

INVERTER SPLIT TYPE
AIR CONDITIONER (50Hz)
DUCT TYPE

SERVICE MANUAL



| | |
|-------------|--------------|
| Indoor unit | Outdoor unit |
| ARYG24LMLA | AOYG24LALA |

CONTENTS

| | |
|---------------------------------|----|
| SPECIFICATIONS..... | 1 |
| DIMENSIONS..... | 2 |
| REFRIGERANT SYSTEM DIAGRAM ... | 3 |
| CIRCUIT DIAGRAM..... | 4 |
| INDOOR PCB CIRCUIT DIAGRAM..... | 5 |
| OUTDOOR PCB CIRCUIT DIAGRAM ... | 8 |
| ERROR DETECTION..... | 10 |
| PARTS (INDOOR UNIT)..... | 11 |
| PARTS (OUTDOOR UNIT)..... | 14 |
| ACCESSORIES..... | 16 |

SPECIFICATIONS

ELECTRICAL DATA

| | | |
|------------------------|-------------------------|------------|
| TYPE | Inverter cool & heat | |
| INDOOR UNIT | ARYG24LMLA | |
| OUTDOOR UNIT | AOYG24LALA | |
| COOLING CAPACITY | 6.80 kW | |
| HEATING CAPACITY | 8.00 kW | |
| POWER SOURCE | 230 V | |
| FREQUENCY | 50 Hz | |
| RUNNING CURRENT | Cooling | 9.7 A |
| | Heating | 9.9 A |
| INPUT WATTS | Cooling | 2.21 kW |
| | Heating | 2.26 kW |
| E.E.R. | Cooling | 3.08 kW/kW |
| COP | Heating | 3.54 kW/kW |
| AIR FLOW, INDOOR UNIT | 1,100 m ³ /h | |
| AIR FLOW, OUTDOOR UNIT | 2,470 m ³ /h | |
| MOISTURE REMOVAL | 2.5 L/hr | |
| MAXIMUM CURRENT | Cooling | 12.0 A |
| | Heating | 13.5 A |

FAN SPEED

| | | |
|--------------|----------------|--------------|
| INDOOR UNIT | Discrimination | MFG-24RVA |
| | High | 830 r.p.m. |
| | Medium | 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. |

NOISE LEVEL

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

COMPRESSOR AND REFRIGERANT

| | | | |
|------------------------------|------------------------|------|---------|
| TYPE | Hermetic type, 4 poles | | |
| DISCRIMINATION | DA150A1F-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 | | |

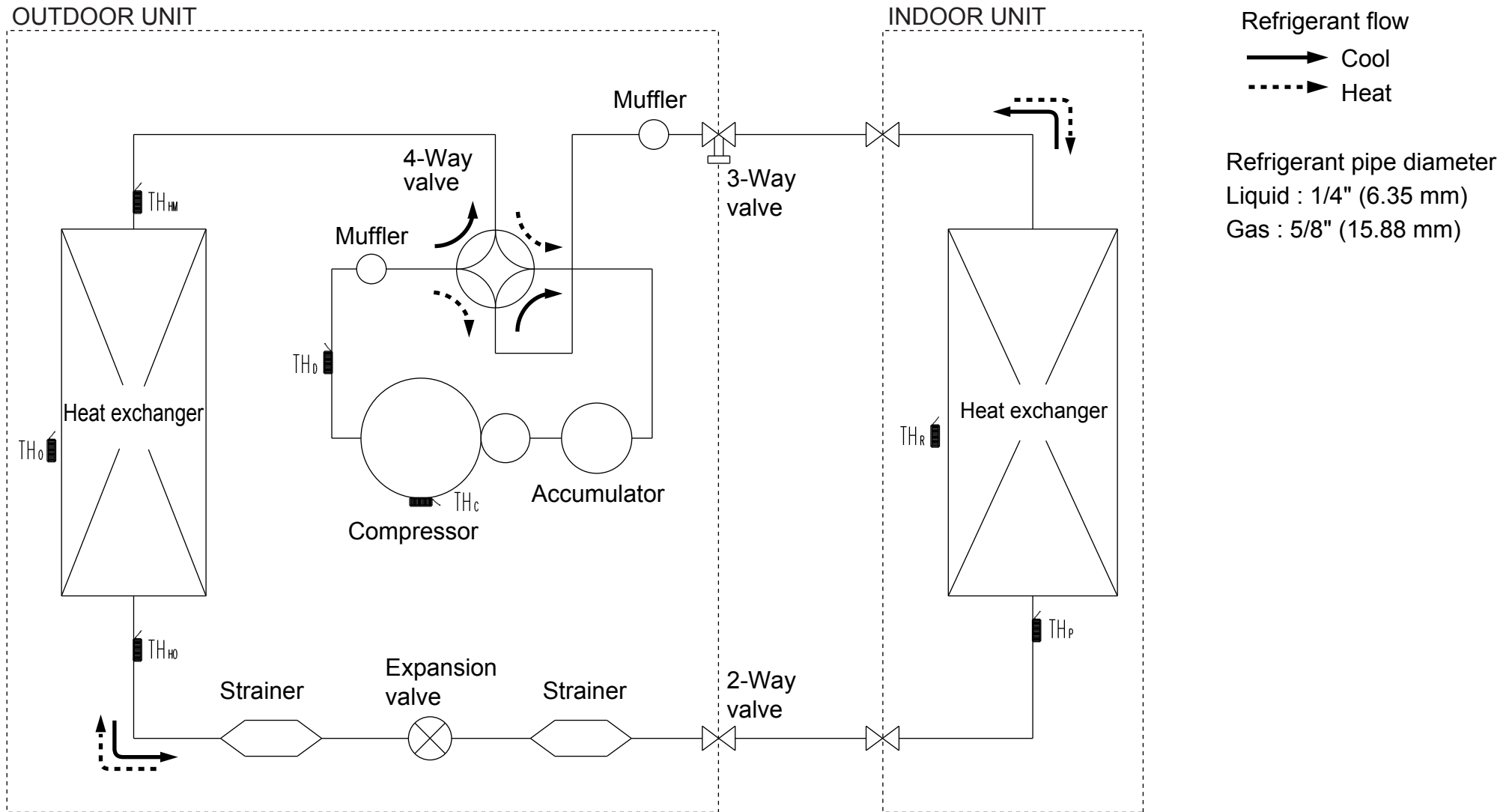
DIMENSIONS

| | | |
|--------------|-----------|----------------------|
| INDOOR UNIT | H x W x D | 270 x 1,135 x 700 mm |
| OUTDOOR UNIT | H x W x D | 570 x 790 x 315 mm |

WEIGHT

| | | |
|--------------|----------------|---------------|
| INDOOR UNIT | Net / Shipping | 38 kg / 44 kg |
| OUTDOOR UNIT | Net / Shipping | 44 kg / 48 kg |

REFRIGERANT SYSTEM DIAGRAM

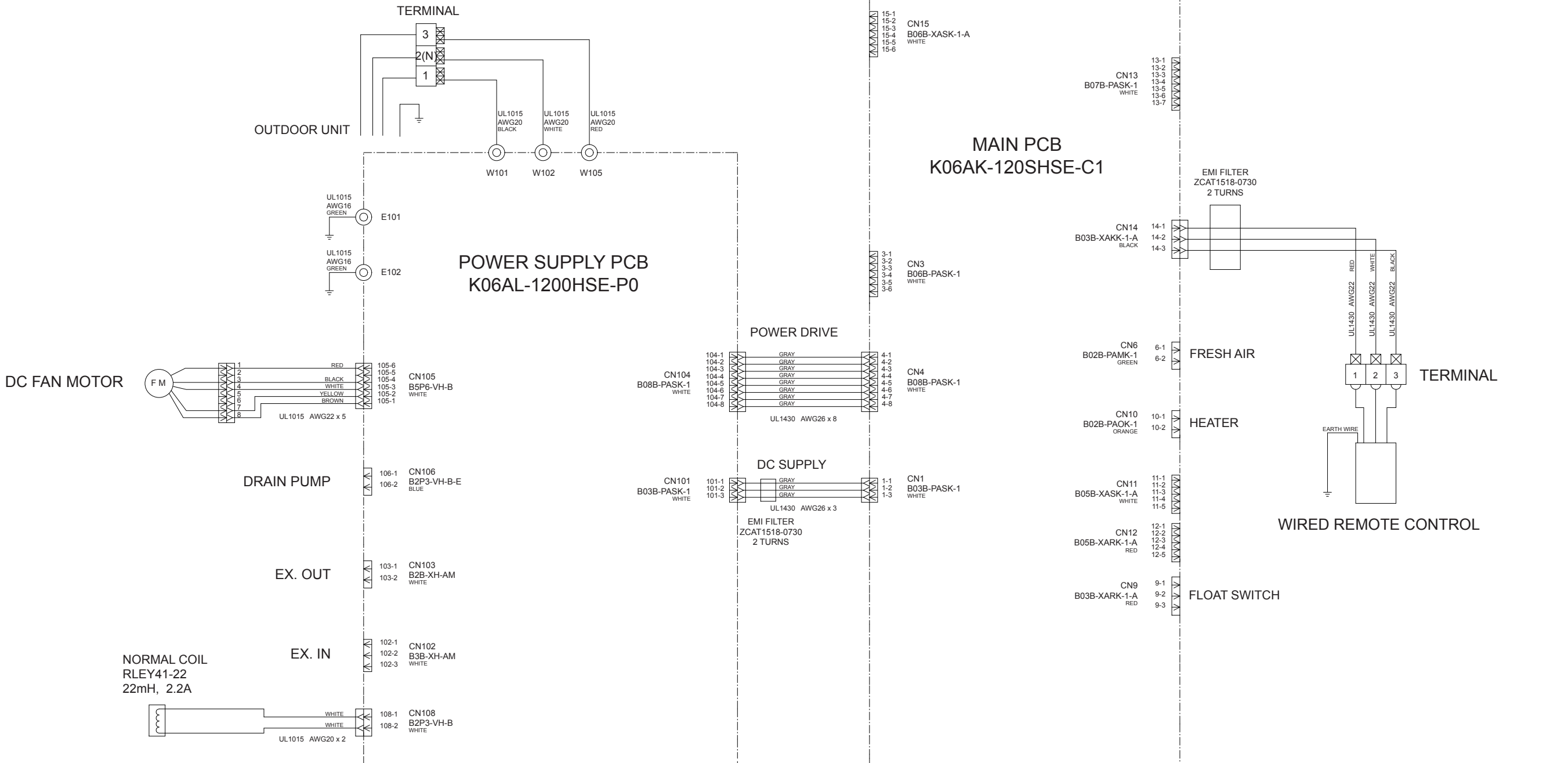


TH_c : THERMISTOR (COMPRESSOR TEP.)
 TH_d : THERMISTOR (DISCHARGE TEP.)
 TH_{HM} : THERMISTOR (HEAT EXCHANGER MED TEP.)
 TH_{HO} : THERMISTOR (HEAT EXCHANGER OUT TEP.)
 TH_o : THERMISTOR (OUTDOOR TEP.)

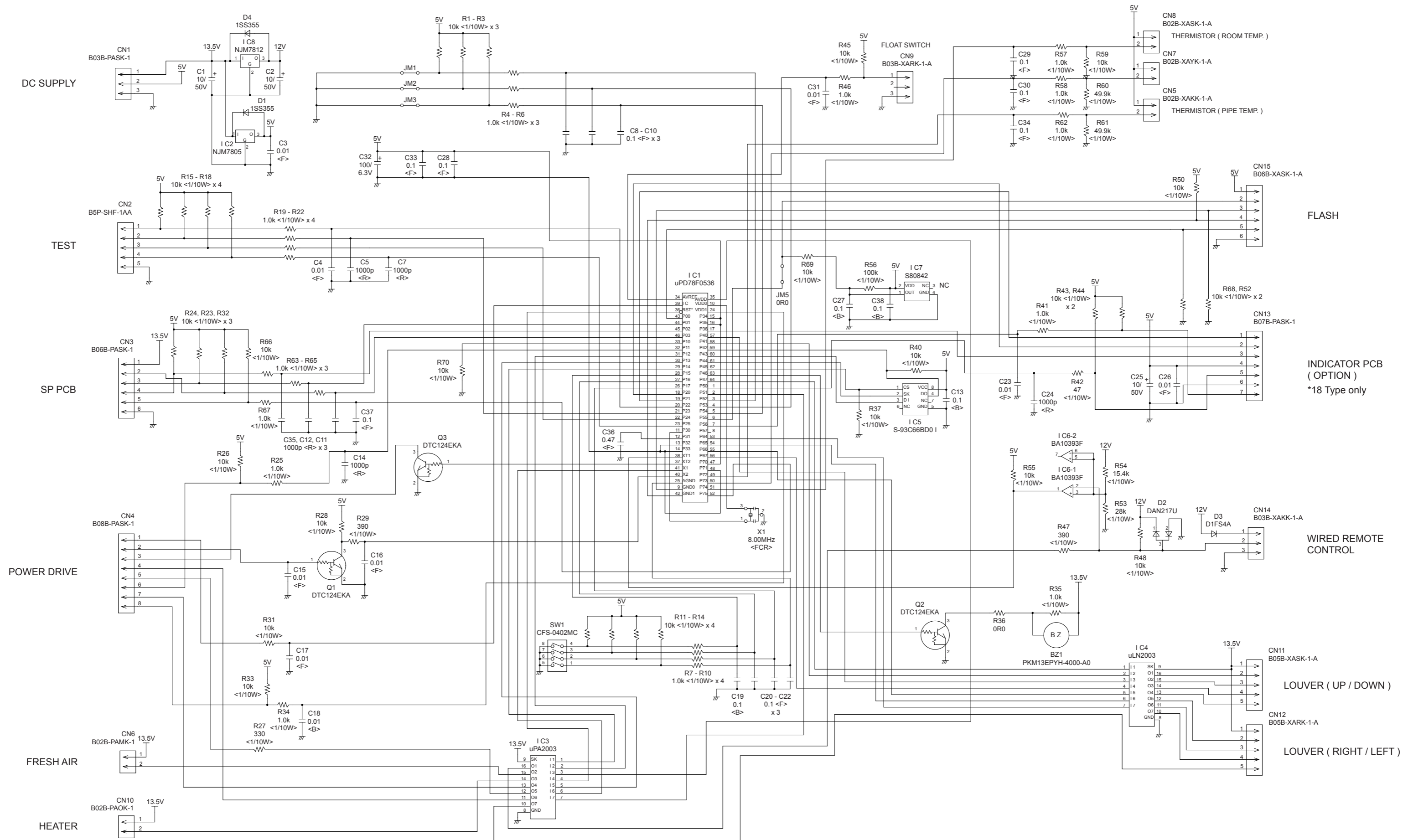
TH_p : THERMISTOR (PIPE TEP.)
 TH_R : THERMISTOR (ROOM TEP.)

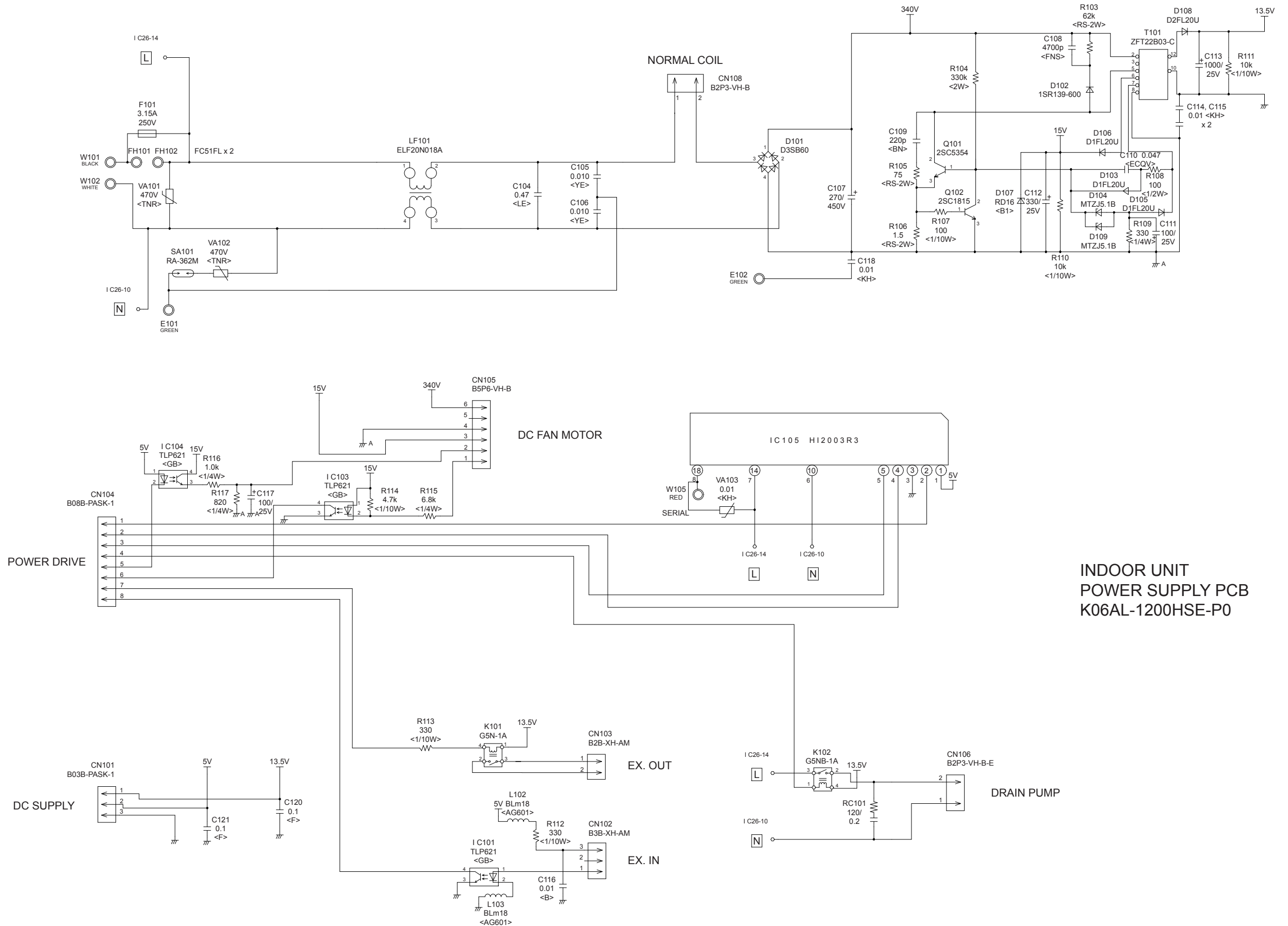
INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT
EZ-01227HSE



INDOOR UNIT
MAIN PCB
K06AK-120SHSE-C1

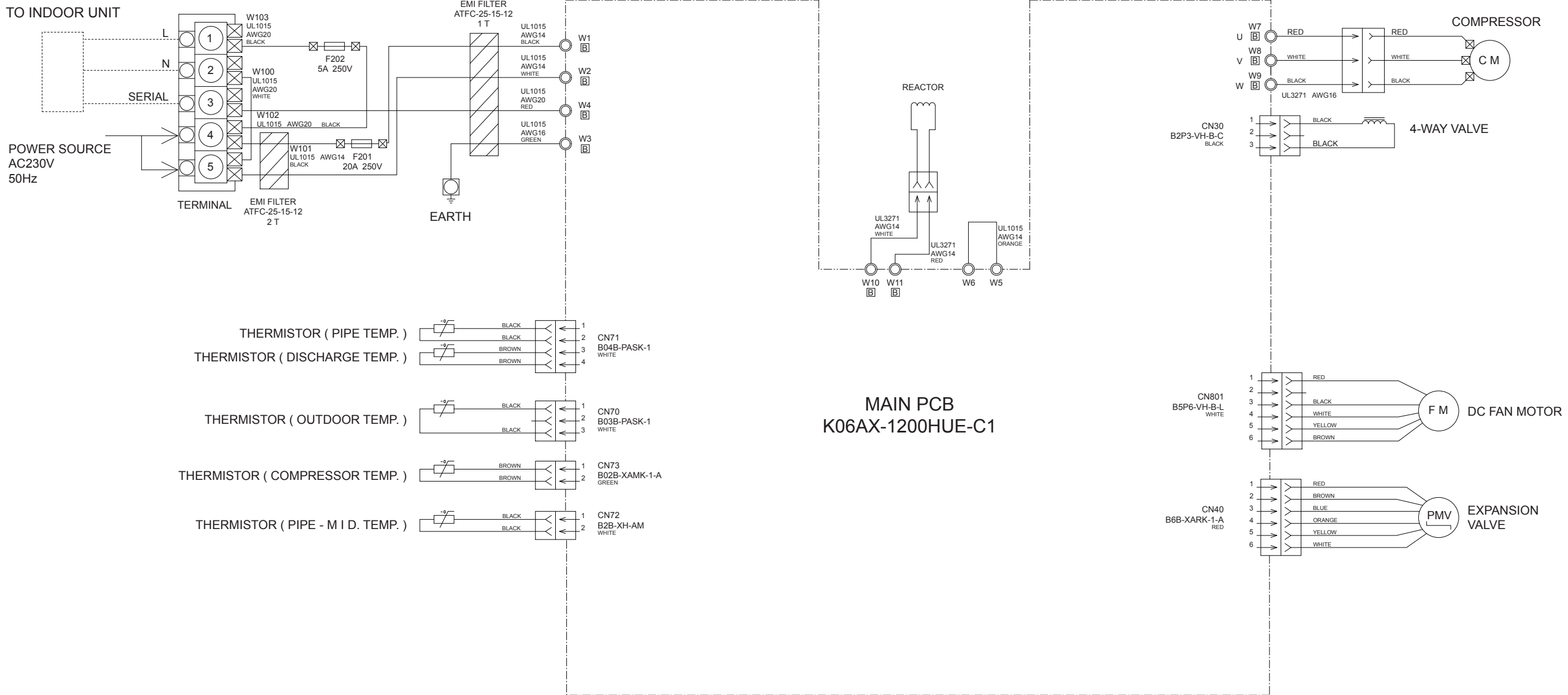




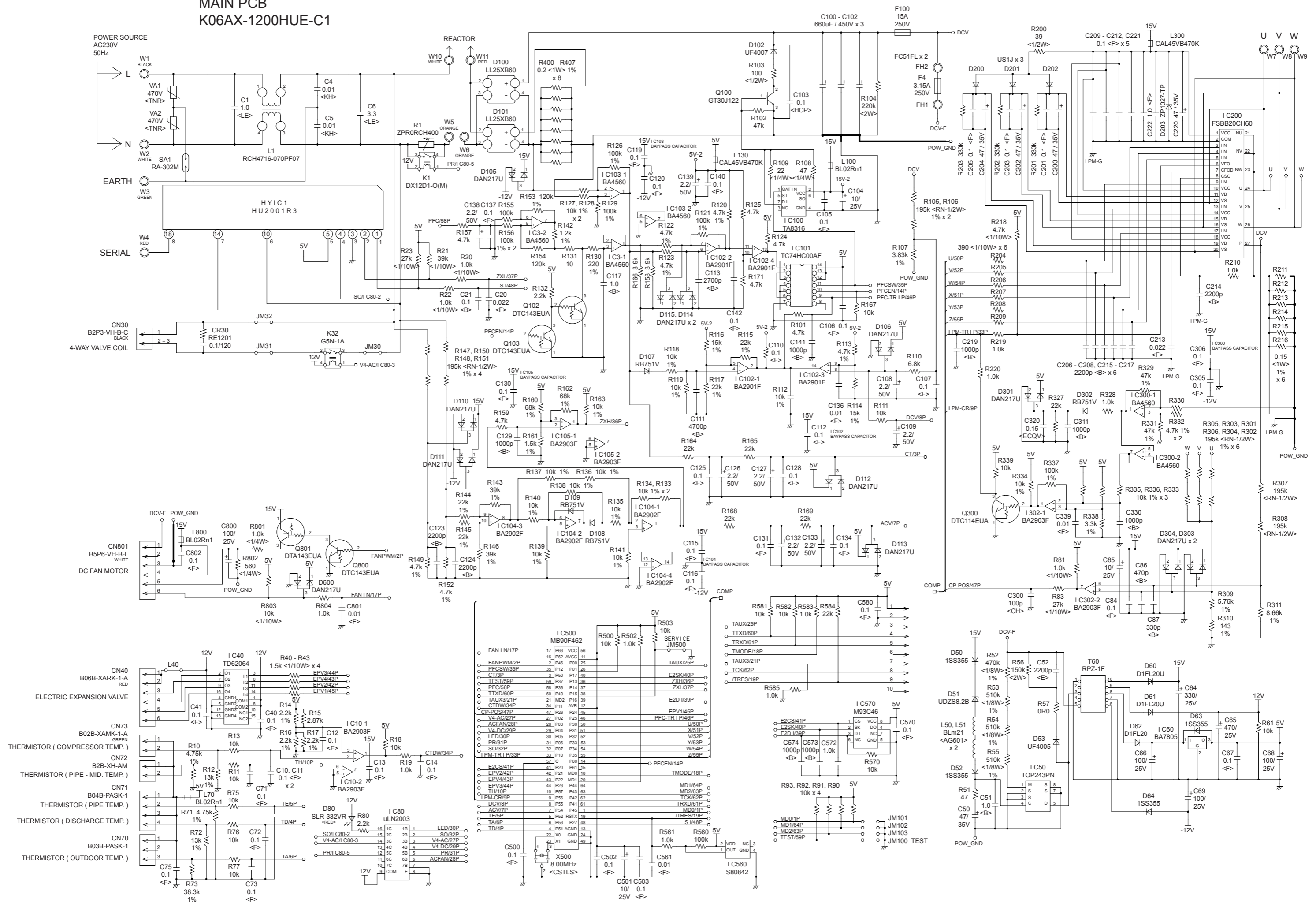
INDOOR UNIT
POWER SUPPLY PCB
K06AL-1200HSE-P0

OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
EZ-0121EHUE



OUTDOOR UNIT MAIN PCB K06AX-1200HUE-C1



ERROR DETECTION

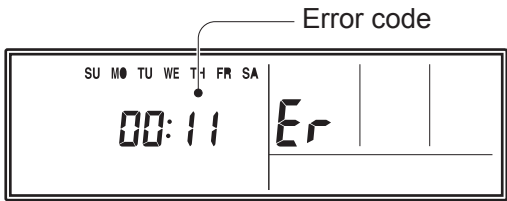
INDOOR UNIT and WIRED REMOTE CONTROL

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

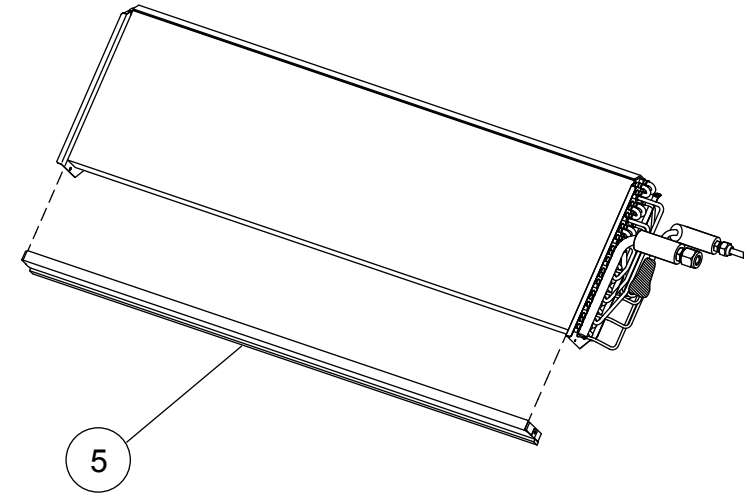
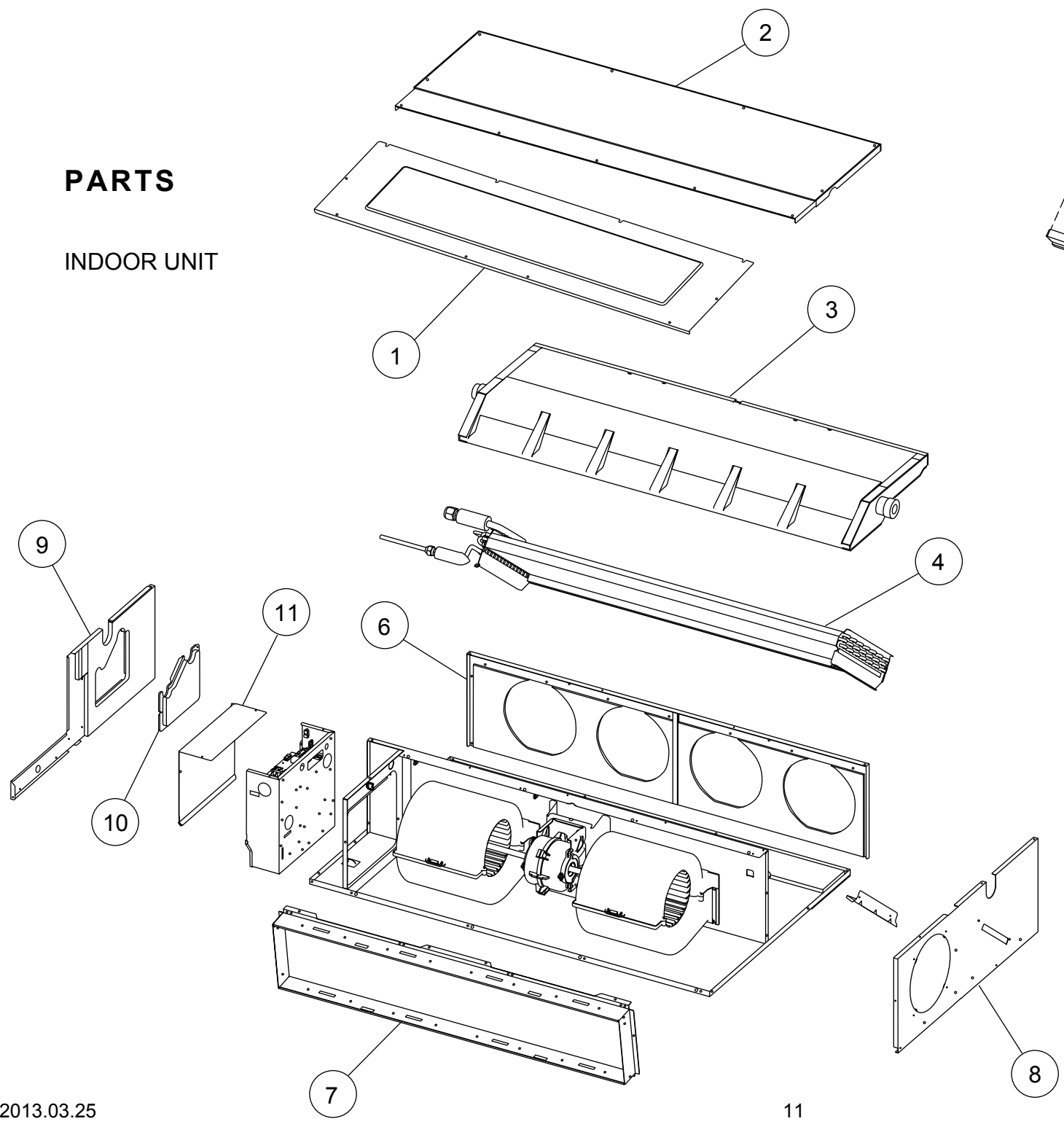
- : 0.5s on / 0.5s off
- ◇ : 0.1s on / 0.1s off
- () : Number of flashing

| Indoor unit lamps | | | Wired remote control | Description |
|----------------------|-------------------|--------------------|----------------------|---|
| OPERATION (green) | TIMER (orange) | ECONOMY (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) | ● (1) | ◇ | 31 | Power supply interruption error |
| ● (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 |

| Indoor unit lamps | | | Wired remote control | Description |
|----------------------|-------------------|--------------------|----------------------|---|
| OPERATION (green) | TIMER (orange) | ECONOMY (green) | | |
| ● (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] |

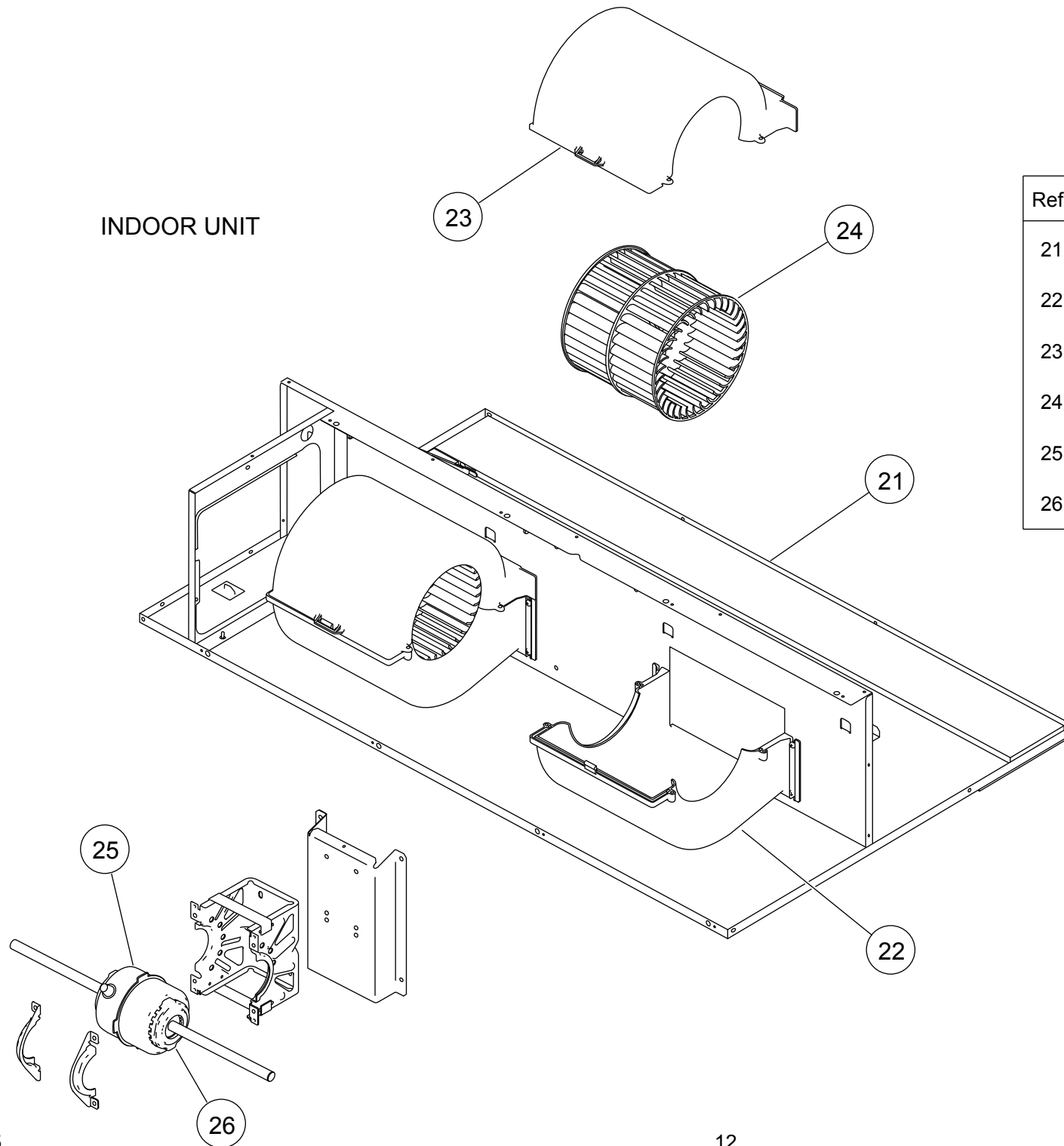
PARTS

INDOOR UNIT



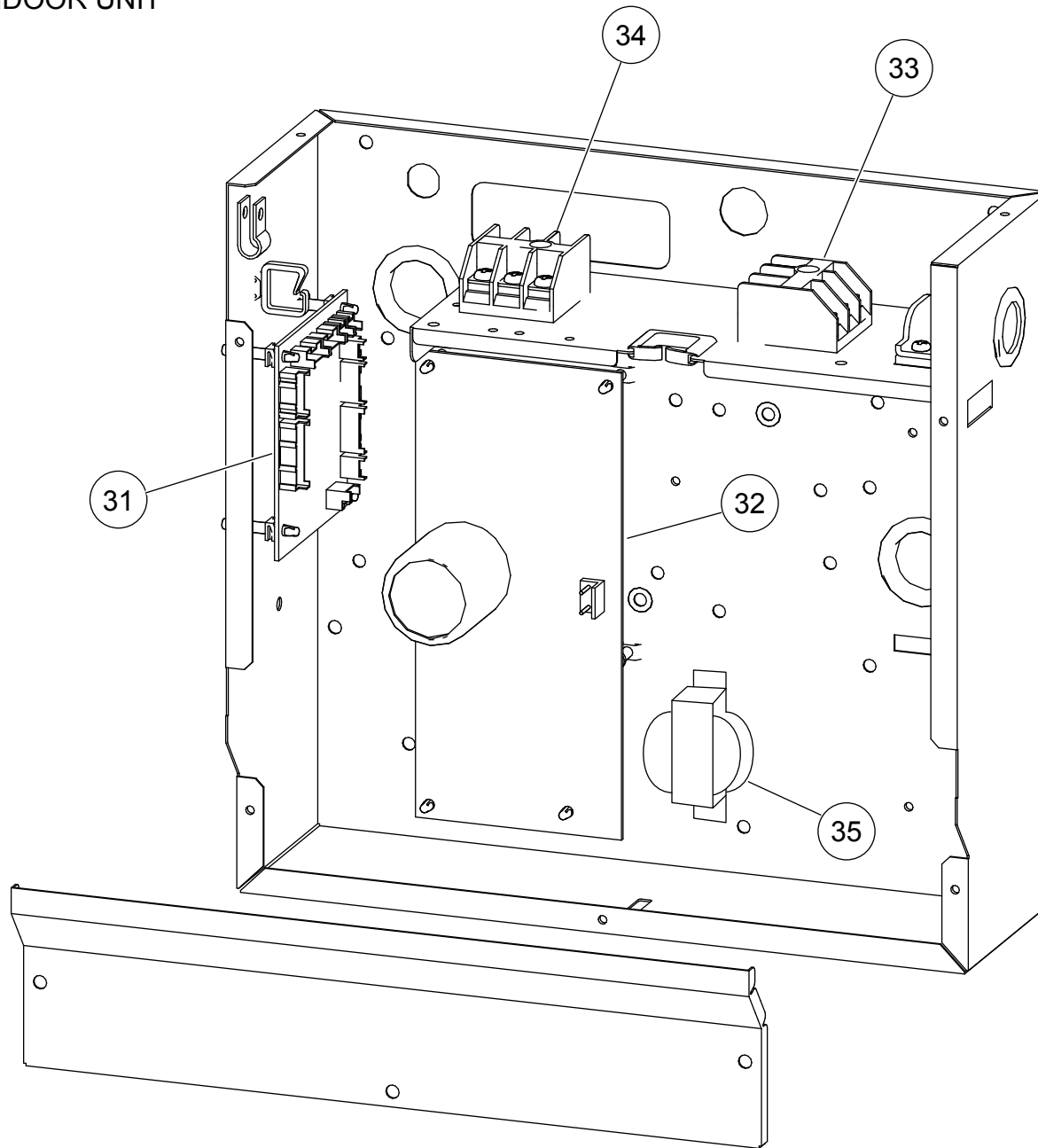
| Ref. | Description | Part number |
|------|--------------------------|-------------|
| 1 | Intake Cover Sub Assy | 9374512010 |
| 2 | Main Panel Sub Assy | 9374511013 |
| 3 | Drain Pan Sub Assy | 9374513017 |
| 4 | Evaporator Total Assy | 9374517268 |
| 5 | Seal Panel Sub Assy | 9374515011 |
| 6 | Outlet Panel Sub Assy | 9374510016 |
| 7 | Intake Frame Assy | 9374216017 |
| 8 | Cabinet L Sub Assy | 9374509010 |
| 9 | Cabinet R Sub Assy | 9374508013 |
| 10 | Bracket Pipe Sub Assy | 9374514014 |
| 11 | Control Cover A Sub Assy | 9374516025 |

INDOOR UNIT

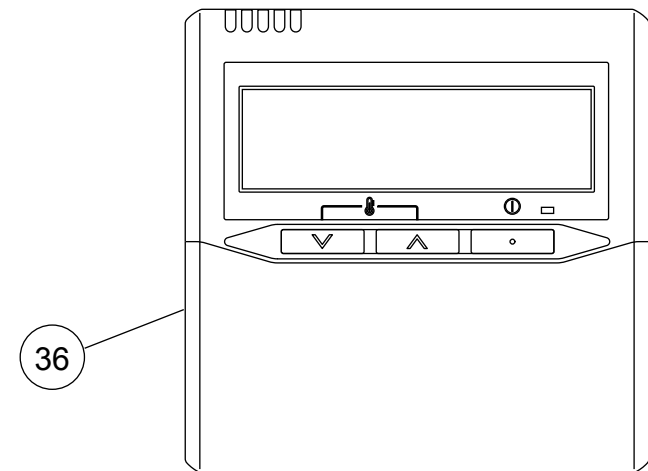


| Ref. | Description | Part number |
|------|------------------|-------------|
| 21 | Base Sub Assy | 9374504015 |
| 22 | Casing A | 9374233021 |
| 23 | Casing B | 9374234028 |
| 24 | Sirocco Fan Assy | 9356531060 |
| 25 | Fan Motor | 9602433025 |
| 26 | Rubber | 9385102002 |

INDOOR UNIT

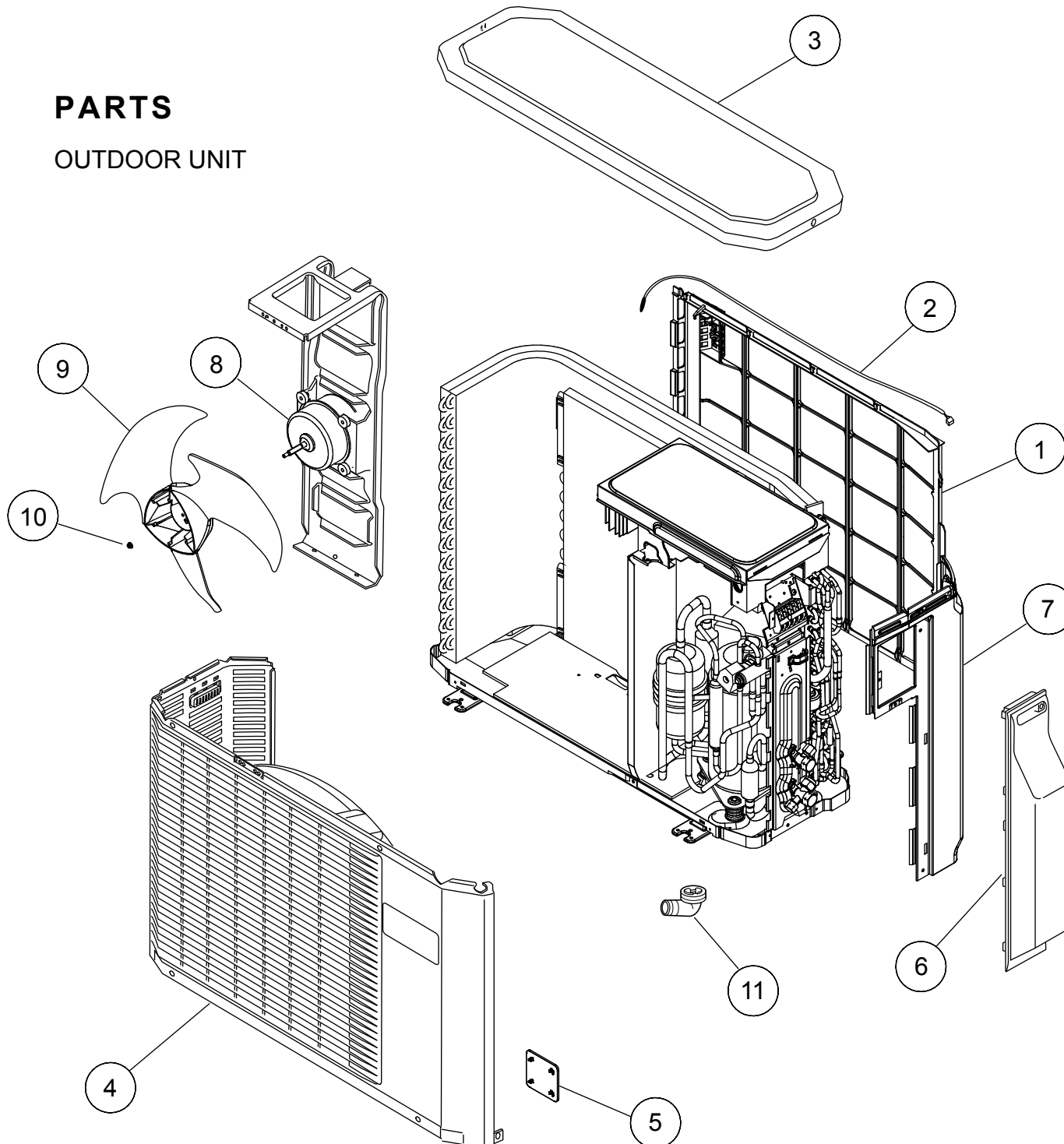


| Ref. | Description | Part number |
|------|------------------|-------------|
| 31 | Main PCB | 9709245323 |
| 32 | Power Supply PCB | 9707398373 |
| 33 | Terminal 3P | 9703345012 |
| 34 | Terminal 3P | 9306489045 |
| 35 | Reactor Assy | 9707457018 |
| 36 | Remote Control | 9318593013 |
| -- | Room Thermistor | 9703299025 |
| -- | Pipe Thermistor | 9703297021 |



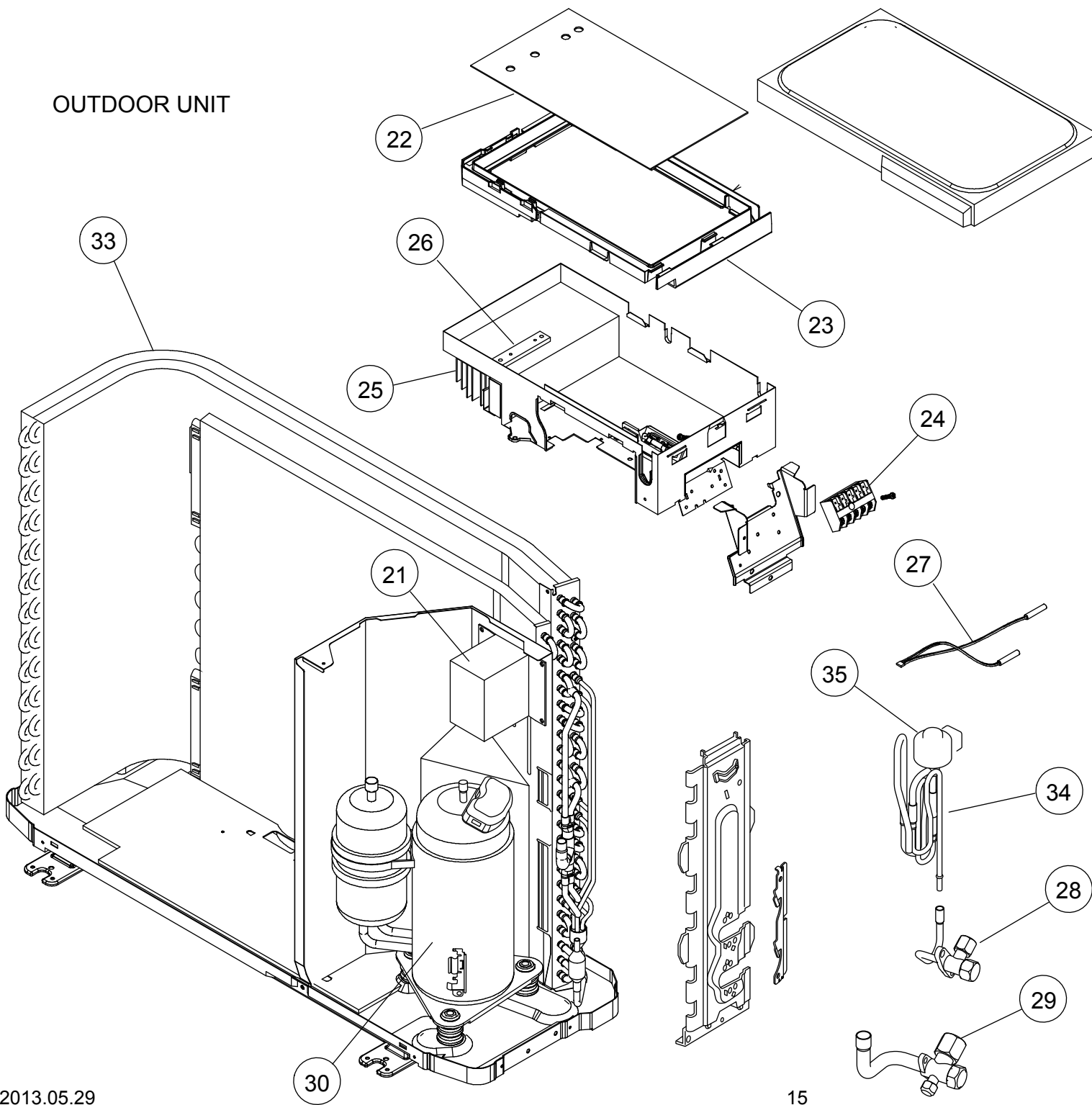
PARTS

OUTDOOR UNIT

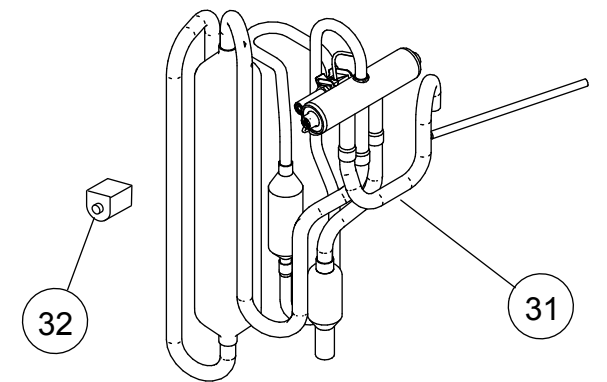


| Ref | Description | Parts number |
|-----|--------------------|--------------|
| 1 | Protective Net | 9315033017 |
| 2 | Outdoor Thermistor | 9900210045 |
| 3 | Top Panel Assy | 9309230057 |
| 4 | Cabinet Assy | 9312799459 |
| 5 | Fan Guard Cover | 9378110014 |
| 6 | Switch Cover Assy | 9309237032 |
| 7 | Cabinet Right Assy | 9309236028 |
| 8 | Fan Motor | 9602451012 |
| 9 | Propeller Fan | 9309909014 |
| 10 | Nut with Washer | 9304902003 |
| 11 | Drain Assy | 9303029015 |

OUTDOOR UNIT

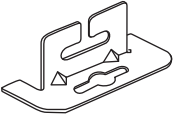
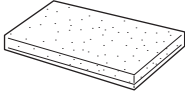



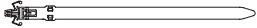
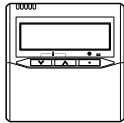


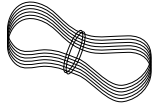

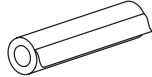
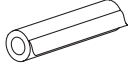


| Ref | Description | Parts number |
|-----|---------------------------|--------------|
| 21 | Reactor Assy | 9900354015 |
| 22 | Main PCB | 9707427561 |
| 23 | PCB Holder | 9313074029 |
| 24 | Terminal | 9703874031 |
| 25 | Heat Sink A | 9314410017 |
| 26 | Heat Sink B | 9314090011 |
| 27 | Thermistor Assy | 9900148027 |
| 28 | 2-way Valve Assy | 9313062019 |
| 29 | 3-way Valve Assy | 9315414014 |
| 30 | Compressor Assy | 9315297037 |
| 31 | 4-way Valve Assy | 9315311023 |
| 32 | Solenoid | 9970055010 |
| 33 | Condenser Sub Assy | 9312069118 |
| 34 | Pulse Motor Valve Assy | 9315310019 |
| 35 | Expansion Valve Coil | 9970057039 |
| -- | Compressor Thermistor | 9900156046 |
| -- | Heat Exchanger Thermistor | 9900403010 |



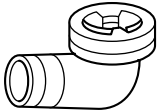
ACCESSORIES

INDOOR UNIT

| Name and Shape | Q'ty | Application (part number) |
|---|------|--|
| Hanger  | 4 | For suspending the indoor unit from ceiling (9356563009) |
| Drain hose insulation  | 1 | Insulates the drain hose and vinyl hose (313806217708) |
| Cable tie (large)  | 1 | For fixing the drain hose (312300787605) |
| Cable tie (small)  | 1 | For remote control and remote control cable binding (313361275805) |
| Cable tie  | 2 | For electrical wiring |
| Wire clamber  | 1 | For electrical wiring |
| Remote control  | 1 | (9318593013) |

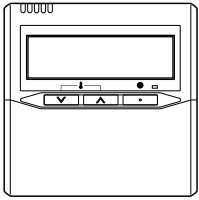

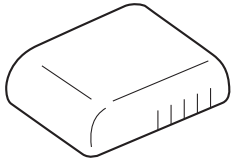
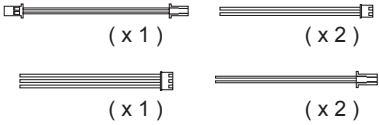
| Name and Shape | Q'ty | Application (part number) |
|---|------|--|
| Remote control cord  | 1 | For connecting a remote control (9372714010) |
| Screw (M4 x 16)  | 2 | For installing a remote control (0700181108) |
| Coupler heat insulation (large)  | 1 | For indoor side pipe joint (large pipe) (9378173569) |
| Coupler heat insulation (small)  | 1 | For indoor side pipe joint (small pipe) (9378173521) |
| Special nut A (large flange)  | 4 | For suspending the indoor unit from ceiling (313005446653) |
| Special nut B (small flange)  | 4 | (313005446759) |

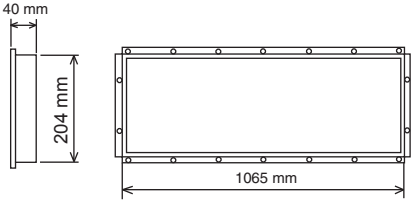
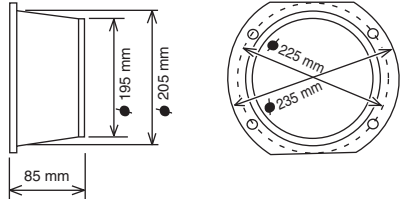
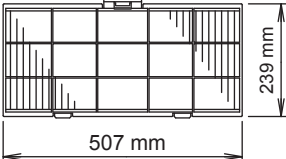
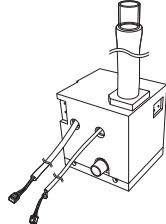
OUTDOOR UNIT

| Name and Shape | Q'ty | Application |
|--|------|--|
| 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.

| Name and Shape | Application (part number) |
|---|---|
| Wired remote control UTY-RNNYM  | |
| Simple remote control UTY-RSNYM  | |
| Remote sensor unit UTY-XSZX  | Room temperature sensor (9002763005) |
| External connect kit UTD-ECS5A  | For control input/output port (9077359004) |

| Name and Shape | Application (part number) |
|---|------------------------------|
| Square flange, UTD-SF045T  | (9098180007) |
| Round flange, UTD-RF204  | (9093160004) |
| Long-life filter UTD-LF25NA  | (9079892004) |
| Drain pump unit UTZ-PX1NBA  | (9052978008) |

1302G4179