

SERVICE MANUAL



Models

Indoor unit

RS-14LB

RS-18LB

Outdoor unit

RO-14LB

RO-18LB

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SPECIFICATIONS

TYPE		COOL & HEAT INVERTER	
INDOOR UNIT		RS-14LB	RS-18LB
OUTDOOR UNIT		RO-14LB	RO-18LB
COOLING CAPACITY	(kW)	4.20	5.20
HEATING CAPACITY	(kW)	5.60	6.25

ELECTRICAL DATA

POWER SOURCE		(V)	230
FREQUENCY		(Hz)	50
RUNNING CURRENT	COOLING	(A)	4.9
	HEATING	(A)	7.6
INPUT WATTS	COOLING	(kW)	1.11
	HEATING	(kW)	1.72
E.E.R.	COOLING	(kW/kW)	3.78
COP	HEATING	(kW/kW)	3.61
MOISTURE REMOVAL	(ℓ/hr)	2.1	2.8
AIR CIRCULATION-HI	(m³/hr)	C 700 H700	C 700 H700

COMPRESSOR

TYPE	Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary		
DISCRIMINATION	DA / 30A / F-25F		
REFRIGERANT	R410A	(g)	1,150

FAN MOTOR

POWER SOURCE		(V)	230
INDOOR UNIT	HI-SPEED	(r.p.m.)	C 1,480 H 1,480
	MED-SPEED	(r.p.m.)	C 1,260 H 1,300
	LO-SPEED	(r.p.m.)	C 1,040 H 1,110
	QUIET	(r.p.m.)	C 850 H 950
OUTDOOR UNIT	(r.p.m.)	C 820 H 750	C 860 H 820

DIMENSIONS

INDOOR UNIT	H x W x D	(mm)	275 x 790 x 215
OUTDOOR UNIT	H x W x D	(mm)	578 x 790 x 300

WEIGHT

INDOOR UNIT	GROSS / NET	(kg)	12 / 9
OUTDOOR UNIT	GROSS / NET	(kg)	40 / 38

NOISE LEVEL

INDOOR UNIT	(dB)	C 44 H 43	C 45 H 43
OUTDOOR UNIT	(dB)	C 48 H 48	C 49 H 49

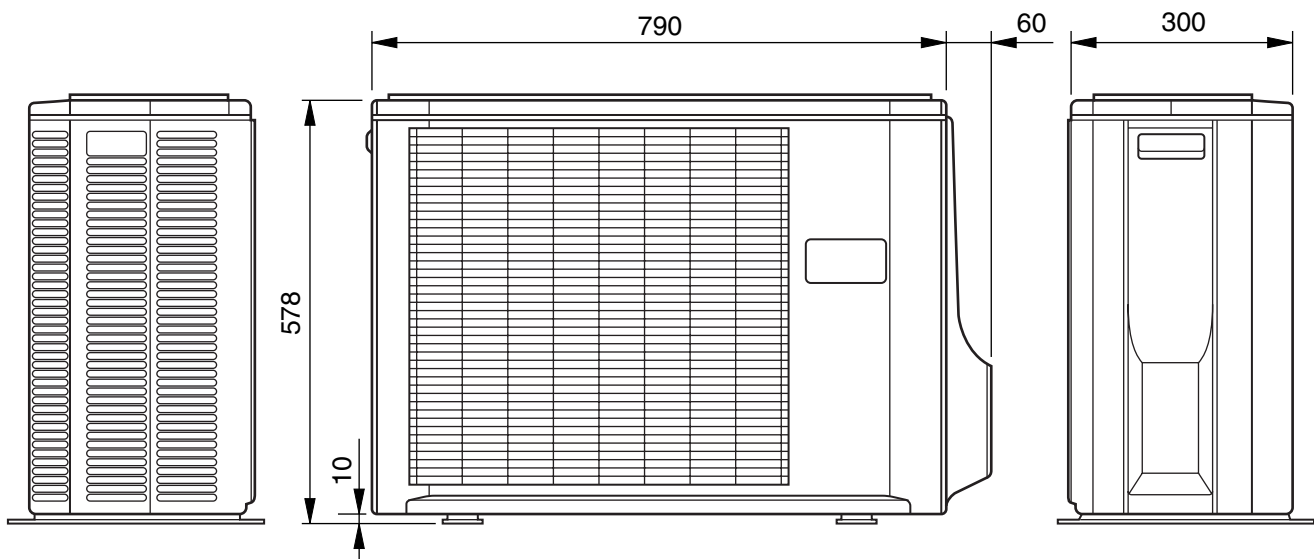
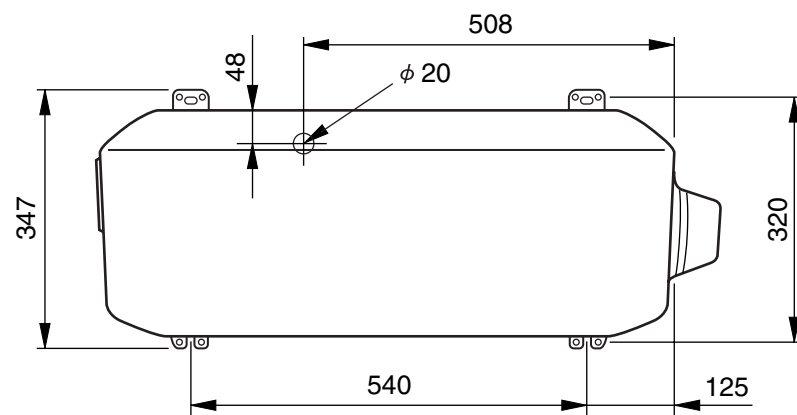
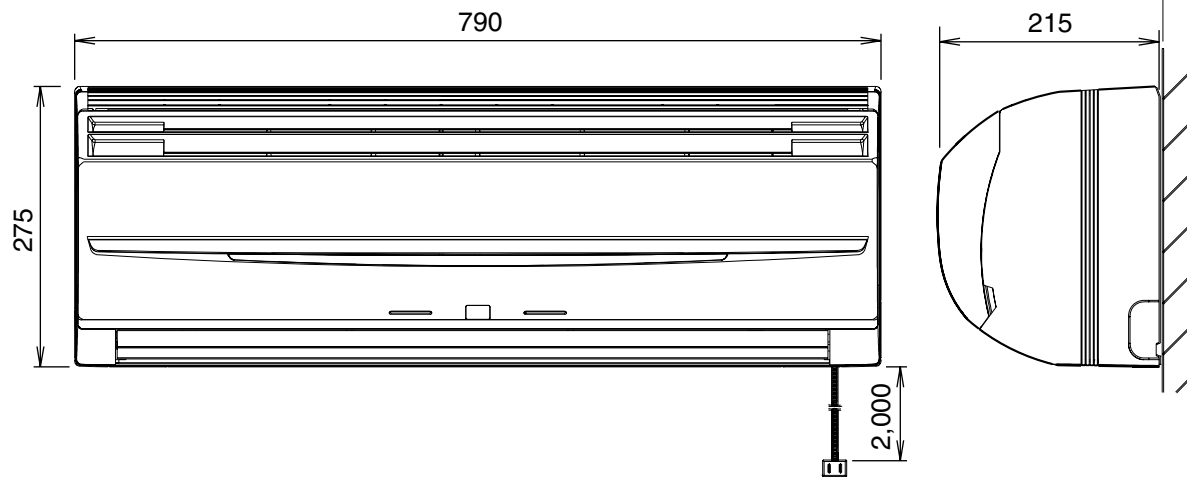
REFRIGERANT (R410A)

FULL CHARGE AMOUNT	PIPE LENGTH	15 m	1,150 g
		20 m	1,250 g
ADDITIONAL REFRIGERANT			20 g / m

DIMENSIONS

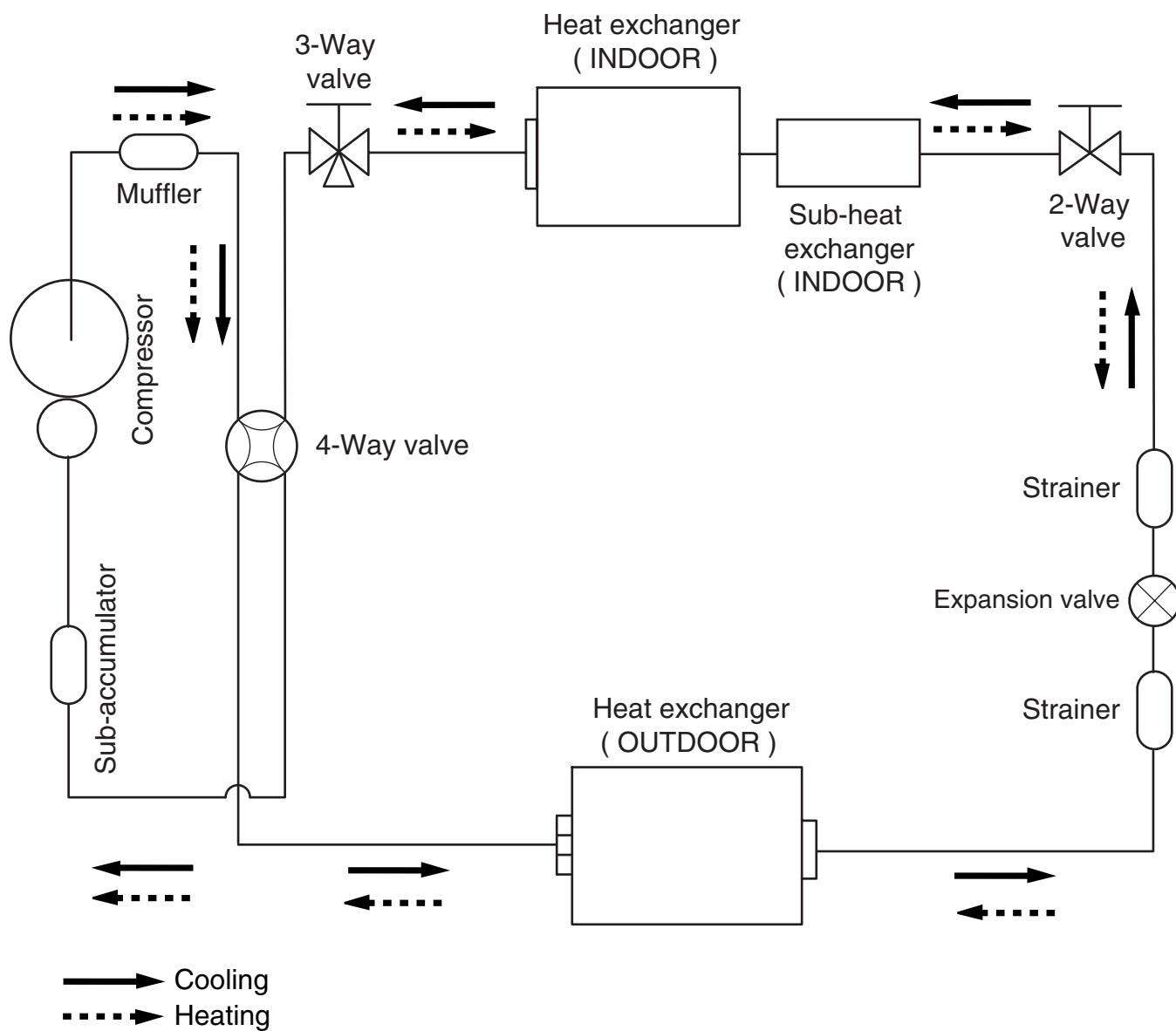
Models : RS-14LB / RO-14LB
RS-18LB / RO-18LB

(unit : mm)



REFRIGERANT SYSTEM DIAGRAM

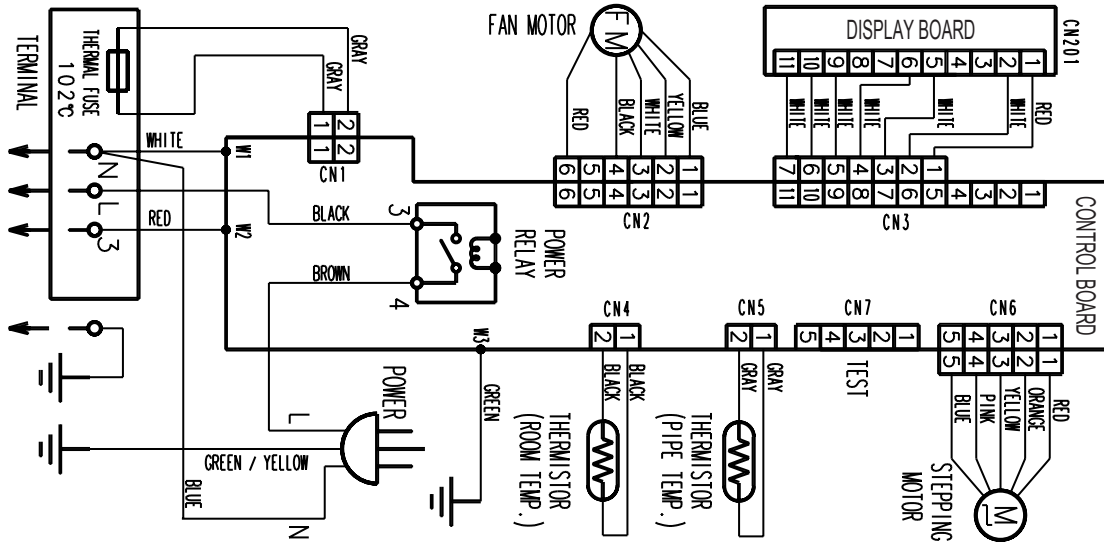
Models : RS-14LB / RO-14LB
RS-18LB / RO-18LB



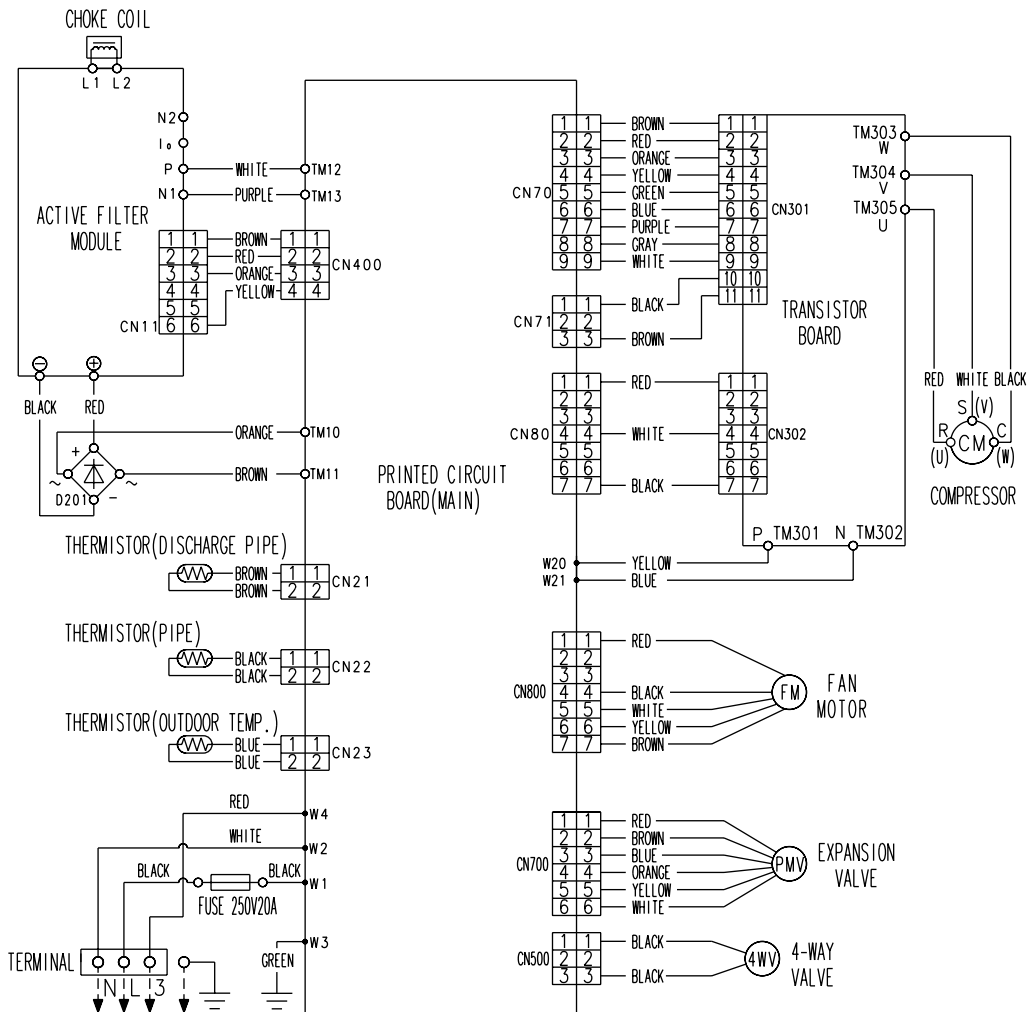
CIRCUIT DIAGRAM

**Models : RS-14LB / RO-14LB
RS-18LB / RO-18LB**

INDOOR UNIT



OUTDOOR UNIT



ERROR CONTENTS

Self-diagnosis function table (Flashing LED Display)

Applicable model : RS-18LB

* Detailed Trouble Display (secondary level) can be indicated by pressing Test Operation button.

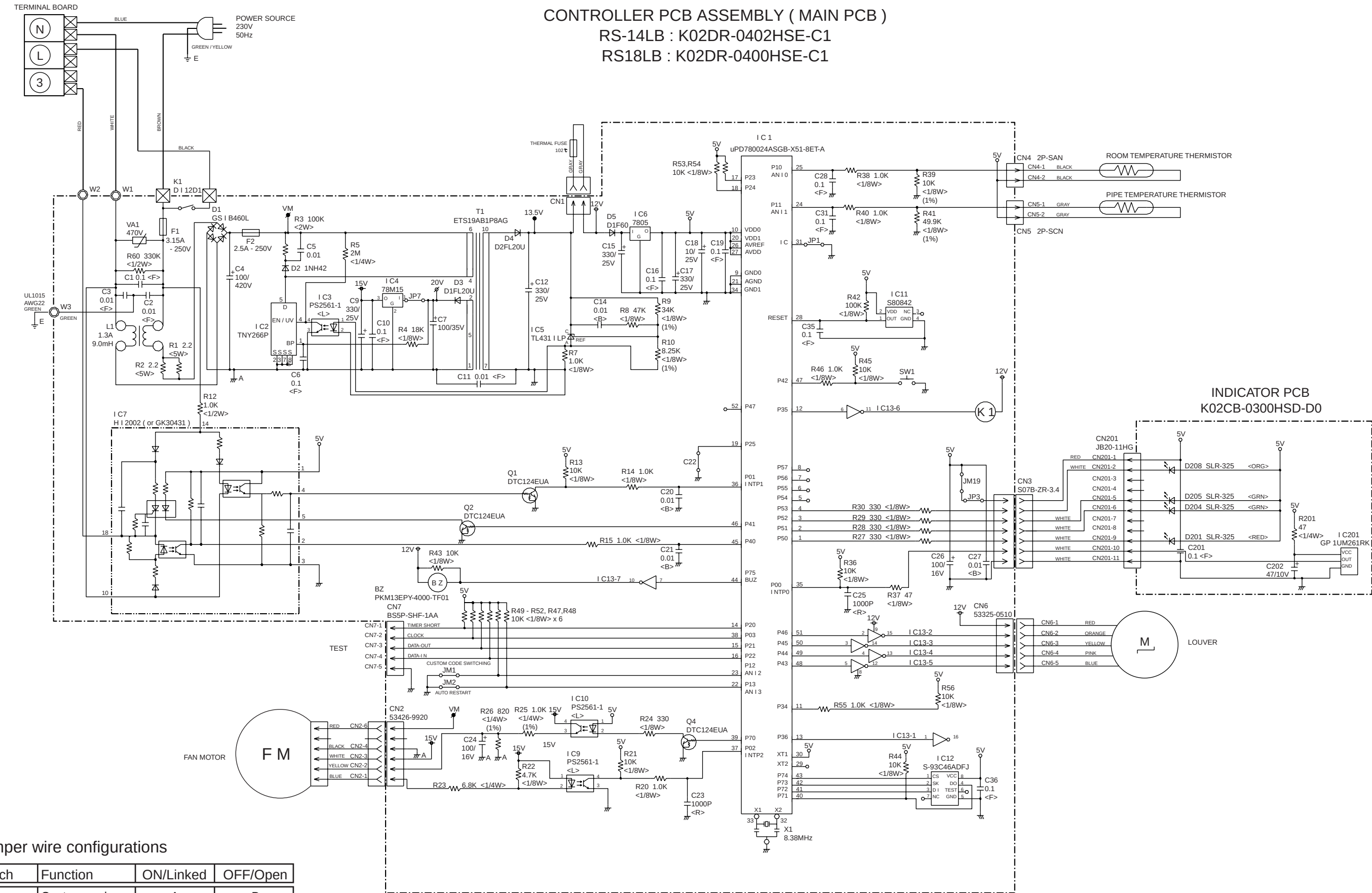
Trouble Display (primary)			Detailed Trouble Display (by Test Button)			Detailed Error Item
Error	Operation	Timer	Error	Operation	Timer	
Serial signal error	Normal	1 sec blinking	Serial reverse signal error at operation start up	0.1sec blinking	0.5sec 2 times	When a signal is not read continuously for 10 secs from power relay ON immediately after operation starts >>Cooling 0 code transmission, automatic reset When a signal is not read for 20 secs thereafter >>Trouble display continues and power relay OFF >>Permanent stop
			Signal reverse signal error during operation	0.1sec blinking	0.5sec 3 times	When a signal is not read continuously for 10 secs from power relay ON immediately after operation starts >>Cooling 0 code transmission, automatic reset When a signal is not read for 20 secs thereafter >>Trouble display continues and power relay OFF >>Permanent stop
			Serial forward signal error at operation start up	0.1sec blinking	0.5 sec 4 times	Normal Serial Forward Signal can not be received more than 10 secs >>Releases when it becomes normal
			Serial forward signal error during operation	0.1sec blinking	0.5sec 5 times	Normal Serial Forward Signal can not be received more than 10 secs (after receiving effective forward transfer signal) >>Releases when it becomes normal
Indoor unit thermistor error	0.5sec 2 times	0.1sec blinking	Indoor temperature thermistor open	0.1sec blinking	0.5sec 2 times	Indoor Thermistor detection value is open when AC plug is inserted >>Releases when value becomes normal
			Pipe thermistor open or short	0.1sec blinking	0.5sec 3 times	Indoor Thermistor detection value is open or short when AC plug is inserted >>Releases when value becomes normal
Outdoor unit thermistor error	0.5sec 3 times	0.1sec blinking	Discharge thermistor open or short	0.1sec blinking	0.5sec 2 times	Outdoor Thermistor detection value is open or short >>Outdoor unit stops Releases when it becomes normal
			Heat exchanger thermistor open	0.1sec blinking	0.5sec 3 times	Outdoor Thermistor detection value is open >>Outdoor unit stops Releases when it becomes normal
			Outdoor temperature thermistor open or short	0.1sec blinking	0.5sec 4 times	Outdoor Thermistor detection value is open or short >>Outdoor unit stops Releases when it becomes normal
Indoor unit control error	0.5sec 4 times	0.1sec blinking	Forced automatic SW welded	0.1sec blinking	0.5sec 2 times	Indoor Forced Auto SW is ON for more than 10 secs continuously >>Error is indicated while it is ON Normal Operation other than error indication
			Main relay welded	0.1sec blinking	0.5sec 3 times	Indoor Serial Reverse Signal is received 1 min. after Main relay becomes OFF >>Error is indicated while serial reverse signal is input on normal operation Normal operation except error indication
			Power interruption error	0.1sec blinking	0.5sec 4 times	Indoor 50/60Hz is not detected after 4 secs of power ON. >>Error is indicated and unit is stopped

Trouble Display (primary)			Detailed Trouble Display (by Test Button)			Detailed Error Item	
Error	Operation	Timer	Error	Operation	Timer		
Outdoor unit control error	0.5sec 5 times	0.1sec blinking	Current trip	0.1sec blinking	0.5sec 2 times	Outdoor	Current trip error is 2nd time within start up >>>Permanent stop
			CT abnormal	0.1sec blinking	0.5sec 3 times	Outdoor	Current detection value is 0A for more than 1 sec when compressor is operated at more than 56rps >>>Automatic release after 3 min. ST
			Compressor rotation error	0.1sec blinking	0.5sec 5 times	Outdoor	Compressor location detection error (incl. failed start up) for 3 times >>>Permanent stop
			Outdoor unit fan drive system abnormal	0.1sec blinking	0.5sec 6 times	Outdoor	When outdoor fan abnormal • fan motor duty abnormal operated 5 times >>>Permanent stop
Indoor fan motor error	0.5sec 6 times	0.1sec blinking	Abnormal lock	0.1sec blinking	0.5sec 2 times	Indoor	Detected rotation is 0 r.p.m. at start up or at 56 secs after Fan mode is selected >>>Permanent stop
			Abnormal rotation	0.1sec blinking 3	0.5sec 3 times	Indoor	Detected rotation is 1/3 of target r.p.m. at start up or at 56 secs after Fan mode is selected >>>Permanent stop
Refrigerant cycle error	0.5sec 7 times	0.1sec blinking	Discharge temperature abnormal	0.1sec blinking	0.5sec 2 times	Outdoor	Discharge Temperature protection (Discharge temperature is 110degC) operated 2 times >>>Permanent stop
			Cooling high pressure abnormal rise	0.1sec blinking	0.5sec 3 times	Outdoor	High pressure rise protection (Outdoor heat exchanger temperature is 65degC) operated >>>Comp. OFF (releases after 3min.ST) Error is indicated while 3 min.ST
Optional function error	0.5sec 8 times	0.1sec blinking	Active filter voltage abnormal (3rd time)	0.1sec blinking	0.5sec 2 times	Outdoor	Active Filter voltage error operated 3 times >>>Permanent stop
			Active filter voltage abnormal (1st time)	0.1sec blinking 3	0.5sec times	Outdoor	Active Filter Module error or open detection protection operated >>>Automatic release after 3 min. ST

INDOOR PCB CIRCUIT DIAGRAM

Models : RS-14LB
RS-18LB

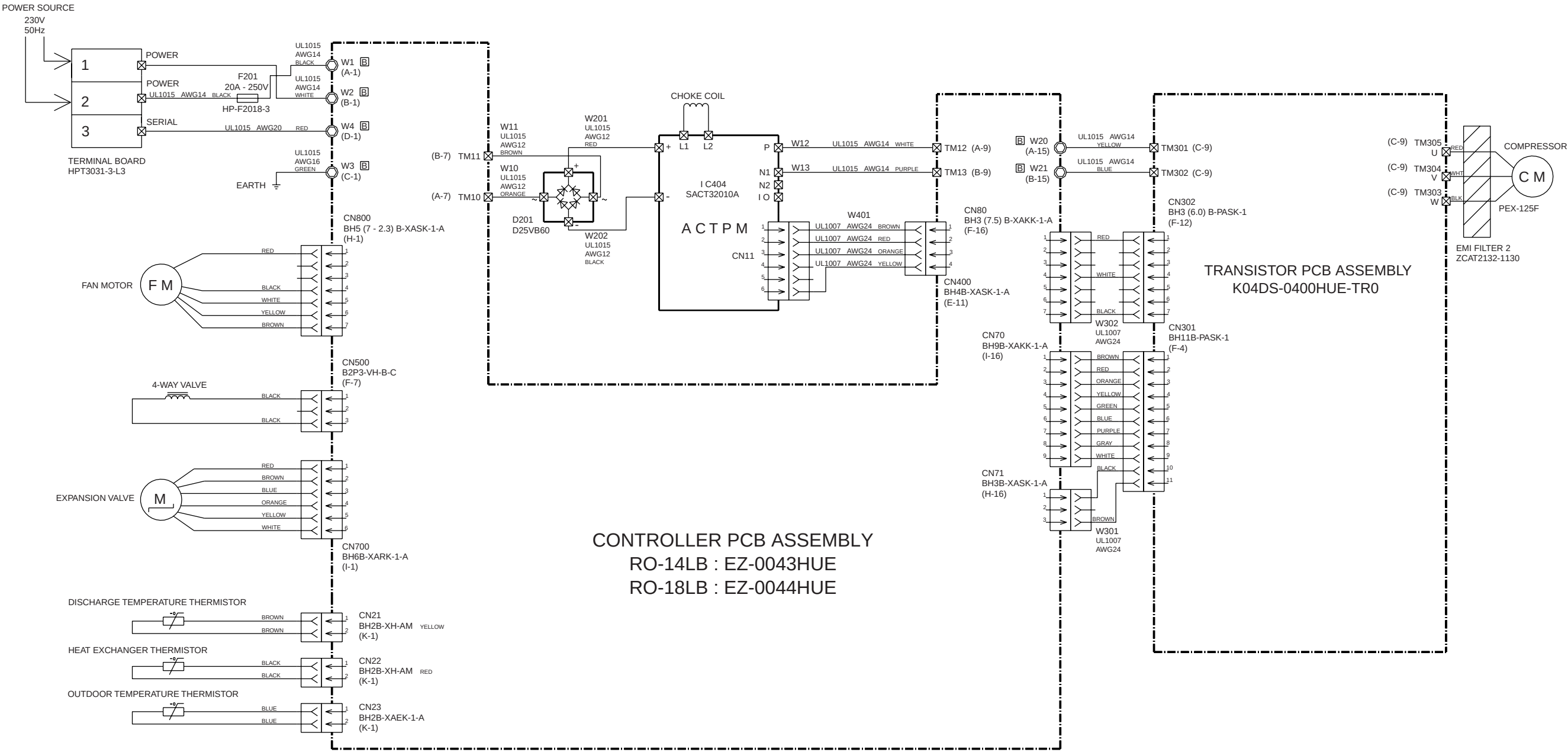
CONTROLLER PCB ASSEMBLY (MAIN PCB)
RS-14LB : K02DR-0402HSE-C1
RS18LB : K02DR-0400HSE-C1



OUTDOOR PCB CIRCUIT DIAGRAM

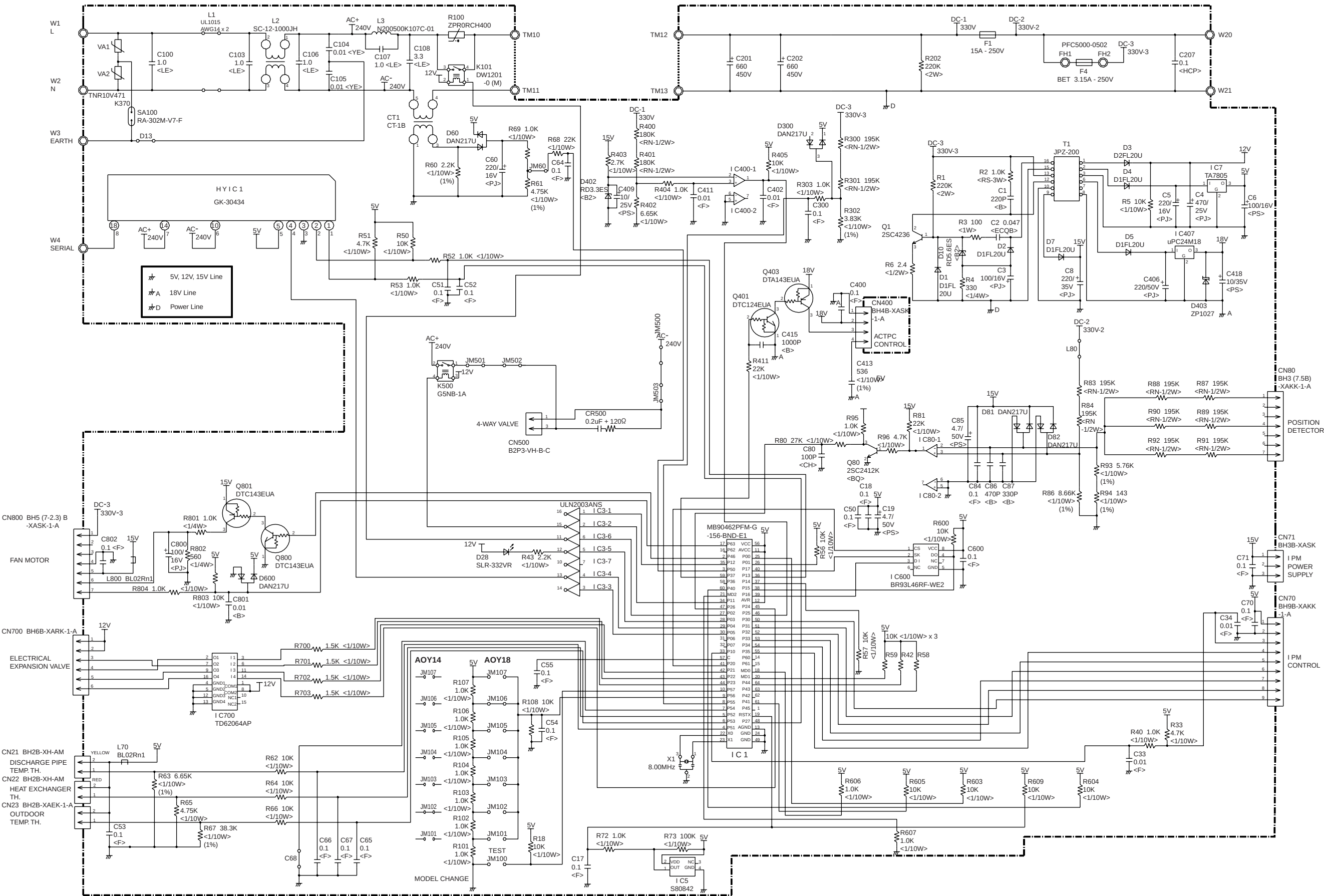
Models : RO-14LB
RO-18LB

INVERTER ASSEMBLY
RO-14LB : EZ-0043HUE
RO-18LB : EZ-0044HUE



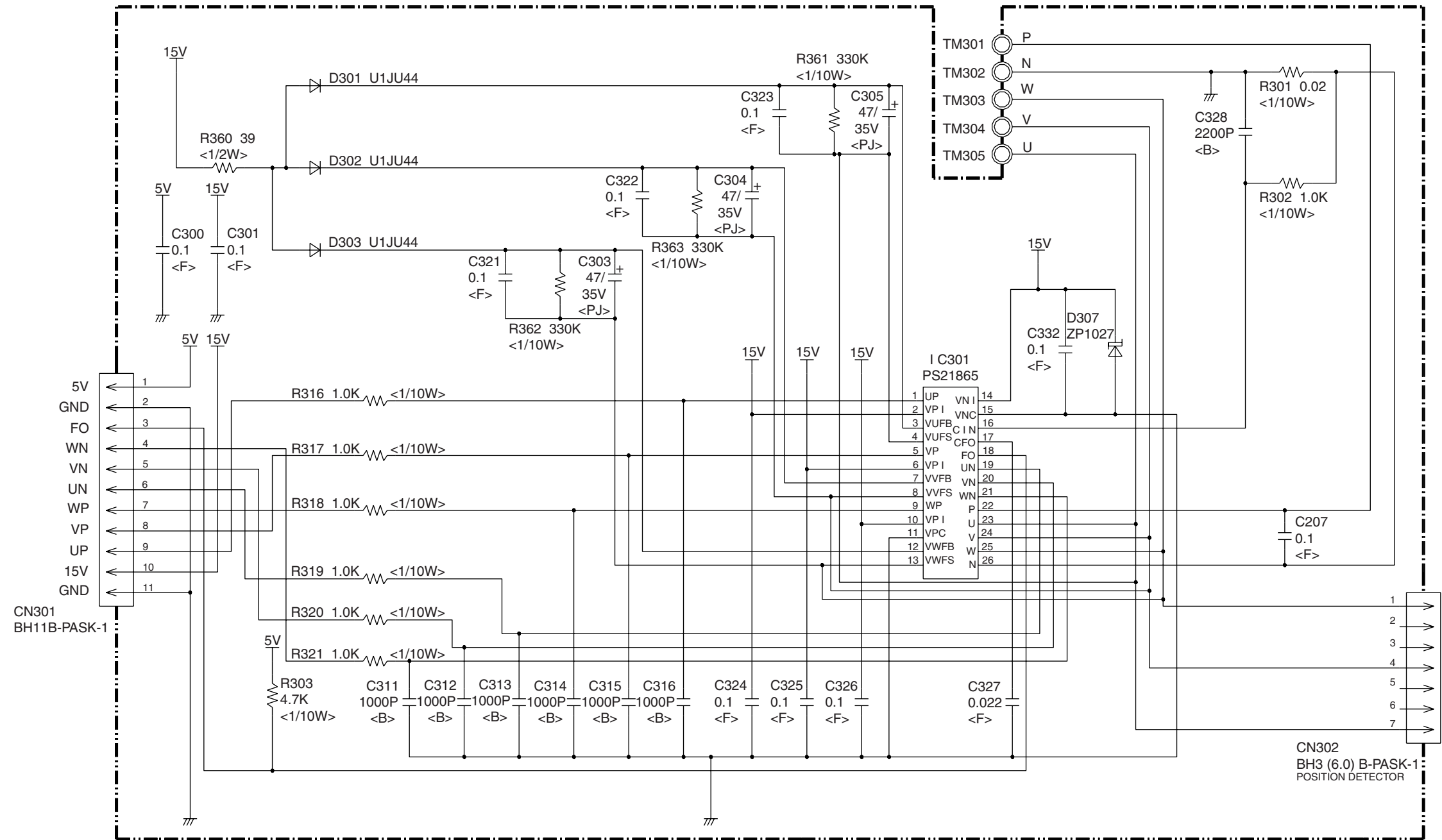
Models : RO-14LB
RO-18LB

CONTROLLER PCB ASSEMBLY
RO-14LB : K04AJ-0400HUE-C1
RO-18LB : K04AJ-0401HUE-C1



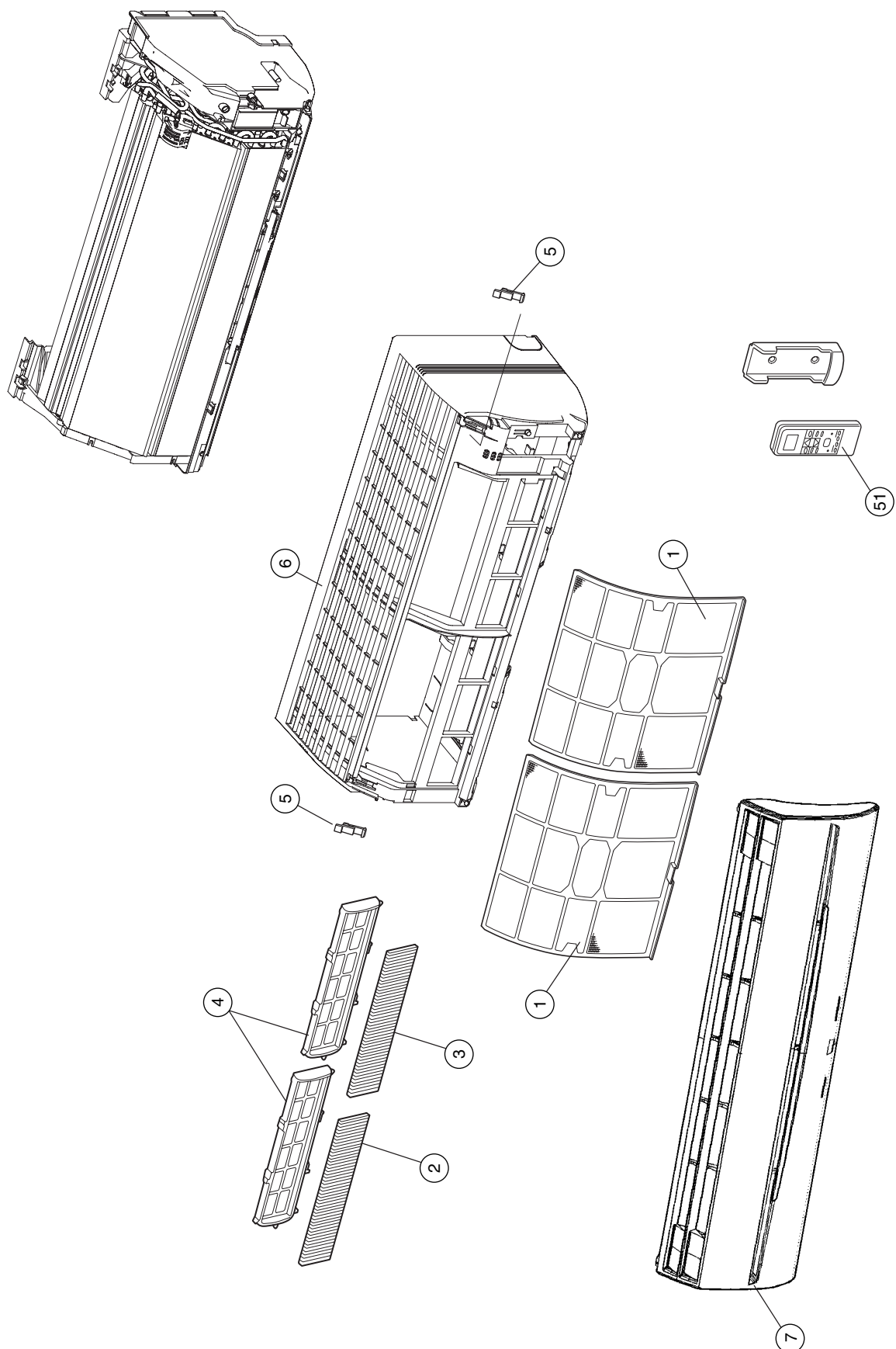
Models : RO-14LB
RO-18LB

TRANSISTOR PCB ASSEMBLY
K02DS-0400HUE-TR0

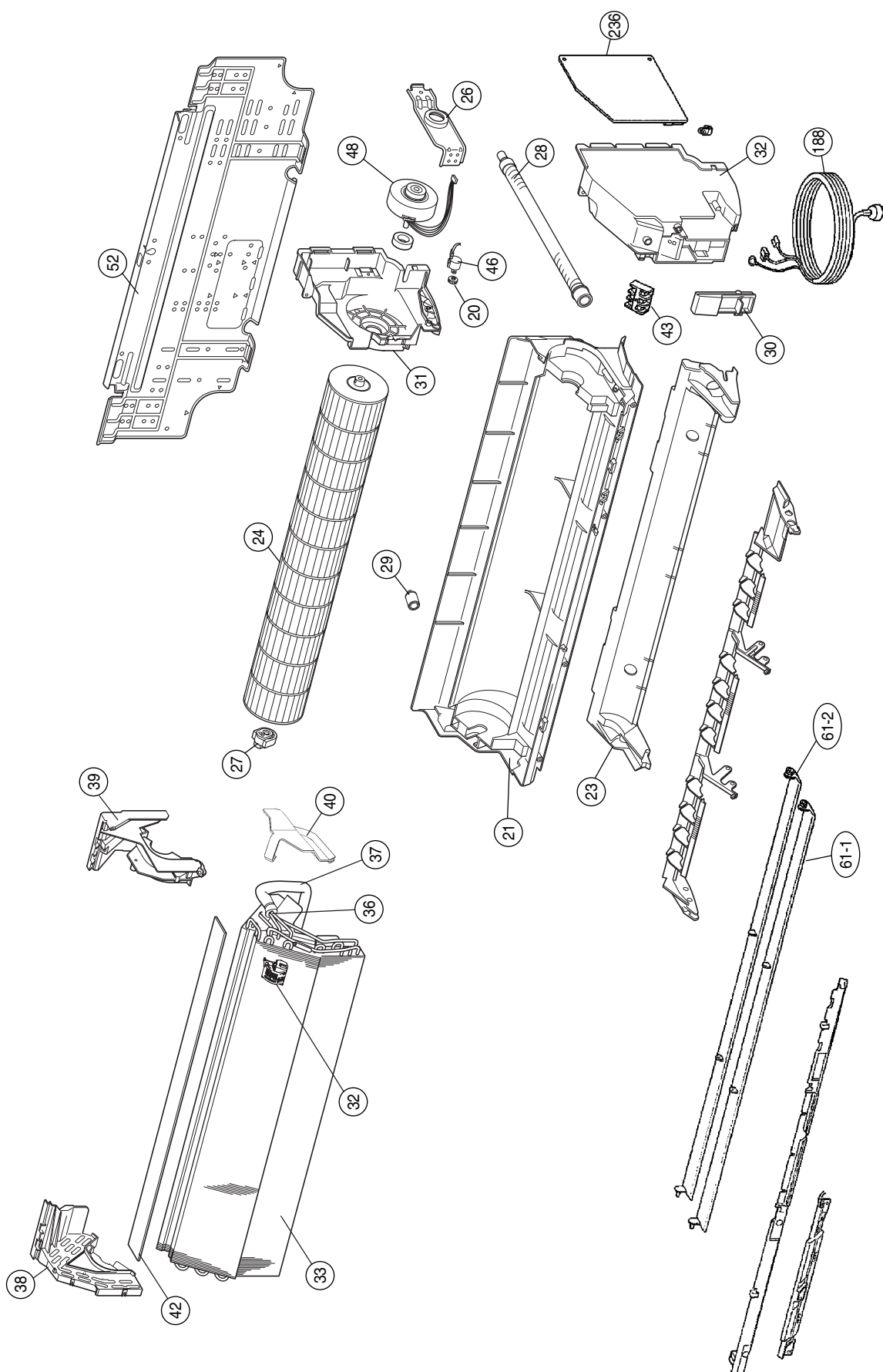


DISASSEMBLY ILLUSTRATION

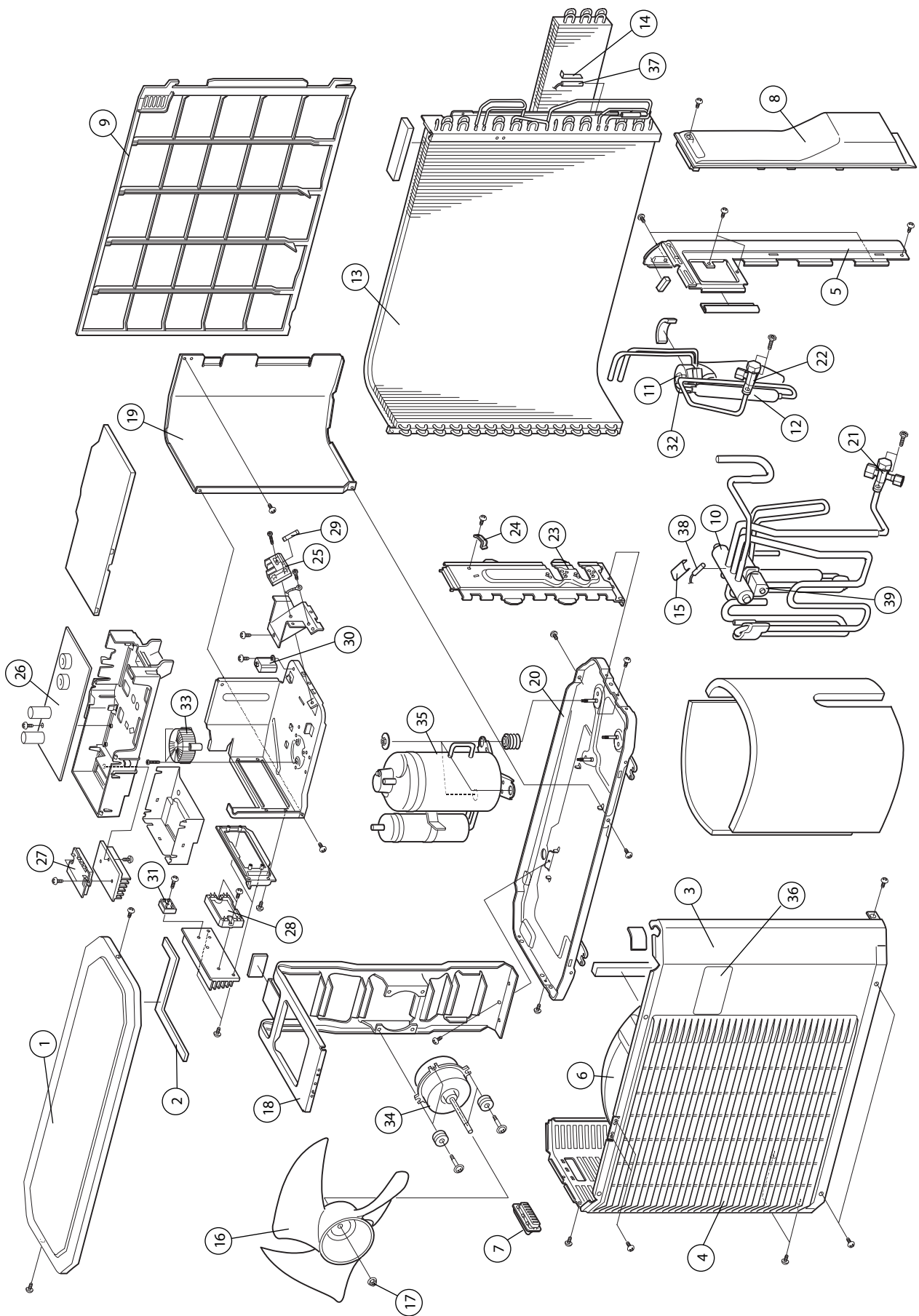
Models : RS-14LB
RS-18LB



Models : RS-14LB
RS-18LB



Models : RO-14LB
RO-18LB



PARTS LIST

INDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		RS-14LB	RS-18LB	
1	Air Filter	9309997011	9309997011	
2	Filter (Electric)	9312153015	9312153015	
3	Filter (ION)	9311925033	9311925033	
4	Holder (Filter)	9306602017	9306602017	
5	Clamper (Grille)	9306755010	9306755010	
6	Front Panel Total Assy	9313130114	9313130114	
7	Intake Grille Assy	9313131074	9313131074	
20	Gear-A	9309994003	9309994003	
21	Casing Assy	9312112081	9312112081	
23	Cover (Casing)-B	9311916017	9311916017	
24	Crossflow Fan Assy	9307836015	9307836015	
26	Clamp (Motor)	9310102008	9310102008	
27	Shaft Holder-C Assy	9306628017	9306628017	
28	Drain Hose Assy	9310357019	9310357019	
29	Drain Cap Assy	9304150008	9304150008	
30	Wire Clamper	9311946014	9311946014	
31	Box (Switch)	9309996014	9309996014	
32	Cover (Switch)	9311863014	9311863014	
33	Evaporator Total Assy	9313099015	9313099015	
36	Joint Pipe Assy-E	9311497011	9311497011	
37	Insulation (Pipe)-E	9304607007	9304607007	
38	Holder (Evaporator)-L	9309982017	9309982017	
39	Holder (Evaporator)-R	9309983014	9309983014	
40	Water Seal	9310721001	9310721001	
42	Air Seal	9310611005	9310611005	
43	Terminal	9701955077	9701955077	
46	Step Motor	9900139025	9900139025	
48	Fan Motor Assy	9601351016	9601351016	
51	Remote Control Unit	9313144012	9313144012	
52	Bracket Panel	9310001004	9310001004	
61-1	Flow Control Panel-U	9309991033	9309991033	
61-2	Flow Control Panel-Z	9309992030	9309992030	
188	Power Cord	9900001025	9900001025	
236	Controller PCB Assy	9705656048	9705656017	
		(K02DR-0402HSE-C1)	(K02DR-0400HSE-C1)	
---	Pipe Temperature Thermistor	9702039042	9702039042	
---	Room Temperature Thermistor	9700801108	9700801108	
---	Indicator PCB Assy	9705039032	9705039032	

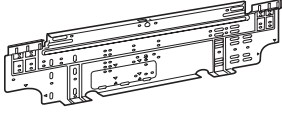
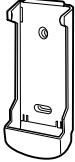
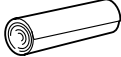
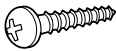
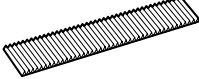
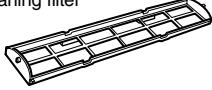
When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

OUTDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		RO-14LB	RO-18LB	
1	Top Panel	9308883025	9308883025	
2	Top Panel Seal	9309228016	9309228016	
3	Cabinet	9308878021	9308878021	
4	Blow Down Grille	9308884015	9308884015	
5	Cabinet-R	9308879028	9308879028	
6	Fan Ring	9308885012	9308885012	
7	Grip	9308880017	9308880017	
8	Switch Cover	9308882028	9308882028	
9	Protective Net	9312026012	9312026012	
10	4-Way Valve Assy	9313755027	9313755027	
11	Expansion Valve Assy	9311641018	9311641018	
12	Dryer	9312056002	9312056002	
13	Condenser	9311381037	9311381037	
14	Thermistor Spring-A	313728262708	313728262708	
15	Thermistor Spring-A	9300089012	9300089012	
16	Propeller Fan	9309909014	9309909014	
17	Nut	9304902003	9304902003	
18	Motor Bracket	9308872012	9308872012	
19	Separator	9312032013	9312032013	
20	Base Assy, Painted	9308869081	9308869081	
21	3-Way Valve Assy	9313554019	9313554019	
22	2-Way Valve Assy	9313064013	9313064013	
24	Cord Clamp	9307271014	9307271014	
25	Terminal	9306489038	9306489038	
26	Inverter PCB Assy	9705622012	9705622029	
27	TR PCB Assy	9705628014	9705628014	
28	ACTPM	9703457012	9703457012	
29	Fuse	0600036027	0600036027	
31	Transformer	9705071018	9705071018	
32	Expansion Valve Coil	9900057039	9900057039	
33	Choke Coil	9703458019	9703458019	
34	Fan Motor	9601815013	9601815013	
35	Compressor Assy	9313764012	9313764012	
36	Emblem	9312637010	9312637010	
37	Heat Exchanger Thermistor	9704220028	9704220028	
38	Discharge Temperature Thermistor	9704219091	9704219091	
39	Solenoid Coil	9970033018	9970033018	
---	IPM	9705441026	9705441026	
---	ACTPM	9703457012	9703457012	

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STANDARD ACCESSORIES

Name and Shape	Part No.
	RS-14LB, RS-18LB
Wall hook bracket 	9312752010
Remote control unit 	9308846099
Remote control unit holder 	9305642014
Battery (penlight) 	0600185534
Cloth tape 	9310519004
Tapping screw (big) (φ 4 x 25) 	0700076046
Tapping screw (small) (φ 3 x 12) 	0700019036
Air cleaning filter 	9312153015
	9311925033
Air cleaning filter frame 	9306602017

