

INVERTER SPLIT TYPE
AIR CONDITIONER (50Hz)
DUCT TYPE

SERVICE MANUAL



| Indoor unit | Outdoor unit |
|-------------|--------------|
| ARYA24LATU | AOYA24LACL |
| ARYA24LATU | AOYA24LALL |
| ARYA24LATU | AOYB24LACL |
| ARYA24LATU | AOYB24LALL |
| ARYF24LBTU | AOYA24LALL |
| ARYF24LBTU | AOYB24LALL |

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SPECIFICATIONS

ELECTRICAL DATA

| | | | |
|------------------|---------|------------------------|------------|
| TYPE | | Inverter Cool & Heat | |
| INDOOR UNIT | | ARYA24LATU, ARYF24LBTU | |
| OUTDOOR UNIT | | AOYA24LA_L | AOYB24LA_L |
| COOLING CAPACITY | | 7.10 kW | |
| HEATING CAPACITY | | 8.00 kW | |
| POWER SOURCE | | 230 V | |
| FREQUENCY | | 50 Hz | |
| RUNNING CURRENT | Cooling | 9.7 A | 10.1 A |
| | Heating | 9.7 A | 10.2 A |
| INPUT WATTS | Cooling | 2.21 kW | 2.32 kW |
| | Heating | 2.21 kW | 2.33 kW |
| E.E.R. | Cooling | 3.21 kW/kW | 3.06 kW/kW |
| | Heating | 3.61 kW/kW | 3.43 kW/kW |
| STARTING CURRENT | | 10.0 A | |
| MOISTURE REMOVAL | | 2.5 L/hr | |
| MAXIMUM CURRENT | | 13.5 A | |

Note : The above list shows values at the external static pressure of 30Pa, setting the fan speed high notch. (indoor unit)

FAN SPEED

| | | |
|--------------|----------------|--------------|
| INDOOR UNIT | Discrimination | MFG-24RV |
| | High | 830 r.p.m. |
| | Med | 700 r.p.m. |
| | Low | 600 r.p.m. |
| | Quiet | 550 r.p.m. |
| OUTDOOR UNIT | Discrimination | MFE-24ROAM |
| | Cooling | 1,050 r.p.m. |
| | Heating | 1,050 r.p.m. |

Note : The above list shows values at the external static pressure of 30Pa, setting the fan speed high notch. (indoor unit)

AIR FLOW

| | | |
|--------------|---------|-------------------------|
| INDOOR UNIT | High | 1,100 m ³ /h |
| | Med | 950 m ³ /h |
| | Low | 800 m ³ /h |
| | Quiet | 600 m ³ /h |
| OUTDOOR UNIT | Cooling | 2,470 m ³ /h |
| | Heating | 2,470 m ³ /h |

Note : The above list shows values at the external static pressure of 30Pa, setting the fan speed high notch. (indoor unit)

NOISE LEVEL

| | | |
|--------------|------------|-------|
| INDOOR UNIT | High speed | 31 dB |
| | Med speed | 29 dB |
| | Low speed | 27 dB |
| | Quiet | 25 dB |
| OUTDOOR UNIT | Cooling | 52 dB |
| | Heating | 53 dB |

Note : Static pressure : 30Pa

Duct length : Inlet 1m, Outlet 2m (indoor unit)

MEASUREMENT

| | | |
|-------------------------|--------------|----------------------|
| DIMENSIONS H x W x D | Indoor unit | 270 x 1,135 x 700 mm |
| | Outdoor unit | 578 x 790 x 315 mm |
| WEIGHT Gross / Net | Indoor unit | 45 kg / 38 kg |
| | Outdoor unit | 48 kg / 44 kg |

COMPRESSOR AND REFRIGERANT

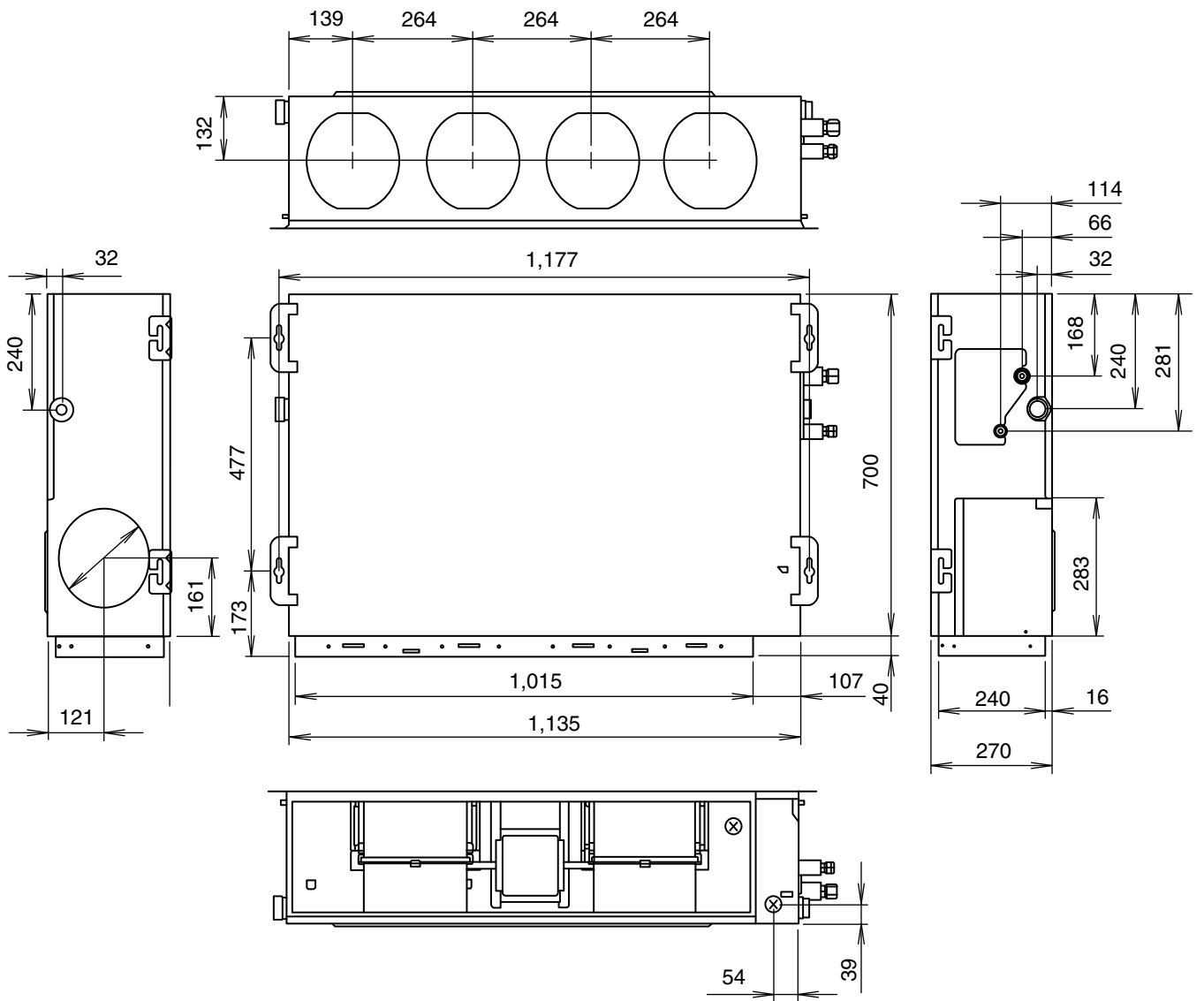
| | | | |
|------------------------------|---|-------------------|---------|
| TYPE | Hermetic type, 4 poles, DC motor, Twin Rotary | | |
| DISCRIMINATION | DA150AIF-20NA | | |
| COMPRESSOR WEIGHT (with oil) | 10.0 kg | | |
| PRECHARGED REFRIGERANT | 1,700 g | | |
| REFRIGERANT TYPE | R410A | | |
| FULL CHARGE | Pipe Length | 15 m | 1,700 g |
| | | 20 m | 1,800 g |
| | | 25 m | 1,900 g |
| | | 30 m | 2,000 g |
| | | ADDITIONAL CHARGE | 20 g/m |
| MAXIMUM PIPE HEIGHT | 20 m | | |

When you dismantle indoor units which are installed, take care not to make parts fall down, especially motors.

DIMENSIONS

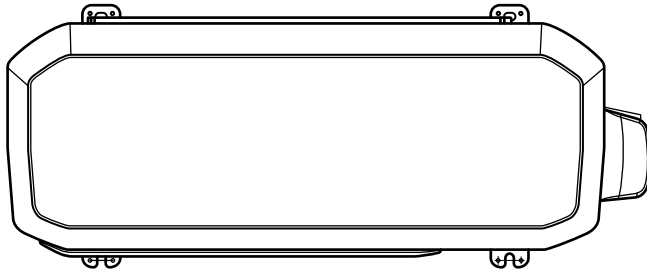
INDOOR UNIT

Unit : mm

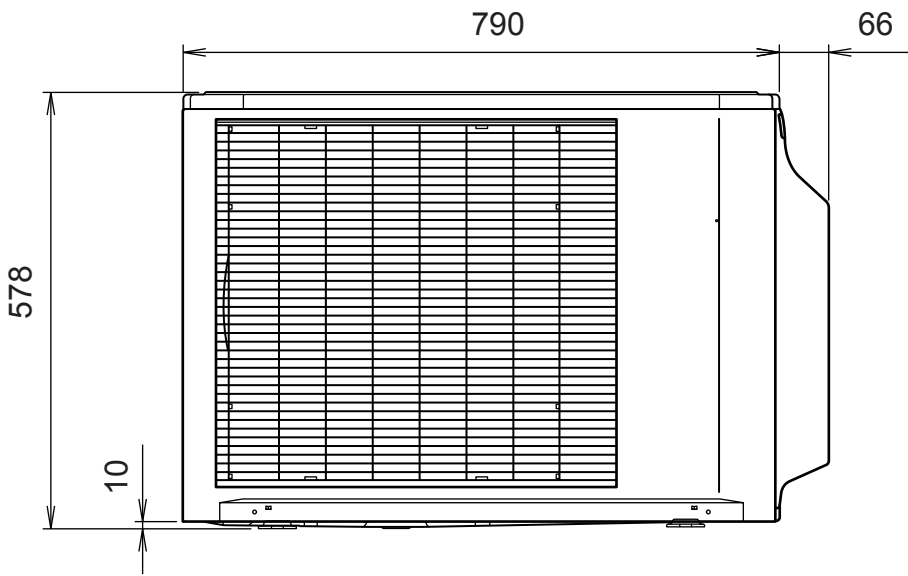


OUTDOOR UNIT

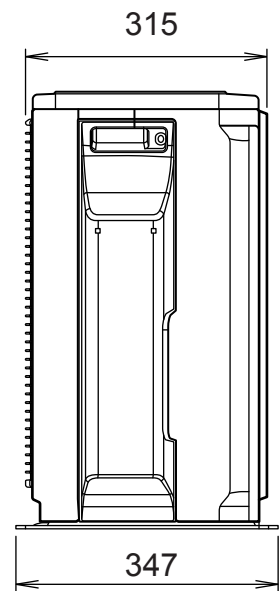
Unit : mm



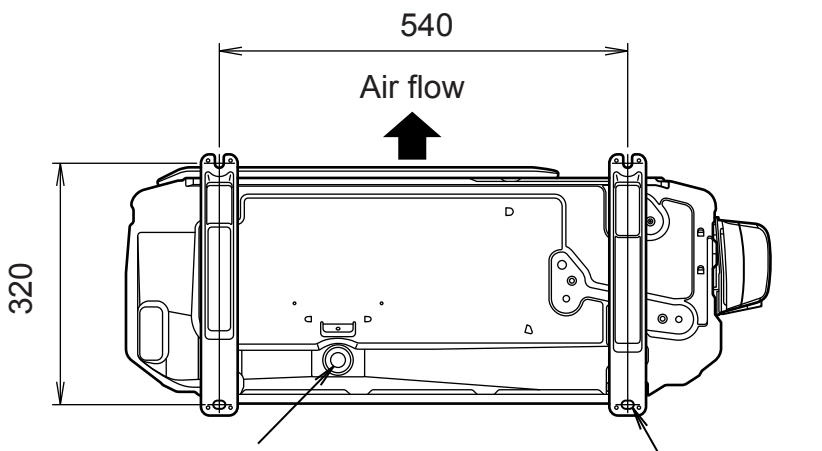
Top view



Front view



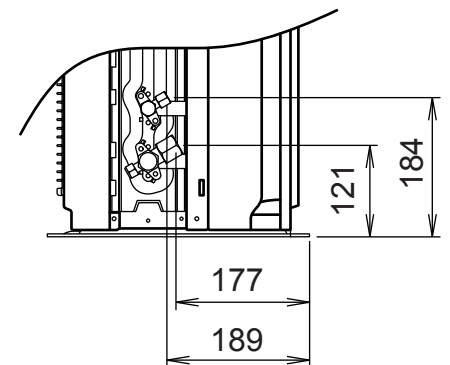
Side view



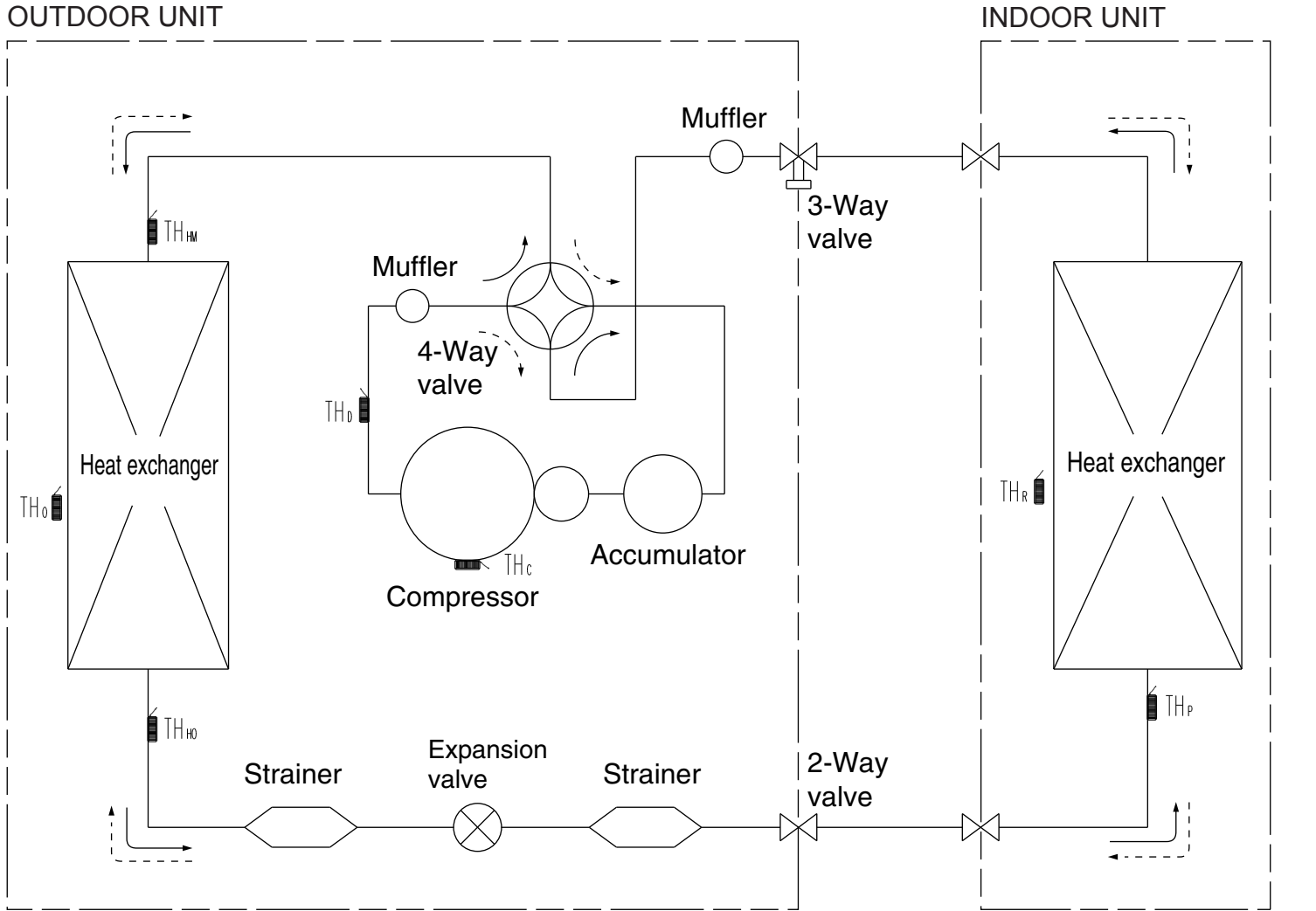
Drain pipe
mounting place
(ϕ 20)

Bottom view

4- ϕ 10mm hole



REFRIGERANT SYSTEM DIAGRAM



→ Cool
 - - - - - Heat

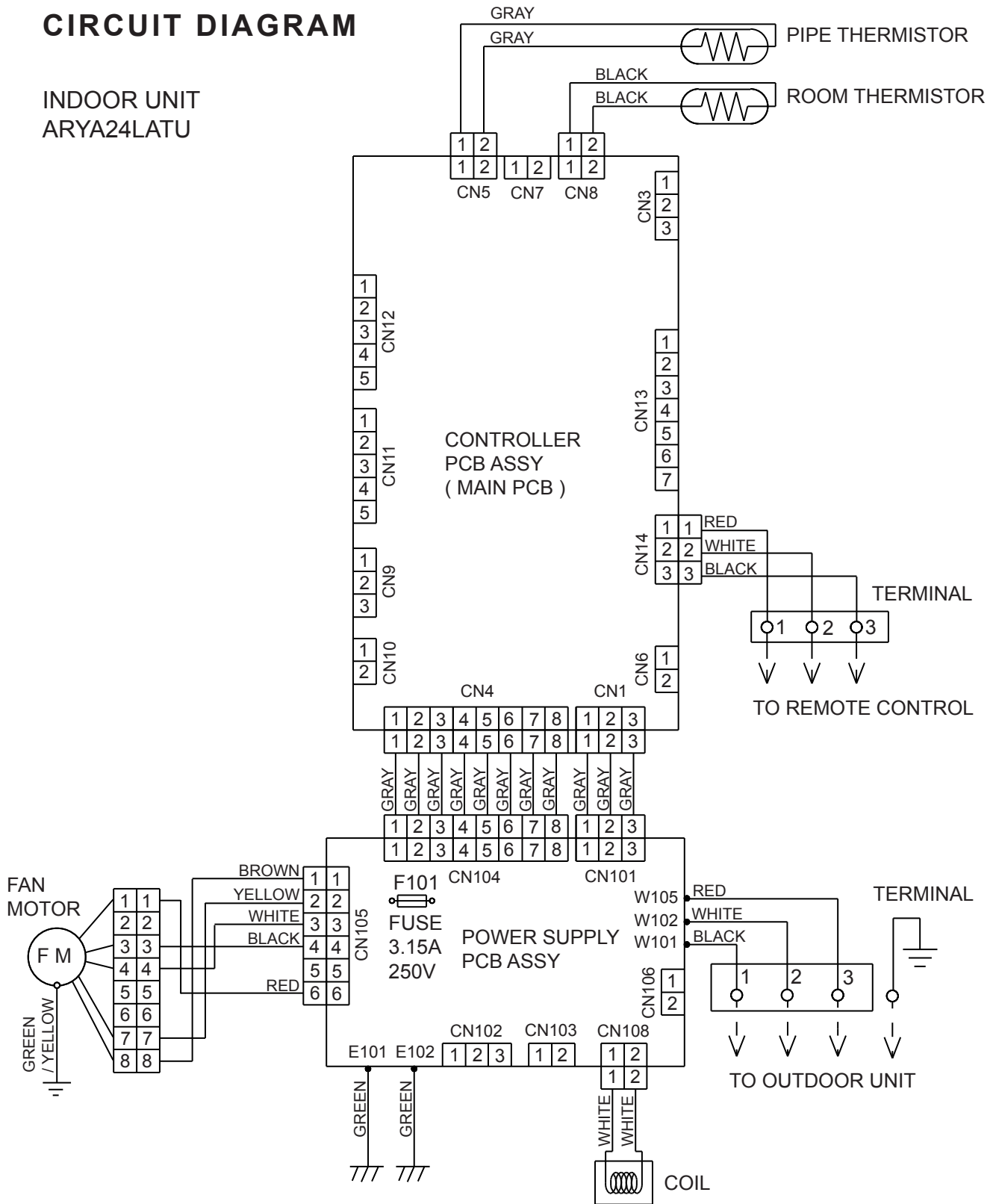
- TH_c : THERMISTOR (COMPRESSOR TEP.)
- TH_d : THERMISTOR (DISCHARGE TEP.)
- TH_m : THERMISTOR (HEAT EXCHANGER MED TEP.)
- TH_{ho} : THERMISTOR (HEAT EXCHANGER OUT TEP.)
- TH_o : THERMISTOR (OUTDOOR TEP.)

- TH_p : THERMISTOR (PIPE TEP.)
- TH_r : THERMISTOR (ROOM TEP.)

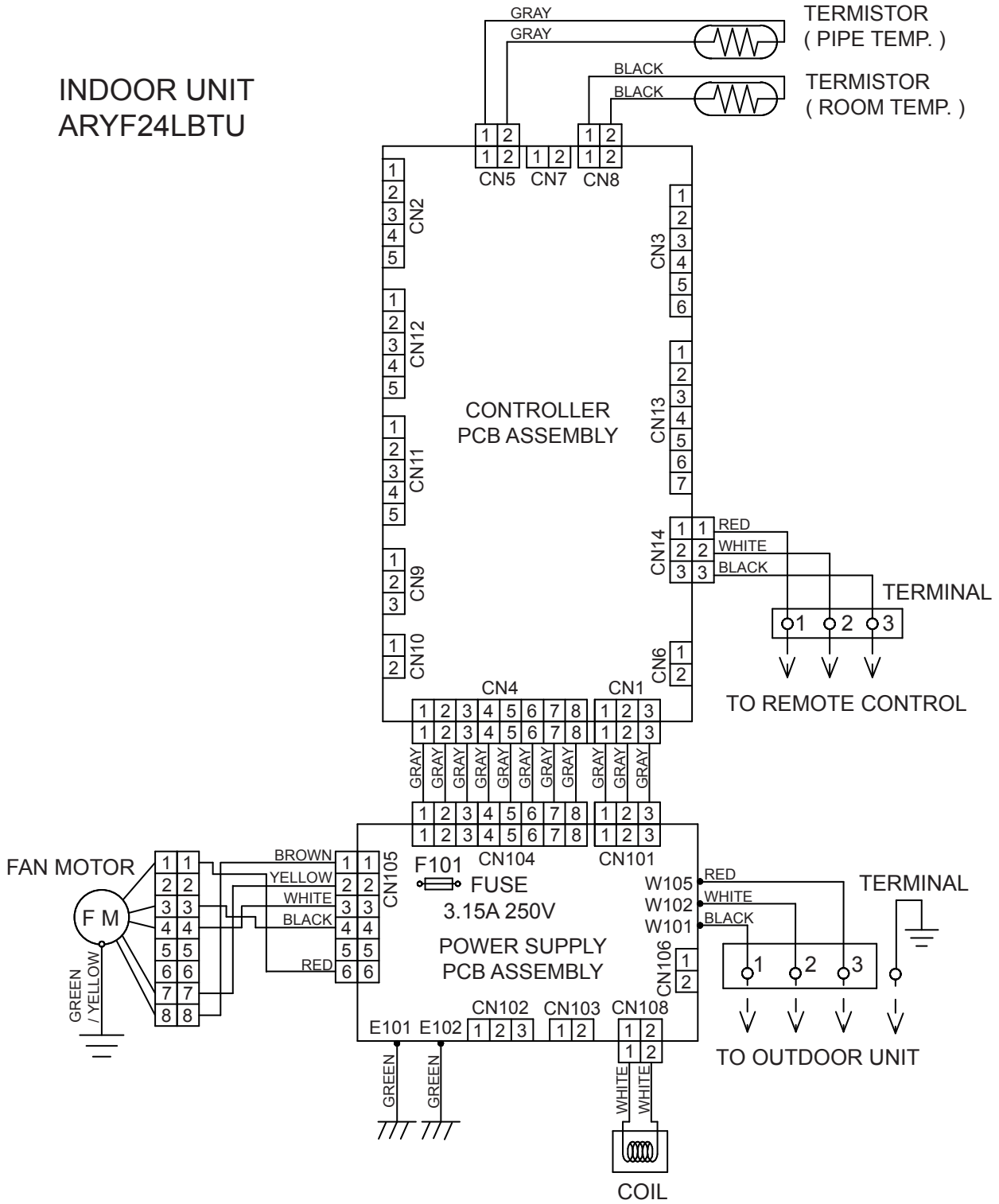
Refrigerant pipe diameter
 Liquid : 1/4" (6.35 mm)
 Gas : 5/8" (15.88 mm)

CIRCUIT DIAGRAM

INDOOR UNIT
ARYA24LATU

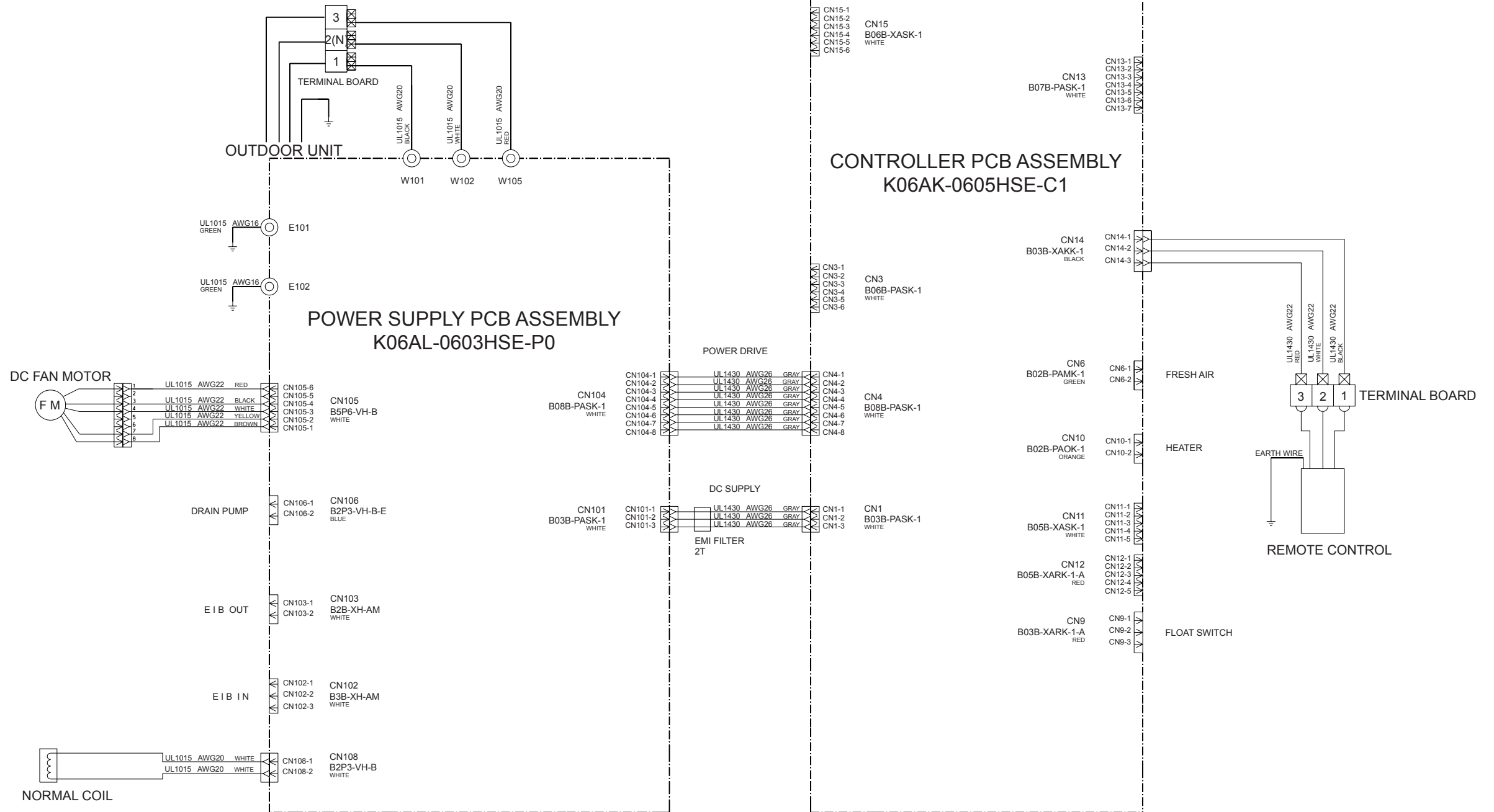


INDOOR UNIT
ARYF24LBTU

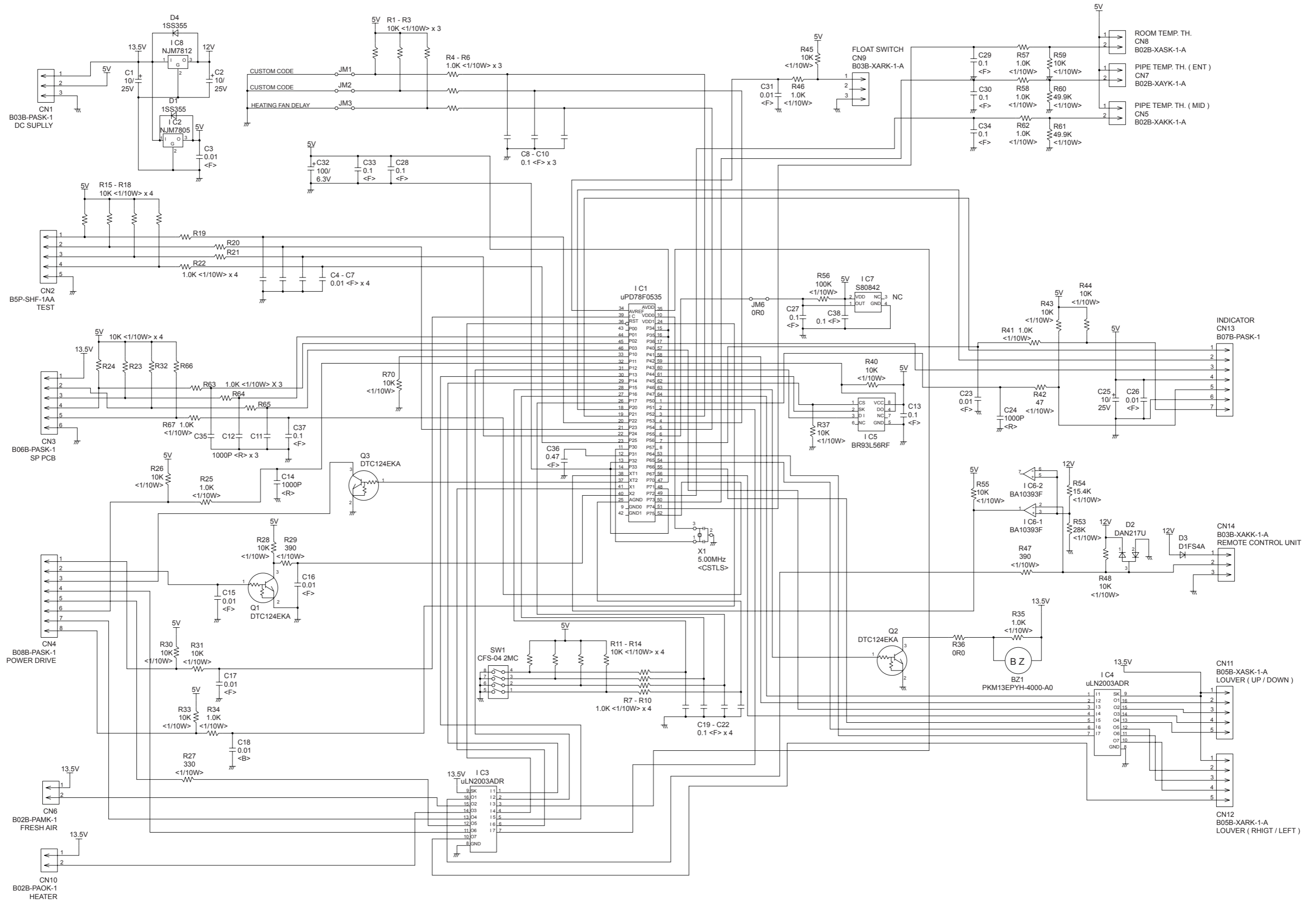


INDOOR PCB CIRCUIT DIAGRAM

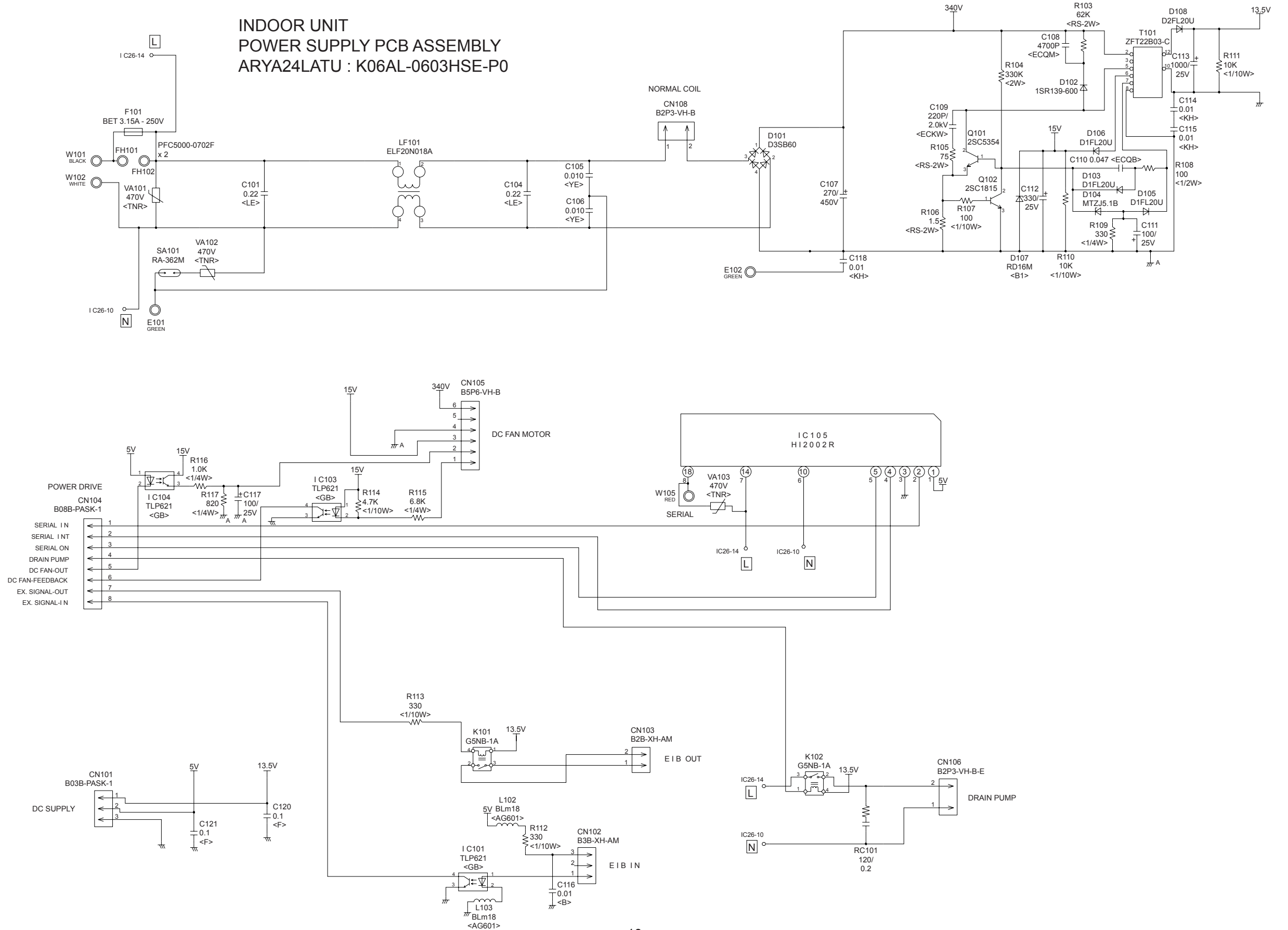
CONTROLLER ASSEMBLY
 ARYA24LATU : EZ-00605HSE



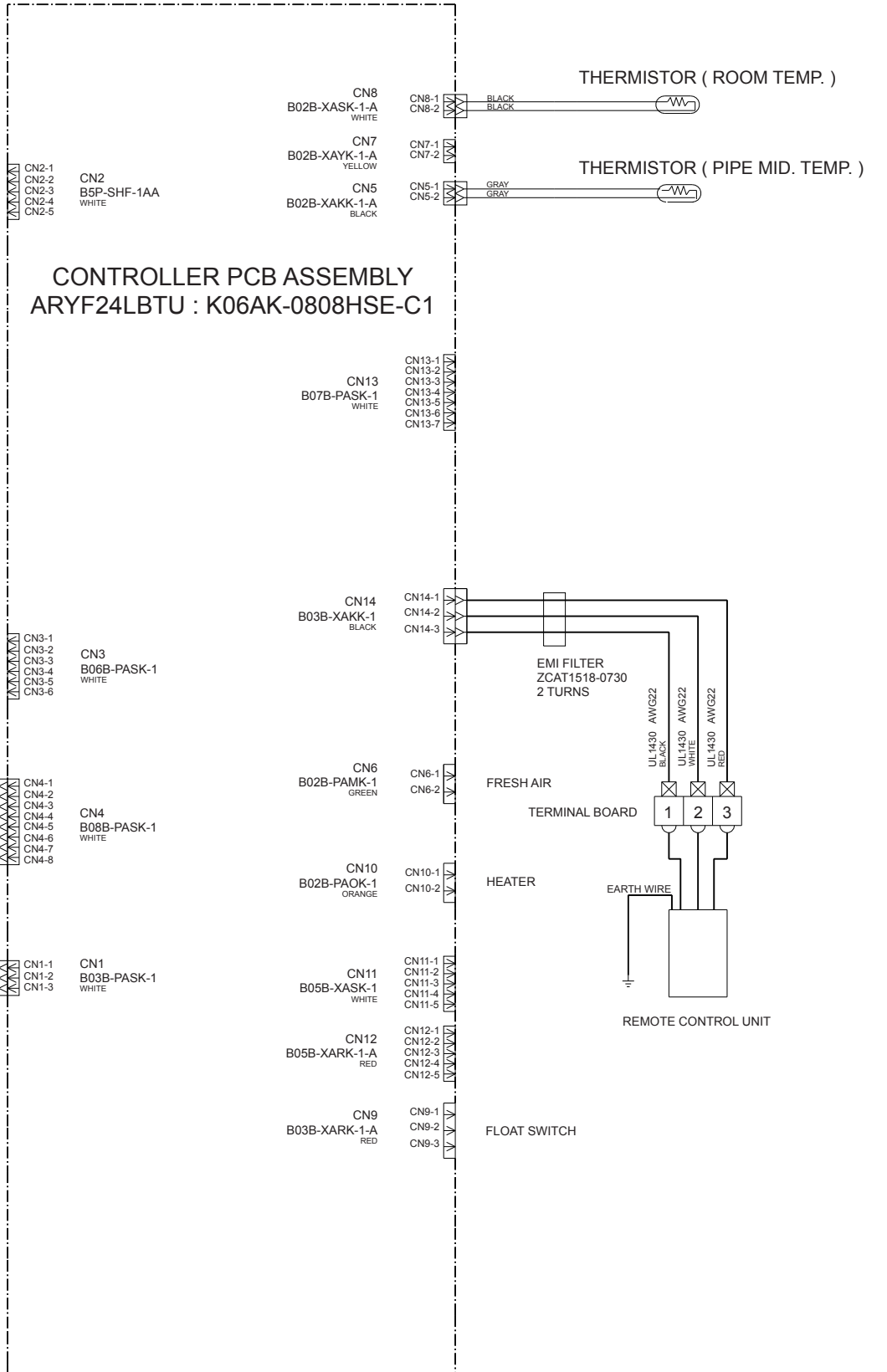
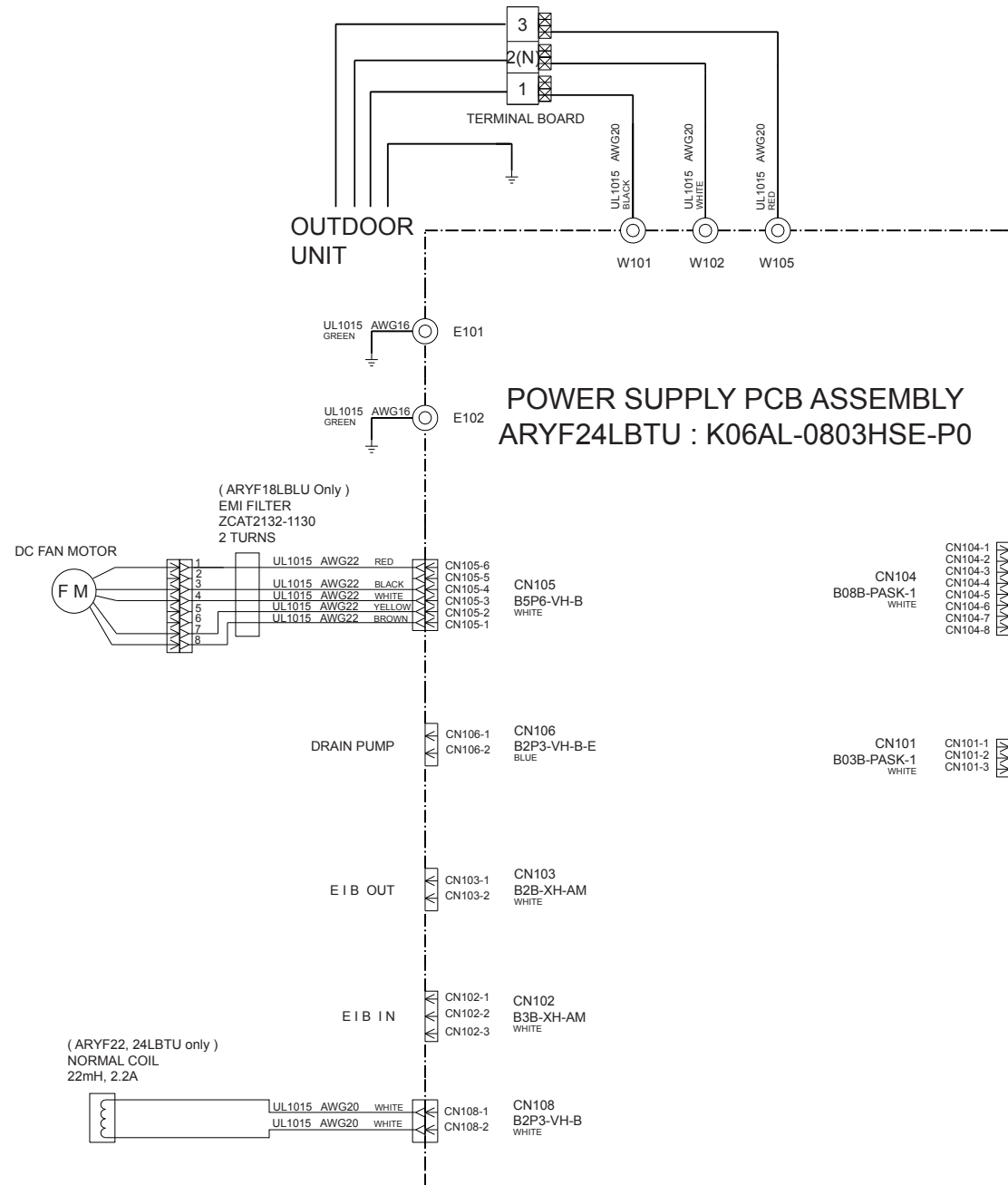
INDOOR UNIT
 CONTROLLER PCB ASSEMBLY
 ARYA24LATU : K06AK-0605HSE-C1



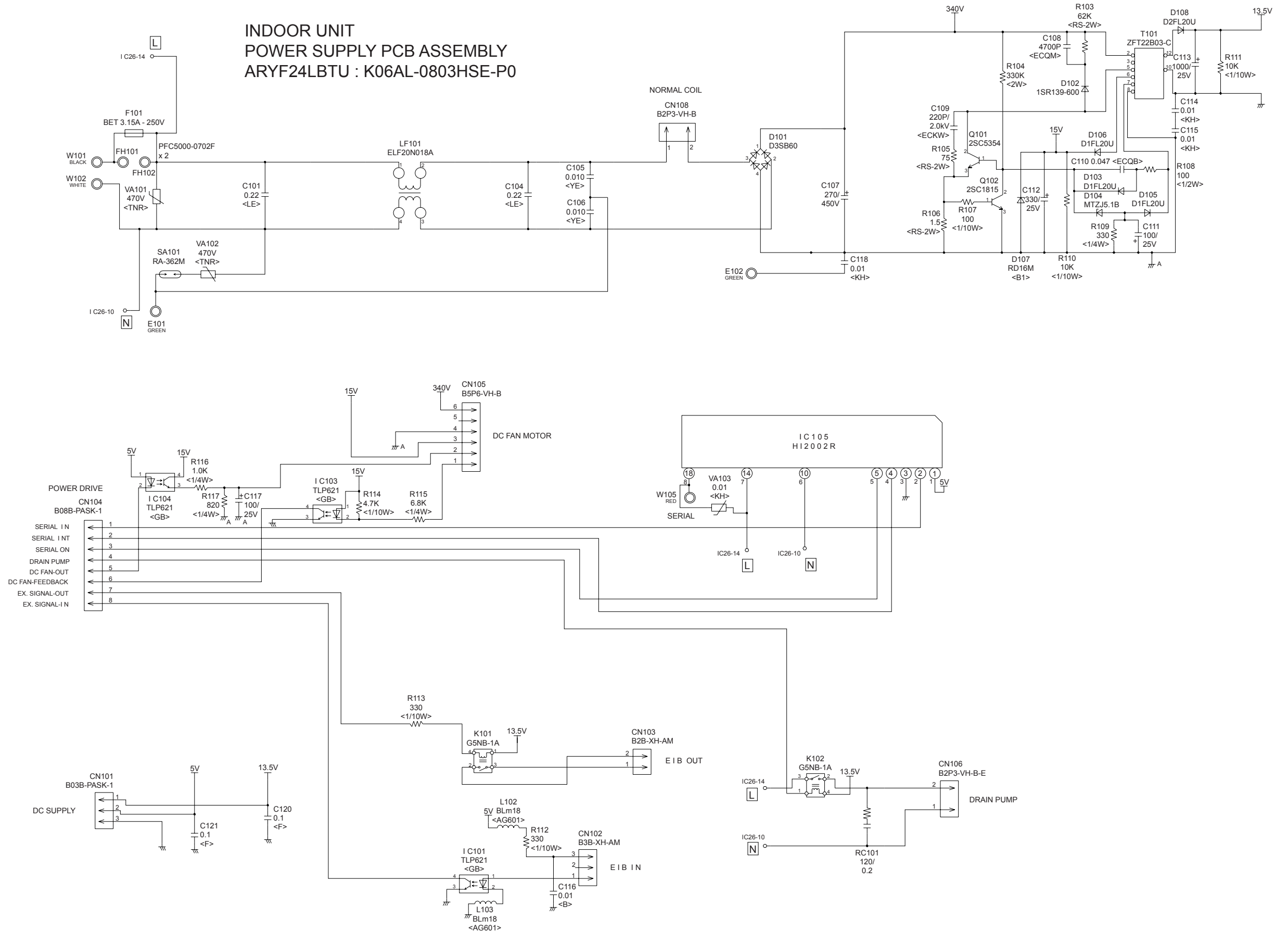
INDOOR UNIT
POWER SUPPLY PCB ASSEMBLY
ARYA24LATU : K06AL-0603HSE-P0



**INDOOR UNIT
CONTROL UNIT
ARYF24LBTU : EZ-0080KHSE**

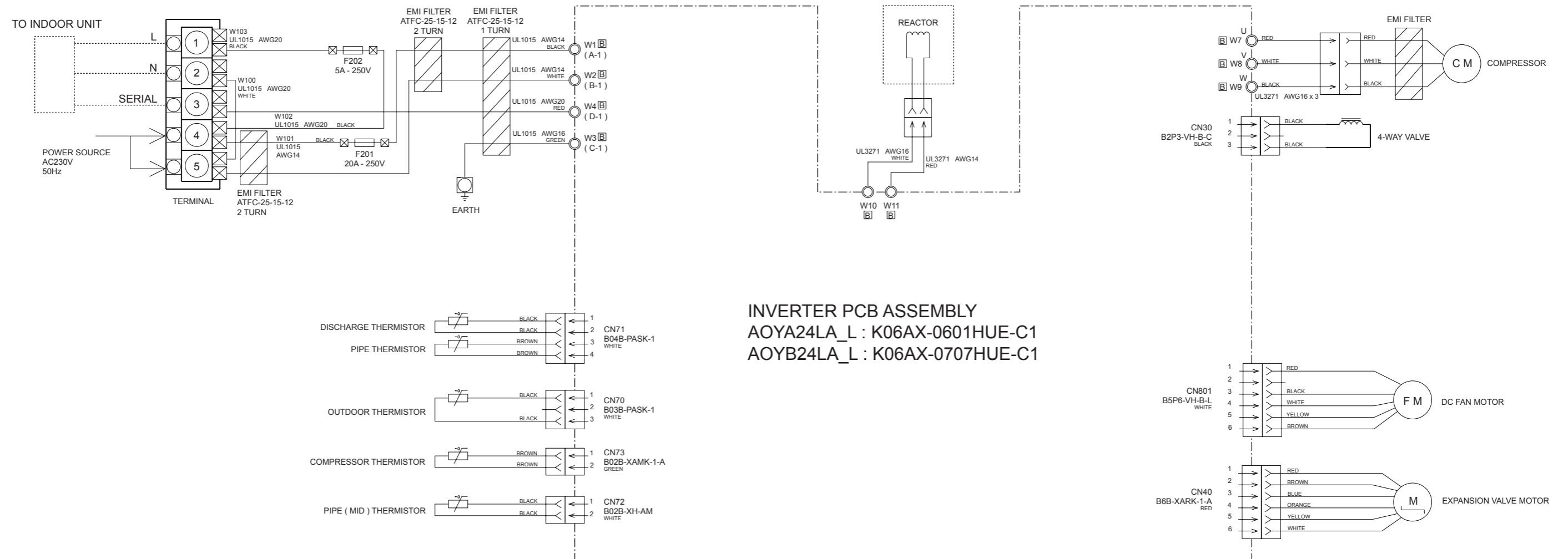


INDOOR UNIT POWER SUPPLY PCB ASSEMBLY ARYF24LBTU : K06AL-0803HSE-P0



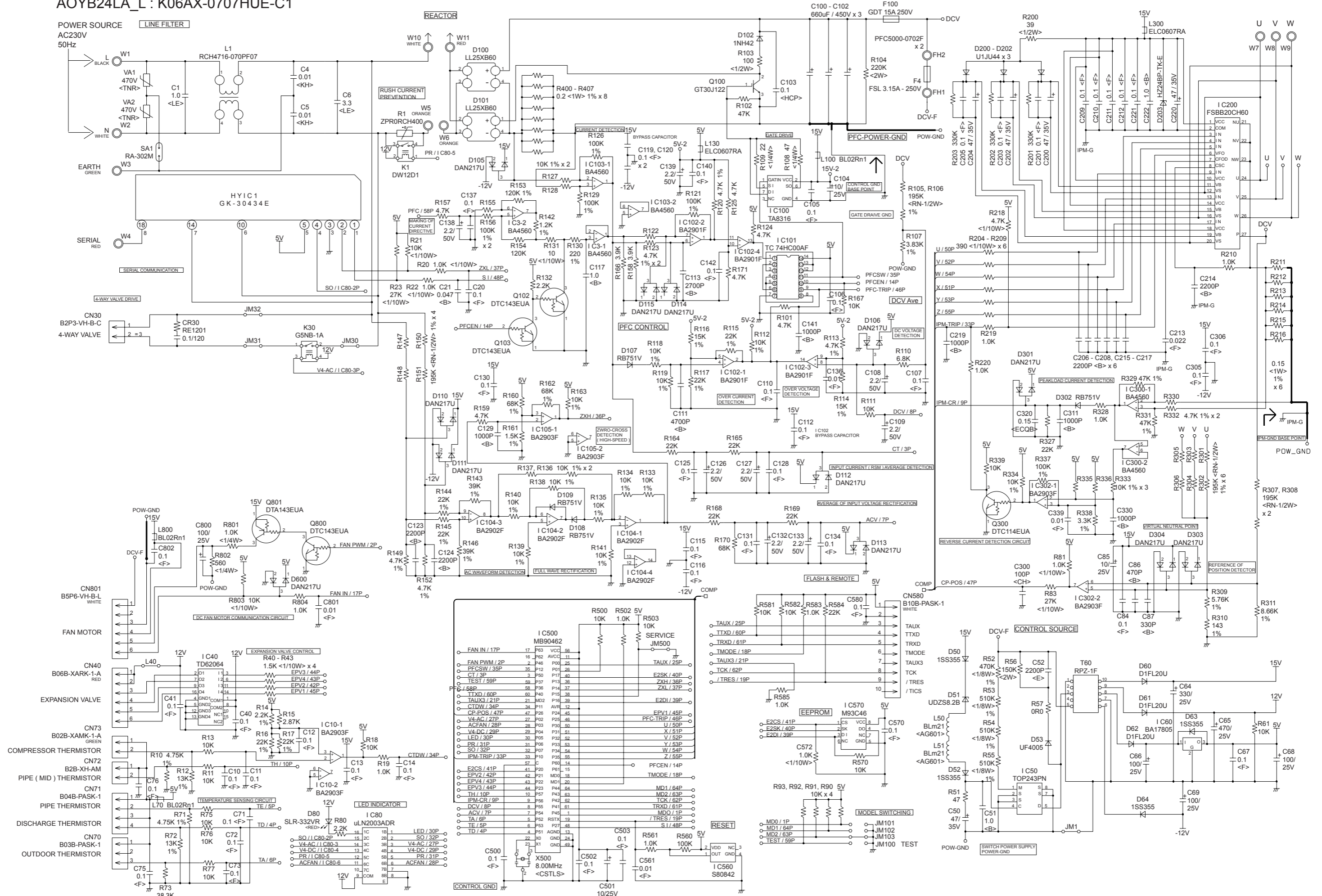
OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
 AOYA24LA_L : EZ-006AHUE
 AOYB24LA_L : EZ-007GHUE



INVERTER PCB ASSEMBLY
 AOYA24LA_L : K06AX-0601HUE-C1
 AOYB24LA_L : K06AX-0707HUE-C1

**OUTDOOR UNIT
INVERTER PCB ASSEMBLY**
AOYA24LA_L : K06AX-0601HUE-C1
AOYB24LA_L : K06AX-0707HUE-C1



ERROR CONTENTS

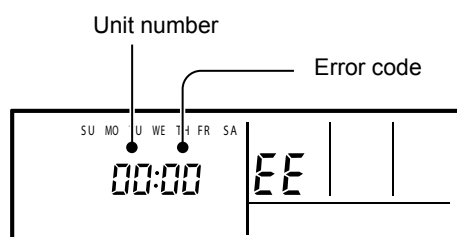
REMOTE CONTROL UNIT

Troubleshooting at the remote control LCD

This is possible only on the wired remote control.

[SELF-DIAGNOSIS]

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



Ex. Self-diagnosis

| Code | Error contents |
|----------------------|--|
| 01 13 26 27 | Indoor signal error |
| 00 | Wired remote controller abnormal |
| 02 | Indoor room temperature sensor error |
| 04 | Indoor heat exchanger temperature sensor (middle) error |
| 28 | Indoor heat exchanger temperature sensor (inlet) error |
| 09 | Float switch operated |
| 0C | Outdoor discharge pipe temperature sensor error |
| 06 | Outdoor heat exchanger temperature sensor (outlet) error |
| 0A | Outdoor temperature sensor error |
| 15 | Compressor temperature sensor error |
| 1d | 2-way valve temperature sensor error |
| 1E | 3-way valve temperature sensor error |
| 29 | Outdoor heat exchanger temperature sensor (middle) error |
| 20 | Indoor manual auto switch abnormal |
| 2A | Power supply frequency detection error |
| 17 | IPM protection |
| 18 | CT error |
| 1A | Compressor location error |
| 1b | Outdoor fan error |
| 1F | Connected indoor unit abnormal |
| 1c | Outdoor unit computer communication error |
| 12 | Indoor fan abnormal |
| 0F | Discharge temperature error |
| 24 | Excessive high pressure protection on cooling |
| 2c | 4-way valve abnormal |
| 16 | Pressure switch abnormal |
| 2b | Compressor temperature error |
| 19 | Active filter abnormal |
| 25 | PFC circuit error |

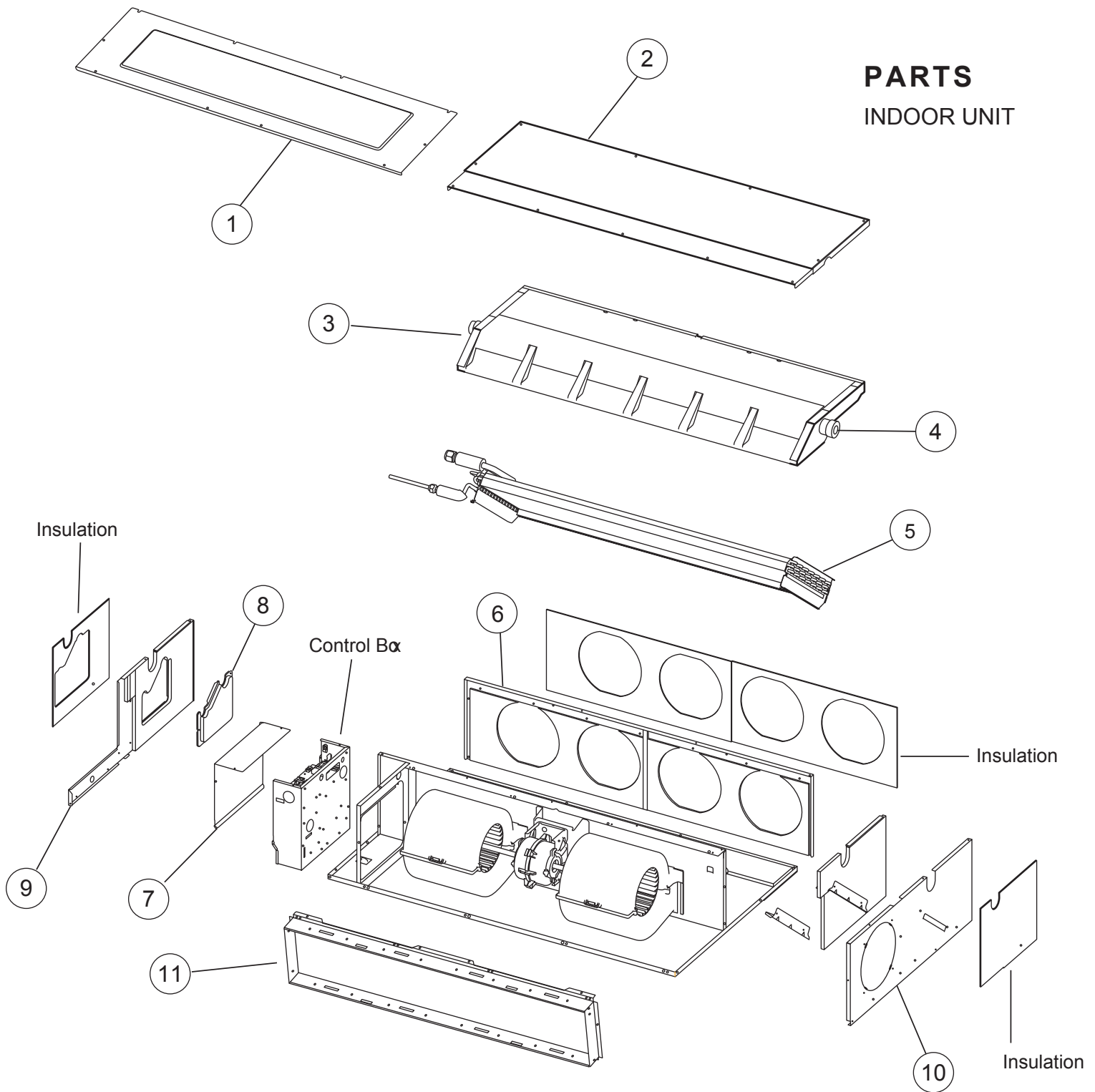
If "CO" appears in the unit number display, there is a remote controller error. Refer to the installation instruction sheet included with the remote controller.

OUTDOOR UNIT

| Error contents | LED |
|--|--------------------------|
| Thermistor malfunction | on 0.1 sec / off 0.1 sec |
| Abnormal discharge temperature | on |
| Current surge protection | on 0.5 sec / off 0.5 sec |
| CT abnormality | on 2.0 sec / off 2.0 sec |
| Compressor position detection malfunction | on 0.1 sec / off 2.0 sec |
| Fan malfunction | on 5.0 sec / off 5.0 sec |
| PAM voltage abnormality | on 5.0 sec / off 0.1 sec |
| Timer short | on 1.0 sec / off 1.0 sec |
| Compressor temperature protection (permanent stop) | on 2.0 sec / off 5.0 sec |
| PFC surge protection (permanent stop) | on 5.0 sec / off 2.0 sec |

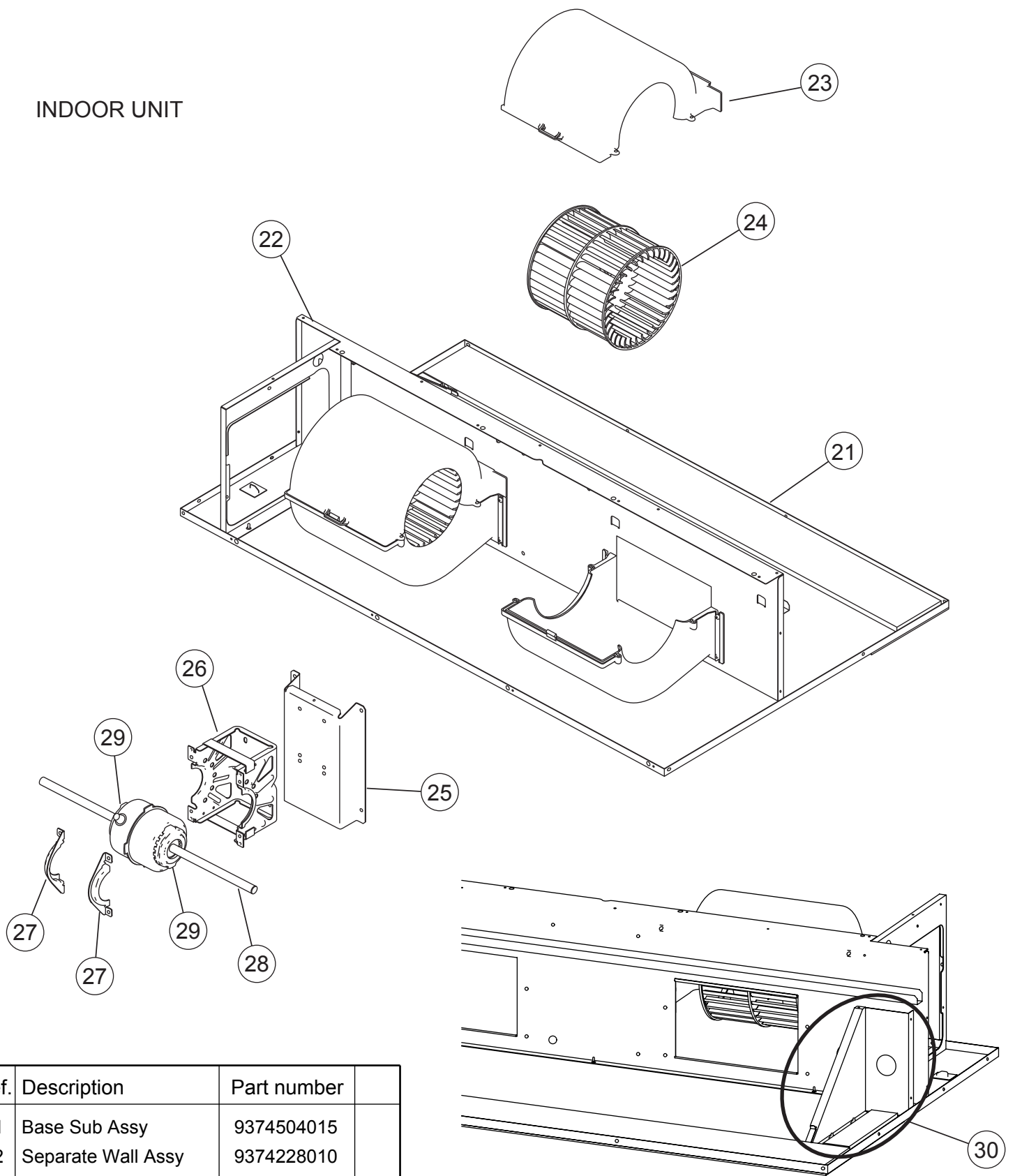
PARTS

INDOOR UNIT



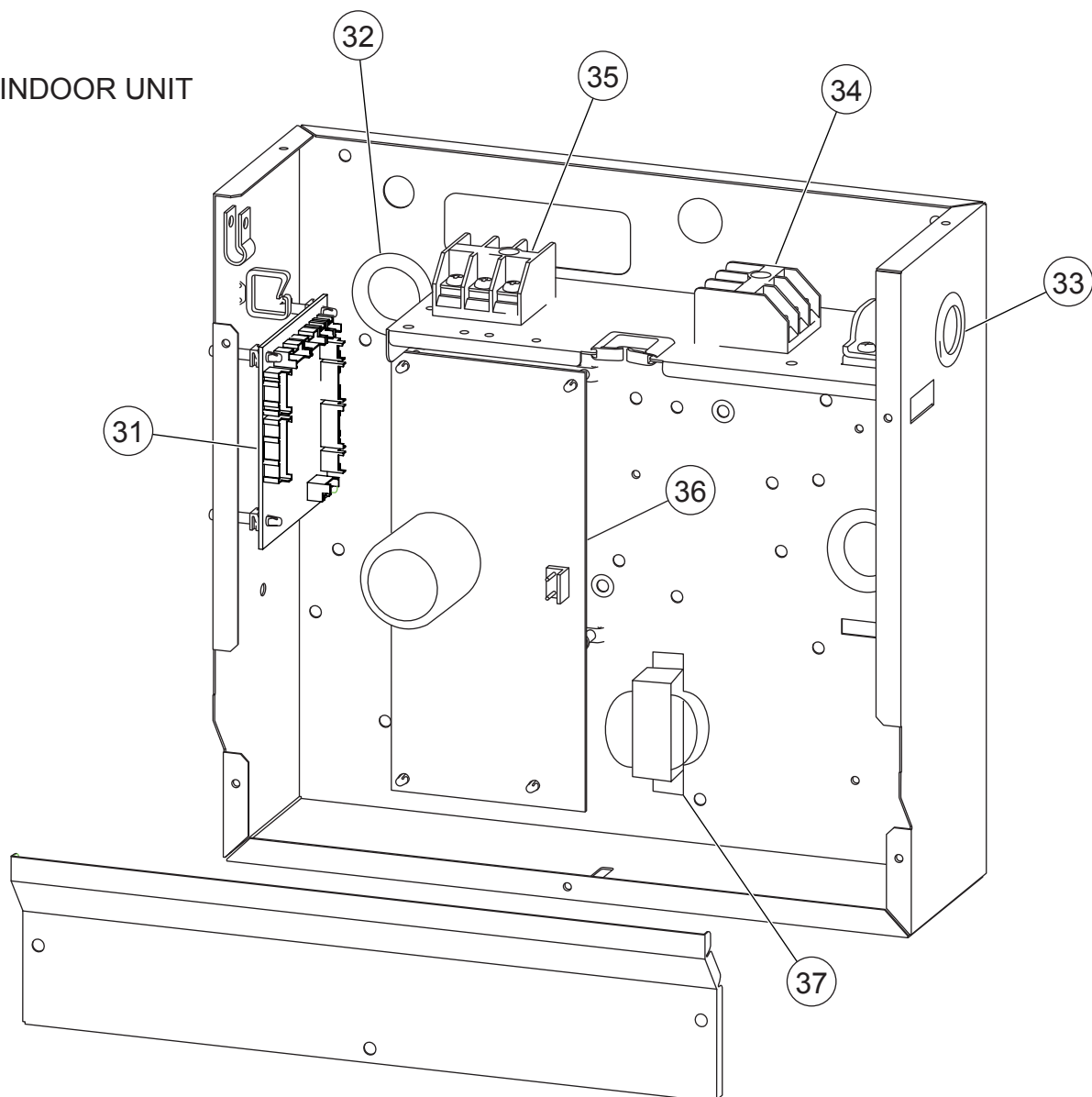
| Ref. | Description | Part number |
|------|--------------------------|-------------|
| 1 | Intake Cover Sub Assy | 9374512010 |
| 2 | Main Panel Sub Assy | 9374511013 |
| 3 | Drain Pan Sub Assy | 9374513017 |
| 4 | Drain Cap | 9356541007 |
| 5 | Evaporator Total Assy | 9374517503 |
| 6 | Outlet Panel Sub Assy | 9374510016 |
| 7 | Control Cover-A Sub Assy | 9374516018 |
| 8 | Bracket (pipe) Sub Assy | 9374514014 |
| 9 | Cabinet R Sub Assy | 9374508013 |
| 10 | Cabinet L Sub Assy | 9374509010 |
| 11 | Intake Frame Assy | 9374216017 |

INDOOR UNIT



| Ref. | Description | Part number |
|------|----------------------|-------------|
| 21 | Base Sub Assy | 9374504015 |
| 22 | Separate Wall Assy | 9374228010 |
| 23 | Casing B | 9374234011 |
| 24 | Sirocco Fan Assy | 9356531039 |
| 25 | Bracket Motor Assy A | 9374230020 |
| 26 | Bracket Motor Assy B | 9358591000 |
| 27 | Bracket Motor C | 9358594001 |
| 28 | Motor, Induction | 9602433018 |
| 29 | Rubber | 9385102002 |
| 30 | Bracket (Eva.) R | 9374207015 |
| -- | Bracket (Eva.) L | 9374208012 |

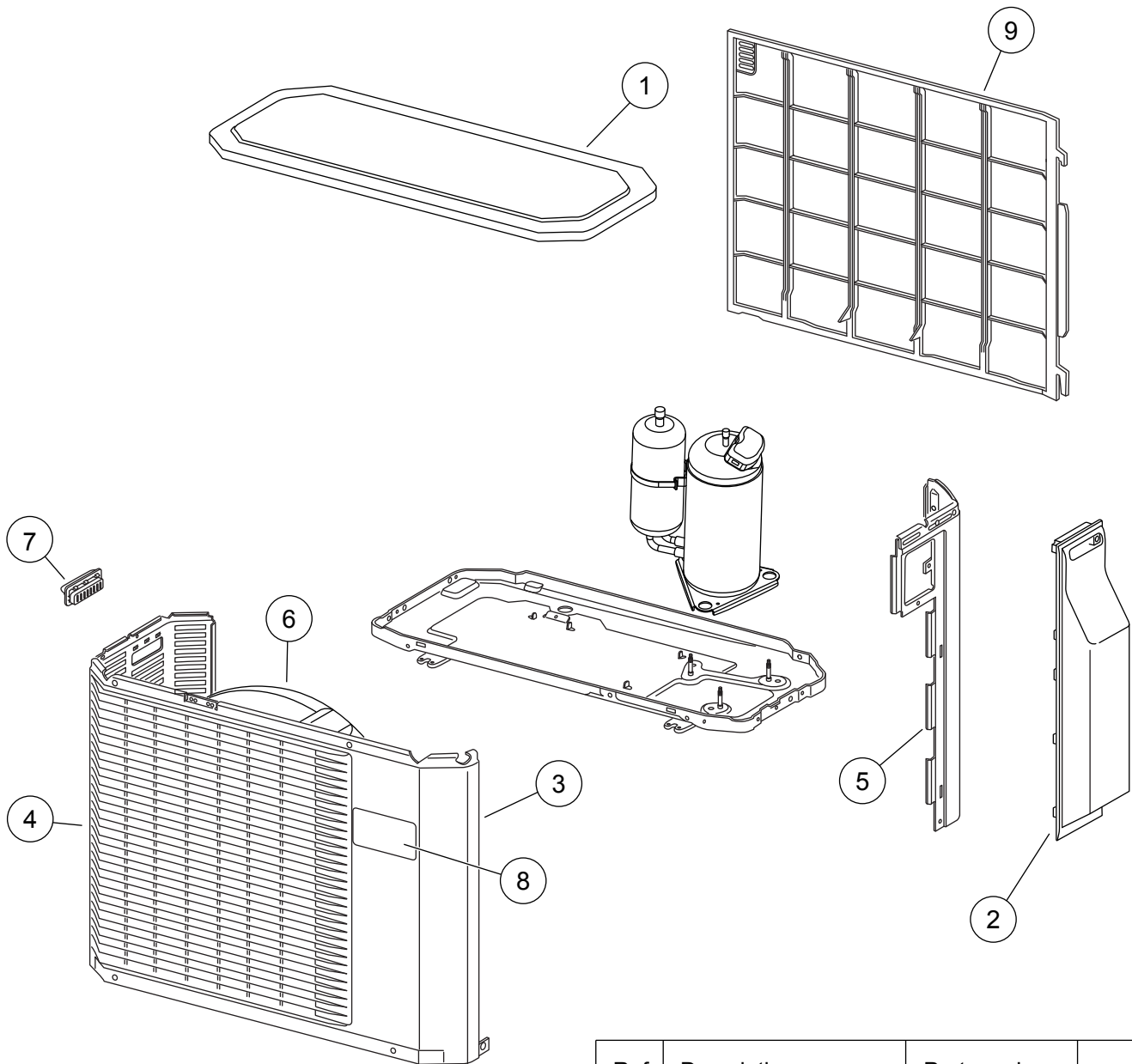
INDOOR UNIT



| Ref. | Description | Part number |
|------|------------------------------|-------------|
| 31 | Controller PCB Assy (LATU) | 9707393064 |
| 31 | Controller PCB Assy (LBTU) | 9707393491 |
| 32 | Cap (Power) | 9352173011 |
| 33 | One Touch Bush | 9374407019 |
| 34 | Terminal 3P | 9703345012 |
| 35 | Terminal 3P | 9306489045 |
| 36 | Power Supply PCB Assy (LATU) | 9707398045 |
| 36 | Power Supply PCB Assy (LBTU) | 9707398144 |
| 37 | Reactor Assy | 9707457018 |
| -- | Room Thermistor | 9703299025 |
| -- | Pipe Thermistor | 9703297021 |
| -- | Remote Control | 9372266199 |
| -- | Wire Assembly | 9372714010 |

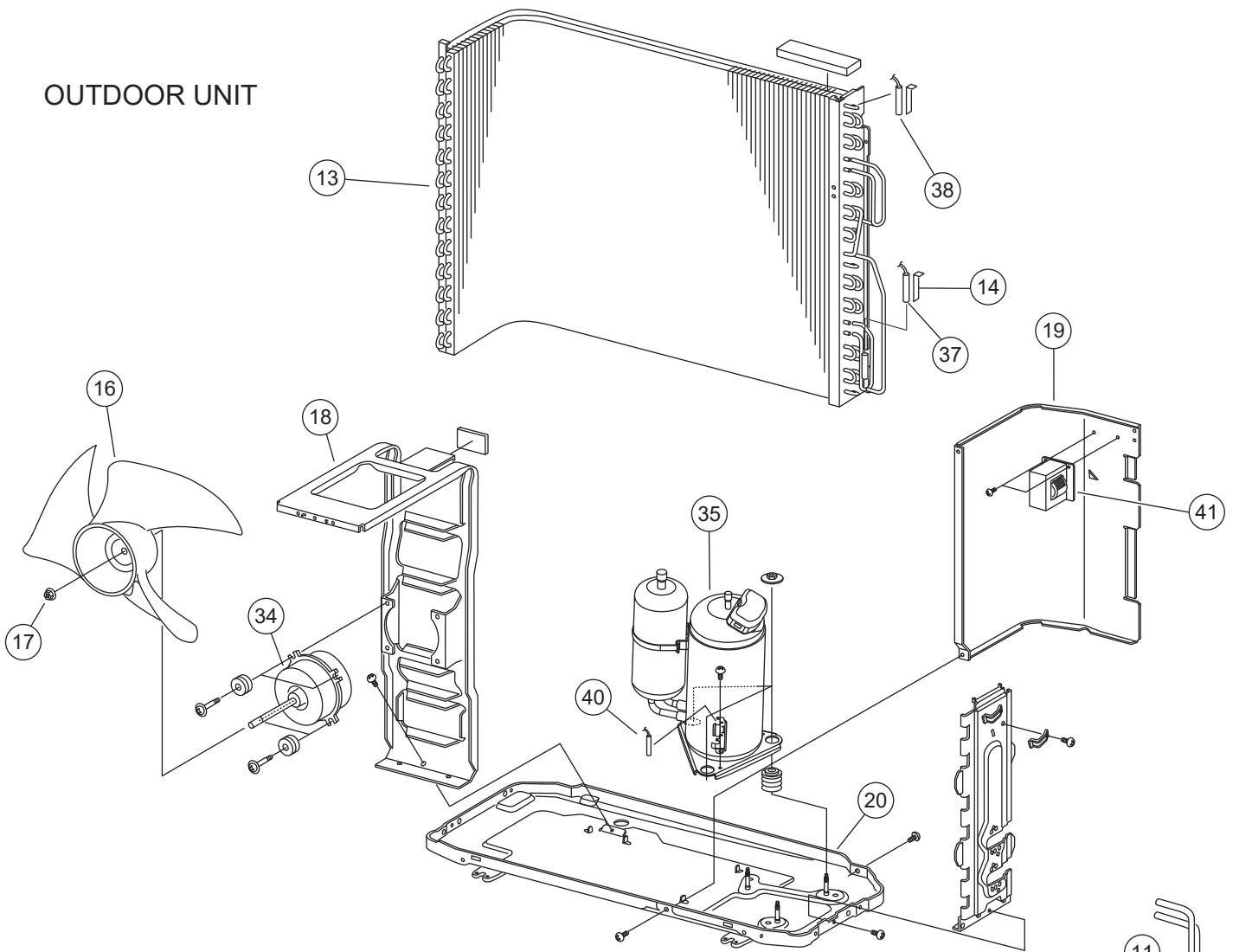
PARTS

OUTDOOR UNIT

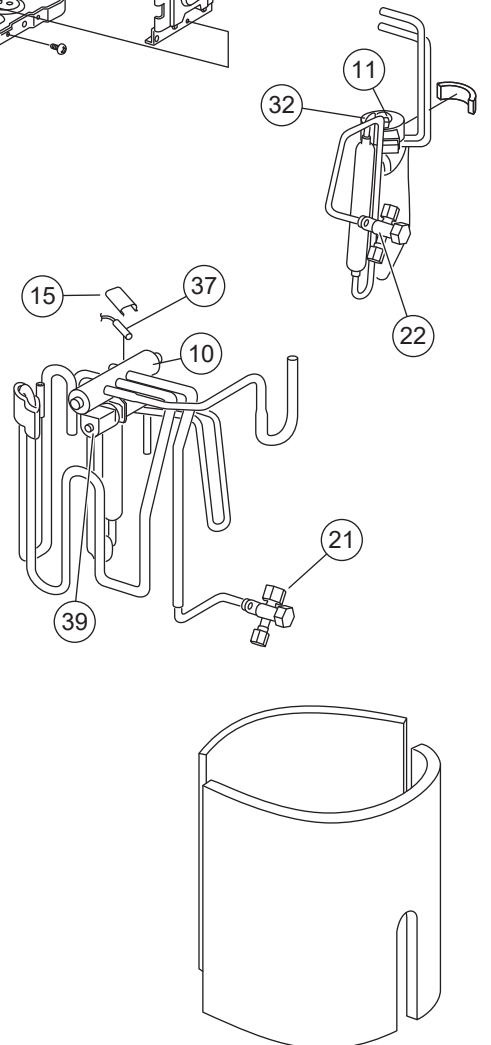


| Ref. | Description | Part number |
|------|---------------------|-------------|
| 1 | Top Panel Assy | 9309230057 |
| 2 | Cover (Switch) Assy | 9309237032 |
| 3 | Cabinet Assy | 9314809019 |
| 4 | Blow Down Grille | 9308884015 |
| 5 | Cabinet Right Assy | 9309236028 |
| 6 | Fan Ring | 9308885012 |
| 7 | Grip | 9308880017 |
| 8 | Emblem | 9315210012 |
| 9 | Protective Net | 9315033017 |

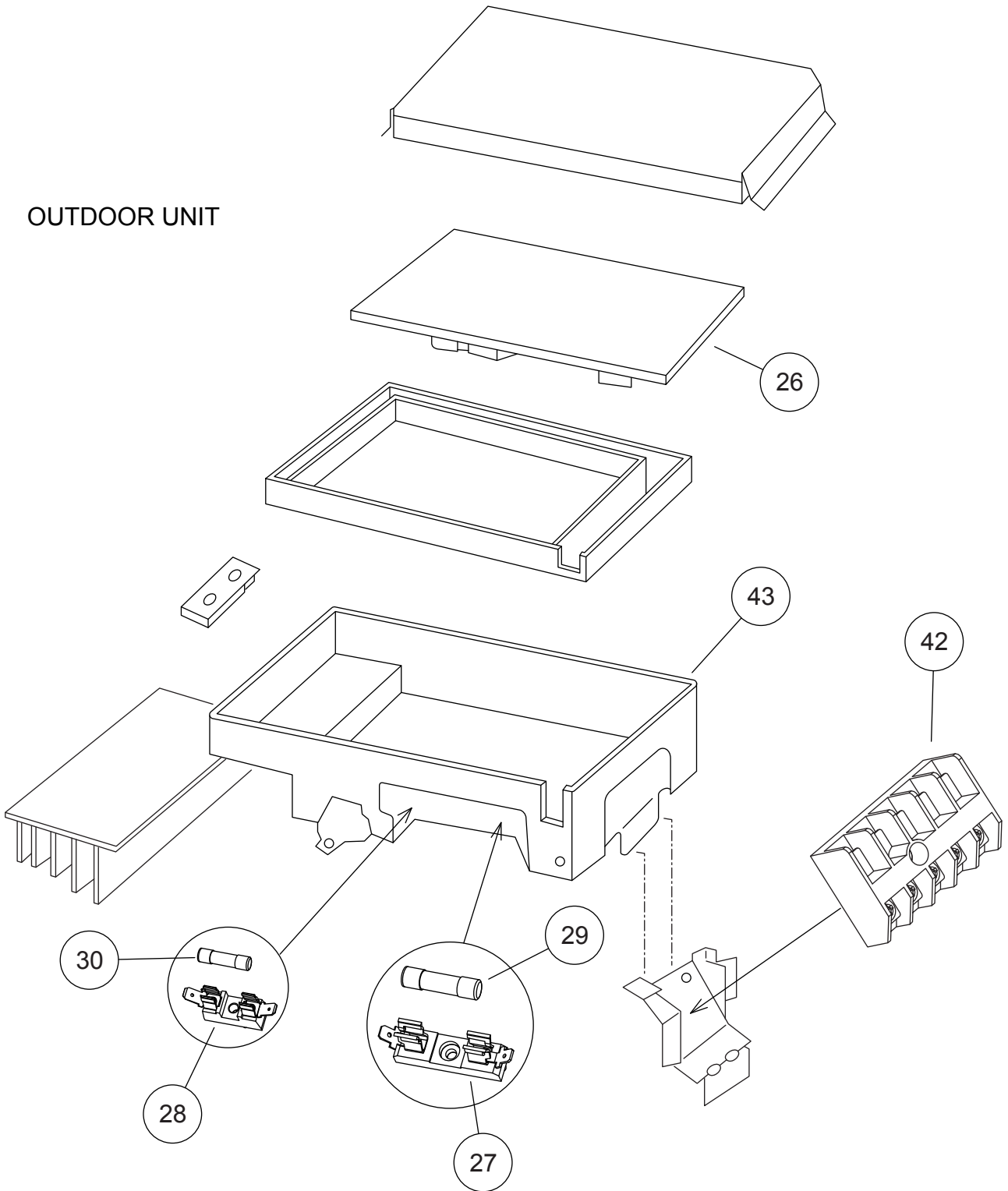
OUTDOOR UNIT



| Ref. | Description | Part number |
|------|---------------------------|-------------------|
| 10 | 4-Way Valve | 9900163013 |
| 11 | Pulse Motor Valve Assy | 9315310019 |
| 13 | Condenser Sub Assy | 9312069118 |
| 14 | Thermistor Spring A | 313728262708 |
| 15 | Thermistor Spring | 9357804002 |
| 16 | Propeller Fan | 9309909014 |
| 17 | Nut | 9304902003 |
| 18 | Motor Bracket | 9308872029 |
| 19 | Separator Assy | 9312971015 |
| 20 | Base Assy | 9315296030 |
| 21 | 3-Way Valve Assy | 9315414014 |
| 22 | 2-Way Valve Assy | 9313062019 |
| 32 | Expansion Valve Coil | 9900057039 |
| 34 | Fan Motor | 9602451012 |
| 35 | Compressor Assy | 9315297037 |
| 37 | Thermistor Assy | 9900148027 |
| 38 | Heat Exchanger Thermistor | 9900403010 |
| 39 | Solenoid Coil | 9970055010 |
| 40 | Compressor Thermistor | 9900156046 |
| 41 | Reactor Assy | 9900354015 |
| -- | Outdoor Thermistor | 9900210045 |








OUTDOOR UNIT

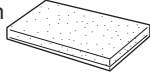

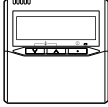
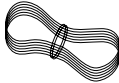



| Ref. | Description | Part number |
|------|--------------------------|-------------|
| 26 | Inverter PCB Assy (AOYA) | 9707427028 |
| 26 | Inverter PCB Assy (AOYB) | 9707427127 |
| 27 | Fuse Holder | 0501454012 |
| 28 | Fuse Holder | 0501456016 |
| 29 | Fuse | 0600382018 |
| 30 | Fuse | 0600372163 |
| 42 | Terminal | 9703874031 |
| 43 | Inverter Case Assy | 9315690012 |

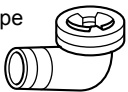
ACCESSORIES

INDOOR UNIT

| Name and Shape | Q'ty | Application (part number) |
|---|------|--|
| Hanger  | 4 | For suspending the indoor unit from ceiling (9356563009) |
| 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) (9378173569) |
| Coupler heat insulation (small)  | 1 | For indoor side pipe joint (small pipe) (9378173521) |

| Name and Shape | Q'ty | Application (part number) |
|--|-----------|---|
| Drain hose insulation  | 1 | Insulates the drain hose and vinyl hose (313806217708) |
| Binder  | 1 (small) | For remote control and remote control cord (313361275805) |
| | 1 (large) | For fixing the drain hose (312300787605) |
| Remote control  | 1 | For air conditioner operation (9372266199) |
| Remote control cord  | 1 | For connecting a remote control (9372714010) |
| Screw (M4 x 16)  | 2 | For installing a remote control (0700181108) |

OUTDOOR UNIT

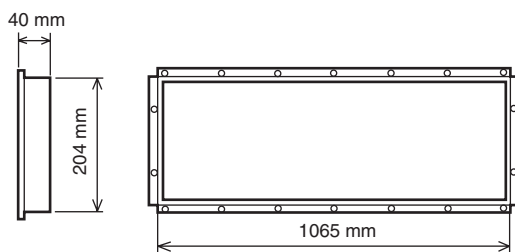
| Name and Shape | Q'ty | Application | Part number |
|--|------|-------------------------------------|-------------|
| Drain pipe  | 1 | For outdoor unit drain piping work. | 9303029015 |

OPTIONAL PARTS

When connecting the square duct and round duct, use the optional square flange or round flange and flexible duct.

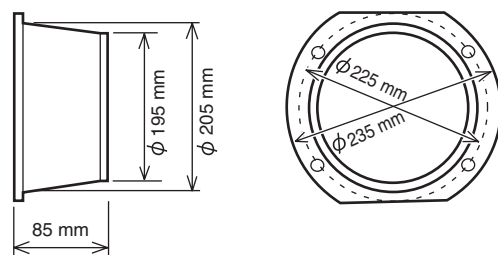
Square flange

Model name : UTD-SF045T (P/N 9098180007)



Round flange

Model name : UTD-RF204 (P/N 9093160004)



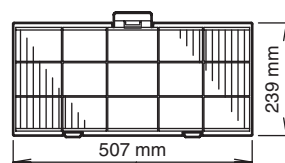
Flexible duct

Model name : UTD-RD202 (P/N 9074165004)



Long-life filter

Model name : UTD-LF25NA (P/N 9079892004)



External control set

Model name : UTD-ECS5A (P/N 9077359004)

Drain pump unit

Model name : UTZ-PX1BBA (P/N 9052976004)

Receiver unit

Model name : UTY-LRHX1 (P/N 9048213007)

Remote sensor

Model name : UTD-RS100 (P/N 9072619004)

0708G3257