



F R I E D R I C H

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL

Indoor unit Outdoor unit
MW18C3F MR18C3F

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SPECIFICATIONS

TYPE	COOLING ONLY INVERTER
INDOOR UNIT	MW18C3F
OUTDOOR UNIT	MR18C3F
COOLING CAPACITY	18,000 Btu/h (5.28 kW)

ELECTRICAL DATA

POWER SOURCE	208 - 230 V
FREQUENCY	60 Hz
RUNNING CURRENT	7.7 A
INPUT WATTS	1.73 kW
E.E.R.	3.05 kW /kW
MOISTURE REMOVAL	5.9 Pt/h (2.8 L/hr)
AIR CIRCULATION -High	412 cfm (700 m3/hr)

COMPRESSOR

TYPE	Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary
DISCRIMINATION	DA130A1F-25F
REFRIGERANT R410A	2-9/16 lbs. (1,150 g)

FAN MOTOR

POWER SOURCE		208 - 230 V
INDOOR UNIT	HIGH-SPEED	1,480 r.p.m.
	MED-SPEED	1,260 r.p.m.
	LOW-SPEED	1,040 r.p.m.
	QUIET	850 r.p.m.
OUTDOOR UNIT		860 r.p.m.

DIMENSIONS

INDOOR UNIT H x W x D	10-13/16 x 31-1/8 x 8-7/16 inch
	275 x 790 x 215 mm
OUTDOOR UNIT H x W x D	22-3/4 x 31-1/8 x 11-13/16 inch
	578 x 790 x 300 mm

WEIGHT

INDOOR UNIT	Gross / Net	26 lbs. / 20 lbs. (12 kg / 9 kg)
OUTDOOR UNIT	Gross / Net	97 lbs. / 88 lbs. (44 kg / 40 kg)

NOISE LEVEL

INDOOR UNIT	HIGH	44 dB
	MED	38 dB
	LOW	32 dB
	QUIET	25 dB
OUTDOOR UNIT		50 dB

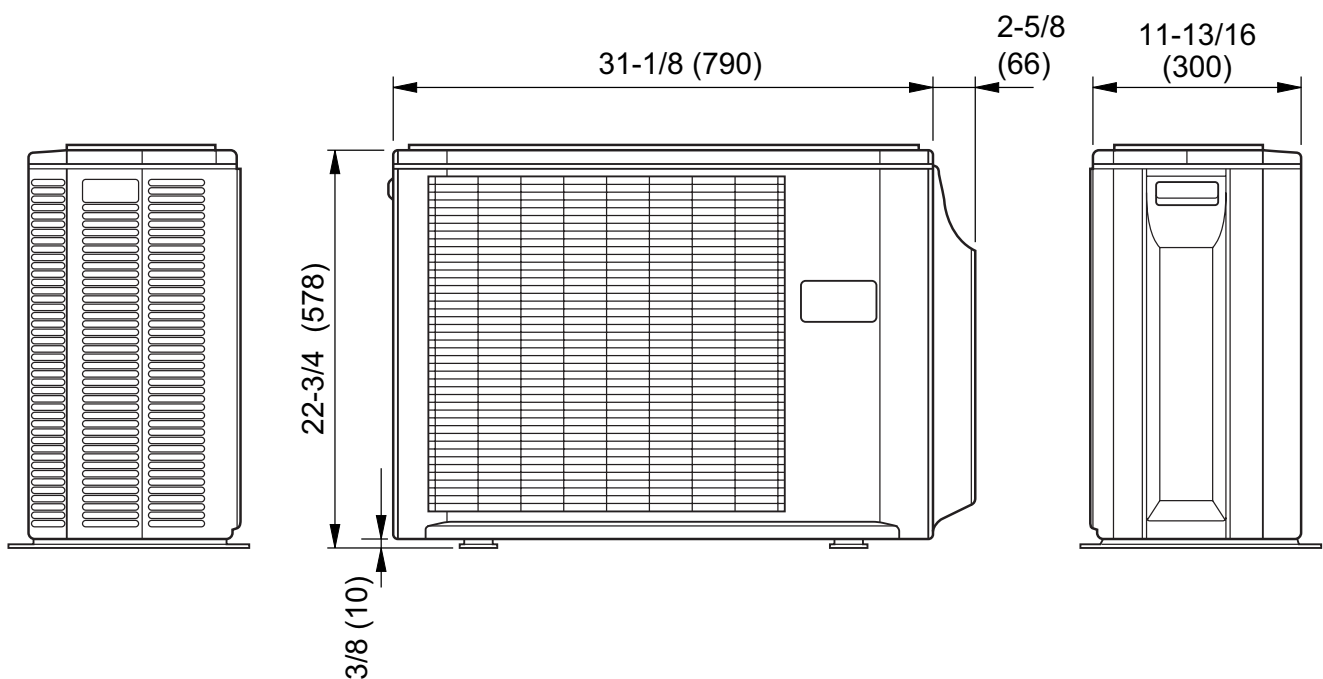
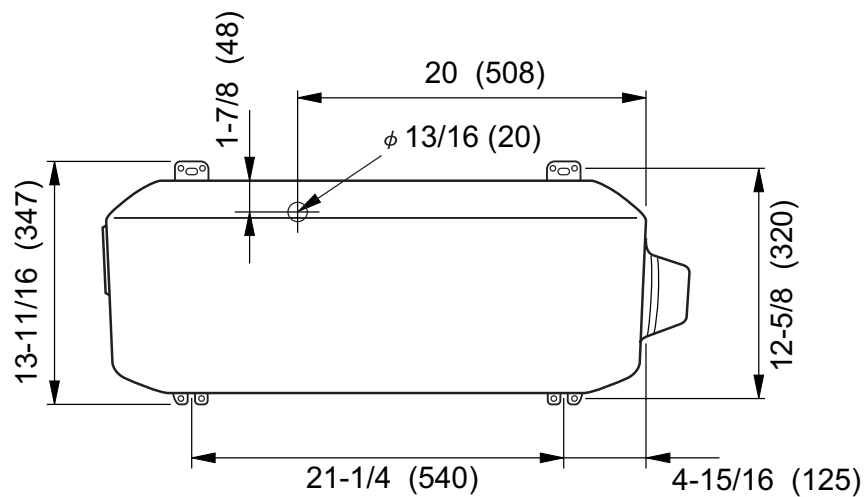
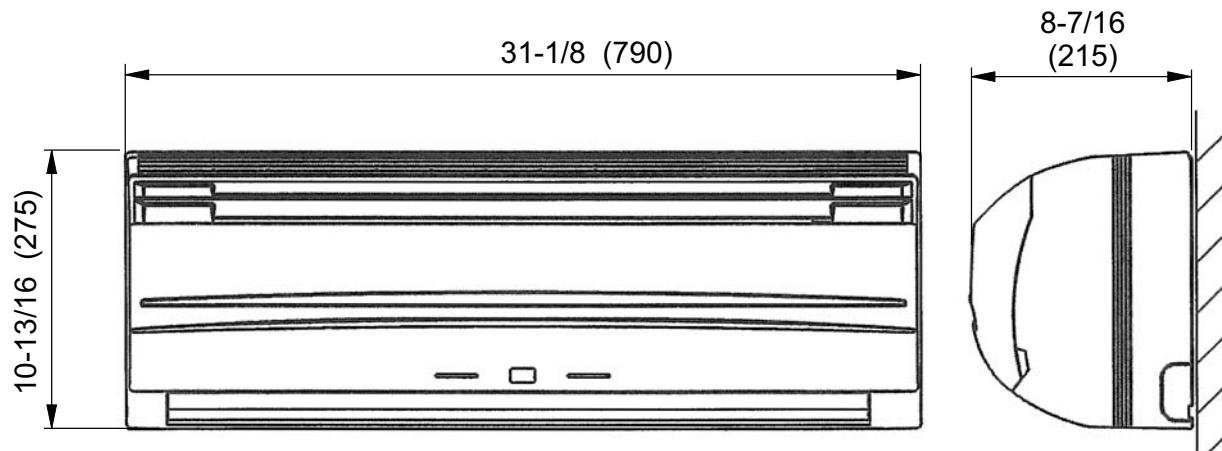
REFRIGERANT (R410A)

Pipe Length	49 ft. (15 m)	2-9/16 lbs. (1,150 g)
FULL CHARGE	66 ft. (20 m)	2-3/4 lbs. (1,250 g)
ADDITIONAL REFRIGERANT		3/16 oz./ft. (20 g/m)

DIMENSIONS

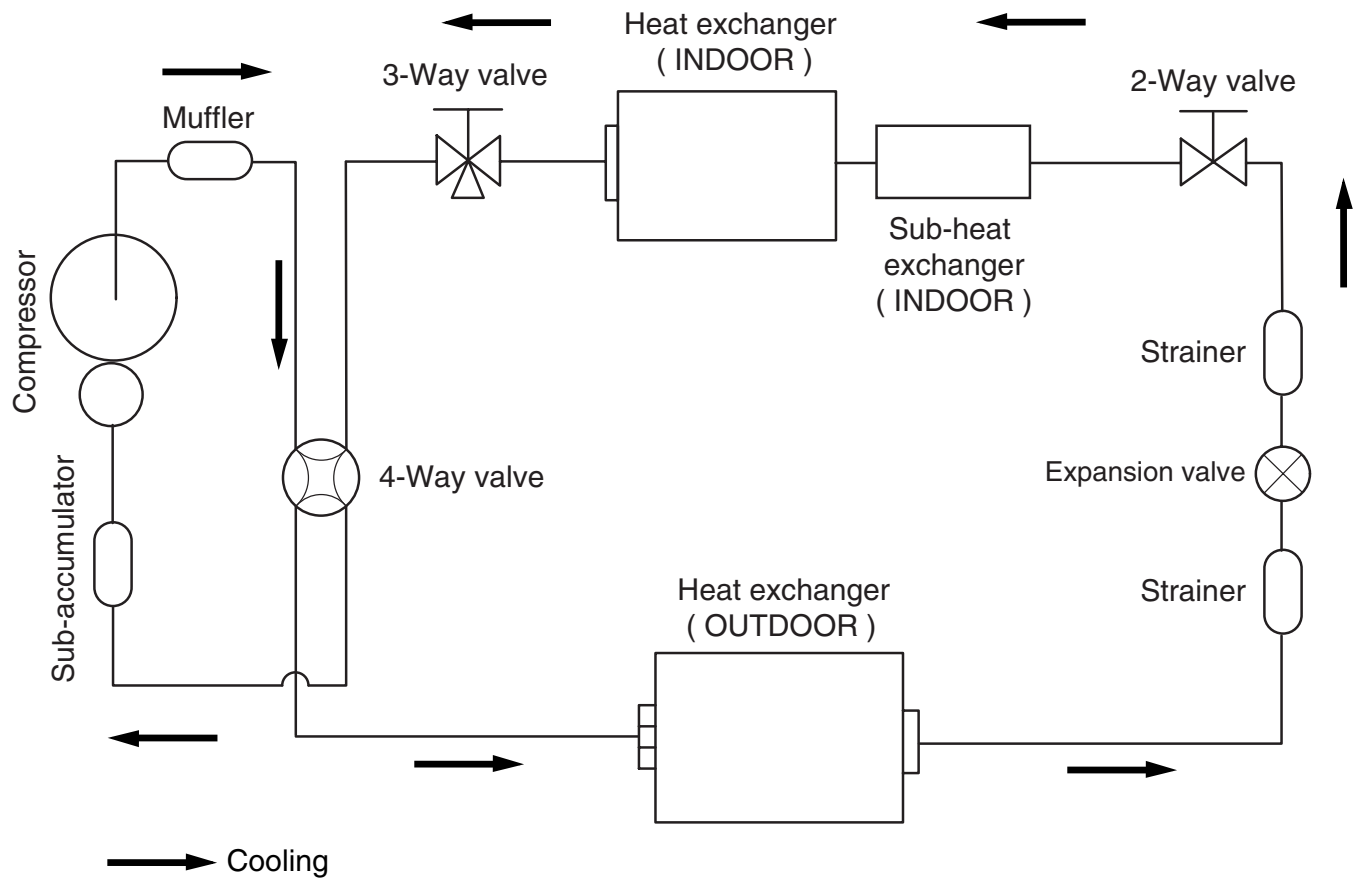
Models : MW18C3F / MR18C3F

unit : inch (mm)



REFRIGERANT SYSTEM DIAGRAM

Model : MW18C3F / MR18C3F

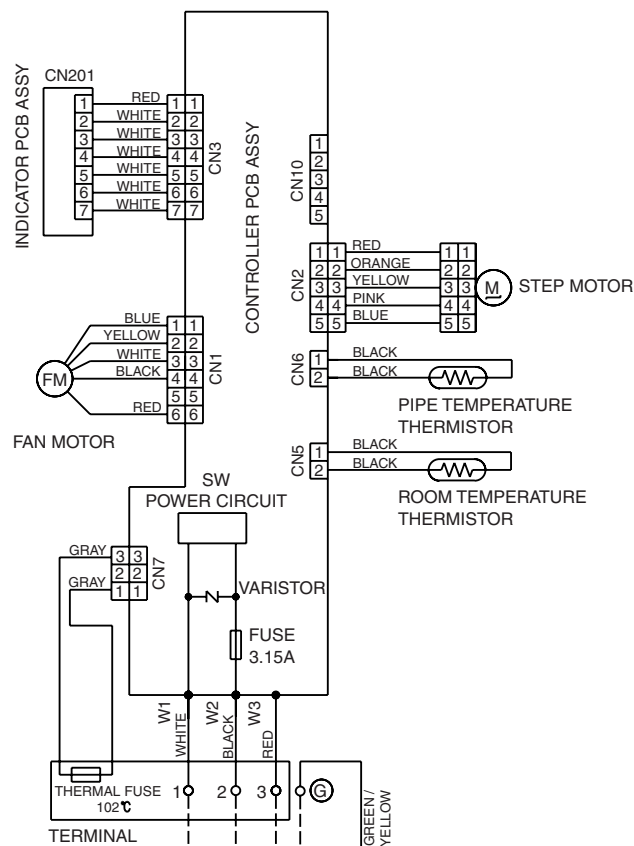


Refrigerant pipe diameter
Liquid : 1/4" (6.35 mm)
Gas : 1/2" (12.7 mm)

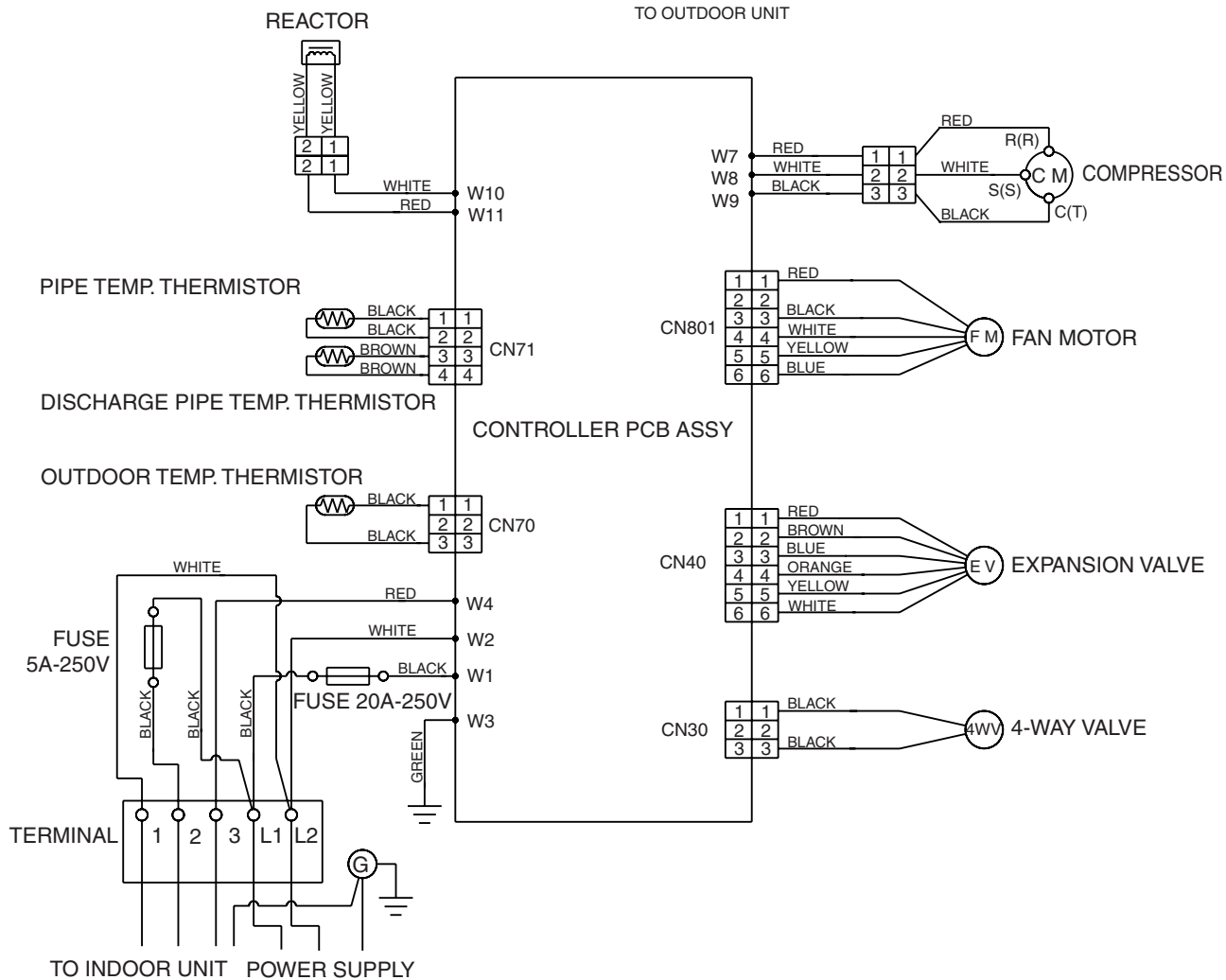
CIRCUIT DIAGRAM

Model :
MW18C3F / MR18C3F

INDOOR UNIT



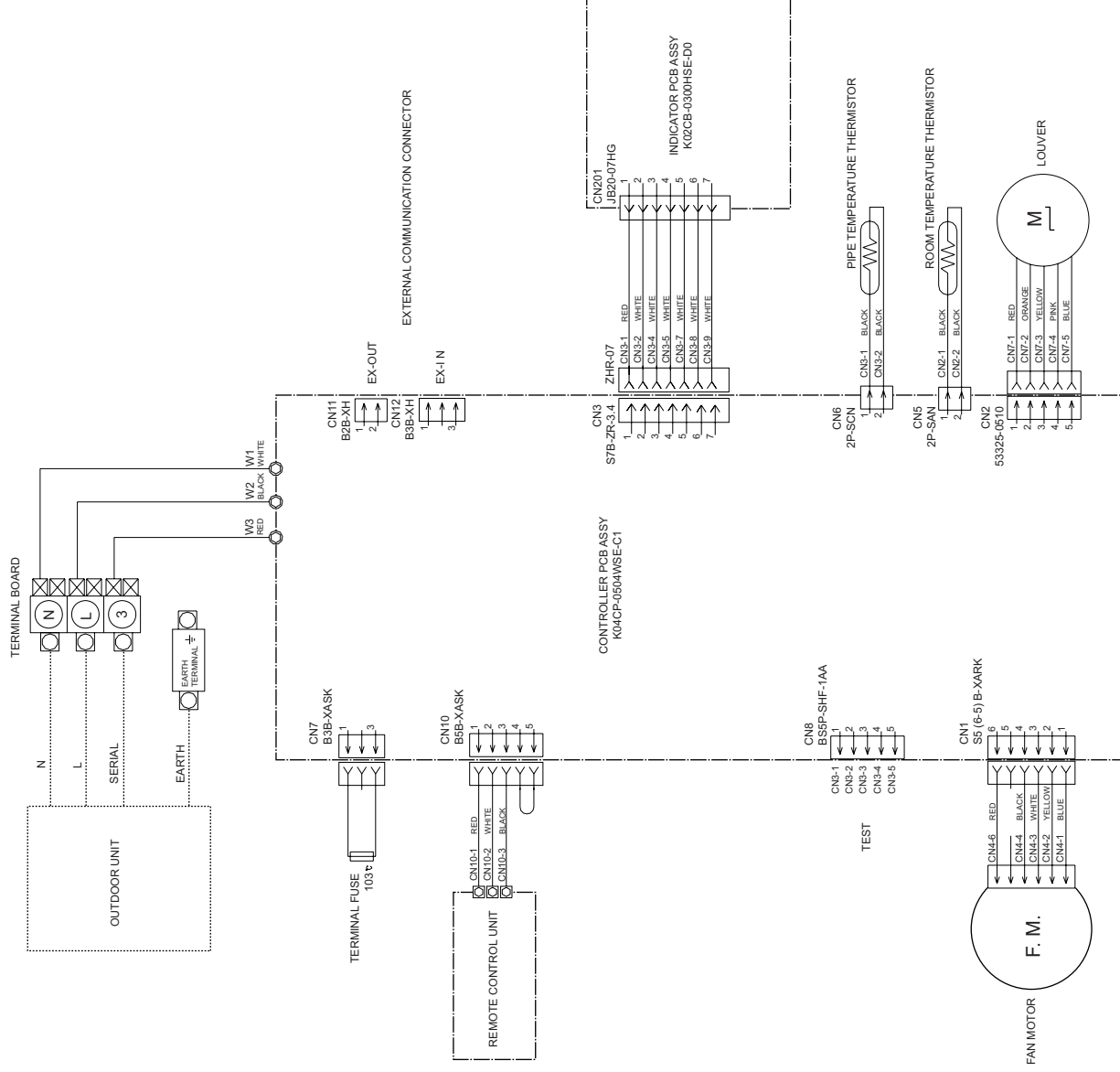
OUTDOOR UNIT



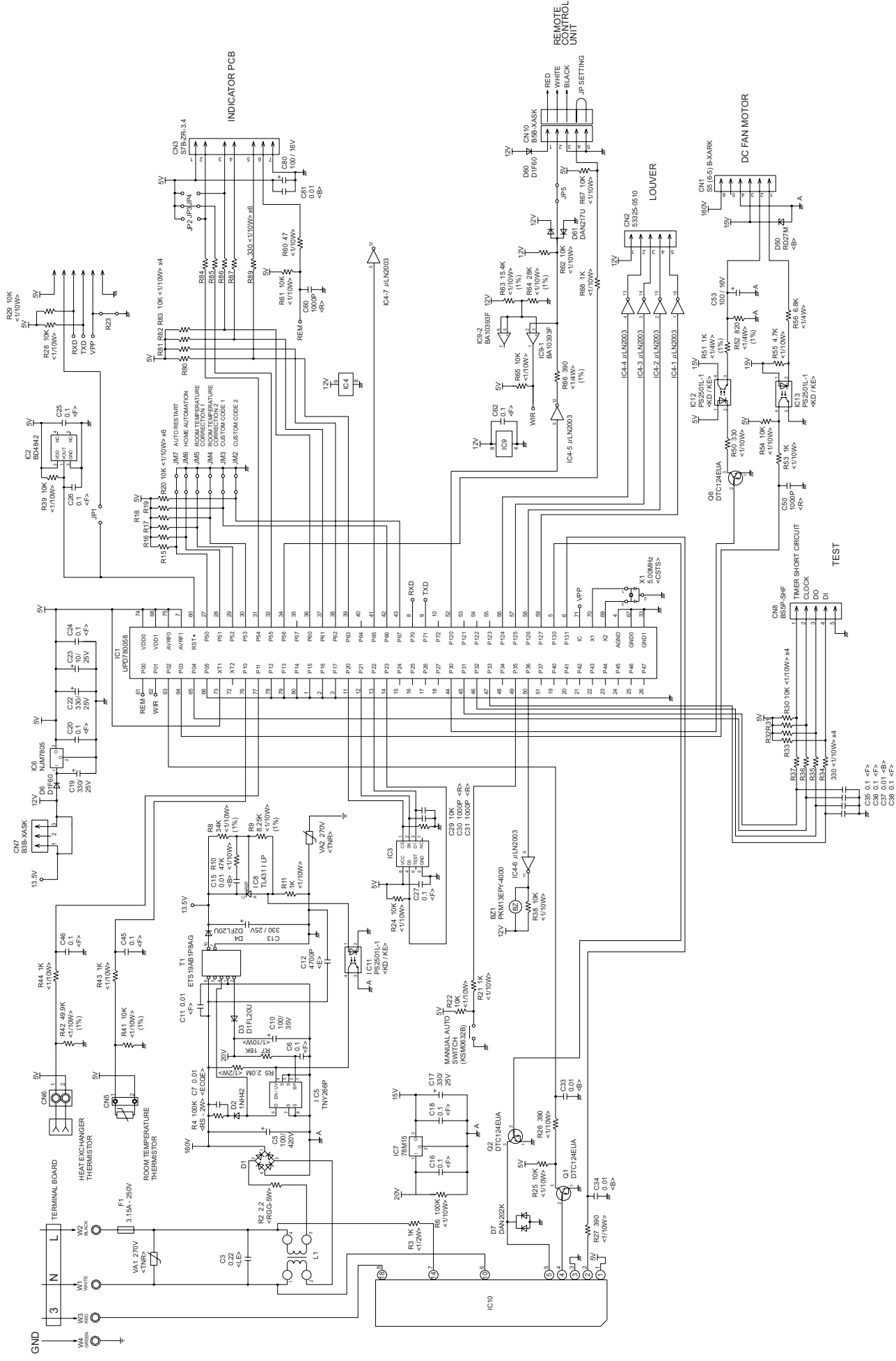
INDOOR PCB CIRCUIT DIAGRAM

Model : MW18C3F

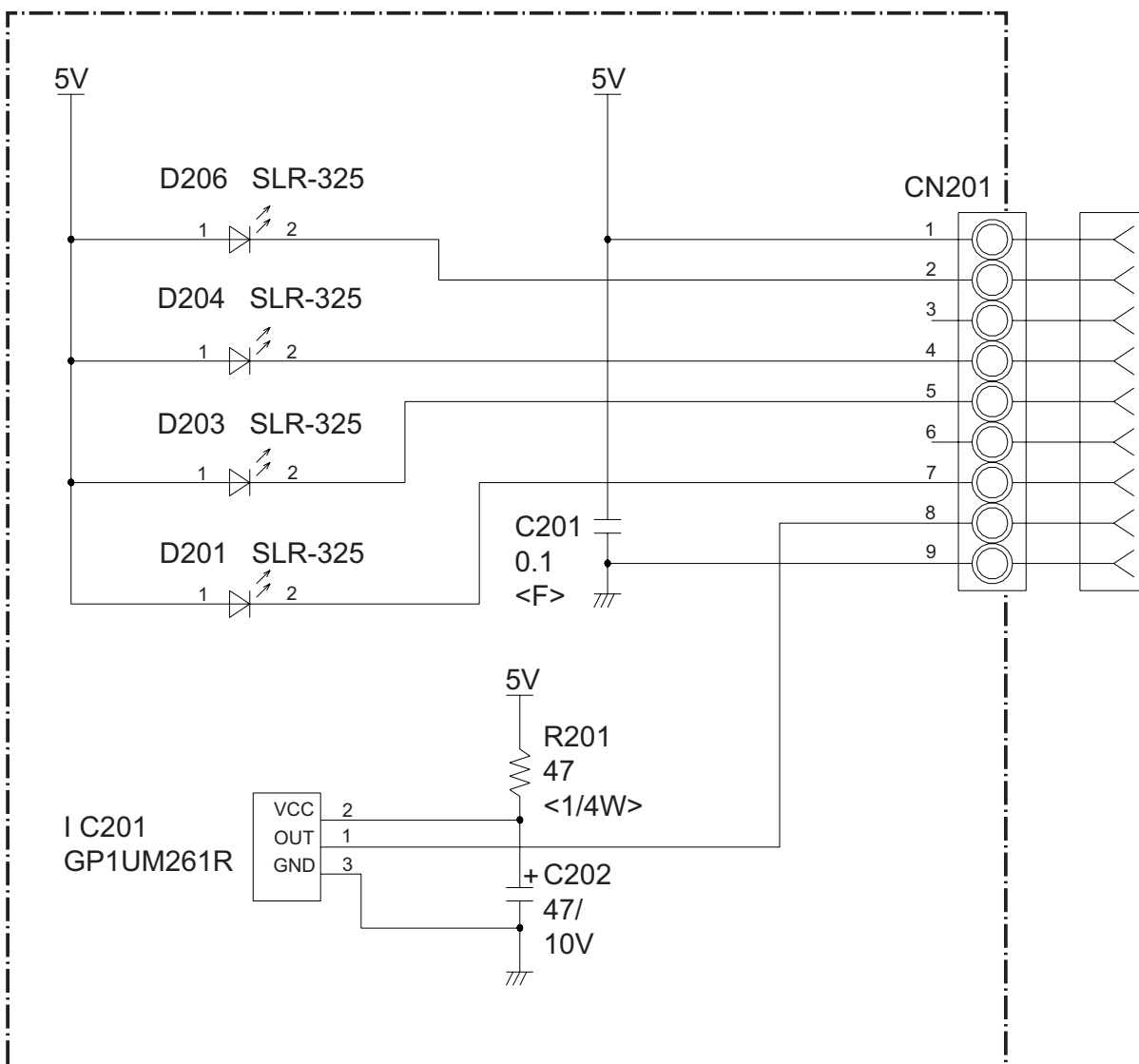
CONTROL UNIT
EZ-005EWSE



CONTROLLER PCB ASSEMBLY
K04CP-0504WSE-C1



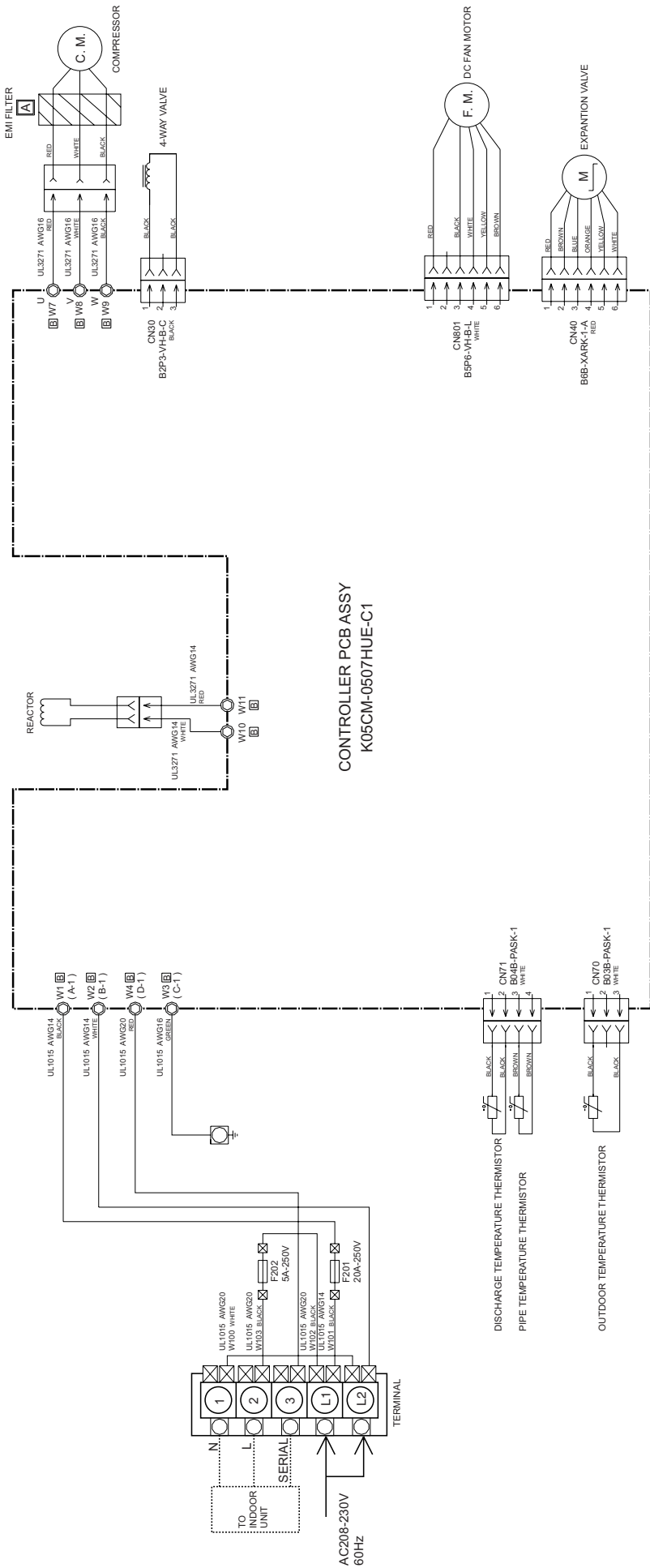
Model : MW18C3F



OUTDOOR PCB CIRCUIT DIAGRAM

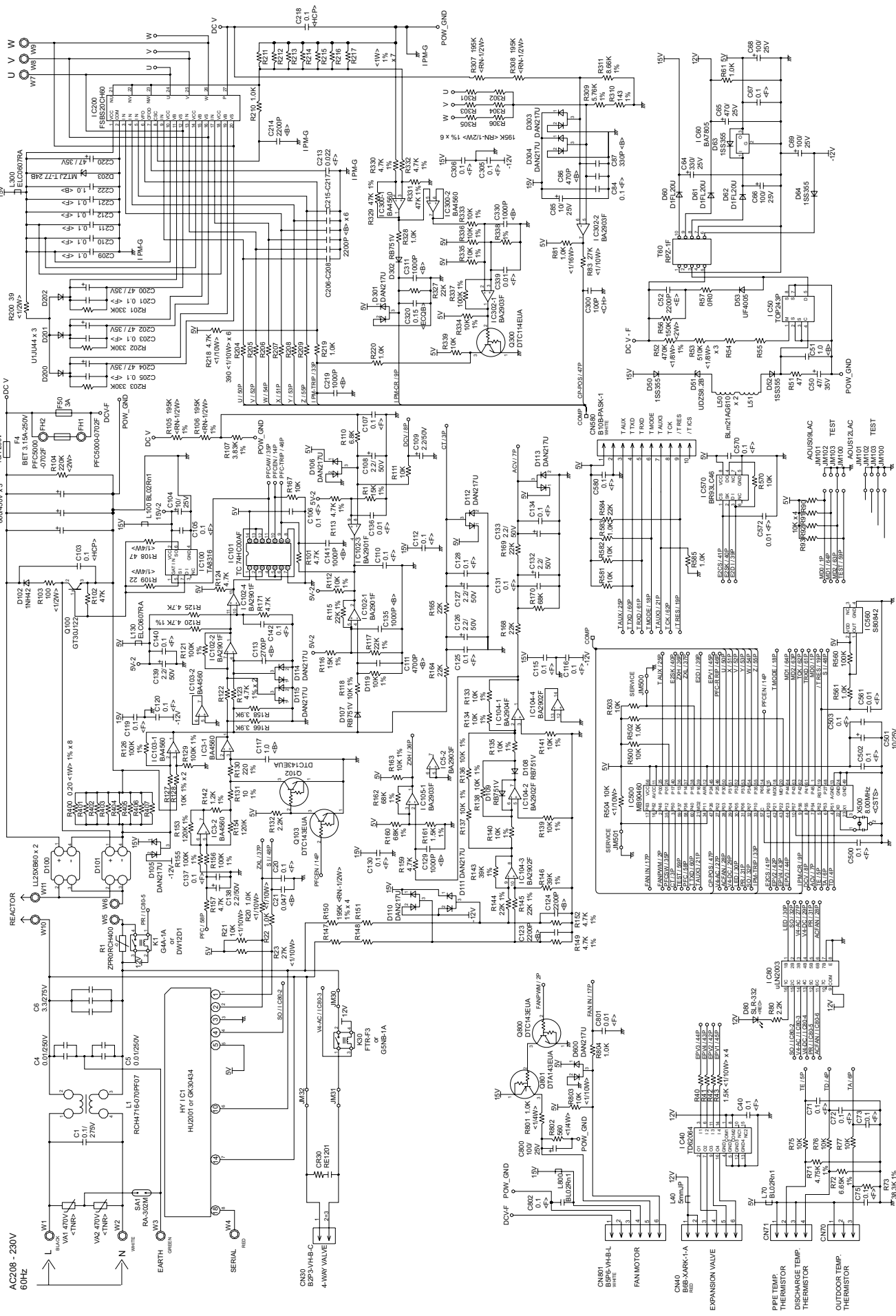
Model : MR18C3F

INVERTER ASSEMBLY EZ-005SHUE



Model : MR18C3F

CONTROLLER PCB ASSY K05CM-0507HUE-C1



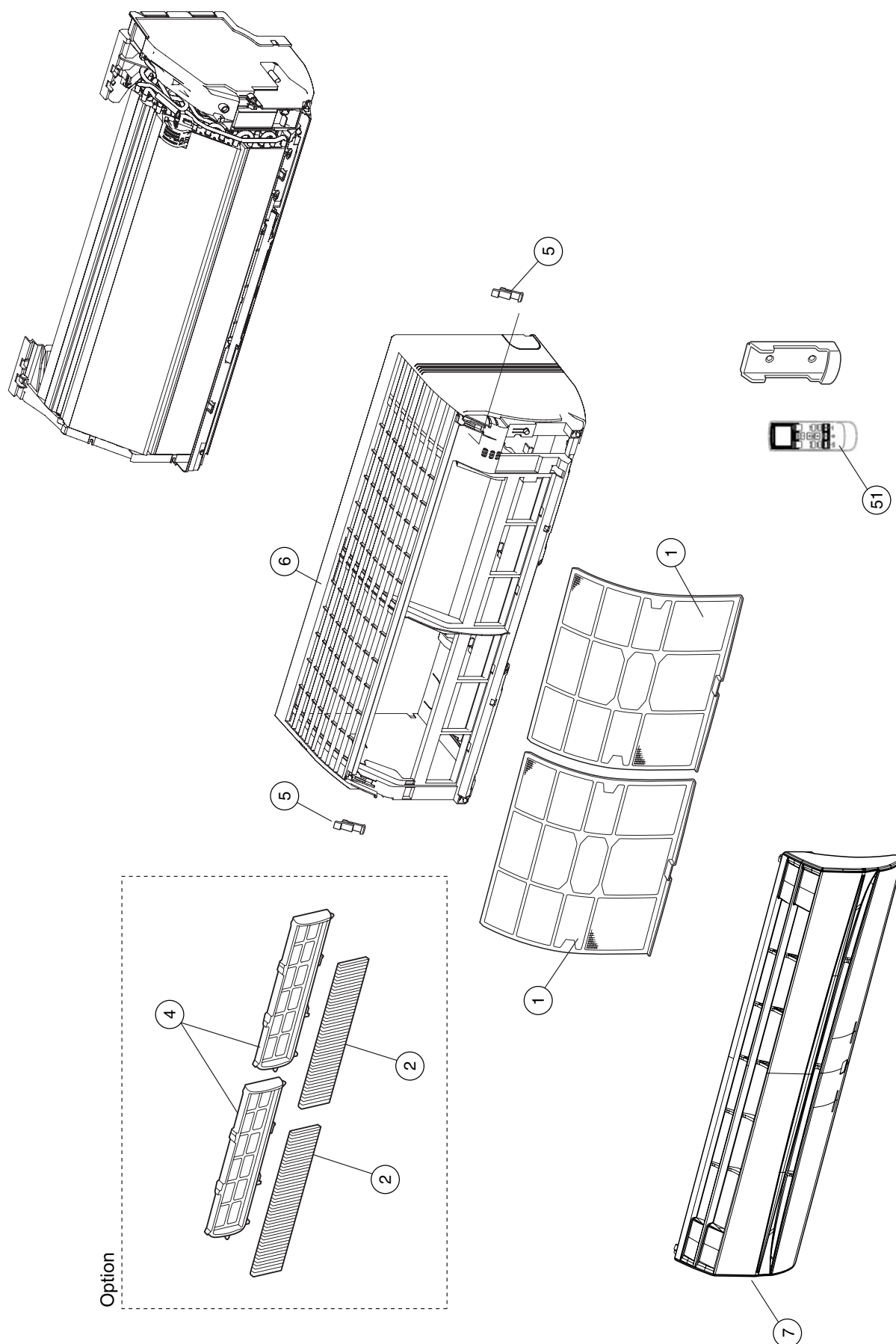
ERROR CONTENTS

Model : MW18C3F

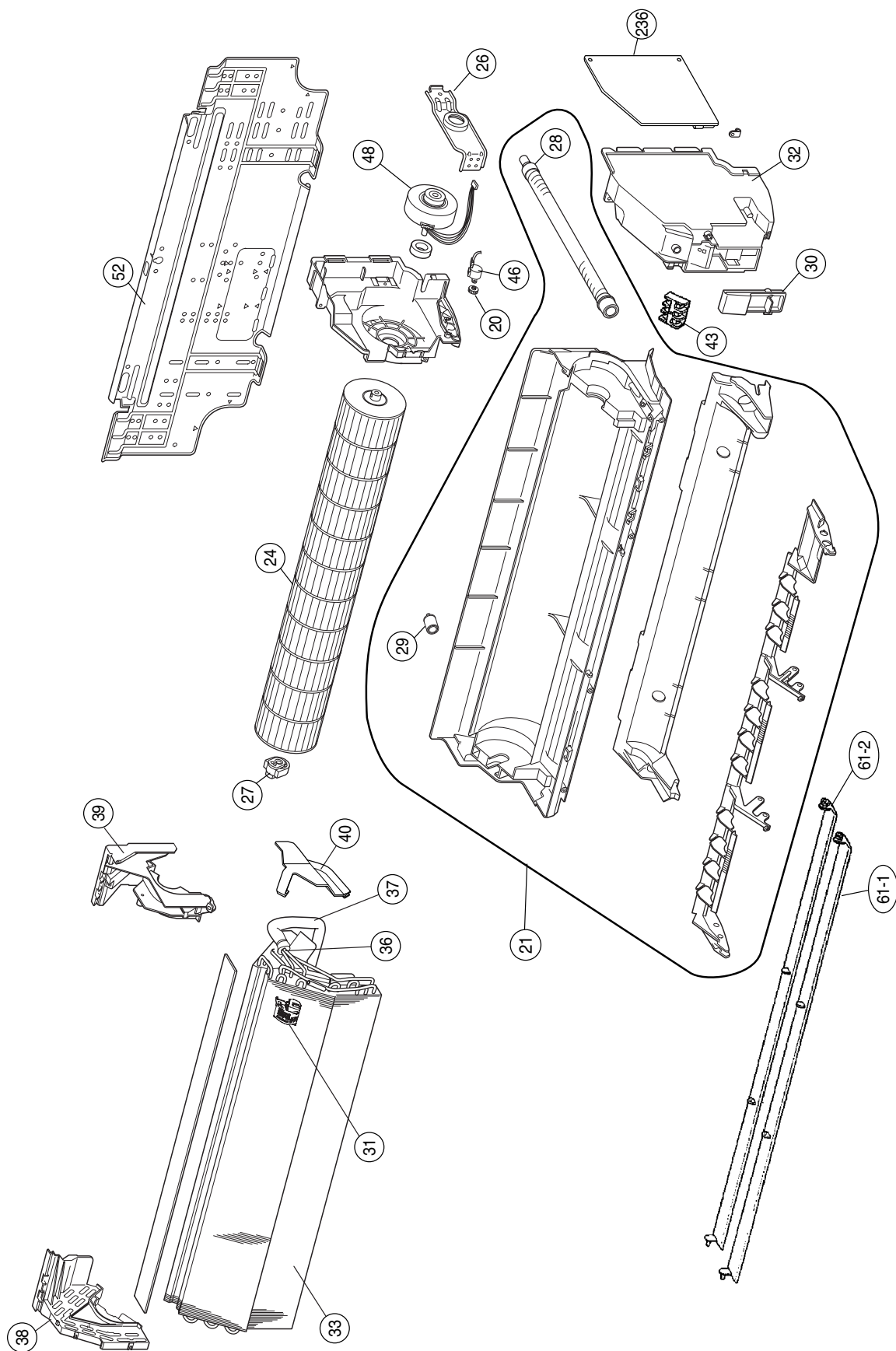
Error	Display		Error
	Operation LED	Timer LED	
Serial signal error	Normal	2 flash	Serial signal (reverse) error, at operation start up
		3 flash	Serial signal (reverse) error, during operation
		4 flash	Serial signal (forward) error, at operation start up
		5 flash	Serial signal (forward) error, during operation
Indoor unit thermistor error	2 flash	2 flash	Indoor temperature thermistor open / short
		3 flash	Heat exchanger middle thermistor open / short
Outdoor unit thermistor error	3 flash	2 flash	Discharge thermistor open / short
		3 flash	Heat exchanger thermistor open
		4 flash	Outdoor temperature thermistor open / short
Indoor unit control error	4 flash	2 flash	Forced automatic SW welded
		3 flash	Main relay welded
		4 flash	Power interruption error
		7 flash	VDD permanent stop protection
		8 flash	reverse VDD permanent stop protection
Outdoor unit control error	5 flash	2 flash	Current trip error
		3 flash	CT abnormal
		5 flash	Compressor location detection error
		6 flash	Outdoor unit fan drive system abnormal
Indoor fan motor error	6 flash	2 flash	Abnormal lock
		3 flash	Abnormal rotation
Refrigerant cycle error	7 flash	2 flash	Discharge Temperature abnormal
		3 flash	Cooling high pressure abnormal rise
Optional function error	8 flash	4 flash	PFC circuit error
Model information error	0.1 sec on/off	0.1 sec on/off	Model information error

DISASSEMBLY ILLUSTRATION

Model : MW18C3F



Model : MW18C3F



Model : MR18C3F

This exploded view diagram illustrates the components of the MR18C3F air conditioning unit. The parts are numbered as follows:

- 1: Main indoor unit casing
- 2: Filter frame
- 3: Indoor unit front panel
- 4: Indoor unit rear panel
- 5: Remote control receiver
- 6: Indoor unit base
- 7: Fan motor
- 8: Outdoor unit casing
- 9: Outdoor unit base
- 10: Outdoor unit fan
- 11: Outdoor unit fan motor
- 12: Outdoor unit fan blades
- 13: Outdoor unit rear panel
- 14: Outdoor unit front panel
- 15: Outdoor unit fan guard
- 16: Fan guard
- 17: Fan guard
- 18: Fan guard
- 19: Fan guard
- 20: Fan guard
- 21: Fan guard
- 22: Fan guard
- 23: Fan guard
- 24: Fan guard
- 25: Fan guard
- 26: Fan guard
- 27: Fan guard
- 28: Fan guard
- 29: Fan guard
- 30: Fan guard
- 31: Fan guard
- 32: Fan guard
- 33: Fan guard
- 34: Fan guard
- 35: Fan guard
- 36: Fan guard
- 37: Fan guard
- 38: Fan guard
- 39: Fan guard
- 40: Fan guard
- 41: Fan guard

PARTS LIST

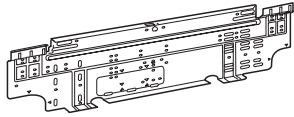
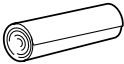
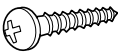
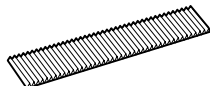
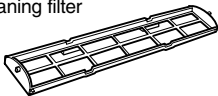
INDOOR UNIT

Ref. No.	Description	Part No.	Ord. Q'ty
		MW18C3F	
1	Air Filter	9309997011	
2	Filter (Electric + ION)	9312152018	
4	Holder (Filter)	9306602017	
5	Clamper (Grille)	9306755010	
6	Front Panel	9309999053	
7	Intake Grille Assy	9313566036	
20	Gear-A	9309994003	
21	Casing Assy	9311354079	
24	Crossflow Fan Assy	9307836015	
26	Clamp (Motor)	9313724016	
27	Shaft Holder-C Assy	9306628017	
28	Drain Hose Assy	9314147012	
29	Drain Cap Assy	9314493010	
30	Wire Clamper	9313944018	
31	Holder (Room Thermistor)	9311948018	
32	Cover (Switch)	9313943011	
33	Evaporator Total Assy	9313099015	
36	Joint Pipe Assy	9313792015	
37	Insulation (Pipe)-E	9304607007	
38	Holder (Evaporator)-L Assy	9313174019	
39	Holder (Evaporator)-R	9309983014	
40	Water Seal	9312912018	
43	Terminal	9701955114	
46	Step Motor	9900139025	
48	Fan Motor Assy	9602109012	
51	Remote Control Unit	9315027061	
52	Bracket Panel	9310001004	
61-1	Flow Control Panel-U	9309991033	
61-2	Flow Control Panel-Z	9309992030	
236	Controller PCB Assy	9707193022	
		(K04CP-0504WSE-C1)	
---	Pipe Temperature Thermistor	9702039042	
---	Room Temperature Thermistor	9700801108	
---	Indicator PCB Assy	9705039032	
---	Evaporator B Assy	9311275022	

OUTDOOR UNIT

Ref. No.	Description	Part No.	Ord. Q'ty
		MR18C3F	
1	Top Panel Assy	9309230057	
2	Top Panel Seal	9309228016	
3	Cabinet Sub Assy	9314809040	
4	Blow Down Grille	9308884015	
5	Cabinet Right Assy	9309236011	
6	Fan Ring	9308885012	
7	Grip	9308880017	
8	Switch Cover Assy	9309237049	
10	4-Way Valve	9970056017	
11	Expansion Valve Assy	9311641018	
12	Strainer	9311440017	
13	Condenser Assy	9311382027	
14	Thermistor Spring-A	313728262708	
15	Thermistor Spring-A	9300089012	
16	Propeller Fan	9309909014	
18	Motor Bracket	9308872012	
19	Separator	9312971015	
20	Base Assy	9308869081	
21	3-Way Valve Assy	9315159014	
22	2-Way Valve Assy	9313064013	
24	Cord Clamp	9307271014	
25	Terminal	9703874024	
26	Inverter PCB Assy	9707039085	
29	Fuse	0600382018	
32	Expansion Valve Coil	9900057039	
34	Fan Motor	9602133017	
35	Compressor Assy	9313764012	
36	Emblem Rear	9312661015	
37	Thermistor Assy (Heat Exchanger & Discharge Pipe)	9900148027	
39	Solenoid Coil	9970033025	
40	Protective Net	9315319012	
41	Intelligent Power Module	9705720015	
---	Outdoor Temp. Thermistor	9900210045	
---	Thermistor	9900041014	

STANDARD ACCESSORIES

Name and Shape	Part No.
	MW18C3F
Wall hook bracket 	9310001004
Remote control unit 	9315027061
Remote control unit holder 	9305642045
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
Seal A 	9304536000

