



SAMSUNG

SYSTEM AIRCONDITIONER

INDOOR UNIT

AM017/022HN1DEH/EU
AM022/028/036FN1DEH/EU
AM056/071FN2DEH/EU
AM045/056/071/090/112/128/140/FN4DEH/EU
AM022/028/036/045/056/060FNNDEH/EU
AM015HNNDEH/EU
AM112/128/140/220/280FNHDEH/EU
AM036/056/071FNFDEH/EU
AM050/100FNKDEH/EU
AM017/022/028/036/045/056/071/090/112/128/140FNLDEH/EU
AM022/028/036/045/056/071/090/112/128/140FNMDEH/EU
AM056/071FNCDEH/EU
AM028/036/056FNJDEH/EU
AM022/028/036/056/071FNTDEH/EU
AM015HNTDEH/EU
AM022/028/036/045/056/071FNQDEH/EU
AM015HNQDEH/EU
AM160FNBFEH/EU,250FNBFEH/EU
AM160FNBFGH/EU,250FNBFGH/EU
AM160FNBDEH/EU,320FNBDEH/EU,500FNBDEH/EU
AM036/045/056/071/090/112/128/140HNMPKH/EU
AM112/128/140 HNHPKH/EU
AM045/056/071/090/112/128/140KNLDEH/EU

SERVICE *Manual*

SYSTEM AIRCONDITIONER



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1. Precautions

1-1 Precautions for the Service

- **Use the correct parts when changing the electric parts.**
 - Please check the labels and notices for the model name, proper voltage, and proper current for the electric parts.
- **Fully repair the connection for the types of harness when repairing the product after breakdown.**
 - A faulty connection can cause irregular noise and problems.
- **When disassembling or assembling, make sure that the product is laid down on a work cloth.**
 - Doing so will prevent scratching to the exterior of the rear side of the product.
- **Completely remove dust or foreign substances on the housing, connection, and inspection parts when performing repairs.**
 - This can prevent fire hazards for tracking, short, etc.
- **Please tighten the service valve of the outdoor unit and the valve cap of the charging valve as securely as possible by using a monkey spanner.**
- **Check whether the parts are properly and securely assembled after performing repairs.**
 - These parts should be in the same condition as before the repair.

1-2 Precautions for the Static Electricity and PL

- **Please carefully handle the PCB power terminal during repair and measurement when it is turned on since it is vulnerable to static electricity.**
 - Please wear insulation gloves before performing PCB repair and measurement.
- **Check if the place of installation is at least 2m away from electronic appliances such as TV, video players, and stereos.**
 - This can cause irregular noise or degrade the picture quality.
- **Please make sure the customer does not directly repair the product.**
 - Arbitrary dismantling may result in electric shock or fire.

1-3 Precautions for the Safety

- **Do not pull or touch the power plug or the subsidiary power switch with wet hands.**
 - This may result in electric shock or fire.
- **If the power line or the power plug is damaged, then it must be changed since this is a hazard.**
- **Do not bend the wire too much or position it so that it can be damaged by a heavy object on top.**
 - This may result in electric shock or fire.
- **The use of multiple electric outlets should be prohibited.**
 - This may result in electric shock or fire.
- **Ground the connection if it is necessary.**
 - The connection must be grounded if there is any risk of electrical short due to water or moisture.
- **Unplug the power or turn off the subsidiary power switch when changing or repairing electrical parts.**
 - Doing so will prevent electric shock.
- **Explain to workers that the battery for the remote control needs to be separated for storage purposes when the product will not be used for a long time.**
 - This can cause a problem for the remote control since battery fluid may trickle out.

1-4 Precautions for Handling Refrigerant for Air Conditioner

Environmental Cautions: Air pollution due to gas release

- **Safety Cautions**

If liquid gas is released, then body parts that come into contact with it may experience frostbite/blister/numbness.

If a large amount of gas is released, then suffocation may occur due to lack of oxygen. If the released gas is heated, then noxious gas may be produced by combustion.

- **Container Handling Cautions**

Do not subject container to physical shock or overheating. (Flowage is possible while moving within the regulated pressure.)

1-5 Precautions for Welding the Air Conditioner Pipe

- **Dangerous or flammable objects around the pipe must be removed before the welding.**

- **If the refrigerant is kept inside the product or the pipe, then remove the refrigerant prior to welding.**

If the welding is carried out while the refrigerant is kept inside, the welding cannot be properly performed. This will also produce noxious gas that is a health hazard. This leakage will also explode with the refrigerant and oil due to an increase in the refrigerant pressure, posing a danger to workers.

- **Please remove the oxide produced inside the pipe during the welding with nitrogen gas.**

Using another gas may cause harm to the product or others.

1-6 Precautions for Additional Supplement of Air Conditioner Refrigerant

- **Precisely calculate the refrigerant by using a scale and S-net, and proceed with the test operation.**

Excessive supplement can cause harm to the product since it can cause an inflow of the liquid refrigerant into the compressor.

- **Do not heat the refrigerant container for a forced injection.**

This may cause harm to the product or others since the refrigerant container may burst.

- **Do not operate the product after removing the product safety pressure switch and sensor.**

If the product is blocked inside, then this may cause harm to the product or others due to the excess pressure increase of the refrigerant gas.

1-7 Other Precautions

- **There should be no leakage of the pipes after installation. When withdrawing the refrigerant, the compressor should be stopped before removing the connecting pipe.**

If the compressor is operating while the refrigerant pipe is not correctly connected and the service valve is opened, then air and other substances can enter the pipe. The interior of the refrigerant cycle may then build up excessive high pressure resulting in explosion and damage.

2. Product Specifications

2-1 Product Specifications

2-1-1 Indoor Unit

■ Slim 1way cassette type

| Model | | | AM017HN1DEH/EU | AM022HN1DEH/EU | AM022FN1DEH/EU1 | AM028FN1DEH/EU1 | AM036FN1DEH/EU | |
|----------------------------------|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|
| Power Supply | | ø/V/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP/HR | HP/HR | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 1.7 | 2.2 | 2.2 | 2.8 | 3.6 |
| | | | Btu/h | 5800 | 7500 | 7,500 | 9,500 | 12,200 |
| | Heating*3) | kW | 1.9 | 2.5 | 2.6 | 3.2 | 4.0 | |
| | | Btu/h | 6400 | 8500 | 8,500 | 10,900 | 13,600 | |
| Condensate (with High fan speed) | | Liters/h | 1.6 | 1.6 | 1.12 | 1.44 | 1.6 | |
| Power | Input | W | 24 | 25 | 50*5) | 45*5) | 50*5) | |
| | Running Current | A | 0.14 | 0.15 | 0.20*5) | 0.23*5) | 0.25*5) | |
| Sound Level | Sound Pressure*4) | dB(A) | 33 | 34 | 34 | 37 | 40 | |
| Fan | Type | - | Crossflow fan | Crossflow fan | Crossflow fan | Crossflow fan | Crossflow fan | |
| | Motor | Model | - | SIC-41CVJ-F127-2 | SIC-41CVJ-F127-2 | Y4S476B041L | Y4S476B041L | Y4S476B041L |
| | | Type | - | BLDC | BLDC | Feedback SSR | Feedback SSR | Feedback SSR |
| | | Output | W | 27W | 27W | - | - | - |
| Air Flow Rate | | m ³ /min | 4.8/4.3/4.1 | 5.1/4.6/4.3 | 6/5/4 | 7/6/5 | 8/7/6 | |
| Refrigerant | Type | - | R410A | R410A | R410A | R410A | R410A | |
| | Control Method | - | EEV | EEV | EEV | EEV | EEV | |
| Temperature Control | | - | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | |
| Safety Devices | | - | Fuse | Fuse | Fuse | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | ø, mm | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | |
| | Gas (Flare) | ø, mm | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | |
| | Drain (Quick Lock) | ø, mm | VP20 | VP20 | VP20 (OD 25, ID 20) | VP20 (OD 25, ID 20) | VP20 (OD 25, ID 20) | |
| Weight | Net Weight | kg | 8 | 8 | 10.5 | 10.5 | 10.5 | |
| | Shipping Weight | kg | 10.8 | 10.8 | 13.0 | 13.0 | 13.0 | |
| Dimensions | Net Dimensions (W x H x D) | mm | 740x135x360 | 740x135x360 | 970x135x410 | 970x135x410 | 970x135x410 | |
| | Shipping Dimensions (W x H x D) | mm | 895x223x435 | 895x223x435 | 1,164x212x478 | 1,164x212x478 | 1,164x212x478 | |
| Panel Size | Model | - | PC1MWSKAN | PC1MWSKAN | PC1NUSMAN | PC1NUSMAN | PC1NUSMAN | |
| | Net Weight | kg | 2.6 | 2.6 | 3.0 | 3.0 | 3.0 | |
| | Shipping Weight | kg | 4.2 | 4.2 | 5.0 | 5.0 | 5.0 | |
| | Net Dimensions (W x H x D) | mm | 900x25x420 | 900x25x420 | 1,180x25x460 | 1,180x25x460 | 1,180x25x460 | |
| | Shipping Dimensions (W x H x D) | mm | 958x112x482 | 958x112x482 | 1,259x144x539 | 1,259x144x539 | 1,259x144x539 | |
| Functions | Auto Restart | - | O | O | O | O | O | |
| | Auto Swing | - | O | O | O | O | O | |
| | Group/Individual Control | - | O | O | O | O | O | |
| | External Contact Control | - | O | O | O | O | O | |
| | Trouble Shooting by LED | - | O | O | O | O | O | |
| Standard Accessories | Installation Manual | - | O | O | O | O | O | |
| | Operation Manual | - | X | X | X | X | X | |
| | Pattern Sheet for Installation | - | O | O | O | O | O | |
| | Flexible Drain Hose | - | O | O | O | O | O | |
| | Filter / Safety Grille | - | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | |
| | Drain Pump (Pumping speed, lift) | ℓ/h, mm | 24, 750 | 24, 750 | 24, 750 | 24, 750 | 24, 750 | |
| Optional Accessories | Wireless Remote Controller | - | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | |
| | Wired Remote Controller | - | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | |
| | External Contact Interface Module | - | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ 2 way cassette type

| Model | | | AM056FN2DEH/EU | AM071FN2DEH/EU | |
|----------------------------------|-----------------------------------|---------------------|---------------------|---------------------|--------------|
| Power Supply | | α/V/Hz | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 5.6 | 7.1 |
| | | | Btu/h | 19,100 | 24,200 |
| | Heating*3) | kW | 6.3 | 8.0 | |
| | | Btu/h | 21,400 | 27,200 | |
| Condensate (with High fan speed) | | Liters/h | 2.87 | 3.19 | |
| Power | Input | W | 70 | 75 | |
| | Running Current | A | 0.38 | 0.40 | |
| Sound Level | Sound Pressure *4) | dB(A) | 45 | 46 | |
| Fan | Type | - | Crossflow fan | Crossflow fan | |
| | Motor | Model | - | PFS027WTVB | PFS027WTVB |
| | | Type | - | Feedback SSR | Feedback SSR |
| | | Output | W | 14.0 x 2 | 14.0 x 2 |
| Airflow Rate | Cooling (High) | m ³ /min | 14 | 14 | |
| | Heating (High) | m ³ /min | 16 | 16 | |
| Refrigerant | Type | - | R410A | R410A | |
| | Control Method | - | EEV | EEV | |
| Temperature Control | | - | Micom & Thermistors | Micom & Thermistors | |
| Safety Devices | | - | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | ø, mm | 6.35 | 9.52 | |
| | Gas (Flare) | ø, mm | 12.70 | 15.88 | |
| | Drain (Quick Lock) | ø, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | |
| Weight | Net Weight | kg | 21.0 | 22.0 | |
| | Shipping Weight | kg | 25.0 | 26.0 | |
| Dimensions | Net Dimensions (W x H x D) | mm | 890x230x575 | 890x230x575 | |
| | Shipping Dimensions (W x H x D) | mm | 1,077x299x642 | 1,077x299x642 | |
| Panel Size | Model | - | PC2NUSMEN | PC2NUSMEN | |
| | Net Weight | kg | 4.0 | 4.0 | |
| | Shipping Weight | kg | 8.0 | 8.0 | |
| | Net Dimensions (W x H x D) | mm | 1,030x25x650 | 1,030x25x650 | |
| | Shipping Dimensions (W x H x D) | mm | 1,103x151x727 | 1,103x151x727 | |
| Functions | Auto Restart | - | O | O | |
| | Auto Swing | - | O | O | |
| | Group/Individual Control | - | O | O | |
| | External Contact Control | - | O | O | |
| | Trouble Shooting by LED | - | O | O | |
| Standard Accessories | Installation Manual | - | O | O | |
| | Operation Manual | - | X | X | |
| | Pattern Sheet for Installation | - | O | O | |
| | Flexible Drain Hose | - | O | O | |
| | Filter / Safety Grille | - | Filter (Washable) | Filter (Washable) | |
| Drain Pump (Pumping speed, lift) | ℓ/h,mm | | 24,750 | 24,750 | |
| Optional Accessories | Wireless Remote Controller | - | MR-DH00 | MR-DH00 | |
| | Wired Remote Controller | - | MWR-WE10N | MWR-WE10N | |
| | | - | MWR-WS00 | MWR-WS00 | |
| | External Contact Interface Module | - | MIM-B14 | MIM-B14 | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ 4 way cassette

| Model | | | AM045FN4DEH/EU | AM056FN4DEH/EU | AM071FN4DEH/EU | AM090FN4DEH/EU | |
|----------------------------------|-------------------------------------|---------------------|------------------------|------------------------|------------------------|------------------------|------------|
| Power Supply | | øV/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 4.5 | 5.6 | 7.1 | 9.0 |
| | | | Btu/h | 15,300 | 19,100 | 24,200 | 30,700 |
| | Heating*3) | kW | 5.0 | 6.3 | 8.0 | 10.0 | |
| | | Btu/h | 17,000 | 21,400 | 27,200 | 34,100 | |
| Condensate (with High fan speed) | | Liters/h | 2.23 | 2.71 | 3.51 | 4.46 | |
| Power | Input | W | 32 | 32 | 45 | 62 | |
| | Running Current | A | 0.22 | 0.22 | 0.31 | 0.43 | |
| Sound Level | Sound Pressure (Cooling/Heating)*4) | dB(A) | 42 / 44 | 42 / 44 | 44 / 44 | 47 / 47 | |
| Fan | Type | - | Turbo Fan | Turbo Fan | Turbo Fan | Turbo Fan | |
| | Motor | Model | - | FMC6531SSH | FMC6531SSH | FMC6531SSH | FMC6531SSH |
| | | Type | - | BLDC | BLDC | BLDC | BLDC |
| | Output | W | *5) | *5) | *5) | *5) | |
| Airflow Rate | Cooling (High) | m ³ /min | 14.5 | 14.5 | 17 | 19.5 | |
| | Heating (High) | m ³ /min | 16.5 | 16.5 | 18.5 | 21.5 | |
| Refrigerant | Type | - | R410A | R410A | R410A | R410A | |
| | Control Method | - | EEV | EEV | EEV | EEV | |
| Temperature Control | - | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | | |
| Safety Devices | - | Fuse | Fuse | Fuse | Fuse | | |
| Piping Connections | Liquid (Flare) | ø, mm | 6.35 | 6.35 | 9.52 | 9.52 | |
| | Gas (Flare) | ø, mm | 12.7 | 12.7 | 15.88 | 15.88 | |
| | Drain (Quick Lock) | ø, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | |
| Weight | Net Weight | kg | 25.0 | 25.0 | 25.0 | 25.0 | |
| | Shipping Weight | kg | 31.0 | 31.0 | 31.0 | 31.0 | |
| Dimensions | Net Dimensions (W x H x D) | mm | 840x204x840 | 840x204x840 | 840x204x840 | 840x204x840 | |
| | Shipping Dimensions (W x H x D) | mm | 898x275x898 | 898x275x898 | 898x275x898 | 898x275x898 | |
| Panel Size | Model | - | PC4NUSKAN | PC4NUSKAN | PC4NUSKAN | PC4NUSKAN | |
| | Net Weight | kg | 6.7 | 6.7 | 6.7 | 6.7 | |
| | Shipping Weight | kg | 8.9 | 8.9 | 8.9 | 8.9 | |
| | Net Dimensions (W x H x D) | mm | 950x30x950 | 950x30x950 | 950x30x950 | 950x30x950 | |
| | Shipping Dimensions (W x H x D) | mm | 1,042x93x1,042 | 1,042x93x1,042 | 1,042x93x1,042 | 1,042x93x1,042 | |
| Functions | Auto Restart | - | O | O | O | O | |
| | Auto Swing | - | O | O | O | O | |
| | Group/Individual Control | - | O | O | O | O | |
| | External Contact Control | - | O | O | O | O | |
| | Trouble Shooting by LED | - | O | O | O | O | |
| Standard Accessories | Installation Manual | - | O | O | O | O | |
| | Operation Manual | - | X | X | X | X | |
| | Pattern Sheet for Installation | - | O | O | O | O | |
| | Flexible Drain Hose | - | O | O | O | O | |
| | Filter / Safety Grille | - | Filter / Safety Grille | Filter / Safety Grille | Filter / Safety Grille | Filter / Safety Grille | |
| | Drain Pump (Pumping speed, lift) | ℓ/h, mm | 24, 750 | 24, 750 | 24, 750 | 24, 750 | |
| Optional Accessories | Wireless Remote Controller | - | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | |
| | Wired Remote Controller | - | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | |
| | External Contact Interface Module | - | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ 4 way cassette(cont.)

| Model | | | AM112FN4DEH/EU | AM128FN4DEH/EU | AM140FN4DEH/EU | |
|-----------------------------------|---------------------------------------|---------------------|------------------------|------------------------|------------------------|--------|
| Power Supply | | α/V/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 11.2 | 12.8 | 14.0 |
| | | | Btu/h | 38,200 | 43,600 | 47,700 |
| | Heating*3) | kW | 12.5 | 13.8 | 16.0 | |
| | | Btu/h | 42,600 | 47,000 | 54,500 | |
| Condensate (with High fan speed) | | Liters/h | 5.58 | 6.22 | 7.18 | |
| Power | Input | W | 78 | 73 | 89 | |
| | Running Current | A | 0.55 | 0.51 | 0.62 | |
| Sound Level | Sound Pressure (Cooling / Heating)*4) | dB(A) | 49 / 49 | 50 / 50 | 53 / 53 | |
| Fan | Type | | Turbo Fan | Turbo Fan | Turbo Fan | |
| | Motor | Model | DAI33585ZLB | DAI33585ZLB | DAI33585ZLB | |
| | | Type | | BLDC | BLDC | BLDC |
| | | Output | | *5) | *5) | *5) |
| Airflow Rate | Cooling (High) | m ³ /min | 23.0 | 25.0 | 26.5 | |
| | Heating (High) | m ³ /min | 26.5 | 29.5 | 32.0 | |
| Refrigerant | Type | | R410A | R410A | R410A | |
| | Control Method | | EEV | EEV | EEV | |
| Temperature Control | | | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | |
| Safety Devices | | | Fuse | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | ø, mm | 9.52 | 9.52 | 9.52 | |
| | Gas (Flare) | ø, mm | 15.88 | 15.88 | 15.88 | |
| | Drain (Quick Lock) | ø, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | |
| Weight | Net Weight | kg | 19.0 | 19.0 | 19.0 | |
| | Shipping Weight | kg | 20.0 | 22.5 | 22.5 | |
| Dimensions | Net Dimensions (W x H x D) | mm | 840x246x840 | 840x288x840 | 840x288x840 | |
| | Shipping Dimensions (W x H x D) | mm | 898x316x898 | 898x357x898 | 898x357x898 | |
| Panel Size | Model | | PC4NUSKAN | PC4NUSKAN | PC4NUSKAN | |
| | Net Weight | kg | 6.7 | 6.7 | 6.7 | |
| | Shipping Weight | kg | 8.9 | 8.9 | 8.9 | |
| | Net Dimensions (W x H x D) | mm | 950x30x950 | 950x30x950 | 950x30x950 | |
| | Shipping Dimensions (W x H x D) | mm | 1,042x83x1,042 | 1,042x83x1,042 | 1,042x83x1,042 | |
| Functions | Auto Restart | | O | O | O | |
| | Auto Swing | | O | O | O | |
| | Group/Individual Control | | O | O | O | |
| | External Contact Control | | O | O | O | |
| | Trouble Shooting by LED | | O | O | O | |
| Standard Accessories | Installation Manual | | O | O | O | |
| | Operation Manual | | X | X | X | |
| | Pattern Sheet for Installation | | O | O | O | |
| | Flexible Drain Hose | | O | O | O | |
| | Filter / Safety Grille | | Filter / Safety Grille | Filter / Safety Grille | Filter / Safety Grille | |
| Drain Pump (Pumping speed, lift) | ℓ/h, mm | 24, 750 | 24, 750 | 24, 750 | | |
| Optional Accessories | Wireless Remote Controller | | AR-DH00 | AR-DH00 | AR-DH00 | |
| | Wired Remote Controller | | MWR-WE10N | MWR-WE10N | MWR-WE10N | |
| | | | MWR-W500 | MWR-W500 | MWR-W500 | |
| External Contact Interface Module | | MIM-B14 | MIM-B14 | MIM-B14 | | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Mini 4 Way Cassette

| Model | | | AM015HNNDEH/EU | AM022FNNDDEH/EU | AM028FNNDDEH/EU | AM036FNNDDEH/EU | |
|------------------------|---------------------------------|------------------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Power Supply | | | ø/V/Hz | 1,2,220-240,50 | 1,2,220-240,50 | 1,2,220-240,50 | 1,2,220-240,50 |
| Mode*1) | | | | HP/HR | HP/HR | HP/HR | HP/HR |
| Performance | Capacity (Nominal) | Cooling*2) | kW | 1.5 | 2.2 | 2.8 | 3.6 |
| | | | Btu/h | 5,100 | 7,500 | 9,600 | 12,300 |
| | | Heating*3) | kW | 2.2 | 2.5 | 3.2 | 4 |
| | | | Btu/h | 7,500 | 8,500 | 10,900 | 13,600 |
| Power | Power Input (Nominal) | Cooling*2) | W | 18 | 18 | 18 | 20 |
| | | Heating*3) | W | 18 | 18 | 18 | 20 |
| | Current Input (Nominal) | Cooling*2) | A | 0.17 | 0.17 | 0.17 | 0.19 |
| | | Heating*3) | A | 0.17 | 0.17 | 0.17 | 0.19 |
| Fan | Motor | Type | - | Turbo Fan | Turbo Fan | Turbo Fan | Turbo Fan |
| | | Output | W | 65 x 1 | 65 x 1 | 65 x 1 | 65 x 1 |
| | Air Flow Rate | H/M/L (UL) | CFM | 8.50/7.20/6.50 | 9.80/8.60/7.40 | 10.60/9.40/8.20 | 11.40/10.20/9.00 |
| | | | CFM | 300/260/230 | 350/300/260 | 370/330/290 | 400/360/320 |
| | External Pressure | Min / Std / Max | mmAq | - | - | - | - |
| Pa | | | - | - | - | - | |
| Piping Connections | Liquid (Flare) | ø, mm | 6.35 | 6.35 | 6.35 | 6.35 | |
| | | ø, inch | 1/4 | 1/4 | 1/4 | 1/4 | |
| | Gas (Flare) | ø, mm | 12.7 | 12.7 | 12.7 | 12.7 | |
| | | ø, inch | 1/2 | 1/2 | 1/2 | 1/2 | |
| Drain (Quick Lock) | ø, mm | VP25 (OD 32,ID 25) | VP25 (OD 32,ID 25) | VP25 (OD 32,ID 25) | VP25 (OD 32,ID 25) | | |
| Field Wiring | Power Source Wire | Below 20m / over 20m | mm ² | 1.5 ~ 2.5 | 1.5 ~ 2.5 | 1.5 ~ 2.5 | 1.5 ~ 2.5 |
| | Transmission Cable | | mm ² | 0.75 ~ 1.50 | 0.75 ~ 1.50 | 0.75 ~ 1.50 | 0.75 ~ 1.50 |
| Refrigerant | Type | - | R410A | R410A | R410A | R410A | |
| | Control Method | - | EEV INCLUDED | EEV INCLUDED | EEV INCLUDED | EEV INCLUDED | |
| Sound | Sound Pressure | COOLING / HEATING (HIGH) | dB(A) | 38/40 | 38/40 | 40/40 | 42/40 |
| Dimensions | Net Weight | | kg | 12.0 | 12.0 | 12.0 | 12.0 |
| | Shipping Weight | | kg | 14.0 | 14.0 | 14.0 | 14.0 |
| | Net Dimensions (W x H x D) | | mm | 575 x 250 x 575 | 575 x 250 x 575 | 75 x 250 x 575 | 575 x 250 x 575 |
| | Shipping Dimensions (W x H x D) | | mm | 623 x 298 x 653 | 623 x 298 x 653 | 623 x 298 x 623 | 623 x 298 x 653 |
| Panel Size | Panel model | | - | PC4SUSMAN/PC4SUSMEN | PC4SUSMAN/PC4SUSMEN | PC4SUSMAN/PC4SUSMEN | PC4SUSMAN/PC4SUSMEN |
| | Panel Net Weight | | - | 2.7 | 2.7 | 2.7 | 2.7 |
| | Shipping Weight | | - | 4.2 | 4.2 | 4.2 | 4.2 |
| | Net Dimensions (W x H x D) | | - | 670 x 45 x 670 | 670 x 45 x 670 | 670 x 45 x 670 | 670 x 45 x 670 |
| | Shipping Dimensions (W x H x D) | | - | 714 x 106 x 724 | 714 x 106 x 724 | 714 x 106 x 724 | 714 x 106 x 724 |
| Additional Accessories | Drain pump | Drain pump | - / Model | Built-in | Built-in | Built-in | Built-in |
| | | Max. lifting Height / Displacement | mm/liter/h | 750/24 | 750/24 | 750/24 | 750/24 |
| | Air Filter | | - | Long life filter | Long life filter | Long life filter | Long life filter |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Mini 4 Way Cassette (cont.)

| Model | | | AM045FNNDH/EU | AM056FNNDH/EU | AM060FNNDH/EU | |
|------------------------|---------------------------------|------------------------------------|---------------------|---------------------|---------------------|---------------------|
| Power Supply | | | ø/V/Hz | 1,2,220-240,50 | 1,2,220-240,50 | |
| Mode*1) | | | - | HP/HR | HP/HR | |
| Performance | Capacity (Nominal) | Cooling*2) | kW | 4.50 | 5.60 | 6.00 |
| | | | Btu/h | 15,400 | 19,100 | 20,500 |
| | | Heating*3) | kW | 5.00 | 6.30 | 6.80 |
| | | | Btu/h | 17,100 | 21,500 | 23,200 |
| Power | Power Input (Nominal) | Cooling*2) | W | 23.00 | 28.00 | 31.00 |
| | | Heating*3) | W | 23.00 | 28.00 | 31.00 |
| | Current Input (Nominal) | Cooling*2) | A | 0.22 | 0.27 | 0.30 |
| | | Heating*3) | A | 0.22 | 0.27 | 0.30 |
| Fan | Motor | Type | - | Turbo Fan | Turbo Fan | Turbo Fan |
| | | Output | W | 65 x 1 | 65 x 1 | 65 x 1 |
| | Air Flow Rate | H/M/L (UL) | CMM | 12.20/11.00/9.80 | 13.40/11.80/10.20 | 14.20/12.60/11.00 |
| | | | CFM | 430/390/350 | 470/420/360 | 500/440/390 |
| | External Pressure | Min / Std / Max | mmAq | - | - | - |
| Pa | | | - | - | - | |
| Piping Connections | Liquid (Flare) | ø, mm | 6.35 | 6.35 | 6.35 | |
| | | ø, inch | 1/4 | 1/4 | 1/4 | |
| | Gas (Flare) | ø, mm | 12.7 | 12.7 | 12.7 | |
| | | ø, inch | 1/2 | 1/2 | 1/2 | |
| | Drain (Quick Lock) | ø, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | |
| Field Wiring | Power Source Wire | mm ² | 1.5 ~ 2.5 | 1.5 ~ 2.5 | 1.5 ~ 2.5 | |
| | Transmission Cable | mm ² | 0.75 ~ 1.50 | 0.75 ~ 1.50 | 0.75 ~ 1.50 | |
| Refrigerant | Type | - | R410A | R410A | R410A | |
| | Control Method | - | EEV INCLUDED | EEV INCLUDED | EEV INCLUDED | |
| Sound | Sound Pressure | COOLING / HEATING (HIGH) | dBA | 43/43 | 46/47 | 47/47 |
| Dimensions | Net Weight | | kg | 12 | 12 | 12 |
| | Shipping Weight | | kg | 14 | 14 | 14 |
| | Net Dimensions (W x H x D) | | mm | 575 x 250 x 575 | 575 x 250 x 575 | 575 x 250 x 575 |
| | Shipping Dimensions (W x H x D) | | mm | 623 x 298 x 653 | 623 x 298 x 653 | 623 x 298 x 653 |
| Panel Size | Panel model | | - | PC4SUSMAN/PC4SUSMEN | PC4SUSMAN/PC4SUSMEN | PC4SUSMAN/PC4SUSMEN |
| | Panel Net Weight | | kg | 2.7 | 2.7 | 2.7 |
| | Shipping Weight | | kg | 4.2 | 4.2 | 4.2 |
| | Net Dimensions (WxHxD) | | mm | 670 x 45 x 670 | 670 x 45 x 670 | 670 x 45 x 670 |
| | Shipping Dimensions (WxHxD) | | mm | 714 x 106 x 724 | 714 x 106 x 724 | 714 x 106 x 724 |
| Additional Accessories | Drain pump | Drain pump | - / Model | Built-in | Built-in | Built-in |
| | | Max. lifting Height / Displacement | mm/liter/h | 750/24 | 750/24 | 750/24 |
| | Air Filter | | - | Long life filter | Long life filter | Long life filter |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Slim duct

| Model | | | AM017FNLDEH/EU | AM022FNLDEH/EU | AM028FNLDEH/EU | AM036FNLDEH/EU | AM045FNLDEH/EU | AM056FNLDEH/EU | |
|----------------------------------|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|
| Power Supply | | ø/V/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | HP / HR | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 1.7 | 2.2 | 2.8 | 3.6 | 4.5 | 5.6 |
| | | | Btu/h | 4,600 | 7,500 | 9,500 | 12,200 | 15,300 | 19,100 |
| | | Heating*3) | kW | 1.9 | 2.5 | 3.2 | 4.0 | 5.0 | 6.3 |
| | | | Btu/h | 5,200 | 8,500 | 10,900 | 13,600 | 17,000 | 21,400 |
| Condensate (with High fan speed) | | Liters/h | | 0.80 | 1.12 | 1.28 | 2.07 | 2.39 | |
| Power | Input | W | 55 | 55 | 60 | 65 | 90 | 95 | |
| | Running Current | A | 0.3 | 0.3 | 0.32 | 0.33 | 0.52 | 0.53 | |
| Sound Level | Sound Pressure *4) | dB(A) | 37 | 37 | 37 | 37 | 40 | 43 | |
| Fan | Type | - | Sirocco Fan | Sirocco Fan | Sirocco Fan | Sirocco Fan | Sirocco Fan | Sirocco Fan | |
| | Motor | Model | - | YSK95-28-4-B | YSK95-28-4-B | YSK95-28-4-B | YSK95-28-4-B | YSK110-50-4SM | YSK110-50-4SM |
| | | Type | - | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR |
| | | Output | W | *5) | *5) | *5) | *5) | *5) | *5) |
| Airflow Rate | Cooling (High) | m ³ /min | 5.0 | 4 | 7.5 | 7.5 | 11.0 | 12.0 | |
| | Heating (High) | m ³ /min | 5.5 | 8.2 | 9.0 | 9.0 | 14.0 | 15.0 | |
| | External Static Pressure | Standard (Min.~Max) | mmHzO | 1(0~3) | 1(0~3) | 1(0~3) | 1(0~3) | 2(0~4) | 2(0~4) |
| Refrigerant | Type | - | R410A | R410A | R410A | R410A | R410A | R410A | |
| | Control Method | - | EEV | EEV | EEV | EEV | EEV | EEV | |
| Temperature Control | - | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | | |
| Safety Devices | - | Fuse | Fuse | Fuse | Fuse | Fuse | Fuse | | |
| Piping Connections | Liquid (Flare) | ø, mm | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | |
| | Gas (Flare) | ø, mm | 12.70 | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | |
| | Drain | ø, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | |
| Weight | Net Weight | kg | 19.0 | 19.0 | 19.0 | 19.5 | 23.5 | 23.5 | |
| | Shipping Weight | kg | 23.0 | 23.0 | 23.0 | 23.5 | 28.0 | 28.0 | |
| Dimensions | Net Dimensions (W x H x D) | mm | 700x199x600 | 700x199x600 | 700x199x600 | 700x199x600 | 900x199x600 | 900x199x600 | |
| | Shipping Dimensions (W x H x D) | mm | 950x270x710 | 950x270x710 | 950x270x710 | 950x270x710 | 1150x280x710 | 1150x280x710 | |
| Functions | Auto Restart | - | O | O | O | O | O | O | |
| | Auto Swing | - | X | X | X | X | X | X | |
| | Group/Individual Control | - | O | O | O | O | O | O | |
| | External Contact Control | - | O | O | O | O | O | O | |
| | Trouble Shooting by LED | - | X | X | X | X | X | X | |
| Standard Accessories | Installation Manual | - | O | O | O | O | O | O | |
| | Operation Manual | - | O | O | O | O | O | O | |
| | Pattern Sheet for Installation | - | X | X | X | X | X | X | |
| | Flexible Drain Hose | - | O | O | O | O | O | O | |
| | Filter / Safety Grille | - | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | |
| Drain Pump (Pumping speed, lift) | - | MR-BH01 | MR-BH01 | MR-BH01 | MR-BH01 | MR-BH01 | MR-BH01 | | |
| Optional Accessories | Wireless Remote Controller | - | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | |
| | Duct Receiver Kits | Receiver | - | MRK-A10 | MRK-A10 | MRK-A10 | MRK-A10 | MRK-A10 | |
| | | Receiver Wire | - | MRW-10A | MRW-10A | MRW-10A | MRW-10A | MRW-10A | |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | |
| | External Contact Interface Module | | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | |
| Drain Pump | | MDP-E075SEE3D | MDP-E075SEE3D | MDP-E075SEE3D | MDP-E075SEE3D | MDP-E075SEE3D | MDP-E075SEE3D | | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Slim duct(cont.)

| Model | | | AM071FNLDEH/EU | AM090FNLDEH/EU | AM112FNLDEH/EU | AM128FNLDEH/EU | AM140FNLDEH/EU | |
|-----------------------------------|----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------|
| Power Supply | | øV/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 7.1 | 9.0 | 11.2 | 12.8 | 14.0 |
| | | | Btu/h | 24,200 | 30,700 | 38,200 | 43,600 | 47,700 |
| | | Heating*3) | kW | 8.0 | 10.0 | 12.5 | 13.8 | 16.0 |
| | | | Btu/h | 27,200 | 34,100 | 42,600 | 47,000 | 54,500 |
| Condensate (with High fan speed) | | Liters/h | 2.87 | 3.83 | 4.63 | 4.95 | 5.26 | |
| Power | Input | W | 120 | 170 | 170 | 200 | 220 | |
| | Running Current | A | 0.6 | 0.96 | 0.96 | 1.28 | 1.43 | |
| Sound Level | Sound Pressure (High/Low)*4) | dB(A) | 47 / 47 | 43 / 44 | 43 / 44 | 45 / 46 | 45 / 46 | |
| Fan | Type | | - | Sirocco Fan | Sirocco Fan | Sirocco Fan | Sirocco Fan | |
| | Motor | Model | - | YSK140-60-4B | DL-12840SSBC | DL-12840SSBC | DL-12840SSBC | |
| | | Type | - | Non Feedback SSR | BLDC | BLDC | BLDC | |
| | | Output | W | *5) | *5) | *5) | *5) | |
| Airflow Rate | Cooling (High) | | m ³ /min | 16.5 | 29.0 | 31.2 | 34.0 | |
| | Heating (High) | | m ³ /min | 20.0 | 34.0 | 34.0 | 36.0 | |
| | External Static Pressure | Standard (Min.~Max) | mmH ₂ O | 2 (0~4) | 3 (0~6) | 3 (0~6) | 3 (0~6) | |
| Refrigerant | Type | | - | R410A | R410A | R410A | R410A | |
| | Control Method | | - | EEV | EEV | EEV | EEV | |
| Temperature Control | | - | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | - | Fuse | Fuse | Fuse | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | | ø, mm | 9.52 | 9.52 | 9.52 | 9.52 | |
| | Gas (Flare) | | ø, mm | 15.88 | 15.88 | 15.88 | 15.88 | |
| | Drain | | ø, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | |
| Weight | Net Weight | | kg | 30.0 | 44.0 | 44.0 | 46.0 | |
| | Shipping Weight | | kg | 35.0 | 52.0 | 52.0 | 54.0 | |
| Dimensions | Net Dimensions (W x H x D) | | mm | 1,100x199x600 | 1,300x295x690 | 1,300x295x690 | 1,300x295x690 | |
| | Shipping Dimensions (W x H x D) | | mm | 1350x280x710 | 1575x370x835 | 1575x370x835 | 1575x370x835 | |
| Functions | Auto Restart | | - | O | O | O | O | |
| | Auto Swing | | - | X | X | X | X | |
| | Group/Individual Control | | - | O | O | O | O | |
| | External Contact Control | | - | O | O | O | O | |
| | Trouble Shooting by LED | | - | X | X | X | X | |
| Standard Accessories | Installation Manual | | - | O | O | O | O | |
| | Operation Manual | | - | O | O | O | O | |
| | Pattern Sheet for Installation | | - | X | X | X | X | |
| | Flexible Drain Hose | | - | O | O | O | O | |
| | Filter / Safety Grille | | - | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | |
| Optional Accessories | Drain Pump (Pumping speed, lift) | | - | MR-BH01 | MR-BH01 | MR-BH01 | MR-BH01 | |
| | Wireless Remote Controller | | - | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | |
| | Duct Receiver Kits | Receiver | - | MRK-A10 | MRK-A10 | MRK-A10 | MRK-A10 | |
| | | Receiver Wire | - | MRW-10A | MRW-10A | MRW-10A | MRW-10A | |
| Wired Remote Controller | | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N | | |
| External Contact Interface Module | | | - | MIM-B14 | MIM-B14 | MIM-B14 | | |
| Drain Pump | | | - | MDP-E075SEE3D | MDP-E075SEE3D | MDP-E075SEE3D | | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Slim Duct(Drain Pump Built-in)

| Model | | | AM045KNLDEH/EU | AM056KNLDEH/EU | |
|----------------------------------|----------------------------------|-----------------------------------|---------------------|---------------------|---------------------|
| Power Supply | | ø/V/Hz | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 4.5 | 5.6 |
| | | | Btu/h | 15,300 | 19,100 |
| | | Heating*3) | kW | 5.0 | 6.3 |
| | | | Btu/h | 17,000 | 21,400 |
| Condensate (with High fan speed) | | Liters/h | 2.07 | 2.39 | |
| Power | Input | | W | 90 | 95 |
| | Running Current | | A | 0.52 | 0.53 |
| Sound Level | | Sound Pressure *4) | dB(A) | 40 | 43 |
| Fan | Type | | - | Sirocco Fan | Sirocco Fan |
| | Motor | Model | - | YSK110-50-4SM | YSK110-50-4SM |
| | | Type | - | Non Feedback SSR | Non Feedback SSR |
| | | Output | W | *5) | *5) |
| Airflow Rate | Cooling (High) | | m ³ /min | 11.0 | 12.0 |
| | Heating (High) | | m ³ /min | 14.0 | 15.0 |
| | External Static Pressure | Standard (Min.~Max) | mmHzO | 2 (0~4) | 2 (0~4) |
| Refrigerant | Type | | - | R410A | R410A |
| | Control Method | | - | EEV | EEV |
| Temperature Control | | | - | Micom & Thermistors | Micom & Thermistors |
| Safety Devices | | | - | Fuse | Fuse |
| Piping Connections | Liquid (Flare) | | ø, mm | 6.35 | 6.35 |
| | Gas (Flare) | | ø, mm | 12.7 | 12.7 |
| | Drain | | ø, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) |
| Weight | Net Weight | | kg | 24.5 | 24.5 |
| | Shipping Weight | | kg | 29.0 | 29.0 |
| Dimensions | Net Dimensions (W x H x D) | | mm | 900x199x600 | 900x199x600 |
| | Shipping Dimensions (W x H x D) | | mm | 1150x280x710 | 1150x280x710 |
| Functions | Auto Restart | | - | O | O |
| | Auto Swing | | - | X | X |
| | Group/Individual Control | | - | O | O |
| | External Contact Control | | - | O | O |
| | Trouble Shooting by LED | | - | X | X |
| Standard Accessories | Installation Manual | | - | O | O |
| | Operation Manual | | - | O | O |
| | Pattern Sheet for Installation | | - | X | X |
| | Flexible Drain Hose | | - | O | O |
| | Filter / Safety Grille | | - | Filter (Washable) | Filter (Washable) |
| | Drain Pump (Pumping speed, lift) | | - | MR-BH01 | MR-BH01 |
| Optional Accessories | Wireless Remote Controller | | - | MR-DH00 | MR-DH00 |
| | Duct Receiver Kits | Receiver | - | MRK-A10 | MRK-A10 |
| | | Receiver Wire | - | MRW-10A | MRW-10A |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N |
| | | External Contact Interface Module | | | MIM-B14 |
| | Drain Pump | | | Include | Include |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Slim Duct(Drain Pump Built-in)

| Model | | | AM071KNLDEU/EU | AM090KNLDEU/EU | AM112KNLDEU/EU | AM128KNLDEU/EU | AM140KNLDEU/EU | |
|----------------------------------|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------|
| Power Supply | | α/V/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 7.1 | 9.0 | 11.2 | 12.8 | 14.0 |
| | | | Btu/h | 24,200 | 30,700 | 38,200 | 43,600 | 47,700 |
| | | Heating*3) | kW | 8.0 | 10.0 | 12.5 | 13.8 | 16.0 |
| | | | Btu/h | 27,200 | 34,100 | 42,600 | 47,000 | 54,500 |
| Condensate (with High fan speed) | | Liters/h | 2.87 | 3.83 | 4.63 | 4.95 | 5.26 | |
| Power | Input | W | 120 | 170 | 170 | 200 | 220 | |
| | Running Current | A | 0.6 | 0.96 | 0.96 | 1.28 | 1.43 | |
| Sound Level | Sound Pressure (High/Low)*4) | dB(A) | 47 / 47 | 43 / 44 | 43 / 44 | 45 / 46 | 45 / 46 | |
| Fan | Type | | - | Sirocco Fan | Sirocco Fan | Sirocco Fan | Sirocco Fan | |
| | Motor | Model | - | YSK140-60-4B | DL-12840SSBC | DL-12840SSBC | DL-12840SSBC | |
| | | Type | - | Non Feedback SSR | BLDC | BLDC | BLDC | |
| | | Output | W | *5) | *5) | *5) | *5) | |
| Airflow Rate | Cooling (High) | | m ³ /min | 16.5 | 29.0 | 31.2 | 34.0 | |
| | Heating (High) | | m ³ /min | 20.0 | 34.0 | 34.0 | 36.0 | |
| | External Static Pressure | Standard (Min.~Max) | mmH ₂ O | 2 (0~4) | 3 (0~6) | 3 (0~6) | 3 (0~6) | |
| Refrigerant | Type | | - | R410A | R410A | R410A | R410A | |
| | Control Method | | - | EEV | EEV | EEV | EEV | |
| Temperature Control | | - | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | - | Fuse | Fuse | Fuse | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | | ø, mm | 9.52 | 9.52 | 9.52 | 9.52 | |
| | Gas (Flare) | | ø, mm | 15.88 | 15.88 | 15.88 | 15.88 | |
| | Drain | | ø, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | |
| Weight | Net Weight | | kg | 30.5 | 40.5 | 40.5 | 42.0 | |
| | Shipping Weight | | kg | 35.5 | 48.0 | 48.0 | 49.5 | |
| Dimensions | Net Dimensions (W x H x D) | | mm | 1,100x199x600 | 1,300x295x690 | 1,300x295x690 | 1,300x295x690 | |
| | Shipping Dimensions (W x H x D) | | mm | 1350x280x710 | 1575x370x835 | 1575x370x835 | 1575x370x835 | |
| Functions | Auto Restart | | - | O | O | O | O | |
| | Auto Swing | | - | X | X | X | X | |
| | Group/Individual Control | | - | O | O | O | O | |
| | External Contact Control | | - | O | O | O | O | |
| | Trouble Shooting by LED | | - | X | X | X | X | |
| Standard Accessories | Installation Manual | | - | O | O | O | O | |
| | Operation Manual | | - | O | O | O | O | |
| | Pattern Sheet for Installation | | - | X | X | X | X | |
| | Flexible Drain Hose | | - | O | O | O | O | |
| | Filter / Safety Grille | | - | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | |
| Optional Accessories | Drain Pump (Pumping speed, lift) | | - | MR-BH01 | MR-BH01 | MR-BH01 | MR-BH01 | |
| | Wireless Remote Controller | | - | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | |
| | Duct Receiver Kits | Receiver | - | MRK-A10 | MRK-A10 | MRK-A10 | MRK-A10 | |
| | | Receiver Wire | - | MRW-10A | MRW-10A | MRW-10A | MRW-10A | |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | |
| | External Contact Interface Module | | - | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | |
| | Drain Pump | | - | Include | Include | Include | Include | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Duct Type (Uplevel Static Pressure)

| Model | | | AM022FNMDEH/EU | AM028FNMDEH/EU | AM036FNMDEH/EU | AM045FNMDEH/EU | |
|----------------------|--------------------------------------|--------------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| Power Supply | | øV/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 2.2 | 2.8 | 3.6 | 4.5 |
| | | | Btu/h | 7,500 | 9,500 | 12,200 | 15,300 |
| | | Heating*3) | kW | 2.5 | 3.2 | 4.0 | 5.0 |
| | | | Btu/h | 8,500 | 10,900 | 13,600 | 17,000 |
| Power | Input | | W | 80 | 80 | 85 | 125 |
| | Running Current | | A | 0.4 | 0.4 | 0.55 | 1.15 |
| Sound Level | Sound Pressure (Cooling/Heating) *4) | | dB(A) | 37 / 38 | 38/39 | 39/40 | 44 / 46 |
| Fan | Type | | - | Sirocco Fan | Sirocco Fan | Sirocco Fan | Sirocco Fan |
| | Motor | Model | - | YSK110-25-4SM | YSK110-25-4SM | YSK110-50-4SM | YSK140-200-4E1 |
| | | Type | - | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR |
| | | Output | W | *5) | *5) | *5) | *5) |
| Airflow Rate | Cooling (High) | | m ³ /min | 7.7 | 8.8 | 11.0 | 13.0 |
| | Heating (High) | | m ³ /min | 8.9 | 10.3 | 12.7 | 14.5 |
| | External Static Pressure | Standard(Min.-Max) | mmHzO | 2 (0~4) | 2 (0~4) | 2 (0~4) | 4 (0~8) |
| Refrigerant | Type | | - | R410A | R410A | R410A | R410A |
| | Control Method | | - | EEV | EEV | EEV | EEV |
| Temperature Control | | | - | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors |
| Safety Devices | | | - | Fuse | Fuse | Fuse | Fuse |
| Piping Connections | Liquid (Flare) | | ø, mm | 6.35 | 6.35 | 6.35 | 6.35 |
| | Gas (Flare) | | ø, mm | 12.7 | 12.7 | 12.7 | 12.7 |
| | Drain | | ø, mm | VP25 (OD 32,ID 25) | VP25 (OD 32,ID 25) | VP25 (OD 32,ID 25) | VP25 (OD 32,ID 25) |
| Weight | Net Weight | | kg | 23.5 | 23.5 | 23.5 | 29.0 |
| | Shipping Weight | | kg | 28.0 | 28.0 | 28.0 | 33.0 |
| Dimensions | Net Dimensions (W x H x D) | | mm | 900x199x600 | 900x199x600 | 900x199x600 | 900x260x480 |
| | Shipping Dimensions (W x H x D) | | mm | 1150x280x710 | 1150x280x710 | 1150x280x710 | 1170x595x340 |
| Functions | Auto Restart | | - | O | O | O | O |
| | Auto Swing | | - | X | X | X | X |
| | Group/Individual Control | | - | O | O | O | O |
| | External Contact Control | | - | O | O | O | O |
| | Trouble Shooting by LED | | - | X | X | X | X |
| Standard Accessories | Installation Manual | | - | O | O | O | O |
| | Operation Manual | | - | O | O | O | O |
| | Pattern Sheet for Installation | | - | X | X | X | X |
| | Flexible Drain Hose | | - | O | O | O | O |
| | Filter / Safety Grille | | - | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) |
| | Drain Pump (Pumping speed, lift) | | - | MR-BH01 | MR-BH01 | MR-BH01 | MR-BH01 |
| Optional Accessories | Wireless Remote Controller | | - | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 |
| | Duct Receiver Kits | Receiver | - | MRK-A10 | MRK-A10 | MRK-A10 | MRK-A10 |
| | | Receiver Wire | - | MRW-10A | MRW-10A | MRW-10A | MRW-10A |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N |
| | External Contact Interface Module | | - | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 |
| Drain Pump | | - | MDP-E075SEE3D | MDP-E075SEE3D | MDP-E075SEE3D | MDP-E075SEE3D | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ MSP duct

| Model | | | AM056FNMBH/EU | AM071FNMBH/EU | AM090FNMBH/EU | AM112FNMBH/EU | AM128FNMBH/EU | AM140FNMBH/EU | |
|----------------------------------|-----------------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Power Supply | | φV/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | HP / HR | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 5.6 | 7.1 | 9 | 11.2 | 12.8 | 14 |
| | | | Btu/h | 19,100 | 24,200 | 30,700 | 38,200 | 43,600 | 47,700 |
| | | Heating*3) | kW | 6.3 | 8.0 | 10.0 | 12.5 | 13.8 | 16.0 |
| | | | Btu/h | 21,400 | 27,200 | 34,100 | 42,600 | 47,000 | 54,500 |
| Condensate (with High fan speed) | | Liters/h | | | | 4.63 | 4.95 | 5.1 | |
| Power | Input | W | 130 ⁵⁾ | 190 ⁵⁾ | 240 ⁵⁾ | 260 | 370 | 410 | |
| | Running Current | A | 1.10 ⁵⁾ | 1.25 ⁵⁾ | 1.30 ⁵⁾ | 1.17 | 1.67 | 1.86 | |
| Sound Level | Sound Pressure *4) | dB(A) | 47 | 47 | 50 | 48 | 50 | 50 | |
| Fan | Type | | - | Sirocco Fan | Sirocco Fan | Sirocco Fan | Sirocco Fan | Sirocco Fan | |
| | Motor | Model | - | YSK140-200-4E1 | YSK140-200-4E1 | YSK140-200-4 | YSK140-200-4 | Y7S423C015 | Y7S423C015 |
| | | Type | - | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR | Non Feedback SSR |
| | | Output | W | - | - | - | - | - | - |
| Airflow Rate | Cooling (High) | | m ³ /min | 14.5 | 18.5 | 19.5 | 27.0 | 32.0 | 37.0 |
| | Heating (High) | | m ³ /min | 15.5 | 20.0 | 21.5 | 27.0 | 31.0 | 36.0 |
| | External Static Pressure | Standard(Min.-Max) | mmH ₂ O | 4(0-8) | 4(0-8) | 6(4-8) | 8(4-12) | 8(4-12) | 8(4-12) |
| Refrigerant | Type | | - | R410A | R410A | R410A | R410A | R410A | R410A |
| | Control Method | | - | EEV | EEV | EEV | EEV | EEV | EEV |
| Temperature Control | | - | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | - | Fuse | Fuse | Fuse | Fuse | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | | φ, mm | 6.35 | 9.52 | 9.52 | 9.52 | 9.52 | 9.52 |
| | Gas (Flare) | | φ, mm | 12.7 | 15.88 | 15.88 | 15.88 | 15.88 | 15.88 |
| | Drain | | φ, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) |
| Weight | Net Weight | | kg | 29.0 | 29.0 | 34.0 | 36.0 | 52.0 | 52.0 |
| | Shipping Weight | | kg | 33.0 | 33.0 | 39.0 | 42.0 | 59.0 | 59.0 |
| Dimensions | Net Dimensions (W x H x D) | | mm | 900x260x480 | 900x260x480 | 1,150x260x480 | 1,150x320x480 | 1,200x360x650 | 1,200x360x650 |
| | Shipping Dimensions (W x H x D) | | mm | 1170x595x340 | 1170x595x340 | 1420x595x340 | 1150x320x480 | 1480x790x420 | 1480x790x420 |
| Functions | Auto Restart | | - | O | O | O | O | O | O |
| | Auto Swing | | - | X | X | X | X | X | X |
| | Group/Individual Control | | - | O | O | O | O | O | O |
| | External Contact Control | | - | O | O | O | O | O | O |
| | Trouble Shooting by LED | | - | X | X | X | X | X | X |
| Standard Accessories | Installation Manual | | - | O | O | O | O | O | O |
| | Operation Manual | | - | O | O | O | O | O | O |
| | Pattern Sheet for Installation | | - | X | X | X | X | X | X |
| | Flexible Drain Hose | | - | O | O | O | O | O | O |
| | Filter / Safety Grille | | - | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) |
| Optional Accessories | Wireless Remote Controller | | - | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 |
| | Duct Receiver Kits | Receiver | - | MRK-A10 | MRK-A10 | MRK-A10 | MRK-A10 | MRK-A10 | MRK-A10 |
| | | Receiver Wire | - | MRW-10A | MRW-10A | MRW-10A | MRW-10A | MRW-10A | MRW-10A |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N |
| | External Contact Interface Module | | - | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 |
| | Drain Pump | | - | MDP-M075SGU3D | MDP-M075SGU1D | MDP-M075SGU1D | MDP-M075SGU1D | MDP-M075SGU2D | MDP-M075SGU2D |

Indoor Unit(cont.)

■ Big Duct

| Model | | | AM220FNHDEH/EU | AM280FNHDEH/EU | |
|----------------------------------|-----------------------------------|--------------------|---------------------|-------------------|------------------|
| Power Supply | | ø/V/Hz | 1/220-240/50 | 1/220-240/50 | |
| Mode*1) | | | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 22.4 | 28.0 |
| | | | Btu/h | 76,400 | 95,500 |
| | Heating*3) | kW | 25.0 | 31.5 | |
| | | Btu/h | 85,300 | 107,500 | |
| Condensate (with High fan speed) | | Liters/h | | | |
| Power | Input | | W | 530 | 790 |
| | Running Current | | A | 3.8 | 5.9 |
| Sound Level | Sound Pressure (High/Low)*4) | | dB(A) | 47 / 44 | 48 / 45 |
| Fan | Type | | - | Sirocco Fan | Sirocco Fan |
| | Motor | Model | - | DL-13875SSOB | DL-13875SSOB |
| | | Type | - | BLDC | BLDC |
| | | Output | W | | |
| Airflow Rate | Cooling (High) | | m ³ /min | 58 | 72 |
| | Heating (High) | | m ³ /min | 58 | 72 |
| | External Static Pressure | Standard(Min.-Max) | mmHzO | 15(5-25) | 15(5-28) |
| Refrigerant | Type | | - | R410A | R410A |
| | Control Method | | - | EEV | EEV |
| Temperature Control | | - | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | - | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | | ø, mm | 9.52 | 9.52 |
| | Gas (Flare) | | ø, mm | 19.05 | 22.2 |
| | Drain | | ø, mm | VP25(OD32, ID25) | VP25(OD32, ID25) |
| Weight | Net Weight | | kg | 89 | 89 |
| | Shipping Weight | | kg | 99 | 99 |
| Dimensions | Net Dimensions (W x H x D) | | mm | 1,240x470x1,040 | 1,240x470x1,040 |
| | Shipping Dimensions (W x H x D) | | mm | 1,507x558x1,155 | 1,507x558x1,155 |
| Functions | Auto Restart | | - | O | O |
| | Auto Swing | | - | X | X |
| | Group/Individual Control | | - | O | O |
| | External Contact Control | | - | O | O |
| | Trouble Shooting by LED | | - | X | X |
| Standard Accessories | Installation Manual | | - | O | O |
| | Operation Manual | | - | O | O |
| | Pattern Sheet for Installation | | - | O | O |
| | Flexible Drain Hose | | - | O | O |
| | Filter / Safety Grille | | - | X | X |
| Optional Accessories | Wireless Remote Controller | | - | MR-DH00 | MR-DH00 |
| | Duct Receiver Kits | Receiver | - | MRK-A10 | MRK-A10 |
| | | Receiver Wire | - | MRW-10A | MRW-10A |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N |
| | External Contact Interface Module | | - | MIM-B14 | MIM-B14 |
| | Drain Pump | | - | MDP-N047SNC1D | MDP-N047SNC1D |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ HSP Duct

| Model | | | AM112FNHDEH/EU | AM128FNHDEH/EU | AM140FNHDEH/EU | |
|----------------------------------|-----------------------------------|---------------------|---|--|--|--|
| Power Supply | | φ/V/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 11.2 | 12.8 | 14.0 |
| | | | Btu/h | 38,200 | 43,600 | 47,700 |
| | Heating*3) | kW | 12.5 | 13.8 | 16.0 | |
| | | Btu/h | 42,600 | 47,000 | 54,500 | |
| Condensate (with High fan speed) | | Liters/h | | | | |
| Power | Input | W | 305 | 333 | 385 | |
| | Running Current | A | 2.35 | 2.58 | 3.0 | |
| Sound Level | Sound Pressure (High/Low)*4) | dB(A) | 43/40 | 45/40 | 46/44 | |
| Fan | Type | - | Sirocco Fan AL, Φ226,L200, 2EA, KJBLWR | Sirocco Fan AL, Φ226,L200, 2EA, KJBLWR | Sirocco Fan AL, Φ226,L200, 2EA, KJBLWR | |
| | Motor | Model | - | BLDC Motor (DL-128405SB, 8Pole, Φ124)X2 | BLDC Motor (DL-128405SB, 8Pole, Φ124)X2 | BLDC Motor (DL-128405SB, 8Pole, Φ124)X2 |
| | | Type | - | BLDC | BLDC | BLDC |
| | | Output | W | | | |
| Airflow Rate | Cooling (High) | m ³ /min | 33 | 35 | 39 | |
| | Heating (High) | m ³ /min | 35 | 37 | 41 | |
| | External Static Pressure | Standard(Min.-Max) | mmHzO | 10 (5~20) | 10 (5~20) | 10 (5~20) |
| Refrigerant | Type | - | R410A | R410A | R410A | |
| | Control Method | - | EEV | EEV | EEV | |
| Temperature Control | | - | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | - | Fuse | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | φ, mm | 9.52 | 9.52 | 9.52 | |
| | Gas (Flare) | φ, mm | 15.88 | 15.88 | 15.88 | |
| | Drain | φ, mm | VP25 (OD 32,ID 25) | VP25 (OD 32,ID 25) | VP25 (OD 32,ID 25) | |
| Weight | Net Weight | kg | 62.0 | 62.0 | 62.0 | |
| | Shipping Weight | kg | 70.0 | 70.0 | 70.0 | |
| Dimensions | Net Dimensions (W x H x D) | mm | 1200x360x650 | 1200x360x650 | 1200x360x650 | |
| | Shipping Dimensions (W x H x D) | mm | 1447x425x769 | 1447x425x769 | 1447x425x769 | |
| Functions | Auto Restart | - | O | O | O | |
| | Auto Swing | - | X | X | X | |
| | Group/Individual Control | - | O | O | O | |
| | External Contact Control | - | O | O | O | |
| | Trouble Shooting by LED | - | X | X | X | |
| Standard Accessories | Installation Manual | - | O | O | O | |
| | Operation Manual | - | O | O | O | |
| | Pattern Sheet for Installation | - | O | O | O | |
| | Flexible Drain Hose | - | O | O | O | |
| | Filter / Safety Grille | - | X | X | X | |
| Optional Accessories | Wireless Remote Controller | - | MR-DH00 | MR-DH00 | MR-DH00 | |
| | Duct Receiver Kits | Receiver | - | MRK-A10 | MRK-A10 | MRK-A10 |
| | | Receiver Wire | - | MRW-10A | MRW-10A | MRW-10A |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N |
| | External Contact Interface Module | - | MIM-B14 | MIM-B14 | MIM-B14 | |
| | Drain Pump | | - | MDP-M075SGU2D | MDP-M075SGU2D | MDP-M075SGU2D |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB - Outdoor temperature : 35°C DB, 24°C WB

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB - Outdoor temperature : 7°C DB, 6°C WB

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Global Duct

| Div. | | | GD-1 | |
|---------------------------------------|-------------------------------------|-----------------------|---|-----------------------------|
| Model | | Europe | AM036HNMPKH/EU | |
| Basic Model | | Europe | AC036HBMDKH/EU(CAC) | |
| Power Supply | | ϕ, V, Hz | 1,220~240,50 | |
| Mode ¹⁾ | | - | HP / HR | |
| Performance | Capacity | Cooling ²⁾ | kW92% ↑ | |
| | | Heating ³⁾ | kW92% ↑ | |
| Power | Input Consumption (Cooling/Heating) | | W 110% ↓ | |
| | Running Current (Cooling/Heating) | | A 110% ↓ | |
| Indoor unit refrigerant adding amount | | Kg/EA | 0.22 | |
| Noise Level | Spec | | dB(A) ↓ | |
| | Catalouel | | dB(A) ↓ | |
| Fan | Type | | - Sirocco Fan (Φ180*2ea) | |
| | Motor | Model | - SIC-70CW-F1153-2 (DB31-00639A) | |
| | | Type | - BLDC feedback | |
| | | Output | W 153 | |
| Fan Speed | Fan(H/M/L) | Standard | rpm±20 700/620/560 | |
| | Cooling (H/M/L) | Standard | 700/620/560 | |
| | Heating (H/M/L) | Standard | 700/620/560 | |
| Airflow Rate | Fan(H/M/L) | | m ³ /min 12.00/9.50/8.00 | |
| | Cooling (High) | | - | |
| | Heating (High) | | - | |
| Refrigerant | Type | | - R410a | |
| | Control Method | | - EDM EEV3.2c Sanhua | |
| Temperature Control | | - | Micom&Thermistors | |
| Safety Devices | | - | Fuse:5A | |
| External Static Pressure | Standard (Min.~Max) | | mmH2O 0-2.5-15 | |
| OPTION CODE | Standard Static Pressure | 0 ≤ SP ≤ 2.5 | Product | 010054-1C5081-202424-331205 |
| | | | Install | 020010-100000-200000-300000 |
| | | | Cycle | 030000-100000-200000-300000 |
| | | | Install 2 | 050000-100000-200000-300000 |
| | All Static Pressure | 0 ≤ SP ≤ 2.5 | Product | 010054-1C5081-202424-331205 |
| | | 2.5 < SP ≤ 5 | Product | 010054-1C50E3-202424-331205 |
| | | 5 < SP ≤ 7.5 | Product | 010054-1C5459-202424-331205 |
| | | 7.5 < SP ≤ 10 | Product | 010054-1C54CD-202424-331205 |
| | | 10 < SP ≤ 12.5 | Product | 010054-1C5931-202424-331205 |
| | | 12.5 < SP ≤ 15 | Product | 010054-1C5983-202424-331205 |
| Piping Connections | Liquid (Flare) | Φ,mm | 6.35 | |
| | | Φ,inch | 1/4" | |
| | Gas (Flare) | Φ,mm | 12.7 | |
| | | Φ,inch | 1/2" | |
| | Drain | Φ,mm | VP25 (OD25, ID 20) | |
| | | Φ,inch | - | |
| Weight | Net Weight | | kg 25.5 | |
| | Shipping Weight | | kg 30 | |
| Dimensions | Net Dimensions (W×H×D) | | mm 850*250*700 | |
| | | | inch - | |
| | Shipping Dimensions (W×H×D) | | mm 1064*320*784 | |
| | | | inch - | |
| HEX | Dimension | | - 2R*395*TP8.4*675mm | |
| | Tube hair fin | | - H2.1(9hole)FMC 9.5mm, | |
| | Fin | | - Louver, FP1.3 | |
| | Pass | | - 4*4 Pass | |
| Micom | | - | DB91-01629A Version:140818 Checksum:66B3 | |
| LOADING QUANTITY | 20ft | | EA 98 | |
| | 40ft | | EA 210 | |
| | 40ft JUMBO | | EA 240 | |
| Panel Size | Model | | Europe - | |
| | Net Weight | | kg - | |
| | Shipping Weight | | kg - | |
| | Net Dimensions (W×H×D) | | mm - | |
| | Shipping Dimensions (W×H×D) | | mm - | |
| Optional Accessories | Model | | Europe MDP-G075SQ MDP-G075SP | |
| | Drain pump | | In/Option Option | |
| | Max. lifting Height / Displacement | | mm / liter/h 750mm, 24/h | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Norminal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB - Outdoor temperature : 35°C DB, 24°C WB

*3) Norminal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB - Outdoor temperature : 7°C DB, 6°C WB

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

■ Global Duct (cont.)

| Div. | | | GD-1 | GD-1 | GD-1 | |
|---------------------------------------|-------------------------------------|---|------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Model | | | AM045HNMPKH/EU | AM056HNMPKH/EU | AM071HNMPKH/EU | |
| Basic Model | | | AC052HBMDKH/EU(CAC) | AC060HBMDKH/EU(CAC) | AC071HBMDKH/EU(CAC) | |
| Power Supply Mode ¹⁾ | | | 1,220~240,50 | 1,220~240,50 | 1,220~240,50 | |
| Performance | | | HP / HR | HP / HR | HP / HR | |
| Capacity | Cooling ²⁾ | kW 92% ↑ | 4.5 | 5.6 | 7.1 | |
| | Heating ³⁾ | kW 92% ↑ | 5.0 | 6.3 | 8.0 | |
| Power | Input Consumption (Cooling/Heating) | W 110% ↓ | 60/60 | 110/110 | 120/120 | |
| | Running Current (Cooling/Heating) | A 110% ↓ | 0.60/0.60 | 0.9/0.9 | 1.0/1.0 | |
| Indoor unit refrigerant adding amount | | | Kg/EA | 0.22 | 0.22 | |
| Noise Level | Spec | dB(A) ↓ | 44/44 | 45/45 | 47/47 | |
| | Catalogue | dB(A) ↓ | 31/28/24 | 32/29/25 | 37/33/29 | |
| Fan | Type | - | Sirocco Fan (Φ180*2ea) | Sirocco Fan (Φ180*2ea) | Sirocco Fan (Φ180*2ea) | |
| | Motor | Model | - | SIC-70CW-F1153-2 (DB31-00639A) | SIC-70CW-F1153-2 (DB31-00639A) | SIC-70CW-F1153-2 (DB31-00639A) |
| | | Type | - | BLDC feedback | BLDC feedback | BLDC feedback |
| | | Output | W | 153 | 153 | 153 |
| Fan Speed | Fan(H/M/L) | Standard | rpm±20 | 800/680/560 | 840/700/560 | 1020/900/800 |
| | Cooling (H/M/L) | Standard | | 800/680/560 | 840/700/560 | 1020/900/800 |
| | Heating (H/M/L) | Standard | | 800/680/560 | 840/700/560 | 1020/900/800 |
| Airflow Rate | Fan(H/M/L) | m ³ /min | 14.00/11.00/8.00 | 16.00/13.50/11.00 | 22.00/19.00/16.00 | |
| | Cooling (High) | - | - | - | - | |
| | Heating (High) | - | - | - | - | |
| Refrigerant | Type | - | R410a | R410a | R410a | |
| | Control Method | - | EDM EEV3.2c Sanhua | EDM EEV3.2c Sanhua | EDM EEV3.2c Sanhua | |
| Temperature Control | | | - | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | | - | Fuse:5A | Fuse:5A | |
| External Static Pressure | Standard (Min.~Max) | | mmH2O | 0-3-15 | 0-3-15 | |
| OPTION CODE | Standard Static Pressure | 0 ≤ SP ≤ 2.5 | Product | 010054-1C50D1-202D2D-331204 | 010054-1C50F1-203838-331203 | 010054-1C548D-204747-331201 |
| | | | Install | 020010-100000-200000-300000 | 020010-100000-200000-300000 | 020010-100000-200000-300000 |
| | | | Cycle | 030000-100000-200000-300000 | 030000-100000-200000-300000 | 030000-100000-200000-300000 |
| | | | Install 2 | 050000-100000-200000-300000 | 050000-100000-200000-300000 | 050000-100000-200000-300000 |
| | All Static Pressure | 0 ≤ SP ≤ 3 3 < SP ≤ 6 6 < SP ≤ 9 9 < SP ≤ 12 12 < SP ≤ 15 | Product | 010054-1C50D1-202D2D-331204 | 010054-1C50F1-203838-331203 | 010054-1C548D-204747-331201 |
| | | | Product | 010054-1C5453-202D2D-331204 | 010054-1C5447-203838-331203 | 010054-1C55E1-204747-331201 |
| | | | Product | 010054-1C54C7-202D2D-331204 | 010054-1C54AB-203838-331203 | 010054-1C5935-204747-331201 |
| | | | Product | 010054-1C583B-202D2D-331204 | 010054-1C581F-203838-331203 | 010054-1C5989-204747-331201 |
| | | | Product | 010054-1C58AF-202D2D-331204 | 010054-1C5973-203838-331203 | 010054-1C59DF-204747-331201 |
| | | | Product | 010054-1C58AF-202D2D-331204 | 010054-1C5973-203838-331203 | 010054-1C59DF-204747-331201 |
| Piping Connections | Liquid (Flare) | Φ,mm | 6.35 | 6.35 | 9.52 | |
| | | Φ,inch | 1/4" | 1/4" | 3/8 | |
| | Gas (Flare) | Φ,mm | 12.7 | 12.7 | 15.88 | |
| | | Φ,inch | 1/2" | 1/2" | 5/8 | |
| | Drain | Φ,mm | VP25 (OD25, ID 20) | VP25 (OD25, ID 20) | VP25 (OD25, ID 20) | |
| Weight | Net Weight | kg | 25.5 | 25.5 | 25.5 | |
| | Shipping Weight | kg | 30 | 30 | 30 | |
| Dimensions | Net Dimensions (W×H×D) | mm | 850*250*700 | 850*250*700 | 850*250*700 | |
| | | inch | - | - | - | |
| | Shipping Dimensions (W×H×D) | mm | 1064*320*784 | 1064*320*784 | 1064*320*784 | |
| | | inch | - | - | - | |
| HEX | Dimension | - | 2R*395*TP8.4*675mm | 2R*395*TP8.4*675mm | 2R*395*TP8.4*675mm | |
| | Tube hair fin | - | H2.1(9hole)FMC 9.5mm, | H2.1(9hole)FMC 9.5mm, | H2.1(9hole)FMC 9.5mm, | |
| | Fin | - | Louver, FP1.3 | Louver, FP1.3 | Louver, FP1.3 | |
| | Pass | - | 4*4 Pass | 4*4 Pass | 4*4 Pass | |
| Micom | - | DB91-01629A | DB91-01629A | DB91-01629A | | |
| | - | Version:140818 Checksum:66B3 | Version:140818 Checksum:66B3 | Version:140818 Checksum:66B3 | | |
| LOADING QUANTITY | 20ft | EA | 98 | 98 | 98 | |
| | 40ft | EA | 210 | 210 | 210 | |
| | 40ft JUMBO | EA | 240 | 240 | 240 | |
| Panel Size | Model | Europe | - | - | - | |
| | Net Weight | kg | - | - | - | |
| | Shipping Weight | kg | - | - | - | |
| | Net Dimensions (W×H×D) | mm | - | - | - | |
| | Shipping Dimensions (W×H×D) | mm | - | - | - | |
| Optional Accessories | Model | Europe | MDP-G075SQ | MDP-G075SQ | MDP-G075SQ | |
| | Drain pump | In/Option | Option | Option | Option | |
| | Max. lifting Height / Displacement | mm / liter/h | 750mm, 24l/h | 750mm, 24l/h | 750mm, 24l/h | |



- *1) Mode
- HP : Heat Pump, HR : Heat Recovery
- *2) Nominal cooling capacities are based on;
- Indoor temperature : 27 °C DB, 19 °C WB - Outdoor temperature : 35 °C DB, 24 °C WB
- *3) Nominal heating capacities are based on;
- Indoor temperature : 20 °C DB, 15 °C WB - Outdoor temperature : 7 °C DB, 6 °C WB
- *4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
- *5) Specifications may be subject to change without prior notice for product improvement.

■ Global Duct (cont.)

| Div. | | | GD-2 | |
|---------------------------------------|-------------------------------------|---|---|-----------------------------|
| Model | | Europe | AM090HNMPKH/EU | |
| Basic Model | | Europe | AC090HBMKD/H/EU(CAC) | |
| Power Supply Mode ¹⁾ | | φ,V,Hz | 1,220~240,50 | |
| Performance | | - | HP / HR | |
| Capacity | Cooling ²⁾ | kW 92%↑ | 9.0 | |
| | | Heating ³⁾ | 10.0 | |
| Power | Input Consumption (Cooling/Heating) | | W 110% ↓ | |
| | Running Current (Cooling/Heating) | | A 110% ↓ | |
| Indoor unit refrigerant adding amount | | Kg/EA | 0.31 | |
| Noise Level | Spec | dB(A) ↓ | 44/45 | |
| | Catalouel | dB(A) ↓ | 38/35/32 | |
| Fan | Type | - | Sirocco Fan (Φ180*3ea) | |
| | Motor | Model | SIC-70CW-F1153-3 (DB31-00640A) | |
| | | Type | BLDC feedback | |
| | | Output | W | |
| Fan Speed | Fan(H/M/L) | Standard | rpm±20 | |
| | Cooling (H/M/L) | Standard | 980/880/800 | |
| | Heating (H/M/L) | Standard | 980/880/800 | |
| Airflow Rate | Fan(H/M/L) | m ³ /min | 29.00/25.00/22.00 | |
| | Cooling (High) | - | - | |
| | Heating (High) | - | - | |
| Refrigerant | Type | - | R410a | |
| | Control Method | - | EDM EEV3.2c Sanhua | |
| Temperature Control | | - | Micom&Thermistors | |
| Safety Devices | | - | Fuse:5A | |
| External Static Pressure | Standard(Min.~Max) | mmH2O | 0-4-15 | |
| OPTION CODE | Standard Static Pressure | 0 ≤ SP ≤ 2.5 | Product | 010054-1C546D-205A5A-331212 |
| | | | Install | 020010-100000-200000-300000 |
| | | | Cycle | 030000-100000-200000-300000 |
| | All Static Pressure | 0 ≤ SP ≤ 4 4 < SP ≤ 8 8 < SP ≤ 12 12 < SP ≤ 15 | Product | 050000-100000-200000-300000 |
| | | | Product | 010054-1C546D-205A5A-331212 |
| | | | Product | 010054-1C55E3-205A5A-331212 |
| | | | Product | 010054-1C5969-205A5A-331212 |
| Piping Connections | Liquid (Flare) | Φ,mm | 9.52 | |
| | | Φ,inch | 3/8 | |
| | Gas (Flare) | Φ,mm | 15.88 | |
| | | Φ,inch | 5/8 | |
| | Drain | Φ,mm | VP25 (OD25,ID 20) | |
| | | Φ,inch | - | |
| Weight | Net Weight | kg | 33.0 | |
| | Shipping Weight | kg | 38.5 | |
| Dimensions | Net Dimensions (W×H×D) | mm | 1200*250*700 | |
| | | inch | - | |
| | Shipping Dimensions (W×H×D) | mm | 1429*320*779 | |
| | | inch | - | |
| HEX | Dimension | - | 2R*395*TP8.4*925mm | |
| | Tube hair fin | - | H2.1(9hole)FMC 9.5mm, | |
| | Fin | - | Louver, FP1.3 | |
| | Pass | - | 4*4 Pass | |
| Micom | - | - | DB91-01629A Version:140818 Checksum:66B3 | |
| LOADING QUANTITY | 20ft | EA | 77 | |
| | 40ft | EA | 161 | |
| | 40ft JUMBO | EA | 184 | |
| Panel Size | Model | Europe | - | |
| | Net Weight | kg | - | |
| | Shipping Weight | kg | - | |
| | Net Dimensions (W×H×D) | mm | - | |
| | Shipping Dimensions (W×H×D) | mm | - | |
| Optional Accessories | Model | Europe | MDP-G075SQ MDP-G075SP | |
| | Drain pump | In/Option | Option | |
| | Max. lifting Height / Displacement | mm / liter/h | 750mm, 24l/h | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Norminal cooling capacities are based on;

- Indoor temperature : 27 °C DB, 19 °C WB - Outdoor temperature : 35 °C DB, 24 °C WB

*3) Norminal heating capacities are based on;

- Indoor temperature : 20 °C DB, 15 °C WB - Outdoor temperature : 7 °C DB, 6 °C WB

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

■ Global Duct (cont.)

| Div. | | | GD-3 | GD-3 | GD-3 | |
|---------------------------------------|-------------------------------------|---|----------------------------|---|---|--------------------------------|
| Model | | | AM112HNMPKH/EU | AM128HNMPKH/EU | AM140HNMPKH/EU | |
| Basic Model | | | Europe AC120HBMDKH/EU(CAC) | AC120HBMDKH/EU(CAC) | AC140HBMDKH/EU(CAC) | |
| Power Supply Mode ¹⁾ | | | φ, V/Hz 1,220~240,50 | 1,220~240,50 | 1,220~240,50 | |
| Performance | | | - | HP / HR | HP / HR | |
| Capacity | Cooling ²⁾ | kW 92%† | 11.2 | 12.8 | 14.0 | |
| | | | Heating ³⁾ | 12.5 | 13.8 | 16.0 |
| Power | Input Consumption (Cooling/Heating) | W 110% ↓ | | 165/165 | 175/175 | 215/215 |
| | Running Current (Cooling/Heating) | A 110% ↓ | 1.40/1.40 | 1.50/1.50 | 1.70/1.70 | |
| Indoor unit refrigerant adding amount | | | Kg/EA 0.38 | 0.38 | 0.38 | |
| Noise Level | Spec | dB(A) ↓ | 45/46 | 46/47 | 47/48 | |
| | Catalouel | dB(A) ↓ | 38/35/32 | 39/36/33 | 40/37/33 | |
| Fan | Type | - | Sirocco Fan (Φ198*3EA) | Sirocco Fan (Φ198*3EA) | Sirocco Fan (Φ198*3EA) | |
| | Motor | Model | - | SIC-80CW-F1244-1 (DB31-00641A) | SIC-80CW-F1244-1 (DB31-00641A) | SIC-80CW-F1244-1 (DB31-00641A) |
| | | Type | - | BLDC feedback | BLDC feedback | BLDC feedback |
| | | Output | W | 244 | 244 | 244 |
| Fan Speed | Fan(H/M/L) | Standard | rpm±20 880/720/580 | 900/780/660 | 940/780/620 | |
| | Cooling (H/M/L) | Standard | 880/720/580 | 900/780/660 | 940/780/620 | |
| | Heating (H/M/L) | Standard | 880/720/580 | 900/780/660 | 940/780/620 | |
| Airflow Rate | Fan(H/M/L) | m ³ /min | 38.00/29.00/22.00 | 38.00/32.00/25.00 | 42.00/34.00/25.00 | |
| | Cooling (High) | - | - | - | - | |
| | Heating (High) | - | - | - | - | |
| Refrigerant | Type | - | R410a | R410a | R410a | |
| | Control Method | - | EDM EEV4.0c Sanhua | EDM EEV4.0c Sanhua | EDM EEV4.0c Sanhua | |
| Temperature Control | | | - | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | | - | Fuse:5A | Fuse:5A | |
| External Static Pressure | | | Standard(Min.-Max) | mmH2O 0-5.2-15 | 0-5.2-15 | |
| OPTION CODE | Standard Static Pressure | 0 ≤ SP ≤ 2.5 | Product | 010054-1C5412-207070-331223 | 010054-1C5426-208080-331222 | 010054-1C5444-208C8C-331221 |
| | | | Install | 020010-100000-200000-300000 | 020010-100000-200000-300000 | 020010-100000-200000-300000 |
| | | | Cycle | 030000-100000-200000-300000 | 030000-100000-200000-300000 | 030000-100000-200000-300000 |
| | | | Install 2 | 050000-100000-200000-300000 | 050000-100000-200000-300000 | 050000-100000-200000-300000 |
| | All Static Pressure | 0 ≤ SP ≤ 5.2 5.2 < SP ≤ 8 8 < SP ≤ 12 12 < SP ≤ 15 | Product | 010054-1C5412-207070-331223 | 010054-1C5426-208080-331222 | 010054-1C5444-208C8C-331221 |
| | | | Product | 010054-1C5466-207070-331223 | 010054-1C5478-208080-331222 | 010054-1C5498-208C8C-331221 |
| | | | Product | 010054-1C54EA-207070-331223 | 010054-1C54EE-208080-331222 | 010054-1C54FA-208C8C-331221 |
| | | | Product | 010054-1C583E-207070-331223 | 010054-1C5920-208080-331222 | 010054-1C583E-208C8C-331221 |
| Piping Connections | Liquid (Flare) | Φ,mm | 9.52 | 9.52 | 9.52 | |
| | | Φ,inch | 3/8 | 3/8 | 3/8 | |
| | Gas (Flare) | Φ,mm | 15.88 | 15.88 | 15.88 | |
| | | Φ,inch | 5/8 | 5/8 | 5/8 | |
| | Drain | Φ,mm | VP25 (OD25, ID 20) | VP25 (OD25, ID 20) | VP25 (OD25, ID 20) | |
| | | Φ,inch | - | - | - | |
| Weight | Net Weight | kg | 38.5 | 38.5 | 38.5 | |
| | Shipping Weight | kg | 44.5 | 44.5 | 44.5 | |
| Dimensions | Net Dimensions (WxHxD) | mm | 1300*300*700 | 1300*300*700 | 1300*300*700 | |
| | | inch | - | - | - | |
| | Shipping Dimensions (WxHxD) | mm | 1529*370*779 | 1529*370*779 | 1529*370*779 | |
| | | inch | - | - | - | |
| HEX | Dimension | - | 2R*455*TP8.4*1.1125mm | 2R*455*TP8.4*1.1125mm | 2R*455*TP8.4*1.1125mm | |
| | Tube hair fin | - | H2.1(9hole)FMC 9.5mm, | H2.1(9hole)FMC 9.5mm, | H2.1(9hole)FMC 9.5mm, | |
| | Fin | - | FP1.3*Louver | FP1.3*Louver | FP1.3*Louver | |
| | Pass | - | 4*4 Pass | 4*4 Pass | 4*4 Pass | |
| Micom | | | - | DB91-01629A Version:140818 Checksum:66B3 | DB91-01629A Version:140818 Checksum:66B3 | |
| LOADING QUANTITY | 20ft | EA | 42 | 42 | 42 | |
| | 40ft | EA | 90 | 90 | 90 | |
| | 40ft JUMBO | EA | 105 | 105 | 105 | |
| Panel Size | Model | Europe | - | - | - | |
| | Net Weight | kg | - | - | - | |
| | Shipping Weight | kg | - | - | - | |
| | Net Dimensions (WxHxD) | mm | - | - | - | |
| | Shipping Dimensions (WxHxD) | mm | - | - | - | |
| Optional Accessories | Model | Europe | MDP-G075SQ MDP-G075SP | MDP-G075SQ MDP-G075SP | MDP-G075SQ MDP-G075SP | |
| | Drain pump | In/Option | Option | Option | Option | |
| | Max. lifting Height / Displacement | mm / liter/h | 750mm, 24l/h | 750mm, 24l/h | 750mm, 24l/h | |



- *1) Mode
- HP : Heat Pump, HR : Heat Recovery
- *2) Nominal cooling capacities are based on;
- Indoor temperature : 27°C DB, 19°C WB - Outdoor temperature : 35°C DB, 24°C WB
- *3) Nominal heating capacities are based on;
- Indoor temperature : 20°C DB, 15°C WB - Outdoor temperature : 7°C DB, 6°C WB
- *4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
- *5) Specifications may be subject to change without prior notice for product improvement.

■ Global Duct (cont.)

| Div. | | | GD-3 HSP | GD-3 HSP | GD-3 HSP | |
|---------------------------------------|-------------------------------------|---|---|---|-----------------------------|-----------------------------|
| Model | | | AM112HNHPKH/EU | AM128HNHPKH/EU | AM140HNHPKH/EU | |
| Basic Model | | | Europe | AC120HBHFKH/SA(CAC) | AC140HBHFKH/SA(CAC) | |
| Power Supply | | | φ, V, Hz | 1,220~240,50 | 1,220~240,50 | |
| Mode 1) | | | - | HP / HR | HP / HR | |
| Performance | Capacity | Cooling 2) | kW 92% ↑ | 11.2 | 12.8 | |
| | | Heating 3) | kW 92% ↑ | 12.5 | 13.8 | |
| Power | Input Consumption (Cooling/Heating) | W 110% ↓ | 205/205 | 230/230 | 260/260 | |
| | Running Current (Cooling/Heating) | A 110% ↓ | 1.20/1.20 | 1.40/1.40 | 1.50/1.50 | |
| Indoor unit refrigerant adding amount | | | Kg/EA | 0.38 | 0.38 | |
| Noise Level | Spec | dB(A) ↓ | 46/47 | 47/48 | 49/50 | |
| | Catalouel | dB(A) ↓ | 38/35/32 | 39/36/33 | 40/37/34 | |
| Fan | Type | - | Sirocco Fan (Φ198*3EA) | Sirocco Fan (Φ198*3EA) | Sirocco Fan (Φ198*3EA) | |
| | Motor | Model | - | DL-17830SBA (DB31-00645A) | DL-17830SBA (DB31-00645A) | DL-17830SBA (DB31-00645A) |
| | | Type | - | BLDC feedback | BLDC feedback | BLDC feedback |
| | Output | W | 350 | 350 | 350 | |
| Fan Speed | Fan(H/M/L) | Standard | rpm±20 | 940/800/660 | 980/820/660 | 1020/840/660 |
| | Cooling (H/M/L) | Standard | | 940/800/660 | 980/820/660 | 1020/840/660 |
| | Heating (H/M/L) | Standard | | 940/800/660 | 980/820/660 | 1020/840/660 |
| Airflow Rate | Fan(H/M/L) | m³/min | 35.00/29.00/22.00 | 38.00/32.00/25.00 | 42.00/34.00/25.00 | |
| | Cooling (High) | - | - | - | - | |
| | Heating (High) | - | - | - | - | |
| Refrigerant | Type | - | R410a | R410a | R410a | |
| | Control Method | - | EDM EEV4.0c Sanhua | EDM EEV4.0c Sanhua | EDM EEV4.0c Sanhua | |
| Temperature Control | | | - | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | | - | Fuse:5A/10A/15A | Fuse:5A/10A/15A | |
| External Static Pressure | | | Standard(Min.-Max) | mmH2O | 3-6.2-20 | |
| OPTION CODE | Standard Static Pressure | 0 ≤ SP ≤ 2.5 | Product | 010054-1C5446-207070-331226 | 010054-1C5466-208080-331225 | 010054-1C5486-208C8C-331224 |
| | | | Install | 020010-100000-200000-300000 | 020010-100000-200000-300007 | 020010-100000-200000-300008 |
| | | | Cycle | 030000-100000-200000-300000 | 030000-100000-200000-300007 | 030000-100000-200000-300008 |
| | | | Install 2 | 050000-100000-200000-300000 | 050000-100000-200000-300007 | 050000-100000-200000-300008 |
| | All Static Pressure | 3 ≤ SP ≤ 6.2 6.2 < SP ≤ 9 9 < SP ≤ 11 11 < SP ≤ 13 13 < SP ≤ 15 15 < SP ≤ 17 17 < SP ≤ 19 19 < SP ≤ 20 | Product | 010054-1C5446-207070-331226 | 010054-1C5466-208080-331225 | 010054-1C5486-208C8C-331224 |
| | | | Product | 010054-1C54A7-207070-331226 | 010054-1C54B9-208080-331225 | 010054-1C54D7-208C8C-331224 |
| | | | Product | 010054-1C54C9-207070-331226 | 010054-1C54EC-208080-331225 | 010054-1C5809-208C8C-331224 |
| | | | Product | 010054-1C580B-207070-331226 | 010054-1C581E-208080-331225 | 010054-1C583B-208C8C-331224 |
| | | | Product | 010054-1C584D-207070-331226 | 010054-1C5940-208080-331225 | 010054-1C586D-208C8C-331224 |
| | | | Product | 010054-1C587F-207070-331226 | 010054-1C5982-208080-331225 | 010054-1C588F-208C8C-331224 |
| Product | 010054-1C59A1-207070-331226 | 010054-1C59B3-208080-331225 | 010054-1C59C0-208C8C-331224 | | | |
| Product | 010054-1C59B2-207070-331226 | 010054-1C59C4-208080-331225 | 010054-1C59D1-208C8C-331224 | | | |
| Piping Connections | Liquid (Flare) | Φ,mm | 9.52 | 9.52 | 9.52 | |
| | | Φ,inch | 3/8 | 3/8 | 3/8 | |
| | Gas (Flare) | Φ,mm | 15.88 | 15.88 | 15.88 | |
| | | Φ,inch | 5/8 | 5/8 | 5/8 | |
| Drain | Φ,mm | VP25 (OD25;D 20) | VP25 (OD25;D 20) | VP25 (OD25;D 20) | | |
| | Φ,inch | - | - | - | | |
| Weight | Net Weight | kg | 46.5 | 46.5 | 46.5 | |
| | Shipping Weight | kg | 52.5 | 52.5 | 52.5 | |
| Dimensions | Net Dimensions (WxHxD) | mm | 1300*300*700 | 1300*300*700 | 1300*300*700 | |
| | | inch | - | - | - | |
| | Shipping Dimensions (WxHxD) | mm | 1529*370*779 | 1529*370*779 | 1529*370*779 | |
| | | inch | - | - | - | |
| HEX | Dimension | - | 2R*45S*TP8.4*L1125mm | 2R*45S*TP8.4*L1125mm | 2R*45S*TP8.4*L1125mm | |
| | Tube hair fin | - | H2.1(9hole) FME 9.10mm, | H2.1(9hole) FME 9.10mm, | H2.1(9hole) FME 9.10mm, | |
| | Fin | - | FP1.3*Louver | FP1.3*Louver | FP1.3*Louver | |
| | Pass | - | 4*4 Pass | 4*4 Pass | 4*4 Pass | |
| Micom | - | DB91-01629A Version:140818 Checksum:66B3 | DB91-01629A Version:140818 Checksum:66B3 | DB91-01629A Version:140818 Checksum:66B3 | | |
| LOADING QUANTITY | 20ft | EA | 42 | 42 | 42 | |
| | 40ft | EA | 90 | 90 | 90 | |
| | 40ft JUMBO | EA | 105 | 105 | 105 | |
| Panel Size | Model | Europe | - | - | - | |
| | Net Weight | kg | - | - | - | |
| | Shipping Weight | kg | - | - | - | |
| | Net Dimensions (WxHxD) | mm | - | - | - | |
| | Shipping Dimensions (WxHxD) | mm | - | - | - | |
| Optional Accessories | Model | Europe | MDP-G075SQ MDP-G075SP | MDP-G075SQ MDP-G075SP | MDP-G075SQ MDP-G075SP | |
| | Drain pump | In/Option | Option | Option | Option | |
| | Max. lifting Height / Displacement | mm / liter/h | 750mm, 24l/h | 750mm, 24l/h | 750mm, 24l/h | |



- *1) Mode
- HP : Heat Pump, HR : Heat Recovery
- *2) Nominal cooling capacities are based on;
- Indoor temperature : 27°C DB, 19°C WB - Outdoor temperature : 35°C DB, 24°C WB
- *3) Nominal heating capacities are based on;
- Indoor temperature : 20°C DB, 15°C WB - Outdoor temperature : 7°C DB, 6°C WB
- *4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.
- *5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Ceiling type

| Model | | | AM056FNCEH/EU | AM071FNCEH/EU | |
|----------------------------------|---------------------------------------|-----------------------------------|---------------------|---------------------|---------------------|
| Power Supply | | øV/Hz | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 5.6 | 7.1 |
| | | | Btu/h | 19,100 | 24,200 |
| | Heating*3) | kW | 6.3 | 8.0 | |
| | | Btu/h | 21,400 | 27,200 | |
| Condensate (with High fan speed) | | Liters/h | 2.87 | 2.87 | |
| Power | Input | | W | 72/72 | 80/77 |
| | Running Current | | A | 0.33/0.28 | 0.35/0.29 |
| Sound Level | Sound Pressure (Cooling / Heating)*4) | | dB(A) | 45/45 | 47/47 |
| Fan | Type | | - | Sirocco Fan | Sirocco Fan |
| | Motor | Model | - | Y5S413B214 | Y5S413B214 |
| | | Type | - | Non Feedback SSR | Non Feedback SSR |
| | | Output | W | *5) | *5) |
| Airflow Rate | Cooling (High) | | m ³ /min | 16.5 | 16.5 |
| | Heating (High) | | m ³ /min | 20.0 | 20.0 |
| Refrigerant | Type | | - | R410A | R410A |
| | Control Method | | - | EEV | EEV |
| Temperature Control | | - | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | - | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | | ø, mm | 6.35 | 9.52 |
| | Gas (Flare) | | ø, mm | 12.7 | 15.88 |
| | Drain | | ø, mm | VP25 (OD 32, ID 25) | VP25 (OD 32, ID 25) |
| Weight | Net Weight | | kg | 21.0 | 21.0 |
| | Shipping Weight | | kg | 25.5 | 25.5 |
| Dimensions | Net Dimensions (W x H x D) | | mm | 1000x650x200 | 1000x650x200 |
| | Shipping Dimensions (W x H x D) | | mm | 1080x730x300 | 1080x730x300 |
| Functions | Auto Restart | | - | O | O |
| | Auto Swing | | - | X | X |
| | Group/Individual Control | | - | O | O |
| | External Contact Control | | - | O | O |
| | Trouble Shooting by LED | | - | X | X |
| Standard Accessories | Installation Manual | | - | O | O |
| | Operation Manual | | - | O | O |
| | Pattern Sheet for Installation | | - | X | X |
| | Flexible Drain Hose | | - | O | O |
| | Filter / Safety Grille | | - | Filter (Washable) | Filter (Washable) |
| Optional Accessories | Wireless Remote Controller | | - | AR-DH00 | AR-DH00 |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N |
| | | External Contact Interface Module | | - | MIM-B14 |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB , Equivalent refrigerant piping : 7.5m , Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB , Equivalent refrigerant piping : 7.5m , Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Console type

| Model | | | AM028FNJDEH/EU | AM036FNJDEH/EU | AM056FNJDEH/EU | |
|----------------------------------|---------------------------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|-----------------|
| Power Supply | | α/V/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 2.8 | 3.6 | 5.6 |
| | | | Btu/h | 9,600 | 12,300 | 19,100 |
| | Heating*3) | kW | 3.2 | 4.0 | 6.3 | |
| | | Btu/h | 11,000 | 13,600 | 21,400 | |
| Condensate (with High fan speed) | | Liters/h | 0.96 | 1.75 | - | |
| Power | Input | W | 30 ^{*5)} | 35 ^{*5)} | 62 ^{*5)} | |
| | Running Current | A | 0.25 ^{*5)} | 0.29 ^{*5)} | 0.49 ^{*5)} | |
| Sound Level | Sound Pressure (Cooling / Heating)*4) | dB(A) | 41/43 | 42/44 | 49/51 | |
| Fan | Type | | Turbo Fan | Turbo Fan | Turbo Fan | |
| | Motor | Model | - | SIC-55CV-F137-2 | SIC-55CV-F137-2 | SIC-55CV-F137-2 |
| | | Type | - | BLDC | BLDC | BLDC |
| | | Output | W | 37.0 | 37.0 | 37.0 |
| Airflow Rate | Cooling (High) | m ³ /min | 7.76 ^{*5)} | 8.67 ^{*5)} | 13.0 ^{*5)} | |
| | Heating (High) | m ³ /min | 7.22 ^{*5)} | 8.89 ^{*5)} | 13.5 ^{*5)} | |
| Refrigerant | Type | - | R410A | R410A | R410A | |
| | Control Method | - | EEV | EEV | EEV | |
| Temperature Control | | - | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | - | Fuse | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | ø, mm | 6.35 | 6.35 | 6.35 | |
| | Gas (Flare) | ø, mm | 12.7 | 12.7 | 12.7 | |
| | Drain | ø, mm | ID 18 hose | ID 18 hose | ID 18 hose | |
| Weight | Net Weight | kg | 16.0 | 16.0 | 16.0 | |
| | Shipping Weight | kg | 21.0 | 21.0 | 21.0 | |
| Dimensions | Net Dimensions (W x H x D) | mm | 720x620x199 | 720x620x199 | 720x620x199 | |
| | Shipping Dimensions (W x H x D) | mm | 810x710x295 | 810x710x295 | 810x710x295 | |
| Functions | Auto Restart | - | O | O | O | |
| | Auto Swing | - | O | O | O | |
| | Group/Individual Control | - | O | O | O | |
| | External Contact Control | - | O | O | O | |
| | Trouble Shooting by LED | - | O | O | O | |
| Standard Accessories | Installation Manual | - | O | O | O | |
| | Operation Manual | - | O | O | O | |
| | Pattern Sheet for Installation | - | X | X | X | |
| | Flexible Drain Hose | - | O | O | O | |
| | Filter / Safety Grille | - | Filter (Washable) | Filter (Washable) | Filter (Washable) | |
| | Wireless Remote Controller | - | ARH-1378(DB93-07547B) | ARH-1378(DB93-07547B) | ARH-1378(DB93-07547B) | |
| Optional Accessories | Wireless Remote Controller | - | MR-DH00 | MR-DH00 | MR-DH00 | |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N |
| | | External Contact Interface Module | - | MIM-B14 | MIM-B14 | MIM-B14 |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Wall Mounted type(Neo Forte without EEV)

| Model | | | AM015HNTDEH/ EU | AM022FNTDEH/ EU | AM028FNTDEH/ EU | AM036FNTDEH/ EU | AM056FNTDEH/ EU | AM071FNTDEH/ EU | |
|----------------------------------|---------------------------------|-----------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------------|
| Power Supply | | ø/V/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP | HP / HR | HP / HR | HP / HR | HP / HR | HP / HR | |
| Performance | Capacity | Cooling*2) | kW | 1.5 | 2.2 | 2.8 | 3.6 | 5.6 | 6.8 |
| | | | Btu/h | 5,100 | 7,500 | 9,500 | 12,200 | 19,100 | 23,200 |
| | | Heating*3) | kW | 2.2 | 2.5 | 3.2 | 4.0 | 6.3 | 7.0 |
| | | | Btu/h | 7,500 | 8,500 | 10,900 | 13,600 | 21,400 | 23,800 |
| Condensate (with High fan speed) | | Liters/h | 0.74 | 1.12 | 1.44 | 1.91 | 2.87 | 3.51 | |
| Power | Input | W | 25 ⁵⁾ | 25 ⁵⁾ | 25 ⁵⁾ | 30 ⁵⁾ | 45 ⁵⁾ | 50 ⁵⁾ | |
| | Running Current | A | 0.16 ⁵⁾ | 0.16 ⁵⁾ | 0.16 ⁵⁾ | 0.18 ⁵⁾ | 0.27 ⁵⁾ | 0.30 ⁵⁾ | |
| Sound Level | Sound Pressure *4) | dB(A) | 43 | 42 | 43 | 43 | 48 | 48 | |
| Fan | Type | - | Crossflow fan | Crossflow fan | Crossflow fan | Crossflow fan | Crossflow fan | Crossflow fan | |
| | Motor | Model | - | YFK-8-4-SX06 | YFK-8-4-SX06 | YFK-8-4-SX06 | YFK-8-4-SX06 | YDK-045542213-02 | YDK-045542213-02 |
| | | Type | - | Feedback SSR | Resin/steel | Resin/steel | Resin/steel | Resin/steel | Resin/steel |
| | | Output | W | - | - | - | - | - | - |
| Airflow Rate | Cooling (High) | m ³ /min | 5.4 ⁵⁾ | 7.80 ⁵⁾ | 7.80 ⁵⁾ | 9.30 ⁵⁾ | 12.00 ⁵⁾ | 14.00 ⁵⁾ | |
| | Heating (High) | m ³ /min | 6.3 ⁵⁾ | 8.20 ⁵⁾ | 8.20 ⁵⁾ | 9.50 ⁵⁾ | 13.00 ⁵⁾ | 15.00 ⁵⁾ | |
| Refrigerant | Type | - | R410A | R410A | R410A | R410A | R410A | R410A | |
| | Control Method | - | EEV | EEV (Optional) | EEV (Optional) | EEV (Optional) | EEV (Optional) | EEV (Optional) | |
| Temperature Control | - | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors | | |
| Safety Devices | - | Fuse | Fuse | Fuse | Fuse | Fuse | Fuse | | |
| Piping Connections | Liquid (Flare) | ø, mm | 6.35 | 6.35 | 6.35 | 6.35 | 6.35 | 9.52 | |
| | Gas (Flare) | ø, mm | 12.7 | 12.7 | 12.7 | 12.7 | 12.7 | 15.88 | |
| | Drain | ø, mm | ID 18 hose | ID 18 hose | ID 18 hose | ID 18 hose | ID 18 hose | ID 18 hose | |
| Weight | Net Weight | kg | 8.3 | 8.0 | 8.0 | 8.0 | 13.0 ⁵⁾ | 13.0 ⁵⁾ | |
| | Shipping Weight | kg | 11.3 | 11.0 | 11.0 | 11.0 | 16.0 | 16.0 | |
| Dimensions | Net Dimensions (W x H x D) | mm | 825x285x189 | 825x285x189 | 825x285x189 | 825x285x189 | 1,099x315x217 | 1,099x315x217 | |
| | Shipping Dimensions (W x H x D) | mm | 900x349x252 | 900x349x252 | 900x349x252 | 900x349x252 | 1,137x377x299 | 1,137x377x299 | |
| Functions | Auto Restart | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Auto Swing | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Group/Individual Control | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| | External Contact Control | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Trouble Shooting by LED | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| Standard Accessories | Installation Manual | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Operation Manual | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Pattern Sheet for Installation | - | X | X | X | X | X | X | |
| | Flexible Drain Hose | - | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Filter / Safety Grille | - | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | |
| Optional Accessories | Wireless Remote Controller | - | ARH-5012 | ARH-5012 | ARH-5012 | ARH-5012 | ARH-5012 | ARH-5012 | |
| | Wireless Remote Controller | - | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | MWR-WE10N | |
| | | External Contact Interface Module | - | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | |
| | EEV Kits | | MXD, MEV Series | MXD, MEV Series | MXD, MEV Series | MXD, MEV Series | MXD, MEV Series | MXD, MEV Series | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Wall Mounted type(Neo Forte with EEV)

| Model | | | AM015HNQDEH/EU | AM022FNQDEH/EU | AM028FNQDEH/EU | AM036FNQDEH/EU | |
|----------------------------------|-----------------------------------|---------------------|-------------------|-------------------|-------------------|-------------------|--------------|
| Power Supply | | φ/V/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP | HP | HP | HP | |
| Performance | Capacity | Cooling*2) | kW | 1.5 | 2.2 | 2.8 | 3.6 |
| | | | Btu/h | 5,100 | 7,500 | 9,500 | 12,200 |
| | Heating*3) | kW | 2.2 | 2.5 | 3.2 | 4.0 | |
| | | Btu/h | 7,500 | 8,500 | 10,900 | 13,600 | |
| Condensate (with High fan speed) | | Liters/h | 0.74 | 1.12 | 1.44 | 1.91 | |
| Power | Input | W | 25*5) | 25*5) | 25*5) | 30*5) | |
| | Running Current | A | 0.16*5) | 0.16*5) | 0.16*5) | 0.18*5) | |
| Sound Level | Sound Pressure *4) | dB(A) | 43 | 43 | 44 | 44 | |
| Fan | Type | - | Crossflow fan | Crossflow fan | Crossflow fan | Crossflow fan | |
| | Motor | Model | - | YFK-8-4-SX06 | YFK-8-4-SX06 | YFK-8-4-SX06 | YFK-8-4-SX06 |
| | | Type | - | Feedback SSR | Feedback SSR | Feedback SSR | Feedback SSR |
| | | Output | W | - | - | - | - |
| Airflow Rate | Cooling (High) | m ³ /min | 5.4*5) | 7.80*5) | 7.80*5) | 9.30*5) | |
| | Heating (High) | m ³ /min | 6.3*5) | 8.20*5) | 8.20*5) | 9.50*5) | |
| Refrigerant | Type | - | R410A | R410A | R410A | R410A | |
| | Control Method | - | EEV | EEV | EEV | EEV | |
| Temperature Control | - | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | | |
| Safety Devices | - | Fuse | Fuse | Fuse | Fuse | | |
| Piping Connections | Liquid (Flare) | ø, mm | 6.35 | 6.35 | 6.35 | 6.35 | |
| | Gas (Flare) | ø, mm | 12.7 | 12.7 | 12.7 | 12.7 | |
| | Drain | ø, mm | ID 18 hose | ID 18 hose | ID 18 hose | ID 18 hose | |
| Weight | Net Weight | kg | 8.3 | 8.3 | 8.3 | 8.3 | |
| | Shipping Weight | kg | 11.3 | 11.3 | 11.3 | 11.3 | |
| Dimensions | Net Dimensions (W x H x D) | mm | 825x285x189 | 825x285x189 | 825x285x189 | 825x285x189 | |
| | Shipping Dimensions (W x H x D) | mm | 900x349x252 | 900x349x252 | 900x349x252 | 900x349x252 | |
| Functions | Auto Restart | - | O | O | O | O | |
| | Auto Swing | - | O | O | O | O | |
| | Group/Individual Control | - | O | O | O | O | |
| | External Contact Control | - | O | O | O | O | |
| | Trouble Shooting by LED | - | O | O | O | O | |
| Standard Accessories | Installation Manual | - | O | O | O | O | |
| | Operation Manual | - | O | O | O | O | |
| | Pattern Sheet for Installation | - | X | X | X | X | |
| | Flexible Drain Hose | - | O | O | O | O | |
| | Filter / Safety Grille | - | Filter (Washable) | Filter (Washable) | Filter (Washable) | Filter (Washable) | |
| | Wireless Remote Controller | - | ARH-5012 | ARH-5012 | ARH-5012 | ARH-5012 | |
| Optional Accessories | Wireless Remote Controller | - | MR-DH00 | MR-DH00 | MR-DH00 | MR-DH00 | |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N | |
| | External Contact Interface Module | - | MIM-B14 | MIM-B14 | MIM-B14 | MIM-B14 | |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Wall Mounted type(Neo Forte with EEV)

| Model | | | AM045FNQDEH/EU | AM056FNQDEH/EU | AM071FNQDEH/EU | |
|----------------------------------|---------------------------------|-----------------------------------|---------------------|----------------------|----------------------|----------------------|
| Power Supply | | α/V/Hz | 1/220~240/50 | 1/220~240/50 | 1/220~240/50 | |
| Mode*1) | | | HP | HP | HP | |
| Performance | Capacity | Cooling*2) | kW | 4.5 | 5.6 | 6.8 |
| | | | Btu/h | - | 19,100 | 23,200 |
| | | Heating*3) | kW | 5.0 | 6.3 | 7.0 |
| | | | Btu/h | - | 21,400 | 23,800 |
| Condensate (with High fan speed) | | Liters/h | 2.35 | 2.87 | 3.51 | |
| Power | Input | | W | 40 ^{*5)} | 45 ^{*5)} | 50 ^{*5)} |
| | Running Current | | A | 0.24 ^{*5)} | 0.27 ^{*5)} | 0.30 ^{*5)} |
| Sound Level | Sound Pressure *4) | | dB(A) | 49 | 49 | 49 |
| Fan | Type | | - | Crossflow fan | Crossflow fan | Crossflow fan |
| | Motor | Model | - | YDK-045S42213-02 | YDK-045S42213-02 | YDK-045S42213-02 |
| | | Type | - | Feedback SSR | Feedback SSR | Feedback SSR |
| | | Output | W | - | - | - |
| Airflow Rate | Cooling (High) | | m ³ /min | 11.70 ^{*5)} | 13.00 ^{*5)} | 14.00 ^{*5)} |
| | Heating (High) | | m ³ /min | 12.30 ^{*5)} | 13.50 ^{*5)} | 15.00 ^{*5)} |
| Refrigerant | Type | | - | R410A | R410A | R410A |
| | Control Method | | - | EEV | EEV | EEV |
| Temperature Control | | - | Micom&Thermistors | Micom&Thermistors | Micom&Thermistors | |
| Safety Devices | | - | Fuse | Fuse | Fuse | |
| Piping Connections | Liquid (Flare) | | ø, mm | 6.35 | 6.35 | 9.52 |
| | Gas (Flare) | | ø, mm | 12.7 | 12.7 | 15.88 |
| | Drain | | ø, mm | ID 18 hose | ID 18 hose | ID 18 hose |
| Weight | Net Weight | | kg | 13.5 | 13.5 | 13.5 |
| | Shipping Weight | | kg | 16.5 | 16.5 | 16.5 |
| Dimensions | Net Dimensions (W x H x D) | | mm | 1,099x315x217 | 1,099x315x217 | 1,099x315x217 |
| | Shipping Dimensions (W x H x D) | | mm | 1,137x377x299 | 1,137x377x299 | 1,137x377x299 |
| Functions | Auto Restart | | - | O | O | O |
| | Auto Swing | | - | O | O | O |
| | Group/Individual Control | | - | O | O | O |
| | External Contact Control | | - | O | O | O |
| | Trouble Shooting by LED | | - | O | O | O |
| Standard Accessories | Installation Manual | | - | O | O | O |
| | Operation Manual | | - | O | O | O |
| | Pattern Sheet for Installation | | - | X | X | X |
| | Flexible Drain Hose | | - | O | O | O |
| | Filter / Safety Grille | | - | Filter (Washable) | Filter (Washable) | Filter (Washable) |
| | Wireless Remote Controller | | - | ARH-5012 | ARH-5012 | ARH-5012 |
| Optional Accessories | Wireless Remote Controller | | - | MR-DH00 | MR-DH00 | MR-DH00 |
| | Wired Remote Controller | Simplified | - | MWR-WE10N | MWR-WE10N | MWR-WE10N |
| | | External Contact Interface Module | | - | MIM-B14 | MIM-B14 |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB

- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ Floor Standing Type

| Model | | | AM036FNFDEH/EU | AM056FNFDEH/EU | AM071FNFDEH/EU | |
|----------------------|-----------------------------------|---------|---------------------|---------------------|----------------------|----------------------|
| Power Supply | | | ØV,Hz | 220 - 240 V~ 50Hz | 220 - 240 V~ 50Hz | 220 - 240 V~ 50Hz |
| Mode | | | | HP / HR | HP / HR | HP / HR |
| Performance | Capacity | Cooling | kW | 3.6 | 5.6 | 7.1 |
| | | | Btu/h | 12,200 | 19,100 | 24,200 |
| | | Heating | kW | 4.0 | 6.3 | 8.0 |
| | | | Btu/h | 13,600 | 21,400 | 27,200 |
| Power | Running Current | Cooling | A | 0.24 ^{*5)} | 0.53 ^{*5)} | 0.53 ^{*5)} |
| | | Heating | A | 0.24 ^{*5)} | 0.53 ^{*5)} | 0.53 ^{*5)} |
| | Input | Cooling | W | 50.0 ^{*5)} | 110.0 ^{*5)} | 110.0 ^{*5)} |
| | | Heating | W | 50.0 ^{*5)} | 110.0 ^{*5)} | 110.0 ^{*5)} |
| Sound Level | Sound Pressure | | dB | 43.0 | 45.0 | 45.0 |
| FAN | Type | | - | Sirocco | Sirocco | Sirocco |
| | Motor | Model | - | OS-KRD306(KR035) | OS-KRD306A(KR045) | OS-KRD306A(KR045) |
| Airflow Rate | Cooling(High) | | m ³ /min | 10.0 ^{*5)} | 16.5 ^{*5)} | 16.5 ^{*5)} |
| | Heating(High) | | m ³ /min | 11.0 ^{*5)} | 19.0 ^{*5)} | 19.0 ^{*5)} |
| Refrigerant | Type | | - | R410 | R410 | R410 |
| | Control Method | | | - | EEV | EEV |
| Temperature Control | | | - | Micom & Thermistors | Micom & Thermistors | Micom & Thermistors |
| Safety Devices | | | - | Fuse | Fuse | Fuse |
| Piping connections | Liquid(Flare) | | Ømm | 6.35 | 6.35 | 9.52 |
| | Gas(Flare) | | Ømm | 12.70 | 12.70 | 15.88 |
| | Drain | | Ømm | ID18HOSE | ID18HOSE | ID18HOSE |
| Weight | Net Weight | | kg | 23.0 | 28.5 | 28.5 |
| | Shipping Weight | | kg | 27.0 | 33.3 | 33.3 |
| Dimensions | Net Dimensions | | mm | 945x600x220 | 1225x600x220 | 1225x600x220 |
| | Shipping Dimensions | | mm | 1035x690x310 | 1335x690x310 | 1335x690x310 |
| Functions | Auto Restart | | - | O | O | O |
| | Auto Swing | | - | X | X | X |
| | Group/Individual Control | | - | O | O | O |
| | External Contact Control | | - | O | O | O |
| | Trouble Shooting by LED | | - | O | O | O |
| Standard Accessories | Installation Manual | | - | O | O | O |
| | Operation Manual | | - | X | X | X |
| | Pattern Sheet for Installation | | - | X | X | X |
| | Flexible Drain Hose | | - | O | O | O |
| | Filter / Safety Grille | | - | O | O | O |
| | Drain Pump (Pumping, Speed, Lift) | | ℓ/h,mm | X | X | X |
| Optional Accessories | Wireless Remote Controller | | - | X | X | X |
| | Wired Remote Controller | | - | MWR-WE10N | MWR-WE10N | MWR-WE10N |
| | External Contact Interface Module | | - | X | X | X |



*1) Mode

- HP : Heat Pump, HR : Heat Recovery

*2) Nominal cooling capacities are based on;

- Indoor temperature : 27°C DB, 19°C WB

- Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*3) Nominal heating capacities are based on;

- Indoor temperature : 20°C DB, 15°C WB




- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m

*4) Sound pressure was acquired in a dead room. Thus actual noise level may be different depending on the installation conditions.

*5) Specifications may be subject to change without prior notice for product improvement.

Indoor Unit(cont.)

■ ERV Plus

| Item | | | Development Model | | |
|--|--|-------------------------|---|---|----|
| | | | AM050FNKDEH/EU | AM100FNKDEH/EU | |
| Image | Product | |  |  | |
| | Remote Controller | |  MWR-WE10N | | |
| Power Source Application | V/Hz/ø | 220-240/50/1 | | | |
| Function | Ventilation | HEAT-EX, BY-PASS, AUTO | | | |
| | Heating/Cooling | HEATING, COOLING, AUTO | | | |
| | Fan Speed | Turbo, High, Low, Quiet | | | |
| Performance | Air Volume | (m³/h) | 500 | 1,000 | |
| | External Static Pressure | (Pa) | 160 | 150 | |
| | Power Consumption | (W) | 220 | 510 | |
| | Temperature Exchange Rate | Cooling | (%) | 70 | 70 |
| | | Heating | (%) | 75 | 75 |
| | Enthalpy Exchange Rate | Cooling | (%) | 60 | 62 |
| | | Heating | (%) | 73 | 75 |
| | Cooling Capacity *():The heat reclaimed from the ERV | (kW) | 5.1(1.5) | 10.5(3.4) | |
| Heating Capacity *():The heat reclaimed from the ERV | (kW) | 6.5(2.5) | 13.2(5.2) | | |
| Humidifier Capacity(Optional Kit) | (kg/h) | 2.7 | 5.4 | | |
| Piping Connections | Liquid | Φ,mm | φ6.4 C1220T (Flare Connection) | | |
| | Gas | Φ,mm | φ12.7 C1220T (Flare Connection) | | |
| | Water Supply | mm | 1/2 inch | | |
| | Drain | mm | VP25 | | |
| Set Size | Weight | kg | 61 | 90 | |
| | Dimensions (WxHxD) | mm | 1,553x270x1,000 | 1,763x340x1,135 | |
| Operating Temp. Range | Around Unit | - | 0~40°C DB, 80%RH ↓ | | |
| | OA | - | -15~40°C DB, 80%RH ↓ | | |
| | RA | - | 0~40°C DB, 80%RH ↓ | | |




***Specifications may be subject to change without prior notice for product improvement.**

- *1) Nominal cooling capacities are based on;
- Indoor temperature : 27°C DB, 19°C WB - Outdoor temperature : 35°C DB, 24°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m
- *2) Nominal heating capacities are based on;
- Indoor temperature : 20°C DB, 15°C WB
- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m
- *3) Humidifying capacity is based on;
- Indoor temperature : 20°C DB, 15°C WB
- Outdoor temperature : 7°C DB, 6°C WB, Equivalent refrigerant piping : 7.5m, Level differences : 0m
- *4) Sound pressure was acquired in an anechoic room.
Thus actual noise level may be different depending on the installation conditions.
- *5) OA: fresh air from outdoor. RA: return air from room.

Indoor Unit(cont.)

■ Hydro Unit


| Type (Hydro Unit) | | |  | | |
|-------------------------------|---------------------------|---------|--|--------------------|--------------------|
| Model | | | AM160FNBDEH/EU | AM320FNBDEH/EU | AM500FNBDEH/EU |
| Division | | | Cooling/Heating | Cooling/Heating | Cooling/Heating |
| Power Supply | | | 1ø, 220-240V, 50Hz | 1ø, 220-240V, 50Hz | 1ø, 220-240V, 50Hz |
| Performance | Horse Power | HP | 5 | 10 | 16 |
| | | Cooling | KW | 14.0 | 28.0 |
| | Kcal/h | | 12040 | 24080 | 38528 |
| | Heating | KW | 16.0 | 31.5 | 50.4 |
| | | Kcal/h | 13760 | 27090 | 43344 |
| Power | Running Current | A | 0.05 | 0.05 | 0.05 |
| | Input | W | 10 | 10 | 10 |
| Piping (Refrigerant) | Liquid | ø,mm | 9.52 | 9.52 | 12.7 |
| | Gas | ø,mm | 15.9 | 22.2 | 28.58 |
| Piping (Water) | Inlet/Outlet | A(Inch) | 25A(PT1) | 25A(PT1) | 32A(PT1-1/4) |
| | Max. Hydraulic | Mpa | 1.0 | 1.0 | 1.0 |
| Rated flow rate(Water Piping) | | LPM | 48 | 92 | 150 |
| Set Size | Net Weight | kg | 29 | 33 | 40 |
| | Shipping Weight | kg | 31 | 35 | 42 |
| | Net Dimension(WxHxD) | mm | 518X627X330 | 518X627X330 | 518X627X330 |
| | Shipping Dimension(WxHxD) | mm | 652X700X426 | 652X700X426 | 652X700X426 |



- 1) Nominal cooling capacities are based on;
 - Indoor temperature : 27°C DB, 19°C WB
 - Outdoor temperature : 35°C DB, 24°C WB, Rated flow standard : Temperature of the Outlet water 18°C
- 2) Nominal heating capacities are based on;
 - Indoor temperature : 20°C DB, 15°C WB
 - Outdoor temperature : 7°C DB, 6°C WB, Rated flow standard : Temperature of the Outlet water 35°C
- 3) Rated heating capacity : Outdoor temperature 7°C standard and outdoor temperature falls below zero, heating capacity can drop, depending on the temperature condition.
- 4) Equivalent refrigerant piping : 7.5m, Level differences : 0m

Indoor Unit(cont.)

■ Hydro unit HT


















| | | | | | | |
|-------------------------------|---------------------------|---------|--|--------------------|--------------------|--------------------|
| Type (Hydro Unit HT) | | |  | | | |
| Model | | | AM160FNBFB/EU | AM250FNBFB/EU | AM160FNBFBG/EU | AM250FNBFBG/EU |
| Division | | | Heating | Heating | Heating | Heating |
| Power Supply | | | 1ø, 220-240V, 50Hz | 1ø, 220-240V, 50Hz | 3ø, 380-415V, 50Hz | 3ø, 380-415V, 50Hz |
| Performance | Horse Power | HP | 5 | 8 | 5 | 8 |
| | Heating | kW | 16.0 | 25.0 | 16.0 | 25.0 |
| | | Kcal/h | 13760 | 21500 | 13760 | 21500 |
| Power | Running Current | A | 14.3 | 23.1 | 485 | 785 |
| | Input | W | 3,100 | 5,000 | 3,100 | 5,000 |
| Refrigerant | Type | - | R-134a | R-134a | R-134a | R-134a |
| | Charging | kg | 2.15 | 2.15 | 2.15 | 2.15 |
| Piping (Refrigerant) | Liquid | ø,mm | 9.52 | 9.52 | 9.52 | 9.52 |
| | Gas | ø,mm | 15.88 | 15.88 | 15.88 | 15.88 |
| Piping(Water) | Inlet/Outlet | A(Inch) | 25A(PT1) | 25A(PT1) | 25A(PT1) | 25A(PT1) |
| | Max. Hydraulic | Mpa | 1.0 | 1.0 | 1.0 | 1.0 |
| Rated flow rate(Water Piping) | | LPM | 23 | 36 | 23 | 36 |
| Set Size | Net Weight | kg | 104 | 104 | 104 | 104 |
| | Shipping Weight | kg | 107 | 107 | 107 | 107 |
| | Net Dimension(WxHxD) | mm | 518x1,210x330 | 518x1,210x330 | 518x1,210x330 | 518x1,210x330 |
| | Shipping Dimension(WxHxD) | mm | 652x1,289x426 | 652x1,289x426 | 652x1,289x426 | 652x1,289x426 |













- 1) Nominal heating capacities are based on;
 - Indoor temperature : 20°C DB, 15°C WB
 - Outdoor temperature : 7°C DB, 6°C WB, Rated flow standard : Temperature of the Outlet water 65°C
- 2) Rated heating capacity : Outdoor temperature 7°C standard and outdoor temperature falls below zero, heating capacity can drop, depending on the temperature condition.
- 3) Equivalent refrigerant piping : 7.5m, Level differences : 0m













2-2 Accessory and Option Specifications

2-2-1 Accessories

| Classification | | Product | Model | Image | Application model |
|---|-----------------------------------|--|---|---|---|
| Integrated management system | Controller | DMS 2 | MIM-D00AN |  | DVM Series, FJM, CAC, ERV Hydro unit, Hydro unit HT |
| | | S-NET 3 | MST-P3P |  | DVM Series, FJM, CAC, ERV Hydro unit, Hydro unit HT |
| | Interface Module | SIM MIM- | MIM-B12N |  | DVM Series, FJM |
| Centralized control system | Controller | Centralized controller | MCM-A202DN |  | DVM Series, FJM, CAC, ERV Hydro unit, Hydro unit HT |
| | | Operation mode selection switch | MCM-C200 |  | DVM Series (Except HR models) |
| Individual control system ControllerController | Controller | New touch CONTROLLER | MCM-A300N |        | Cassette, Duct (Receiver needed) |
| | | Wireless remote controller | MR-DH00 | | |
| | Controller | Wired remote controller (Multi function) | MWR-WE10N | | Cassette, Wall-mounted, Ceiling, Duct, Console, ERV |
| | | Wired remote controller (Multi function) | MWR-WW00N | | Hydro unit / Hydro unit HT |
| | Controller | Wireless signal receiver | MRK-A10 | | Duct (For wireless remote controller) |
| | Controller | Remote sensor | MRW-TA | | Cassette, Wall-mounted, Ceiling, Duct, Console |
| | Controller | ERV CO2 Sensor | MOS-C1 | | ERV, ERV PLUS |
| Building management system | Lonworks interface module | MIM-B18N |  | DVM Series, FJM, CAC, ERV | |
| Guest room management system | DMS-Bnet (BACnet) | MIM-B17N |  | DVM Series, FJM Hydro unit, Hydro unit HT | |
| | External contact interface module | MIM-B14 |  | Mini DVM(R-410A), DVM PLUS III, FJM | |
| Power distribution | | MIM-B16N |  | DVM Series, FJM | |
| Converter | | MIM-C02N |  | DVM Series, FJM, CAC | |
| | | MIM-N00 | | | |
| Multi Tenant Function Controller | | MCM-C210 | | | |







※ DVM Series : DVM mini, DVM PLUS III, DVM PLUS III HR, DVM PLUS IV, DVM PLUS IV HR

| Classification | Feature | Model | Description | Relevant unit | Remark | |
|---|---|---|---|---|---------------------|---|
| Y-JOINT |  | MXJ-YA1509M | 15.0 kW and below | DVMS HP / HR | Requisite | |
| | | MXJ-YA2512M | Over 15.0 ~ 40.6 kW and below | | | |
| | | MXJ-YA2812M | Over 40.6 ~ 46.4 kW and below | | | |
| | | MXJ-YA2815M | Over 46.4 ~ 69.6 kW and below | | | |
| | | MXJ-YA3419M | Over 69.6 ~ 98.6 kW and below | | | |
| | | MXJ-YA4119M | Over 98.6 ~ 139.2 kW and below | | | |
| | | MXJ-YA4422M | Over 139.2 kW | | | |
| Y-joint(High Pressure Gas) for DVM S HR | | MXJ-YA1500M | 23.2 kW and below | DVMS HR | Requisite | |
| | | MXJ-YA2500M | Over 23.2 ~ 69.6 kW and below | | | |
| | | MXJ-YA3100M | Over 69.6 ~ 139.2 kW and below | | | |
| | | MXJ-YA3800M | Over 139.2 kW | | | |
| Outdoor joint (Outdoor Connection) | | MXJ-TA3819M | Below 48 HP | DVMS HP / HR | Requisite | |
| | | MXJ-TA4422M | Over 50 HP | | | |
| Outdoor joint (High Pressure Gas) for DVM S HR | | MXJ-TA3100M | Below 48 HP | DVMS HR | Requisite | |
| | | MXJ-TA3800M | Over 50 HP | | | |
| Header joint |  | MXJ-HA2512M | Below 46.4 kW | DVMS HP / HR | Requisite | |
| | | MXJ-HA3115M | Below 69.6 kW | | | |
| | | MXJ-HA3819M | Over 69.7 kW | | | |
| EEV kits |  | MXD-E13K116A | Below 3.6 kW (1 Room) + 5.6 kW ~9.0 kW (1Room) | Wall-mounted & Ceiling indoor unit (For 2 indoor units) | Option | |
| | | MXD-E13K200A | Below 3.6 kW (2 Rooms) | | | |
| | | MXD-E16K200A | 5.6 kW~9.0 kW (2Rooms) | | | |
| | | MXD-E22K200A | Over 9.0 kW (2Rooms) | | | |
| |  | MXD-E13K216A | Below 3.6 kW (2 Rooms) + 5.6 kW ~9.0 kW (1Room) | Wall-mounted & Ceiling indoor unit (For 3 indoor units) | | |
| | | MXD-E13K300A | Below 3.6 kW (3 Rooms) | | | |
| | | MXD-E16K213A | Below 3.6 kW (1 Room) + 5.6 kW ~9.0 kW (2Rooms) | | | |
| | | MXD-E16K300A | 5.6 kW ~ 9.0 kW (3Rooms) | | | |
| |  | MEV-E13SA | Below 3.6 kW (1 Room) | Wall-mounted & Ceiling indoor unit (for single unit) | | |
| | | MEV-E16SA | 5.6 kW ~ 9.0 kW (1Room) | | | |
| Drain Pump |  | MDP-N047SNC1D | HSP Duct 22.0/28.0kW | - | Option | |
| | |  | MDP-M075SGU1D | MSP Duct (9.0/11.2) kW | | - |
| | | | MDP-M075SGU2D | MSP Duct (12.8/14.0) kW HSP Duct (11.2/12.8/14.0) kW | | |
| | | | MDP-M075SGU3D | MSP Duct (5.6/7.1) kW | | |
|  | MDP-E075SEE3D | SlimDuct (1.7~14.0) kW | - | | | |
| MCU |  | MCU-S4NEE1N | Below 4 indoor units | DVMS HR | Requisite (HR Only) | |
| | | MCU-S6NEE1N | Below 2 large capacity ducts | | | |
| | | MCU-S4NEE2N | Below 6 indoor units | | | |
| AHU KIT |  | MXD-K025AN | 7.0kW~8.75kW | - | Option | |
| | | MXD-K050AN | 14.0kW~17.5kW | | | |
| | | MXD-K075AN | 21.0kW~26.25kW | | | |
| | | MXD-K100AN | 28.0kW~35.0kW | | | |

| Classification | Feature | Model | Description | Relevant unit | Remark |
|----------------------|---|--------------|--------------------|---------------|-----------|
| PDM KIT |  | MXD-A38K2A | 8~12HP | DVMS | Option |
| | | MXD-A58K2A | 14~22HP | | |
| Humidifier |  | MVO-VA050100 | 500CMH | - | Option |
| | | MVO-VA100100 | 1000CMH | | |
| S-Plasma Ion KIT |  | MSD-CAN1 | 4way Cassette | - | Option |
| | | MSD-EAN1 | ERV-Plus | | |
| Motion detect sensor | | MCR-SMA | 4way Cassette | - | Option |
| Front panel |  | PC1MWSKAN | Slim 1way cassette | - | Requisite |
| |  | PC1NUSMAN | Slim 1way cassette | | |
| |  | PC1NUPMAN | Slim 1way cassette | | |
| |  | PC2NUSMEN | 2 way cassette | | |
| |  | PC4SUSMAN | Mini 4way cassette | | |
| |  | PC4SYSTEMEN | Mini 4way cassette | | |
| |  | PC4NUSKAN | 4 way cassette | | |
| |  | PC4NUSKEN | 4 way cassette | | |
| |  | PC4NBSKAN | 4 way cassette | | |

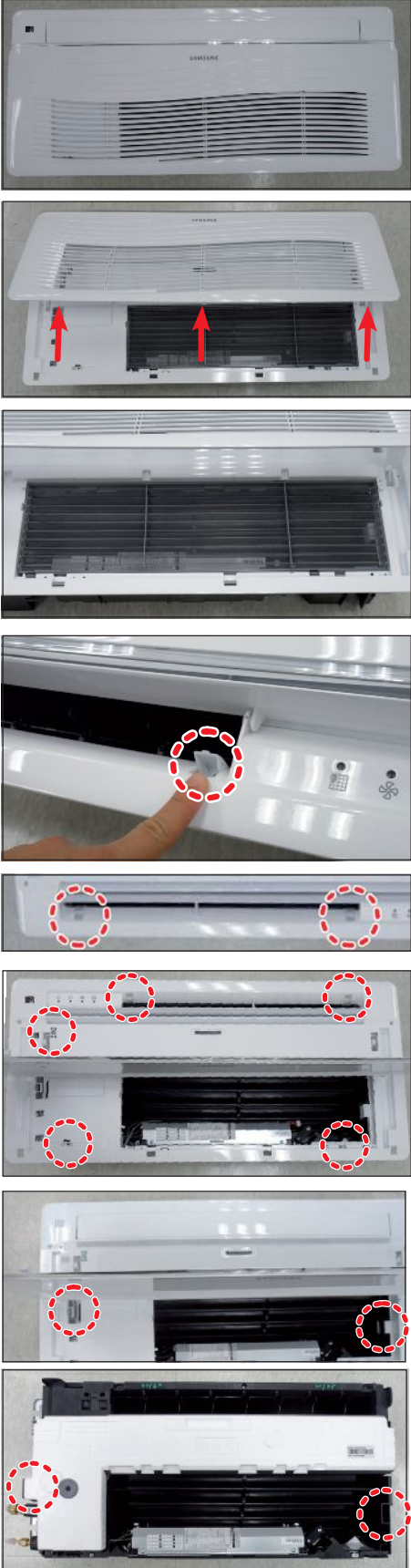
3. Disassembly and Reassembly




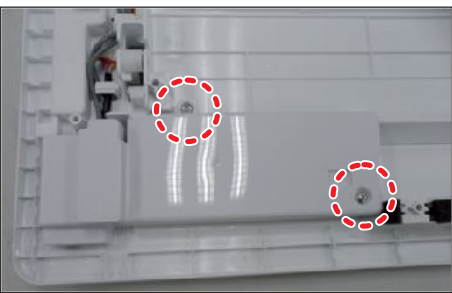
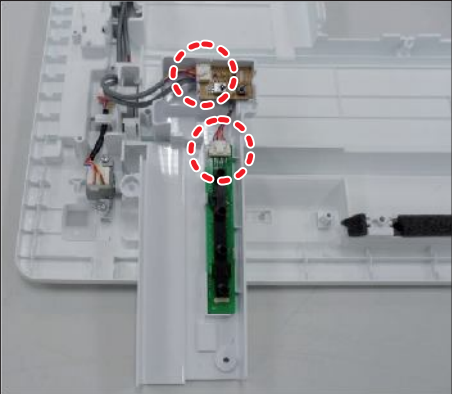
■ Necessary Tools

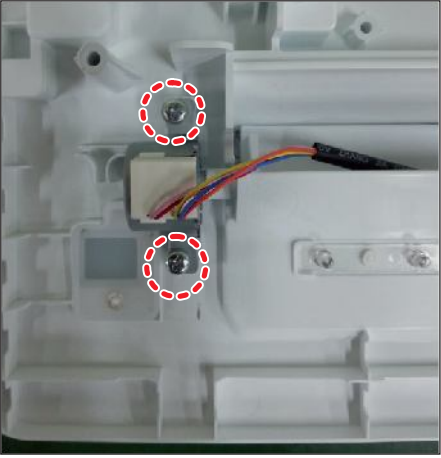
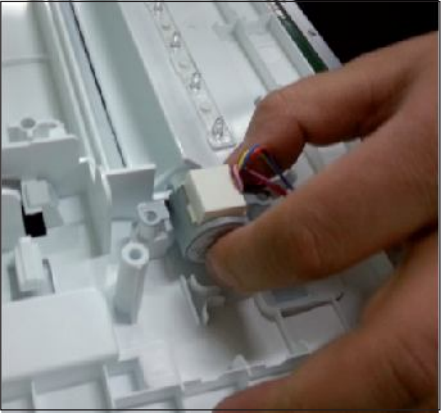

| Item | Remark |
|------------------------|---|
| +Screw Driver |  |
| Monkey Spanner |  |
| -Screw Driver |  |
| Nipper |  |
| Electric Motion Driver |  |
| L-Wrench |  |

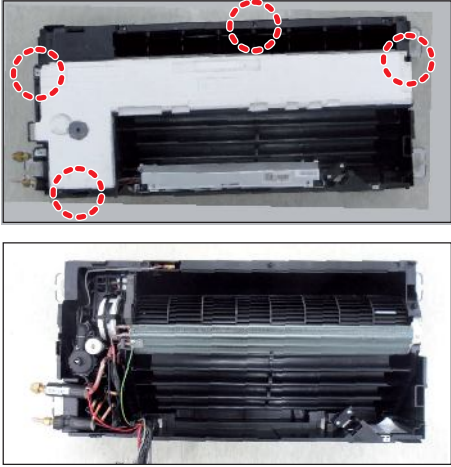
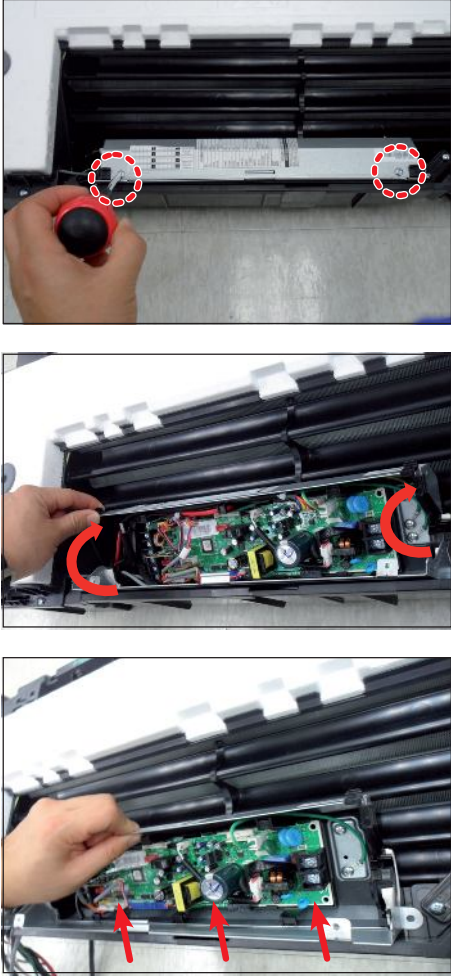
3-1 Indoor Unit


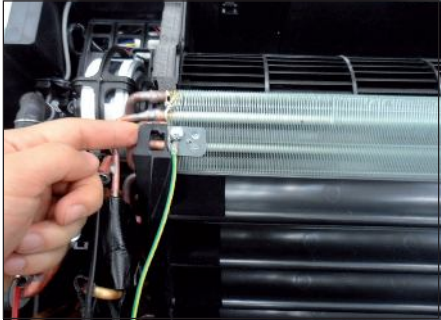

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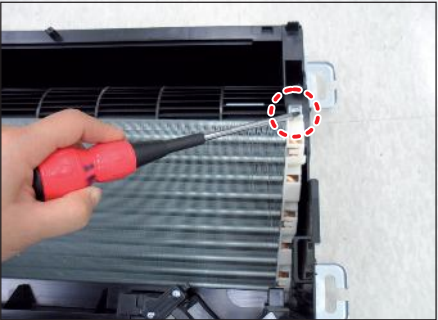
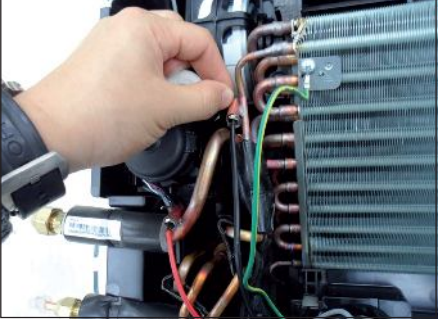

| No | Parts | Procedure | Remark |
|----|---------------------------------|--|---|
| 1 | PANEL And FILTER (Continues) | <p>1) Open the GRILLE as shown in the figure.</p> <p>2) Remove the FILTER from the PANEL.</p> <p>3) Remove the 2 COVER SCREW as shown in the figure.</p> <p>4) Remove the 5 screws fixed in PANEL and then remove the PANEL. (Use +Screw Driver)</p> <p>5) Press the left and right PANEL HOOK and then separate the PANEL from the indoor unit.</p> |  |

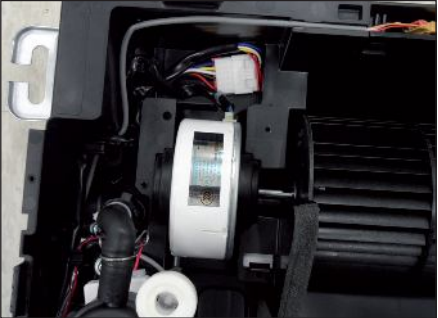

| No | Parts | Procedure | Remark |
|----|---------------------------------|---|--|
| | PANEL And FILTER (Continues) | <p>6) Open the GRILLE and then raise the LINK LEVER SWITCH(yellowish green) of both sides in the direction of arrow and separate the LINK LEVER.</p> <p>7) Remove the 2 screws fixed in COVER DISPLAY and then remove the COVER DISPLAY.(Use +Screw Driver)</p> <p>8) Disconnect the connector. (Remote control receiver PBA and Display PBA)</p> |      |

| No | Parts | Procedure | Remark |
|----|---------------------------------|---|---|
| | PANEL And FILTER (Continues) | <p>9) Remove the 2 screws fixed in STEP MOTOR and then remove the MOTOR. (Use +Screw Driver)</p> <p>10) Remove the BLADE H.</p> |    |

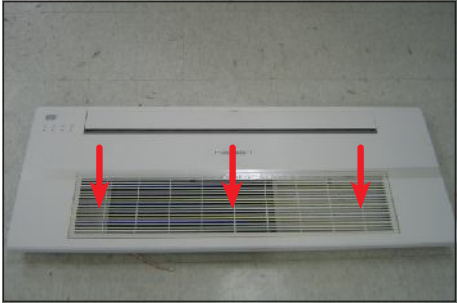
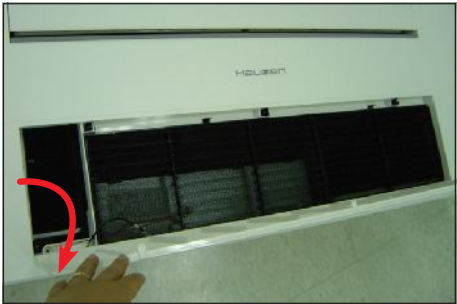



| No | Parts | Procedure | Remark |
|----|----------------------|---|---|
| 2 | DRAIN PAN | <p>1) Remove the 4 screws fixed in DRAIN PAN. (Use +Screw Driver)</p> <p>2) Pull the DRAIN PAN from the indoor unit and remove.</p> <p>⚠ By Hair-Pin, be careful not to damage and weldment is flowed in.</p> <p>⚠ When you remove the DRAIN PAN, be careful not to fall off the remaining water.</p> |  |
| 3 | Electrical equipment | <p>1) Remove the 2 screws fixed in Electrical equipment and then remove the cover. (Use +Screw Driver)</p> <p>2) Push up as shown in the figure with hand and then disconnect the 8 connectors from the indoor unit PCB.</p> <p>3) Lift up the control part and remove.</p> |  |


| No | Parts | Procedure | Remark |
|----|-----------|---|---|
| | | |  |
| 4 | DRAIN SUB | 1) Push the HOOK of DRAIN SUB and remove. |   |

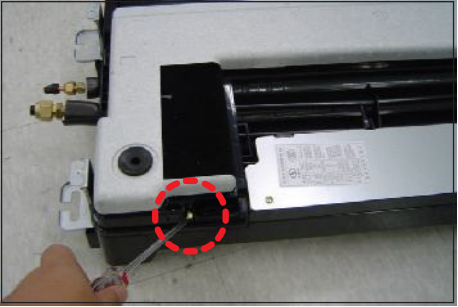
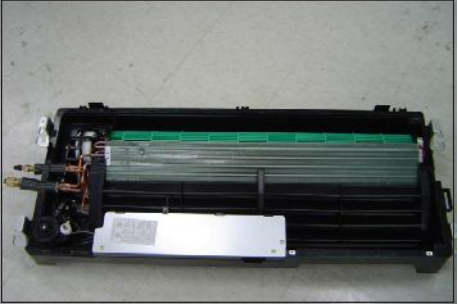


| No | Parts | Procedure | Remark |
|----|----------------|--|--|
| 5 | Heat Exchanger | <ol style="list-style-type: none"> <li>1) Remove the 1 screw fixed in Heat Exchanger. (Use +Screw Driver) <li>2) Separate the SENSOR of indoor unit from the Heat Exchanger. <li>3) Separate the Heat Exchanger from the indoor unit. |    |

| No | Parts | Procedure | Remark |
|----|-----------|---|--|
| 6 | CORSS FAN | <ol style="list-style-type: none"> 1) Remove the 2 screws fixed in COVER FAN MOTOR. (Use +Screw Driver) 2) Separate the COVER FAN MOTOR from the indoor unit. 3) Disconnect the CROSS FAN connector. 4) Separate the FAN MOTOR and CROSS FAN from the indoor unit. 5) Remove the screw fixed in CROSS FAN and then remove the FAN MOTOR and CROSS FAN. (Use +Screw Driver) |       |

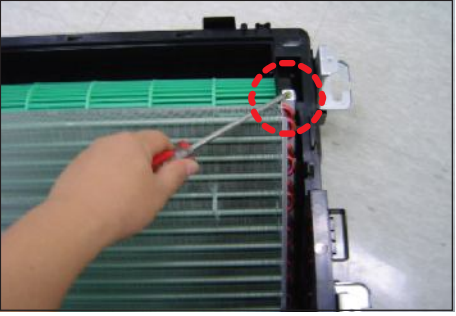
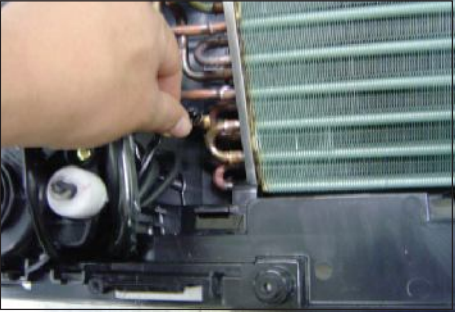
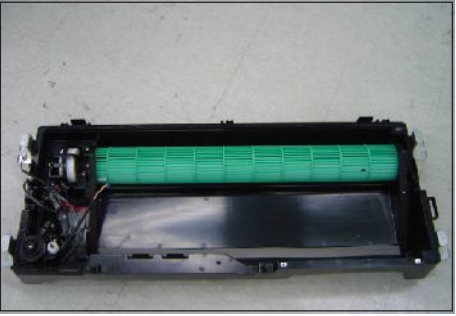
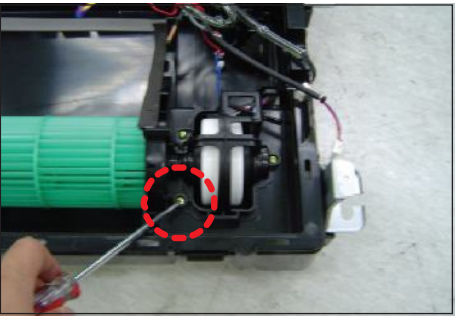
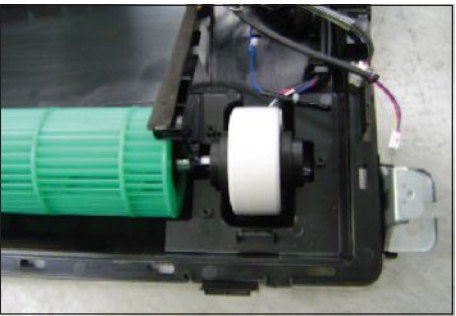
■ Slim 1 way cassette type

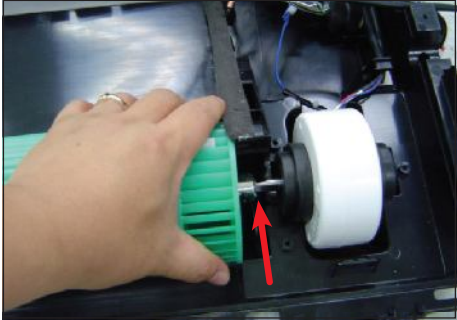
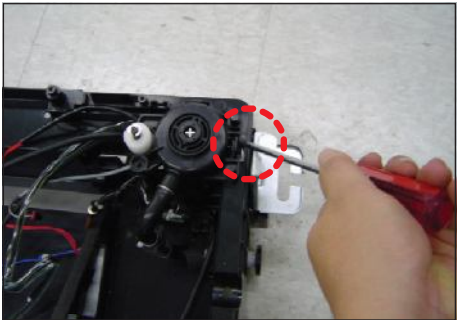
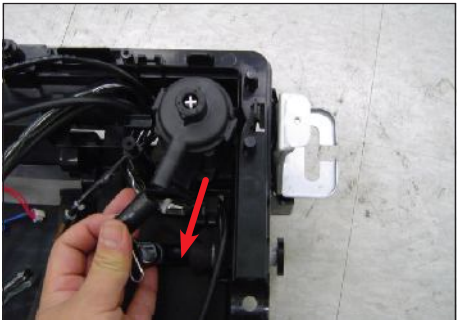

| No | Parts | Procedure | Remark |
|----|----------------------------|---|---|
| 1 | Panel & Filter (A type) | <p>1) Press the Push Button on the Grill and open it</p> <p>2) Separate 1 clip from the Panel and tilt the Grill to 45° and separate the Grille from the Panel.</p> <p>3) Separate the Filter from the Panel.</p> <p>4) Separate 3 cover screws from it.</p> <p>5) Unscrew 6 fixed screws and separate them from the Indoor Unit. (Use +Screw Driver)</p> |      |

| No | Parts | Procedure | Remark |
|----|-------|--|--|
| | | <p>6) Press the left and right Hooks to separate the Panel from the Indoor Unit.</p> |  |


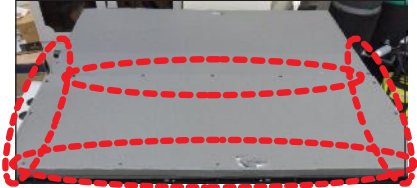
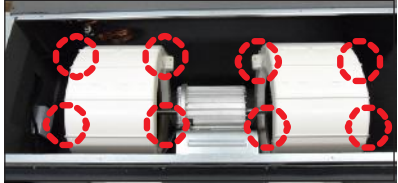
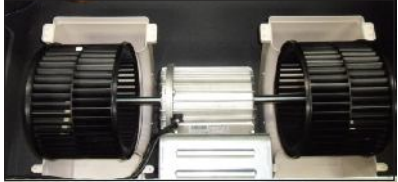
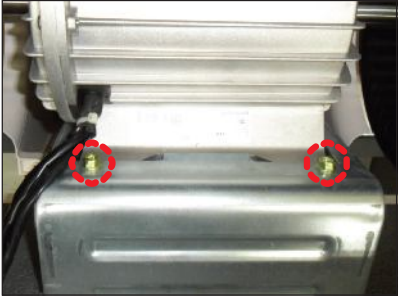
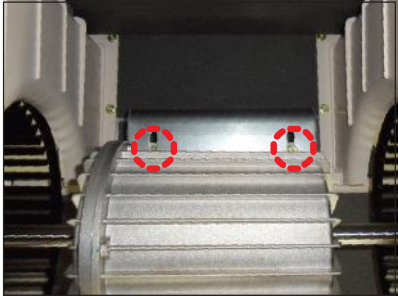
| No | Parts | Procedure | Remark |
|----|------------|---|---|
| 2 | Drain Pan | <p>1) Separate 5 fixing screws from the Drain Pan. (Use +Screw Driver)</p> <p>2) Pull the Drain Pan to separate them from the Indoor Unit.</p> <p>⚠ When disassembling the Pan, be careful not to touch the heat exchanger board with a bare hand.</p> |   |
| 3 | Control In | <p>1) Undo 3 fixing screws in the Control In appliance part to separate the Cover. (Use +Screw Driver)</p> |   |

| No | Parts | Procedure | Remark |
|----|-----------|--|---|
| | | <p>2) Separate 8 connectors on the PCB of the Indoor Unit.</p> <p>3) Separate the Control In from the Indoor Unit.</p> |    |
| 4 | Drain Sub | 1) Push the hook on the Drain Sub to separate it. |   |


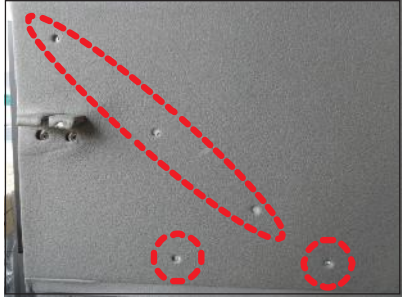

| No | Parts | Procedure | Remark |
|----|----------------|--|---|
| 5 | Heat Exchanger | <ol style="list-style-type: none"> 1) Undo fixing screw in the Heat Exchanger. (Use +Screw Driver) 2) Separate an Indoor Sensor from the Heat Exchanger. 3) Separate the Heat Exchanger from the Indoor Unit. |    |
| 6 | Cross Fan | <ol style="list-style-type: none"> 1) Undo 3 fixing screws on the Cover Fan Motor. (Use +Screw Driver) 2) Separate the Cover Fan Motor from the Indoor Unit. |   |

| No | Parts | Procedure | Remark |
|----|------------|---|--|
| | | <p>3) Separate the Cross Fan from the Indoor Unit.</p> |  |
| 7 | Drain Pump | <p>1) Separate fixing screw in the Cover Drain Pump. (Use +Screw Driver)</p> <p>2) Separate the Drain Hose from the Drain Pump.</p> <p>3) Separate the Drain Pump from the Indoor Unit.</p> |    |


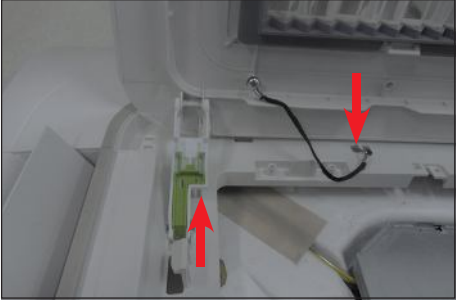
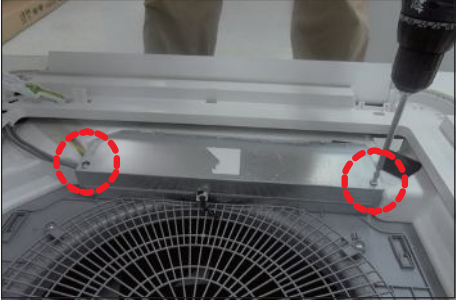
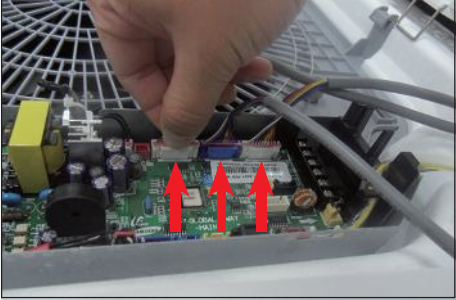

■ BIG DUCT


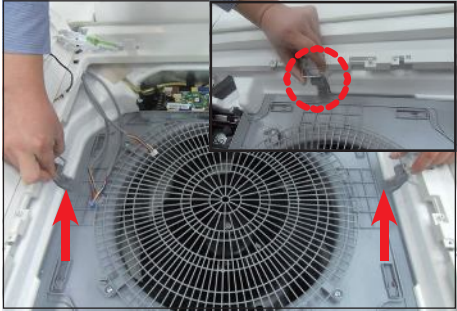
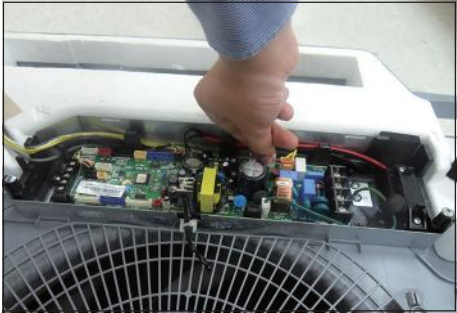
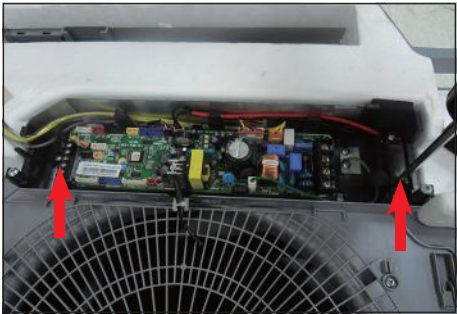
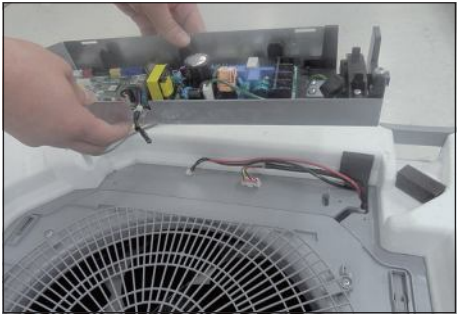
| No | Parts | Procedure | Remark |
|----|----------------|---|--|
| 1 | MOTOR & BLOWER | <p>1) Detach the motor connectors from the PCB.</p> <p>2) Unscrew 16 screws and detach Cabinet-Base Blower. (Use+Screw Driver)</p> <p>3) Unscrew 8 screws and detach Case-Blower. (Use +Screw Driver)</p> <p>4) Unscrew 4 bolts and separate Motor & blower from Bracket-Motor. (Use +Screw Driver)</p> |       |



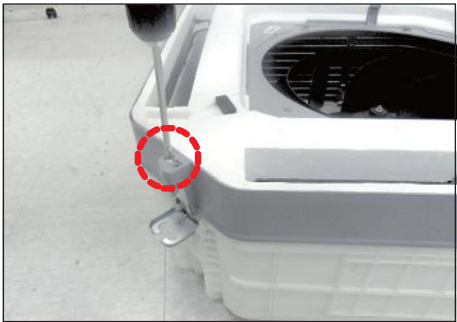

| No | Parts | Procedure | Remark |
|----|------------------------|--|---|
| | | 5) Unscrew bolt and Separate Blower from the motor. (Use +Screw Driver) |  |
| 2 | EVAPORATOR & DRAIN-PAN | 1) Detach EEV and Sensor connectors from the PCB. (Use +Screw Driver) 2) Unscrew 8 screws and Detach Cover-Pipe. (Use +Screw Driver) 3) Unscrew 31 screws and detach Cabinet-Base Blower and Cabinet-Base Drain. (Use +Screw Driver) |     |




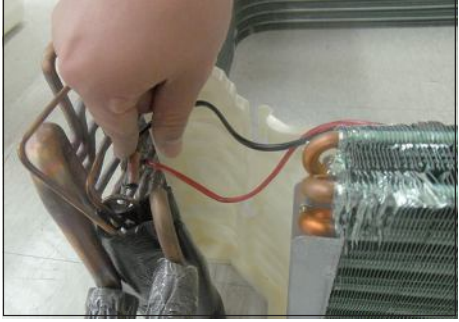
| No | Parts | Procedure | Remark |
|----|-------|--|---|
| | | <p>4) Unscrew 10 screws and detach Drain-Pan from the indoor unit. (Use +Screw Driver)</p> <p>5) Separate Evaporator from the indoor unit.</p> |    |






■ Global 4way Cassette type


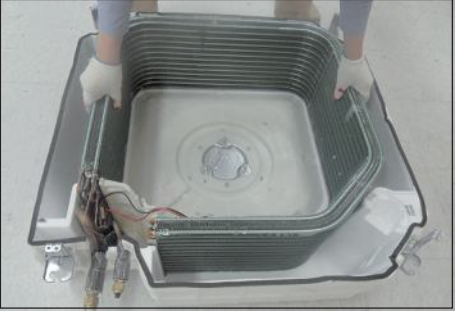

| No | Parts | Procedure | Remark |
|----|-------|--|--|
| 1 | Panel | <p>1) Push the handles on both sides of the Samsung logo towards the product's interior to open the Grille.</p> <p>2) Push up the green knob in the Open direction, and detach the white link from the panel. Detach the safety clip.</p> <p>3) Remove the 2 fixed screws to remove the Control-Box Cover. (Use +Screw Driver)</p> <p>4) Remove the Remocon-Receiver and Blade Connector Wire from the PBA. (3EA)</p> <p>5) Push the 4 panel corners and cover downwards to remove it.</p> |      |

| No | Parts | Procedure | Remark |
|----|-------------|---|--|
| | | <p>6) Disassemble the bolts that are assembled with the indoor unit at the 4 panel corners.</p> <p>7) Press the Steel Hangers at both sides of the panel inwards, and rotate them 90 degrees to remove it from the indoor unit's Hock. Remove the panel from the indoor unit.</p> |   |
| 2 | Control-Box | <p>1) Disconnect the Connector Wire that is connected to the indoor unit's PBA from the PBA.</p> <p>2) Unscrew the 2 fixed screws on both sides of the Control Box, and disassemble the Control Box from the indoor unit. (Use +Screw Driver)</p> |    |

| No | Parts | Procedure | Remark |
|----|------------|---|---|
| 3 | Bell-Mouth | <p>1) Unscrew the screw fixed on the Bell-Mouth. (Use +Screw Driver)</p> <p>2) Push the Bell-Mouth in the direction opposite to where it's installed on the Control-Box to remove it.</p> |   |
| 4 | Drain Pan | <p>1) Unscrew the screws on the 4 corners of the indoor unit. (Use +Screw Driver)</p> <p>2) Remove the Drain Pan from the indoor unit.</p> |   |

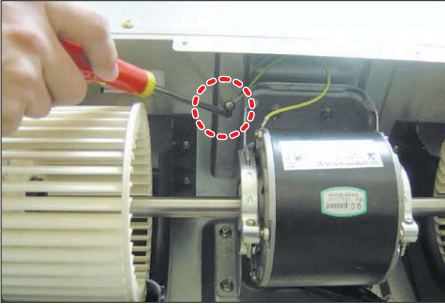
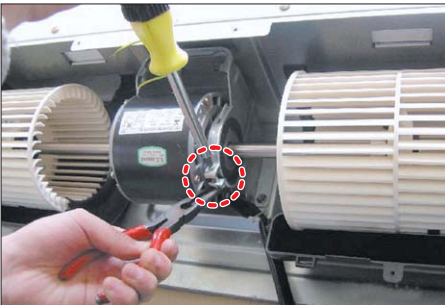
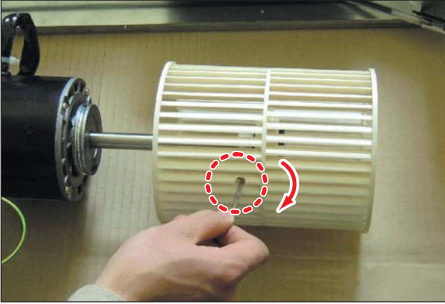
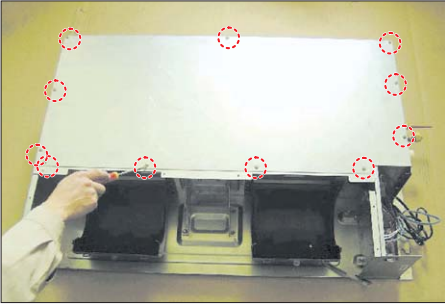

| No | Parts | Procedure | Remark |
|----|--------------------------|--|--|
| 5 | Drain Pump & Hose | <p>1) Remove the 2 fixed screws and disconnect the white drainage hose from the Drain Pump. (Use +Screw Driver)</p> <p>2) Remove the 2 screws and take the Drain-Hose out from the indoor unit to disassemble the transparent Drain-Hose fixed on the side of the indoor unit. (Use +Screw Driver)</p> |    |
| 6 | Evap. Temperature Sensor | <p>1) Use your hand to remove the temperature sensor attached to the Evap Pipe along with the fixing clip.</p> |  |


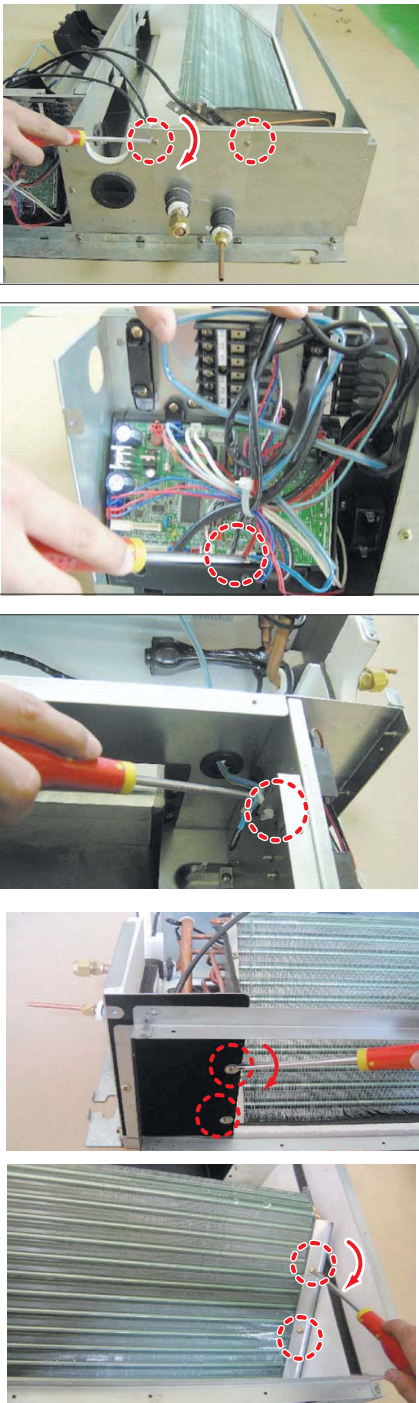
| No | Parts | Procedure | Remark |
|----|-------------|--|---|
| 7 | Fan & Motor | <ol style="list-style-type: none"> <li>1) Turn the hexagonal nut attached to the top of the Fan counterclockwise to remove it. Take the Fan out of the Motor. <li>2) Turn the three hexagonal nuts on the Motor counterclockwise to remove the nuts. Take the Motor Wires attached to these three locations out with your hands prior to removing the Motor. |    |
| 8 | Evaporator | <ol style="list-style-type: none"> <li>1) Remove the screws of the 2 Steel Holder Evaps that are used to fix the Heat Exchanger, and then remove it. (Use +Screw Driver) <li>2) Remove the 2 fixing screws of the Partition Evap at the Heat Exchanger's In/Out Pipe. (Use +Screw Driver) |   |


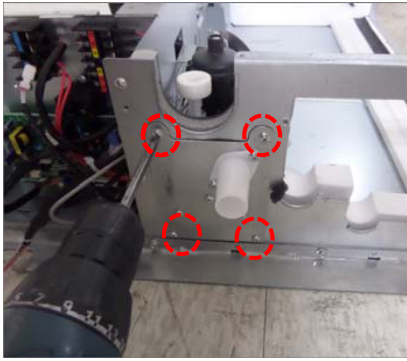
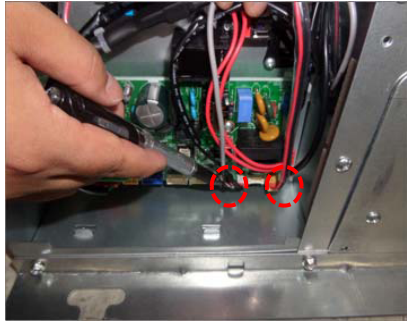
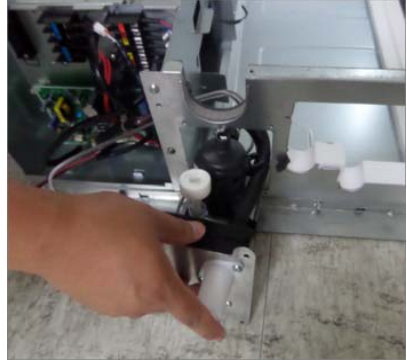
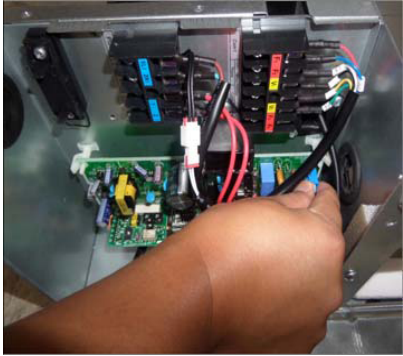
| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>3) Remove the screw of the Cover Pipe that is used to fix the In/Out Pipe. Remove the In/Out Pipe. (Use +Screw Driver)</p> <p>4) Remove the Heat Exchanger from the indoor unit's cabinet.</p> |    |

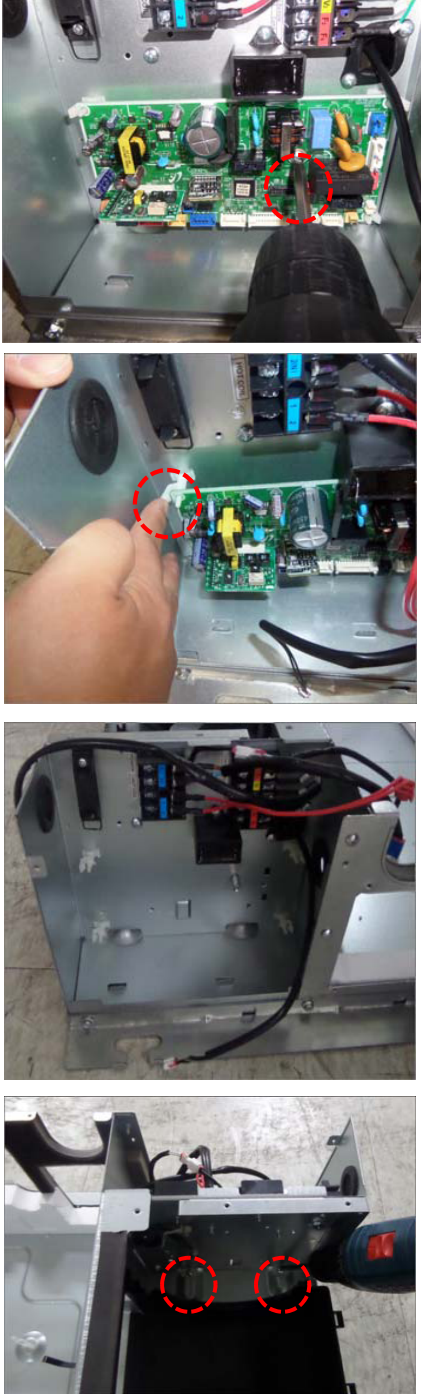
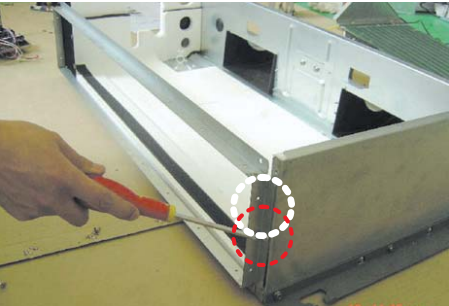
■ Duct type(Slim1,2)

| No | Parts | Procedure | Remark |
|----|----------------|--|--------|
| 1 | Motor & Blower | <p>1) Disassemble the Cabinet-Top Motor. – Unscrew 8 screws</p> <p>2) Disassemble 2 Cover Blower Uppers. – After unscrewing 2 screws</p> <p>– Disassemble the Cover Blower Upper with pushing its hook.</p> <p>3) Disassemble the Cover Control. – Unscrew 2 screws</p> <p>4) Disassemble Motor Wires connected to the inside of PCB and connected to the Capacitor.</p> | |



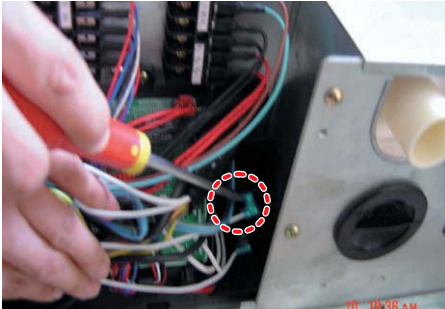
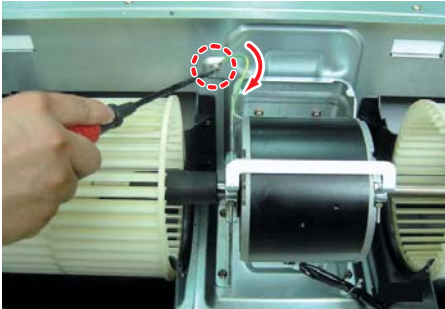
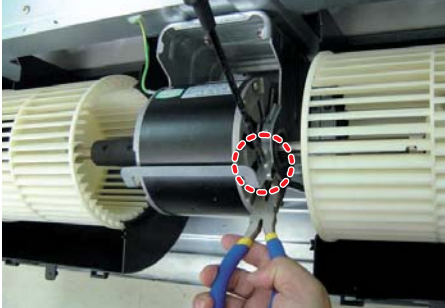
| No | Parts | Procedure | Remark |
|----|-----------------|---|---|
| | | <p>5) Disassemble the Motor earth wire connected to the Partition. – Unscrew a screw</p> <p>6) Disassemble the band Motor for fixing the Motor. – Unscrew 2 screws</p> <p>7) After disassembling the Motor and Blower for the set, disassemble the Blower by use of 3mm wrench.</p> |    |
| 2 | Ass'y Drain Pan | <p>1) Disassemble the Cabinet-Top Evap. – Unscrew 11 screws</p> <p>2) Disassemble the Bracket Outlet Sub that fixes the Drain Pan equipped on the front of the set. – Unscrew 6 screws</p> |   |

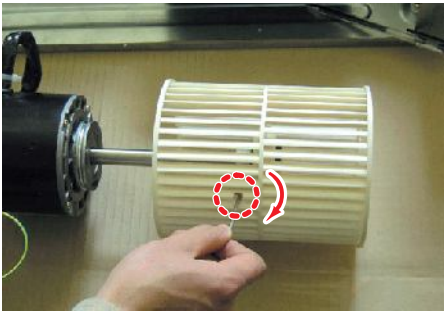
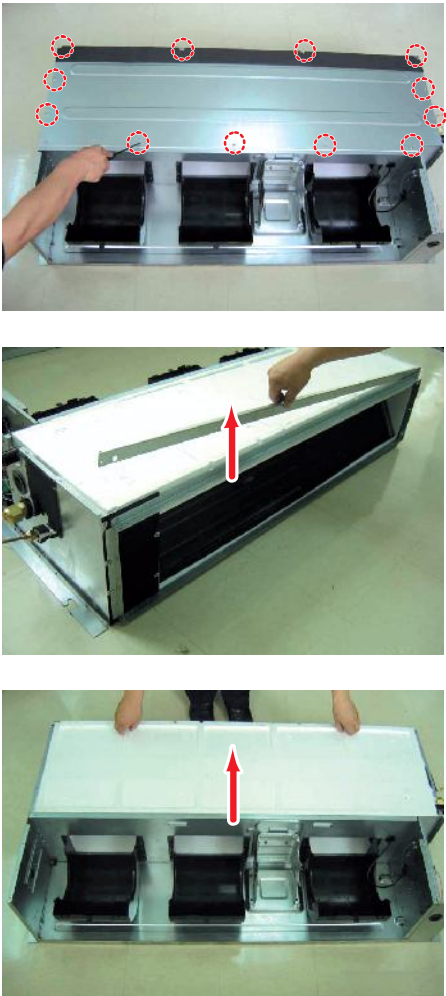
| No | Parts | Procedure | Remark |
|----|------------|--|---|
| | | 3) Disassemble the Drain Cushion from the set. |  |
| 3 | Ass'y Evap | <p>⚠ The Evaporator should be disassembled after disassembling the Cover Control 1-3) and the Drain Pan 2-1), 2-2), 2-3).</p> <p>1) Disassemble the Cover Pipe that fixes the high/low pressure Pipe. – Unscrew 2 screws</p> <p>2) Disassemble the refrigerant temperature sensor, Inlet air temperature sensor, and EEV wire that connected to the inside of PCB.</p> <p>3) Disassemble the Support Evap. LF that fixes the Evaporator. – Unscrew 2 screws</p> <p>4) Disassemble the Support Evap RH. – Unscrew 2 screws</p> |  |

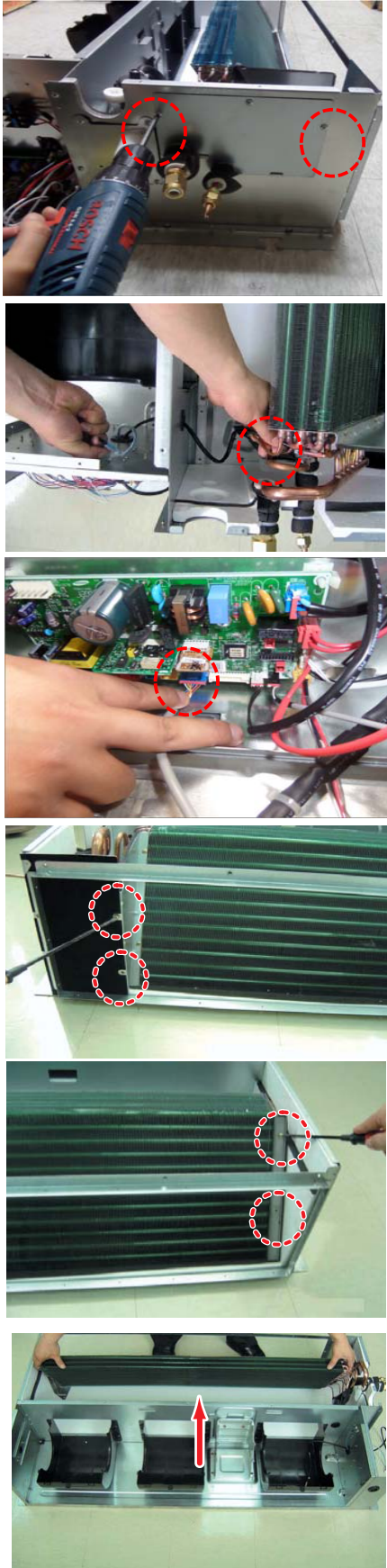
| No | Parts | Procedure | Remark |
|----|------------------|---|---|
| | | 5) Disassemble the Evaporator form the set. |  |
| 4 | Assy drain pump | <p>1)Disassemble Drain Pump by unscrew 4 screws.</p> <p>2)Disassemble the connector of power wire and float switch signal wire.</p> <p>3)Take out the drain pump.</p> |    |
| 4 | Ass'y Control In | <p>⚠ The Control In should be disassembled after disassembling the Cover Control 1-3).</p> <p>1) Disassemble all Control Wires connected to the inside of PCB.</p> |  |

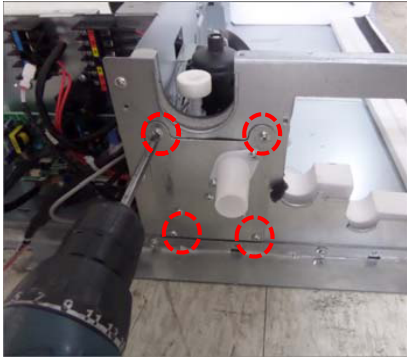
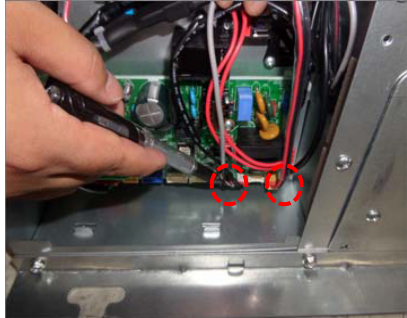
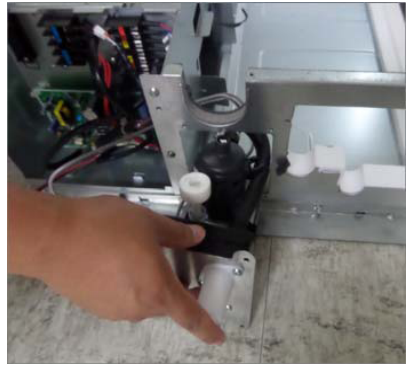
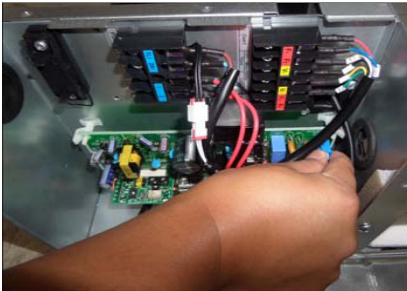

| No | Parts | Procedure | Remark |
|----|----------------|---|--|
| | | <p>2)Disassemble the earth screw;</p> <p>3)Push the hook to take out the PBA.</p> <p>4)Disassemble the control box by unscrew the 2. screws</p> |  |
| 5 | Bracket Outlet | <p>1) Disassemble the Bracket Outlet assembled on the Cabinet. – Unscrew 10 screws</p> |  |

| No | Parts | Procedure | Remark |
|----|----------------|--|--|
| | | <p>3) If the Cabinet-Top Motor is assembled on the side of the set, the procedure of disassembling the Filter is just as the above.</p> |  |
| 5 | Bracket Outlet | <p>1) After disassembling 13 indicating screws, detach Ass'y Cabinet-Top Motor.</p> <p>2) After disassembling 3 indicating screws, detach Ass'y Case Blower Upper.</p> <p>– Press the pothook of the Case Blower and detach Ass'y Case Blower Upper.</p> |  |





| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>3) After disassembling 2 indicating screws, detach the Cover Control.</p> <p>4) Detach the Motor Wire Connected to PCB and Capacitor.</p> <p>5) After disassembling the indicating screws, detach the wire connected to the Partition.</p> <p>6) After disassembling 2 indicating screws, detach the Ass'y Band Motor.</p> |      |



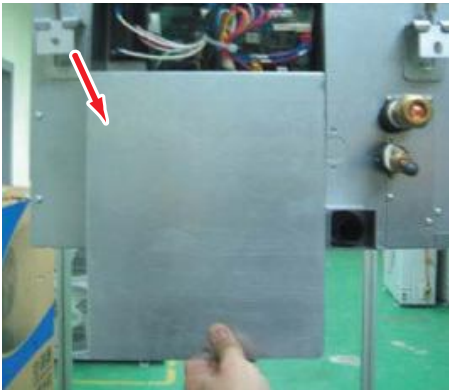
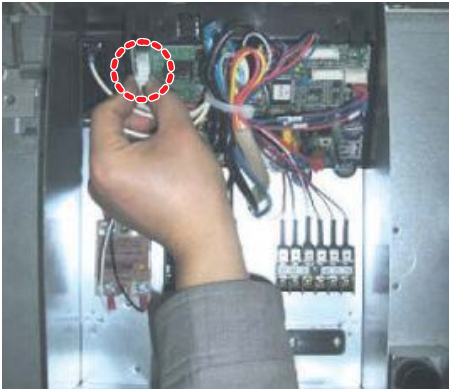
| No | Parts | Procedure | Remark |
|----|-----------|--|---|
| | | <p>7) After disassembling the Motor and Blowers, detach the Blowers from the axis of the Motor by 3mm inner hexagon spanner.</p> |  |
| 3 | Drain Pan | <p>1) After disassembling 15 indicating screws, detach Ass'y Cabinet-Top Evap.</p> <p>2) After disassembling 6 indicating screws, detach the Bracket Outlet.</p> <p>3) Detach the Drain Pan.</p> |  |

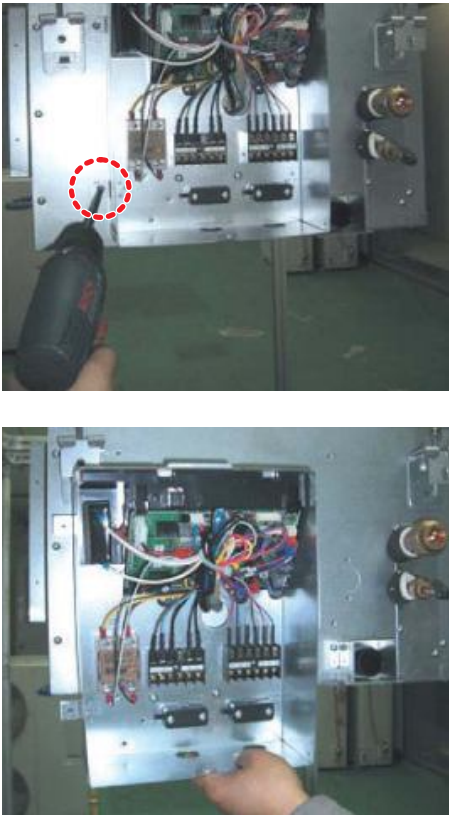
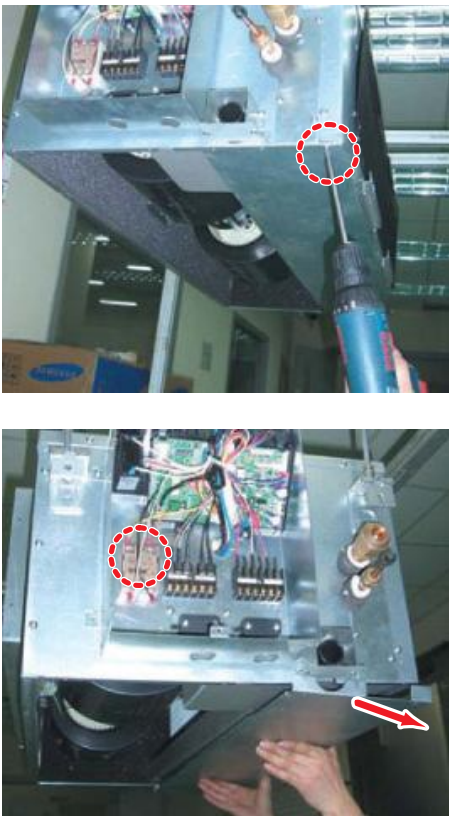
| No | Parts | Procedure | Remark |
|----|------------|---|---|
| 4 | Evaporator | <p>⚠ After finished the procedures above, detach the Evaporator.</p> <p>1) After disassembling 2 indicating screws, detach Ass'y Cover Pipe.</p> <p>2) Detach the Sensor from the Control Box. (including 2 Sensors)</p> <p>3) After disassembling 2 indicating screws, detach Ass'y Support Evap LF.</p> <p>4) After disassembling 2 indicating screws, detach Ass'y Support Evap RH.</p> <p>5) Detach the Evaporator from the set.</p> |  |


| No | Parts | Procedure | Remark |
|----|------------------|---|---|
| 4 | Assy drain pump | <p>1)Disassemble Drain Pump by unscrew 4 screws.</p> <p>2)Disassemble the connector of power wire and float switch signal wire.</p> <p>3)Take out the drain pump.</p> |    |
| 5 | Ass'y Control In | <p>⚠ The Control In should be disassembled after disassembling the Cover Control 1-3).</p> <p>1) Disassemble all Control Wires connected to the inside of PCB.</p> <p>2)Disassemble the earth screw;</p> |   |



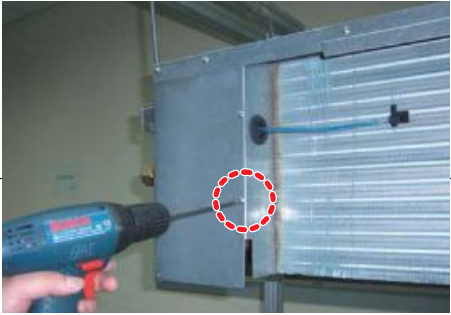


■ Duct type(Mid pressure1)

| No | Parts | Procedure | Remark |
|----|--------|--|---|
| 1 | Filter | <p>1) After disassembling 16 places indicating screws, detach Ass'y Cabi Bottom Blower. (Use +Screw Driver.)</p> <p>2) Detach from Ass'y Control In the capacitor connection wire between the Motor Fan and housing connector.</p> <p>3) After disassembling 2 places indicating screws, detach the 2 Fan Case. (Use +Screw Driver.)</p> |     |

| No | Parts | Procedure | Remark |
|----|------------|--|---|
| | | <p>4) After disassembling 2 places indicating screws, detach Fan Motor and Blower from the set.</p> |  |
| 2 | Control In | <p>1) After disassembling 1 Indicating screw, detach the Cover control. (Use +Screw Driver.)</p> <p>2) Detach the Motor-Fan and Sensor Connector from the PCB.</p> |    |




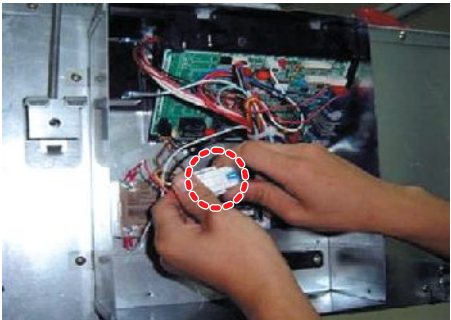
| No | Parts | Procedure | Remark |
|----|-----------|---|--|
| | | <p>3) Disassemble 4 indicating screws and detach Control In from the set. (Use +Screw Driver.)</p> |  |
| 3 | Drain Pan | <p>※ Work is possible when Disassembling the Ass'y Cabi Bottom Blower.</p> <p>1) Disassemble 7 indicating screws and detach Ass'y Cabi Bottom Drain. (Use +Screw Driver.)</p> |  |

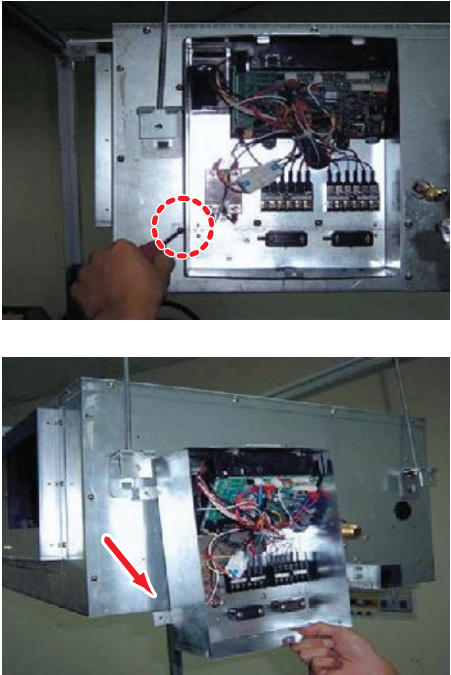
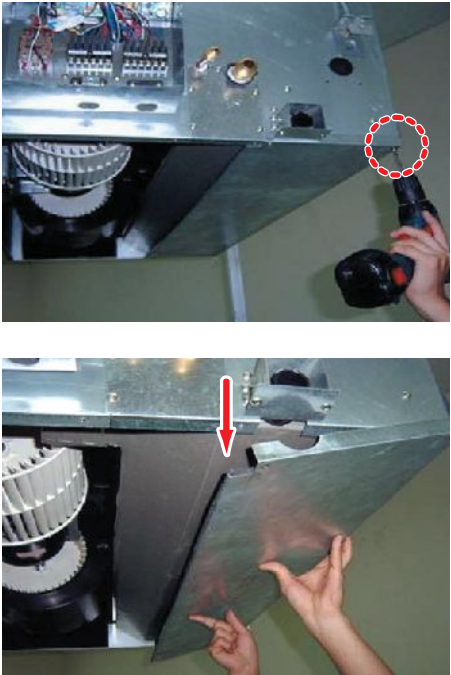
| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>2) Disassemble 2 indicating screws and detach Holder Pipe. (Use +Screw Driver.)</p> <p>3) Disassemble 4 indicating screws and detach the Drain Pan. (2 screws each at left and right side) (Use +Screw Driver.)</p> |  |

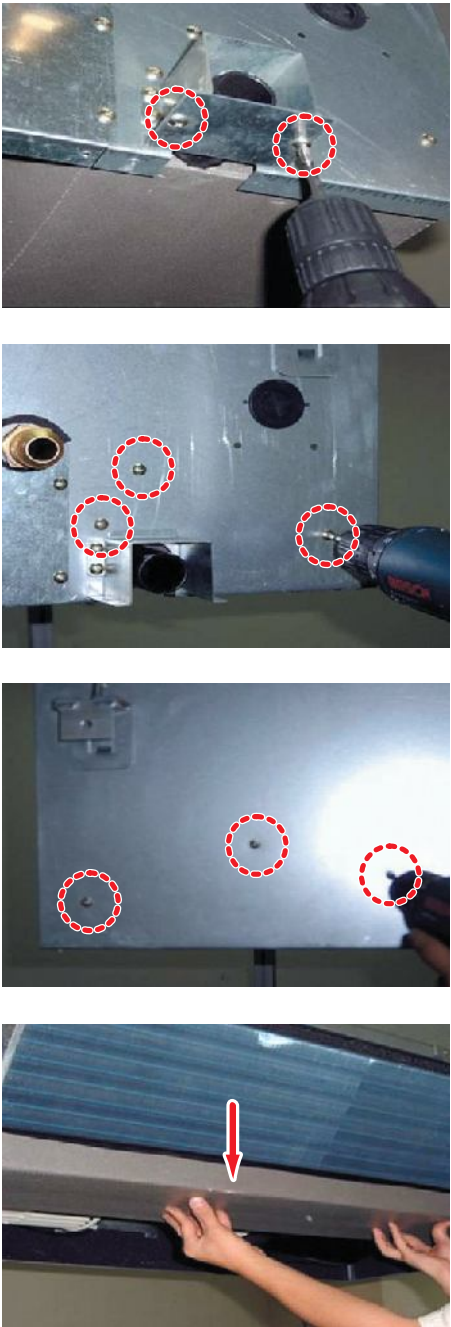
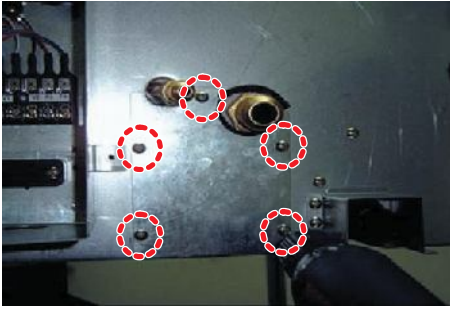
| No | Parts | Procedure | Remark |
|----|-------|---|---|
| 4 | Evap | <p>Work is possible when Disassembling the Ass'y Drain Pan.</p> <p>1) Disassemble 5 indicating screws to detach Cover Pipe.(Use +Screw Driver.)</p> <p>2) Disassemble Sensor on the Evap.</p> <p>3) Disassemble 4 indicating screws which are in the near of Hanger Plate to detach the Evap. (2 screws each at left and right side) (Use +Screw Driver.)</p> <p>⚠ It needs 2 peoples.</p> |      |

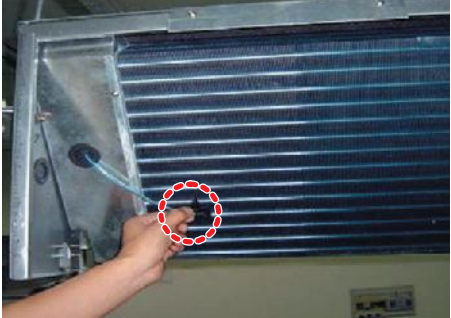


■ Duct type (Mid Pressure2, High Pressure)

| No | Parts | Procedure | Remark |
|----|----------------|--|--|
| 1 | Blower & Motor | <p>1) After disassembling 15 places indicating screws, detach Ass'y Cabi Bottom Blower. (Use +Screw Driver.)</p> <p>2) Detach from Ass'y Control In the capacitor connection wire between the Motor Fan and housing connector.</p> <p>3) After disassembling 4 places indicating screws, detach the 2 Fan Case. (Use +Screw Driver.)</p> |     |

| No | Parts | Procedure | Remark |
|----|-----------|--|---|
| | | 4) After disassembling 2 places indicating screws, detach Fan Motor and Blower from the set. (Use +Screw Driver.) |  |
| 3 | Drain Pan | 1) After disassembling 1 Indicating screw, detach the Cover control.(Use +Screw Driver.) 2) Detach the Motor-Fan and Sensor Connector from the PCB. |    |

| No | Parts | Procedure | Remark |
|----|-----------|---|---|
| | | <p>3) Disassemble 4 indicating screws and detach Control In from the set. (Use +Screw Driver.)</p> |  |
| 3 | Drain Pan | <p>※ Work is possible when Disassembling the Ass'y Cabi Bottom Blower.</p> <p>1) Disassemble 6 indicating screws and detach Ass'y Cabi Bottom Drain. (Use +Screw Driver.)</p> |  |

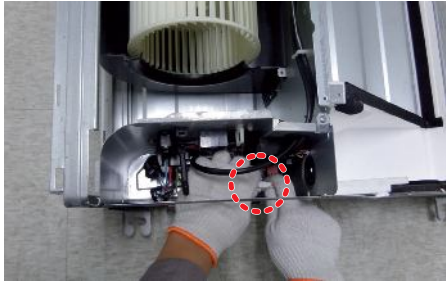
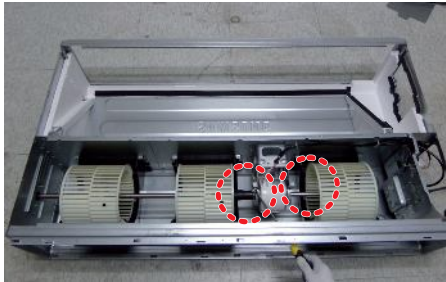

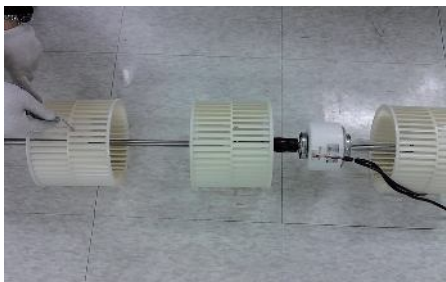

| No | Parts | Procedure | Remark |
|----|-------|--|--|
| | | <p>2) Disassemble 2 indicating screws and detach Holder Pipe. (Use +Screw Driver.)</p> <p>3) Disassemble 6 indicating screws and detach the Drain Pan. (Use +Screw Driver.) (3 screws each at left and right side)</p> |  |
| 4 | Evap | <p>※ Work is possible when Disassembling the Ass'y Cabi Bottom Blower.</p> <p>1) Disassemble 6 indicating screws and detach Ass'y Cabi Bottom Drain. (Use +Screw Driver.)</p> |  |

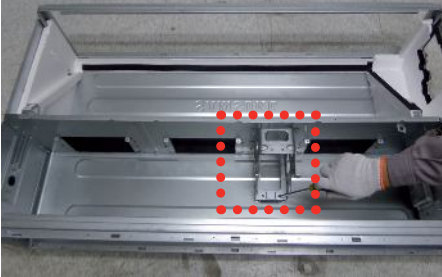


| No | Parts | Procedure | Remark |
|----|-------|--|---|
| | | <p>2) Disassemble Sensor on the Evap.</p> <p>3) Disassemble 2 indicating screws which are in the near of Hanger Plate to detach the Evap. (1 screw each at left and right side)</p> <p>⚠ It needs 2 peoples.</p> |    |

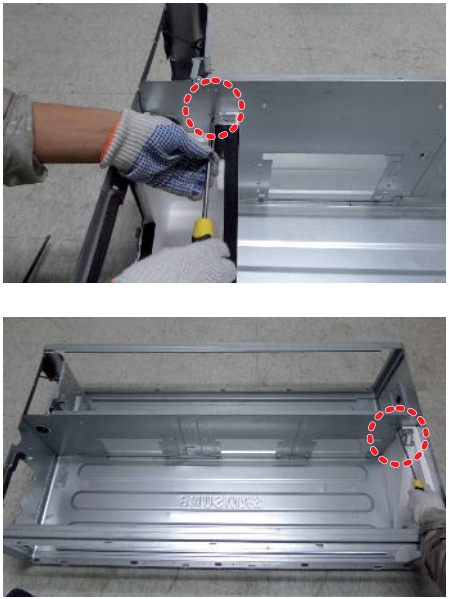
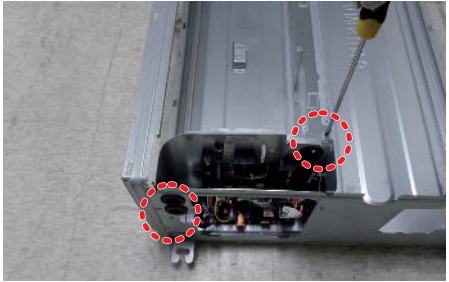
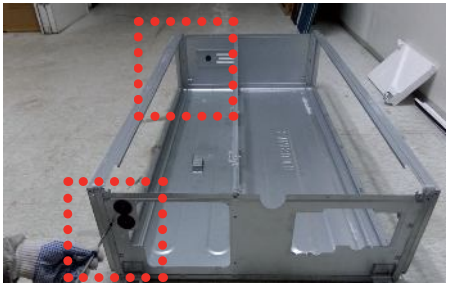
**AM036/045/056/071/090/112/128/140HNMPKH,
AM112/128/140HNHPKH/EU**

| No | Parts | Procedure | Remark |
|----|--------|--|---|
| 1 | Common | <p>1)Disassemble the Cabinet Bottom Fan. - Unscrew 11 screws</p> <p>⚠ You must turn off the Power before disassembly.</p> <p>2)Disassemble the Case Filter Pre.</p> <p>3)Disassemble the Cover Control. - Unscrew 2 screws</p> <p>4)Disassemble the Cabinet Bottom Evap. - Unscrew 8 screws</p> |     |

| No | Parts | Procedure | Remark |
|----|------------------|--|---|
| 2 | Drain Pan & Evap | <p>1)Disassemble the Drain Pan from the set.</p> <p>2)Disassemble the 3 Case Blower Bottom. - Unscrew 6 screws</p> <p>3)Disassemble the Cover Pipe. - Unscrew 2 screws</p> <p>4)Disassemble the Support Evap. - Unscrew 1 screws</p> <p>5)Disassemble the Evap. - Unscrew 3 screws</p> |      |

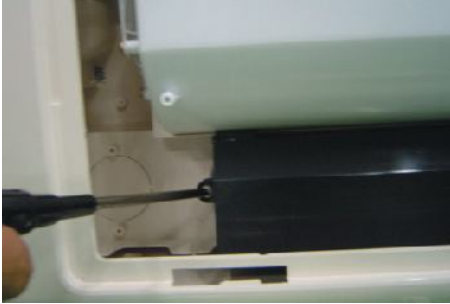
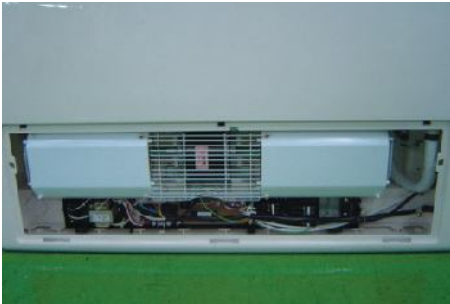


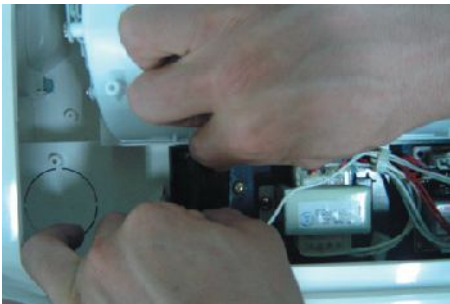
| No | Parts | Procedure | Remark |
|----|-------------|---|---|
| 3 | Motor & Fan | <p>1)Disassembl the connection wire,the take the Motor Fan out</p> <p>2)Disassemble the 2 Holder Motor. - Unscrew 2 screws</p> <p>3)After disassembling the Motor and Blower for the set, disassemble the Blower by use of 3mm wrench.</p> <p>4)Disassemble the 3 Case Blower Top. - Unscrew 6 screws</p> |      |

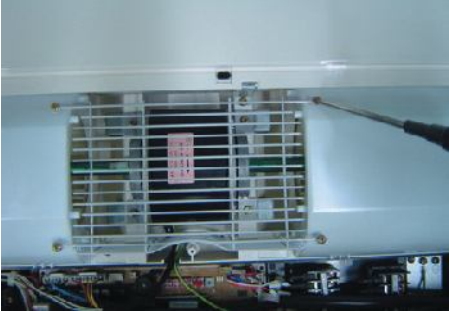
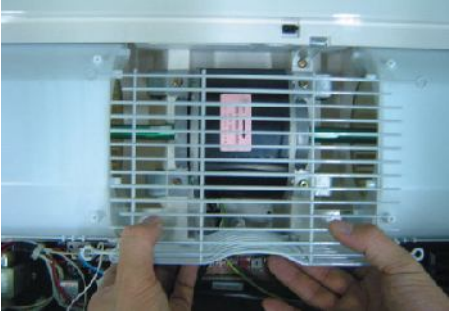


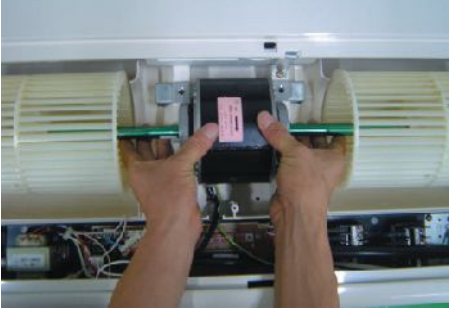
| No | Parts | Procedure | Remark |
|----|-------|--|---|
| | | <p>5)Disassemble the Bracket Motor. - Unscrew 6 screws</p> <p>6)Disassemble the 3 Case Blower Out - Unscrew 6 screws</p> |    |

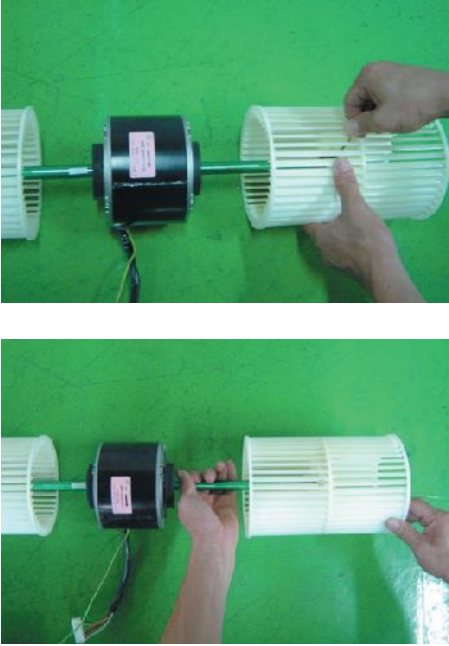

| No | Parts | Procedure | Remark |
|----|---------|---|--|
| 4 | Cushion | 1)Disassemble the Assy Cushion Right. - Unscrew 1 screws 2)Disassemble the Seal Cushion LF. - Unscrew 1 screws |  |
| 5 | Control | 1)Disassemble the Case Control. - Unscrew 2screws |  |
| 6 | Frame | 1)Disassemble the Frame. - Unscrew 6 screws |  |






■ CEILING

| No | Parts | Procedure | Remark |
|----|-----------------|---|---|
| 1 | Electrical Part | <p>1) Open the Grille by pressing 3 position. (center and both side)</p> <p>2) Detach the Air Inlet Grille.</p> <p>3) Open the Cover of Component Electrical Box by removing 3 screws. (center and both side)</p> |     |

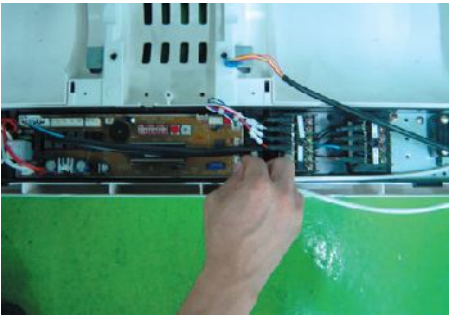




| No | Parts | Procedure | Remark |
|----|-------------|---|--|
| | | |   |
| 2 | Fan & Motor | <p>1) Detach the screw and untie earth wire of Motor.</p> <p>2) Disconnect of housing of Motor Wire.</p> <p>3) Disconnect the Capacitor Wire.</p> |    |


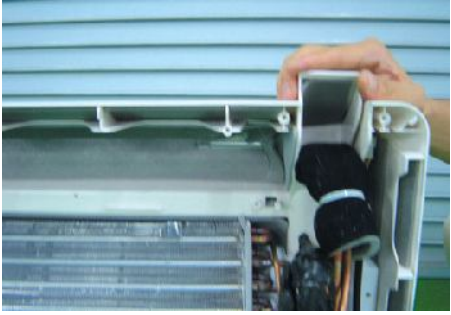

| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>4) Loosen the Guard Safety by removing 6 screws.</p> <p>5) Detach the Upper Case of Fan. (2EA)</p> <p>6) Loosen the 4 screws what is fix the Motor.</p> <p>7) Detach the Fan and Motor assembly.</p> |      |



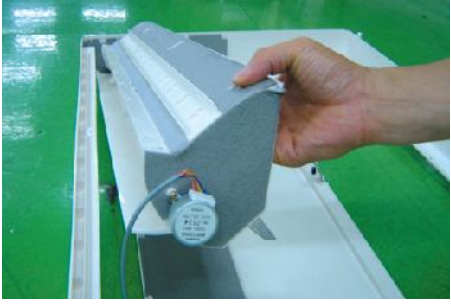
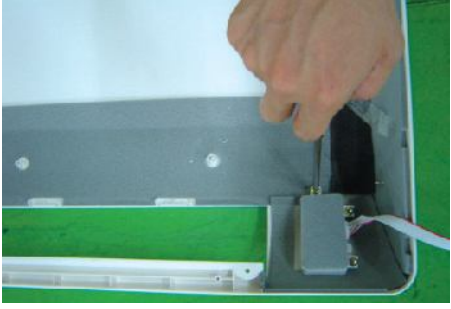
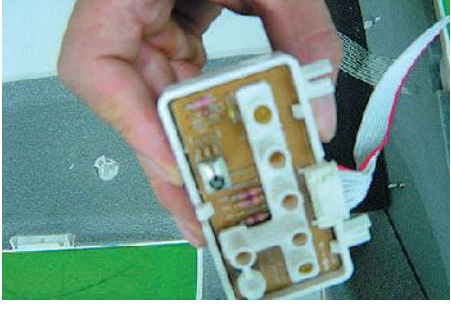
| No | Parts | Procedure | Remark |
|----|-----------|---|---|
| | | <p>8) Loosen the set fixing bolts. (with a M3 wrench)</p> <p>9) Detach the Fan.</p> |  <p>The first photograph shows a person using a green M3 wrench to loosen a bolt on a black motor assembly. The second photograph shows the person pulling the white fan housing away from the motor.</p> |
| 3 | Drain Pan | <p>1) Disconnect the Display PCB Wire as shown in picture. (white housing)</p> <p>2) Disconnect the Step Motor Wire as shown in picture. (blue housing)</p> <p>3) Disassemble the Hanger Bracket by removing the 1 screw.</p> |  <p>The first photograph shows a hand disconnecting a multi-colored wire from a display PCB. The second photograph shows a hand disconnecting a blue and yellow wire from a step motor. The third photograph shows the interior of a white plastic housing with a hanger bracket being removed.</p> |

| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>4) Loosen the 3 screws of Front Side.</p> <p>5) Disassemble the assembly Front Cover Part.</p> <p>6) Disconnect the Step Motor Wire as shown in picture.</p> <p>7) Detach the Wire Clamp fixed in Base Part.</p> <p>8) Detach the Front Cover assembly completely.</p> |      |

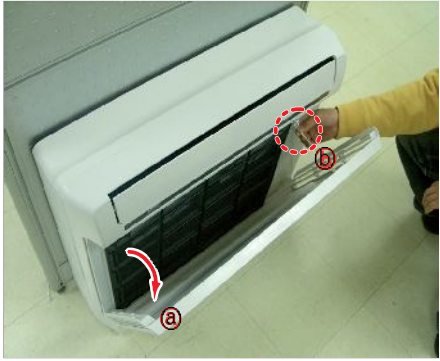


| No | Parts | Procedure | Remark |
|----|-------|--|---|
| | | <p>9) Loosen the screw what is fix with Base Part and Drain Pan. (Upper Side:2EA)</p> <p>10) Loosen the screw what is fix with Base Part and Drain Pan. (Lower Side:2EA)</p> <p>11) Detach the Drain Pan completely.</p> |    |

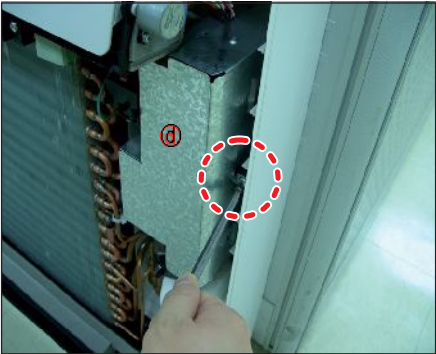

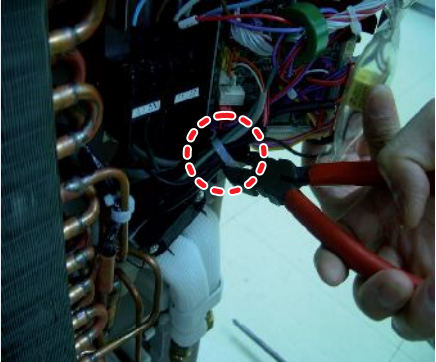
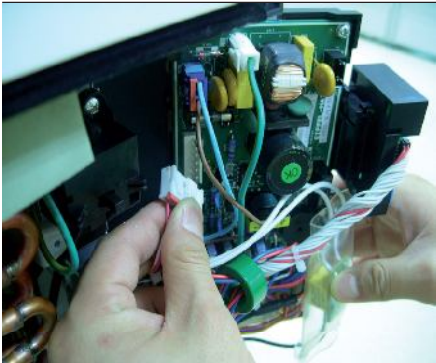
| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>1) Disconnect the Thermistor Wire as shown in picture. (white housing)</p> <p>2) Loosen the 2 screws shown in picture.</p> <p>3) Loosen the 2 screws shown in picture and remove Plastic Part. (white)</p> <p>4) Loosen the 2 screws shown in picture and remove Steel Bracket.</p> <p>5) Disassemble the 4 screws Steel Plate in rear side of the unit.</p> |      |

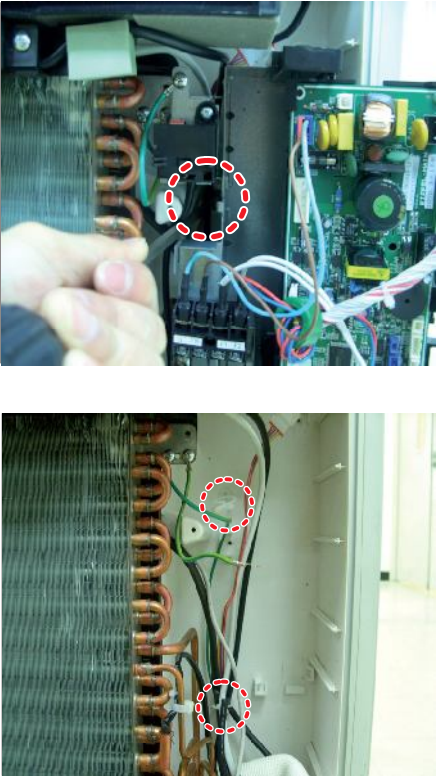
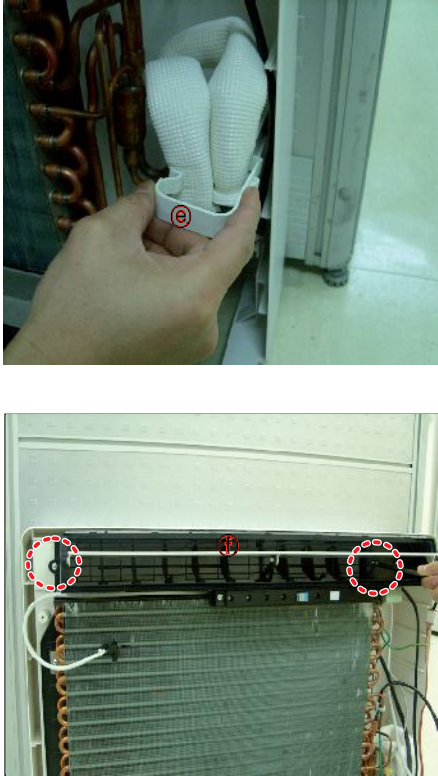
| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>6 Loosen the 2 screws as shown in picture.</p> <p>7) Detach the Plastic Cover as shown in picture.</p> <p>8) Detach the Evaporator assembly.</p> |    |

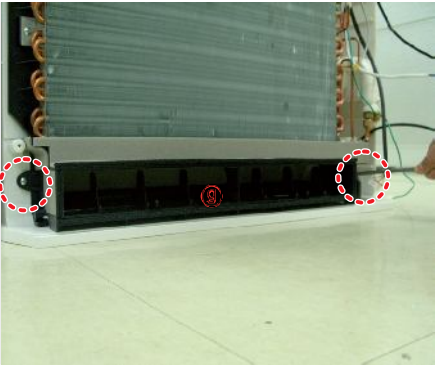
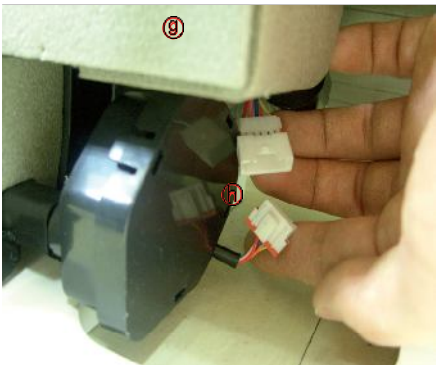

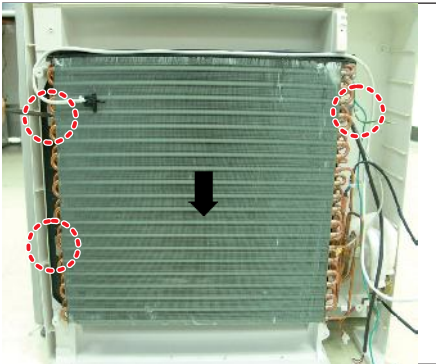
| No | Parts | Procedure | Remark |
|----|----------------|---|---|
| 5 | Stepping Motor | <ol style="list-style-type: none"> 1) Loosen the 4 screws in rear side of Front Cover assembly as shown in picture. 2) Loosen the 2 screws as shown in picture. 3) Disassemble the Blade and Stepping Motor assembly and remove the 2 Screws Stepping Motor. |    |
| 6 | Display PCB | <ol style="list-style-type: none"> 1) Loosen the 3 screws in rear side of Front Cover assembly as shown in picture. 2) Disassemble Display PCB assembly and Disconnect Wire. 3) Disassemble the Display PCB. |   |



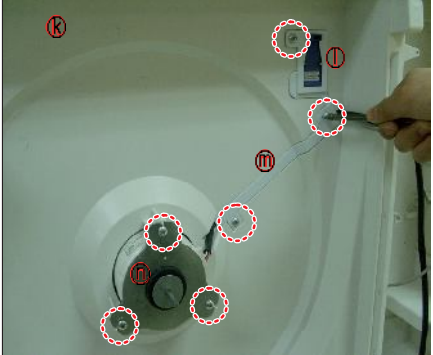

■ CONSOLE

| No | Parts | Procedure | Remark |
|----|------------|---|---|
| 1 | Cabi Parts | <p>1) Open the Panel Front(㉓). Remove the Clip Wire(㉔).</p> <p>2) Release 4 screws on the Body Front(㉕).</p> <p>3) Open the Body Front(㉕) by pulling from bottom of the part.</p> |    |

| No | Parts | Procedure | Remark |
|----|------------------|--|--|
| 2 | Electrical Parts | <p>1) Open the cover of Control Box (①).</p> <p>2) Pull the PBA out along the slide guide.</p> <p>3) Cut the Cable tie.</p> <p>4) Pull all wires out from the PBA.</p> |     |


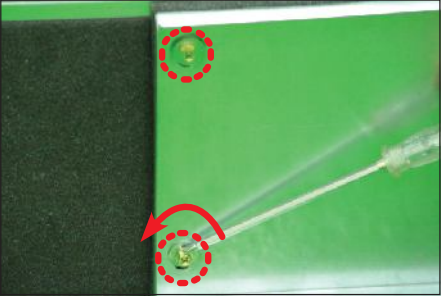

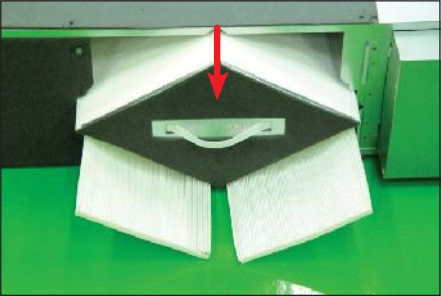

| No | Parts | Procedure | Remark |
|----|---------------------|--|--|
| | | <p>5) Release the 2 screws. (one is top of the C-Box, the other is left of it)</p> <p>6) Release 2 Hold Wires and pull all wires out from it .</p> |  |
| 3 | Blowing & Evap Part | <p>1) Pull the Bracket Pipe (Ⓔ) out.</p> <p>2) Release 2 screws and pull Top Discharge Kit (Ⓘ) out.</p> |  |



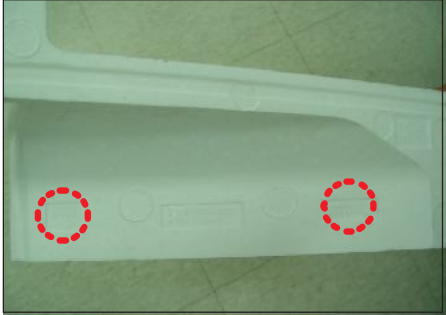

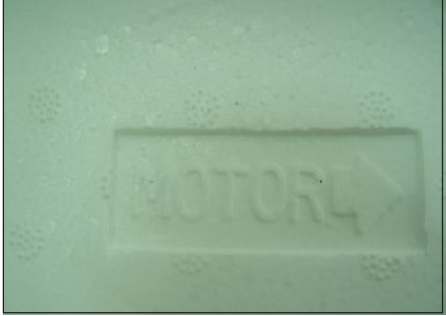
| No | Parts | Procedure | Remark |
|----|-------|--|--|
| | | <p>3) Release 2 screws and pull Bottom Discharge Kit(㉑) out.</p> <p>4) Disconnect the Step Motor wire(㉒) from the conect wire . This part is right side of the Bottom Discharge Kit(㉑).</p> <p>5) Pull Bottom Discharge Kit(㉑) Out from the bottom of it.</p> <p>6) Release 3 screws and pull the Evap out from top to bottom direction.</p> |     |

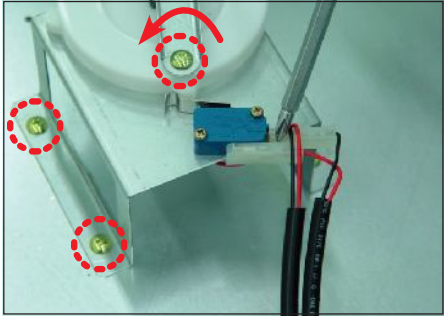
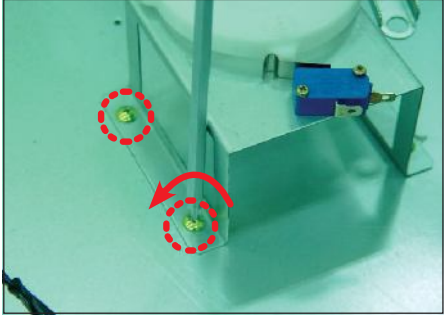
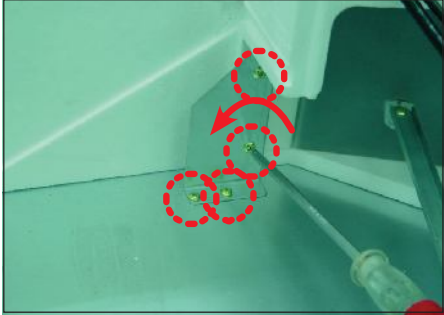
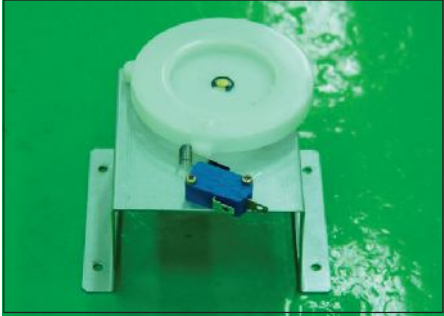

| No | Parts | Procedure | Remark |
|----|----------|---|--|
| 4 | Fan Part | <p>1) Release 1 screw and pull the Bell Mouth (①) out.</p> <p>2) Release the Nut and pull Fan Turbo (①) out.</p> <p>3) Release 6 screw on the Body Back (㉔). Pull the Cap MPI (①), Bracket Wire (㉓) and Bracket Motor (㉒) out.</p> <p>4) Pull the MPI Kit (㉑) and Motor</p> |     |

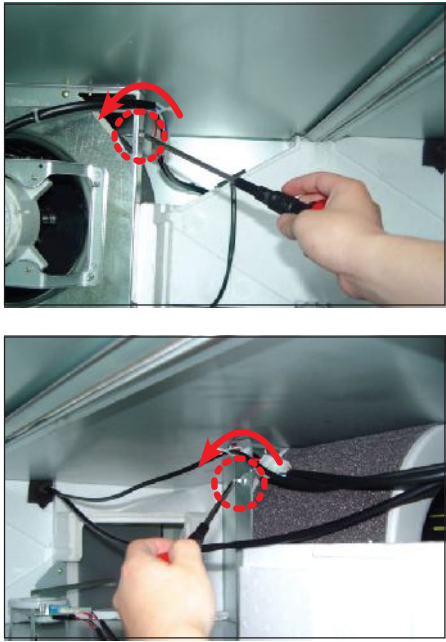
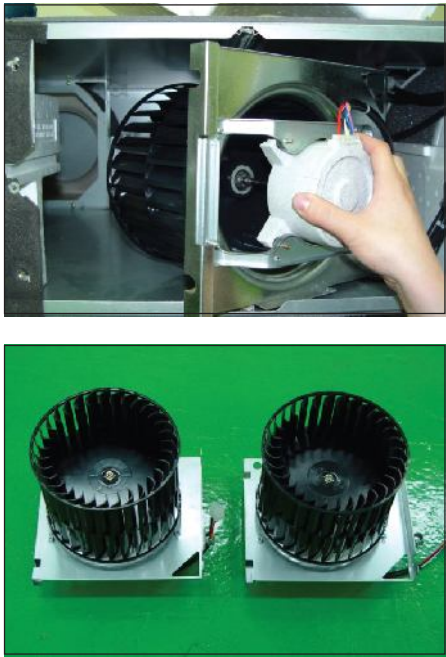
■ ERV PLUS

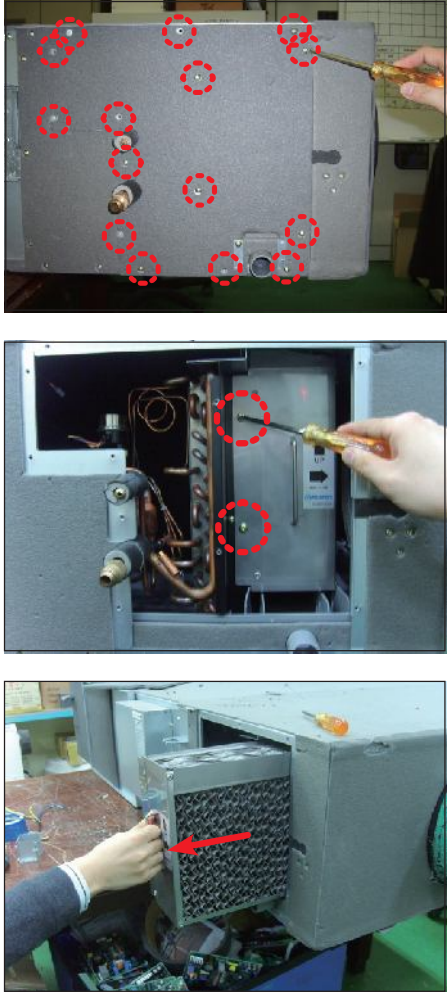
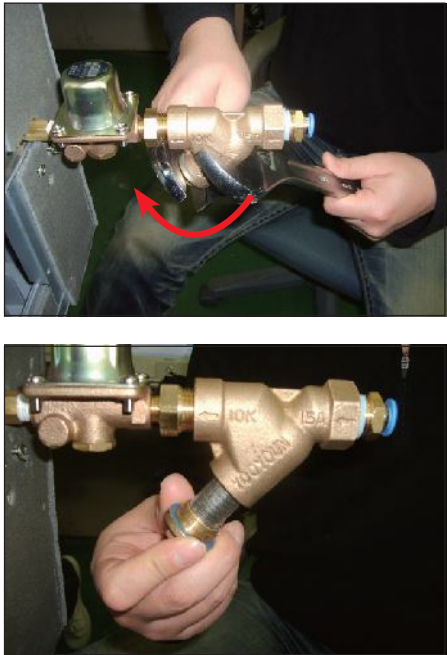
– All the procedure has to be verified because the cover should not open when the unit is installed.

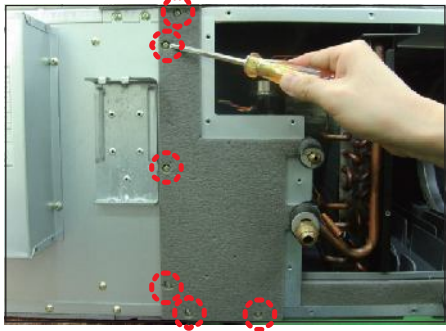


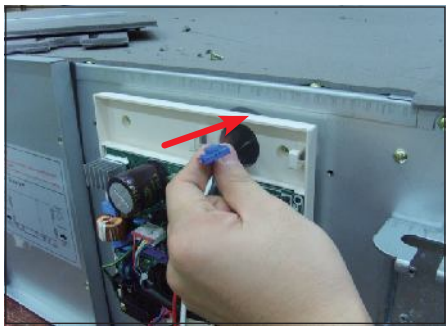

| No | Parts | Procedure | Remark |
|----|-------------------------------------|---|--|
| 1 | ERV (Energy Recovery Ventilator) | 1) Stop the air conditioner operation and shut off the main power. 2) Remove the unit from ceiling suspension. (Disassembly is not required when Fan, Motor, Element, Filter replacement or cleaning.) |  |
| 2 | Cover Element | 1) Remove the 2 bolts of the Cover Element. (Use +Screw Driver.) 2) Find the Element and 2 Dust Filters. |   |
| 3 | Ass'y Element Ass'y Filter | 1) Detach Element and Filter from the unit. Make sure detach the Filter before the Element. 2) There are 2 Element within the product. |   |


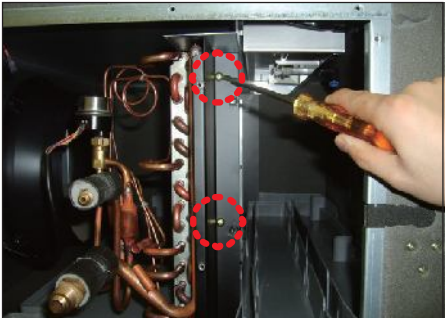
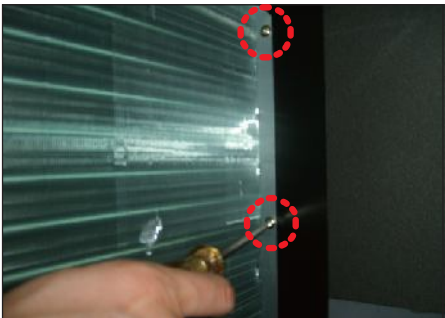
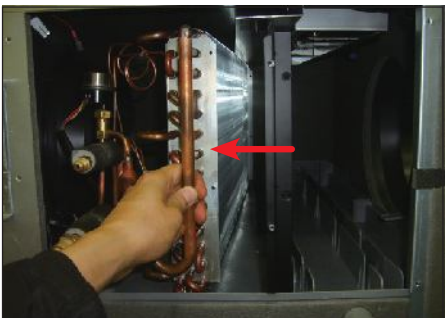

| No | Parts | Procedure | Remark |
|----|-------------|--|---|
| 6 | Cushion Mid | <p>1) As seen in the picture besides, pull out the EPS structure located at the center of exhaust air and supply air.</p> <p>2) Pull out the EPS structure through the inspection hole.</p> <p>3) Assemble the product by adjusting it with the direction, following the direction carved on the surface of Cushion Mid. Put the part written with Down ↓ downwards and put the part with Motor → towards the Motor when assembling the unit.</p> <p>⚠ Make sure not to break down EPS structure.</p> |      |

| No | Parts | Procedure | Remark |
|----|-------------------------|--|---|
| 7 | Connector Damper Cam | <ol style="list-style-type: none"> 1) Separate the Damper from the unit. (Use +Screw Driver.) 2) Separate the connectors by holding their bodies and pulling them out. 3) Unscrew bolts attached to Bracket and Cam. (Use +Screw Driver.) |      |

| No | Parts | Procedure | Remark |
|----|---------------------|--|---|
| 8 | Ass'y Fan Parts | <p>⚠ Ensure to separate the Damper before the Fan.</p> <p>1) Rotate bolts fixing the Bracket 10 turns. Input and outlet of the products have 2 bolts each. (Use +Screw Driver.)</p> <p>⚠ The bolts are not required to be removed.</p> |  |
| 9 | Ass'y Bracket Motor | <p>1) Detach the whole Ass'y Blower Motor (which is made up of Fan, Motor, Bracket Motor, and Cover Bell Mouse) through the inspection hole.</p> <p>2) 2 Motors are placed within the unit for supply air and exhaust air.</p> |  |

| No | Parts | Procedure | Remark |
|----|---------------------------|---|--|
| 11 | Element Etc Humidifier | <p>1) Unscrew 15 screws from the Cover Humid to separate them from the product.</p> <p>2) Unscrew 2 screws from the Element Humidifier.</p> <p>3) Hold the handle of the Element Humidifier and pull to the direction indicated by the arrow to separate it from the product.</p> |  |
| 12 | Ass'y Flow Valve | <p>1) Use 2 monkey spanners to hold the Ass'y Flow Valve as shown in the image, and rotate the monkey spanner on the right hand to the direction indicated by the arrow to unscrew the plug.</p> <p>2) Completely separate the plug by hand and remove foreign substances.</p> |  |

| No | Parts | Procedure | Remark |
|----|------------------|---|---|
| 13 | Ass'y Evap Parts | <ol style="list-style-type: none"> 1) Unscrew 6 screws from the Cover Evap to separate them from the product. 2) Unscrew 4 screws from the Case PCB to separate them from the product. 3) Separate the PCB connection housing of the Valve Expan and move the housing as shown in the picture. |      |

| No | Parts | Procedure | Remark |
|----|-------|--|---|
| | | <p>4) Separate the 2 thermal sensors attached to Ass'y Evap.</p> <p>5) Unscrew 2 screws from the Support Evap L.</p> <p>6) Unscrew 2 screws from the Support Evap R.</p> <p>7) Pull the Ass'y Evap to the direction indicated by the arrow to separate it from the fixed part.</p> <p>8) Hold the end part of the Ass'y Evap and pull to the direction indicated by the arrow to separate it from the product.</p> |      |

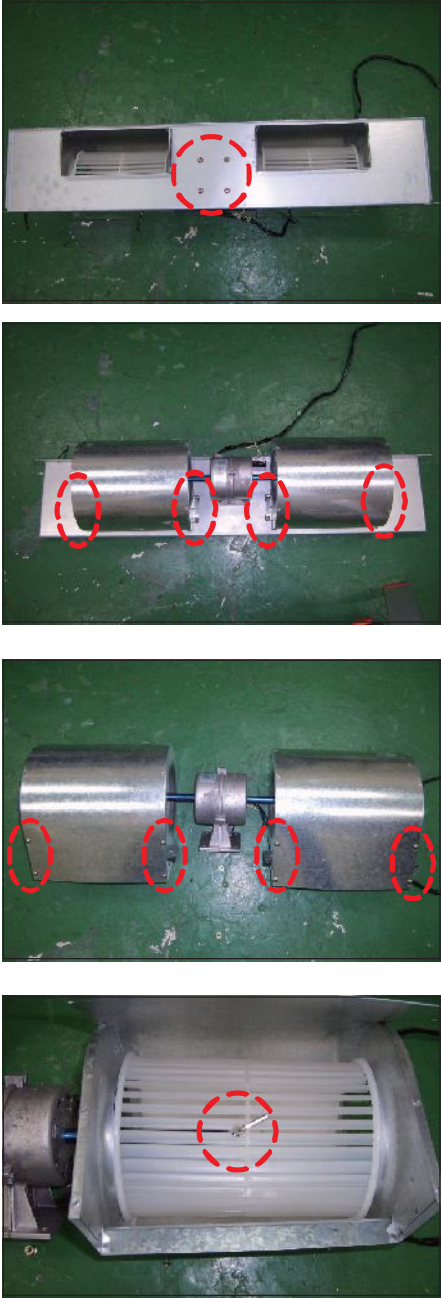
■ Floor Standin Type

– All the procedure has to be verified because the cover should not open when the unit is installed.

| No | Parts | Procedure | Remark |
|----|----------|---|---|
| 1 | Cabinnet | <p>1) Unscrew fixed screw of the upper part cabinet, and please separate</p> <p>2) Please separate front cabinet.</p> |  |

| No | Parts | Procedure | Remark |
|----|----------------|---|--|
| 2 | Heat Exchanger | <p>1) Unscrew two fixed screws, and please separate heat exchanger cover.</p> <p>2) Unscrew fixed screw on both side of heat exchanger plate. And then pulls heat exchanger to the right side, and please separate.</p> |  |
| 3 | Drain Pan | <p>1) Please remove PLATE for fixation of DRAIN PAN located in the side.</p> |  |

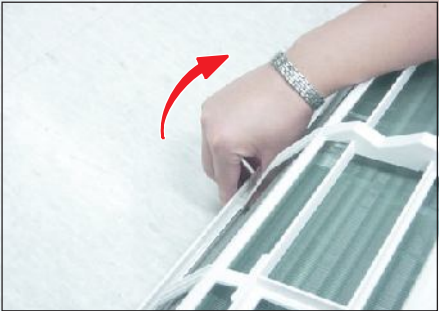
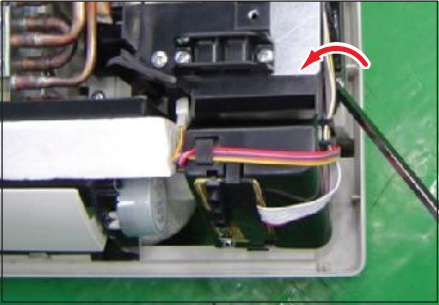
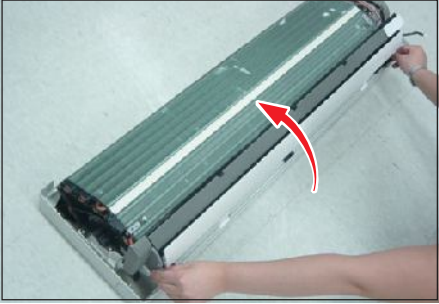
| No | Parts | Procedure | Remark |
|----|-------------|---|---|
| 4 | Motor & Fan | <ol style="list-style-type: none"> 1) Process hopes for DRAIN PAN isolation work in this work earlier. 2) Unscrew MOTOR BRACKET fixation screw located in the front surface, and please separate. 3) Unscrew MOTOR BRACKET fixation screw located in the side, and please separate. 4) Separate out MOTOR BRACKET for front side. |    |


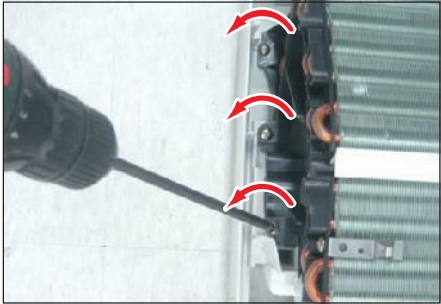
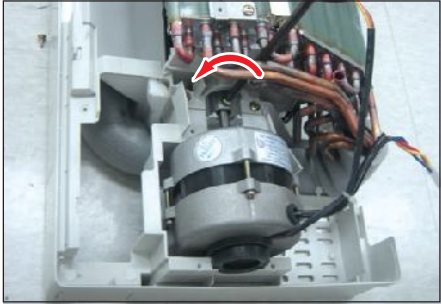
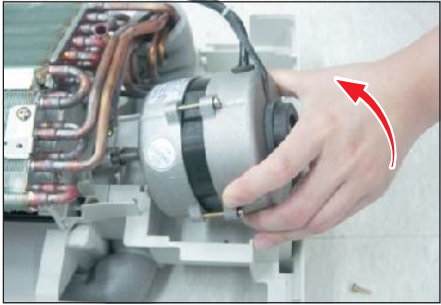
| No | Parts | Procedure | Remark |
|----|-------------|--|---|
| 4 | Motor & Fan | <p>5) Unscrew fixed screw of MOTOR BRACKET and FAN CASING, and please separate.</p> <p>6) Unscrew fixed screw of FAN CASING, and please separate.</p> <p>7) Unscrew FAN and the fixed screw of the MOTOR axis, and please separate. (use Wrench)</p> |  |

■ Wall mount type


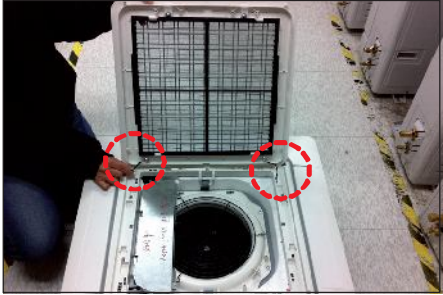

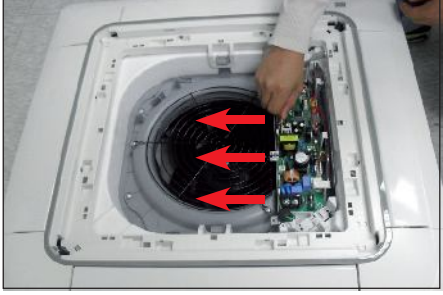

– All the procedure has to be verified because the cover should not open when the unit is installed.

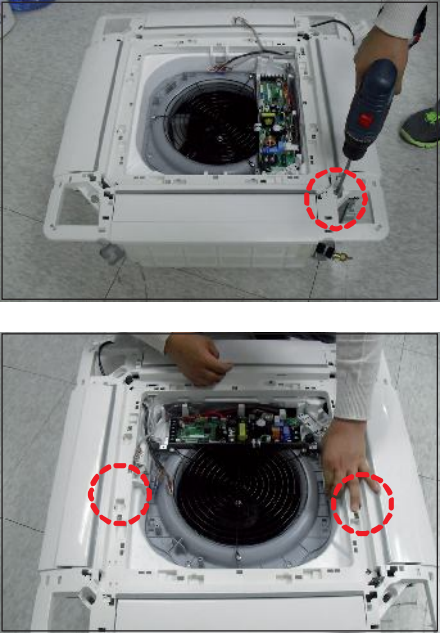
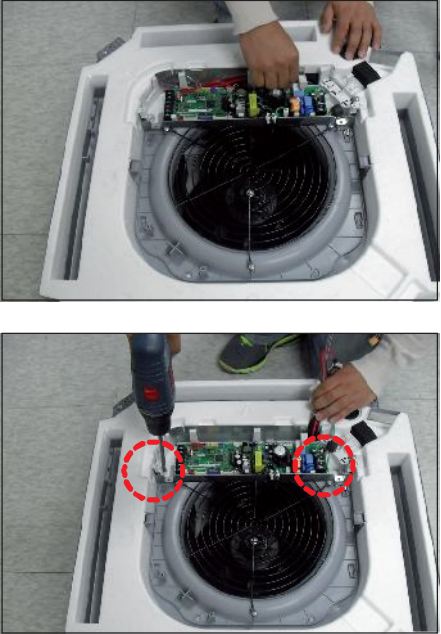
| No | Parts | Procedure | Remark |
|----|--------------|---|---|
| 1 | Front Grille | <ol style="list-style-type: none"> 1) Stop the air conditioner operation and shut off the main power. 2) Open the Front Grille by pulling right and left sides of the hook. 3) Loosen 1 of the right screw(CCW) and detach the Terminal Cover. (Use +Screw Driver.) 4) Detach the thermistor from the Front Grille. 5) Loosen 2 fixing screws(CCW) of Front Grille. 6) Unlock 3 hooks to fix Panel Front and Tray Drain. (Use +Screw Driver.) |      |

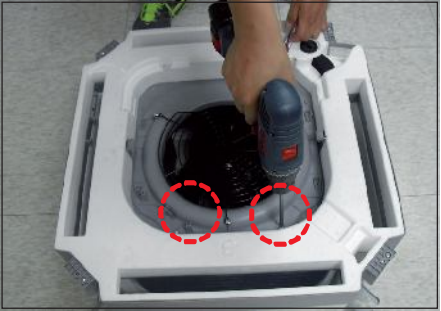
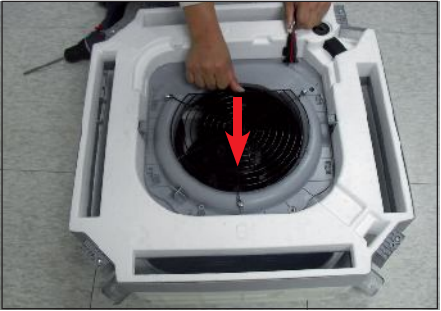
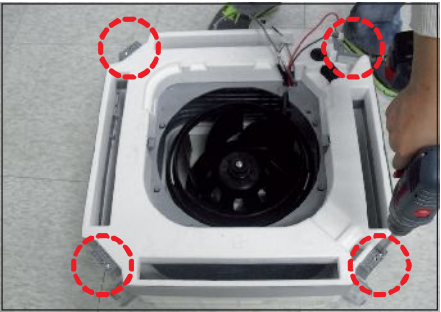

| No | Parts | Procedure | Remark |
|----|-----------------------|--|--|
| | | 7) Unlock 3 hooks to fix Panel Front and Back-Body. |  |
| 2 | Control-In (Main PCB) | 1) Take all the connector of PCB upper side out. (Inclusion Power Cord) 2) Detach the outdoor unit connection wire from the Terminal Block. 3) Loosen 4 fixing screws(CCW) of Ass'y Control-In. (Use +Screw Driver.) ⚠ You can disassembly Ass'y Control In without evaporator disassembled. |  |
| 3 | Tray Drain | 1) Pull Tray Drain out from the Back Body. |  |

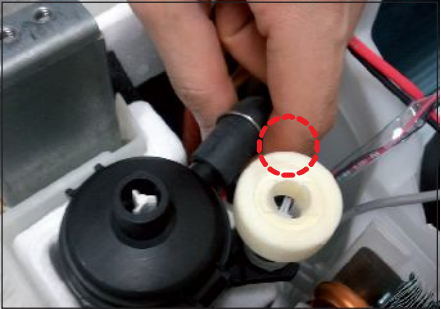

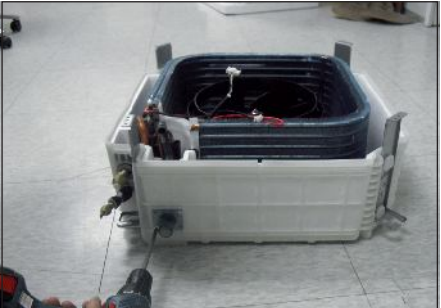
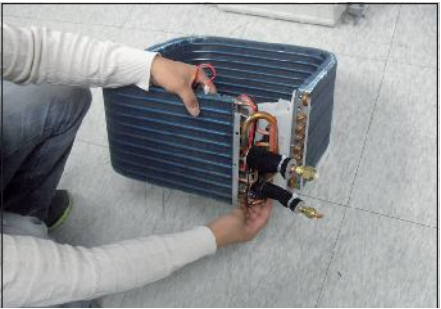
| No | Parts | Procedure | Remark |
|----|-----------------------|---|--|
| 4 | Heat Exchanger | <ol style="list-style-type: none"> 1) Loosen 2 fixing earth screws(CCW) of right side. (Use +Screw Driver.) 2) Detach the Connection Pipe. 3) Detach the Holder Pipe at the rear side. 4) Loosen the 4 fixing screws(CCW) of right and left side. (Use +Screw Driver.) 5) Lifting the Heat Exchanger up a little to push the up side for separation from the indoor unit. <p style="color: red; font-weight: bold;">⚠ First, check Comp. Down and then disconnect the connection pipes before you disassemble the Evaporator from indoor unit.</p> |   |
| 5 | Fan Motor & Cross Fan | <ol style="list-style-type: none"> 1) Loosen the fixing screw(CCW). (Use +Screw Driver.) 2) Detach the Fan Motor from the Fan. 3) Detach the Fan From the left Holder Bearing. |   |


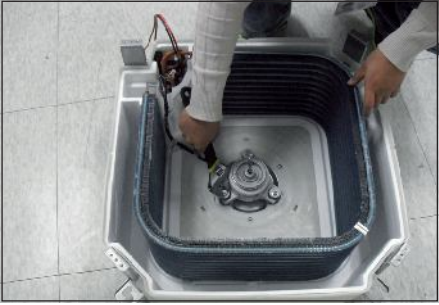



■ Global Mini 4way

| No | Parts | Procedure | Remark |
|----|-------|--|--|
| 1 | Panel | <ol style="list-style-type: none"> 1) Pull both hooks and take the grille downward. Two safety clips are mounted to the front grille to prevent it from dropping. 2) Detach the safety clip and take up the grille. 3) Remove the 2 fixed screws to remove the Control-Box Cover. (Use +Screw Driver) 4) Remove the Remocon-Receiver and Blade Connector Wire from the PBA. (3EA) 5) Push the 4 panel corners and cover downwards to remove it. |      |

| No | Parts | Procedure | Remark |
|----|-------------|--|---|
| | | <p>6) Disassemble the bolts that are assembled with the indoor unit at the 4 panel corners.</p> <p>7) Press the Hangers at both sides of the panel inwards, to remove it from the indoor unit's hook. Remove the panel from the indoor unit.</p> |  |
| 2 | Control-Box | <p>1) Disconnect the Connector Wire that is connected to the indoor unit's PBA</p> <p>2) Unscrew the 2 fixed screws on both sides of the Control Box, and disassemble the Control Box from the indoor unit. (Use +Screw Driver)</p> |  |

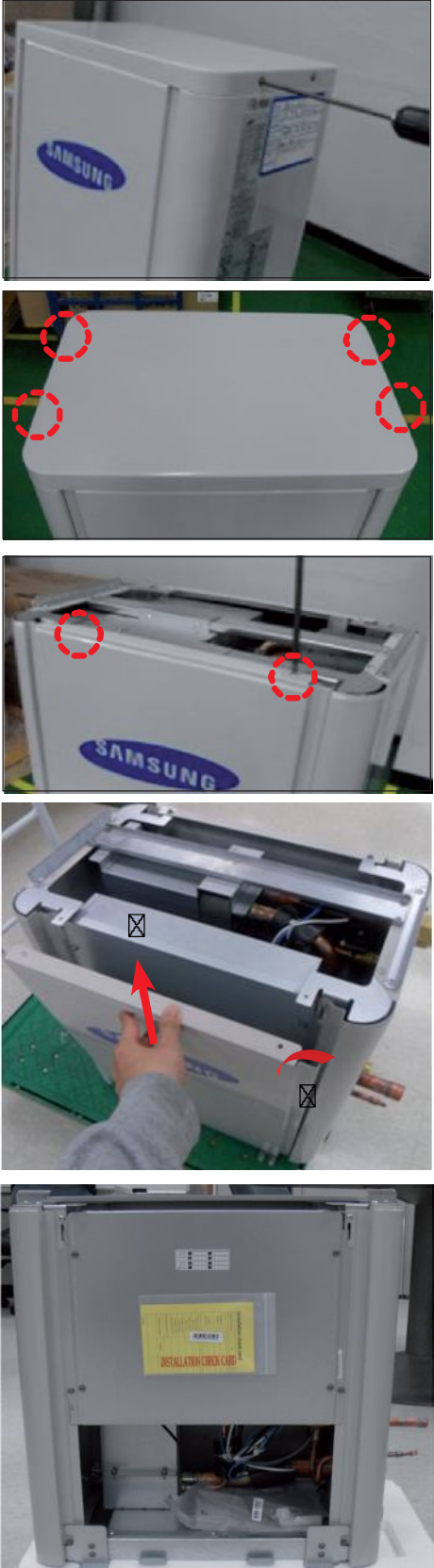
| No | Parts | Procedure | Remark |
|----|------------|---|---|
| 3 | Bell-Mouth | <p>1) Unscrew the screw fixed on the Bell-Mouth. (Use +Screw Driver)</p> <p>2) Push the Bell-Mouth in the direction opposite to where it's installed on the Control-Box to remove it.</p> |   |
| 4 | Drain Pan | <p>1) Unscrew the screws on the 4 corners of the indoor unit. (Use +Screw Driver)</p> <p>2) Remove the Drain Pan from the indoor unit.</p> |   |

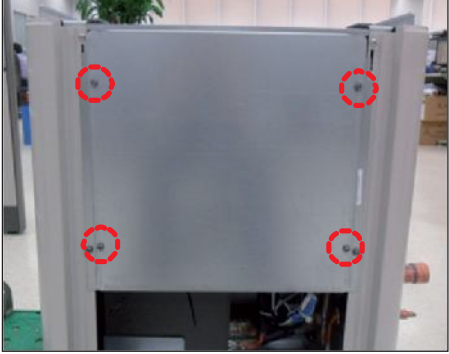
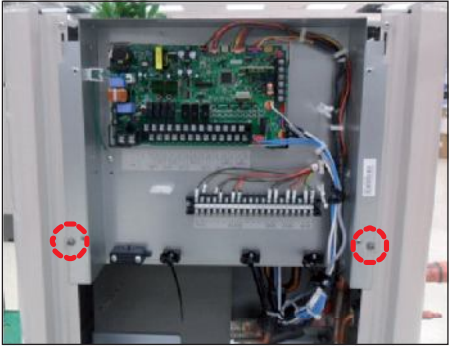

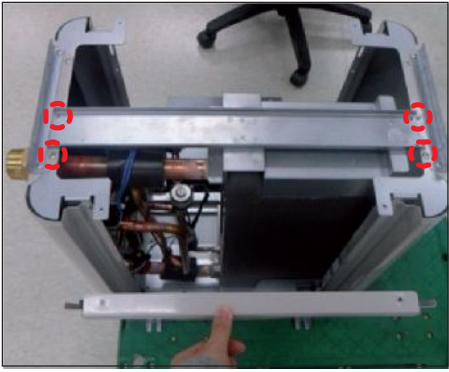
| No | Parts | Procedure | Remark |
|----|--------------------------|--|---|
| 5 | Drain Pump & Hose | <p>1) Remove the 2 fixed screws and disconnect the white drainage hose from the Drain Pump. (Use +Screw Driver)</p> <p>2) Remove the 2 screws and take the Drain-Hose out from the indoor unit to disassemble the transparent Drain-Hose fixed on the side of the indoor unit. (Use +Screw Driver)</p> |    |
| 6 | Evap. Temperature Sensor | <p>1) Use your hand to remove the temperature sensor attached to the Evap Pipe along with the fixing clip.</p> |  |

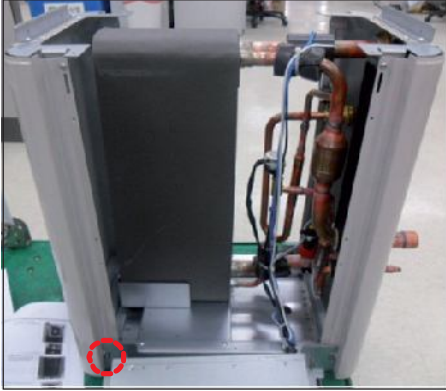
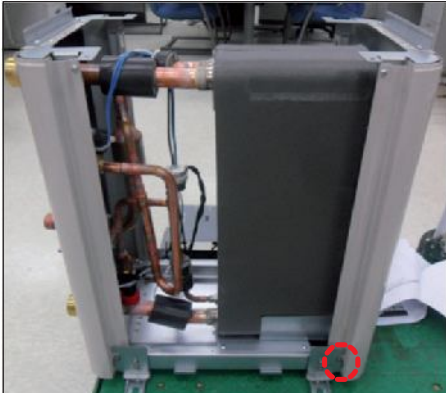
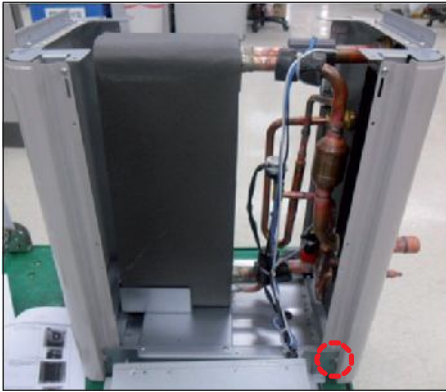
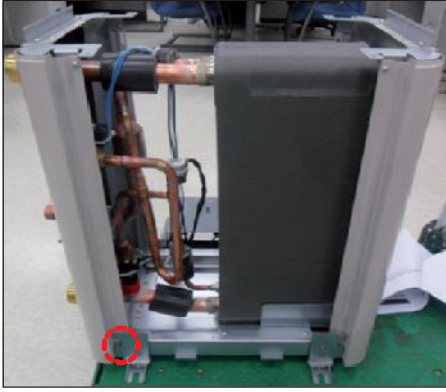
| No | Parts | Procedure | Remark |
|----|-------------|---|---|
| 7 | Fan & Motor | <p>1) Turn the hexagonal nut attached to the top of the Fan counterclockwise to remove it. Take the Fan out of the Motor.</p> <p>2) Turn the three hexagonal nuts on the Motor counterclockwise to remove the nuts. Take the Motor Wires attached to these three locations out with your hands prior to removing the Motor.</p> |    |
| 8 | Evaporator | <p>1) Remove the screws of the Steel Holder Evaps that are used to fix the Heat Exchanger, and then remove it. (Use +Screw Driver)</p> <p>2) Remove the 2 fixing screws of the Partition Evap at the Heat Exchanger's In/Out Pipe. (Use +Screw Driver)</p> |   |


| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>3) Remove the screw of the Cover Pipe that is used to fix the In/Out Pipe. Remove the In/Out Pipe. (Use +Screw Driver)</p> <p>4) Remove the Heat Exchanger from the indoor unit's cabinet.</p> |    |

■ AM160FNBDEH/320FNBDEH/500FNBDEH


| No | Parts | Procedure | Remark |
|----|---------------------------|---|---|
| 1 | CABINET TOP/FRONT/BACK | <p>⚠ Carried out after shut off the power before disassembly.</p> <p>1) Remove the 4 screws from the left and right of the CABI TOP, and then separate it.</p> <p>2) Remove the 2 screws from the ASSY CABI FRONT upper part and then separate the ASSY CABI FRONT upward after incline CABINET forward.</p> <p>3) Separate the ASSY CABI BACK by method such as ASSY CABI FRONT.</p> |  |






| No | Parts | Procedure | Remark |
|----|---------------|---|---|
| 2 | Control BOX | <p>4) Remove the 4 screws and then pull the COVER CONTROL to upward, and separate it.</p> <p>5) Remove the 2 screws from the ASSY CONTROL BOX.</p> <p>6) Separate the C/BOX from the product.</p> |    |
| 3 | CABINET LF/RH | 7) Remove the 4 screws from the BRACKET COND UP, and separate it. |  |


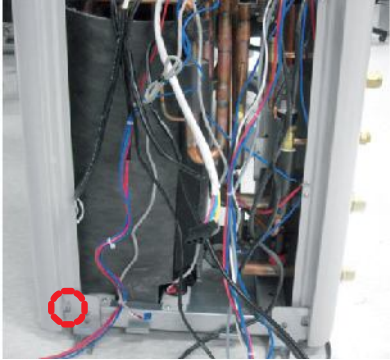

| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>8) Remove the 2 screws from the front and rear and then separate the ASSY CABI LF to side.</p> |   <p>9) Remove the 2 screws from the ASSY CABI RH.</p>   |

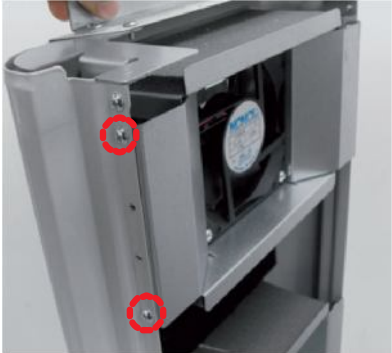
| No | Parts | Procedure | Remark |
|----|----------|---|--|
| 4 | ASSY PHE | 1) Remove the 8 screws from the side of the ASSY CABI RH. |  <p>The top photograph shows the front panel of the ASSY CABI RH with 8 screws circled in red. The panel has labels for 'WATER SET' and 'WATER IN'. The bottom photograph shows the internal components of the ASSY CABI RH, including a large grey component and various pipes and fittings.</p> |


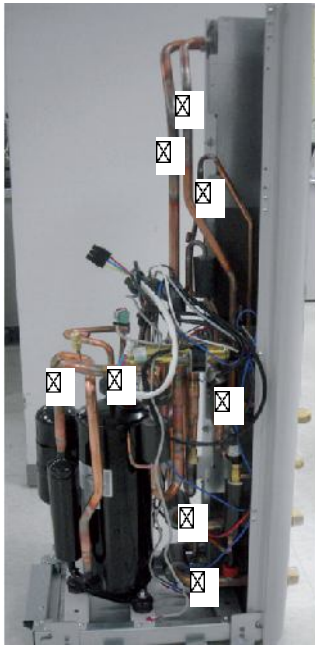
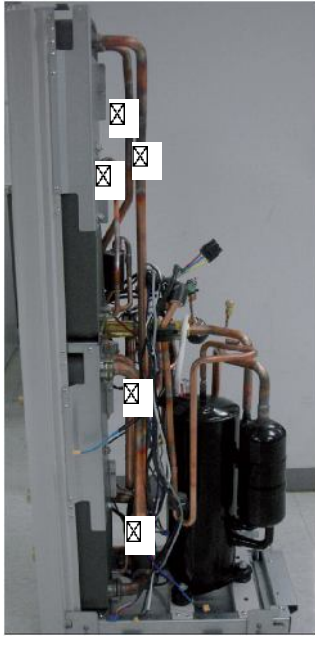
■ AM160/250FNBFEF, AM160/250FNBFGF

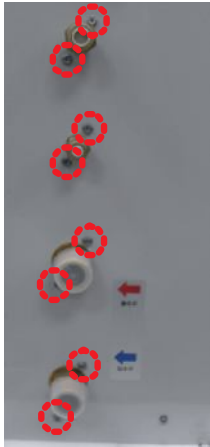
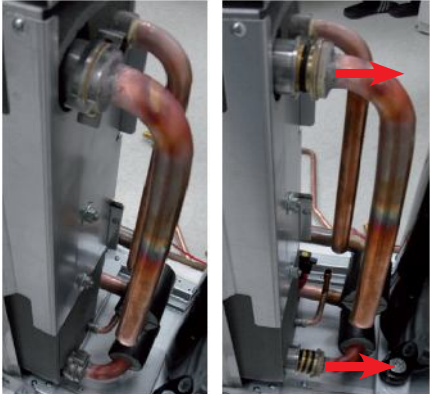
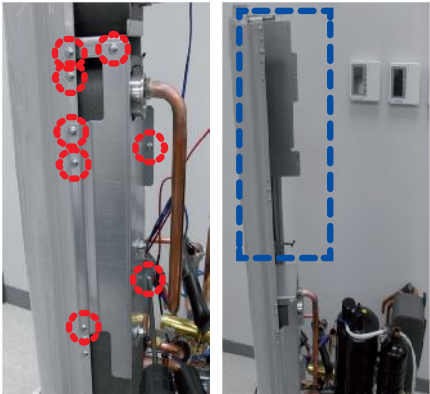

| No | Parts | Procedure | Remark |
|----|---------|---|---|
| 1 | CABINET | <p>⚠ Stop the air conditioner operation and shut off the main power.</p> <p>1) Remove the 4 screws in CABI TOP left/right side and then separate it.</p> <p>2) Remove the 2 screws in ASSY CABI FRONT upper part. Tilt the CABINET forward and then separate upward.</p> <p>3) ASSY CABI BACK separate by method such as upside.</p> <p>4) Remove the 4 screws from COVER CONTROL and then pull it forward.</p> |  |

| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>5) Remove the 2 screws and open the HINGE PBA PLATE.</p> <p>6) Pull the SLIDE PBA and then separate the WIRE CONNECTOR.</p> <p>7) Remove the 6 screws from the ASSY CONTROL BOX.</p> <p>8) Remove the 4 screws from the BRACKET UPPER and separate it.</p> |      |

| No | Parts | Procedure | Remark |
|----|-------|---|---|
| | | <p>9) Loosen the CONDUIT from ASSY CONTROL COOLER IN lower part and then separate the TEMP SENSOR.</p> |  |
| | | <p>10) Remove the 2 screws from front and rear parts. Remove the 2 screws from side part and then separate the ASSY CABI LF in the direction of the side.</p> |  |
| | | <p>11) Replace of REACTOR and FAN is available after remove the ASSY CABI LF.</p> |  |

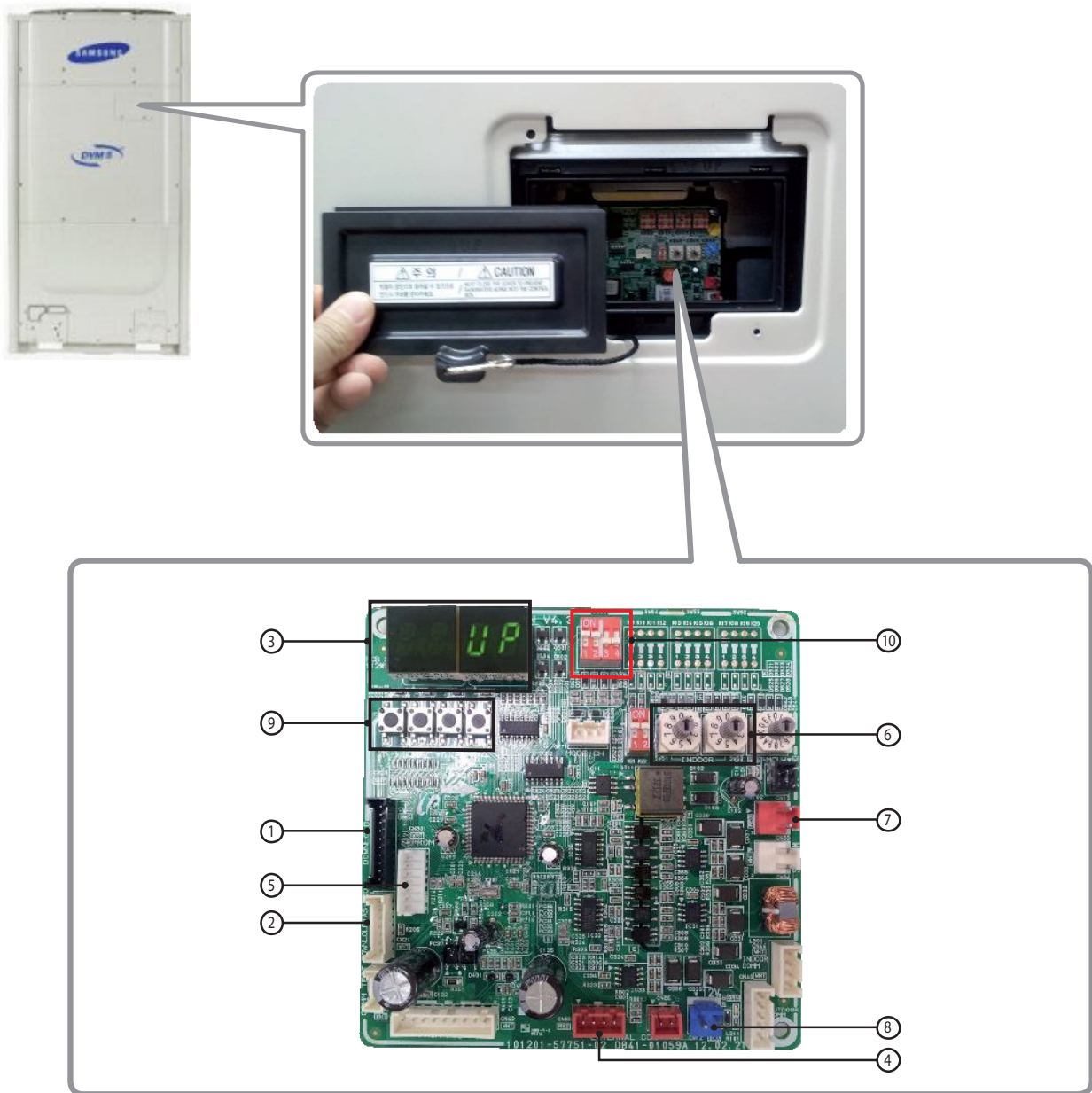
| No | Parts | Procedure | Remark |
|----|-------|--|--|
| | | <p>12) When need CONDUIT control for temperature sensor : Remove the 4 screws in ASSY CONTROL COOLER side.</p> |  |

| No | Parts | Procedure | Remark |
|----|-------|---|--|
| 2 | PIPE | <p>1) Remove the COMP FELT</p> <ul style="list-style-type: none"> ① CLOTH COMP SOUND ② CLOTH COMP TOP ③ FELT COMP SOUND ④ FELT COMP TOP <p>2) When you need to replace parts, weld zone 8 places that should separate.</p> <ul style="list-style-type: none"> ■ Replace the COMP <ul style="list-style-type: none"> ① COMP DISCHARGE ② ACCUM IN ■ Replace the ASSY EVAP <ul style="list-style-type: none"> ③ R134a EVAP IN ④ R134a EVAP OUT ⑤ R410a EVAP IN ⑥ R410a EVAP OUT ■ Replace the ASSY COND <ul style="list-style-type: none"> ⑦ R134a COND IN ⑧ R134a COND OUT <p>⚠ ▶ Separate Pipe by welding machine after extract perfectly refrigerant of Compressor inside in case of separate COMPRESSOR, ASSY COND and PIPE.</p> <p>▶ When replace the ASSY EVAP : Outdoor unit is commissioning (PUMP DOWN the refrigerant) and then separate a pipe using welding machine.</p> |    |

| No | Parts | Procedure | Remark |
|----|------------|---|--|
| 3 | PHE & COMP | <p>1) When separate the water piping and refrigerant nipple : Remove the M5 screws from the ASSY CABI SIDE LH.</p> <p>2) When separate the water piping : Remove the QUICKFASTENER and then moved horizontally and separate it.</p> <p>3) When separate the ASSY COND and ASSY EVAP : Remove the 6 screws from the BRACKET PHE.</p> <p>4) When Replace the COMP : Remove the 3 nuts from the FOOT part.</p> |     |

4. Troubleshooting

4-1 Check-up Window Description



| No. | Function | No. | Function |
|-----|--|-----|---|
| 1 | CN22 download (PC) (SMW200-10 black) | 6 | Set up the number of connected outdoor units |
| 2 | MICOM. download (AS-PRO) (SMW200-07P white) | 7 | For checking indoor unit communication (YW396-02P red) |
| 3 | ERROR DISPLAY | 8 | Transmitter 12V (YW396-02P blue) |
| 4 | State Check (SMW250-04P red) | 9 | Outdoor Unit Tact Switch |
| 5 | EEPROM SOCKET | 10 | Outdoor Unit Dip Switch |

4-2 Service Operation

4-2-1 Special Operation

- ▶ Key input of the outdoor unit when the service enters the operation mode.

| K1 (Number of press) | Key operation | Display on segment |
|-----------------------|---|--------------------|
| 1 time | Refrigerant charging in Heating mode | K, 1, BLANK, BLANK |
| 2 times | Trial operation in Heating mode | K, 2, BLANK, BLANK |
| 3 times | Pump out in Heating mode (Outdoor unit address 1) | K, 3, BLANK, 1 |
| 4 times | Pump out in Heating mode (Outdoor unit address 2) | K, 3, BLANK, 2 |
| 5 times | Pump out in Heating mode (Outdoor unit address 3) | K, 3, BLANK, 3 |
| 6 times | Pump out in Heating mode (Outdoor unit address 4) | K, 3, BLANK, 4 |
| 7 times | Vacuumig (Outdoor unit address 1) | K, 4, BLANK, 1 |
| 8 times | Vacuumig (Outdoor unit address 2) | K, 4, BLANK, 2 |
| 9 times | Vacuumig (Outdoor unit address 3) | K, 4, BLANK, 3 |
| 10 times | Vacuumig (Outdoor unit address 4) | K, 4, BLANK, 4 |
| 11 times | Vacuuming (All outdoor units) | K, 4, BLANK, A |
| 12 times | End Key operation | - |
| Press and hold 1 time | Auto trial operation | K, K, BLANK, BLANK |

| K2 (Number of press) | Key operation | Display on segment |
|----------------------|--|---|
| 1 time | Refrigerant charging in Cooling mode | K, 5, BLANK, BLANK |
| 2 times | Trial operation in Cooling mode | K, 6, BLANK, BLANK |
| 3 times | Pump down all units in Cooling mode | K, 7, BLANK, BLANK |
| 4 times | H/R: Checking the pipe connection H/P: Automatic setting of operation mode (Cooling/Heating) for trail operation | K, 8, BLANK, BLANK |
| 5 times | Checking the amount of refrigerant | K 9 X X (Display of last two digits may differ depending on the progress) |
| 6 times | Discharge mode of DC link voltage | K, A, BLANK, BLANK |
| 7 times | Forced defrost operation | K, B, BLANK, BLANK |
| 8 times | Forced oil collection | K, C, BLANK, BLANK |
| 9 times | End Key operation | - |

- ※ Inv1 & Inv2 voltage during discharge mode are displayed alternately.
- ※ Outdoor Power Off even when the Inverter PCB, Fan PCB is a high DC voltage charging contacts at danger.
- ※ When you run the repair and replacement of the PCB should work after the power is turned off, the DC voltage discharge.
(Natural discharge until Please wait for at least 15 minutes.)
- ※ If an error occurs, the discharge mode may not work properly.
In particular, E464 & E364 is power devices can be damaged.
Therefore, the discharge mode, do not use.

■ Commissioning

- ▶ After initial installation, stable operation for a certain period of time limited to operation conditions.

| | Cooling | Heating |
|------------------------|---|--|
| Method of Entry | K2 Tact Switch twice | K2 Tact Switch twice |
| Compressor | Normal operation, but the maximum frequency limit (differ by model) | |
| Indoor Unit | Whole operation (The set temperature=3°C) | Whole operation (The set temperature=40°C) |
| Outdoor fan and valves | Normally control conduct | |
| Operation time | Min : 60 minutes, Max : 10 hours | |
| Etc. | <ul style="list-style-type: none"> · Exceed the maximum operating time at stops and waits. · Protection and control, self-diagnosis is performed. | |

■ Refrigerant filling operation

- ▶ Operation to filling the refrigerant compressor was fixed at a certain frequency.

| | Cooling | Heating |
|------------------------|---|--|
| Method of Entry | K2 Tact Switch one time | K1 Tact Switch one time |
| Compressor | Starting frequency (Mild Start frequency) operation | |
| Indoor Unit | Whole operation (The set temperature=3°C) | Whole operation (The set temperature=40°C) |
| Outdoor fan and valves | Normally control conduct | |
| Operation time | 60 minutes | |
| Etc. | During the filling operation does not enter the special operation, such as oil recovery, defrost. | |

■ Heating Pump Out

- ▶ Operation for the repair of the Individual outdoor unit, the outdoor unit refrigerant emissions to the indoor part.
- ▶ Liquid pipe service valve and the gas pipe service valve operation, the operator manually need to close.
- ▶ Observe low pressure using View Mode of K4 button if compressor operate.
If low pressure goes down below about 0.2 MPa.g : Immediately lock the gas side service valve, Pump Out operation is shut down.
(Pump out operation shut down : K1 button once more press or K3 button one time press)
- ▶ If operation of low pressure goes down below 0.1 MPa.g : Will be stopped automatically for the protection of the compressor.

| | |
|------------------------|--|
| How to Initiate | K1 Tact Switch 3 times~6 times |
| Compressor | 60Hz |
| Indoor Unit | Whole Operation (The set temperature=40°C) |
| 4Way Valve | ON (Heating Mode) |
| Outdoor Fan | Maximum air flow |
| Main EEV | Operation side : 700 Step (Stop side : 0 step) |
| Maximum Operation Time | 10 minutes |
| Protection Control | Conduct the discharge temperature, high pressure control. (Low pressure protection control is not carried out) ※ Low pressure is outside normal limits : Operation is shut down after gas pipe manually closed. |
| Etc. | Entry after safety start. (Only the corresponding Outdoor Unit operation.) To pump out more than 2 : Except communication between Outdoor Unit of relevant set after working for one, remainder set makes Pump Out add. |

■ Cooling Pump Down

- ▶ Recover the refrigerant of Indoor Unit and Piping to outdoor side.
- ▶ Liquid pipe service valve and the gas pipe service valve operation, the operator manually need to close.
- ▶ If the installation of the long pipe : Any refrigerant into the outdoor unit can not be recovered, therefore should use a separate container.
- ▶ Observe low pressure using View Mode of K4 button if compressor operate.
If low pressure goes down below about 0.2 MPa.g : Immediately lock the gas side service valve, Pump Out operation is shut down.
(Pump out operation shut down : K1 button once more press or K3 button one time press)
- ▶ If operation of low pressure goes down below 0.1 MPa.g : Will be stopped automatically for the protection of the compressor.

| | |
|------------------------|---|
| How to Initiate | K2 Tact Switch 3 times |
| Compressor | Address No.1 Outdoor Unit -60Hz (Other Outdoor Unit COMPOFF) |
| Indoor Unit | Whole Operation (The set temperature=3°C) |
| 4Way Valve | OFF (Cooling Mode) |
| Outdoor Fan | Maximum air flow |
| Main EEV | Operation side : 2000 Step , Stop side : 2000 step |
| Maximum Operation Time | 30 minutes |
| Etc. | Does not conduct the operation of the special operation, and protection control. Pressure and temperature is outside normal limits : Operation is shut down after gas pipe manually dosed. |

■ Vacuum Operation

- ▶ Operation to facilitate vacuum to open the valve after the Outdoor Unit repair.

| | |
|-------------------------|---|
| How to Initiate | K1 Tact Switch 7 times~11 times |
| Compressor | OFF |
| Indoor Unit/Outdoor Fan | OFF |
| 4WayValve | OFF |
| Valves | Open all valves maximum |
| Etc | If not turn off the vacuum mode, the start of normal operation is prohibited. |

■ Piping Inspection Operation

- ▶ Operation mode to check the status of the piping between the MCU and the indoor unit.
- ▶ Heat Pump Model: Outdoor temperature is more than 15°C / Cooling commissioning start
Outdoor temperature is less than 15°C / Heating commissioning start

■ Discharge Mode Operation

- ▶ Outdoor power is turned off, the Inverter PCB and Fan PCB charging a high DC voltage, so dangerous to touch.
 - To replace the PCB, first turn off the power and the begin if DC voltage is discharged.
 - If not use the discharge mode, the discharge time of about 15 minutes takes.
 - If an error occurs, the discharge mode may not properly run. (Wait until natural discharge.)
 - In particular, E 464, E364, power devices may be damaged, therefore do not use the discharge mode.
- ▶ Block the Inverter PCB 3-phase relay after connected the power, and through compressor, DC voltage is discharging.
 - INV1 and INV2 DC voltage during discharge mode are displayed alternately.
 - Discharge mode Display (Rotate the three page display, as shown below.)
 'K' 'A' '' '' → DC Link Volt1 (For example, 120[V] 0 1 2 0 display)
 → DCLinkVolt2 (For example, 120[V] 0 1 2 0 display) → 'K' 'A' '' '' → DC Link Volt1 ...
- ▶ Discharge is complete, the power of the Inverter PCB and Fan PCB is being blocked, communication function is blocked, E206 will occur.
- ▶ If want operation again after complete discharge mode : Restart after K3 key to Reset or Power Reset.

■ Forced defrost operation

- ▶ Forced defrost operation : Is operation when Frost Formation occurs in the outdoor. (When carried out the service)

| | |
|-----------------|---|
| Method of Entry | K2 Tact Switch 6 times |
| Start pattern | Heating commissioning pattern |
| Defrost start | Defrost start : It is after 10 minutes which Safety Start finishes. |
| Defrost off | General defrost operation conditions are the same as. |
| Etc. | Defrost shut down and stop the normal pattern of the outdoor unit stop. |

■ Forced oil recovery operation

- ▶ Forced oil recovery operation : Oil recovery in the outdoor unit for the purpose of moving, installation if necessary.

| | |
|--------------------|--|
| Method of Entry | K2 Tact Switch 7 times |
| Start pattern | Outdoor temperature is more than 10°C : Cooling commissioning Outdoor temperature is less than 10°C : Heating commissioning |
| Oil recovery start | Oil recovery start : It is after 10 minutes which Safety Start finishes. |
| Etc. | Oil recovery shut down and stop the normal pattern of the outdoor unit stop. |

4-2-2 DVM S Models EEPROM Code Table

| No. | Model Name | EEP Code |
|-----|----------------|-------------|
| 1 | AM080FXVAGH/EU | DB82-01358A |
| 2 | AM100FXVAGH/EU | DB82-01359A |
| 3 | AM120FXVAGH/EU | DB82-01360A |
| 4 | AM140FXVAGH/EU | DB82-01361A |
| 5 | AM160FXVAGH/EU | DB82-01362A |
| 6 | AM180FXVAGH/EU | DB82-01363A |
| 7 | AM200FXVAGH/EU | DB82-01364A |
| 8 | AM220FXVAGH/EU | DB82-01365A |
| 9 | AM080FXVAGR/EU | DB82-01330A |
| 10 | AM100FXVAGR/EU | DB82-01331A |
| 11 | AM120FXVAGR/EU | DB82-01332A |
| 12 | AM140FXVAGR/EU | DB82-01333A |
| 13 | AM160FXVAGR/EU | DB82-01334A |
| 14 | AM180FXVAGR/EU | DB82-01335A |
| 15 | AM200FXVAGR/EU | DB82-01336A |
| 16 | AM220FXVAGR/EU | DB82-01337A |
| 17 | AM080FXMDGH/EU | DB82-01774A |
| 18 | AM090FXMDGH/EU | DB82-01776A |

4-3 Troubleshooting

4-3-1 Setting Option Setup Method

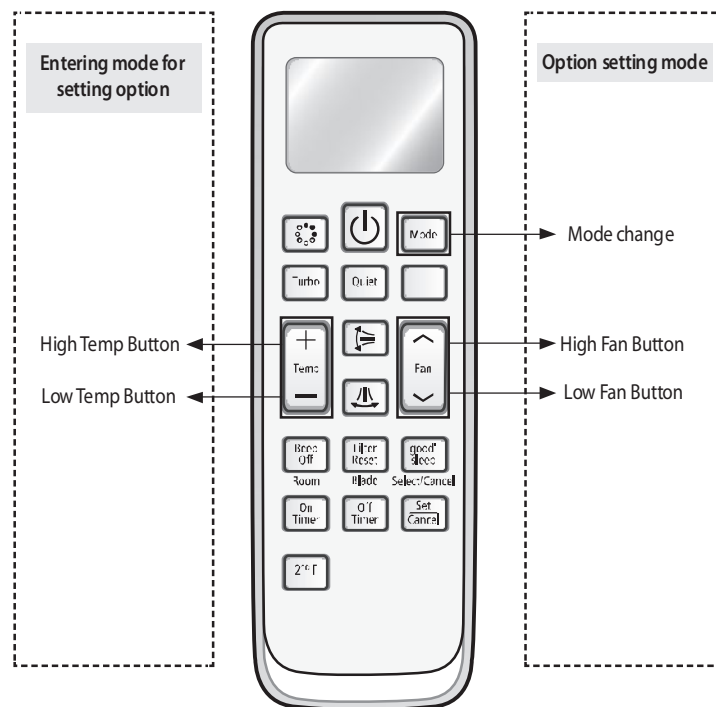
4-3-1-1 PCB option code input method

■ ND***1HXEH, ADN***BDEHA/EU Series



- ▶ Set the indoor unit address and installation option with remote controller option.

Set the each option separately since you cannot set the ADDRESS setting and indoor unit installation setting option at the same time. You need to set twice when setting indoor unit address and installation option.

■ The procedure of setting option



Step 1 Entering mode to set option

1. Remove batteries from the remote controller.
2. Insert batteries and enter the option setting mode while pressing High Temp button and Low Temp button .
3.  Check if you have entered the option setting status.

Step 2 The procedure of option setting

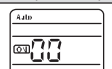

After entering the option setting status, select the option as listed below.



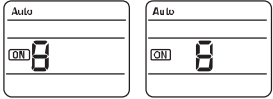

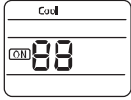
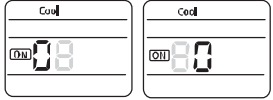

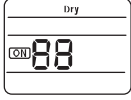
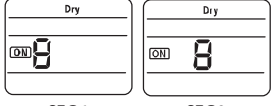

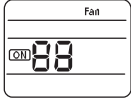


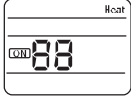
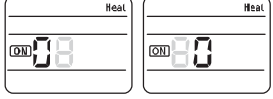


Option setting is available from SEG1 to SEG 24

- SEG1, SEG7, SEG13, SEG19 are not set as page option.
- Set the SEG2~SEG6, SEG8~SEG12 as ON status and SEG14~18, SEG20~24 as OFF status.

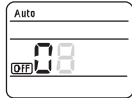
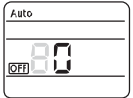
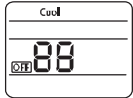
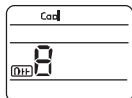
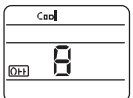
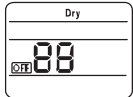
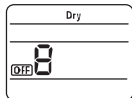
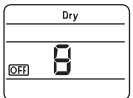
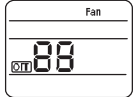
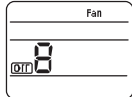
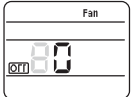
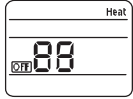
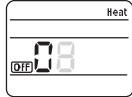
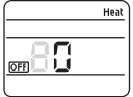
| SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 | SEG7 | SEG8 | SEG9 | SEG10 | SEG11 | SEG12 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0 | X | X | X | X | X | 1 | X | X | X | X | X |
| SEG13 | SEG14 | SEG15 | SEG16 | SEG17 | SEG18 | SEG19 | SEG20 | SEG21 | SEG22 | SEG23 | SEG24 |
| 2 | X | X | X | X | X | 3 | X | X | X | X | X |

| On(SEG1~12) | Off(SEG13~24) |
|--|---|
|  |  |


■ The procedure of setting option

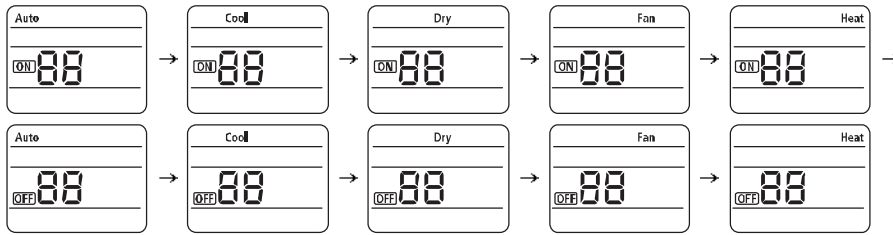
| Option setting | Status |
|--|---|
| <p>1. Setting SEG2, SEG3 option Press Low Fan button(V) to enter SEG2 value. Press High Fan button(^) to enter SEG3 value. Each time you press the button, 0 → 1 → ... 8 → F will be selected in rotation.</p> |  |
| <p>2. Setting Cool mode  Press Mode button to be changed to Cool mode in the ON status.</p> |  |
| <p>3. Setting SEG4, SEG5 option Press Low Fan button(V) to enter SEG4 value. Press High Fan button(^) to enter SEG5 value. Each time you press the button, 0 → 1 → ... 8 → F will be selected in rotation.</p> |  |
| <p>4. Setting Dry mode  Press Mode button to be changed to DRY mode in the ON status.</p> |  |
| <p>5. Setting SEG6, SEG8 option Press Low Fan button(V) to enter SEG6 value. Press High Fan button(^) to enter SEG8 value. Each time you press the button, 0 → 1 → ... 8 → F will be selected in rotation.</p> |  |
| <p>6. Setting Fan mode  Press Mode button to be changed to FAN mode in the ON status.</p> |  |
| <p>7. Setting SEG9, SEG10 option Press Low Fan button(V) to enter SEG9 value. Press High Fan button(^) to enter SEG10 value. Each time you press the button, 0 → 1 → ... 8 → F will be selected in rotation.</p> |  |
| <p>8. Setting Heat mode  Press Mode button to be changed to HEAT mode in the ON status.</p> |  |
| <p>9. Setting SEG11, SEG12 option Press Low Fan button(V) to enter SEG11 value. Press High Fan button(^) to enter SEG12 value. Each time you press the button, 0 → 1 → ... 8 → F will be selected in rotation.</p> |  |
| <p>10. Setting Auto mode  Press Mode button to be changed to AUTO mode in the OFF status.</p> |  |

■ The procedure of setting option (cont.)


| Option setting | Status |
|---|---|
| <p>11. Setting SEG14, SEG15 option Press Low Fan button(∨) to enter SEG14 value. Press High Fan button(∧) to enter SEG15 value. Each time you press the button, → → ... → will be selected in rotation.</p> |   SEG14 SEG15 |
| <p>12. Setting Cool mode Press Mode button to be change to Cool mode in the OFF status.</p> |  |
| <p>13. Setting SEG16, SEG17 option Press Low Fan button(∨) to enter SEG16 value. Press High Fan button(∧) to enter SEG17 value. Each time you press the button, → → ... → will be selected in rotation.</p> |   SEG16 SEG17 |
| <p>14. Setting Dry mode Press Mode button to be change to Dry mode in the OFF status.</p> |  |
| <p>15. Setting SEG18, SEG20 option Press Low Fan button(∨) to enter SEG18 value. Press High Fan button(∧) to enter SEG20 value. Each time you press the button, → → ... → will be selected in rotation.</p> |   SEG18 SEG20 |
| <p>16. Setting Fan mode Press Mode button to be change to Fan mode in the OFF status.</p> |  |
| <p>17. Setting SEG21, SEG22 option Press Low Fan button(∨) to enter SEG21 value. Press High Fan button(∧) to enter SEG22 value. Each time you press the button, → → ... → will be selected in rotation.</p> |   SEG21 SEG22 |
| <p>18. Setting Heat mode Press Mode button to be change to HEAT mode in the OFF status.</p> |  |
| <p>19. Setting SEG23, SEG24 mode Press Low Fan button(∨) to enter SEG23 value. Press High Fan button(∧) to enter SEG24 value. Each time you press the button, → → ... → will be selected in rotation.</p> |   |

Step 3 Check the option you have set

After setting option, press  button to check whether the option code you input is correct or not.



Step 4 Input option

Press operation button  with the direction of remote control for set. For the correct option setting, you must input the option twice.

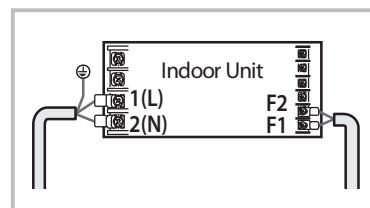
Step 5 Check operation

1. Reset the indoor unit by pressing the RESET button of indoor unit or outdoor unit.
2. Take the batteries out of the remote controller and insert them again and then press the operation button.

- Setting an indoor unit address and installation option

■ Setting an indoor unit installation option (suitable for the condition of each installation location)

1. Check whether power is supplied or not.
 - When the indoor unit is not plugged in, there should be additional power supply in the indoor unit.
2. The panel(display) should be connected to an indoor unit to receive option.
3. Set the installation option according to the installation condition of an air conditioner.
 - The default setting of an indoor unit installation option is 020010-100000-200000-300000.
 - Individual control of a remote controller(SEG20) is the function that controls an indoor unit individually when there is more than one indoor unit.



4. Set the indoor unit option by wireless remote controller.

| SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 |
|-------|---|------------------------------|---|--|------------------------------|
| 0 | 2 | RESERVED | Exterior temperature sensor | Central control | FAN RPM compensation |
| SEG7 | SEG8 | SEG9 | SEG10 | SEG11 | SEG12 |
| 1 | Drain pump | Hot water heater | Electronic heater | Opening the electronic expansion valve | Master / Slave |
| SEG13 | SEG14 | SEG15 | SEG16 | SEG17 | SEG18 |
| 2 | External control | External control output | S-Plasma ion | Buzzer | Number of hours using filter |
| SEG19 | SEG20 | SEG21 | SEG22 | SEG23 | SEG24 |
| 3 | Individual control of a remote controller | Heating setting compensation | EEV opening of an indoor unit stopped during oil return or Defrost operation. | - | Human sensor |

- ▶ 1WAY/2WAY/4WAY MODEL : Drain pump(SEG8) will be set to 'USE + 3minute delay' even if the drain pump is set to 0.
- ▶ 1WAY/2WAY/4WAY, DUCT MODEL : Number of hours using filter(SEG18) will be set to '1000hour' even if the SEG18 is set to except for 2 or 6.
- ▶ If you input a number other than 0~4 of the individual control of the indoor unit(SEG20), the indoor is set as indoor 1.
- ▶ SEG5 central control option is basically set as 1 (Use), so you don't need to set the central control option additionally. However, if the central control is not connected but it doesn't indicate an error message, you need to set the central control option as 0 (Disuse) to exclude the indoor unit from the central control.

Option No. : 02XXXX-1XXXX-2XXXX-3XXXX

| Option | SEG1 | SEG2 | SEG3 | SEG4 | SEG5 | SEG6 | | | | | | | |
|---------------------------|------------|---|--|---|--|------------------------------|------------|----------|---|---|------------------|-----------|------------------|
| Explanation | PAGE | MODE | Use of robot cleaning | Use of external temperature sensor | Use of central control | FAN RPM compensation | | | | | | | |
| Remote Controller Display | | | | | | | | | | | | | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | | | |
| | 0 | 2 | 0 | Disuse | 0 | Disuse | 0 | Disuse | 0 | Disuse | | | |
| | | | 1 | Use | 1 | Use | 1 | Use | 1 | Use | | | |
| | | | | | | | | 0 | Disuse | 1 | RPM compensation | 2 | High ceiling KIT |
| Option | SEG7 | SEG8 | SEG9 | SEG10 | SEG11 | SEG12 | | | | | | | |
| Explanation | PAGE | Use of drain pump | Use of hot water heater | Use of electronic heater | Opening the electronic expansion valve of an indoor unit when heating operation stops. | Master / Slave | | | | | | | |
| Remote Controller Display | | | | | | | | | | | | | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | | | |
| | 1 | Use + 3minute delay | 0 | Disuse | 0 | Disuse | 0 | Disuse | 0 | 0 | 0 | slave | |
| | | | 1 | Use | 1 | Use | 1 | Use | 1 | 80 | 1 | master | |
| 2 | | | Use + 3minute delay | | | | | | | | | | |
| Option | SEG13 | SEG14 | SEG15 | SEG16 | SEG17 | SEG18 | | | | | | | |
| Explanation | PAGE | Use of external control | Setting the output of external control | S-Plasma ion | Buzzer control | Number of hours using filter | | | | | | | |
| Remote Controller Display | | | | | | | | | | | | | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | | | |
| | 2 | ON/OFF Control | 0 | Disuse | 0 | Thermo on | 0 | Disuse | 0 | Mixed operation control1/Use buzzer | 2 | 1000 Hour | |
| | | | 1 | ON/OFF Control | 1 | Operation on | 1 | Use | 1 | Mixed operation control1/Disuse of buzzer | 6 | 2000 Hour | |
| | | | 2 | OFF Control | | | | | 2 | Mixed operation control2/Use buzzer | | | |
| | | | | | | | | 3 | Mixed operation control2/Disuse of buzzer | | | | |
| Option | SEG19 | SEG20 | SEG21 | SEG22 | SEG23 | SEG24 | | | | | | | |
| Explanation | PAGE | Individual control of a remote controller | Heating setting compensation | EEV opening of an indoor unit stopped during oil return or defrost operation. | - | Human sensor | | | | | | | |
| Remote Controller Display | | | | | | | | | | | | | |
| Indication and Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | Indication | Details | | | |
| | 3 | channel 1 | 0 or 1 | channel 1 | 0 | Disuse | 0 | 150 step | | | 8 | Disuse | |
| | | | 2 | channel 2 | 1 | 2°C | 1 | 0 step | | | 9 | Use | |
| | | | 3 | channel 3 | 2 | 5°C | | | | | | | |
| 4 | | | channel 4 | | | | | | | | | | |

4-3-2 Option Items

| Item | Model | SEG | | | | | | | | | | | | | | | | | | | | | | | | Static Pressure |
|-----------------------|----------------|-----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|-----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| Slim 1-Way Cassette | AM017HN1DEH/EU | 0 | 1 | D | 0 | 4 | 4 | 1 | 9 | 6 | 0 | 8 | 5 | 2 | 0 | 2 | 0 | 2 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM022HN1DEH/EU | 0 | 1 | D | 0 | 4 | 4 | 1 | 9 | 7 | 0 | A | 6 | 2 | 0 | 1 | 4 | 1 | 4 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM022FN1DEH/EU | 0 | 1 | 7 | 0 | 4 | 4 | 1 | 1 | 8 | 0 | C | 8 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM028FN1DEH/EU | 0 | 1 | 7 | 0 | 4 | 4 | 1 | 1 | 8 | 0 | F | 8 | 2 | 0 | 1 | C | 1 | C | 3 | 3 | 0 | 0 | 1 | 0 | |
| 2-Way Cassette | AM036FN1DEH/EU | 0 | 1 | 7 | 0 | 4 | 4 | 1 | 1 | 5 | 4 | 5 | D | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM056FN2DEH/EU | 0 | 1 | 2 | 0 | 4 | 4 | 1 | 1 | 5 | 5 | 6 | 1 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 1 | 0 | |
| Global 4-Way Cassette | AM071FN2DEH/EU | 0 | 1 | 2 | 0 | 4 | 4 | 1 | 1 | 5 | 5 | 8 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 1 | 0 | | |
| | AM045FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 0 | 9 | 7 | 2 | 0 | 2 | D | 2 | D | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM056FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 0 | A | 7 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM071FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 4 | 0 | D | 8 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM090FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 4 | 0 | 9 | 2 | 0 | 5 | A | 5 | A | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM112FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 4 | 1 | B | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 0 | 0 | 1 | 0 | |
| BIG Duct | AM128FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 4 | 2 | D | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 0 | 0 | 2 | 0 | |
| | AM140FN4DEH/EU | 0 | 1 | 4 | 0 | 4 | F | 1 | 9 | 5 | 4 | F | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 0 | 0 | 2 | 0 | | |
| | AM220FNHDEH/EU | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 0 | 9 | 7 | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 5mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 0 | C | 7 | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 0 | E | 8 | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 15mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 4 | D | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 20mmAq |
| | AM280FNHDEH/EU | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 9 | F | 2 | 0 | D | C | D | C | 3 | 1 | 1 | 1 | 1 | 0 | 25mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 0 | 7 | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 5mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 2 | 9 | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 5 | B | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 15mmAq |
| 0 | | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 4 | 9 | E | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 20mmAq | |
| 0 | | 1 | 1 | 0 | 5 | 4 | 1 | 9 | 5 | 5 | D | 1 | 2 | 3 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 25mmAq | |
| Floor Standing | AM036FNFDEH/EU | 0 | 1 | A | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM056FNFDEH/EU | 0 | 1 | A | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | AM071FNFDEH/EU | 0 | 1 | A | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 1 | 0 | |
| ERV Plus | AM050FNKDEH/EU | 0 | 1 | E | 0 | 4 | 4 | 1 | 9 | 5 | 5 | 8 | 0 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 2 | 0 | 0 | 0 | |
| | AM100FNKDEH/EU | 0 | 1 | E | 0 | 4 | 4 | 1 | 9 | 5 | 5 | 7 | 3 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 2 | 0 | 2 | 0 | |
| G-MINI 4-W/C | AM015HNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 7 | 0 | B | 8 | 2 | 0 | 0 | F | 0 | F | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM022FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 7 | 0 | E | 8 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM028FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 5 | 4 | 0 | A | 2 | 0 | 1 | C | 1 | C | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM036FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 3 | 4 | 2 | C | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM045FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 5 | 4 | 4 | E | 2 | 0 | 2 | D | 2 | D | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM056FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 5 | 4 | 7 | F | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM060FNNDEH/EU | 0 | 1 | 5 | 0 | 4 | F | 1 | 9 | 5 | 5 | 9 | 1 | 2 | 0 | 3 | C | 3 | C | 3 | 3 | 0 | 0 | 0 | 0 | |
| SLIM DUCT-S | AM017FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 4 | 9 | E | 2 | 0 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | B | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 0 | 1mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | F | 5 | 2 | 0 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 0 | 3mmAq |
| | AM022FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 0 | 8 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | A | C | 3 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 1mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | A | 8 | 0 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM028FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 7 | A | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 1 | 5 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 1mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | A | E | 2 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | AM036FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | C | D | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 6 | 8 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 1mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | 3 | 5 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| SLIM DUCT-1 | AM045FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | F | 6 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | A | E | 2 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | AM056FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | F | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | F | 9 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| SLIM DUCT-2 | AM071FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | E | F | 6 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | D | 9 | E | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| SLIM DUCT-3 | AM090FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | B | B | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 2 | A | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | A | D | 4 | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | AM112FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | 9 | C | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 2 | A | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | A | D | 4 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | AM128FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | 9 | 6 | C | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 4 | B | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | A | F | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | A | F | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| AM140FNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | F | C | 3 | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq | |
| | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 7 | F | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 3mmAq | |
| AM140KNLDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | B | 5 | E | 3 | A | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq | |

Option Items(cont.)

| Item | Model | SEG | | | | | | | | | | | | | | | | | | | | | | | | Static Pressure |
|--|----------------|-----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|-------|-----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| SLIM DUCT-1 [Uplevel Static Pressure] | AM022FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 5 | E | 4 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 4 | 1 | E | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 0 | B | 6 | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | AM028FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 9 | A | 9 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 5 | 6 | 2 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 4 | 2 | C | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 0 | E | 8 | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 4 | C | F | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 4 | 2 | C | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| AM036FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 4 | F | B | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq | |
| | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 0 | E | A | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq | |
| | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 0 | E | A | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq | |
| | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 0 | 6 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq | |
| MSP DUCT-S [Uplevel Static Pressure] | AM045FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | A | 4 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 8 | 3 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 7 | 1 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 5 | 0 | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| MSP DUCT-S | AM056FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 5 | 7 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | C | 5 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 9 | 3 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 9 | 3 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | 7 | 1 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | AM071FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 5 | F | C | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | D | F | 9 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 7 | 9 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 3 | 6 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| MSP DUCT-0 | AM090FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | D | F | D | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 2mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | 9 | 4 | 5 | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 0mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 5 | D | F | D | 2 | 0 | 5 | A | 5 | A | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| HSP Duct | AM112FNHDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 5 | 4 | 0 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 9 | 1 | 6 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 1 | 1 | 0 | 5mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | A | E | A | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 5 | 6 | 0 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 1 | 1 | 0 | 15mmAq |
| | AM128FNHDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 5 | C | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 1 | 1 | 0 | 5mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 9 | 3 | D | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | E | 1 | 8 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 1 | 1 | 0 | 15mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | E | 1 | 8 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 1 | 1 | 0 | 20mmAq |
| | AM140FNHDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 5 | 8 | 0 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 1 | 1 | 0 | 5mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | 9 | 1 | 9 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | A | D | 3 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 1 | 1 | 0 | 15mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 3 | 5 | F | 6 | 0 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 1 | 1 | 0 | 20mmAq |
| MSP DUCT-1 | AM112FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | F | F | 0 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 12mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | F | F | 0 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | B | B | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 2 | 6 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| MSP DUCT-2 | AM128FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 0 | 4 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 3 | 6 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 14mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 1 | 4 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 12mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | E | 2 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | A | B | 0 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | 9 | 6 | C | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| | AM140FNMDEH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | F | C | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | A | A | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 14mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | A | A | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 12mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 4 | 7 | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 10mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | E | 2 | 4 | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 8mmAq |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | A | F | 2 | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 6mmAq |
| 0 | 1 | 0 | 0 | 5 | 4 | 1 | 2 | 2 | 9 | C | F | 2 | 0 | 8 | C | 8 | C | 3 | 1 | 1 | 1 | 1 | 0 | 4mmAq | | |

Option Items(cont.)

| Item | Model | SEG | | | | | | | | | | | | | | | | | | | | | | | | Static Pressure | |
|-------------|----------------|----------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------|-----------------|--|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | |
| GLOBAL DUCT | AM036HNMPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 0 | 8 | 4 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 1 | 2 | 0 | 5 | 0≤SP≤2.5 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 0 | E | B | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 1 | 2 | 0 | 5 | 2.5<SP≤5 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | 5 | 2 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 1 | 2 | 0 | 5 | 5<SP≤7.5 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | C | A | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 1 | 2 | 0 | 5 | 7.5<SP≤10 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | A | 3 | 0 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 1 | 2 | 0 | 5 | 10<SP≤12.5 | |
| | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | A | 8 | 5 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 1 | 2 | 0 | 5 | 12.5<SP≤15 | | |
| | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 0 | D | 5 | 2 | 0 | 2 | D | 2 | D | 3 | 3 | 1 | 2 | 0 | 4 | 0≤SP≤3 | | |
| | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 4 | 5 | D | 2 | 0 | 2 | D | 2 | D | 3 | 3 | 1 | 2 | 0 | 4 | 3<SP≤6 | | |
| | AM045HNMPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | C | 4 | 2 | 0 | 2 | D | 2 | D | 3 | 3 | 1 | 2 | 0 | 4 | 6<SP≤9 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 3 | B | 2 | 0 | 2 | D | 2 | D | 3 | 3 | 1 | 2 | 0 | 4 | 9<SP≤12 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | A | A | 2 | 0 | 2 | D | 2 | D | 3 | 3 | 1 | 2 | 0 | 4 | 12<SP≤15 | | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 4 | 7 | F | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 1 | 2 | 0 | 2 | 0≤SP≤3 | |
| | AM056HNMPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | D | 5 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 1 | 2 | 0 | 2 | 3<SP≤6 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 2 | B | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 1 | 2 | 0 | 2 | 6<SP≤9 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | A | 7 | 1 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 1 | 2 | 0 | 2 | 9<SP≤12 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | A | C | 8 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 1 | 2 | 0 | 2 | 12<SP≤15 | |
| | AM071HNMPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | 8 | 0 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 1 | 2 | 0 | 1 | 0≤SP≤3 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | E | 6 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 1 | 2 | 0 | 1 | 3<SP≤6 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 3 | C | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 1 | 2 | 0 | 1 | 6<SP≤9 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | A | 8 | 2 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 1 | 2 | 0 | 1 | 9<SP≤12 | |
| | AM090HNMPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | A | D | 9 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 1 | 2 | 0 | 1 | 12<SP≤15 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 4 | 6 | F | 2 | 0 | 5 | A | 5 | A | 3 | 3 | 1 | 2 | 1 | 2 | 0≤SP≤4 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | E | 8 | 2 | 0 | 5 | A | 5 | A | 3 | 3 | 1 | 2 | 1 | 2 | 4<SP≤8 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | A | 6 | 1 | 2 | 0 | 5 | A | 5 | A | 3 | 3 | 1 | 2 | 1 | 2 | 8<SP≤12 | |
| | AM112HNMPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | A | C | 8 | 2 | 0 | 5 | A | 5 | A | 3 | 3 | 1 | 2 | 1 | 2 | 12<SP≤15 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 4 | 1 | B | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 3 | 0≤SP≤5.2 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | 6 | 0 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 3 | 5.2<SP≤8 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | E | B | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 3 | 8<SP≤12 | |
| | AM128HNMPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 3 | D | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 3 | 12<SP≤15 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 4 | 2 | C | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 2 | 0≤SP≤5.2 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | 7 | 2 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 2 | 5.2<SP≤8 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | E | A | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 2 | 8<SP≤12 | |
| | AM140HNMPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 2 | E | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 2 | 12<SP≤15 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 4 | 4 | C | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 1 | 0≤SP≤5.2 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | 9 | 2 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 1 | 5.2<SP≤8 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | F | A | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 1 | 8<SP≤12 | |
| | AM112HNHPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 3 | E | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 1 | 12<SP≤15 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | 4 | 0 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 6 | 3≤SP≤6.2 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | A | 4 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 6 | 6.2<SP≤9 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | C | 6 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 6 | 9<SP≤11 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 0 | 8 | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 6 | 11<SP≤13 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 4 | A | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 6 | 13<SP≤15 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 7 | C | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 6 | 15<SP≤17 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | A | E | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 6 | 17<SP≤19 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | B | F | 2 | 0 | 7 | 0 | 7 | 0 | 3 | 3 | 1 | 2 | 2 | 6 | 19<SP≤20 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | 6 | 1 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 5 | 3≤SP≤6.2 | |
| | AM128HNHPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | B | 3 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 5 | 6.2<SP≤9 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | E | 5 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 5 | 9<SP≤11 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 1 | 7 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 5 | 11<SP≤13 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 4 | 9 | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 5 | 13<SP≤15 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 8 | B | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 5 | 15<SP≤17 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | B | D | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 5 | 17<SP≤19 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | C | E | 2 | 0 | 8 | 0 | 8 | 0 | 3 | 3 | 1 | 2 | 2 | 5 | 19<SP≤20 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | 8 | 1 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 4 | 3≤SP≤6.2 | |
| | AM140HNHPKH/EU | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 5 | D | 3 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 4 | 6.2<SP≤9 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 0 | 5 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 4 | 9<SP≤11 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 3 | 7 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 4 | 11<SP≤13 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 6 | 9 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 4 | 13<SP≤15 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | 8 | B | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 4 | 15<SP≤17 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | C | D | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 4 | 17<SP≤19 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | D | E | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 4 | 19<SP≤20 | |
| | | 0 | 1 | 0 | 0 | 5 | 4 | 1 | C | 5 | 9 | D | E | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 1 | 2 | 2 | 4 | 19<SP≤20 | |
| | CEILING | AM056FNCDEH/EU | 0 | 1 | 3 | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | | AM071FNCDEH/EU | 0 | 1 | 3 | 0 | 5 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | CONSOLE | AM028FNJDEH/EU | 0 | 1 | 9 | 0 | 4 | 4 | 1 | 9 | 5 | 0 | B | 7 | 2 | 0 | 1 | C | 1 | C | 3 | 3 | 0 | 0 | 1 | 0 | |
| | | AM036FNJDEH/EU | 0 | 1 | 9 | 0 | 4 | 4 | 1 | 9 | 5 | 0 | D | 7 | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 1 | 0 | |
| | | AM056FNJDEH/EU | 0 | 1 | 9 | 0 | 4 | 4 | 1 | 9 | 5 | 4 | 1 | B | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 1 | 0 | |

Option Items(cont.)

| Item | Model | SEG | | | | | | | | | | | | | | | | | | | | | | | | Static Pressure |
|-----------------------|-----------------|-----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| NEO-FORTE without EEV | AM015HNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | B | 8 | 2 | 0 | 0 | F | 0 | F | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM022FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | F | A | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM028FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | F | A | 2 | 0 | 1 | C | 1 | C | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM036FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 4 | 4 | D | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 3 | 0 | 0 | 0 | 0 | |
| | AM056FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 6 | F | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 3 | 0 | 0 | 2 | 0 | |
| NEO-FORTE with EEV | AM071FNTDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 8 | F | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 3 | 0 | 0 | 2 | 0 | |
| | AM015HNTQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | B | 8 | 2 | 0 | 0 | F | 0 | F | 3 | 1 | 0 | 0 | 0 | 0 | |
| | AM022FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | F | A | 2 | 0 | 1 | 6 | 1 | 6 | 3 | 1 | 0 | 0 | 0 | 0 | |
| | AM028FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 0 | F | A | 2 | 0 | 1 | C | 1 | C | 3 | 1 | 0 | 0 | 0 | 0 | |
| | AM036FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 7 | 4 | 4 | D | 2 | 0 | 2 | 4 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | |
| | AM045FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 3 | F | 2 | 0 | 2 | D | 2 | D | 3 | 1 | 0 | 0 | 2 | 0 | |
| Hydro unit | AM056FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 6 | F | 2 | 0 | 3 | 8 | 3 | 8 | 3 | 1 | 0 | 0 | 2 | 0 | |
| | AM071FNQDEH/EU | 0 | 1 | 0 | 0 | 4 | 4 | 1 | 1 | 6 | 4 | 8 | F | 2 | 0 | 4 | 7 | 4 | 7 | 3 | 1 | 0 | 0 | 2 | 0 | |
| | AM160FNBDEH/EU | 0 | 1 | 0 | 0 | 4 | C | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | 8 | C | 8 | C | 3 | 3 | 2 | 2 | 0 | 0 | |
| | AM320FNBDEH/EU | 0 | 1 | 0 | 0 | 4 | C | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 3 | 1 | C | 1 | C | 3 | 3 | 2 | 2 | 0 | 0 | |
| Hydro unit HT | AM500FNBDEH/EU | 0 | 1 | 0 | 0 | 4 | C | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 3 | 2 | D | 2 | D | 3 | 3 | 2 | 2 | 0 | 0 | |
| | AM160FNBFBEB/EU | 0 | 1 | 1 | 0 | 4 | C | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | A | 0 | A | 0 | 3 | 3 | 2 | 2 | 0 | 0 | |
| | AM250FNBFBEB/EU | 0 | 1 | 1 | 0 | 4 | C | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | F | A | F | A | 3 | 3 | 2 | 1 | 0 | 0 | |
| | AM160FNBFBGB/EU | 0 | 1 | 1 | 0 | 4 | C | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | A | 0 | A | 0 | 3 | 3 | 2 | 2 | 0 | 0 | |
| | AM250FNBFBGB/EU | 0 | 1 | 1 | 0 | 4 | C | 1 | 0 | 5 | 0 | 0 | 0 | 2 | 0 | F | A | F | A | 3 | 3 | 2 | 1 | 0 | 0 | |

* If you are going to use up to SEG 24, please refer to following instruction.
 SEG 17 : 0 → 1: Using high ceiling kit for 4way

SEG 18 :

| | Not in use | Use |
|----------------------------|------------|---------------|
| Change temperature display | 0(Celsius) | 1(Fahrenheit) |
| Sound Mute | 0 | 2 |
| Mixed operation control | 0 | 4 |

• If you want to use multiple functions, add each of the 'use' value of the function you want to used and input the final addition as option value. (Use Fahrenheit + Sound mute + Mixed operation control : 1 + 2 + 4 = 7)

Ex) 044217-1d00e6-200000-300000

When using Sound mute : 044217-1d00e6-200002-300000

When using high ceiling kit for 4way and mixed operation error preventing function : 044217-1d00e6-200014-300000

4-3-3 What to check before diagnosis

4-3-3-1 Lamp combination expression method display (cassette type indoor unit)

- Slim 1-Way, 2 -Way, Mini 4-Way cassette type

■ Error detection and restart

- When error occurs during operation, indicate a problem with LED flashes, and no other operations but LED stops.
- When restarting operation with remote controller or switch, it will determine the appropriate error mode after normal operation

■ LED lamp display with error detection

| Abnormal condition | Error code | LED Display | | | | |
|---|--|-------------|-----|---|---|---|
| | | | | | | |
| | | Green | Red | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × | | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) 3. Discharge sensor error (Short or Open) | E122 E123 E126 | | × | | × | × |
| Indoor fan error | E154 | × | × | × | | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list | E221 E237 E251 | | × | × | | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | × | | | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E129 E198 | × | × | | | |

● : On : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
 - If you re-operate the air conditioner, it operates normally at first, then detect an error again.
 - When E108 error occurs, change the address and reset the system.
- Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

■ LED lamp display with error detection (cont.)

| Abnormal condition | Error code | LED Display | | | | |
|--|------------|-------------|-----|---|---|---|
| | | ⏻ | | ⏴ | ⏵ | ⏶ |
| | | Green | Red | | | |
| 1. COND mid sensor is detached | E241 | | | | | |
| 2. Refrigerant leakage (2nd detection) | E554 | | | | | |
| 3. Abnormally high temperature on Cond (2nd detection) | E450 | | | | | |
| 4. Low pressure s/w (2nd detection) | E451 | | | | | |
| 5. Abnormally high temperature on discharged air on outdoor unit (2nd detection) | E416 | | | | | |
| 6. Indoor operation stop due to unconfirmed error on outdoor unit | E559 | | | | | |
| 7. Error due to reverse phase detection | E425 | | | | | |
| 8. Comp stop due to freeze detection (6th detection) | E403 | | | | | |
| 9. High pressure sensor is detached | E301 | × | × | ◐ | ◐ | ◐ |
| 10. Low pressure sensor is detached | E306 | | | | | |
| 11. Outdoor unit copression ration error | E428 | | | | | |
| 12. Outdoor sump down_1 prevetion control | E413 | | | | | |
| 13. Compressor down due to low pressure sensor prevention control_1 | E410 | | | | | |
| 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) | E180 | | | | | |
| 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) | E181 | | | | | |
| Other outdoor unit self-diagnosis error that is not on the above list | | | | | | |
| Flowating s/w (2nd detection) | E153 | × | × | × | ◐ | ◐ |
| EEPROM error | E162 | ◐ | ◐ | ◐ | ◐ | ◐ |
| EEPROM option error | E163 | ◐ | ◐ | ◐ | ◐ | ◐ |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ◐ |

● : On ◐ : Flickering × : Off


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 - If you re-operate the air conditioner, it operates normally at first, then detect an error again.
 - When E108 error occurs, change the address and reset the system.
- Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

- Global 4way cassette type












■ Error detection and restart

- When error occurs during operation, indicate a problem with LED flashes, and no other operations but LED stops.
- When restarting operation with remote controller or switch, it will determine the appropriate error mode after normal operation

■ LED lamp display with error detection

| Abnormal condition | Error code | LED Display | | | |
|--|--|--|---|---|---|
| | | Operation | Defrost | Timer | Filter |
| | |  |  |  |  |
| Error on indoor temperature sensor (Short or Open) | E121 | × | ◐ | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) 3. Discharge sensor error (Short or Open) | E122 E123 E126 | ◐ | ◐ | × | × |
| Indoor fan error | E154 | × | × | ◐ | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list | E221 E237 E251 | ◐ | × | ◐ | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | ◐ | ◐ | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E129 E198 | × | ◐ | ◐ | ◐ |
| 1. COND mid sensor is detached. 2. Refrigerant leakage (2nd detection). 3. Abnormally high temperature on Cond. (2nd detection) 4. Low pressure s/w. (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit. (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit. 7. Error due to reverse phase detection. 8. Comp stop due to freeze detection. (6th detection) 9. High pressure sensor is detached. 10. Low pressure sensor is detached. 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) Other outdoor unit self-diagnosis error that is not on the above list | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | × | ◐ | ◐ | ◐ |
| Flowating s/w (2nd detection) | E153 | × | × | ◐ | ◐ |
| EEPROM error | E162 | ◐ | ◐ | ◐ | ◐ |

■ LED lamp display with error detection (cont.)

| Abnormal condition | Error code | LED Display | | | |
|---------------------------------------|------------|--|---|---|---|
| | | Operation | Defrost | Timer | Filter |
| | |  |  |  |  |
| EEPROM option error | E163 |  |  |  |  |
| Error due to incompatible indoor unit | E164 |  |  | × |  |

●:On ○:Flickering ×:Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
 - If you re-operate the air conditioner, it operates normally at first, then detect an error again.
 - When E108 error occurs, change the address and reset the system.
- Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

- Duct type

■ Error detection and restart

- When error occurs during operation, indicate a problem with LED flashes, and no other operations but LED stops.
- When restarting operation with remote controller or switch, it will determine the appropriate error mode after normal operation






■ LED lamp display with error detection(Remote Control Receiver)

| Abnormal condition | Error code | LED Display | | | | |
|--|--|-------------|---|---|---|---|
| | | | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × | ◐ | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) 3. Discharge sensor error (Short or Open) | E122 E123 E126 | ◐ | × | ◐ | × | × |
| Indoor fan error | E154 | × | × | × | ◐ | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list | E221 E237 E251 | ◐ | × | × | ◐ | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | × | ◐ | ◐ | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E129 E198 | × | × | ◐ | ◐ | ◐ |

● : On ◐ : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system. Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

■ LED lamp display with error detection(Remote Control Receiver) (cont.)

| Abnormal condition | Error code | LED Display | | | | |
|---|--|---|---|---|---|---|
| | |  |  |  |  |  |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit (2nd detection) | E241 E554 E450 E451 E416 | | | | | |
| 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) | E559 E425 E403 | × | × | ◐ | ◐ | ◐ |
| 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) Other outdoor unit self-diagnosis error that is not on the above list | E301 E306 E428 E413 E410 E180 E181 | | | | | |
| Flowating s/w (2nd detection) | E153 | × | × | × | ◐ | ◐ |
| EEPROM error | E162 | ◐ | ◐ | ◐ | ◐ | ◐ |
| EEPROM option error | E163 | ◐ | ◐ | ◐ | ◐ | ◐ |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ◐ |

● : On ◐ : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system.Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

- Ceiling type

■ Error detection and reoperation

- If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

■ Indoor unit LED lamp display at error detecting

| Abnormal condition | Error code | LED Display | | | | |
|---|--|-------------|---|---|---|---|
| | | | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × | ● | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) | E122 E123 | ● | × | ● | × | × |
| Indoor fan error | E154 | × | × | × | ● | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor | E221 E237 E251 | ● | × | × | ● | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | × | ● | ● | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E128 E198 | × | × | ● | ● | ● |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w. (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit. (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | × | × | ● | ● | ● |
| Flowating s/w (2nd detection) | E153 | × | × | × | ● | ● |
| EEPROM option error | E162 | ● | ● | ● | ● | ● |
| EEPROM option error | E163 | ● | ● | ● | ● | ● |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ● |

● : On ● : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

- Console type

■ Error detection and reoperation

- If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

■ Indoor unit LED lamp display at error detecting

| Abnormal condition | Error code | LED Display | | | | |
|--|--|-------------|---|---|---|---|
| | | | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × | ● | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) | E122 E123 | ● | × | ● | × | × |
| Indoor fan error | E154 | × | × | × | ● | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor | E221 E237 E251 | ● | × | × | ● | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | × | ● | ● | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E128 E198 | × | × | ● | ● | × |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit. (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | × | × | ● | ● | ● |
| Flowating s/w (2nd detection) | E153 | × | × | × | ● | ● |
| EEPROM error | E162 | ● | ● | ● | ● | ● |
| EEPROM option error | E163 | ● | ● | ● | ● | ● |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ● |

● : On ● : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

- Wall-mounted type (Neo Forte without EEV/with EEV)

■ Error detection and reoperation

- If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

■ Indoor unit LED lamp display at error detecting

| Abnormal condition | Error code | LED Display | | |
|---|--|-------------|---|---|
| | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | ◐ | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) | E122 E123 | ◐ | ◐ | × |
| Indoor fan error | E154 | × | × | ◐ |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor | E221 E237 E251 | ◐ | × | ◐ |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | ◐ | ◐ |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E128 E198 | ● | ◐ | ◐ |
| 1. COND mid sensor is detached 2. Refrigerant leakage (2nd detection) 3. Abnormally high temperature on Cond (2nd detection) 4. Low pressure s/w (2nd detection) 5. Abnormally high temperature on discharged air on outdoor unit (2nd detection) 6. Indoor operation stop due to unconfirmed error on outdoor unit 7. Error due to reverse phase detection 8. Comp stop due to freeze detection (6th detection) 9. High pressure sensor is detached 10. Low pressure sensor is detached 11. Outdoor unit copression ration error 12. Outdoor sump down_1 prevetion control 13. Compressor down due to low pressure sensor prevention control_1 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) | E241 E554 E450 E451 E416 E559 E425 E403 E301 E306 E428 E413 E410 E180 E181 | ● | ◐ | ◐ |
| EEPROM error | E162 | ◐ | ◐ | ◐ |
| EEPROM option error | E163 | ◐ | ◐ | ◐ |
| Error due to incompatible indoor unit | E164 | ◐ | ● | ◐ |

● : On ◐ : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

- Floor Standing type

■ Error detection and reoperation

- If an error occurs during the operation, an LED flickers and the operation is stopped except the LED.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.

■ Indoor unit LED lamp display at error detecting

| Abnormal condition | Error code | LED Display | | | | |
|--|--|-------------|---|---|---|---|
| | | | | | | |
| Error on indoor temperature sensor (Short or Open) | E121 | × | × | ◐ | × | × |
| 1. Error on Eva-in sensor (Short or Open) 2. Error on Eva-out sensor (Short or Open) | E122 E123 | ◐ | × | ◐ | × | × |
| Indoor fan error | E154 | × | × | × | ◐ | × |
| 1. Error on outdoor temperature sensor (Short or Open) 2. Error on cond sensor 3. Error on discharge sensor Other outdoor unit sensor error that is not on the above list | E221 E237 E251 | ◐ | × | × | ◐ | × |
| 1. When there is no communication between the indoor-outdoor units for 2 minutes 2. Communication error received from the outdoor unit 3. 3 minute tracking error on outdoor unit 4. Communication error after tracking due to unmatching number of installed units 5. Error due to repeated communication address 6. Communication address not confirmed Other outdoor unit communication error that is not on the above list | E101 E102 E202 E201 E108 E109 | × | × | ◐ | ◐ | × |
| Self diagnosis error display 1. Error due to opened EEV (2nd detection) 2. Error due to closed EEV (2nd detection) 3. Eva in sensor is detached 4. Eva out sensor is detached 5. Thermal fuse error (Open) | E151 E152 E128 E129 E198 | × | × | ◐ | ◐ | × |

● : On ◐ : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system.

Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

■ Indoor unit LED lamp display at error detecting (cont.)

| Abnormal condition | Error code | LED Display | | | | |
|--|------------|-------------|---|---|---|---|
| | | | | | | |
| 1. COND mid sensor is detached | E241 | | | | | |
| 2. Refrigerant leakage (2nd detection) | E554 | | | | | |
| 3. Abnormally high temperature on Cond (2nd detection) | E450 | | | | | |
| 4. Low pressure s/w (2nd detection) | E451 | | | | | |
| 5. Abnormally high temperature on discharged air on outdoor unit (2nd detection) | E416 | | | | | |
| 6. Indoor operation stop due to unconfirmed error on outdoor unit | E559 | | | | | |
| 7. Error due to reverse phase detection | E425 | | | | | |
| 8. Comp stop due to freeze detection (6th detection) | E403 | × | × | ◐ | ◐ | ◐ |
| 9. High pressure sensor is detached | E301 | × | × | ◐ | ◐ | ◐ |
| 10. Low pressure sensor is detached | E306 | | | | | |
| 11. Outdoor unit copression ration error | E428 | | | | | |
| 12. Outdoor sump down_1 prevetion control | E413 | | | | | |
| 13. Compressor down due to low pressure sensor prevention control_1 | E410 | | | | | |
| 14. Simultaneous opening of cooling/heating MCU SOL valve (1st detection) | E180 | | | | | |
| 15. Simultaneous opening of cooling/heating MCU SOL valve (2nd detection) | E181 | | | | | |
| Other outdoor unit self-diagnosis error that is not on the above list | | | | | | |
| Flowating s/w (2nd detection) | E153 | × | × | × | ◐ | ◐ |
| EEPROM error | E162 | ◐ | ◐ | ◐ | ◐ | ◐ |
| EEPROM option error | E163 | ◐ | ◐ | ◐ | ◐ | ◐ |
| Error due to incompatible indoor unit | E164 | × | × | × | × | ◐ |

● : On ◐ : Flickering × : Off

- If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- If you re-operate the air conditioner, it operates normally at first, then detect an error again.
- When E108 error occurs, change the address and reset the system.

Ex.) When address of the indoor unit #1 and #2 are set as 5, address of the indoor unit #1 will become 5 and indoor unit #2 will display E108, A002.

- ERV Plus type

If an error occurs during the operation, The Wired Remote controller show that Error mode.

- When ERRORS related to cooling and heating operation occur, the ventilator (ERV) continues to perform in normal operation.
- When ERRORS related to a ventilator (ERV) occur, it stops operating.

■ ERROR CODE DISPLAY on Wired remote controller

| Error code | Explanation | Classifications |
|-------------------|--|---|
| E101 | No communication between indoor unit and outdoor unit | ERRORS RELATED TO COOLING AND HEATING OPERATION |
| E102 | Indoor unit receiving the communication error from outdoor unit | |
| E122 | EVA-IN Sensor(open/short) | |
| E123 | EVA-OUT Sensor(open/short) | |
| E128 | Breakaway of EVA-IN Sensor | |
| E129 | Breakaway of EVA-OUT Sensor | |
| E174 | EVA-IN Air sensor(open/short) | |
| E151 | Error of EEV open | |
| E152 | Error of EEV close | |
| E161 | Error of mixed operation | |
| E201 | Communication error from outdoor unit due to the mismatching of the communication numbers and installed numbers after tracking | Errors related to ventilator (ERV) operation |
| E121 | Indoor Temperature Sensor(open/short) | |
| E175 | Outdoor Temperature Sensor(open/short) | |
| E139 | CO2 sensor (open/short) | |
| E162 | EEPROM ERROR | |
| E163 | EEPROM option setting error | |
| E186 | SPI Error | |
| E561 | Supply Air Fan Motor error | |
| E562 | Exhaust Air Fan Motor error | |
| E654 | Damper ERROR (When there is no switch input for 100 seconds while monitoring the damper) | |

--Hydro unit / Hydro unit HT

If an error occurs during the operation, The Wired Remote controller show that Error mode.

- When ERRORS related to cooling and heating operation occur, the ventilator (ERV) continues to perform in normal operation.

- When ERRORS related to a ventilator (ERV) occur, it stops operating.

■ ERROR CODE DISPLAY on Wired remote controller

| Error code | Explanation |
|------------|--|
| E101 | Communication error between DVM Hydro unit / Hydro unit HT and outdoor unit (When DVM Hydro unit / Hydro unit HT is having trouble with receiving data from outdoor unit) |
| E102 | Communication error on outdoor unit (When outdoor unit is having trouble sending data to DVM Hydro unit / Hydro unit HT) |
| E110 | Communication error between DVM Hydro unit / Hydro unit HT and Control Kit (Detection from the Control Kit) |
| E121 | Error on room temperature sensor of DVM Hydro unit / Hydro unit HT (Short or Open) |
| E122 | Error on EVA IN sensor of DVM Hydro unit / Hydro unit HT (Short or Open) |
| E123 | Error on EVA OUT sensor of DVM Hydro unit / Hydro unit HT (Short or Open) |
| E128 | EVA IN sensor of DVM Hydro unit / Hydro unit HT is detached |
| E129 | EVA OUT sensor of DVM Hydro unit / Hydro unit HT is detached |
| E130 | EVA IN and EVA OUT sensor of DVM Hydro unit / Hydro unit HT is detached |
| E151 | Error due to opened EEV of DVM Hydro unit / Hydro unit HT (2nd detection) |
| E152 | Error due to closed EEV of DVM Hydro unit / Hydro unit HT (2nd detection) |
| E161 | Mixed operation mode error |
| E162 | EEPROM error |
| E163 | EEPROM option setting error |
| E177 | Check the water circulating |
| E185 | Cross wiring error (When power line is connected to communication line of DVM Hydro unit / Hydro unit HT) |
| E198 | Error due to disconnected Thermal Fuse (When the temperature of terminal block is increases) |
| E601 | Communication error between remote controller and the DVM Hydro unit / Hydro unit HT |
| E602 | Communication error between master and slave remote controller |
| E604 | Tracking error between remote controller and the DVM Hydro unit / Hydro unit HT |
| E618 | Error due to exceeding maximum numbers of Hydro unit installation (16 units) |
| E627 | Error due to exceeding maximum numbers of wired remote controller installation (2 units) |
| E633 | Error caused by installing mixed models |
| E653 | Remote controller's temperature sensor is disconnected or has problem |
| E654 | Data error on remote controller (Memory read/write error) |
| E901 | Error on the sensor of water inlet pipe (Short or Open) |
| E902 | Error on the sensor of water outlet pipe (Short or Open) |
| E904 | EEPROM option setting error |
| E907 | Error due to pipe rupture protection |
| E908 | Error due to freeze prevention(Re-operation is possible) |
| E909 | Error due to freeze prevention(Re-operation is impossible) |
| E910 | Water temperature sensor on water outlet pipe is detached |
| E911 | Flow switch off error, When the switch is turned off within 10 seconds after a pump starts its operation(Re-operation is possible) |
| E913 | Six times detection for Flow Switch Error(Re-operation is not possible) |
| E914 | Error due to incorrect thermostat connection |
| E915 | Error on DC fan(Non-operating) |

4-3-4 Number Display Method (Outdoor Unit, MCU, Cable remote control, wall-mount, etc.)

■ How to Display Integrated Error Code

▶ Meanings of First Alphabetical Character / Number of Error Code

| Displayed alphabet | Explanation | |
|--------------------|---|--|
| <i>E</i> | When displaying Error 101~700 | |
| <i>P</i> | When displaying Error 701~800 | |
| <i>C</i> | When E206 occurs | Displays address of subordinate within the set C001: HUB, C002: FAN, C003: INV1, C004: INV2 |
| | When MCU error occurs | Displays address of MCU Ex) C100: MCU address 0, C101: MCU address 1, C102: MCU address 2 |
| <i>U</i> | When displaying outdoor unit address Ex) U200: Outdoor unit 1, U201: Outdoor unit 2, U202: Outdoor unit 3, U203: Indoor unit 4 | |
| <i>A</i> | When displaying indoor unit address Ex) A000: Indoor unit address 0, A001: Indoor unit address 1, A002: Indoor unit address 2 | |

▶ Order of Error Display

| Classification | Error display method | Display Example |
|---|---|--|
| Display method for error that occurred in indoor unit | Error Number → Indoor unit address → Error Number, repeat display | E471 → A002 → E471 → A002 |
| Display method for error that occurred in outdoor unit and other methods of error display | Error Number → Outdoor unit address → Error Number, repeat display | E471 → U200 → E471 → U200 E206 → C001 → E206 → C002 |

■ Diagnosis and Adjustment (Error Code)

▶ Error code related indoor unit

| CODE | Explanation |
|-------|--|
| E-101 | Indoor unit communication error. Indoor unit can not receive any data from outdoor unit. |
| E-102 | Communication error between indoor unit and outdoor unit. Displayed in indoor unit. |
| E-108 | Error due to repeated address setting (When 2 or more devices has same address within the network) |
| E-109 | Communication address not confirmed other outdoor unit communication error that is not on the above list |
| E-110 | Communication error between Hydro unit HT(Main PBA) and Control kit PBA(Detection from the Control kit) |
| E-121 | Error on indoor temperature sensor of indoor unit (Short or Open) |
| E-122 | Error on EVA IN sensor of indoor unit (Short or Open) |
| E-123 | Error on EVA OUT sensor of indoor unit (Short or Open) |
| E-128 | EVA IN temperature sensor of indoor unit is detached from EVA IN pipe |
| E-129 | EVA OUT temperature sensor of indoor unit is detached from EVA OUT pipe |
| E-130 | Heat exchanger in/out sensors of indoor unit are detached |
| E-135 | RPM feedback error of indoor unit's cleaning fan |
| E-151 | Error due to opened EEV of indoor unit (2nd detection) |
| E-152 | Error due to closed EEV of indoor unit (2nd detection) |
| E-153 | Error on floating switch of indoor unit (2nd detection) |
| E-154 | RPM feedback error of indoor unit |
| E-161 | Mixed operation mode error of indoor unit; When outdoor unit is getting ready to operate in cooling (or heating) and some of the indoor unit is trying to operate in heating (or cooling) mode |
| E-162 | EEPROM error of MICOM (Physical problem of parts/circuit) |
| E-163 | Indoor unit's remote controller option input is Incorrect or missing. Outdo or unit EEPROM data error |
| E-180 | Simultaneous opening of cooling/heating MCU SOL V/V (1st detection) |
| E-181 | Simultaneous opening of cooling/heating MCU SOL V/V (2nd detection) |
| E-185 | Cross wiring error between communication and power cable of indoor unit |
| E-186 | Connection error or problem on SPi |
| E-190 | No temperature changes in EVA IN during pipe inspection or changes in temperature is seen in indoor unit with wrong address |
| E-191 | No temperature changes in EVA OUT during pipe inspection or changes in temperature is seen in indoor unit with wrong address |
| E-198 | Error due to disconnected thermal fuse of indoor unit |
| E-201 | Communication error between indoor and outdoor units (installation number setting error, repeated indoor unit address, indoor unit communication cable error) |
| E-202 | Communication error between indoor and outdoor units (Communication error on all indoor unit, outdoor unit communication cable error) |
| E-203 | Communication error between main and sub outdoor units |
| E-205 | Communication error on all PBA within the outdoor unit C-Box, communication cable error |
| E-206 | E206-C001: HUB PBA communication error / E206-C002: FAN PBA communication error E206-C003: INV1 PBA communication error / E206-C004: INV2 PBA communication error |

■ Diagnosis and Adjustment (Error Code)

▶ Error code related to the Communications / Settings / HW (cont.)

| CODE | Explanation |
|-------|---|
| E-211 | When single indoor unit uses 2 MCU ports that are not in series. |
| E-212 | If the rotary switch (on the MCU) for address setting of the indoor unit has 3 or more of the same address |
| E-213 | When total number of indoor units assigned to MCU is same as actual number of installed indoor units but there is indoor unit that is not installed even though it is assigned on MCU |
| E-214 | When number of MCU is not set correctly on the outdoor unit or when two or more MCU was installed some of them have the same address |
| E-215 | When two different MCU's have same address value on the rotary switch |
| E-216 | When indoor unit is not installed to a MCU port but the switch on the port is set to On. |
| E-217 | When indoor unit is connected to a MCU port but indoor unit is assigned to a MCU and the switch on the port is set to Off |
| E-218 | When there's at least one or more actual number of indoor unit connection compared to number of indoor units assigned to MCU |
| E-219 | Error on temperature sensor located on MCU intercooler inlet (Short or Open) |
| E-220 | Error on temperature sensor located on MCU intercooler outlet (Short or Open) |
| E-221 | Error on outdoor temperature sensor of outdoor unit (Short or open) |
| E-231 | Error on COND OUT temperature sensor of main outdoor unit (Short or Open) |
| E-241 | COND OUT sensor is detached |
| E-251 | Error on discharge temperature sensor of compressor 1 (Short or Open) |
| E-257 | Error on discharge temperature sensor of compressor 2 (Short or Open) |
| E-262 | Discharge temperature sensor of compressor 1 is detached from the sensor holder on the pipe |
| E-263 | Discharge temperature sensor of compressor 2 is detached from the sensor holder on the pipe |
| E-266 | Top sensor of compressor 1 is detached |
| E-267 | Top sensor of compressor 2 is detached |
| E-269 | Suction temperature sensor is detached from the sensor holder on the pipe |
| E-276 | Error on top sensor of compressor 1 (Short or Open) |
| E-277 | Error on top sensor of compressor 2 (Short or Open) |
| E-291 | Refrigerant leakage or error on high pressure sensor (Short or Open) |
| E-296 | Refrigerant leakage or error on low pressure sensor (Short or Open) |
| E-308 | Error on suction temperature sensor (Short or Open) |

■ Diagnosis and Adjustment (Error Code)

▶ Error code related to the Communications / Settings / HW (cont.)

| CODE | Explanation |
|-------|--|
| E-311 | Error on temperature sensor of double layer pipe/liquid pipe(sub heat exchanger) (Short or Open) |
| E-321 | Error on EVI (ESC) IN temperature sensor (Short or Open) |
| E-322 | Error on EVI (ESC) OUT temperature sensor (Short or Open) |
| E-323 | Error on suction sensor 2 (Short or Open) |
| E-346 | Error due to operation failure of Fan2 |
| E-347 | Motor wire of Fan2 is not connected |
| E-348 | Lock error on Fan2 of outdoor unit |
| E-353 | Error due to overheated motor of outdoor unit's Fan2 |
| E-355 | Error due to overheated IPM of Fan2 |
| E-361 | Error due to operation failure of inverter compressor 2 |
| E-364 | Error due to over-current of inverter compressor 2 |
| E-365 | V-limit error of inverter compressor 2 |
| E-366 | Error due to over voltage /low voltage of inverter PBA2 |
| E-367 | Error due to unconnected wire of compressor 2 |
| E-368 | Output current sensor error of inverter PBA2 |
| E-369 | DC voltage sensor error of inverter PBA2 |
| E-374 | Heat sink temperature sensor error of inverter PBA2 |
| E-378 | Error due to overcurrent of Fan2 |
| E-385 | Error due to input current of inverter 2 |
| E-386 | Over-voltage/low-voltage error of Fan2 |
| E-387 | Hall IC connection error of Fan2 |
| E-389 | V-limit error on Fan2 of compressor |
| E-393 | Output current sensor error of Fan2 |
| E-396 | DC voltage sensor error of Fan2 |
| E-399 | Heat sink temperature sensor error of Fan2 |
| E-400 | Error due to overheat caused by contact failure on IPM of Inverter PBA2 |
| E-407 | Compressor operation stop due to high pressure protection control |
| E-410 | Compressor operation stop due to low pressure protection control or refrigerant leakage |
| E-416 | Compressor operation stop due to discharge temperature protection control |
| E-425 | Phase reversal or phase failure (3Ø outdoor unit wiring, R-S-T-N), connection error on 3 phase input |
| E-428 | Compressor operation stop due abnormal compression ratio |
| E-438 | EVI (ESC) EEV leakage or internal leakage of intercooler or incorrect connector insertion of EVI (ESC) EEV |
| E-439 | Error due to refrigerant leakage |
| E-440 | Heating mode restriction due to high air temperature |
| E-441 | Cooling mode restriction due to low air temperature |
| E-442 | Refrigerant charging restriction in heating mode when air temperature is over 15 °C |
| E-443 | Operation prohibited due to the pressure drop |
| E-445 | CCH is deatched |
| E-446 | Error due to operation failure of Fan1 |

■ Diagnosis and Adjustment (Error Code)

▶ Error code related to the Communications / Settings / HW (cont)

| CODE | Explanation |
|-------|--|
| E-447 | Motor wire of Fan1 is not connected |
| E-448 | Lock error on Fan1 |
| E-452 | Error due to ZPC detection circuit problem or power failure |
| E-453 | Error due to overheated motor of outdoor unit's Fan 1 |
| E-455 | Error due to overheated IPM of Fan 1 |
| E-461 | Error due to operation failure of inverter compressor 1 |
| E-462 | Compressor stop due to full current control or error due to low current on CT2 |
| E-464 | Error due to over-current of inverter compressor 1 |
| E-465 | V-limit error of inverter compressor 1 |
| E-466 | Error due to over voltage /low voltage of inveter PBA1 |
| E-467 | Error due to unconnected wire of compressor 1 |
| E-468 | Output current sensor error of inverter PBA1 |
| E-469 | DC voltage sensor error of inver PBA1 |
| E-474 | Heat sink temperature sensor error of inverter PBA1 |
| E-478 | Error due to overcurrent of Fan1 |
| E-485 | Error due to input current of inverter 1 |
| E-486 | Error due to over voltage/low voltage of Fan |
| E-487 | Hall IC error of Fan1 |
| E-489 | V-limit error on Fan1 of compressor |
| E-493 | Output current sensor error of Fan1 |
| E-496 | DC voltage sensor error of Fan1 |
| E-499 | Heat sink temperature sensor error of Fan1 |
| E-500 | Error due to overheat caused by contact failure on IPM of Inverter PBA1 |
| E-503 | Error due to alert the user to check if the service valve is closed |
| E-504 | Error due to self diagnosis of compressor operation |
| E-505 | Error due to self diagnosis of high pressure sensor |
| E-506 | Error due to self diagnosis of low pressure sensor |
| E-560 | Outdoor unit's option switch setting error (when inappropriate option switch is on) |
| E-563 | Error due to module installation of indoor unit with old version (Micom version needs to be checked) |
| E-573 | Error due to using single type outdoor unit in a module installation |
| E-601 | Communication error between remote controller and the DVM Hydro unit / Hydro unit HT |
| E-602 | Communication error between master and slave remote controller |
| E-604 | Tracking error between remote controller and the DVM Hydro unit / Hydro unit HT |
| E-618 | Error due to exceeding maximum numbers of Hydro unit installation (16 units) |
| E-627 | Error due to exceeding maximum numbers of wired remote controller installation (2 units) |
| E-633 | Error caused by installing mixed models |
| E-653 | Remote controller's temperature sensor is disconnected or has problem |
| E-654 | Data error on remote controller (Memory read/write error) |

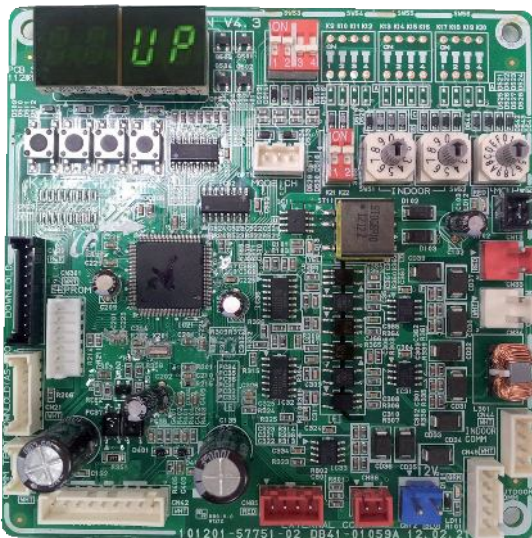
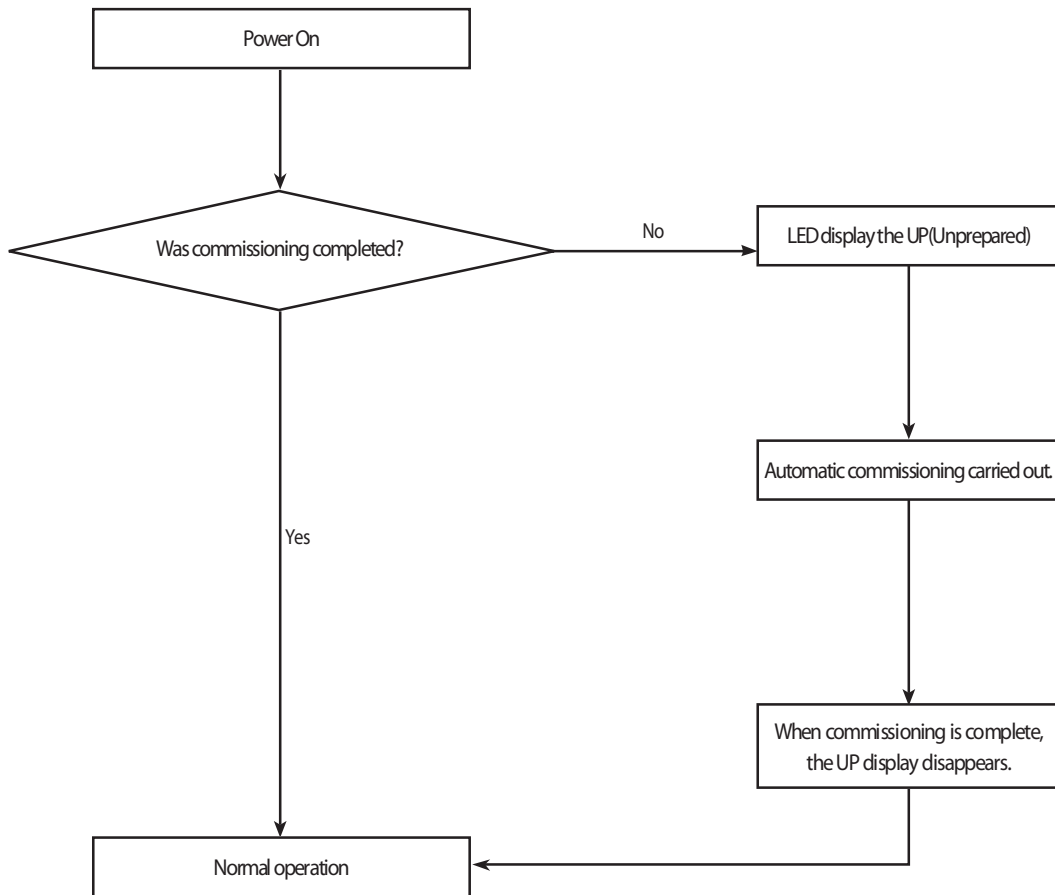
■ Diagnosis and Adjustment (Error Code)

▶ Error code related to the Communications / Settings / HW (cont.)

| CODE | Explanation |
|-------|--|
| E-702 | Error due to closed EEV of indoor unit (1st detection) |
| E-703 | Error due to opened EEV of indoor unit (1st detection) |
| E-901 | Error on the sensor of water inlet pipe (Short or Open) |
| E-902 | Error on the sensor of water outlet pipe (Short or Open) |
| E-904 | Error on water tank (Short or open) |
| E-907 | Error due to pipe rupture protection |
| E-908 | Error due to freeze prevention(Re-operation is possible) |
| E-909 | Error due to freeze prevention(Re-operation is impossible) |
| E-910 | Water temperature sensor on water outlet pipe is detached |
| E-911 | Flow switch off error, When the switch is turned off within 10 seconds after a pump starts its operation(Re-operation is possible) |
| E-913 | Six times detection for Flow Switch Error(Re-operation is not possible) |
| E-914 | Error due to incorrect thermostat connection |
| E-915 | Error on DC fan(Non-operating) |
| UP | Trial operation incompleted (UnPrepared) - It will be cleared when trial operation was executed for 1 hour or when automatic inspection is completed |

4-4 Appropriate Measures for Different Symptom

4-4-1 Outdoor Unit Operation Flow



Commissioning if it is not running - UP is displayed

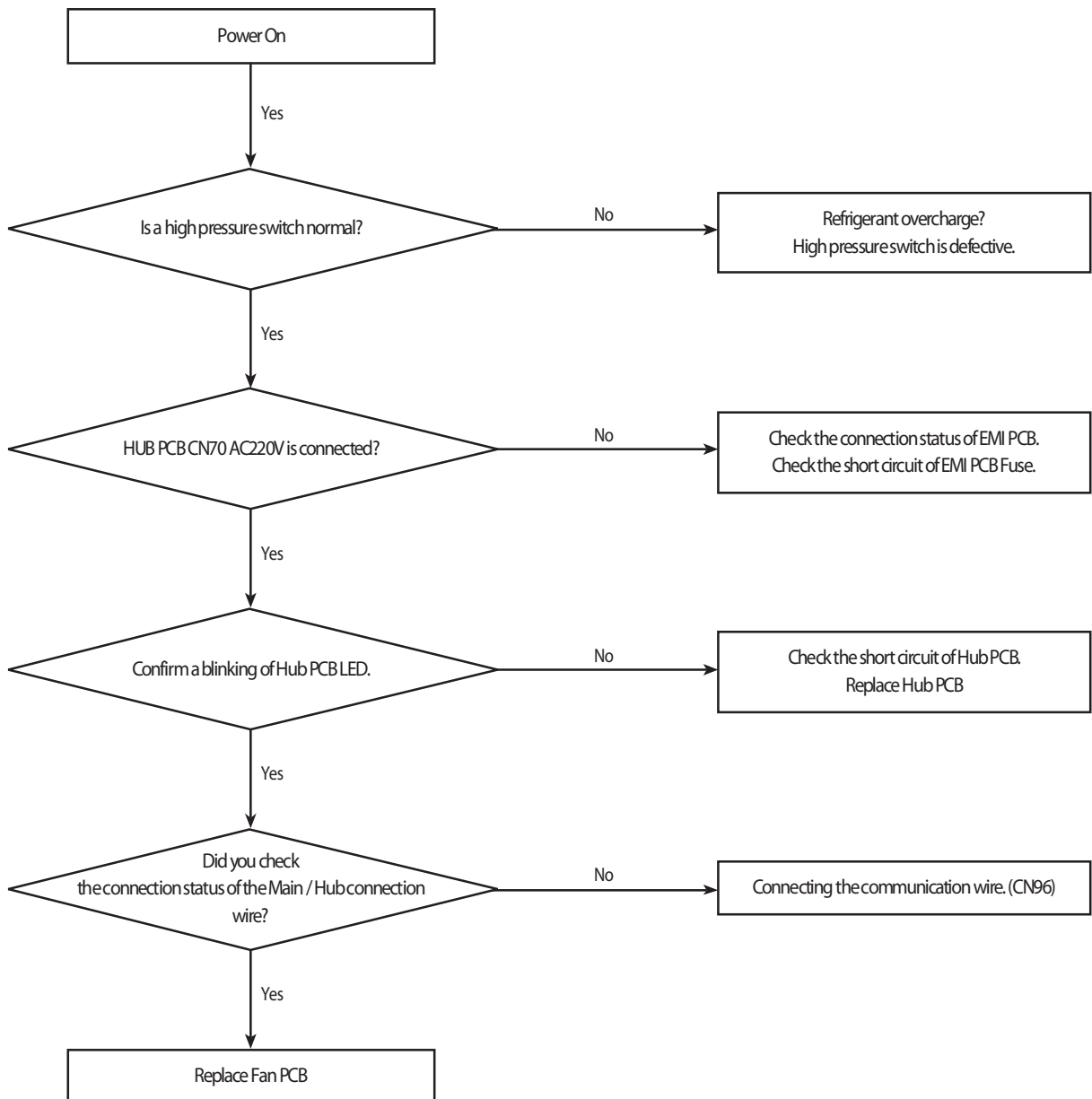
Prior to starting the air conditioning operation after the initial installation and automatic commissioning is carried out. This process, the stable operation to protect the system and verify the defect of the product.

1. Tracking is complete and after the initial installation, if you do not have a history of commissioning is completed, UP will be displayed.
2. Execute the automatic commissioning by Tact Switch.
3. UP display disappears after commissioning is complete, normal operation is possible.
4. Automatic commissioning is completed, if there is a history, normal operation execution immediately.

4-4-2 Main PCB has no power phenomenon

| | |
|----------------------|--|
| Outdoor unit display | Main PCB has no power phenomenon (7-seg does not blink) |
| Judgment Method | Hub PCB power and connection wire to detect. |
| Cause of problem | <ul style="list-style-type: none"> · HUB PCB connector wire defects and the connection is not. · Main PCB defective. · Hub PCB defective. · High pressure switch operation |

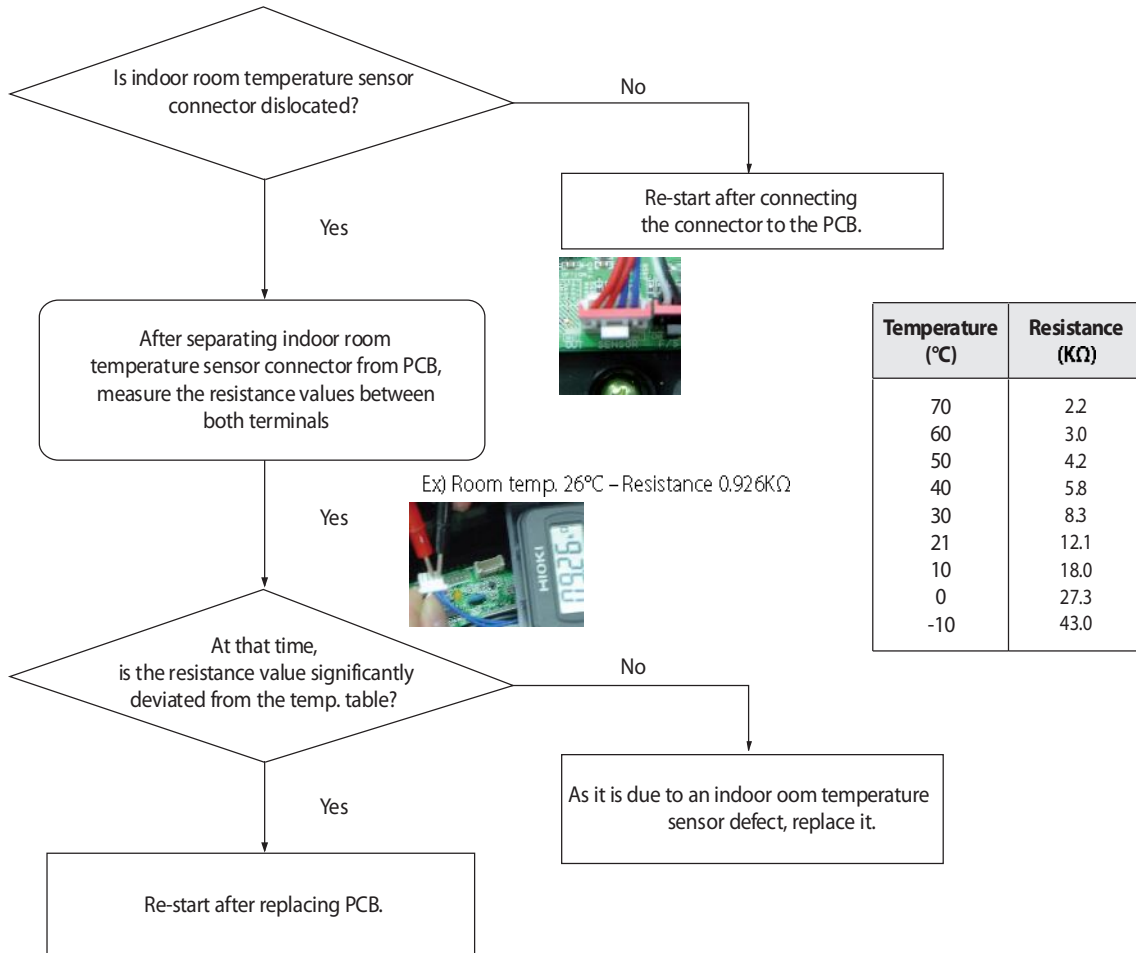
1. Cause of problem



4-4-3 Indoor Unit ROOM sensor Error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E 121 ↔ A XXX (XXX: The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ●(Timer) ×(Fan) ×(Filter) ×(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • The room temperature sensor of No. XXX indoor unit has defective OPEN/SHORT |

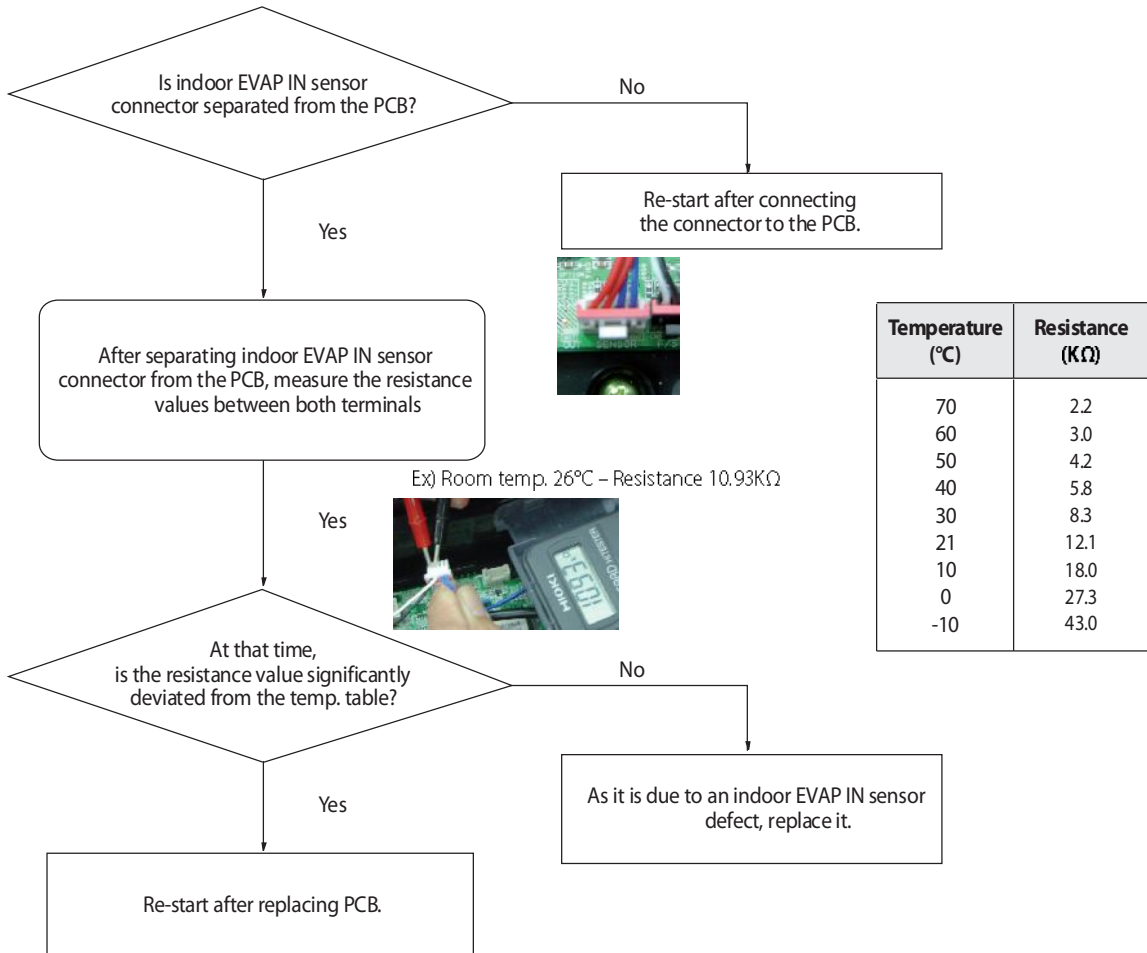
1. How to check



4-4-4 Indoor unit EVAP IN sensor Error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E 122 ↔ A XXX (XXX : The address of the error occurred indoor unit) |
| Indoor unit display | ● (Operation) ● (Timer) × (Fan) × (Filter) × (Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • The EVAP IN sensor of No. XXX indoor unit has defective OPEN/SHORT |

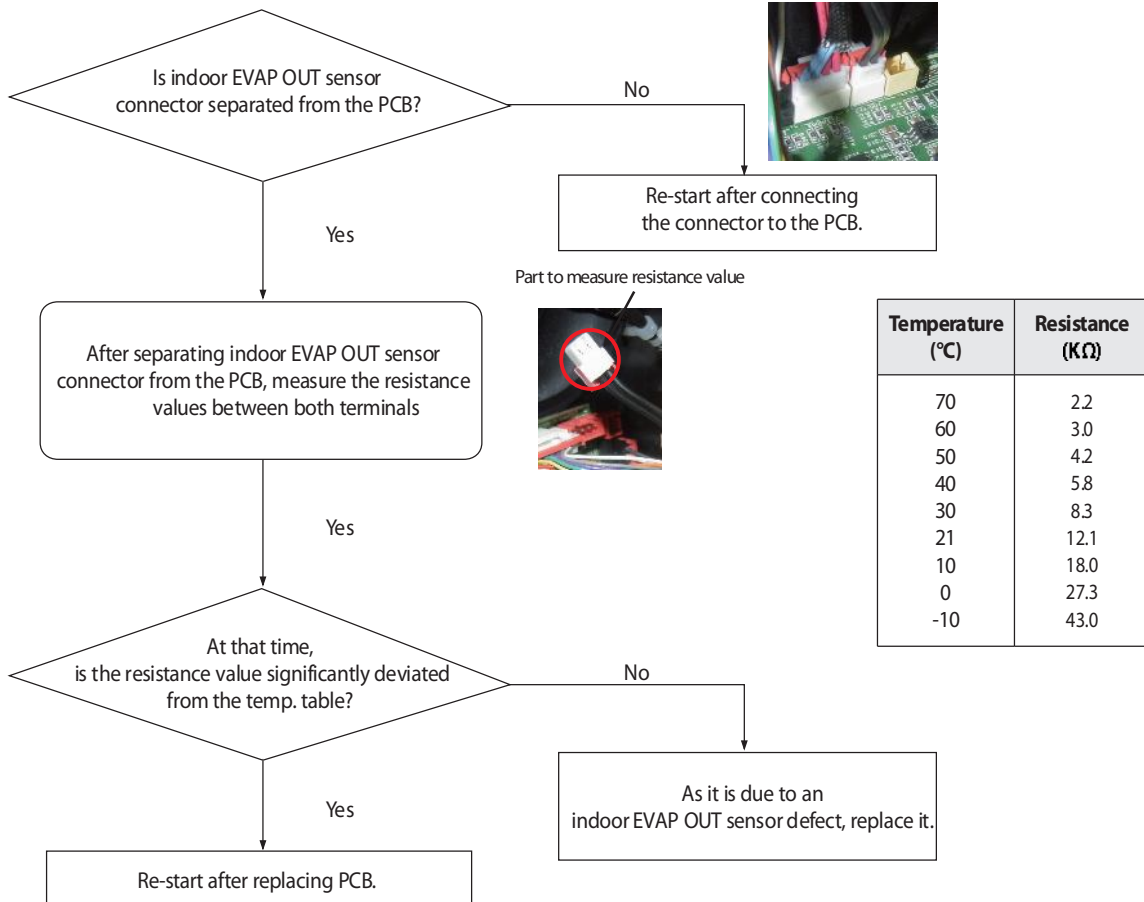
1. How to check



4-4-5 Indoor EVAP OUT sensor Error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E 123 ↔ A XXX (XXX : The address of the error occurred indoor unit) |
| Indoor unit display | ●(Operation) ●(Timer) ×(Fan) ×(Filter) ×(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • The EVAP out sensor of No. XXX indoor unit has defective OPEN/SHORT |

1. How to check



4-4-6 Indoor Heat Exchanger's EVAP IN sensor dislocation error

| | |
|----------------------|---|
| Outdoor unit display | E 12B ↔ A ^{xxx} (xxx: The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • Indoor heat exchanger's EVAP IN piping sensor has been dislocated |

1. How to diagnose

1) During Cooling Operation

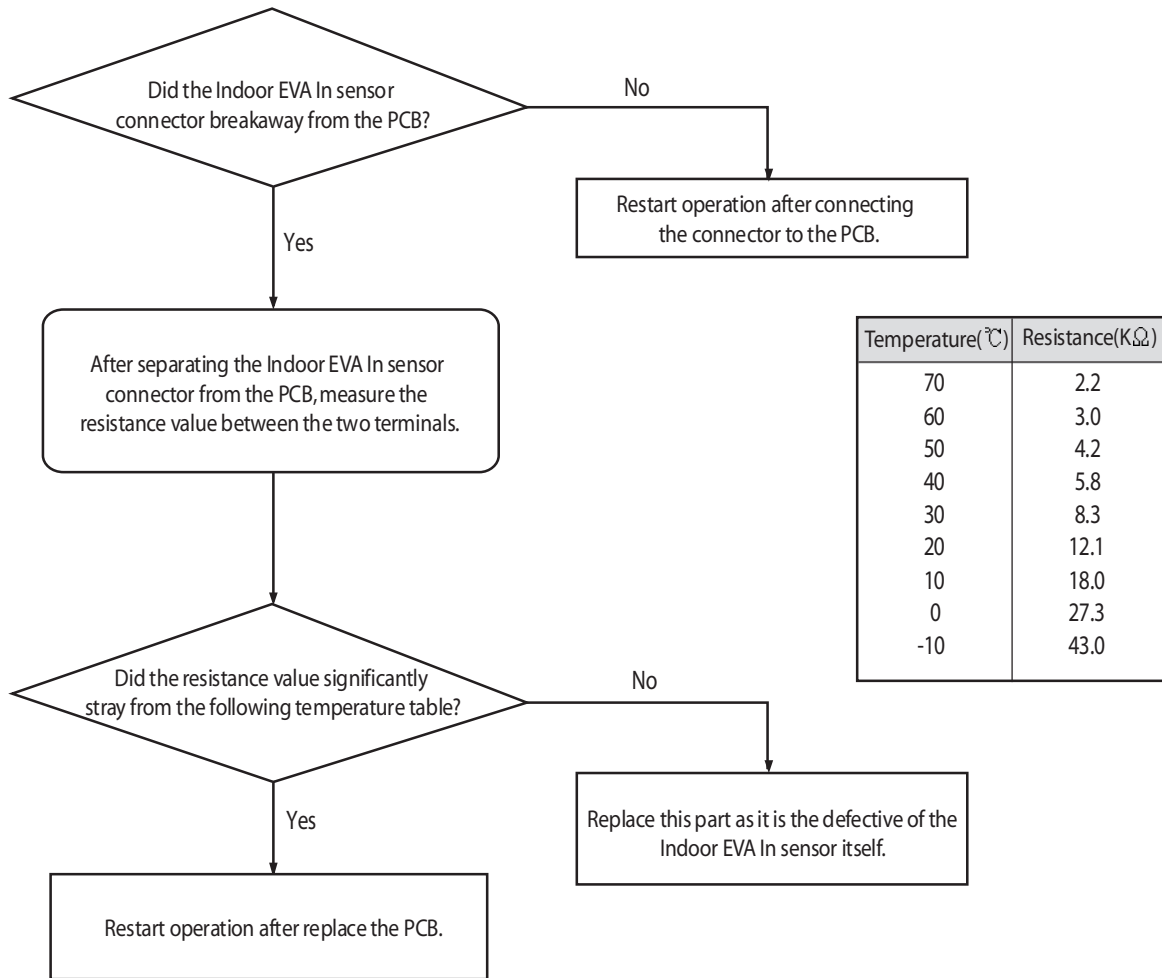
| | |
|---|---|
| Tcond, out - Tair, out > 3°C | OK |
| Tair, in - Teva, out > 4°C | NO |
| Tair, in - Teva, out > 4°C | OK |
| Compressor in operation & Indoor Unit operation & Thermo On | OK |
| Error details | Breakaway Error of Indoor Heat Exchanger EVA Out sensor |

* Hydro Unit : Before and after the Compressor operation, EVA Out temperature difference is less than 3°C.

2) During Heating operation

| | |
|---|---|
| Average high pressure > 25kg/cm ² | OK |
| Average low pressure > 8.5kg/cm ² | OK |
| Tcond, out - Tair, out ≥ 3°C | OK |
| Tair, in - Teva, out ≥ 2°C | NO |
| Tcond, out - Tair, out < -2°C | OK |
| Compressor in operation & Indoor Unit operation & Thermo On | OK |
| Error details | Breakaway Error of Indoor Heat Exchanger EVA Out sensor |

2. How to check



4-4-7 Indoor Heat Exchanger's EVA OUT sensor dislocation error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E 129 ↔ A xxx (xxx: The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Refer to the judgment method below. |
| Cause of problem | • Breakaway of Indoor Heat Exchanger EVA Out sensor |

1. How to diagnose

1) During Cooling Operation

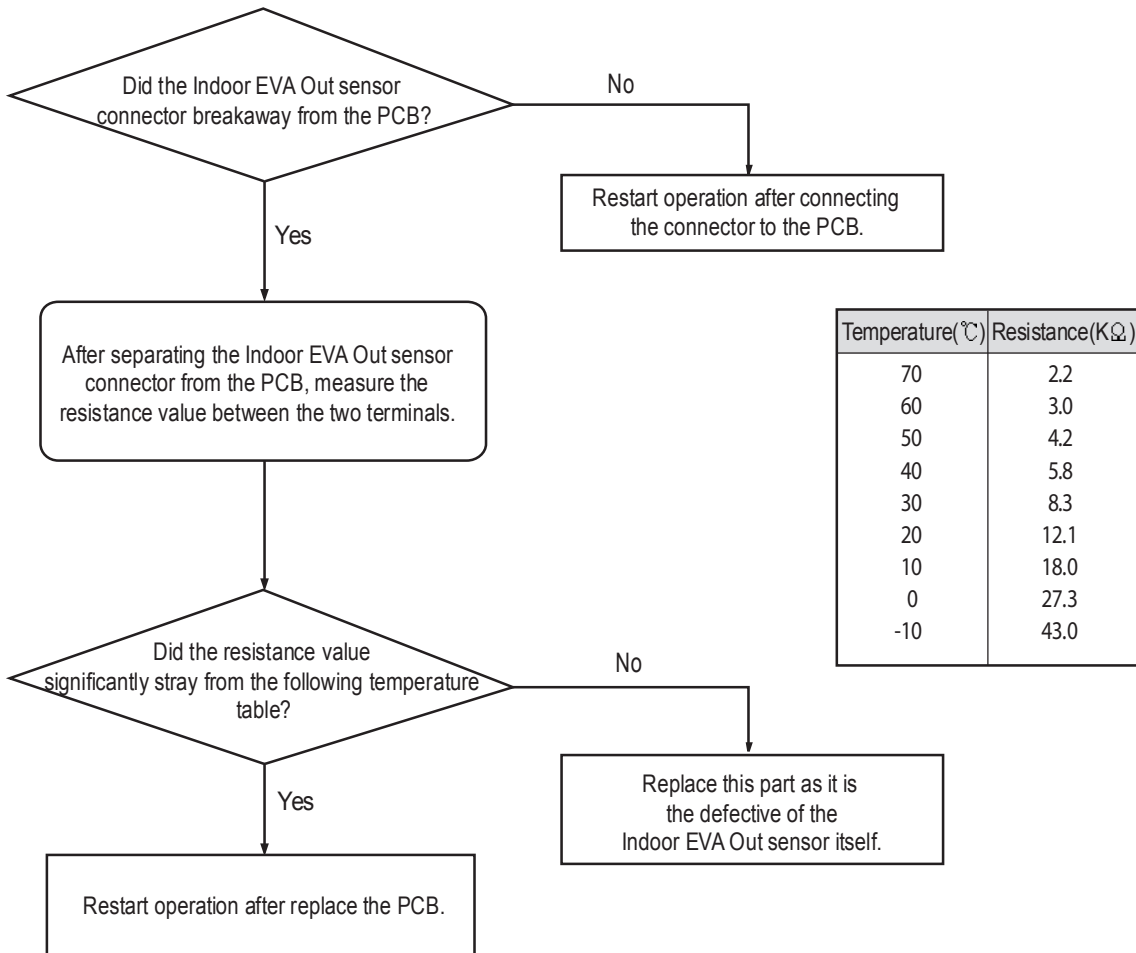
| | |
|---|---|
| Tcond, out - Tair, out > 3°C | OK |
| Tair, in - Teva, out > 4°C | NO |
| Tair, in - Teva, out > 4°C | OK |
| Compressor in operation & Indoor Unit operation & Thermo On | OK |
| Error details | Breakaway Error of Indoor Heat Exchanger EVA Out sensor |

* Hydro Unit : Before and after the Compressor operation, EVA Out temperature difference is less than 3°C.

2) During Heating operation

| | |
|---|---|
| Average high pressure > 25kg/cm ² | OK |
| Average low pressure > 8.5kg/cm ² | OK |
| Tcond, out - Tair, out ≥ 3°C | OK |
| Tair, in - Teva, out ≥ 2°C | NO |
| Tcond, out - Tair, out < -2°C | OK |
| Compressor in operation & Indoor Unit operation & Thermo On | OK |
| Error details | Breakaway Error of Indoor Heat Exchanger EVA Out sensor |

2. How to check



4-4-8 Simultaneous Indoor Heat Exchanger's EVA IN, OUT sensor dislocation error (Open/Short)

1. How to diagnose

1) During Cooling Operation

| | |
|---|---|
| Tcond, out - Tair, out > 3°C | OK |
| Tair, in - Teva, out > 4°C | NO |
| Tair, in - Teva, out > 4°C | NO |
| Compressor in operation & Indoor unit operation & Thermo On | OK |
| Error details | Simultaneous indoor heat exchanger's EVA IN, OUT sensor dislocation error |

2) During Heating operation

| | |
|---|---|
| Average high pressure > 25kg/cm ² | OK |
| Average low pressure > 8.2kg/cm ² | OK |
| Teva, out - Tair, out ≥ 3°C | NO |
| Tair, in - Teva, out ≥ 2°C | NO |
| Tcond, out - Tair, out < -2°C | OK |
| Compressor in operation & Indoor unit operation & Thermo On | OK |
| Error details | Simultaneous Indoor heat exchanger's EVA IN, OUT sensor dislocation error |

2. How to check

Check if an Indoor heat exchanger's EVA IN, OUT sensor has been dislocated then is correct after assembling.

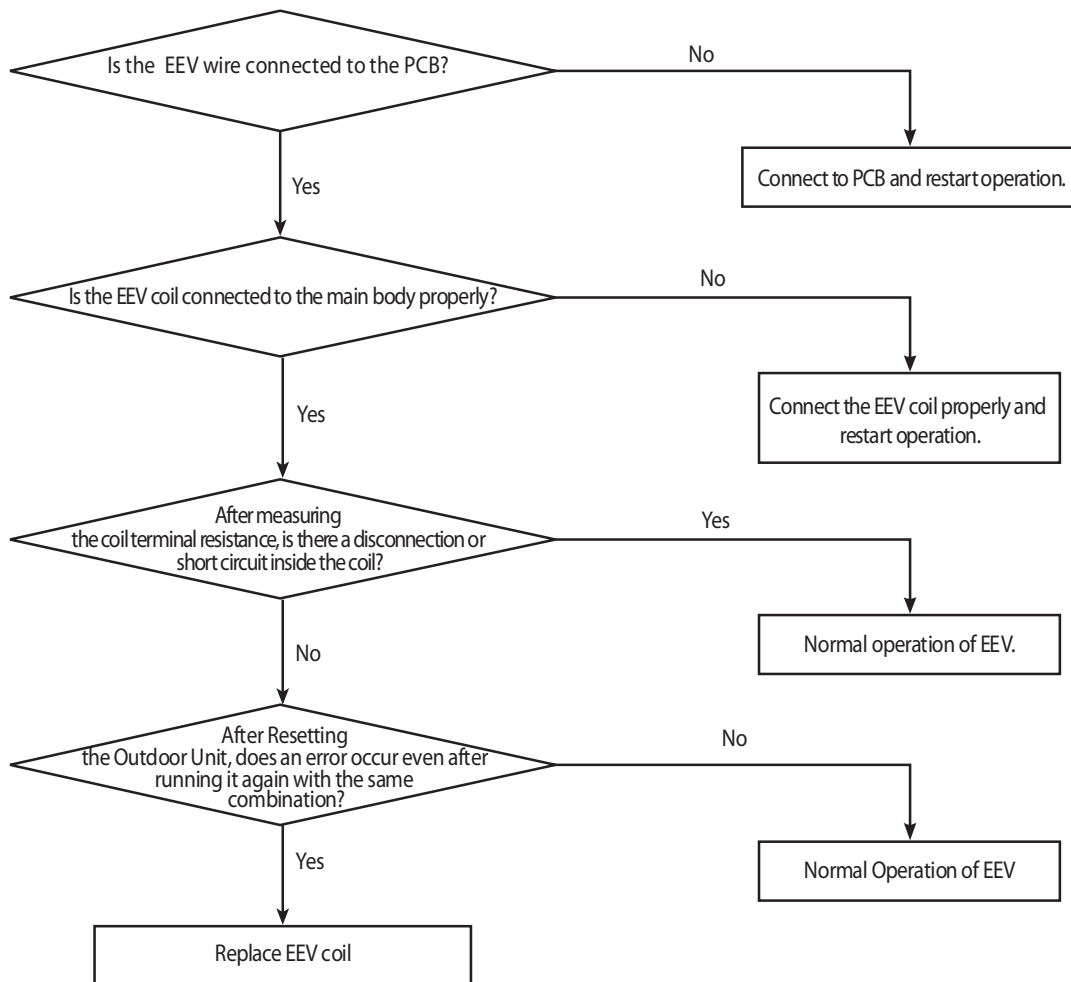
4-4-9 Electronic Expansion Valve opening malfunction (2nd stage) - E 135

| | |
|-----------------------------|--|
| Outdoor unit display | 1st detection : P703 (Outdoor Unit display only) 2nd detection : E 135 ↔ A ××× (×××: The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ×(Timer) ●(Fan) ×(Filter) ×(Defrost) |
| Criteria | • Refer to the judgment method below. |
| Cause of problem | • Faulty Indoor Unit EEV action. (Refrigerant will leak into the stopped Indoor Unit.) |

1. How to diagnose

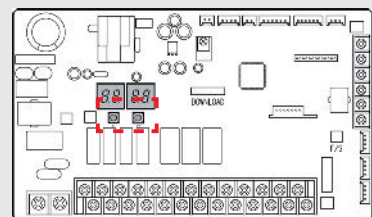
- During Cooling operation, the temperature of the inlet or outlet of stopped Heat Exchanger is kept lower than 0°C for more than 20 minutes without cessation.
- Hydro Unit : During the defrost operation, detection from stop-side Indoor Unit. (Temperature of the inlet of Heat Exchanger is kept lower than 0°C for more than 20 minutes without cessation.)

2. How to check



*** How to turn off the Hydro Unit E151**

- Hydro Unit PCB k1, k2 switch : At the same time push for more than 4 seconds.
- After resolving the cause of the error, restart operation.
- (Excessive reset operation, can cause damage to the Heat Exchanger.)



4-4-10 Breakdown of EEV (2nd)

1. How to diagnose

Detect only on cooling operation. (No detection during heating operation.)

During cooling operation, the temperature of the inlet or outlet ducts of heat exchanger is kept below 0°C for more than 20 minutes without cessation

2. How to check

1) Check if the wire of electronic expansion valve is correctly connected to the PCB of indoor unit.

2) Check if the coil of an electronic expansion valve is correctly plugged into the main body.

3) Check if there is any rust on the surface of the electronic expansion valve with naked eyes then check the resistance between each terminal to find any wire breaking or short circuit.

4) Press the RESET KEY (K3) of the outdoor unit then see if the same error occurs.

- In case of closure problem, operate the indoor unit in which the error has occurred.

- In case of opening problem, please do not operate the indoor unit in which the error has occurred.

5) If there is no problem with the above checkup items, replace the electronic expansion valve of the troubled indoor unit.

- As an electronic expansion valve replacement is tricky work that requires collecting refrigerants in all systems, please check the above items before replacement.

4-4-11 Problem with EEV closure (2nd)

1. How to diagnose

1) During Cooling operation(Each of the below conditions have to be met for at least 20 minutes.)

| | |
|--|---|
| Tcond, out - Tair, out > 3°C | OK |
| Tair, in - Teva, out > 4°C | NO |
| Tair, in - Teva, out > 4°C | NO |
| Compressor in operation & Indoor unit operation & Thermo On | OK |
| Error details | Electrically operated valve closure breakdown |

2) During heating operation (must satisfy all conditions below)

- When more than 2 indoor units are on Thermo On heating operation.
- When average high pressure is over 18kg/cm²
- 5 minutes after finishing Safety Start
- Keep Indoor units' T(Eva_In)<T(Room) +3°C and T(Eva_Out)<T(Room) +3°C condition for more than 5 minutes

2. How to check

- 1) Check if the wire of electronic expansion valve is correctly connected to the PCB of indoor unit.
- 2) Check if the coil of electronic expansion valve is correctly plugged into the main body.
- 3) Check if there is any rust on the surface of the electronic expansion valve with naked eye then check the resistance between each terminal to find any wire breaking or short circuit.
- 4) Press the RESET KEY (K3) of the outdoor unit then see if the same error occurs.
 - In case of closure problem, operate the indoor unit in which the error has occurred.
 - In case of opening problem, please do not operate the indoor unit in which the error has occurred.
- 5) If there is no problem with the above checkup items, replace the electronic expansion valve of the troubled indoor unit.
 - As electronic expansion valve replacement is tricky work that requires collecting refrigerants in all systems, please check the above items before replacement.

4-4-12 EEV(Electronic Expansion Valve) opening malfunction (2nd stage)

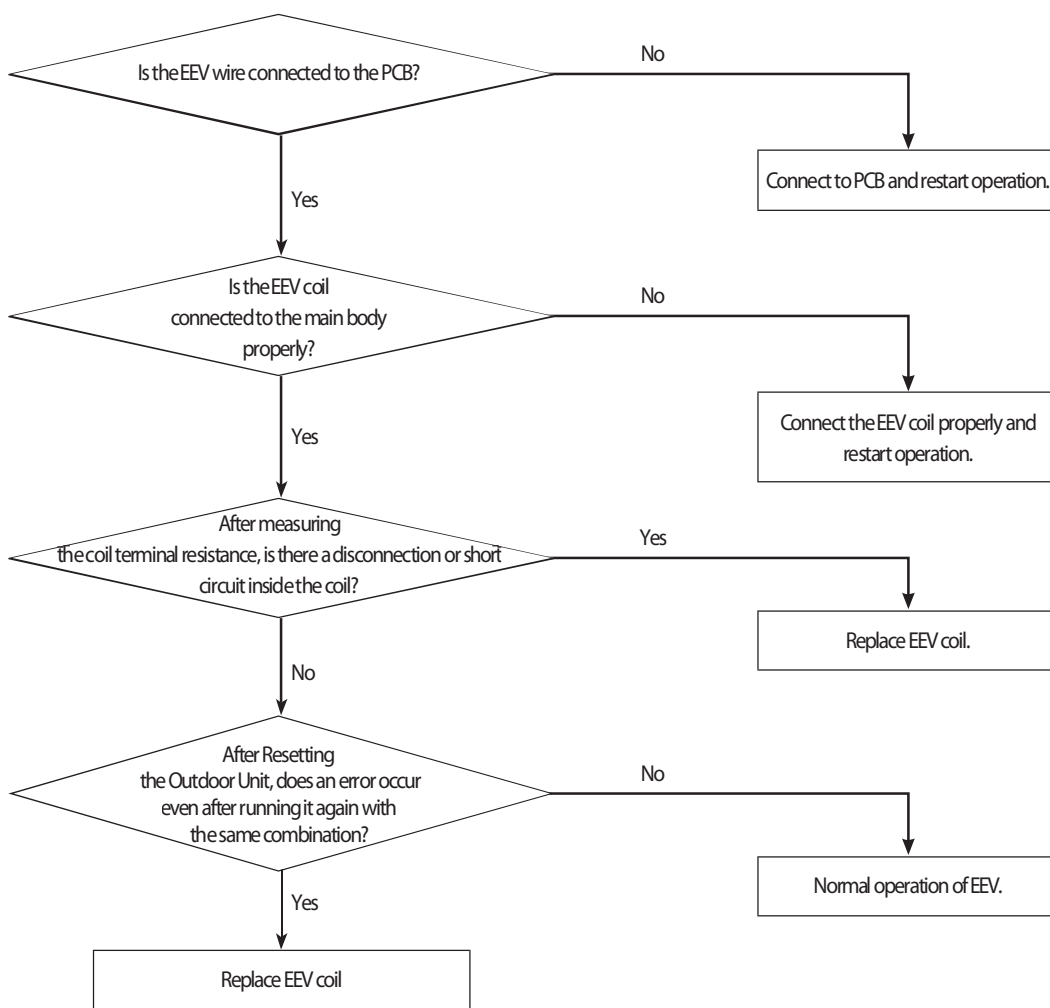
| | |
|----------------------|---|
| Outdoor unit display | 1st detection : P703 (Outdoor Unit display only) 2nd detection: <i>E 151</i> → <i>A</i> ^{x x x} (x x x : The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | · Refer to the judgment method below. |
| Cause of problem | · Faulty Indoor Unit EEV action. (Refrigerant will leak into the stopped Indoor Unit.) |

1. How to diagnose

Detect only on cooling operation. (No detection during heating operation.)

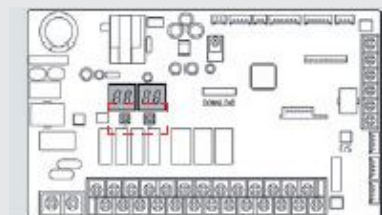
During Cooling operation, the temperature of the inlet or outlet of stopped Heat Exchanger is kept lower than 0°C for more than 20 minutes without cessation.

2. How to check



• How to turn off the Hydro Unit E151

- Hydro Unit PCB k1, k2 switch : At the same time push for more than 4 seconds.
- After resolving the cause of the error, restart operation. (Excessive reset operation, can cause damage to the Heat Exchanger.)



4-4-13 E 152 : EEV(Electronic Expansion Valve) closure malfunction (2nd stage)

| | |
|----------------------|--|
| Outdoor unit display | 1st detection : P702 (Outdoor Unit display only) 2nd detection : E 152 ↔ Axxxx (xxxx : The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | · Refer to the judgment method below. |
| Cause of problem | · Faulty Indoor Unit EEV action. (EEV does not open.) |

1. How to diagnose

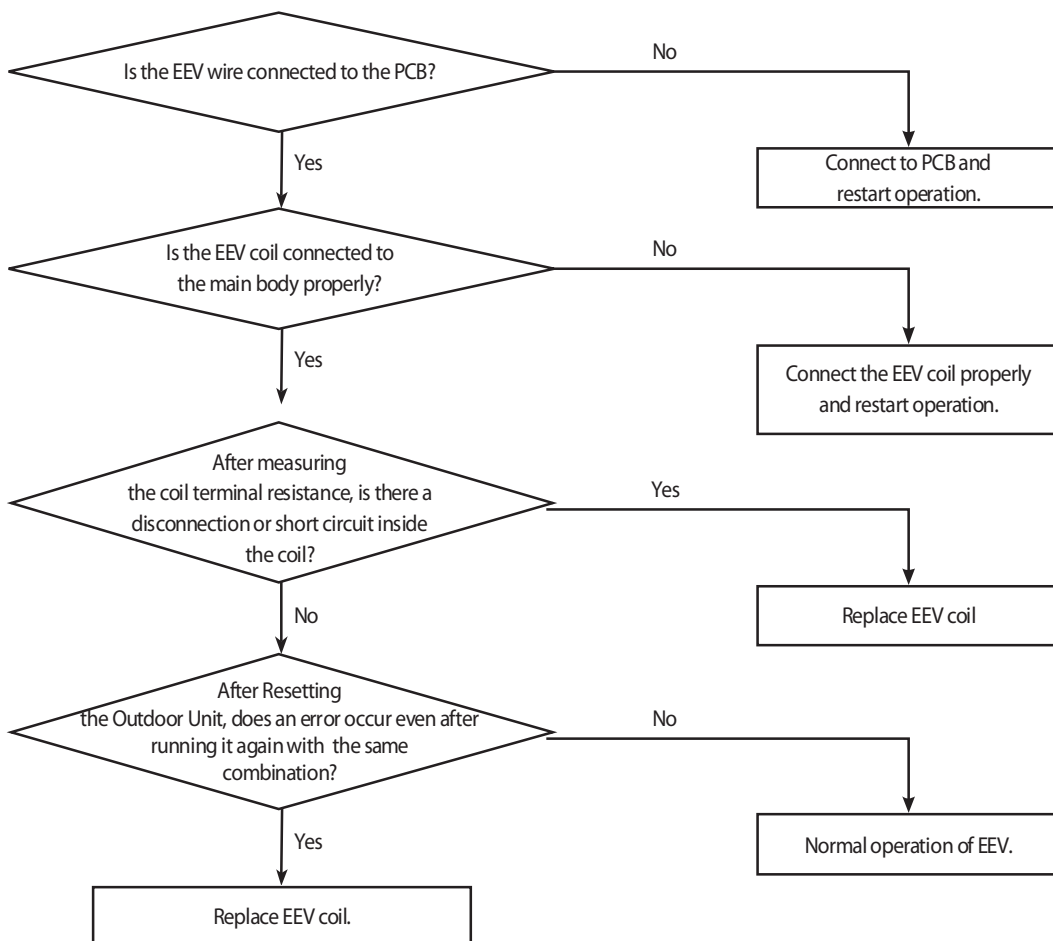
1) During Cooling operation. (Each of the below conditions have to be met for at least 20 minutes.)

| | |
|---|-----------------------------------|
| $T_{cond,out} - T_{air,out} > 3^{\circ}C$ | OK |
| $T_{air,in} - T_{eva,in} > 4^{\circ}C$ | NO |
| $T_{air,in} - T_{eva,out} > 4^{\circ}C$ | NO |
| Compressor in operation & Indoor unit operation & Thermo ON | OK |
| Error details | Indoor Unit EEV closure breakdown |

2) During heating operation (must satisfy all conditions below)

- When more than 2 indoor units are on Thermo ON heating operation.
- When average high pressure is over 18kg/cm².
- 5 minutes after finishing Safety Start.
- Keep Indoor Unit $T(Eva_In) < T(Room) + 3^{\circ}C$ and $T(Eva_Out) < T(Room) + 3^{\circ}C$ condition for more than 5 minutes.

2. How to check

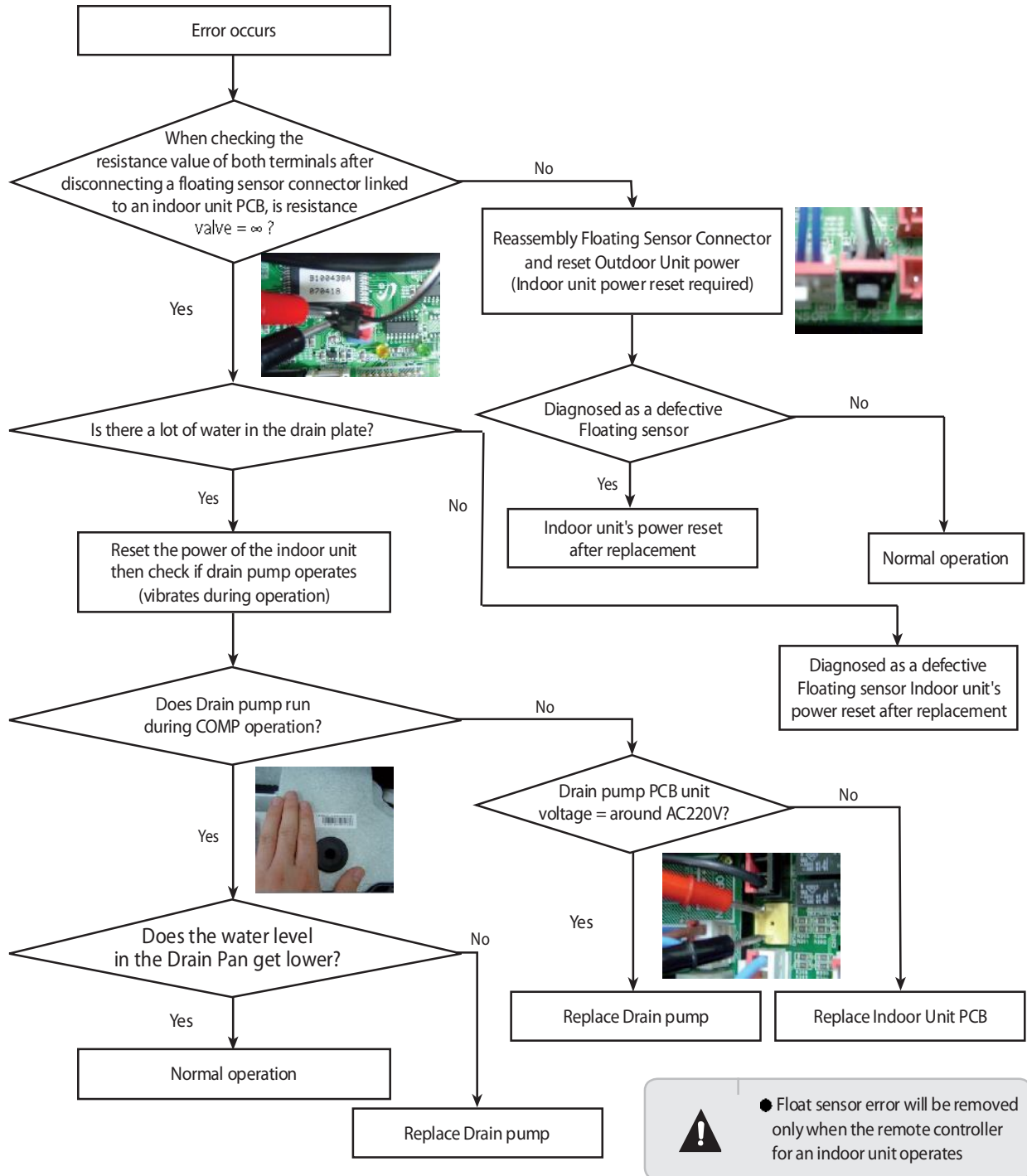


4-4-14 E 153 : Detection of Floating Switch of Indoor Unit's Drain Pump

| | |
|----------------------|---|
| Outdoor unit display | E 153 ↔ A ^{xx} x(xxx : The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ×(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • Due to the breakdown of a drain pump of the indoor unit, an increase in the water level in the drainage plate or defective detection sensor |

* To release E153 error, you must reset the power of the indoor unit.

1. How to check



4-4-15 The operational error of Indoor Unit's Fan Motor

| | |
|----------------------|--|
| Outdoor unit display | <i>E 154</i> ↔ <i>A</i> ^{xxx} (_{xxx} : The address of the error occurred indoor unit) |
| Indoor unit display | ×(Operation) ×(Timer) ●(Fan) ×(Filter) ×(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • The operational error of the fan motor of No. XXX indoor unit |

1. How to diagnose
 - 1) Occurs when RPM valve fails to feedback to MICOM at a PID control-type fan motor
2. How to check
 - 1) Check HALL IC connector that carries out feedback of RPM value.
 - 2) If a fan motor operation capacitor is a PCB separating type, check the connection terminal.
 - 3) Check the operational status of the fan motor.
 - 4) If there is no problem with the above checkup items, replace the PCB.

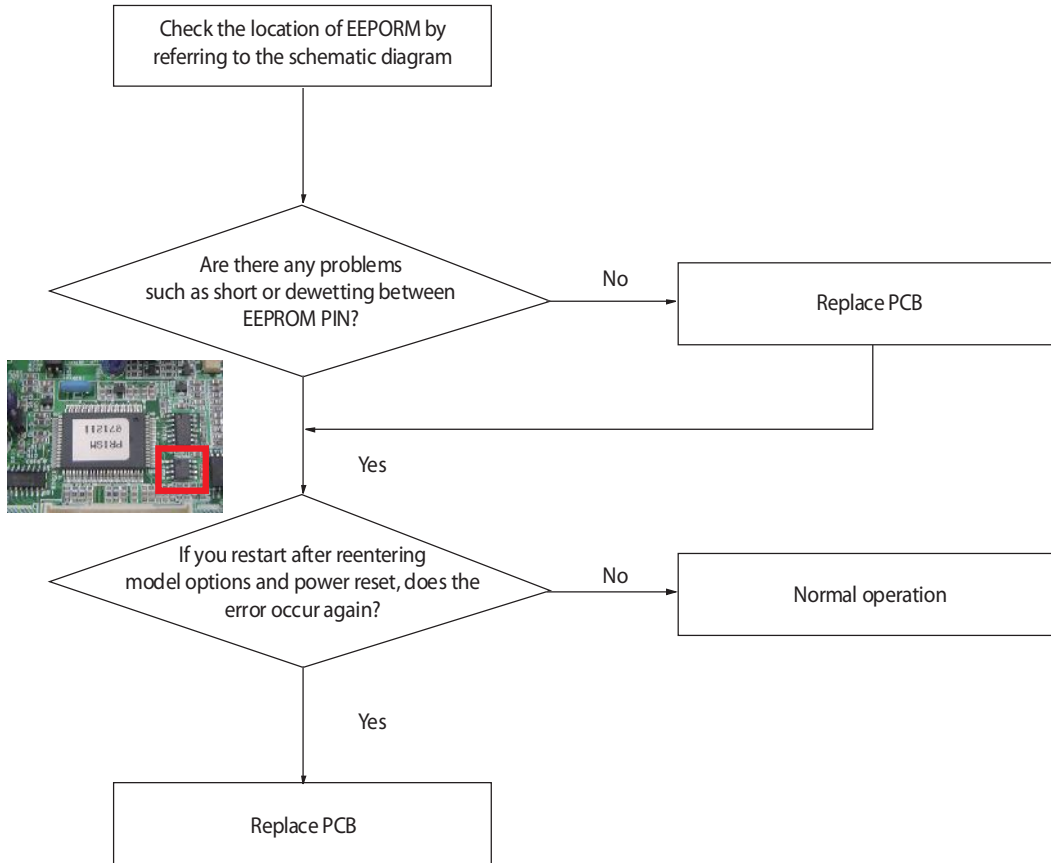
4-4-16 Mixed operation Error (Only applicable to Heat Pump Model/Not to HR model)

- Mixed operation error is applicable only to Heat Pump Model and not to HR model.
- Mixed operation error is not due to a product problem but is displayed when the operational mode input in an indoor unit is different from current operational status (other indoor unit's operational mode).
- Check the operational mode of outdoor unit or other indoor unit then re-enter or stop the operational mode of the relevant unit.
- If it is necessary to apply a different operational mode to an indoor unit from others, please stop other indoor units then operate the indoor unit.

4-4-17 EEPROM error

| | |
|----------------------|---|
| Outdoor unit display | <i>E 162</i> |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Communication failure between EEPROM and MICOM |
| Cause of problem | • PCB replacement due to defective EEPROM |

1. How to check



4-4-18 Option error of the Remote Controller for an Indoor Unit

| | |
|----------------------|---|
| Outdoor unit display | <i>E 163</i> |
| Indoor unit display | ●(Operation) ●(Timer) ●(Fan) ●(Filter) ●(Defrost) |
| Criteria | • Display number type of indoor unit – E163 occurs, Lamp type – all lamps flash |
| Cause of problem | • Missed or erroneous input of remote controller options |

- Check relevant remote controller options for each model then enter correct options

4-4-19 Error due to confused use of Fahrenheit and Celsius

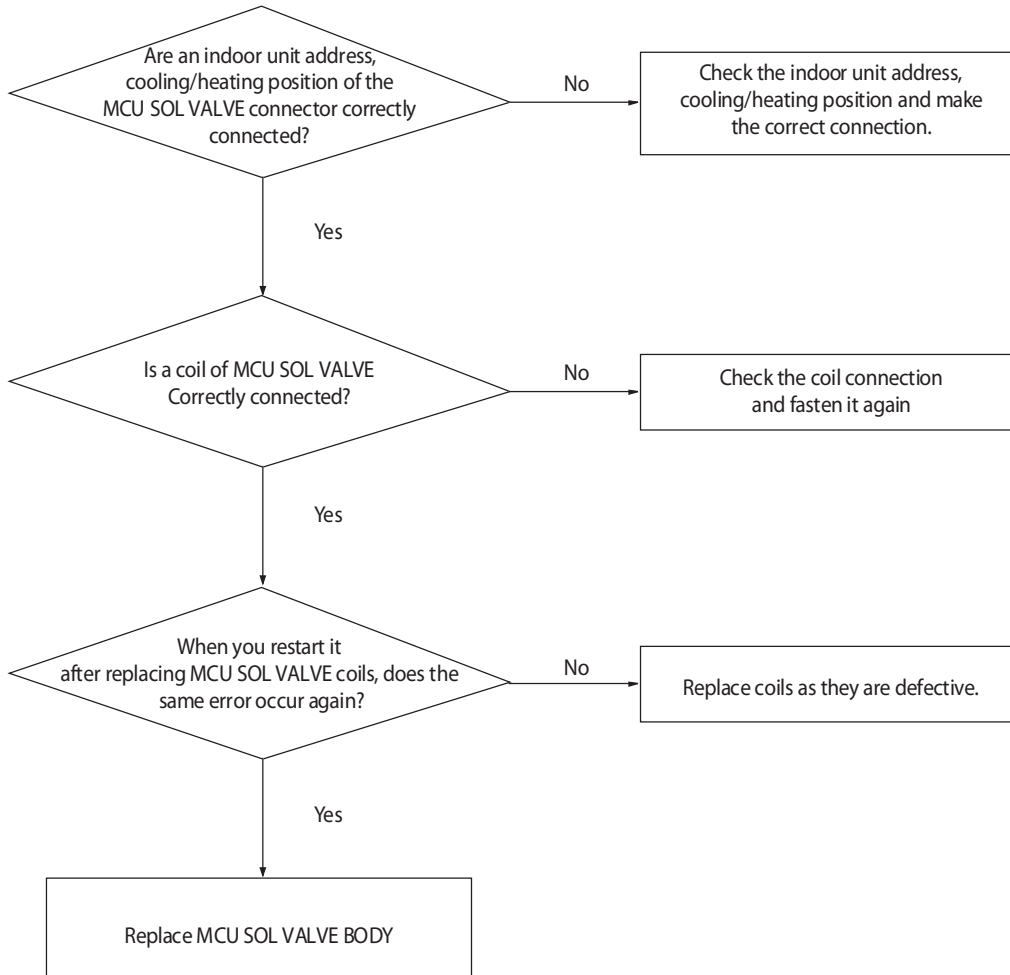
| | |
|----------------------|--|
| Outdoor unit display | <i>E 170</i> |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Display number type of indoor unit – E170 occurs, Lamp type – all lamps flash • Occurs in an indoor unit with Celsius setting |
| Cause of problem | • Missed input of remote controller options |

- Check relevant remote controller options for each model then enter correct options
- As this happens only in a Celsius setting model, it is necessary to reenter option codes for error-free models in a region where Celsius is used.

4-4-20 Simultaneous opening of Cooling/heating MCU SOL Valves 1st/2nd

- During the first detection, as the system restarts after making an automatic stop to check a problem with the system
- During the second detection, please refer to the following check-up methods.

1. How to check



4-4-21 Error due to incorrect Indoor Unit Power/Communication Cable Connection

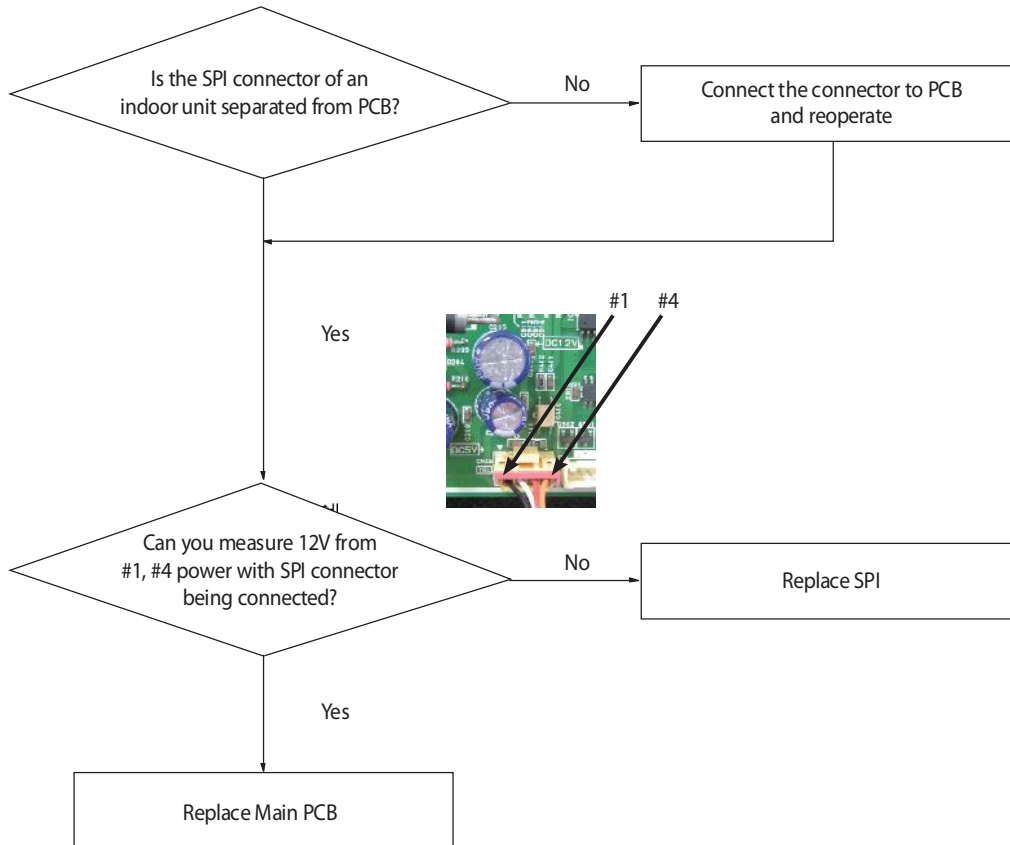
| | |
|----------------------|---|
| Outdoor unit display | <i>E 185</i> |
| Indoor unit display | <i>E 185</i> (wall mount type) |
| Criteria | • Check for Power input(220V) for the Terminal block(F1/F2). |
| Cause of problem | • Apply power (220V) to the terminal of the indoor unit communication block (F1/F2) |

- Check for disconnected line after turning off the Main power.

4-4-22 SPI Feedback Error

| | |
|----------------------|---|
| Outdoor unit display | <i>E 186</i> |
| Indoor unit display | ●(Operation) ●(Timer) ×(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Check if the output of SPI Feedback is 12V |
| Cause of problem | • SPI defect |

1. How to check



4-4-23 Outdoor Unit Pipe Inspection Error

| | |
|----------------------|---|
| Outdoor Unit Display | <i>E 190</i> : No change of EVA IN or wrong EVAN IN change during pipe inspection. <i>E 191</i> : No change of EVA OUT or wrong EVA OUT change during pipe inspection. |
| Indoor Unit Display | - |
| Judgment Method | • Refer to the judgment method below |
| Special Cause | • The liquid pipe/gas pipe of the indoor unit is not correctly connected to the port set in MCU. |

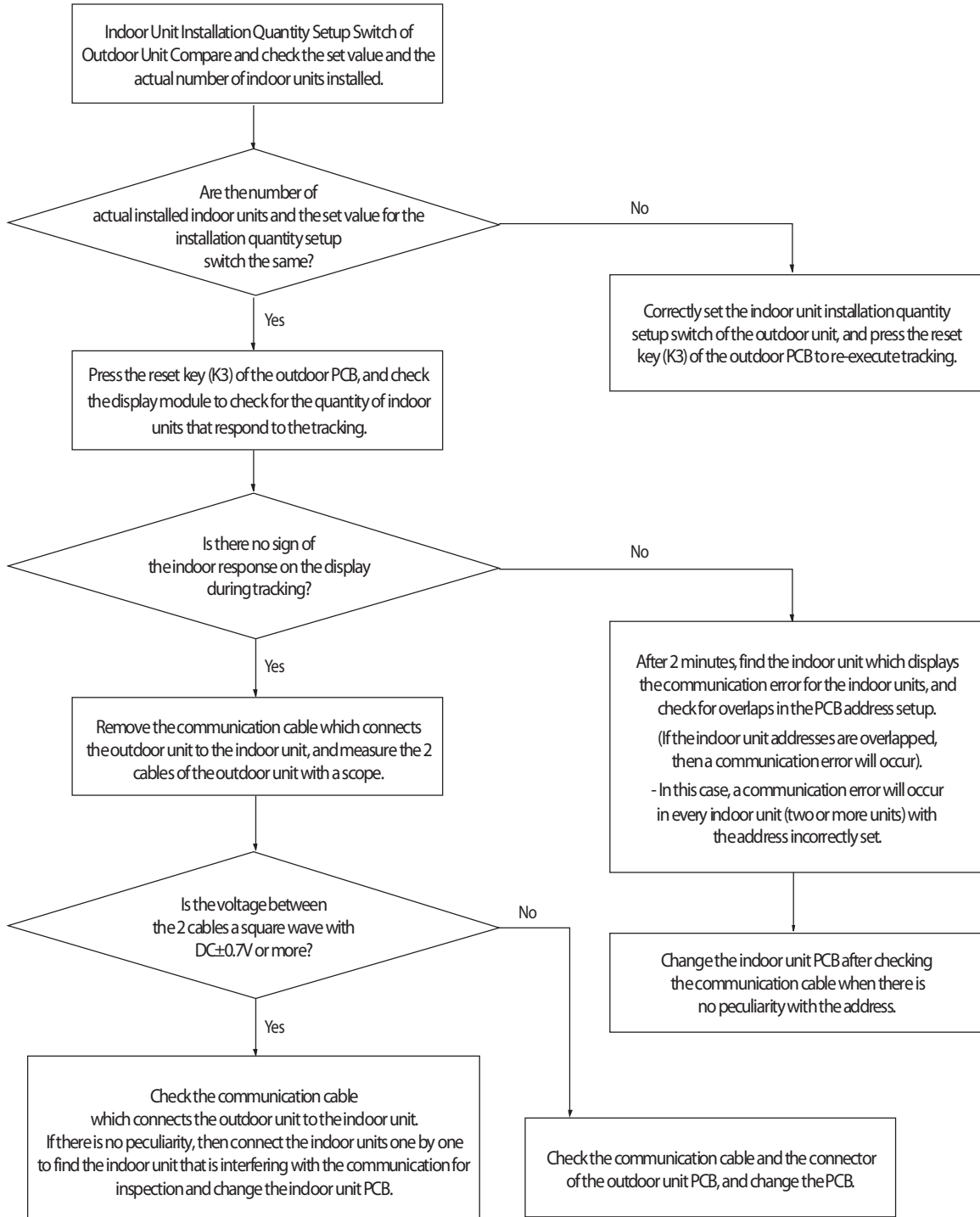
1. Judgment Method

- Check if the indoor address settings are the same for the address of the indoor units connected to each port of the MCU and the address of the indoor units of the relevant MCU ports.
- Check if the indoor unit usage setup switch is turned on for the MCU port connected to the indoor unit.

4-4-24 Communication Error between Indoor and Outdoor Units during Tracking

| | |
|----------------------|---|
| Outdoor unit display | E201 |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Communication error between indoor and outdoor units. |
| Cause of problem | · Refer to the judgment method below. |

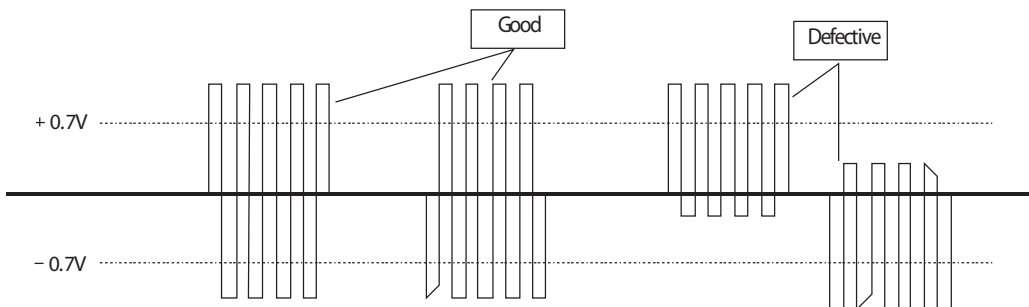
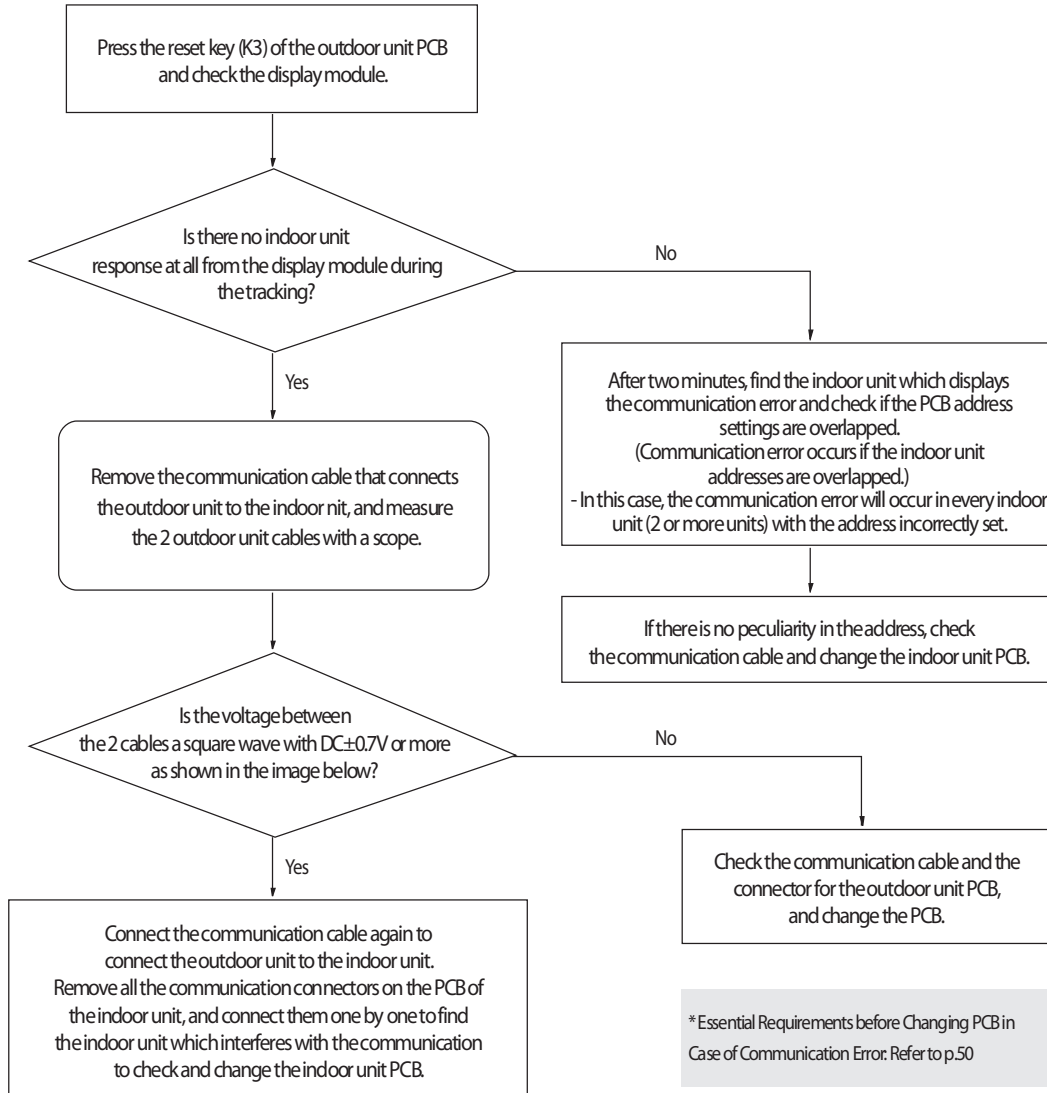
1. Cause of problem



4-4-25 Communication Error between Indoor and Outdoor Units after Tracking

| | |
|----------------------|---|
| Outdoor unit display | E202 |
| Indoor unit display | ×(Operation) ● (Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Outdoor unit is unable to communicate for two minutes during operation. (no reception of relocation) |
| Cause of problem | · Communication error between indoor and outdoor units and setup error of indoor unit installation quantity setup switch. |

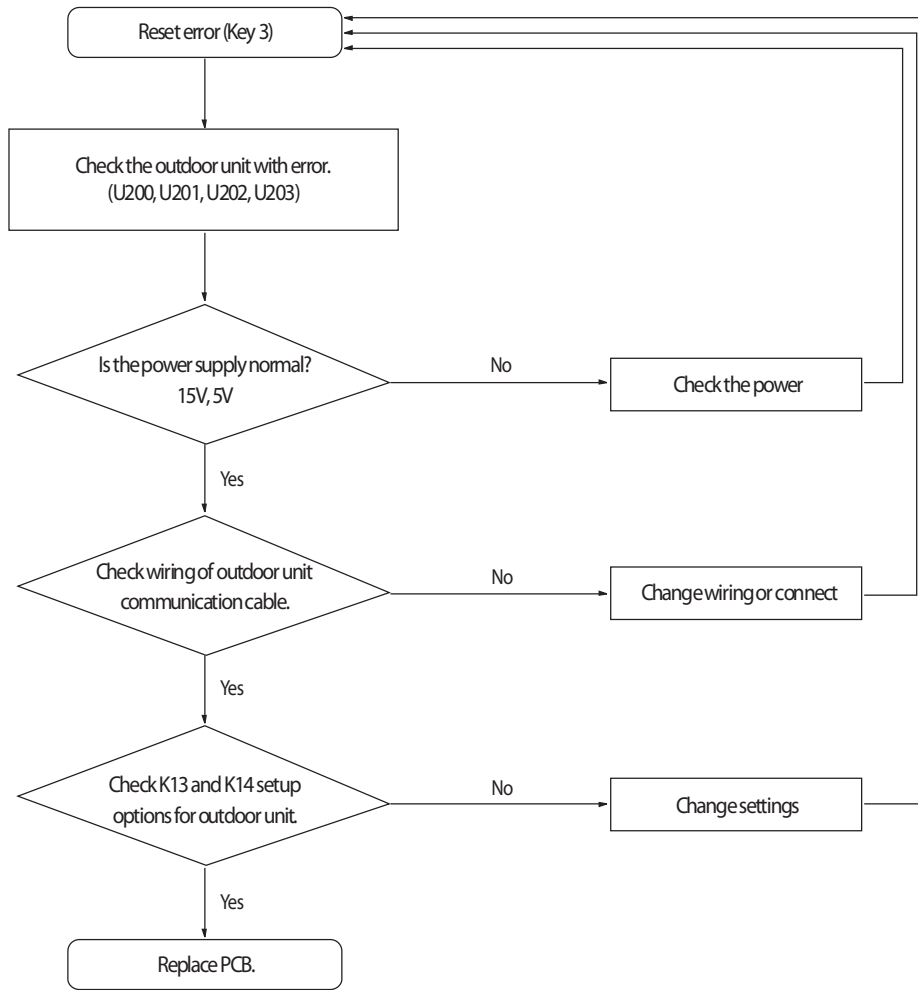
1. Cause of problem



4-4-26 Communication error between main and sub Unit of outdoor unit or between outdoor units

| | |
|----------------------|---|
| Outdoor unit display | E203 |
| Indoor unit display | - |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Communication error between outdoor units |

1. Cause of problem

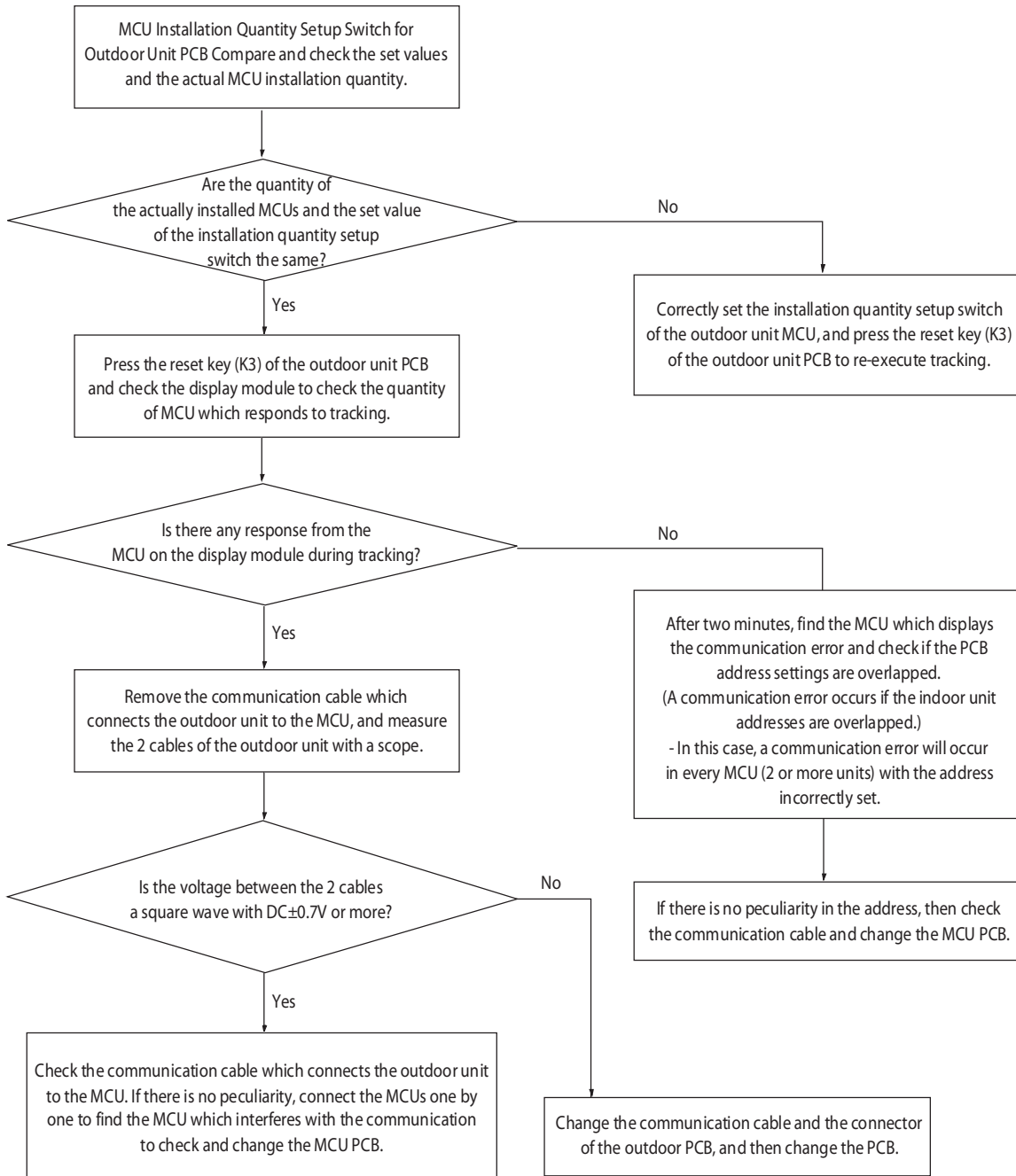


Essential Requirements before Changing PCB in Case of Communication Error: Refer to p.59

4-4-27 Communication Error between MCU and Outdoor Unit

| | |
|----------------------|--|
| Outdoor Unit Display | E204 |
| Indoor Unit Display | - |
| Judgment Method | • Communication Error between MCU and outdoor unit |
| Special Cause | • Reference below |

1. Inspection Method

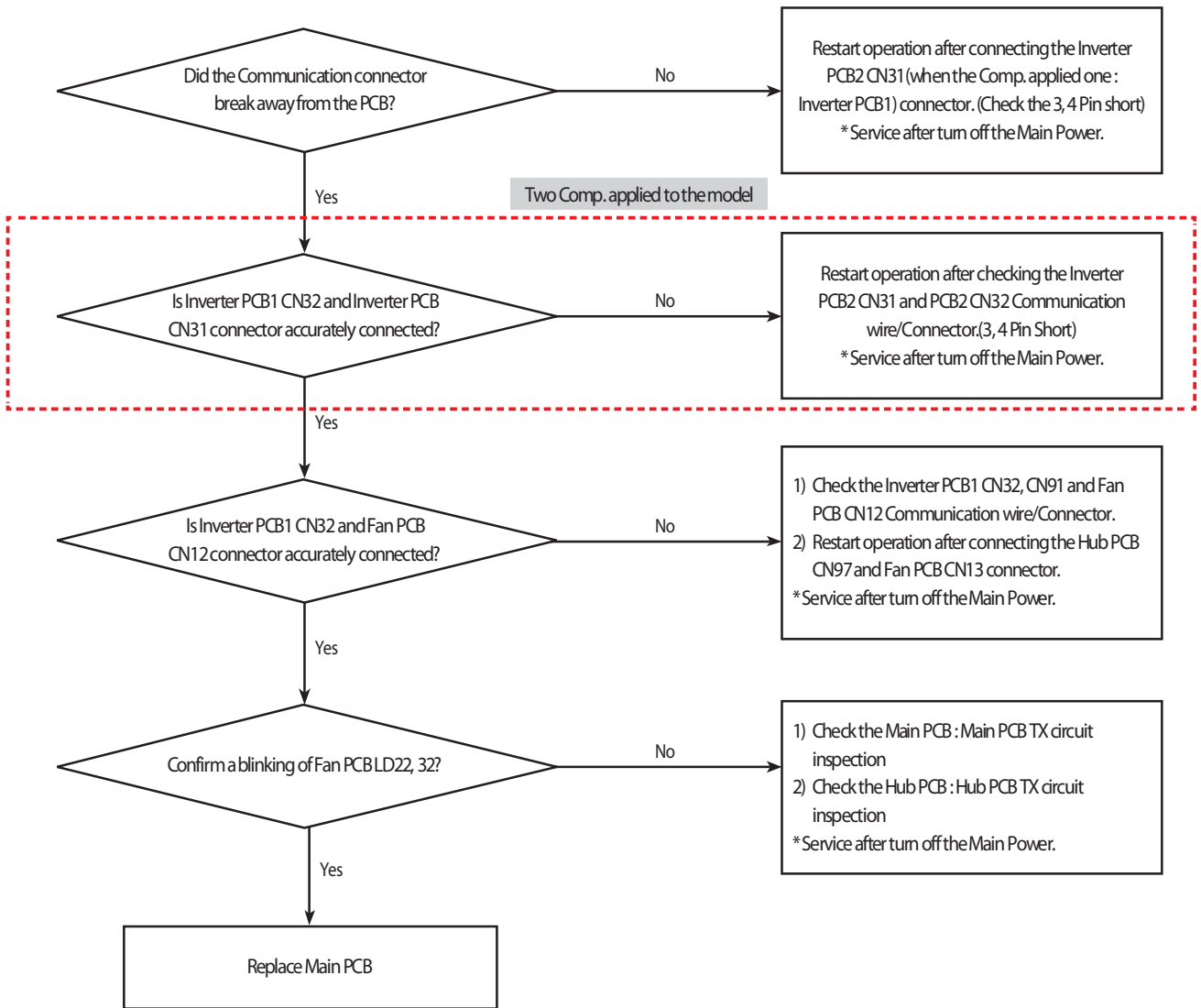


※ Essential Requirements before Changing PCB in Case of Communication Error: Refer to p.4-80

4-4-28 Internal Communication error of the Outdoor Unit C-Box

| | |
|----------------------|--|
| Outdoor unit display | E205 |
| Indoor unit display | ×(Operation) ● (Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Communication error between the C-Box PCB |
| Cause of problem | · Communication wire inside the C-Box is unconnected · Main PCB defective |

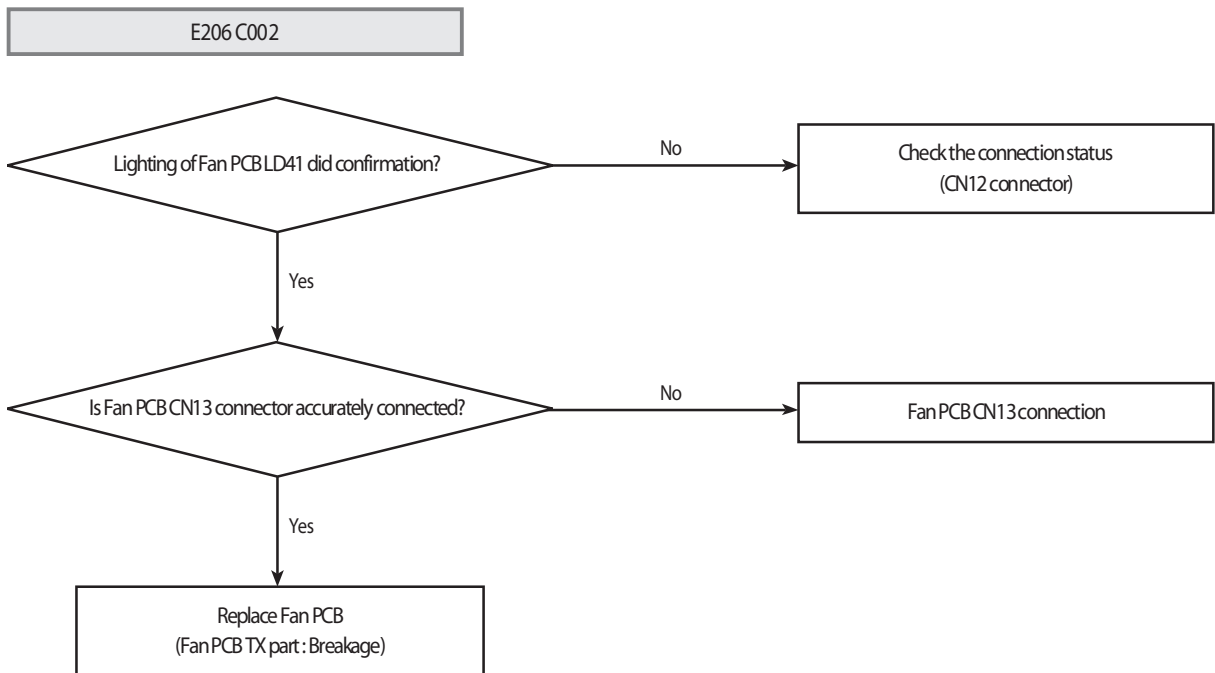
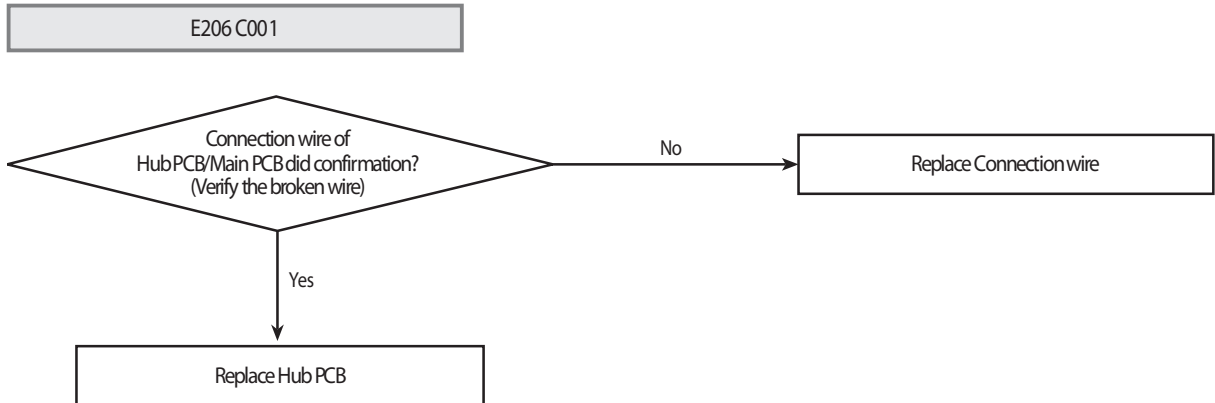
1. Cause of problem



4-4-29 Internal PCB Communication error of the Outdoor Unit C-Box

| | |
|----------------------|---|
| Outdoor unit display | E206 |
| Indoor unit display | ×(Operation) ● (Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · PCB does not respond to the invoked Main PCB |
| Cause of problem | · C-Box internal Inverter PCB, Fan PCB, Hub PCB defective |

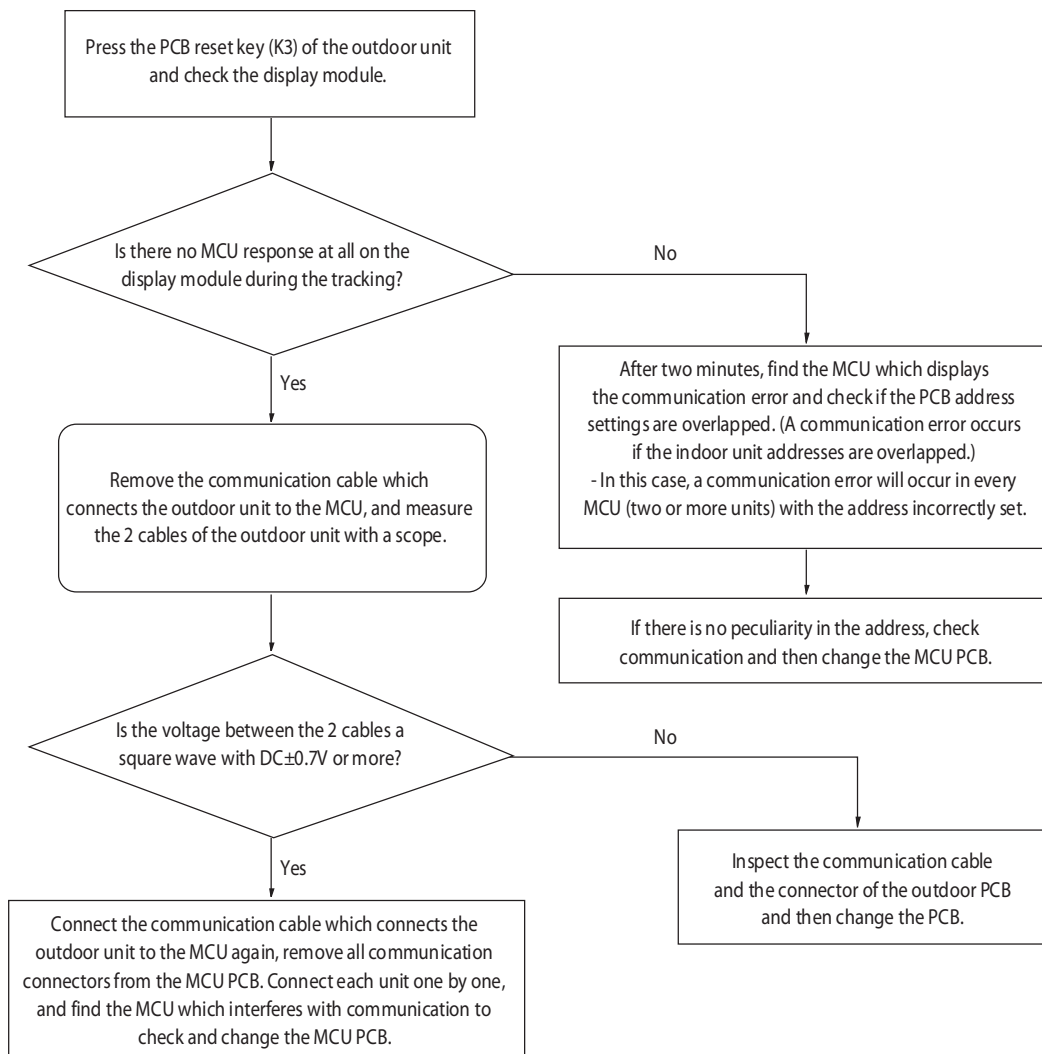
1. Cause of problem



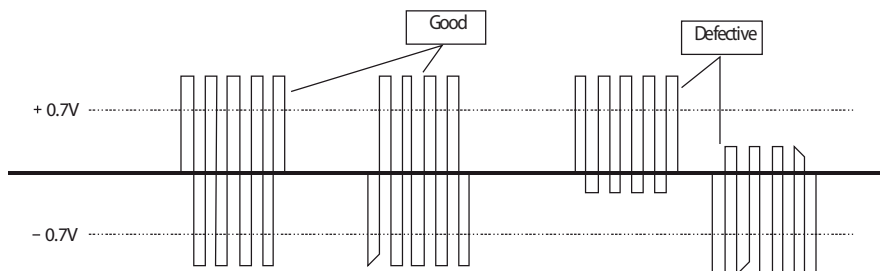
4-4-30 Communication Error between MCU and Outdoor Unit after Tracking is Completed

| | |
|----------------------|--|
| Outdoor Unit Display | E2 10 |
| Indoor Unit Display | - |
| Judgment Method | • Outdoor unit is unable to communicate for two or more minutes during operation (no reception of relocation) |
| Special Cause | • Communication error between indoor and outdoor units and setup error of indoor unit installation quantity setup switch |

1. Inspection Method



※ Essential Requirements before Changing PCB in Case of Communication Error: Refer to p.4-80

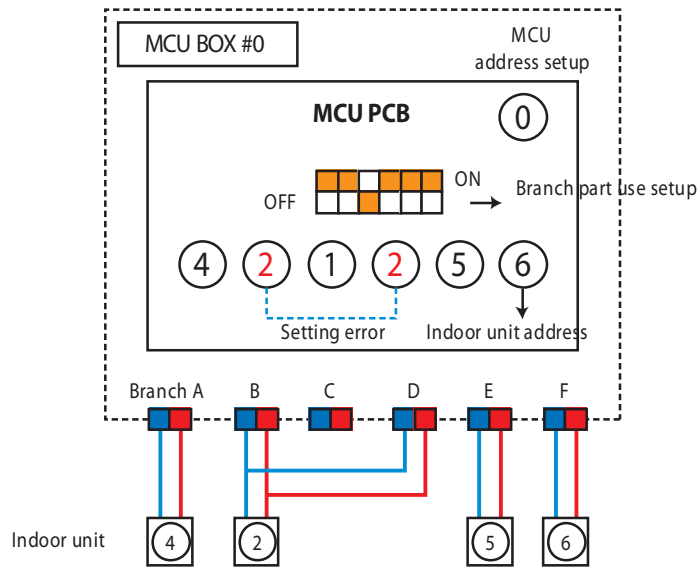


4-4-31 MCU branch part setup error – inconsecutive connection with the use of 2 branch parts

| | |
|----------------------|---|
| Outdoor unit display | E211 |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • When 2 branch parts are used for one indoor unit without connecting them consecutively. |
| Cause of problem | • Branch part assembly error |

1. How to check

Find an MCU that is composed as the following picture to carry out assembly of branch part again. After completing the re-setting, press K3 button on the button to reset or turn it off to restart.

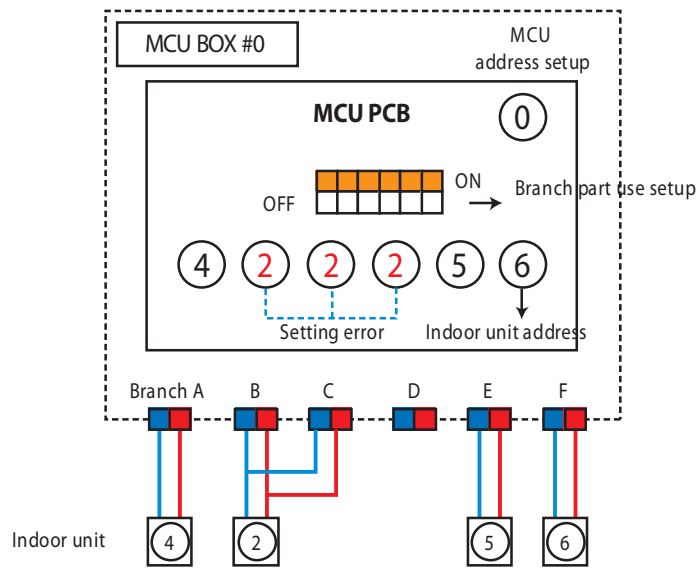


4-4-32 MCU branch part setup error – Repeated setup for the same address over 3 times

| | |
|----------------------|---|
| Outdoor unit display | E2 12 |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • The same indoor unit address was setup more than 3 times in MCU |
| Cause of problem | • MCU indoor unit address setting error |

1. How to check

Find an MCU that is composed as the following picture to carry out assembly of branch part again. After completing the re-setting, press K3 button on the button to reset or turn it off to restart.

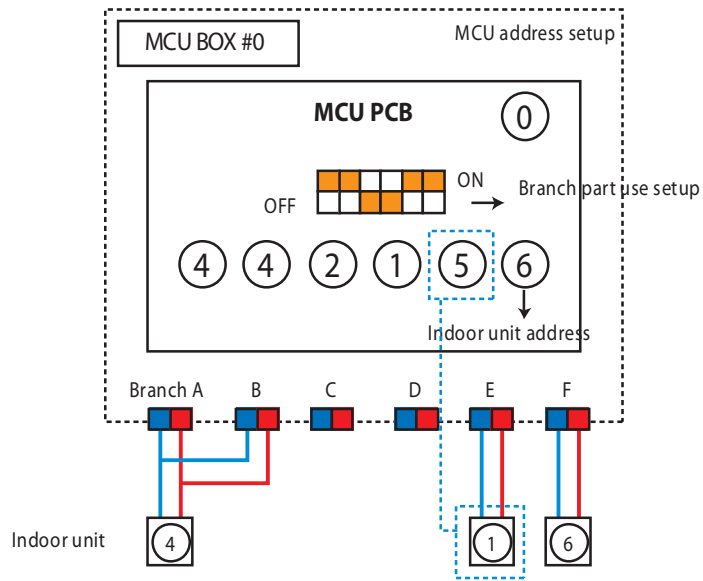


4-4-33 MCU branch part setup error – non-installed address setup

| | |
|----------------------|--|
| Outdoor unit display | E2 13 |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • If there is an indoor unit that is not installed among MCU registered indoor units |
| Cause of problem | • Indoor unit, with the assigned address on MCU, not installed. |

1. How to check

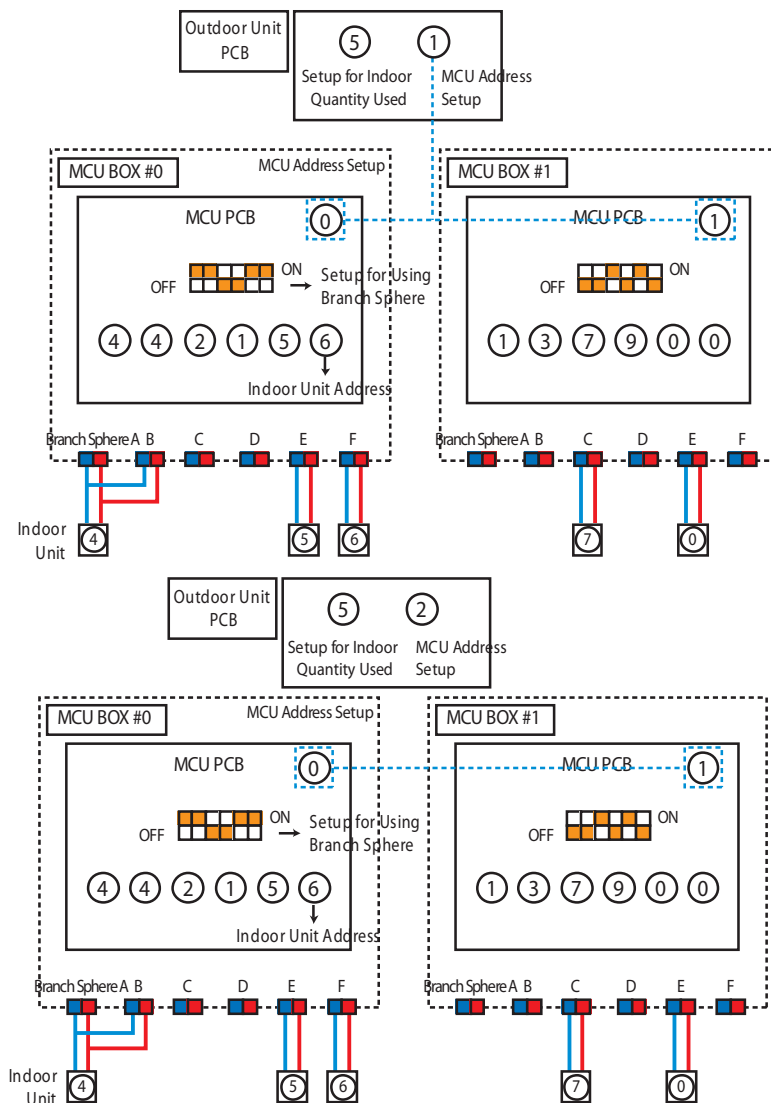
Find an MCU that is composed as the following picture to carry out assembly of branch part again. After completing the re-setting, press K3 button on the button to reset or turn it off to restart.



4-4-34 Setup Error for MCU Branch part – Setup Error for MCU Quantity Used

| | |
|----------------------|---|
| Outdoor Unit Display | E2 14 |
| Indoor Unit Display | x(Operation) ●(Reservation) ●(Blast) ●(Filter) x(Defrost) |
| Judgment Method | <ul style="list-style-type: none"> Occurs when the quantity of MCU is incorrectly set by the outdoor unit. Occurs when same addresses are found when two or more MCU are connected. |
| Special Cause | <ul style="list-style-type: none"> Outdoor unit MCU setup and same address errors when connecting two or more MCUs. |

- Inspection Method:** Re-check the MCU quantity setup switch from the outdoor unit.
 Check for overlaps in each MCU address setup switch.
 To use, reset by pressing the K3 button of the outdoor unit after the reset is completed, or reset after turning off the power and then turn it on again.



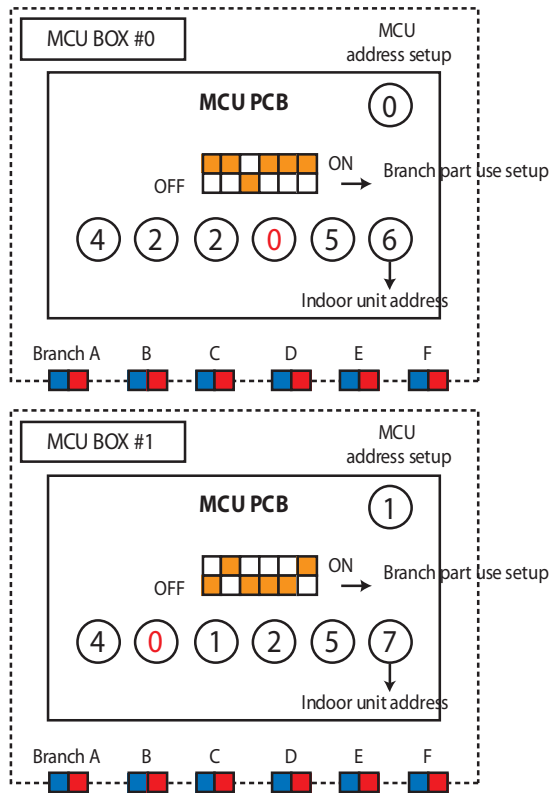
4-4-35 MCU branch part setup error – Overlapping Indoor unit Address setup

| | |
|----------------------|--|
| Outdoor unit display | E2 15 |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Occurs when an indoor unit address setup switch in MCU has been overlapped |
| Cause of problem | • Repeated indoor unit address |

1. How to check

Check the setup switch for the number of indoor units in MCU

After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.

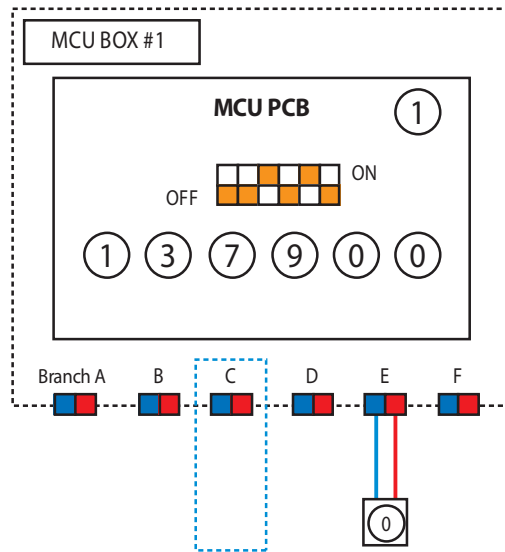


4-4-36 MCU branch part setup error – Set as being used without connection to an Indoor unit

| | |
|----------------------|--|
| Outdoor unit display | <i>E2 16</i> |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Occurs when MCU PIPE is set as being used, yet not connected to an indoor unit |
| Cause of problem | • Pipe is not installed to the indoor unit with assigned address on MCU |

1. How to check

Adjust the Dip switch that sets up the use of MCU branch part to 'Not-Used'. After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.

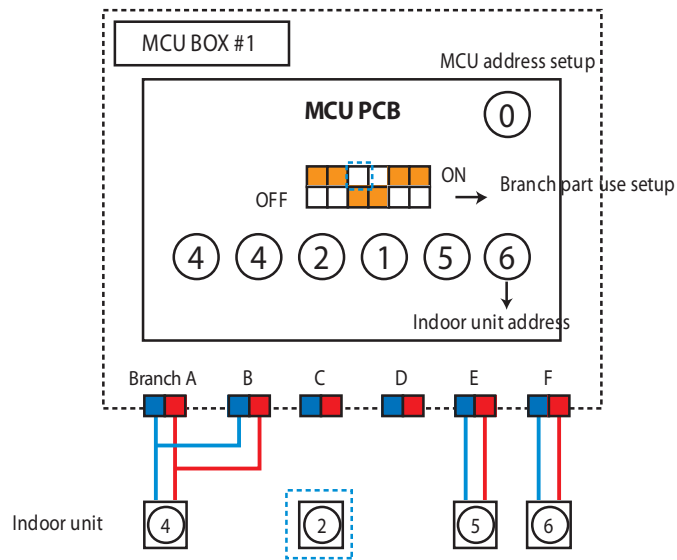


4-4-37 MCU branch part setup error – Connect an Indoor unit to a branch part not being used

| | |
|----------------------|--|
| Outdoor unit display | E2 17 |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Occurs when MCU PIPE is turned off, yet an indoor unit is registered |
| Cause of problem | • Indoor unit connection to the unused branch part |

1. How to check

Check the actual use of the branch part. If it is used, turn on the Dip switch for branch part setup. After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.

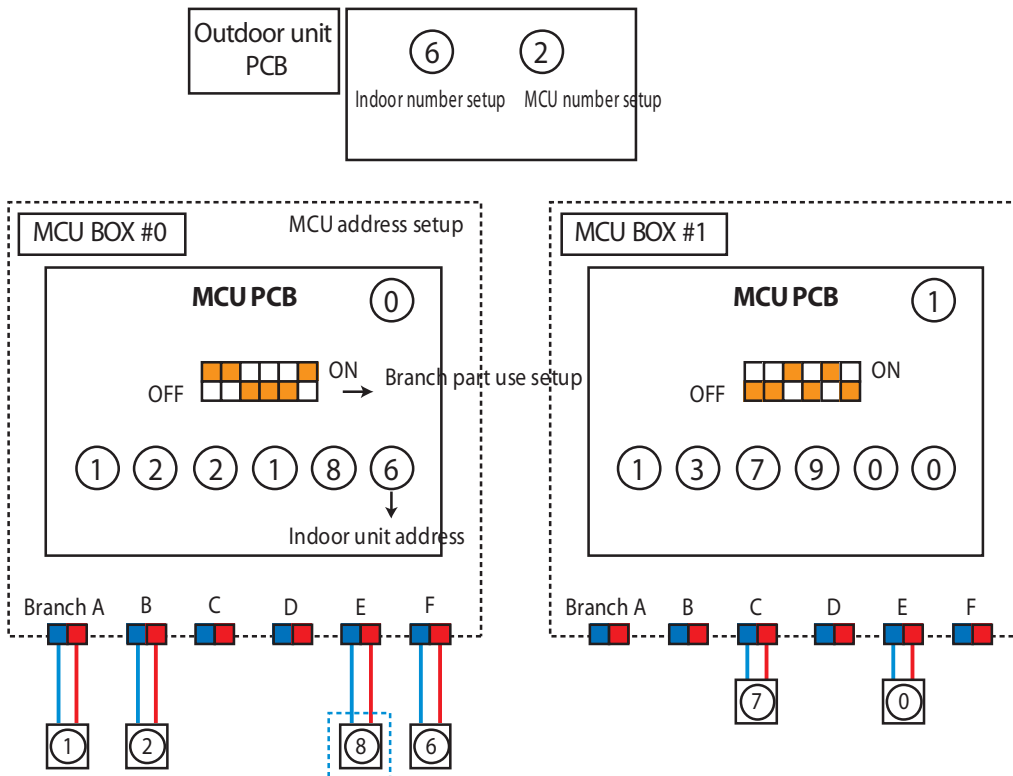


4-4-38 MCU branch part setup error – Connect more Indoor units than what is actually set up in MCU

| | |
|----------------------|---|
| Outdoor unit display | E2 18 |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Occurs when the number of indoor units installed exceeds that registered in MCU |
| Cause of problem | • Number of indoor units exceeds number of indoor units entered on MCU setting |

1. How to check

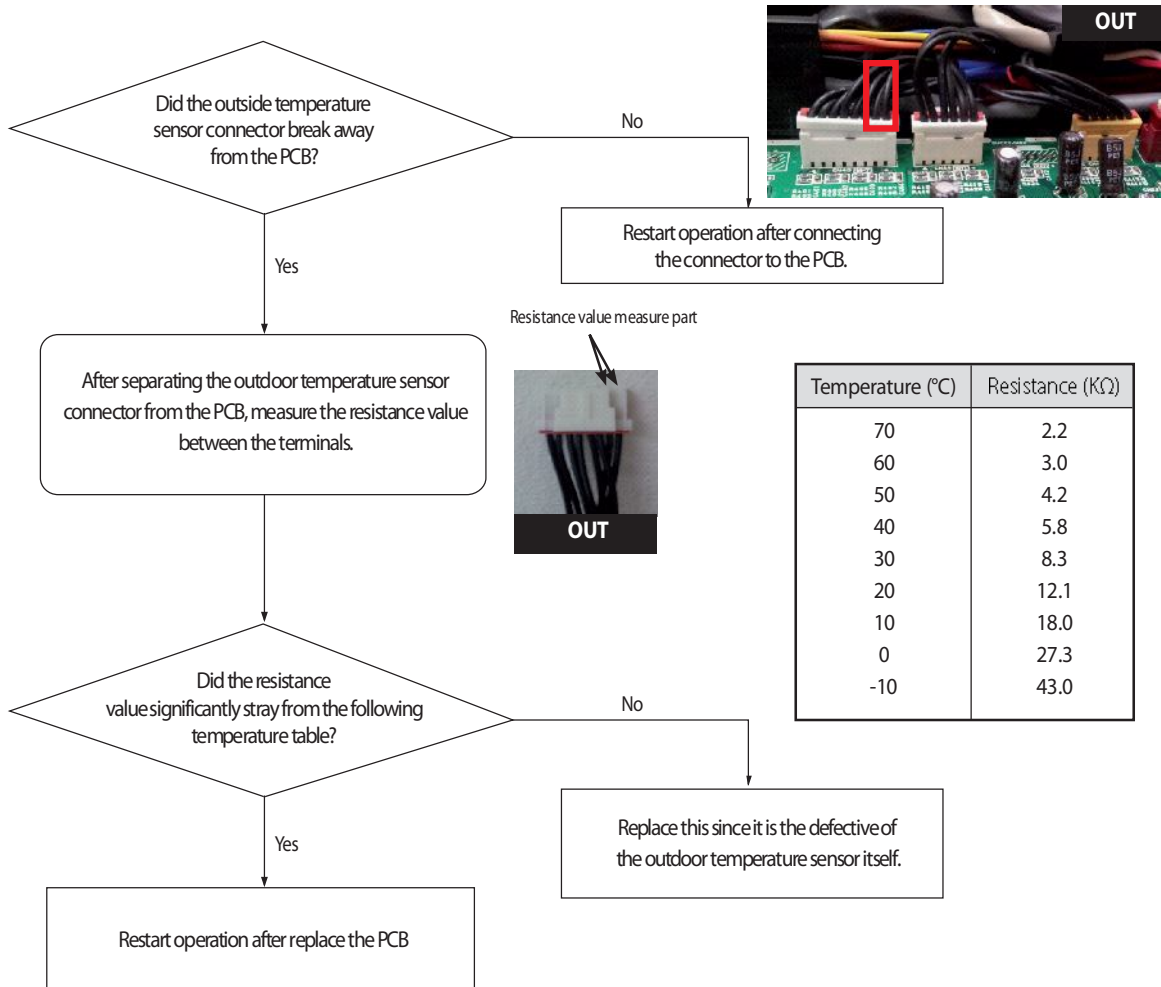
Check the number of indoor units connected to MCU then readjust the switch for the number of units
 After completing resetting, press the outdoor unit's K3 button to reset or turn off to restart.



4-4-39 Outdoor Temperature Sensor Error

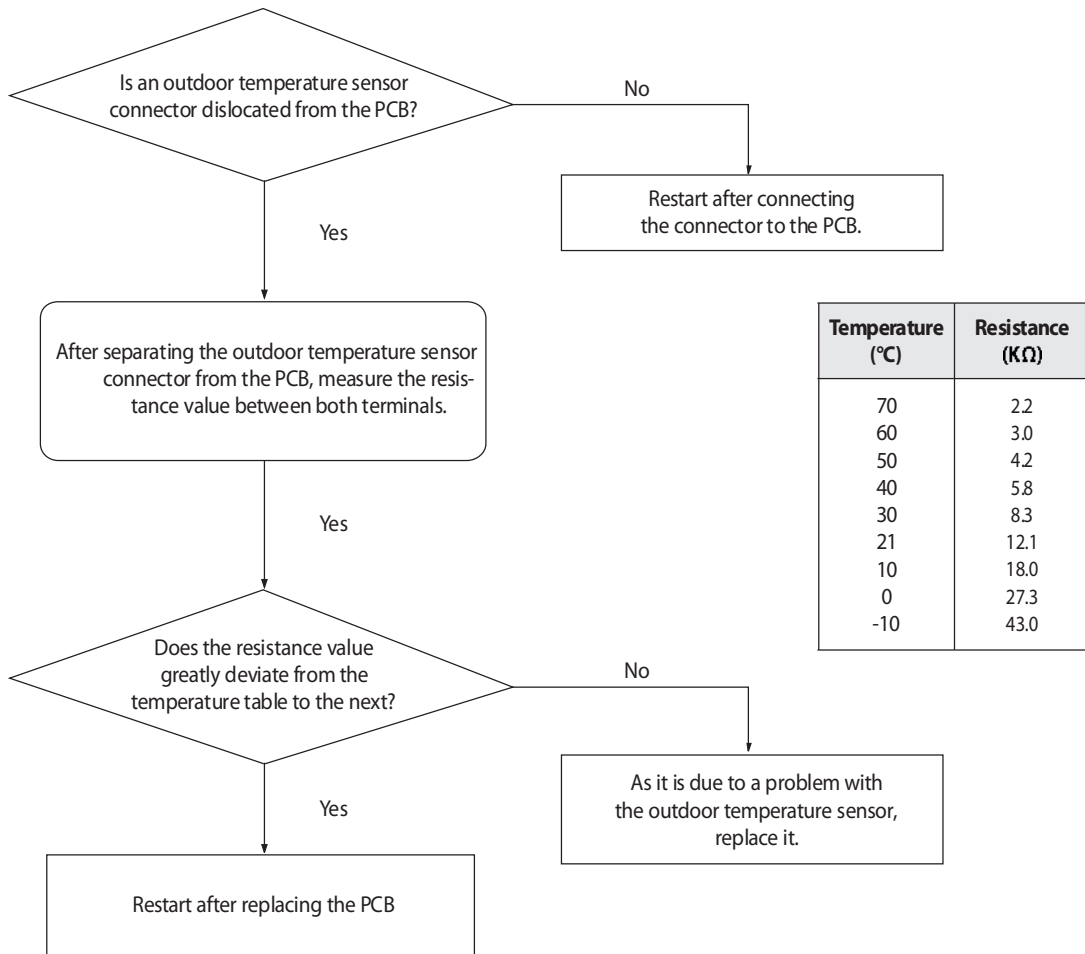
| | |
|----------------------|---|
| Outdoor unit display | E221 |
| Indoor unit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Outdoor temperature sensor Open/Short is defective. |

1. Cause of problem



4-4-40 Outdoor Temperature dislocation error

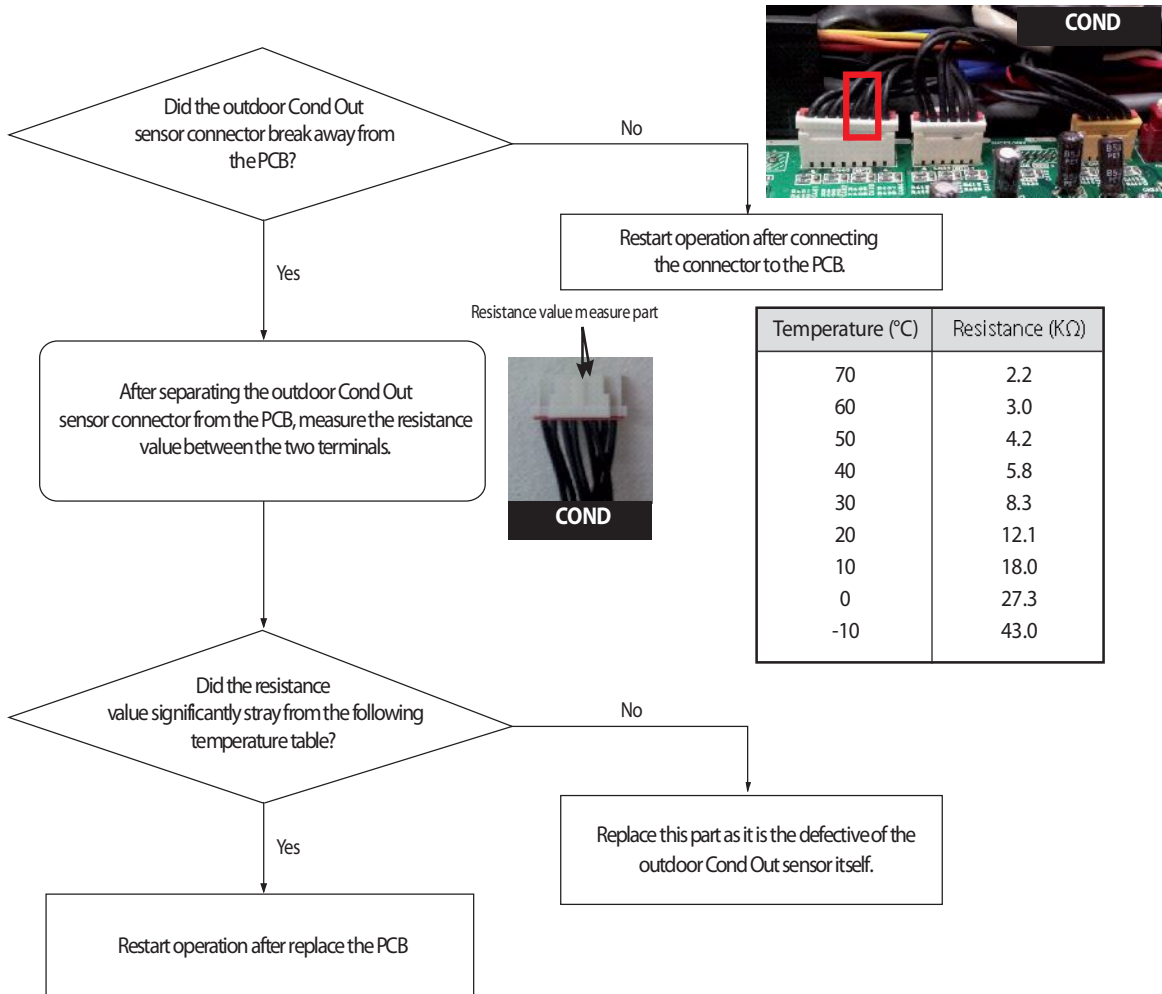
1. How to check



4-4-41 Cond Out Temperature Sensor Error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E231 |
| Indoor unit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

1. Cause of problem



4-4-42 Outdoor Cond Out sensor breakaway error

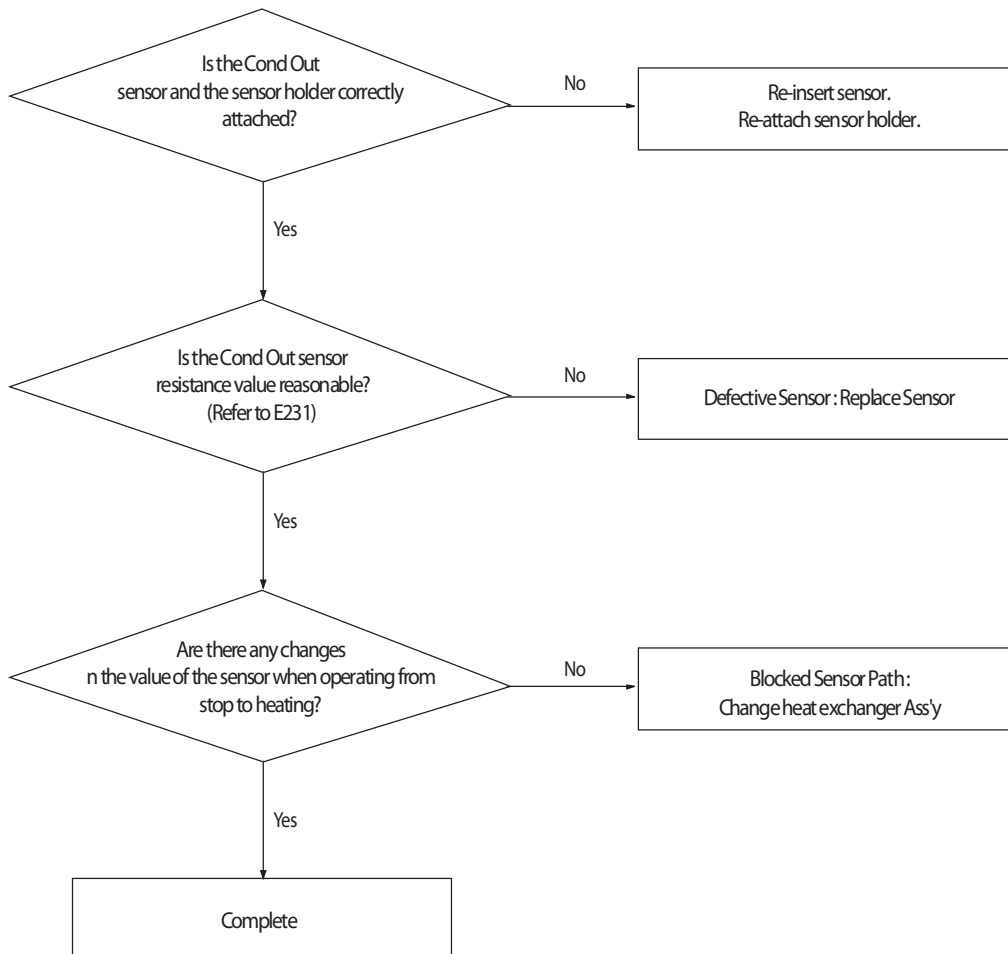
| | |
|----------------------|---|
| Outdoor unit display | E241 |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Outdoor Cond Out sensor breakaway/defective/ relevant path blocked. |

1. Judgment Method

- 1) No inspection for Cooling operation.
- 2) For heating operation (Each of the conditions below needs to be satisfied for more than 20 minutes.)

| | |
|--|---|
| High pressure average > 25kg/cm ² | OK |
| Low pressure average < 8.5kg/cm ² | OK |
| T _{eva, out} - T _{air, in} ≥ 3°C | OK |
| T _{eva, in} - T _{air, in} ≥ 2°C | OK |
| T _{cond, out} - T _{air, out} ≤ 0°C | NO |
| Every compressor is in operation & indoor unit operation and Thermo On | OK |
| Error Content | Outdoor Cond Out sensor breakaway error |

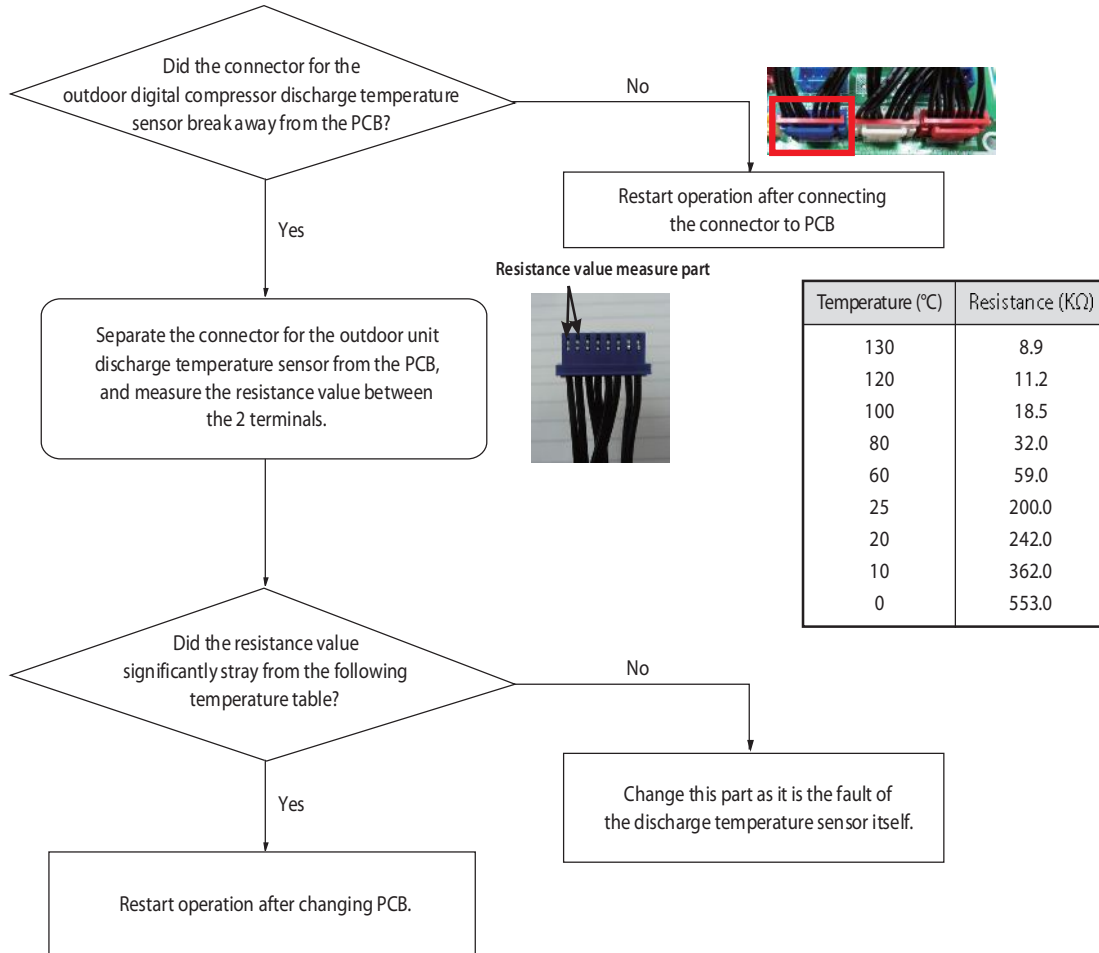
2. Cause of problem



4-4-43 Digital Compressor Discharge Temperature Sensor Error (OPEN/SHORT)

| | |
|----------------------|--|
| Outdoor Unit Display | E251 |
| Indoor Unit Display | ●(Operation) ×(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | • Refer to the inspection method below, |
| Special Cause | • Digital compressor discharge temperature sensor OPEN/SHORT problem |

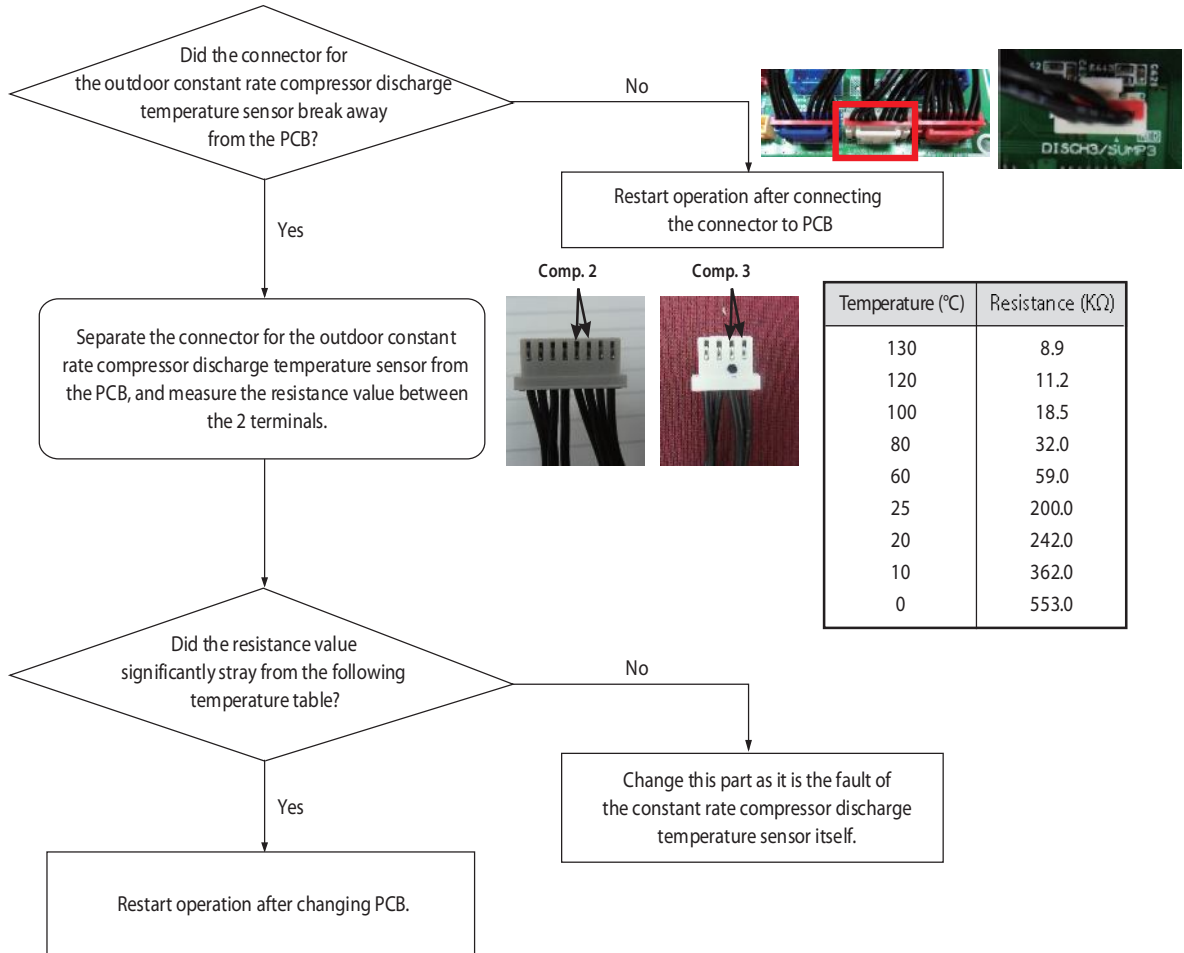
1. Inspection Method



4-4-44 Constant Rate Compressor Discharge Temperature Sensor Error (OPEN/SHORT)

| | |
|----------------------|--|
| Outdoor Unit Display | E257, E258 (Compressor 2, Compressor 3) |
| Indoor Unit Display | ●(Operation) ×(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | • Refer to the inspection method below. |
| Special Cause | • Constant rate compressor discharge temperature sensor OPEN/SHORT problem |

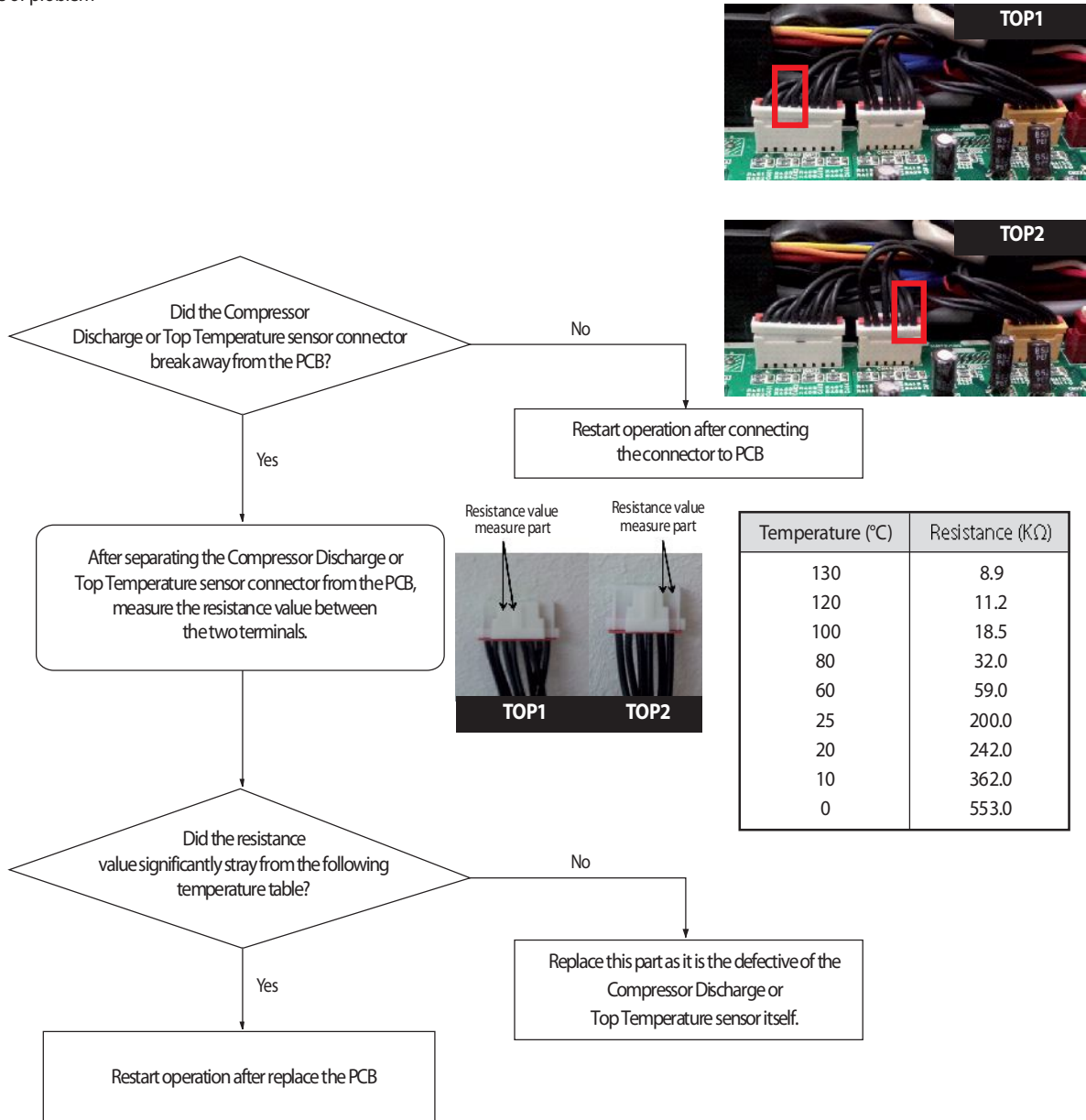
1. Inspection Method



4-4-45 Compressor Discharge or Top 1/2 Temperature sensor error

| | |
|----------------------|--|
| Outdoor unit display | <i>E262</i> (Compressor 1 Discharge) <i>E263</i> (Compressor 2 Discharge) <i>E266</i> (Compressor 1 Top) <i>E267</i> (Compressor 2 Top) |
| Indoor unit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Compressor Discharge or Top Temperature sensor defective. (Open/Short) |

1. Cause of problem



4-4-46 *E265* : Dislocation error of Compressor SUMP Temperature (oil temperature) Sensor

| | |
|----------------------|--|
| Outdoor unit display | <i>E265</i> (digital compressor or fixed compressor 1) |
| Indoor unit display | ×(Operation) ●(Timer) ●(Fan) ●(Filter) ×(Defrost) |
| Criteria | • Refer to how to determine below |
| Cause of problem | • Sump (oil) temperature sensor dislocation error |

1. How to diagnose

- 1) If the Sump temperature right before the start of compressor = $T_{\text{sump.ini}}$, current compressor's SUMP temp = $T_{\text{sump.real}}$,
 When the difference between $T_{\text{sump.ini}}$ and $T_{\text{sump.real}}$ is an absolute value so that it cannot be more than 2°C,
 In other words, the condition of $T_{\text{sump.real}} - T_{\text{sump.ini}} < 2^{\circ}\text{C}$ has been satisfied for 60 minutes since a compressor started, it is diagnosed as an error.
 After 60 minutes of compressor operation, there will be no Sump sensor dislocation detection.

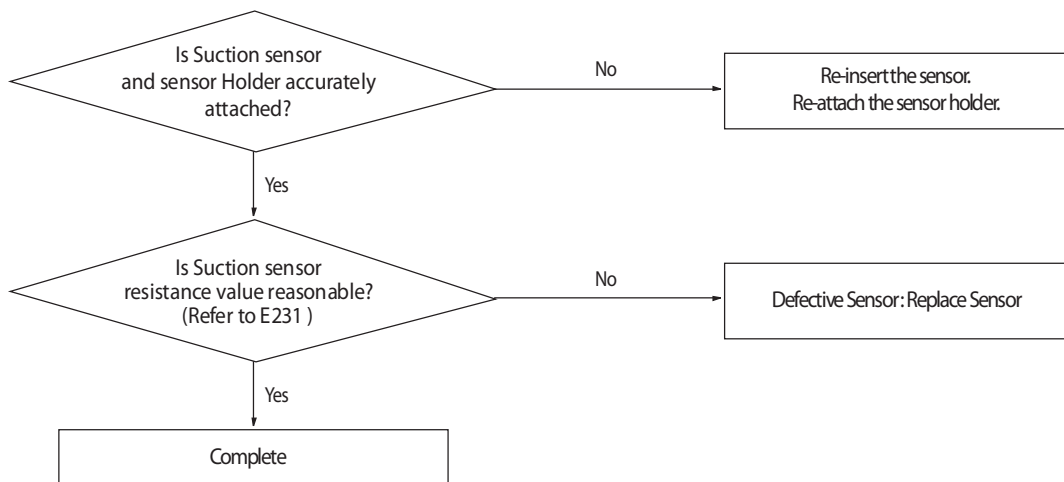
2. How to check

- 1) Check if a sensor of the relevant compressor has been dislocated in accordance with error code, assemble and correct the error.

4-4-47 E269 : Suction Temperature sensor breakaway error

| | |
|----------------------|--|
| Outdoor unit display | E269 |
| Indoor unit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | · If the suction temperature right before operating the Comp, when the operating order is highest, is set at $T_{suc, ini}$, and the suction temperature of the current Comp is set at $T_{suc, real}$, it is considered to have an error if the condition of $T_{suc, real} < T_{suc, ini} < 2^{\circ}\text{C}$ is maintained for 30 minutes. |
| Cause of problem | · Suction temperature sensor breakaway/defective. |

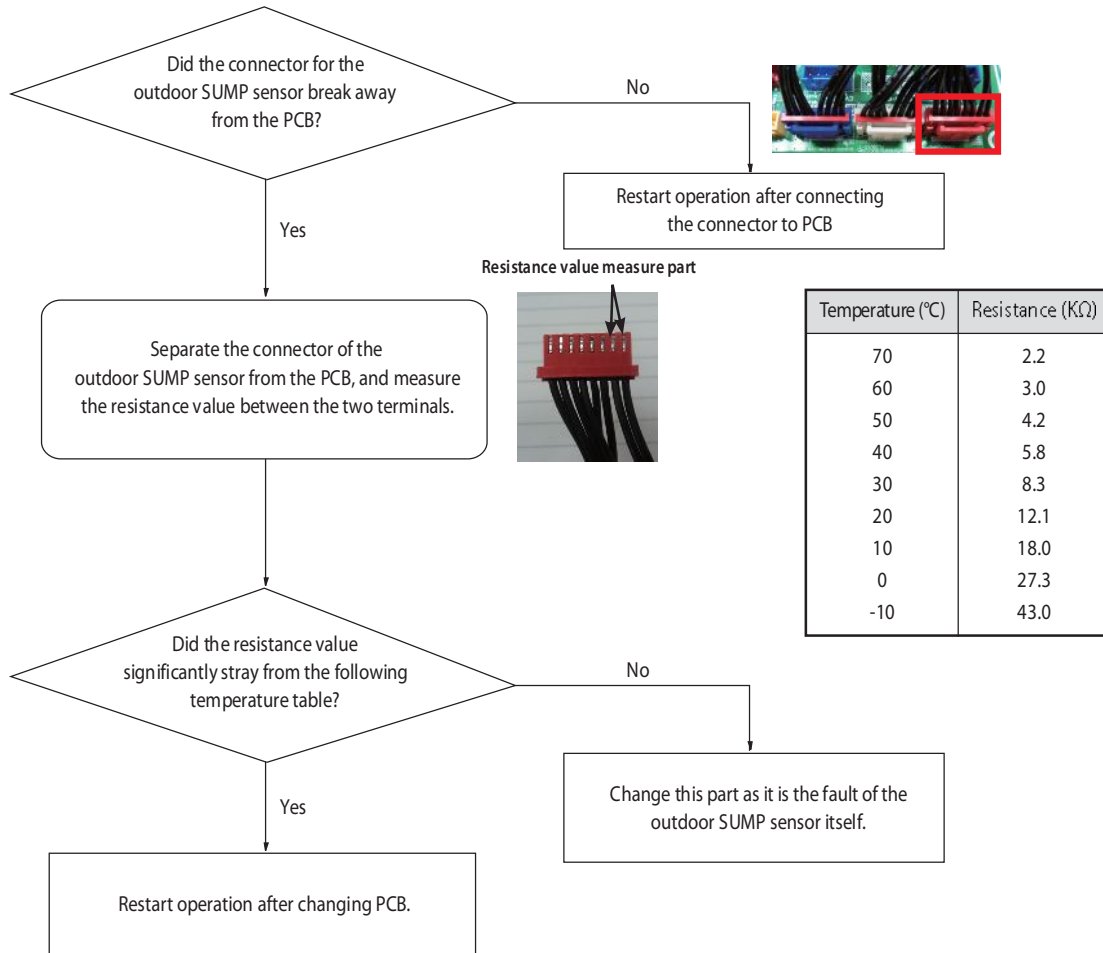
1. Cause of problem



4-4-48 SUMP Temperature Sensor Error (OPEN/SHORT)

| | |
|----------------------|---|
| Outdoor Unit Display | E271 |
| Indoor Unit Display | ●(Operation) ×(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | • Refer to the judgment method below. |
| Special Cause | • Disconnection or breakdown of relevant sensor |

1. Inspection Method

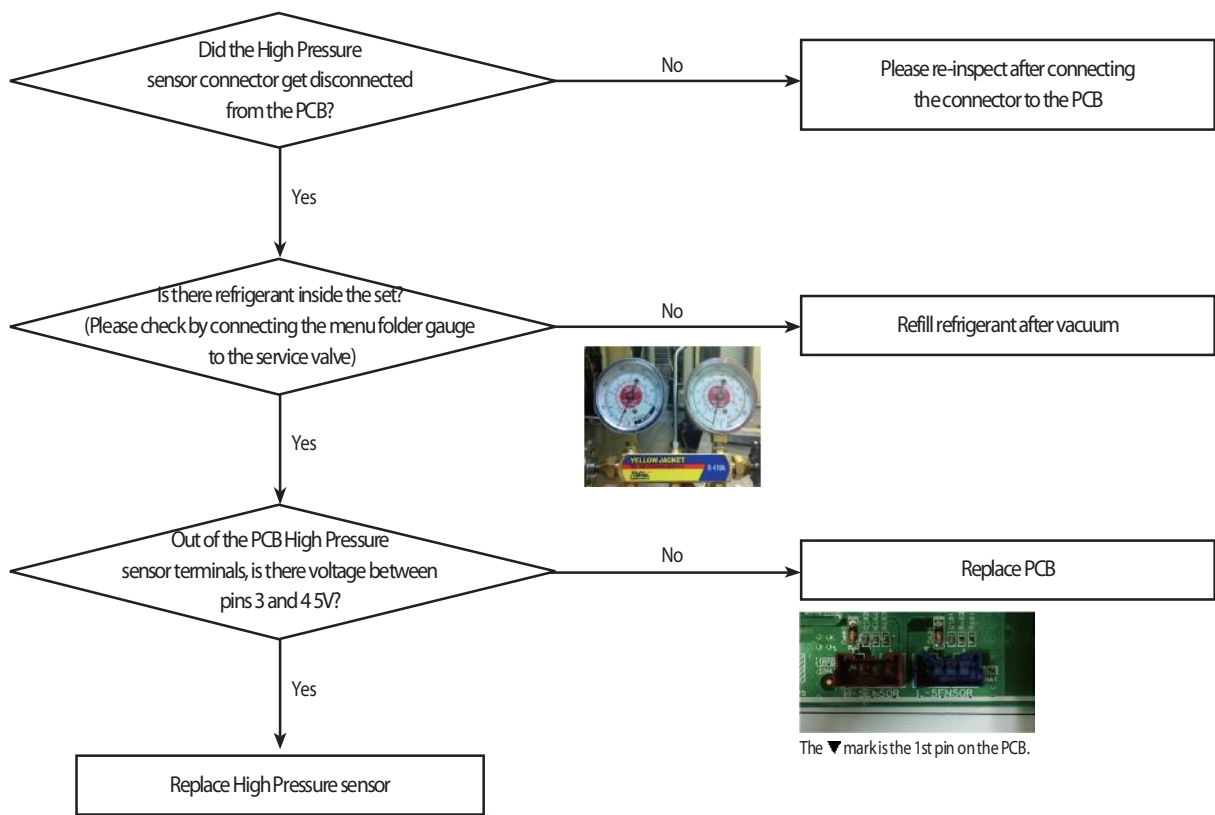


4-4-49 High Pressure sensor error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E291 |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

1. High Pressure sensor Open/Short error determination method
 - 1) Identifies from when power is supplied or 2 minutes after RESET, and only when set is stopped.
 - 2) An Open/Short error will occur if the input voltage standard range of 0.5V ~ 4.95V is exceeded.

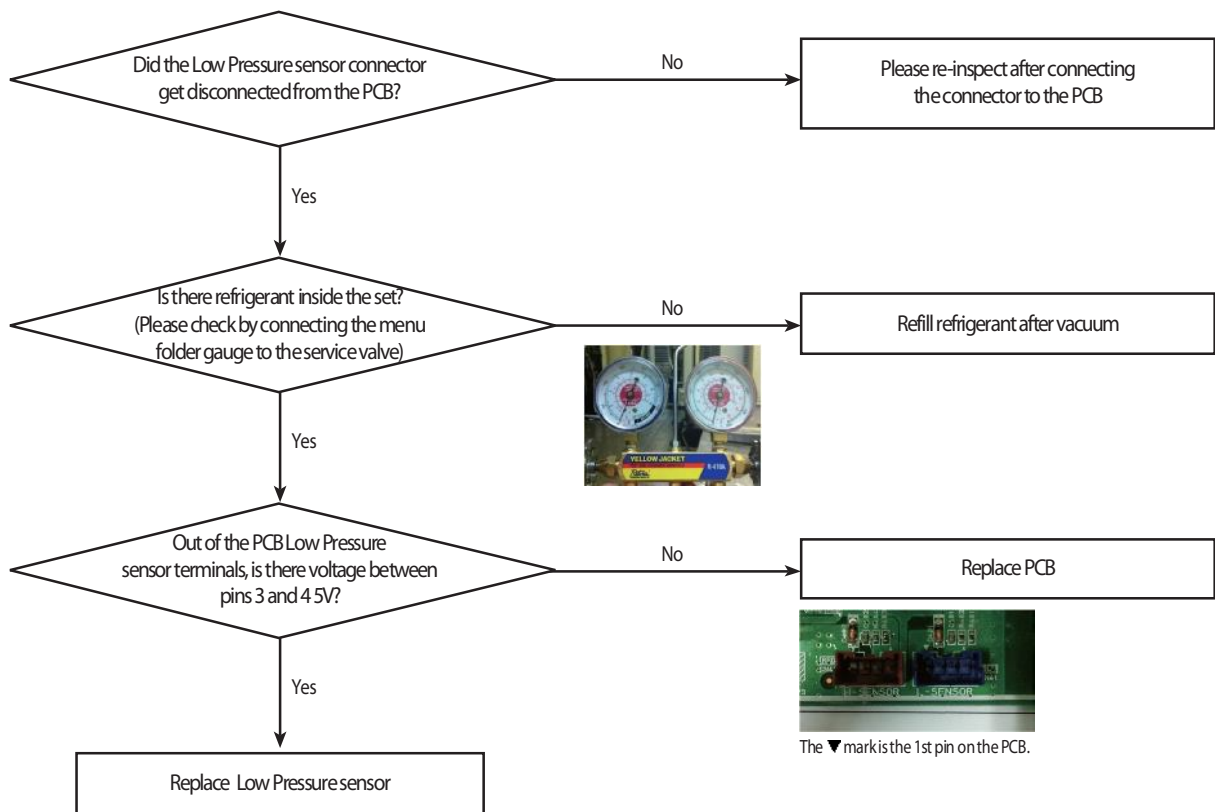
2. Inspection Method



4-4-50 Low Pressure sensor error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | E296 |
| Indoor unit display | ● (Operation) ● (Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

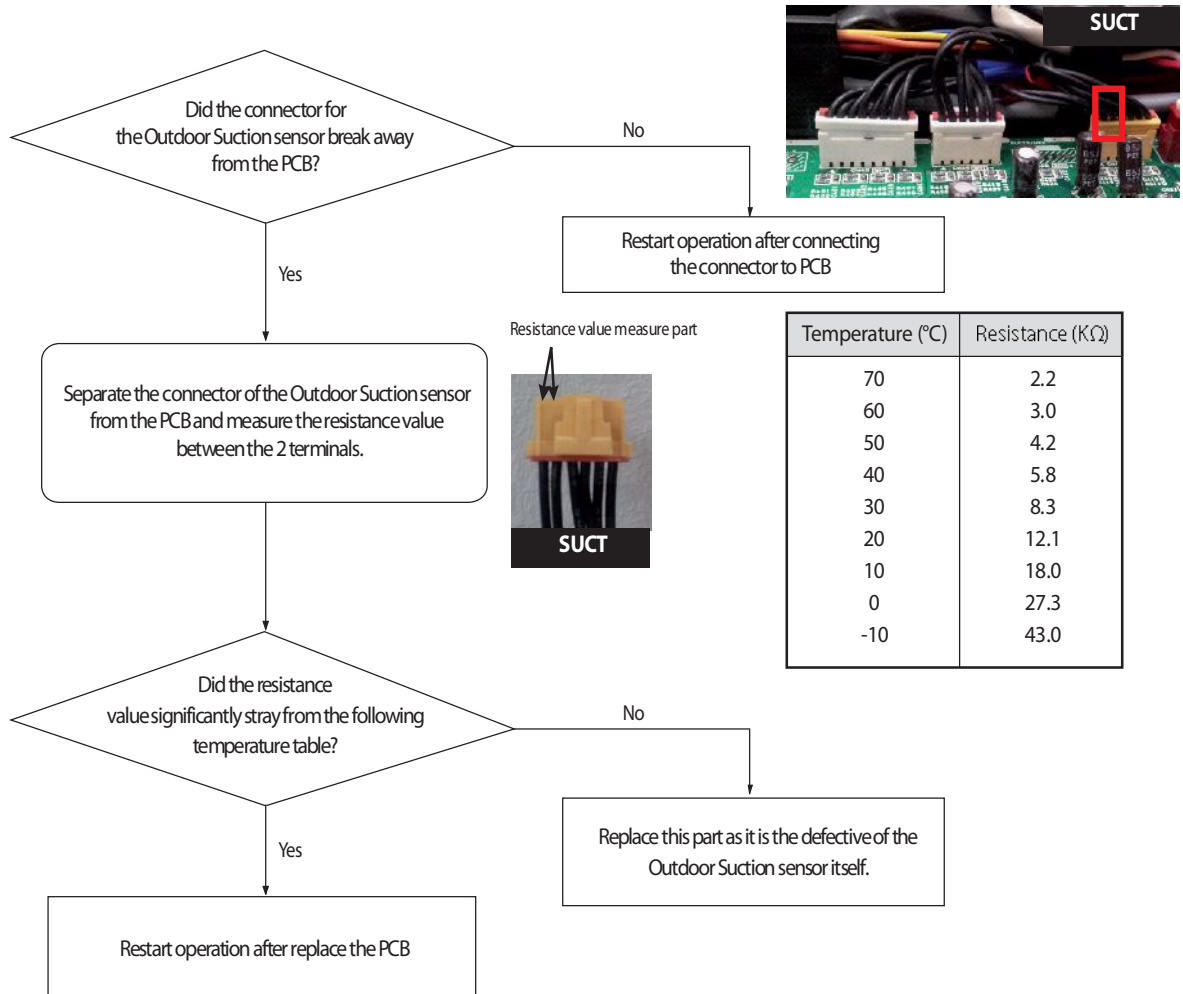
1. Low Pressure sensor Open/Short error determination method
 - 1) Identifies from when power is supplied or 2 minutes after RESET, and only when set is stopped.
 - 2) An Open/Short error will occur if the input voltage standard range of 0.5V ~ 4.95V is exceeded.
2. Inspection Method



4-4-51 Suction Temperature sensor error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E308 |
| Indoor unit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

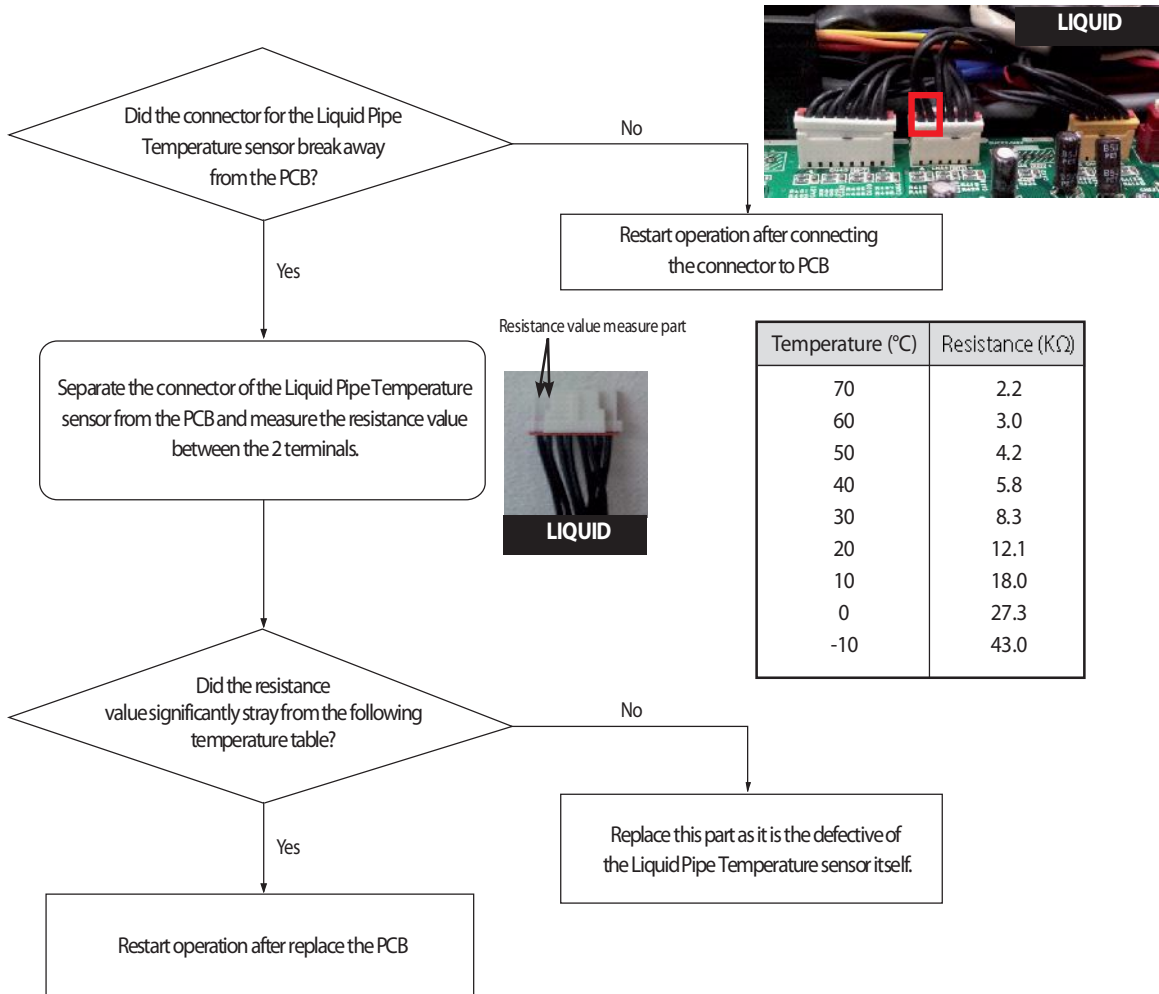
1. Cause of problem



4-4-52 Liquid Pipe Temperature sensor error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E311 |
| Indoor unit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

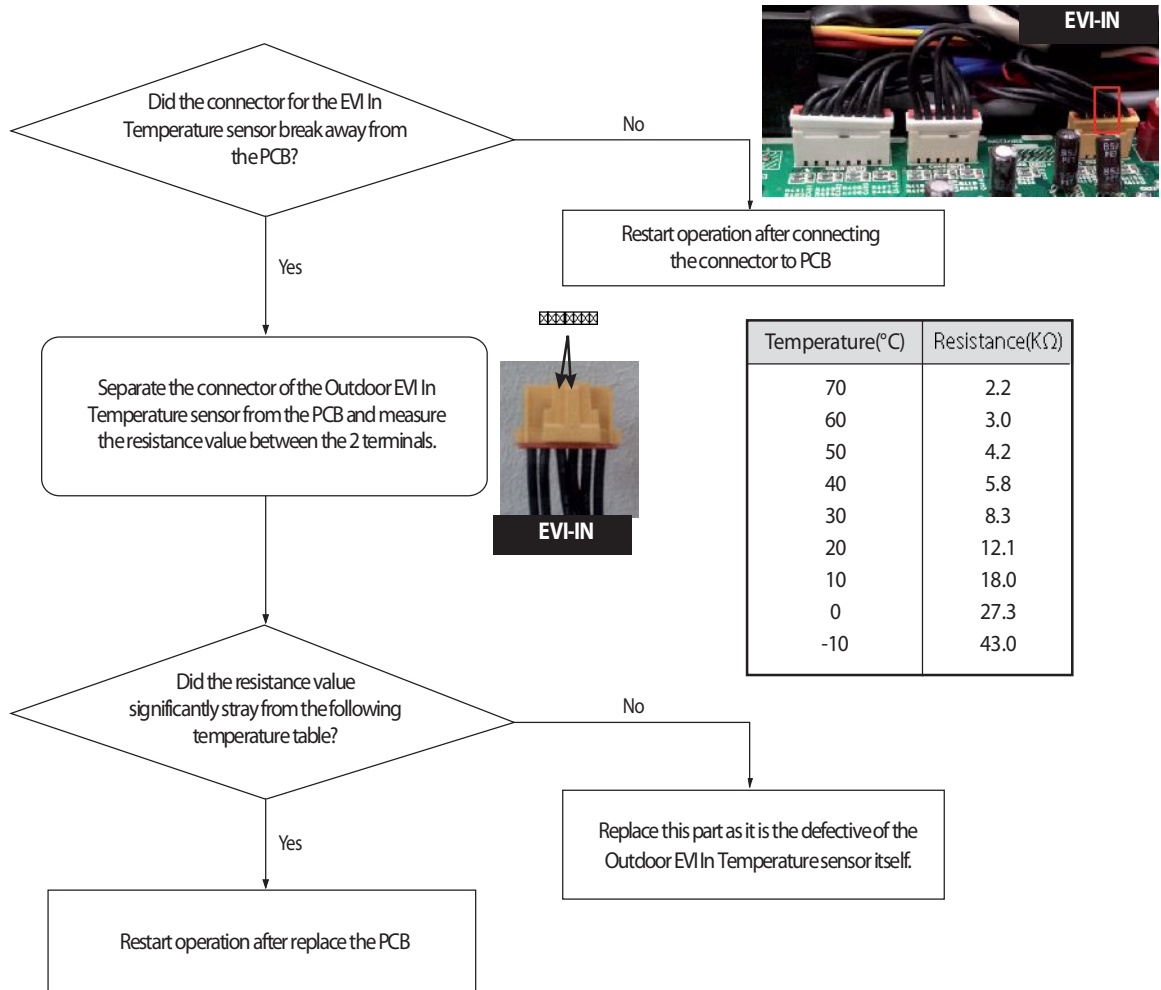
1. Cause of problem



4-4-53 EVI In Temperature sensor error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E321 |
| Indoor unit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

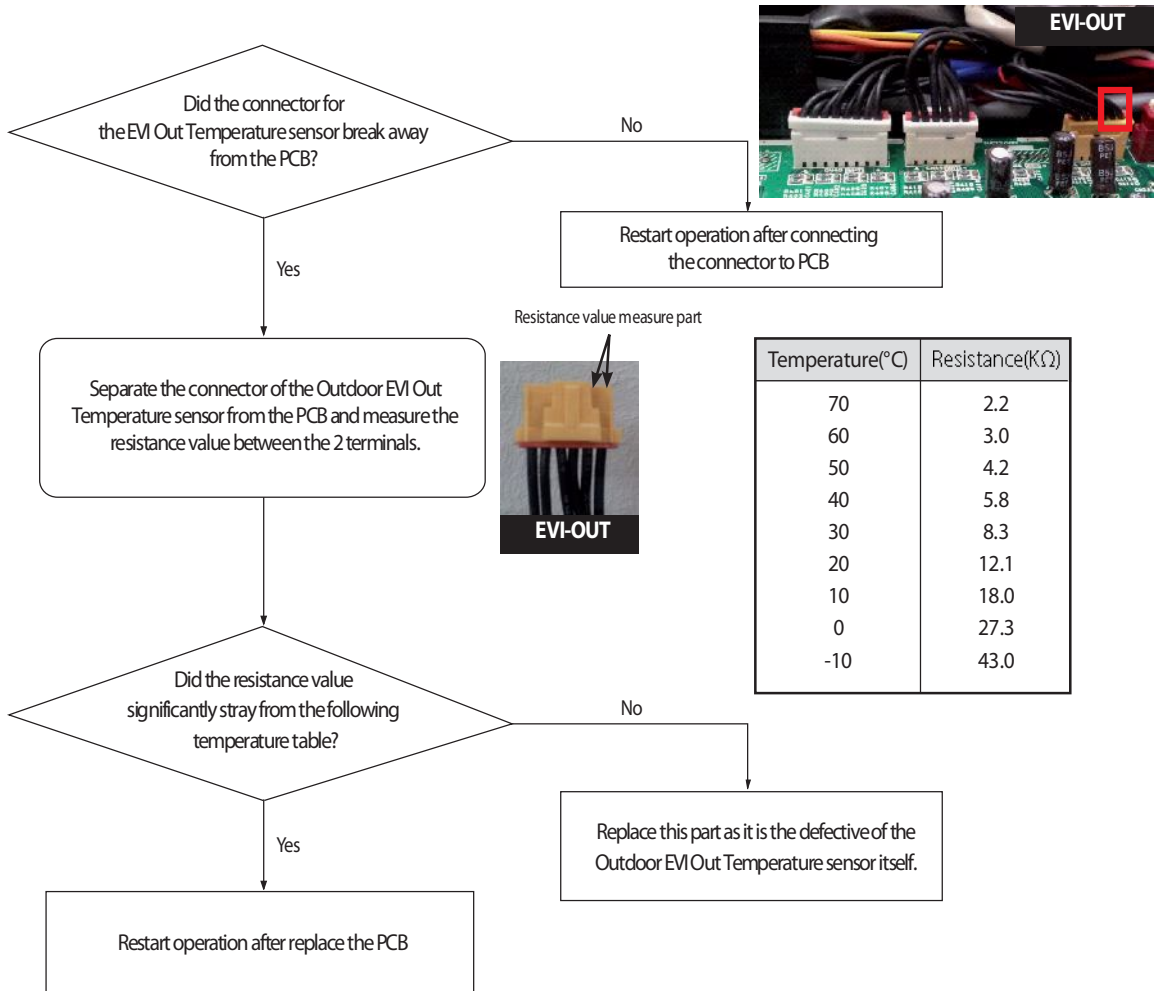
1. Cause of problem



4-4-54 EVI Out Temperature sensor error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | E322 |
| Indoor unit display | ● (Operation) ×(Reservation) ● (Blast) ×(Filter) ×(Defrost) |
| Judgment Method | · Refer to the judgment method below. |
| Cause of problem | · Disconnection or breakdown of relevant sensor. |

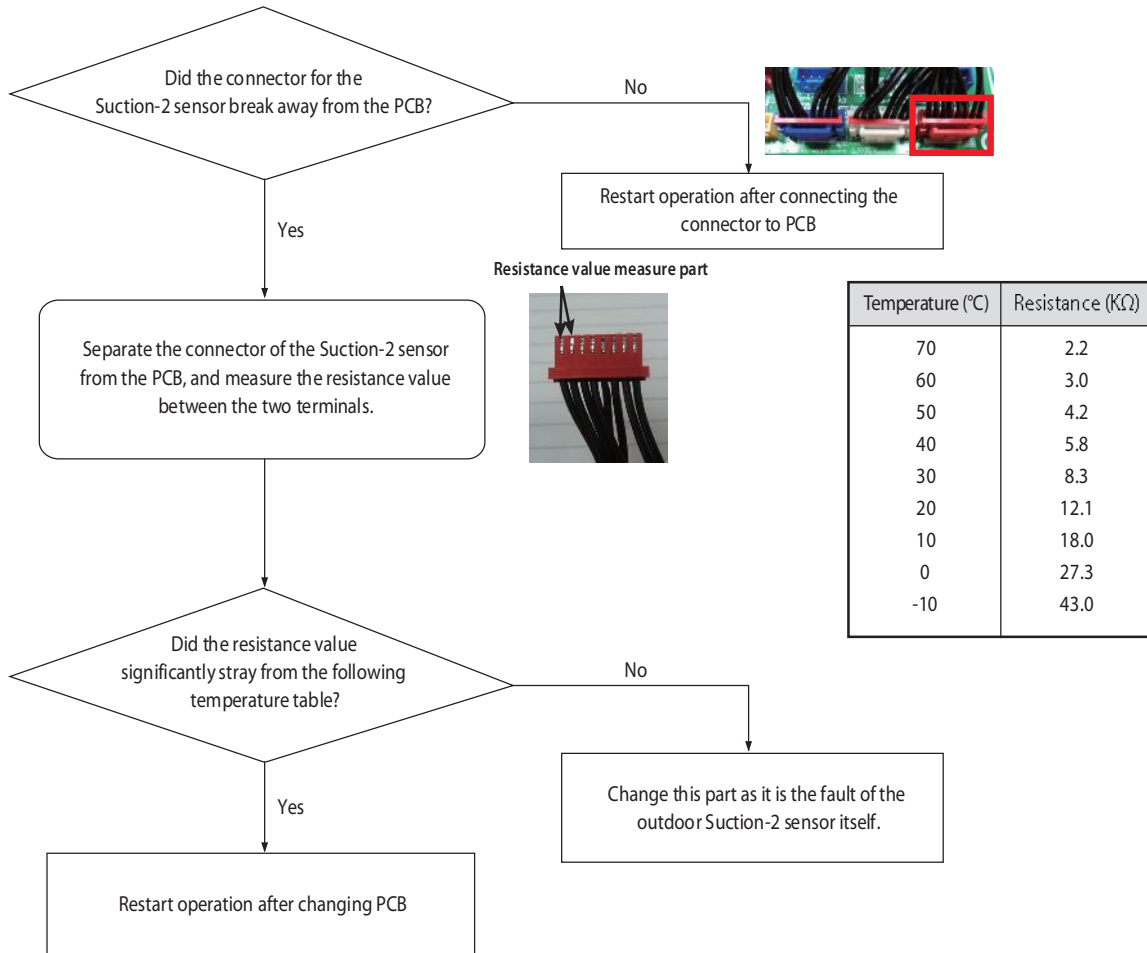
1. Cause of problem



4-4-55 Suction-2 Temperature Sensor Error (OPEN/SHORT)

| | |
|----------------------|---|
| Outdoor Unit Display | E323 |
| Indoor Unit Display | ●(Operation) ×(Reservation) ●(Blast) ×(Filter) ×(Defrost) |
| Judgment Method | • Refer to the judgment method below. |
| Special Cause | • Disconnection or breakdown of relevant sensor |

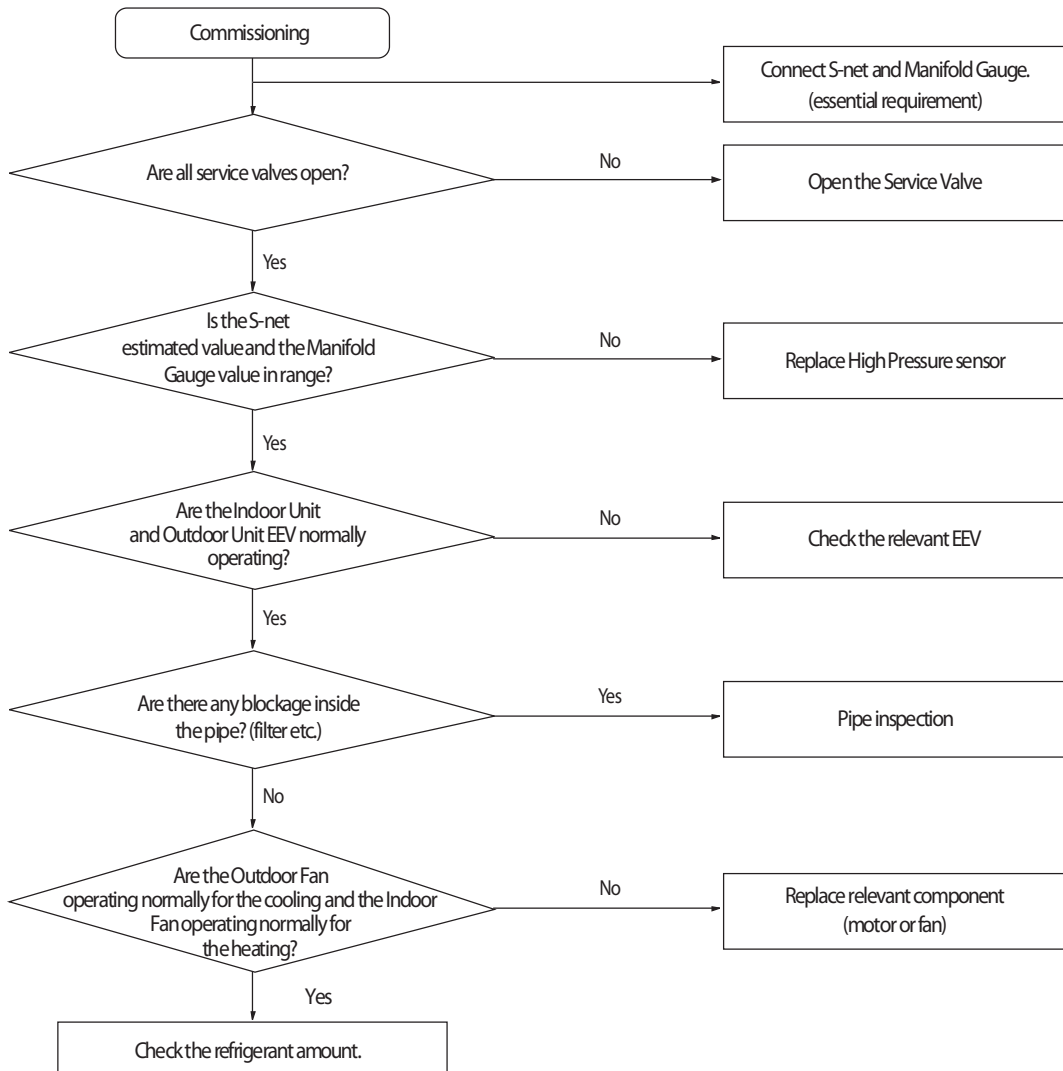
1. Inspection Method



4-4-56 E407 : Comp. Down due to High Pressure Protection Control

| | |
|----------------------|---|
| Outdoor unit display | E407 |
| Indoor unit display | ×(Operation) (Reservation) (Blast) (Filter) ×(Defrost) |
| Judgment Method | Value of the high pressure sensor is detected at 40kg/cm ² or more |
| Cause of problem | <p><Cooling Operation></p> <ul style="list-style-type: none"> · Outdoor unit fan motor problem (constrained, defective) · Motor driver defective or wire is cut · Outdoor heat exchanger is contaminated. · Service valve locked/Fill refrigerant <p><Heating Operation></p> <ul style="list-style-type: none"> · Outdoor unit fan motor problem (constrained, defective) · Motor driver defective or wire is cut · Service valve locked/Excessive refrigerant |

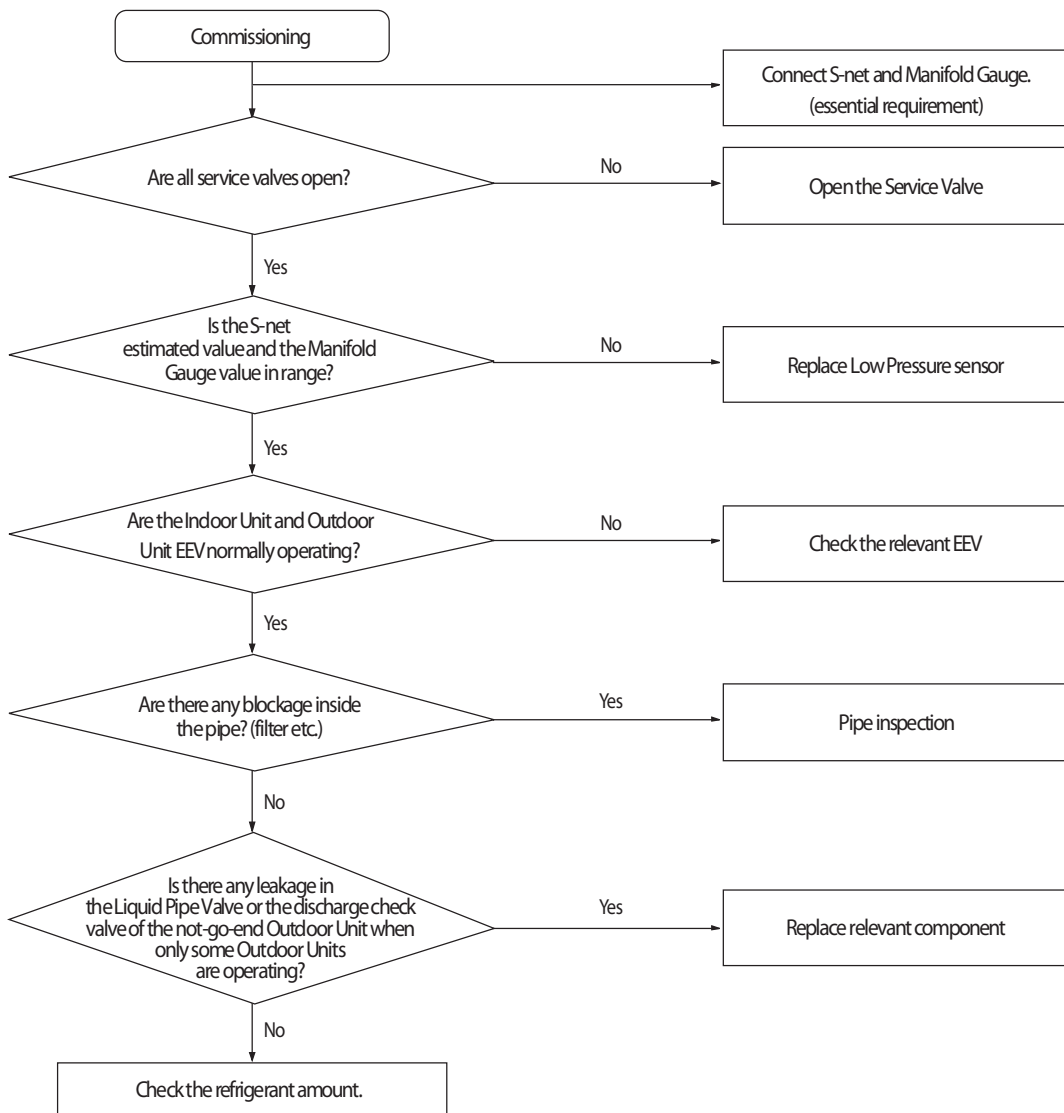
1. Cause of problem



4-4-57 E4 10 : Comp. Down due to Low Pressure Protection Control

| | |
|----------------------|--|
| Outdoor unit display | E4 10 |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | · Inspection when the value of low pressure sensor is 0.8kg/cm ² , or less for air conditioning and 0.6kg/cm ² for heating |
| Cause of problem | <ul style="list-style-type: none"> · Refrigerant shortage · Electronic expansion valve blocked · Service valve blocked · Low pressure sensor defective · Leakage of compressor discharge check valve of not-go-end outdoor unit · Error may be found when used in temperature range outside the conditions of use (Operating outside temperature at -20°C or less for heating and operating outside temperature at -5°C or less for Cooling) |

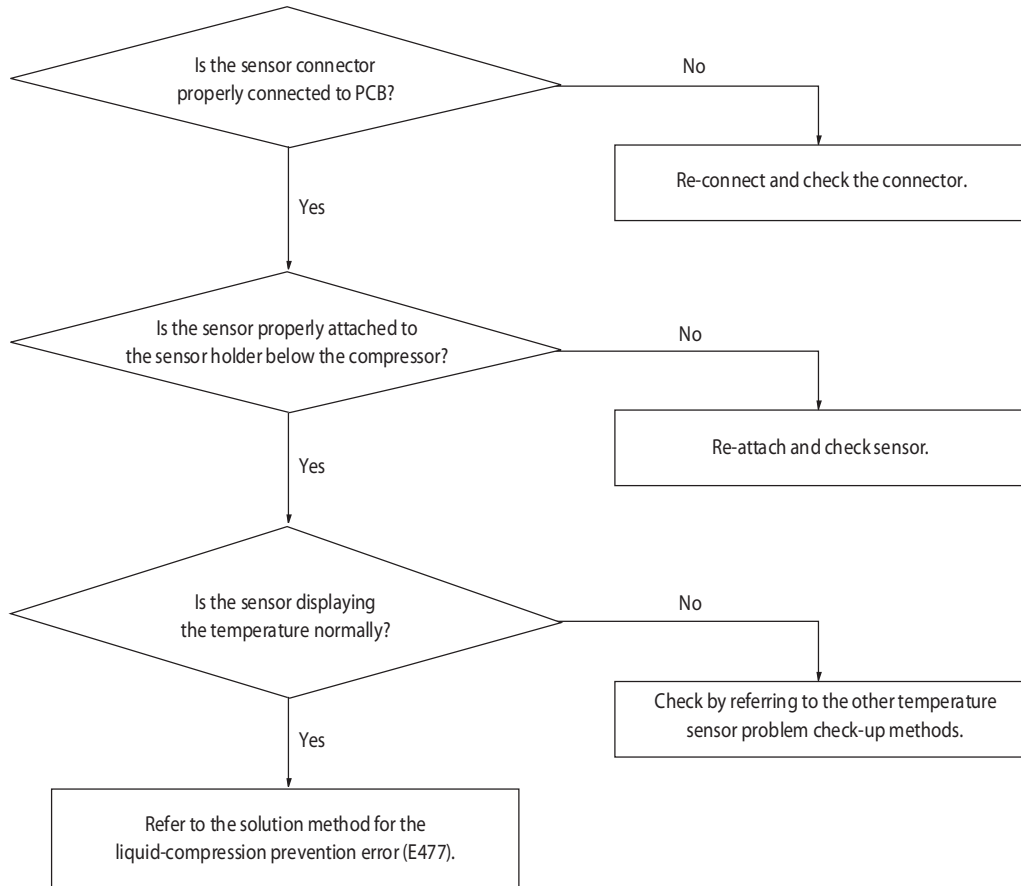
1. Cause of problem



4-4-58 Sump Sensor Error Due to Protection Control

| | |
|----------------------|--|
| Outdoor Unit Display | E413 |
| Indoor Unit Display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | • Maintain sump temperature of 95°C or more for five minutes |
| Special Cause | • Compressor loading faulty/sump temperature sensor faulty |

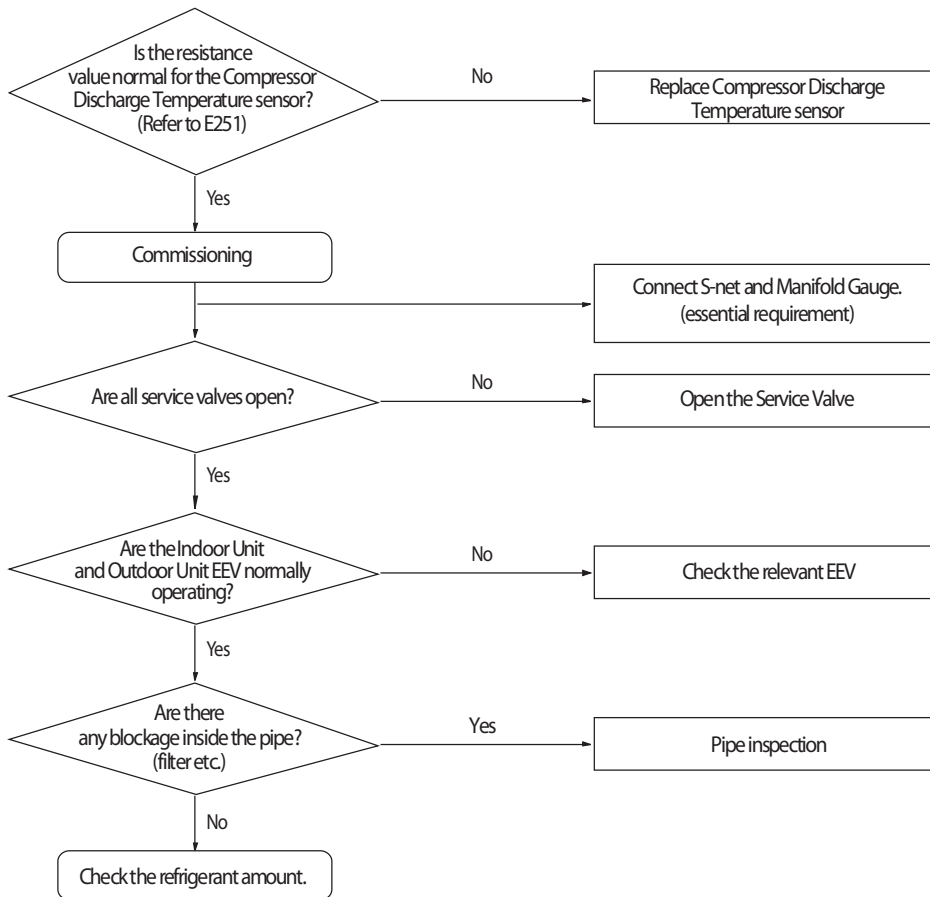
1. Inspection Method



4-4-59 E4 16 : Comp. Down due to Compressor Discharge Temperature sensor

| | |
|----------------------|---|
| Outdoor unit display | E4 16 |
| Indoor unit display | ×(Operation) (Reservation) (Blast) (Filter) ×(Defrost) |
| Judgment Method | · When value of compressor discharge temperature sensor is checked at 120°C or more |
| Cause of problem | <ul style="list-style-type: none"> · Refrigerant shortage · Electronic expansion valve is blocked. · Service valve blocked · Defective discharge temperature sensor · Blocked pipe and defective · Leakage of compressor discharge check valve of not-go-end outdoor unit |

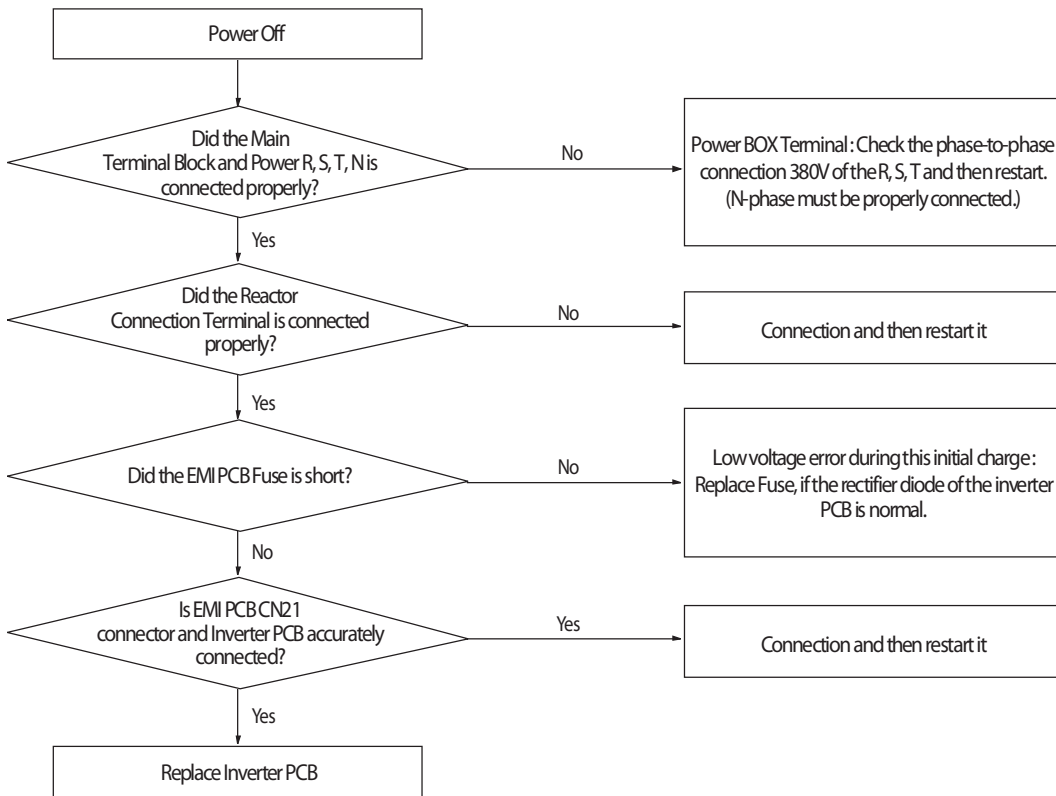
1. Cause of problem



4-4-60 3-phase Input Wiring error

| | |
|----------------------|---|
| Outdoor unit display | E425 |
| Indoorunit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | <ul style="list-style-type: none"> · When turn on the power and check the status of the power from the inverter. · If the phase does not connect the power(no phase) : E425 or E466 (E366) is displayed (Air conditioner to maintain the normal state.) · However) N-phase must be properly connected. |
| Cause of problem | <ul style="list-style-type: none"> · Check the input wiring · EMI Fuse short |

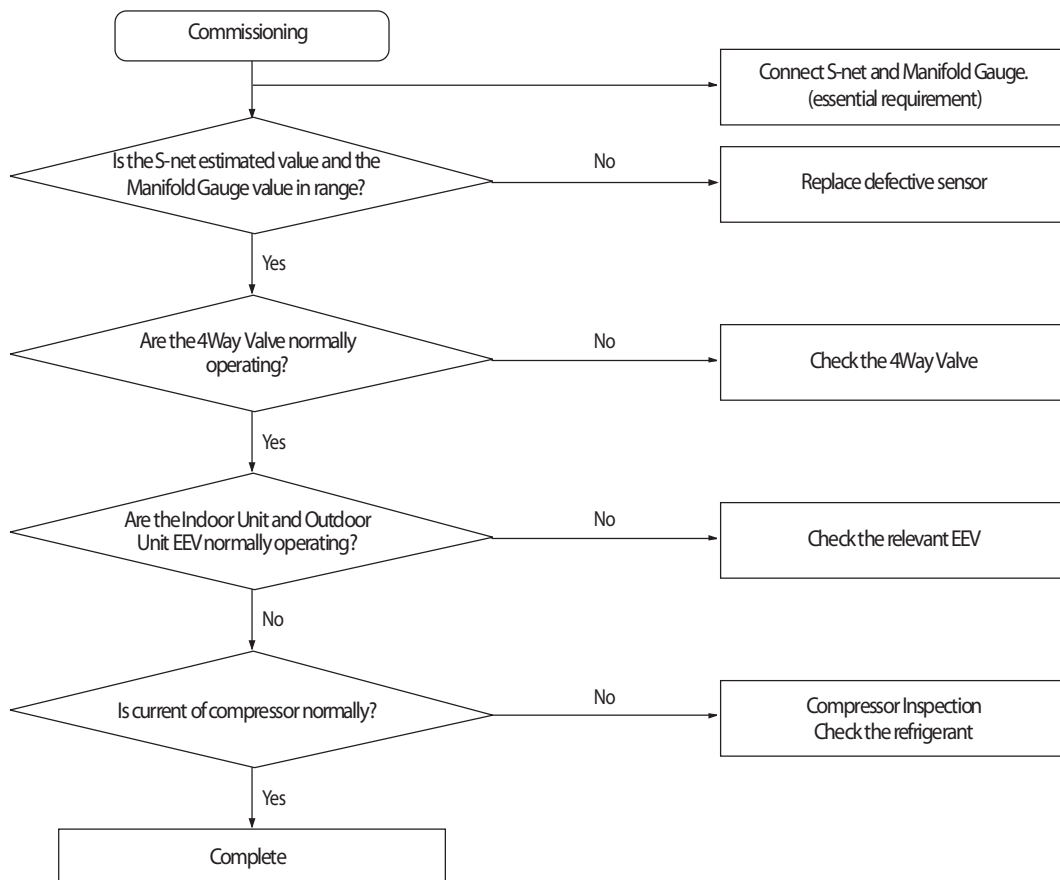
1. Cause of problem



4-4-61 E428 : Comp. Down by Compression Ratio Control

| | |
|----------------------|---|
| Outdoor unit display | E428 |
| Indoorunit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | <ul style="list-style-type: none"> · When compression ratio (high pressure+1)/(low pressure+1) less than 1.5 and lasts for 10 minutes or more · Differential pressure (high pressure - low pressure) less than 0.4 MPa.g and lasts for 10 minutes or more |
| Cause of problem | <ul style="list-style-type: none"> · Indoor and Outdoor EEV breakdown · 4Way Valve breakdown · High and Low pressure sensor defective · Refrigerant shortage |

1. Cause of problem



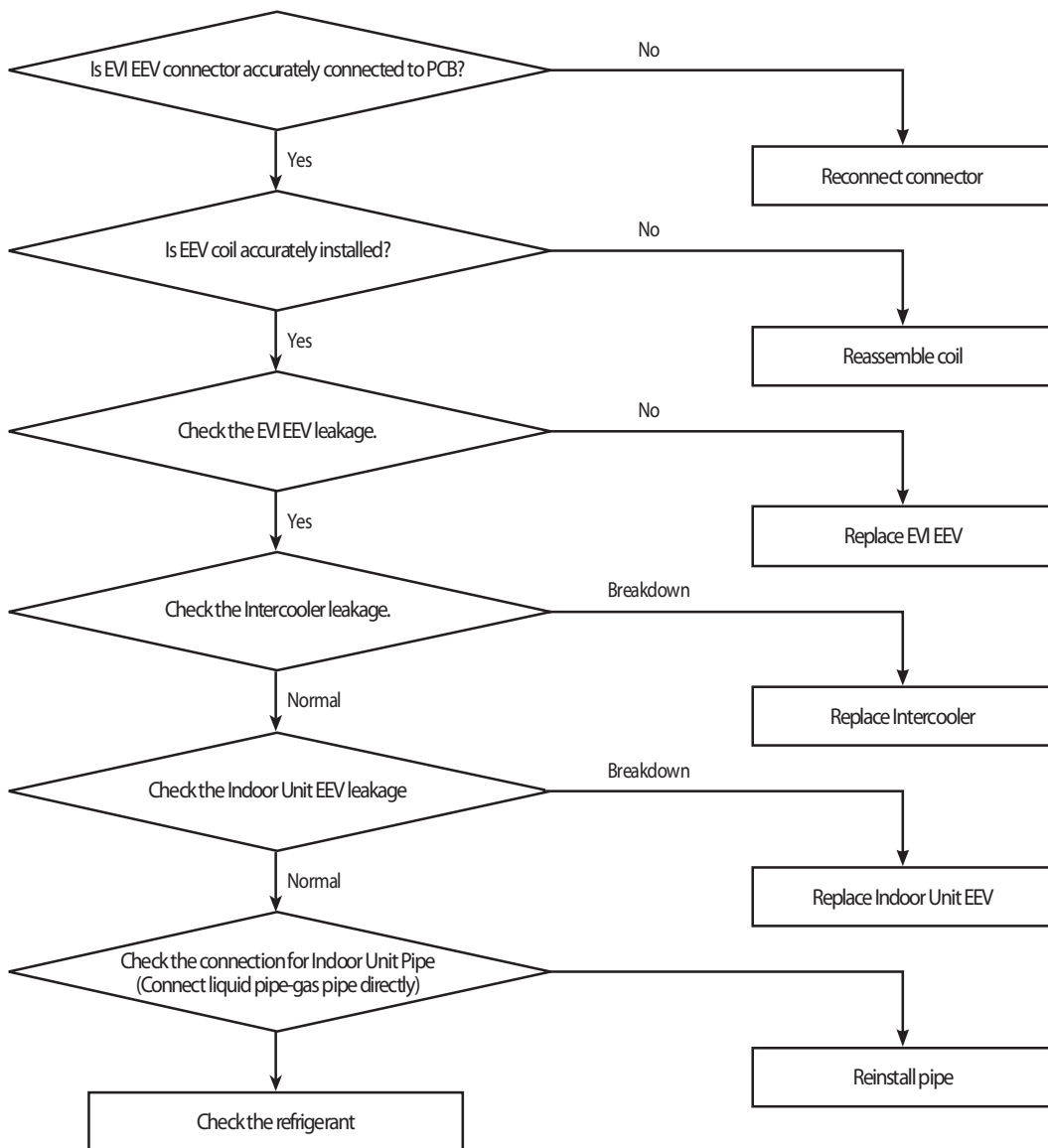
4-4-62 EVI EEV Open error

| | |
|----------------------|--|
| Outdoor unit display | E438 |
| Indoorunit display | - |
| Judgment Method | . DSH <10 °C, EVI Out-in <= 0°C & frequency> 65Hz 40 minutes maintaining |
| Cause of problem | . EVI EEV and Intercooler leakage, excessive refrigerant amount, Outdoor Check Valve inserted opposite. . Indoor Unit EEV leakage, direct connection between Indoor Liquid Pipe and the Gas Pipe. |

※ Indoor EEV leakage can be easily checked during the operation of cooling operation and during the not-go-end blast operation.
(In case it is normal, the EVA In and Out temperatures for the blast may rise)

※ If cooling operation is operated for low temperature with excessive refrigerant amount, then the DSH may descend.

1. Cause of problem



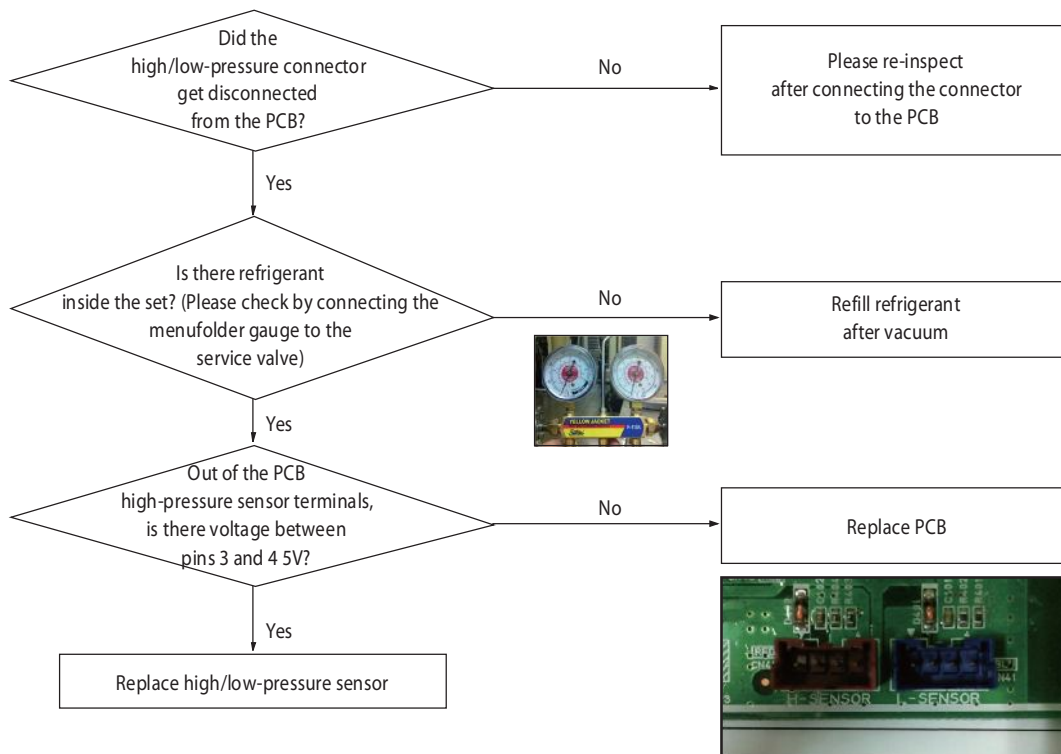
4-4-63 Refrigerant Leakage Error

| | |
|----------------------|---|
| Outdoor Unit Display | E439 |
| Indoor Unit Display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | • Refer to the judgment method below |
| Special Cause | • Leakage of refrigerant, simultaneous malfunction of pressure sensor |

■ Low-pressure sensor OPEN/SHORT error determination method

1. Identifies from when power is supplied or 2 minutes after RESET, and only when set is stopped.
2. An E439 error will occur if the input voltage standard ranges of 0.5V ~ 4.95V of both the high- and low-pressure sensors are exceeded.
3. Will occur if the measured value of both high- and low-pressure sensors is 1kgf/cm²G

1. Inspection method



The ▼ mark is the 1st pin on the PCB.

4-4-64 E440, E442 : Prohibition of the operation of Compressor due to Outdoor Temperature

| | |
|----------------------|--|
| Outdoor unit display | E440 (prohibit heating operation in outdoor temperature over 30°C) E442 (prohibit heat filling operation in outdoor temperature over 15°C) |
| Indoor unit display | No sign |
| Criteria | E440 : Right before an outdoor unit starts heating operation by On signal of an indoor Remocon, the error occurs and prohibits the operation in outdoor temperature over 30°C E442 : Right before operating heat refrigerant filling mode by the K1 switch of an outdoor PCB, the error occurs and prohibits the operation in outdoor temperature over 15°C |
| Cause of problem | • Operation Prohibition mode by the indoor temperature limit |

1. How to check

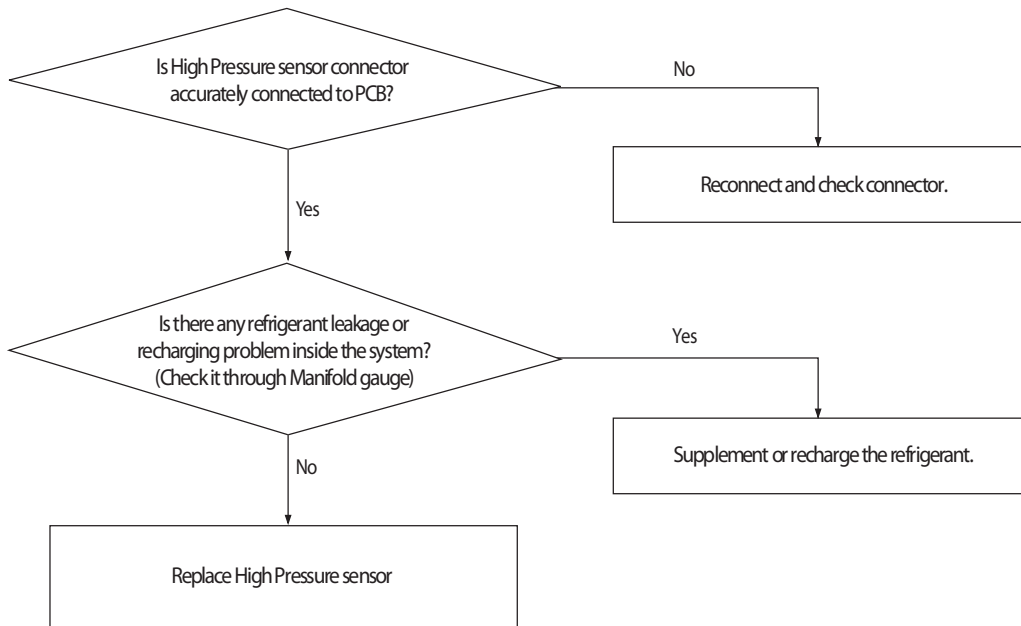
The above error code is not caused by a product's problem but a function to protect the product by limiting the available temperature range so please refer to the usable temperature range in the product manual.

If the error code is displayed despite a condition that does not belong to any of the above diagnosis methods, read the temperature sensor value of the outdoor inlet air with View Mode or S-net, and if the actual outdoor temperature is different, please replace the temperature sensor.

4-4-65 High Pressure Standard Not Met before Air Conditioning (Inability to Re-operate)

| | |
|----------------------|--|
| Outdoor unit display | E443 |
| Indoor unit display | ×(Operation) ● (Reservation) ● (Blast) ● (Filter) ×(Defrost) |
| Judgment Method | · Operation should be forbidden if High Pressure sensor value of the Main Unit before the pump down is started at 2.2kg/cm ² g or below for air-conditioning and 1.0kg/cm ² G or less for heating for three consecutive seconds. (Restarting operation is not possible, and an error displayed on the indoor unit.) |
| Cause of problem | · Refrigerant leakage/fault in High Pressure sensor . |

1. Cause of problem



4-4-66 CCH Malfunction and Sump Sensor Miswiring Error

| | |
|----------------------|--|
| Outdoor Unit Display | E445 |
| Indoor Unit Display | - |
| Judgment Method | • Refer to the judgment method below |
| Special Cause | • CCH Connector PCB is not connected / Sump sensor compressor separated / Own problem of CCH |

1. Judgment Method

Tini = Sump temperature when entering the CH operation delay condition

Tlast = Sump temperature when maintaining CH operation delay for two hours

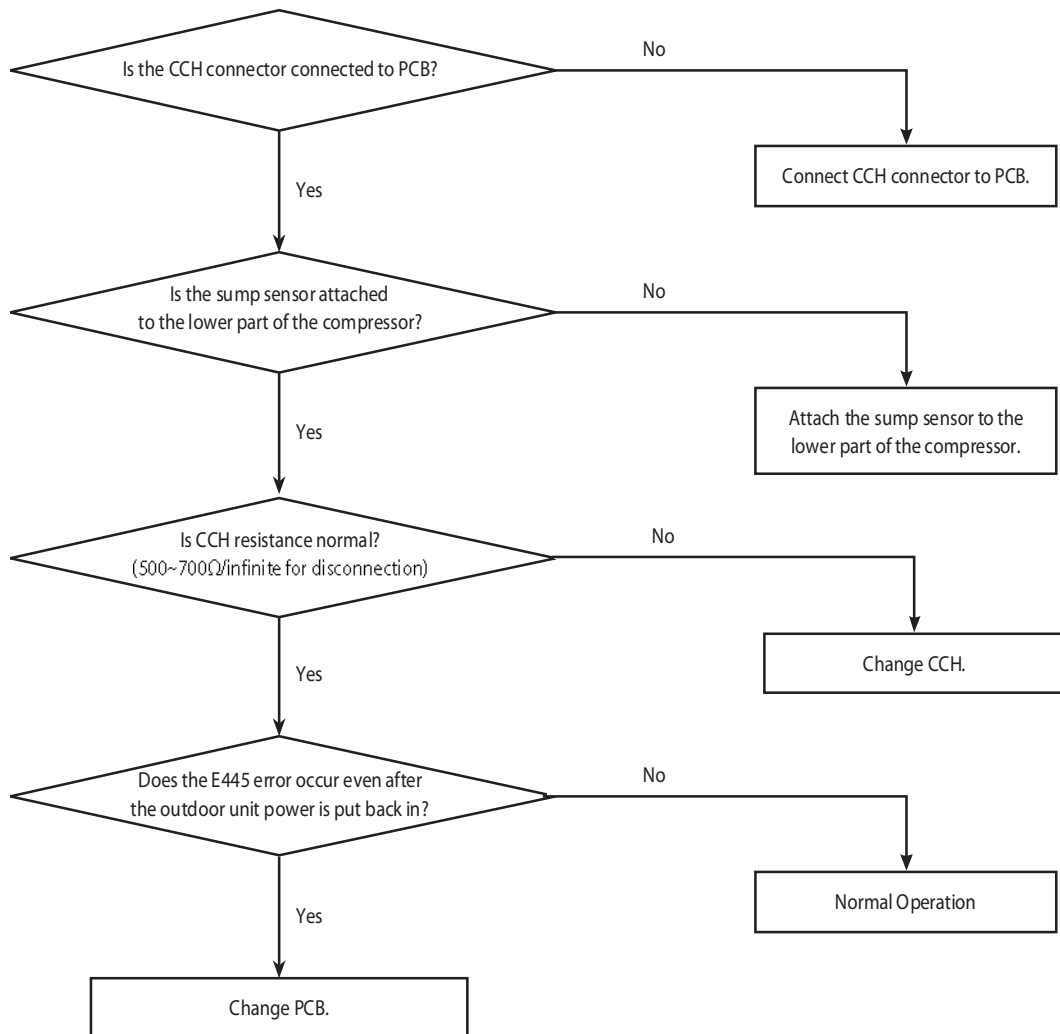
Outside Air Temperature Sensor Value: Outside air temperature when maintaining CH operation delay for two hours

① $T_{last} - T_{ini} < 2^{\circ}\text{C}$

② $T_{last} < \text{Outside Air Temperature Sensor Value} + 2^{\circ}\text{C}$

③ Outside Air Temperature Sensor Value $< 30^{\circ}\text{C}$

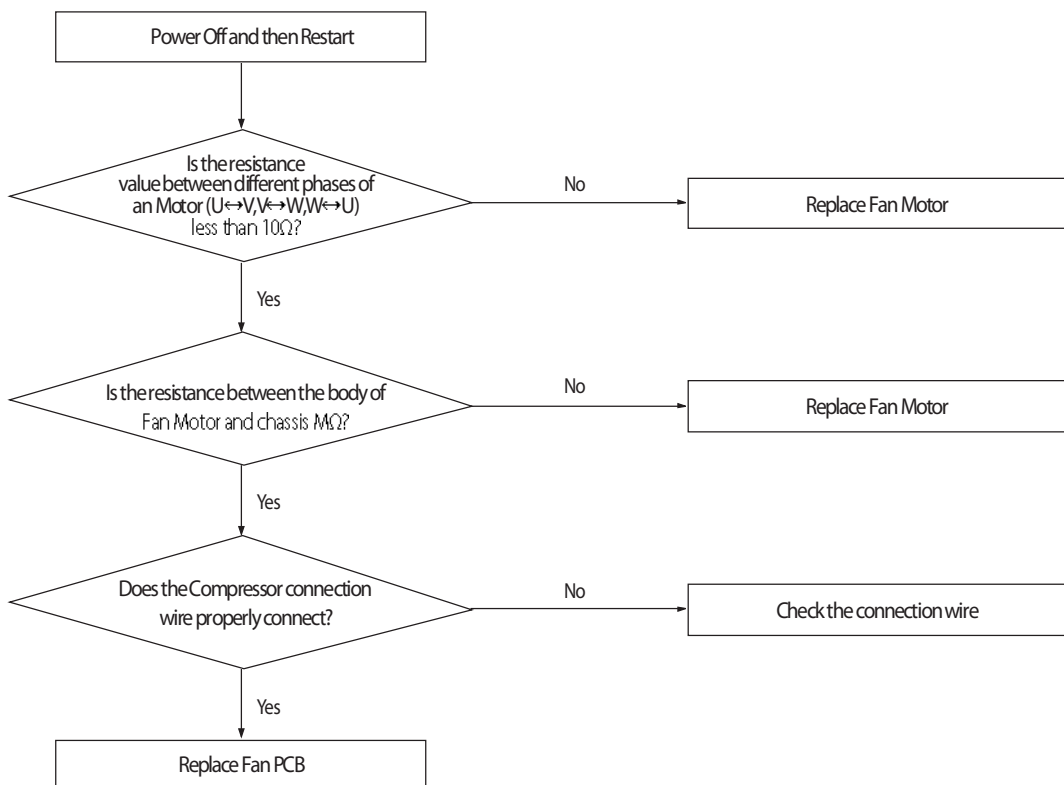
If ①, ② and ③ are satisfied at the same time, then display E445.



4-4-67 Fan starting error

| | |
|----------------------|--|
| Outdoor unit display | E446 (FAN PCB(FAN1)) E346 (FAN PCB(FAN2)) |
| Judgment Method | <ul style="list-style-type: none"> · Startup, and then if the speed increase is not normally. · Detected by H/W or S/W |
| Cause of problem | <ul style="list-style-type: none"> · Compressor connection error · Defective Compressor · Defective PCB |

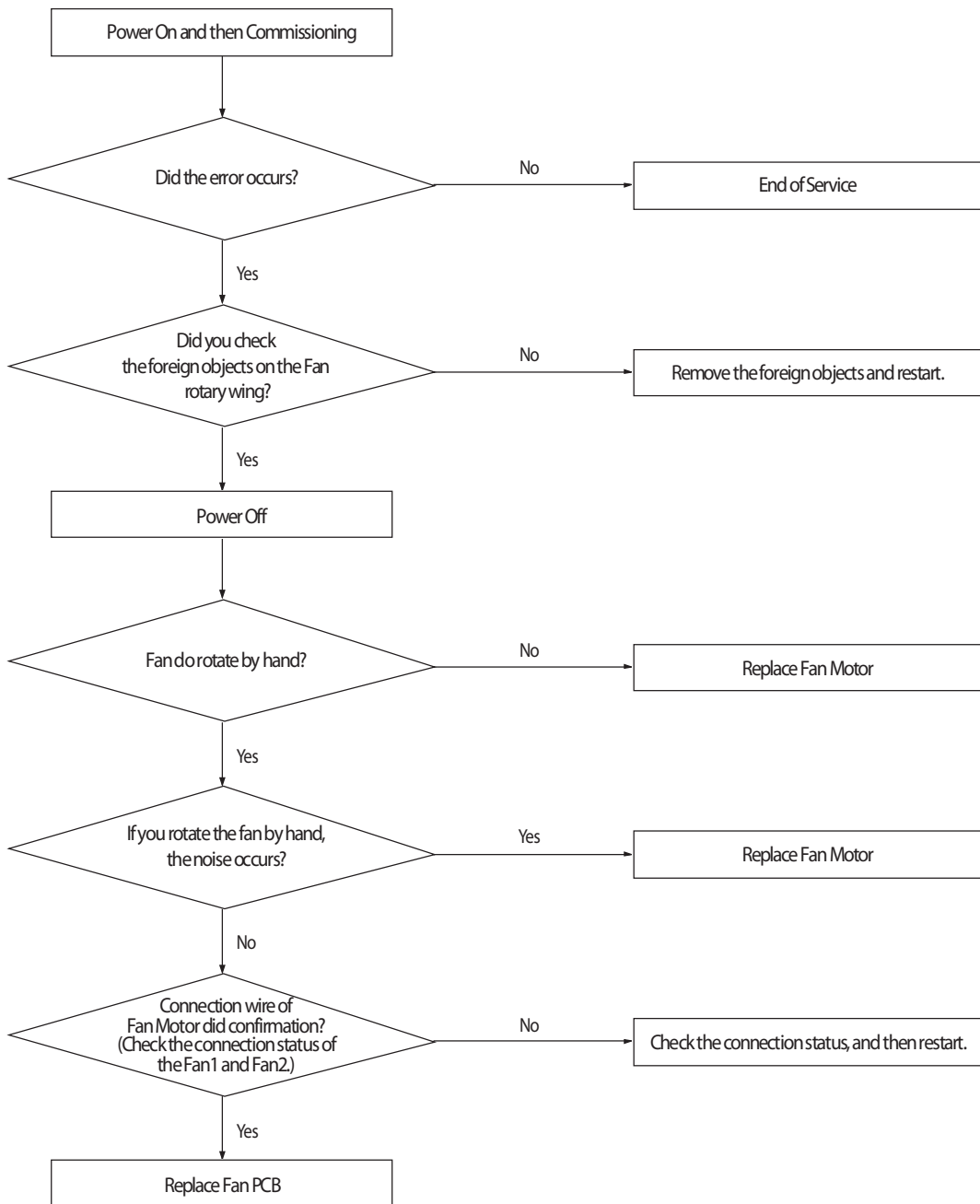
1. Cause of problem



4-4-68 Fan lock error

| | |
|----------------------|---|
| Outdoor unit display | E448 (FAN PCB(FAN1)) E348 (FAN PCB(FAN2)) |
| Judgment Method | · Is checked symptoms by phase current of Fan Motor. |
| Cause of problem | · Fan Motor connection error. · Defective Fan · Defective PCB |

1. Cause of problem



4-4-69 Momentary Blackout error

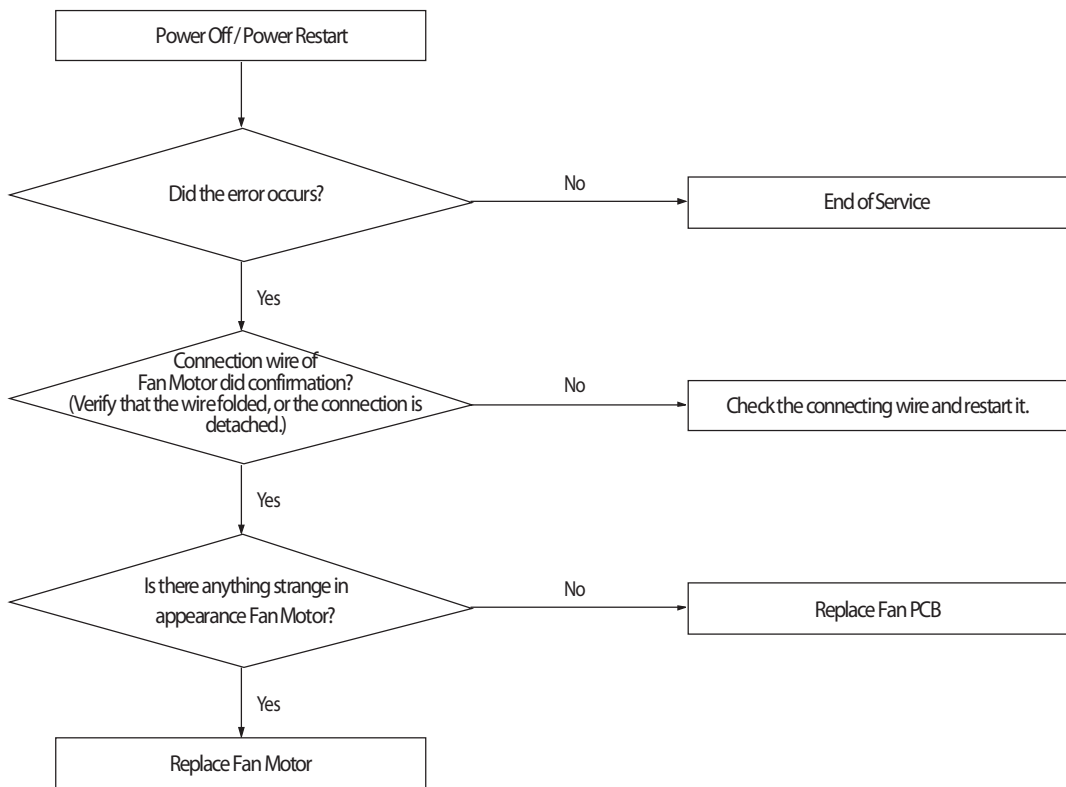
| | |
|----------------------|---|
| Outdoor unit display | E452 |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | · Momentary stop of compressor due to momentary blackout. |
| Cause of problem | · Momentary stop of compressor due to momentary blackout. |

1. Precautions : Replace Hub PCB or Main Hub Connection wire.

4-4-70 Outdoor Fan Motor overheating

| | |
|----------------------|--|
| Outdoor unit display | E453 (FAN PCB(FAN1)) E353 (FAN PCB(FAN2)) |
| Judgment Method | · Overheating due to the internal sensor of the Fan Motor. |
| Cause of problem | · Defective connection wire · Defective Fan Motor · Defective PCB · Defective installation conditions |

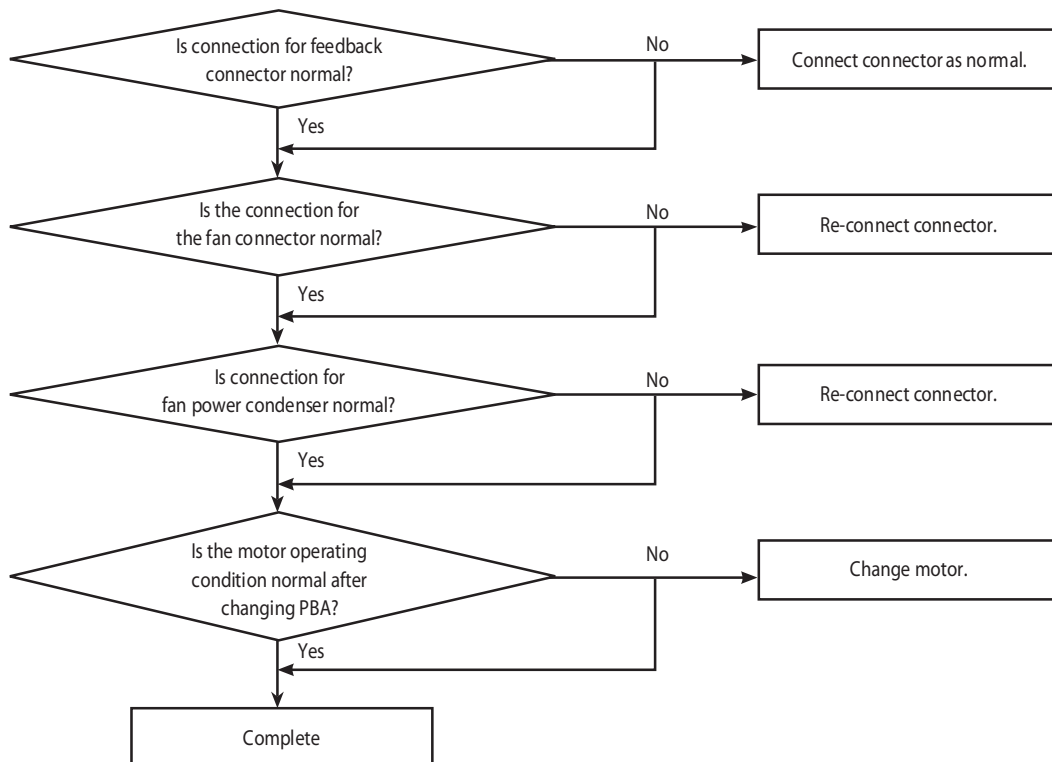
1. Cause of problem



4-4-71 Outdoor Unit Fan Motor RPM Error

| | |
|----------------------|--|
| Outdoor Unit Display | E454 |
| Indoor Unit Display | - |
| Judgment Method | • In case the number of the revolutions of the outdoor unit fan motor in motion is different by 100rpm or more compared to the instructed value. |
| Special Cause | • Outdoor unit fan motor constrained or faulty of operation |

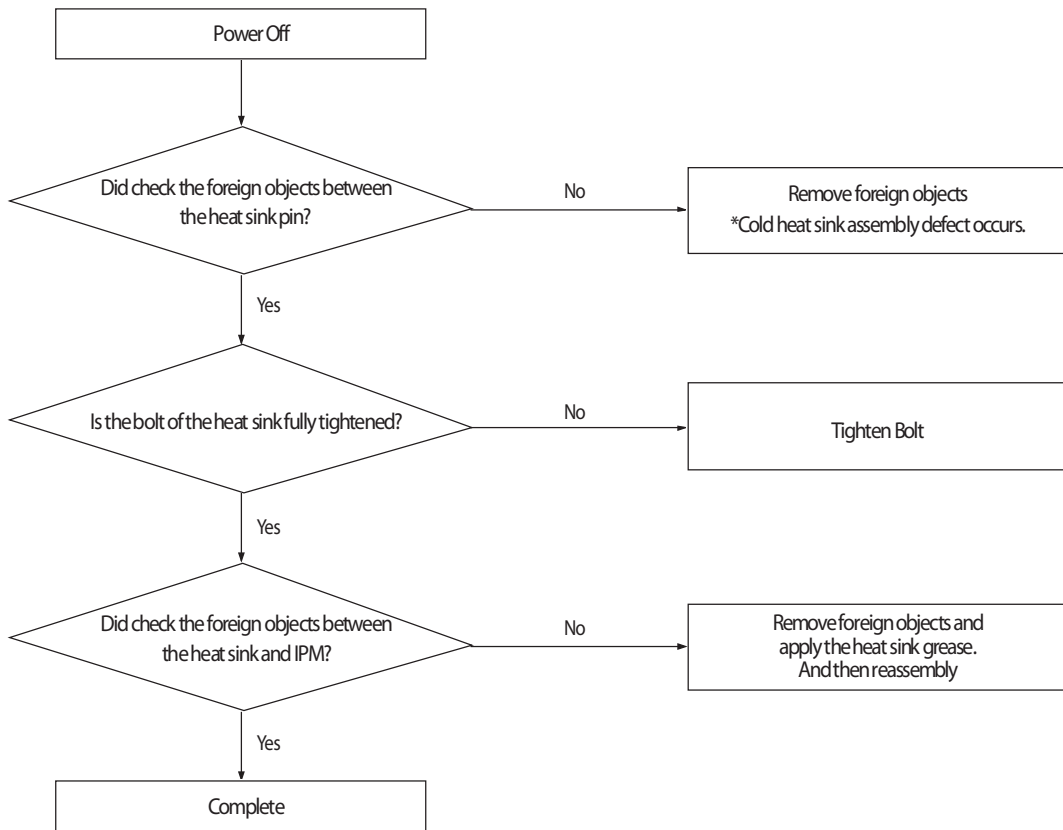
1. Inspection Method



4-4-72 Fan IPM Overheat error

| | |
|----------------------|--|
| Outdoor unit display | <i>E455</i> (FAN1 PCB) <i>E355</i> (FAN2 PCB) |
| Judgment Method | · IPM internal temperature more than 85°C (E455, E355) |
| Cause of problem | · Heat sink and IPM assembly defective. · Defective heat sink cooling |

1. Cause of problem



4-4-73 Over-Voltage Error of an Outdoor Fan Motor

| | |
|----------------------|--|
| Outdoor unit display | E456 |
| Indoor unit display | - |
| Criteria | •When the current of an operating outdoor fan motor is more than 7A for 1 minute |
| Cause of problem | • Outdoor fan motor lock or defect • Occurs by abrupt start or overload |

1. How to check
 - 1) Check if outdoor fan motor rotates or is locked
 - 2) If it is not locked, the above error occurs due to overload and signals by abnormal operation, and it indicates the overload status. Thus, it is not breakdown.
 - 3) Need to check if there is a problem with fan load status

4-4-72 Counter-Rotation Error of an Outdoor Fan Motor

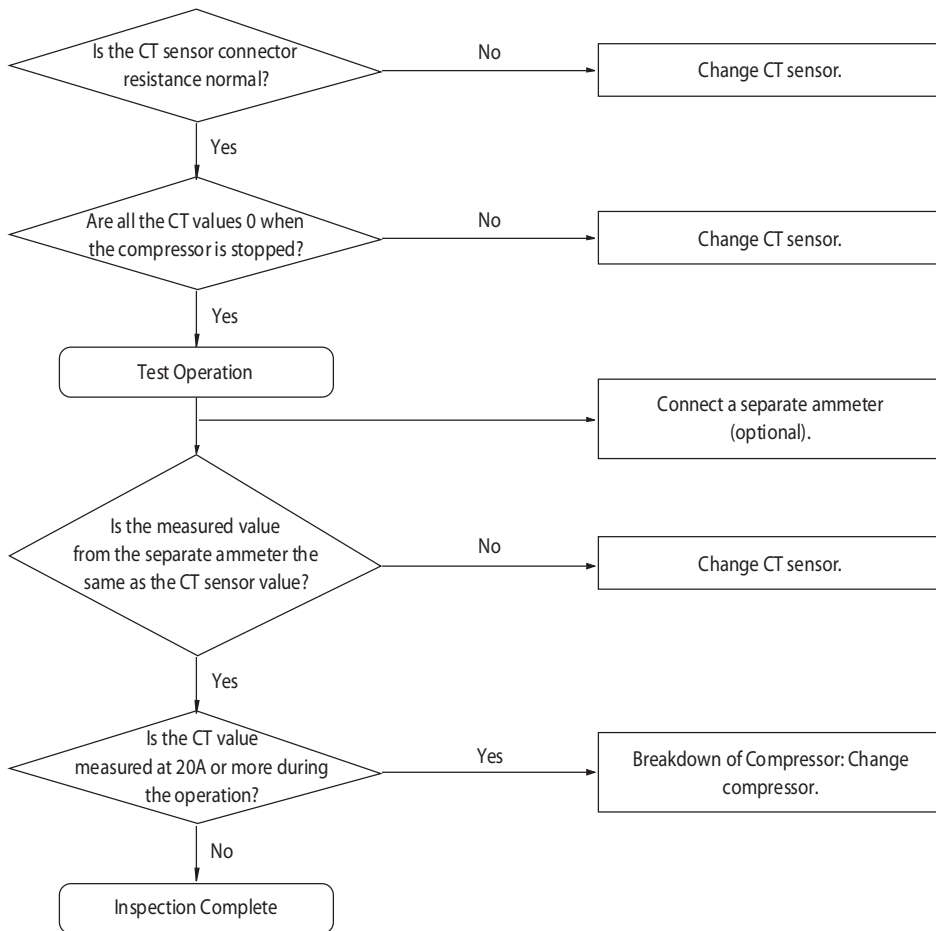
| | |
|----------------------|--|
| Outdoor unit display | E457 |
| Indoor unit display | - |
| Criteria | •When the rotational direction of an outdoor fan motor is counter-clockwise before operating |
| Cause of problem | • Due to wind that can run the fan counter-wise |

1. How to diagnose
 - 1) Check if the start instruction of outdoor unit's fan is counter-clockwise
2. How to check
 - 1) It is a signal to protect a motor by checking the operational condition of the outdoor unit's fan motor without power so as not to operate it in counter-clockwise condition.
 - 2) Check if there is wind strong enough to force a fan to rotate counter-clockwise where the outdoor unit is installed.

4-4-74 E458 : Compressor Excess Current Error

| | |
|----------------------|---|
| Outdoor Unit Display | E458 |
| Indoor Unit Display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Judgment Method | • Error displayed if the CT sensor value of the relevant compressor is 20A or more and is maintained for more than 3 seconds. |
| Special Cause | • Breakdown of compressor/Faulty CT sensor |

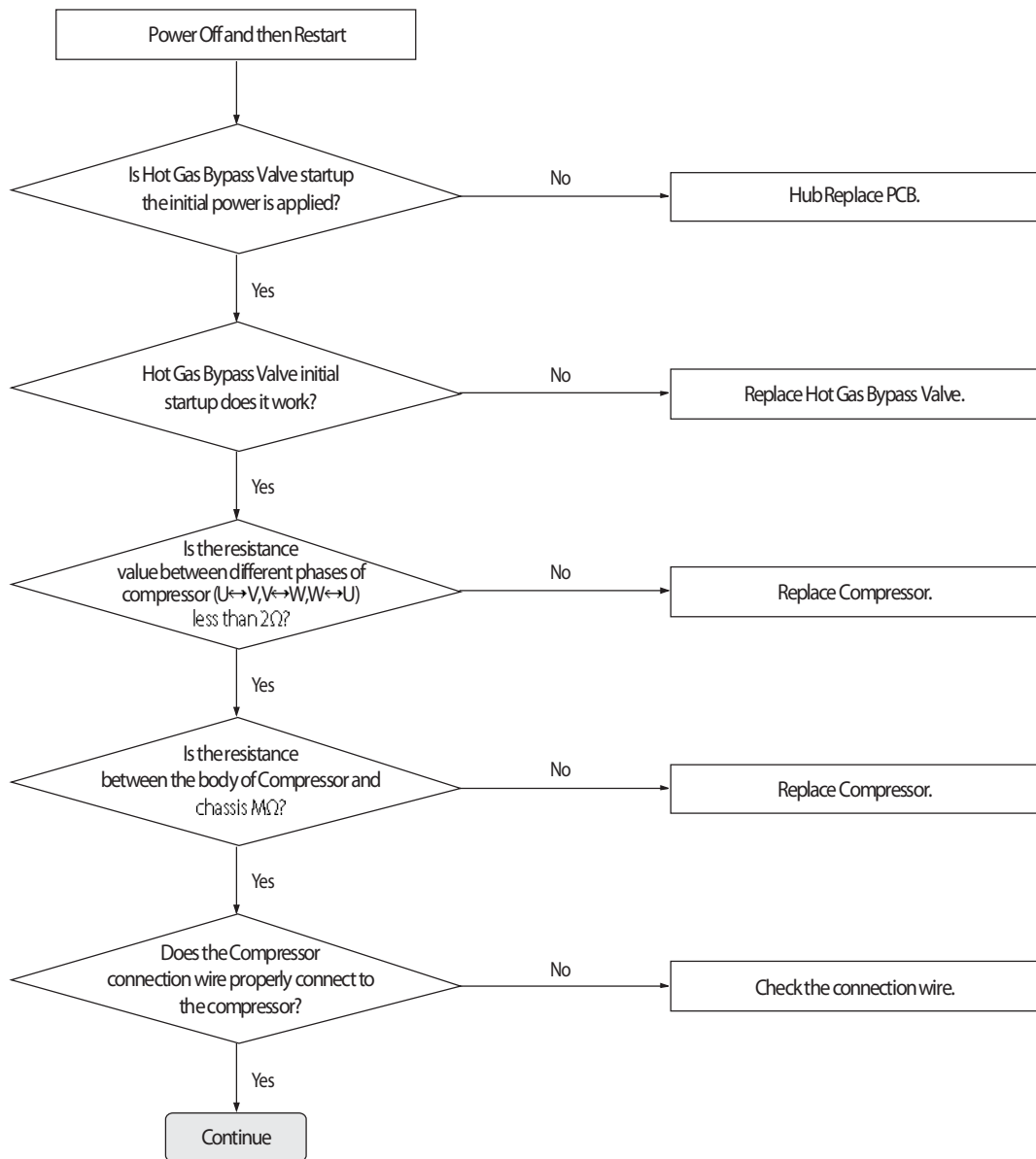
1. Inspection Method



4-4-75 Compressor starting error

| | |
|----------------------|---|
| Outdoor unit display | E461 (INVERTER1 PCB) E361 (INVERTER2 PCB) |
| Judgment Method | <ul style="list-style-type: none"> Startup, and then if the speed increase is not normally. Detected by H/W or S/W. |
| Cause of problem | <ul style="list-style-type: none"> Compressor connection error Defective Compressor Defective PCB |

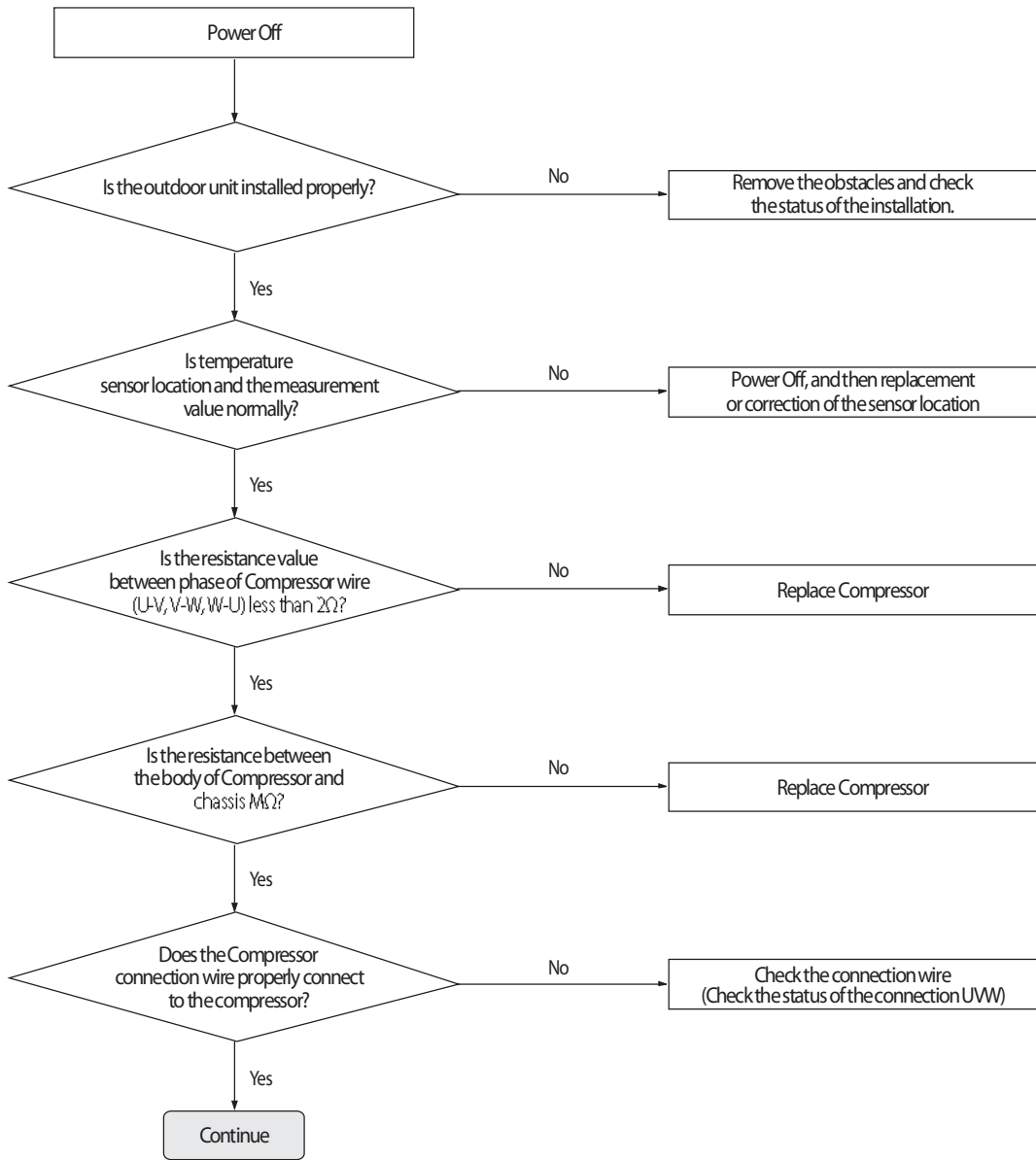
1. Cause of problem



4-4-76 Inverter Overcurrent error

| | | |
|----------------------|---|--|
| Outdoor unit display | <i>E464/E465</i> (INVERTER1 PCB) <i>E364/E365</i> (INVERTER2 PCB) | |
| Judgment Method | <ul style="list-style-type: none"> · Will occur if the overcurrent flowing in the IPM. · Detected by H/W or S/W | |
| Cause of problem | <ul style="list-style-type: none"> · Installation defective · Comp. defective · PCB defective | <ul style="list-style-type: none"> · Connection wire error · Motor defective |

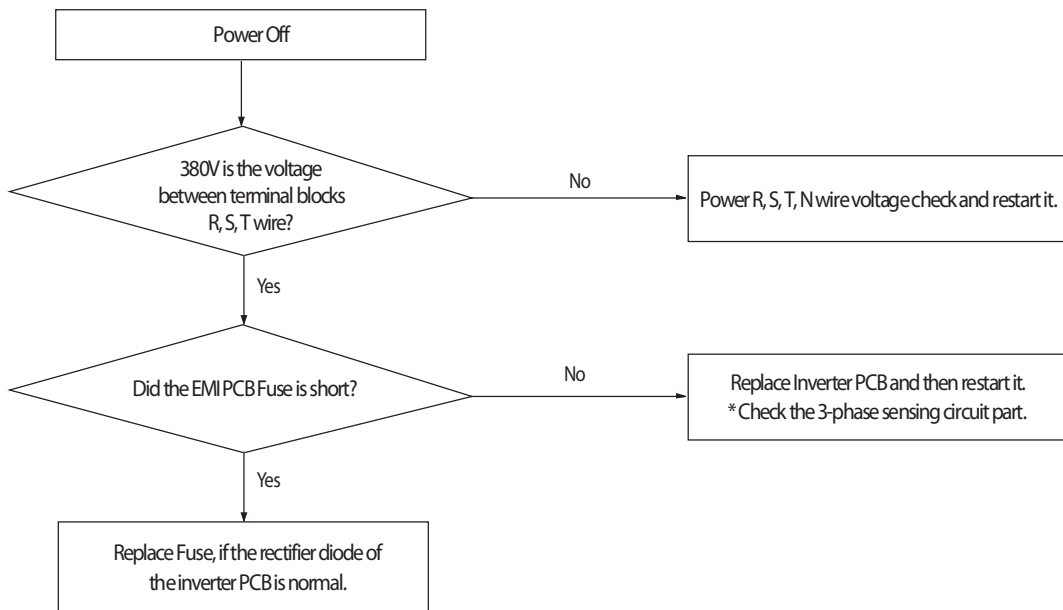
1. Cause of problem



4-4-77 Overvoltage / Low voltage error

| | |
|----------------------|---|
| Outdoor unit display | E466 (INVERTER1 PCB) E366 (INVERTER2 PCB) |
| Judgment Method | <ul style="list-style-type: none"> · N-phase wiring error and EMI Fuse short. · DC-Link Overvoltage / Low voltage occurs. |
| Cause of problem | <ul style="list-style-type: none"> · Check the input wiring · EMI Fuse short |

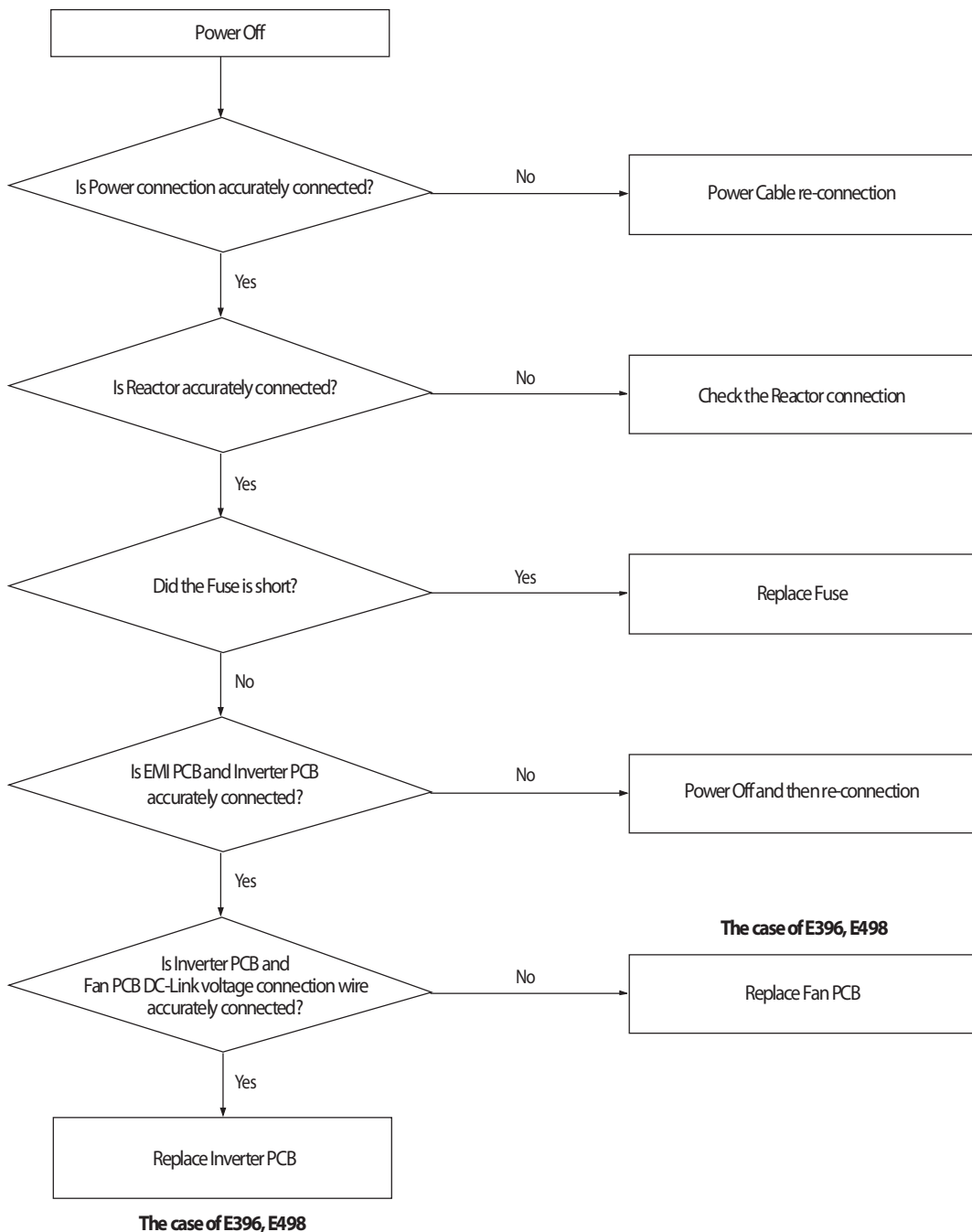
1. Cause of problem



4-4-78 DC Link voltage sensor error

| | |
|----------------------|---|
| Outdoor unit display | <i>E469</i> (INVERTER1 PCB) <i>E369</i> (INVERTER2 PCB) <i>E496</i> (OUTDOOR FAN 1 PCB) <i>E396</i> (OUTDOOR FAN 2 PCB) |
| Judgment Method | · DC voltage detection : Judged as an error if the detected value is more than 2.8V or 0.2V less than |
| Cause of problem | · Input voltage defective · AC Power wiring error · Momentary Overvoltage / Low voltage occurs · PCB voltage sensing circuit defective |

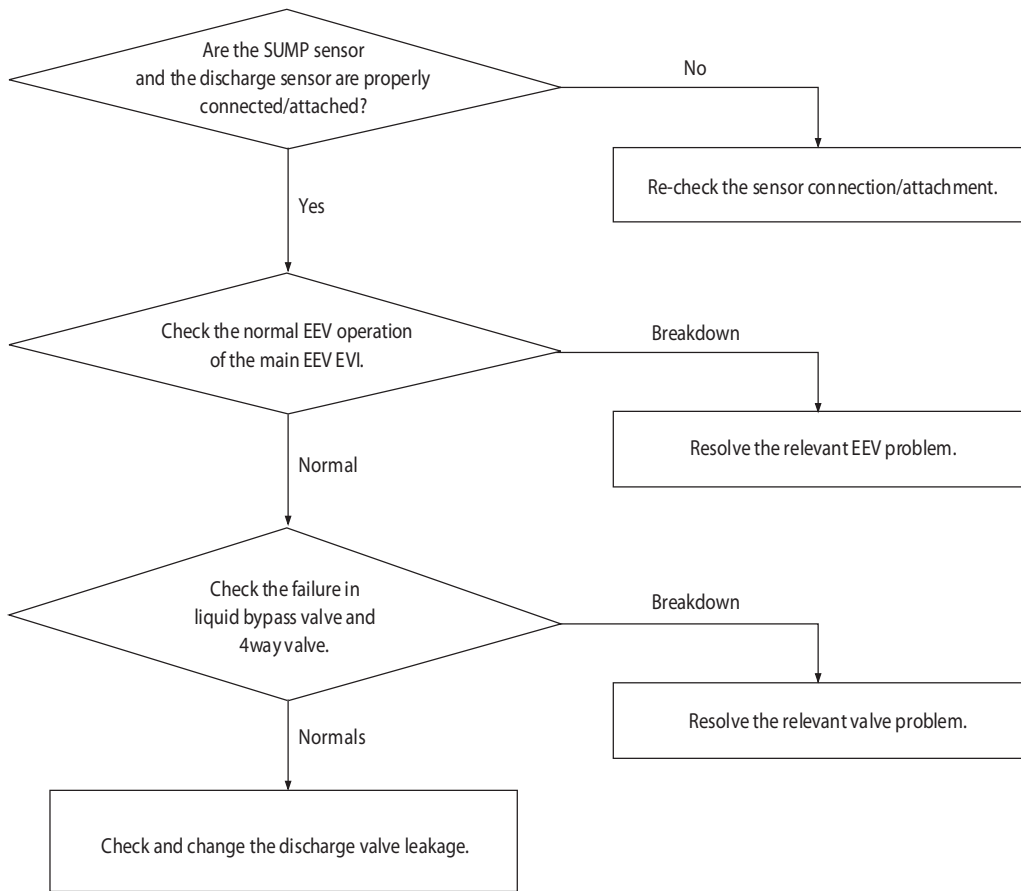
1. Cause of problem



4-4-79 Liquid Compression Prevention Control

| | |
|----------------------|---|
| Outdoor Unit Display | E477 |
| Indoor Unit Display | - |
| Judgment Method | • SUMP temperature decrease & DSH < 5°C 25 min. |
| Special Cause | • EVI EEV and super cooler, liquid bypass valve leakage, refrigerant overcharge, indoor unit EEV leakage, direct connection between indoor liquid pipe-gas pipe, faulty main EEV, and failure to operate compressor |

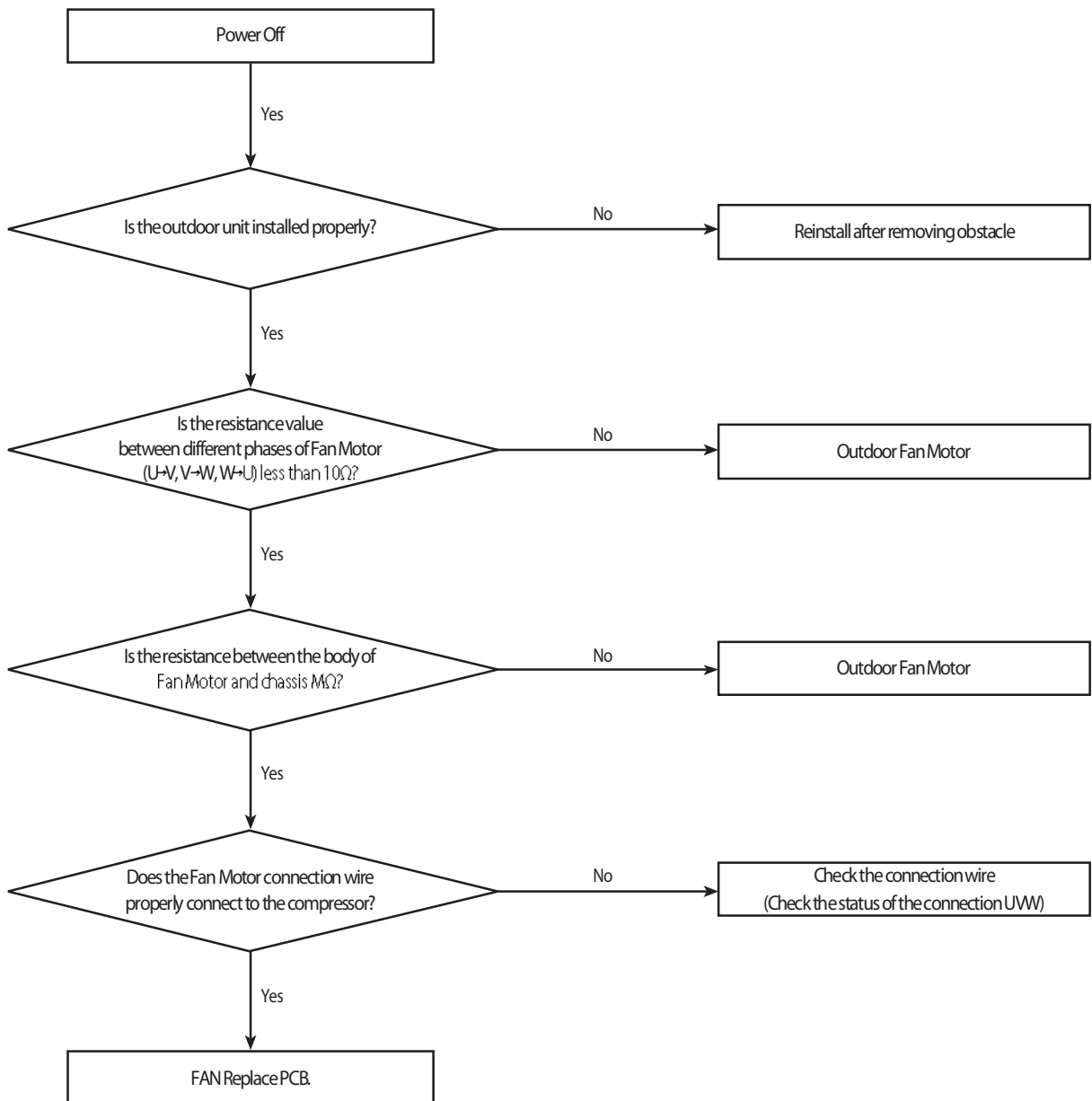
1. Inspection Method



4-4-80 Fan Motor Overcurrent error

| | |
|----------------------|---|
| Outdoor unit display | <i>E478/E489</i> (FAN PCB(FAN1)) <i>E378/E389</i> (FAN PCB(FAN2)) |
| Judgment Method | <ul style="list-style-type: none"> · Occurs when overcurrent flows in the IPM. · Detected by H/W or S/W |
| Cause of problem | <ul style="list-style-type: none"> · Installation error · Defective Comp · Defective PCB · Connector error · Defective Motor |

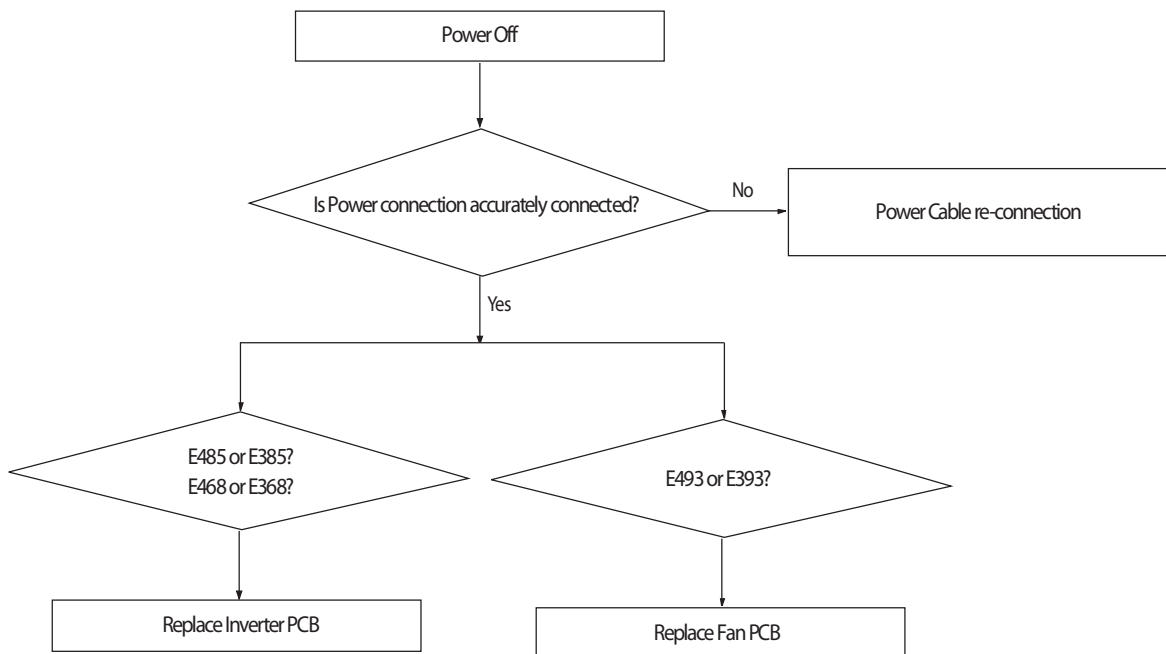
1. Cause of problem



4-4-81 Input / Output Current sensor error

| | |
|----------------------|--|
| Outdoor unit display | <p>E485 INVERTER1 PCB(Input Current sensor)</p> <p>E385 INVERTER2 PCB(Input Current sensor)</p> <p>E468 INVERTER1 PCB(Output Current sensor)</p> <p>E368 INVERTER 2 PCB(Output Current sensor)</p> <p>E493 OUTDOOR FAN PCB (FAN1 Output Current sensor)</p> <p>E393 OUTDOOR FAN PCB (FAN2 Output Current sensor)</p> |
| Judgment Method | <ul style="list-style-type: none"> · Sensor Output detection : Judged as an error if the detected value is more than 2.8V or 0.2V less than |
| Cause of problem | <ul style="list-style-type: none"> · Input voltage defective · PCB voltage sensing circuit defective |

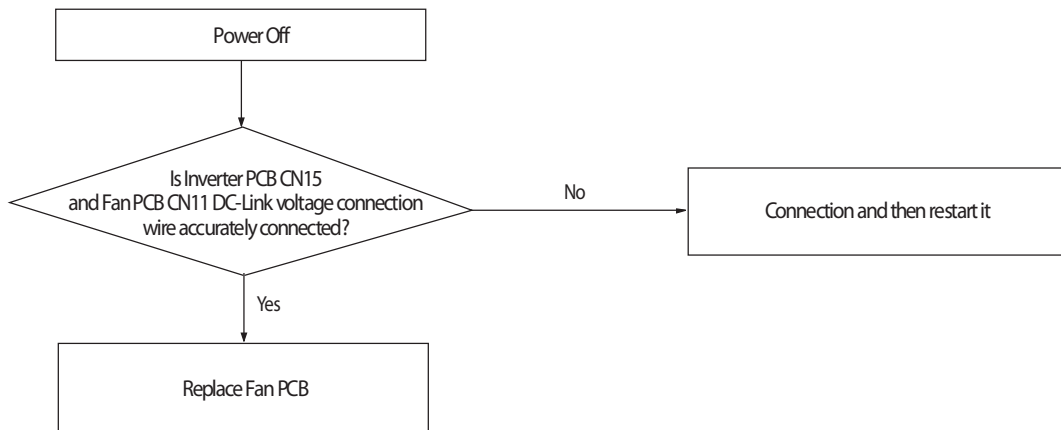
1. Cause of problem



4-4-82 Outdoor Fan PCB Overvoltage / Low voltage error

| | |
|----------------------|--|
| Outdoor unit display | E486 |
| Judgment Method | <ul style="list-style-type: none"> · N-phase wiring error and EMI Fuse short · DC-Link Overvoltage / Low voltage occurs. |
| Cause of problem | <ul style="list-style-type: none"> · Check the input wiring · EMI Fuse short |

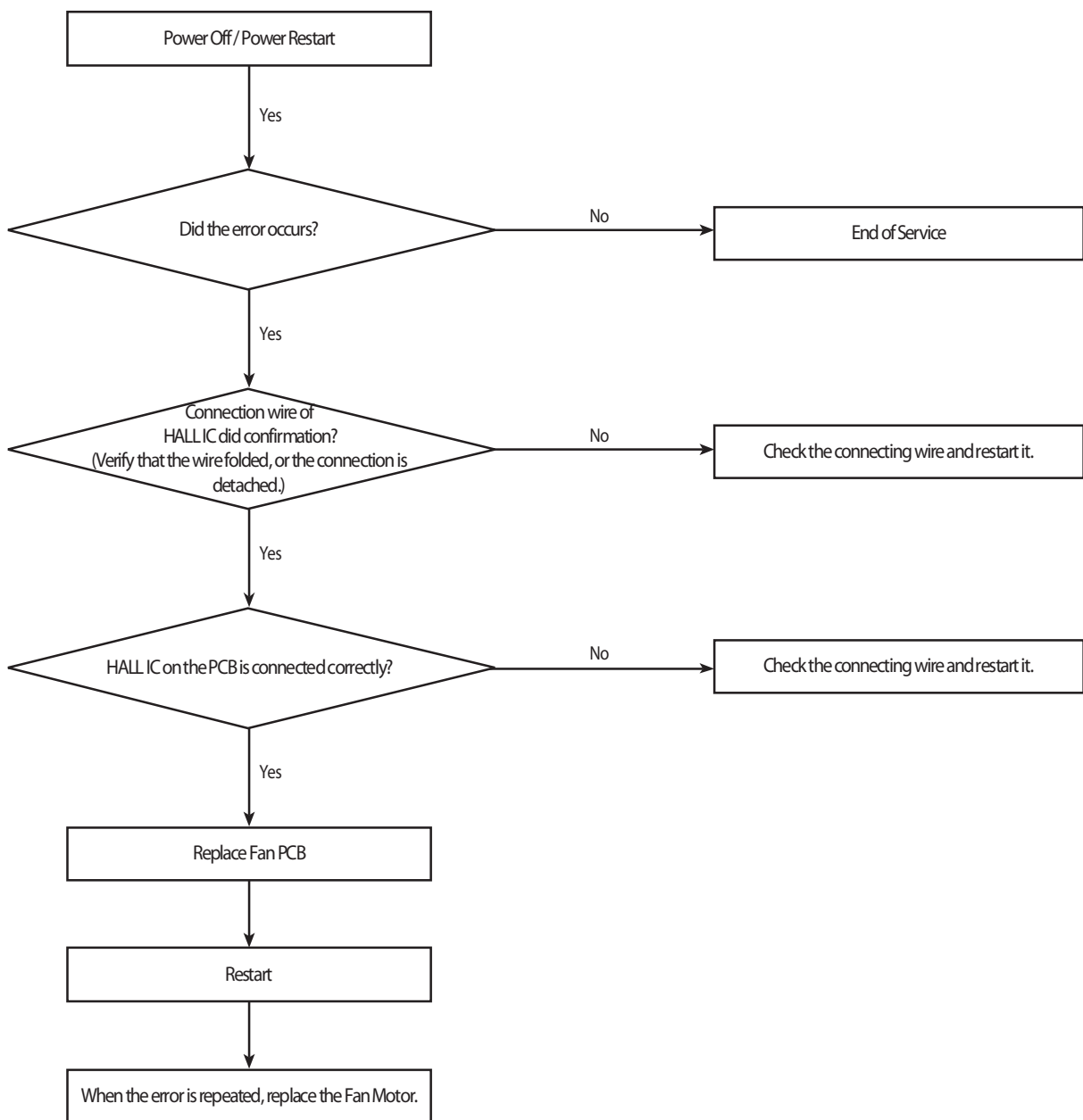
1. Cause of problem



4-4-83 Hall IC(Fan) error

| | |
|----------------------|---|
| Outdoor unit display | <i>E4B7</i> (FAN PCB(FAN1)) <i>E3B7</i> (FAN PCB(FAN2)) |
| Judgment Method | <ul style="list-style-type: none"> · Fan rotation defective or vibration and noise of the defective operation. · Hall IC there is no signal input |
| Cause of problem | <ul style="list-style-type: none"> · Connection status error. · Hall IC wire disconnection. · Defective circuit parts and defective manufacturing. · Fan Motor defective. |

1. Cause of problem



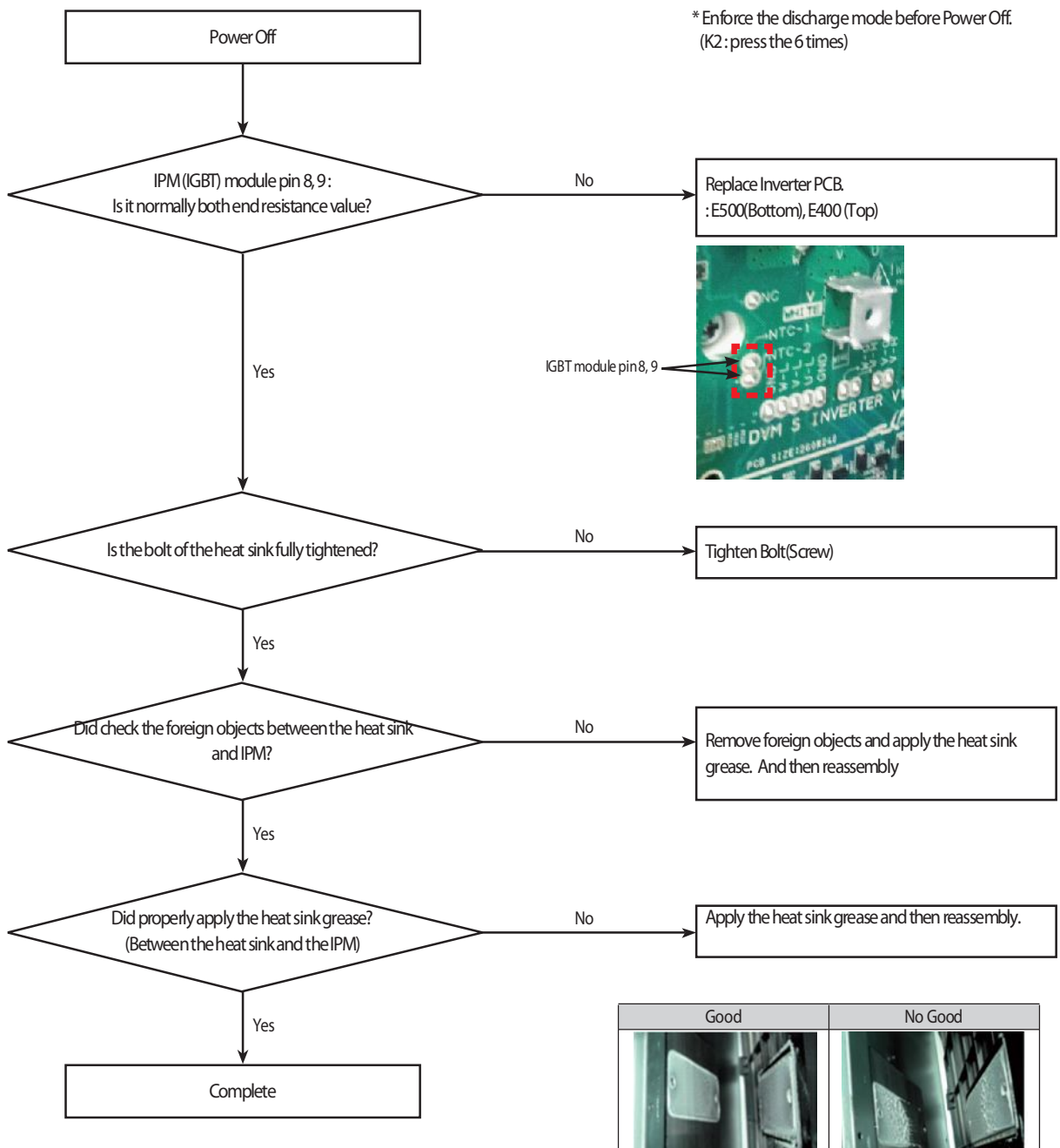
4-4-84 Inverter Overheat error

| | |
|----------------------|---|
| Outdoor unit display | E500 (INVERTER1 PCB) E400 (INVERTER2 PCB) |
| Judgment Method | · IGBT module internal temperature: 105°C more than (E500, E400) |
| Cause of problem | · Cooling Pin and the IGBT junction part assembly defective. · Refrigerant cooling heat sink and refrigerant piping assembly defective. · Assembled bolt defective. |

Both end resistance values of IGBT module pin(8, 9 pin)

| Temperature [°C] | NTC [ohm] | AD [V] | Temperature [°C] | NTC [ohm] | AD [V] |
|------------------|-----------|--------|------------------|-----------|--------|
| 10 | 9000 | 2.58 | 100 | 500 | 0.55 |
| 20 | 6000 | 2.33 | 105 | 450 | 0.51 |
| 30 | 4000 | 2.03 | 110 | 380 | 0.44 |
| 40 | 3000 | 1.80 | 120 | 300 | 0.35 |
| 50 | 2000 | 1.47 | 130 | 250 | 0.30 |
| 60 | 1600 | 1.29 | 140 | 200 | 0.25 |
| 70 | 1200 | 1.07 | | | |
| 80 | 750 | 0.76 | | | |
| 90 | 650 | 0.68 | | | |

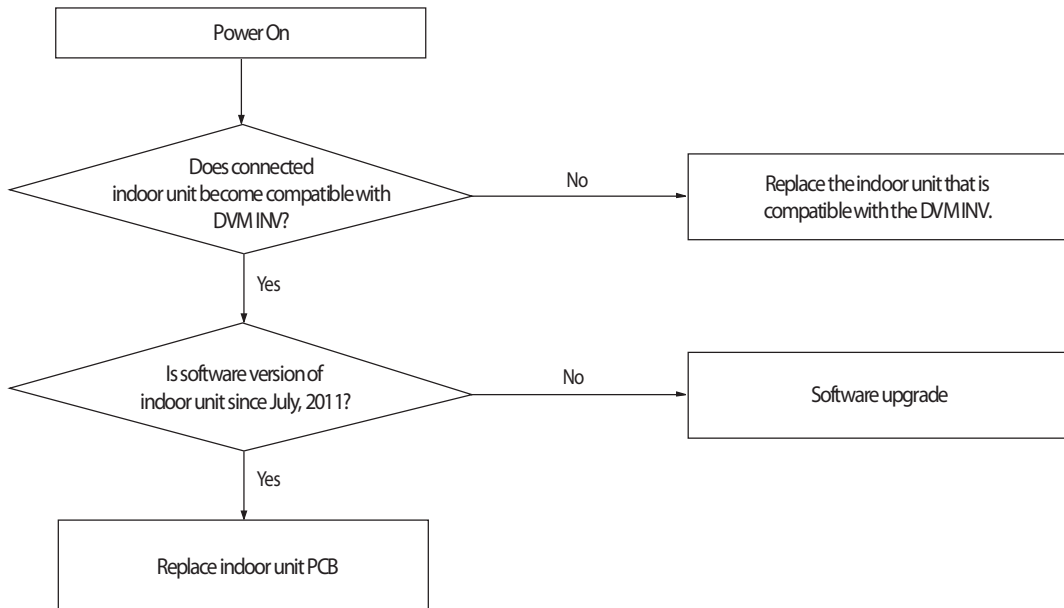
1. Cause of problem



4-4-85 Model mismatching of Indoor unit.

| | |
|----------------------|--|
| Outdoor unit display | <i>E563</i> |
| Judgment Method | <ul style="list-style-type: none"> · Prior to July 2011, if the software version of the indoor unit · Prior to July 2011, if the software version of the indoor unit |
| Cause of problem | <ul style="list-style-type: none"> · Check the software version of the indoor unit. · Check whether the support of the indoor unit. |

1. Cause of problem



4-4-86 Breakdown of an EEV(1st)

1. How to diagnose

Detect only on cooling operation. (No detection during heating operation.)

During cooling operation, the temperature of the inlet or outlet ducts of heat exchanger is kept lower than 0°C for more than 20 minutes without cessation

2. How to check

1) Check if the wire of an electronic expansion valve is correctly connected to the PCB of indoor unit.

2) Check if the coil of an electronic expansion valve is correctly plugged into the main body.

3) Check if there is any rust on the surface of the coil of an electronic expansion valve with the naked eye, and then check the resistance between each terminal to find any wire breaking or short circuit.

4) Press the RESET KEY (K3) of the outdoor unit then see if the same error occurs.

- In case of closure problem, operate the indoor unit in which the error has occurred.

- In case of opening problem, please do not operate the indoor unit in which the error has occurred.

5) If there is no problem with the above checkup items, replace the electronic expansion valve of the troubled indoor unit.

- As an electronic expansion valve replacement is tricky work that requires collecting refrigerants in all systems, please make sure to check the above items before replacement.

4-4-87 Breakdown of an EEV closure

1. How to diagnose

1) During cooling operation (It must satisfy each of the following conditions for over 20minutes.)

| | |
|---|-----------------------|
| $T_{air\ in} - T_{eva\ in} \geq 4^{\circ}C$ | OK |
| $T_{air\ in} - T_{eva\ out} \geq 4^{\circ}C$ | OK |
| $T_{cond, out} - T_{air, out} > 3^{\circ}C$ | NO |
| Compressor in operation & Indoor unit operation & Thermo On | OK |
| Error details | EEV closure breakdown |

2) During heating operation (It must satisfy each of the following conditions for over 20minutes.)

- When more than 2 indoor units are on Thermo On heating operating.
- When average high pressure is over 25 kg/cm²G
- 5 minutes after finishing Safety Start.
- Keep indoor units' $T(Eva_IN) < T(Room) + 3^{\circ}C$ and $T(Eva_Out) < T(Room) + 3^{\circ}C$ condition for more than five minutes.

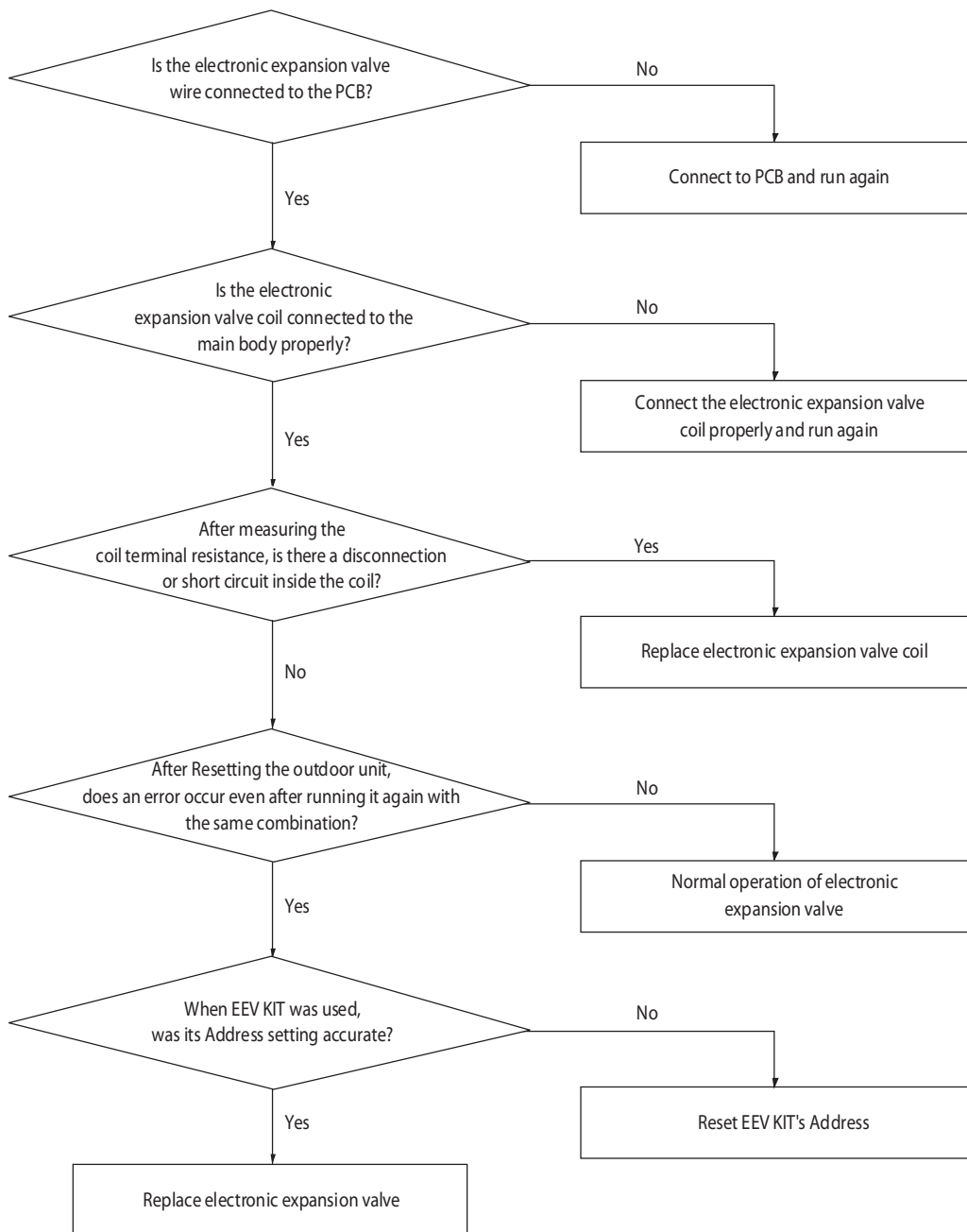
2. How to check

- 1) Check if the wire of an electronic expansion valve is correctly connected to the PCB of indoor unit.
- 2) Check if the coil of an electronic expansion valve is correctly plugged into the main body.
- 3) Check if there is any rust on the surface of the coil of an electronic expansion valve with the naked eye, and then check the resistance between each terminal to find any wire breaking or short circuit.
- 4) Press the RESET KEY (K3) of the outdoor unit then see if the same error occurs.
 - In case of closure problem, operate the indoor unit in which the error has occurred.
 - In case of opening problem, please do not operate the indoor unit in which the error has occurred.
- 5) If there is no problem with the above checkup items, replace the electronic expansion valve of the troubled indoor unit.
 - As an electronic expansion valve replacement is tricky work that requires collecting refrigerant in all systems, please make sure to check the above items before replacement.

4-4-88 Electronic expansion valve closing malfunction (2nd stage)

| | |
|-----------------------------|--|
| Outdoor unit display | 1 st stage inspection: <i>P702</i> (only displays on outdoor unit) 2 nd stage inspection: <i>E 152</i> ↔ <i>A^{x x x}</i> (x x x: error occurred) |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Criteria | • Please refer to determining method below |
| Cause of problem | • Faulty indoor unit electronic expansion valve action (valve will not open) • Address setup error in indoor unit (RAC) using EEV KIT |

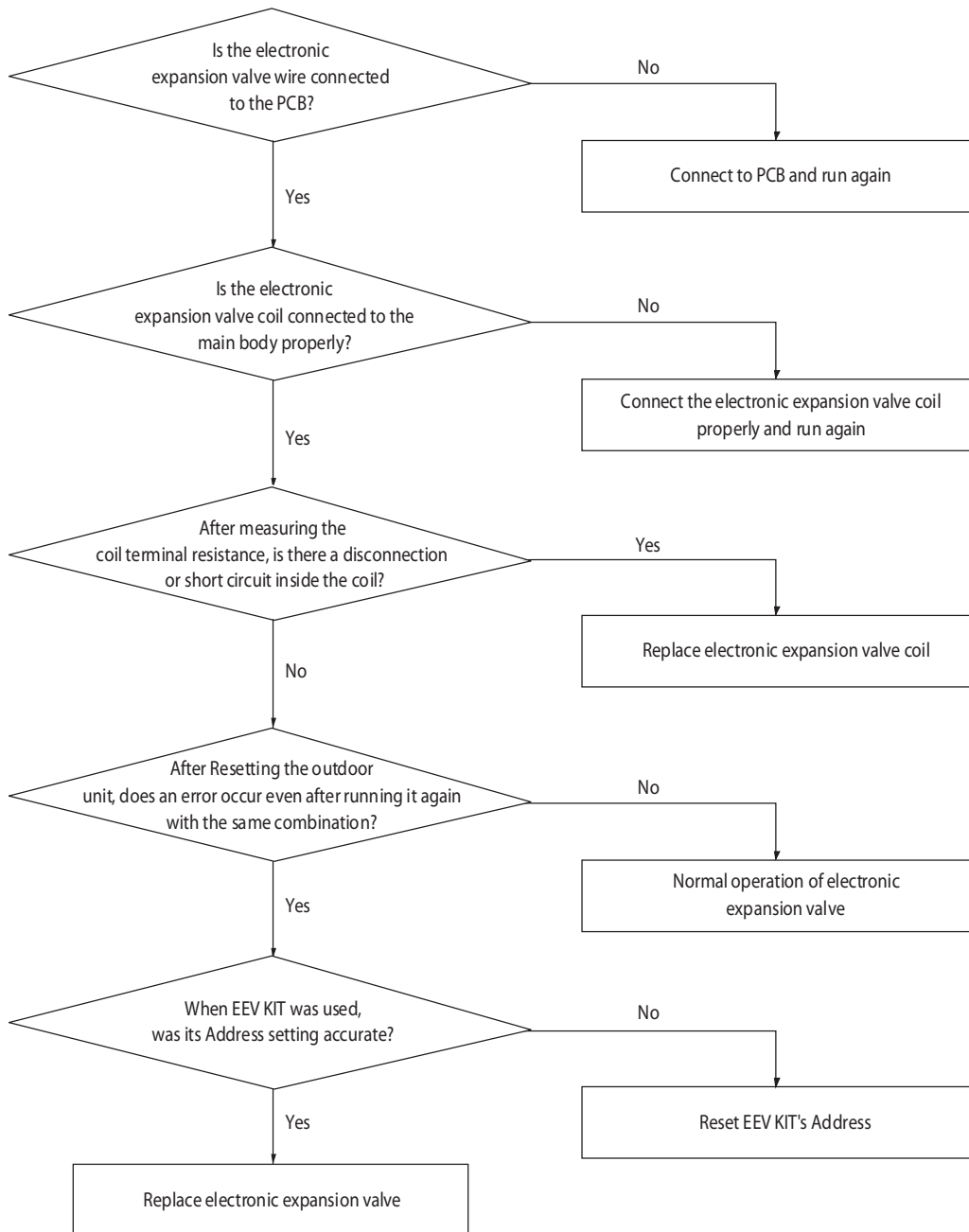
1. Inspection Method



4-4-89 Electronic expansion valve opening malfunction (2nd stage)

| | |
|----------------------|--|
| Outdoor unit display | 1 st stage inspection: <i>P703</i> (only displays on outdoor unit) 2 nd stage inspection: <i>E151</i> ↔ <i>A^{xxx}</i> (x x x: indoor unit address of where error occurred) |
| Indoor unit display | ×(Operation) ●(Reservation) ●(Blast) ●(Filter) ×(Defrost) |
| Criteria | • Please refer to determining method below |
| Cause of problem | • Faulty indoor unit electronic expansion valve action (refrigerant will leak into the stopped indoor unit) • Address setup error in indoor unit (RAC) using EEV KIT |

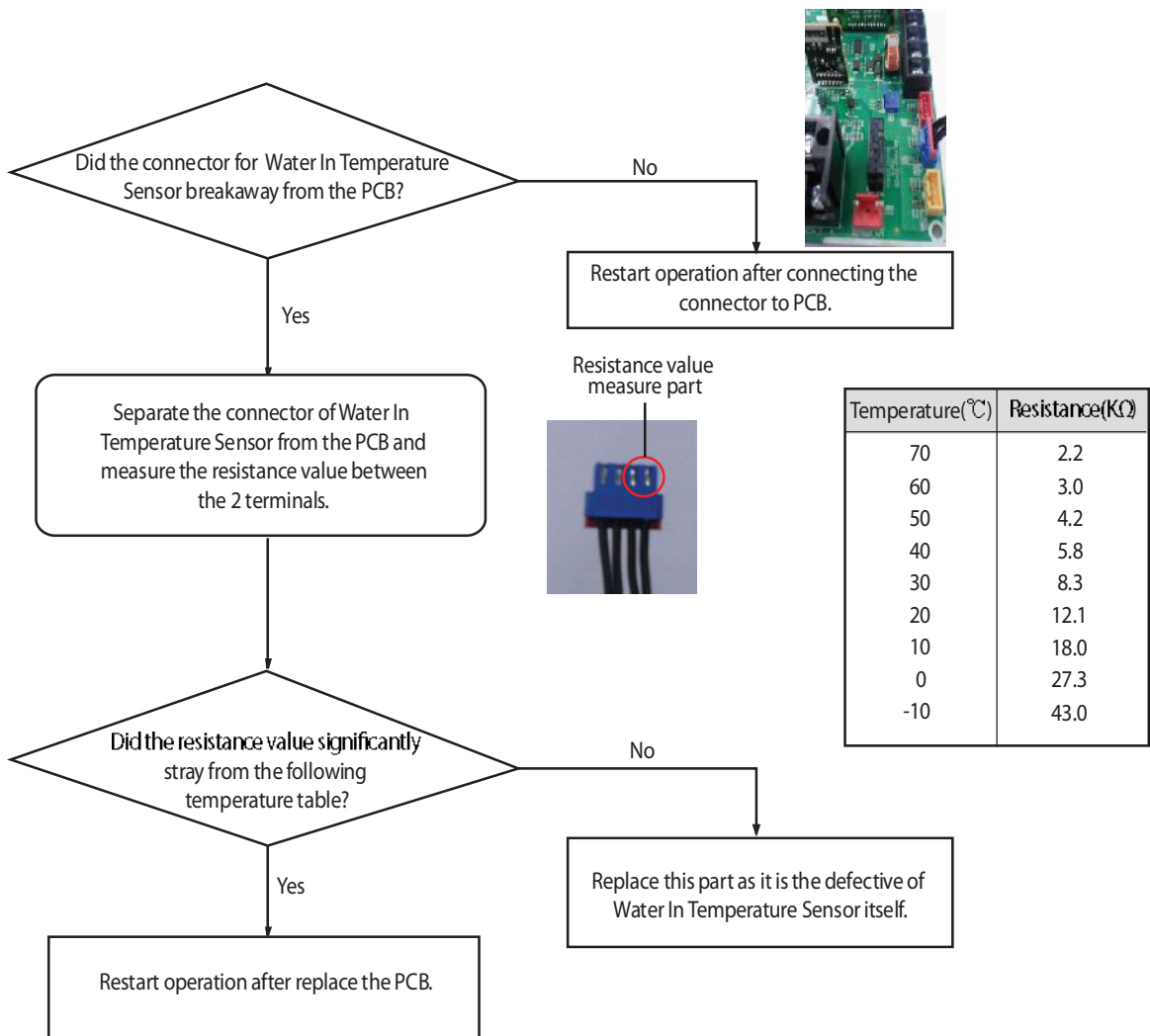
1. Inspection Method



4-4-90 Hydro Unit Water In Temperature Sensor Error (Open/Short)

| | |
|----------------------|---|
| Outdoor unit display | <i>E90 1</i> → <i>A</i> XXX (xxx: Address of Indoor Unit that error occurred) |
| Indoor unit display | <i>E90 1</i> |
| Criteria | • Refer to the judgment method below. |
| Cause of problem | • Hydro Unit Water In Temperature Sensor Open/Short error of xxx |

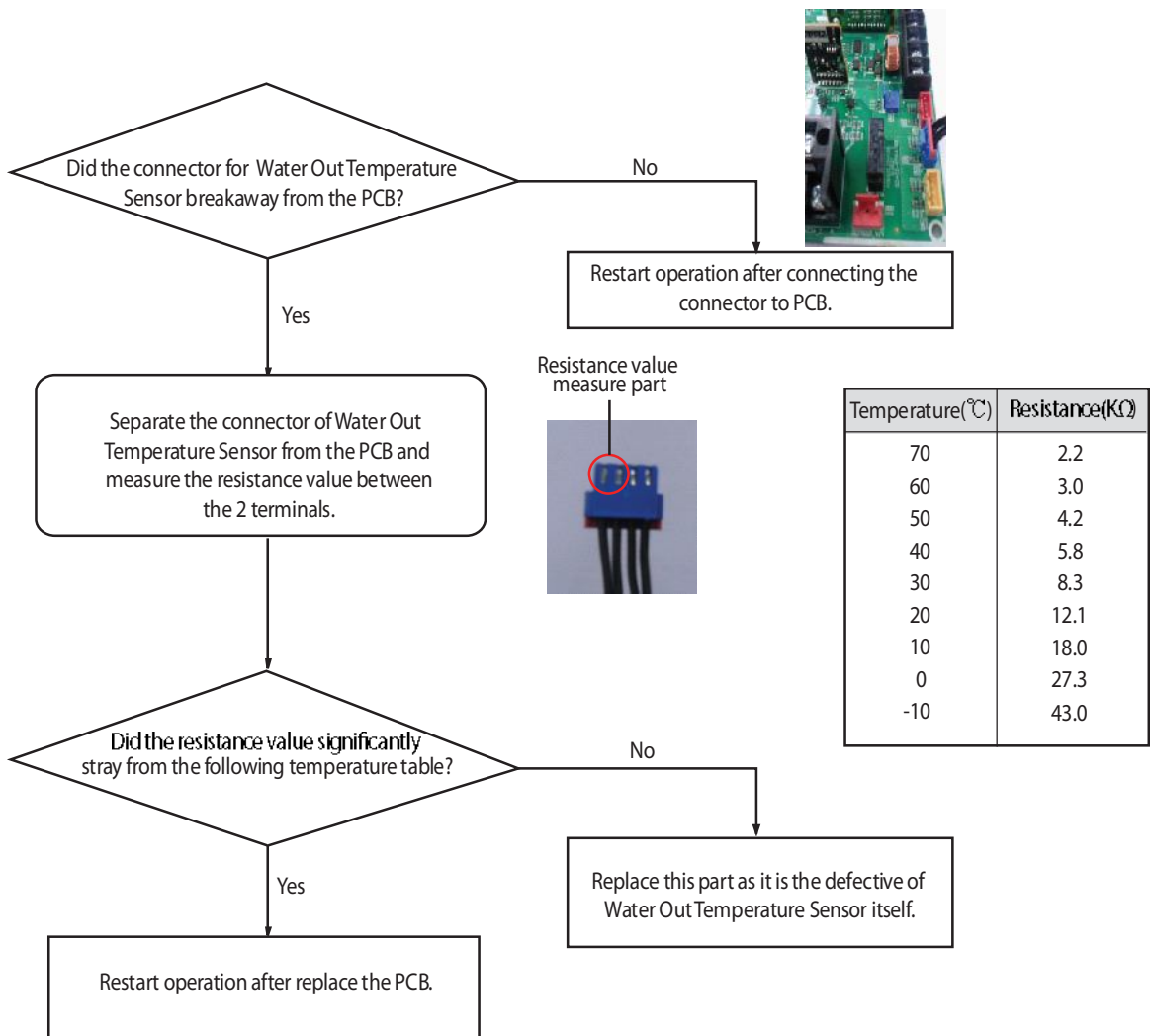
1. Inspection Method



4-4-91 Hydro Unit Water Out Temperature Sensor Error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | <i>E902</i> → <i>A</i> XXX (xxx: Address of Indoor Unit that error occurred) |
| Indoor unit display | <i>E902</i> |
| Criteria | • Refer to the judgment method below. |
| Cause of problem | • Hydro Unit Water Out Temperature Sensor Open/Short error of xxx |

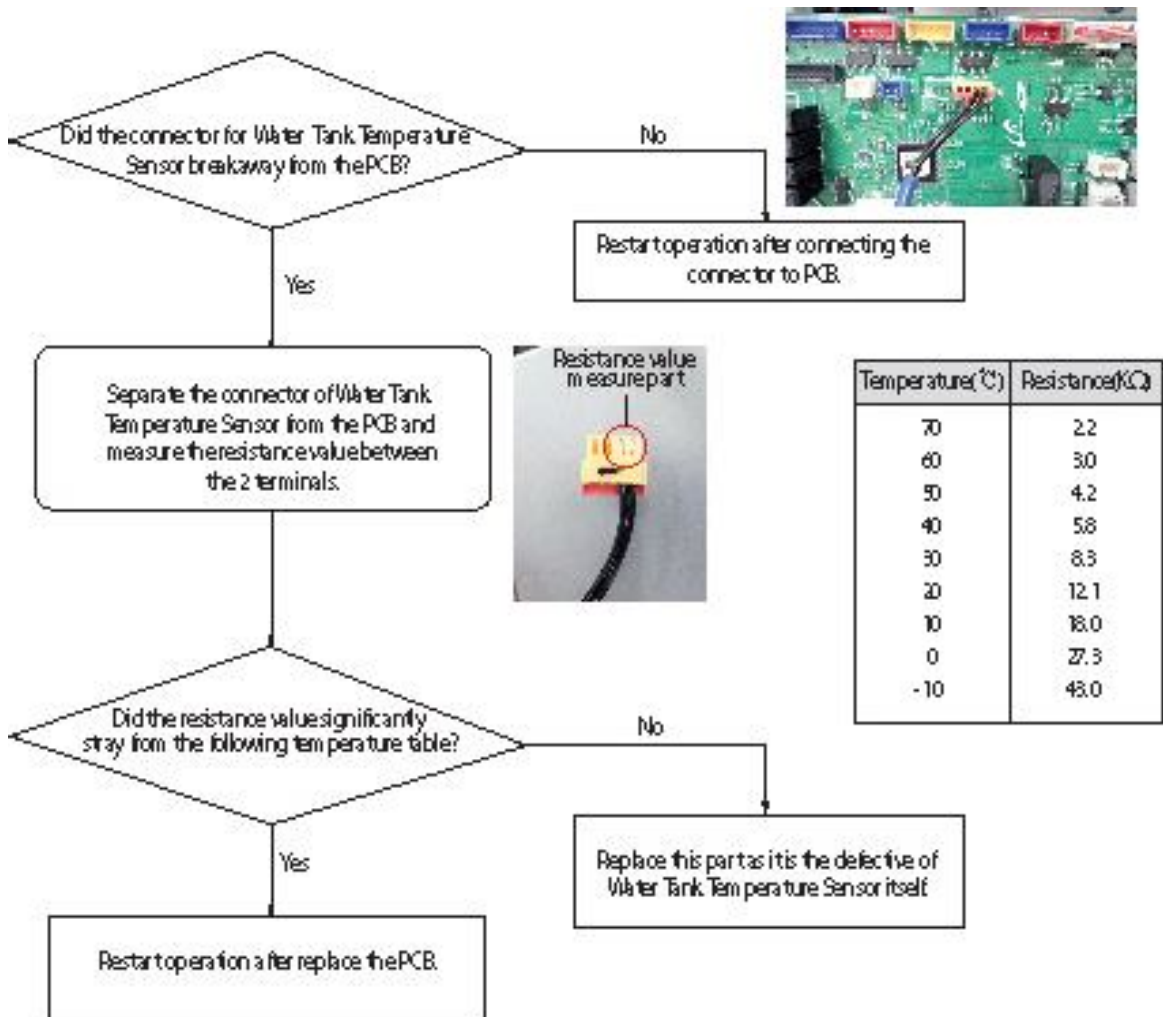
1. Inspection Method



4-4-92 Hydro Unit Water Tank Temperature Sensor Error (Open/Short)

| | |
|----------------------|--|
| Outdoor unit display | <i>E904</i> → <i>R</i> XXX (xxx: Address of Indoor Unit that error occurred) |
| Indoor unit display | <i>E904</i> |
| Criteria | • Refer to the judgment method below. |
| Cause of problem | • Hydro Unit Water Tank Temperature Sensor Open/Short error of xxx |

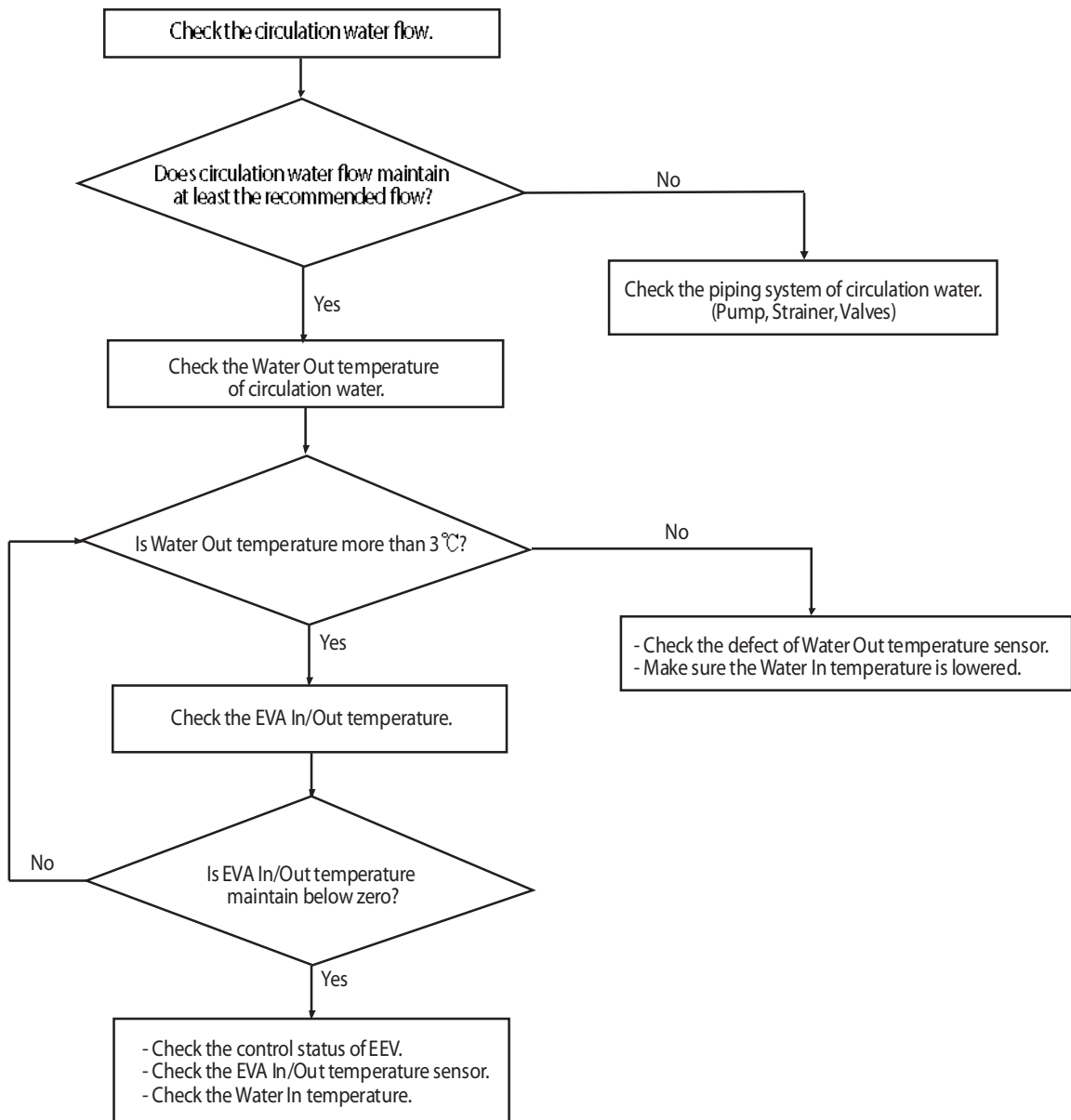
1. Inspection Method



4-4-93 Emergency Error (Check the Water Piping Equipment)

| | |
|----------------------|---|
| Outdoor unit display | <i>E907</i> → <i>A</i> XXX (xxx: Address of Indoor Unit that error occurred) |
| Indoor unit display | <i>E907</i> |
| Criteria | • More than 2 hours Heating / Hot water operation : Water In temperature does not change more than 5℃ . |
| Cause of problem | • Heating / Hot water operation of xxx Hydro Unit : There is no change in the water temperature. |

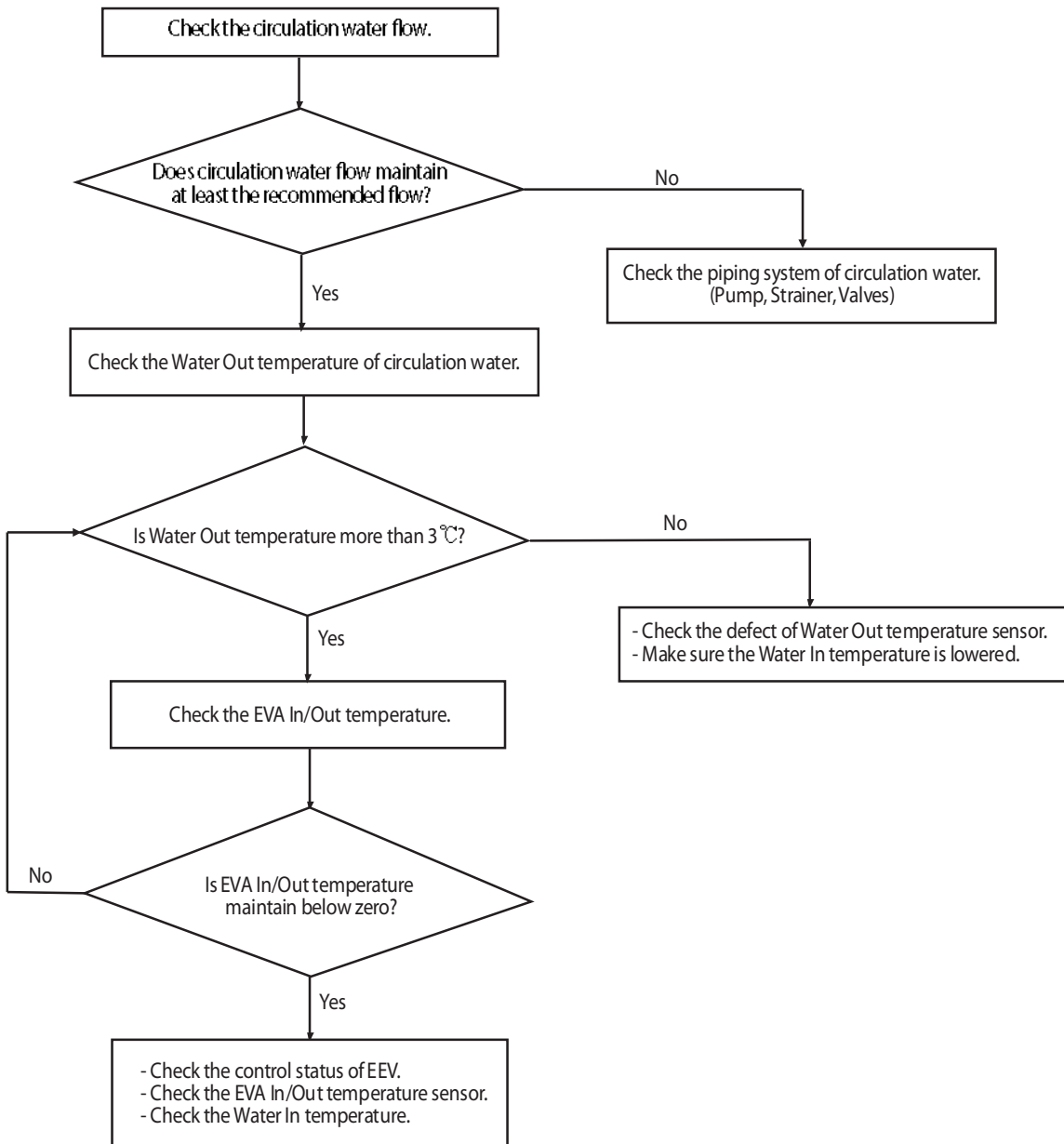
1. Inspection Method



4-4-94 Error to prevention from freezing and bursting of Heat Exchanger

| | |
|----------------------|---|
| Outdoor unit display | <i>E908/E909</i> → <i>A</i> XXX (xxx: Address of Indoor Unit that error occurred) |
| Indoor unit display | <i>E908/E909</i> (Repeats six times) |
| Criteria | . Water Out temperature is less than 3 ℃ . . EVA In/Out maintains the temperature below zero. (* During the cooling operation, can be detected) |
| Cause of problem | • Low Heat Exchanger internal temperature of xxx Hydro Unit. (Low flow / Low water temperature) |

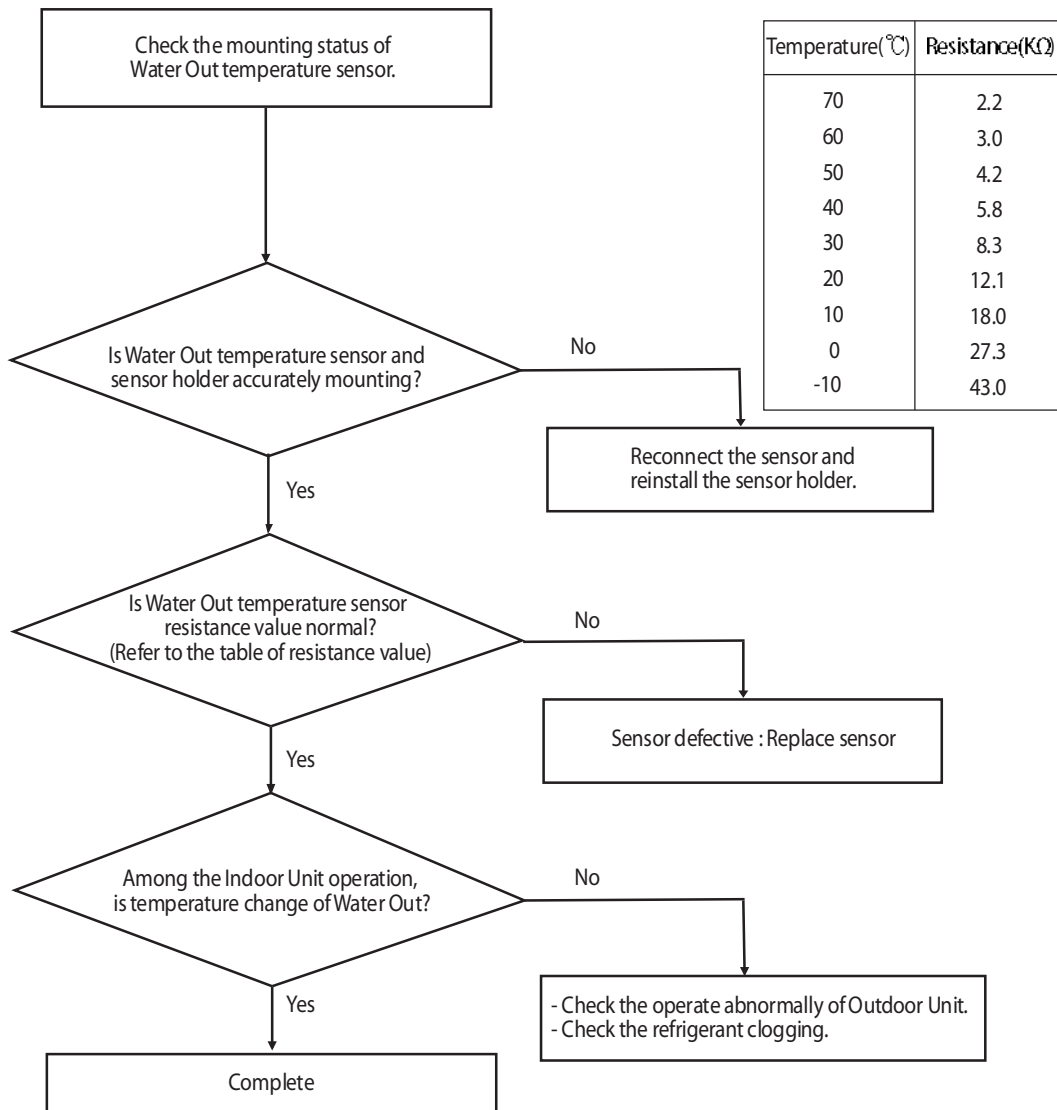
1. Inspection Method



4-4-95 Breakaway of Water Out temperature sensor

| | |
|----------------------|---|
| Outdoor unit display | E9 10 → A XXX (xxx: Address of Indoor Unit that error occurred) |
| Indoor unit display | E9 10 |
| Criteria | . Water Out temperature before and after the operation : Temperature difference is less than 2℃ . |
| Cause of problem | • Water Out temperature sensor breakaway of xxx Hydro Unit. |

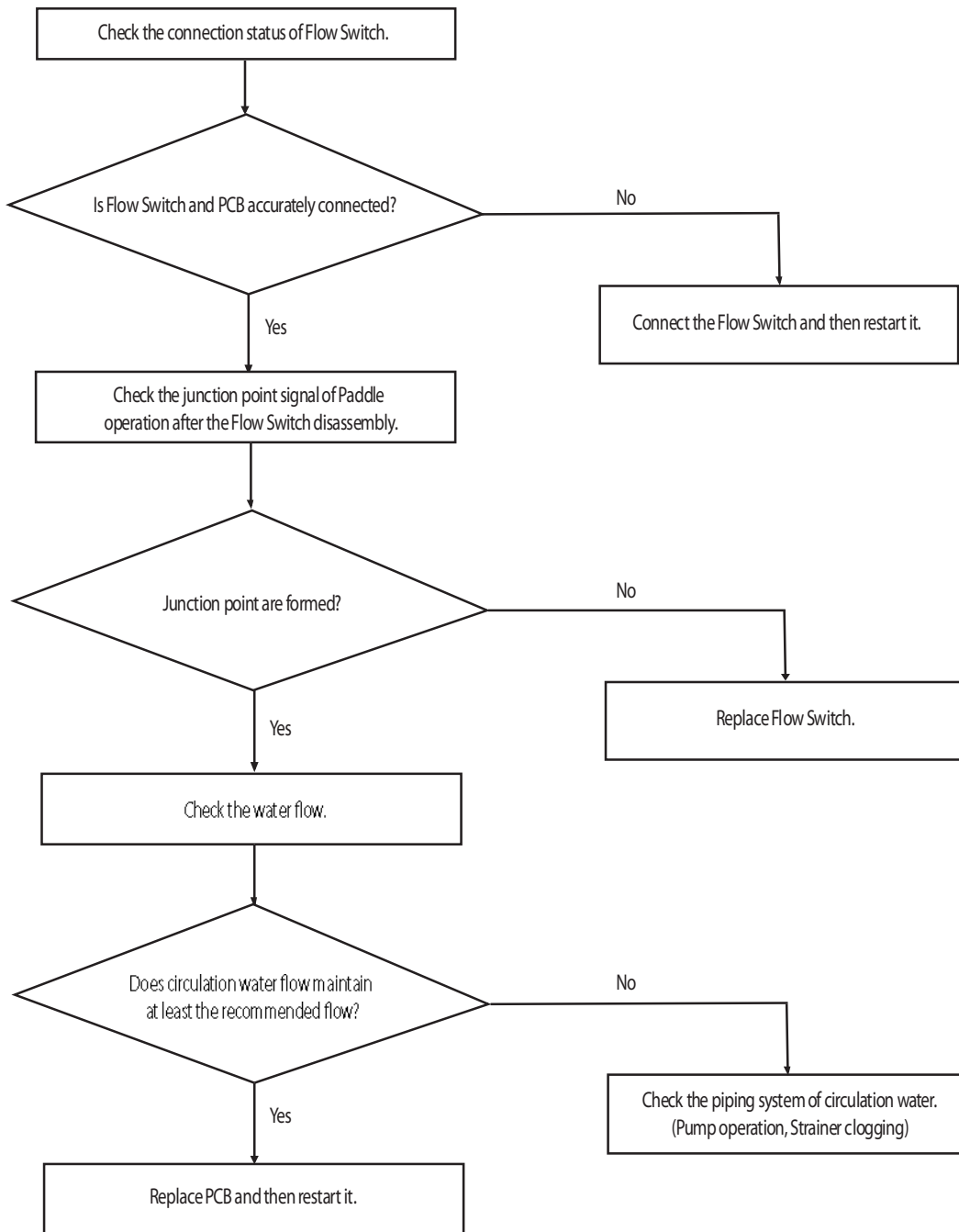
1. Inspection Method



4-4-96 Breakaway of Flow switch

| | |
|----------------------|--|
| Outdoor unit display | E9 1 1/E9 1 3 ↔ A XXX (xxx: Address of Indoor Unit that error occurred) |
| Indoor unit display | E9 1 1/E9 1 3 (Repeats six times) |
| Criteria | . Output status from Pump signal : Does not detect the signal of Flow Switch, more than 5 seconds. |
| Cause of problem | · Does not detect the signal of xxx Hydro Unit Flow Switch. (Flow shortage of Water piping system) |

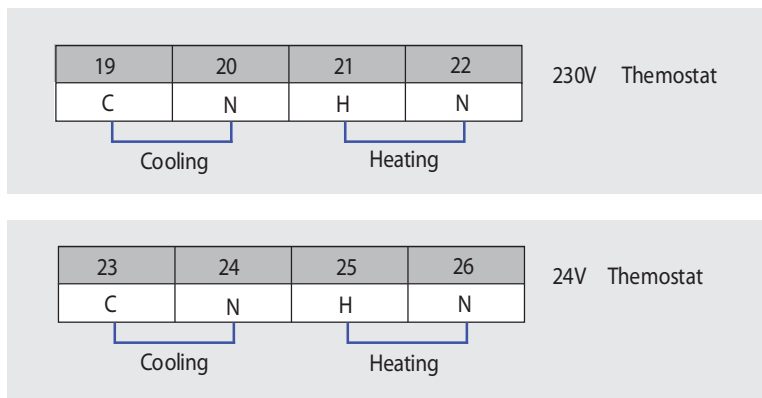
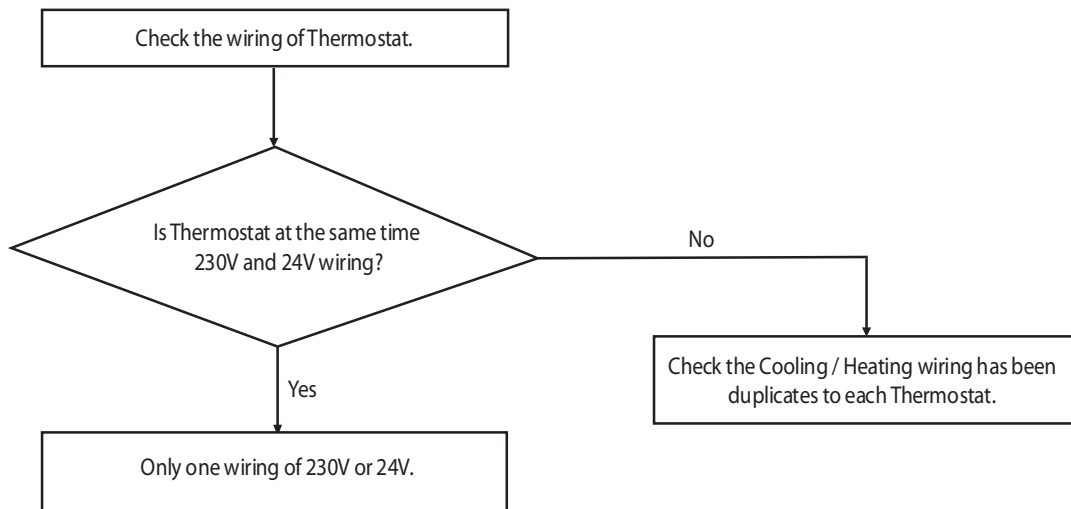
1. Inspection Method



4-4-97 Thermostat Wiring Error

| | |
|----------------------|--|
| Outdoor unit display | E9 14 → A XXX (xxx: Address of Indoor Unit that error occurred) |
| Indoor unit display | E9 14 |
| Criteria | • Heating / Cooling signal of Thermostat at the same time input. |
| Cause of problem | • Thermostat wiring error of xxx Hydro Unit. |

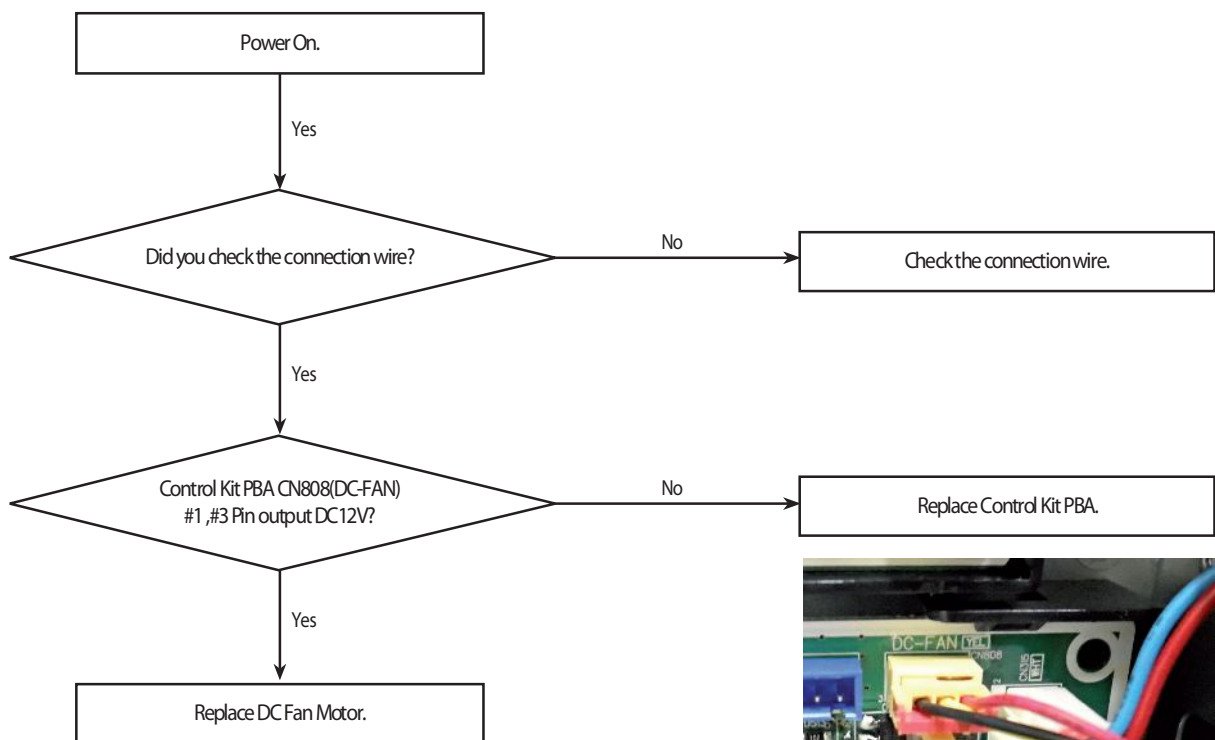
1. Inspection Method



4-4-98 DC FAN Motor Feedback Error

| | |
|----------------------|---|
| Outdoor unit display | E9 15 → A XXX (xxx: Address of Indoor Unit that error occurred) |
| Indoor unit display | E9 15 |
| Criteria | • Refer to the judgment method below. |
| Cause of problem | <ul style="list-style-type: none"> • DC FAN connector defects and connection is not • DC FAN motor defective. • Control kit PBA defective. |

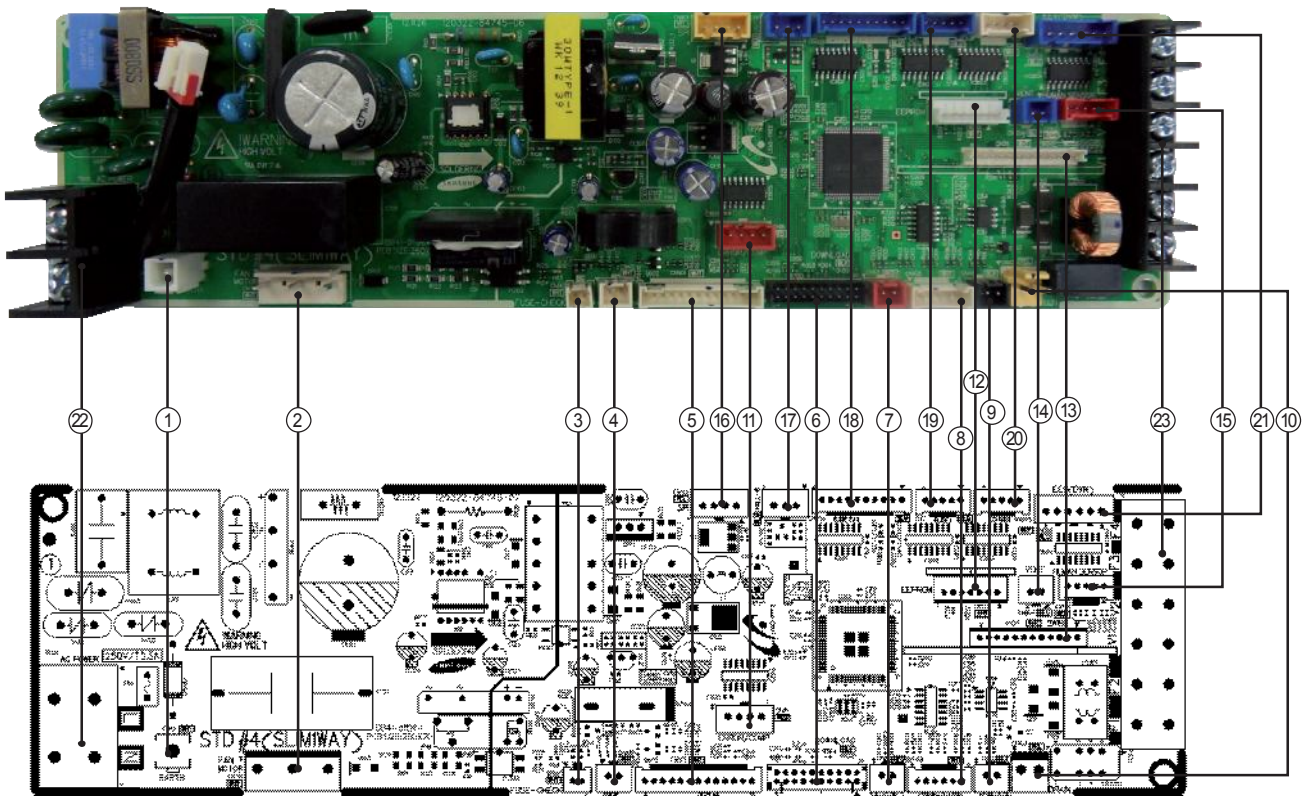
1. Cause of problem



5. PCB Diagram and Parts List

5-1 Indoor Unit

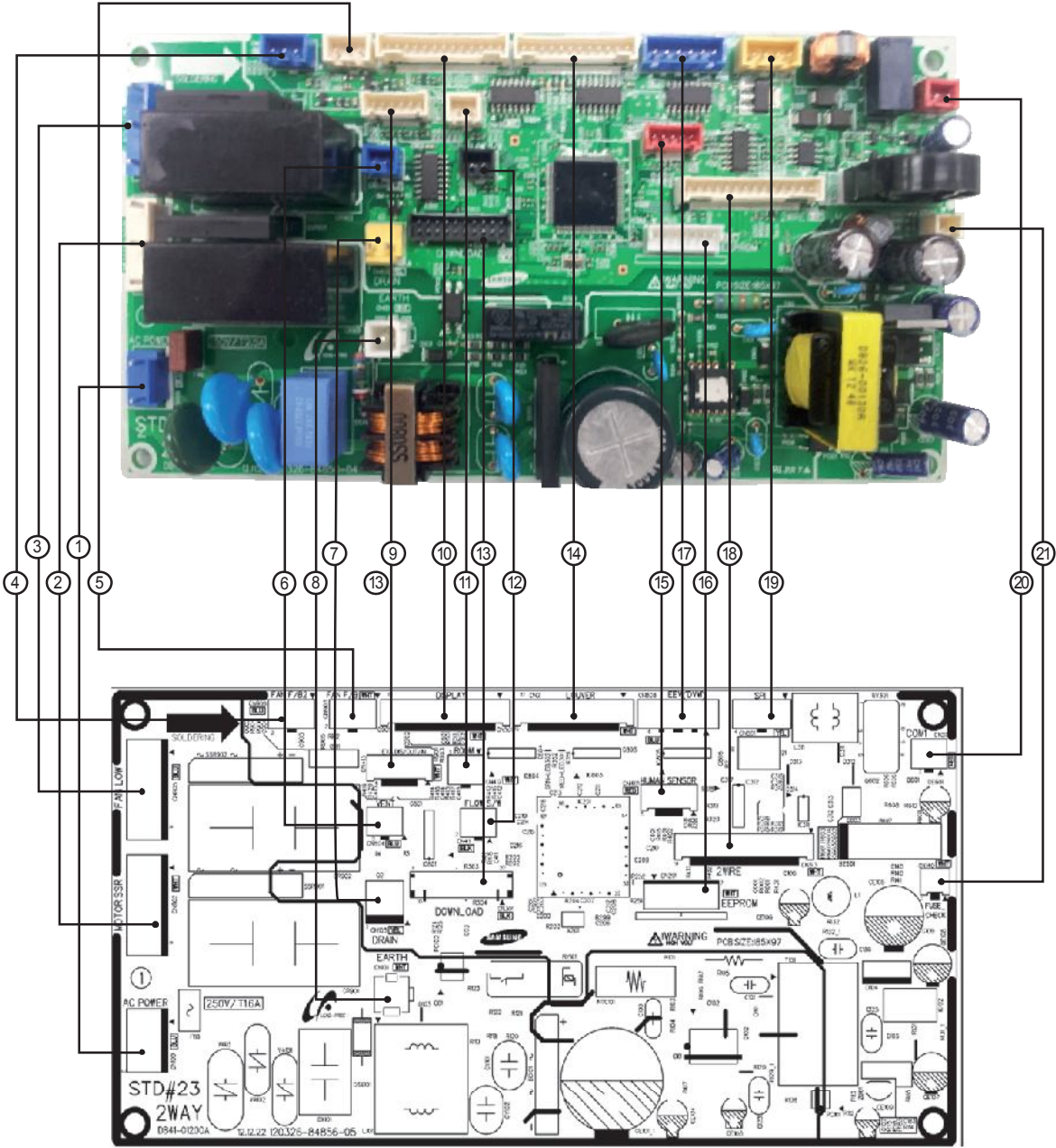
5-1-1 Slim 1 way cassette type



Slim 1 way cassette type (cont.)

| | | | |
|--|---|---|---|
| ① CN101-GND #1: GND | ② CN701-FAN MOTOR #1: POWER(N) #3 : SSR MOTOR POWER(L) #5 : POWER(N) | ③ CN140-FUSE CHECK #1: FUSE CHECK SIGNAL #2: GND | ④ CN412-ROOM THERMISTOR #1 : ROOM THERMISTOR #2 : GND |
| ⑤ CN501-DISPLAY #1: DC12V #2: LED_0 #3: LED_1 #4: LED_2 #5: LED_3 #6: LED_4 #8: REMOCON_OUTPUT_SIGNAL #9: AUTO SWITCH #10: REMOCON_INPUT_SIGNAL #11: GND #12: DC5V #13: GND | ⑥ CN301-DOWNLOAD #1: DC12V #2: GND | ⑦ CN83-EXT CTRL #1: GND #2: EXT-CTRL SIGNAL | ⑧ CN413-THERMISTOR #1 : EVA-IN THERMISTOR #2 : GND #3 : EVA-OUT THERMISTOR #4 : GND #5 : DISCHARGE THERMISTOR #6 : GND |
| ⑨ CN411-FLOAT SWITCH #1: F/S SIGNAL #2: GND | ⑩ CN103-DRAIN PUMP #1: D/P POWER(DC12V) #2: GND | ⑪ CN81-ERROR/COMP CHECK #1: DC12V #2: ERROR SIGNAL OUTPUT(GND) #3: DC12V #4: COMP/OPER. SIGNAL OUTPUT(GND) | ⑫ CN201-EEPROM #1: GND #3: DC5V #4: EEPROM_SELECT #5: EEPROM_SO #6: EEPROM_SI #7: EEPROM_CLK |
| ⑬ CN311-2WIRED REMOCON | ⑭ CN804-VENTILATOR #1: DC12V #2: VENT SIGNAL OUTPUT(GND) | ⑮ CN401-HUMAN SENSING #1: DC12V #2: HUMAN SENSOR COMM(TXD) #3: HUMAN SENSOR COMM(RXD) #4: GND | ⑯ CN801-SPI #1: GND #2: GND #3: SPI POWER OUTPUT(DC12V) |
| ⑰ CN702-HALL IC #1 : DC5V #2 : GND #3 : MOTOR FEEDBACK | ⑱ CN806-SLIDE 2/3 #1 : DC12V #2~#5: LOUVER SIGNAL OUTPUT #6 : DC12V #7~#10: LOUVER SIGNAL OUTPUT | ⑲ CN2-SLIDE 1 #1 : DC12V #2~#5: LOUVER SIGNAL OUTPUT | ⑳ CN805-LOUVER #1 : DC12V #2~#5: LOUVER SIGNAL OUTPUT |
| ㉑ CN808-EEV #1~#4: EEV SIGNAL OUTPUT #5: DC12V #6: DC12V | ㉒ TB101-AC POWER #1: POWER(L) #2: POWER(N) | ㉓ TE04-COMMUNICATION #1: COM1(F1) #2: COM1(F2) #3: V1(DC12V) #4: V2(GND) #5: COM2(F3) #6: COM2(F4) | |

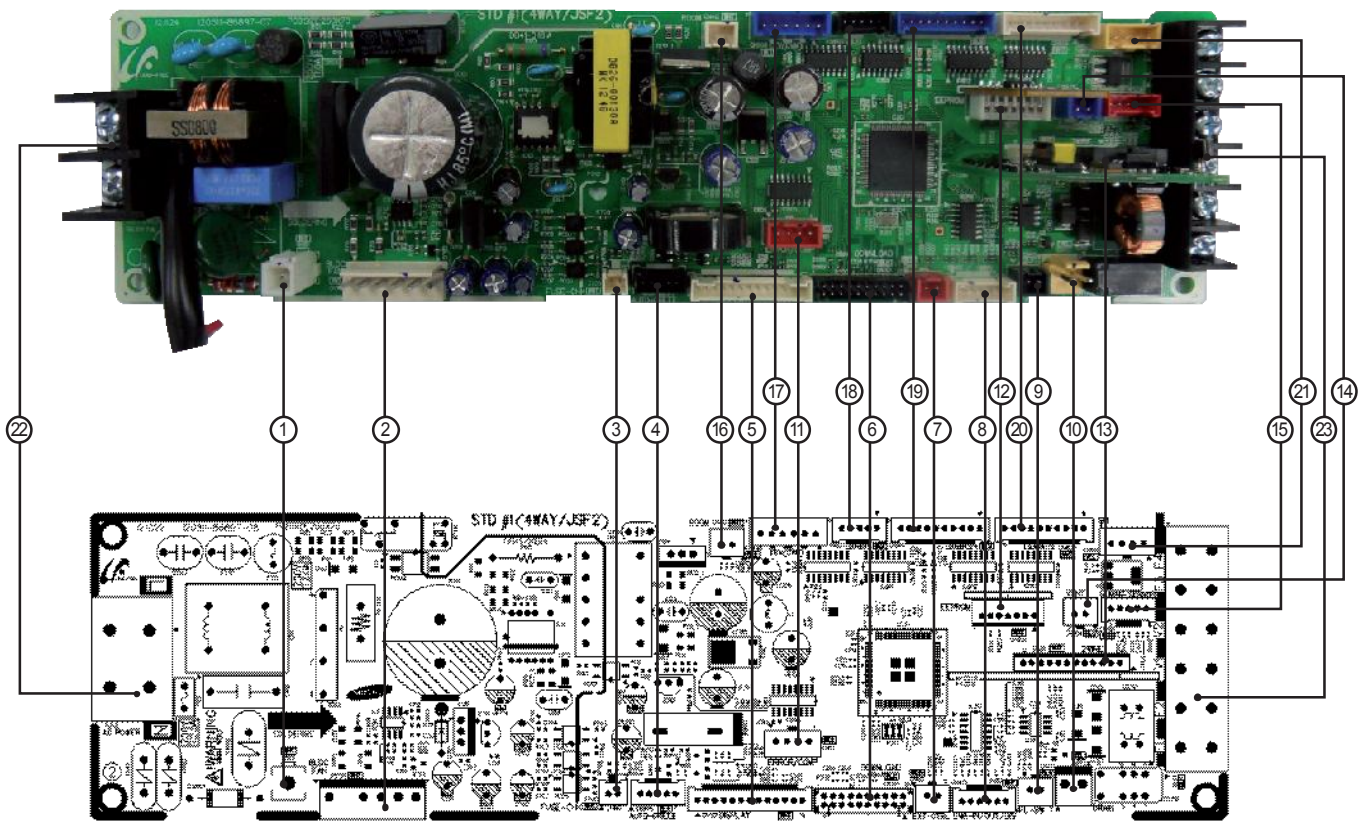
5-1-2 2 way cassette type



2 way cassette type (cont.)

| | | | |
|--|---|--|---|
| ① CN100-AC INPUT #1: L #2: N | ② CN902-SSR MOTOR1 #1: N #2: L #3: N | ③ CN905-SSR MOTOR2 #1: N #2: L #3: N | ④ CN905-SSR FAN FEED BACK #1:VCC #2:FEEDBACK #3:GND |
| ⑤ CN903-FAN FEED BACK #1:VCC #2:FEEDBACK #3:GND | ⑥ CN804-VENT #1:12V #2:VENT OUT | ⑦ CN103-DRAIN PUMP #1: 12V #2: GND | ⑧ CN101-EARTH |
| ⑨ CN413- THERMO. #1 : EVA IN TEMP #2,4,6: GND #3 : EVA OUT TEMP #5 : DISCHARGE TEMP | ⑩ CN901-DISPLAY #1:12V #2~7:LED #8: REMOCON OUT #9: AUTO SW #10:REMOCON INT #11:GND #12:VCC | ⑪ CN412-ROOM THERMO. #1: THERMOR INPUT #2: GND | ⑫ CN411-FLOW SW #1:Flow SW INPUT #2:GND |
| ⑬ CN301-MICOM DOWNLOAD | ⑭ CN2-BLADE #1,2: 12V #3~6: BLADE CONTROL #7,8:12V #9~12:BLADE CONTROL | ⑮ CN401-HUMAN SENSOR #1:12V #2,3: COM #5:GND | ⑯ CN201-E2P MODULE |
| ⑰ CN808-EEV VALVE #1~4: EEV CONTROL #5,6 : 12V | ⑱ CN311-COMM | ⑲ CN801-SPI #1,2 : GND #3 : SPI CONTROL | ⑳ CN31-IN-OUT COMM. |
| ㉑ CN140-FUSE CHECK #1:FUSE CHECK #2:GND | | | |

5-1-3 4way cassette , mini 4way cassette type, Slim 1way cassette (mini)

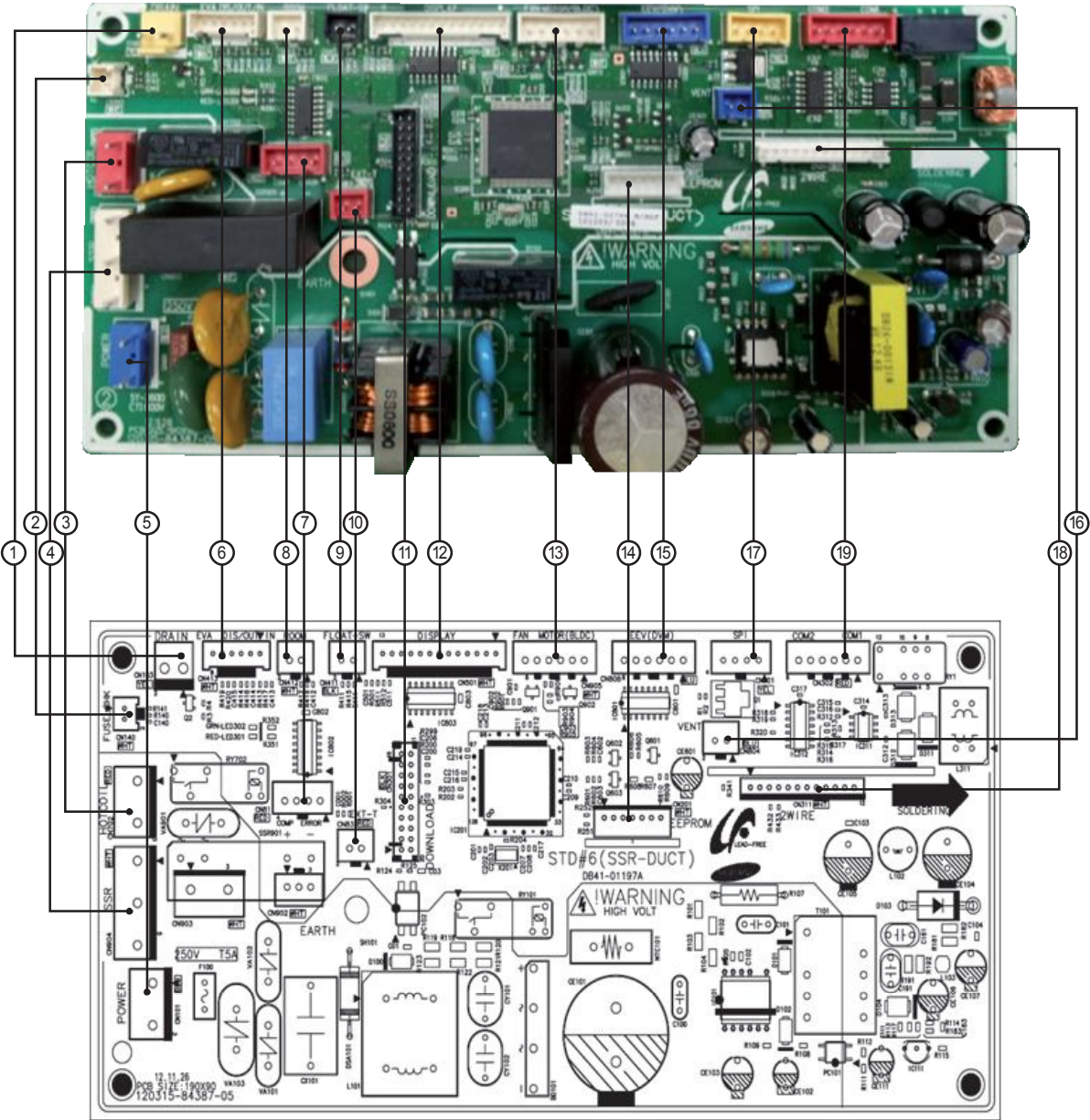


4way cassette , mini 4way cassette type, Slim 1way cassette (mini) (cont.)

| | | | |
|---|--|---|---|
| ① CN101-GND #1: GND | ② CN701-BLDC MOTOR #1: DC310V #3: GND #4: DC15V #5: FAN RPM #6: RPM FEEDBACK | ③ CN140-FUSE CHECK #1: FUSE CHECK SIGNAL #2: GND | ④ CN809-AUTO GRILL #1 : DC12V #4: REMOCON SIGNAL #5 : GND |
| ⑤ CN501-DISPLAY #1: DC12V #2: LED_0 #3: LED_1 #4: LED_2 #5: LED_3 #6: LED_4 #7: LED_5 #8: REMOCON_OUTPUT_SIGNAL #9: AUTO SWITCH #10: REMOCON_INPUT_SIGNAL #11: GND #12: DC5V #13: GND | ⑥ CN301-DOWNLOAD | ⑦ CN83-EXT CTRL #1: GND #2: EXT-CTRL SIGNAL | ⑧ CN413:THERMISTOR #1 : EVA-IN THERMISTOR #2 : GND #3 : EVA-OUT THERMISTOR #4 : GND #5 : DISCHARGE THERMISTOR #6 : GND |
| ⑨ CN411-FLOAT SWITCH #1: F/S SIGNAL #2: GND | ⑩ CN103-DRAIN PUMP #1: D/P POWER(DC12V) #2: GND | ⑪ CN81-ERROR/COMP CHECK #1: DC12V #2: ERROR SIGNAL OUTPUT(GND) #3: DC12V #4: COMP/OPER. SIGNAL OUTPUT(GND) | ⑫ CN201-EEPROM #1: GND #3: DC5V #4: EEPROM_SELECT #5: EEPROM_SO #6: EEPROM_SI #7: EEPROM_CLK |
| ⑬ CN311-2WIRED REMOCON | ⑭ CN804-VENTILATOR #1: DC12V #2: VENT SIGNAL OUTPUT(GND) | ⑮ CN401-HUMAN SENSING #1: DC12V #2: HUMAN SENSOR COMM(TXD) #3: HUMAN SENSOR COMM(RXD) #4: GND | ⑯ CN412-ROOM THERMISTOR #1 : ROOM THERMISTOR #2 : GND |
| ⑰ CN808-EEV #1~#4: EEV SIGNAL OUTPUT #5 : DC12V #6 : DC12V | ⑱ CN807-LOUVER5 #1 : DC12V #2~#5: LOUVER SIGNAL OUTPUT | ⑲ CN806-LOUVER3/4 #1 : DC12V #2~#5: LOUVER SIGNAL OUTPUT #6 : DC12V #7~#10: LOUVER SIGNAL OUTPUT | ⑳ CN805-LOUVER1/2 #1 : DC12V #2~#5: LOUVER SIGNAL OUTPUT |
| ㉑ CN801-SPI #1: GND #2: GND #3: SPI POWER OUTPUT(DC12V) | ㉒ TB101-AC POWER #1: POWER(L) #2: POWER(N) | ㉓ TE04-COMMUNICATION #1: COM1(F1) #2: COM1(F2) #3: V1(DC12V) #4: V2(GND) #5: COM2(F3) #6: COM2(F4) | |

5-1-4 Duct type (Slim Duct 2)

■ MAIN PCB



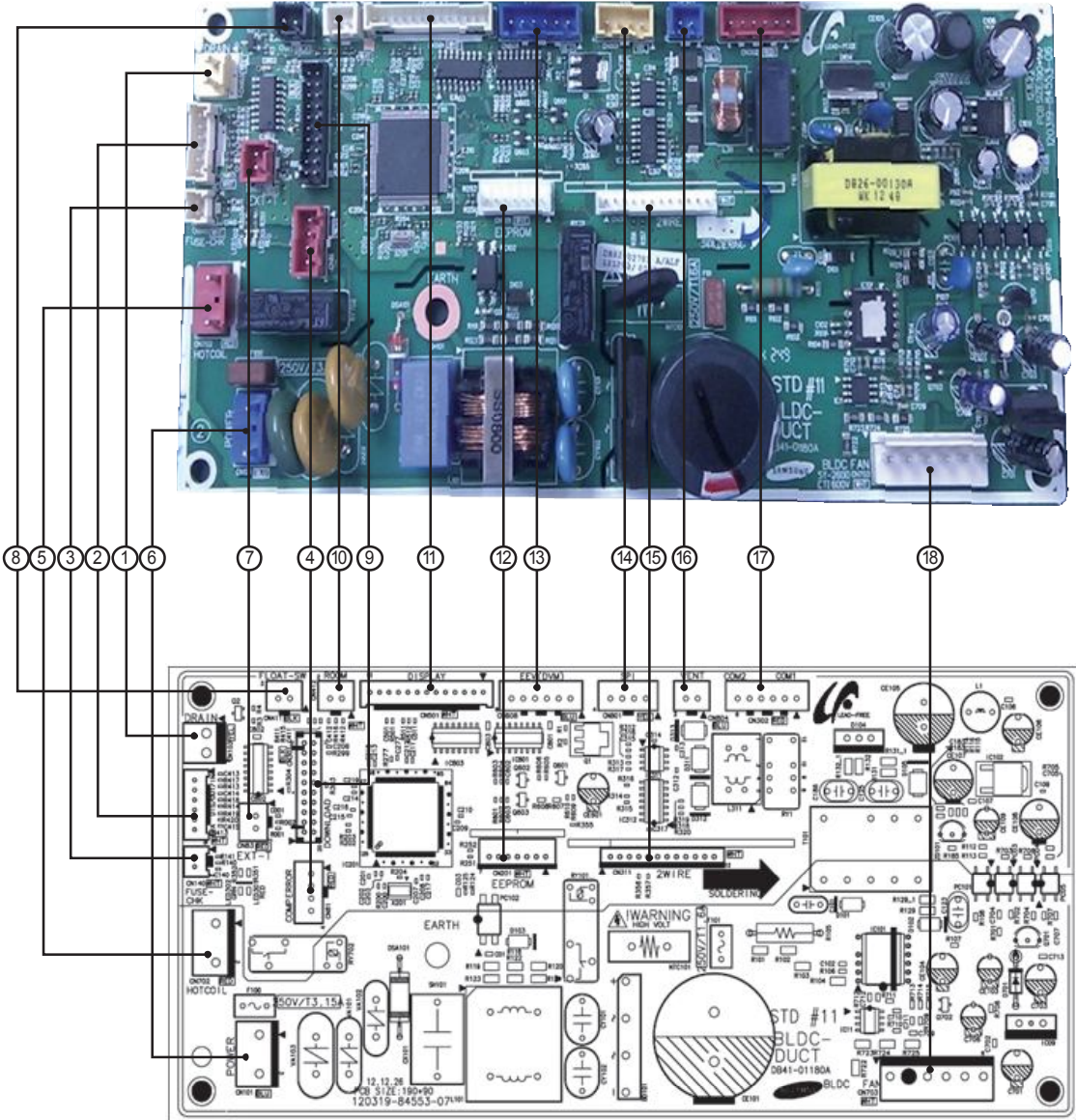
Duct type (Slim Duct 2) (cont.)

■ MAIN PCB

| | | | |
|--|---|---|---|
| <p>① CN103-DRAIN #1:POWER #2:GND</p> | <p>② CN140-FUSE CHK #1:POWER #2:GND</p> | <p>③ CN702-HOTCOIL #1:N #3:L</p> | <p>④ CN904-SSR #1,#5:N #3:L #2,#4:NO USED</p> |
| <p>⑤ CN101-POWER #1:L #3:N</p> | <p>⑥ CN413-EVA DIS/OUT/IN #1:EVA-IN #3:EVA-OUT #5:DISCHARGE #2,#4,#6:GND</p> | <p>⑦ CN81-COMP ERROR #1,#3:12V #2:ERROR_CHK_OUT #4:COMP_CHK_OUT</p> | <p>⑧ CN412-ROOM #1:ROOM #2:GND</p> |
| <p>⑨ CN411-FLOAT SW #1:FLOAT SW #2:GND</p> | <p>⑩ CN83-EXTT #1:GND #2:EXT_CTRL</p> | <p>⑪ CN301-DOWNLOAD - For Developer only,Not available in Actual Site - 20 Pin Down Loader</p> | <p>⑫ CN501-DISPLAY 12.CN501-DISPLAY #1:12V #2~#6:DISPLAY LED CONTROL #7:BZ_1 #8:REMOCON SIGNAL OUT #9:AUTO_SW #10:REMOCON_INT #11:GND #12:VCC #13:BZ_2</p> |
| <p>⑬ CN905-FAN MOTOR #1:12V #2:GND #3:VCC #4:MOTOR SIGNAL PWM1 OUT #5:R903 CONTROL SIGNAL #6:INRUSH OUT</p> | <p>⑭ CN201-EEPROM #1:GND #2:NO USED #3:VCC #4:EEPROM_SELECT #5:EEPROM_SO #6:EEPROM_SI #7:EEPROM_CLK</p> | <p>⑮ CN808-EEV(DVM) #1~4:CONTROL SIGNAL #5~6:12V</p> | <p>⑯ CN804-VENT #1:12V #2:VENT_OUT</p> |
| <p>⑰ CN801-SPI #1:GND #2:GND #3:CONTROL SIGNAL #4:NOT USED</p> | <p>⑱ CN311-2WIRE #1:12V #2:COM2_PCTRL_MICOM #3:COM2_VCHECK_A #4:COM2_VCHECK_B #5:COM2_MICOM_AD #6:VCC #7:COM2_ENABLE #8:COM2_C #9:COM2_D #10:COM2_Tx #11:COM2_Rx #12:GND</p> | <p>⑲ CN302-COM1 COM2 #1~2:COM1 #3:12V #4:GND #5~6:COM2</p> | |

5-1-5 Duct type (Slim Duct 3)

■ MAIN PCB



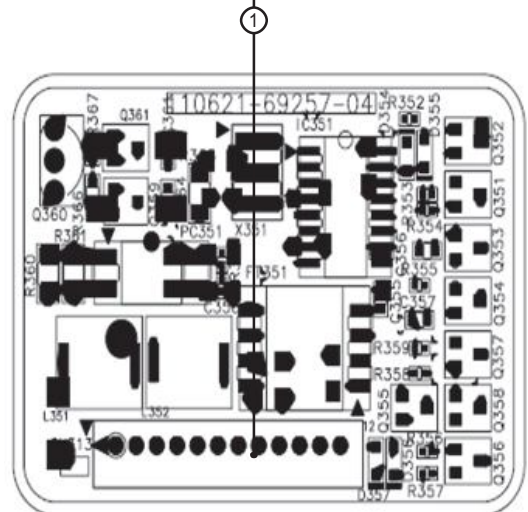
Duct type (Slim Duct 3) (cont.)

■ MAIN PCB

| | | | |
|--|---|--|--|
| ① CN103-DRAIN #1:POWER #2:GND | ② CN413-EVA DIS/OUT/IN #1:EVA-IN #3:EVA-OUT #5:DISCHARGE #2,#4,#6:GND | ③ CN140-FUSE CHK #1:POWER #2:GND | ④ CN81-COMP ERROR #1,#3:12V #2:ERROR_CHK_OUT #4:COMP_CHK_OUT |
| ⑤ CN702-HOTCOIL #1:N #3:L | ⑥ CN101-POWER #1:L #3:N | ⑦ CN83-EXT T #1:GND #2:EXT_CTRL | ⑧ CN411-FLOAT SW #1:FLOAT SW #2:GND |
| ⑨ CN301-DOWNLOAD →For Developer only,Not available in Actual Site →20 Pin Down Loader | ⑩ CN412-ROOM #1:ROOM #2:GND | ⑪ CN501-DISPLAY #1:12V #2~#6:DISPLAY LED CONTROL #7:BZ_1 #8:REMOCON SIGNAL OUT #9:AUTO_SW #10:REMOCON_INT #11:GND #12:VCC #13:BZ_2 | ⑫ CN201-EEPROM #1:GND #2:NO USED #3:VCC #4:EEPROM_SELECT #5:EEPROM_SO #6:EEPROM_SI #7:EEPROM_CLK |
| ⑬ CN808-EEV(DVM) #1~4:CONTROL SIGNAL #5~6:12V | ⑭ CN801-SPI #1:GND #2:GND #3:CONTROL SIGNAL #4:NOT USED | ⑮ CN311-2WIRE #1:12V #2:COM2_PCTRL_MICOM #3:COM2_VCHECK_A #4:COM2_VCHECK_B #5:COM2_MICOM_AD #6:VCC #7:COM2_ENABLE #8:COM2_C #9:COM2_D #10:COM2_Tx #11:COM2_Rx #12:GND | ⑯ CN804-VENT #1:12V #2:VENT_OUT |
| ⑰ CN302-COM1 COM2 #1~2:COM1 #3:12V #4:GND #5~6:COM2 | ⑱ CN703-BLDC FAN #1:DC310V #2:NOT USED #3:AGND #4:DC15V #5:PC04 OUTPUT #6:RPM OUTPUT | | |

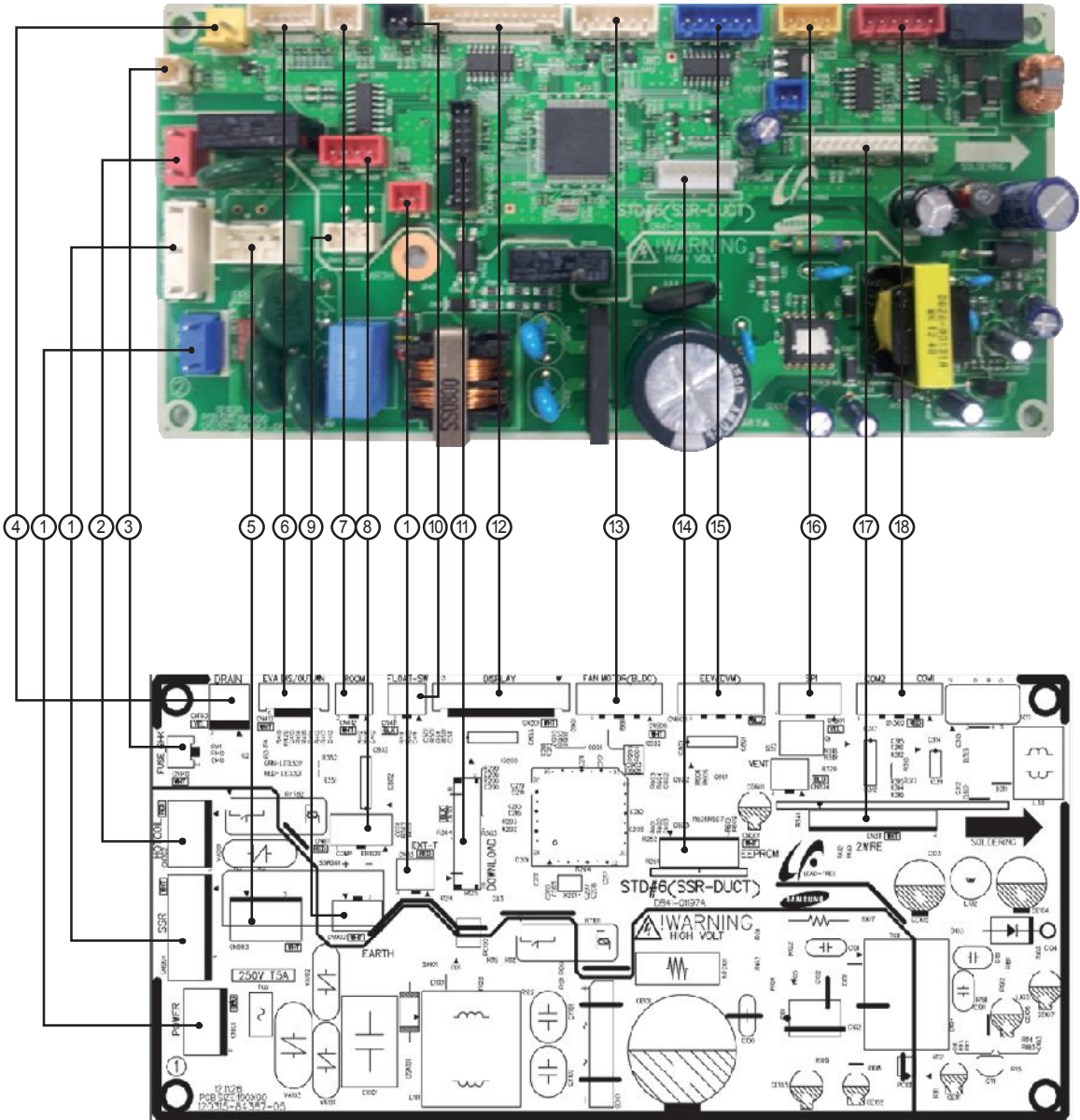
Duct type (Slim Duct 3) (cont.)

■ Sub PCB



| | |
|------|---------------------------|
| ① | CN313-2WIRES COMM. |
| #1: | 12V |
| #2: | COM2_PCTRL_MICOM |
| #3: | COM2_VCHECK_A |
| #4: | COM2_VCHECK_B |
| #5: | COM2_MICOM_AD |
| #6: | VCC |
| #7: | NO UESD |
| #8: | COM2_C |
| #9: | COM2_D |
| #10: | COM2_TXD |
| #11: | COM2_RXD |
| #12: | GND |

5-1-6 Duct type(MSP, HSP, Big Duct)

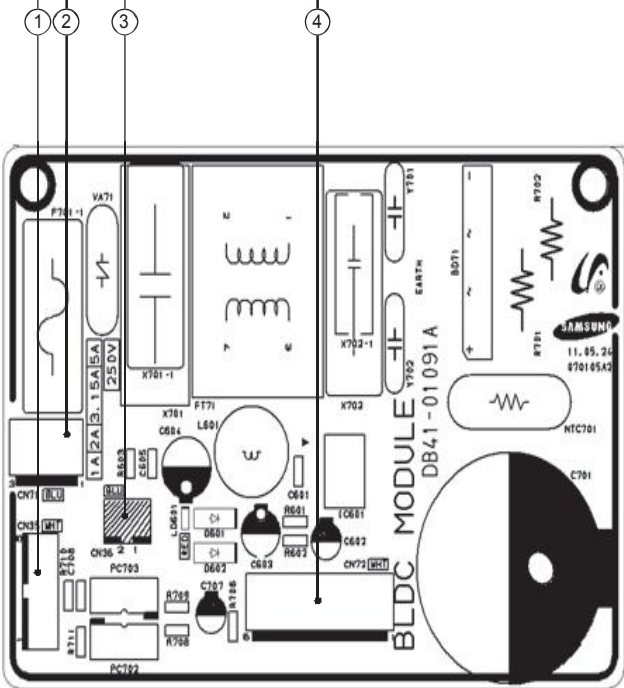
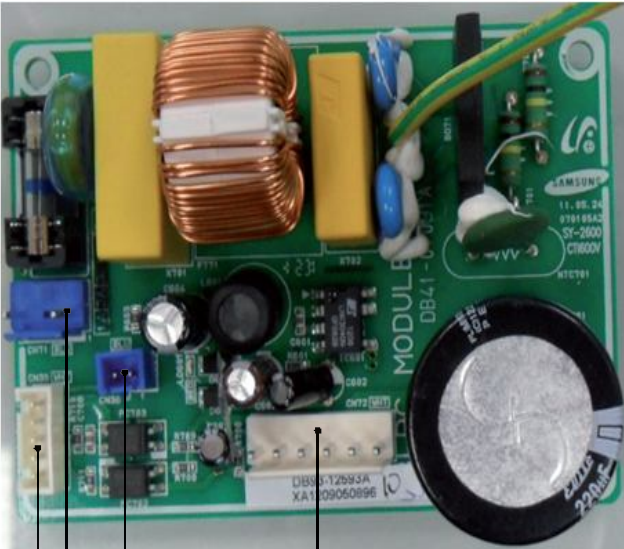


Duct type(MSP, HSP, Big Duct) (cont.)

| | | | |
|--|--|--|---|
| <p>① CN904-SSR MOTOR #1: N #2: L #3: N</p> | <p>② CN702-HOT COIL #1: L #2: N</p> | <p>③ CN140-FUSE CHECK #1:FUSE CHECK #2:GND</p> | <p>④ CN103-DRAIN PUMP #1: 12V #2 : GND</p> |
| <p>⑤ CN903-SSR AC CONTROL #1: L INPUT #2: L OUTPUT</p> | <p>⑥ CN413-TEMP SENSOR #1 : EVA IN TEMP #2,4,6: GND #3 : EVA OUT TEMP #5 : DISCHARGE TEMP</p> | <p>⑦ CN412-ROOM TEMP Sensor #1: INPUTTEMP #2: GND</p> | <p>⑧ CN81-EXTERNAL CONTROL OUT #1,3: 12V #2: ERROR CHECK OUT #4: COM CHK OUT</p> |
| <p>⑨ CN902- SSR DC OUTPUT #1: 12V #2: MOTOR SSR OUT</p> | <p>⑩ CN83-EXTERNAL CONTROL #1: GND #2: EXT CTRL</p> | <p>⑪ CN301-MICOM DOWNLOAD</p> | <p>⑫ CN501-DISPLAY #1:12V #2~6:CONTROL LED #7: BZ1 #8: OUTPUT SIGNAL REMOCON #9: AUTO SW #10: REMOCON INT #11:GND #12:VCC #13:BZ2</p> |
| <p>⑬ CN905-BLDC MOTOR #1:12V #2: GND #3: VCC #4: MOTOR SIGNAL PWM #5: MOTOR FEEDBACK #6:INRUSH OUT #12:VCC</p> | <p>⑭ CN201-E2P MODULE</p> | <p>⑮ CN808-EEV #1~4:EEV CONTROL #5,6:12V</p> | <p>⑯ CN801-SPI #1,2:GND #3:SPI CONTROL</p> |
| <p>⑰ CN311-2 WIRE COMM</p> | <p>⑱ CN302-INDOOR UNIT & OUTDOOR UNIT COMM/CABLE #1,2: INDOOR UNIT & OUTDOOR UNIT COMM #3:12V #4:GND #5: WIRED REMOCON COMM</p> | <p>⑲ CN101-AC INPUT #1: L #2: N</p> | |

5-1-7 Duct type(HSP)

■ BLDC PCB

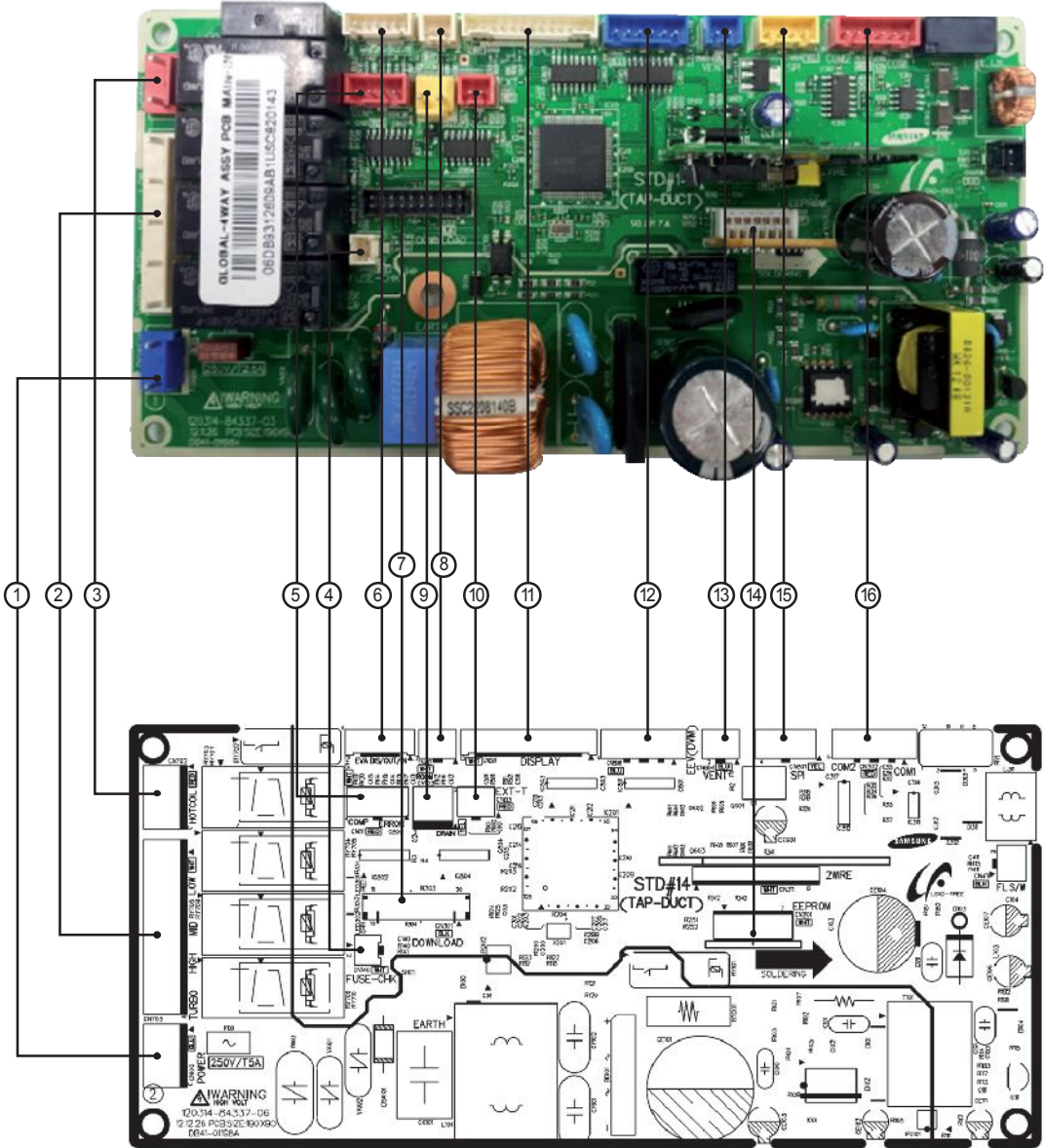


Duct type(HSP) (cont.)

■ BLDC PCB

| | | | |
|---|---|---|---|
| <p>① CN35-Main PCB Connection #1: DC12V #2: Fan Signal #3: DC5V #4: Fan feedback signal #5: GND</p> | <p>② CN71-AC Power #1: AC power L #2: AC power N</p> | <p>③ CN36-BLDC PCB Connection #1: DC12V #2: Fan signal</p> | <p>④ CN12-Motor Connector #1: DC310V #3: GND #4: DC15V #5: Fan signal #6: Fan feedback signal</p> |
|---|---|---|---|

5-1-8 Duct type (Super)

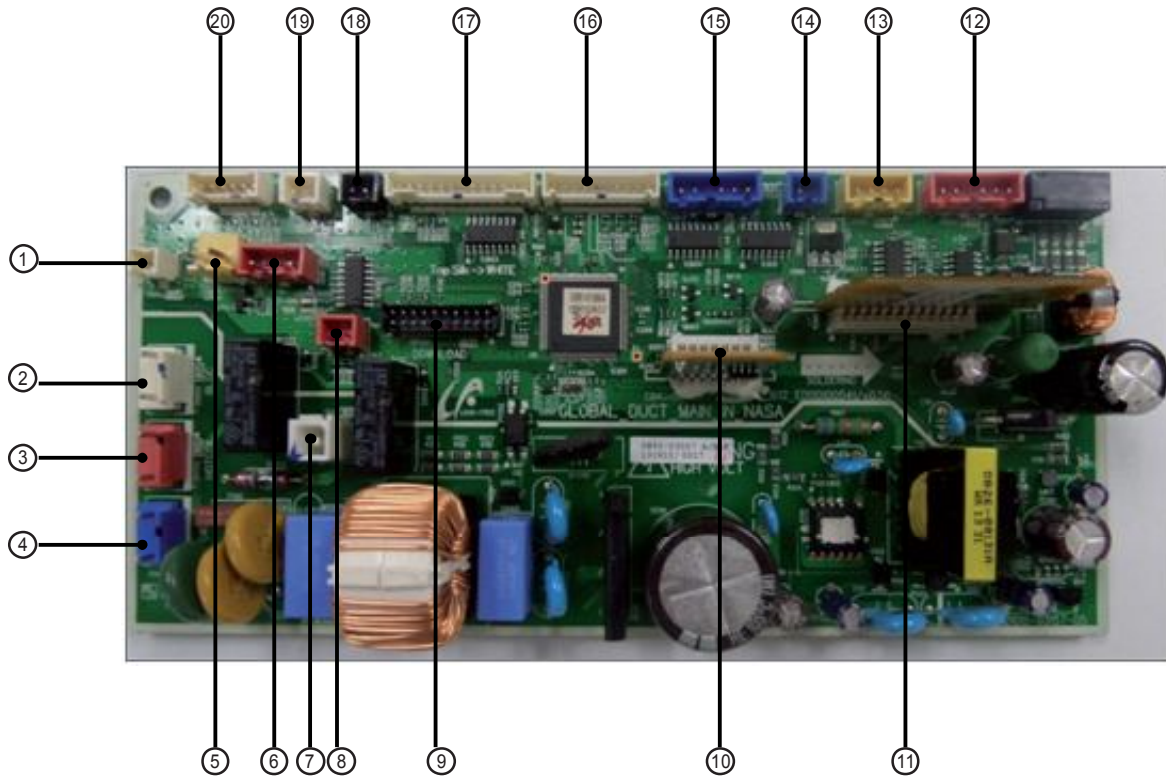


Duct type (Super) (cont.)

| | | | |
|--|--|--|--|
| <p>① CN100-POWER #1: LIVE #2: - #3: NEUTRAL</p> | <p>② CN703-FAN STEP #1: NEUTRAL #2: - #3: FAN_LOW_OUT #4: - #5: FAN_MID_OUT #6: - #7: FAN_HUGH_OUT #8: - #9: FAN_TURBO_OUT</p> | <p>③ CN702-HOT COIL #1: NEUTRAL #2: LIVE</p> | <p>④ CN140-FUSE CHECKER</p> |
| <p>⑤ CN81-ERROR/COMP CHECK #1: 12V #2: ERROR_CHK_OUT #3: 12V #4: COMP_CHK_OUT</p> | <p>⑥ CN413-EVA IN/EVA OUT/ DISCHARGE TEMP #1: EVA-IN #2: EVA-IN #3: EVA-OUT #4: EVA-OUT #5: DISCHARGE #6: DISCHARGE</p> | <p>⑦ CN301-DOWNLOAD</p> | <p>⑧ CN412-ROOM TEMP #1: ROOM TEMP #2: ROOM TEMP</p> |
| <p>⑨ CN103-DC DRAIN PUMP #1: DRAIN_PUMP_OUT #2: GND</p> | <p>⑩ CN83-EXT_CONTROL</p> | <p>⑪ CN501-DISPLAY #1: 12V #2: LED_0_OUT #3: LED_1_OUT #4: LED_2_OUT #5: LED_3_OUT #6: LED_4_OUT #7: BZ_1 #8: REMOCON_SIGN_OUT #9: AUTO_SW #10: REMOCON_INT #11: GND #12: 5V #13: BZ_2</p> | <p>⑫ CN808-EEV(DVM) #1: EEV'_B_OUT #2: EEV'_A_OUT #3: EEV_B_OUT #4: EEV_A_OUT #5: 12V #6: 12V</p> |
| <p>⑬ CN804-VENTILATOR #1: 12V #2: VENT_OUT</p> | <p>⑭ CN201-EEPROM</p> | <p>⑮ CN801-SPI #1: GND #2: GND #3: SPL_CTRL_OUT_1 #4: -</p> | <p>⑯ CN302-COM1/COM2 #1: COM1_A #2: COM1_B #3: 12V #4: GND #5: COM2_C #6: COM2_D</p> |

5-1-9 Duct type (Global Duct)

■ Main PCB



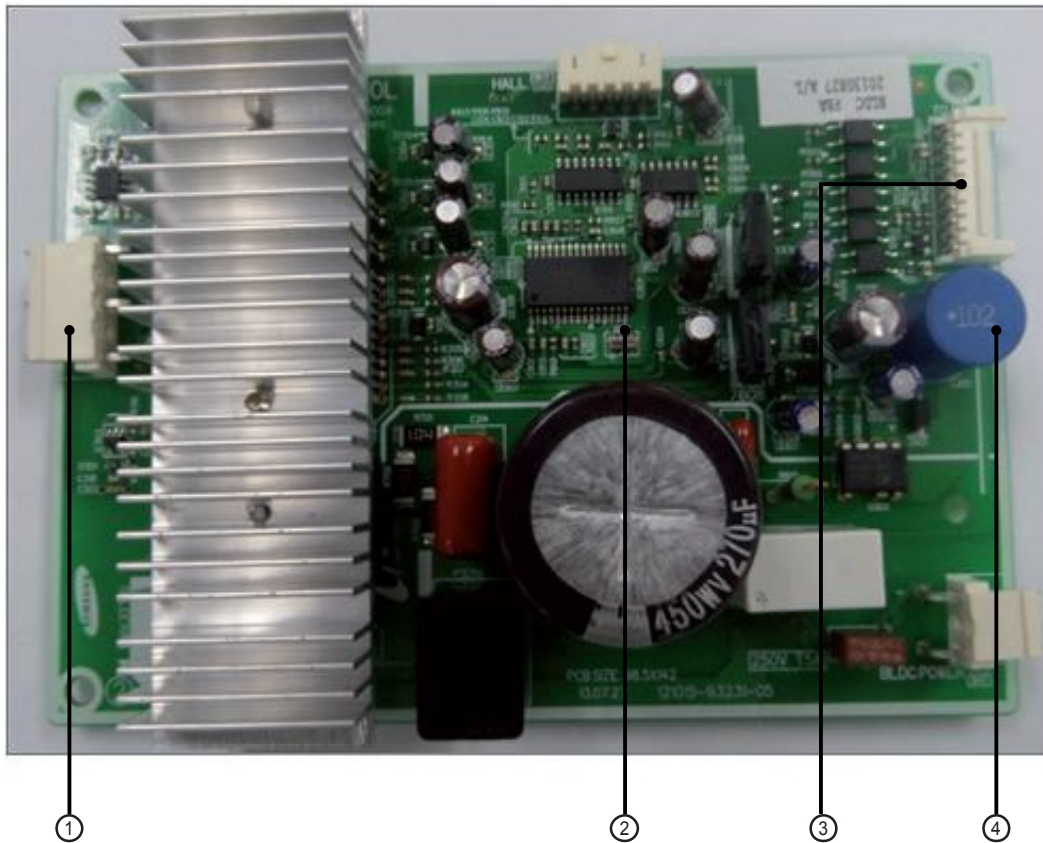
| No | Part Code | Local | Function | Description |
|----|-------------|-------|---------------------------|--|
| 1 | 3711-003942 | CN140 | Fuse Check | SMW200-02P WHT #1 - FUSE CHECK, #2 - GND |
| 2 | 3711-000203 | CN906 | BLDC POWER | YW396-03AV WHT #1 - N, #3 - L |
| 3 | 3711-003407 | CN702 | HOTCOIL | YW396-03AV RED #1 - N, #3 - L |
| 4 | 3711-003404 | CN101 | MAIN POWER | YW396-03AV BLU #1 - L, #3 - N |
| 5 | 3711-000179 | CN701 | DRAIN | YW396-02V YEL #1 - DRAIN PUMP OUT, #2 - GND |
| 6 | 3711-000939 | CN81 | ERROR CHECK COMP CHECK | SMW250-04 RED #1,2 - ERROR CHECK SIGNAL #3 - 12V, #4 - COMP CHECK SIGNAL |
| 7 | 3711-000744 | CN1 | EARTH | YDW236-01 WHT |
| 8 | 3711-000796 | CN83 | EXT-T | SMW250-02 RED #1,2 - EXT SIGNAL |
| 9 | 3711-002001 | CN301 | DOWNLOAD | YDW200-20 #1,2 - COM SIGNAL #3~8,12~16,18~20 - DOWNLOAD SIGNAL #9,17 - GND, #10,11 - 5V |
| 10 | 3711-007817 | CN201 | EPPROM | B7P-MQ WHT #1 - GND, #2 - NC, #3 - 5V #4,5,6,7 - EEPROM SIGNAL |
| 11 | 3711-004773 | CN311 | 2 WIRE | BMW200-12 WHT #1 - 12V, #6 - 5V, #12 - GND #2~5,7~11 - COM2 SIGNAL |
| 12 | 3711-001037 | CN302 | COMM | SMW250-06 RED #1,2,5,6 - COM SIGNAL #3 - 12V, #4 - GND |
| 13 | 3711-000941 | CN801 | SPI | SMW250-04 YEL #1,#2 - GND, #3 - SPI CTRL, #4 - NC |

PCB Diagram and Parts List

| No | Part Code | Local | Function | Description |
|----|-------------|-------|--------------------|--|
| 14 | 3711-000795 | CN804 | VENT | SMW250-02 BLU #1 - 12V, #2 - VENT OUT |
| 15 | 3711-001036 | CN808 | EEV | SMW250-06 BLU #1~4 - EEV SIGNAL, #5,6 - 12V |
| 16 | 3711-004182 | CN905 | FAN MOTOR COMM | SMW200-10P WHT #1 - 12V, #2 - GND #3 - 5V, #4 - BLDC POWER RELAY SIGNAL #5 - OVER TEMP, #6 IPM FO #7 - REV OUT, #8 - FAN FEEDBACK #9 - INRUSH RELAY SIGNAL, #10 - FAN PWM |
| 17 | 3711-003895 | CN501 | DISPLAY | SMW200-13P WHT #1 - 12V, #2~6 - LED OUT #7 - Buz1, #8 - REMOCON OUT #9 - AUTO S/W, #10 - REMOCON-INT #11 - GND, #12 - 5V, #13 - Buz2 |
| 18 | 3711-000794 | CN411 | FLOAT-SW | SMW250-02 BLK #1 - FLOAT S/W SIGNAL, #2 - GND |
| 19 | 3711-000015 | CN412 | ROOM SENSOR | SMW250-02 WHT #1 - ROOM SENSOR SIGNAL, #2 - GND |
| 20 | 3711-004236 | CN413 | EVA DIS/OUT SENSOR | SMW200-06P WHT #1 - EVA IN SIGNAL #3 - EVA OUT SIGNAL #5 - DISCHARGE SIGNAL #2,4,6 - GND #1 - L, #3 - N |

Duct type (Global Duct) (Cont.)

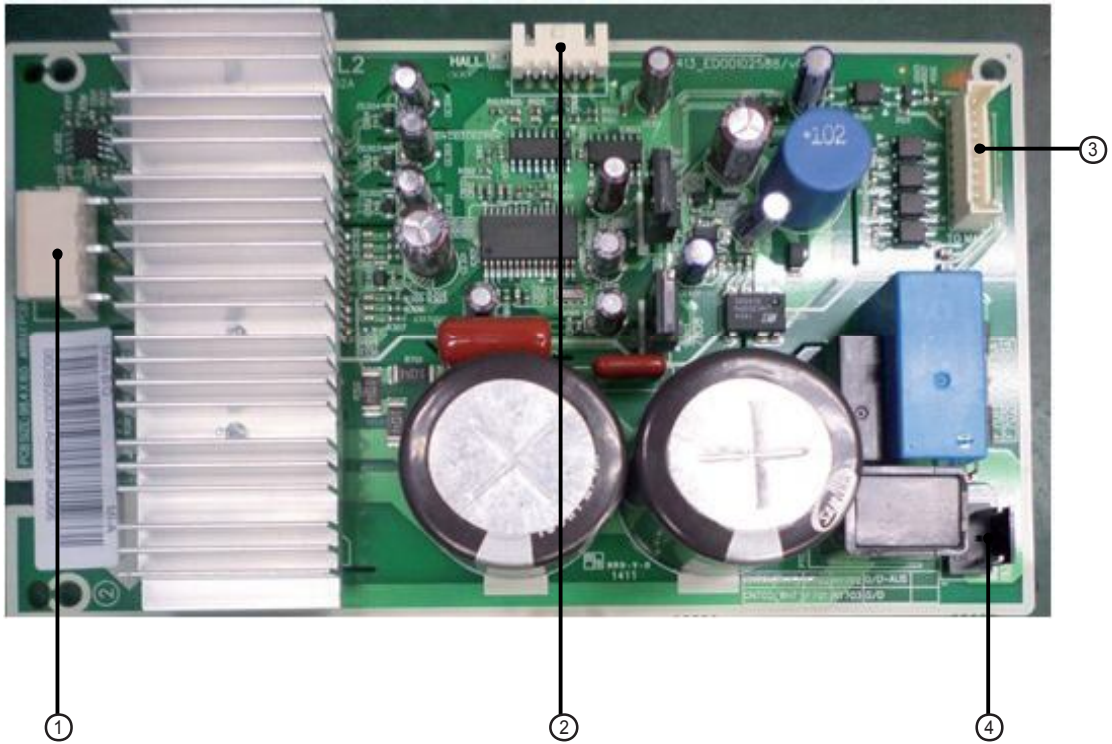
■ SUB PCB



| No | Part Code | Local | Function | Description |
|----|-------------|-------|----------------|---|
| 1 | 3711-003381 | CN301 | FAN MOTOR | YAW396-05AV WHT #1 - U, #2 - V, #3 - W |
| 2 | 3711-000992 | CN101 | HALL | SMAW250-05 WHT #1 - 5V, #2~4 - HALL, #5 - GND |
| 3 | 3711-004531 | CN501 | FAN MOTOR COMM | SMAW200-10P WHT #1 - 12V, #2 - GND #3 - 5V, #4 - BLDC POWER RELAY #5 - OVER TEMP #6 - RST #7 - REV OUT, #8 - FAN FEEDBACK #9 - INRUSH RELAY, #10 - FAN PWM |
| 4 | 3711-003380 | CN701 | POWER | YAW396-03AV WHT #1 - L, #2 - N |

5-1-10 Duct type (Global Duct_HSP)

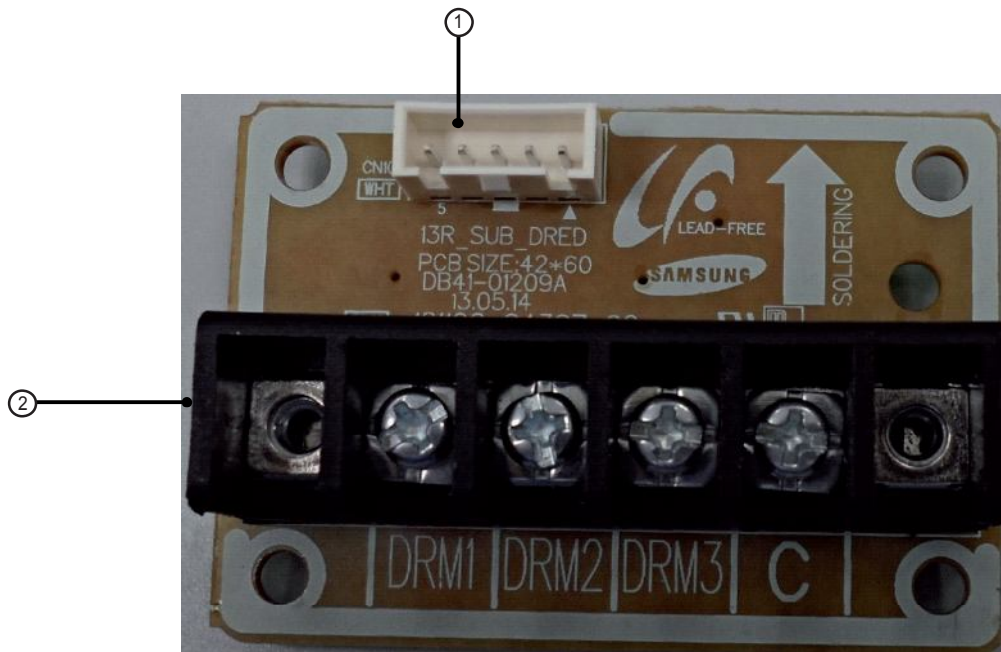
■ SUB PCB



| No | Part Code | Local | Function | Description |
|----|-------------|-------|----------------|--|
| 1 | 3711-003381 | CN301 | FAN MOTOR | 1WALL,5P,1R,3,96mm,ANGLE,SN,WHT #1 - U, #2 - V, #3 - W |
| 2 | 3711-000992 | CN101 | HALL | BOX,5P,1R,2,5MM,ANGLE,SN,WHT #1 - 5V, #2~4 - HALL, #5 - GND |
| 3 | 3711-004182 | CN501 | FAN MOTOR COMM | BOX,10P,1R,2mm,STRAIGHT,SN,WHT #1 - 12V, #2 - GND #3 - 5V, #4 - BLDC POWER RELAY #5 - OVER TEMP #6 - RST #7 - REV OUT, #8 - FAN FEEDBACK #9 - INRUSH RELAY, #10 - FAN PWM |
| 4 | 3711-003405 | CN701 | POWER | 1WALL,2P,1R,7,92mm,STRAIGHT,SN,BLK #1 - N, #2 - L |

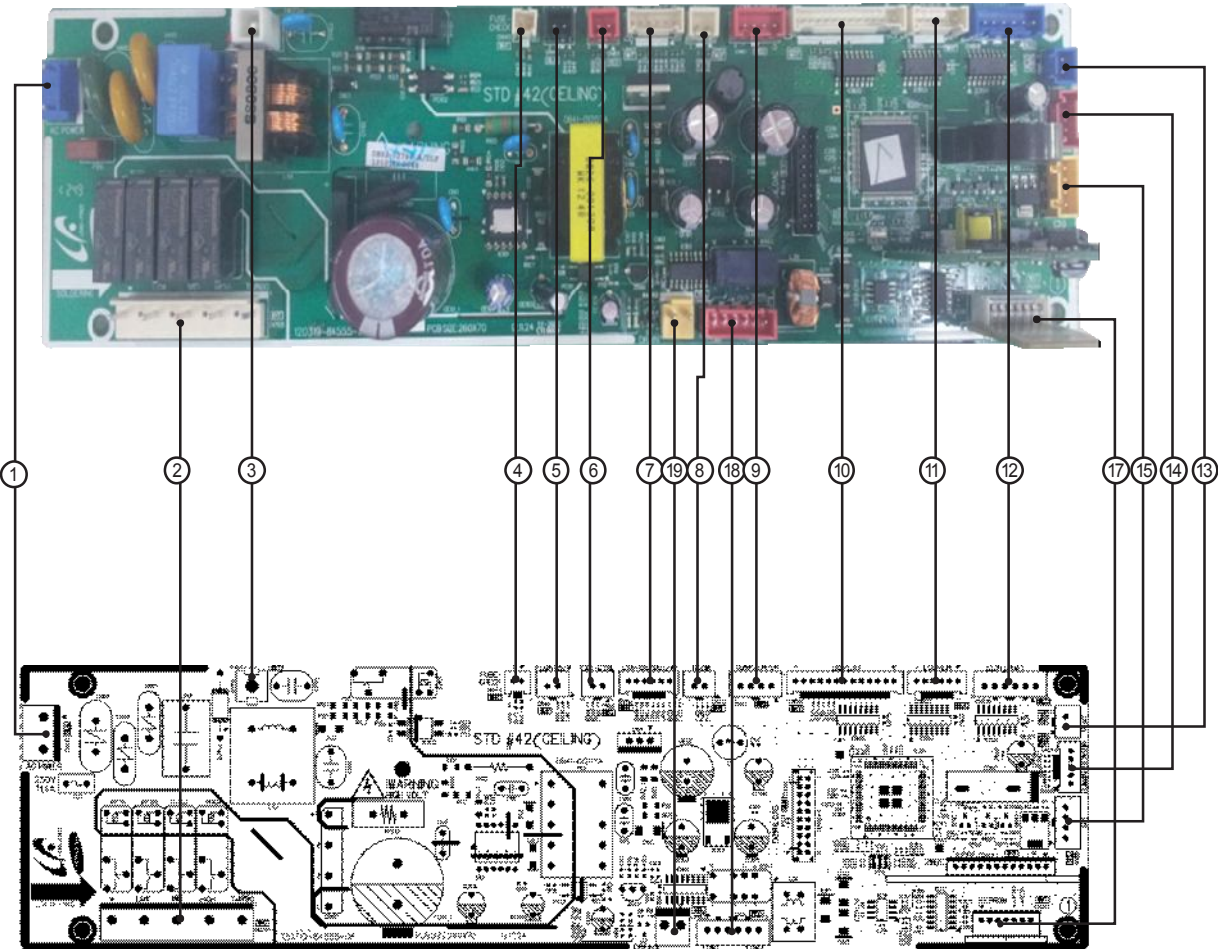


| No. | part code | location No. | Function | Description |
|-----|-------------|--------------|----------|---------------------|
| 1 | 3712-001139 | L | IN-L | TAB,MALE,6.35x0.8mm |
| 2 | 3712-001139 | N | IN-N | TAB,MALE,6.35x0.8mm |
| 3 | 3712-001139 | L | OUT-L | TAB,MALE,6.35x0.8mm |
| 4 | 3712-001139 | N | OUT-N | TAB,MALE,6.35x0.8mm |



| No. | part code | location No. | Function | Description |
|-----|-------------|--------------|-----------|---|
| 1 | 3711-000999 | CN101 | DRED COMM | BOX,5P,1R,2.5mm,STRAIGHT,SN,WHT #1~3 - DRED SIGNAL, #4 - GND, #5 - VCC |
| 2 | DB65-00320A | CN102 | DRED T/B | DAPC-2009,BRASS,6P,55.5*6.5*14,BLK |
| 4 | 3712-001139 | N | OUT-N | TAB,MALE,6.35x0.8mm |

5-1-11 Ceiling type

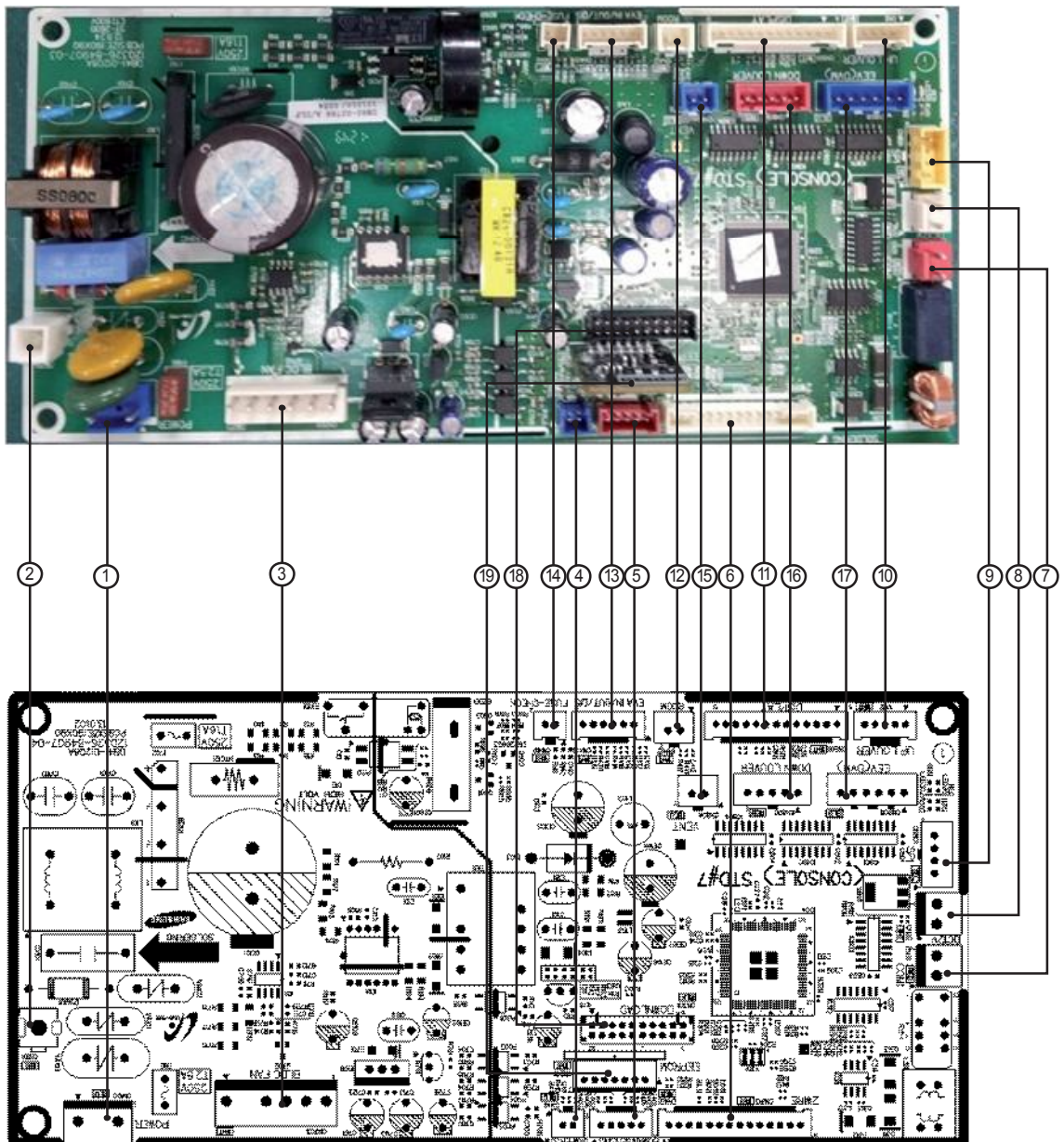


Celiling type (cont.)

| | | | |
|--|--|--|--|
| <p>① CN100-VENTILATOR #1: L #3: N</p> | <p>② CN703-FAN MOTOR #1: N #3: RY701 OUTPUT #5: RY702 OUTPUT #7: RY703 OUTPUT #9: RY704 OUTPUT</p> | <p>③ CN101-GND #1: GND</p> | <p>④ CN140-FUSE CHECK #1: FUSE CHECK #2: GND</p> |
| <p>⑤ CN411-FLOAT S/W #1: FLOAT_SW #2: GND</p> | <p>⑥ CN83-EXT CTRL #1: GND #2: EXT_CTRL</p> | <p>⑦ CN413-EVA-DIS/OUT/IN #1: VEA_IN_MID_TEMP #2: GND #3: EVA_OUT_TEMP #4: GND #5: EVA_DIS_TEMP #6: GND</p> | <p>⑧ CN412-ROOM #1: ROOM_TEMP #2: GND</p> |
| <p>⑨ CN81-COMP/ERROR #1: DC 12V #2: ERROR_CHK_OUT #3: DC 12V #4: COMP_CHK_OUT</p> | <p>⑩ CN501-DISPLAY #1: DC 12V #2~#7: LED SIGNAL #8: REMOCON_SIGN_OUT #9: AUTO_SW #10: REMOCON_INT #11: GND #12: DC 5V #13: NOT USED</p> | <p>⑪ CN805-LOUVER #1: DC 12V #2: DC 12V #3~#6: LVR SIGNAL</p> | <p>⑫ CN808-EEV(DVM) #1~#4: EEV SIGNAL #5: DC 12V #6: DC 12V</p> |
| <p>⑬ CN804-VENT #1: DC 12V #2: VENT_OUT</p> | <p>⑭ CN401-HUMAN_SENSOR #1: DC 12V #2: COM4_TXD #3: COM4_RXD #4: NOT USED #5: GND</p> | <p>⑮ CN801-SPI #1: GND #2: GND #3: Q1_OUT #4: NOT USED</p> | <p>⑯ CN311-2WIRE OPTION #1:DC12V #2~#5:COMM. SIGNAL #6:VCC(DC5V) #7~#11:COMM. SIGNAL #12:GND</p> |
| <p>⑰ CN201-EEPROM #1:GND #2:NOT USED #3:VCC(DC5V) #4~#7:EEPROM SIGNAL</p> | <p>⑱ CN31-HUMAN_SENSOR #1~#2: COM1 SIGNAL #3: DC12V #4: GND #5~#6: COM2 SIGNAL</p> | <p>⑲ CN103-DRAIN #1: DRAIN SIGNAL #2: GND</p> | |

5-1-12 Console

■ MAIN PCB



Console (cont.)

■ MAIN PCB(cont.)

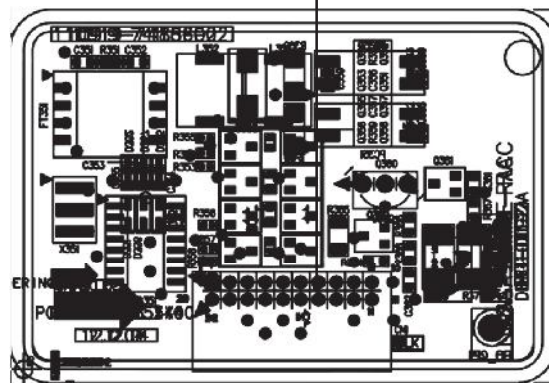
| | | | |
|---|--|---|--|
| ① CN100-AC POWER #1: L #3: N | ② CN101-GND #1: GND | ③ CN703-FAN MOTOR #1:DC310V #2:NOT USED #3:AGND #4:DC15V #5:PC04 OUTPUT #6:RPM OUTPUT | ④ CN411-FLOAT S/W #1:FLOAT S/W #2:GND |
| ⑤ CN401-HUMAN SENSING #1:DC12V #2,#3:COMM. SIGNAL #4:NOT USED #5:GND | ⑥ CN313-2WIRES COMM. #1~#4:COMM. SIGNAL #5:EXTERNAL CONTROL #6:COMP CHECK #7:ERROR CHECK #8:VCC(DC5V) #9:GND #10:DC12V #11~#14:COMM. SIGNAL | ⑦ CN31-COMM.1 #1:COMM. SIGNAL F1 #2:COMM. SIGNAL F2 | ⑧ CN32-DC12V #1:DC12V #2:GND |
| ⑨ CN801-SPI #1:GND #2:GND #3:CONTROL SIGNAL #4:NOT USED | ⑩ CN2-UP LOUVER #1:DC12V #2~#5:CONTROL SIGNAL | ⑪ CN501-DISPLAY #1:DC12V #2~#6:DISPLAY LED CONTROL #7:VCC(DC5V) #8:REMOCON SIGNAL OUT #9:TOUCH SWITCH SIGNAL #10:REMOCON SIGNAL IN #11:GND #12:VCC(DC5V) #13:NOT USED | ⑫ CN412-ROOM SENSOR #1:ROOM TEMP. SENSOR #2:GND |
| ⑬ CN413-EVA IN/OUT #1:EVA IN/OUT TEMP. SENSOR #2:GND | ⑭ CN140-FUSE CHECK #1:FUSE CHECK SIGNAL #2:GND | ⑮ CN804-VENT #1:DC12V #2:VENT SIGNAL | ⑯ CN806-DOWN LOUVER #2~#5:CONTROL SIGNAL |
| ⑰ CN808-EEV #1~#4:EEV CONTROL SIGNAL #5,#6:DC12V | ⑱ CN301-DOWNLOAD →For Developer only,Not available in Actual Site →20 Pin Down Loader | ⑲ CN201-EEPROM PBA CONNECTOR #1:GND #2:NOT USED #3~#7:EEPROM SIGNAL | |

Console (cont.)

■ Sub PCB



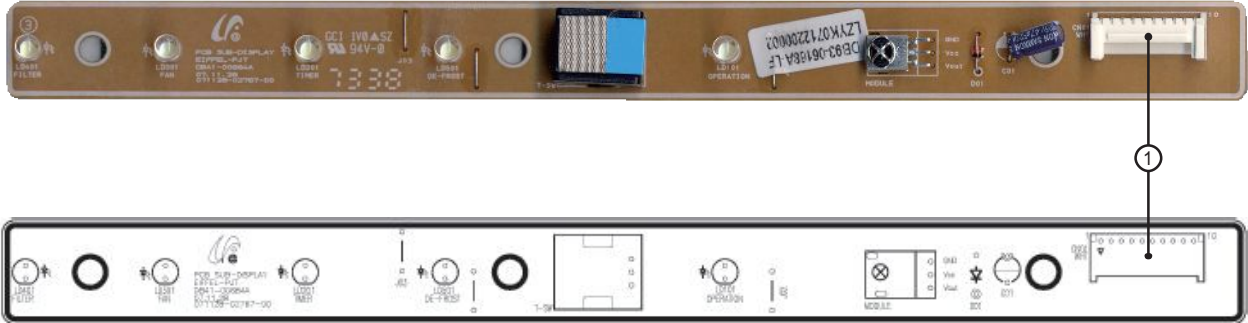
①



| | |
|---|----------------------------|
| ① | CN1-2WIRES COMM. |
| | #1,#2,#19,#20:COMM. SIGNAL |
| | #3,#18:EXTERNAL CONTROL |
| | #4,#17:COMP CHECK |
| | #5,#16:ERROR CHECK |
| | #6:VCC(DC5V) |
| | #7,#14:GND |
| | #8,#13,#15:DC12V |
| | #9~#12:COMM. SIGNAL |

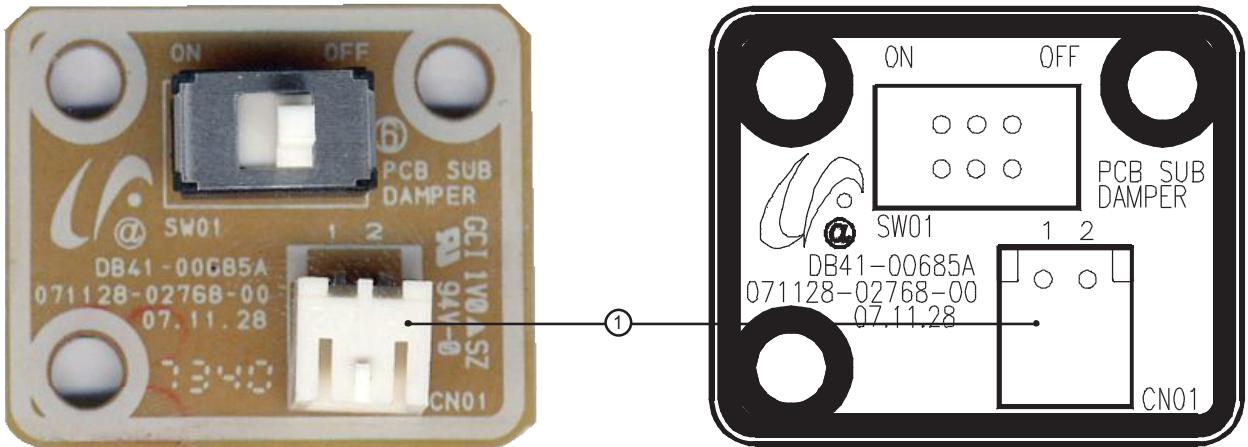
Console(cont.)

■ DISPLAY



| | |
|--------------|--|
| DC Connector | ① CN01-Panel Display |
| | #1,#2,#3,#4,#5: Display LED Control #6: TOUCH S/W Reset(DC5V) #7: TOUCH S/W out(DC5V) #8: Receive REMOCON Signal #9: GND #10: VCC(DC5V) |

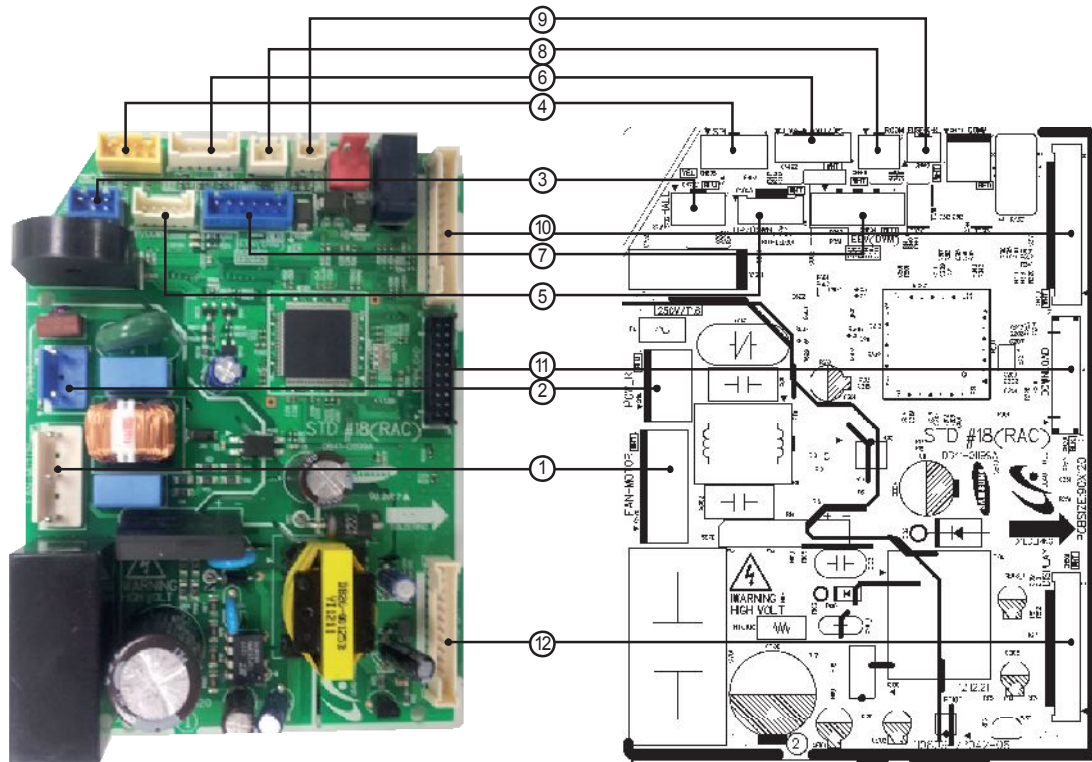
■ DAMPER



| | |
|--------------|---------------------|
| DC Connector | ① CN01-Damper S/W |
| | #1: DC5V #2: GND |

5-1-13 Wall-Mounted type (Neo Forte)

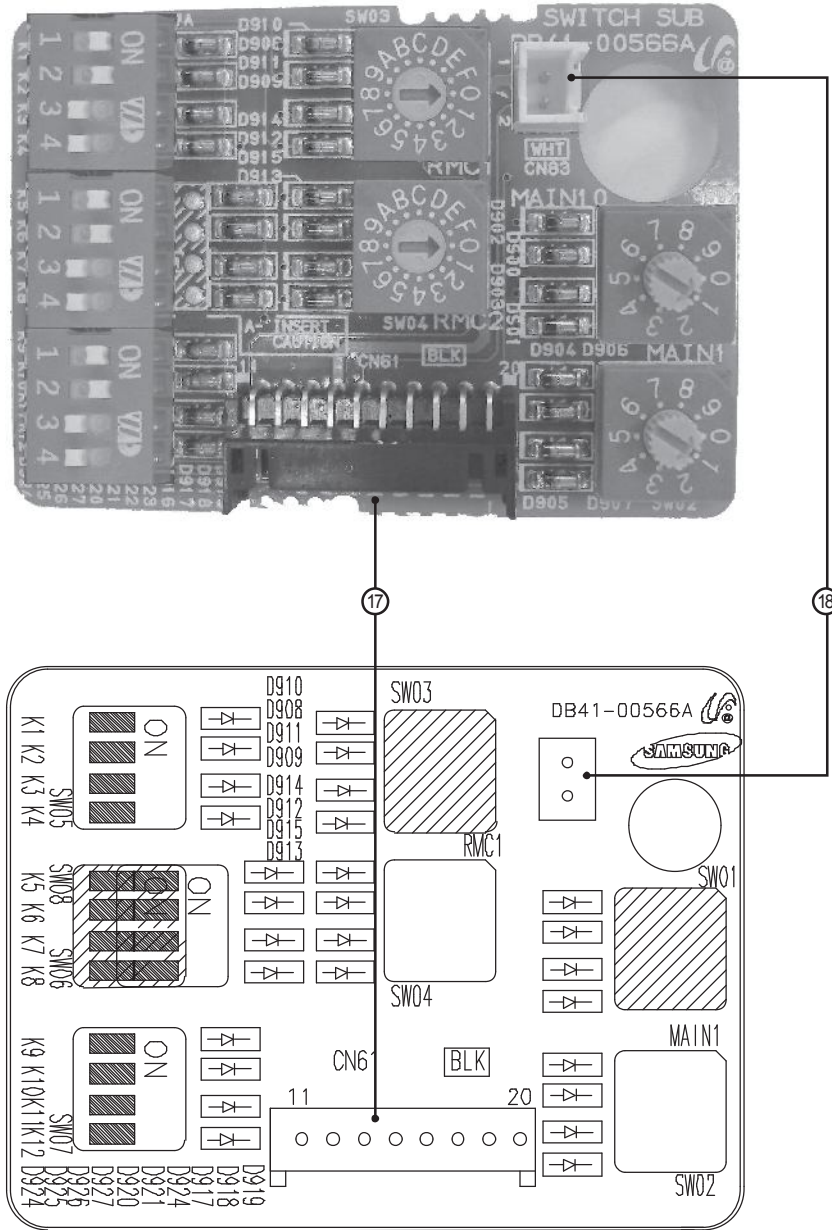
■ MAIN



| | | | |
|---|--|---|--|
| <p>① CN701-SSR MOTOR #1: 12V #2: MOTOR SSR OUT</p> | <p>② CN101-AC INPUT #1: L #2: N</p> | <p>③ CN702-HALL IC INPUT #1: VCC #2: GND #3: INPUT HALL SENSOR VALUE</p> | <p>④ CN805-SPI #1~2: GND #3: SPI CONTROL</p> |
| <p>⑤ CN803-UP/DOWN BLADE #1: VCC #2~5: BLADE CONTROL</p> | <p>⑥ CN402-TEMP SENSOR #1 : EVA IN TEMP #2,4,6: GND #3 : EVA OUT TEMP #5 : DISCHARGE TEMP</p> | <p>⑦ CN804-EEV #1~4: EEV CONTROL #5,6: 12V</p> | <p>⑧ CN401-ROOM TEMP SENSOR #1: INPUTTEMP #2: GND</p> |
| <p>⑨ CN140 - FUSE CHECK #1:FUSE CHECK #2:GND</p> | <p>⑩ CN313-2 WIRE COMM</p> | <p>⑪ CN301-MICOM DOWNLOAD</p> | <p>⑫ CN501-DISPLAY #1: 12V #2~7: LED CONTROL #8: OUTPUT SIGNAL REMOCON #9: AUTO SW #10: REMOCON INT #11:GND #12:VCC</p> |

Wall-Mounted type (Neo Forte)(cont.)

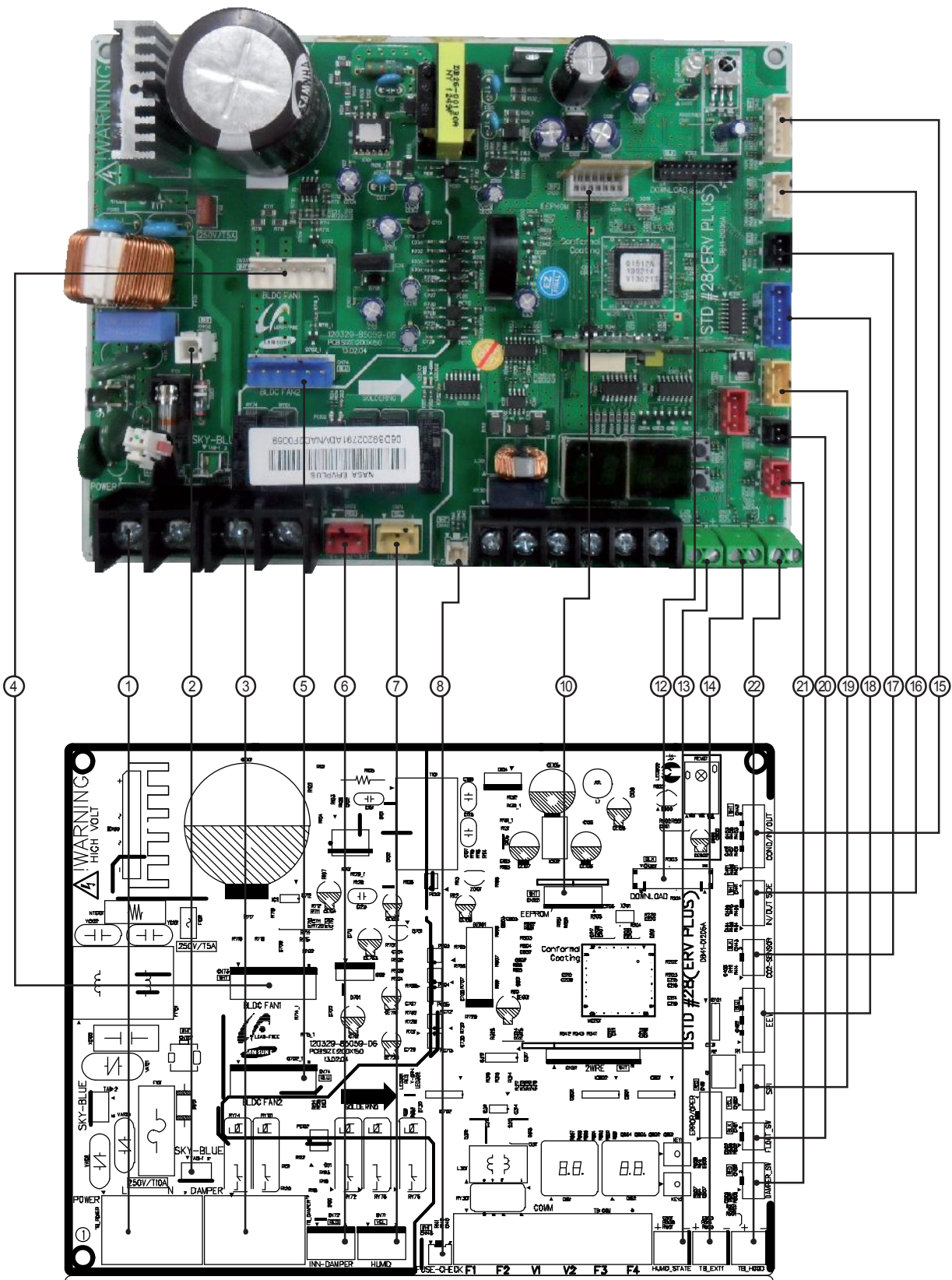
■ SUB SWITCH



| No. | CN # | COLOR | FUNCTION |
|-----|------|-------|--------------------------|
| ⑰ | CN61 | Black | Main-Sub PCB Connector |
| ⑱ | CN83 | White | External Contact Control |

5-1-14 ERV Plus

■ MAIN

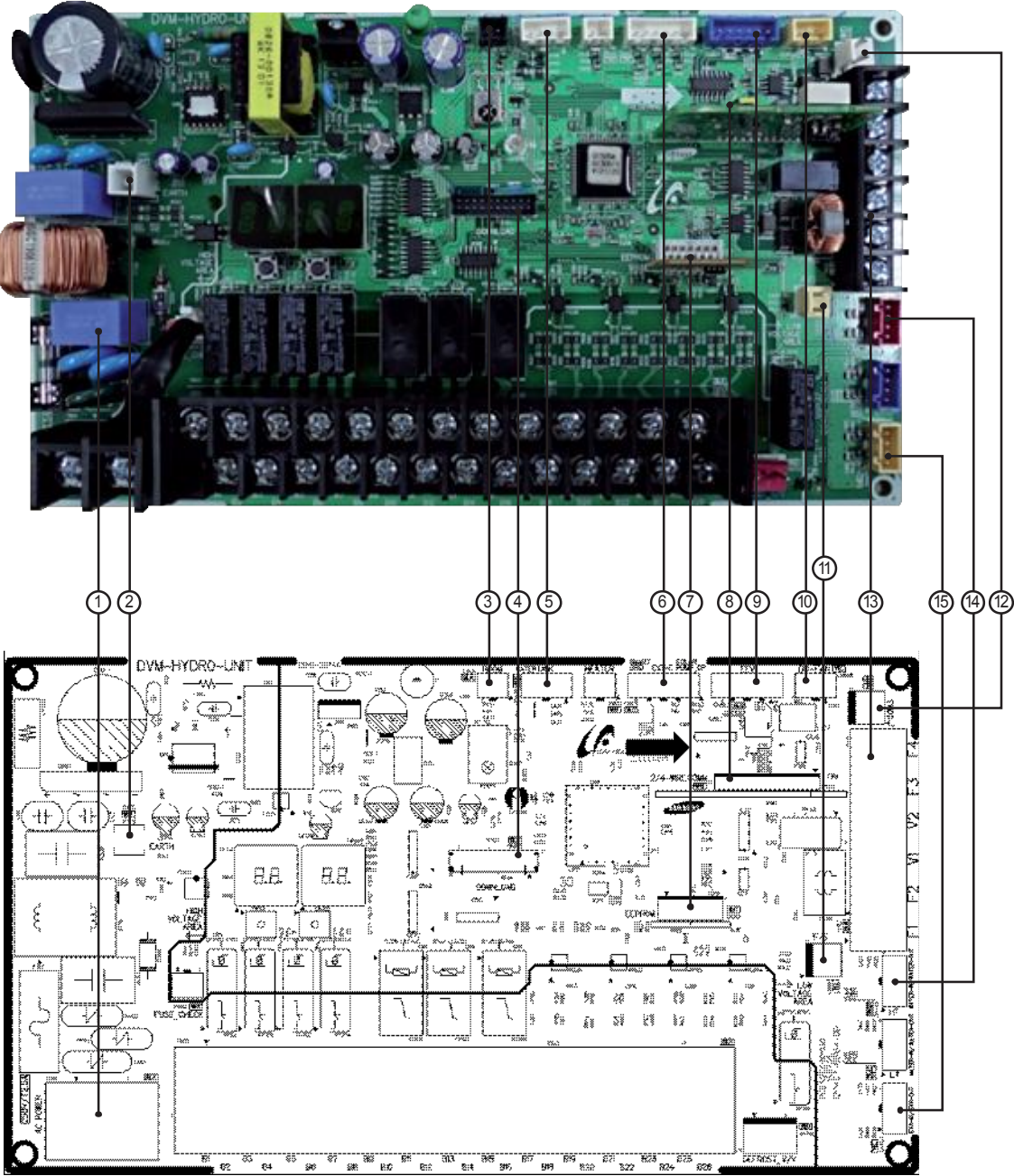


ERV Plus(cont.)

| | | | |
|--|--|--|--|
| <p>① TB_POWER-AC POWER #1: POWER(L) #2: POWER(N)</p> | <p>② CN102-GND #1 : GND</p> | <p>③ TB_DAMPER #1: DEMPER AC(L) #2: DEMPER AC(N)</p> | <p>④ CN73-BLDC MOTER1 #1: DC310V #3 : GND #4: DC15V #5 : FAN RPM #6 : RPM FEEDBACK</p> |
| <p>⑤ CN74-BLDC MOTER2 #1: DC310V #3 : GND #4: DC15V #5 : FAN RPM #6 : RPM FEEDBACK</p> | <p>⑥ CN72-INNER DAMPER #1: INNER DEMPER AC(L) #2: INNER DEMPER AC(N)</p> | <p>⑦ CN71-HUMID #1: HUMID AC(L) #2: HUMID AC(N)</p> | <p>⑧ CN140-FUSE CHECK #1: FUSE CHECK SIGNAL #2: GND</p> |
| <p>⑨ TB_COM-COMMUNICATION #1: COM1(F1) #2: COM1(F2) #3: V1(DC12V) #4: V2(GND) #5: COM2(F3) #6: COM2(F4)</p> | <p>⑩ CN201-EEPROM #1: GND #3: DC5V #4: EEPROM_SELECT #5: EEPROM_SO #6: EEPROM_SI #7: EEPROM_CLK</p> | <p>⑪ CN311-2WIRED REMOCOON</p> | <p>⑫ CN301-DOWNLOAD</p> |
| <p>⑬ HUMID_STATE-HUMID STATE #1 : HUMID STEAT signal #2 : GND</p> | <p>⑭ TB_EXT1-EXT CONTROL #1 : EXT CONTROL signal #2 : GND</p> | <p>⑮ CN42-COND,EVA_IN/OUT SENSOR #1 : COND SENSOR #2 : GND #3 : EVA IN SENSOR #4 : GND #5 : EVA OUT SENSOR #6 : GND</p> | <p>⑯ CN41-IN/OUT_SIDE SENSOR #1 : IN SIDE SENSOR #2 : GND #3 : OUT SIDE SENSOR #4 : GND</p> |
| <p>⑰ CN43-CO2 SENSOR #1 : DC 12V #2 : CO2 SENSOR #3 : GND</p> | <p>⑱ CN62-EEV #1~#4: EEV signal #5 : DC12V #6 : DC12V</p> | <p>⑲ CN801-SPI #1: GND #2: GND #3: SPI POWER OUTPUT(DC12V)</p> | <p>⑳ CN51-FLOAT SWITCH #1: FLOAT SWITCH signal #2: GND</p> |
| <p>㉑ CN52-DAMPER SWITCH #1 : DAMPER SWITCH signal #3 : GND</p> | <p>㉒ TB_HOOD-HOOD #1 : HOOD signal #2 : GND</p> | | |

5-1-15 Hydro unit/Hydro unit HT

■ Control kit PBA



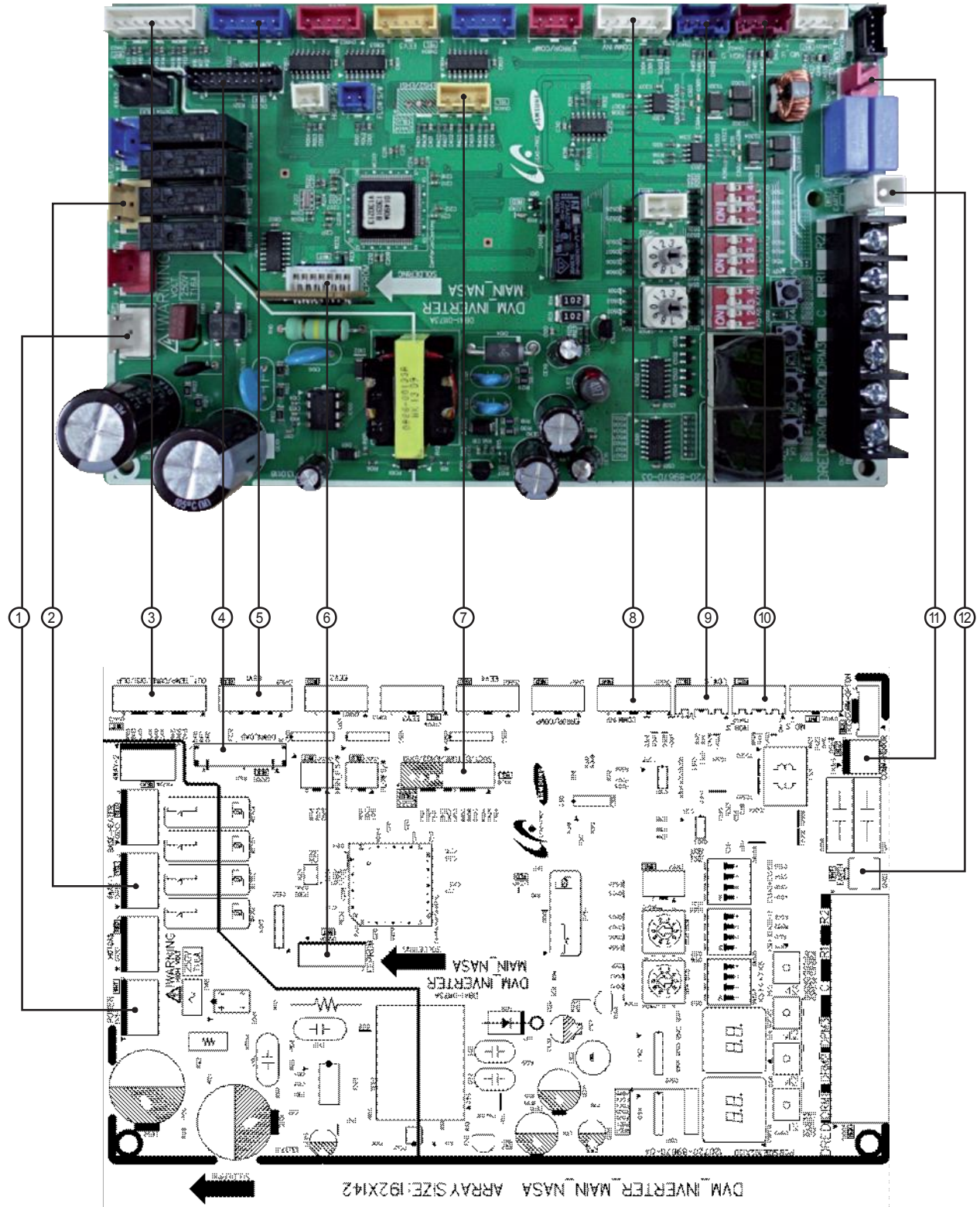
Hydro unit/Hydro unit HT

■ Control kit (cont.)

| | | | |
|--|---|--|--|
| ① TB01 - AC POWER #1 : L #2 : N | ② CN101 - EARTH #1 : EARTH | ③ CN411 - ROOM #1 : ROOMTEMP #2 : GND | ④ CN002 - DOWNLOAD #1 ~ #20 : DOWNLOAD |
| ⑤ CN409 - WATERTANK #1 : N.C #2 : N.C #3 : WATERTANK TEMP #4 : GND | ⑥ CN401 - SOLAR/EXT/GRID #1 : SOLAR PUMP OPTION #2 : GND #3 : EXT CTRL #4 : GND #5 : SMART GRID #6 : GND | ⑦ CN201 - EEPROM #1 ~ #7 : EEPROM | ⑧ CN313 - 2/4-WIRE COMM #1 ~ #12 : 2-WIRE COMM |
| ⑨ CN809 - EEV #1 ~ #4 : EEV SIGNAL #5,#6 : DC 12V | ⑩ CN808 - DC FAN #1 : DC12V #2 : DC FAN FEEDBACK #3 : GND | ⑪ CN404 - FLOW SWITCH #1 : FLOW SWITCH #2 : GND | ⑫ CN315 - COM3 #1 ~ #2 : COM3 COMM |
| ⑬ TB02 - 6P T/B #1 : COM1 COMM #2 : COM1 COMM #3 : DC12V #4 : GND #5 : COM2 COMM #6 : COM2 COMM | ⑭ CN405 - SENSOR #1 : WATER IN TEMP #2 : GND #3 : WATER OUT TEMP #4 : GND | ⑮ CN407 - SENSOR #1 : EVA IN TEMP #2 : GND #3 : EVA OUT TEMP #4 : GND | |

5-1-16 Hydro unit HT

■ Main PBA



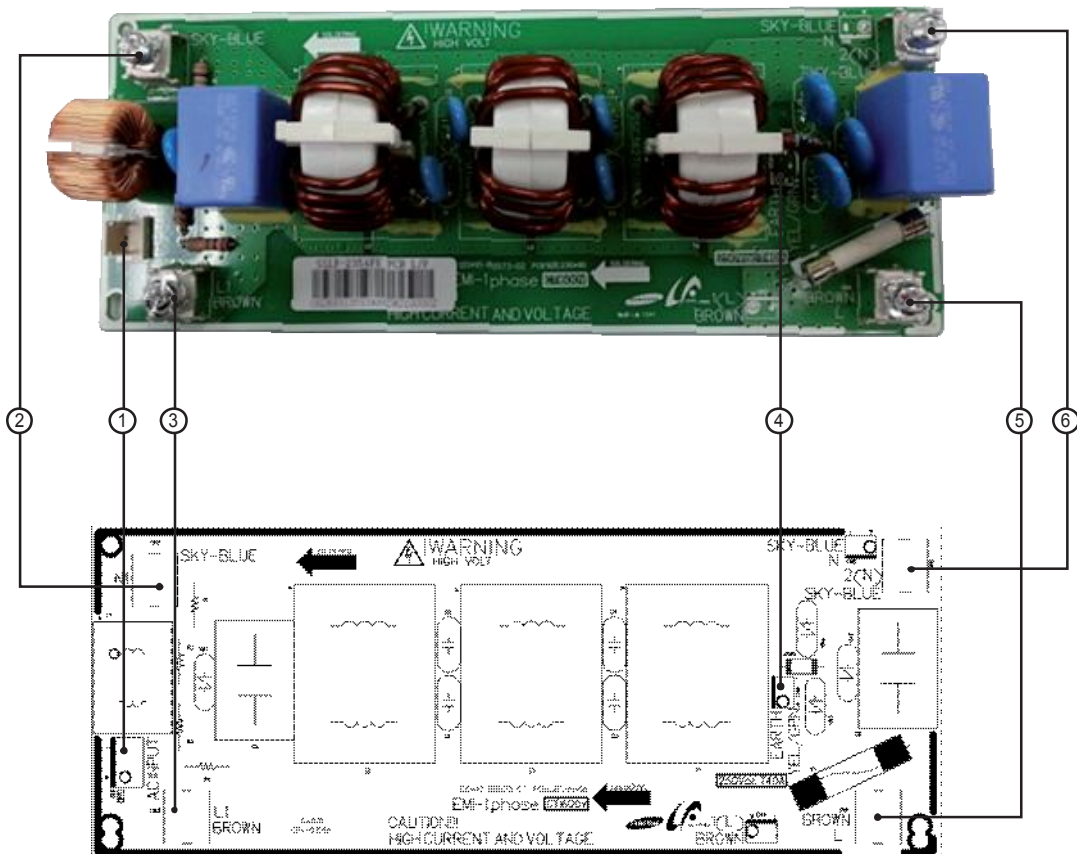
Hydro unit HT

■ Control kit (cont.)

| | | | |
|---|---|--|--|
| <p>① CN101 - POWER</p> <p>#1: L #2: N.C #3: N</p> | <p>② CN702 - 4WAY</p> <p>#1: N #2: N.C #3: 4WAY V/V SIGNAL</p> | <p>③ CN403 - SENSOR</p> <p>#1: OUT TEMP #2: GND #3: COND TEMP #4: GND #5: DISCHARGE TEMP #6: GND #7: OLP TEMP #8: GND</p> | <p>④ CN306 - DOWNLOAD</p> <p>#1 ~ #20: DOWNLOAD</p> |
| <p>⑤ CN802 - EEV</p> <p>#1 ~ #4: EEV SIGNAL #5,#6: DC 12V</p> | <p>⑥ CN806 - EEPROM</p> <p>#1 ~ #7: EEPROM</p> | <p>⑦ CN406 - SENSOR</p> <p>#1: SUCTION TEMP #2: GND #3: N.C #4: N.C</p> | <p>⑧ CN305 - COMM INV</p> <p>#1: COMM SIGNAL #2: COMM SIGNAL #3: GND #4: DC 5V #5: DC 12V #6: COMM SIGNAL</p> |
| <p>⑨ CN401 - LOW PRESSURE</p> <p>#1: N.C #2: SENSOR SIGNAL #3: GND #4: DC 5V</p> | <p>⑩ CN402 - HIGH PREWSSURE</p> <p>#1: SENSOR SIGNAL #2: N.C #3: GND #4: DC 5V</p> | <p>⑪ CN303 - COMM INDOOR</p> <p>#1 ~ #2: COMM SIGNAL</p> | <p>⑫ CN103 - EARTH</p> <p>#1: EARTH</p> |

Hydro unit HT

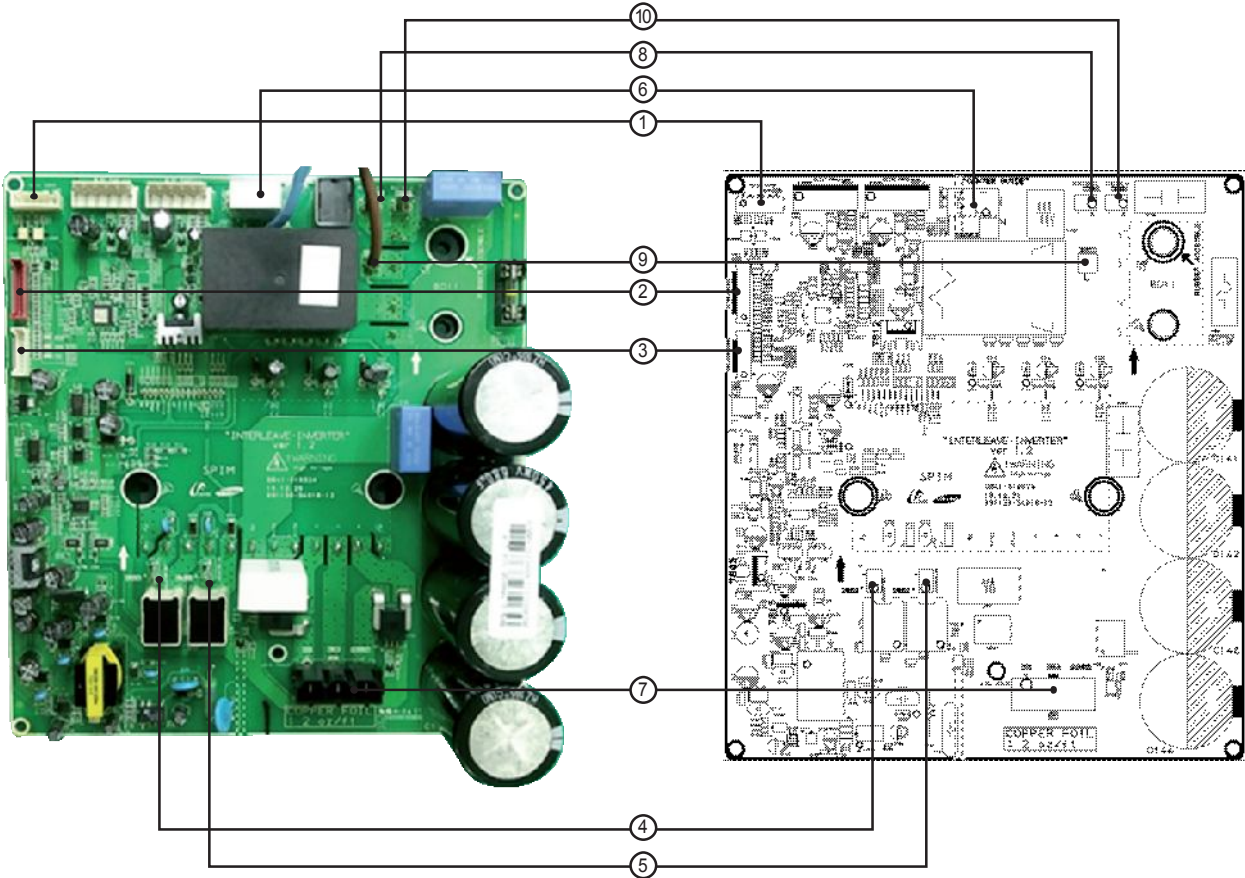
■ ASSY PCB SUB-EMI (1 PHASE)



| | | | |
|--|---------------------------------------|---------------------------------------|---|
| <p>① CN1 - ACPOWER</p> <p>#1: L #2: N.C #3: N</p> | <p>② CN2 - N1</p> <p>#1: N</p> | <p>③ CN3 - L1</p> <p>#1: L</p> | <p>④ CN8 - EARTH</p> <p>#1,#2: EARTH</p> |
| <p>⑤ CN4 - L</p> <p>#1: L</p> | <p>⑥ CN5 - N</p> <p>#1: N</p> | | |

Hydro unit HT

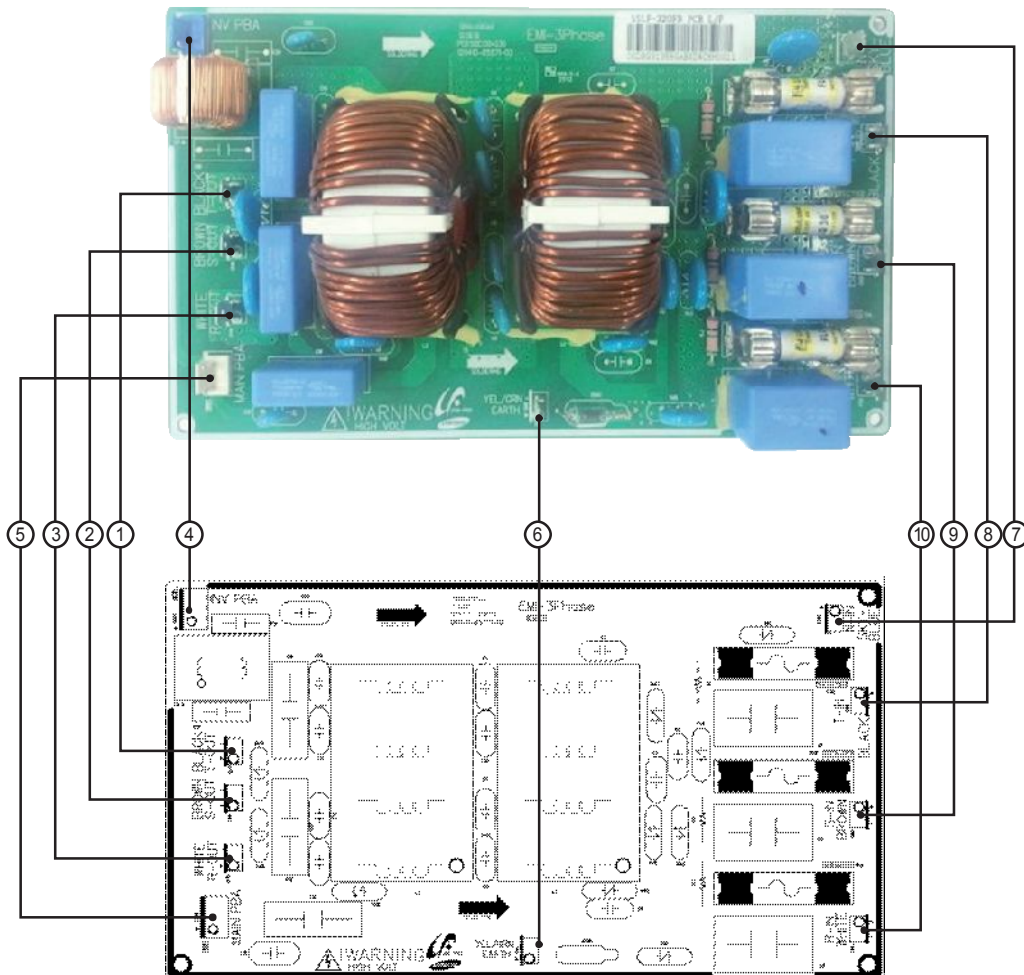
■ ASSY PCB MAIN-INVERTER (1 PHASE)



| | | | |
|--|---|--|--|
| ① CN31 - MAIN COMM #1 : COMM SIGNAL #2 : COMM SIGNAL #3 : GND #4 : DC 5V #5 : DC 12V #6 : COMM SIGNAL | ② CN22 - DOWNLOADER #1 ~ #10 : DOWNLOAD | ③ CN21 - DAC/ENCODER #1 ~ #8 : DOWNLOAD | ④ REACTOR-B2 #1,#2 : REACTOR BLACK |
| ⑤ REACTOR-A2 #1,#2 : REACTOR BLACK | ⑥ N - SKYBLUE WIRE #1 : N | ⑦ CN32 - COMP #1 : RED #2 : BLUE #3 : YELLOW | ⑧ REACTOR-B1 #1,#2 : REACTOR WHITE |
| ⑨ L - BROWN WIRE #1 : L | ⑩ REACTOR-A1 #1,#2 : REACTOR WHITE | | |

Hydro unit HT

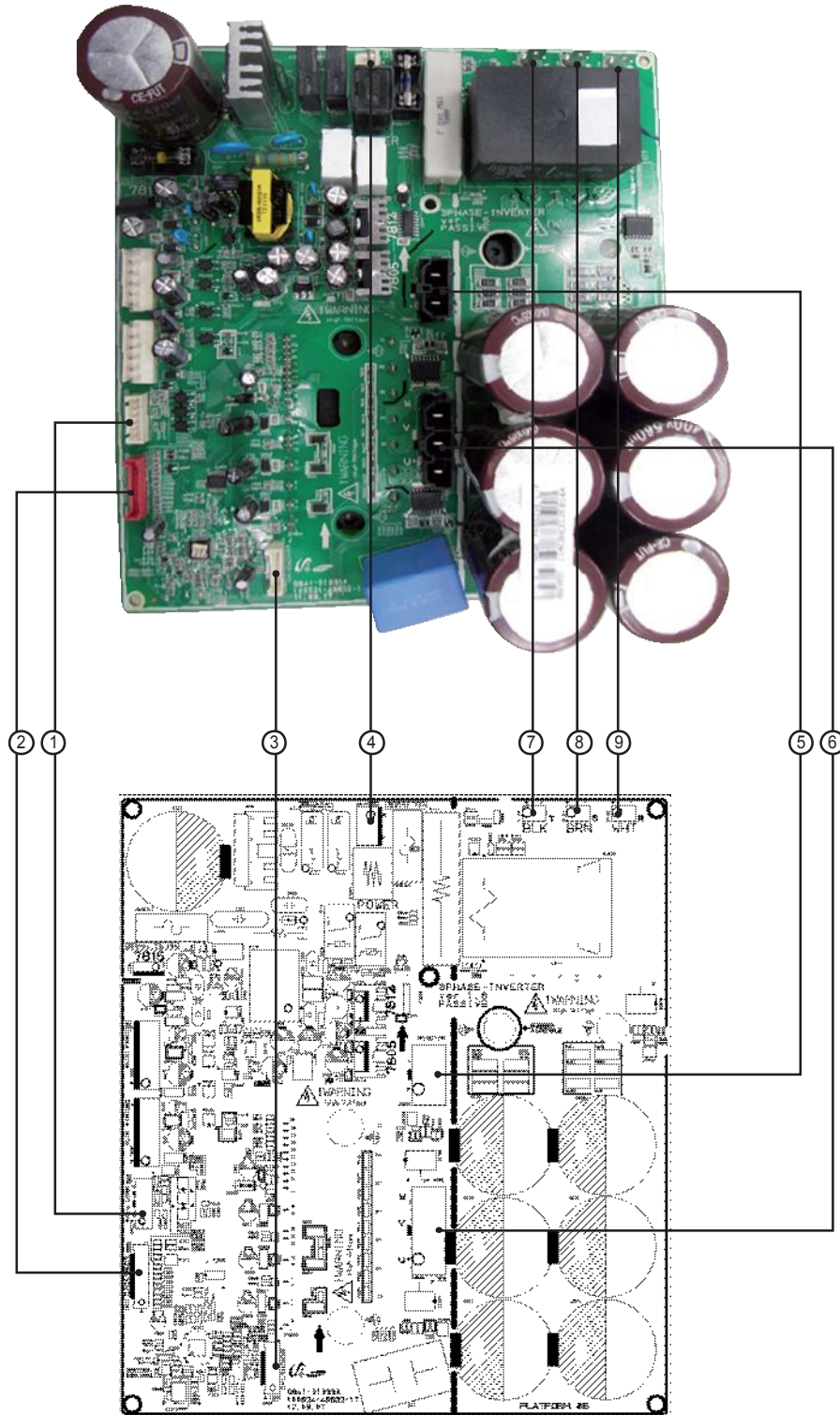
■ ASSY PCB SUB-EMI (3 PHASE)



| | | | |
|---|--|---|---|
| <p>① CN31 - MAIN COMM #1 : COMM SIGNAL #2 : COMM SIGNAL #3 : GND #4 : DC 5V #5 : DC 12V #6 : COMM SIGNAL</p> | <p>② CN22 - DOWNLOADER #1 ~ #10 : DOWNLOAD</p> | <p>③ CN21 - DAC/ENCODER #1 ~ #8 : DOWNLOAD</p> | <p>④ REACTOR-B2 #1,#2 : REACTOR BLACK</p> |
| <p>⑤ REACTOR-A2 #1,#2 : REACTOR BLACK</p> | <p>⑥ N - SKYBLUE WIRE #1 : N</p> | <p>⑦ CN32 - COMP #1 : RED #2 : BLUE #3 : YELLOW</p> | <p>⑧ REACTOR-B1 #1,#2 : REACTOR WHITE</p> |
| <p>⑨ L - BROWN WIRE #1 : L</p> | <p>⑩ REACTOR-A1 #1,#2 : REACTOR WHITE</p> | | |

Hydro unit HT

■ ASSY PCB MAIN-INVERTER (3 PHASE)

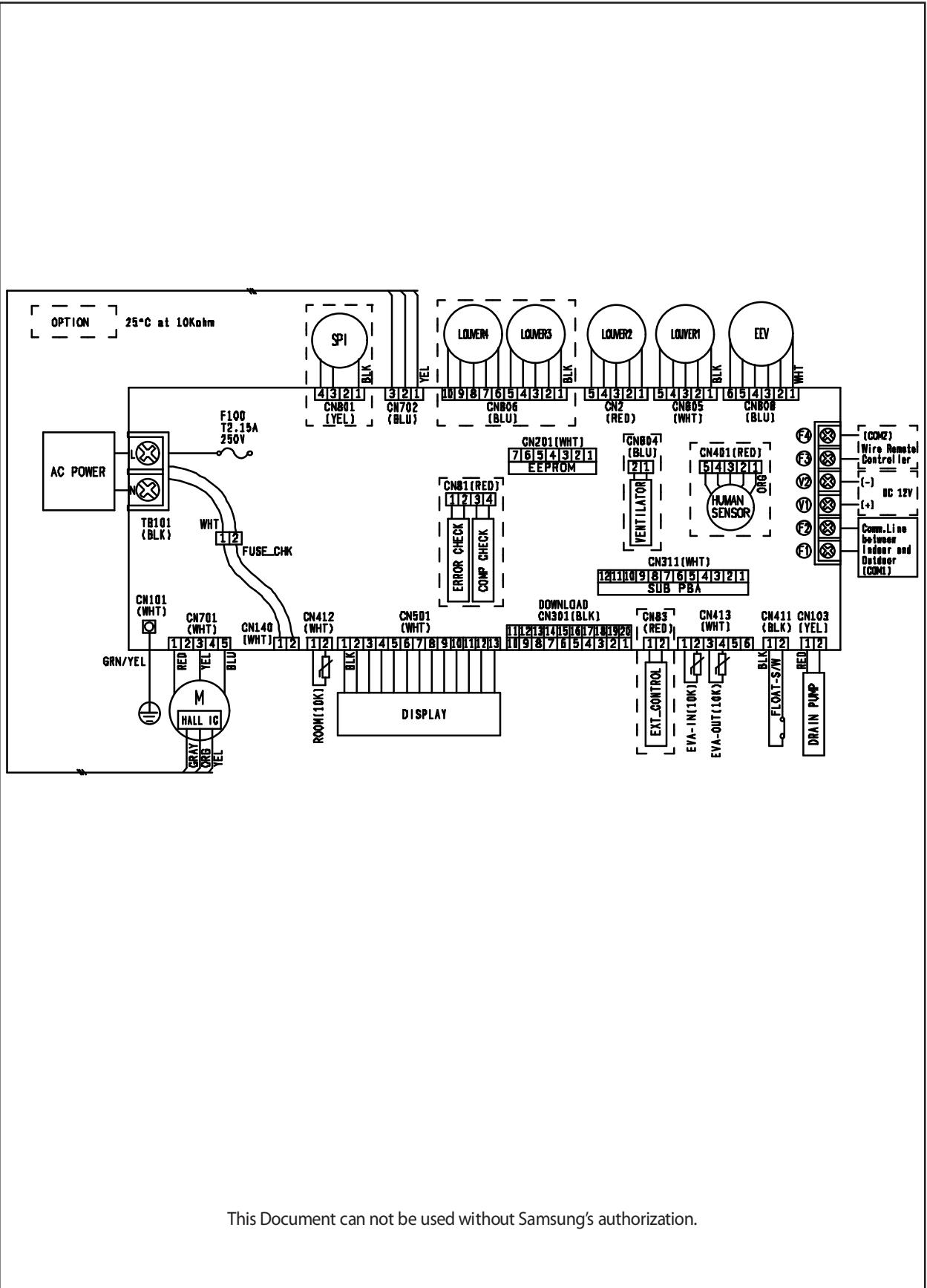


Hydro unit HT

■ ASSY PCB MAIN-INVERTER (3 PHASE)

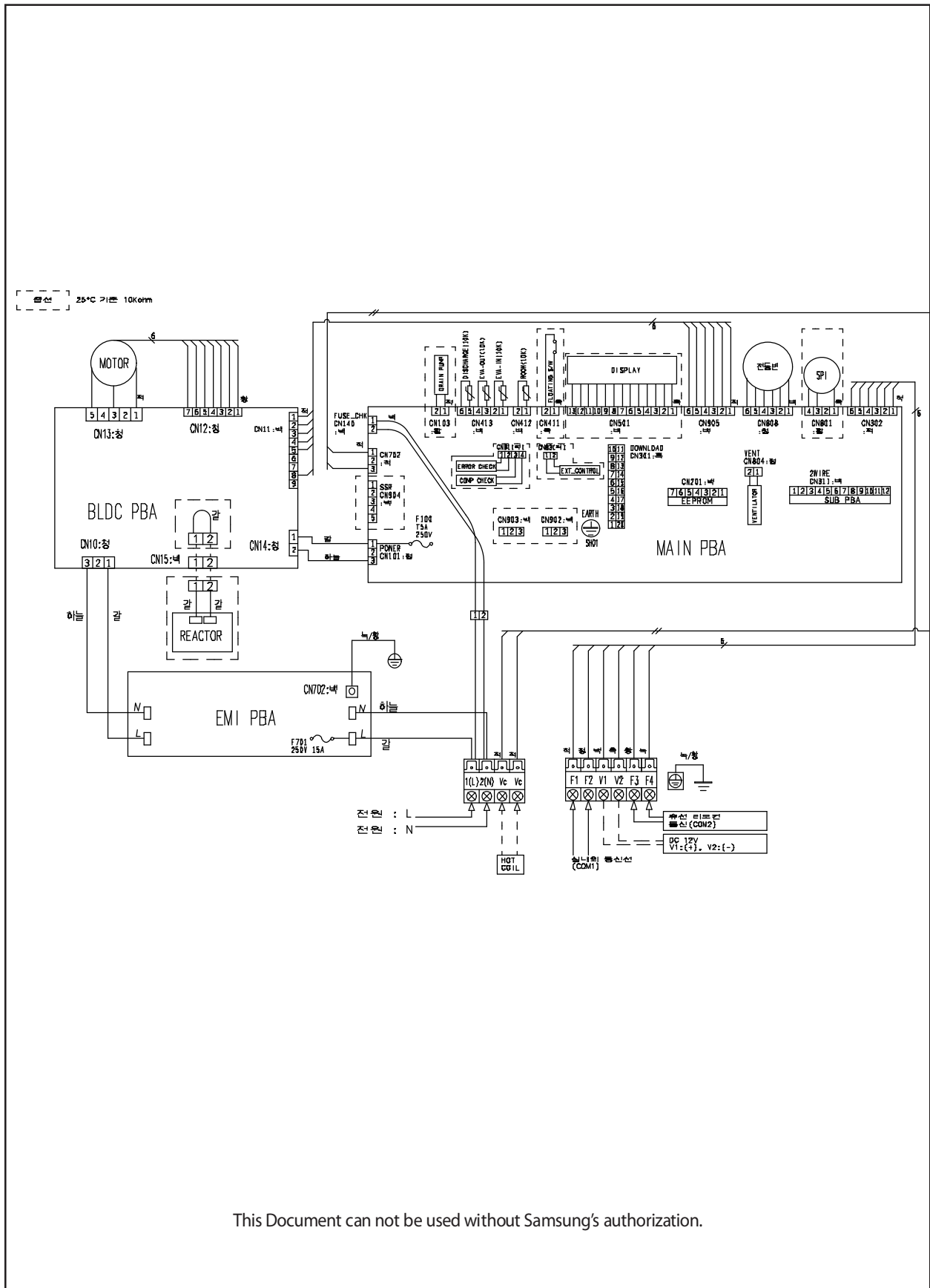
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|--|--|--|--|
| ① CN31 - MAIN COMM #1: COMM SIGNAL #2: COMM SIGNAL #3: GND #4: DC 5V #5: DC 12V #6: COMM SIGNAL | ② CN22 - DOWNLOADER #1 ~ #10: DOWNLOAD | ③ CN21 - DAC/ENCODER #1 ~ #8: DOWNLOAD | ④ CN100 - AC POWER #1: T #2: N.C #3: N |
| ⑤ CN600 - REACTOR #1,#2: REACTOR BLACK | ⑥ CN800 - COMP #1: U #2: V #3: W | ⑦ T-IN #1,#2: T | ⑧ S-IN #1,#2: S |
| ⑨ R-IN #1,#2: R | | | |

6-1-2 Slim 1way cassette type



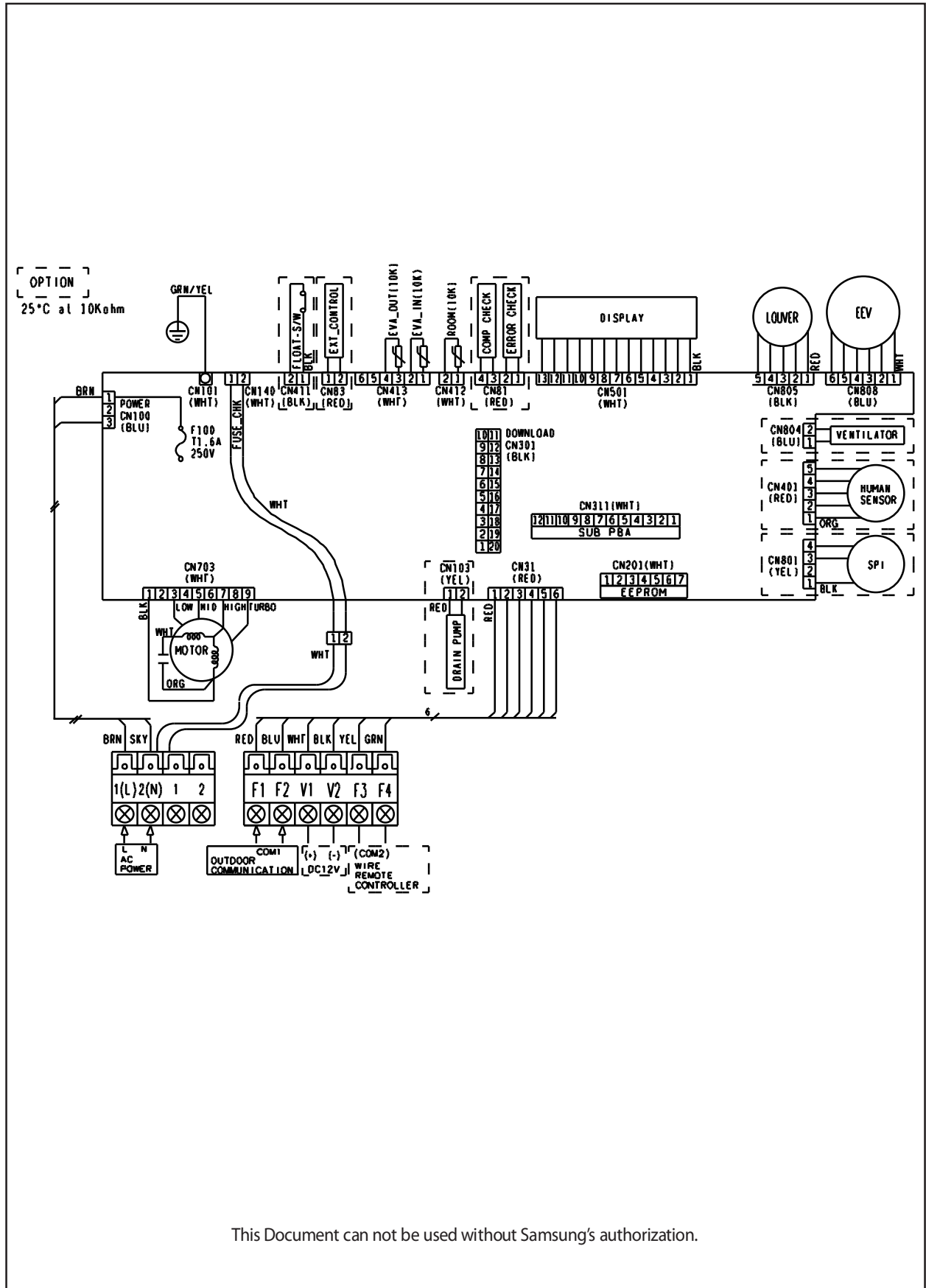
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6-1-3 BIG Duct



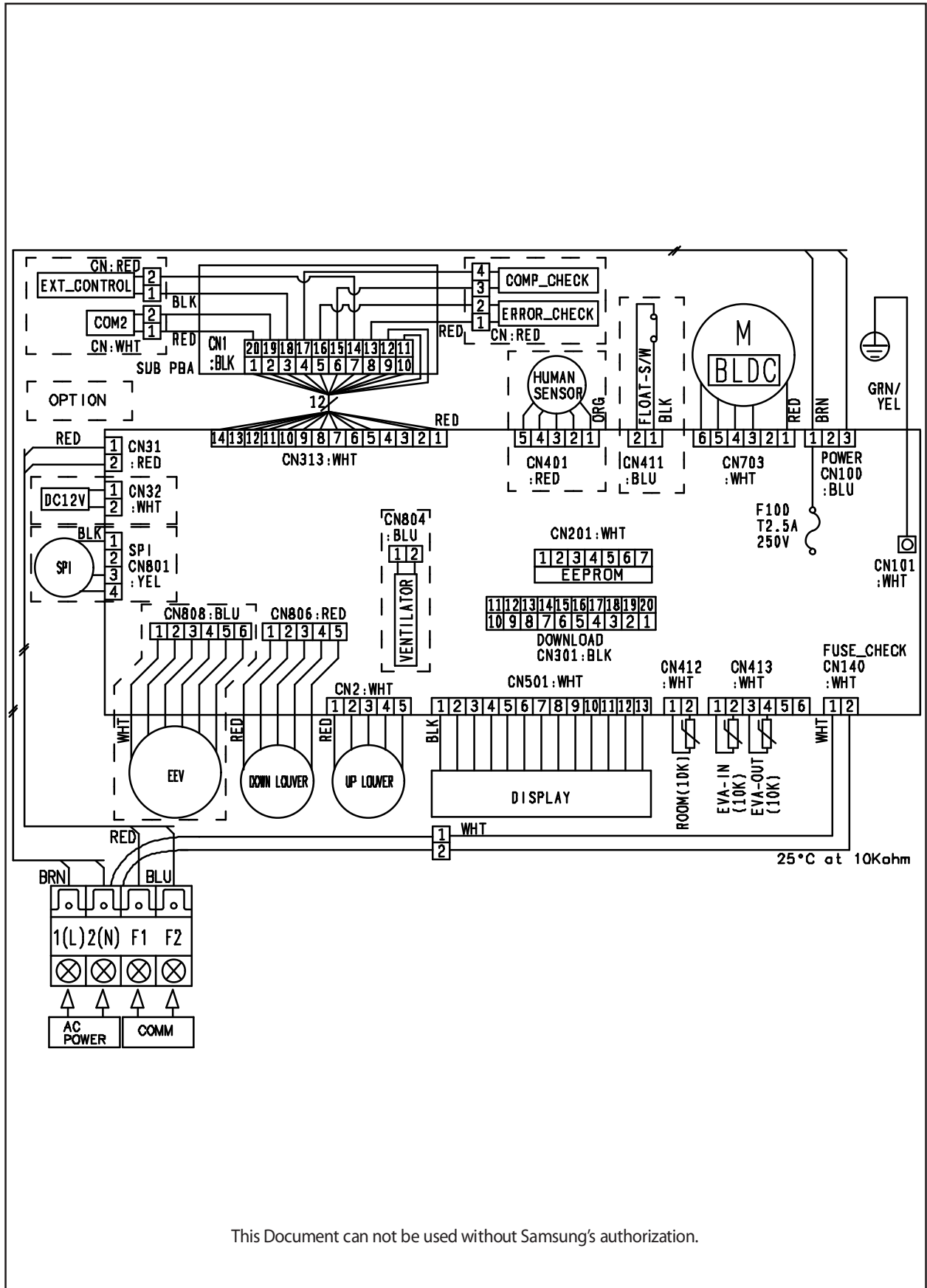
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6-1-4 Ceiling



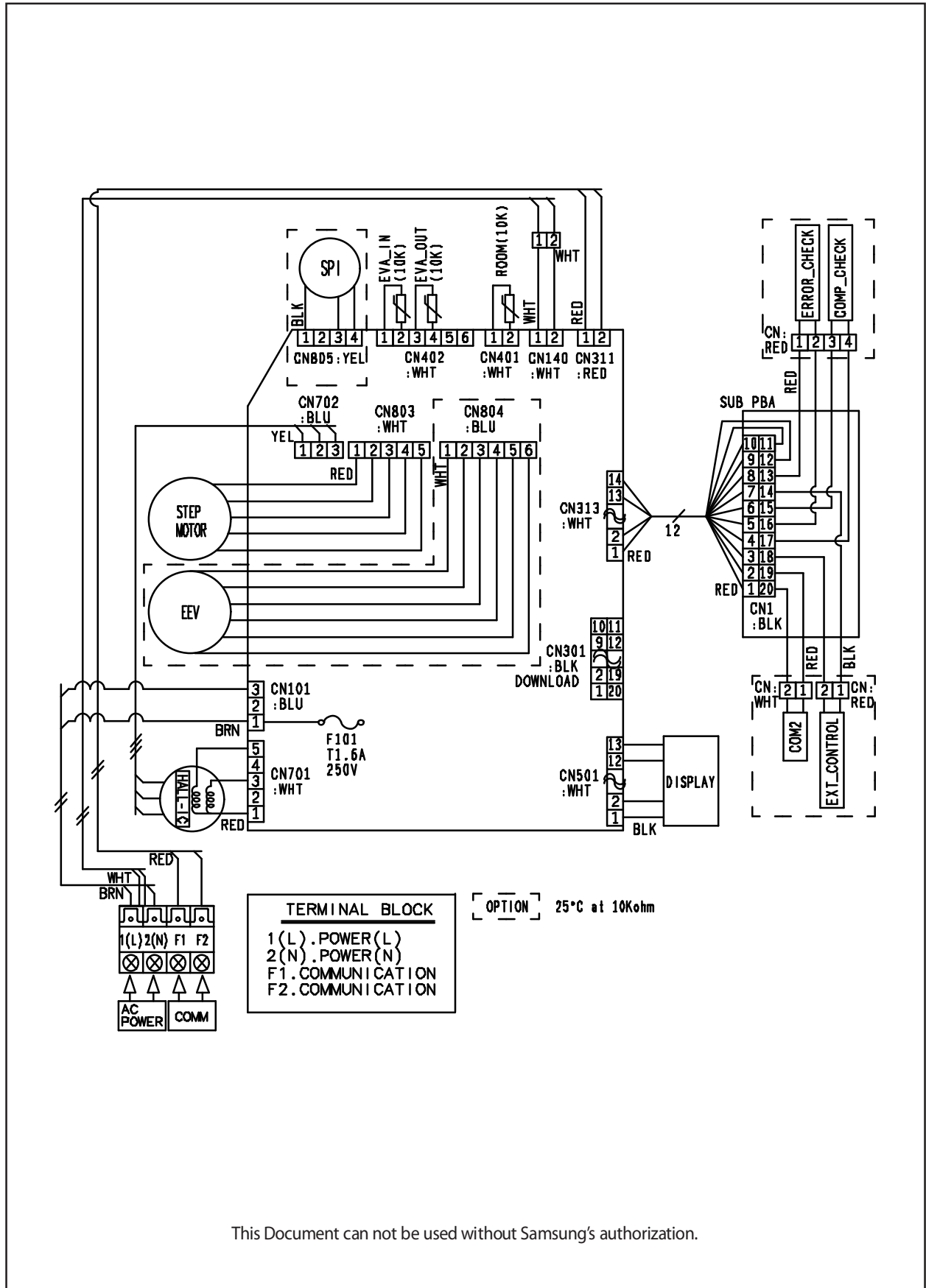
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6-1-5 Console



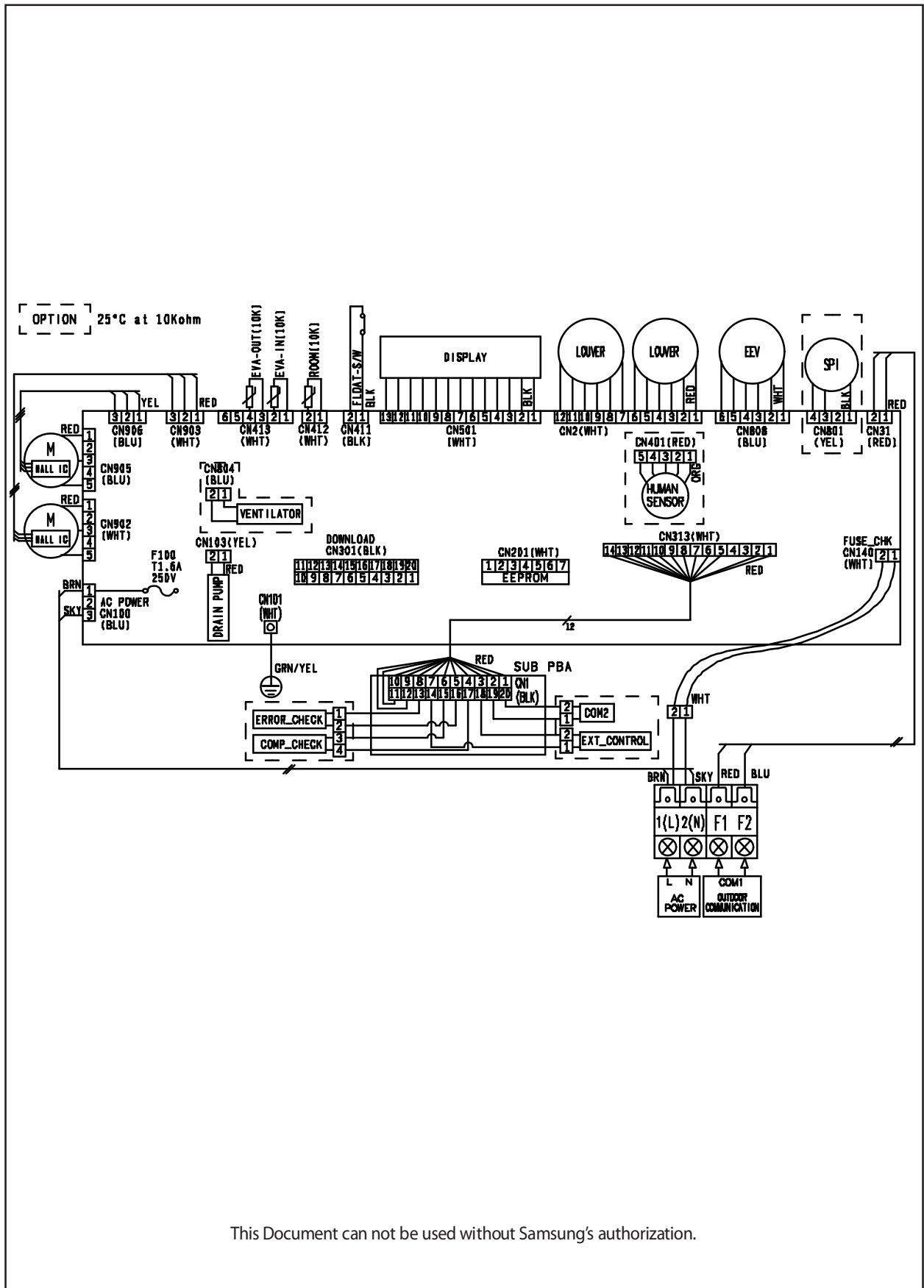
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6-1-6 RAC(Neo Forte)



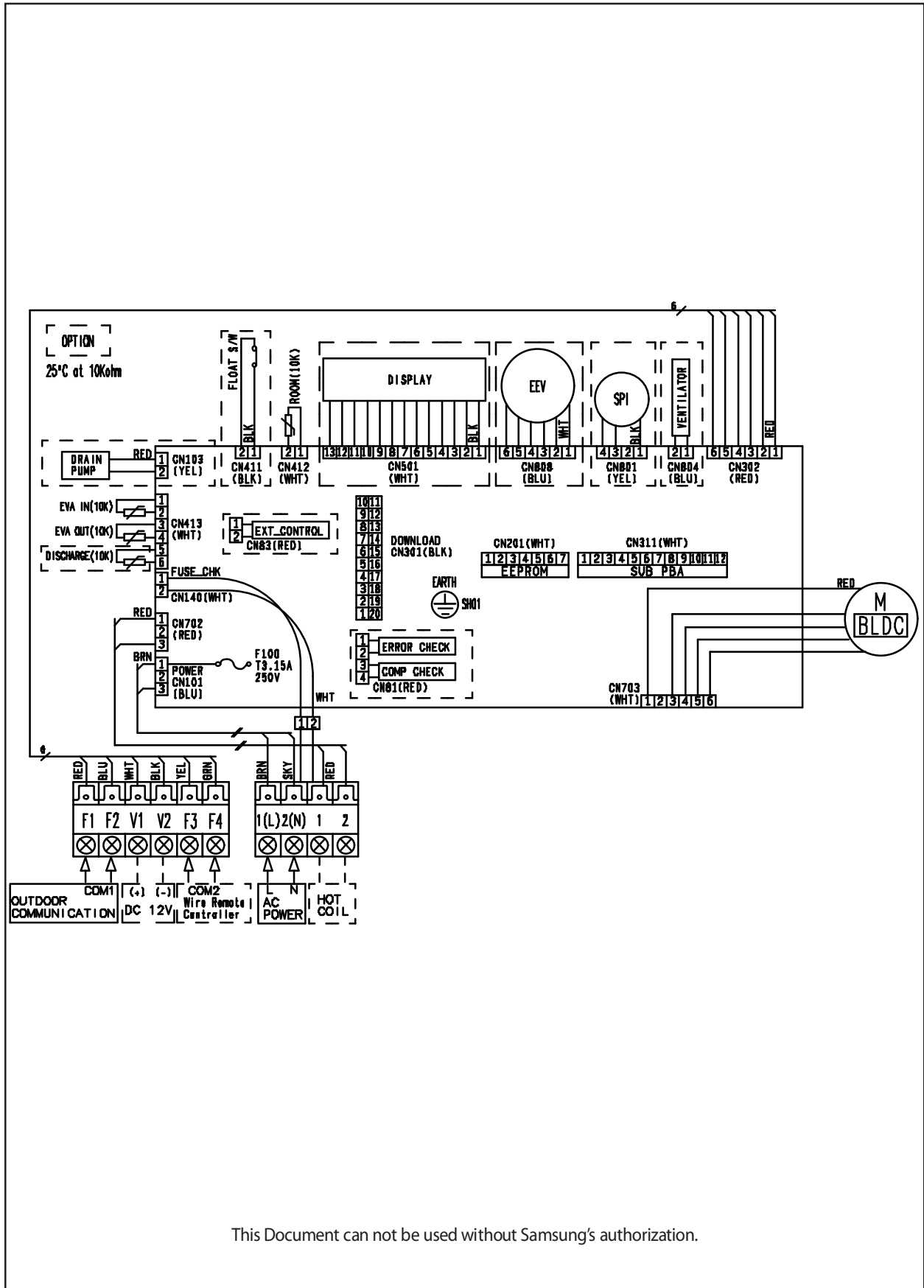
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6-1-7 2way cassette type



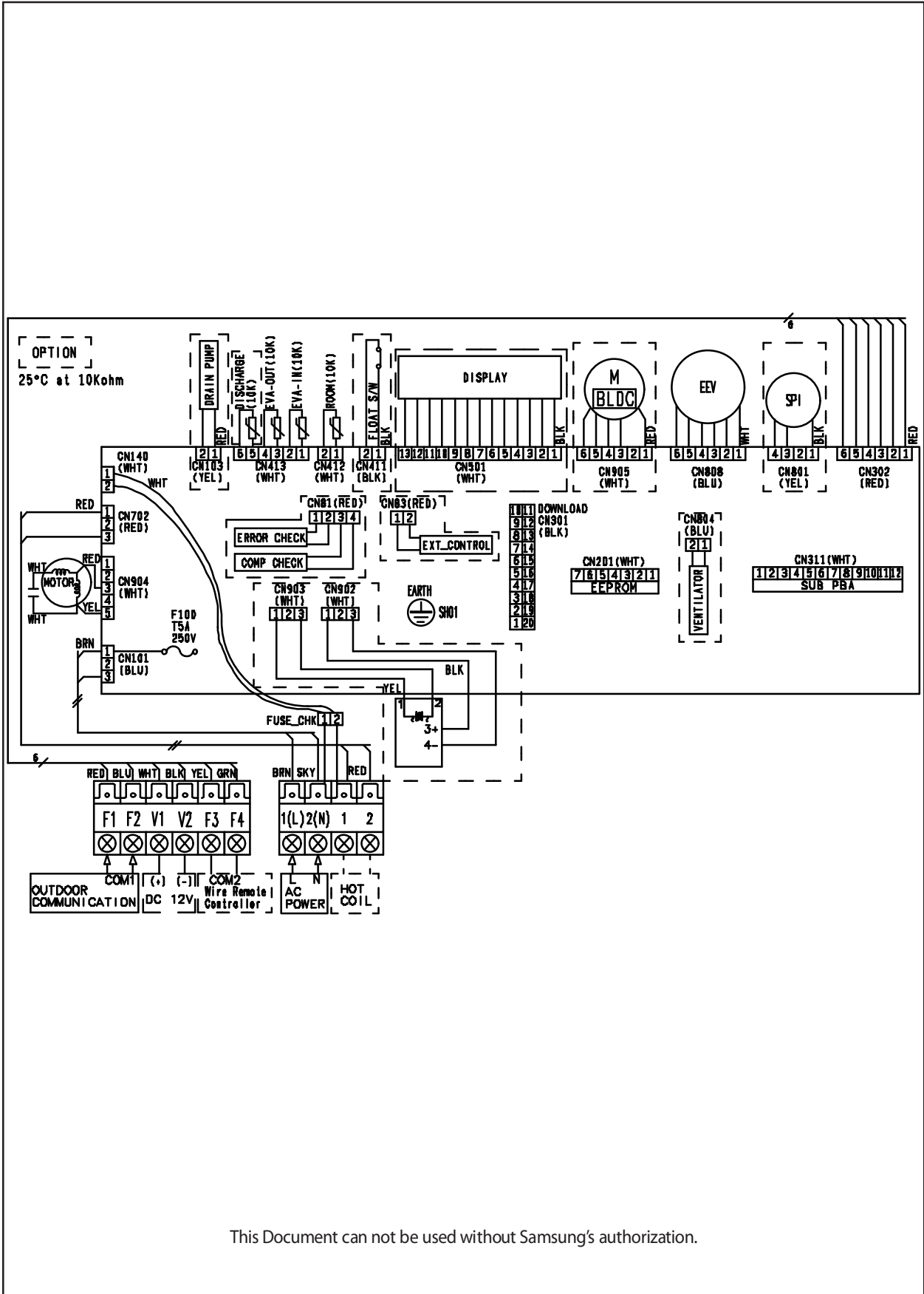
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6-1-8 DUCT type (Slim III)



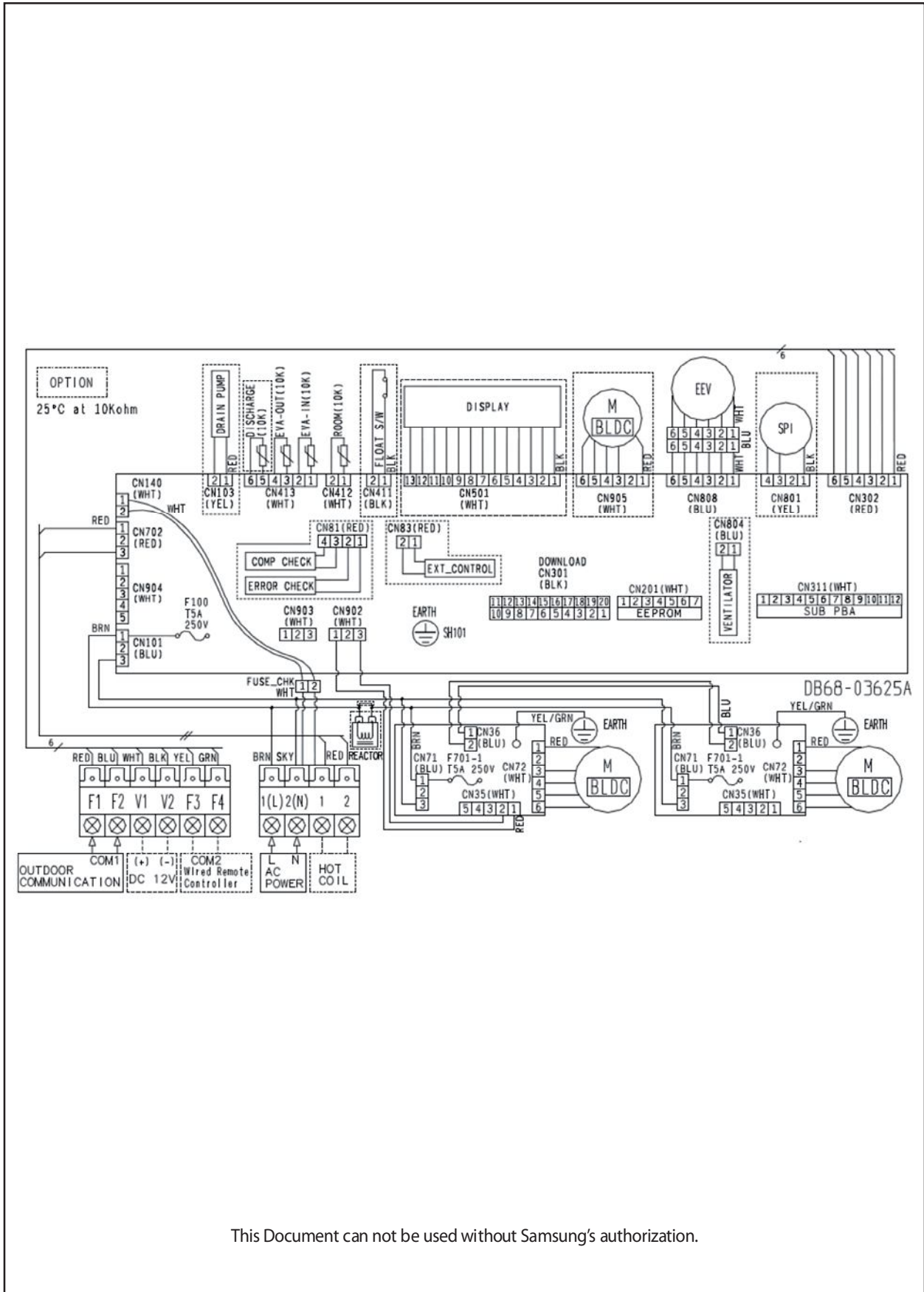
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6-1-9 DUCT type (Slim I, II, MSP)



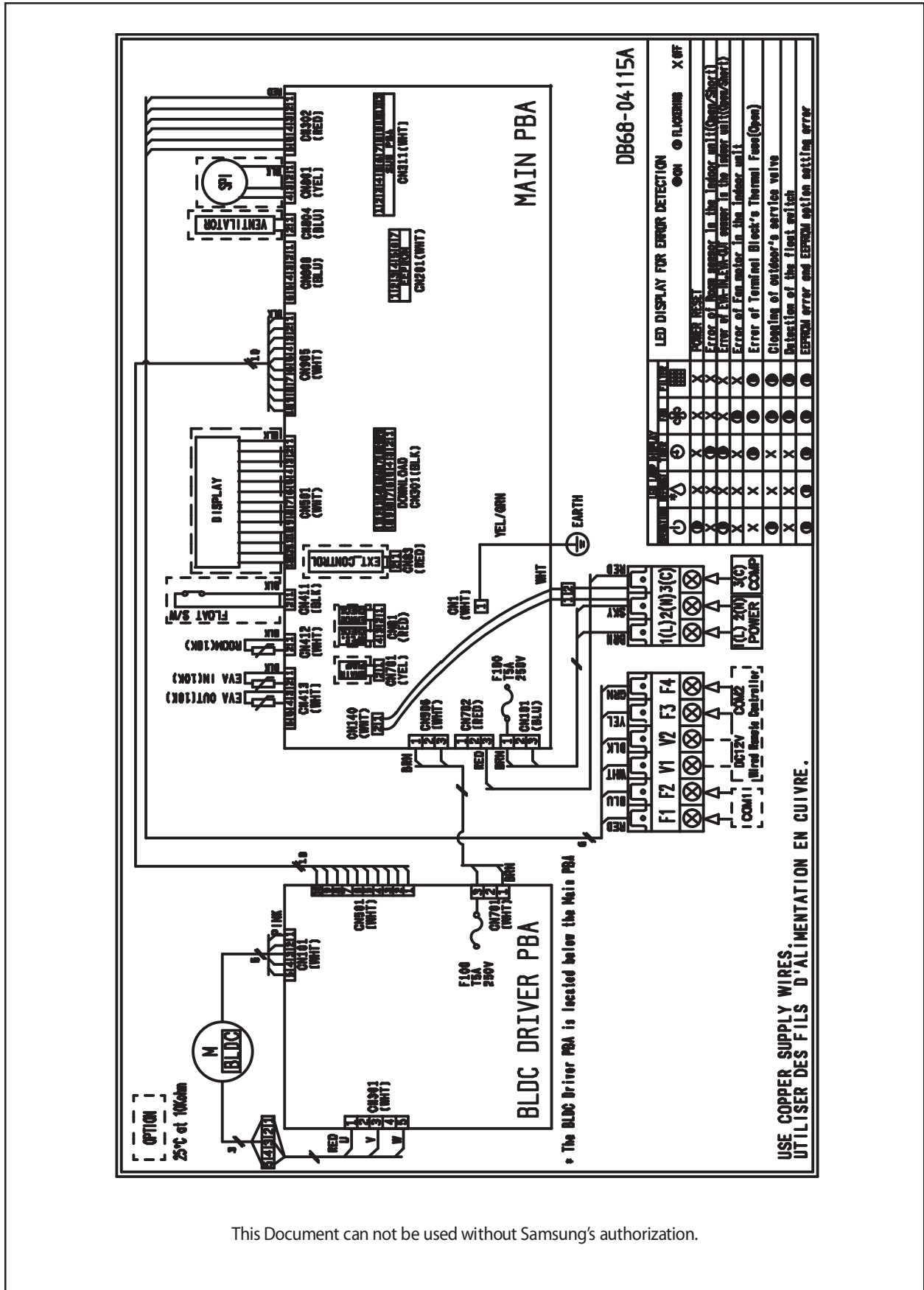
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6-1-10 Duct type (HSP)



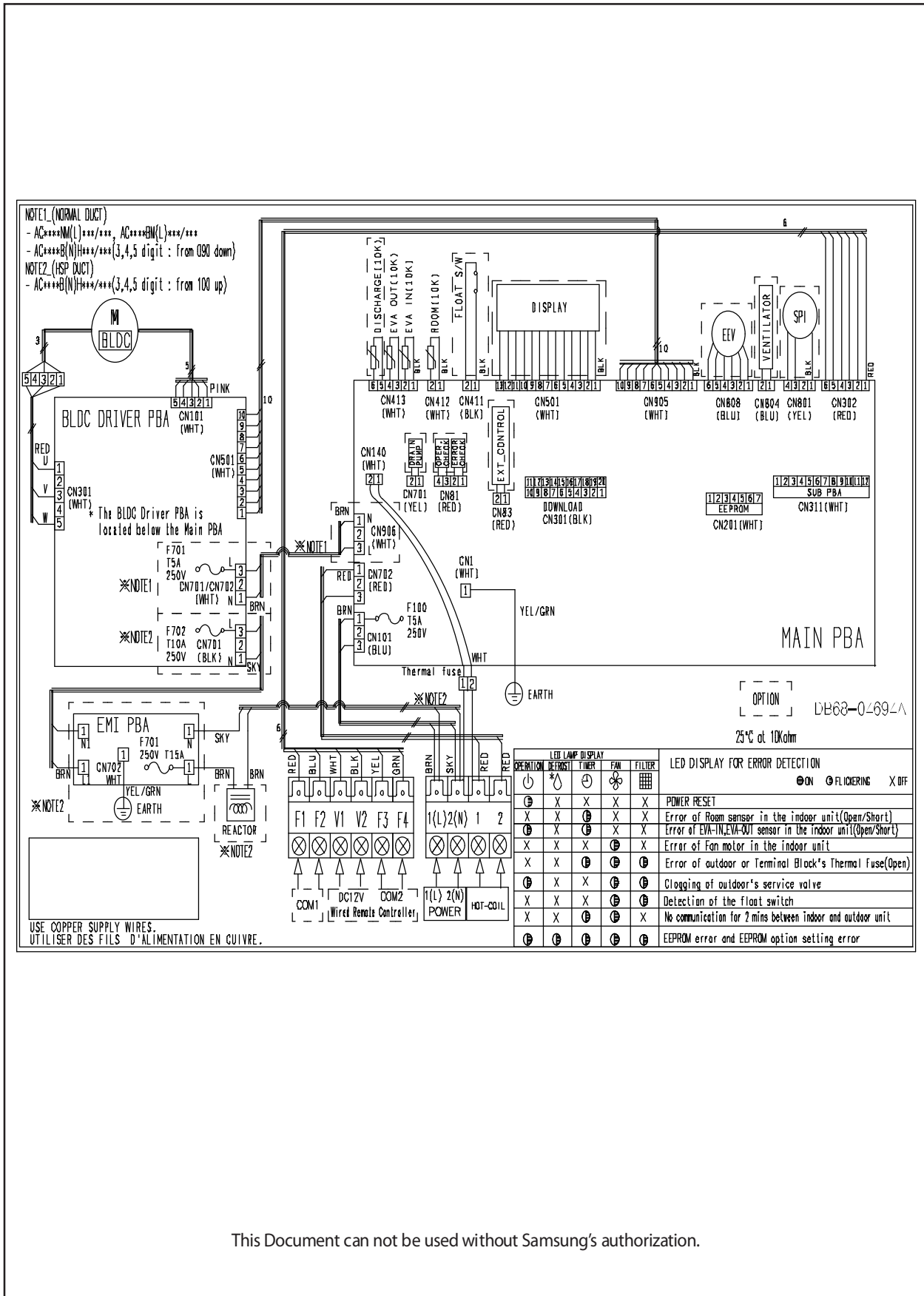
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6-1-11 Duct type (Global Duct, MSP)



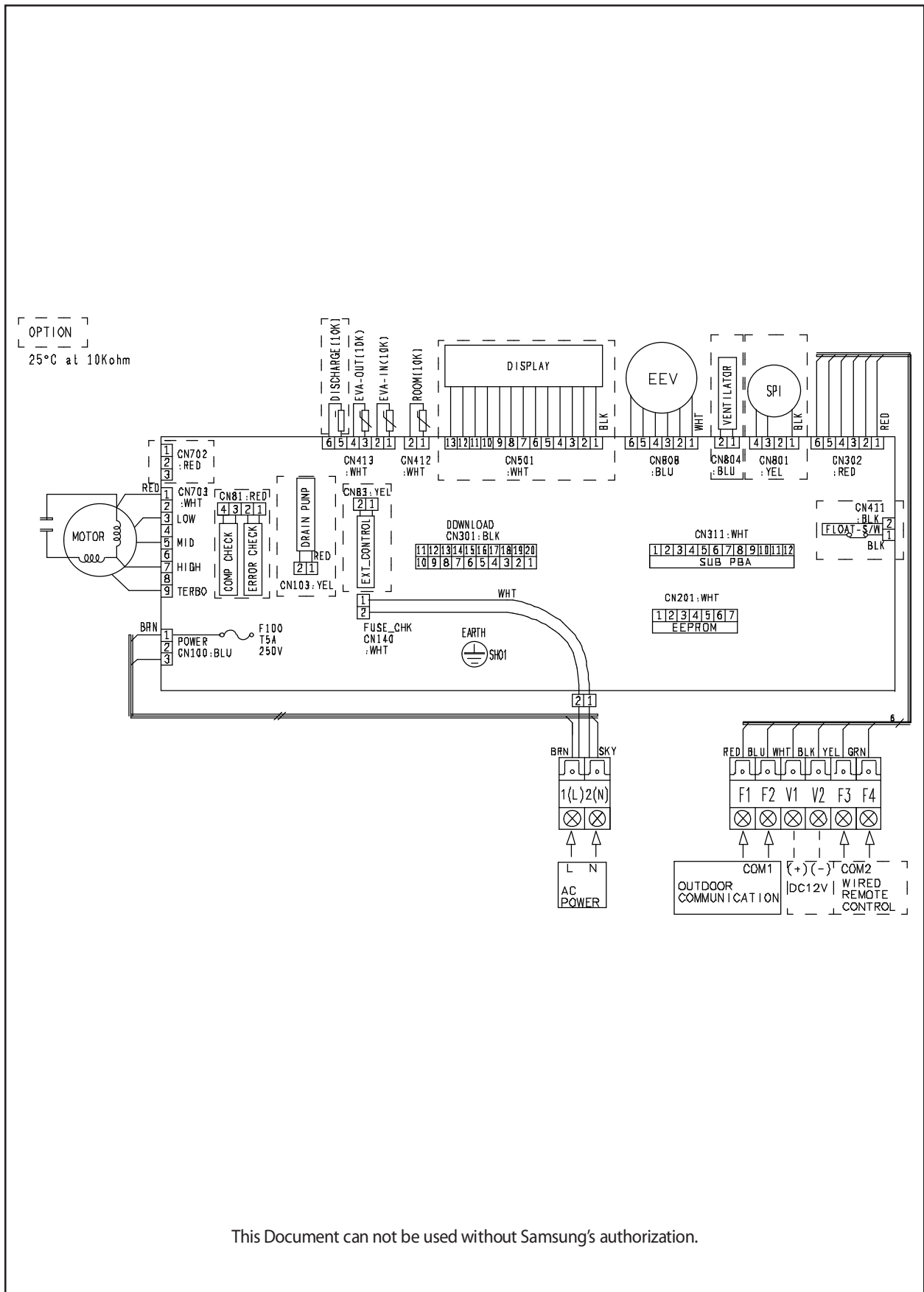
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6-1-12 Duct type (Global Duct, HSP)



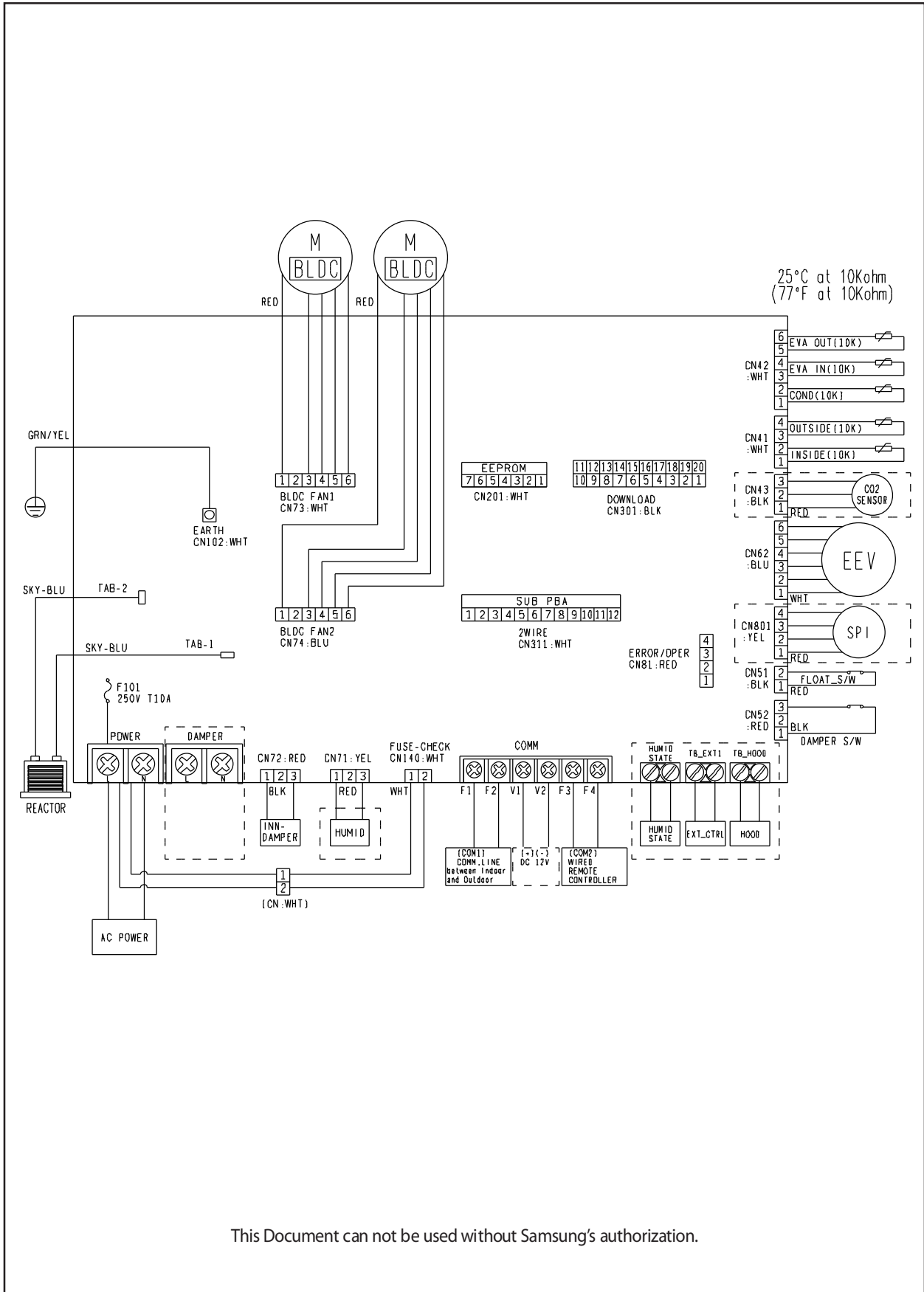
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6-1-13 Floor Stand Type



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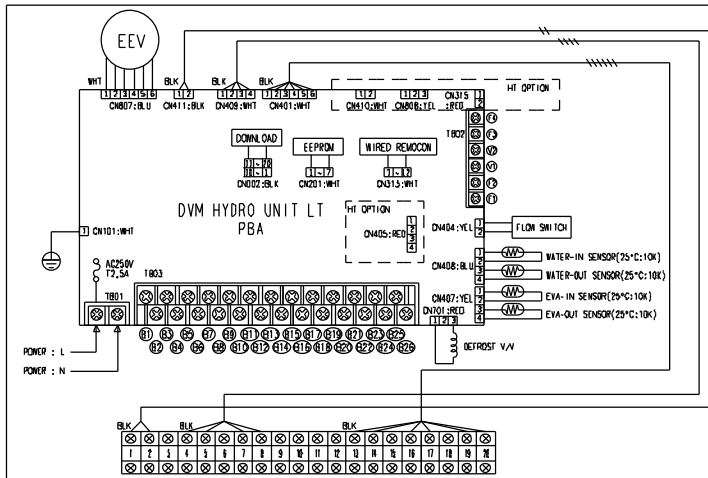
6-1-14 ERV Plus



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6-1-15 Hydro unit

AM160/320/500FNBDEH



| Terminal No. | External contact | Operation status/inspection checklist | Remarks |
|-----------------|---------------------|---|------------------------------|
| B1 - B2 | OPERATION CHECK | Check on/off status for operation lamp of the control panel on the site | Optional |
| B3 - B4 | ALARM | Check on/off status for alarm lamp of the panel on the site | Optional |
| B5 - B6 | MAIN PUMP | Check the status of the pump operation signal and on/off status of operation at the control panel on the site | Mandatory |
| B7 - B8 | HEATER | Check the status of the heater operation signal output of the control panel on the site | Optional |
| B9 - B10 - B11 | 3WAY 1 V/V | Check the status of signal output and on/off status of valve operation (directional switch of the indoor hot water loop) | Optional |
| B12 - B13 - B14 | 3WAY 2 V/V | Check the status of signal output and on/off status of valve operation (interlocked with solar energy pump signal) | Optional |
| B15 - B16 - B17 | 2WAY V/V | Check the status of signal output or operation status of the valve | Optional |
| B19 - B20 | AC230, THERMOSTAT 1 | Check the connection status of the thermostat and operation status of the product (cooling) | Optional |
| B21 - B22 | AC230, THERMOSTAT 2 | Check the connection status of the thermostat and operation status of the product (heating) | Optional |
| B23 - B24 | AC24, THERMOSTAT 1 | Check the connection status of the thermostat and operation status of the product (cooling) | Optional |
| B25 - B26 | AC24, THERMOSTAT 2 | Check the connection status of the thermostat and operation status of the product (heating) | Optional |
| 1 - 2 | ROOM TEMP | Check the temperature display on the wired remote controller after operatively installing the indoor temperature sensor. (Refer to option setting of the wired remote controller) | Optional |
| 7 - 8 | WATER TANK TEMP | Check the temperature display on the wired remote controller after installing the P200A temperature sensor | Mandatory (hot water supply) |
| 13 - 14 | SOLAR PUMP | Check the solar pump contact signal input and status of the operation | Optional |
| 16 - 17 | EXT. CONTROL | Check the contact signal input and status of the operation | Optional |
| 19 - 20 | SMART GRID | Check the Smart Grid contact input and the signal | Optional |

| Display | Explanation |
|---------|---|
| E101 | Communication error between DVM Hydro unit and outdoor unit (When DVM Hydro unit is having trouble with receiving data from outdoor unit) |
| E102 | Communication error on outdoor unit |
| E121 | Error on room temperature sensor of DVM Hydro unit (Short or Open) |
| E122 | Error on EVA IN sensor of DVM Hydro unit (Short or Open) |
| E123 | Error on EVA OUT sensor of DVM Hydro unit (Short or Open) |
| E128 | EVA IN sensor of DVM Hydro unit is detached |
| E129 | EVA OUT sensor of DVM Hydro unit is detached |
| E130 | EVA IN and EVA OUT sensor of DVM Hydro unit is detached |
| E151 | Error due to opened EEV of DVM Hydro unit (2nd detection) |
| E152 | Error due to closed EEV of DVM Hydro unit (2nd detection) |
| E161 | Mixed operation mode error |
| E162 | EEPROM error |
| E163 | EEPROM option setting error |
| E177 | Check the water circulating |
| E185 | Cross wiring error (When power line is connected to communication line of DVM Hydro unit) |
| E198 | Error due to disconnected Thermal Fuse (When the temperature of terminal block is increases) |
| E901 | Error on the sensor of water inlet pipe (Short or Open) |
| E902 | Error on the sensor of water outlet pipe (Short or Open) |
| E907 | Error due to pipe rupture protection |
| E908 | Error due to freeze prevention |
| E909 | Water temperature sensor on water outlet pipe is detached |
| E911 | Error due to turned off Flow switch |
| E913 | (when switch turns off within 10 seconds after pump starts to operate) |
| E914 | Error due to incorrect thermostat connection |

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6-1-16 Hydro unit HT 3 phase

AM160/250FNBFGB

| Error No | PBA - 에러 설명 Error Description | 원인 Cause | 조치 Action | 참고 Remarks | 비고 Notes |
|----------|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| E 110 | Control kit (PBA - UNIT)의 릴레이 접점 불량 (Control kit relay error) | 제어 키트 (PBA - UNIT)의 릴레이 접점 불량 | 제어 키트 (PBA - UNIT)의 릴레이 접점 불량 | 제어 키트 (PBA - UNIT)의 릴레이 접점 불량 | 제어 키트 (PBA - UNIT)의 릴레이 접점 불량 |
| E 121 | Compressor error between the control kit and main | 제어 키트와 메인 사이에서 압축기 오류 | 제어 키트와 메인 사이에서 압축기 오류 | 제어 키트와 메인 사이에서 압축기 오류 | 제어 키트와 메인 사이에서 압축기 오류 |
| E 122 | High pressure sensor (Short/Open) | 고압 센서 단락/개방 | 고압 센서 단락/개방 | 고압 센서 단락/개방 | 고압 센서 단락/개방 |
| E 123 | Low pressure sensor (Short/Open) | 저압 센서 단락/개방 | 저압 센서 단락/개방 | 저압 센서 단락/개방 | 저압 센서 단락/개방 |
| E 124 | Temperature sensor error (Short/Open) | 온도 센서 단락/개방 | 온도 센서 단락/개방 | 온도 센서 단락/개방 | 온도 센서 단락/개방 |
| E 125 | Compressor error (The in-matched number of hydro unit) | 압축기 오류 (수동 단락/개방) | 압축기 오류 (수동 단락/개방) | 압축기 오류 (수동 단락/개방) | 압축기 오류 (수동 단락/개방) |
| E 126 | Compressor error between the indoor and hydro unit | 실내기와 압축기 사이에서 압축기 오류 | 실내기와 압축기 사이에서 압축기 오류 | 실내기와 압축기 사이에서 압축기 오류 | 실내기와 압축기 사이에서 압축기 오류 |
| E 127 | Hydro unit control error between the indoor and in, main | 수동 단락/개방 | 수동 단락/개방 | 수동 단락/개방 | 수동 단락/개방 |
| E 128 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 129 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 130 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 131 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 132 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 133 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 134 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 135 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 136 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 137 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 138 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 139 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 140 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 141 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 142 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 143 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 144 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 145 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 146 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 147 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 148 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 149 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 150 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 151 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 152 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 153 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 154 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |
| E 155 | Compressor error (Short/Open) | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 | 압축기 단락/개방 |

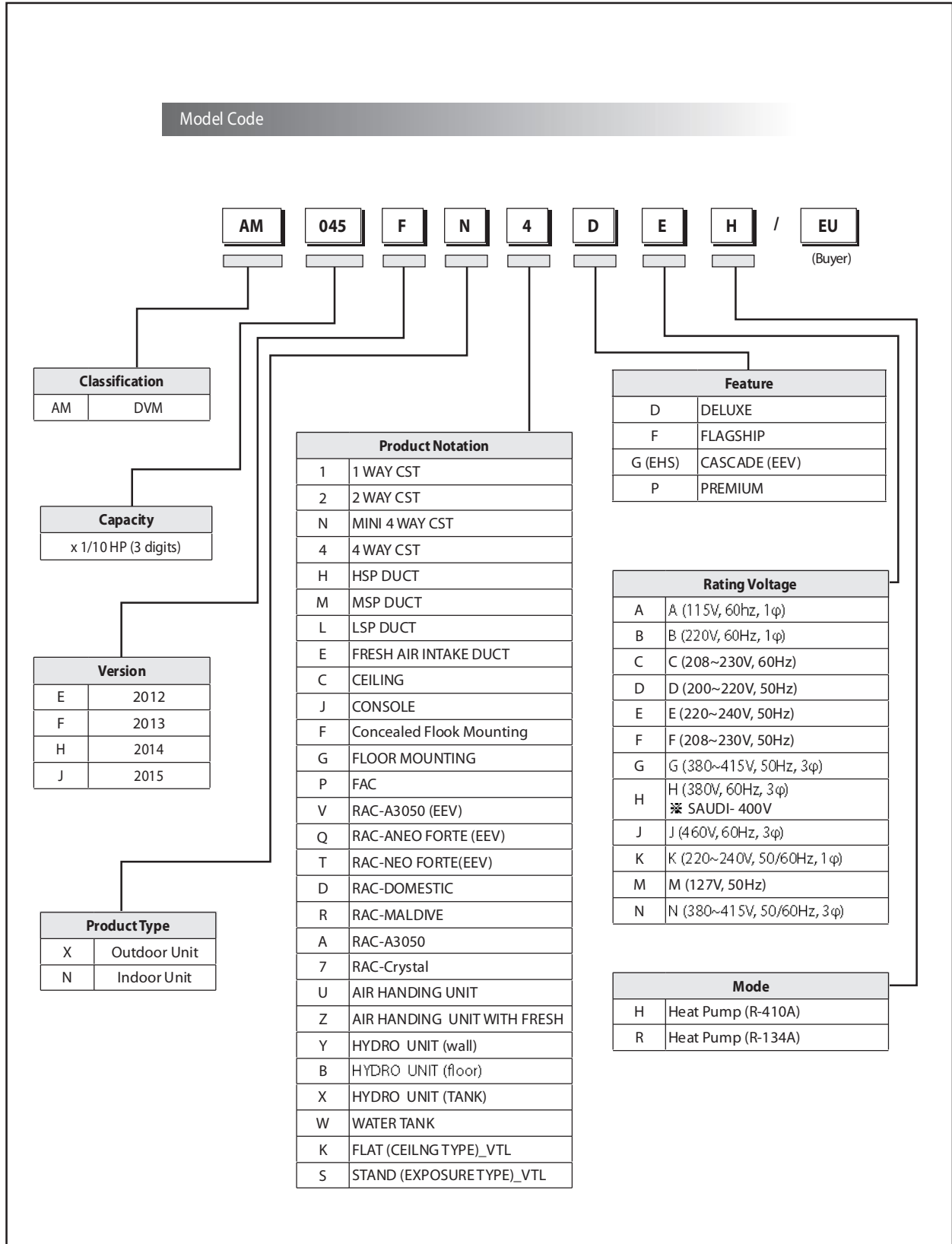
D868-04031A-00
하이드루닛 전기회로도
Wiring Diagram Hydro unit
D868-04031A

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7. Reference Sheet

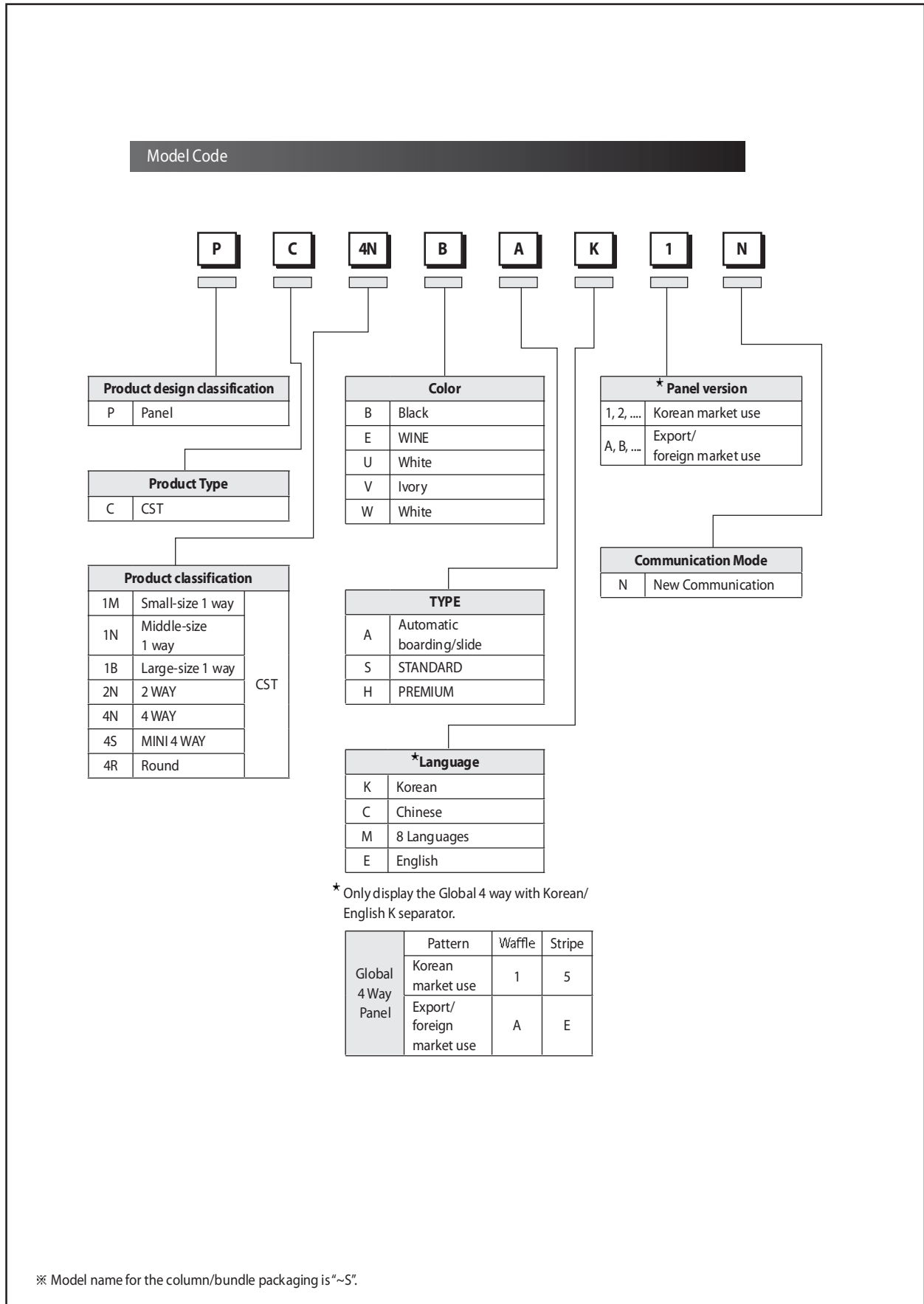
7-1 Index for Model Name

7-1-1 Indoor Unit



Index for Model Name(cont.)

7-1-2 Panel



7-2 Pump-down Method

7-2-1 Precautions for Pump-down

1. If the pressure is kept low for a long time to completely replenish the refrigerant of the pipe during the pump-down, then the compressor may be damaged. Therefore, close the valve immediately if the pressure goes below 2kg/cm²g.
2. If the length of the pipe is too long or the outside temperature is too high, then it may not be able to pump down all of the refrigerant. In this case, use an empty refrigerant container which can be used for recharge to place some of the system refrigerant inside the container. The pump down can be easily carried out if only the remaining refrigerant is pumped down.



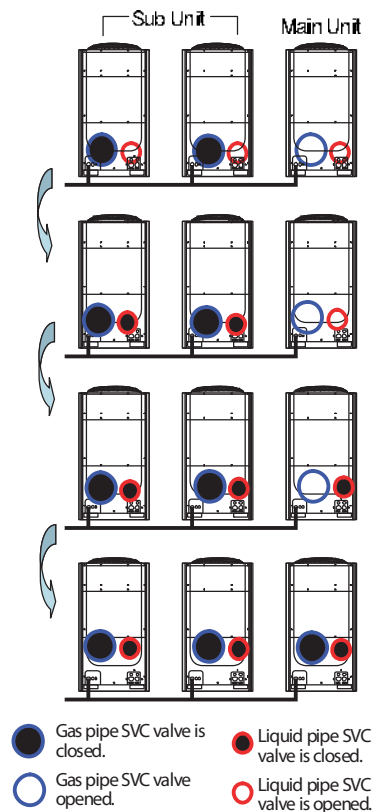
- Please use a rechargeable container for exclusive use when putting the refrigerant in the container. Accidents such as explosions can happen and result in damage if normal refrigerant containers are used after illegal modification.

7-2-2 For Single Installation of Outdoor Unit (Only One Outdoor Unit Installed)

1. Close the liquid pipe SVC valve.
2. Press the K2 Button on the PCB of the main outdoor unit. ("K7" mark displayed on the outdoor unit PCB LED.)
3. Observe for low pressure by using the K4 button's view mode once the compressor starts operating.
(If the first number of the LED is "4," then the following three digits represent the low pressure, expressed up to the first decimal point.)
Example: 41 22 → 4 means the value of the low pressure, and 122 means that the low pressure is 12.2kg/cm²g.
4. If the low pressure goes below around 2kg/cm²g, then immediately close the SVC valve for the gas and finish the pump-down operation.
(Finish the pump-down operation, press K2 button two more times, or reset the operation by pressing the K3 button once more.)

7-2-3 When Two or More Outdoor Units are Installed

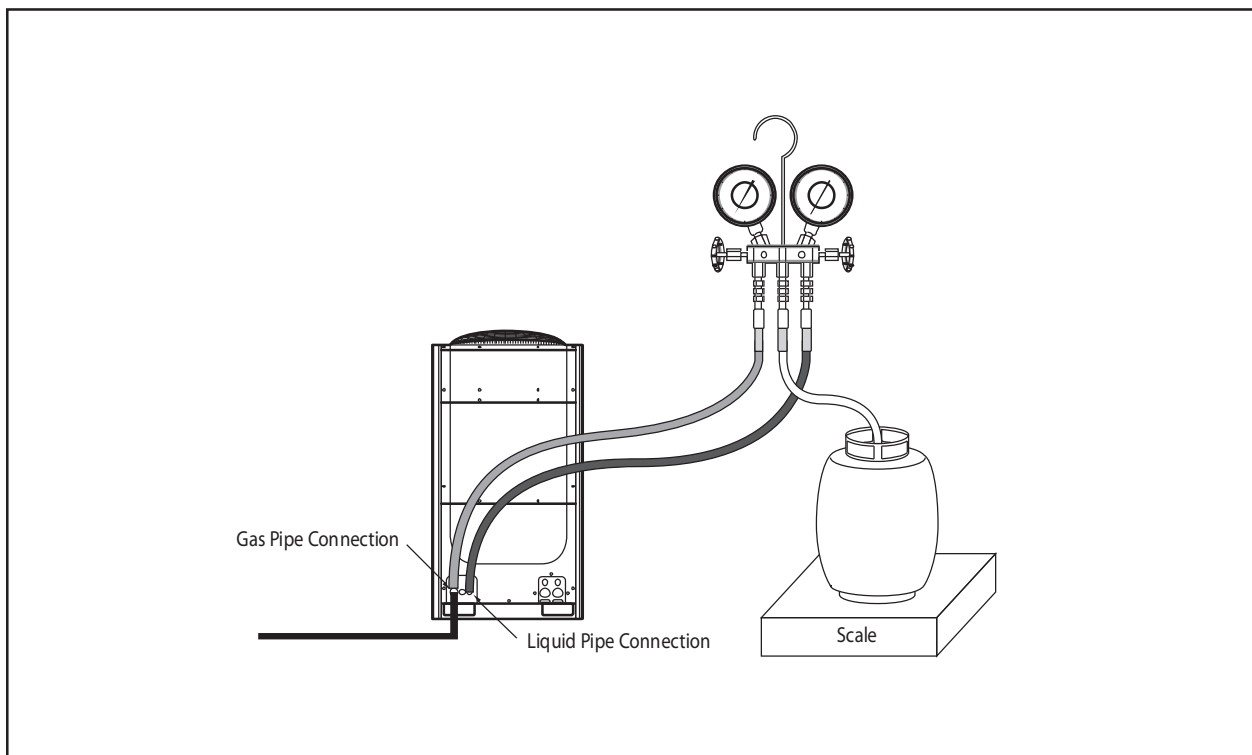
1. Close the gas valves of each sub unit.
2. Press the K2 button of the outdoor unit PCB three times. At this time, K7 will be displayed on the PCB LED. After pressing the button, wait for about 20~30 minutes once the main unit compressor starts operating.
3. Close the liquid pipe valves of each sub unit.
4. Close the liquid pipe valves of the main unit, and observe for low pressure as in the case of a single outdoor unit.
5. Close the gas valve of the main unit if the pressure drops down, and then finish the pump-down operation mode.



7-3 How to Put Refrigerant in Refrigerant Container

7-3-1 How to put refrigerant in container before pump-down

1. Prepare a rechargeable exclusive refrigerant container, a scale, and a Manifold gauge.
2. Check the amount of refrigerant remaining in the overall system at the time.
3. Connect the refrigerant container to the outdoor unit as shown in the following figure, and operate only about 50% of the total indoor units in air conditioning mode.
4. Check the high pressure from the Manifold gauge 10 minutes after the air conditioning begins operation.
Reduce the number of indoor units in operation if the high pressure goes above $30\text{kg}/\text{cm}^2\text{g}$. to lower the high pressure below $30\text{kg}/\text{cm}^2\text{g}$.
5. Check that the high pressure goes below $30\text{kg}/\text{cm}^2\text{g}$, and open the Manifold gauge connected to the liquid pipe, as well as the refrigerant container valve, so that the refrigerant flows from the liquid pipe to the refrigerant container.
6. Check the changes in the weight of the container using the scale. Once the desired amount of refrigerant is filled up inside the container, close the valves, and then remove the Manifold gauge.
7. The amount of refrigerant that can be contained inside the container is about 50% of the amount of refrigerant inside the overall system.
8. Please take extra caution by precisely determining the amount of the refrigerant that can be put in each container so that too much refrigerant is not contained in the container.
The weight must be measured by using a scale to avoid putting more refrigerant than the amount originally contained in the container.





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