

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
ASYG30LMTA	AOYG30LMTA
ASYG36LMTA	AOYG36LMTA

CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS.....	2
REFRIGERANT SYSTEM DIAGRAM.....	4
CIRCUIT DIAGRAM.....	5
PCB CIRCUIT DIAGRAM.....	6
ERROR DETECTION.....	8
PARTS (INDOOR UNIT).....	9
PARTS (OUTDOOR UNIT).....	17
ACCESSORIES.....	21

SPECIFICATIONS

ELECTRICAL DATA

INDOOR UNIT		ASYG30LMTA	ASYG36LMTA
OUTDOOR UNIT		AOYG30LMTA	AOYG36LMTA
TYPE		Cooling & Heating	
POWER SOURCE		Single phase, 230 V, 50 Hz	
Cooling	CAPACITY	8.00 kW	9.40 kW
	POWER CONSUMPTION	2.33 kW	3.16 kW
	EER	3.43 kW/kW	2.97 kW/kW
	OPERATING CURRENT	10.2 A	13.9 A
	MAXIMUM CURRENT	14.5 A	19.0 A
	DEHUMIDIFICATION	2.7 L/h	3.7 L/h
Heating	CAPACITY	8.8 kW	10.10 kW
	POWER CONSUMPTION	2.41 kW	2.96 kW
	COP	3.65 kW/kW	3.41 kW/kW
	OPERATING CURRENT	10.5 A	13.0 A
	MAXIMUM CURRENT	14.5 A	19.0 A

FAN MOTOR

INDOOR UNIT	MFD-Z80XA3N
OUTDOOR UNIT	MFE-60TVT

FAN REVOLUTION

INDOOR UNIT	High	1,370 r.p.m.	
	Medium	1,150 r.p.m.	
	Low	950 r.p.m.	
	Quiet	780 r.p.m.	
OUTDOOR UNIT	Cooling	850 r.p.m.	900 r.p.m.
	Heating	850 r.p.m.	900 r.p.m.

AIR CIRCULATION

INDOOR UNIT	High	1,380 m3/h	
	Medium	1,130 m3/h	
	Low	910 m3/h	
	Quiet	710 m3/h	
OUTDOOR UNIT	Cooling	3,600 m3/h	3,800 m3/h
	Heating	3,600 m3/h	3,800 m3/h

NOISE LEVEL

INDOOR UNIT Cooling	High	50 dB	
	Medium	44 dB	
	Low	38 dB	
	Quiet	31 dB	
INDOOR UNIT Heating	High	49 dB	
	Medium	44 dB	
	Low	39 dB	
	Quiet	33 dB	
OUTDOOR UNIT	Cooling	52 dB	55 dB
	Heating	54 dB	56 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, Inverter, 6 poles, DC motor, Twin Rotary	
DISCRIMINATION		N-TF30ND1A	
WEIGHT (with oil)		15.3 kg	
PRECHARGED REFRIGERANT		2,100 g	
REFRIGERANT TYPE		R410A	
FULL CHARGE	Piping length	20 m	2,100 g
		30 m	2,500 g
		40 m	2,900 g
		50 m	3,300 g
ADDITIONAL CHARGE		40 g/m	
MAXIMUM PIPING HEIGHT DIFFERENCE		30 m	

DIMENSIONS

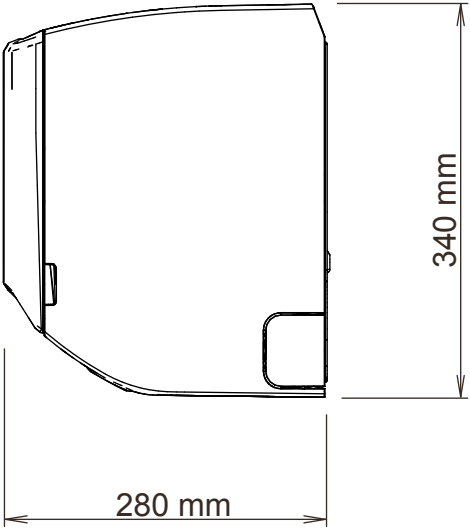
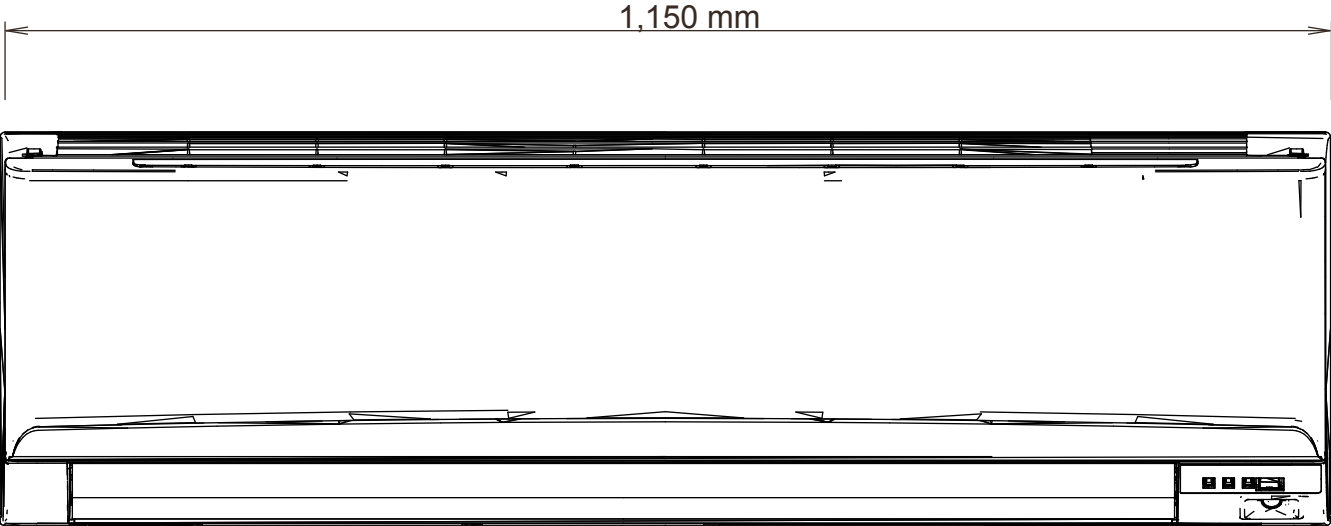
INDOOR UNIT	H x W x D	340 x 1,150 x 280 mm
OUTDOOR UNIT	H x W x D	830 x 900 x 330 mm

WEIGHT

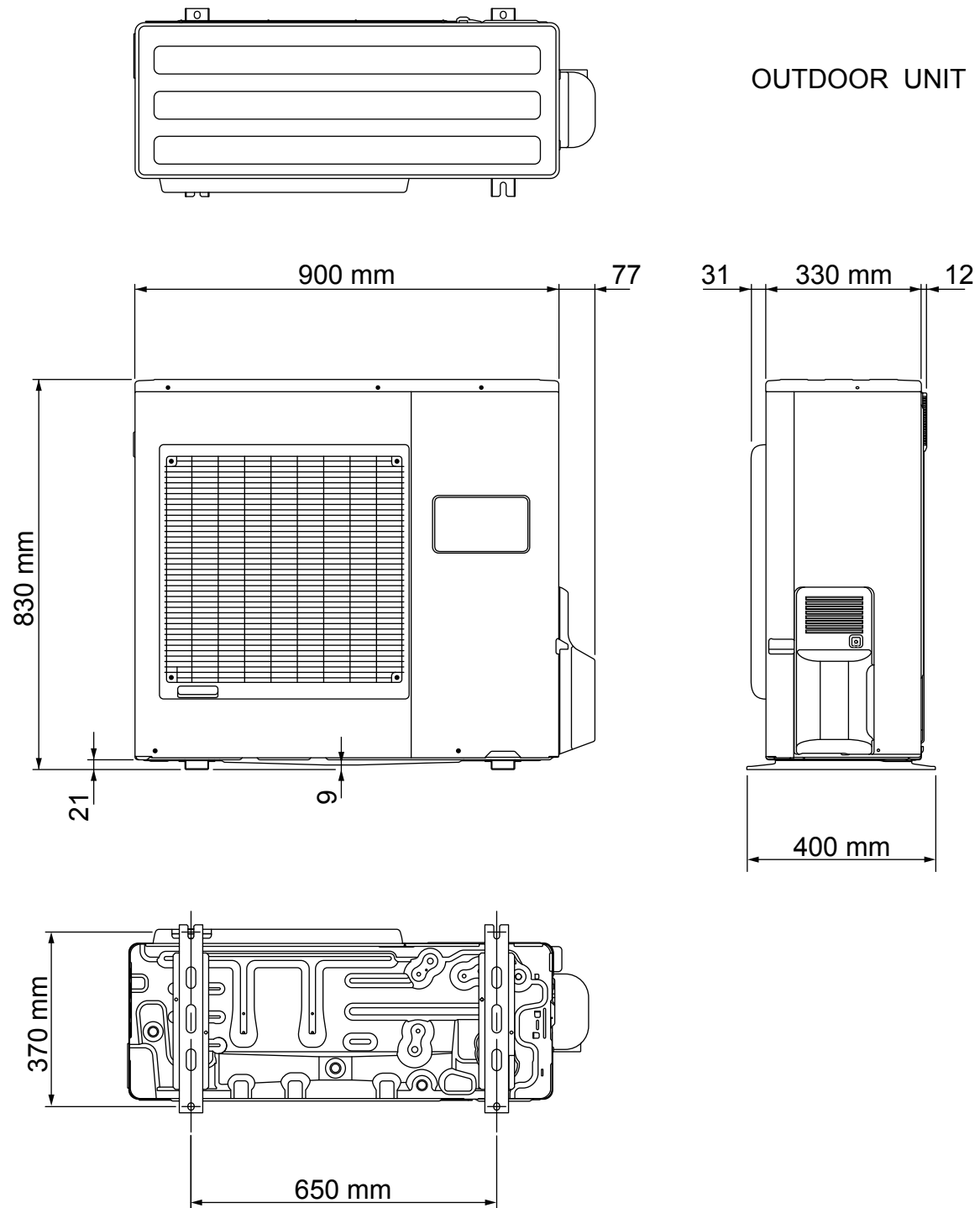
INDOOR UNIT	Net / Shipping	18 kg / 24 kg
OUTDOOR UNIT	Net / Shipping	61 kg / 68 kg

DIMENSIONS

INDOOR UNIT



OUTDOOR UNIT

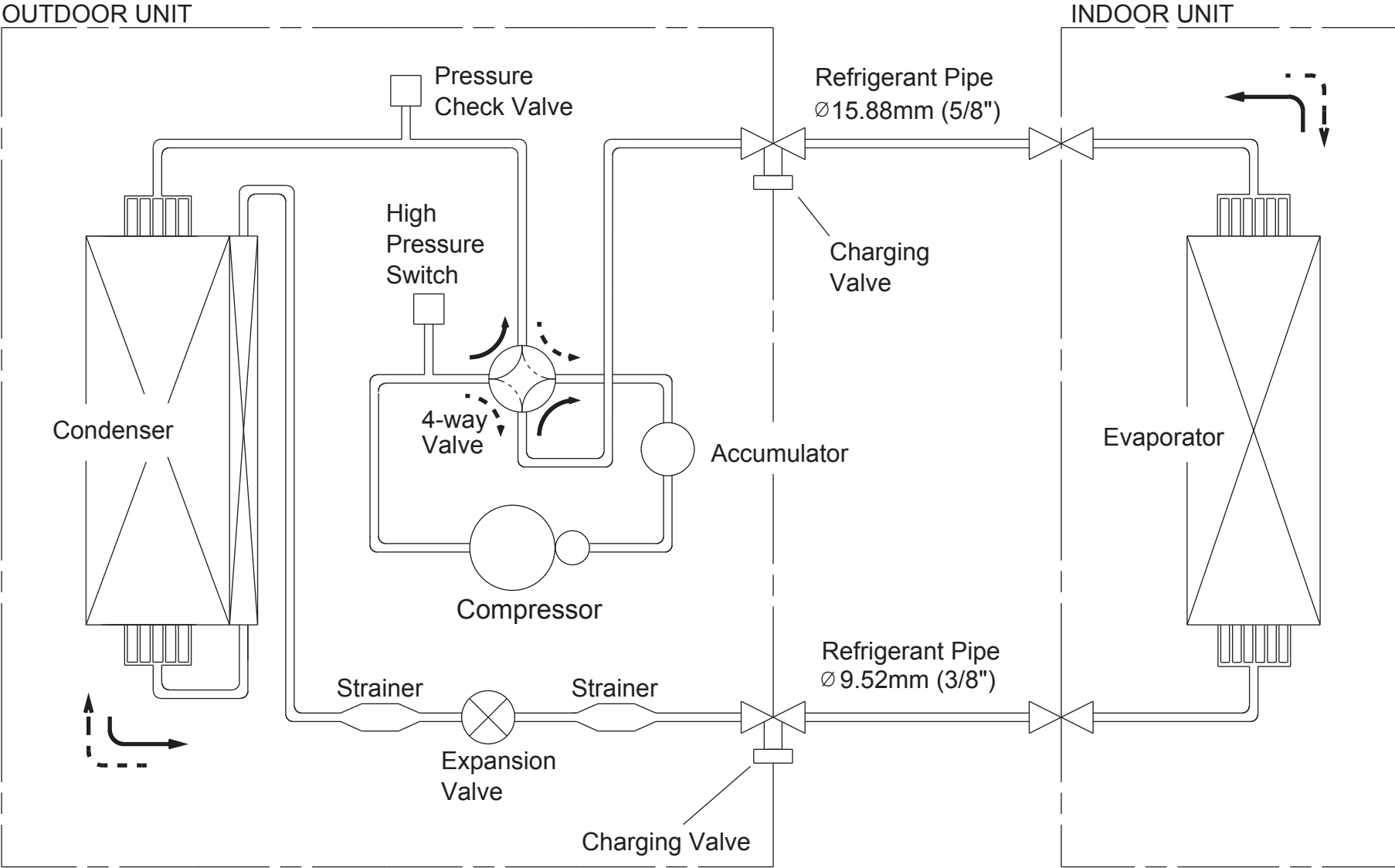


**REFRIGERANT
SYSTEM DIAGRAM**

Refrigerant direction

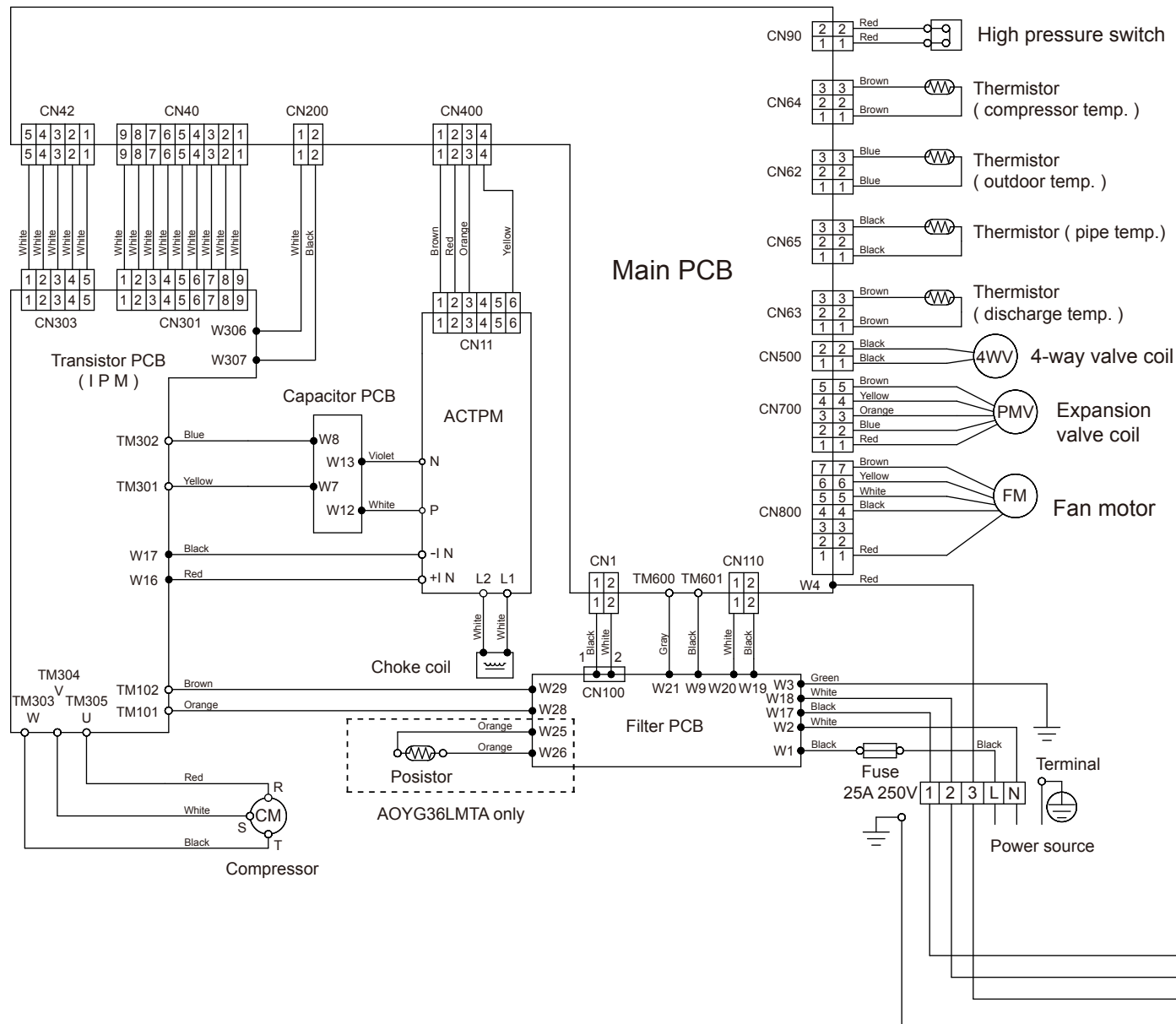
—→ : Cool

- - -→ : Heat

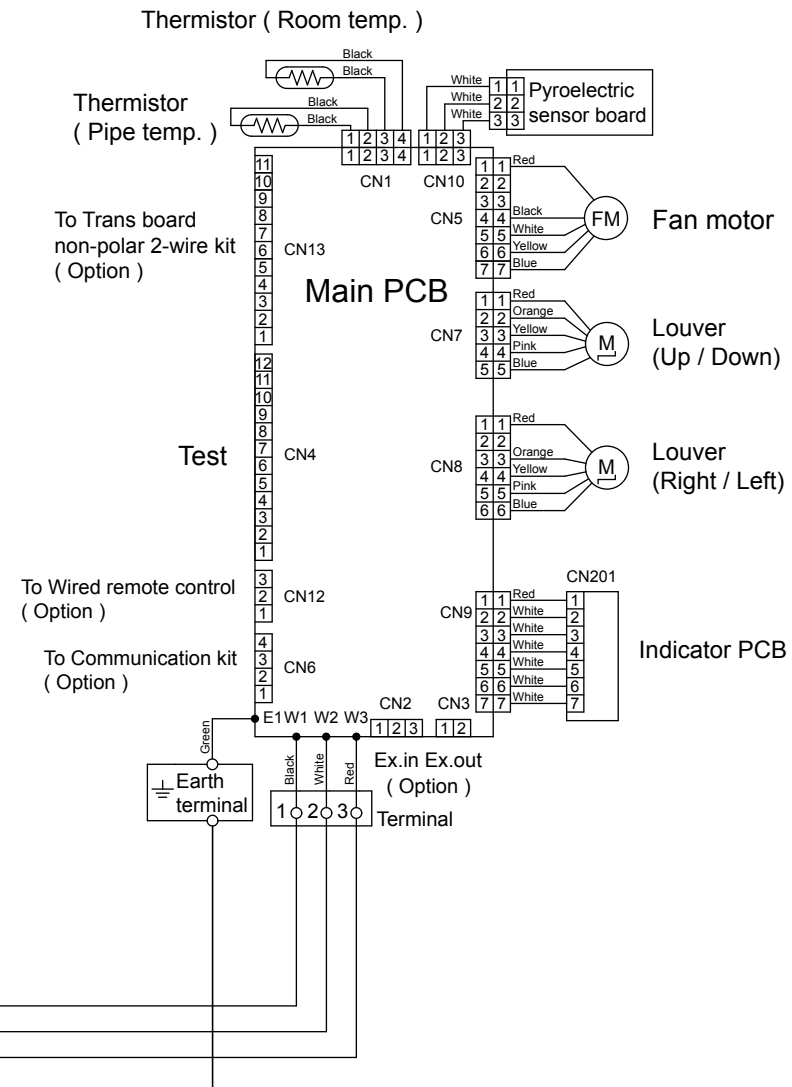


CIRCUIT DIAGRAM

OUTDOOR UNIT



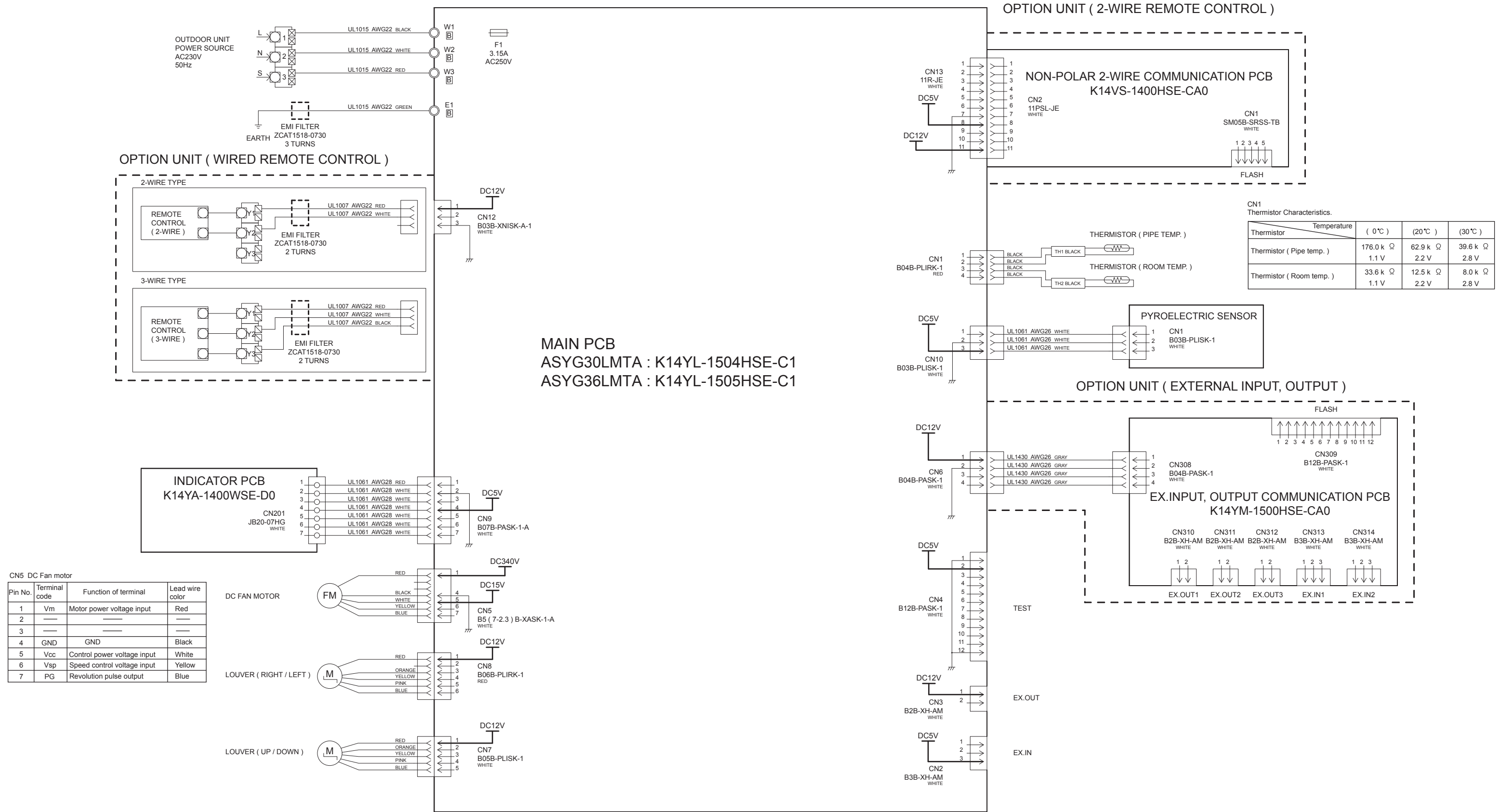
INDOOR UNIT



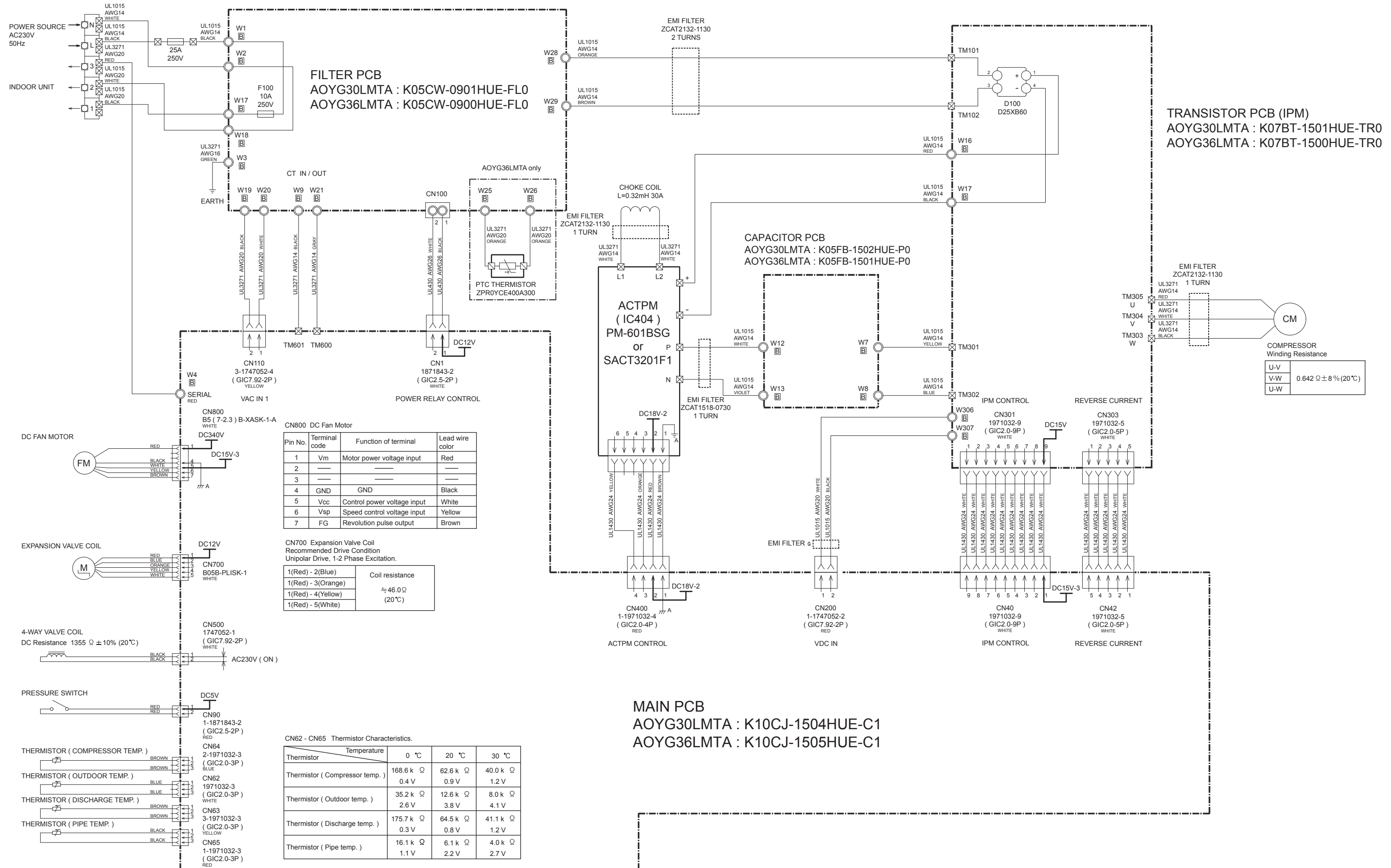
PCB CIRCUIT DIAGRAM

INDOOR UNIT

CONTROL UNIT
ASYG30LMTA : EZ-015SHSE
ASYG36LMTA : EZ-015THSE



INVERTER ASSEMBLY
AOYG30LMTA : EZ-015DHUE
AOYG36LMTA : EZ-015EHUE



ERROR DETECTION

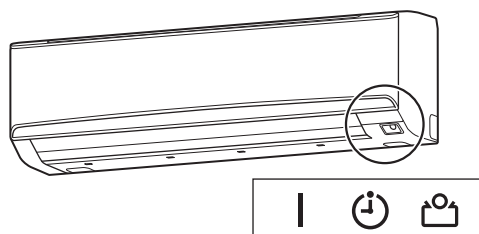
If you use a wireless remote control, the lamp on the photo detector unit will output error codes by way of blinking patterns.

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.

Troubleshooting with the indoor unit display



OPERATION indicator (green) —

TIMER indicator (orange) —

ECONOMY indicator (green) —

Troubleshooting with the wired remote controller display (Option)

If an error occurs, the following display will be shown.

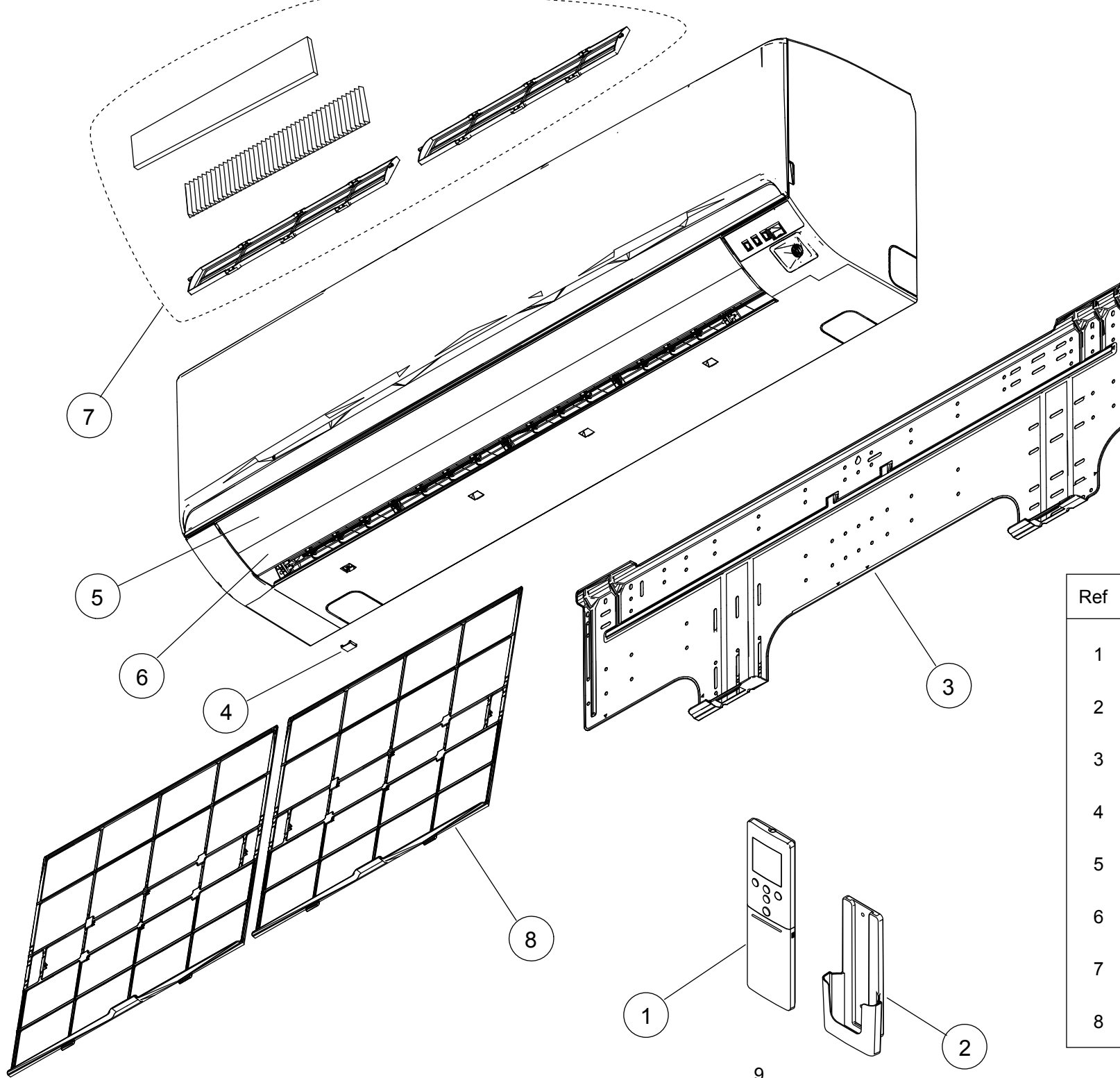
("Er" will appear in the set room temperature display.)



Error display			Wired remote control Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(1)	●(1)	◇	11	Serial communication error
●(1)	●(2)	◇	12	• Wired remote control communication error • Server room control communication error
●(1)	●(5)	◇	15	Check run unfinished
●(1)	●(6)	◇	16	Peripheral unit transmission PCB connection error
●(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 slave unit) [Simultaneous Multi] • Connection unit number error (indoor unit or branch unit) [Flexible Multi]
●(2)	●(6)	◇	26	Address setting error in wired remote controller system
●(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 grille 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
●(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
●(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 [Flexible Multi]

Display mode ● : 0.5s ON / 0.5s OFF
◇ : 0.1s ON / 0.1s OFF
() : Number of flashing

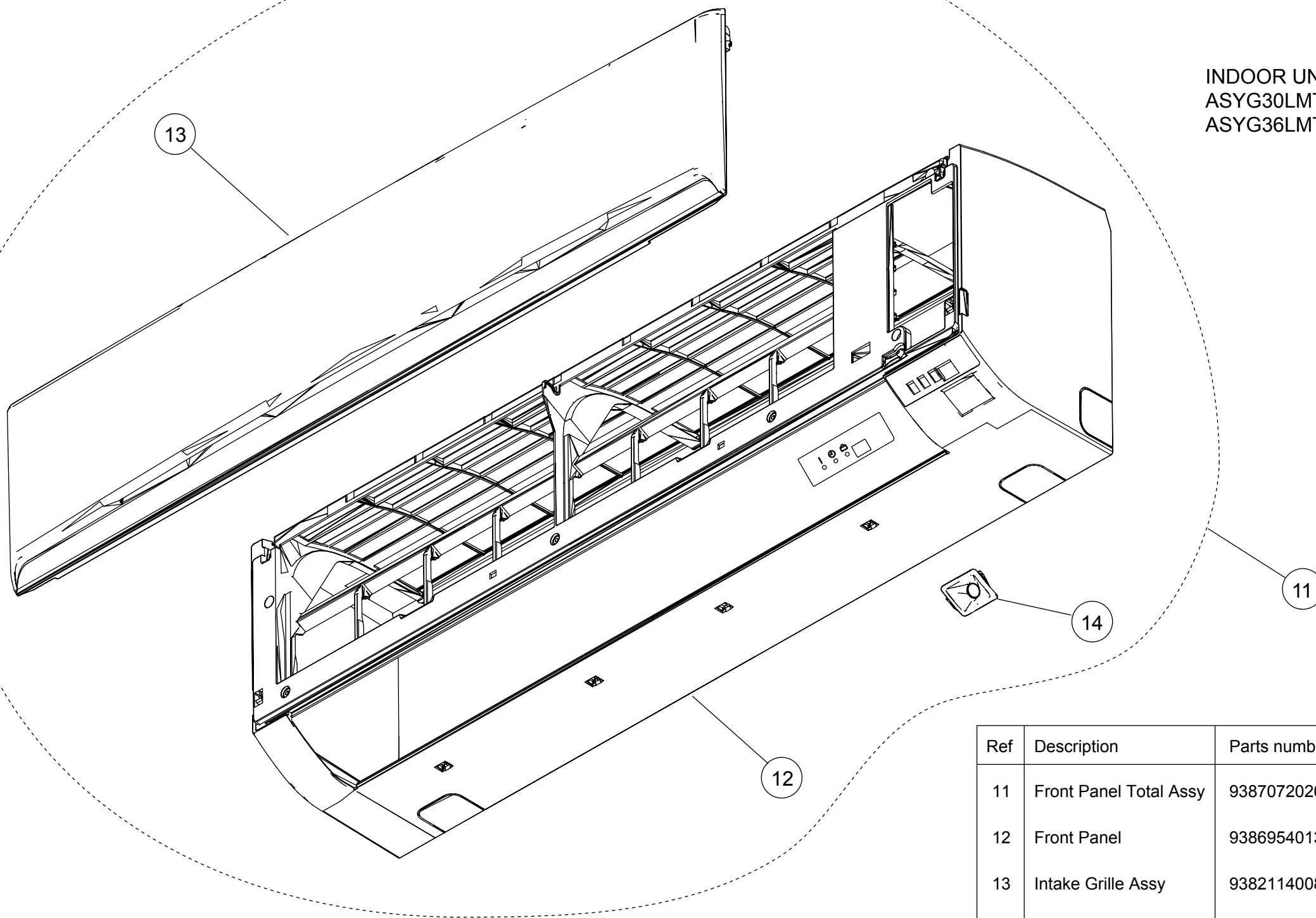


PARTS

INDOOR UNIT
ASYG30LMTA
ASYG36LMTA

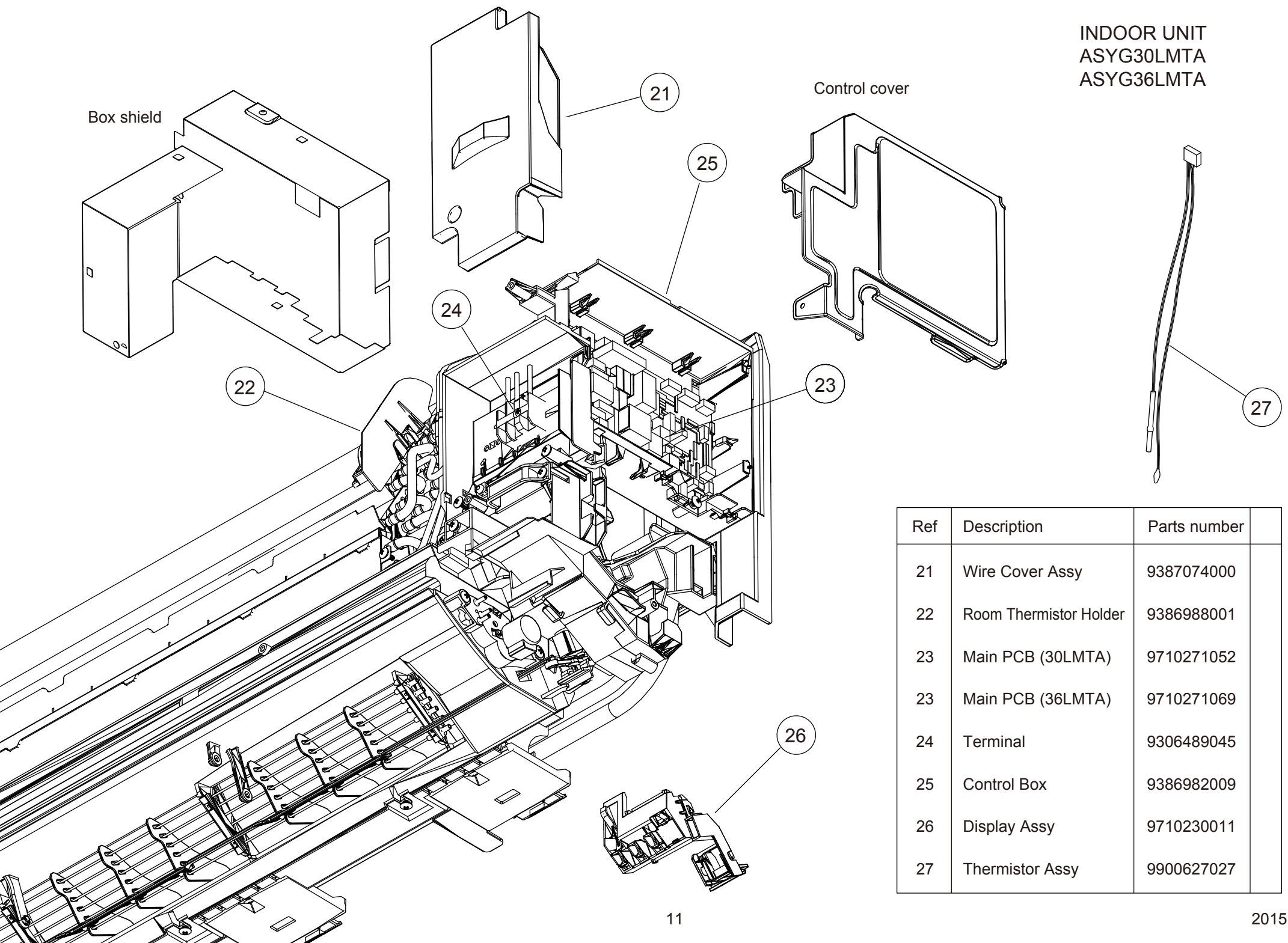
Ref	Description	Parts number	
1	Remote Control (no brand)	9320360023	
2	Remote Control Holder	9318912005	
3	Bracket Panel	9386990004	
4	Screw Cap	9386986007	
5	Louver U (Upper)	9386958004	
6	Louver Z (Lower)	9386959001	
7	Air Clean Filter Assy	9315212016	
8	Air Filter	9386960007	

INDOOR UNIT
ASYG30LMTA
ASYG36LMTA



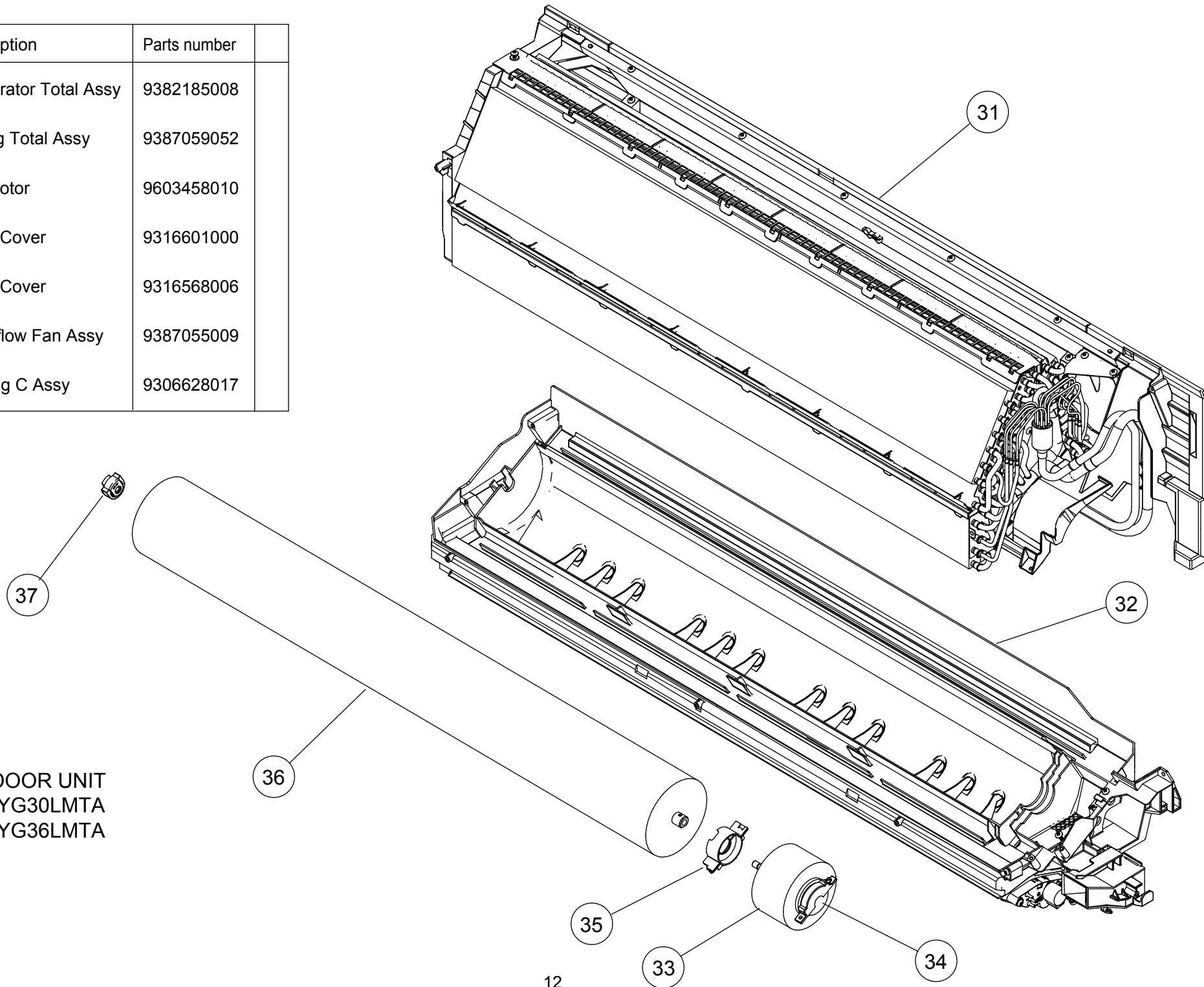
Ref	Description	Parts number	
11	Front Panel Total Assy	9387072020	
12	Front Panel	9386954013	
13	Intake Grille Assy	9382114008	
14	Front Panel Cover	9386999007	

INDOOR UNIT
ASYG30LMTA
ASYG36LMTA



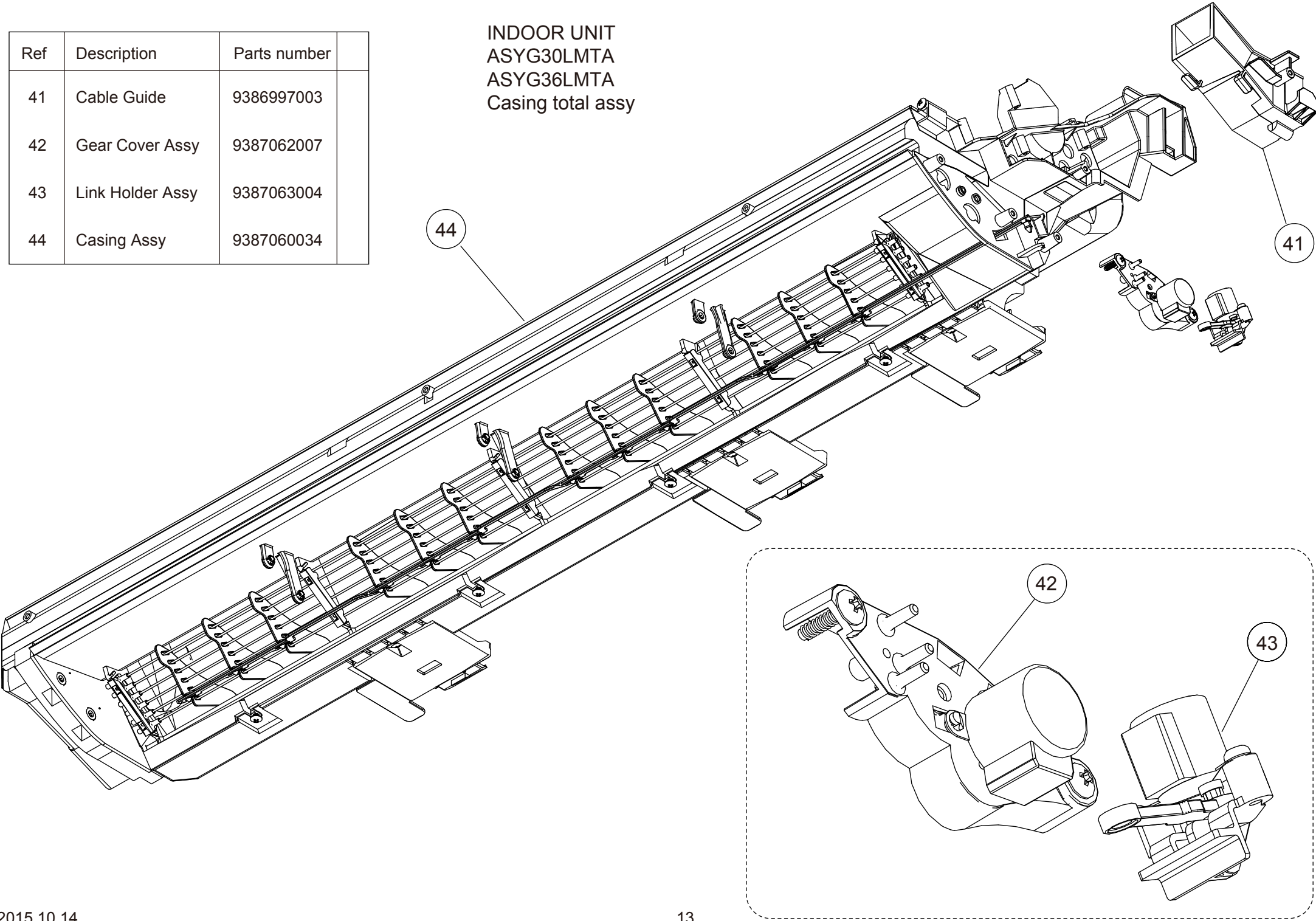
Ref	Description	Parts number	
21	Wire Cover Assy	9387074000	
22	Room Thermistor Holder	9386988001	
23	Main PCB (30LMTA)	9710271052	
23	Main PCB (36LMTA)	9710271069	
24	Terminal	9306489045	
25	Control Box	9386982009	
26	Display Assy	9710230011	
27	Thermistor Assy	9900627027	

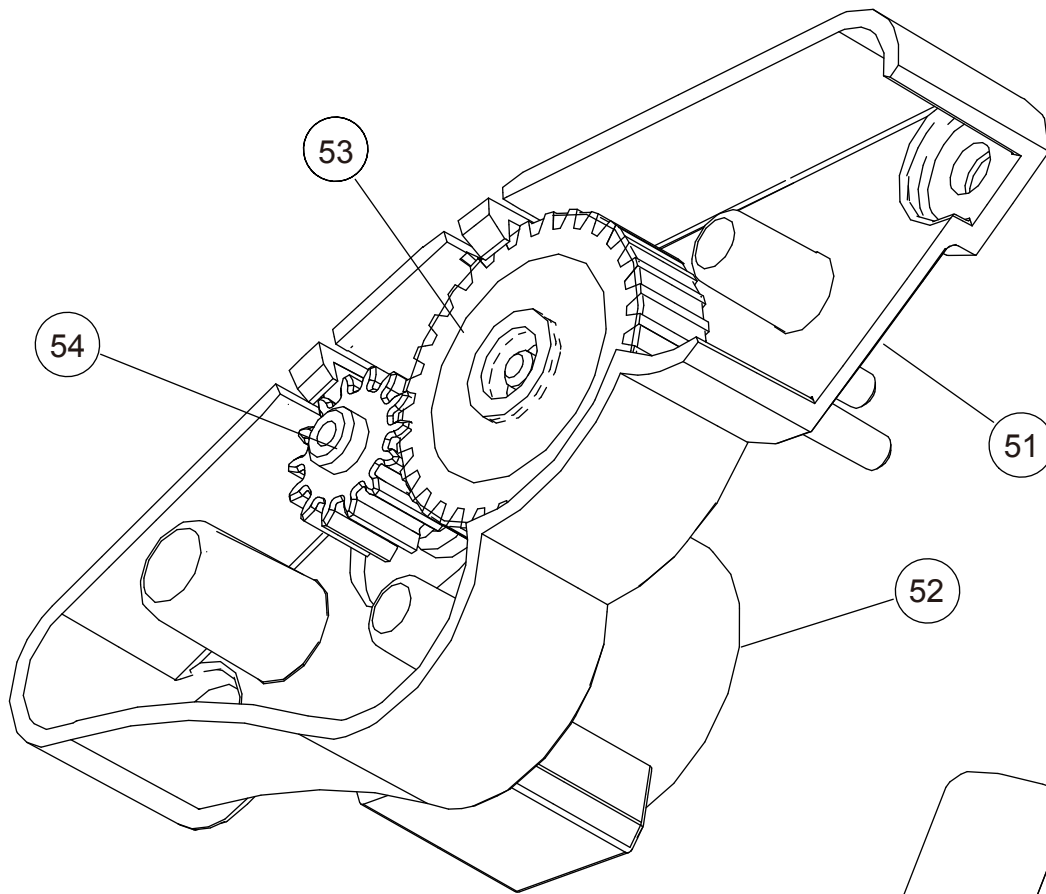
Ref	Description	Parts number	
31	Evaporator Total Assy	9382185008	
32	Casing Total Assy	9387059052	
33	Fan Motor	9603458010	
34	Motor Cover	9316601000	
35	Motor Cover	9316568006	
36	Crossflow Fan Assy	9387055009	
37	Bearing C Assy	9306628017	



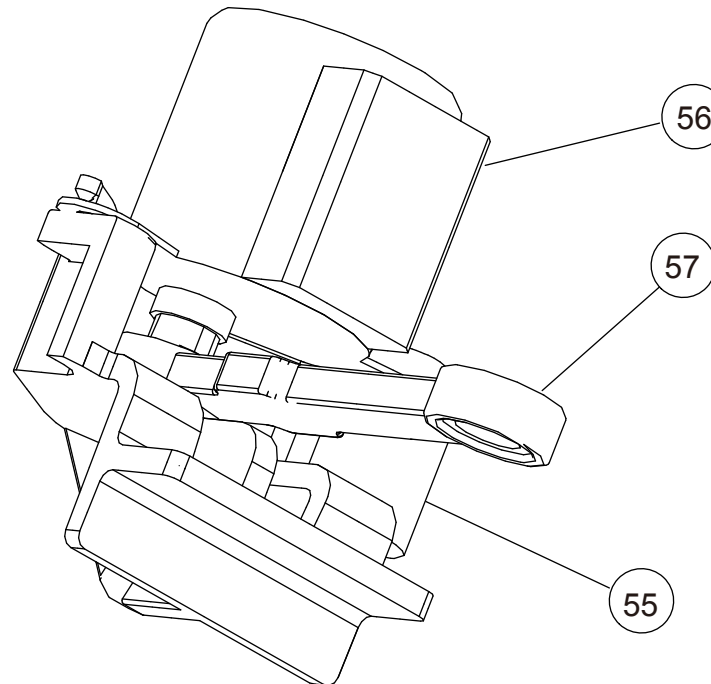
Ref	Description	Parts number	
41	Cable Guide	9386997003	
42	Gear Cover Assy	9387062007	
43	Link Holder Assy	9387063004	
44	Casing Assy	9387060034	

INDOOR UNIT
ASYG30LMTA
ASYG36LMTA
Casing total assy



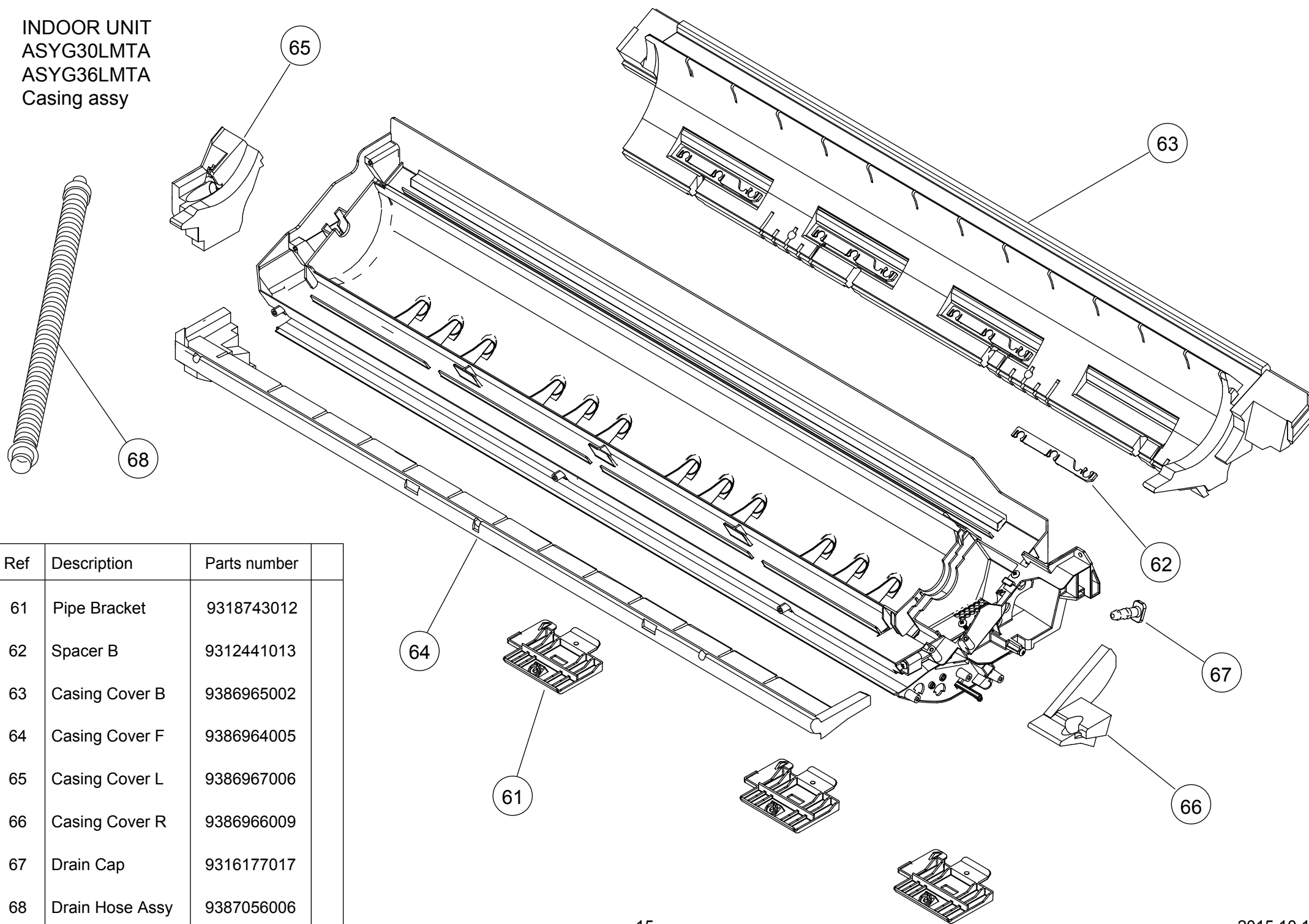


Ref	Description	Parts number	
51	Gear Cover A	9386970006	
52	Step Motor	9900384234	
53	Louver Gear	9317648004	
54	Gear A	9309994003	
55	Link Holder	9315007018	
56	Step Motor	9900139186	
57	Link A	9386972000	



INDOOR UNIT
 ASYG30LMTA
 ASYG36LMTA
 Gear cover assy
 Link holder assy

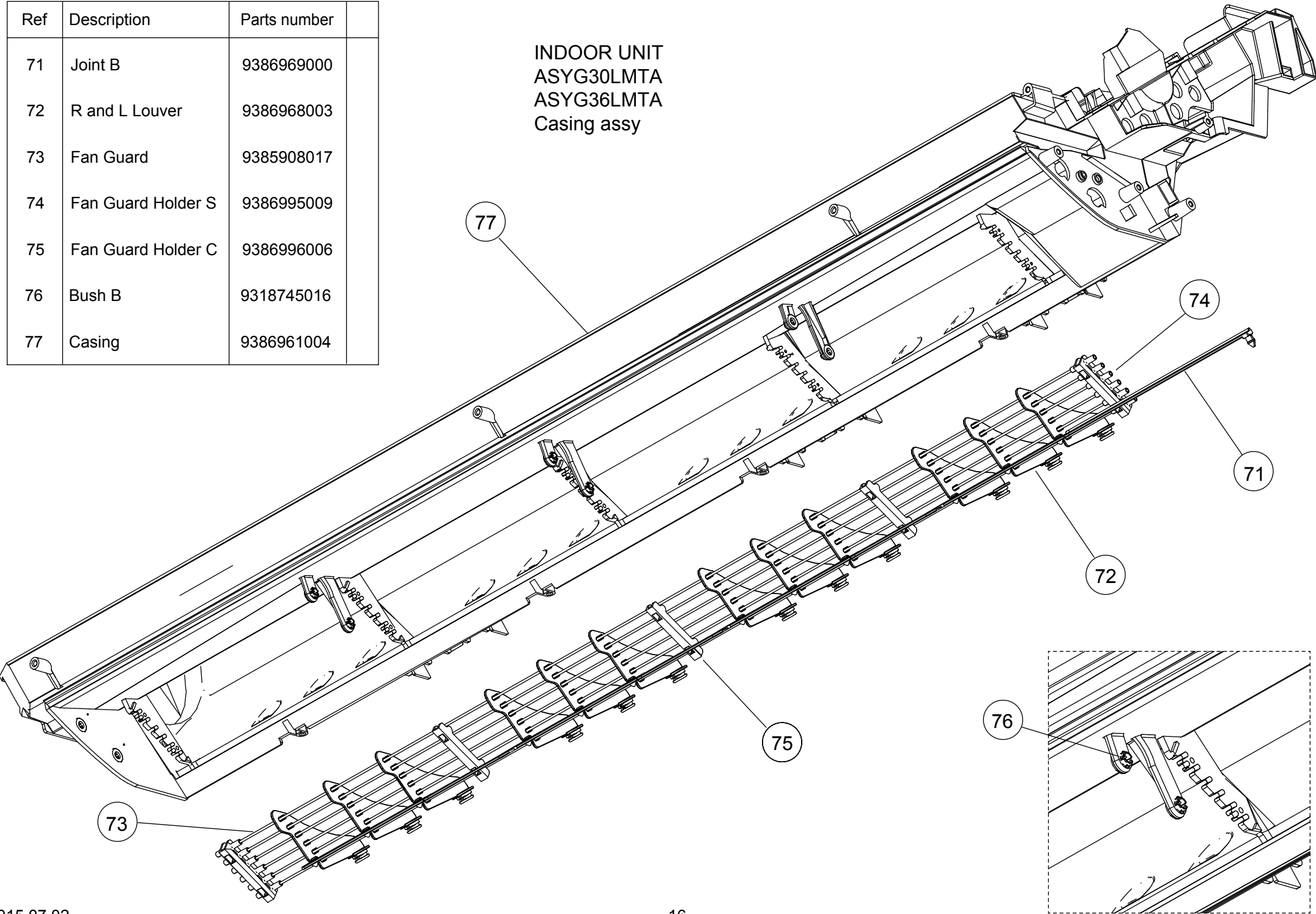
INDOOR UNIT
ASYG30LMTA
ASYG36LMTA
Casing assy

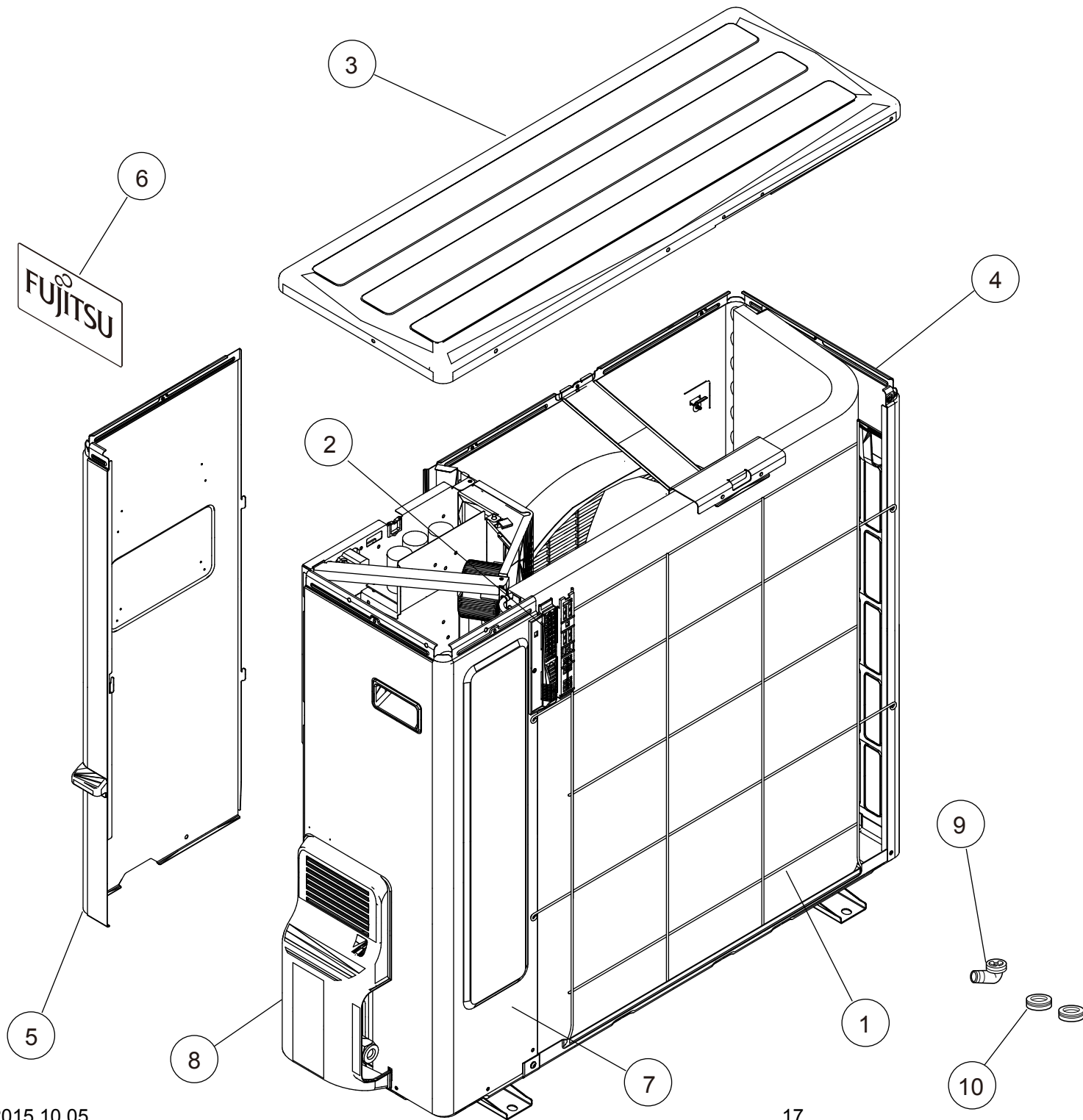


Ref	Description	Parts number	
61	Pipe Bracket	9318743012	
62	Spacer B	9312441013	
63	Casing Cover B	9386965002	
64	Casing Cover F	9386964005	
65	Casing Cover L	9386967006	
66	Casing Cover R	9386966009	
67	Drain Cap	9316177017	
68	Drain Hose Assy	9387056006	

Ref	Description	Parts number
71	Joint B	9386969000
72	R and L Louver	9386968003
73	Fan Guard	9385908017
74	Fan Guard Holder S	9386995009
75	Fan Guard Holder C	9386996006
76	Bush B	9318745016
77	Casing	9386961004

INDOOR UNIT
ASYG30LMTA
ASYG36LMTA
Casing assy





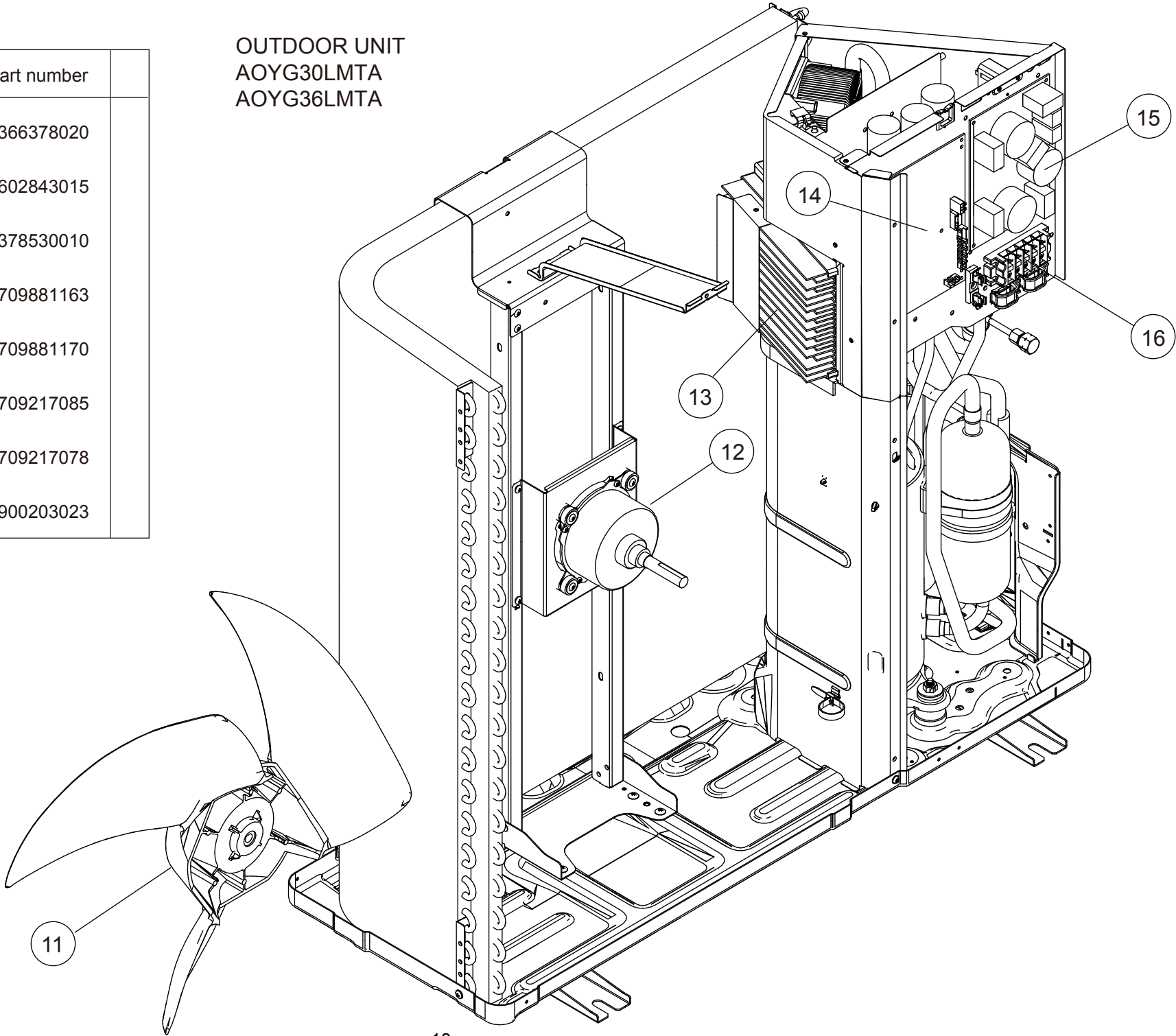
PARTS

OUTDOOR UNIT
AOYG30LMTA
AOYG36LMTA

Ref.	Description	Part number	
1	Protective Net	9375381011	
2	Thermo Holder	9375211011	
3	Top Panel Sub Assy	9374417032	
4	Front Panel Sub Assy	9374414079	
5	Service Panel Sub Assy	9374415052	
6	Emblem Rear	9351355005	
7	Right Panel Sub Assy	9374416127	
8	Valve Cover	9374174010	
9	Drain Assy	9303029015	
10	Drain Cap	313166024302	

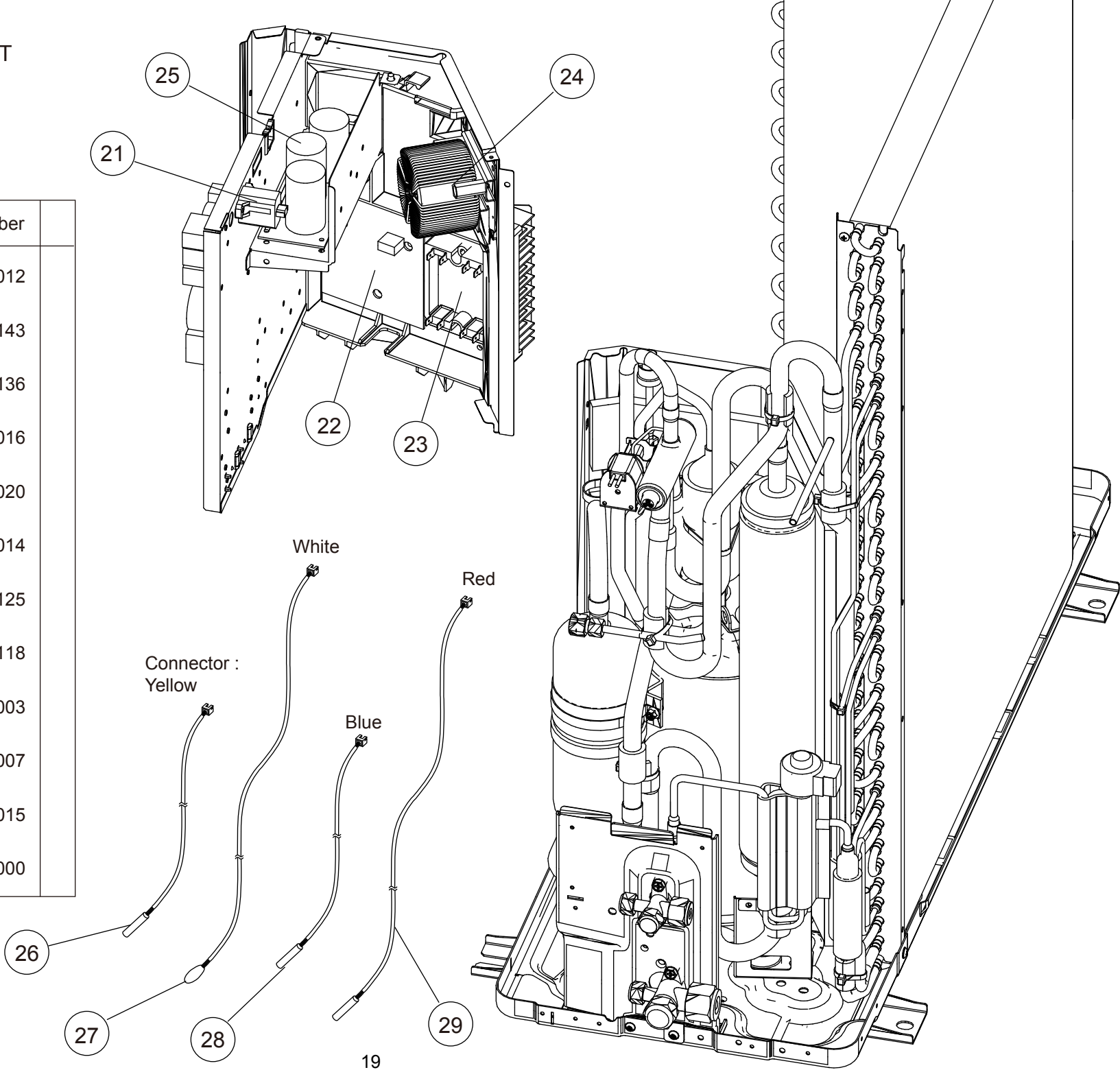
Ref.	Description	Part number	
11	Propeller Fan Assy	9366378020	
12	Fan Motor	9602843015	
13	Heatsink	9378530010	
14	Main PCB (30LMTA)	9709881163	
14	Main PCB (36LMTA)	9709881170	
15	Filter PCB (30LMTA)	9709217085	
15	Filter PCB (36LMTA)	9709217078	
16	Terminal 5P	9900203023	

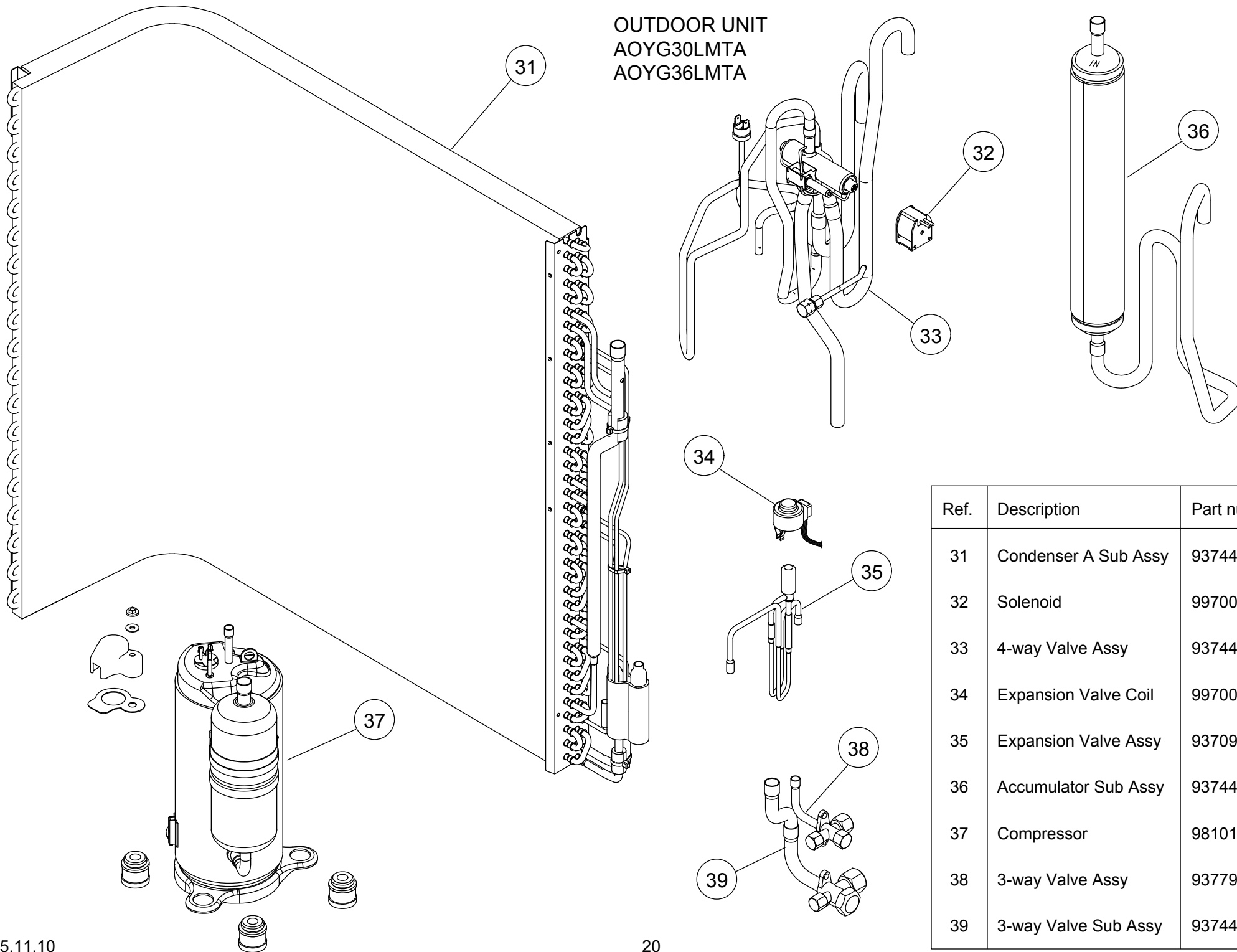
OUTDOOR UNIT
AOYG30LMTA
AOYG36LMTA



OUTDOOR UNIT
AOYG30LMTA
AOYG36LMTA

Ref.	Description	Part number
21	PFC Thermistor (36 only)	9704265012
22	Transistor PCB (30)	9708512143
22	Transistor PCB (36)	9708512136
23	ACTPM	9707592016
24	Choke Coil (30LMTA)	9900390020
24	Choke Coil (36LMTA)	9900223014
25	Capacitor PCB (30)	9709894125
25	Capacitor PCB (36)	9709894118
26	Discharge Thermistor	9900461003
27	Thermistor (Outdoor)	9900463007
28	Compressor Thermistor	9900466015
29	Heat Exchanger Thermistor	9900462000

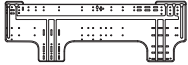
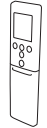




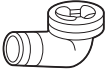
Ref.	Description	Part number	
31	Condenser A Sub Assy	9374420308	
32	Solenoid	9970055034	
33	4-way Valve Assy	9374425198	
34	Expansion Valve Coil	9970095030	
35	Expansion Valve Assy	9370947144	
36	Accumulator Sub Assy	9374426133	
37	Compressor	9810135001	
38	3-way Valve Assy	9377958013	
39	3-way Valve Sub Assy	9374470044	

ACCESSORIES

INDOOR UNIT

Name and Shape	Q'ty	Name and Shape	Q'ty
Wall hook bracket 	1	Tapping screw (Large) 	8
Remote control 	1	Tapping screw (Small) 	2
Battery 	2	Air cleaning filter 	2
Remote control holder 	1	Filter holders 	2
Cloth tape 	1	Drain hose insulation 	1

OUTDOOR UNIT

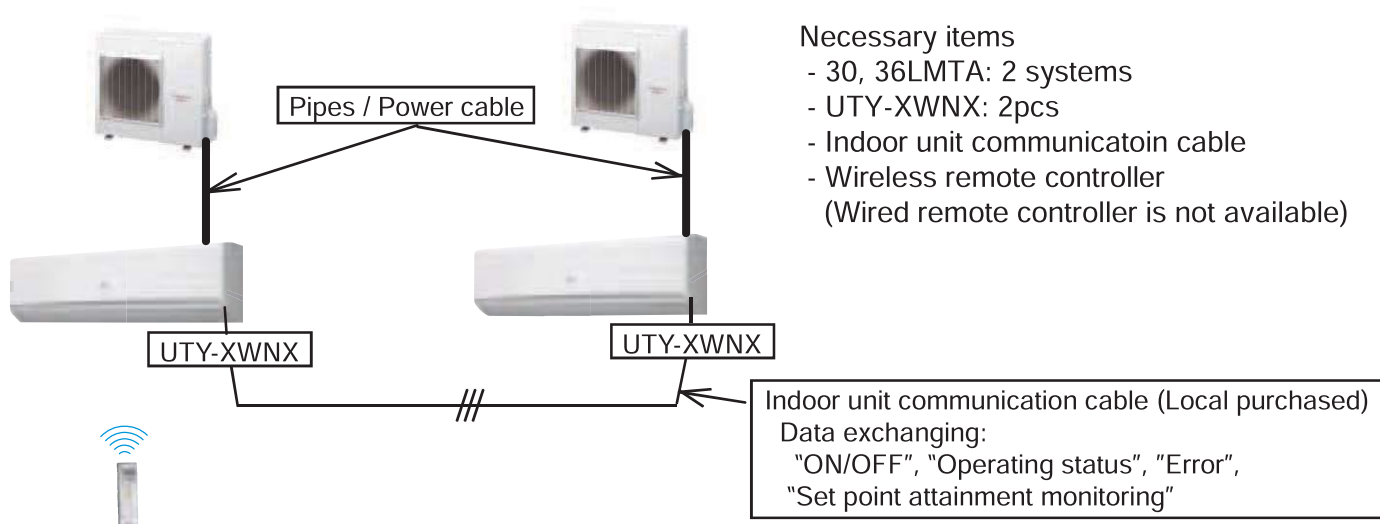
Name and shape	Q'ty	Description
Drain pipe 	1	For outdoor unit drain piping work
Drain cap 	2	

26. SERVER ROOM CONTROL

Operation:

Cooling operation can be performed even in the low outdoor temperature and low humidity environment. In addition, the following interlock operation is possible by connecting two indoor units with a cable.

1. System configuration



2. Available Functions

- Alternative operation: 2 units operate alternately.
- Backup operation: In case one unit breaks down, the other unit starts operation automatically.
- Supporting operation: Both units operate simultaneously when the loaded capacity is not enough with one unit.

3. Controlling

The control specification (Compressor operation control, Outdoor unit FAN control, EEV control, Protection Function and abnormal display) belongs to the original controlling specification of one system.

4. Operation specification

When Server room control is activated by changing the setting on function setting 96, this product maintains the room temperature constant by performing 3 types of operations automatically according to the room temperature conditions.

While this function is activated, contents of operation is fixed as follows:

Operation mode	Set temperature	Airflow mode
COOL	24 °C*	HIGH

*: Set temperature correction (± 4 °C) is possible by switching the setting value on function setting 30.

The temperature correction has to be set with the same value on both indoor units.

(when the correction setting are not the same, the temperature controlling or the supporting operation might not work properly.)

For the setting details, refer to the technical manual.

5. Precautions & Restrictions

- 1) While performing Server room control, the following function cannot be used.
 - Operation modes other than cooling
 - Airflow modes other than HIGH
 - POWERFUL mode
 - 10°C HEAT operation
 - ECONOMY operation
 - On/Off timer, Program time, and Sleep timer
 - Weekly timer on the secondary unit
 - Human sensor function
 - Starting operation on the secondary unit
 - Temperature setting other than 24°C *

* Temperature correction is possible
- 2) For stopping the system operation, shutdown the power supply.

*Stop operation by the Remote controller is impossible.
- 3) For canceling the server room control, refer to 9. Canceling procedure of Server room control.
- 4) The Pump down operation has to be performed by Pump down SW on the outdoor unit's PCB.

*The forced operation by pushing MANUAL AUTO button is not available.
- 5) Error memory indication function is not available.
- 6) When the following setting needs to be changed, set the remote controller "Mode Cooling", and "High FAN mode"
 - Air flow direction (UP/Down, Right/Left, Swing)
 - Low noise mode
 - Clock adjust
 - Weekly timer
- 7) Procedure of when one of system needs a maintenance (repair / trouble shooting)
 1. Shutdown the system
 2. Disconnect the Indoor unit communication cable
 3. Turn ON the operable system

*When the operable system is in operating, IU will show the Error 12 after system starting.

 4. Start the Maintenance.

Note: How to define the Primary system and the Secondary system

Send the weekly timer setting signal from the wireless remote controller.

- The Primary system can receive the signal.
(IU reacts with beep sound " Pi " and the Operation LED blink.)
- The Secondary system cannot receive the signal
(IU reacts with beep sound " Pi Pi----" and the 3 LEDs blink.)

6. External Input & Output function

The External Input & the External Output functions are available.

For the setting detail, refer to the technical manual

Input

- Operation / Stop*
- Forced Thermostat OFF*

*Not available on the Secondary units

Output

- Operation / Stop
- Error status
- Indoor unit fan operation status
- Set point attainment status

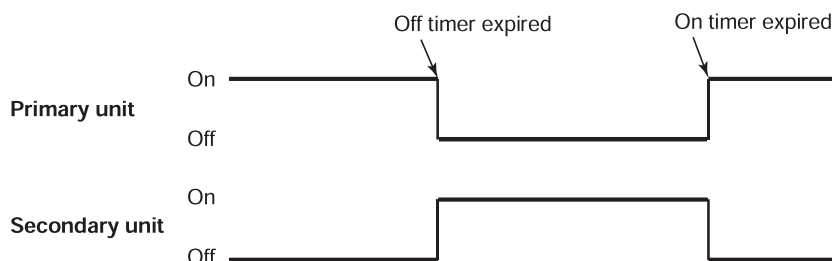
7. Operation detail

7-1 Alternative operation

Controls the units operations by using the weekly timer of the primary unit.

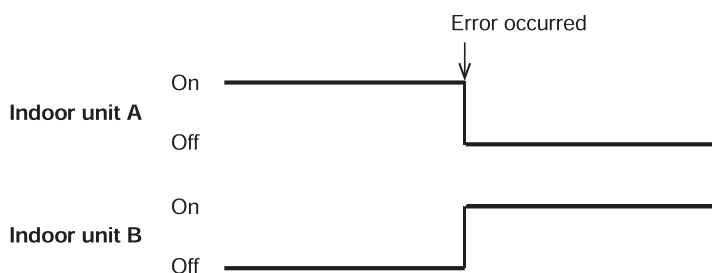
When the weekly timer is activated and the primary unit operation is turned off, the secondary unit starts operation simultaneously.

Also, when the weekly timer is activated and the primary unit operation is turned on, the secondary unit stops operation simultaneously.



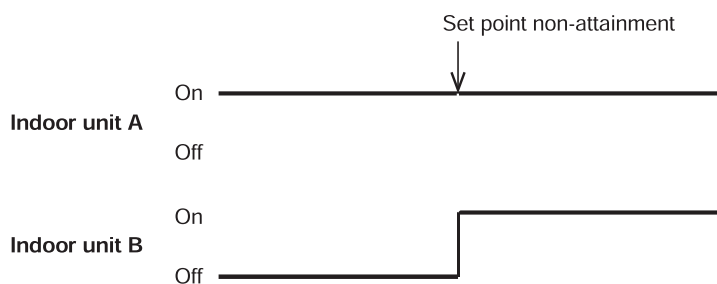
7-2 Backup operation

Regardless of the primary-secondary relation of the unit, if an error occurred on one unit, operation start indication is issued to another unit and the unit starts backup operation.

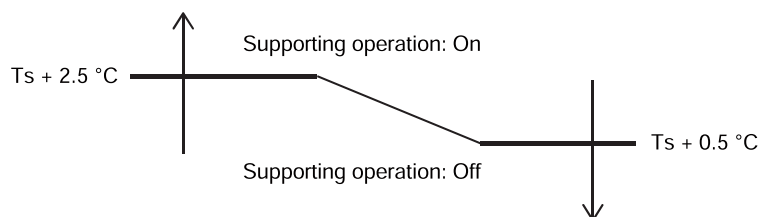


7-3 Supporting operation

When the room temperature does not reach to the set point after a certain period of time, regardless of the primary-secondary relation of the unit, operation start indication is issued to another unit and both indoor units perform air conditioning simultaneously.



*: Operation is started even when the unit is stopped by the weekly timer.



8. Installation and Setting

Step 1. Install the system one by one (Refer to the Installation manual)

*Make sure that each system can operate in cooling by test operation.

Step 2. Install Option UTY-XWNX to each indoor unit (Refer to 8-1)

- Install UTY-XWNX (Terminal with connector)
- Change DIP switch setting of Indoor units Main PCB (2WIRE → 3WIRE)
- Install the Indoor unit communication cable

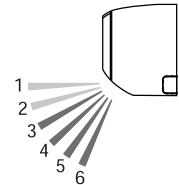
Step 5. Perform Initial setting (Refer to 8-2)

Step 6. Starting units operation (Refer to 8-3)

Step 7. Starting server room control function (Refer to 8-4)

Precautions

- Do not place any other electrical products or household belongings under the product. Condensation dripping from the product might get them wet, and may cause damage or malfunction to the property.
- In units installation facing each other, the vertical airflow direction louver on each indoor unit should be set at a position from 3 to 6.
*If the louver position is other than 3 to 6, the temperature control might not work properly
- Do not connect any wired remote controller.

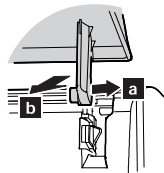


8-1 Install Option UTY-XWNX

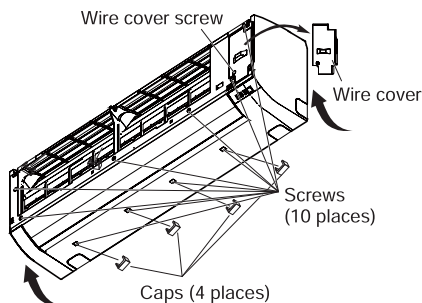
8-1-1. Front panel, control box cover removal

- (1) Open the intake grille. While gently pressing the left and right mounting shafts of the intake grille outward "a", remove the intake grille in the direction of the arrow "b".

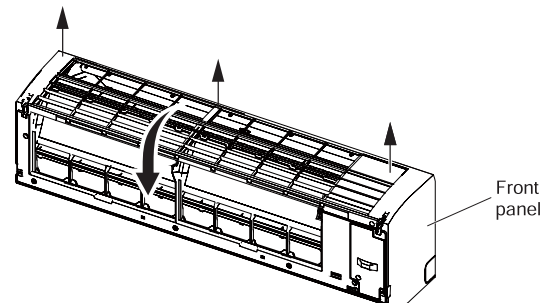
Intake grill removal



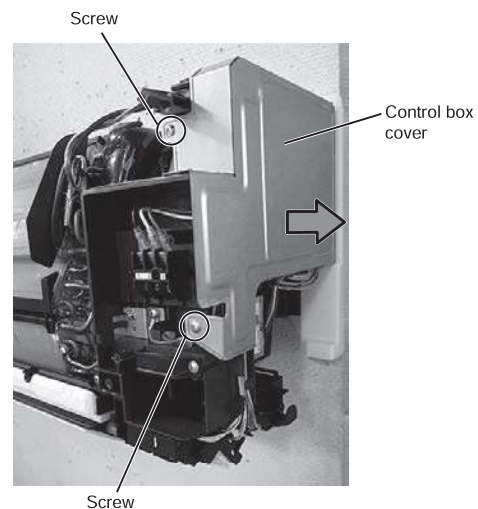
- (2) Remove 4 caps.
(3) Remove wire cover screw, then remove the wire cover.
(4) Remove 10 screws.



- (5) Pull the front panel forward raising the upper surface, to remove the front panel.

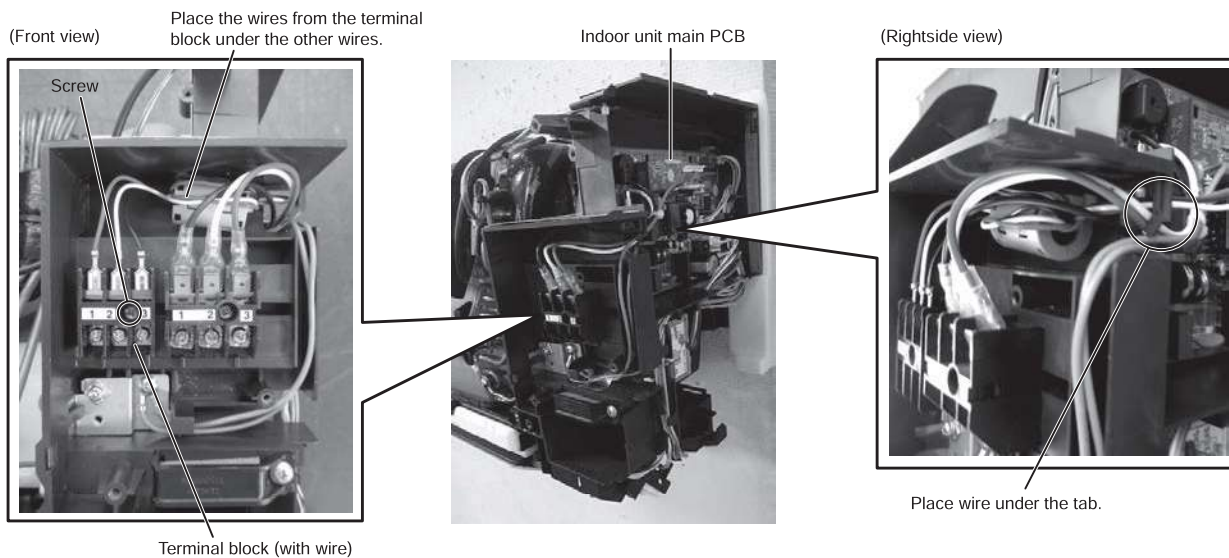


- (6) Remove 2 screws, then remove the control box cover.



8-1-2. Install the terminal block

- (1) Attach the terminal block to the indoor unit firmly with 1 screw.
- (2) Place the wiring as per the figure.



- (3) Connect the wires from the terminal block to the indoor unit main PCB by inserting to connector (CN12).
- (4) Change the DIP switch setting as shown in the following photograph.



⚠ CAUTION

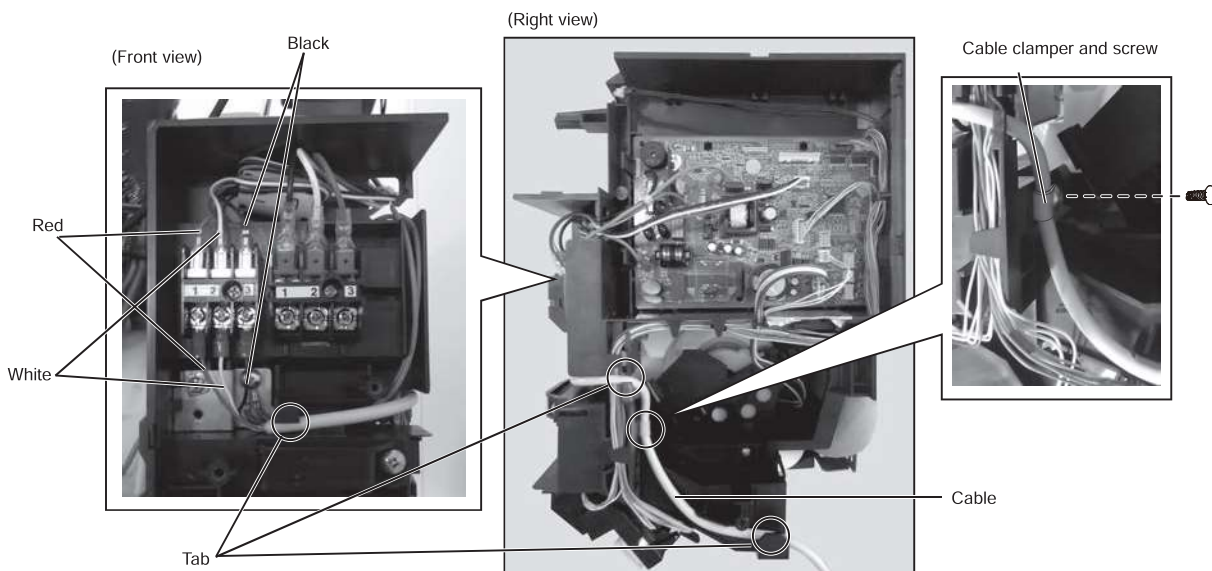
- Be careful not to damage the parts on the board. Otherwise, it will cause malfunction.
- Ensure that the connector is properly inserted. Otherwise, it may result in erroneous operation.

8-1-3. Connecting the cable

- (1) Use the following cables (locally purchased) for this connection.

Cable size	Remarks
22AWG Sheathed PVC cable Polar 3 core	Use shielded cable in accordance with local rules for cable.

- (2) Attach the cable to the terminal block.
Position the wires so that the number on the terminal match.
- (3) Install the cable as shown in the photograph below.
Be sure to place the wiring under the tabs.
- (4) Fix the cable with the cable clumper and screw as shown in the photograph mentioned above.



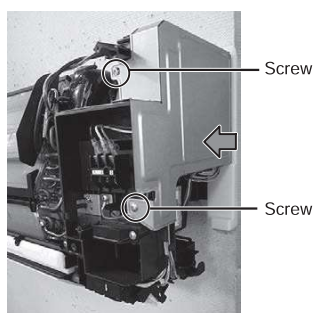
⚠ CAUTION

- Do not connect the cable to the terminal for power supply.
- Make sure to insulate the connecting parts when extending the cable.

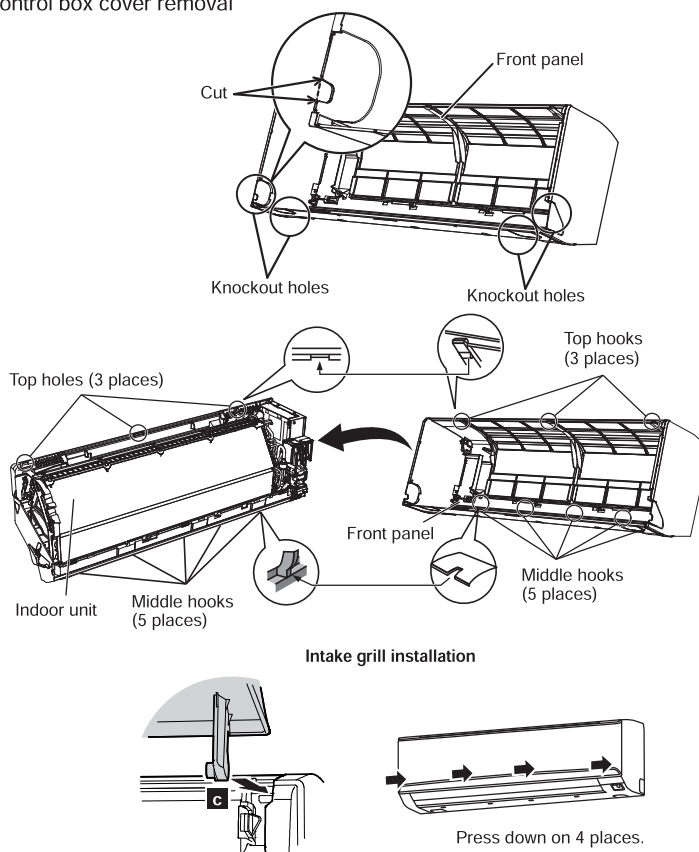
8-1-4. Front panel, control box cover replacement

Reinstall by reversing the procedure in "8-1-1 Front panel, control box cover removal"

- (1) Replace the control box cover (2 screws).



- (2) Open a hole in the front panel for the remote controller cable to pass through.
* Choose from 4 knockout holes marked on the inside of the front panel.
- (3) Replace the front cover.
First, insert the hook on the lower part of the front panel (5 places), then fit the hooks on the top (3 places).
- (4) Replace the 10 screws.
- (5) Replace the wire cover (1 screw).
- (6) Replace the 4 caps.
- (7) Replace the intake grille.



8-2 Function setting procedure

Before activating server room control, assignment of primary unit and secondary unit is required
Change the setting of function setting 96 as follows:

1. Turn on the power source of 2 indoor units.
2. Set one of the indoor unit as "Primary unit" (Setting value: 01) by function setting 96. (For contents of function setting 96, refer to the Technical manual)
When performing the setting, operate the remote controller close to the signal receiver on the primary unit as possible so that the signal transmission is firmly received by the primary unit only.
3. Set the other unit as "Secondary unit" (Setting value: 02) by function setting 96.
When performing the setting, operate the remote controller close to the signal receiver on the secondary unit as possible so that the signal transmission is firmly received by the secondary unit only.
4. Turn off the power supply of the 2 indoor units.

8-3 Starting units operation

After the setting change on function setting 96 is completed, do as follows:

1. After 30 seconds or more since the power source is turned off, turn on the power source of the secondary unit.
2. Turn on the power source of the primary unit.
3. Press the MANUAL AUTO button on the primary unit for more than 3 seconds.
You will hear a short beep, and the primary unit starts operation.

NOTE: While performing these steps, error indications will be lit on the unit. Nevertheless, continue the procedure.

8-4 Starting Server room control

Set the weekly timer on the primary unit.

Example of setting: Monday_0:00_ON - Thursday_12:00_OFF

Primary unit: Operation start on Monday_0:00 --> Operation stop on Thursday_12:00

Secondary unit: Operation start on Thursday_12:00 --> Operation stop on Monday_0:00

(For the weekly timer setting procedure, refer to the OPERATION MANUAL)

Server room control is activated, and the unit will start the alternative operation.

NOTE: If the alternative operation does not start or error indications on the unit are still lit, reconfirm whether the settings on function setting 96 are set correctly, and perform the setup procedures from the beginning.

As for the display pattern of the error indications of the indoor unit, refer to 2-1 ERROR DISPLAY.

9 Canceling procedure of Server room control

Step 1. Turn OFF both system

Step 2. Disconnect the indoor unit communication cable

Step 3. Turn ON both system

Step 4. Change the Function setting 96 to 00 both system

*When the Indoor units start the operation, push MANUAL AUTO button more than 3 sec.

After the Indoor units stopped, apply the function setting.

The Indoor units shows Error 12, until the new setting is completed.

Step 5. Turn OFF both system.

*When the Indoor unit shows Error, repeat from the step 3.