

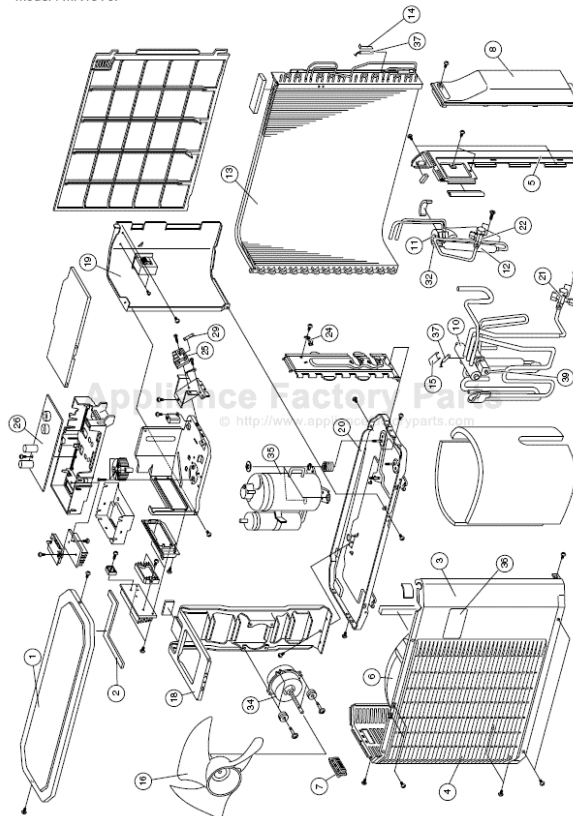
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# FRIEDRICH MR18Y3F Owner's Manual

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MR18Y3F](#)

Model : MR18Y3F



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**SPLIT TYPE  
ROOM AIR CONDITIONER  
WALL MOUNTED type**

**SERVICE  
MANUAL**



**Models**

<b>Indoor unit</b>	<b>Outdoor unit</b>
MW18Y3F	MR18Y3F

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# SPECIFICATIONS

TYPE	COOL & HEAT INVERTER
INDOOR UNIT	MW18Y3F
OUTDOOR UNIT	MR18Y3F
COOLING CAPACITY	5.28 kW
HEATING CAPACITY	6.30 kW

## ELECTRICAL DATA

POWER SOURCE	208 - 230 V	
FREQUENCY	60 Hz	
RUNNING CURRENT	COOLING	7.7 A
	HEATING	8.6 A
INPUT WATTS	COOLING	1.73 kW
	HEATING	1.93 kW
E.E.R.	COOLING	3.05 kW/kW
COP	HEATING	3.28 kW/kW
MOISTURE REMOVAL	2.8 L/hr	
AIR CIRCULATION -High	Cool 700 m <sup>3</sup> /hr Heat 700 m <sup>3</sup> /hr	

## COMPRESSOR

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

## FAN MOTOR

POWER SOURCE	208 - 230 V	
INDOOR UNIT	HIGH-SPEED	Cool 1,480 r.p.m. Heat 1,480 r.p.m.
	MED-SPEED	Cool 1,260 r.p.m. Heat 1,300 r.p.m.
	LOW-SPEED	Cool 1,040 r.p.m. Heat 1,110 r.p.m.
	QUIET	Cool 850 r.p.m. Heat 950 r.p.m.
OUTDOOR UNIT	Cool 860 r.p.m. Heat 820 r.p.m.	

## DIMENSIONS

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

## WEIGHT

INDOOR UNIT	GROSS / NET	12 / 9 kg
OUTDOOR UNIT	GROSS / NET	44 / 40 kg

## NOISE LEVEL

INDOOR UNIT	C 44 dB H 42 dB
OUTDOOR UNIT	C 50 dB H 50 dB

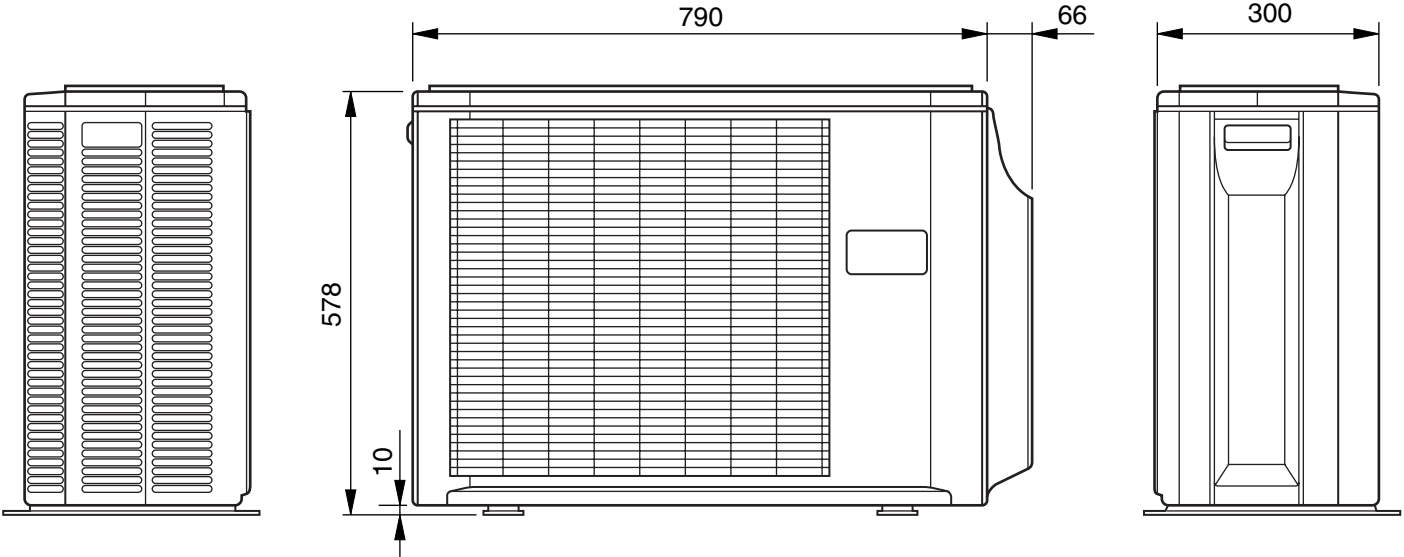
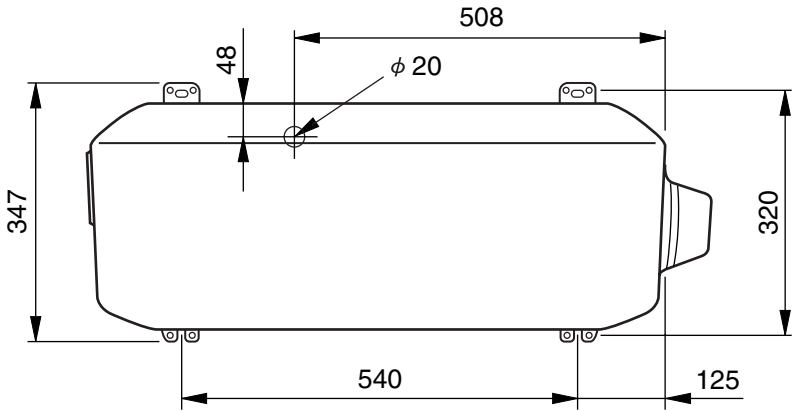
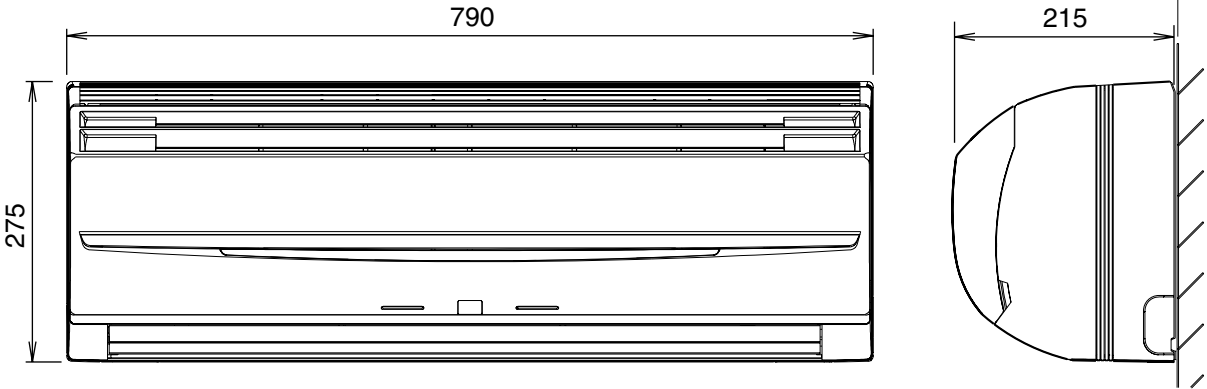
## REFRIGERANT (R410A)

FULL CHARGE AMOUNT	Pipe Length 15 m	1,150 g
	20 m	1,250 g
ADDITIONAL REFRIGERANT	20 g / m	

# DIMENSIONS

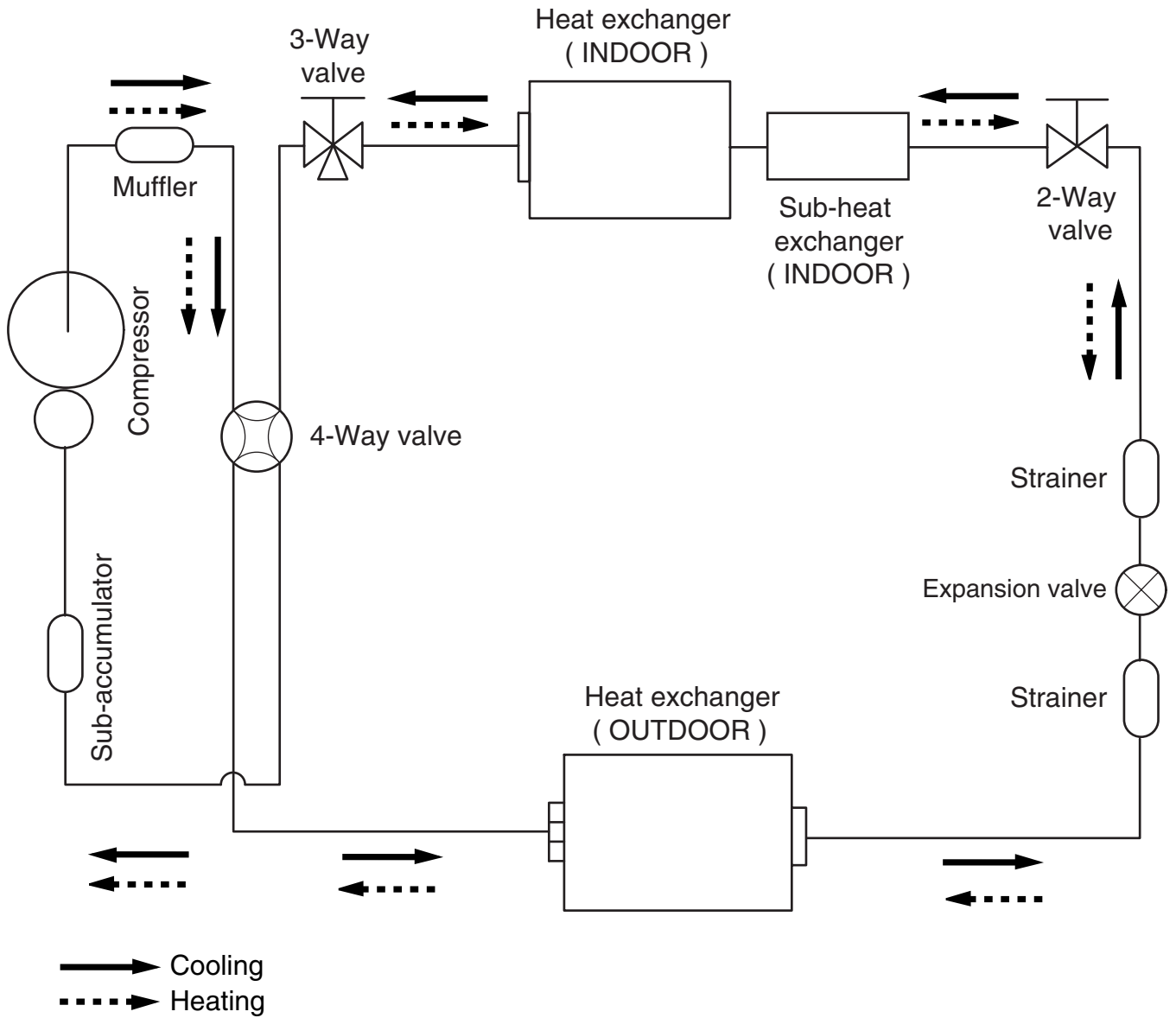
Model : MW18Y3F / MR18Y3F

(unit : mm)



# REFRIGERANT SYSTEM DIAGRAM

Model : MW18Y3F / MR18Y3F

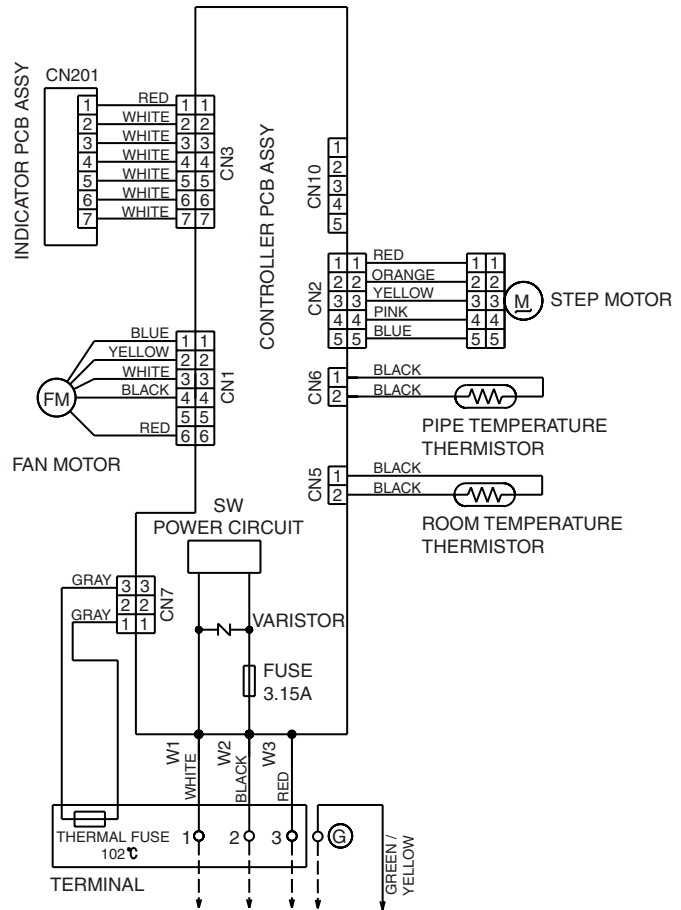


Refrigerant pipe diameter  
 Liquid : 1/4" (6.35 mm)  
 Gas : 1/2" (12.7 mm)

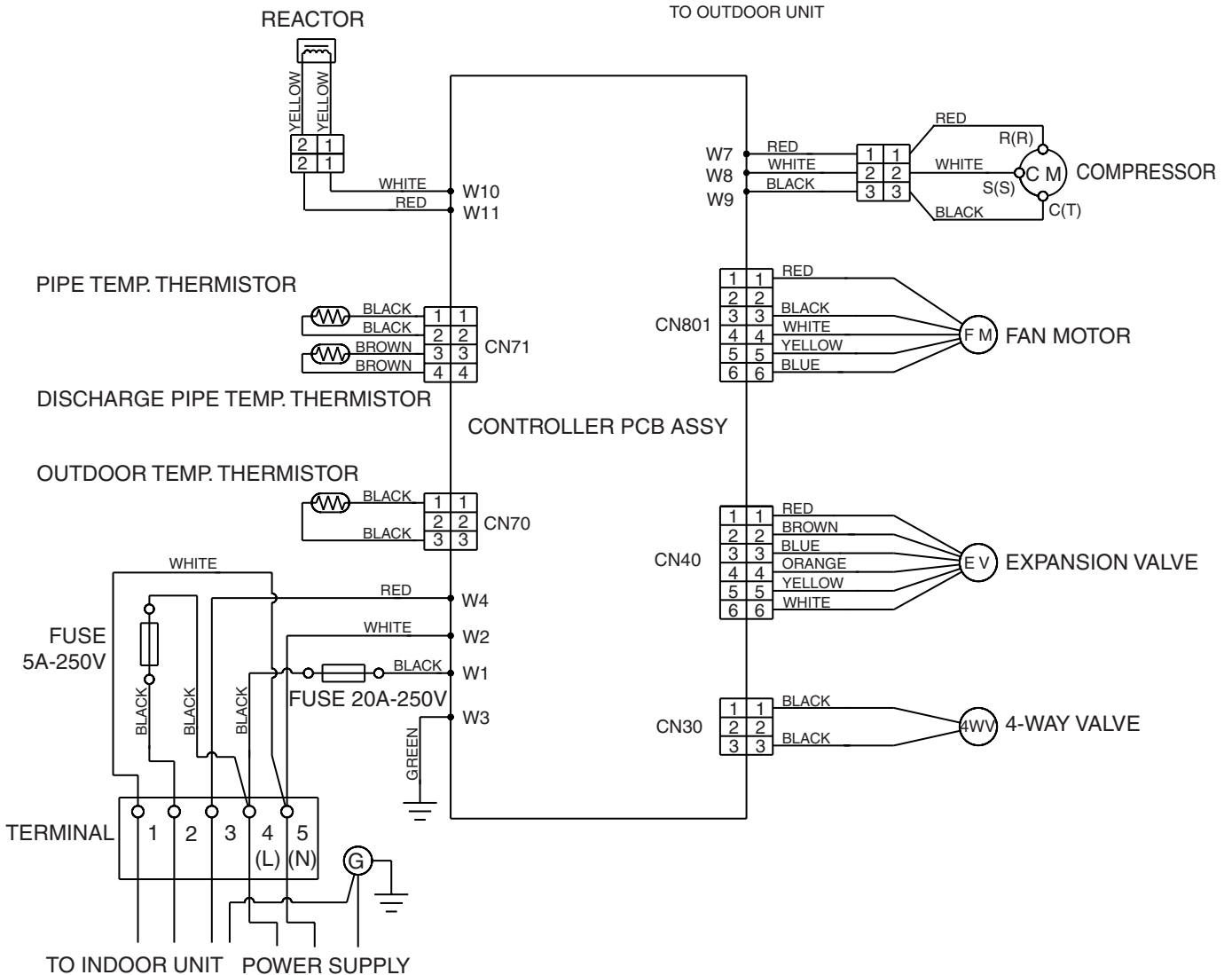
# CIRCUIT DIAGRAM

Model :  
MW18Y3F / MR18Y3F

INDOOR UNIT

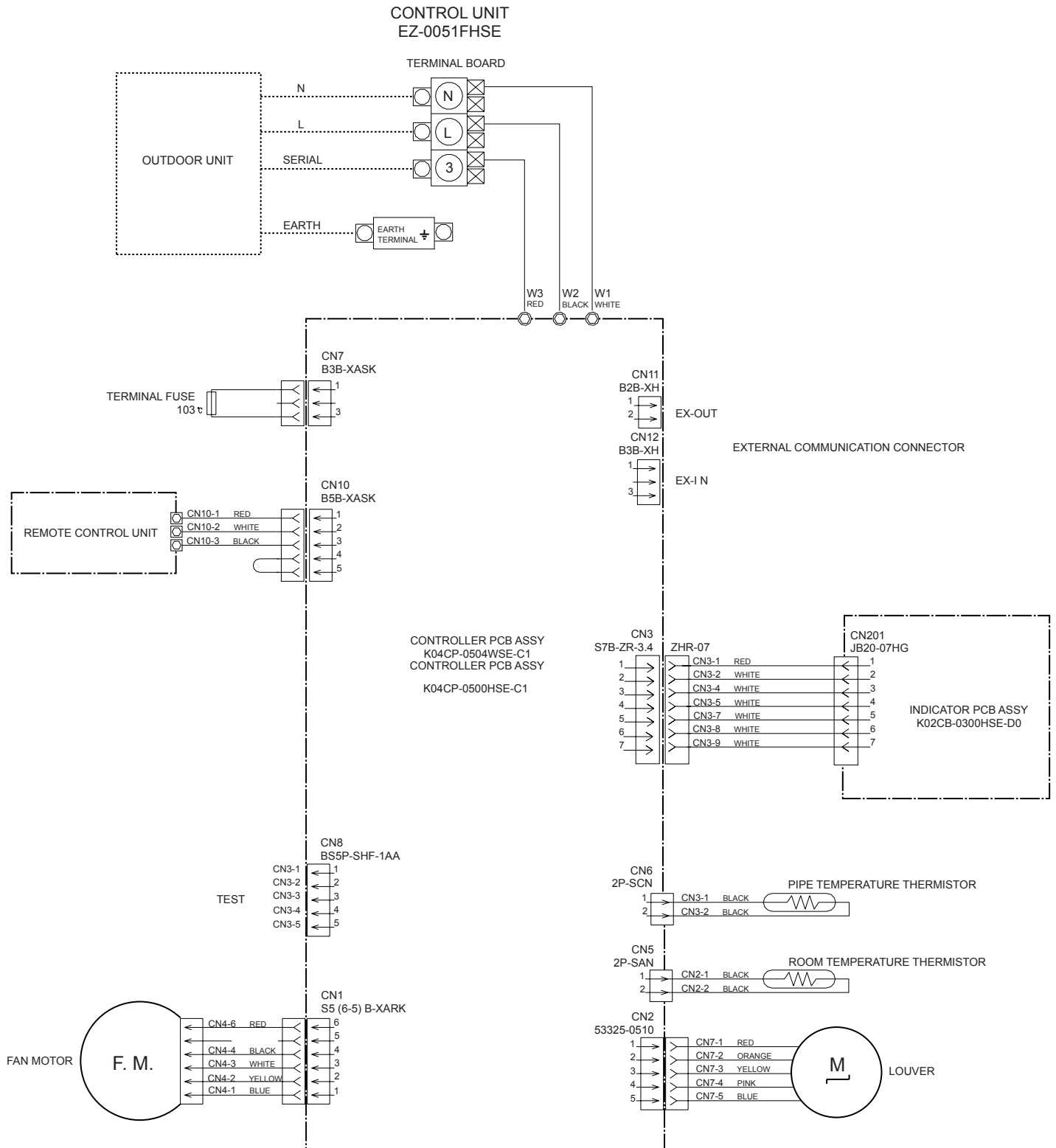


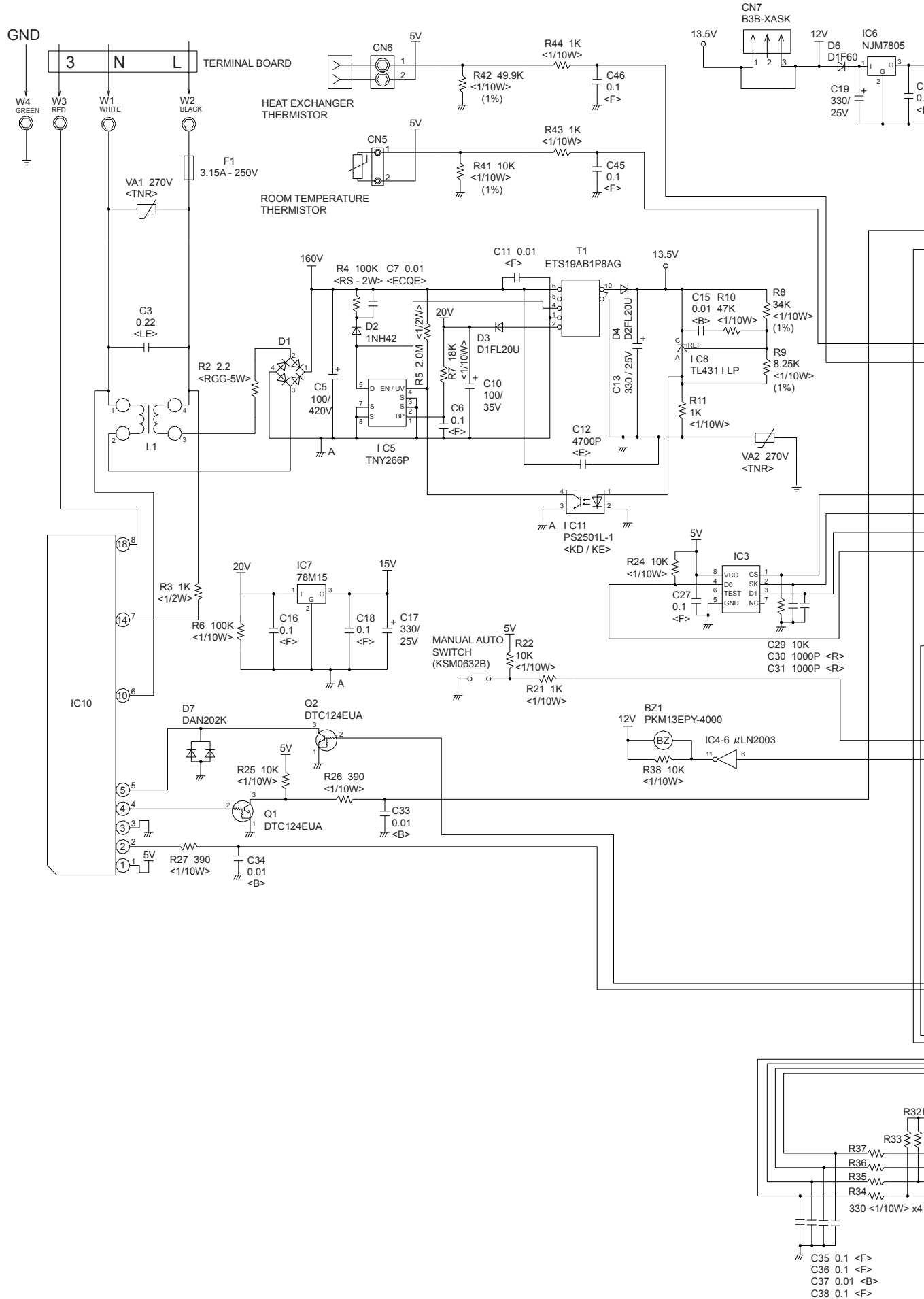
OUTDOOR UNIT



# INDOOR PCB CIRCUIT DIAGRAM

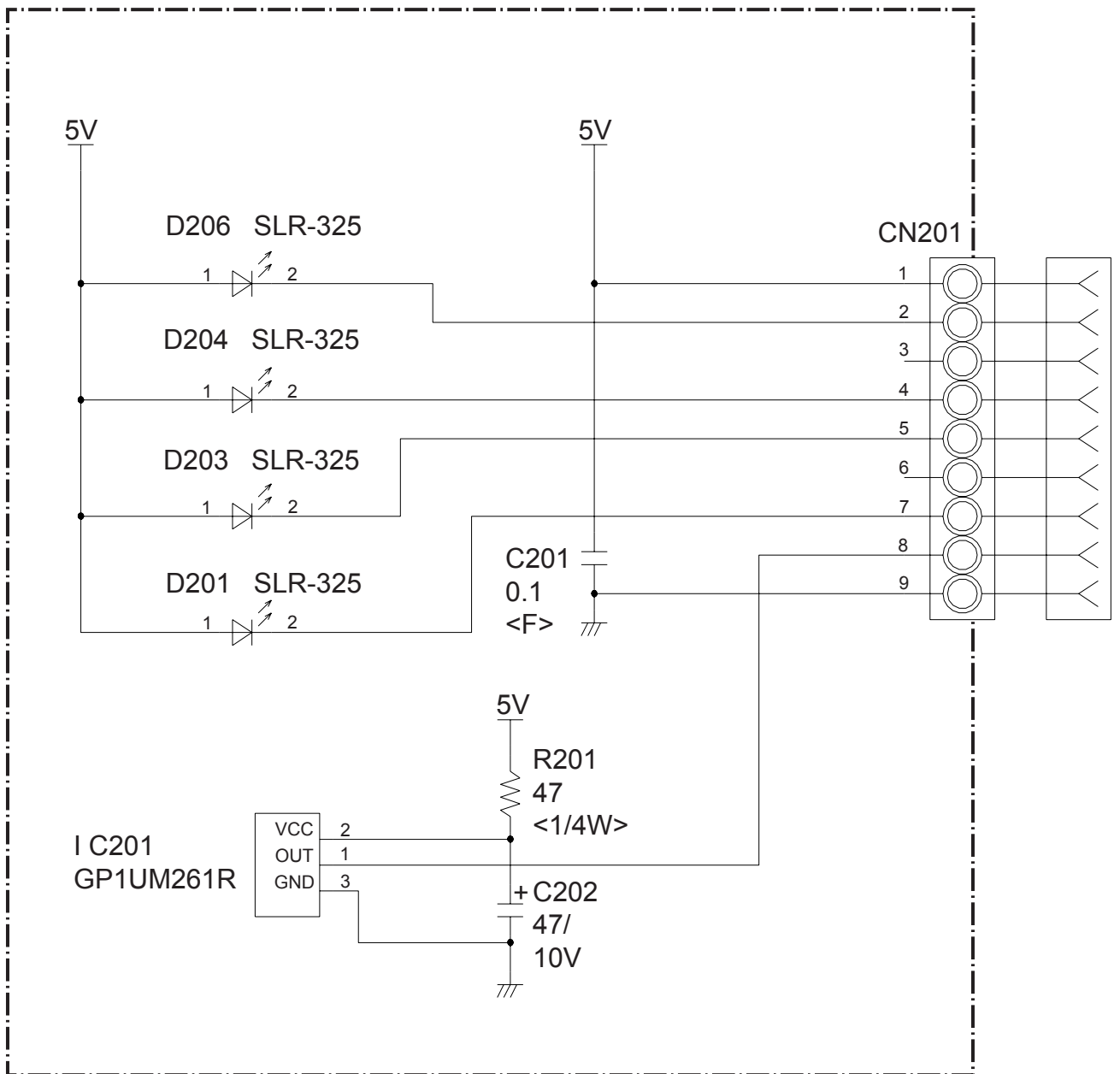
Model : MW18Y3F





Model : MW18Y3F

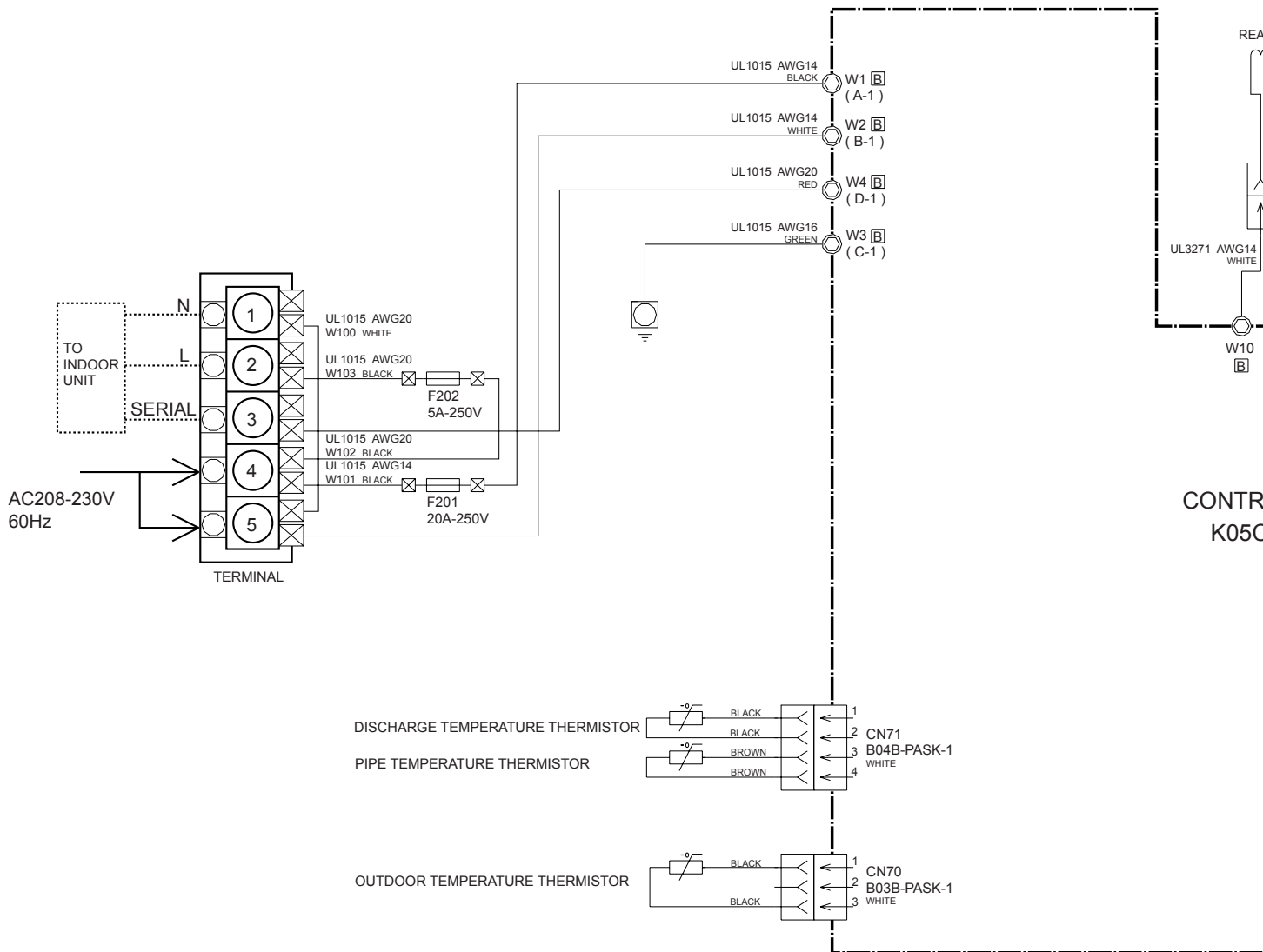
# INDICATOR PCB ASSY K03DV-0400WSE-D0



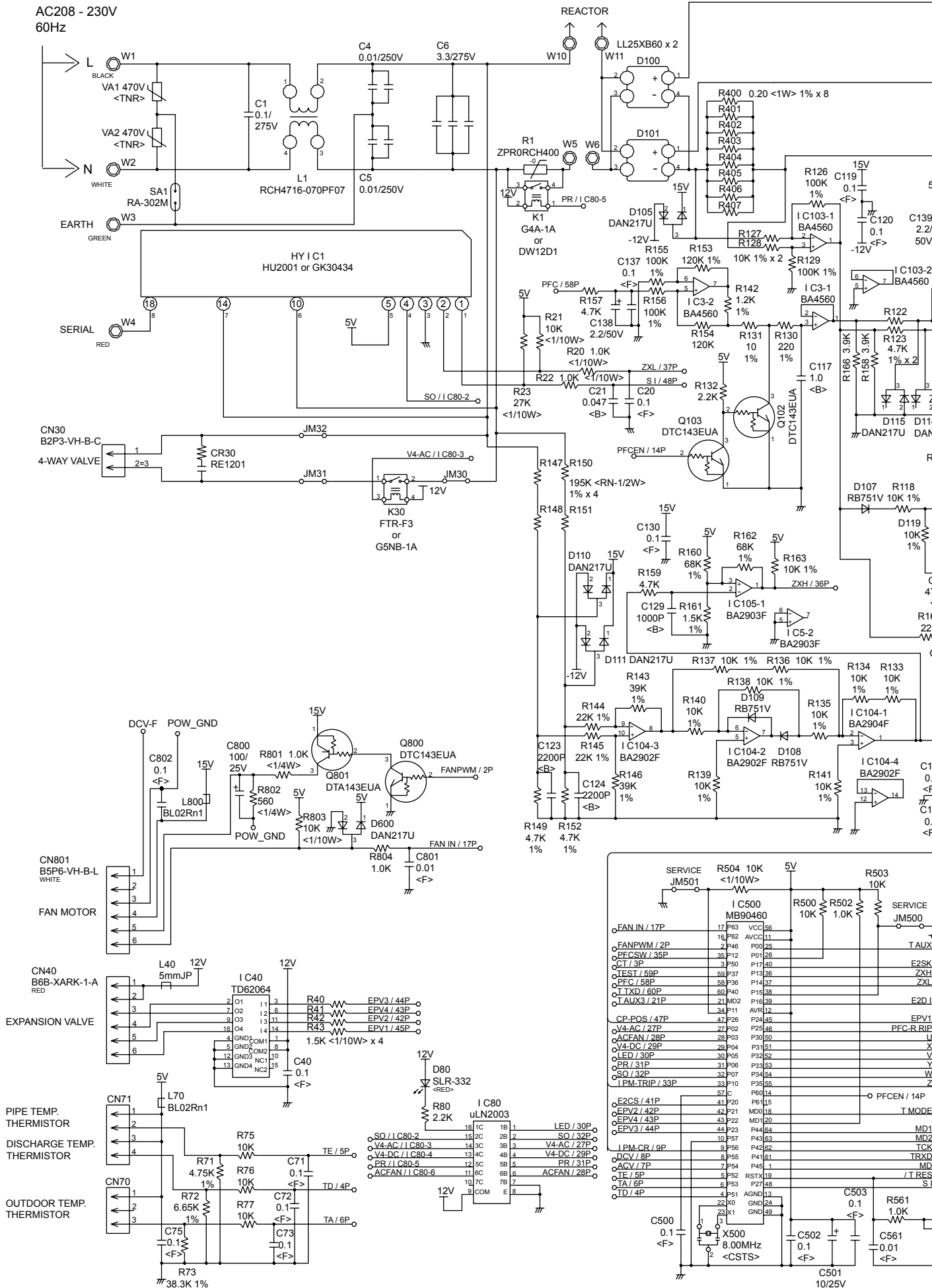
# OUTDOOR PCB CIRCUIT DIAGRAM

Model : MR18Y3F

INVERTER  
EZ-0



AC208 - 230V  
60Hz



# ERROR CONTENTS

Model : MW18Y3F / MR18Y3F

## Self-diagnosis function table (Flashing LED Display)

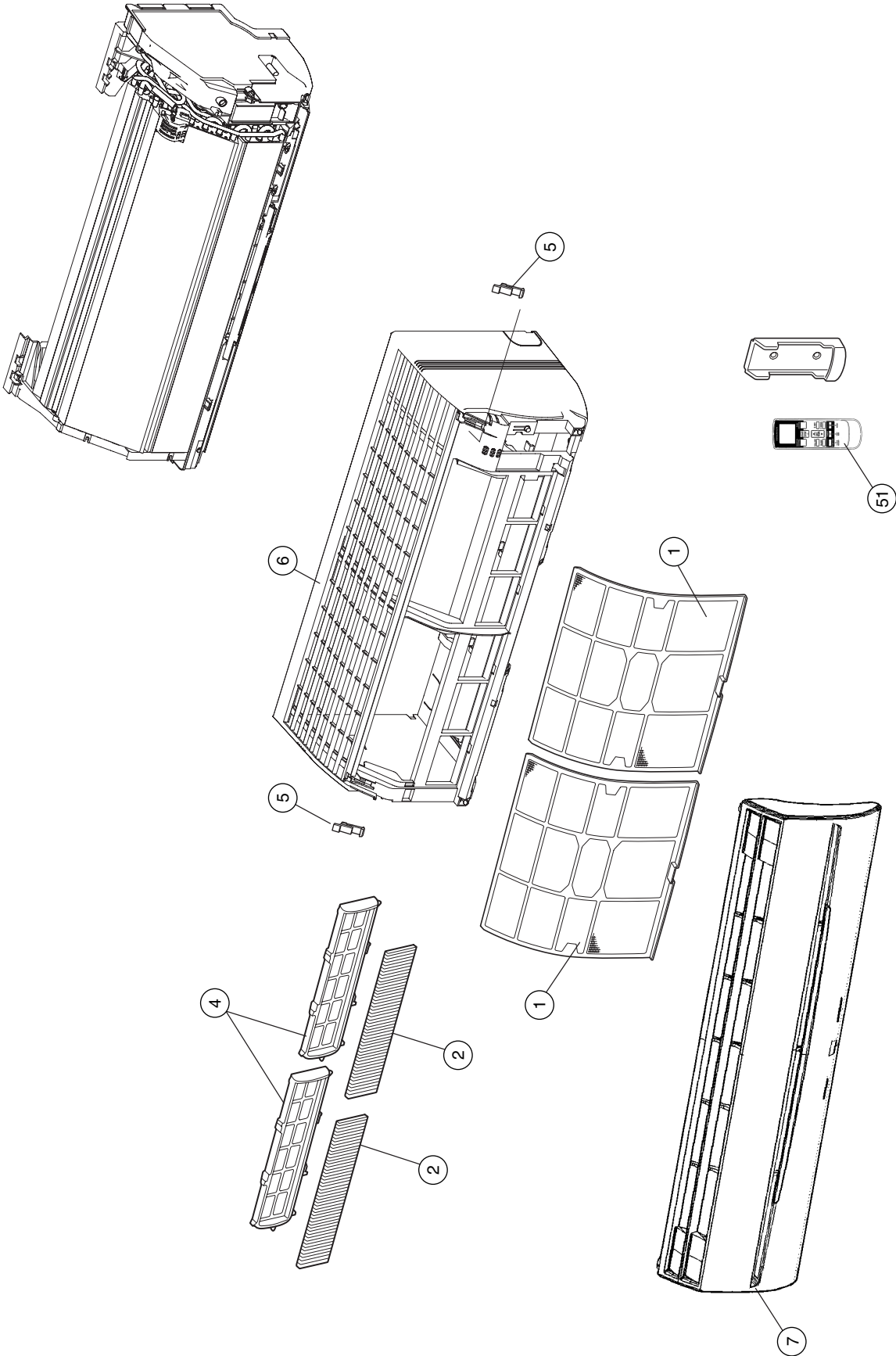
\* Detailed Trouble Display (secondary level) can be indicated by pressing Test Operation button.

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 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
			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

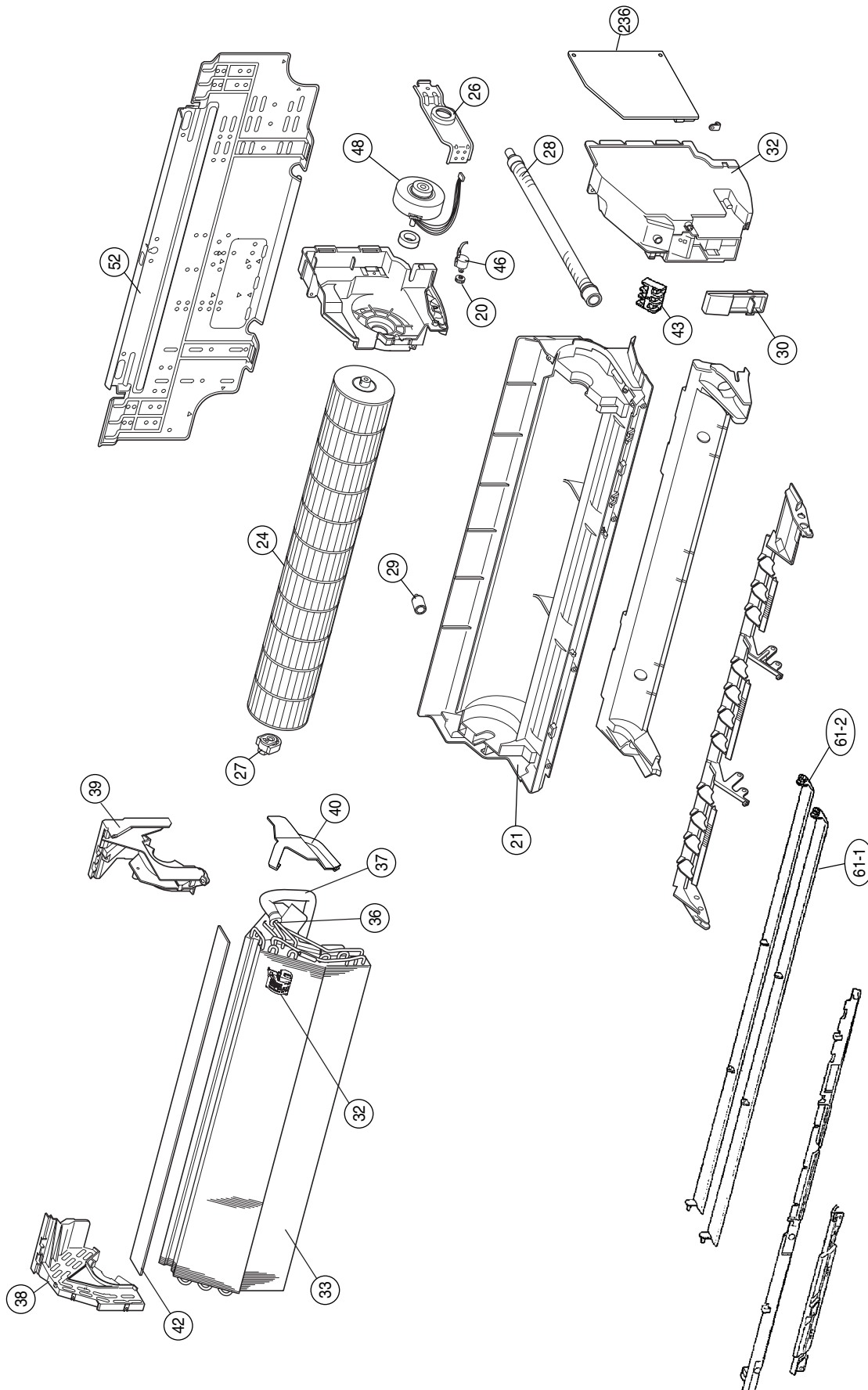
Trouble Display (primary)			Detailed Trouble Display (by Test Button)			Detailed Error Item	
Error	Operation	Timer	Error	Operation	Timer		
Outdoor unit control error	0.5sec 5 times	1 sec blinking	Current trip	0.1sec blinking	0.5sec 2 times	Outdoor	Current trip error is 2nd time within start up >>Permanent 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	0.5 sec 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	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	0.5sec 3 times	Outdoor	Active Filter Module error or open detection protection operated >>Automatic release after 3 min. ST

# DISASSEMBLY ILLUSTRATION

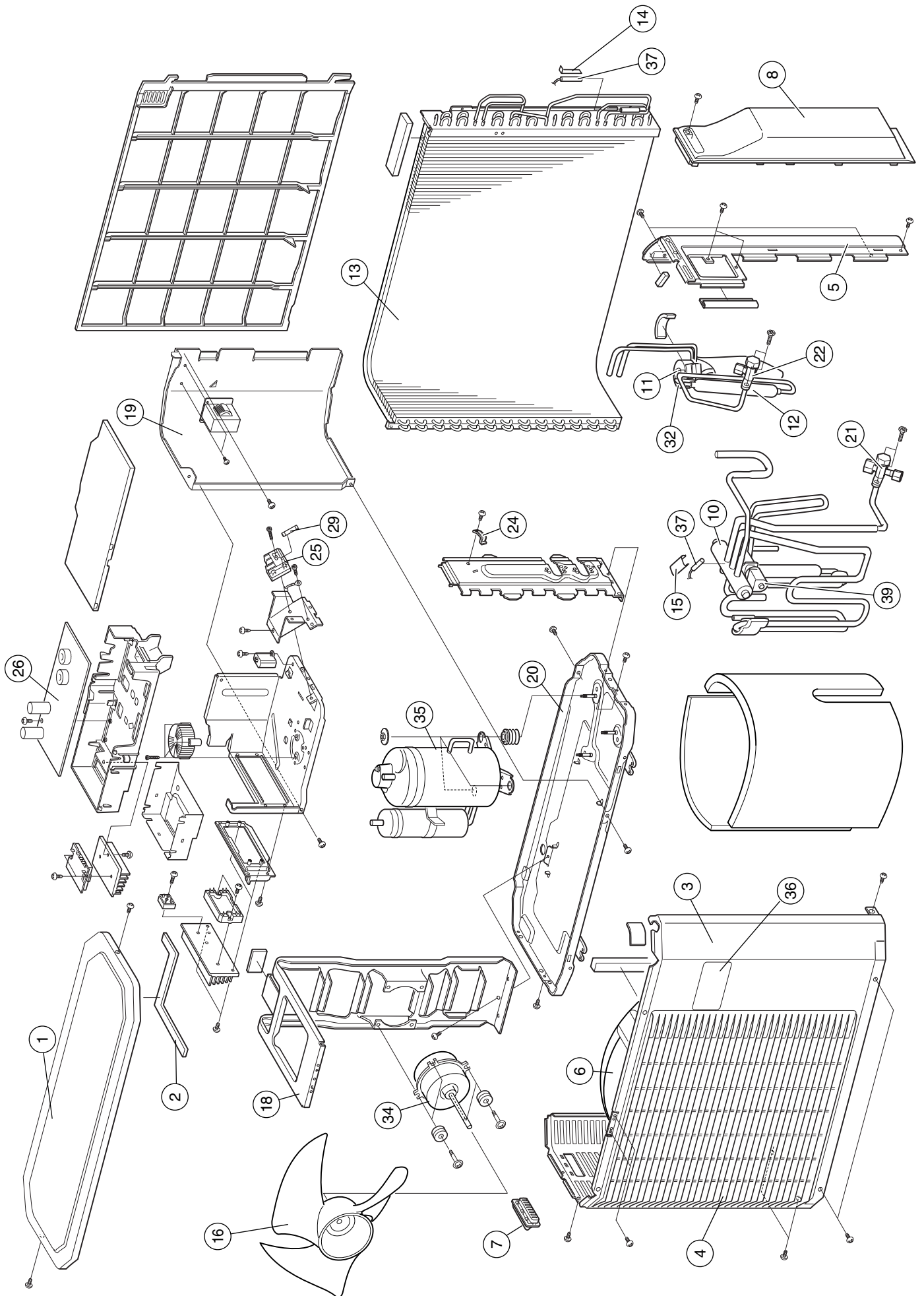
Model : MW18Y3F



Model : MW18Y3F



Model : MR18Y3F



# PARTS LIST

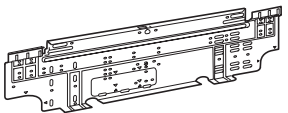

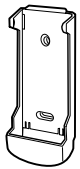

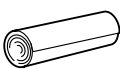
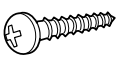

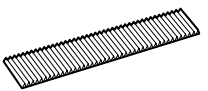
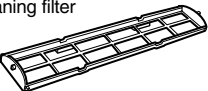

## INDOOR UNIT

Ref. No.	Description	Part No.	Ord. Q'ty
		MW18Y3F	
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	9313566043	
20	Gear-A	9309994003	
21	Casing Assy	9311354079	
24	Crossflow Fan Assy	9307836015	
26	Clamp (Motor)	9310102008	
27	Shaft Holder-C Assy	9306628017	
28	Drain Hose Assy	9314147012	
29	Drain Cap Assy	9314493010	
30	Wire Clamper	9311946014	
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	
42	Air Seal	9310611005	
43	Terminal	9701955114	
46	Step Motor	9900139025	
48	Fan Motor Assy	9602109012	
51	Remote Control Unit	9315260017	
52	Bracket Panel	9310001004	
61-1	Flow Control Panel-U	9309991033	
61-2	Flow Control Panel-Z	9309992030	
236	Controller PCB Assy	9707193015	
		(K04CP-0500HSE-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
		MR18Y3F	
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	Heat Exchanger Thermistor	9900148027	
39	Solenoid Coil	9970033025	
---	IPM	9705720015	
---	Outdoor Temp. Thermistor	9900210045	
---	Thermistor	9900041014	
---	Thermistor Assy	9900148027	

# STANDARD ACCESSORIES

Name and Shape	Part No.
Wall hook bracket 	9312752010
Remote control unit 	9314990038
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
Seal A 	9304536000

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