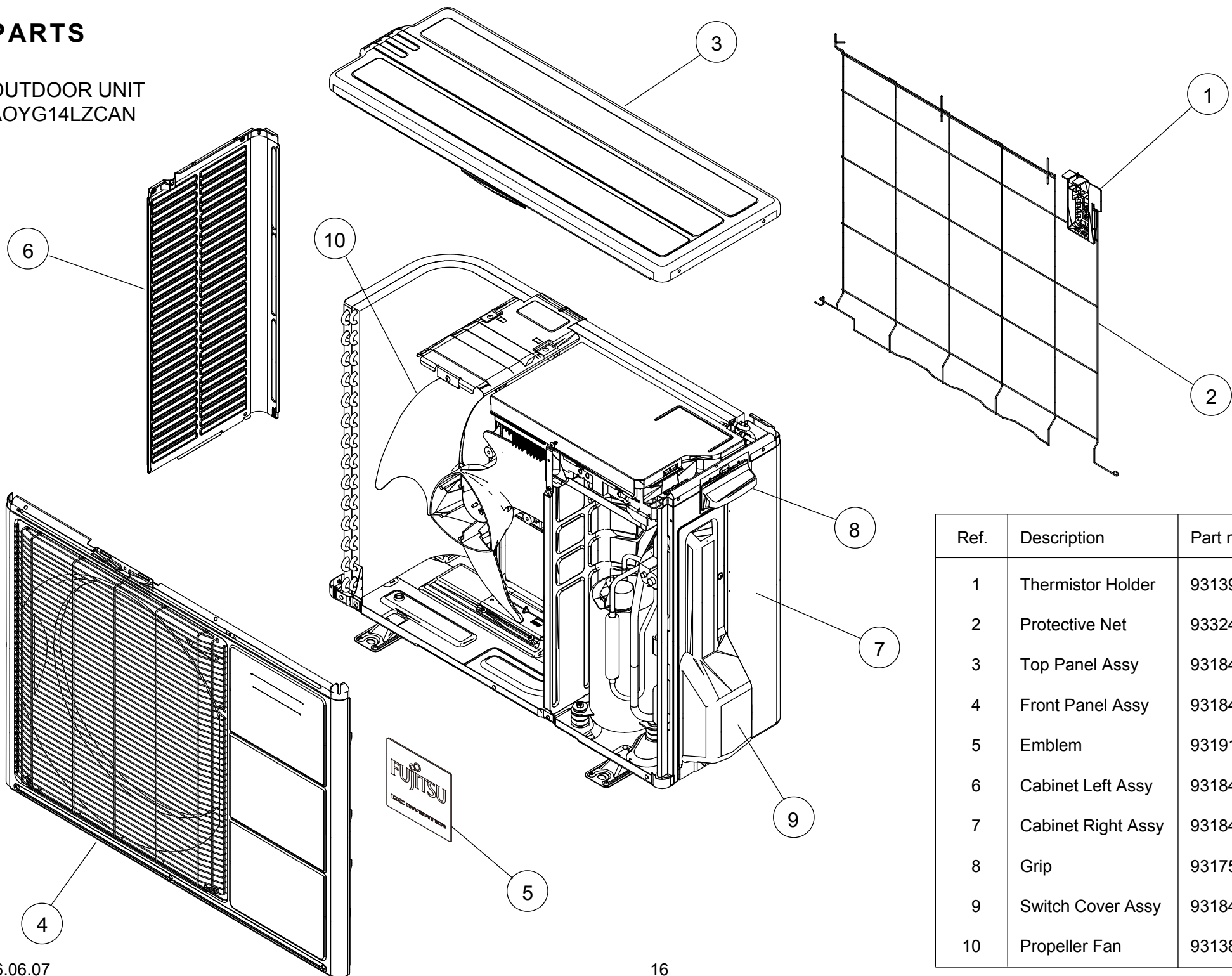
INDOOR UNIT
ASYG14LZCA
Casing assy



Ref.	Description	Part number
61	Casing	9318840025
62	Casing Cover F	9382222000
63	Casing Cover B	9318862003
64	Casing Cover L	9318830002
65	Casing Cover R	9318831009
66	R and L Louver Assy	9319229027
67	Fan Guard	9320458003
68	Pipe Bracket	9318743029
69	Drain Cap	9316177017
70	Drain Hose Assy	9316904019

PARTS

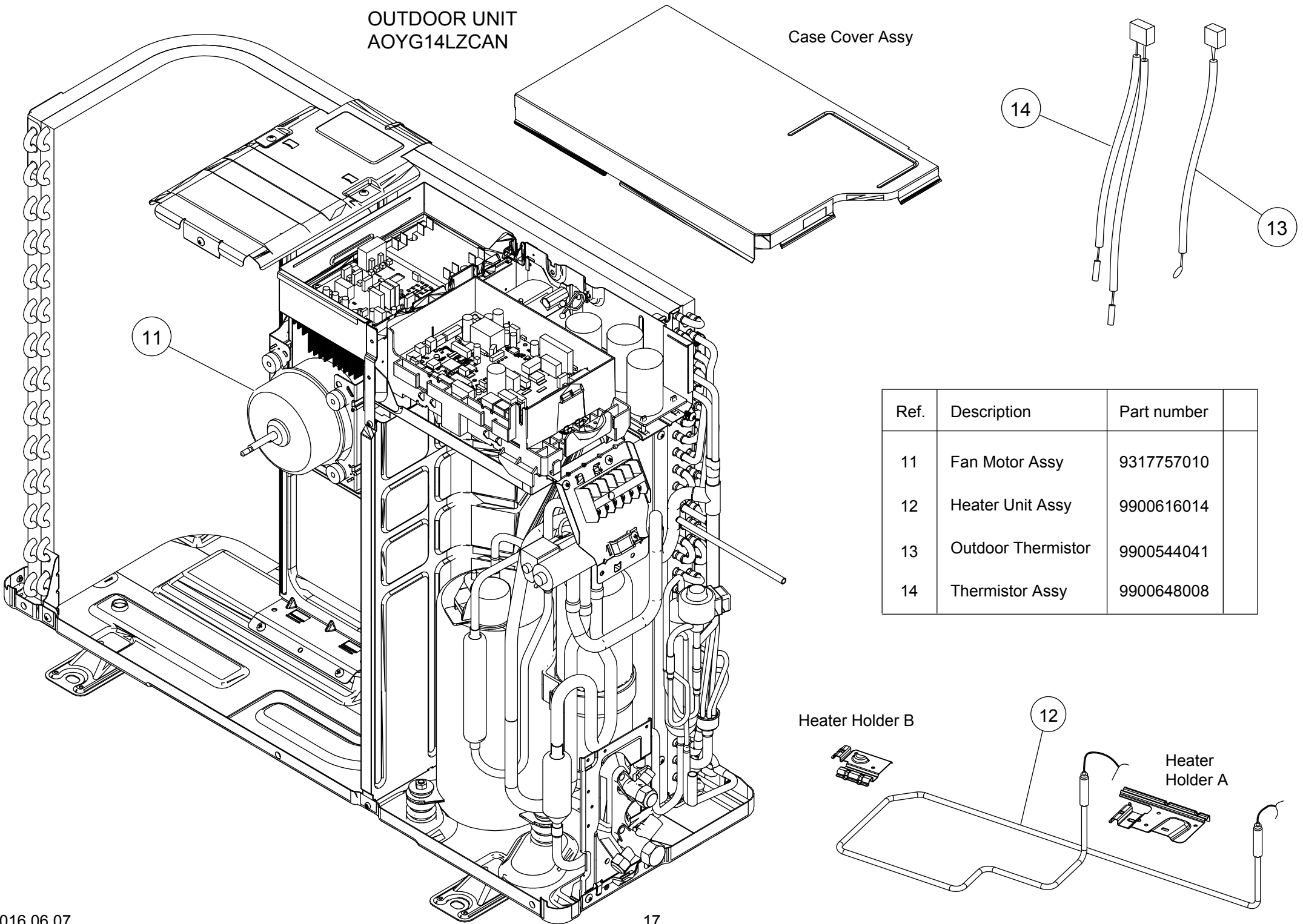
OUTDOOR UNIT
AOYG14LZCAN

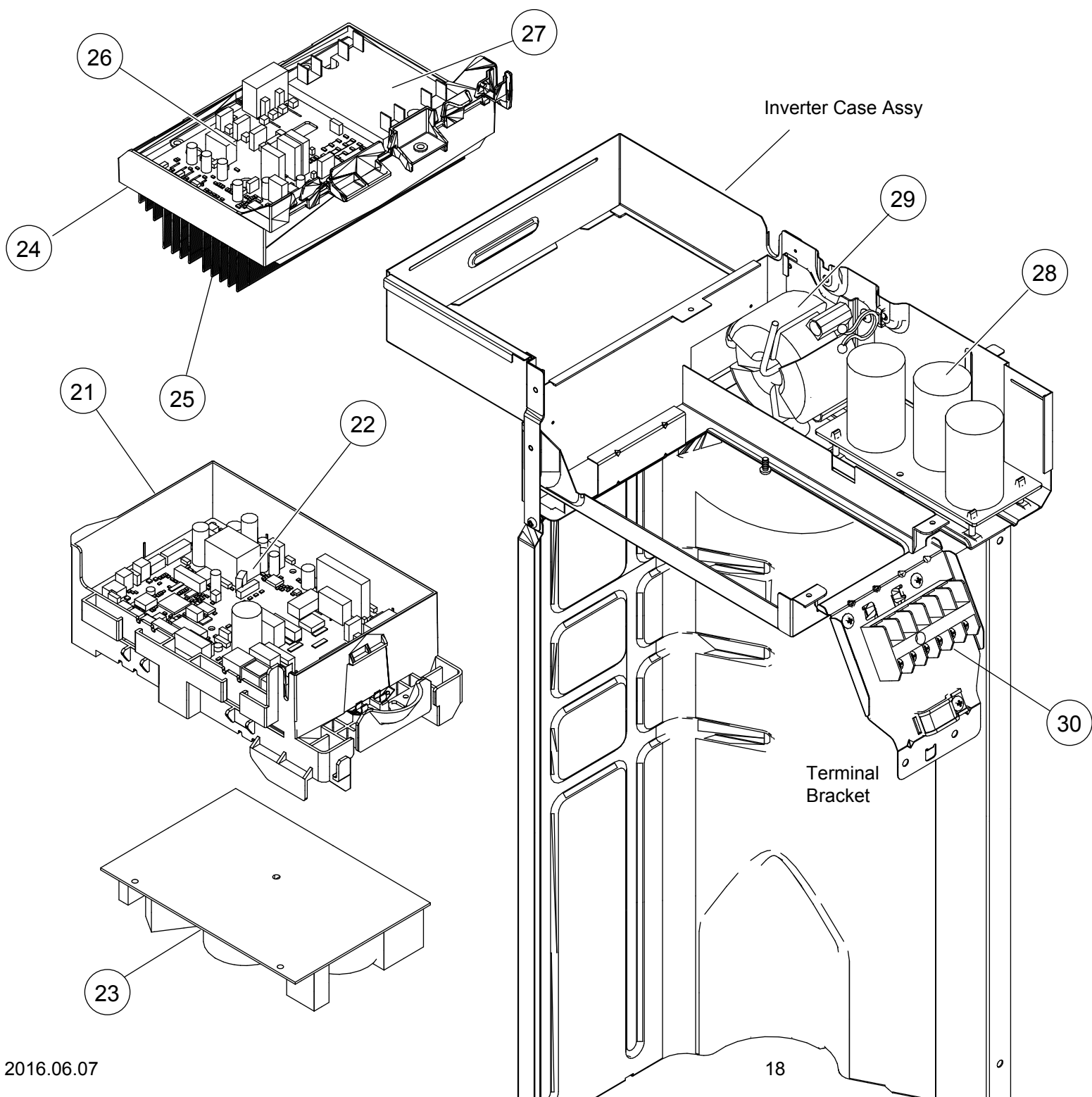


Ref.	Description	Part number
1	Thermistor Holder	9313954031
2	Protective Net	9332492002
3	Top Panel Assy	9318464160
4	Front Panel Assy	9318463132
5	Emblem	9319151007
6	Cabinet Left Assy	9318461015
7	Cabinet Right Assy	9318462005
8	Grip	9317588003
9	Switch Cover Assy	9318499001
10	Propeller Fan	9313808013

OUTDOOR UNIT
AOYG14LZCAN

Case Cover Assy



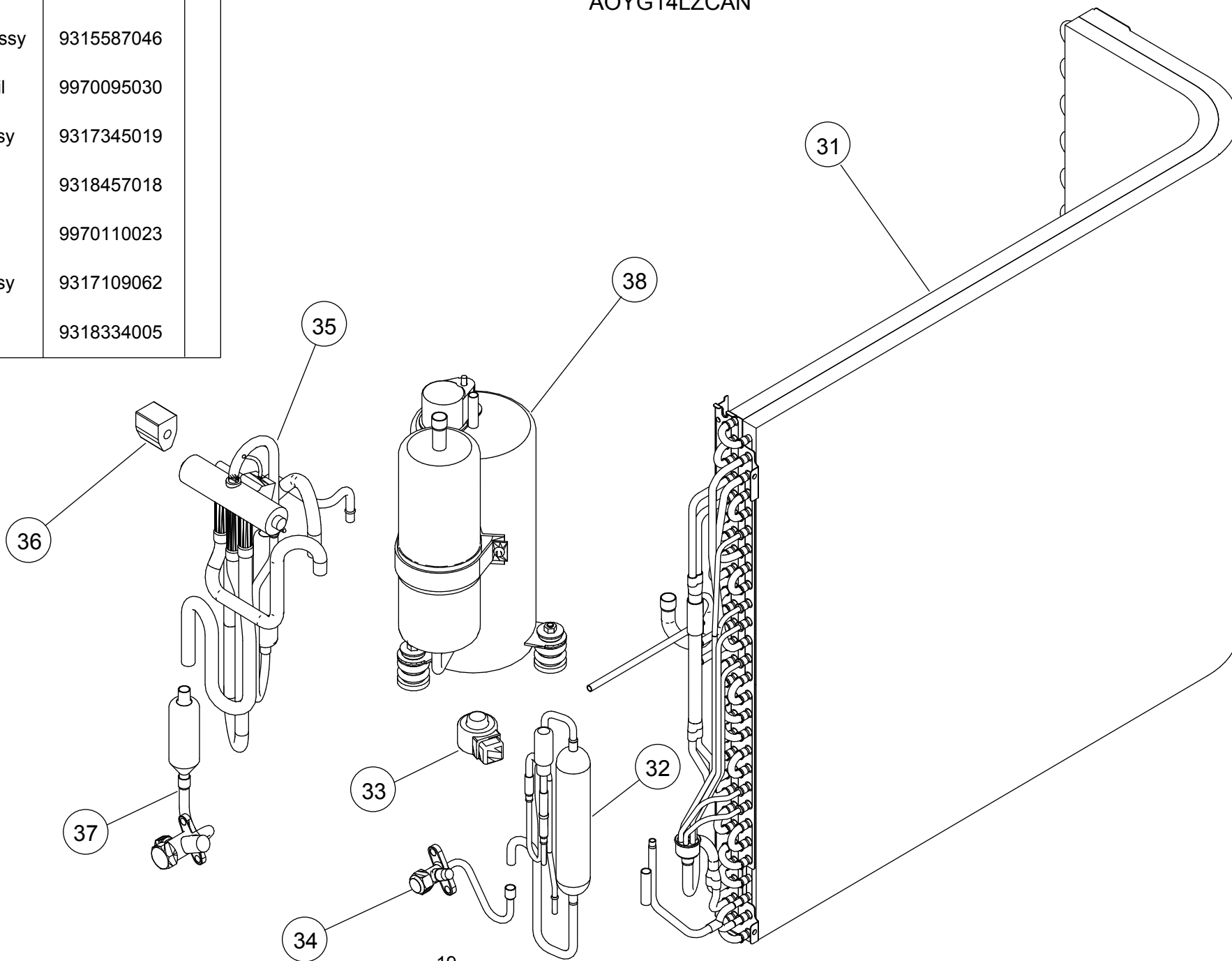


OUTDOOR UNIT
AOYG14LZCAN

Ref.	Description	Part number
21	PCB Holder	9315050021
22	Main PCB	9708511788
23	Filter PCB	9708764030
24	Heatsink Cover	9316831001
25	Heatsink	9318614015
26	Transistor PCB	9708646077
27	ACTPM	9707592016
28	Power Supply PCB	9708514017
29	Choke Coil	9900223014
30	Terminal 6P	9900435028

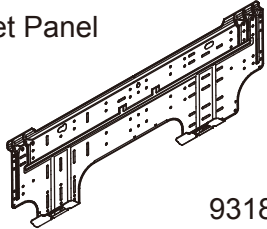




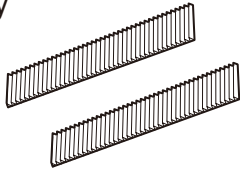
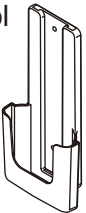
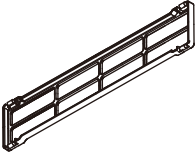
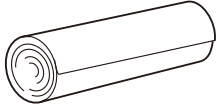

Ref.	Description	Part number
31	Condenser Total Assy	9317089104
32	Pulse Motor Valve Assy	9315587046
33	Expansion Valve Coil	9970095030
34	2-way Valve Sub Assy	9317345019
35	4-way Valve Assy	9318457018
36	Solenoid	9970110023
37	3-way Valve Sub Assy	9317109062
38	Compressor Assy	9318334005

OUTDOOR UNIT
AOYG14LZCAN



ACCESSORIES

INDOOR UNIT

Name and Shape	Part number	Name and Shape	Part number
Bracket Panel 	9318861013	Tapping screw (M4 x 25 mm) 	0700076046
Remote Control 	9320360023	Tapping screw (M3 x 12 mm) 	0700019036
Battery (penlight) 	0600185541	Air cleaning filter assy 	9317250009
Remote Control Holder 	9318912005	Filter holder 	9332911008
Cloth tape 	9310519004	Seal A 	9304536000

1604G4518