

SPLIT TYPE AIR CONDITIONER DUCT type (50Hz)

SERVICE MANUAL



Models

Indoor unit

ARY18FUAL

ARY18UUAL

Outdoor unit

AOY18FNDN

AOY18UNDNL

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SPECIFICATIONS

TYPE	Cool
INDOOR UNIT	ARY18FUAL
OUTDOOR UNIT	AOY18FNDN
COOLING CAPACITY	5.40 kW

ELECTRICAL DATA

POWER SOURCE	230 V
FREQUENCY	50 Hz
RUNNING CURRENT	9.0 A
INPUT WATTS	2.03 kW
E.E.R.	2.87 kW/kW
MOISTURE REMOVAL	1.6 L/hr
AIR CIRCULATION-HIGH	1,000 m³/hr

COMPRESSOR

TYPE	Hermetic type, Deposit electrode condenser, 2 poles. Single phase, Induction motor, Rotary	
DISCRIMINATION	5KS225DAC	
REFRIGERANT	R410A	900 g

FAN MOTOR

POWER SOURCE		230 V
INDOOR UNIT	DISCRIMINATION	MFA-18NTT
	HIGH-SPEED	1,250 r.p.m.
	MED-SPEED	1,095 r.p.m.
	LOW-SPEED	955 r.p.m.
OUTDOOR UNIT	DISCRIMINATION	MFB-24JTAS
	HIGH- SPEED	780 r.p.m.
	LOW-SPEED	400 r.p.m.

DIMENSIONS

INDOOR UNIT	H x W x D	217 x 953 x 595 mm
OUTDOOR UNIT	H x W x D	650 x 830 x 320 mm

WEIGHT

INDOOR UNIT	GROSS / NET	29 kg / 25 kg
OUTDOOR UNIT	GROSS / NET	51 kg / 47 kg

REFRIGERANT CHARGE (R410A)

FULL CHARGE	PIPE LENGTH	7.5 m (25 ft)	900 g (31.7oz)
		10 m (33 ft)	950 g (33.5oz)
		15 m (49 ft)	1,050 g (37.0oz)
		20 m (66 ft)	1,150 g (40.6oz)
ADDITIONAL REFRIGERANT		20 g/m (0.71oz / 3.3ft)	

TYPE	Cool and Heat
INDOOR UNIT	ARY18UUAL
OUTDOOR UNIT	AOY18UNDNL
COOLING CAPACITY	5.40 kW
HEATING CAPACITY	6.00 kW

ELECTRICAL DATA

POWER SOURCE	230 V
FREQUENCY	50 Hz
RUNNING CURRENT (Cool)	8.8 A
RUNNING CURRENT (Heat)	8.7 A
INPUT WATTS (Cool)	1.92 kW
INPUT WATTS (Heat)	1.87 kW
E.E.R. (Cool)	2.81 kW/kW
E.E.R. (Heat)	3.21 kW/kW
MOISTURE REMOVAL	1.6 L/hr
AIR CIRCULATION-Hi	1,040 m³/hr

COMPRESSOR

TYPE	Hermetic type, Deposit electrode condenser, 2 poles. Single phase, Induction motor, Rotary	
DISCRIMINATION	5KS225DAC	
REFRIGERANT	R410A	1,400 g

FAN MOTOR

POWER SOURCE		230 V
INDOOR UNIT	DISCRIMINATION	MFA-18NTT
	HIGH-SPEED	1,250 r.p.m.
	MED-SPEED	1,095 r.p.m.
	LOW-SPEED	955 r.p.m.
OUTDOOR UNIT	DISCRIMINATION	MFB-24JTAS
	HIGH- SPEED	780 r.p.m.
	LOW-SPEED	400 r.p.m.

DIMENSIONS

INDOOR UNIT	H x W x D	217 x 953 x 595 mm
OUTDOOR UNIT	H x W x D	650 x 830 x 320 mm

WEIGHT

INDOOR UNIT	GROSS / NET	29 kg / 25 kg
OUTDOOR UNIT	GROSS / NET	56 kg / 52 kg

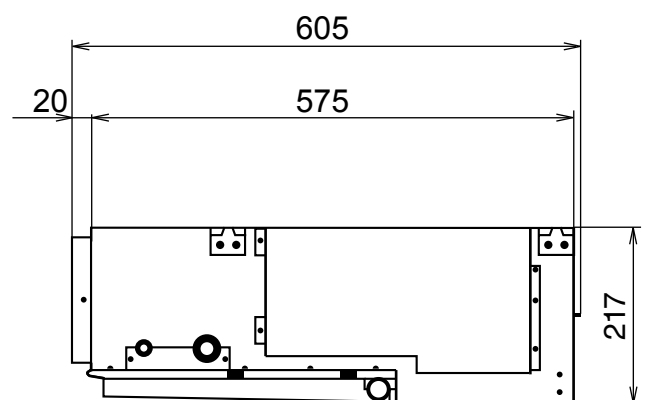
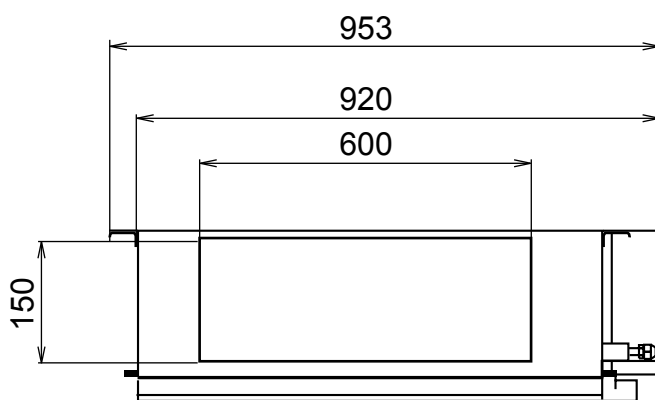
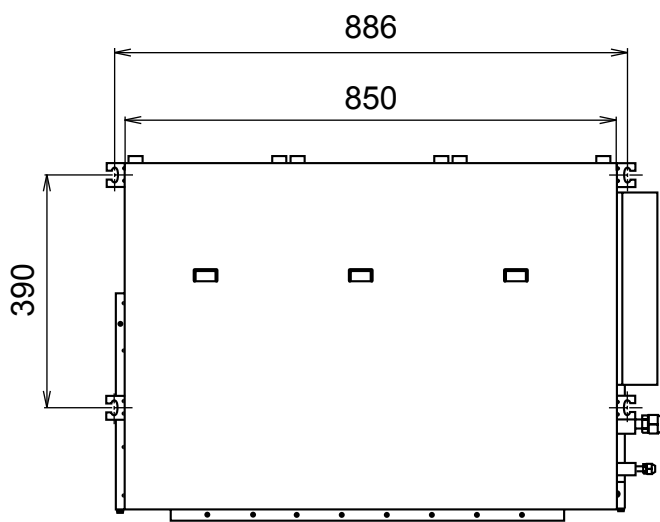
REFRIGERANT CHARGE (R410A)

FULL CHARGE	PIPE LENGTH	7.5 m (25 ft)	1,400 g (49.5oz)
		10 m (33 ft)	1,450 g (51.1oz)
		15 m (49 ft)	1,550 g (54.7oz)
		20 m (66 ft)	1,650 g (58.2oz)
ADDITIONAL REFRIGERANT		20 g/m (0.71oz / 3.3ft)	

OUTLINE AND DIMENSIONS

Models :
ARY18FUAL
ARY18UUAL

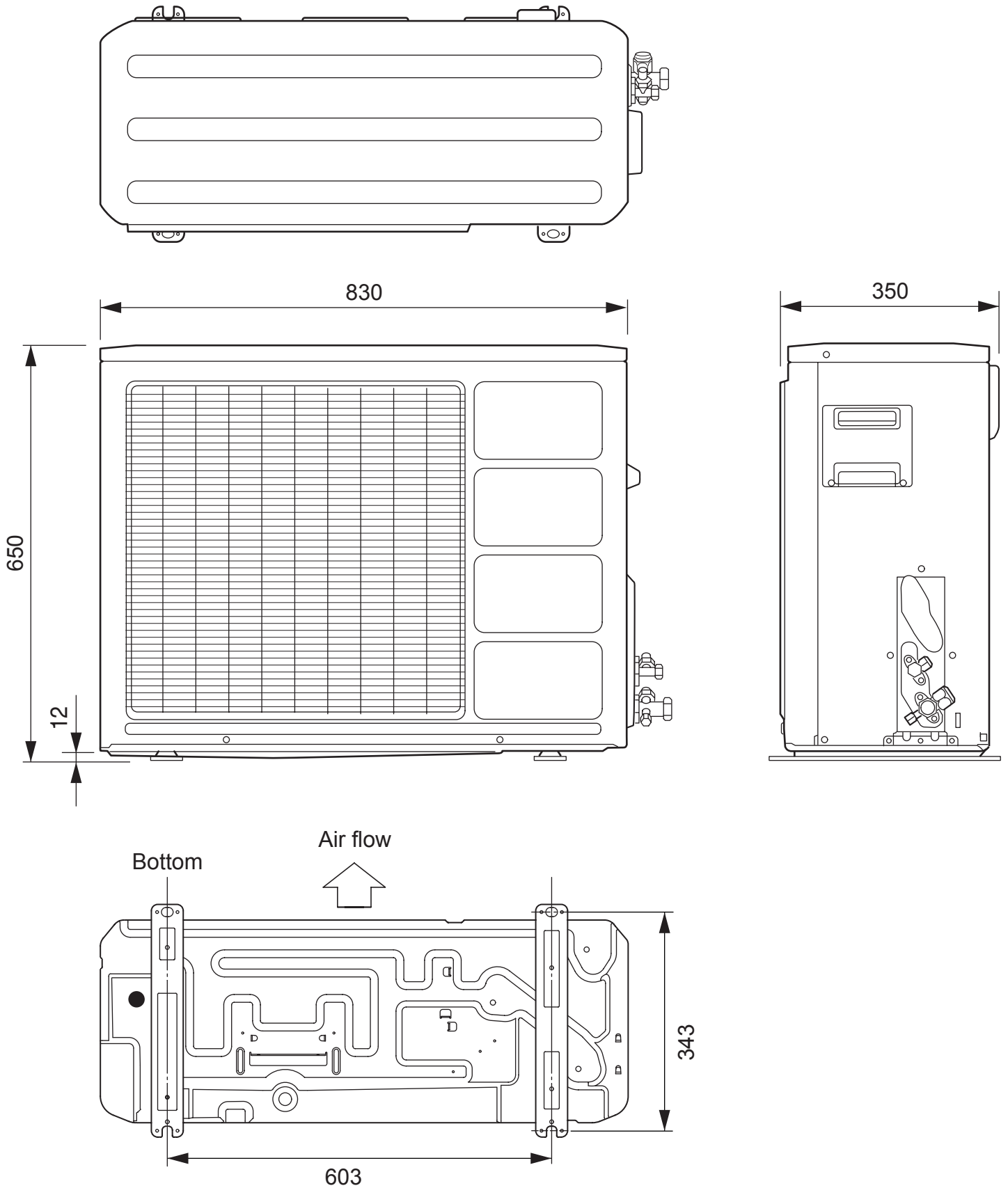
Unit : mm



OUTDOOR UNIT

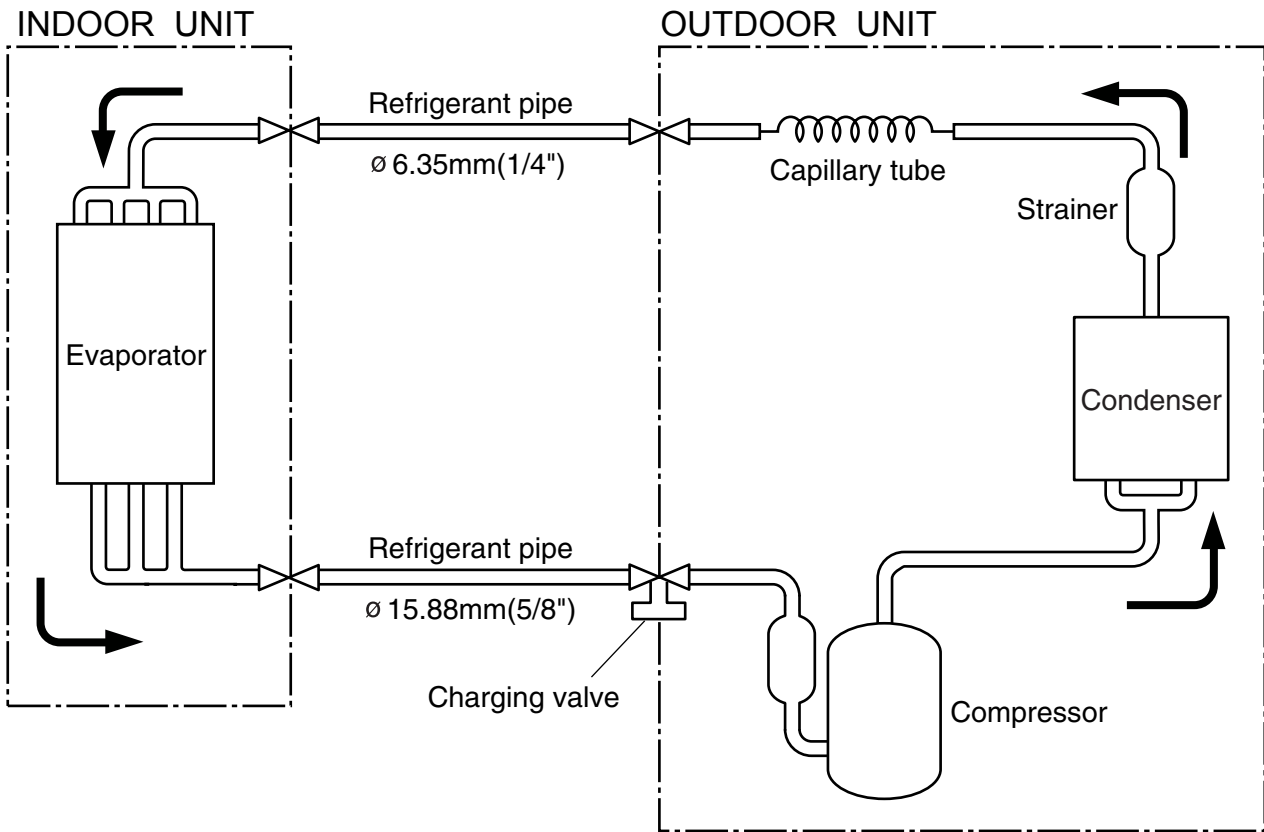
Models :
AOY18FNDN
AOY18UNDNL

Unit : mm

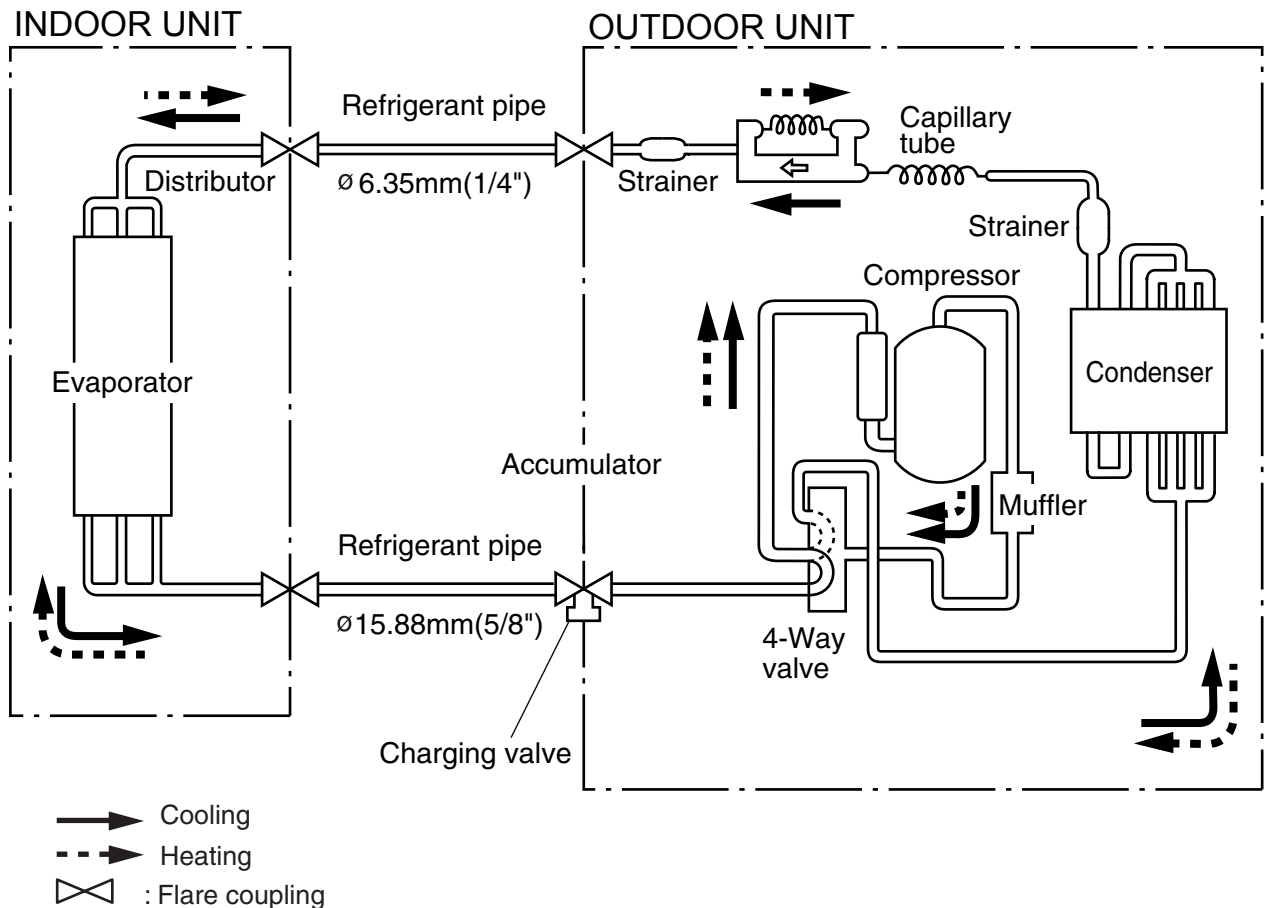


REFRIGERANT SYSTEM DIAGRAM

Models :
ARY18FUAL / AOY18FNDN

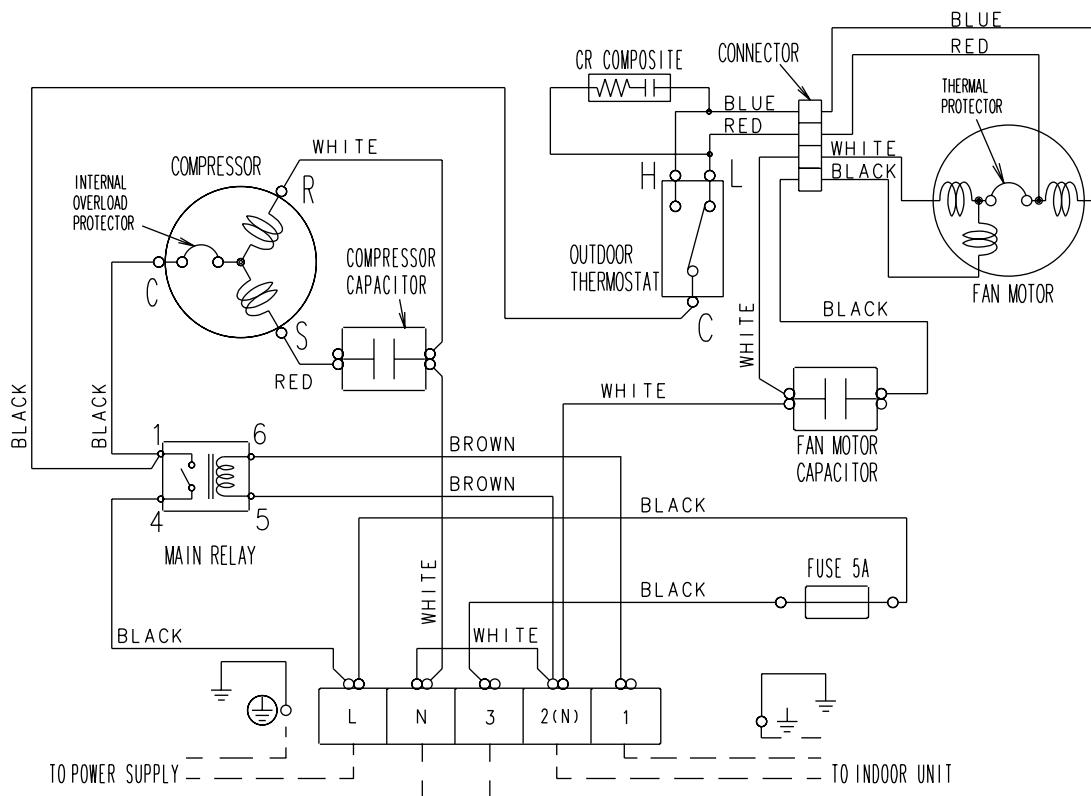
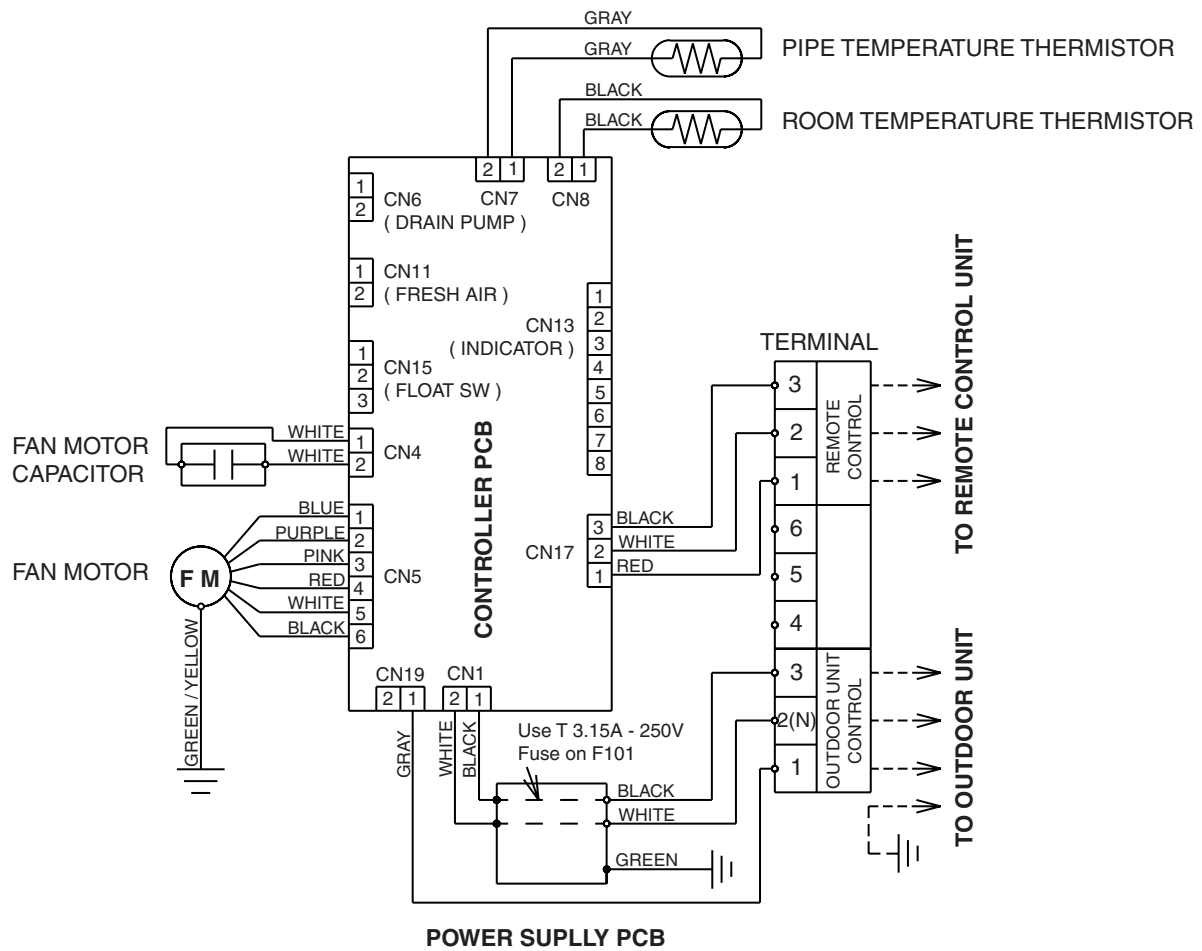


Models :
ARY18UUAL / AOY18UNDNL

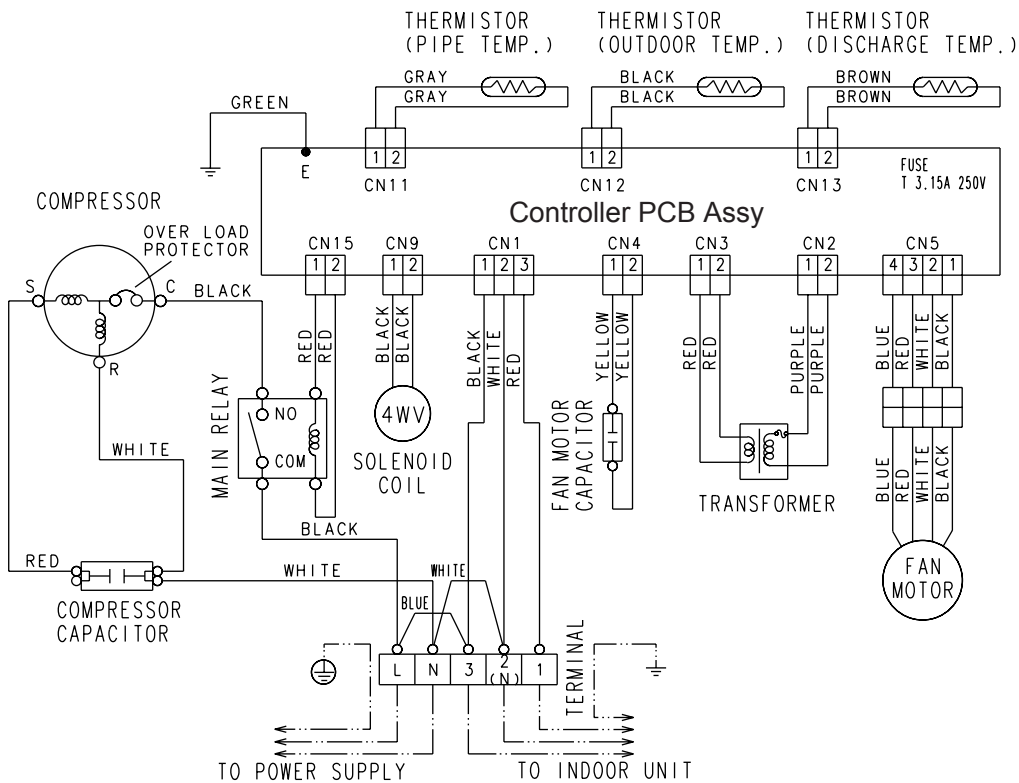
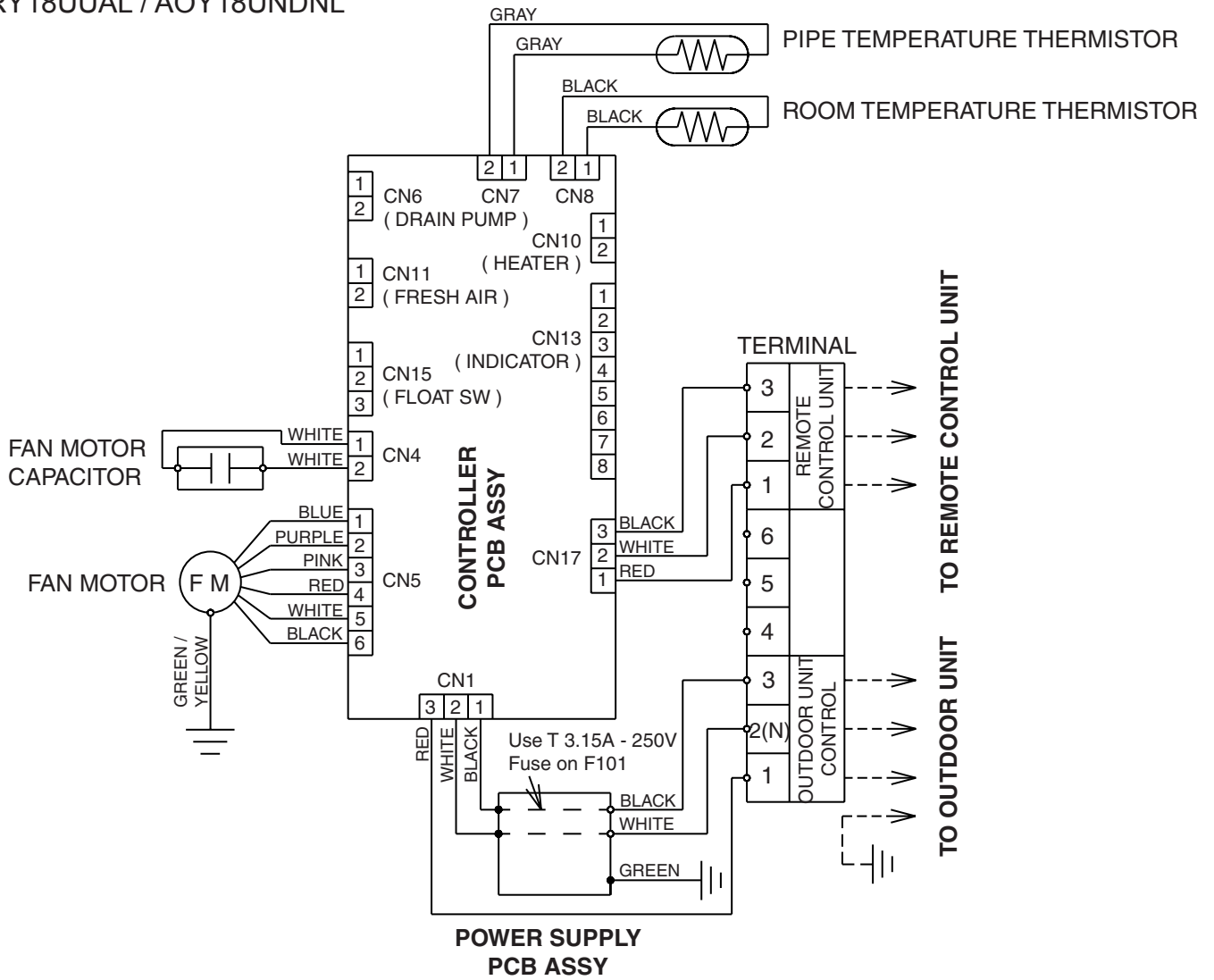


CIRCUIT DIAGRAM

Models :
ARY18FUAL / AOY18FNDN



Models :
ARY18UUAL / AOY18UNDNL

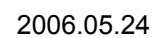


Model : ARY18FUAL

Controller PCB Assy
EZ-00305WSE-C



Controller PCB Assy
EZ-0030THSE-C



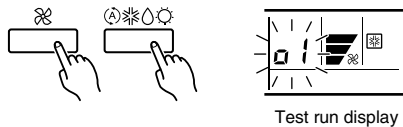
Model : AOY18UNDNL

EZ-0028HUE-C



ERROR CONTENTS

- (1) Stop the air conditioner operation.
- (2) Press the master control button and the fan control button simultaneously for 2 seconds or more to start the test run.



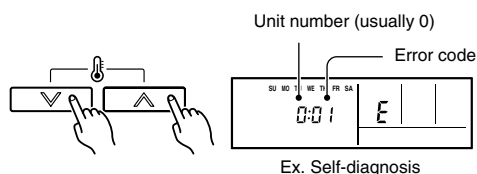
- (3) Press the start/stop button to stop the test run.

[SELF-DIAGNOSIS]

When the error indication "E:EE" is displayed, follow the following items to perform the self-diagnosis. "E:EE" indicates an error has occurred.

1. REMOTE CONTROLLER DISPLAY

- (1) Stop the air conditioner operation.
- (2) Press the set temperature buttons Δ / ∇ simultaneously for 5 seconds or more to start the self-diagnosis.
Refer to the following tables for the description of each error code.



- (3) Press the set temperature buttons Δ / ∇ simultaneously for 5 seconds or more to stop the self-diagnosis.

Error code	Error contents
00	Communication error (indoor unit $\leftrightarrow$ remote controller)
01	Communication error (indoor unit $\leftrightarrow$ outdoor unit)
02	Room temperature sensor open
03	Room temperature sensor short-circuited
04	Indoor heat exchanger temperature sensor open
05	Indoor heat exchanger temperature sensor short-circuited
06	Outdoor heat exchanger temperature sensor open
07	Outdoor heat exchanger temperature sensor short-circuited
08	Power source connection error
09	Float switch operated
0A	Outdoor temperature sensor open
0b	Outdoor temperature sensor short-circuited
0c	Discharge pipe temperature sensor open
0d	Discharge pipe temperature sensor short-circuited
0E	Outdoor high pressure abnormal
0F	Discharge pipe temperature abnormal
11	Model abnormal
12	Indoor fan abnormal
13	Outdoor signal abnormal
14	Outdoor EEPROM abnormal

2. OUTDOOR UNIT LEDS

When the outdoor temperature drops, the outdoor units fans may switch to low speed.

ERROR : 18000 BTU/h model HEAT & COOL MODEL (REVERSE CYCLE) ONLY

The LED lamps operate as follows according to the error contents.

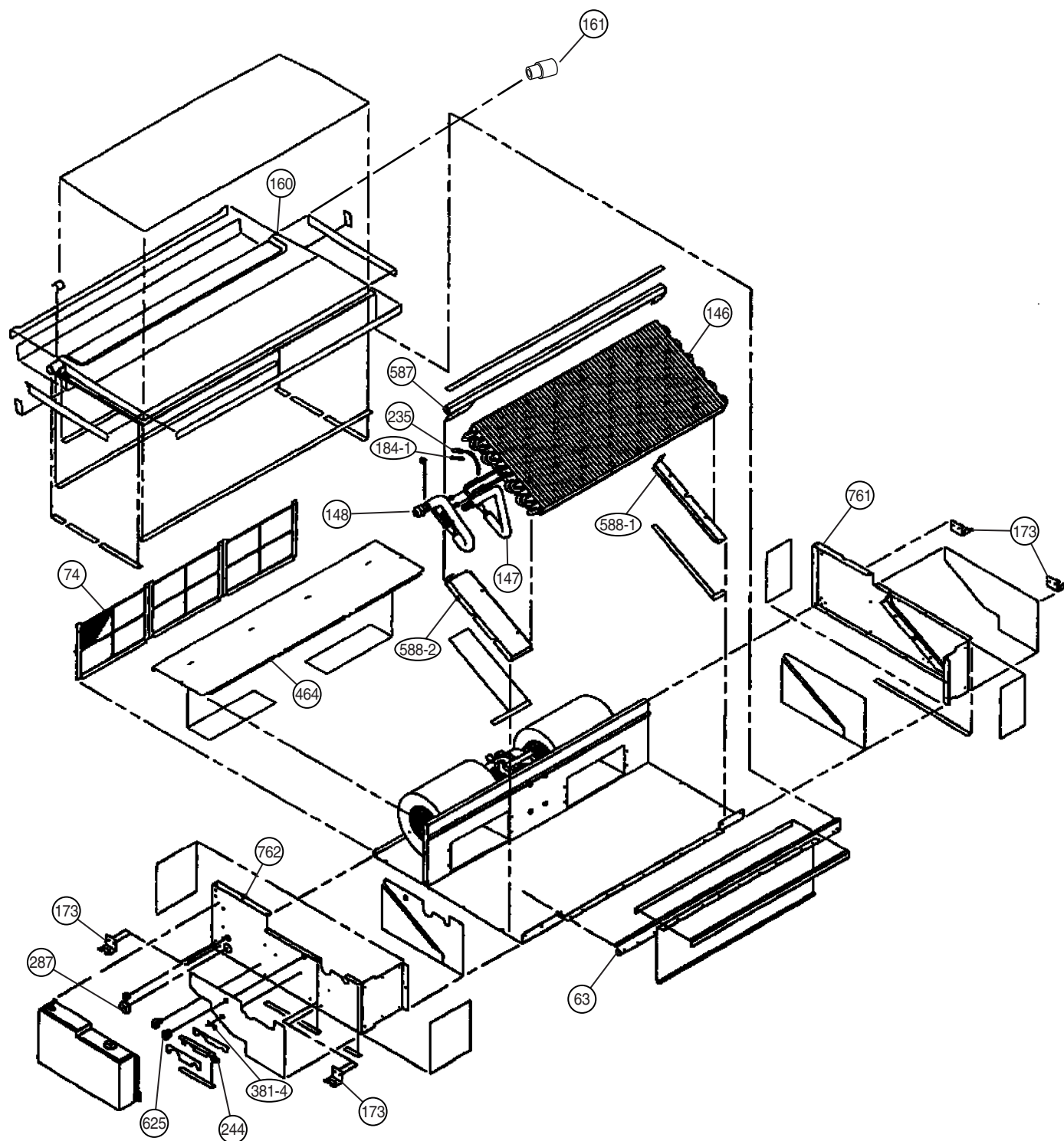
Error display		Error contents
LED1	LED2	
Quick flash continued	Quick flash continued	Model abnormal or EEPROM abnormal
1 quick flash repeated	Lighting continued	Power source connection error
2 quick flash repeated	Lighting continued	Discharge temperature sensor error
3 quick flash repeated	Lighting continued	Outdoor heat exchanger temperature sensor error
4 quick flash repeated	Lighting continued	Outdoor temperature sensor error
5 quick flash repeated	Lighting continued	Communication signal error
6 quick flash repeated	Lighting continued	Indoor unit error
7 quick flash repeated	Lighting continued	Discharge temperature abnormal
8 quick flash repeated	Lighting continued	High pressure abnormal

When the fault is cleared, the LED lamp goes off.

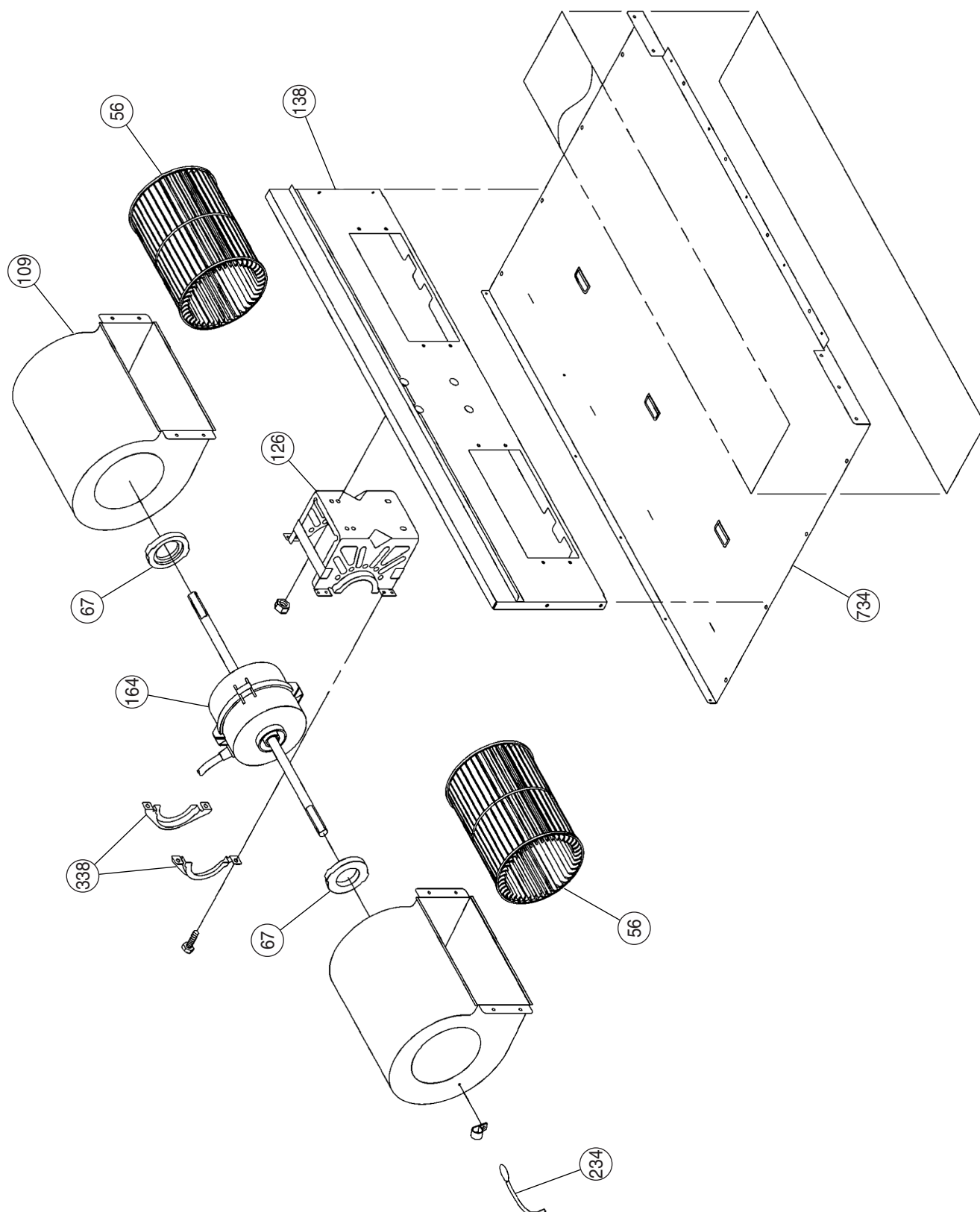
However, for discharge pipe temperature abnormal and high pressure abnormal, the LED lamp lights continuously for 24 hours, as long as the power is not turned off.

DISASSEMBLY ILLUSTRATION

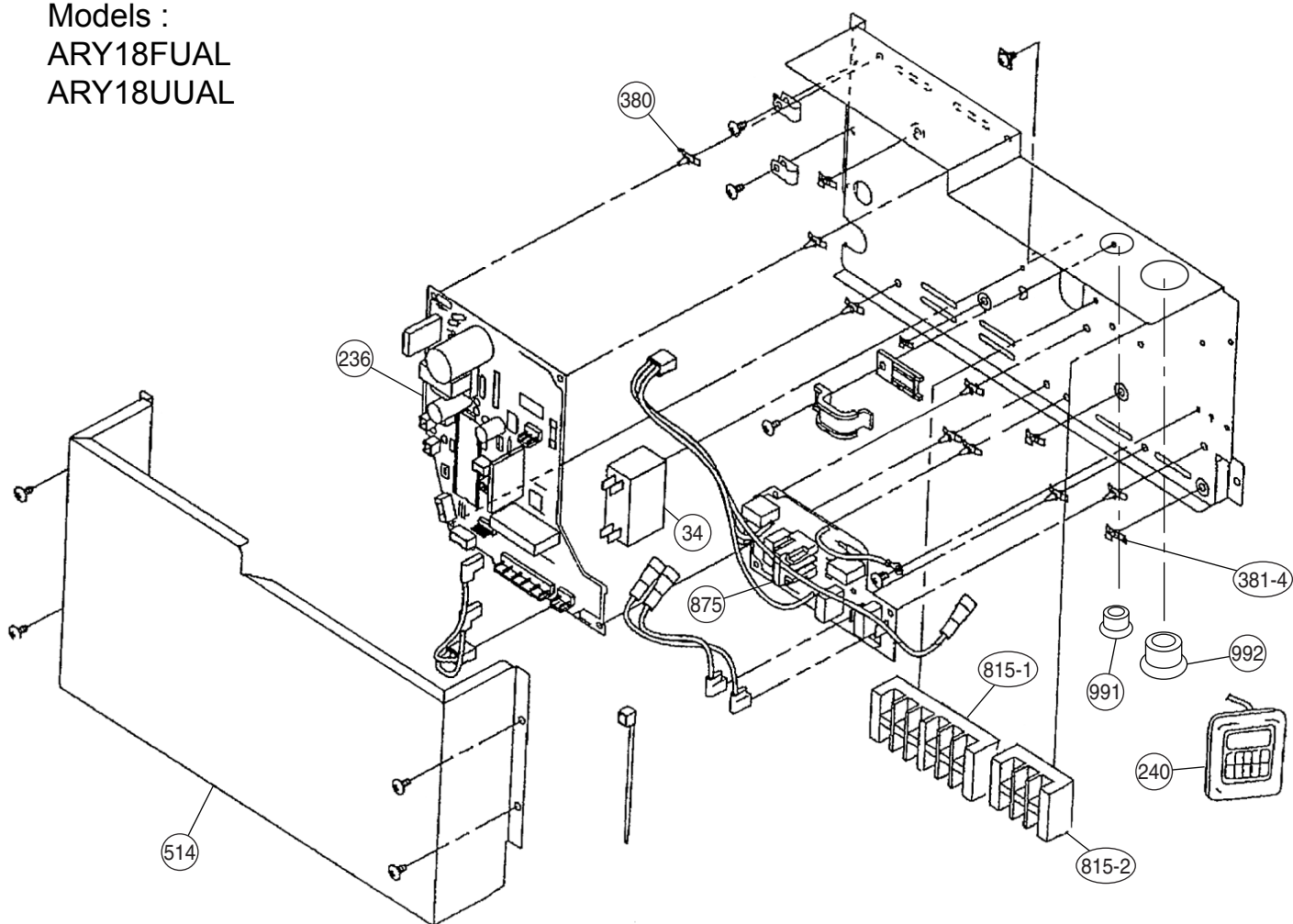
Models :
ARY18FUAL
ARY18UUAL



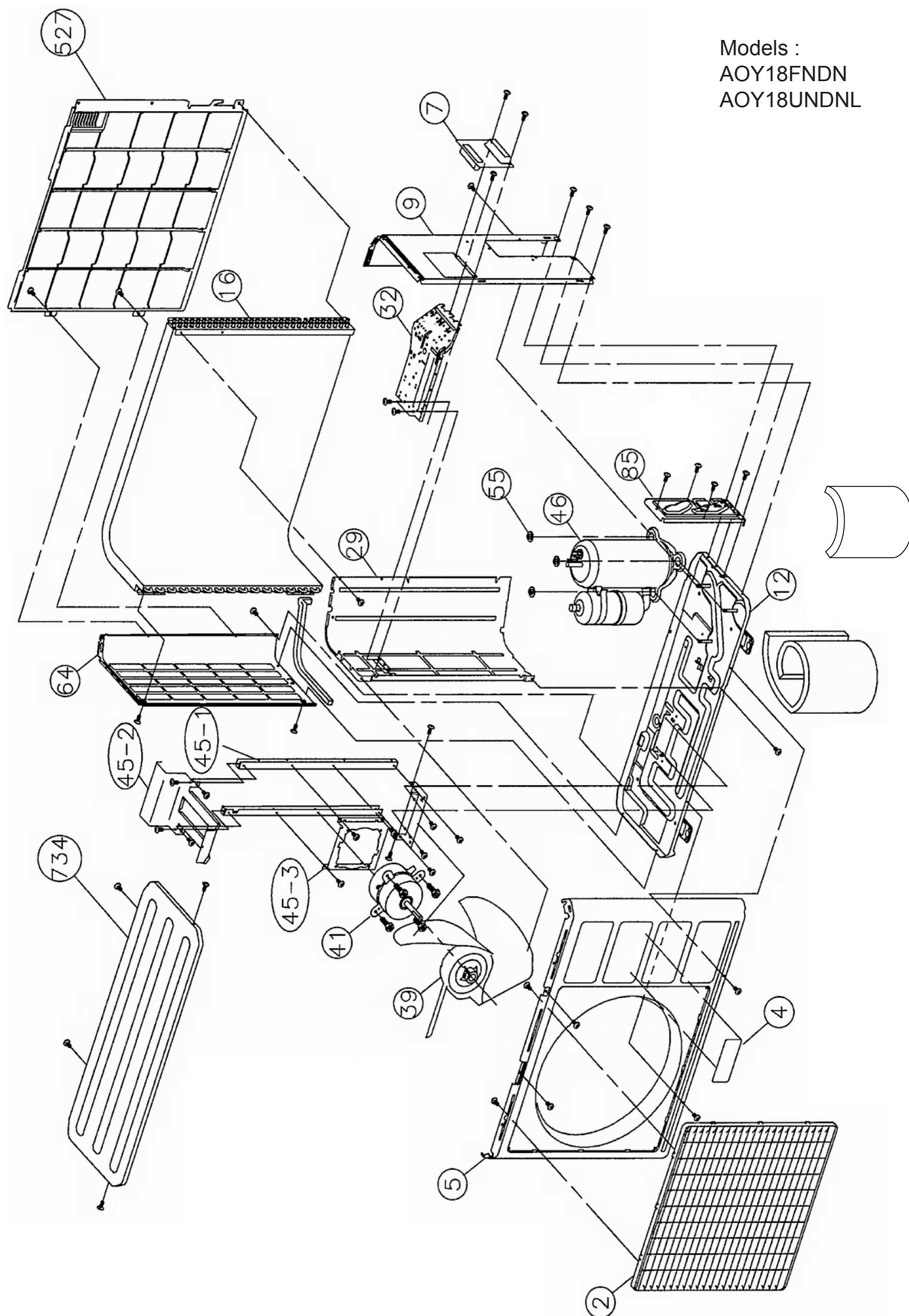
Models :
ARY18FUAL
ARY18UUAL



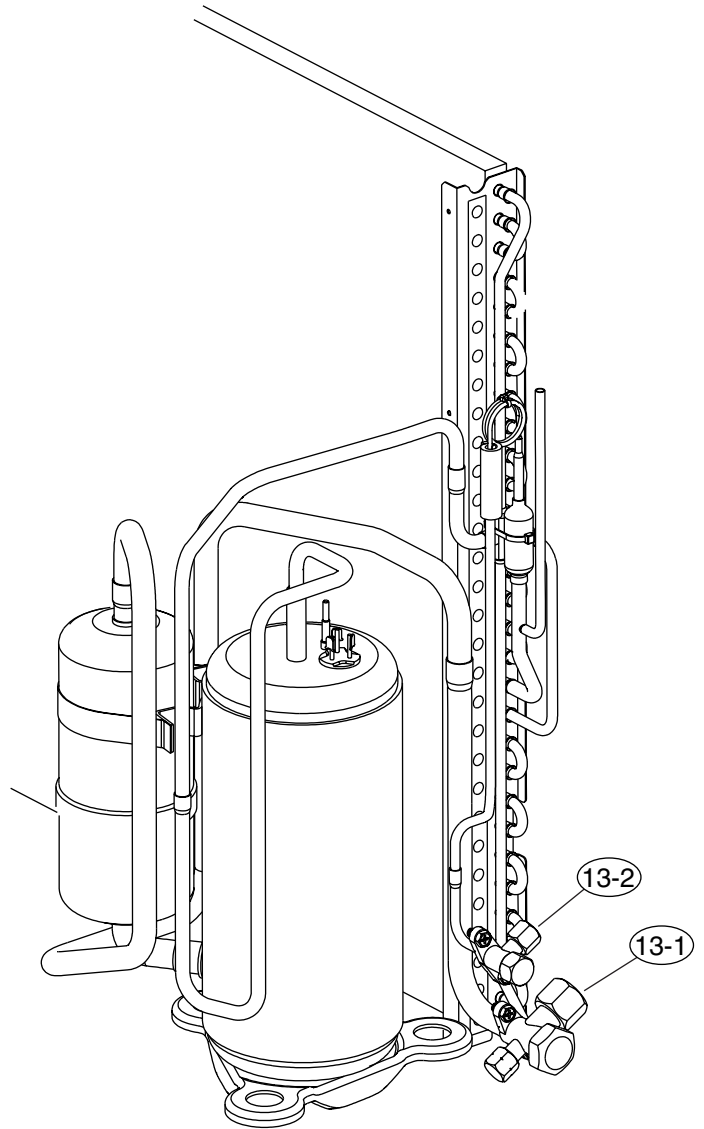
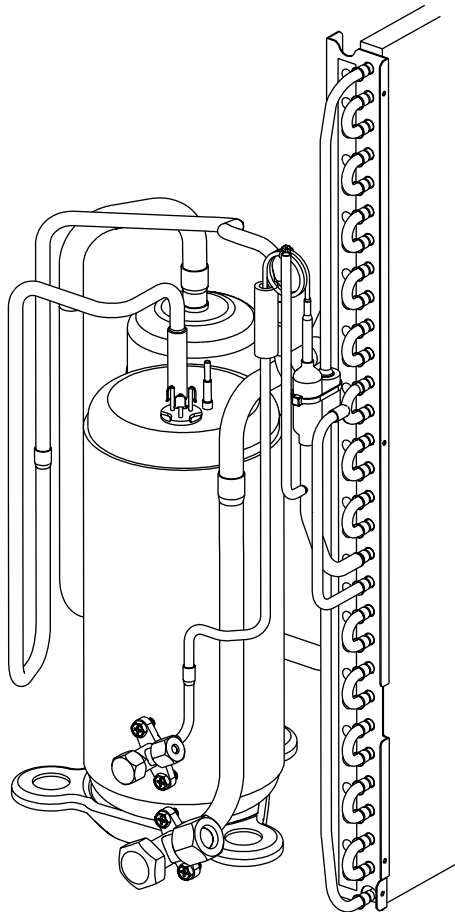
Models :
ARY18FUAL
ARY18UUAL



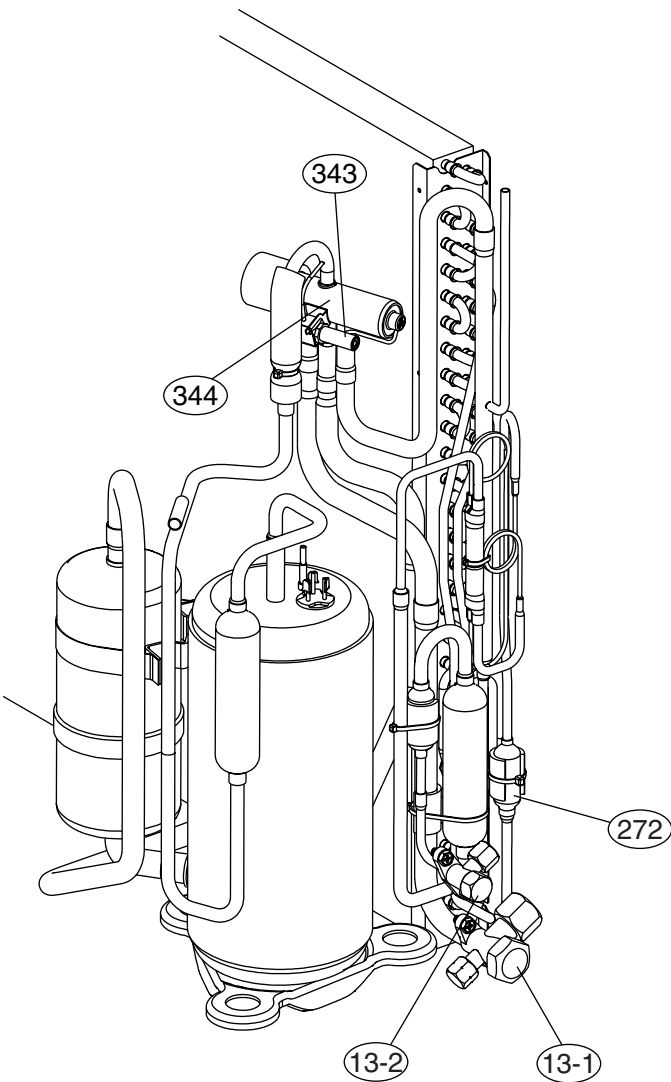
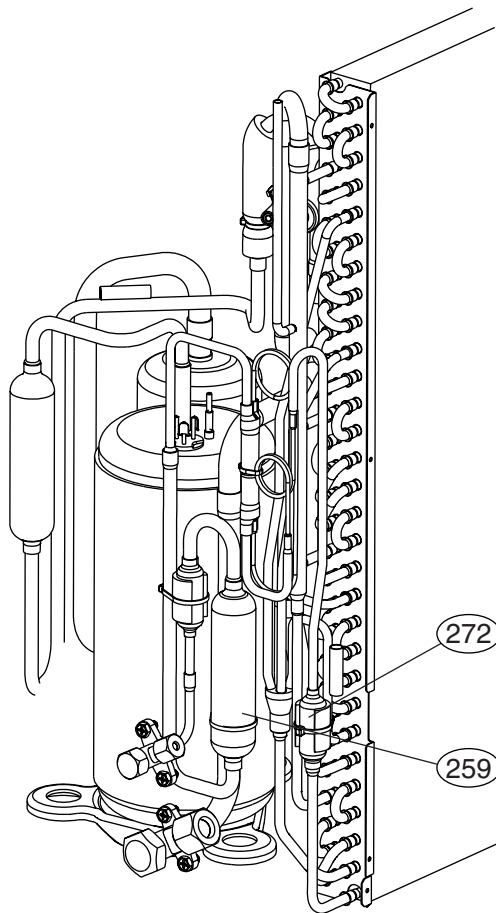
Models :
 AOY18FNDN
 AOY18UNDNL



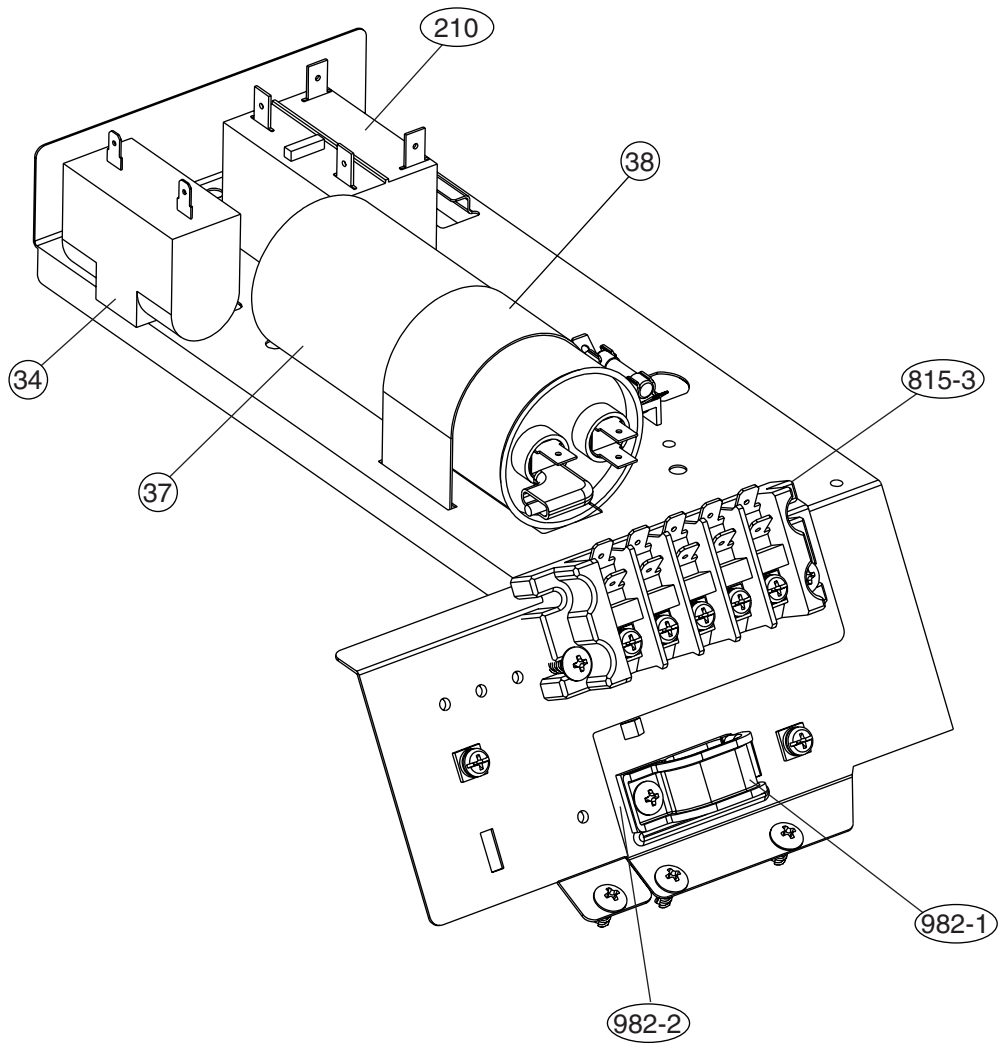
Model : AOY18FNDN



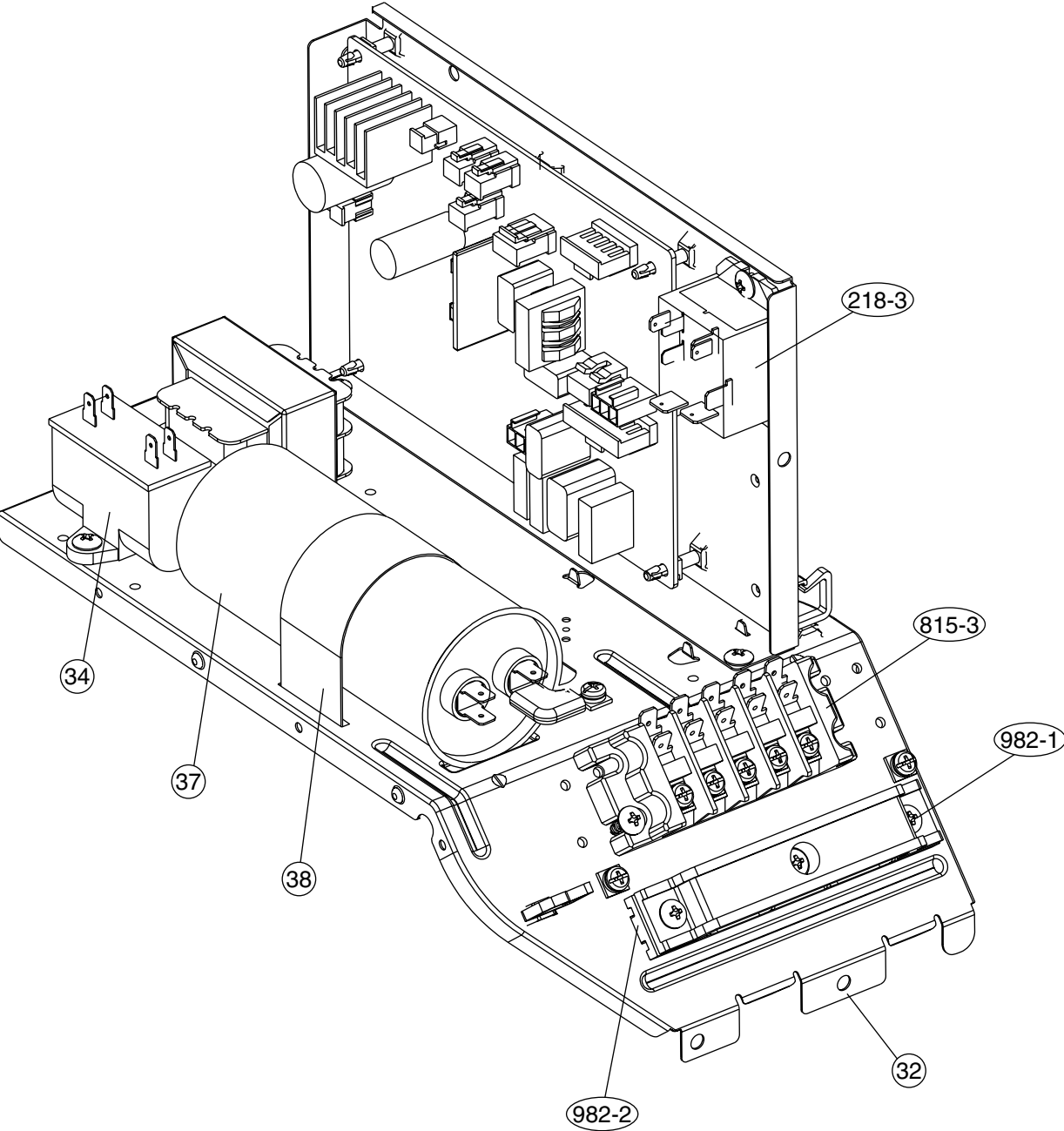
Model : AOY18UNDNL



Model : AOY18FNDN



Model : AOY18UNDNL



PARTS LIST

INDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		ARY18FUAL	ARY18UUAL	
34	Capacitor (Fan Motor)	9900089160	9900089160	
56	Sirocco Fan Assy	9358621004	9358621004	
63	Front Panel Assy	9363723007	9363723007	
67	Rubber (Vibration - proof)	313659068604	313659068604	
74	Air Filter	9366833017	9366833017	
109	Casing Assy	9363322002	9363322002	
126	Motor Fixing Table Assy	9358591000	9358591000	
138	Panel Assy (Motor)	9363401004	9363401004	
146	Evaporator Total Assy	9364499413	9364499413	
147	Inlet Pipe (Eva.) Assy	9373034056	9373034056	
148	Coupling Pipe Assy	9373038047	9373038047	
160	Drain Pan Sub Assy	9364502069	9364502069	
161	Drain Cap	9358746004	9358746004	
164	Fan Motor Assy	9600778210	9600778210	
173	Hook Metal	9363195002	9363195002	
184-1	Thermo. Spring-A	313728262708	313728262708	
234	Thermistor Assy-Room	9703299018	9703299018	
235	Thermistor Assy-Pipe	9703297090	9703297090	
236	Controller PCB Assy	9704557612	9704557544	
		(EZ-00305WSE-C)	(EZ-0030THSE-C)	
240	Remote Control Unit	9372266021	9372266014	
244	Cover (Piping)	9363327007	9363327007	
287	Cap (Power)	9352173011	9352173011	
338	Motor Fixture	9358594001	9358594001	
380	Locking Spacer	313209391403	313209391403	
381-4	Spacer	0600118075	0600118075	
464	Cover (Cabinet)	9363400007	9363400007	
514	Control Box Cover	9363201000	9363201000	
587	Support Plate (Eva.)	9363404005	9363404005	
588-1	Bracket Eva. R	9363199000	9363199000	
588-2	Bracket Eva. L	9363198003	9363198003	
625	Cord Bushing	9359240006	9359240006	
734	Panel Top	9363504002	9363504002	
761	Side Panel-R Assy	9363507003	9363507003	
762	Side Panel-L Assy	9363505009	9363505009	
815-1	Terminal 6P	9900016036	9900016036	
815-2	Terminal 3P	9703345012	9703345012	
875	Power Supply PCB Assy	9704561152	9704561084	
991	Bushing	9364788005	9364788005	
992	One Touch Bush	9374407019	9374407019	

When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

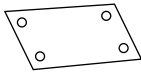
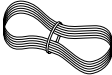
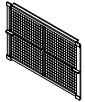
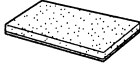
OUTDOOR UNIT

Ref. No.	Description	Part No.	Ord. Q' ty
		AOY18FNDN	
2	Fan Guard	9371187013	
4	Emblem-Rear	9351355005	
5	Front Panel	9371924014	
7	Cover (Switch) Assy	9366398004	
9	Side Panel-R	9371927015	
12	Base Assy	9371920054	
13-1	3-Way Valve Assy	9314674013	
13-2	2-Way Valve Assy	9314681011	
16	Condenser Assy	9314473012	
29	Separate Wall	9371933016	
32	Control Box	9371935010	
34	Capacitor, DS451355	9900089108	
37	Capacitor (Running)	9307588174	
38	Clamp Metal (Capacitor)	9351770013	
39	Propeller Fan Assy	9314812019	
41	Motor, Induction	9602277018	
45-1	Motor Bracket Top	9371931012	
45-2	Motor Bracket Center	9371930015	
45-3	Motor Bracket Bottom	9371932019	
46	Compressor Assy	9372558027	
55	Special Nut M8	9355091008	
64	Side Panel-L	9371926018	
85	Valve Plate	9371928012	
210	Relay	9900074012	
527	Protective Net	9371934013	
734	Top Panel	9371925011	
815-3	Terminal-5P	9900203023	
982-1	Double Cord Clamp A	9359822011	
982-2	Double Cord Clamp B	9359823018	
---	Outdoor Thermostat	9352553004	
---	Wire Assy (Comp.)	9314792007	
---	Special Nut M5	9300301015	
---	Strainer	9369287008	
---	Capillary Assy	9372197066	
---	Fuse Holder	0501456016	

Ref. No.	Description	Part No.	Ord. Q' ty
		AOY18UNDNL	
2	Fan Guard	9371187013	
4	Emblem-Rear	9351355005	
5	Front Panel	9371924014	
7	Cover (Switch) Assy	9366398004	
9	Side Panel-R	9371927015	
12	Base Assy	9371920054	
13-1	3-Way Valve Assy	9314674013	
13-2	2-Way Valve Assy	9314681011	
16	Condenser Assy	9314475016	
29	Separate Wall	9371933023	
32	Control Box	9371935010	
34	Capacitor, DS451355XPQB	9900089108	
37	Capacitor (Running)	9307588174	
38	Clamp Metal (Capacitor)	9351770013	
39	Propeller Fan Assy	9314812019	
41	Motor, Induction	9602277018	
45-1	Motor Bracket Top	9371931012	
45-2	Motor Bracket Center	9371930015	
45-3	Motor Bracket Bottom	9371932019	
46	Compressor Assy	9372558027	
55	Special Nut M8	9355091008	
64	Side Panel-L	9371926018	
85	Valve Plate	9371928012	
218-3	Relay	9900264017	
259	Muffler	9372369012	
272	Strainer	9369287008	
343	Solenoid	9900165024	
344	4-Way Valve	9970036019	
527	Protective Net	9371934013	
734	Top Panel	9371925011	
815-3	Terminal-5P	9900203023	
982-1	Double Cord Clamp A	9359822011	
982-2	Double Cord Clamp B	9359823018	
---	BR Sheet	9363708059	
---	Transformer, Power	9900039011	
---	Heat Exchanger Thermistor	9900043032	
---	Discharge Temp. Thermistor	9900038014	
---	Outdoor Temp. Thermistor	9900037031	
---	Thermistor Spring-A	313728262708	
---	Wire Assy (Comp.)	9314792007	
---	Control Box-B	9371936017	
---	Special Nut M5	9300301015	
---	Controller PCB Assy	9704299055	
---	Receiver Tank Sub Assy	9372320013	
---	Capillary Assy	9372197127	
---	Fuse	0600222512	

STANDARD ACCESSORIES

INDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application	Part No.
Installation template 	1	For positioning the indoor unit	9364225005
Hanger 	4	For suspending the indoor unit from ceiling	9363195002
Tapping screw (φ 4 x 10) 	8	For installing the hanger	0700009037
Special nut A (large flange) 	4	For suspending the indoor unit from ceiling	313005446653
Special nut B (small flange) 	4		313005446759
Coupler heat insulation (large) 	1	For indoor side pipe joint (large pipe)	9350716029
Coupler heat insulation (small) 	1	For indoor side pipe joint (small pipe)	9352766015
Binder 	(Small) 1	For remote controller and remote controller cord binding	313361275805
	(Large) 4	For fixing the coupler heat insulation	312300787605
Remote controller 	1	Cooling model	9372266021
		Heat & Cooling model	9372266014
Remote controller cord 	1	For connecting the remote controller	9372714010
Tapping screw (φ 4 x 16) 	2	For installing the remote controller	0700181108
Filter 	3	12000, 14000, and 18000 BTU/h models	9366833017
Drain hose insulation 	1	Insulates the drain hose and vinyl hose connection	313806217708

OUTDOOR UNIT ACCESSORIES (Cooling and heating model)

Name and Shape	Q'ty	Application	Part No.
Drain pipe packing 	1	For outdoor unit drain piping work [Heat & Cool model (Reverse cycle) only]	9301143003
Drain pipe 	1		9301102000
Cap (drain) 	1		313166024302

OPTIONS

- Remote sensor : UTD-RS100 (P/N 9072619004)

