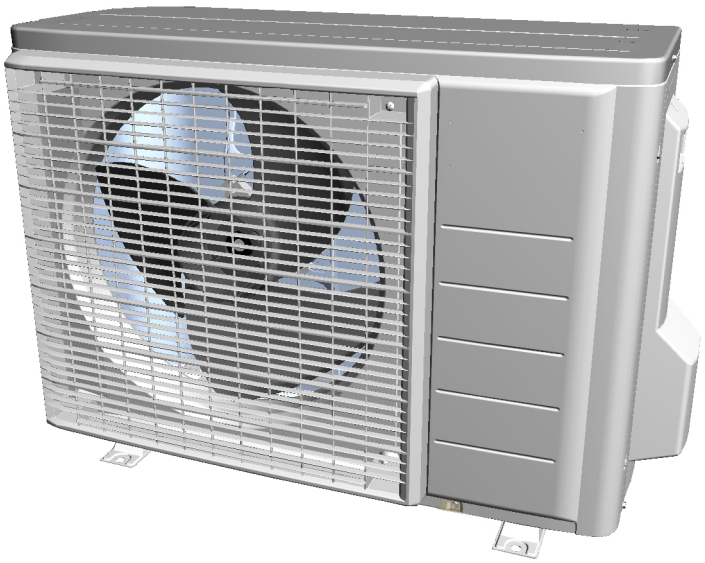
DAIKIN

ESIE17-19C

Service Manual

Optimized Heating 4

Indoor unit	Outdoor unit
FTXTA30AW	RXTA30N
FTXTM30-40M	RXTM30-40N
FTXTP25-35K	RXTP25-35N
FVXM25-35F	RXTP25-35N9
ATXTP25-35K	ARXTP25-35N



Part 1. Introduction

This part contains the following chapters:

1.1. Version log

Version code	Description	Date
ESIE17-19	Release	03/04/2018
ESIE17-19A	Update field settings	01/06/2018
ESIE17-19B	Correct description on J8 facility setting jumper on defrost performance	15/02/2019
ESIE17-19C	Added models FTXTA-A, FVXM-F, RTXA-A, RXTP-N9	19/08/2019

1.2. Safety precautions

The precautions described in this document cover very important topics, follow them carefully.

All activities described in the service manual must be performed by an authorized person.

If you are not sure how to install, operate or service the unit, contact your dealer.

In accordance with the applicable legislation, it might be necessary to provide a logbook with the product containing at least: information on maintenance, repair work, results of tests, stand-by periods, …

Also, at least, following information must be provided at an accessible place at the product:

- Instructions for shutting down the system in case of an emergency
- Name and address of fire department, police and hospital
- Name, address and day and night telephone numbers for obtaining service

In Europe, EN378 provides the necessary guidance for this logbook.

1.2.1. Meaning of symbols

	**WARNING** Indicates a situation that could result in death or serious injury.
	**WARNING: RISK OF ELECTROCUTION** Indicates a situation that could result in electrocution.
	**WARNING: RISK OF BURNING** Indicates a situation that could result in burning because of extreme hot or cold temperatures.
	**WARNING: RISK OF EXPLOSION** Indicates a situation that could result in explosion.
	**WARNING: RISK OF POISONING** Indicates a situation that could result in poisoning.
	**WARNING: RISK OF FIRE** Indicates a situation that could result in fire.
	**CAUTION** Indicates a situation that could result in equipment or property damage.
	**INFORMATION** Indicates useful tips or additional information.

1.2.2. Warnings

	**WARNING** Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Only use accessories, optional equipment and spare parts made or approved by Daikin.

WARNING

Make sure installation, testing and applied materials comply with applicable legislation (on top of the instructions described in the Daikin documentation).

WARNING

Make sure the work site environment is clean and safe to work in. Beware of spilled fluids, like water, oil or other substances. Protect bystanders from injury and property from possible damage cause by service works.

WARNING

Wear adequate personal protective equipment (protective gloves, safety glasses,…) when installing, maintaining or servicing the system.

WARNING

Tear apart and throw away plastic packaging bags so that nobody, especially children, can play with them. Possible risk: suffocation.

WARNING

Do NOT touch the air inlet or aluminium fins of the unit.

WARNING

- Do NOT place any objects or equipment on top of the unit.
- Do NOT sit, climb or stand on the unit.

WARNING

During tests, NEVER pressurize the product with a pressure higher than the maximum allowable pressure (as indicated on the nameplate of the unit).

WARNING

- Never mix different refrigerants or allow air to enter the refrigerant system.
- Never charge recovered refrigerant from another unit. Use recovered refrigerant only on the same unit where it was recovered from, or have it recycled at a certified facility.

WARNING: RISK OF FIRE

- When reconnecting a connector to the PCB, do not apply force or damage the connector or the connector pins on the PCB.

WARNING: RISK OF BURNING

- Do NOT touch the refrigerant piping, water piping or internal parts during and immediately after operation. It could be too hot or too cold. Give it time to return to normal temperature. If you must touch it, wear protective gloves.
- Do NOT touch any accidental leaking refrigerant.

WARNING

Always recover the refrigerants. Do NOT release them directly into the environment. Use a recovery pump to evacuate the installation.

Take sufficient precautions in case of refrigerant leakage. If refrigerant gas leaks, ventilate the area immediately.

Possible risks:

- Excessive refrigerant concentrations in a closed room can lead to oxygen deficiency.
- Toxic gas may be produced if refrigerant gas comes into contact with fire.

Where applicable, pump down the system and close the service valve, before leaving the site if leak was not repaired, to avoid further leaking of the refrigerant.

WARNING: RISK OF ELECTROCUTION

- Turn OFF all power supply before removing the switch box cover, connecting electrical wiring or touching electrical parts. Where applicable, stop the equipment's operation first and allow (refrigerant) pressure to equalize, before turning OFF the power. Disconnect the power supply for more than 1 minute, and measure the voltage at the terminals of main circuit capacitors or electrical components before servicing. The voltage must be less than 50 V DC before you can touch electrical components. For the location of the terminals, refer to "Wiring diagram" on page 112.
- Do NOT touch electrical components with wet hands.
- Do NOT leave the unit unattended when the service cover is removed.
- Protect electric components from getting wet while the service cover is opened.

WARNING

- Only use copper wires.
- All field wiring must be performed in accordance with the wiring diagram and installation manual supplied with the product.
- If the power cable and lead wires have scratches or deteriorated, be sure to replace them. Damaged cable and wires may cause an electrical shock, excessive heat generation or fire.
- Secure all terminal connections and provide proper routing for cables, both inside and outside the switchbox.
- NEVER squeeze bundled cables and make sure they do not come in contact with the piping and sharp edges.
- Make sure no external pressure is applied to the terminal connections.
- Make sure to check the earth wiring. Do NOT earth the unit to a utility pipe, surge absorber, or telephone earth. Improper earth wiring may cause electrical shock.
- Make sure to use a dedicated power circuit. NEVER use a power supply shared by another appliance.
- Make sure to check the required fuses and/or circuit breakers before starting works.

WARNING

- After finishing the electrical work, confirm that each electrical component and terminal inside the electrical components box is connected securely.
- Make sure all covers are closed before starting the unit again.

WARNING

- The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres.
- Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

WARNING

- Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant.
- The label shall be dated and signed.
- For appliances containing flammable refrigerants, ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

1.2.3. Cautions

CAUTION

Provide adequate measures to prevent that the unit can be used as a shelter by small animals. Small animals that make contact with electrical parts can cause malfunctions, smoke or fire.

CAUTION

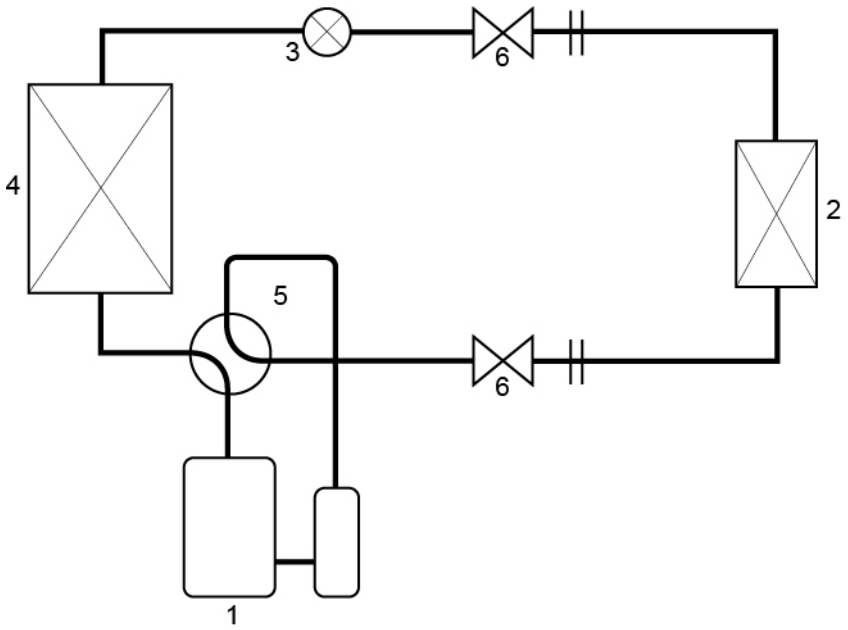
- Make sure water quality complies with EU directive 98/83 EC.
- Check the system for leaks after each repair/modification of the water side.
- Check drainage system(s) after repairs.
- Be careful when tilting units as water may leak.

1.2.4. Information

	INFORMATION Make sure refrigerant piping installation complies with applicable legislation. In Europe, EN378 is the applicable standard.
	INFORMATION Make sure the field piping and connections are not subjected to stress.

1.3. General operation

- These split units are used for comfort heating/cooling and are equipped with an inverter.
- The rotation speed rps (= rotation per second) of the inverter driven compressor, modulated by the inverter, can be varied according the required capacity in the room.
- The compressor capacity step is changed in order to reach target compression ratio. The target compression ratio is calculated from deviation between actual and target condensation and evaporation temperature.
- Tc (condensing temperature) is used in heating mode.
- Te (evaporation temperature) is used if any indoor unit operates in cooling mode.
- The evaporating temperature in the heat exchanger is controlled by the electronic expansion valve.
- When indoor unit is selecting heating mode, discharge gas is supplied by the outdoor unit to the indoor unit.
- When indoor unit is selecting cooling mode, liquid refrigerant is supplied by the outdoor unit to the indoor unit.



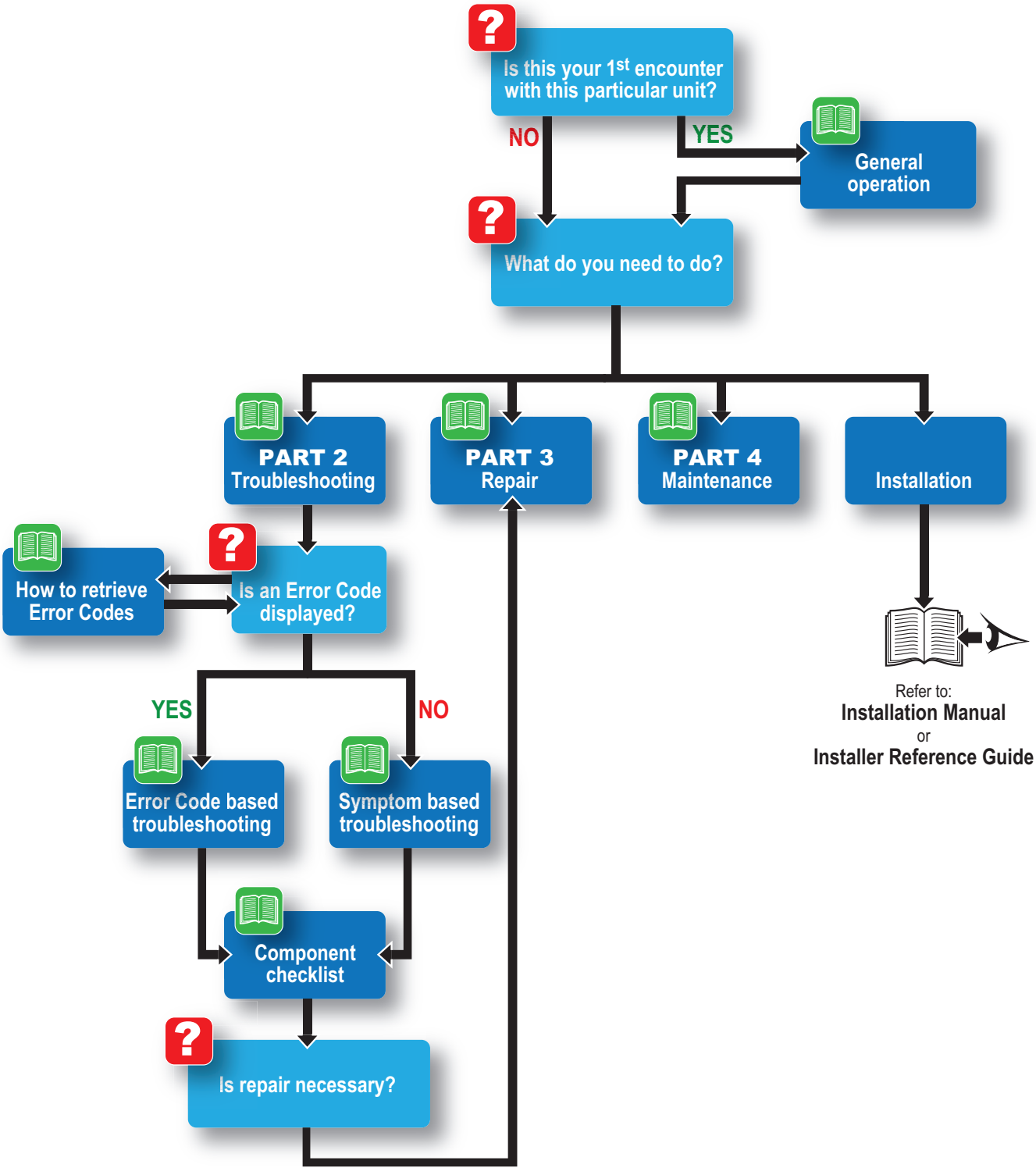
1. Compressor	4. Outdoor heat exchanger
2. Indoor heat exchanger	5. 4-way valve
3. Expansion valve	6. Stop valves

1.4. How to use

1.4.1. Interactive information flow

This Daikin product Service Manual is intended for professional use only. The actions described hereafter, are only to be performed by qualified and certified persons, taking into account the safety precautions mentioned in this manual and the local regulations as well.

By following the diagram below, the reader can find the relevant information related to his/her task. The digital (pdf) version of this book allows direct page access through all active links. When Adobe Acrobat Reader is used, the <Alt> + <Back Arrow> keys or the arrow in the top right-hand corner of this page can be used to return to the previously viewed page.



1.4.2. Parts of the book

This Daikin product Service Manual is intended for professional use only. The actions described hereafter, are only to be performed by qualified and certified persons, taking into account the safety precautions mentioned in this manual and the local regulations as well.

As can be observed from the Table of Contents, this manual is split up into several chapters:

1.4.2.1. The introduction chapter

The chapter "Introduction" on page 9 includes the safety precautions, this topic and the general operation description of the product(s) this manual refers to.

1.4.2.2. The troubleshooting chapter

The chapter "Troubleshooting" on page 17 not only deals with the methods to recognize and resolve occurring error codes; it also describes the methods how to solve a problem that does not immediately trigger an error code. Such problems are referred to as 'symptom based'. Both the error code based and symptom based troubleshooting tables, indicate possible causes, the necessary checks and in case required, how to repair. The possible causes have been sorted to probability of occurrence and speed of execution.

1.4.2.3. The repair chapter

The chapter "Repair" on page 65 handles the removal and replacement of the major components in the product and discusses cleaning methods as well if applicable, such as for filters. Where applicable, refrigerant handling precautions are mentioned for certain actions; please consider these carefully for your own safety.

1.4.2.4. The maintenance chapter

The chapter "Maintenance" on page 99 of this manual describes the maintenance intervals and procedures to be performed on the product. Remember that a well maintained product, is a more reliable and efficient product.

1.4.2.5. Appendices

Finally, the service manual provides in chapter "Appendix" on page 101 valuable reference data such as piping/wiring diagrams, field settings overview and a checklist to be filled in when you need to escalate an issue to your dealer.

1.4.3. Contact information

This manual has been made with much care and effort. Use it in your daily jobs, as it has been made for you.

Despite our efforts, there is always a chance some cleric or other mistake has been made during the creation of this manual. We kindly ask you to send the found mistakes, or remarks for improvement, to the no-reply email address servicemanual@daikineurope.com.

Part 2. Troubleshooting

This part contains the following chapters:

2.1. Error codes check

2.1.1. Error codes via remote controller

2.1.1.1. General

If operation stops due to malfunction, the remote controller's operation LED blinks, and malfunction code is displayed. (Even if stop operation is carried out, malfunction contents are displayed when inspection mode is entered.) The malfunction code enables you to tell what kind of malfunction caused operation to stop.

2.1.1.2. How to reset error codes

When the problem is solved, you can reset the error by pushing the ON/OFF-button.

2.1.1.3. History of error codes

Not applicable for this remote controller.

2.1.2. Error codes via outdoor unit PCB

Not applicable.

2.2. Error based troubleshooting

Overview of error codes:

2.2.1. Indoor unit

2.2.1.1. "A0-00" – Detection of refrigerant leak (only for FVXM-F model)

Trigger	Effect	Reset
Detect gas leakage (R32 or other gasses).	Outdoor unit stops running. Indoor fan starts in fan only. Blinking led indoor.	After 10 min. of no gas detection: • A0 error disappears (auto reset) • Unit starts working again After 10 min. of gas detection: • A0 error continuous • Buzzer will start beeping • Action: 1. Replace the sensor 2. Clear the error code

Possible cause	Check	Corrective action
Refrigerant leakage.	Check for refrigerant leak indoor unit with electronic leak detector.	Repair leak and recharge refrigerant if required. Clear error code.
No refrigerant leakage.	Check possible other gasses: hairspray, alcohol, cleaning agent, ...	Ventilate the room.

2.2.1.2. "A1-00" – Zero cross detection

Trigger	Effect	Reset
Multiple zero-cross is detected in approximately 10 continuous seconds.	Unit will stop operating.	Manual reset via user interface. Manual reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty power module = faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.1.3. "A1-01" – PCB abnormality

Trigger	Effect	Reset
EEPROM data is not received correctly.	Unit will stop operating.	Power reset via outdoor unit.

Possible cause	Check	Corrective action
Indoor Unit - Electrical components		
Faulty indoor PCB.	Check if error still occurs after turning off power and turning it back on again. Check if the indoor PCB receives power. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check the wiring to indoor PCB.	Adjust power to the indoor PCB. Replace indoor PCB when HAP LED is not blinking in regular intervals. Install correct spare part or update indoor PCB. Adjust wiring to indoor PCB when required.

2.2.1.4. "A5-00" – Freeze-up protection / Heating peak cut control

Trigger	Effect	Reset
• during cooling operation, indoor heat exchanger temperature is below 0°C (freeze-up protection control). • during heating operation, indoor heat exchanger is above 61°C (heating peak-cut control).	Unit will stop operating.	Automatic reset when temperature is within range.

Possible cause	Check	Corrective action
Air short-circuit.	Check if the airflow around the unit is OK and there are no obstructions.	Remove obstruction.
Clogged air filter.	Check if the air filter is clogged.	Clean the air filter.
Dust accumulation on indoor heat exchanger.	Check if indoor heat exchanger is dirty/dusty.	Clean the indoor heat exchanger.
Faulty indoor heat exchanger thermistor.	Check indoor heat exchanger thermistor.	Replace indoor heat exchanger thermistor when required.
Faulty indoor PCB.	Check if error still occurs after turning off power and turning it back on again. Check if the indoor PCB receives power. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check the wiring to indoor PCB.	Adjust power to the indoor PCB. Replace indoor PCB when HAP LED is not blinking in regular intervals. Install correct spare part or update indoor PCB. Adjust wiring to indoor PCB when required.

2.2.1.5. "A6-00" – Fan motor abnormality

Trigger	Effect	Reset
The rotation speed of the fan motor is not detected while the output voltage to the fan is at its maximum.	Unit will stop operating.	Power reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty indoor PCB.	Check if error still occurs after turning off power and turning it back on again. Check if the indoor PCB receives power. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check the wiring to indoor PCB.	Adjust power to the indoor PCB. Replace indoor PCB when HAP LED is not blinking in regular intervals. Install correct spare part or update indoor PCB. Adjust wiring to indoor PCB when required.

Possible cause	Check	Corrective action
Faulty indoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.
Indoor fan motor locked.	Switch of the power. Turn fan manually.	Replace fan motor when the fan does not turn smoothly.

More info:

Check procedures	Replacing procedures
"Fan motor" on page 55	

2.2.1.6. "AH-00" – Streamer unit error

Trigger	Effect	Reset
Streamer unit error.	Unit keeps working.	Manual reset via user interface.

Possible cause	Check	Corrective action
Problem with bad connection or connectors.	Check if connection and wiring of streamer unit to PCB is OK.	Correct wiring connection or repair wiring.
Streamer unit error.	No problem with wiring and connections.	Replace streamer unit.

More info:

Check procedures	Replacing procedures
	"Replacing streamer unit" on page 70

2.2.1.7. "AJ-00" – Capacity setting abnormality

Trigger	Effect	Reset
The capacity setting adaptor is not connected or not recognised by the indoor PCB.	Unit will stop operating.	Power reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty indoor PCB.	Check if error still occurs after turning off power and turning it back on again. Check if the indoor PCB receives power. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check the wiring to indoor PCB.	Adjust power to the indoor PCB. Replace indoor PCB when HAP LED is not blinking in regular intervals. Install correct spare part or update indoor PCB. Adjust wiring to indoor PCB when required.
Faulty capacity adapter on indoor PCB (in case of spare part PCB).	Check if the correct adapter is installed. Check if the correct spare part is installed.	Adjust capacity adapter when required.

2.2.1.8. "C1-00" – Transmission error (indoor & adapter PCB)

Trigger	Effect	Reset
When normal transmission between indoor unit PCB & adaptor PCB is not conducted for a certain duration (15 seconds or more).	Unit will stop operating.	Power reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty adaptor PCB.	Check if the adaptor PCB is installed. Check if the connector X8A on the adaptor PCB is not circuited. Check the wire harness.	Adjust when required.
Faulty indoor PCB.	Check if error still occurs after turning off power and turning it back on again. Check if the indoor PCB receives power. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check the wiring to indoor PCB.	Adjust power to the indoor PCB. Replace indoor PCB when HAP LED is not blinking in regular intervals. Install correct spare part or update indoor PCB. Adjust wiring to indoor PCB when required.
External factory (e.g. electrical noise) (cause when error is reset after power reset, and error happens again after a while).	Check for source which could cause electrical interference.	Avoid electrical interference.
Internal wiring is not OK.	Check if wiring between PCB's is correct (refer to wiring diagram).	Correct wiring.

2.2.1.9. "C4-00" – Liquid pipe thermistor for heat exchanger abnormality

Trigger	Effect	Reset
Thermistor input is > 4.96 V or < 0.04 V during compressor operation.	Unit will stop operating.	Power reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty liquid pipe thermistor.	Check liquid pipe thermistor.	Replace liquid pipe thermistor when required.
Faulty indoor unit main PCB.	Check if error still occurs after turning off power and turning it back on again. Check if the indoor PCB receives power. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check the wiring to indoor PCB.	Adjust the power to the indoor main PCB. Replace indoor main PCB when HAP LED is not blinking in regular intervals.

More info:

Check procedures	Replacing procedures
"Refrigerant thermistors" on page 60	

2.2.1.10. "C9-00" – Suction air thermistor abnormality

Trigger	Effect	Reset
Resistance value is out of range. T measured < -43.6°C or > 90°C.	Unit will stop operating.	Automatic reset when resistance is within range.

Possible cause	Check	Corrective action
Faulty suction air thermistor.	Check suction air thermistor.	Replace suction air thermistor when required.

Possible cause	Check	Corrective action
Faulty indoor PCB.	Check if error still occurs after turning off power and turning it back on again. Check if the indoor PCB receives power. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check the wiring to indoor PCB.	Adjust power to the indoor PCB. Replace indoor PCB when HAP LED is not blinking in regular intervals. Install correct spare part or update indoor PCB. Adjust wiring to indoor PCB when required.

2.2.1.11. "CC-00" – Humidity sensor abnormality (only for FTXTA-A model)

Trigger	Effect	Reset
• Disconnected sensor • Broken sensor • Communication error	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION
It is recommended to perform the checks in the listed order.

1. Perform a check of the humidity sensor.

   Possible cause: Faulty humidity sensor.

INFORMATION
If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

2.2.1.12. "CE-00" – Intelligent thermal sensor abnormality (only for FTXTA-A model)

Trigger	Effect	Reset
• Disconnected sensor • Broken sensor • Communication error	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION
It is recommended to perform the checks in the listed order.

1. Perform a check of the intelligent thermal sensor.

   Possible cause: Faulty intelligent thermal sensor.

INFORMATION
If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

2.2.1.13. "CH-00" – Abnormality of refrigerant leakage sensor (only for FVXM-F model)

Trigger	Effect	Reset
Sensor error.	Unit will stop operating. Buzzer will beep.	See corrective action.

Possible cause	Check	Corrective action
Sensor error.	Check if connection and wiring of sensor to PCB is OK.	Correct the wiring connection or repair the wiring.
Broken sensor.	If all the wiring is OK but the error still exists then is the sensor not OK.	Replace sensor.

More info:

Check procedures	Replacing procedures
	"Replacing R32 sensor (only for FVXM-F model)" on page 74

2.2.2. Outdoor unit

2.2.2.1. "E1-00" – PCB abnormality

Trigger	Effect	Reset
Outdoor main PCB detects that EEPROM is abnormal.	Unit will stop operating.	Manual reset via user interface. Power reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty capacity adapter on outdoor main PCB installed.	Check if the correct capacity adapter is used.	Replace capacity adapter when required.
External factor (e.g. electrical noise) (cause when error is reset after power reset, and error happens again after a while).	Check for source which could cause electrical interference.	Avoid electrical interference.
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87

2.2.2.2. “E3-00” – Discharge pressure abnormality (units with no pressure sensor)

Trigger	Effect	Reset
High pressure switch opens due to measure pressure > 41.7 bar.	Unit will stop operating.	Manual reset via user interface.
High pressure control (measure pressure > 38 bar) occurs 16 times within 300 minutes.		

Possible cause	Check	Corrective action
Faulty high pressure switch.	Check high pressure switch.	Replace high pressure switch.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Adjust the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty capacity adapter on outdoor PCB.	Check if the correct adapter is installed. Check if the correct spare part is installed.	Adjust capacity adapter when required.
Refrigerant overcharge.	Check for refrigerant overcharge. Refer to the nameplate for the correct charge.	Charge the correct refrigerant amount when required.
Humidity in refrigerant (ice formation in expansion valve).	Check for humidity in the refrigerant.	In case of suspicion of humidity, recover, vacuum and recharge with virgin refrigerant.
Non condensables in refrigerant.	Check for non condensables in refrigerant.	In case of suspicion of non condensables, recover, vacuum and recharge with virgin refrigerant.
Refrigerant is contaminated.	Check for non condensables in refrigerant.	In case of suspicion of non condensables. Recover, vacuum and recharge refrigerant.
Stop valve is closed.	Check if stop valve is open.	Open stop valve when required.
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.

More info:

Check procedures	Replacing procedures
"High pressure switch" on page 58	"Replacing high pressure switch" on page 94
	"Replacing main PCB" on page 95
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87

2.2.2.3. “E5-00” – Compressor motor lock or overheated

Trigger	Effect	Reset
Compressor overload is detected.	Unit will stop operating.	Automatic reset if the unit runs for 60 seconds without error.

Possible cause	Check	Corrective action
Faulty discharge pipe thermistor.	Check discharge pipe thermistor.	Replace discharge pipe thermistor when required.
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.

Possible cause	Check	Corrective action
Faulty overload protection.	Check the overload protection. Check the overload protection connections and wiring.	Replace the overload protection when required. Adjust wiring when required.
Faulty expansion valve.	Check the expansion valve.	Replace the expansion valve body or motor when required.
Faulty 4-way valve.	Check the 4-way valve.	Replace the 4-way valve coil or body when required.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty power module = faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Refrigerant shortage.	Check for refrigerant shortage. Refer to the nameplate for the correct charge.	Charge the correct refrigerant amount when required.
Humidity in refrigerant (ice formation in expansion valve).	Check for humidity in the refrigerant.	In case of suspicion of humidity, recover, vacuum and recharge with virgin refrigerant.
Non condensables in refrigerant.	Check for non condensables in refrigerant.	In case of suspicion of non condensables, recover, vacuum and recharge with virgin refrigerant.
Stop valve is closed.	Check stop valve.	Open stop valve when required.

More info:

Check procedures	Replacing procedures
"Refrigerant thermistors" on page 60	
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89 "Replacing expansion valve motor" on page 91
"4-way valve" on page 49	"Replacing 4-way valve coil" on page 83 "Replacing 4-way valve body" on page 81
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.4. “E6-00” – Compressor motor lock

Trigger	Effect	Reset
The motor rotor does not rotate when the compressor is energized.	Unit will not stop operating.	Automatic reset after a continuous run for about 10 min.
	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Faulty discharge thermistor.	Check the discharge thermistor.	Replace discharge thermistor when required.
Refrigerant shortage.	Check for refrigerant shortage. Refer to the nameplate for the correct charge.	Charge the correct refrigerant amount when required.
Humidity in refrigerant (ice formation in expansion valve).	Check for humidity in the refrigerant.	In case of suspicion of humidity, recover, vacuum and recharge with virgin refrigerant.

Possible cause	Check	Corrective action
Non condensables in refrigerant.	Check for non condensables in refrigerant.	In case of suspicion of non condensables, recover, vacuum and recharge with virgin refrigerant.
Stop valve is closed.	Check stop valve.	Open stop valve when required.
Refrigerant circuit is clogged (HP - LP > 0,26 MPa).	Check for possible blockage (blockages can be checked by measuring the refrigerant/pipe temperature. Sudden drop in temperature could indicate a blockage (remark: this is not valid for the expansion valve)).	Replace the blocked part.
Faulty compressor.	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.
Compressor turned off too fast.		Wait for guard timer.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Faulty 4-way valve.	Check the 4-way valve.	Replace the 4-way valve coil or body when required.
Faulty expansion valve.	Check the expansion valve.	Replace the expansion valve body or motor when required.

More info:

Check procedures	Replacing procedures
"Refrigerant thermistors" on page 60	
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89
"Main PCB" on page 56	"Replacing main PCB" on page 95
"4-way valve" on page 49	"Replacing 4-way valve coil" on page 83 "Replacing 4-way valve body" on page 81
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89 "Replacing expansion valve motor" on page 91

2.2.2.5. “E7-00” – Fan motor abnormality

Trigger	Effect	Reset
Fan does not start in about 15~30 seconds = fan motor lock. It can occur that E7-00 error is triggered even when the fan motor is running caused by a faulty hall signal.	Unit will not stop operating.	Automatic reset after a continuous run.
	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Blown fuse.	Check the fuse on the outdoor unit PCB's.	Replace fuse when required.

More info:

Check procedures	Replacing procedures
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87
"Product specific information" on page 118	

2.2.2.6. “E8-00” – Compressor overcurrent detection

Trigger	Effect	Reset
When the compressor is running the current exceeds 9.25 A ~ 20 A (depending on the unit) for 2.5 seconds.	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Outdoor temperature is out of operation range.	Check the outdoor temperature.	Wait until the temperature is within operation range.
Faulty compressor.	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.
Faulty power module. = Faulty inverter PCB.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.

More info:

Check procedures	Replacing procedures
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.7. "E9-00" – Electronic expansion valve abnormality (units with no pressure sensor)

Trigger	Effect	Reset
1. No continuity of expansion valve. 2. Minimum expansion valve opening and suction superheat < A K and discharge superheat < B K.	Unit will stop operating.	Manual reset via user interface. Power reset via outdoor unit.

Possible cause	Check	Corrective action
Wet operation.	Check for wet operation. (Wet operation can be detected by checking the suction superheat. If the suction superheat is 0°C then liquid refrigerant is returned to the compressor.)	In case wet operation was detected, confirm the cause: • Refrigerant overcharge. • Faulty expansion valve.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Adjust the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty thermistor.	Check thermistor.	Replace thermistor when required.
Faulty or disturbance of the power supply (imbalance >10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.
Faulty expansion valve.	Check the expansion valve.	Replace the expansion valve body or motor when required.
Faulty capacity adapter on outdoor PCB.	Check if the correct adapter is installed. Check if the correct spare part is installed.	Adjust capacity adapter when required.
External factory (e.g. electrical noise) (cause when error is reset after power reset, and error happens again after a while).	Check for source which could cause electrical interference.	Avoid electrical interference.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95
"Refrigerant thermistors" on page 60	
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89
"Product specific information" on page 118	

2.2.2.8. "EA-00" – 4-way valve abnormality

Trigger	Effect	Reset
The room thermistor / indoor heat exchanger are not functioning within operation range.	Unit will not stop operating.	Automatic reset when unit runs without error for 60 minutes.
	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Faulty 4-way valve coil.	Check 4-way valve coil.	Replace 4-way valve coil when required.
Faulty 4-way valve body, blocked.	Check 4-way valve body.	Replace 4-way valve body when required.

Possible cause	Check	Corrective action
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty room thermistor.	Check room thermistor.	Replace room thermistor when required.
Faulty indoor heat exchanger thermistor.	Check indoor heat exchanger thermistor.	Replace indoor heat exchanger thermistor when required.
Refrigerant shortage.	Check for refrigerant shortage. Refer to the nameplate for the correct charge.	Charge the correct refrigerant amount when required.
Humidity in refrigerant (ice formation in expansion valve).	Check for humidity in the refrigerant.	In case of suspicion of humidity, recover, vacuum and recharge with virgin refrigerant.
Non condensables in refrigerant.	Check for non condensables in refrigerant.	In case of suspicion of non condensables, recover, vacuum and recharge with virgin refrigerant.
Stop valve is closed.	Check stop valve.	Open stop valve when required.
Faulty stop valve.	Check the stop valve.	Replace the stop valve when required.
Wrong combination hybrid and outdoor unit.	Check if correct hybrid is installed.	Make official combination hybrid and outdoor unit.

More info:

Check procedures	Replacing procedures
"4-way valve" on page 49	"Replacing 4-way valve coil" on page 83 "Replacing 4-way valve body" on page 81
"Main PCB" on page 56	"Replacing main PCB" on page 95
"Refrigerant thermistors" on page 60	
"Product specific information" on page 118	

2.2.2.9. “F3-00” – Discharge pipe temperature abnormality

Trigger	Effect	Reset
Discharge temperature is too high: • If the discharge temperature detected is above A°C, 10 times within 200 min. • If within 200 min the discharge temperature detected is 10 times above B°C for 15 min.	Unit will not stop operating.	Automatic reset when temperature drops below C°C.
	Unit will stop operating.	Manual reset via remote controller.

Possible cause	Check	Corrective action
Refrigerant shortage.	Check for refrigerant shortage. Refer to the nameplate for the correct charge.	Charge the correct refrigerant amount when required.
Humidity in refrigerant (ice formation in expansion valve).	Check for humidity in the refrigerant.	In case of suspicion of humidity, recover, vacuum and recharge with virgin refrigerant.
Non condensables in refrigerant.	Check for non condensables in refrigerant.	In case of suspicion of non condensables, recover, vacuum and recharge with virgin refrigerant.
Stop valve is closed.	Check if stop valve is open.	Open stop valve when required.
Faulty 4-way valve.	Check the 4-way valve.	Replace the 4-way valve coil or body when required.
Faulty expansion valve.	Check the expansion valve.	Replace the expansion valve body or motor when required.

Possible cause	Check	Corrective action
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty discharge thermistor.	Check discharge thermistor.	Replace discharge thermistor when required.
Faulty heat exchanger thermistor.	Check heat exchanger thermistor.	Replace heat exchanger thermistor when required.
Faulty outdoor temperature thermistor.	Check outdoor temperature thermistor.	Replace outdoor temperature thermistor when required.

More info:

Check procedures	Replacing procedures
"4-way valve" on page 49	"Replacing 4-way valve coil" on page 83 "Replacing 4-way valve body" on page 81
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89 "Replacing expansion valve motor" on page 91
"Main PCB" on page 56	"Replacing main PCB" on page 95
"Refrigerant thermistors" on page 60	
"Product specific information" on page 118	

2.2.2.10. “F6-00” – High pressure abnormality or refrigerant overcharge

Trigger	Effect	Reset
Outdoor heat exchanger thermistor measures temperature > 57°C~65°C (depending on model).	Unit will not stop operating.	Automatic reset when temperature drops below 50°C.

Possible cause	Check	Corrective action
Installation space is too small.	Check if the installation space is in line with regulations.	Adjust installation space.
Dirty outdoor heat exchanger.		Clean the outdoor heat exchanger.
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.
Faulty stop valve.	Check the stop valve.	Replace the stop valve when required.
Faulty heat exchanger thermistor.	Check heat exchanger thermistor.	Replace heat exchanger thermistor when required.
Faulty expansion valve.	Check the expansion valve.	Replace the expansion valve body or motor when required.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.

More info:

Check procedures	Replacing procedures
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87
"Refrigerant thermistors" on page 60	

Check procedures	Replacing procedures
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89 "Replacing expansion valve motor" on page 91
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.11. "F8-00" – System shutdown due to compressor internal temperature abnormality

Trigger	Effect	Reset
Temperature discharge pipe thermistor exceeds the determined limit.	Unit will stop operating.	Manual reset via user interface.

To solve the error code

INFORMATION

It is recommended to perform the checks in the listed order.

1. Perform a check of the refrigerant circuit.

   Possible cause:

   - Stop valve is closed
   - Clogged refrigerant circuit
   - Refrigerant circuit NOT charged correctly
   - Humidity in the refrigerant circuit
   - Non-condensables in the refrigerant circuit
   - Leaking refrigerant circuit

2. Perform a check of the discharge pipe thermistor, refer to "Refrigerant thermistors" on page 60.

   Possible cause: Faulty discharge pipe thermistor.

INFORMATION

If all procedures listed above have been performed and the problem is still present, contact the helpdesk.

2.2.2.12. "H0-00" – Compressor sensor system abnormality

Trigger	Effect	Reset
DC voltage before compressor start-up is out of range (0.5~4.5 V).	Unit will stop operating.	Manual reset via user interface.
DC voltage before compressor start-up is below 50 V.	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Faulty connection or wiring of the PCB's.	Check the connections and the wiring of the PCB's.	Adjust connection or wiring when required.

Possible cause	Check	Corrective action
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.13. “H3-00” – High pressure switch abnormality

Trigger	Effect	Reset
High pressure switch is activated when compressor is off.	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Stop valve is closed.	Check if stop valve is open.	Open stop valve when required.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Adjust the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the alive led is blinking in regular intervals. Check if the correct spare part is installed.	Adjust the power to the outdoor inverter PCB. Replace outdoor inverter PCB.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.
Faulty high pressure switch.	Check high pressure switch.	Replace the high pressure switch.
Faulty capacity adapter on outdoor PCB.	Check if the correct adapter is installed. Check if the correct spare part is installed.	Adjust capacity adapter when required.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95
"High pressure switch" on page 58	"Replacing high pressure switch" on page 94

2.2.2.14. “H6-00” – Position detection sensor abnormality

Trigger	Effect	Reset
Compressor fails to start within 15 seconds after the compressor run command signal is sent.	Unit will not stop operating.	Automatic reset after a continuous run of 10 minutes.
	Unit will stop operating if the warning occurs 8 times.	Manual reset via remote controller.

Possible cause	Check	Corrective action
Faulty compressor.	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Stop valve is closed.	Check stop valve.	Open stop valve when required.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.

More info:

Check procedures	Replacing procedures
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.15. “H8-00” – Compressor input (CT) system abnormality

Trigger	Effect	Reset
DC voltage or DC current sensor abnormality based on the compressor running frequency and the input current.	Unit will not stop operating.	Automatic reset when compressor runs normally for 60 minutes.
	Unit will stop operating if the warning occurs several times.	Manual reset via user interface.

Possible cause	Check	Corrective action
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty power module. Input current or compressor current too low. Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Faulty compressor.	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.

Possible cause	Check	Corrective action
Faulty reactor.	Check reactor.	Replace reactor when required.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89

2.2.2.16. "H9-00" – Outdoor air temperature thermistor abnormality

Trigger	Effect	Reset
Thermistor input voltage is > 4.96 V or < 0.04 V when power is on.	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Faulty outdoor air temperature thermistor.	Check outdoor temperature thermistor.	Replace outdoor temperature thermistor when required.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.

More info:

Check procedures	Replacing procedures
"Refrigerant thermistors" on page 60	
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.17. "J3-00" – Discharge pipe thermistor abnormality

Trigger	Effect	Reset
Thermistor input voltage is > 4.96 V or < 0.04 V when power is on.	Unit will stop operating.	Manual reset via user interface.
Discharge pipe temperature is lower than the heat exchanger temperature.		

Possible cause	Check	Corrective action
Faulty discharge pipe thermistor.	Check discharge pipe thermistor.	Replace discharge pipe thermistor when required.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.

More info:

Check procedures	Replacing procedures
"Refrigerant thermistors" on page 60	

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.18. "J6-00" – Outdoor heat exchanger thermistor abnormality

Trigger	Effect	Reset
Thermistor input voltage is > 4.96 V or < 0.04 V when power is on.	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Faulty heat exchanger thermistor.	Check heat exchanger thermistor.	Replace heat exchanger thermistor when required.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.

More info:

Check procedures	Replacing procedures
"Refrigerant thermistors" on page 60	
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.19. "L1-00" – Main PCB abnormality

Trigger	Effect	Reset
Outdoor main PCB detects current/voltage errors.	Unit will stop operating.	Manual reset via user interface. Power reset via outdoor unit.

Possible cause	Check	Corrective action
Blown fuse.	Check fuse on outdoor main PCB.	Replace fuse if blown.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Adjust the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the alive led is blinking in regular intervals. Check if the correct spare part is installed.	Adjust the power to the outdoor inverter PCB. Replace outdoor inverter PCB.
Faulty compressor.	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.
Faulty capacity adapter on outdoor PCB.	Check if the correct adapter is installed. Check if the correct spare part is installed.	Adjust capacity adapter when required.
External factory (e.g. electrical noise). (cause when error is reset after power reset, and error happens again after a while).	Check for source which could cause electrical interference.	Avoid electrical interference.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87

2.2.2.20. “L3-00” – Switch box temperature abnormality

Trigger	Effect	Reset
Switch box temperature is too high when the compressor is off.	Unit will not stop operating.	Automatic reset when temperature drops.
	Unit will stop operating.	Manual reset via remote controller.

Possible cause	Check	Corrective action
Faulty outdoor inverter PCB. Faulty radiation fin thermistor.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.
Outdoor heat exchanger is dirty.	Check outdoor heat exchanger.	Clean outdoor heat exchanger when required.

More info:

Check procedures	Replacing procedures
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87
"Product specific information" on page 118	

2.2.2.21. "L4-00" – Inverter radiating fin temperature abnormality

Trigger	Effect	Reset
Radiation fin temperature rise is detected.	Unit will stop operating.	Automatic reset.
		Power reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.
Faulty radiating fin thermistor.	Check radiating fin thermistor.	Replace radiating fin thermistor when required.
Faulty outdoor unit PCB in which radiating fin thermistor is connected.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Silicon grease is not applied properly on the radiation fin.	Check the silicon grease on the outdoor unit PCB.	Adjust silicon grease when required.

More info:

Check procedures	Replacing procedures
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87
"Refrigerant thermistors" on page 60	
"Main PCB" on page 56	"Replacing main PCB" on page 95
"Product specific information" on page 118	

2.2.2.22. "L5-00" – Inverter instantaneous overcurrent (AC output)

Trigger	Effect	Reset
An output overcurrent is detected by checking the current that flows in the inverter DC section.	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Installation of the unit is not in line with specifications.	Check the installation specifications. Refer to the installation manual.	Adjust the installation when required.
Refrigerant shortage.	Check for refrigerant shortage. Refer to the nameplate for the correct charge.	Charge the correct refrigerant amount when required.
Humidity in refrigerant (ice formation in expansion valve).	Check for humidity in the refrigerant.	In case of suspicion of humidity, recover, vacuum and recharge with virgin refrigerant.
Non condensables in refrigerant.	Check for non condensables in refrigerant.	In case of suspicion of non condensables, recover, vacuum and recharge with virgin refrigerant.
Stop valve is closed.	Check stop valve.	Open stop valve when required.
Faulty power module = faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed.	Restore the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.

Possible cause	Check	Corrective action
Faulty compressor.	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.

More info:

Check procedures	Replacing procedures
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89

2.2.2.23. “L8-00” – Electronic thermal overload

Trigger	Effect	Reset
When compressor overload (except during start-up) is detected.	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Refrigerant circuit is clogged.	Check for possible blockage.	Replace blocked part when required.
Refrigerant overcharge.	Check for refrigerant overcharge. Refer to the nameplate for the correct charge.	Charge the correct refrigerant amount when required.
Refrigerant is contaminated.		Replace refrigerant.
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the alive led is blinking in regular intervals. Check if the correct spare part is installed.	Adjust the power to the outdoor inverter PCB. Replace outdoor inverter PCB.
Faulty compressor	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.

More info:

Check procedures	Replacing procedures
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89

2.2.2.24. “L9-00” – Stall prevention time lag

Trigger	Effect	Reset
Outdoor inverter PCB detects compressor overload at start up.	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Refrigerant circuit is clogged.	Check for possible blockage.	Replace blocked part when required.
Refrigerant condition is not OK (HP-LP > 0,2 MPa at start-up).	Check refrigerant condition.	
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the alive led is blinking in regular intervals. Check if the correct spare part is installed.	Adjust the power to the outdoor inverter PCB. Replace outdoor inverter PCB.
Faulty compressor.	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.

More info:

Check procedures	Replacing procedures
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89

2.2.2.25. “LC-00” – Transmission system abnormality

Trigger	Effect	Reset
No transmission between outdoor main PCB and outdoor inverter PCB.	Unit will stop operating.	Automatic reset.

Possible cause	Check	Corrective action
Internal wiring is not OK.	Check if wiring between PCB’s. (refer to wiring diagram).	Correct wiring.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Adjust the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the alive led is blinking in regular intervals. Check if the correct spare part is installed.	Adjust the power to the outdoor inverter PCB. Replace outdoor inverter PCB.
Faulty capacity adapter on outdoor PCB.	Check if the correct adapter is installed. Check if the correct spare part is installed.	Adjust capacity adapter when required.
External factory (e.g. electrical noise). (cause when error is reset after power reset, and error happens again after a while).	Check for source which could cause electrical interference.	Avoid electrical interference.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.26. "P1-00" – Open phase or power supply voltage imbalance

Trigger	Effect	Reset
Outdoor inverter PCB detects incorrect power supply.	Unit will stop operating.	Manual reset via user interface. Automatic reset.

Possible cause	Check	Corrective action
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Adjust the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the alive led is blinking in regular intervals. Check if the correct spare part is installed.	Adjust the power to the outdoor inverter PCB. Replace outdoor inverter PCB.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.
Faulty capacity adapter on outdoor PCB.	Check if the correct adapter is installed. Check if the correct spare part is installed.	Adjust capacity adapter when required.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.27. "P3-00" – Malfunction of thermistor in electrical box

Trigger	Effect	Reset
Resistance value is out of range. T measured < -X°C or > X°C.	Unit will stop operating.	Automatic reset when resistance is within range.

Possible cause	Check	Corrective action
Faulty outdoor inverter PCB.	Check outdoor inverter PCB. Check if the alive led is blinking in regular intervals. Check if the correct spare part is installed.	Adjust the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Faulty radiation fin thermistor.	Check outdoor inverter PCB. Check if the alive led is blinking in regular intervals. Check if the correct spare part is installed.	Adjust the power to the outdoor inverter PCB. Replace the outdoor inverter PCB when required.
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.

2.2.2.28. “P4-00” – Radiating fin temperature sensor abnormality

Trigger	Effect	Reset
Radiating fin thermistor input voltage is < 0.04 V or > 4.96 V when power is on.	Unit will stop operating.	Manual reset via user interface.

Possible cause	Check	Corrective action
Faulty radiating fin thermistor.	Check radiating fin thermistor.	Replace radiating fin thermistor when required.
Faulty outdoor unit PCB in which radiating fin thermistor is connected.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.

More info:

Check procedures	Replacing procedures
"Refrigerant thermistors" on page 60	
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.2.29. “PJ-00” – Capacity setting abnormality

Trigger	Effect	Reset
Outdoor main PCB detects a defective capacity in EEPROM.	Unit will stop operating.	Manual reset via user interface. Power supply reset.

Possible cause	Check	Corrective action
Position of PCB dip switches are not OK.	Check if dip switches are set to default (OFF) position.	
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Adjust the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty capacity adapter on outdoor PCB.	Check if the correct adapter is installed. Check if the correct spare part is installed.	Adjust capacity adapter when required.

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.3. System

2.2.3.1. "U0-00" – Refrigerant shortage

Trigger	Effect	Reset
Refrigerant shortage detected.	Unit will stop operating.	Automatic reset.
		Power reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty air thermistor.	Check air thermistor.	Replace air thermistor when required.
Faulty discharge thermistor.	Check discharge thermistor.	Replace discharge thermistor when required.
Faulty outdoor heat exchanger thermistor.	Check outdoor heat exchanger thermistor.	Replace outdoor heat exchanger thermistor when required.
Stop valve is closed.	Check stop valve.	Open stop valve when required.
Refrigerant shortage.	Check for refrigerant shortage. Refer to the nameplate for the correct charge.	Charge the correct refrigerant amount when required.
Humidity in refrigerant (ice formation in expansion valve).	Check for humidity in the refrigerant.	In case of suspicion of humidity, recover, vacuum and recharge with virgin refrigerant.
Non condensables in refrigerant.	Check for non condensables in refrigerant.	In case of suspicion of non condensables, recover, vacuum and recharge with virgin refrigerant.
Faulty compressor.	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for the correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.
Faulty expansion valve.	Check the expansion valve.	Replace the expansion valve body or motor when required.

More info:

Check procedures	Replacing procedures
"Refrigerant thermistors" on page 60	
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89 "Replacing expansion valve motor" on page 91
"Product specific information" on page 118	

2.2.3.2. "U2-00" – Power supply abnormality or instantaneous power failure

Trigger	Effect	Reset
There is no zero-cross detected in approximately 10 seconds (indoor unit PCB).	Unit will stop operating.	Power reset via outdoor unit.
Abnormal voltage drop (< 150-180 V) is detected by the DC voltage detection circuit.	Unit will stop operating.	Automatic restart after compressor stand-by of 3 minutes.
Abnormal voltage rise is detected by the over-voltage detection circuit.	Unit will stop operating.	Automatic restart after compressor stand-by of 3 minutes.

Possible cause	Check	Corrective action
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.
Defective DC voltage detection circuit.	Check PCB with DC voltage detection circuit.	Replace PCB when required.
Defective over-voltage detection circuit.	Check PCB with over-voltage detection circuit.	Replace PCB when required.
Defective PAM control part.	Check PAM control part.	Replace PAM control part when required.
Faulty compressor.	Check compressor. Check connections and wiring of the compressor. Check expansion valve (liquid back issue). Check the refrigerant charge. Refer to the nameplate for correct charge.	Replace compressor when required. Investigate reason of breakdown. Replace expansion valve when required. Fix possible leak.
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.
Momentary drop of voltage.	-	Wait until compressor restarts.
Momentary power failure.	-	Wait until compressor restarts.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty indoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the indoor main PCB receives power.	Restore the power to the indoor main PCB. Replace indoor main PCB when HAP LED is not blinking in regular intervals.

More info:

Check procedures	Replacing procedures
"Compressor" on page 51	"Replacing compressor" on page 84
"Electronic expansion valve" on page 53	"Replacing expansion valve body" on page 89
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.3.3. “U4-00” – Transmission abnormality between indoor unit and outdoor unit

Trigger	Effect	Reset
Data sent from outdoor unit cannot be received normally, content of the send data is abnormal.	Unit will stop operating.	Power reset via outdoor unit.

Possible cause	Check	Corrective action
Faulty or disturbance of the power supply (imbalance > 10%). Power drop. Short circuit.	Check if the power supply is conform with regulations. No fluctuations in frequency.	Adjust power supply when required. Power reset via outdoor unit.

Possible cause	Check	Corrective action
Wiring abnormality between indoor unit and outdoor unit.	Check wiring between indoor unit and outdoor unit.	Adjust wiring between indoor unit and outdoor unit when required. Replace wiring between indoor unit and outdoor unit when required.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty outdoor fan motor.	Check the fan motor. Check fan motor connections and wiring.	Replace fan motor when required. Adjust wiring when required.
Faulty indoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the indoor main PCB receives power.	Restore the power to the indoor main PCB. Replace indoor main PCB when HAP LED is not blinking in regular intervals.
Standby electricity saving mode is ON but there is a sky-air indoor installed on the unit.	If the indoor unit is NOT a sky-air indoor. This mode is only compatible with split indoor units.	Put “standby electricity saving function” OFF (see installation manual).

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95
"Fan motor" on page 55	"Replacing DC fan motor assembly" on page 87

2.2.3.4. “UA-00” – Improper combination of indoor unit and outdoor unit

Trigger	Effect	Reset
Signal transmission between indoor unit and outdoor unit abnormality.	Unit will stop operating.	Power reset via outdoor unit.

Possible cause	Check	Corrective action
Improper combination of indoor unit and outdoor unit.	Check combination.	Adjust installation when required.
Wiring abnormality between indoor unit and outdoor unit.	Check wiring between indoor unit and outdoor unit.	Adjust wiring between indoor unit and outdoor unit when required. Replace wiring between indoor unit and outdoor unit when required.
Faulty outdoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the outdoor main PCB receives power.	Restore the power to the outdoor main PCB. Replace outdoor main PCB when HAP LED is not blinking in regular intervals.
Faulty indoor unit main PCB.	Check if the HAP LED is blinking in regular intervals. Check if the correct spare part is installed. Check if the indoor main PCB receives power.	Restore the power to the indoor main PCB. Replace indoor main PCB when HAP LED is not blinking in regular intervals.
Standby electricity saving mode is ON but there is a sky-air indoor installed on the unit.	If the indoor unit is NOT a sky-air indoor. This mode is only compatible with split indoor units.	Put “standby electricity saving function” OFF (see installation manual).

More info:

Check procedures	Replacing procedures
"Main PCB" on page 56	"Replacing main PCB" on page 95

2.2.4. Others

Not applicable.

2.3. Symptom based troubleshooting

2.3.1. Indoor unit

Not available.

2.3.2. Outdoor unit

Not available.

2.3.3. System

Not applicable.

2.3.4. Others

Not applicable.

2.4. Component checklist

Overview of component checklists:

2.4.1. Indoor unit

Not applicable.

2.4.2. Outdoor unit

2.4.2.1. 4-way valve

Technical specification		Description	
-		The 4-way valve directs the super heated refrigerant discharged from the compressor to the indoor heat exchanger in case of heating operation or to the outdoor heat exchanger in case of defrosting and cooling operation.	
Location			
Piping diagram	**Wiring diagram**	**Switch box**	**Component overview of unit**
See "Outdoor unit" on page 117.	See "Outdoor unit" on page 114.	See "Outdoor unit" on page 118.	See "Outdoor unit" on page 118.
Check procedure			

Mechanical check

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

1. Loosen the screw and remove the coil from the 4-way valve (refer to "Replacing 4-way valve coil" on page 83).

> **WARNING: RISK OF FIRE**
> When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

2. Unplug 4-way valve connector from applicable PCB, see table "Component checklist" on page 118.
3. Switch the circuit breaker on.
4. Switch on the Daikin unit via the user interface, start cooling/defrost operation.

   If the temperature after the heat exchanger drops, proceed with next step.

   If the temperature after the heat exchanger rises, the 4-way valve is stuck in heating position, replace the 4-way valve body (refer to "Replacing 4-way valve body" on page 81).

   If the temperature after the heat exchanger does not rise, check the refrigerant pressure by connecting a manifold to one of the service ports.

   - If no pressure is measured, perform a pressure test and fix any leaks.
   - If pressure is measured, the 4-way valve is stuck in the middle, confirm by determining the position of the 4-way valve as described below and replace the 4-way valve (refer to "Replacing 4-way valve body" on page 81).

> **CAUTION - RISK OF LIQUID ENTERING THE COMPRESSOR**
> To prevent damage to the compressor the step below must only be done once.

5. While listening to the 4-way valve, place a round permanent magnet on the core of the solenoid valve. If you do not hear the 4-way valve switching, it must be replaced (refer to "Replacing 4-way valve body" on page 81).

Electrical check

PRELIMINARY ACTIONS

1. Switch off Daikin unit via the user interface.
2. Switch off Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

1. Switch on the Daikin unit, start heating operation.

> **WARNING: RISK OF FIRE**
> When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

2. Measure the voltage on 4-way valve connector: pin 1-3, see table "Component checklist" on page 118. If the measured voltage does not range 220-240 VAC during switching / 15 VAC after switching, unplug 4-way valve connector from PCB and measure the voltage directly on the PCB: pin 1-3 of 4-way valve connection.
   - If the voltage, measured directly on the PCB does not range 220-240 VAC during switching / 15 VAC after switching, replace main PCB.
   - If the voltage, measured directly on the PCB does range 220-240 VAC during switching / 15 VAC after switching, replace the 4-way valve coil (refer to "Replacing 4-way valve coil" on page 83).

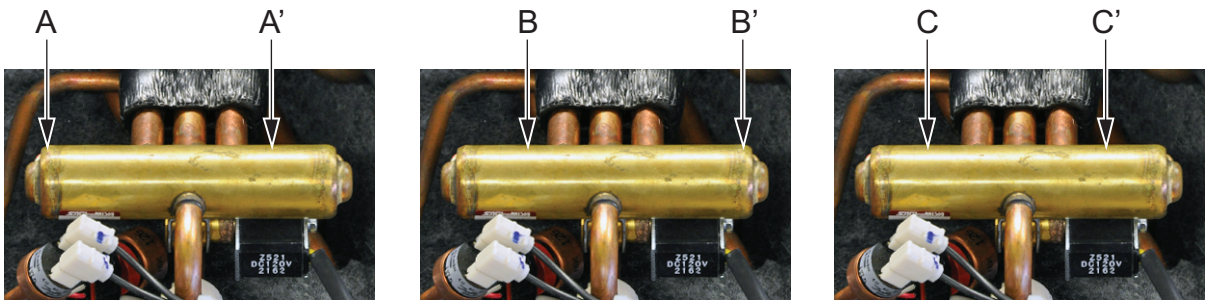
> **WARNING: RISK OF FIRE**
> When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

3. Unplug 4-way valve connector from PCB and measure the resistance of the 4-way valve coil. If the measured resistance does not range 1000 - 2000 Ω, replace the 4-way valve coil (refer to "Replacing 4-way valve coil" on page 83).
4. Switch on the Daikin unit, start cooling/defrost operation.

   If the temperature after the plate type heat exchanger rises, the control of the 4-way valve is wrong. Replace main PCB.

Determine the position of the 4-way valve

1. Switch off Daikin unit via the user interface.
2. Switch off Daikin unit with the field supplied circuit breaker.
3. Slide a magnet over the front and the rear of the 4-way valve body and sense the attraction of the magnet to determine the valve position.
4. If the magnet is attracted in positions A,A' or B,B', the 4-way valve is OK; if the magnet is attracted in positions C,C' the 4-way valve must be replaced (refer to "Replacing 4-way valve body" on page 81).



2.4.2.2. Compressor

Technical specification		Description	
Type: inverter driven, swing double swing.		The compressor compresses the refrigerant in the refrigerant circuit.	
Location			
Piping diagram	**Wiring diagram**	**Switch box**	**Component overview of unit**
See "Outdoor unit" on page 117.	See "Outdoor unit" on page 114.	See "Outdoor unit" on page 118.	See "Outdoor unit" on page 118.
Check procedure			

Preliminary check

1. Check if the Daikin unit is connected to earth.
2. Check if the stop valve is open.

Mechanical check

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

1. Open the compressor insulation.
2. Check if the condition of the compressor dampers and piping is correct.

Electrical check

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required.

PROCEDURE

1. Open the compressor insulation.
2. Switch on the Daikin unit and measure the U, V, W inverter voltages. All voltages must be identical, if not, replace the inverter PCB.
3. Switch off the Daikin unit via the user interface.
4. Switch off the Daikin unit with the field supplied circuit breaker.

INFORMATION

Note the position of the cables on the compressor wire terminals to allow identical wiring during reinstallation.

5. Disconnect the Faston connectors U, V and W from the compressor, take picture.
6. Measure the compressor motor windings U-V, V-W and U-W.

7. Megger the compressor using 500 or 1000 VDC, the insulation must be higher than 3 MΩ.

8. Replace the compressor if the windings and/or insulation measurements fail (refer to "Replacing compressor" on page 84).

9. Run the compressor and measure the current in each phase; the current for each phase should be identical (refer to "Product specific information" on page 118). In that case it can be decided to preventively replace the compressor (refer to "Replacing compressor" on page 84).

2.4.2.3. Electronic expansion valve

Technical specification	Description
The electronic expansion valve has a hermetically sealed body with a slide-on stepping motor drive coil (480 pulses from fully closed to fully open position).	The electronic expansion valve is used: • To control the flow of refrigerant. Depending on location, the trigger point is sub-cool and/or superheat. • To stop the flow of refrigerant completely when closing (= 0 pulses).

Location			
Piping diagram	**Wiring diagram**	**Switch box**	**Component overview of unit**
See "Outdoor unit" on page 117.	See "Outdoor unit" on page 114.	See "Outdoor unit" on page 118.	See "Outdoor unit" on page 118.

Check procedure

Mechanical check

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Switch on the Daikin unit and listen to the expansion valve assembly, if the expansion valve body does not create a latching sound, continue with the electrical check.
4. Switch off the Daikin unit via the user interface.
5. Switch off the Daikin unit with the field supplied circuit breaker.
6. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

1. Remove the expansion valve coil from the expansion valve body.
2. Slide the magnet (tool part N° 9950038) over the expansion valve body and gently rotate the magnet to manually operate the expansion valve body clockwise (closing) and counterclockwise (opening).
3. If it is not possible to open the expansion valve body with the magnet, the expansion valve body is blocked and the expansion valve body must be replaced (refer to "Replacing expansion valve body" on page 89).

Electrical check

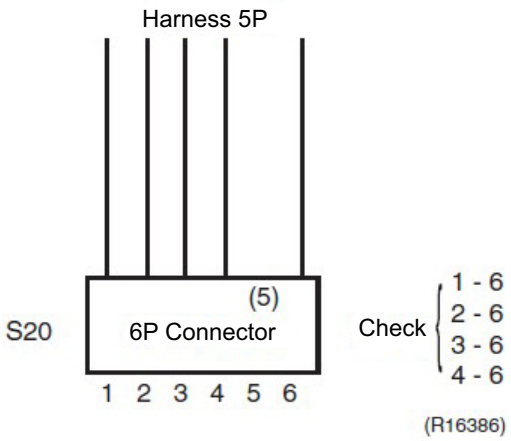
PRELIMINARY ACTIONS

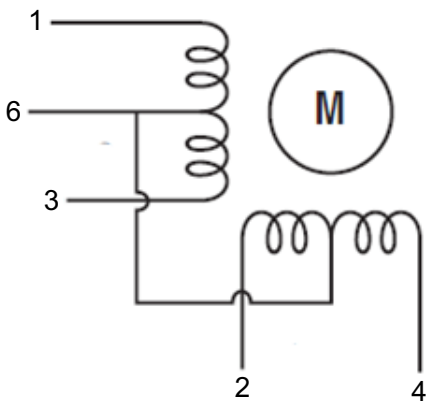
1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

1. Check if the electrical connector of the expansion valve coil was correctly connected to the PCB, if not, connect the electrical connector.
2. Disconnect the electrical connector of the expansion valve coil and check the continuity between below pins using a multi meter. It should be ± the same value.
   - Connector pin 1-6: connected

- Connector pin 2-6: connected
- Connector pin 3-6: connected
- Connector pin 4-6: connected





3. If one or more of the windings have no continuity, replace the expansion valve coil.

2.4.2.4. Fan motor

Technical specification		Description	
The motor has a single connector for DC power and the rotation counter feed back from the integrated pulse generator (4 pulses/revolution).		The fan motor runs on a fixed speed to supply the required air flow rate.	
Location			
Piping diagram	**Wiring diagram**	**Switch box**	**Component overview of unit**
See "Outdoor unit" on page 117.	See "Outdoor unit" on page 114.	See "Outdoor unit" on page 118.	See "Outdoor unit" on page 118.
Check procedure			

Mechanical check

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

1. Check the state of the propeller, replace the propeller if damaged, deformed, cracked or broken (refer to "Replacing propeller fan blade assembly single fan outdoor unit" on page 97).
2. Check the motor shaft bearing friction, only perform electrical check if motor runs with low shaft bearing friction. Replace fan motor if friction is abnormal (refer to "Replacing DC fan motor assembly" on page 87).

Electrical check

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

1. Check fuse on PCB, replace if blown, see table "Component checklist" on page 118.

WARNING: RISK OF FIRE

When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

2. Check if fan motor connector is plugged into PCB.
3. Power the Daikin unit.
4. Check power supply, the measured voltage must be 198 - 240 VAC, if not replace main PCB (refer to "Replacing main PCB" on page 95).

2.4.2.5. Main PCB

Technical specification		Description	
Location			
Piping diagram	**Wiring diagram**	**Switch box**	**Component overview of unit**
See "Outdoor unit" on page 117.	See "Outdoor unit" on page 114.	See "Outdoor unit" on page 118.	See "Outdoor unit" on page 118.
Check procedure			

Mechanical check

Not applicable.

Electrical check

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

1. Switch on the Daikin unit with the field supplied circuit breaker.
2. Switch on the Daikin unit via the user interface.
3. Check if the HAP LED is blinking in regular intervals (1/0.5 sec), if not blinking, replace the main PCB board (refer to "Replacing main PCB" on page 95).
4. Measure the supply voltage to the main PCB board: there should be ± 220 V between brown and blue cable. If not correct voltage, replace the electrical noise filter PCB (refer to "Replacing electrical noise filter" on page 80).
5. Switch off the Daikin unit via the user interface.
6. Switch off the Daikin unit with the field supplied circuit breaker.
7. Remove plate work when required.
8. Open the compressor insulation.
9. Remove the terminal cover of compressor wiring.

WARNING: RISK OF ELECTROCUTION

The smoothing capacitor must discharge below 10 VDC before removing the compressor wiring.

10. Measure the voltage on S70: pin 7-4 and wait until it drops below 10 VDC.

INFORMATION

Note the position of the cables on the compressor wire terminals to allow identical wiring during reinstallation.

11. Disconnect the compressor wires and connect the compressor wires to the Inverter Analyzer (SPP number 1368521).

12. Power the Daikin unit.

> **WARNING**
> Electrical shock hazard. Do not touch life wires.

13. Activate the inverter test (refer to "Component checklist" on page 118).
14. Check that all LED's on the Inverter Analyzer are lit; if not, replace the inverter board (refer to "Replacing inverter PCB" on page 87).
15. Switch off the Daikin unit with the field supplied circuit breaker.
16. Wait a few minutes and confirm that the LED's on the Inverter Analyzer are off.
17. Disconnect the Inverter Analyzer from the U V W wiring.

> **CAUTION**
> When wiring the compressor, observe UV W as indicated on the compressor.

18. Reconnect the U V W leads to the compressor.

2.4.2.6. High pressure switch

Technical specification	Description
The high pressure switch has a normally closed contact. If the pressure exceeds 41.7 (+0 / -1) bar the contact will open; if the pressure drops below 32 (±2) bar the contact will close.	The high pressure switch is a safety component that stops the compressor if overpressure is detected in the refrigerant circuit.

Location			
Piping diagram	**Wiring diagram**	**Switch box**	**Component overview of unit**
See "Outdoor unit" on page 117.	See "Outdoor unit" on page 114.	See "Outdoor unit" on page 118.	See "Outdoor unit" on page 118.

Check procedure

Electrical check

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

1. Disconnect the high pressure switch connector from applicable PCB, see table "Component checklist" on page 118.
2. Recover the refrigerant.
3. Pressurize the refrigerant circuit at 41.7 bar with nitrogen.
4. Measure the switch contacts between high pressure switch connector: pins 1-2; the switch must be open.
5. Replace the high pressure switch if the contact is not open (refer to "Replacing high pressure switch" on page 94).
6. Lower the refrigerant circuit pressure to 30 bar.
7. Measure the switch contacts between high pressure switch connector: pins 1-2; the switch must be closed.
8. Replace the high pressure switch if the contact is not closed (refer to "Replacing high pressure switch" on page 94).

2.4.2.7. Muffler

Technical specification		Description	
-		The muffler breaks up the pressure pulses which create noise.	
Location			
Piping diagram	**Wiring diagram**	**Switch box**	**Component overview of unit**
See "Outdoor unit" on page 117.	See "Outdoor unit" on page 114.	See "Outdoor unit" on page 118.	See "Outdoor unit" on page 118.
Check procedure			
Mechanical check			

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required.

PROCEDURE

1. Power on the Daikin unit with the field supplied circuit breaker.
2. After the compressor has been running for 5 minutes, measure the temperature before and after the muffler.
3. If a temperature difference above 3°C is measured over the muffler, it indicates the muffler is obstructed and must be replaced.
4. Switch on the Daikin unit via the user interface.

2.4.2.8. Refrigerant thermistors

Technical specification	Description
A single type of thermistor is used; the resistance vs. temperature characteristics is shown in below table "Thermistor resistance / temperature characteristics (type 1)".	The thermistors are used to measure the temperature at multiple locations inside the Daikin unit. The measured temperatures are processed by the main board.

Location			
Piping diagram	**Wiring diagram**	**Switch box**	**Component overview of unit**
See "Outdoor unit" on page 117.	See "Outdoor unit" on page 114.	See "Outdoor unit" on page 118.	See "Outdoor unit" on page 118.

Check procedure

Mechanical check

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Locate the thermistor and check if thermal contact with the piping or ambient is ensured.

Electrical check

INFORMATION

If a thermistor check fails, replace the thermistor.

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required.

PROCEDURE

1. From the table in the appendix ("Component checklist" on page 118), select the thermistor that must be checked.
2. Measure the temperature of the thermistor using a contact thermometer.

WARNING: RISK OF FIRE

When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

3. Unplug the connector from the appropriate PCB and measure the resistance between the pins listed in the table in the appendix ("Component checklist" on page 118).
   - Compare the measured resistance with the range determined by the lower and higher temperature.
4. If the measured resistance does not match the listed value, the thermistor must be replaced.

INFORMATION

All thermistors have a tolerance of 5%.

E.g. R3T air thermistor - main PCB - connector S90: pin 1-2 type 1:

- Measured temperature with contact thermometer: 23.1°C.
- Unplug the sensor and measure the resistance between S90: 1-2: 21.86 kΩ.

- The resistance values are defined by below table "Thermistor resistance / temperature characteristics (type 1)":
  - Resistance at 23°C: 21.85 kΩ.
  - Resistance at 24°C: 20.90 kΩ.
- The measured value 21.86 kΩ is inside the range, thermistor R3T passes the check.

INFORMATION

The user interface allows to monitor most thermistors.

If the measured resistance of the thermistor matches the temperature measured with the contact thermometer but the temperature for the corresponding thermistor is not correct on the user interface display, replace applicable PCB.

Table 2-1: Thermistor resistance / temperature characteristics (type 1)

T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ
-20	197.81	0	65.84	20	25.01	40	10.63	60	4.87
-19	186.53	1	62.54	21	23.91	41	10.21	61	4.70
-18	175.97	2	59.43	22	22.85	42	9.81	62	4.54
-17	166.07	3	56.49	23	21.85	43	9.42	63	4.38
-16	156.80	4	53.71	24	20.90	44	9.06	64	4.23
-15	148.10	5	51.09	25	20.00	45	8.71	65	4.08
-14	139.94	6	48.61	26	19.14	46	8.37	66	3.94
-13	132.28	7	46.26	27	18.32	47	8.05	67	3.81
-12	125.09	8	44.05	28	17.54	48	7.75	68	3.68
-11	118.34	9	41.95	29	16.80	49	7.46	69	3.56
-10	111.99	10	39.96	30	16.10	50	7.18	70	3.44
-9	106.03	11	38.08	31	15.43	51	6.91	71	3.32
-8	100.41	12	36.30	32	14.79	52	6.65	72	3.21
-7	95.14	13	34.62	33	14.18	53	6.41	73	3.11
-6	90.17	14	33.02	34	13.59	54	6.65	74	3.01
-5	85.49	15	31.50	35	13.04	55	6.41	75	2.91
-4	81.08	16	30.06	36	12.51	56	6.18	76	2.82
-3	76.93	17	28.70	37	12.01	57	5.95	77	2.72
-2	73.01	18	27.41	38	11.52	58	5.74	78	2.64
-1	69.32	19	26.18	39	11.06	59	5.14	79	2.55
								80	2.47

Table 2-2: Thermistor resistance / temperature characteristics (type 2)

T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ
-20	192.08	0	64.17	20	24.45	40	10.41	60	4.87
-19	181.16	1	60.96	21	23.37	41	10.00	61	4.70
-18	170.94	2	57.94	22	22.35	42	9.61	62	4.54
-17	161.36	3	55.08	23	21.37	43	9.24	63	4.38
-16	152.38	4	52.38	24	20.45	44	8.88	64	4.23
-15	143.96	5	49.83	25	19.56	45	8.54	65	4.08
-14	136.05	6	47.42	26	18.73	46	8.21	66	3.94
-13	128.63	7	45.14	27	17.93	47	7.90	67	3.81
-12	121.66	8	42.98	28	17.17	48	7.60	68	3.68
-11	115.12	9	40.94	29	16.45	49	7.31	69	3.56
-10	108.96	10	39.01	30	15.76	50	7.04	70	3.44

T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ
-9	103.18	11	37.18	31	15.10	51	6.78	71	3.32
-8	97.73	12	35.45	32	14.48	52	6.53	72	3.21
-7	92.61	13	33.81	33	13.88	53	6.53	73	3.11
-6	87.79	14	32.25	34	13.31	54	6.53	74	3.01
-5	83.25	15	30.77	35	12.77	55	6.29	75	2.91
-4	78.97	16	29.37	36	12.25	56	6.06	76	2.82
-3	74.94	17	28.05	37	11.76	57	5.84	77	2.72
-2	71.14	18	26.78	38	11.29	58	5.43	78	2.64
-1	67.56	19	25.59	39	10.84	59	5.05	79	2.55
								80	2.47

Table 2-3: Thermistor resistance / temperature characteristics (air thermistor FTXM-M)

T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ	T °C	kΩ
-32,5	237,01	-6,0	46,5	20,5	12,3	47	4	73,5	1,6
-32,0	229,08	-5,5	45,3	21	12	47,5	3,9	74	1,5
-31,5	221,45	-5,0	44	21,5	11,7	48	3,9	74,5	1,5
-31,0	214,1	-4,5	42,8	22	11,4	48,5	3,8	75	1,5
-30,5	207,02	-4,0	41,7	22,5	11,2	49	3,7	75,5	1,5
-30,0	200,2	-3,5	40,6	23	10,9	49,5	3,7	76	1,4
-29,5	193,64	-3,0	39,5	23,5	10,7	50	3,6	76,5	1,4
-29,0	187,32	-2,5	38,4	24	10,5	50,5	3,5	77	1,4
-28,5	181,22	-2,0	37,4	24,5	10,2	51	3,5	77,5	1,4
-28,0	175,35	-1,5	36,4	25	10	51,5	3,4	78	1,4
-27,5	169,7	-1,0	35,5	25,5	9,8	52	3,3	78,5	1,3
-27,0	164,24	-0,5	34,5	26	9,6	52,5	3,3	79	1,3
-26,5	158,99	0	33,6	26,5	9,4	53	3,2	79,5	1,3
-26,0	153,92	0,5	32,7	27	9,2	53,5	3,1	80	1,3
-25,5	149,03	1	31,9	27,5	9	54	3,1	80,5	1,3
-25,0	144,32	1,5	31,1	28	8,8	54,5	3	81	1,2
-24,5	139,77	2	30,3	28,5	8,6	55	3	81,5	1,2
-24,0	135,39	2,5	29,5	29	8,4	55,5	2,9	82	1,2
-23,5	131,15	3	28,7	29,5	8,2	56	2,9	82,5	1,2
-23,0	127,07	3,5	28	30	8	56,5	2,8	83	1,2
-22,5	123,13	4	27,3	30,5	7,9	57	2,8	83,5	1,1
-22,0	119,33	4,5	26,6	31	7,7	57,5	2,7	84	1,1
-21,5	115,66	5	25,9	31,5	7,5	58	2,7	84,5	1,1
-21,0	112,11	5,5	25,3	32	7,4	58,5	2,6	85	1,1
-20,5	108,69	6	24,6	32,5	7,2	59	2,6	85,5	1,1
-20,0	105,38	6,5	24	33	7,1	59,5	2,5	86	1,1
-19,5	102,19	7	23,4	33,5	6,9	60	2,5	86,5	1
-19,0	99,11	7,5	22,8	34	6,8	60,5	2,4	87	1
-18,5	96,13	8	22,3	34,5	6,6	61	2,4	87,5	1
-18,0	93,25	8,5	21,7	35	6,5	61,5	2,4	88	1
-17,5	90,47	9	21,2	35,5	6,4	62	2,3	88,5	1
-17,0	87,78	9,5	20,7	36	6,2	62,5	2,3	89	1
-16,5	85,19	10	20,2	36,5	6,1	63	2,2	89,5	0,9
-16,0	82,67	10,5	19,7	37	6	63,5	2,2	90	0,9
-15,5	80,25	11	19,2	37,5	5,9	64	2,2	90,5	0,9
-15,0	77,9	11,5	18,7	38	5,7	64,5	2,1	91	0,9
-14,5	75,63	12	18,3	38,5	5,6	65	2,1	91,5	0,9

-14,0	73,43		12,5	17,9		39	5,5		65,5	2,1		92	0,9
-13,5	71,31		13	17,4		39,5	5,4		66	2		92,5	0,9
-13,0	69,25		13,5	17		40	5,3		66,5	2		93	0,9
-12,5	67,27		14	16,6		40,5	5,2		67	1,9		93,5	0,8
-12,0	65,34		14,5	16,2		41	5,1		67,5	1,9		94	0,8
-11,5	63,48		15	15,8		41,5	5		68	1,9		94,5	0,8
-11,0	61,68		15,5	15,5		42	4,9		68,5	1,9		95	0,8
-10,5	59,93		16	15,1		42,5	4,8		69	1,8		95,5	0,8
-10,0	58,25		16,5	14,8		43	4,7		69,5	1,8		96	0,8
-9,5	56,61		17	14,4		43,5	4,6		70	1,8		96,5	0,8
-9,0	55,03		17,5	14,1		44	4,5		70,5	1,7		97	0,8
-8,5	53,5		18	13,8		44,5	4,4		71	1,7		97,5	0,7
-8,0	52,01		18,5	13,4		45	4,3		71,5	1,7		98	0,7

2.4.3. System

Not applicable.

2.4.4. Others

Not applicable.

2.5. Other capacity range

Not applicable.

Part 3. Repair

This part contains the following chapters:

3.1. Refrigerant repair procedures

Overview:

3.1.1. Refrigerant piping handling

- Make sure the applied pressure is never higher than the unit design pressure as indicated on the nameplate (PS).
- Work according the F-gas regulation and/or local regulations.
- Make sure the correct amount according the F-gas regulation label on the unit (factory + additional where required) of refrigerant is charged after repair.
- Make sure to use the appropriate equipment and tools according to the refrigerant and unit type.
- Charge non-azeotropic refrigerant (e.g. R-410A) always in a liquid state.
- R32 can be charged in gas phase.
- Make sure to use a digital scale (no charging cylinder).
- Execute correct vacuum drying procedure after repair work:
  - -0,1 MPa / -760 mmHg / -750 Torr / -1 bar for at least 1 hour.
  - Connect the unit according the available service ports, refer to "Recovery procedure" on page 65.
  - Use related field setting where necessary to open expansion valve/solenoid valve.

3.1.2. Recovery procedure

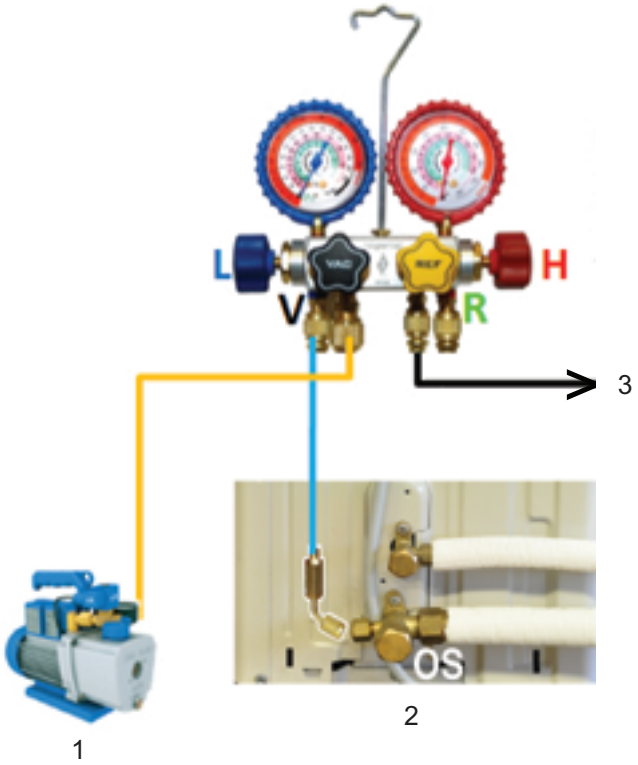
3.1.2.1. Outdoor unit casing

1. Switch off the Daikin unit via the user interface.
2. Manually open the expansion valve (located on the outdoor unit).
3. Connect the vacuum pump, manifold, recovery unit and refrigerant bottle to the service port as shown below.

   For the location of the service ports, refer to "Outdoor unit" on page 117.

In case of 1 service port at the stop valves

Figure 3-1: 1 service port at the stop valves



1. Vacuum pump
2. Connect flexible hose to service port 3 stop valve
3. To recovery pump

INFORMATION

See instruction of the recovery pump supplier how to recover the refrigerant.

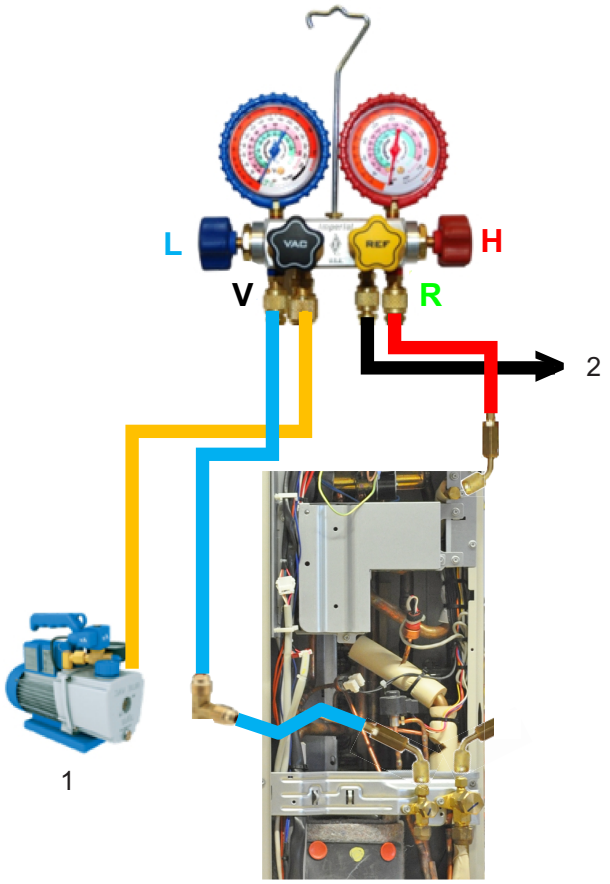
In case of 2 service ports at the stop valves

Connect both stop valve service ports to the manifold.

In case of 3 service ports at the stop valves

Connect 1 hose to the suction stop valve service port and 1 hose to the service port between the expansion valve and outdoor H/E.

Figure 3-2: 3 service ports at the stop valves



1. Vacuum pump	2. To recovery pump

INFORMATION

See instruction of the recovery pump supplier how to recover the refrigerant.

3.1.3. Refrigerant pump down

This unit is equipped with an automatic pump down operation which will collect all refrigerant from the field piping and indoor unit in the outdoor unit. To protect the environment, make sure to perform the following pump down operation when relocating the unit.

WARNING: RISK OF EXPLOSION

- When the refrigeration circuit has a leak, do not execute pump down with the compressor.
- Use recovery system into separate cylinder.
- Warning, explosive hazard exists when executing pump down.
- Pump down with compressor can lead to self-combustion due to air entering during pump down.

INFORMATION

Some outdoor units are equipped with a low pressure switch to protect the compressor by switching it off.

Never short-circuit the low pressure switch during pump down operation!

3.1.3.1. Small outdoor unit

1. Remove the valve lid from liquid stop valve and gas stop valve.
2. Carry out pump down operation.

	**CAUTION** Refer to Installer Reference Guide for 'Pump down operation' procedure.

3. After 5-10 min (after only 1-2 min in case of very low Ta < -10°C), close the liquid stop valve with a hexagonal wrench.
4. Check on manifold if vacuum is reached, close gas stop valve and forced cooling operation.

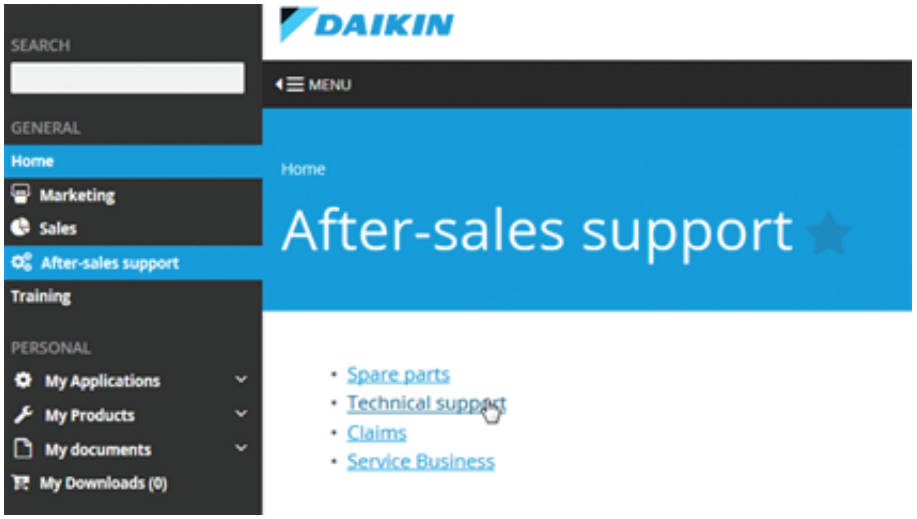
3.1.4. Piping repair procedures

- Make sure to cover open pipe ends during repair work so no dust or moisture can enter.
- Make sure to re-apply insulation removed during repair.
- Pipe expansion / flare making:
  - Remove any burrs on the cut surface and use correct tool such as reamer or scraper (note that excessive deburring can thin the pipe walls and cause cracking of the pipe).
  - Make sure the flare has the correct size (use a flare gauge).
  - Make sure no particles remain in the piping.
  - Apply just a drop of refrigerant oil on the inner surface of the flare.
  - Make sure the flare connection is tightened with the correct torque (torque values refer to installation manual).
- Brazing:
  - Use correct brazing tool.
  - Use a phosphor copper filler metal (silver composition of 0 to 2%). Do not use flux material.
  - Flush the piping before brazing with nitrogen to avoid oxidation of the inside of the copper tubes (nitrogen purity ≥ 99,99%).

3.2. Service tools

For an overview of the applicable service tools, please check the Daikin Business Portal: http://www.mydaikin.eu

Go to the tab “After-sales support” on the left side and then select “Technical support”.



You will then find a button “Service tools” which gives you an overview on which service tool to use for which product. Also additional information on the service tool (instruction, latest software) can be found there.

3.3. Unit specific repair procedures

Overview:

3.3.1. Indoor unit

3.3.1.1. Replacing streamer unit

PRELIMINARY ACTIONS

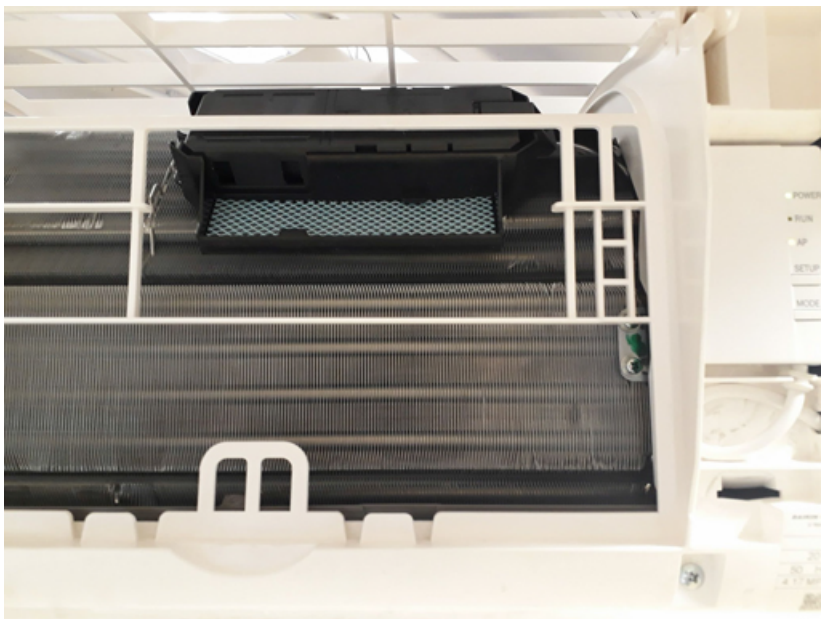
1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.

PROCEDURE

Removal

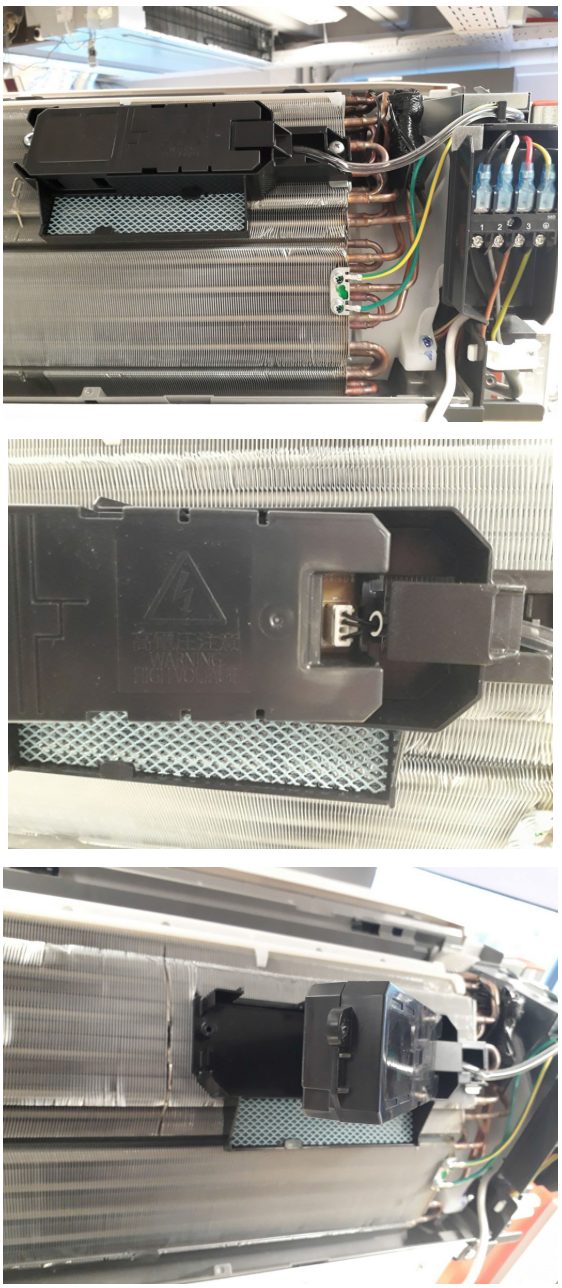
1. Remove front panel.

Figure 3-3: Removing the front panel



2. Lose connection, click stream unit out and replace with new unit.

Figure 3-4: Replacing the streamer unit



Installation

1. Proceed in reverse order.

3.3.1.2. Replacing humidity sensor

PRELIMINARY ACTIONS

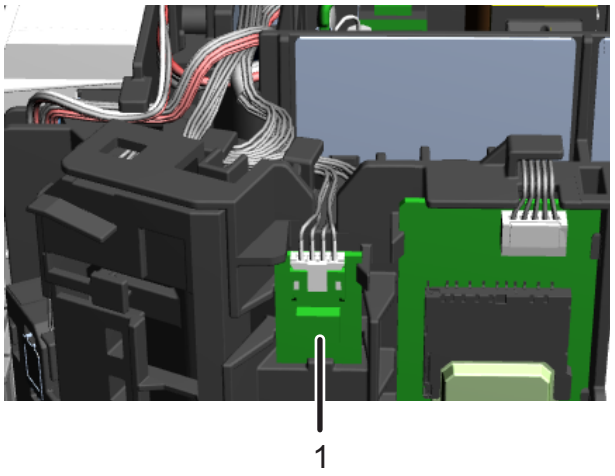
1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required, refer to "Basic removal" on page 76.

PROCEDURE

Removal

1. Disconnect the humidity sensor connector from the indoor unit PCB.
2. Carefully click the complete humidity sensor PCB assembly (1) out of the indoor unit.

Figure 3-5: Removing the humidity sensor PCB assembly

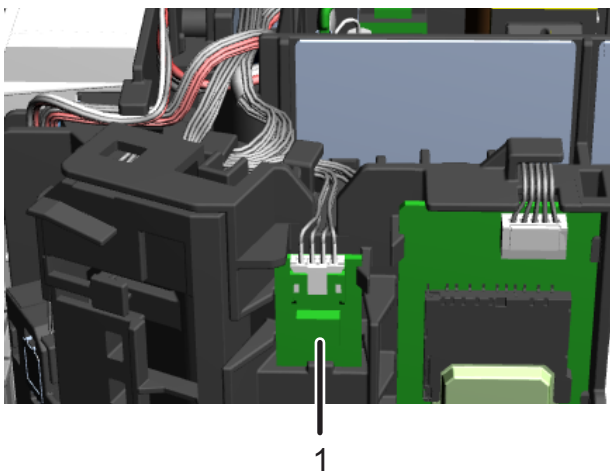


1. Humidity sensor PCB assembly

Installation

1. Click the humidity sensor PCB assembly on the indoor unit.

Figure 3-6: Installing the humidity sensor PCB assembly



1. Humidity sensor PCB assembly

2. Route the humidity sensor harness inside the switch box, along the harness retainers.

3. Connect the humidity sensor harness to the appropriate connector on the indoor unit PCB.

WARNING: RISK OF FIRE

When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

3.3.1.3. Replacing R32 sensor (only for FVXM-F model)

PRELIMINARY ACTIONS

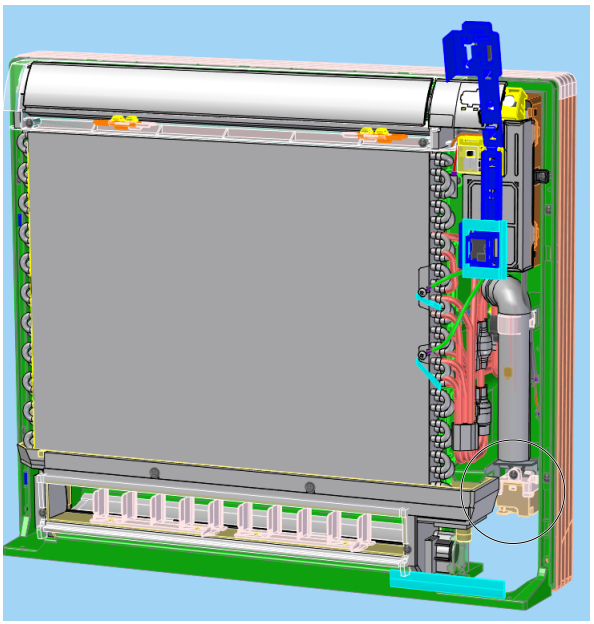
1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work.

PROCEDURE

Removal

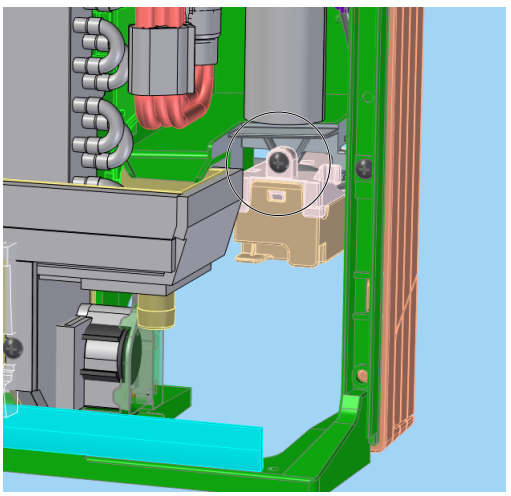
1. Remove plate work (front case).

Figure 3-7: Removing plate work



2. Remove screw.

Figure 3-8: Removing the screw

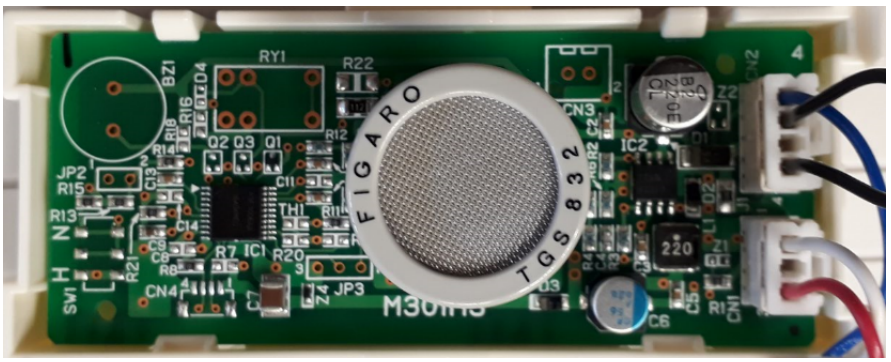


3. Remove casing of the sensor.

Figure 3-9: Removing casing of the sensor

4. Remove PCB connectors, put new PCB in casing.

Figure 3-10: Removing PCB connectors



Installation

1. Proceed in reverse order.

3.3.2. Outdoor unit

3.3.2.1. Basic removal

3.3.2.1.1 Removing refrigerant connection cover

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.

PROCEDURE

Removal

1. Loosen and remove 1 screw (1) that fix the refrigerant connection cover.

Figure 3-11: Removing refrigerant connection cover

1. Screw

3.3.2.1.2 Removing the top plate

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.

PROCEDURE

Removal

1. Loosen and remove the 3 screws (1) that fix the top plate.

Figure 3-12: Removing the top plate

1. Screw

3.3.2.1.3 Removing the front plate

PRELIMINARY ACTIONS

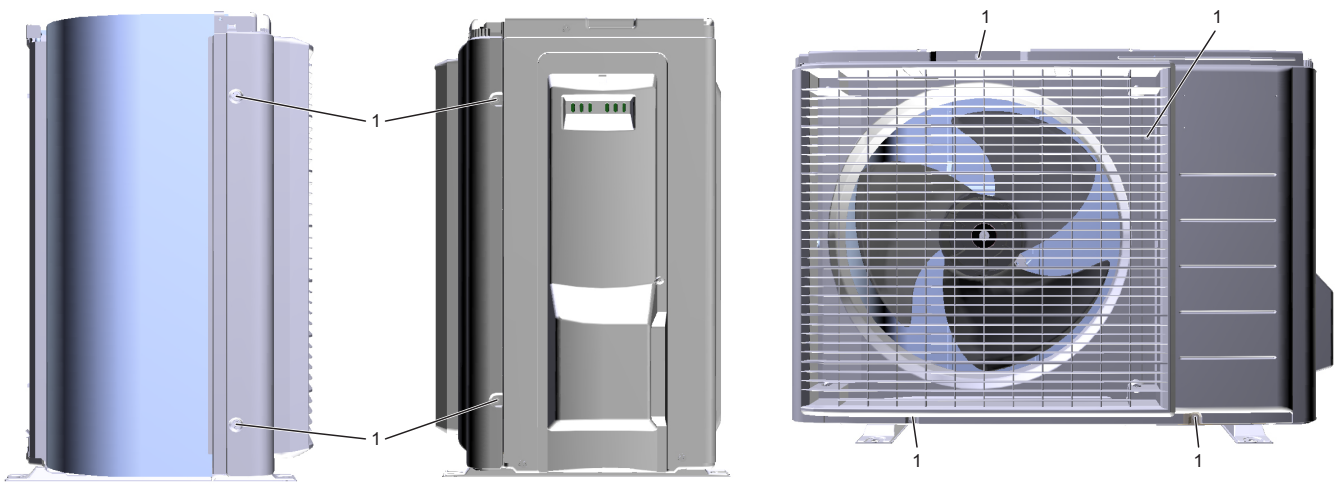
1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.

PROCEDURE

Removal

1. Remove the top plate.
2. Loosen and remove the 8 screws (1) that fix the front plate.

Figure 3-13: Removing the front plate



1. Screw

3.3.2.1.4 Removing the compressor sound insulation

PRELIMINARY ACTIONS

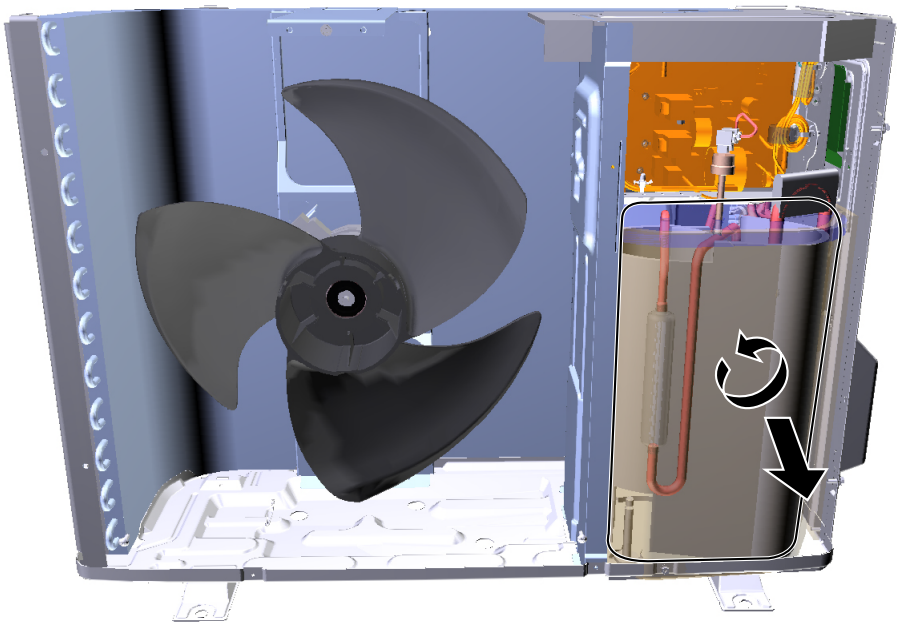
1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.

PROCEDURE

Removal

1. Remove the top plate.
2. Remove the front plate.
3. Remove the compressor sound insulation (untwist the cord and remove the insulation).

Figure 3-14: Removing the compressor sound insulation



3.3.2.2. Removing switch box

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required, refer to "Basic removal" on page 76.

PROCEDURE

Removal

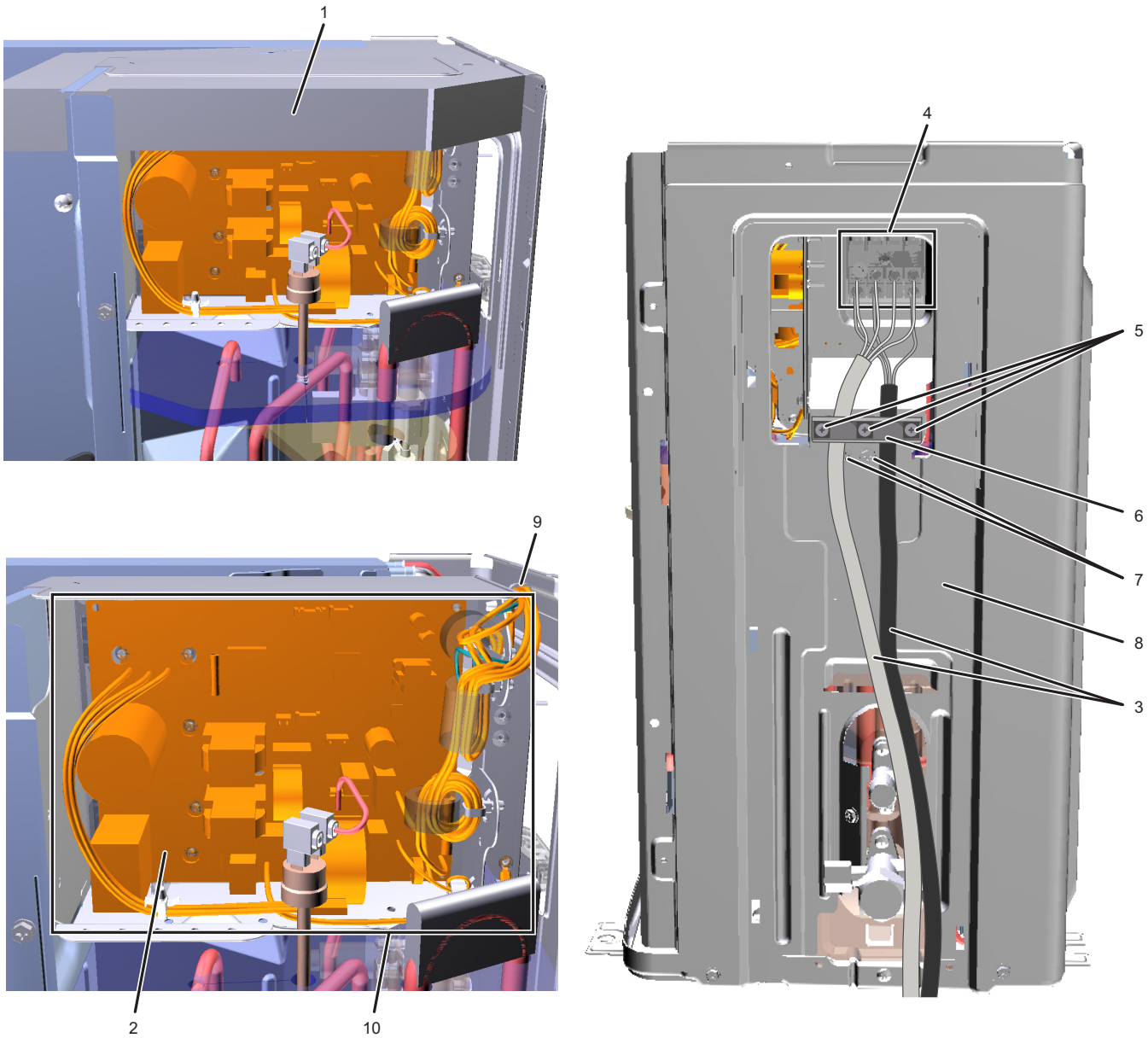
1. Remove the insulation (1).

WARNING: RISK OF FIRE

When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

2. Unplug all connectors from the main PCB (2), see "Component checklist" on page 118.
3. Remove all electrical power wiring (3) from the wire terminals (4).
4. Remove the screws (5) that fix the wire clamp (6), remove the wire clamp (6).
5. Remove the screws (7) that fix the right side plate assembly (8).
6. Cut the cable tie (9).
7. Lift the switch box (10) from the Daikin unit.

Figure 3-15: Removing the switch box



1. Insulation	6. Wire clamp
2. Main PCB	7. Screw
3. Electrical power wiring	8. Right side plate assembly
4. Wire terminals	9. Cable tie
5. Screw	10. Switch box

Installation

1. Proceed in reverse order.

3.3.2.3. Replacing 4-way valve body

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Recover the refrigerant, refer to "Recovery procedure" on page 65.
4. Remove plate work when required (refer to "Basic removal" on page 76).

PROCEDURE

Removal

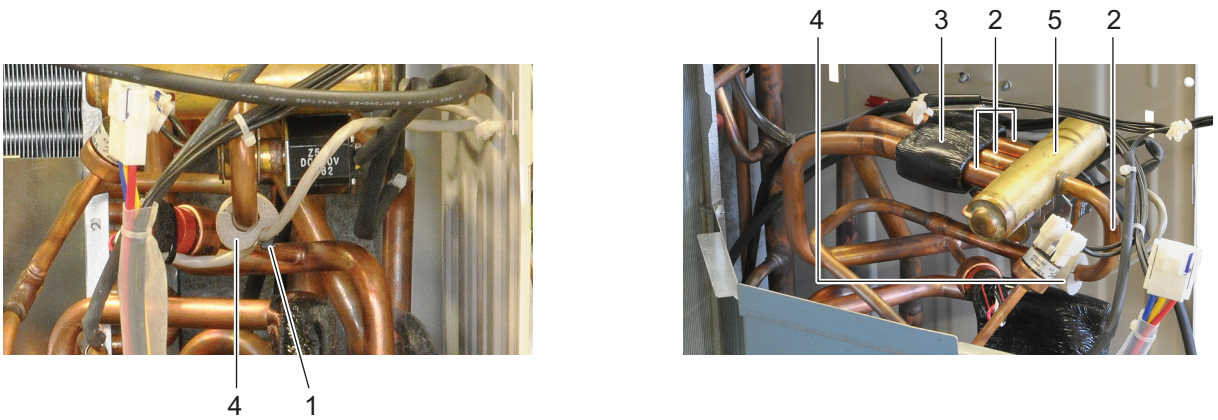
1. Remove any parts that block the way to the 4-way valve.

> **INFORMATION**
>
> Follow local regulations and Daikin refrigerant repair procedures during the repair of your unit, refer to "Refrigerant repair procedures" on page 65.

> **CAUTION**
>
> The maximum applied Nitrogen pressure must not exceed 0.02 MPa.

2. Cut the 4-way valve pipes (2).
3. Remove the 4-way valve (5).
4. Recuperate the putty (3).
5. Recuperate the insulation (4).

Figure 3-16: Removing the 4-way valve



1. Tie wrap
2. 4-way valve pipe
3. Putty
4. Insulation
5. 4-way valve

Installation

> **WARNING**
>
> Overheating the 4-way valve will damage or destroy it.

1. Wrap a wet rag around the 4-way valve (5).

INFORMATION

Install the putty on the 4-way valve.
Install the compressor sound insulation in the same location.

2. Proceed in reverse order.

3.3.2.4. Replacing 4-way valve coil

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required.
4. Remove any part that block the way to the 4-way valve coil.

PROCEDURE

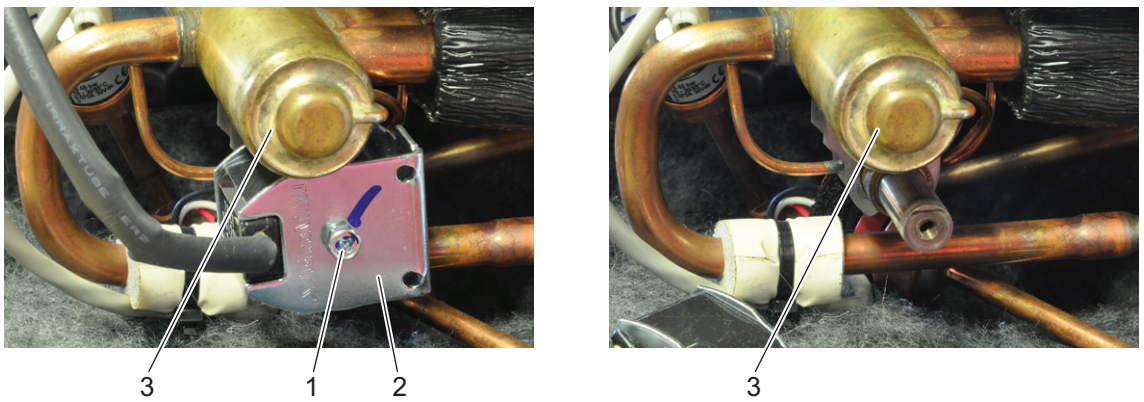
Removal

1. Loosen and remove the screw (1) that fixes the 4-way valve coil (2).
2. Cut the tie wraps that fix the 4-way valve coil wiring.

> **WARNING: RISK OF FIRE**
>
> When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

3. Unplug 4-way valve connector from PCB.

Figure 3-17: Removing the 4-way valve coil



1. Screw
2. 4-way valve coil
3. 4-way valve body

Installation

1. Proceed in reverse order.

3.3.2.5. Replacing compressor

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Recover the refrigerant, refer to "Recovery procedure" on page 65.
4. Remove plate work when required.
5. Remove any part that blocks the way to the compressor.

PROCEDURE

INFORMATION

Follow local regulations and Daikin refrigerant repair procedures during the repair of your unit, refer to "Refrigerant repair procedures" on page 65.

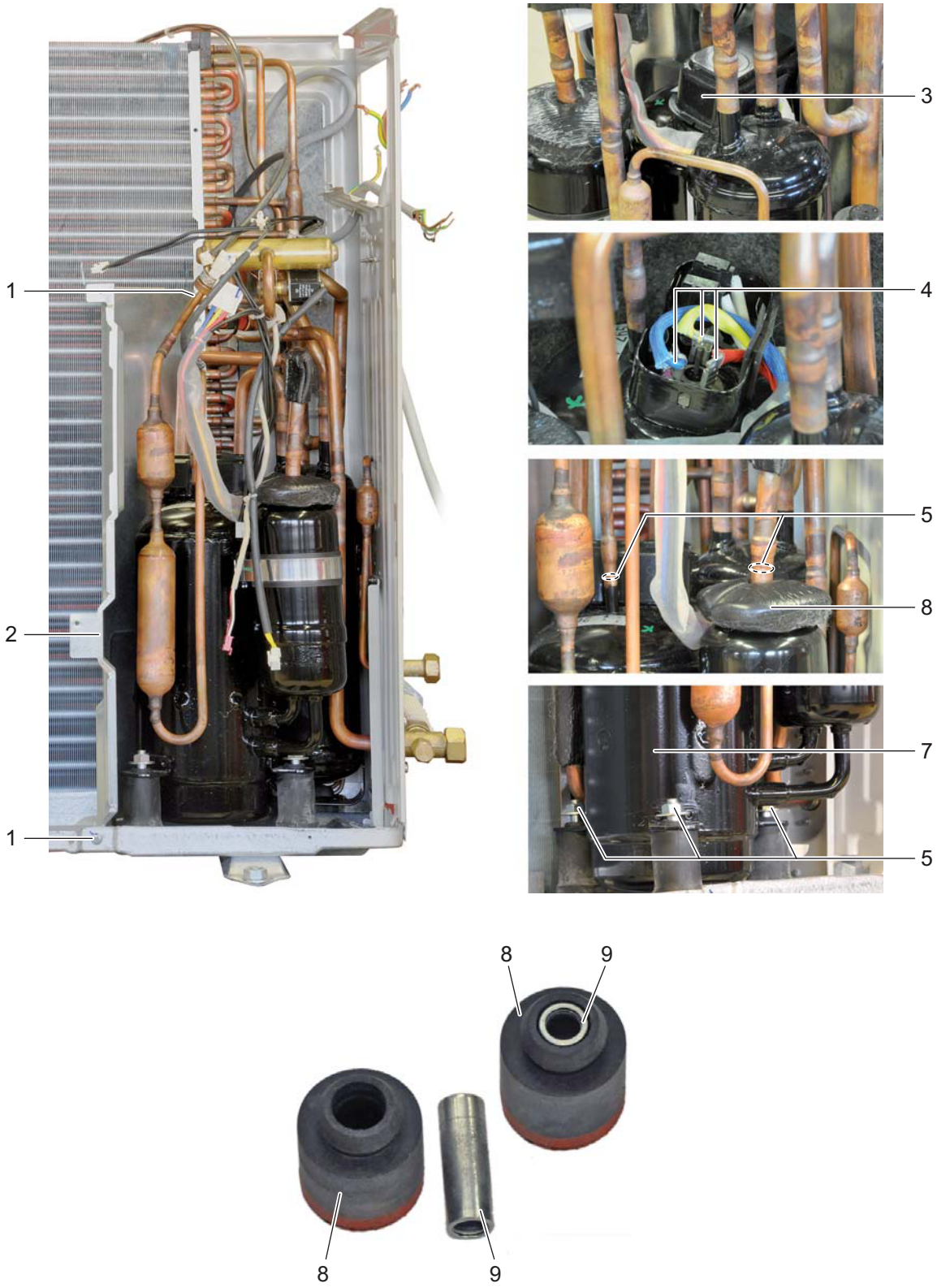
CAUTION

The maximum applied Nitrogen pressure must not exceed 0.02 MPa.

Removal

1. Remove the terminal cover (3) and unplug the compressor wiring (4) and take picture.
2. Using a pipe cutter, cut the compressor pipes (5) below the soldered joint.
3. Loosen and remove the 3 nuts (6) that fix the compressor (7).
4. Remove the compressor (7).
5. Remove the dampers (9) with bushings (10) from the compressor (7).
6. Recuperate the putty (8).

Figure 3-18: Removing the compressor



1. Screw	6. Nut
2. Partition plate assembly	7. Compressor
3. Terminal cover	8. Putty
4. Compressor wiring	9. Dampers
5. Compressor pipe	10. Bushing

Installation

	**CAUTION** The oil in the compressor is hygroscopic. Remove the caps from the compressor piping as late as possible.
	**INFORMATION** Before installing a new compressor, determine the cause of the compressor failure and take all required corrective actions.
	**INFORMATION** If the dampers are worn, replace the dampers. The bushings inside the dampers are recuperated for use with the new dampers.
	**INFORMATION** Install the putty on the compressor. Install the compressor sound insulation in the same location.

1. Check damper status, replace when worn.
2. First install the 3 (new) dampers (without the bushings) on the new compressor.
3. Install the 3 bushings in the dampers.
4. When installing the new compressor, remove the caps from the compression pipe and the suction pipe as late as possible.
5. When soldering the compressor pipes, cover the compressor pipes with a wet cloth to prevent overheating the compressor (and the oil in the compression pipe).
6. Proceed in reverse order.

3.3.2.6. Replacing DC fan motor assembly

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove the propeller fan blade assembly, refer to "Replacing propeller fan blade assembly single fan outdoor unit" on page 97.

PROCEDURE

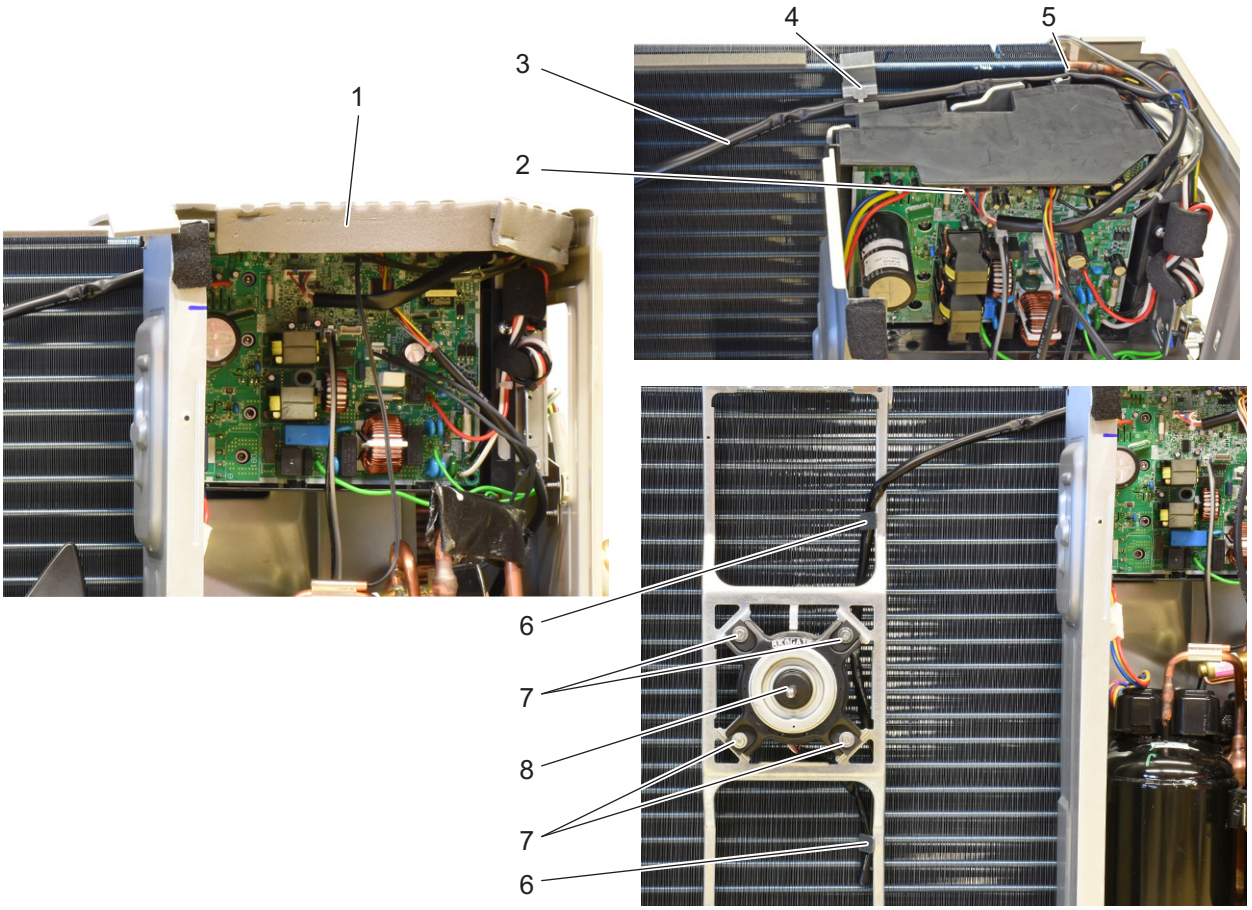
Removal

1. Remove the insulation (1) from the switch box.
2. Unplug the fan motor connector (3) from the main PCB.

	**WARNING: RISK OF FIRE** When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

3. Release the fan motor assembly harness (2) from the slot (4).
4. Slightly bend the harness retainers (5) to release the fan motor assembly harness (2).
5. Loosen and remove the screws (6) that fix the DC fan motor assembly (7).
6. Remove the DC fan motor assembly (7).

Figure 3-19: Removing the DC fan motor assembly



1. Insulation
2. Fan motor assembly harness
3. Connector
4. Slot
5. Harness retainer
6. Screw
7. Fan motor assembly

Installation

1. Proceed in reverse order.

3.3.2.7. Replacing expansion valve body

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove the expansion valve motor, refer to "Replacing expansion valve motor" on page 91.
4. Remove plate work when required.
5. Remove any part that block the way to the expansion valve body.

PROCEDURE

INFORMATION

Follow local regulations and Daikin refrigerant repair procedures during the repair of your unit, refer to "Refrigerant repair procedures" on page 65.

CAUTION

The maximum applied Nitrogen pressure must not exceed 0.02 MPa.

Removal

1. Recuperate the putty (1).
2. Using a pipe cutter, cut the expansion valve body pipes (2).
3. Remove the expansion valve body (3).

Figure 3-20: Removing the expansion valve

1. Putty
2. Expansion valve pipe
3. Expansion valve

Installation

WARNING

Overheating the expansion valve body will damage or destroy it.

1. Wrap a wet rag around the expansion valve body (3).

INFORMATION

Install the putty on the expansion valve body piping.

2. Proceed in reverse order.

3.3.2.8. Replacing expansion valve motor

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required.
4. Remove any part that block the way to the expansion valve motor.

PROCEDURE

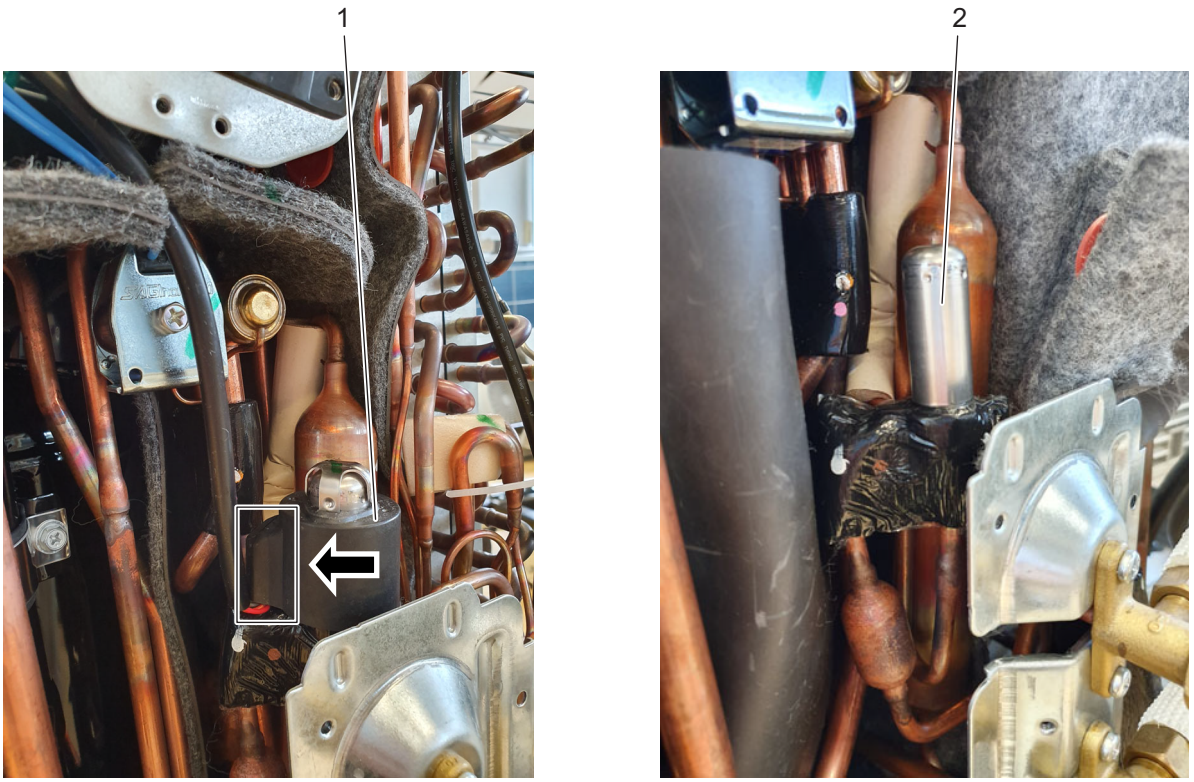
Removal

WARNING: RISK OF FIRE

When reconnecting a connector to the PCB, do not apply force, as this may damage the connector or connector pins of the PCB.

1. Remove the expansion valve motor (1) from the expansion valve body (2).
2. Unplug expansion valve motor connector from PCB.
3. Cut all tie wraps that fix the expansion valve motor (1) wiring.

Figure 3-21: Removing the expansion valve motor



1. Expansion valve motor
2. Expansion valve

Installation with clip

INFORMATION

Replace all tie wraps that were cut during removal.

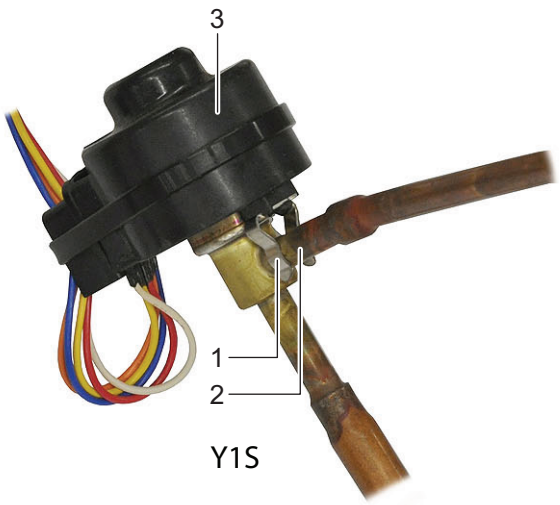
1. Proceed in reverse order.

INFORMATION

The expansion valve motor (3) is equipped with a pipe retention clip (1). The pipe retention clip (1) must be placed over the pipe (2) to lock the expansion valve motor (3).

2. When installing the expansion valve motor (3), lock it on the expansion valve on the CORRECT direction.

Figure 3-22: Locking the expansion valve motor



1. Pipe retention clip
2. Pipe
3. Expansion valve motor

Installation with bracket

INFORMATION

Replace all tie wraps that were cut during removal.

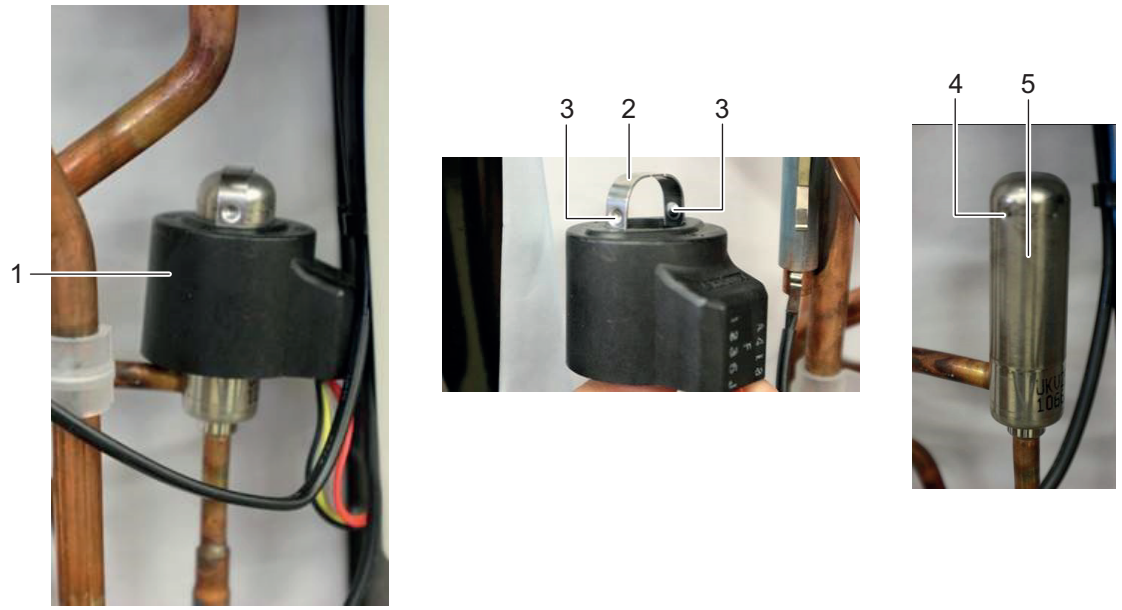
1. Proceed in reverse order.

INFORMATION

The expansion valve motor (1) is equipped with a metal bracket (2). Fit the nipples (3) of the metal bracket (2) into the notches (4) of the expansion valve body (5).

2. When installing the expansion valve motor (1), lock it on the expansion valve.

Figure 3-23: Locking the expansion valve motor



1. Expansion valve motor
2. Metal bracket
3. Nipples
4. Notch
5. Expansion valve body

3.3.2.9. Replacing high pressure switch

PRELIMINARY ACTIONS

1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Recover the refrigerant, refer to "Recovery procedure" on page 65.
4. Remove plate work when required.
5. Remove any part that block the way to the high pressure switch.

PROCEDURE

INFORMATION

Follow local regulations and Daikin refrigerant repair procedures during the repair of your unit, refer to "Refrigerant repair procedures" on page 65.

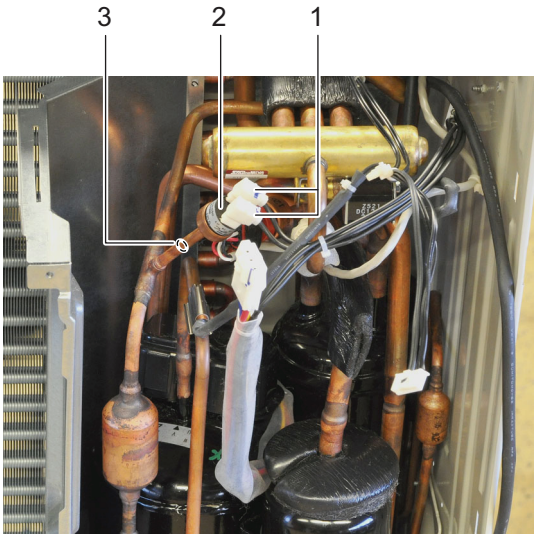
CAUTION

The maximum applied Nitrogen pressure must not exceed 0.02 MPa.

Removal

1. Remove high pressure switch connectors (1) from the high pressure switch (2).
2. Using a pipe cutter, cut the high pressure switch pipe (3).
3. Remove the high pressure switch (2).

Figure 3-24: Removing the high pressure switch



1. Connector
2. High pressure switch
3. High pressure switch pipe

Installation

WARNING

Overheating the high pressure switch will damage or destroy it.

1. Wrap a wet rag around the high pressure switch (2).
2. Proceed in reverse order.

3.3.2.10. Replacing main PCB

PRELIMINARY ACTIONS

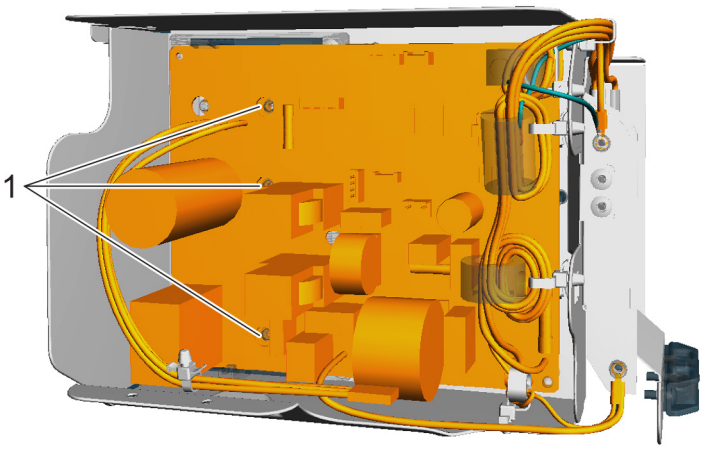
1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required, refer to "Basic removal" on page 76.
4. Remove the switch box, refer to "Removing switch box" on page 79.

PROCEDURE

Removal

1. Remove the screws (1) that fix the main PCB to the heat sink.

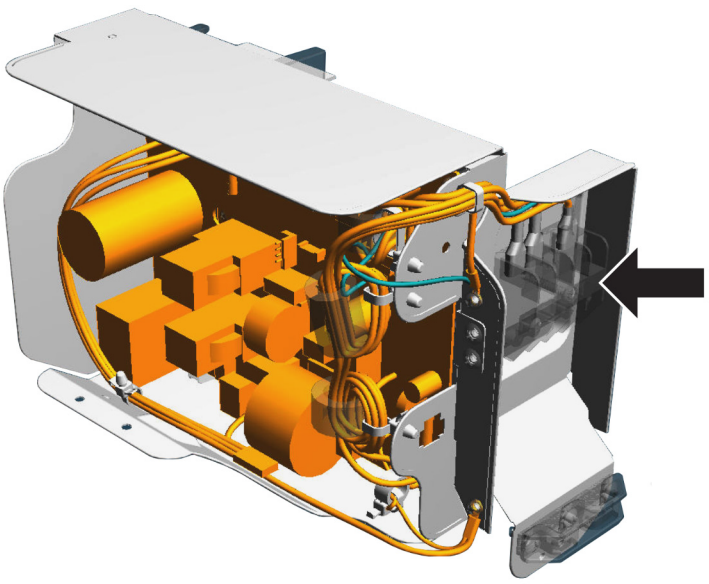
Figure 3-25: Remove screws main PCB



1. Screw

2. Remove wiring from terminals.

Figure 3-26: Remove wiring from terminals



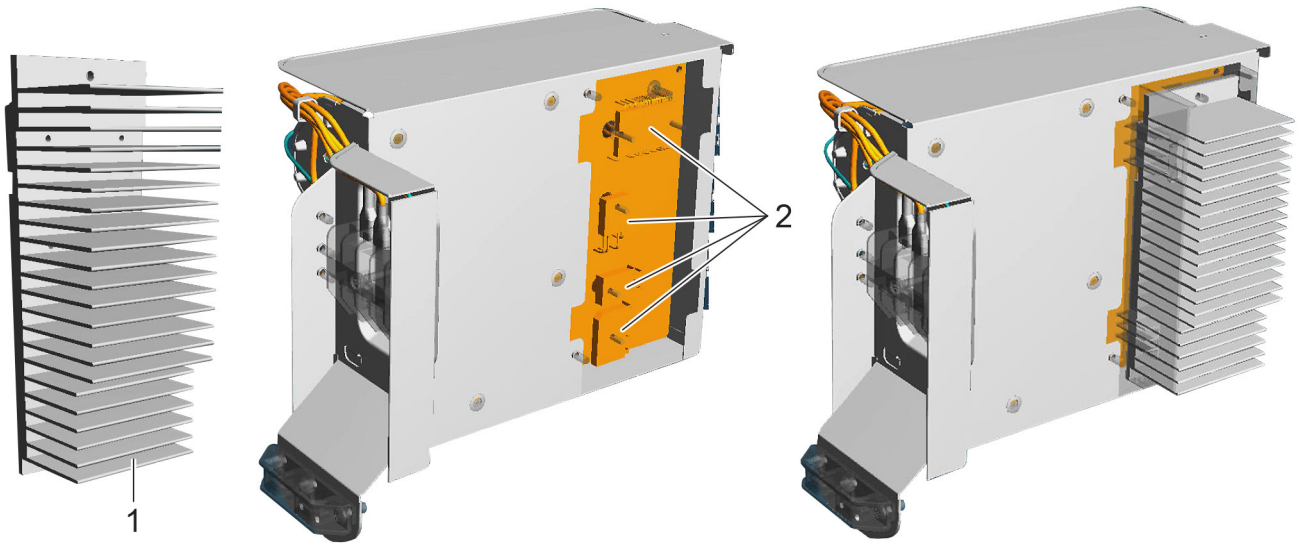
3. Lift PCB from switch box.

Installation

	**CAUTION** Make sure to apply enough heat conductive paste.

1. Attach new heat conductive paste (2) before attaching the heat sink (1) to the power electronics.

Figure 3-27: Apply heat conductive paste



1. Heat sink
2. Apply heat conductive paste

2. Proceed in reverse order.

3.3.2.11. Replacing propeller fan blade assembly single fan outdoor unit

PRELIMINARY ACTIONS

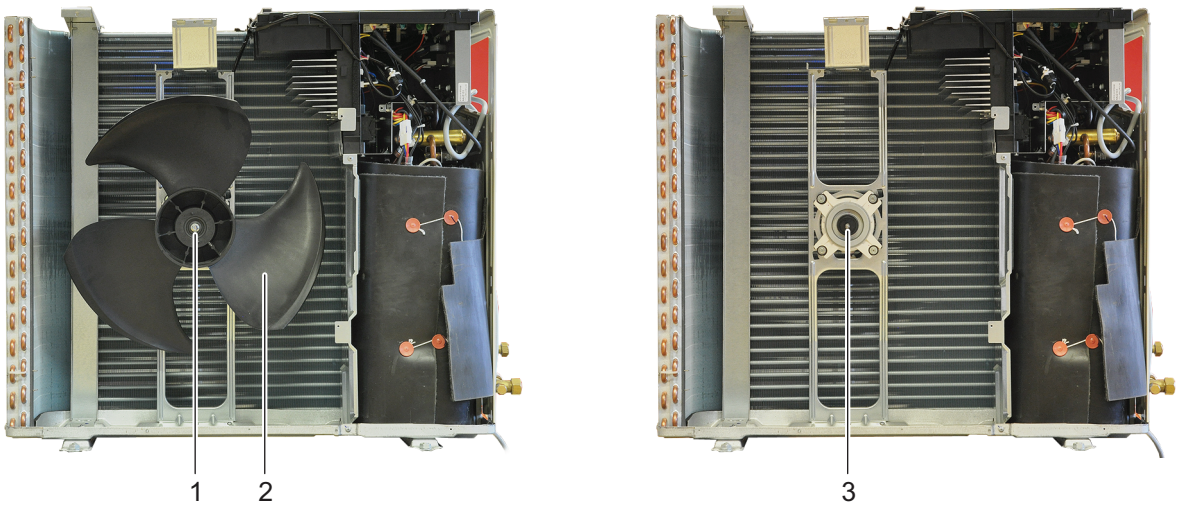
1. Switch off the Daikin unit via the user interface.
2. Switch off the Daikin unit with the field supplied circuit breaker.
3. Remove plate work when required.

PROCEDURE

Removal

1. Remove the nut (1) that fixes the propeller fan blade assembly (2).
2. Pull the propeller fan blade assembly (2) from the fan motor assembly (3).

Figure 3-28: Removing the propeller fan blade assembly



1. Nut
2. Propeller fan blade assembly
3. Fan motor assembly

Installation

CAUTION

Do not install a damaged propeller.

1. Proceed in reverse order.

Part 4. Maintenance

This part contains the following chapters:

4.1. Indoor unit

4.1.1. General maintenance indoor unit

1. Optimal operation conditions

	Cooling	Heating
Differential between suction temperature and discharge temperature	8~18°C	14~30°C
DB	27°C	20°C
WB	19°C	Not applicable

2. Correlation of air-conditioner's operation status, pressure and running current

COOLING	Low pressure	High pressure	Running current
Dirty air filter	Lower	Lower	Lower
Short circuit of air inlet/outlet	Lower	Lower	Lower
Air mixed in refrigerant	Higher	Higher	Higher
Water mixed in refrigerant	Lower*	Lower	Lower
Dirt mixed in refrigerant	Lower**	Lower	Lower
Refrigerant shortage (gas)	Lower	Lower	Lower
Unsatisfactory compression	Higher***	Lower	Lower

* Water in the refrigerant freezes inside the electronic expansion valve and is basically the same phenomenon as pump down.

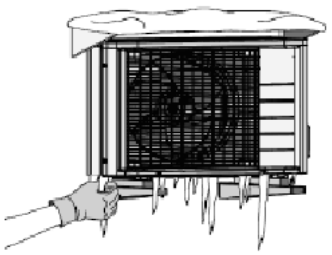
** Dirt in the refrigerant clogs filters inside the piping and is basically the same phenomenon as pump down.

*** Pressure differential between high and low pressure becomes low.

4.2. Outdoor unit

4.2.1. General maintenance outdoor unit

1. Outdoor unit coil
   - Straighten hair fins.
   - Clear coil from dust, leaves, etc. with a fin-comb, or compressed air/N2. Avoid bending or damaging of the Alu fins during the cleaning process.
   - Remove the icicles during winter season. Use gloves to avoid injury and unit damage.



CAUTION

Make sure not to bend the hair fins.

2. Correlation of air-conditioner's operation status, pressure and running current.

COOLING	Low pressure	High pressure	Running current
Dirty air filter	Higher	Higher	Higher
Short circuit of air inlet/outlet	Higher	Higher	Higher
Air mixed in refrigerant	Higher	Higher	Higher
Water mixed in refrigerant	Lower*	Lower	Lower
Dirt mixed in refrigerant	Lower**	Lower	Lower
Refrigerant shortage (gas)	Lower***	Lower	Lower

* Water in the refrigerant freezes inside the electronic expansion valve and is basically the same phenomenon as pump down.

** Dirt in the refrigerant clogs filters inside the piping and is basically the same phenomenon as pump down.

*** Pressure differential between high and low pressure becomes low.

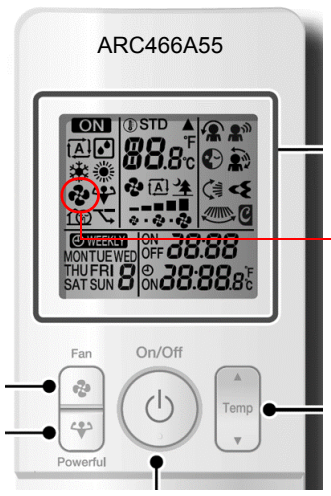
Part 5. Appendix

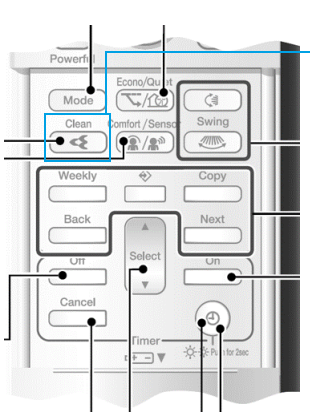
This part contains the following chapters:

5.1. Field setting

5.1.1. Indoor unit

5.1.1.1. How to activate fireplace logic





For symbol use 'hot wind' without the frame.

How to activate 'fireplace logic':

1. Set unit to heating mode - symbol for heating on display light continuously.
2. Set by Clean / Fireplace button 'fireplace function' ⟶ symbol for fan will start light continuously, it indicates on R/C active fire place logic.

So active 'fireplace logic' on R/C is indicate by:

- heating symbol continuously light
- fan symbol continuously light

Original button:

- 1st push - streamer activated
- 2nd push - streamer deactivated

New proposal of button:

- 1st push - only streamer activated
- 2nd push - only fireplace logic activated
- 3rd push - streamer and fireplace logic activated
- 4th push - streamer and fireplace deactivated

New proposal for streamer / fireplace button, caption.

5.1.1.2. Only for FTXTA-A

5.1.1.2.1 To control heating mode only

Prerequisite: Stop operation of the unit.

1. Press Temp, Temp and Mode simultaneously.
2. Press Temp.
3. Select SU.
4. Press Mode to confirm.
5. Press Temp.
6. Select 19.
7. Press Mode to confirm.
8. Press Temp.
9. Select 1 (0: factory setting, 1: heating only).
10. Press Mode to confirm.

5.1.1.2.2 To adjust target set temperature in heating operation

INFORMATION

When there is a big difference between the indoor room temperature and the set temperature in heating mode, adjust the target set temperature field setting.

Target temperature= remote controller set temperature + 2.5°C.

For example:

Remote controller set temperature= 20°C

Target temperature= 20°C + 2.5°C= 22.5°C

Thermo off temperature= 24.5°C

1. Press Temp, Temp and Mode simultaneously.
2. Press Temp.
3. Select SU.
4. Press Mode to confirm.
5. Press Temp.
6. Select 7.
7. Press Mode to confirm.

8. Press [Temp▲].
9. Select the value to set the desired target temperature:
   - 0= -2,0°C
   - 1= -1,0°C
   - 2= 0°C (factory setting)
   - 3= +1,0°C
   - 4= +2,0°C
10. Press [Mode] to confirm.

5.1.1.2.3 To control the indoor unit fan during thermostat off in cooling

1. Press [Temp▲], [Temp▼] and [Mode] simultaneously.
2. Press [Temp▲].
3. Select SU.
4. Press [Mode] to confirm.
5. Press [Temp▲].
6. Select 4.
7. Press [Mode] to confirm.
8. Press [Temp▲].
9. Select 0 (0: fan ON, 1: fan OFF).
10. Press [Mode] to confirm.

5.1.1.2.4 To change auto restart ON to OFF

> **INFORMATION**
> After power failure, the unit will automatically restart (default setting). It is possible to switch OFF auto restart. For example: after a long power failure, generators have to start-up. As there is limited energy and the air conditioners do NOT have priority, it is recommended to switch OFF auto restart.

1. Press [Temp▲], [Temp▼] and [Mode] simultaneously.
2. Press [Temp▲].
3. Select SU.
4. Press [Mode] to confirm.
5. Press [Temp▲].
6. Select 10.
7. Press [Mode] to confirm.
8. Press [Temp▲].
9. Select 0 (0: auto restart OFF, 1: auto restart ON).
10. Press [Mode] to confirm.

5.1.1.2.5 To control cooling mode only

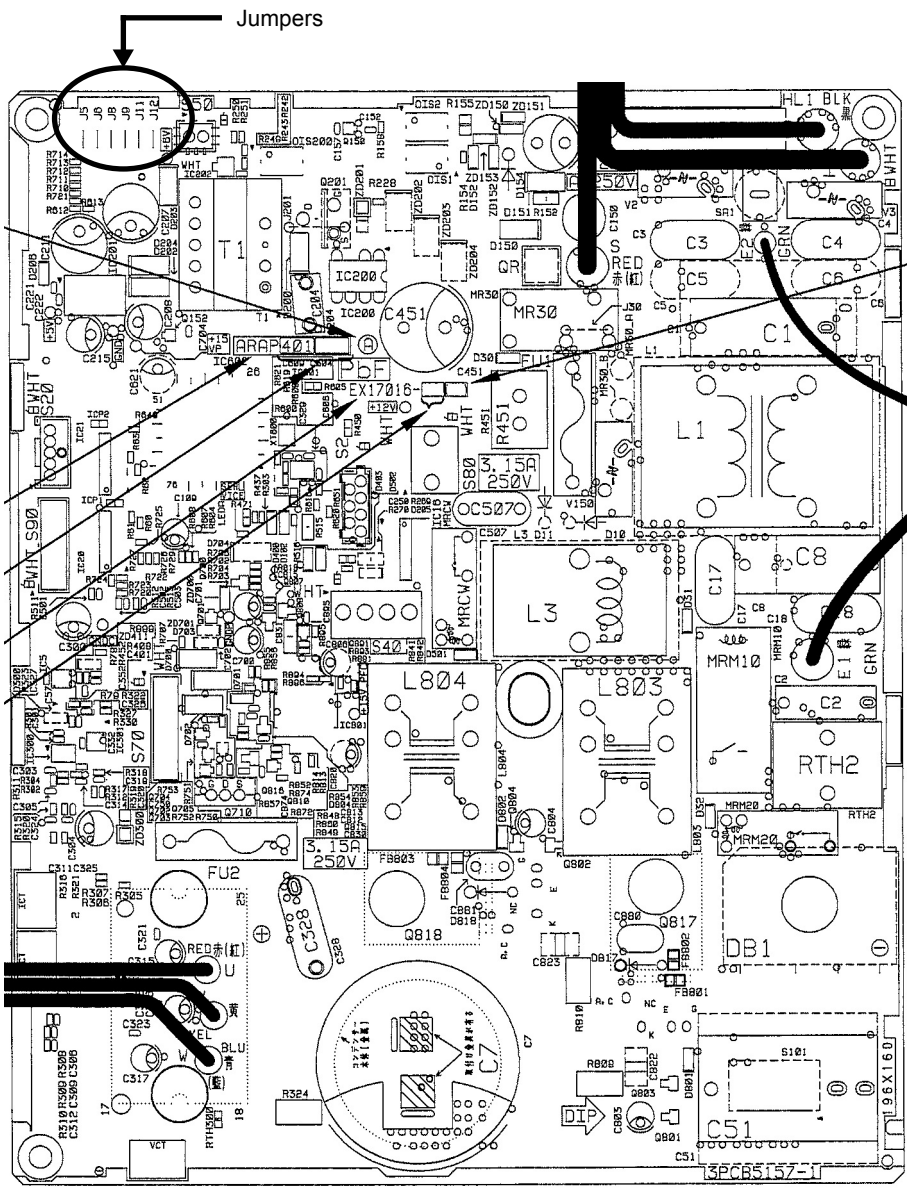
Prerequisite: Stop operation of the unit (via the user interface, operation switch, ...).

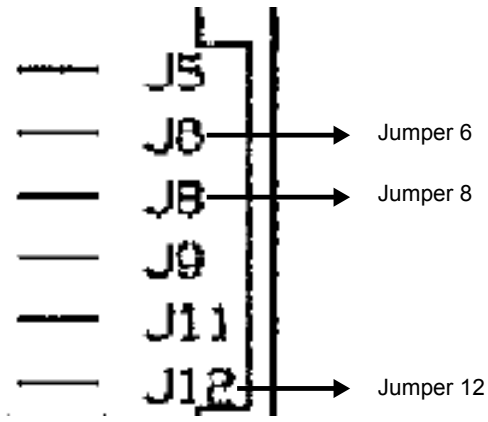
Prerequisite: Turn OFF the respective circuit breaker.

1. Cut the jumper J8 on the user interface of the indoor unit.

2. Turn ON the unit using the respective circuit breaker.
3. Start the unit operation (via the user interface, operation switch, ...).

5.1.2. Outdoor unit





J6: facility setting jumper and switch (cooling at low outdoor temperature)

Outline: this function is limited only for facilities (the target of air conditioning is equipment such as computer). Never use it in spaces occupied by humans such as a residence or office. Detail you can expand the operation range to -10°C by cutting the jumper or turning on switch on the outdoor unit PCB. If the outdoor temperature falls to -15°C or lower, the operation stops. If the outdoor temperature rises, the operation starts again.

J8: facility setting jumper for improving defrost performance

Improves defrosting performance by enabling the onsite setting of this function in the event frost remains when the equipment is used for heating operation under extremely low temperatures and severe environmental conditions, such as in Europe.

J12: snow accumulation prevention fan for cold areas

In heavy snow areas, snow may cover the outdoor unit, a snowdrift pile may be formed near the outdoor unit, or icicles may reach the outdoor unit during the night. If such conditions are left uncorrected, operating the air conditioner in the next morning can cause damage to the outdoor unit fan or result in a fan lock error, disallowing proper heating operation in some cases. If cut jumper, outdoor unit fan operates intermittently at low ambient.

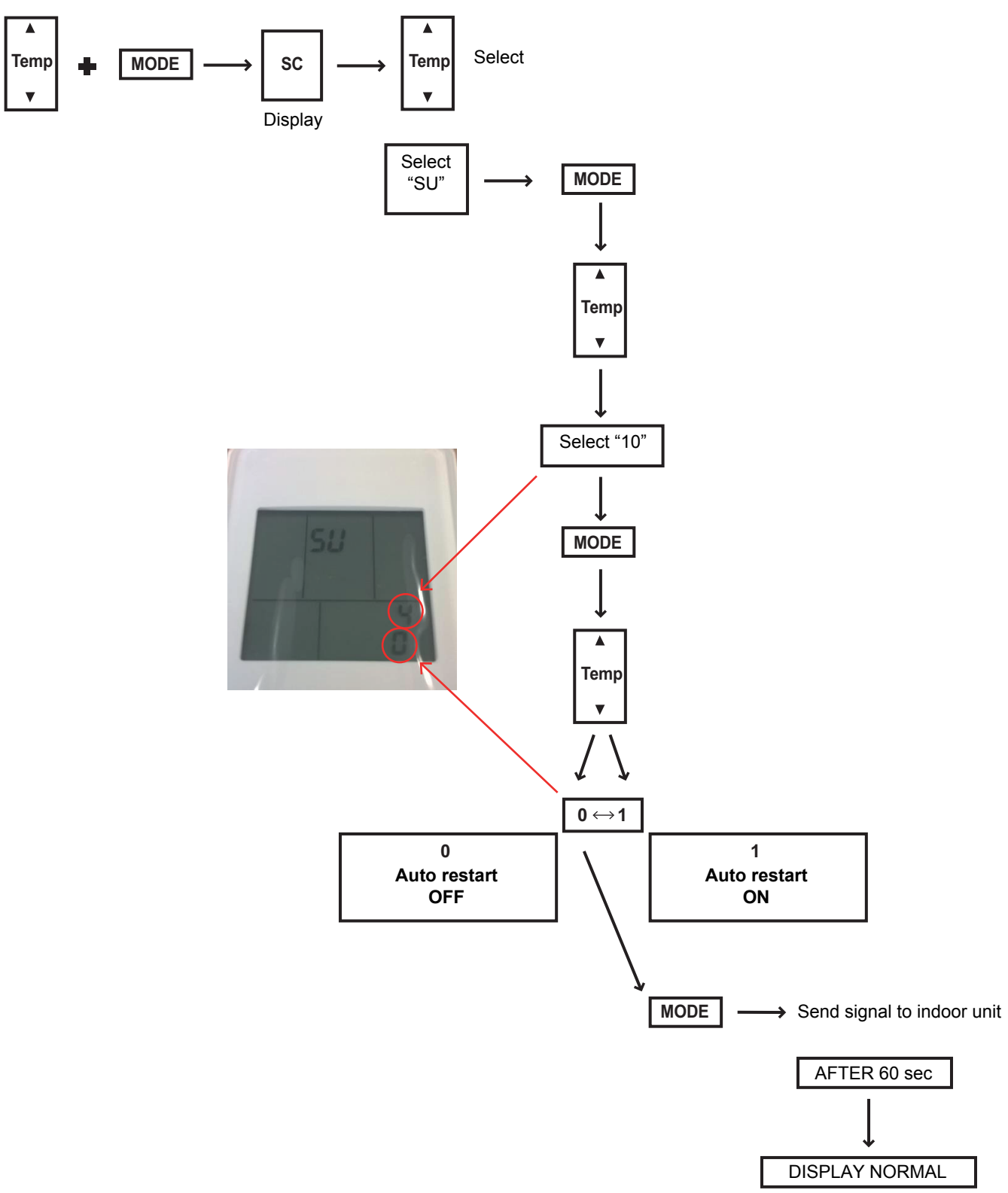
5.1.3. Remote controller

Model	Controller
FTXTM-M	ARC466A55
FTXTP-K	ARC480A11
ATXTP-K	ARC480A11

5.1.3.1. Change power saving mode OFF to ON

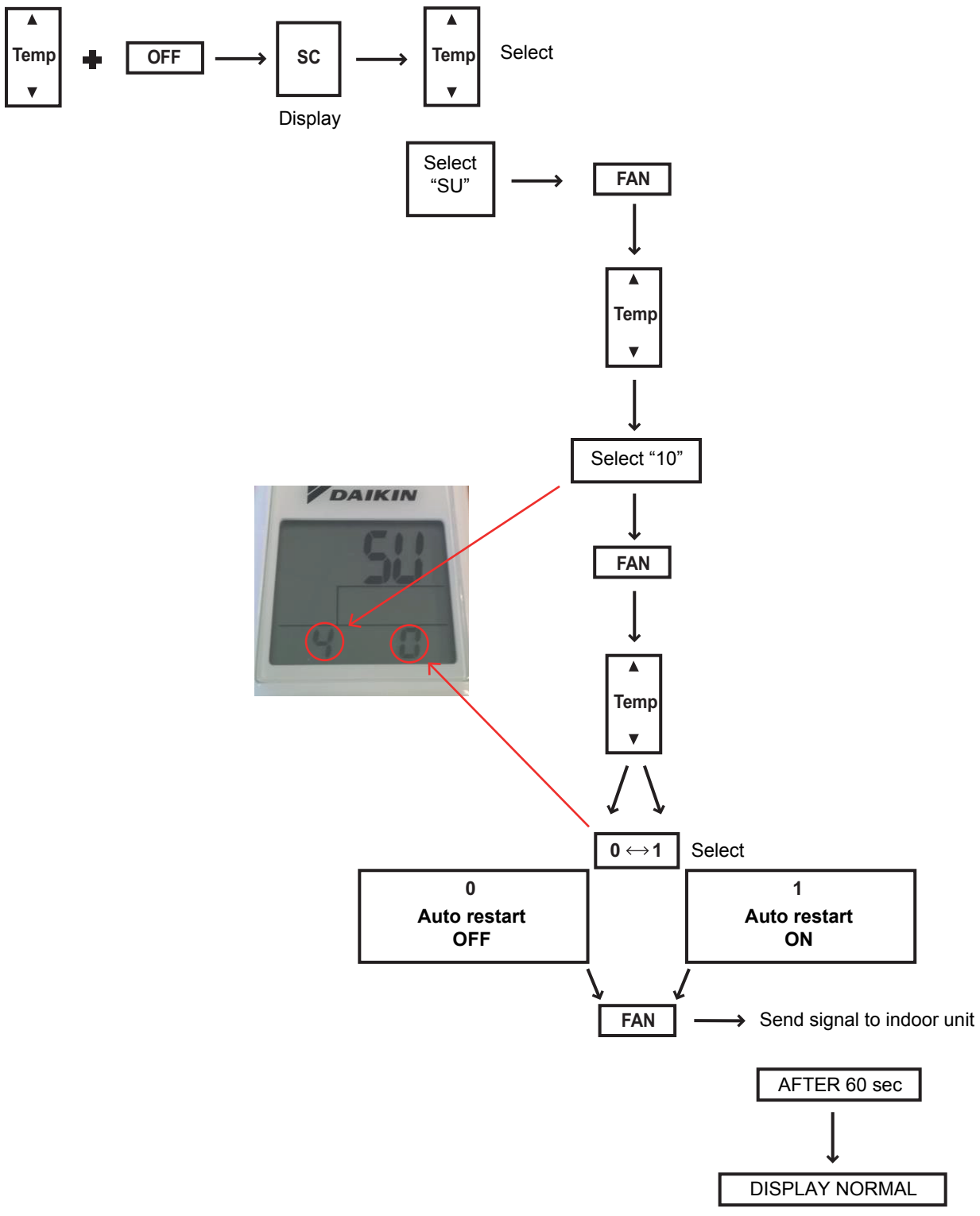
5.1.3.1.1 Remote controller ARC466A55

Figure 5-1: How to change power saving mode OFF to ON - Remote controller: ARC466A33/ARC466A55



5.1.3.1.2 Remote controller ARC480A11

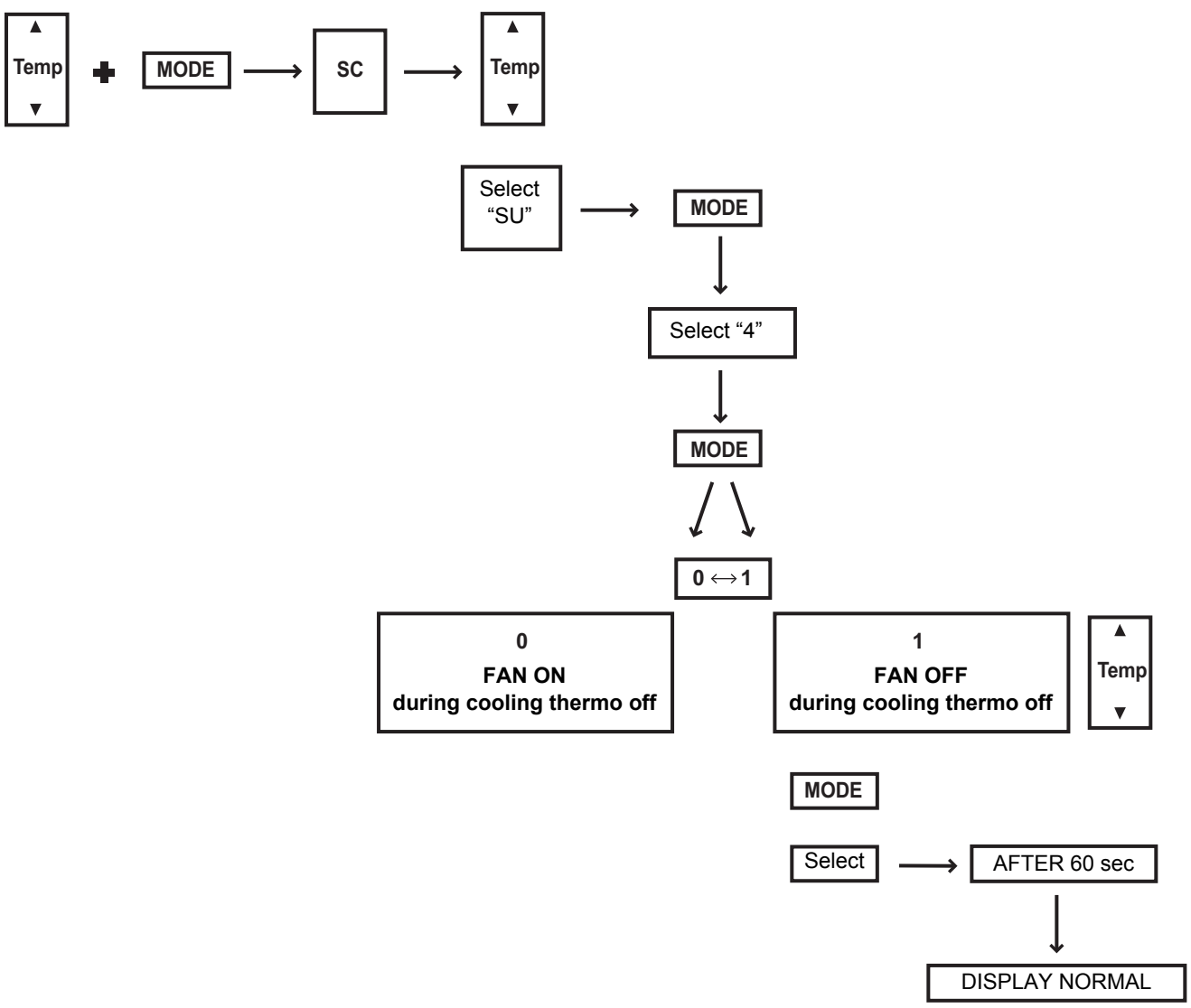
Figure 5-2: How to change power saving mode OFF to ON - Remote controller: ARC480A11



5.1.3.2. Change fan OFF to ON in cooling thermo off

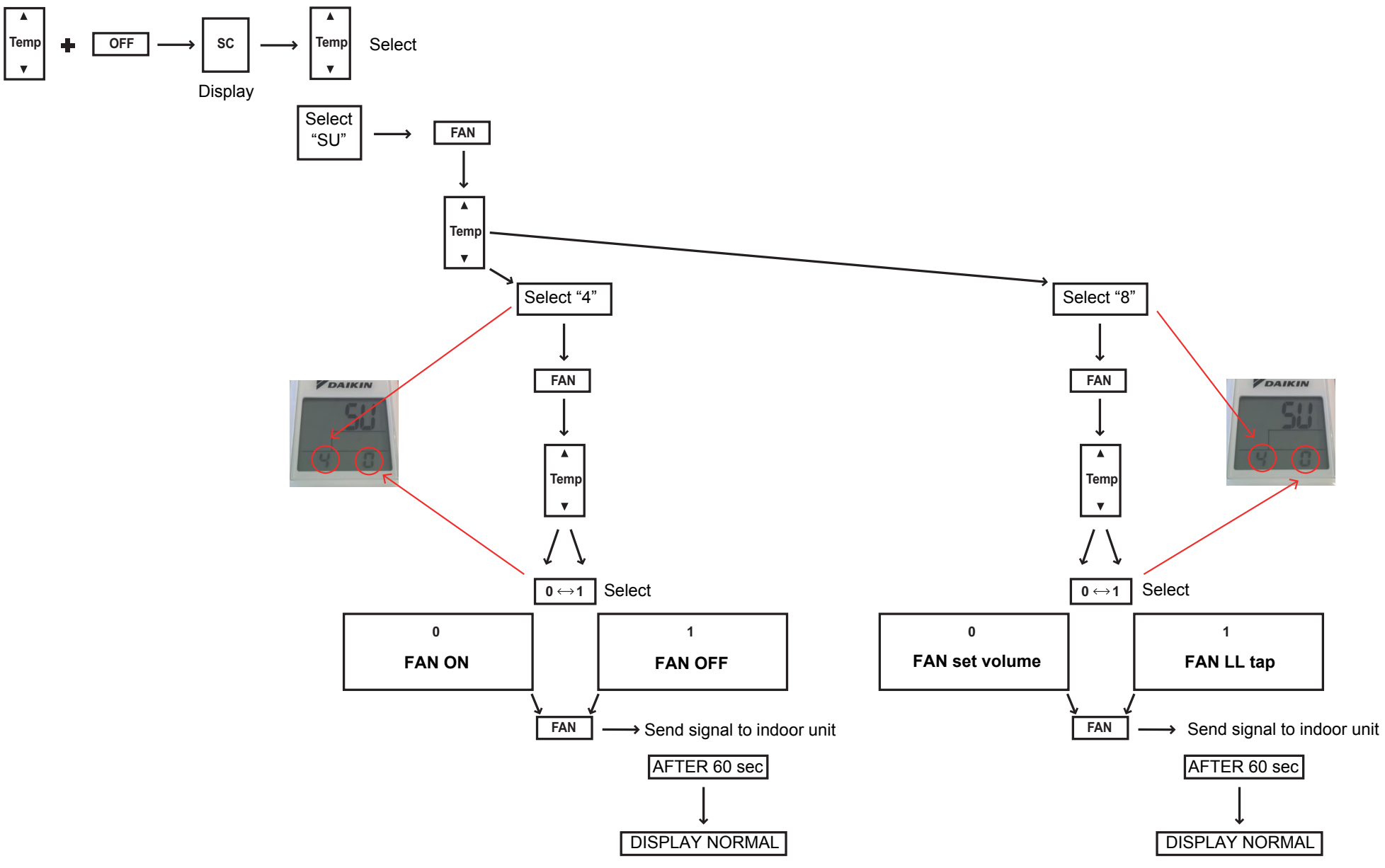
5.1.3.2.1 Remote controller ARC466A55

Figure 5-3: How to change fan OFF to ON when in cooling thermo off - Remote controller: ARC466A33/ARC466A55



5.1.3.2.2 Remote controller ARC480A11

Figure 5-4: How to change fan OFF to ON when in cooling thermo off - Remote controller: ARC480A11



5.1.3.3. Set target temperature in heating (DFu4)

T_{set}= $T_{R/C,set}$ + DFu4

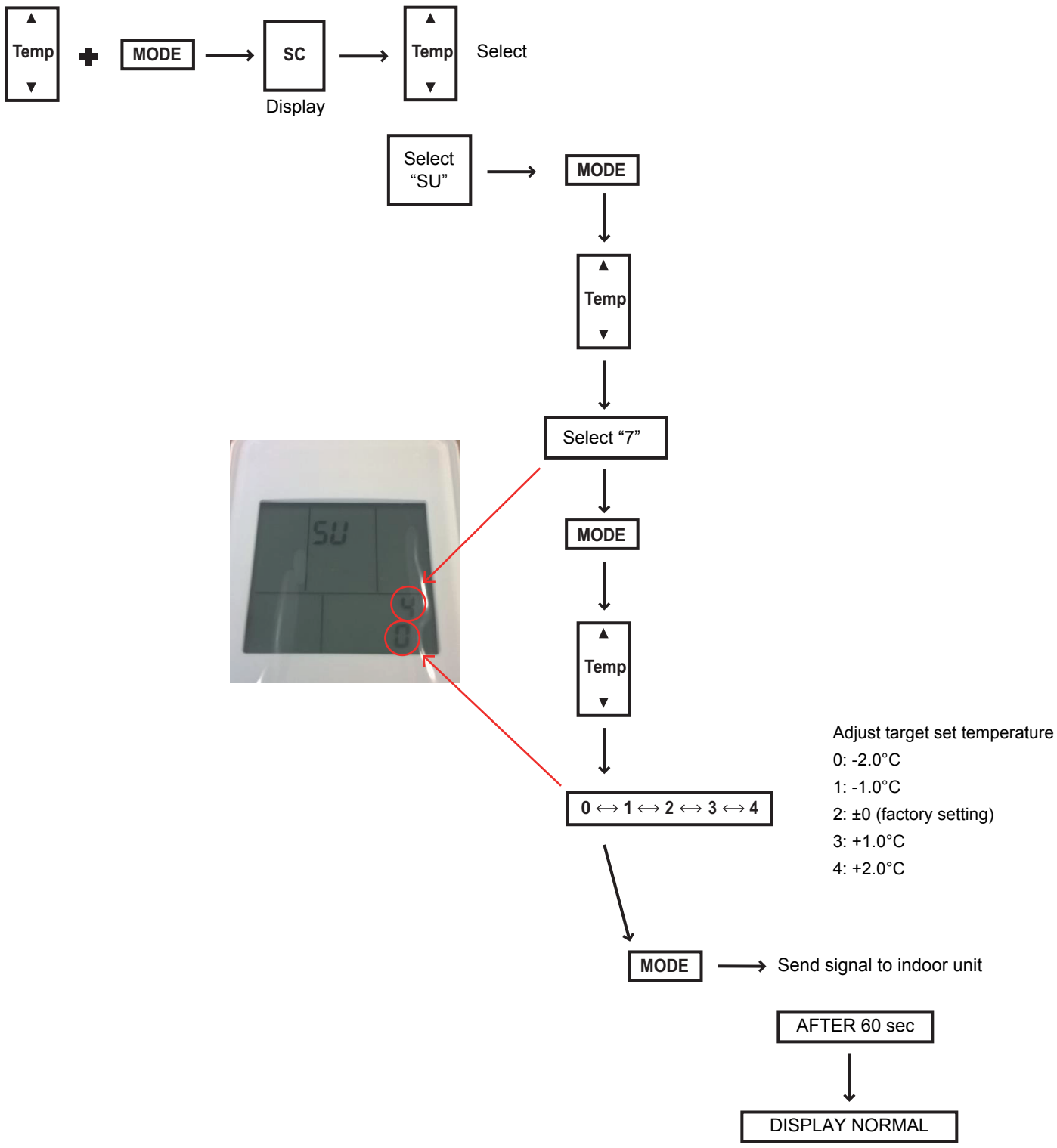
T_{set}= system set temperature

$T_{R/C,set}$= remocon set temperature

DFu4= offset

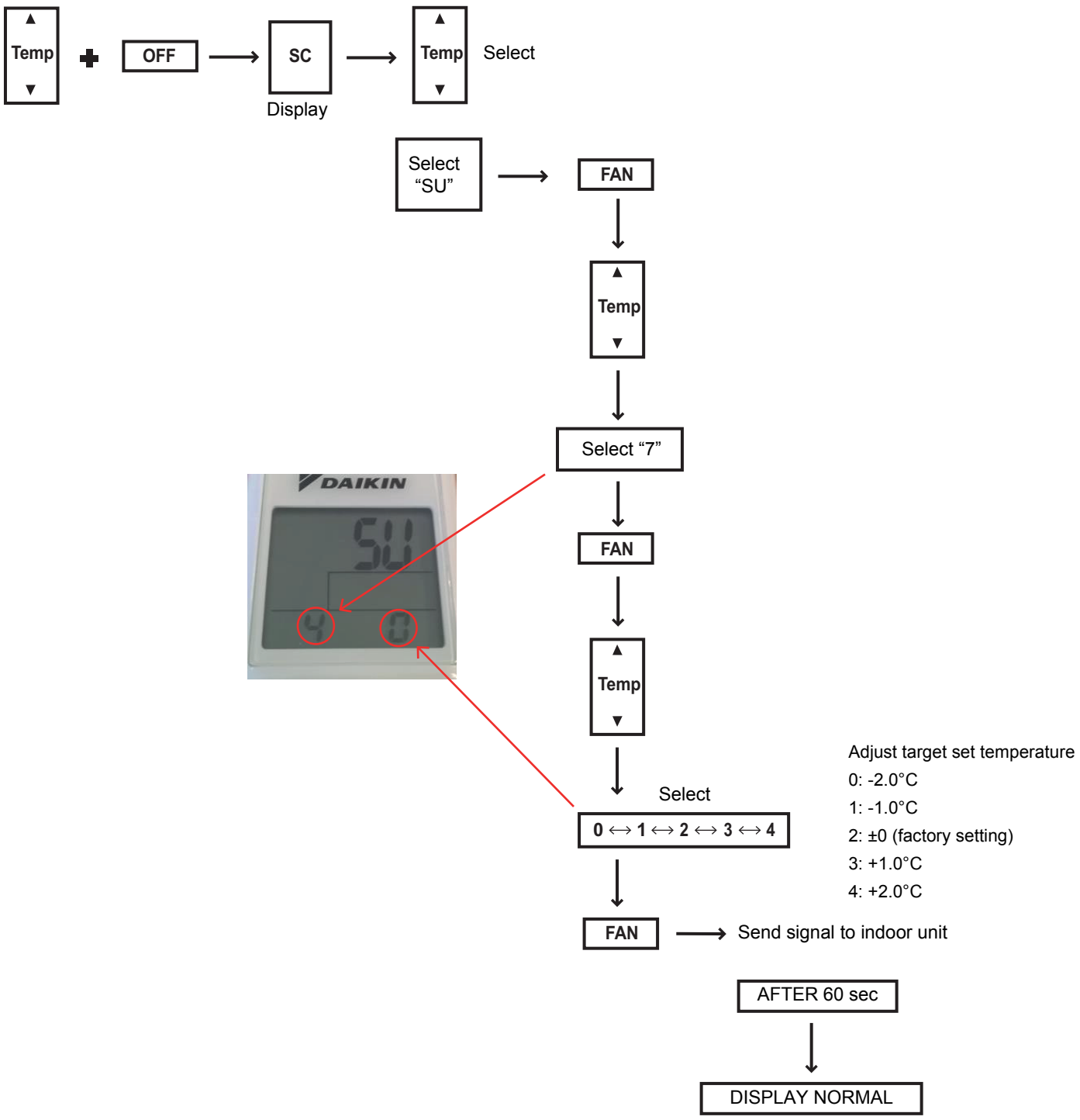
5.1.3.3.1 Remote controller ARC466A55

Figure 5-5: How to adjust target set temperature in heating operation - Remote controller: ARC466A55



5.1.3.3.2 Remote controller ARC480A11

Figure 5-6: How to adjust target set temperature in heating operation - Remote controller: ARC480A11



5.1.3.4. Set unit in inverter checker mode

Activate power transistor test operation from the indoor unit

1. Turn the power on.
2. Please select trial operation "FAN ONLY" by R/C.
   Note: trial operation described in each installation manual
3. Start the power transistor test operation.

5.2. Detailed information setting mode

5.2.1. Indoor unit

Not applicable.

5.2.2. Outdoor unit

Not applicable.

5.2.3. Remote controller

Not applicable.

5.3. Wiring diagram

5.3.1. Indoor unit

Figure 5-7: FTXTA-AW

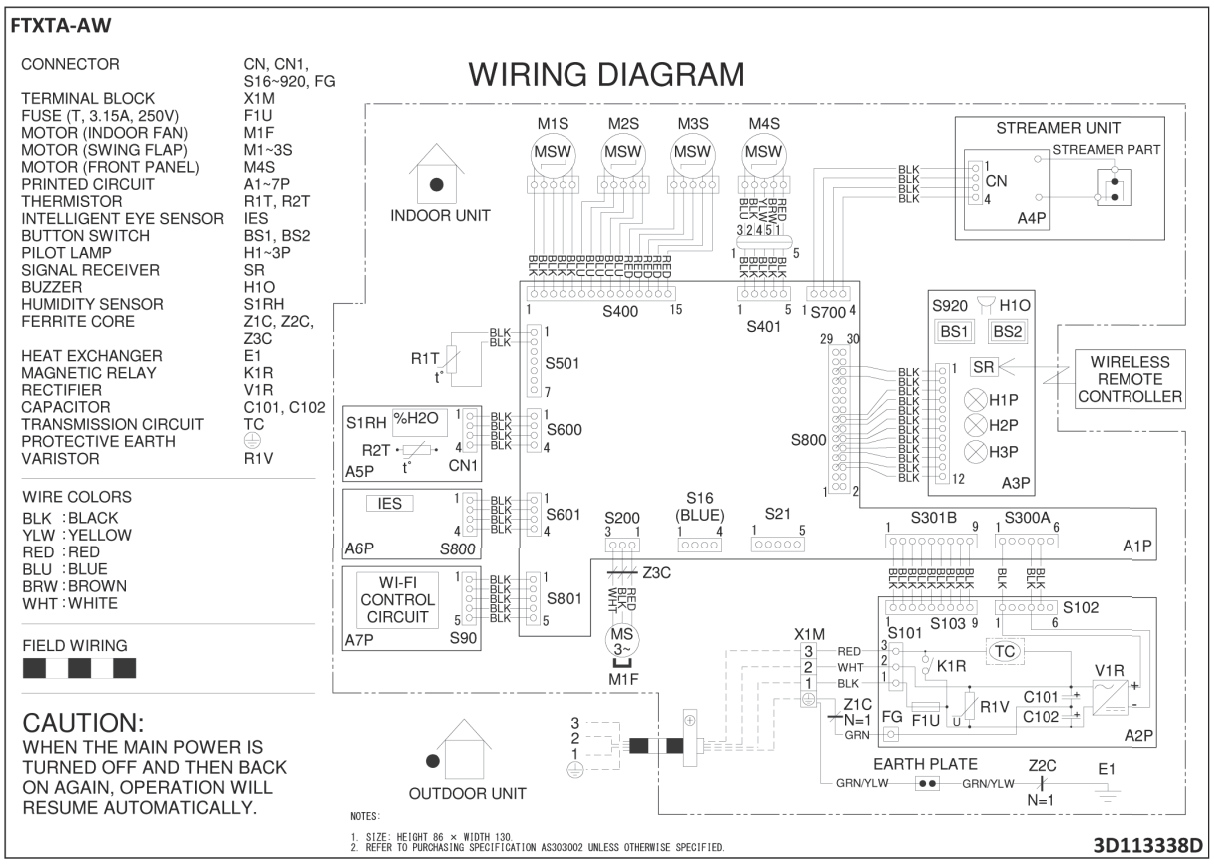
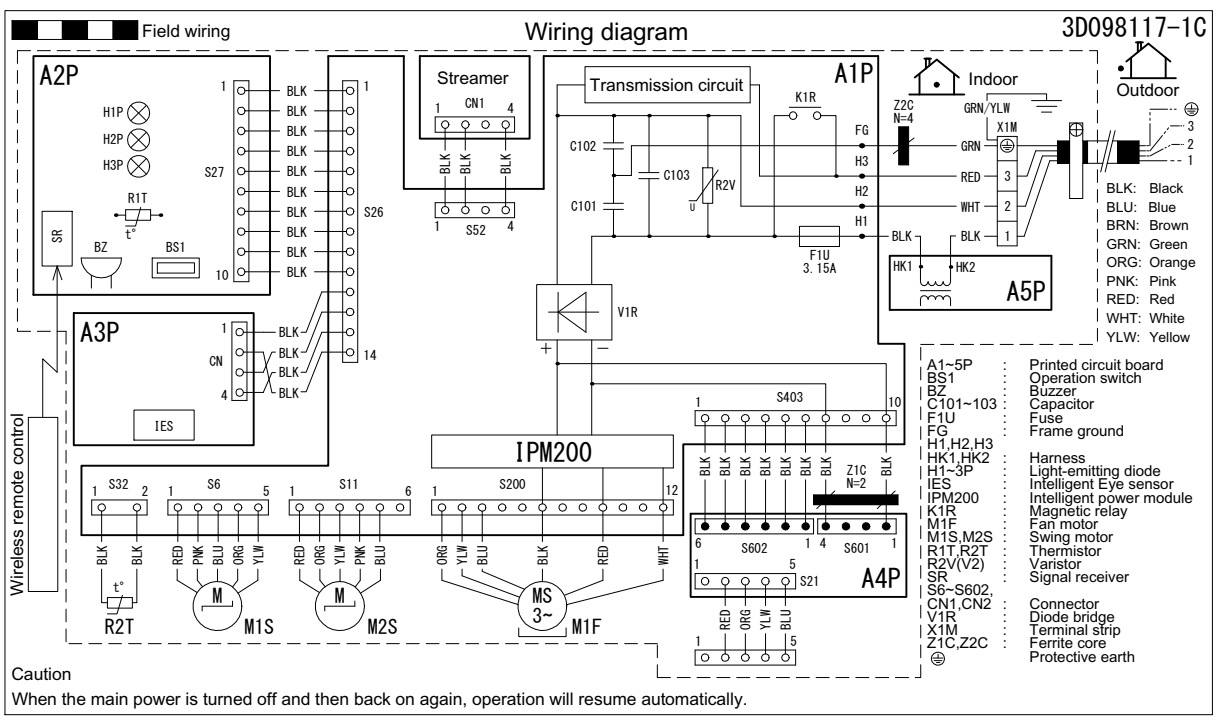


Figure 5-8: FTXTM30-M



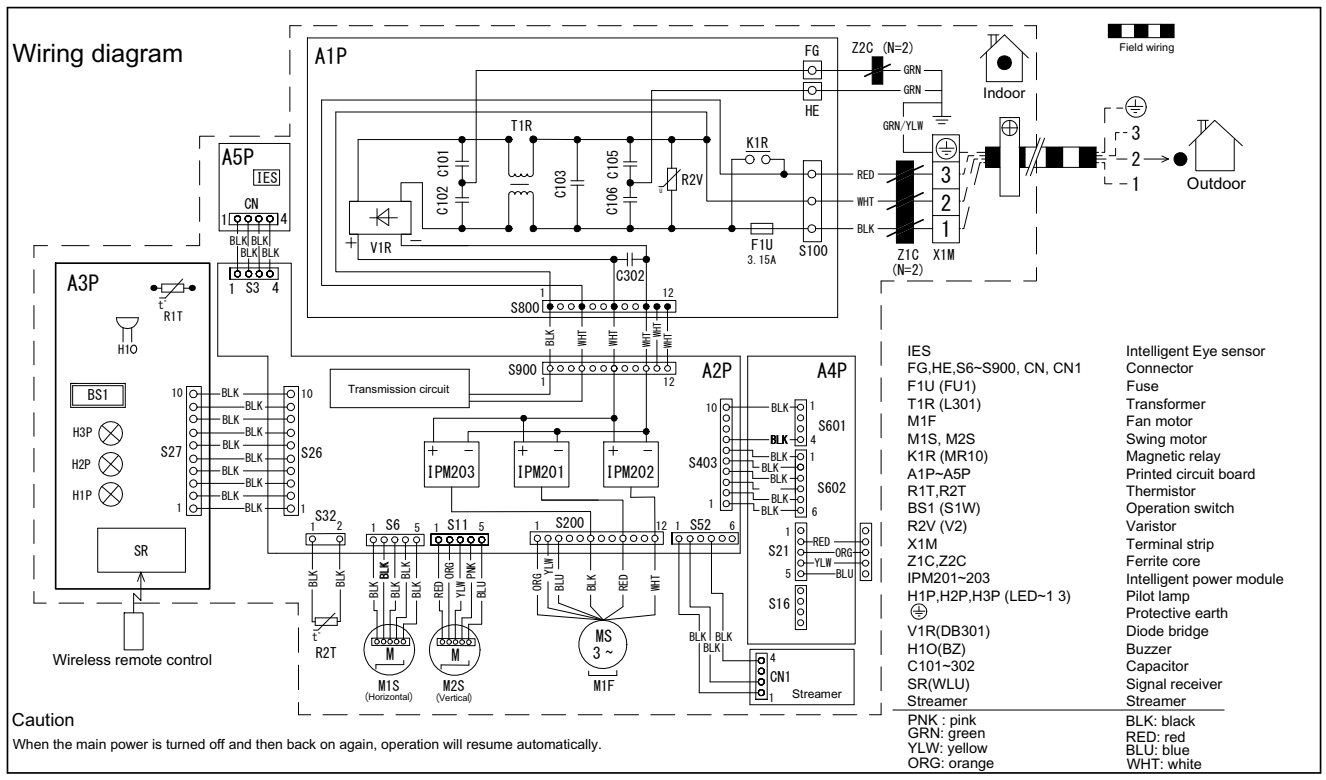
Notes

1) Size: length ·70· X width ·120·.

2) Refer to purchasing specification ·AS303002·, unless otherwise specified.

3) Editable data for this drawing are available in the ·GDE (E-BOM)· system.

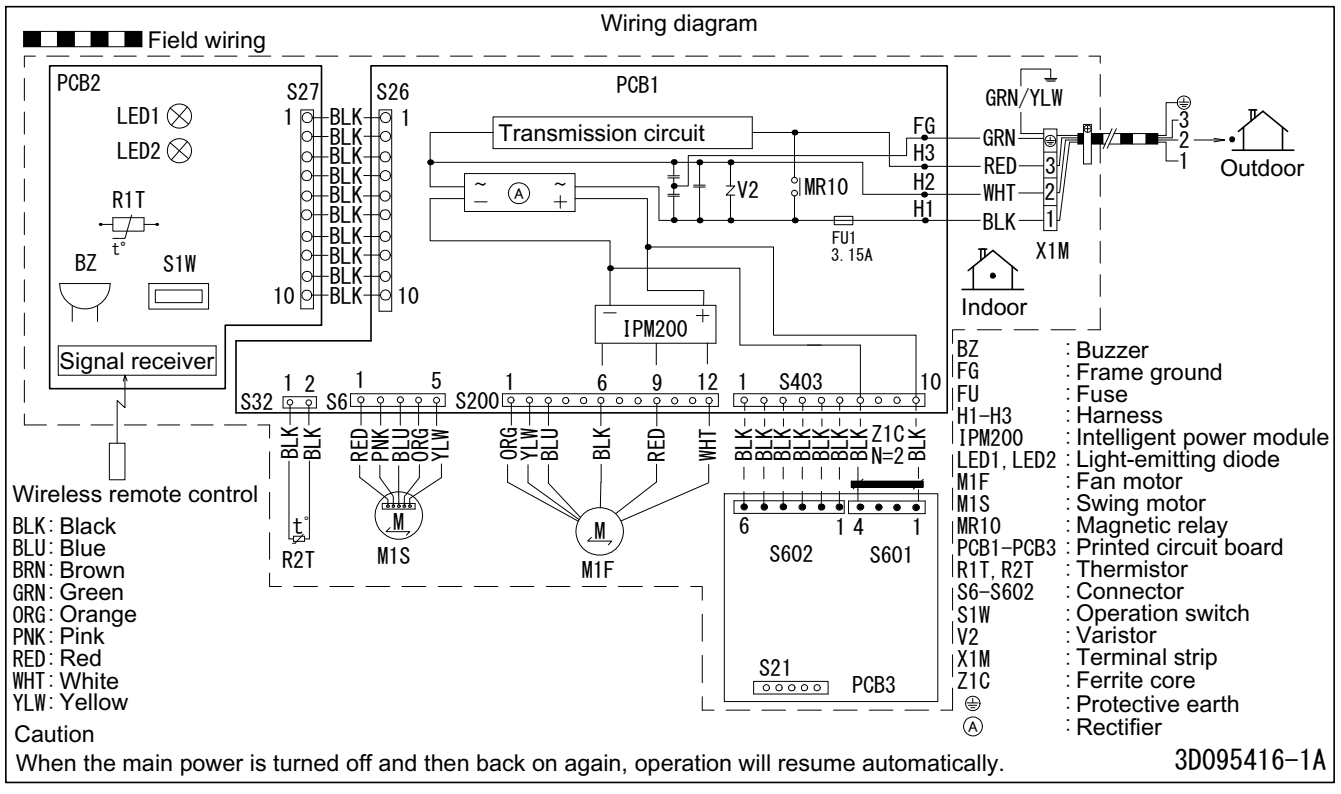
Figure 5-9: FTXTM40-M



NOTES:

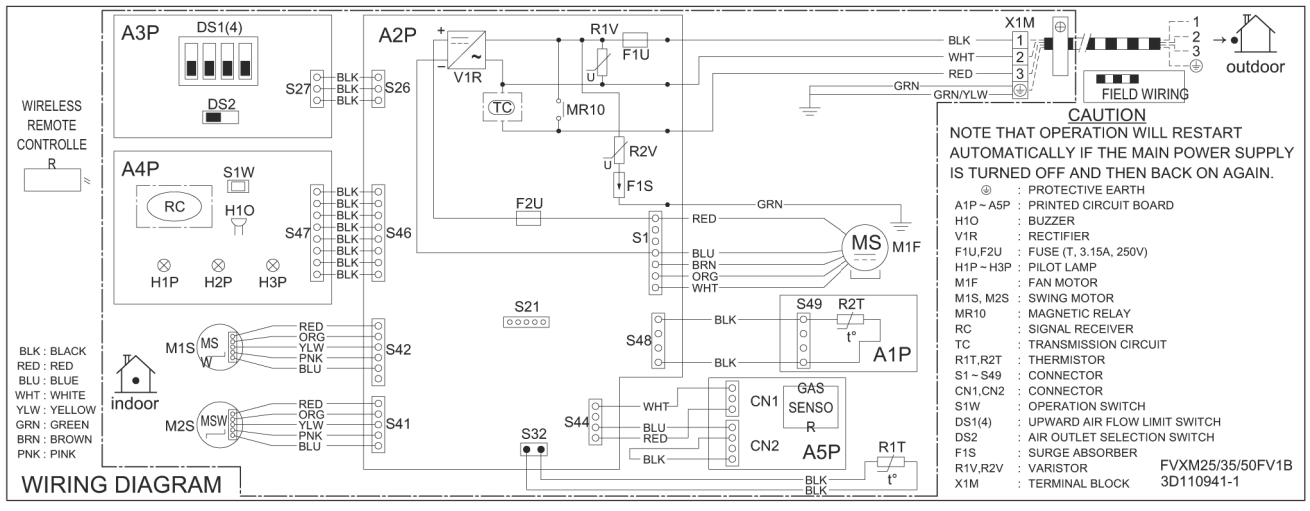
1. Size: length ·65· X width ·110·.
2. Refer to purchasing specification ·AS303002·, unless otherwise specified.
3. Editable data for this drawing are available in the ·GDE EBOM· system.

Figure 5-10: FTXTP-K, ATXTP-K



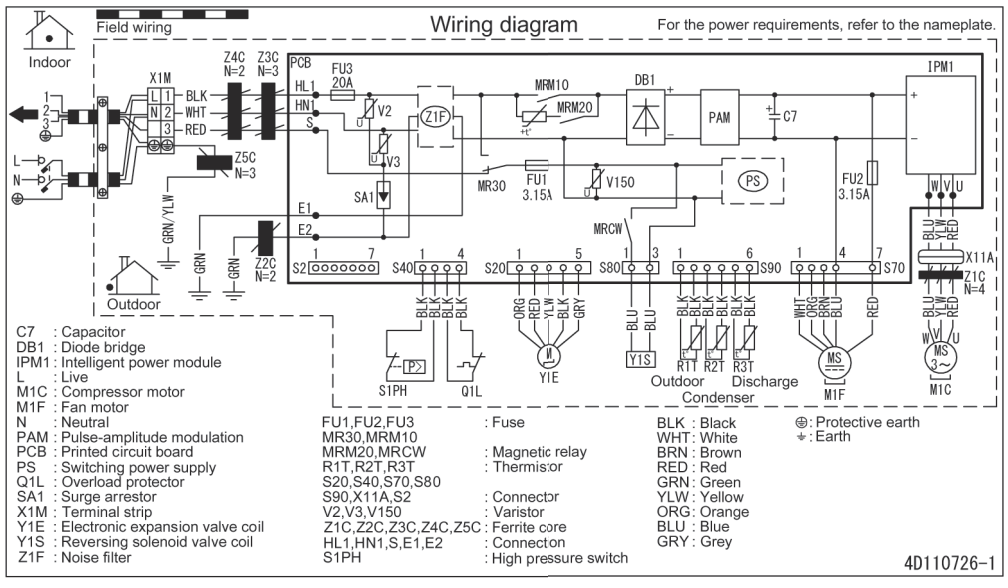
Notes
1. Size: length ·70· X width ·120·.
2. Refer to purchasing specification ·AS303002·, unless otherwise specified.
3. Editable data for this drawing are available in the ·GDE (E-BOM)· system.

Figure 5-11: FVXM-F



5.3.2. Outdoor unit

Figure 5-12: RXTA-N, RXTM-N, RXTP-N, RXTP-N9, ARXTP-N



Notes

1. Size: ·140 x 80·
2. Refer to purchasing specification ·AS303002·, unless otherwise specified.

5.3.3. Field wiring

Not applicable.

5.4. Piping diagram

5.4.1. Indoor unit

Figure 5-13: FTXTA-AW

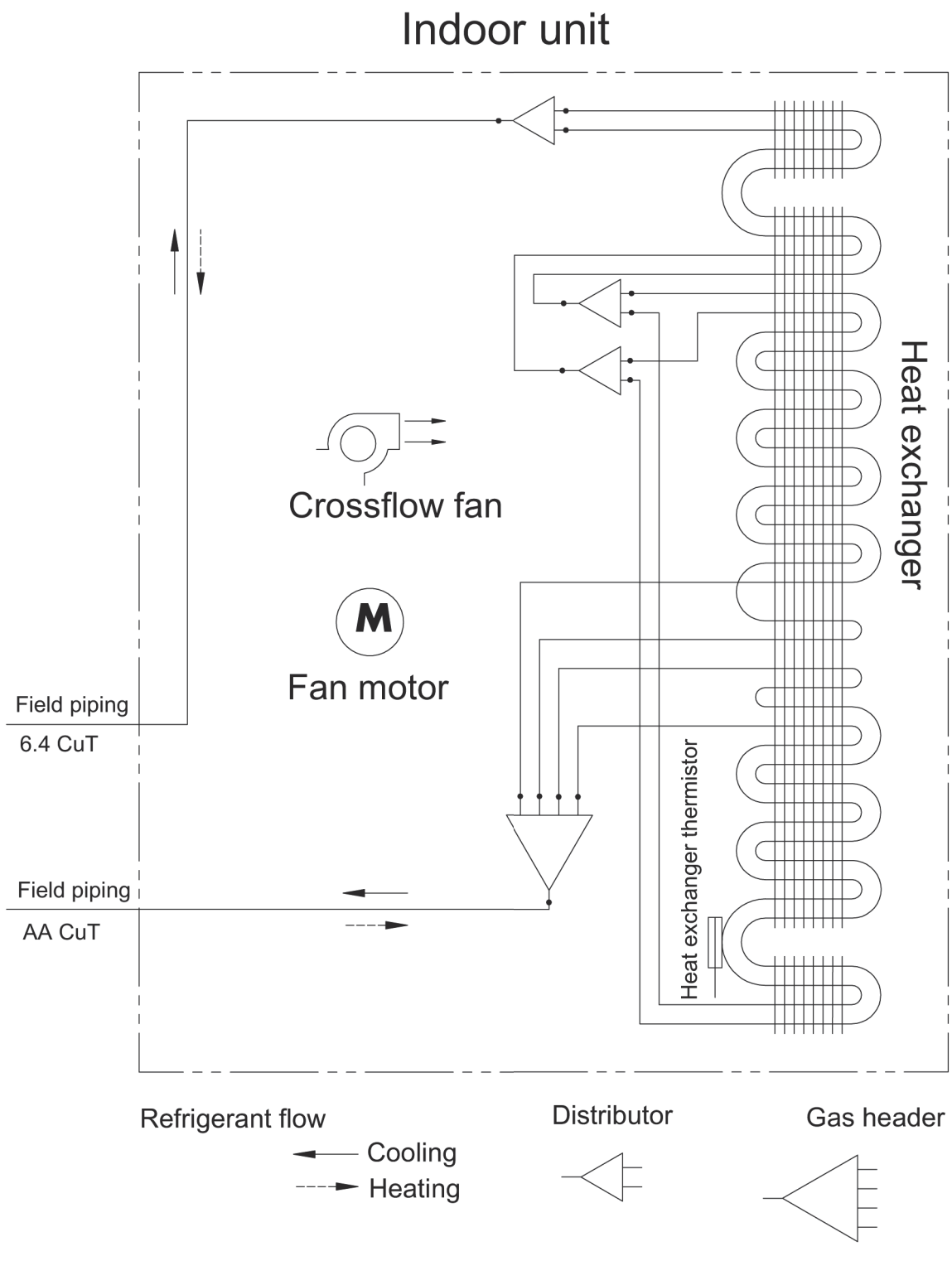


Figure 5-14: FTXTM40-M

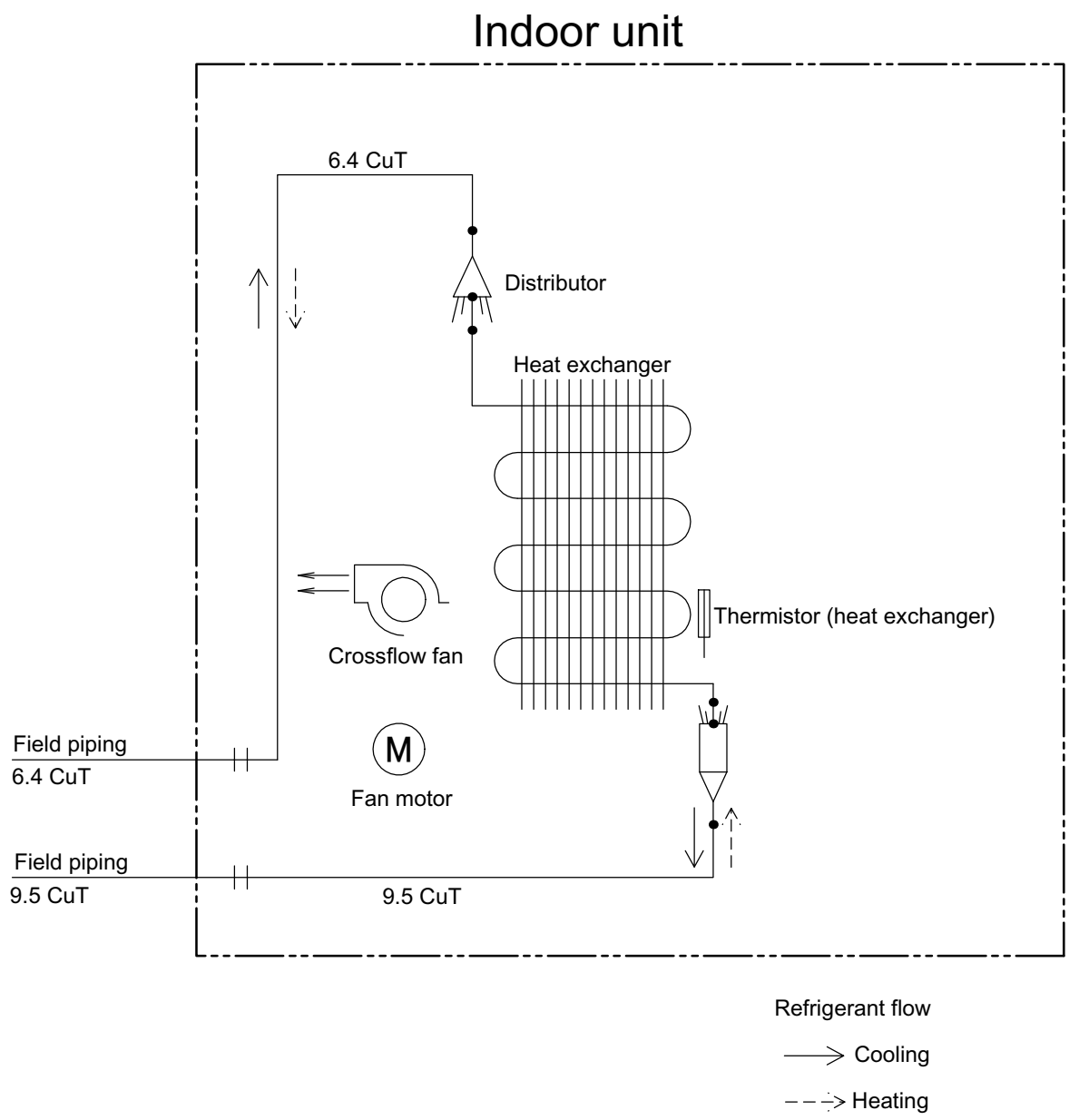
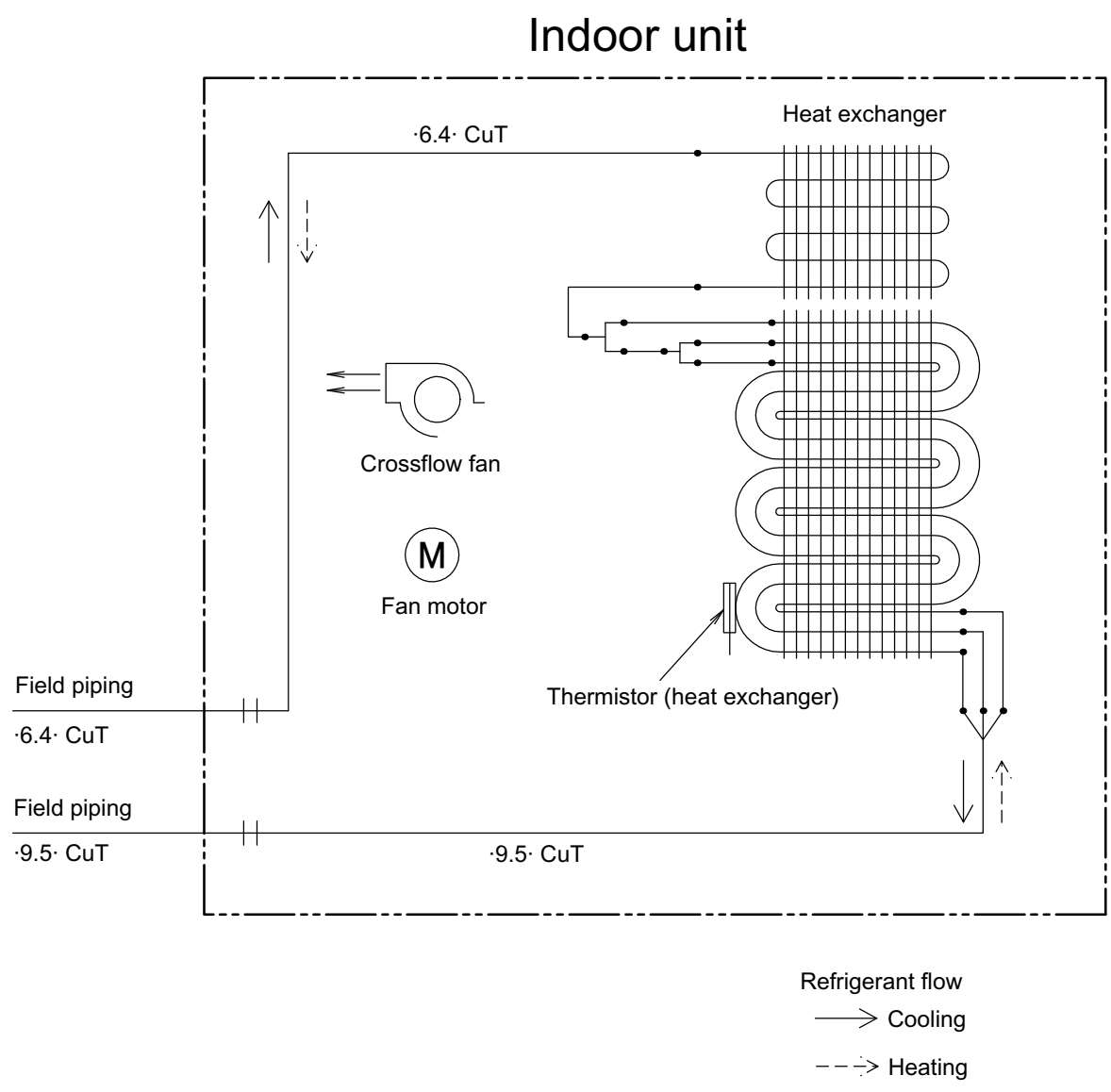


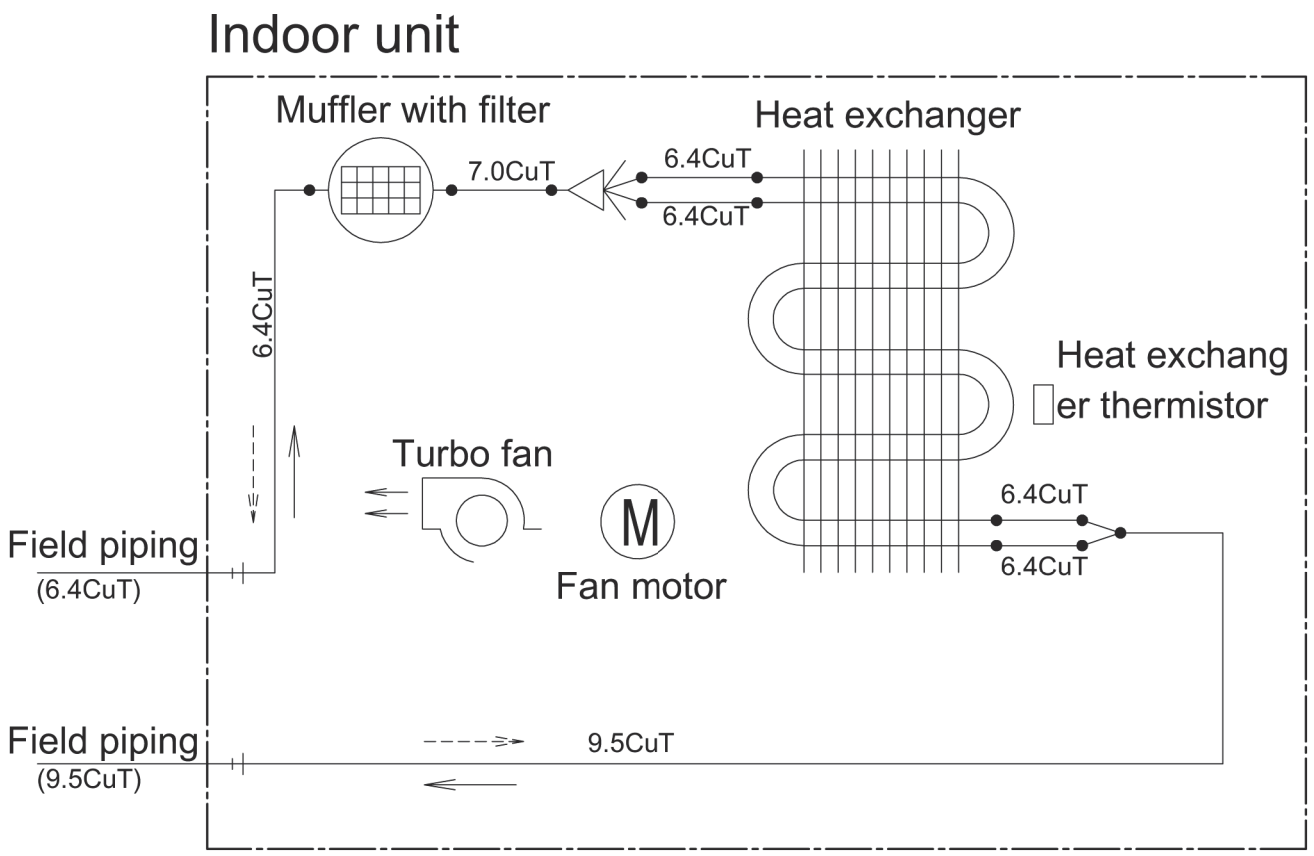
Figure 5-15: FTXTM-M, FTXTP-K, ATXTP-K



Notes

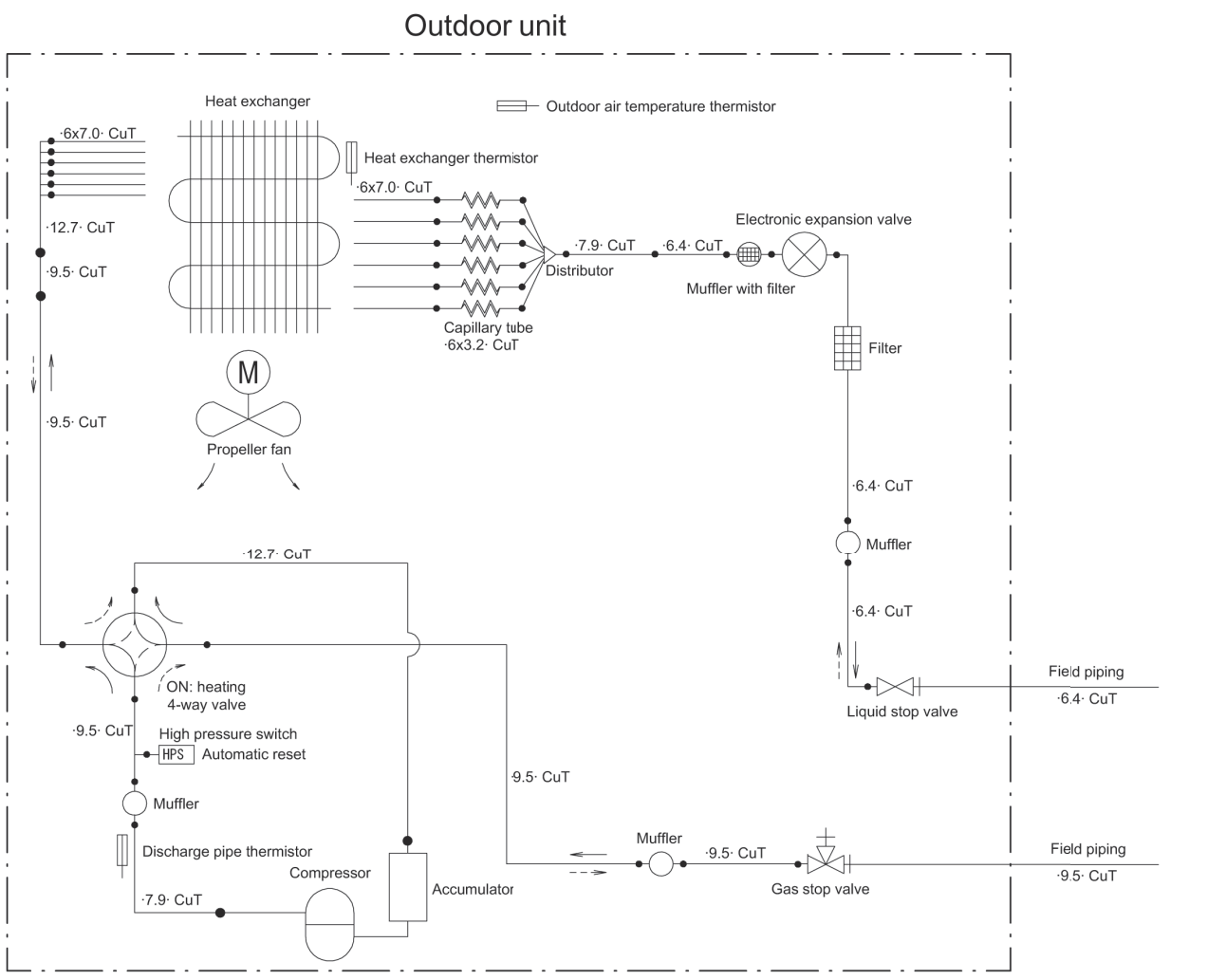
1. Editable data for this drawing are available in the ·GDE (E-BOM)· system.

Figure 5-16: FVXM-F



5.4.2. Outdoor unit

Figure 5-17: RXTA-N, RXTM-N, RXTP-N, RXTP-N9, ARXTP-N



5.5. Component overview of unit

5.5.1. Indoor unit

Not applicable.

5.5.2. Outdoor unit

Not applicable.

5.6. Product specific information

5.6.1. Error codes

Not applicable.

5.6.2. Component checklist

Not applicable.

5.7. Switch box

5.7.1. Indoor unit

Not applicable.

5.7.2. Outdoor unit

Not applicable.

5.8. Field information report

See next page.

In case a problem occurred on the unit which could not be resolved by using the content of this service manual or in case you have a problem which could be resolved but of which the manufacturer should be notified, we advise you to contact your distributor.

To facilitate the investigation, additional information is required. Please fill out the following form before contacting your distributor.

DAIKIN

FIELD INFORMATION REPORT

Key person info	
Name:	Company name:
Your contact details Phone number:	E-mail address:
Site address:	
Your reference:	Date of visit:

Claim info	
Title:	
Problem description:	
Error code:	Trouble date:
Problem frequency:	
Investigation steps done:	
Insert picture of the trouble.	
Current situation (solved, not solved, …):	
Countermeasures taken:	
Comments and proposals:	
Part available for return (if applicable):	

Application info
Application (house, apartment, office, …):
New project or refurbishment:
Heat emitters (radiators / under floor heating / fan coils / …):
Hydraulic layout (simple schematic):

Unit / Installation info	
Model name:	Serial number:
Installation / commissioning date:	Software version hydro PCB A1P:
	Software version hydro PCB A5P:
Software version user interface:	Software version outdoor PCB:
Minimum water volume:	Maximum water volume:
Brine composition and mixture:	
Brine freeze up temperature:	
Space heating control (leaving water temperature, room thermostat, ext. room thermostat):	
Space heating setpoint:	
Domestic hot water control (reheat only, schedule only, reheat + schedule):	
Domestic hot water setpoint:	

Provide pictures of the field settings overview (viewable on the user interface).