

SPLIT TYPE
AIR CONDITIONER
SLIM DUCT TYPE (50Hz)

SERVICE MANUAL



Indoor unit	Outdoor unit
ARYG12LLTB	AOYG12LALL
ARYG14LLTB	AOYG14LALL
ARYG18LLTB	AOYG18LALL

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Inverter cooling & heating		
INDOOR UNIT		ARYG12LLTB	ARYG14LLTB	ARYG18LLTB
OUTDOOR UNIT		AOYG12LALL	AOYG14LALL	AOYG18LALL
COOLING CAPACITY		3.50 kW	4.30 kW	5.20 kW
HEATING CAPACITY		4.10 kW	5.00 kW	6.00 kW
POWER SOURCE		230 V, 50 Hz		
RUNNING CURRENT	Cooling	4.8 A	6.1 A	7.2 A
	Heating	5.1 A	6.1 A	7.4 A
INPUT WATTS	Cooling	1.05 kW	1.33 kW	1.62 kW
	Heating	1.11 kW	1.34 kW	1.66 kW
E.E.R.	Cooling	3.33 kW/kW	3.21 kW/kW	3.21 kW/kW
COP	Heating	3.69 kW/kW	3.71 kW/kW	3.61 kW/kW
MOISTURE REMOVAL		1.3 L/hr	1.5 L/hr	2.0 L/hr
AIR CIRCULATION (HIGH)		650 m3/hr	800 m3/hr	940 m3/hr
MAXIMUM CURRENT	Cooling	7.5 A	9.0 A	9.0 A
	Heating	10.0 A	12.5 A	12.5 A

FAN MOTOR

INDOOR UNIT, Discrimination		MFG-14WV		
INDOOR UNIT	High	1,340 r.p.m.	1,560 r.p.m.	1,380 r.p.m.
	Medium	1,240 r.p.m.	1,400 r.p.m.	1,300 r.p.m.
	Low	1,140 r.p.m.	1,240 r.p.m.	1,220 r.p.m.
	Quiet	1,030 r.p.m.	1,030 r.p.m.	1,140 r.p.m.
OUTDOOR UNIT, Discrimination		MFE-63NOM		
OUTDOOR UNIT (cool)		770 r.p.m.	820 r.p.m.	860 r.p.m.
OUTDOOR UNIT (heat)		700 r.p.m.	750 r.p.m.	820 r.p.m.

NOISE LEVEL

INDOOR UNIT (cool)	High	29 dB	32 dB	32 dB
	Medium	28 dB	30 dB	30 dB
	Low	26 dB	28 dB	29 dB
	Quiet	25 dB	26 dB	27 dB
INDOOR UNIT (heat)	High	29 dB	32 dB	32 dB
	Medium	28 dB	30 dB	30 dB
	Low	26 dB	28 dB	29 dB
	Quiet	24 dB	25 dB	27 dB
OUTDOOR UNIT (cool)		47 dB	49 dB	50 dB
OUTDOOR UNIT (heat)		48 dB	49 dB	50 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR		DA130A1F-25NA		
WEIGHT (with oil)		9.6 kg		
REFRIGERANT TYPE		R410A		
PRECHARGED		1,150 g	1,250 g	1,250 g
FULL CHARGE	Pipe length 15 m	1,150 g	1,250 g	1,250 g
	20 m	1,250 g	1,350 g	1,350 g
	25 m	1,350 g	1,450 g	1,450 g
ADDITIONAL CHARGE		20 g/m		
MAXIMUM PIPING HEIGHT		15 m		

DIMENSIONS

INDOOR UNIT H x W x D	198 x 700 x 620 mm	198 x 900 x 620
OUTDOOR UNIT H x W x D	578 x 790 x 300 mm	

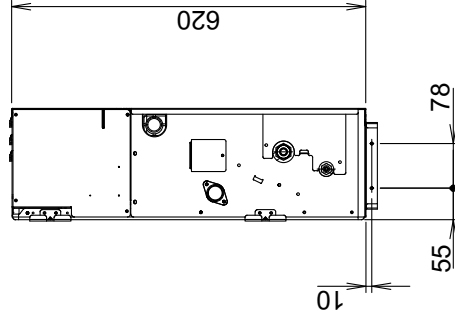
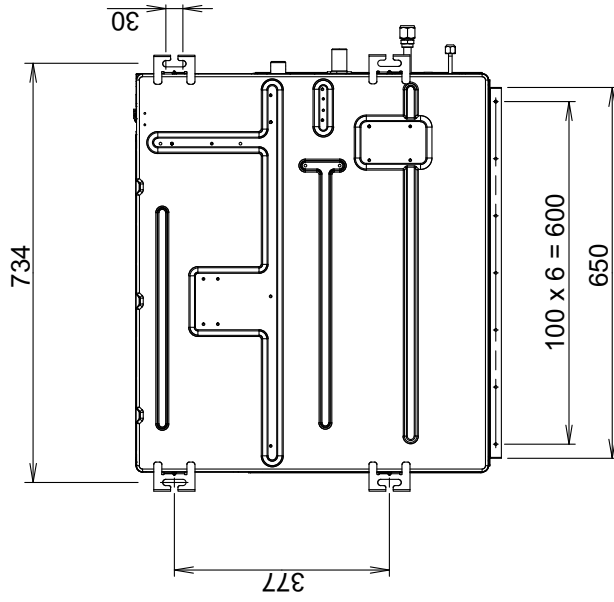
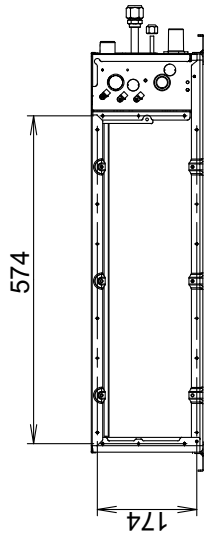
WEIGHT

INDOOR UNIT Net / Shipping	19 kg / 26 kg	23 / 30 kg
OUTDOOR UNIT Net / Shipping	40 kg / 44 kg	

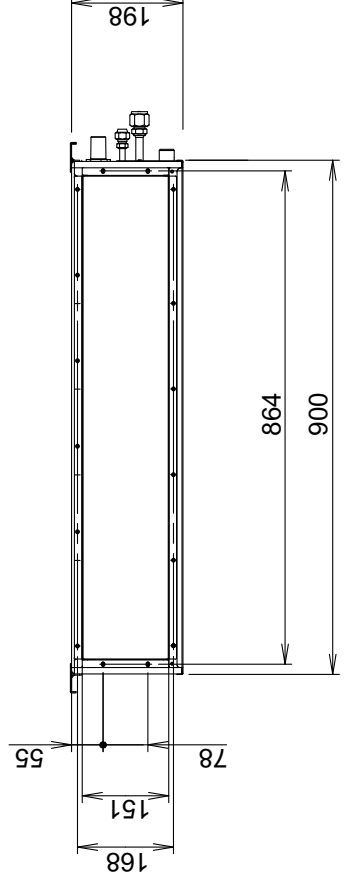
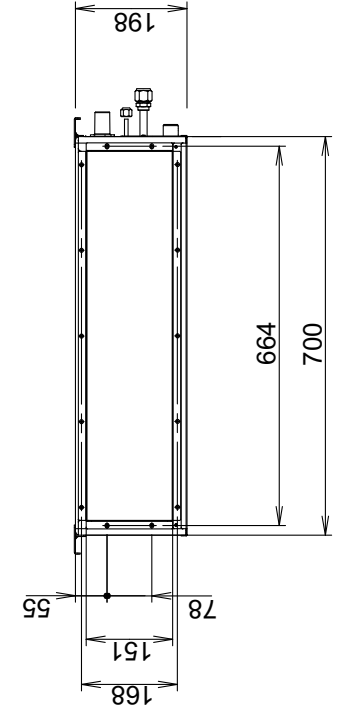
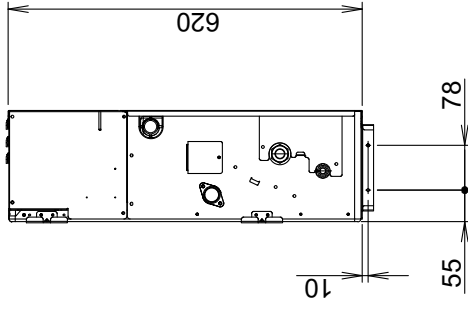
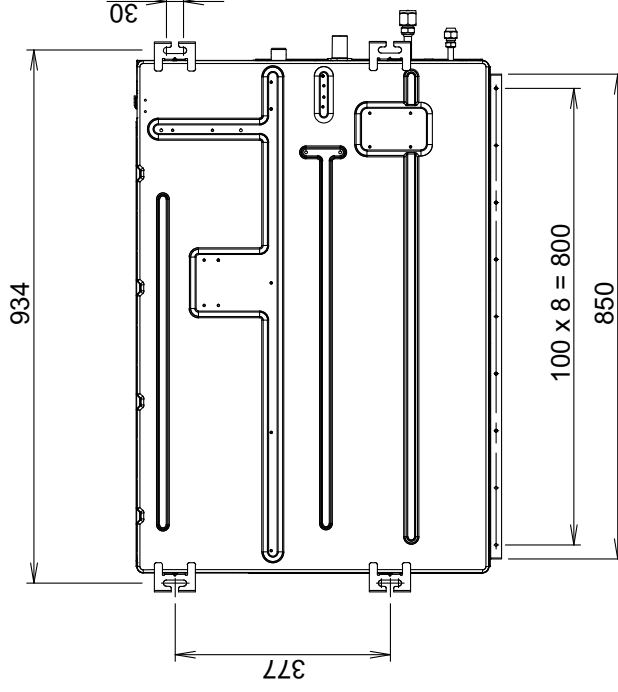
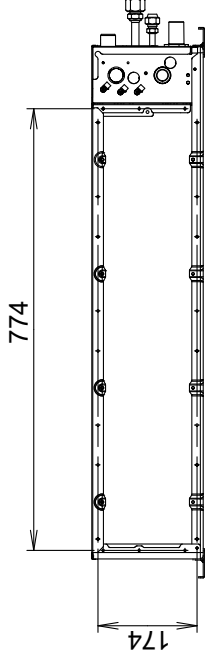
DIMENSIONS

Unit : mm

INDOOR UNIT
ARYG12LLTB
ARYG14LLTB

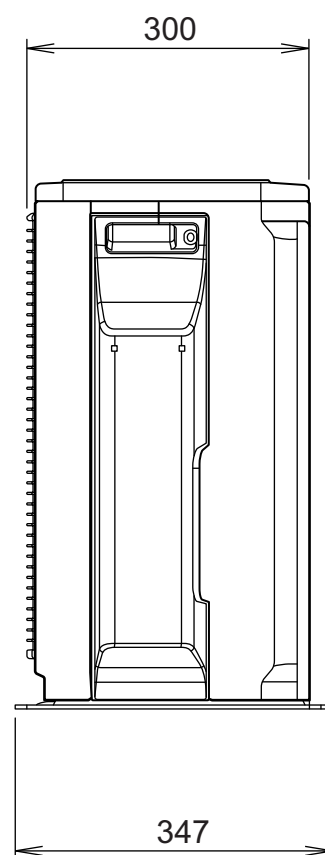
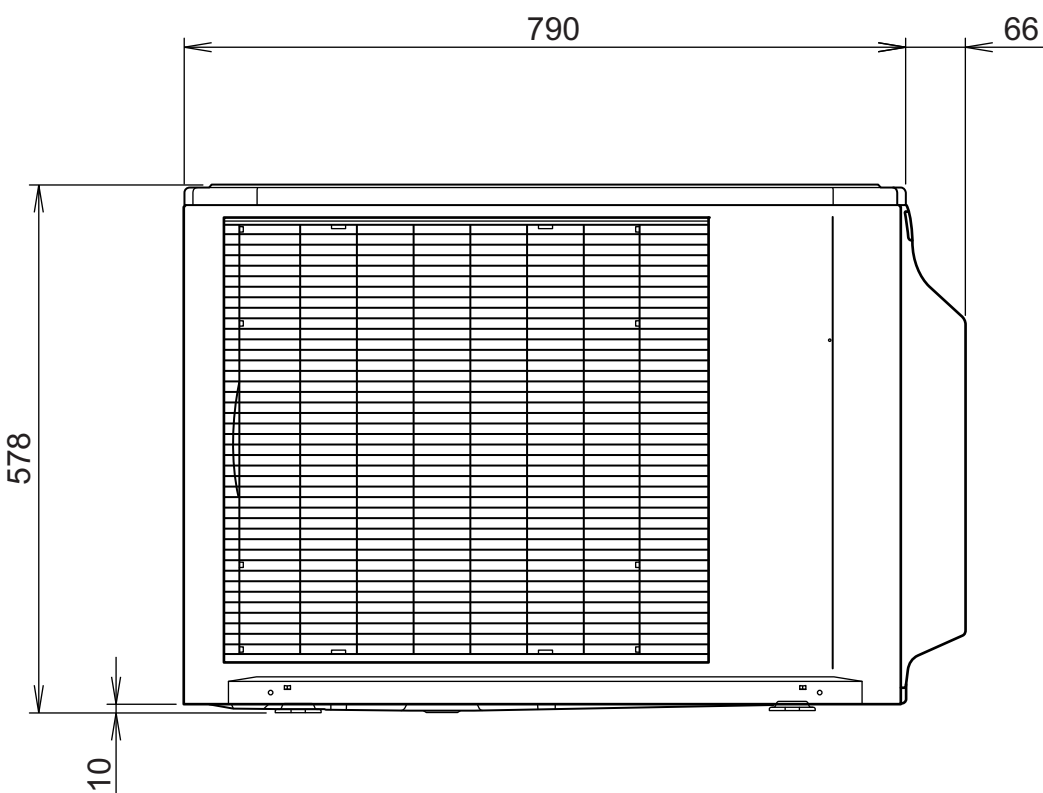
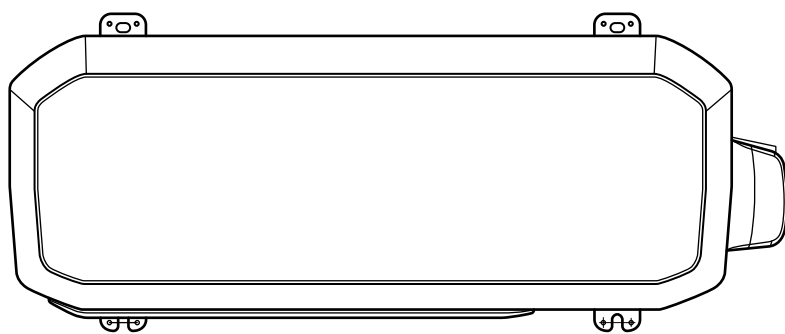


INDOOR UNIT
ARYG18LLTB

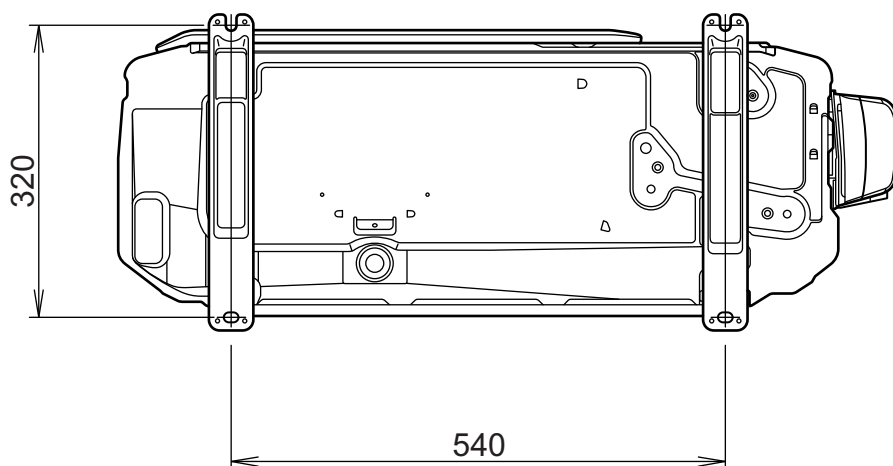


Unit : mm

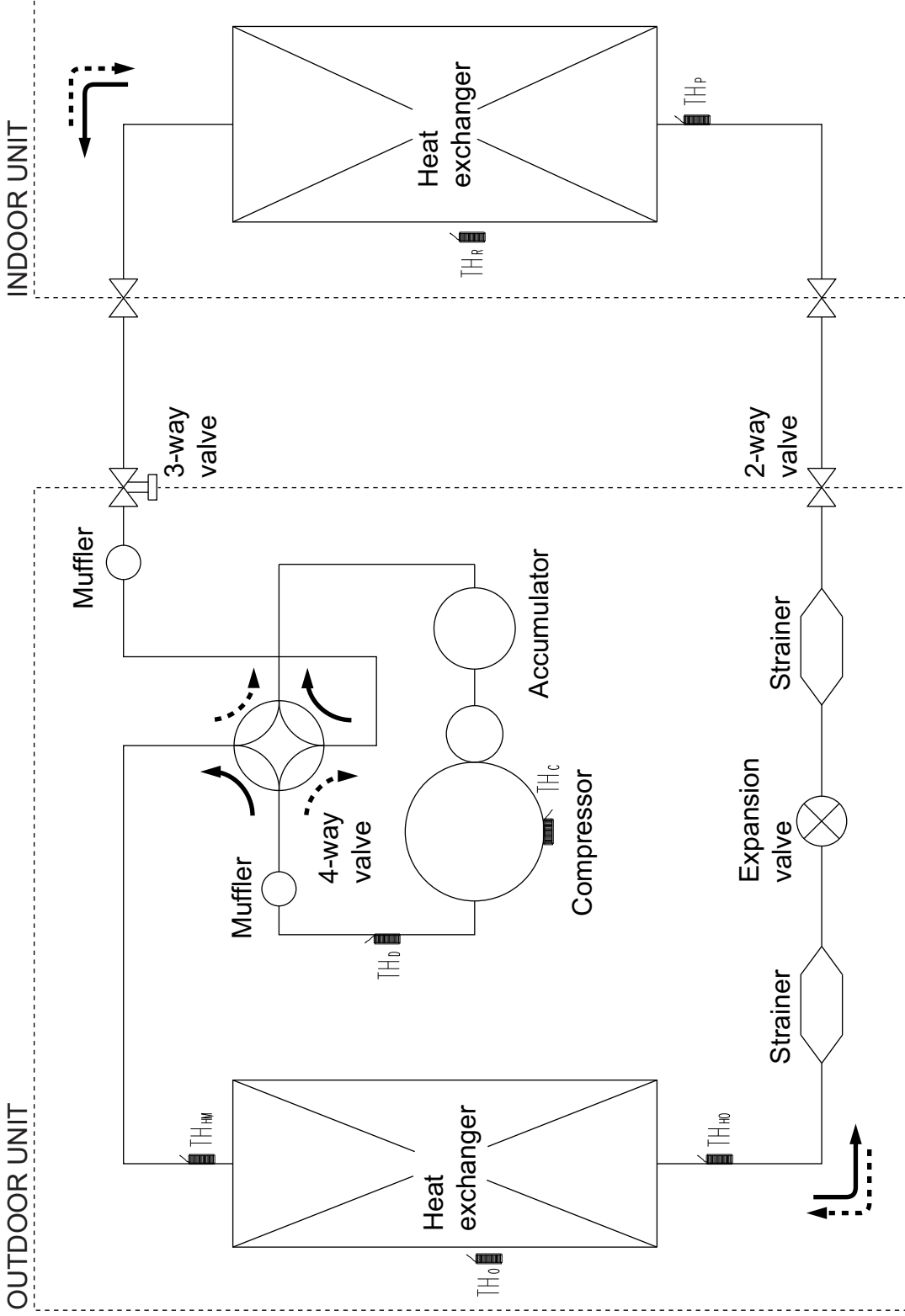
OUTDOOR UNIT



Air flow



REFRIGERANT SYSTEM DIAGRAM

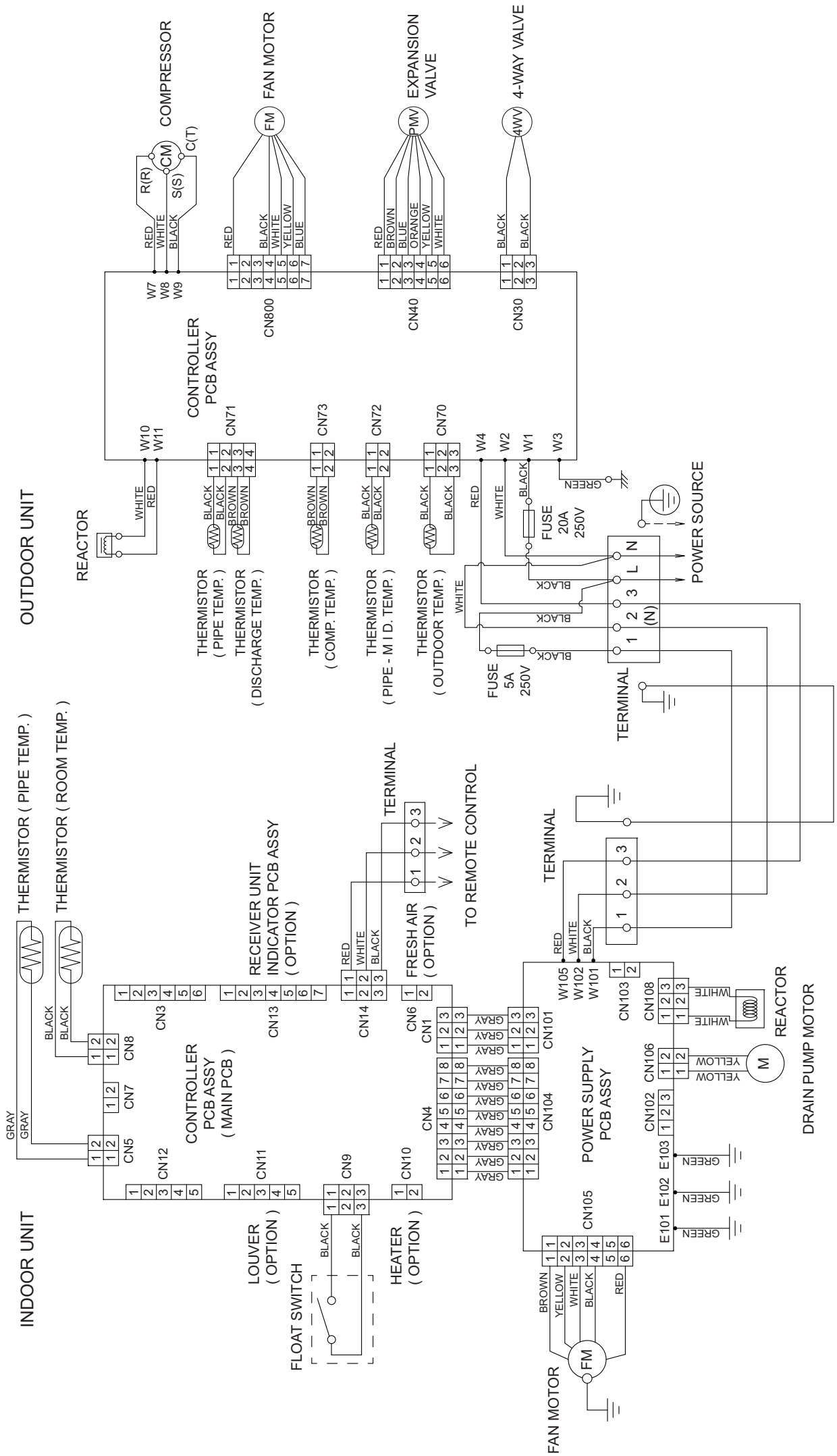


<Refrigerant direction>
 ———> Cooling
 - - - -> Heating

<Refrigerant pipe diameter>
 12 Liquid : 1/4" (6.35 mm)
 Gas : 3/8" (9.52 mm)
 14, 18 Liquid : 1/4" (6.35 mm)
 Gas : 1/2" (12.70 mm)

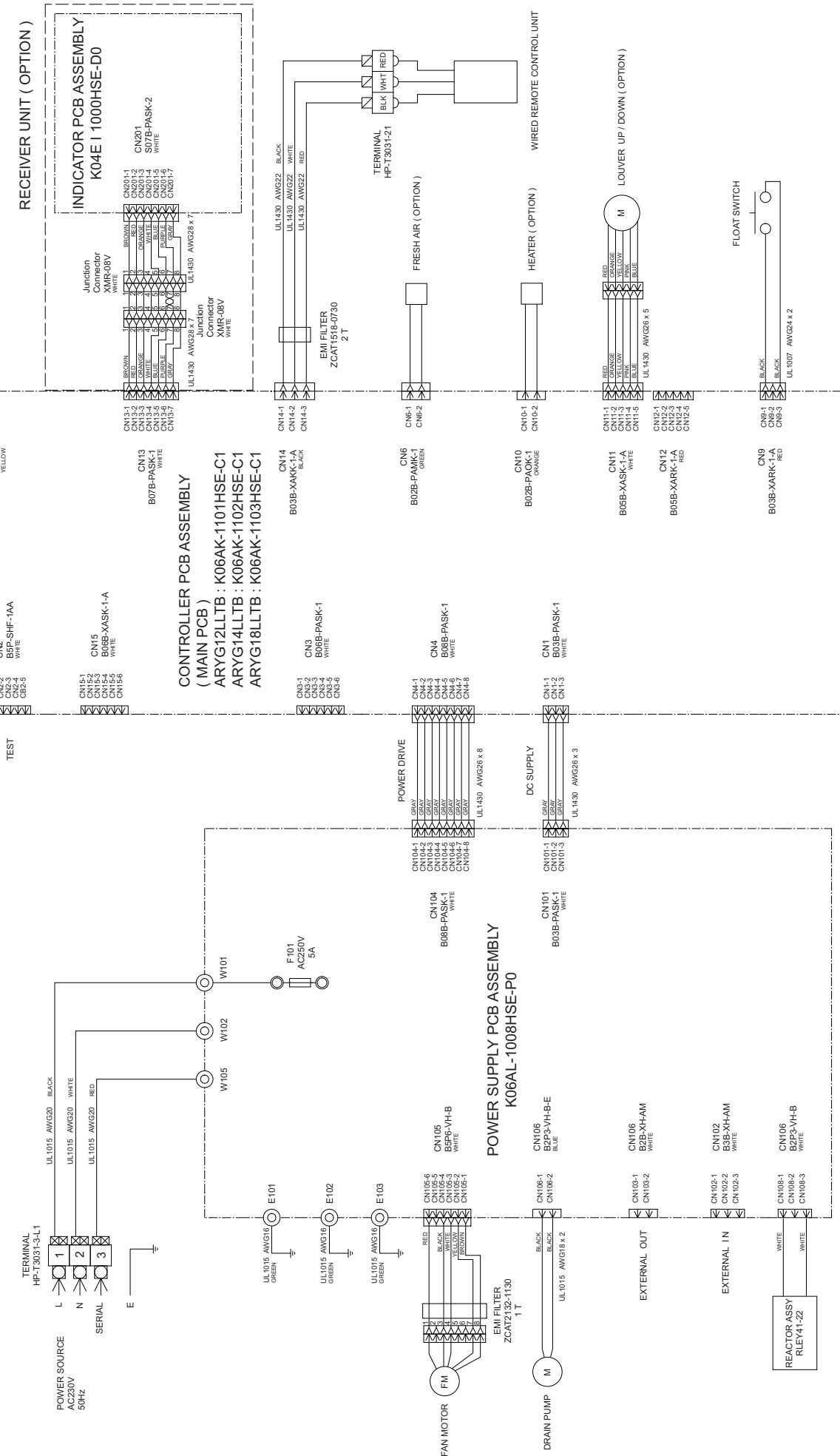
TH_c : Compressor thermistor
 TH_d : Discharge pipe thermistor
 TH_m : Heat exchanger thermistor (Middle)
 TH_o : Heat exchanger thermistor (Out)
 TH_o : Outdoor thermistor
 TH_p : Pipe thermistor
 TH_r : Room thermistor

CIRCUIT DIAGRAM

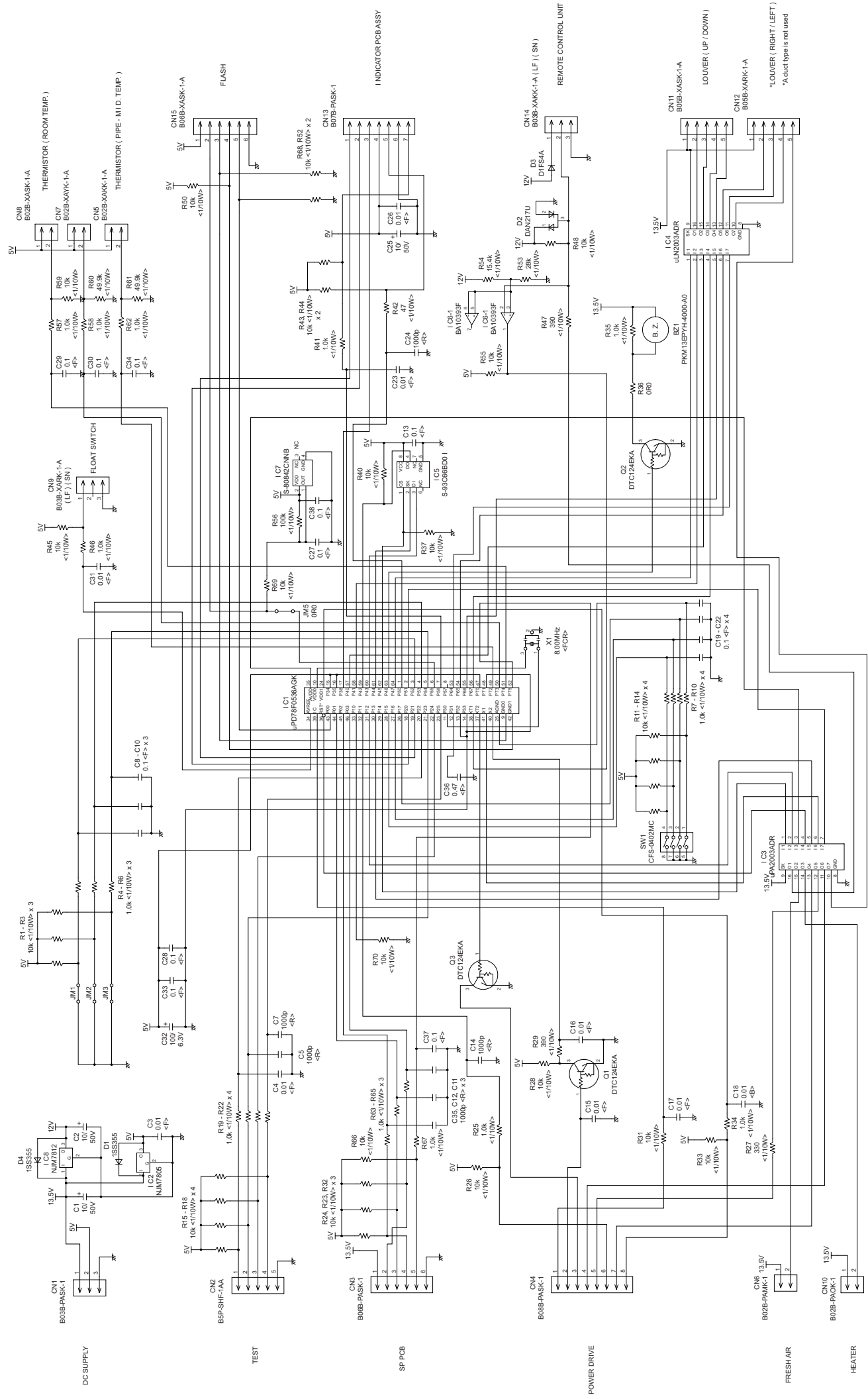


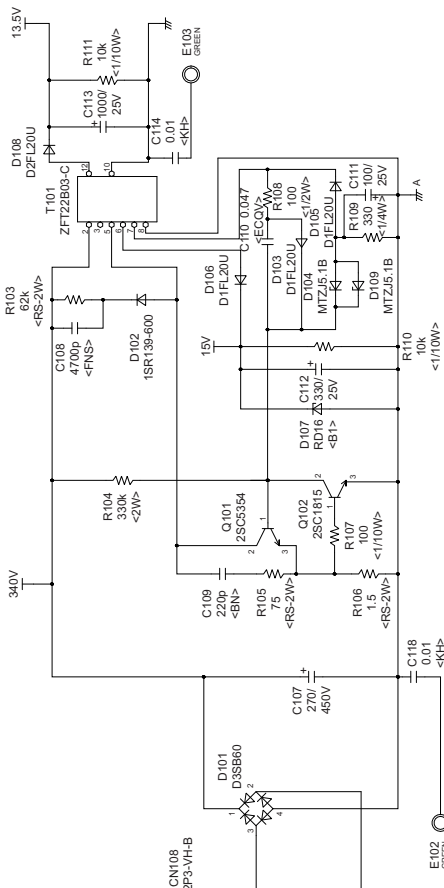
INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT
 ARYG12LLTB : EZ-01110HSE
 ARYG14LLTB : EZ-01111HSE
 ARYG18LLTB : EZ-01112HSE

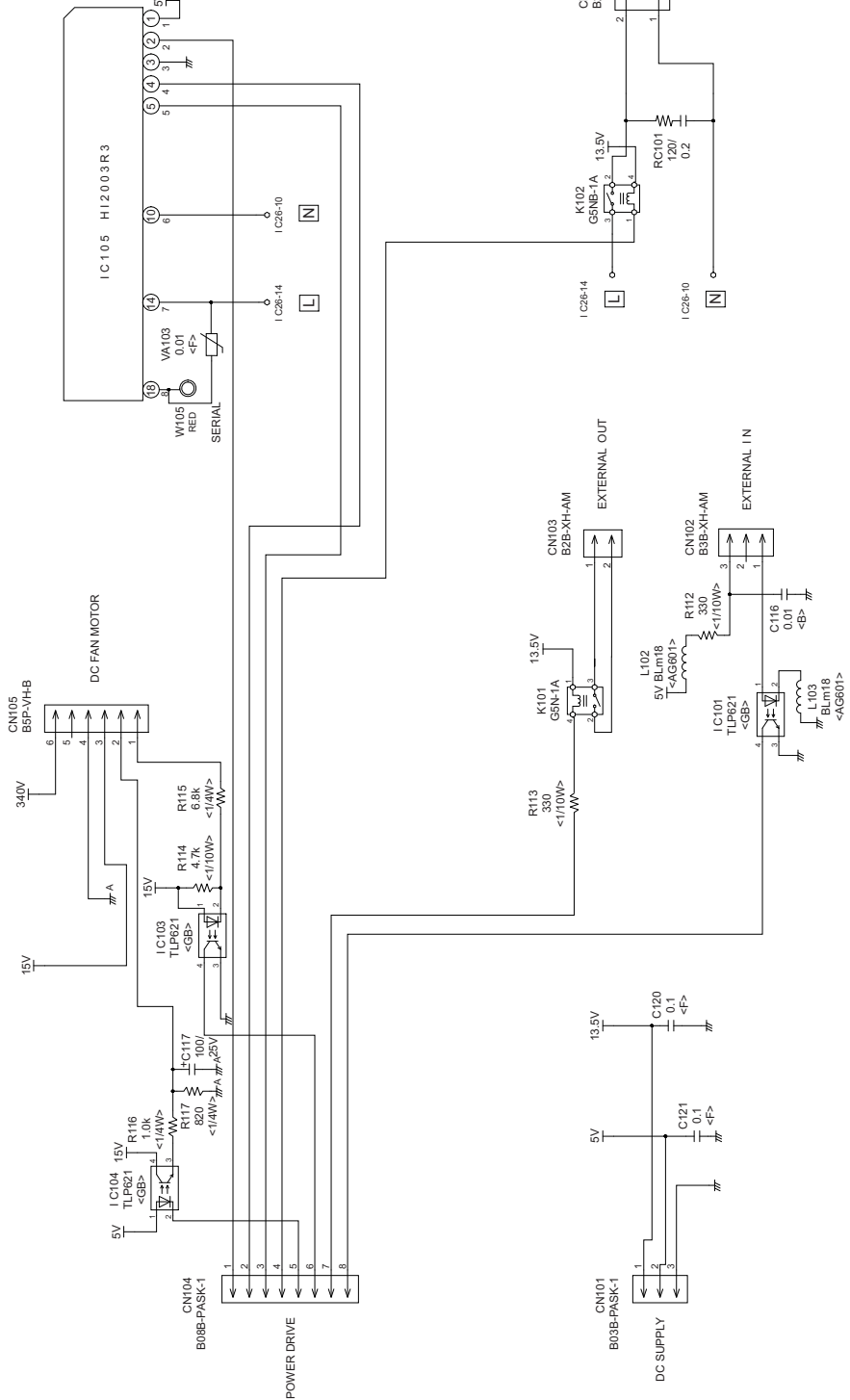


INDOOR UNIT
 CONTROLLER PCB ASSEMBLY (MAIN PCB)
 ARYG12LLTB : K06AK-1101HSE-C1
 ARYG14LLTB : K06AK-1102HSE-C1
 ARYG18LLTB : K06AK-1103HSE-C1

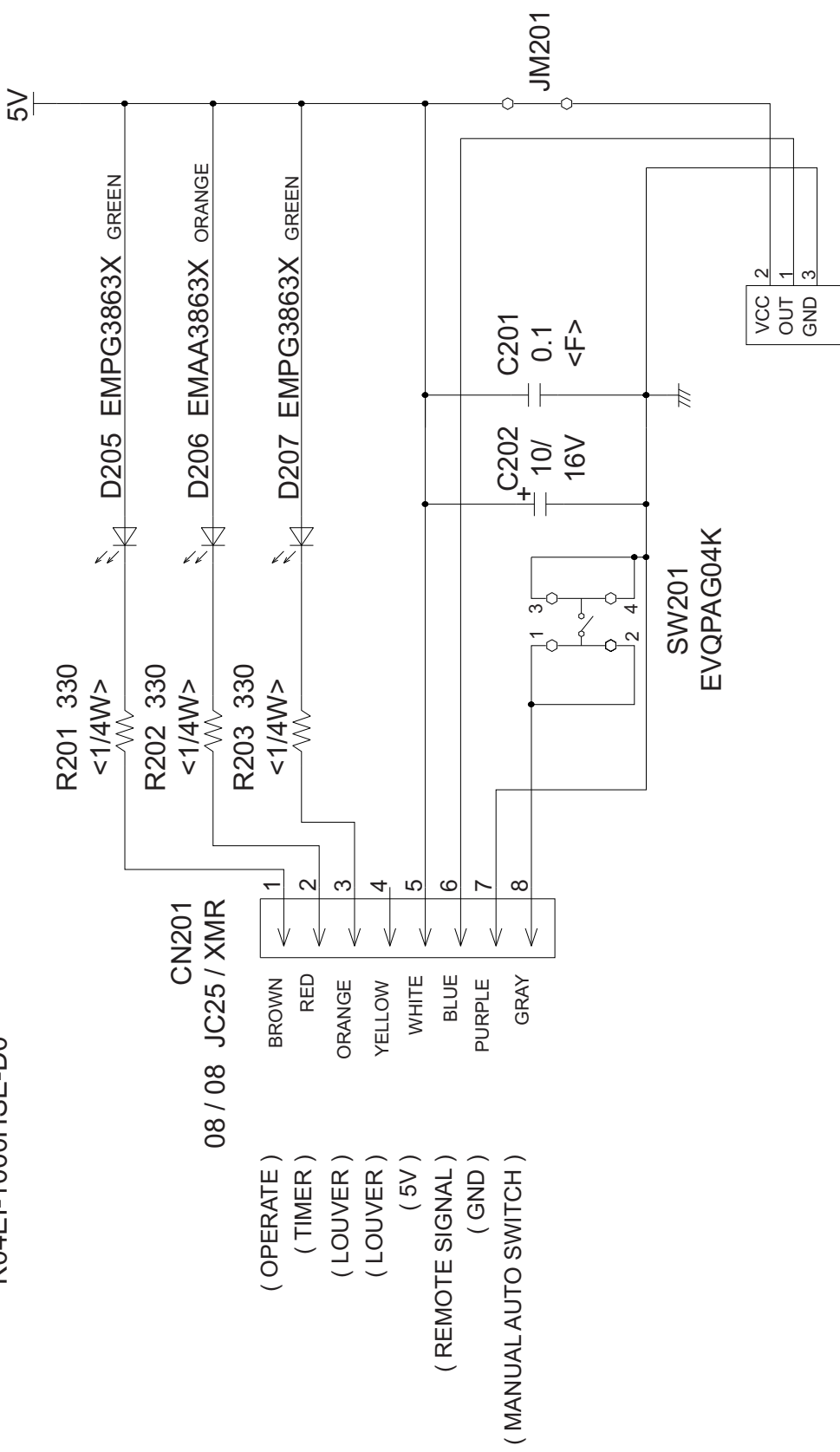




INDOOR UNIT POWER SUPPLY PCB ASSEMBLY K06AL-1008HSE-P0



INDOOR UNIT
 INDICATOR PCB ASSEMBLY (OPTION)
 K04EI-1000HSE-D0



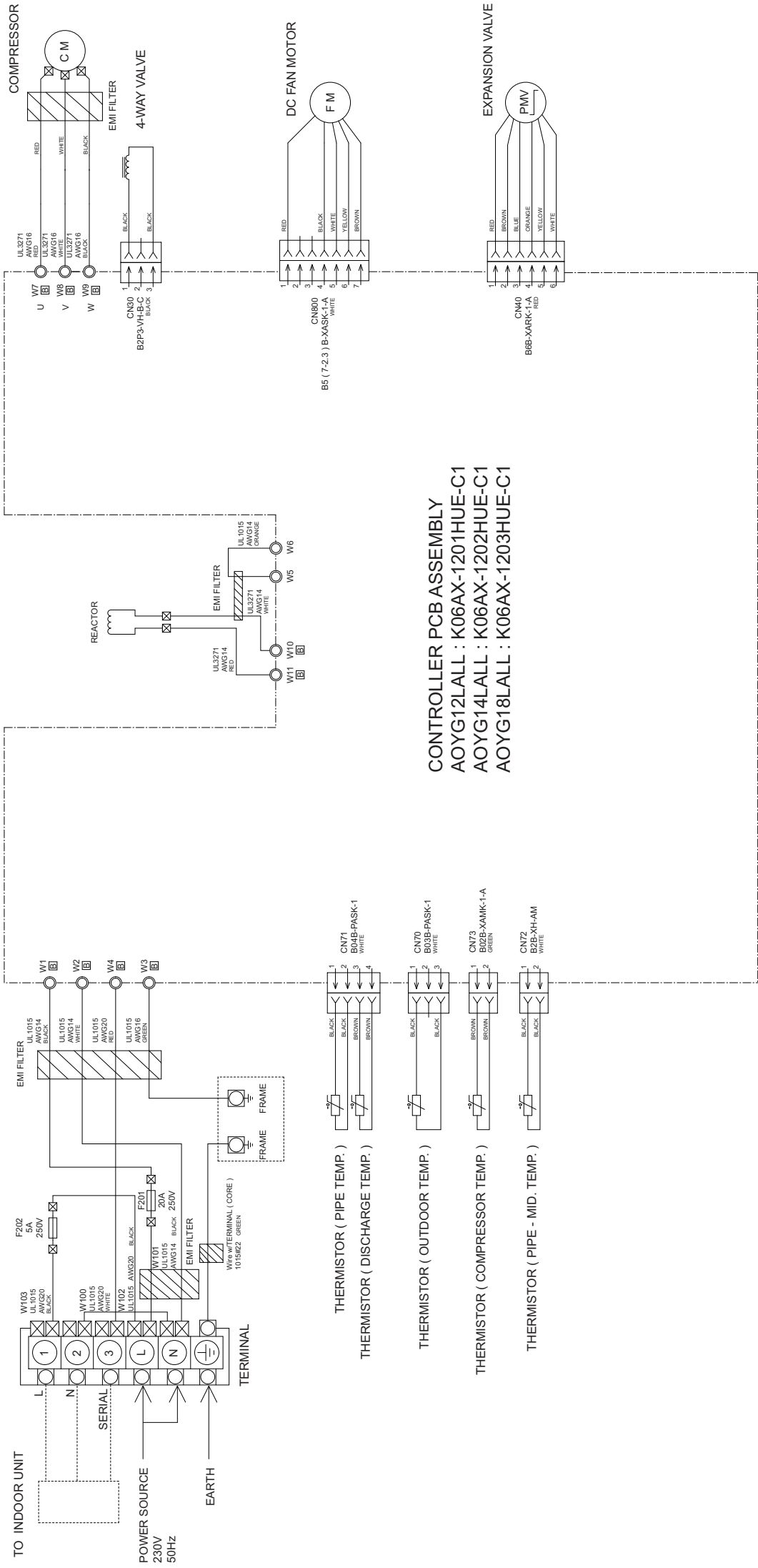
- (OPERATE)
- (TIMER)
- (LOUVER)
- (LOUVER)
- (5V)
- (REMOTE SIGNAL)
- (GND)
- (MANUAL AUTO SWITCH)

PHA201
 PIC-37143TH5

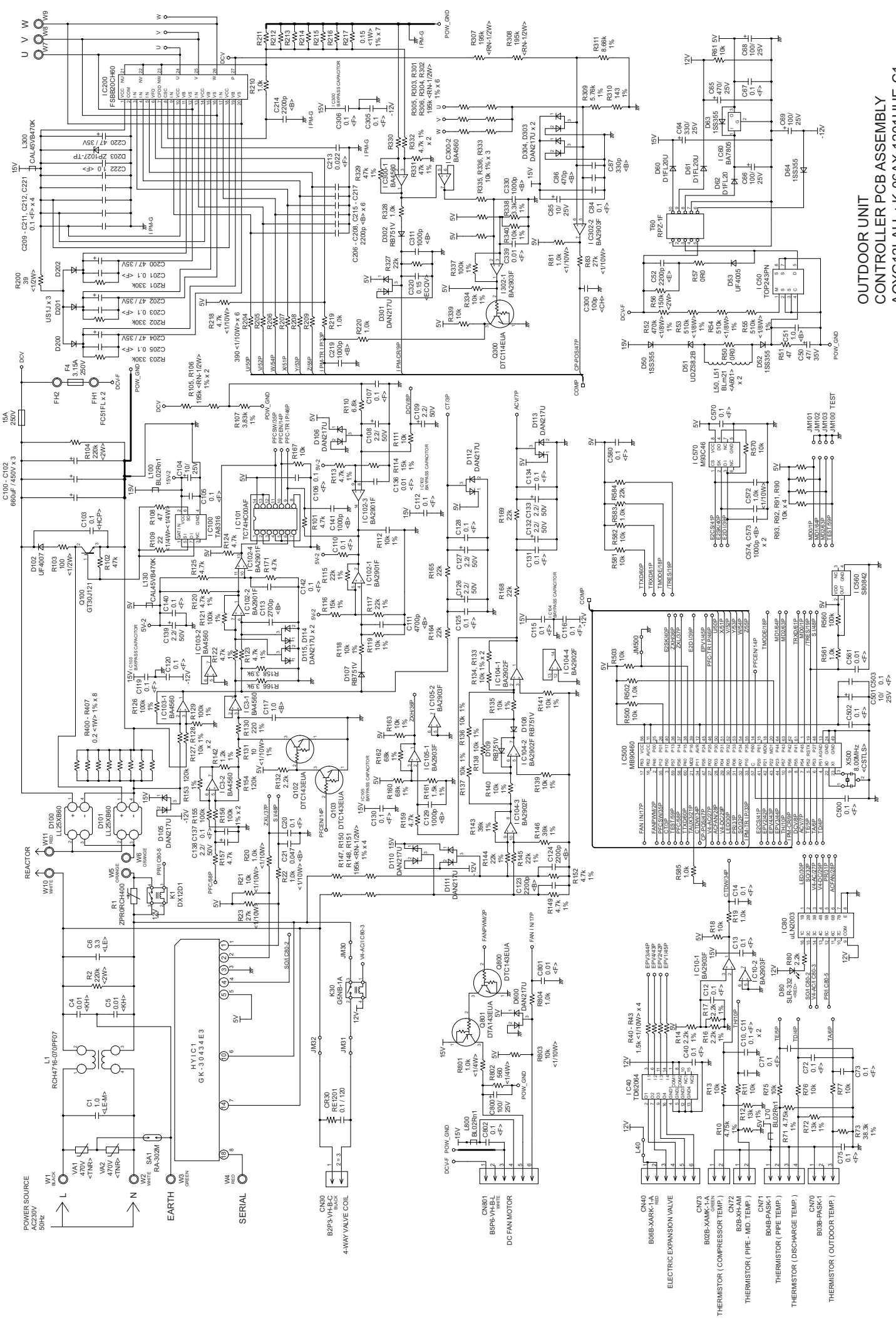
OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY

- AOYG12LALL : EZ-0121PHUE
- AOYG14LALL : EZ-0121RHUE
- AOYG18LALL : EZ-0121SHUE



CONTROLLER PCB ASSEMBLY
 AOYG12LALL : K06AX-1201HUE-C1
 AOYG14LALL : K06AX-1202HUE-C1
 AOYG18LALL : K06AX-1203HUE-C1



OUTDOOR UNIT
 CONTROLLER PCB ASSEMBLY
 AOYG12LALL : K-06AX-1201HUE-C1
 AOYG14LALL : K-06AX-1202HUE-C1
 AOYG18LALL : K-06AX-1203HUE-C1

- : 0.5s on / 0.5s off
- ◇ : 0.1s on / 0.1s off
- () : Number of flashing

ERROR DETECTION

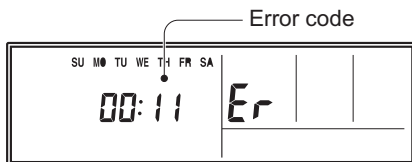
INDOOR UNIT and WIRED REMOTE CONTROL

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 type 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 running.

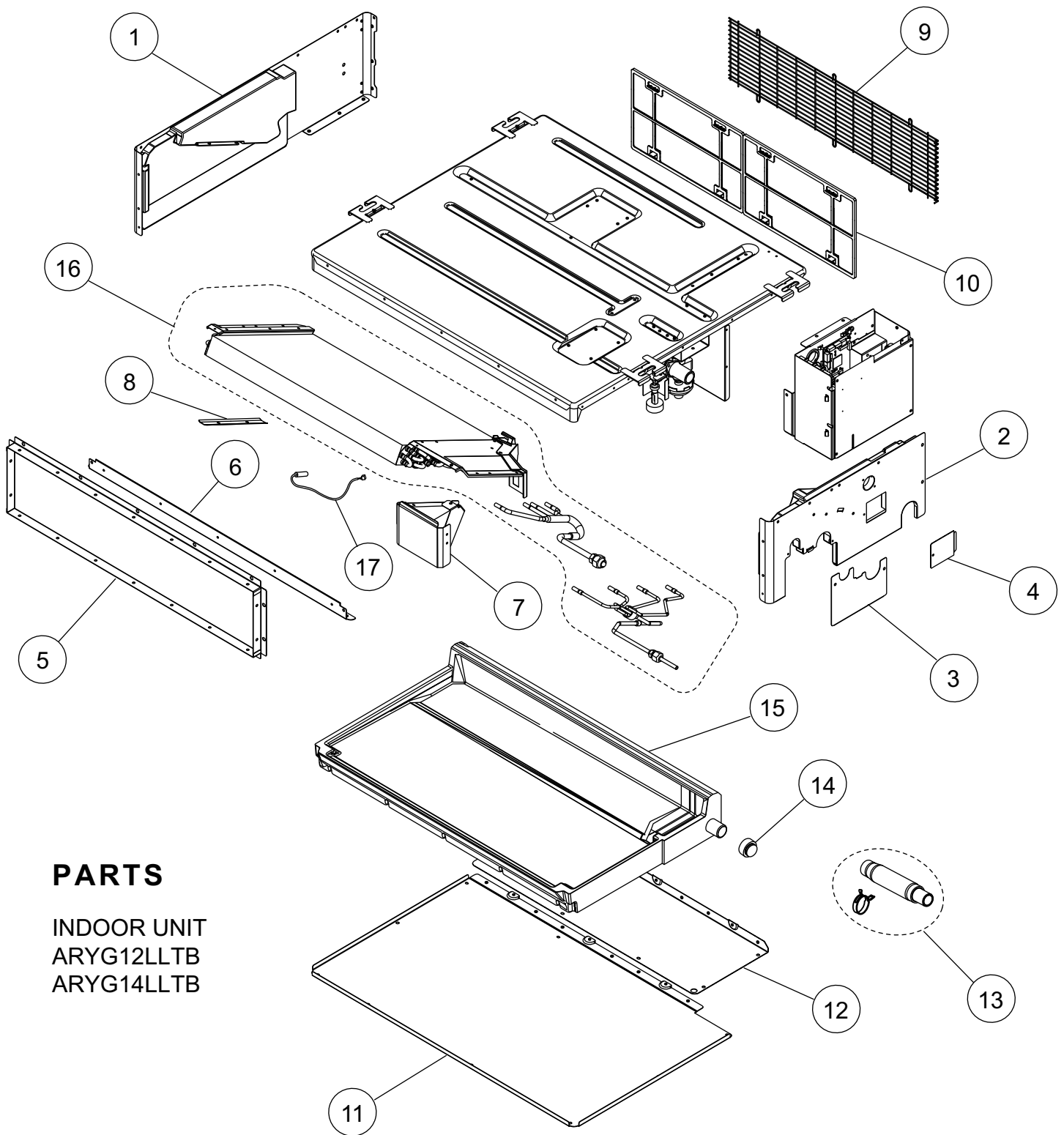
This is possible only on a wired remote control.

If an error occurs, the following display will be shown. ("Er" will appear in the set room temperature display.)



EX. Self-diagnosis

Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (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 slave 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	Inlet air 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)	●(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 (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 [Flexible Multi]

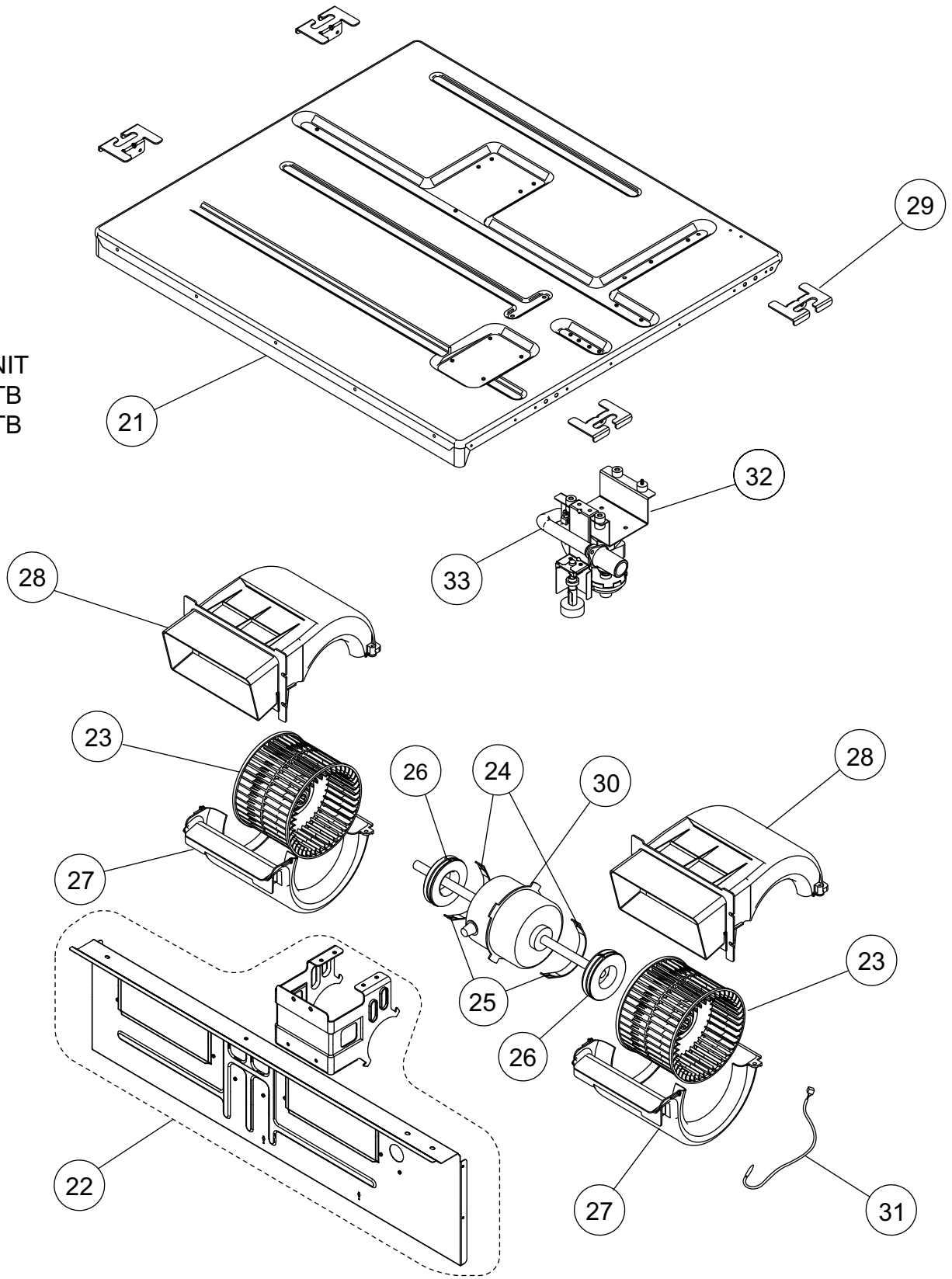


PARTS

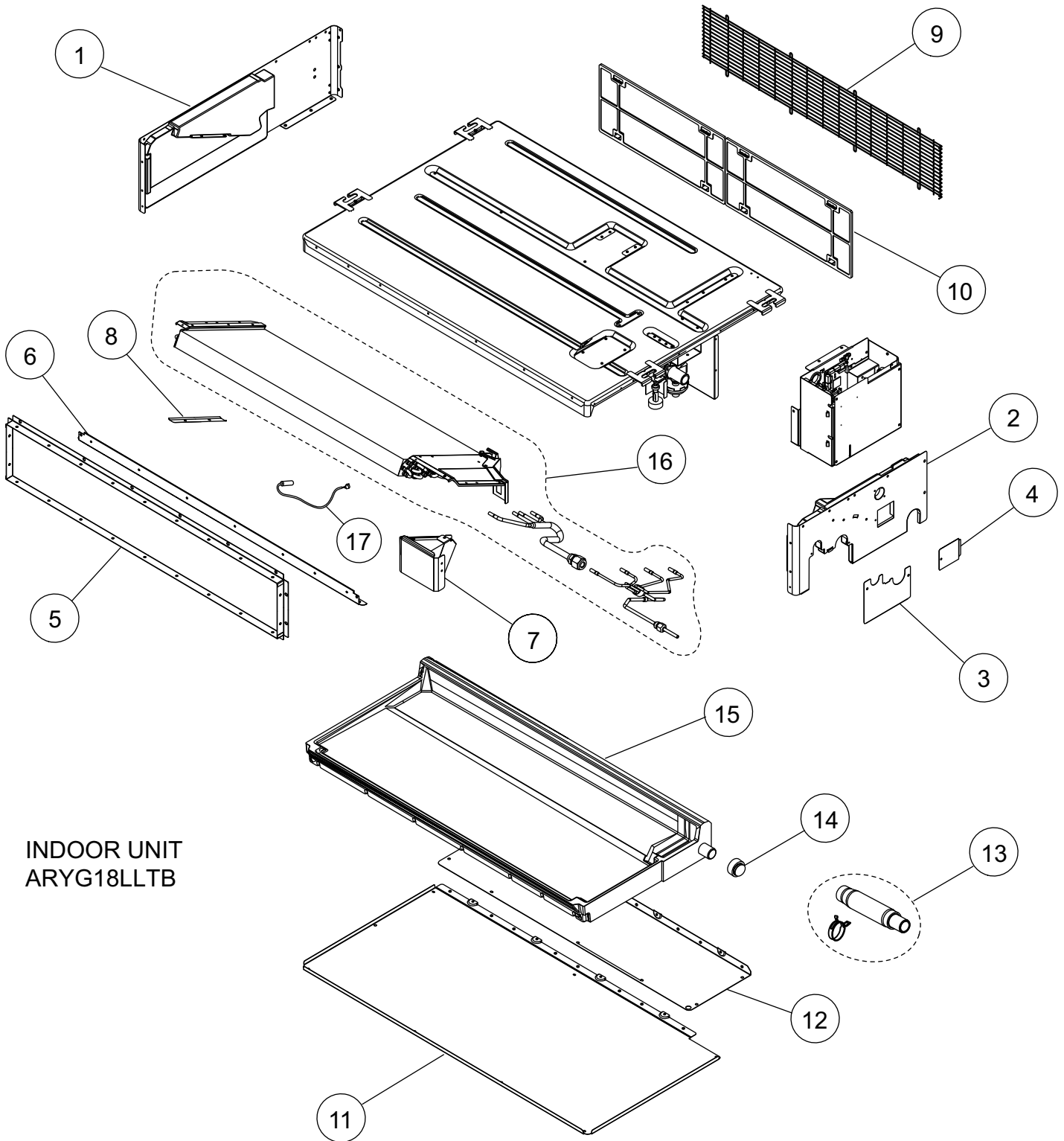
INDOOR UNIT
ARYG12LLTB
ARYG14LLTB

Ref	Description	Parts number	Ref	Description	Parts number
1	Side Panel R Sub Assy	9379906005	10	Air Filter	9379574006
2	Side Panel L Sub Assy	9379907002	11	Main Panel Sub Assy	9379902007
3	Pipe Panel Sub Assy	9379900003	12	Cabinet Panel (2 Fan)	9379596008
4	Panel (Window) Sub Assy	9379915007	13	Hose Sub Assy	9378450103
5	Outlet Frame Sub Assy	9379909006	14	Drain Cap	9358746004
6	Front Panel (2 Fan)	9379593007	15	Drain Pan Sub Assy	9379901000
7	Valve Cover Sub Assy	9379576000	16	Evaporator Sub Assy (12)	9364499581
8	Cover Pipe Sub Assy	9380033004	16	Evaporator Sub Assy (14)	9364499673
9	Fan Guard (2 Fan)	9379637008	17	Pipe Thermistor	9900623005

INDOOR UNIT
ARYG12LLTB
ARYG14LLTB



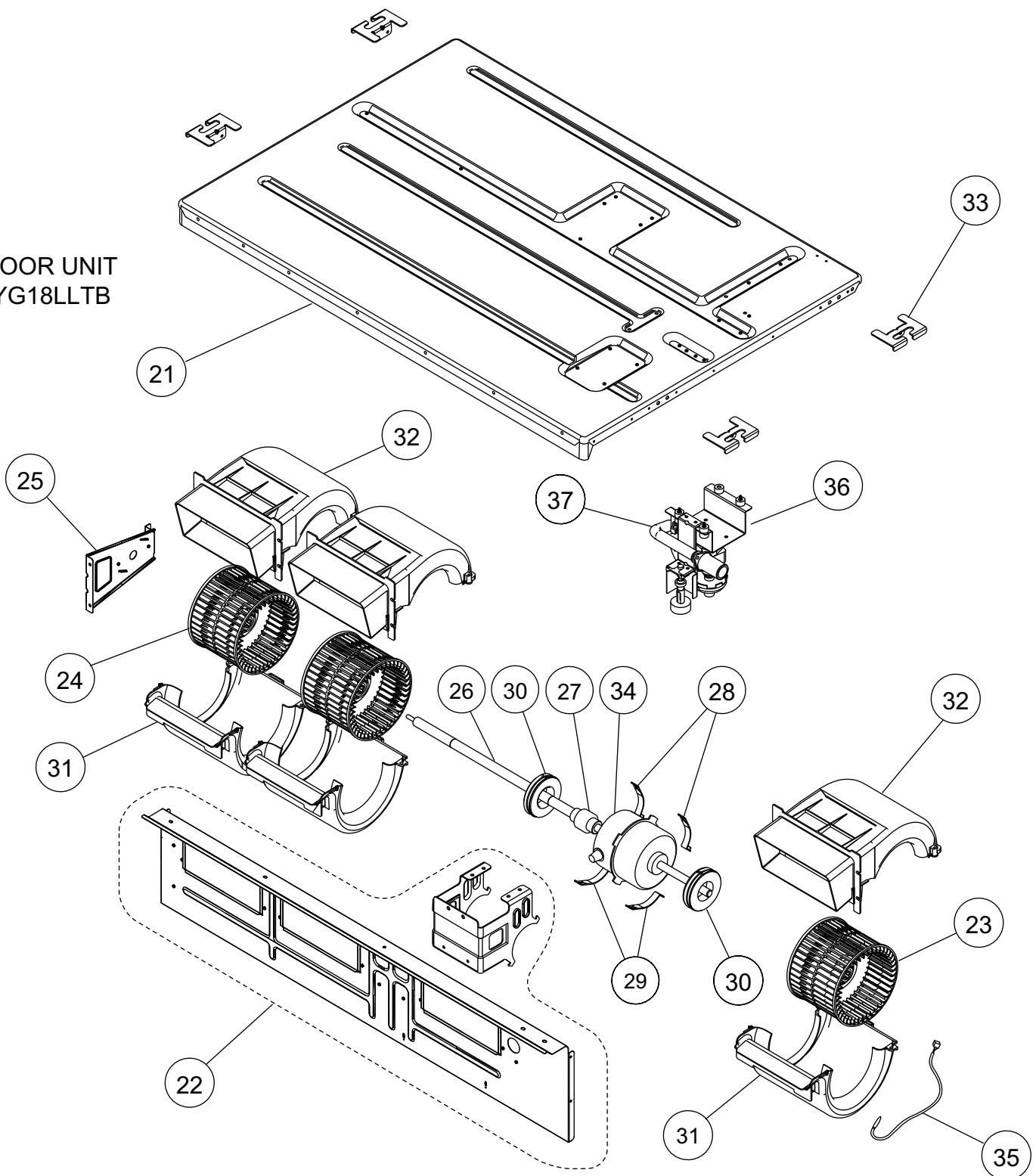
Ref	Description	Parts number	Ref	Description	Parts number
21	Top Panel Sub Assy	9379908009	28	Casing U	9379571005
22	Separator Sub Assy	9379898003	29	Hook Metal	9379889001
23	Sirroco Fan Assy	9379570015	30	Fan Motor Assy	9602967018
24	Motor Band Assy	9379613002	31	Room Thermistor	9703299247
25	Motor Band	9379614009	32	Drain Pump Sub Assy	9379914000
26	Rubber (Vibration Proof)	9379644006	33	Drain Hose Assy	9379913003
27	Casing B	9379572002			



INDOOR UNIT
ARYG18LLTB

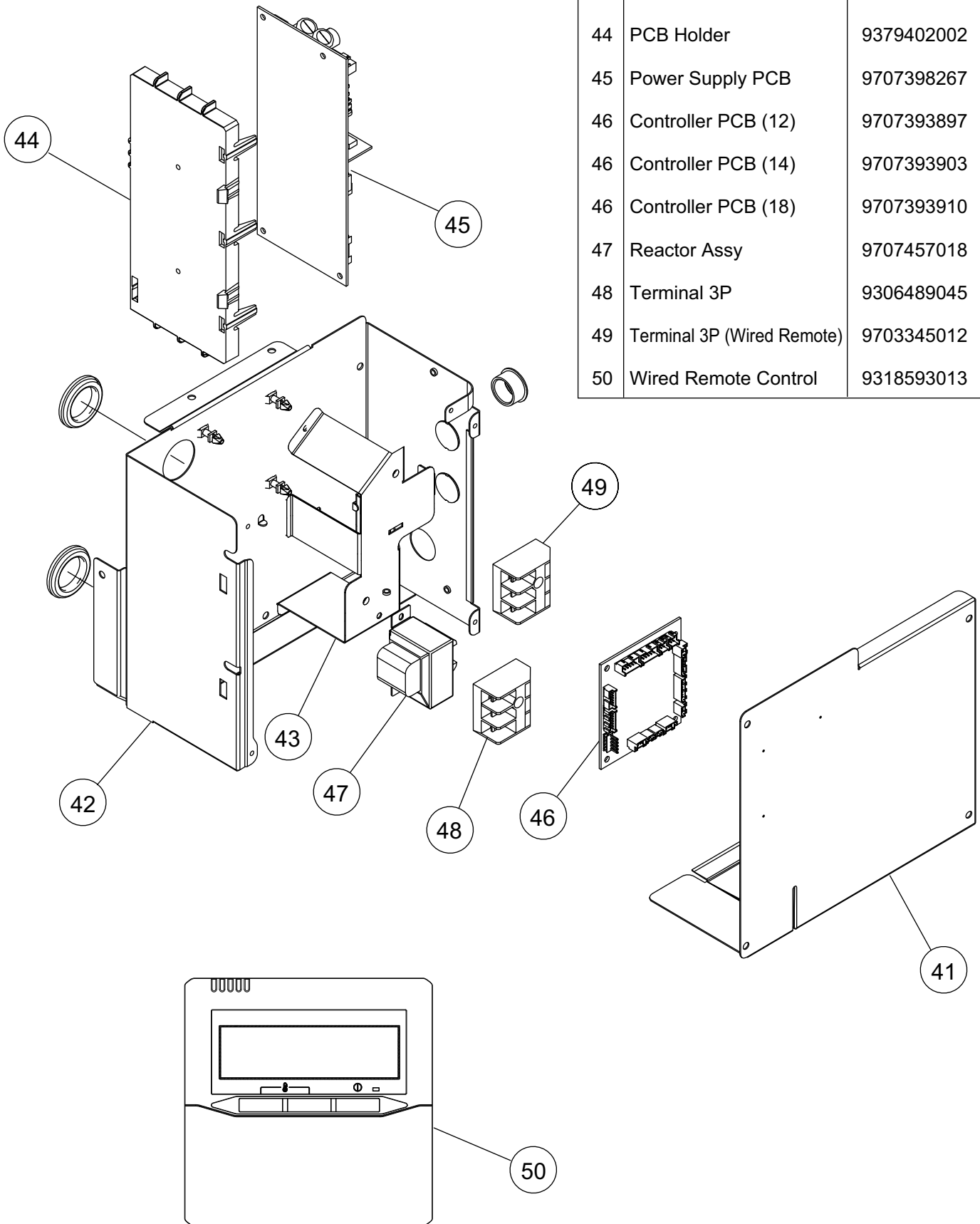
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1	Side Panel R Sub Assy	9379906005	10	Air Filter	9379575003
2	Side Panel L Sub Assy	9379907002	11	Main Panel Sub Assy	9379902014
3	Pipe Panel Sub Assy	9379900003	12	Cabinet Panel (3 Fan)	9379597005
4	Panel (Window) Sub Assy	9379915007	13	Hose Sub Assy	9378450103
5	Outlet Frame Sub Assy	9379909013	14	Drain Cap	9358746004
6	Front Panel (3 Fan)	9379594004	15	Drain Pan Sub Assy	9379901017
7	Valve Cover Sub Assy	9379576000	16	Evaporator Sub Assy	9364499604
8	Cover Pipe Sub Assy	9380033004	17	Pipe Thermistor	9900623005
9	Fan Guard (3 Fan)	9379638005			

INDOOR UNIT
ARYG18LLTB



Ref	Description	Parts number	Ref	Description	Parts number
21	Top Panel Sub Assy	9379908016	30	Rubber (Vibration Proof)	9379644006
22	Separator Sub Assy	9379898010	31	Casing B	9379572002
23	Sirroco Fan Assy	9379570022	32	Casing U	9379571005
24	Sirroco Fan Assy	9379570039	33	Hook Metal	9379889001
25	Bracket (Bearing Sub Assy)	9379627009	34	Fan Motor Assy	9602968015
26	Shaft	9380398004	35	Thermistor (Room)	9703299247
27	Joint Assy	9378038011	36	Drain Pump Sub Assy	9379914000
28	Motor Band Assy	9379613002	37	Drain Hose Assy	9379913003
29	Motor Band	9379614009			

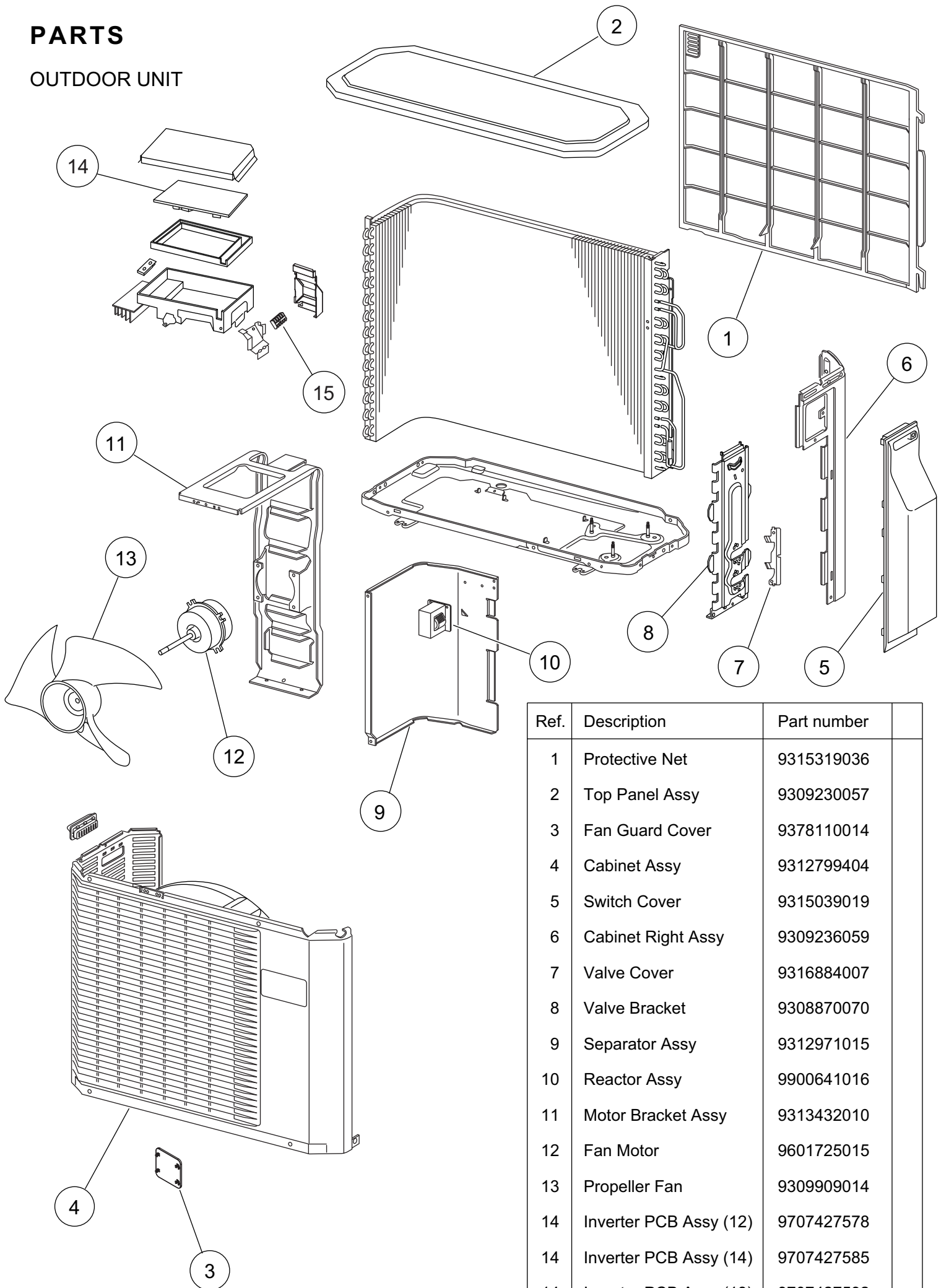
INDOOR UNIT
 ARYG12LLTB
 ARYG14LLTB
 ARYG18LLTB



Ref	Description	Parts number
41	Control Cover Sub Assy	9379806039
42	Control Box Assy	9380041023
43	Terminal Bracket	9380132011
44	PCB Holder	9379402002
45	Power Supply PCB	9707398267
46	Controller PCB (12)	9707393897
46	Controller PCB (14)	9707393903
46	Controller PCB (18)	9707393910
47	Reactor Assy	9707457018
48	Terminal 3P	9306489045
49	Terminal 3P (Wired Remote)	9703345012
50	Wired Remote Control	9318593013

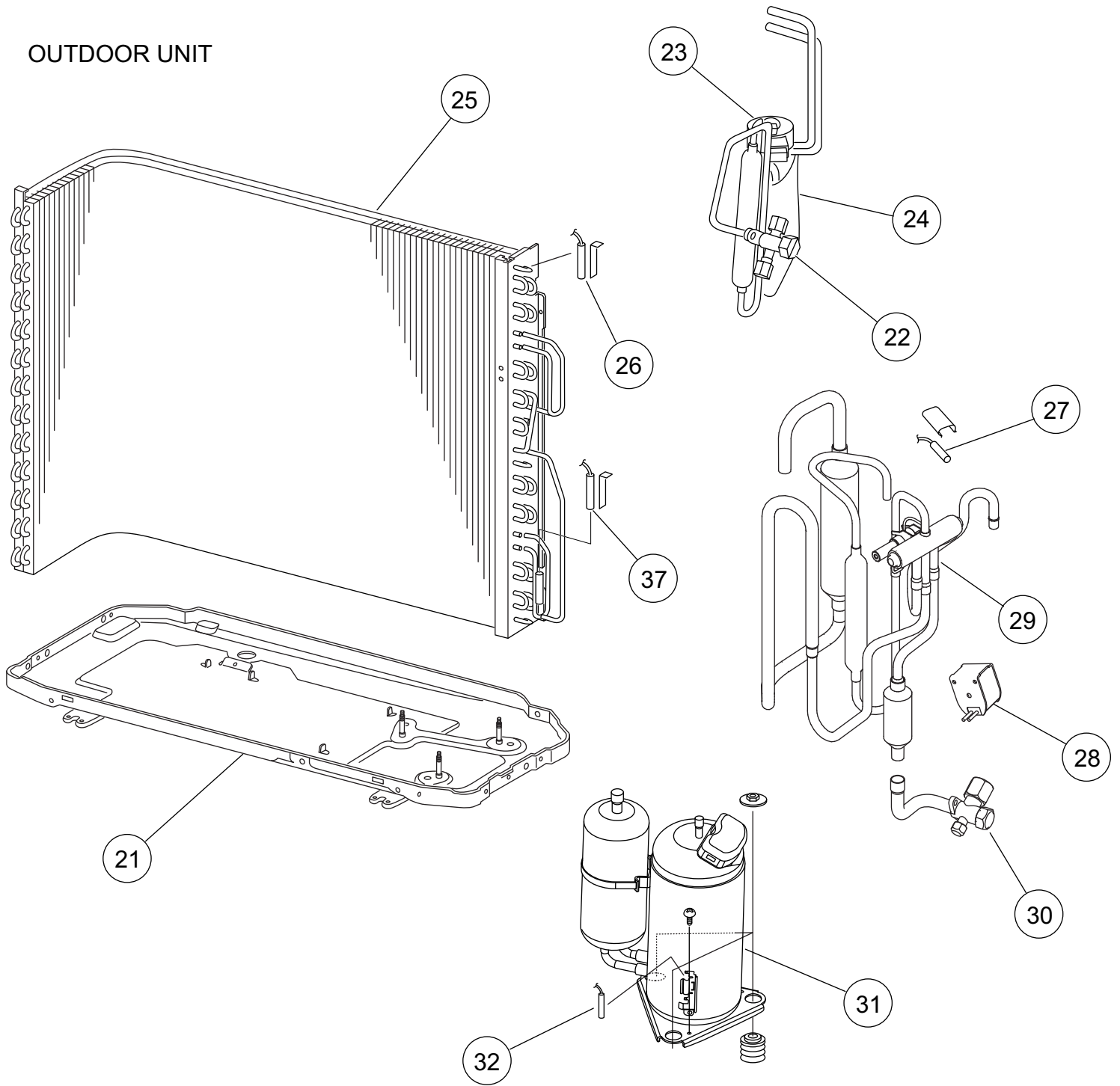
PARTS

OUTDOOR UNIT



Ref.	Description	Part number
1	Protective Net	9315319036
2	Top Panel Assy	9309230057
3	Fan Guard Cover	9378110014
4	Cabinet Assy	9312799404
5	Switch Cover	9315039019
6	Cabinet Right Assy	9309236059
7	Valve Cover	9316884007
8	Valve Bracket	9308870070
9	Separator Assy	9312971015
10	Reactor Assy	9900641016
11	Motor Bracket Assy	9313432010
12	Fan Motor	9601725015
13	Propeller Fan	9309909014
14	Inverter PCB Assy (12)	9707427578
14	Inverter PCB Assy (14)	9707427585
14	Inverter PCB Assy (18)	9707427592
15	Terminal	9703874031

OUTDOOR UNIT

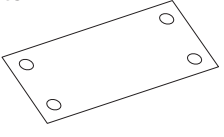




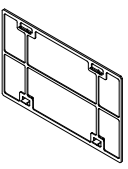
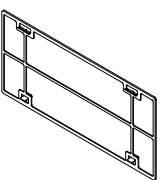


Ref.	Description	Part number
21	Base Assy	9308869081
22	2-way Valve Assy	9970093012
23	Expansion Valve Coil	9900057039
24	Pulse Motor Valve Assy	9311641018
25	Condenser Total Assy	9311381068
26	Heat Exchanger Thermistor	9900403010
27	Thermistor Assy	9900148027

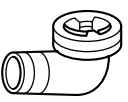
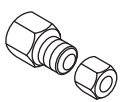
Ref.	Description	Part number
28	Solenoid	9970033018
29	4-way Valve Assy	9315311030
30	3-way Valve Assy	9970092015
31	Compressor Assy	9313763039
32	Compressor Thermistor	9900156046
--	Outdoor Thermistor	9900210045
--	Drain Assy	9303029015

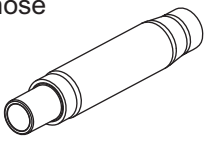


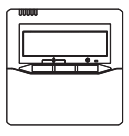


ACCESSORIES

INDOOR UNIT

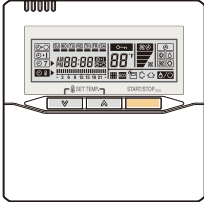


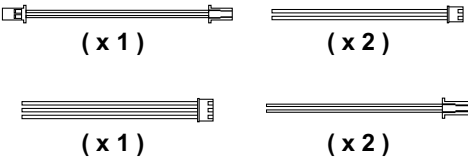


Name and Shape	Q'ty	Application
Installation template 	1	For positioning the indoor unit
Washer 	8	For installing indoor unit
Coupler heat insulation (Large) 	1	For indoor side pipe joint (Large pipe)
Coupler heat insulation (Small) 	1	For indoor side pipe joint (Small pipe)
Binder 	Medium 3	For power supply and remote control cable binding.
	Large 4	For fixing the coupler heat insulation.
Filter (Small) 	2	(ARYG12LLTB ARYG14LLTB)
Filter (Big) 	2	(ARYG18LLTB)

OUTDOOR UNIT

Name and Shape	Q'ty	Application
Drain pipe 	1	For drain piping work. 9303029015
Adapter assy 	1	To connect 12,000 BTU model 9370244007

Name and Shape	Q'ty	Application
Drain hose 	1	For installing drain pipe VP25 (O.D.32 I.D.26)
Hose band 	1	For installing drain hose
Drain hose insulation B 	1	Insulates a drain hose
Wired remote control 	1	
Remote control cable 	1	For connecting the remote control
Tapping screw (M4 × 16 mm) 	2	For installing the remote control

OPTIONAL PARTS

Exterior	Parts name	Model number	Summary
	Wired remote controller	UTY-RNNYM	Unit control is performed by wired remote controller .
	Simple remote controller	UTY-RSNYM	Unit control is performed by simple remote controller.
	IR receiver unit	UTY-LRHYM	Unit control is performed by wired remote controller.
 <p>(x 1) (x 2) (x 1) (x 2)</p>	External control set	UTD-ECS5A	Use to connect with various peripheral devices and air conditioner PC board. (Set of 6)
	Remote sensor unit	UTY-XSZX	New amenity space can be offered by installing the Remote sensor in the remote controller.
	Auto louver grille kit	UTD-GXSA-W	(ARYG12LLTB ARYG14LLTB)
		UTD-GXSB-W	(ARYG18LLTB)

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