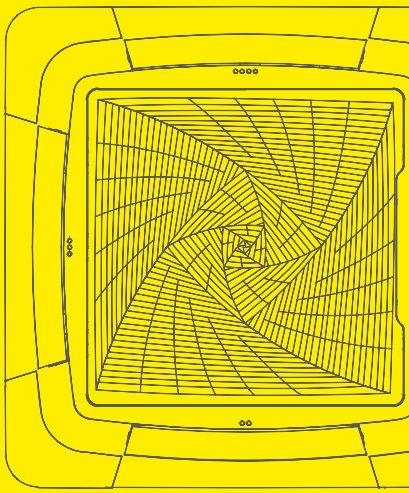
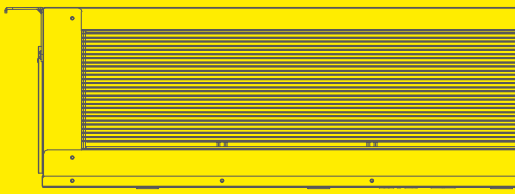
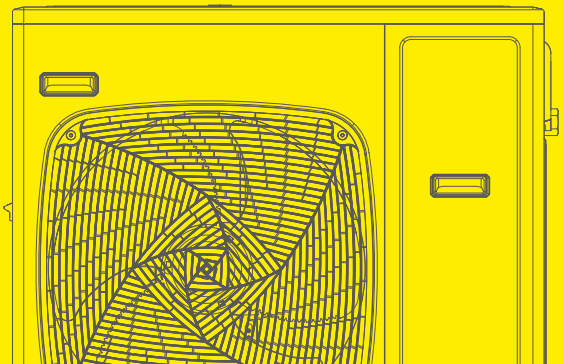
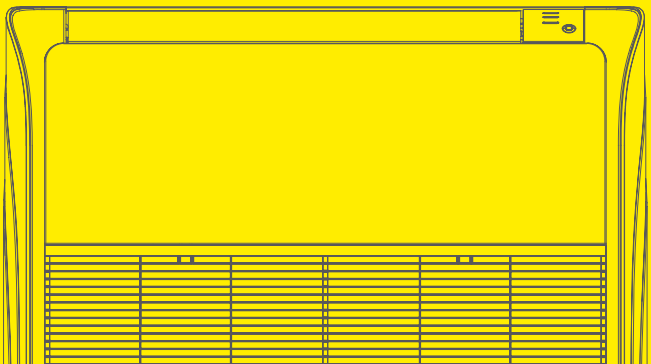
TECHNICAL MANUAL 2022

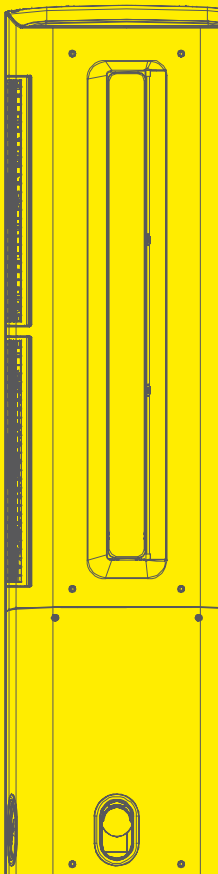




Haier
training center







The data in this catalogue is purely indicative as the data may vary. Please be advised to check the accuracy of the data with the supplier before purchasing products.

The Inverter Air Conditioner Guarantee expires if a Class A differential magnetothermal circuit breaker is not installed.

Index

Reference conditions: cooling

Ambient temperature: 27°C BS
19.5°C BU
Outdoor temperature: 35°C BS

Reference conditions: heating

Ambient temperature: 20°C BS
Outdoor temperature: 7°C BS

Energy Efficiency according to EN 14825.
Performance testing according to EN 14511.

Model	Family	Unit type	Unit	
1U105S2SS1FB	Supermatch R32	Mono Inverter	Outdoor	
1U105S2SS2FA	Supermatch R32	Mono Inverter	Outdoor	
1U125S2SN2FA	Supermatch R32	Mono Inverter	Outdoor	
1U125S2SN2FB	Supermatch R32	Mono Inverter	Outdoor	
1U140S2SN1FA	Supermatch R32	Mono Inverter (single-phase)	Outdoor	
1U140S2SN1FB	Supermatch R32	Mono Inverter (three-phase)	Outdoor	
1U140S2SP2FA	Supermatch R32	Mono Inverter (single-phase)	Outdoor	
1U140S2SP2FB	Supermatch R32	Mono Inverter (three-phase)	Outdoor	
1U160S2SP1FB	Supermatch R32	Mono Inverter (three-phase)	Outdoor	
1U25MECFRA-3	High Seasonal R32 - Jade	Mono Inverter - Jade	Outdoor	
1U25S2SM1FA	Supermatch R32	Mono Inverter	Outdoor	
1U25S2SM1FA-2	Supermatch R32	Mono Inverter	Outdoor	
1U25S2SQ1FA-NR	Nordic	Mono Inverter - Nordic	Outdoor	
1U25YEGFRA	Pearl / Tundra Plus	Mono Inverter - Pearl / Tundra Plus	Outdoor	
1U25YEGFRA-1	Pearl / Tundra Plus	Mono Inverter - Pearl	Outdoor	
1U35MECFRA-3	High Seasonal R32 - Jade	Mono Inverter - Jade	Outdoor	
1U35S2SM1FA	Supermatch R32	Mono Inverter	Outdoor	
1U35S2SM1FA-2	Supermatch R32	Mono Inverter	Outdoor	
1U35S2SQ1FA-NR	Nordic	Mono Inverter - Nordic	Outdoor	
1U35YEGFRA	Pearl / Tundra Plus	Mono Inverter - Pearl / Tundra Plus	Outdoor	
1U35YEGFRA-1	Pearl / Tundra Plus	Mono Inverter - Pearl	Outdoor	
1U42S2SM1FA	Supermatch R32	Mono Inverter	Outdoor	
1U50JECFRA-3	High Seasonal R32 - Jade	Mono Inverter - Jade	Outdoor	
1U50MEGFRA	Pearl / Tundra Plus	Mono Inverter - Pearl / Tundra Plus	Outdoor	
1U50S2SJ2FA	Supermatch R32	Mono Inverter	Outdoor	
1U50S2SQ1FA-NR	Nordic	Mono Inverter - Nordic	Outdoor	
1U68REEFRA	Tundra 2.0 R32	Mono Inverter - Tundra 2.0	Outdoor	
1U68WEGFRA	Pearl / Tundra Plus	Mono Inverter - Pearl / Tundra Plus	Outdoor	
1U71REAFRA	High Seasonal R32 - Tower (Fa)	Mono Inverter - Fa Tower	Outdoor	
1U71RECFRA	High Seasonal R32 - Zun Tower	Zun Tower	Outdoor	
1U71S2SR2FA	Supermatch R32	Mono Inverter	Outdoor	
1UH200W1ERK	Supermatch R410A	Mono Inverter (three-phase)	Outdoor	
1UH250W1ERK	Supermatch R410A	Mono Inverter (three-phase)	Outdoor	
2U40S2SM1FA	Supermatch R32	Multi Inverter	Outdoor	
2U50S2SM1FA	Supermatch R32	Multi Inverter	Outdoor	
2U50S2SM1FA-3	Supermatch R32	Multi Inverter	Outdoor	
3U55S2SR3FA	Supermatch R32	Multi Inverter	Outdoor	
3U55S2SR5FA	Supermatch R32	Multi Inverter	Outdoor	
3U70S2SR5FA	Supermatch R32	Multi Inverter	Outdoor	
4U75S2SR5FA	Supermatch R32	Multi Inverter	Outdoor	
4U85S2SR3FA	Supermatch R32	Multi Inverter	Outdoor	
4U85S2SR5FA	Supermatch R32	Multi Inverter	Outdoor	
5U105S2SS5FA	Supermatch R32	Multi Inverter	Outdoor	
5U125S2SN1FA	Supermatch R32	Multi Inverter	Outdoor	
5U90S2SS5FA	Supermatch R32	Multi Inverter	Outdoor	
AB25S2SC2FA-1	Supermatch R32	Cassetta 620	Indoor	
AB35S2SC2FA-1	Supermatch R32	Cassetta 620	Indoor	
AB50S2SC2FA-1	Supermatch R32	Cassetta 620	Indoor	
AB71S2SG1FA	R32&R410A Compatible	Round Flow Cassette	Indoor	
ABH105H1ERG	R32&R410A Compatible	Round Flow Cassette	Indoor	
ABH125K1ERG	R32&R410A Compatible	Round Flow Cassette	Indoor	
ABH140K1ERG	R32&R410A Compatible	Round Flow Cassette	Indoor	

Model	Family	Unit type	Unit	
ABH160K1ERG	Supermatch R32	Round Flow Cassette	Indoor	
AC105S2SH1FA	R32&R410A Compatible	Ceiling / Floor Convertible	Indoor	
AC125S2SK1FA	R32&R410A Compatible	Ceiling / Floor Convertible	Indoor	
AC140S2SK1FA	R32&R410A Compatible	Ceiling / Floor Convertible	Indoor	
AC160S2SK1FA	Supermatch R32	Ceiling / Floor Convertible	Indoor	
AC35S2SG1FA	Supermatch R32	Ceiling / Floor Convertible	Indoor	
AC50S2SG1FA	Supermatch R32	Ceiling / Floor Convertible	Indoor	
AC71S2SG1FA	R32&R410A Compatible	Ceiling / Floor Convertible	Indoor	
AD105S2SM3FA(H)	R32&R410A Compatible	Ducted Medium Pressure	Indoor	
AD125S2SM3FA	R32&R410A Compatible	Ducted Medium Pressure	Indoor	
AD140S2SM3FA	R32&R410A Compatible	Ducted Medium Pressure	Indoor	
AD160S2SM3FA	Supermatch R32	Ducted Medium Pressure	Indoor	
AD25S2SS1FA(H)	Supermatch R32	Slim Ducted Low Pressure	Indoor	
AD35S2SM3FA(H)	Supermatch R32	Slim Ducted Medium Pressure	Indoor	
AD35S2SS1FA(H)	Supermatch R32	Slim Ducted Low Pressure	Indoor	
AD50S2SM3FA(H)	Supermatch R32	Slim Ducted Medium Pressure	Indoor	
AD50S2SS1FA(H)	Supermatch R32	Slim Ducted Low Pressure	Indoor	
AD71S2SM3FA(H)	R32&R410A Compatible	Ducted Medium Pressure	Indoor	
AD71S2SS1FA(H)	R32&R410A Compatible	Slim Ducted Low Pressure	Indoor	
ADH125H1ERG	R32&R410A Compatible	Ducted High Pressure	Indoor	
ADH140H1ERG	R32&R410A Compatible	Ducted High Pressure	Indoor	
ADH200H1ERG	Supermatch R410A	Ducted High Pressure	Indoor	
ADH250H1ERG	Supermatch R410A	Ducted High Pressure	Indoor	
AF25S2SD1FA(H)	Supermatch R32	Console	Indoor	
AF35S2SD1FA(H)	Supermatch R32	Console	Indoor	
AF42S2SD1FA(H)	Supermatch R32	Console	Indoor	
AG10AA1TAA	Air Treatment	Dehumidifiers	Portable	
AG12AA1TAA	Air Treatment	Dehumidifiers	Portable	
AG16AB2TAA	Air Treatment	Dehumidifiers	Portable	
AG20AB2TAA	Air Treatment	Dehumidifiers	Portable	
AM09AA1GAA	Air Treatment	Portable Air Conditioner - With Heat Pump	Portable	
AM09AA1TAA	Air Treatment	Portable Air Conditioner - Cooling only	Portable	
AM12AA1GAA	Air Treatment	Portable Air Conditioner - With Heat Pump	Portable	
AM12AA1TAA	Air Treatment	Portable Air Conditioner - Cooling only	Portable	
AP140S2SK1FA(H)	Supermatch R32	Cabinet	Indoor	
AP71DFCHRA	High Seasonal R32 - Zun Tower	Mono Inverter - Zun Tower	Indoor	
AP71UFAHRA	High Seasonal R32 - Tower (Fa)	Fa Tower	Indoor	
AS105S2SF2FA-2	Wall 10kW	Wall 10Kw - Monospilt	Indoor	
AS20PBAHRA	Supermatch R32	Pearl - Split	Indoor	
AS20S2SF1FA-MB3	Supermatch R32	Flexis (Black) Plus - Split	Indoor	
AS20S2SF1FA-MW3	Supermatch R32	Flexis (White) Plus - Split	Indoor	
AS20S2SF2FA-3	Supermatch R32	IES Plus - Split	Indoor	
AS20TADHRA-2	Supermatch R32 / Tundra Plus R32	Tundra Plus - Split	Indoor	
AS20XCAHRA	Supermatch R32	Expert - Split	Indoor	
AS25PBAHRA	Supermatch R32	Pearl - Split	Indoor	
AS25S2SF1FA-MB3	Supermatch R32	Flexis (Black) Plus - Split	Indoor	
AS25S2SF1FA-MW3	Supermatch R32	Flexis (White) Plus - Split	Indoor	
AS25S2SF2FA-3	Supermatch R32	IES Plus - Split	Indoor	
AS25S2SJ1FA-3	Supermatch R32	Jade - Supermatch Split	Indoor	
AS25S2SN1FA-NRC	Nordic	Nordic - Split	Indoor	
AS25TADHRA-2	Supermatch R32 / Tundra Plus R32	Tundra Plus - Split	Indoor	
AS25XCAHRA	Supermatch R32	Expert - Split	Indoor	

Model	Family	Unit type	Unit	
AS35PBAHRA	Supermatch R32	Pearl - Split	Indoor	
AS35S2SF1FA-MB3	Supermatch R32	Flexis (Black) Plus - Split	Indoor	
AS35S2SF1FA-MW3	Supermatch R32	Flexis (White) Plus - Split	Indoor	
AS35S2SF2FA-3	Supermatch R32	IES Plus - Split	Indoor	
AS35S2SJ1FA-3	Supermatch R32	Jade - Supermatch Split	Indoor	
AS35S2SN1FA-NRC	Nordic	Nordic - Split	Indoor	
AS35TADHRA-2	Supermatch R32 / Tundra Plus R32	Tundra Plus - Split	Indoor	
AS35XCAHRA	Supermatch R32	Expert - Split	Indoor	
AS42S2SF1FA-MB3	Supermatch R32	Flexis (Black) Plus - Split	Indoor	
AS42S2SF1FA-MW3	Supermatch R32	Flexis (White) Plus - Split	Indoor	
AS42S2SF2FA-3	Supermatch R32	IES Plus - Split	Indoor	
AS42XCAHRA	Supermatch R32	Expert - Split	Indoor	
AS50PDAHRA	Pearl R32	Pearl - Split	Indoor	
AS50S2SF1FA-MB3	Supermatch R32	Flexis (Black) Plus - Split	Indoor	
AS50S2SF1FA-MW3	Supermatch R32	Flexis (White) Plus - Split	Indoor	
AS50S2SF2FA-3	Supermatch R32	IES Plus - Split	Indoor	
AS50S2SJ1FA-3	Supermatch R32	Jade - Supermatch Split	Indoor	
AS50S2SN1FA-NRC	Nordic	Nordic - Split	Indoor	
AS50TDDHRA-CLC	Tundra Plus R32	Tundra Plus - Split	Indoor	
AS50XCAHRA	Supermatch R32	Expert - Split	Indoor	
AS68PDAHRA	Pearl R32	Pearl - Split	Indoor	
AS68TEDHRA-CLC	Tundra Plus R32	Tundra Plus - Split	Indoor	
AS71S2SF1FA-MB3	Supermatch R32	Flexis (Black) Plus - Split	Indoor	
AS71S2SF1FA-MW3	Supermatch R32	Flexis (White) Plus - Split	Indoor	
AS71S2SF2FA-3	Supermatch R32	IES Plus - Split	Indoor	
ATW-A01	Air - Water Heat Pump	Terminal Box	Accessory	
AU052FYCRA(HW)	Super-Water	Mono Inverter (single-phase)	Outdoor	
AU082FYCRA(HW)	Super-Water	Mono Inverter (single-phase)	Outdoor	
AU112FYCRA(HW)	Super-Water	Mono Inverter (single-phase)	Outdoor	
AU162FYCRA(HW)	Super-Water	Mono Inverter (single-phase)	Outdoor	
HACI-RP100	Recovery Unit	Recovery Unit	Indoor	
HACI-RP130	Recovery Unit	Recovery Unit	Indoor	
HACI-RP25	Recovery Unit	Recovery Unit	Indoor	
HACI-RP35	Recovery Unit	Recovery Unit	Indoor	
HACI-RP50	Recovery Unit	Recovery Unit	Indoor	
HACI-RP65	Recovery Unit	Recovery Unit	Indoor	
HACI-RP80	Recovery Unit	Recovery Unit	Indoor	
HP110M5	Water heater A P.D.C. R134A	Mono On-Off - Water heater	Indoor	
HP200M3	Water heater A P.D.C. R134A	Mono On-Off - Water heater	Indoor	
HP200S1	Water heater A P.D.C. R134A	Mono Inverter - Water Heater	Outdoor	
HP250M3	Water heater A P.D.C. R134A	Mono On-Off - Water heater	Indoor	
HP250M3C	Water heater A P.D.C. R134A	Mono On-Off - Water heater	Indoor	
HP300S1	Water heater A P.D.C. R134A	Mono Inverter - Water Heater	Outdoor	
HP80M5	Water heater A P.D.C. R134A	Mono On-Off - Water heater	Indoor	
TS200HE-S1	Water heater A P.D.C. R134A	Tank	Indoor	
TS300HE-S1	Water heater A P.D.C. R134A	Tank	Indoor	
TS200HE-S1	Water heater A P.D.C. R134A	Tank	Indoor	
TS300HE-S1	Water heater A P.D.C. R134A	Tank	Indoor	

- At the time of reporting by the customer, try to obtain as much information as possible including: indoor/outdoor unit model and possible alarm reports.
- You can download technical reference material (diagnostics, electrical schemes, spare parts lists, etc.) by entering your credentials through the website **www.haiercondizionatori.it.**
- When you go to the customer for the first time, retrieve the serial number from the unit on which you will have to operate.
- Try to understand if the LEDs on the indoor unit flash or light up in a particular sequence, or if alarm codes appear if the unit is equipped with a display.
- In units controlled by the wired remote controller, the alarms do not go out spontaneously but must be recalled according to the procedure described in your user manual.
  (For example: To recall alarms with the YR-E17 wired touch-screen remote controller, press the TIME key for 10 seconds)

Check temperature probe alarms

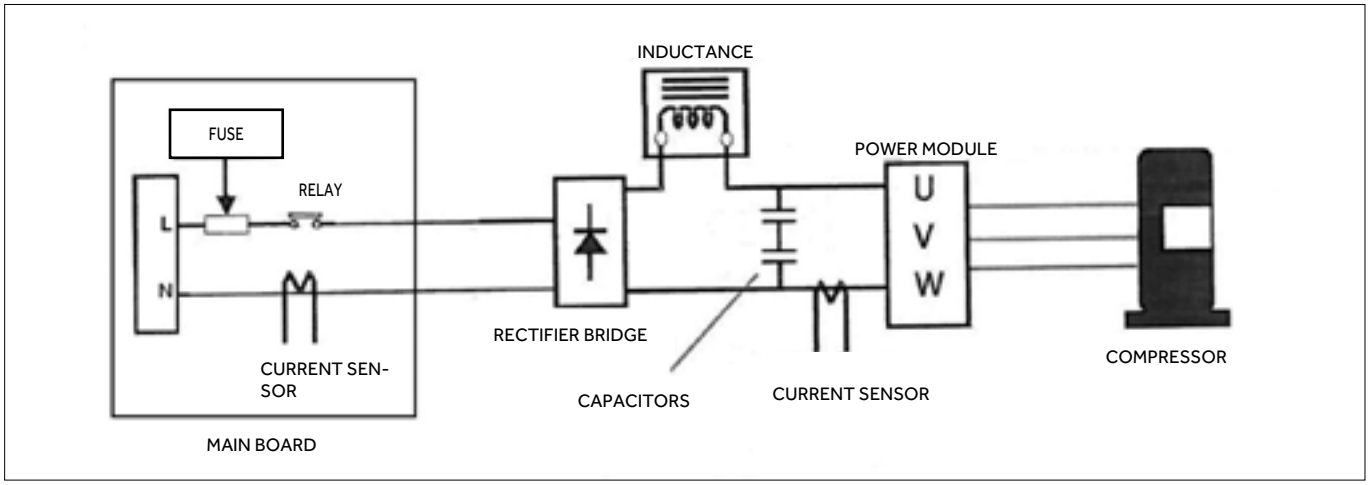
- Verify with the tester that the probe is not interrupted or short-circuited. If so, replace it.
- Verify that the measured ohmic value is consistent with the temperature that the probe measures.
- Once you have identified the type of probe and measured its ohmic value, use the table on page 263 to identify the type and characteristics of the probe.
- When replacing a probe, always verify (measuring it with the tester) that it is of correct type.

Check communication alarm between indoor and outdoor units (e.g. E7.)

- Try disconnecting the voltage for a couple of minutes, then try restarting the air conditioner. In some cases it may be a transient alarm caused by external disturbances.
- For testing only, reverse the wire "1" with the wire "2" between the indoor and outdoor units in the terminal block. Due to different product versions, it is possible that the phase and neutral are reversed between the 2 units.
- Verify alarm signals on both indoor and outdoor units and check if there is a reference to a specific fault.
- Verify if the problem is caused by the indoor unit(s), outdoor units, or the wiring as indicated below:
- Verify that in ventilation mode the indoor unit turns on and responds to all settings given by your controller. This will verify with a good probability that it is working.
- Verify the wiring between the units, (continuity and polarity, shielding when required). If in doubt try using a "jumper" cable.
- Before the alarm is signaled in the outdoor unit with a 4-wire terminal block (L,N,COM,TERRA), verify that there is an alternating (also variable) voltage between the neutral and communication terminal other than 0 V. If this is not the case, try replacing the indoor unit card.
- In the inverter outdoor units, measure the continuous voltage at the heads of the capacitors connected to the power module between P(-), N(-). It must correspond to a voltage of about 310 Vdc. If not, check with the tester that the inductance gives continuity, otherwise it is possible to temporarily bypass it by shorting it. Verify that the power module is powered by 230 Vac in the respective terminals, and that the main board is powered.
- If the communication alarm appears on the indoor unit but there are no alarms on the outdoor unit, proceed to verify:
  1. continuous voltage 310 Vdc compressor
  2. continuous voltage 310 Vdc fan motor
  3. impedances on DC fan motor wires

  If in doubt about faulty fan and main board without alarms, replace them both.

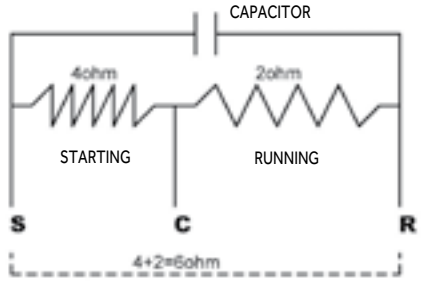
Block diagram of an inverter circuit



Electrical checks on the compressor

- Inverter / three-phase compressor: Measure the impedance of the phases by verifying that there are exactly equal values between the respective U,V,W or R,S,T terminals. Usually the value is about a few ohm. Disconnect all cables from the compressor before measuring.
- ON-OFF single-phase compressor: Measure the impedance of the run winding (C- R) and start winding (C-S) between the respective C,S,R terminals.

The sum of both windings must be equal to the impedance between R and S.



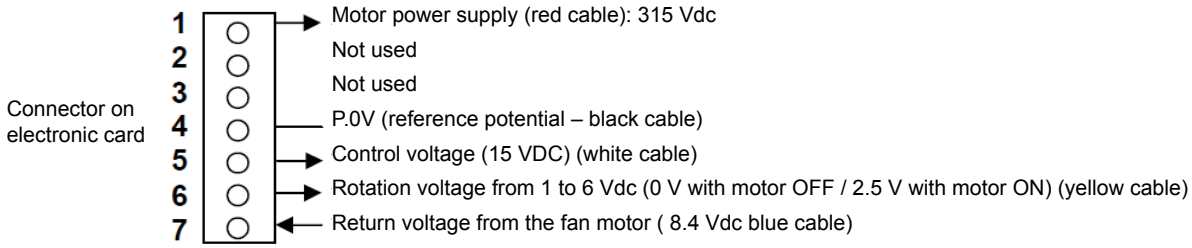
C = Common
R = Run winding
S= Start winding

- Measuring the absorption directly in the phase of the outdoor terminal block, can make us understand if the consumption of the compressor falls into the rating plate data or not. In the On-Off compressors the start capacitor can be the cause of excessive absorption.
  In inverter compressors, measuring the current on one of the three phases with the current clamp in c.a. can verify if there are abnormal absorptions. In fact, in the start phase, it has to rise slowly from the minimum consumption.
- Measure the impedance of each winding towards the ground verifying that it is not less than 20 Mohm. This would indicate that there is a possible leakage that could cause the circuit breaker to intervene.
- The above tests can only give us a first idea of the state of the compressor, but they are not enough to completely exclude a possible problem. For example, they do not detect mechanical blockages.

Fan Motor Verification (DC)

Against E14 or F8 alarm, make some checks according to the following indications:

1. Check the connector connection.
2. Check that the motor output voltage is 315 Vdc (pin 1-4)
3. Check that the motor control voltage is 15 Vdc (pin 4-5).
4. Check the rotation command output voltage (pin 4-6).
5. Check rotation input pulses (pin 4-7).



Resistive values of some fan motors

INDOOR UNIT MOTORS		
Motor Code 0010403317G		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	40kΩ	<100Ω
YELLOW / BLACK	226kΩ	<60kΩ
BLUE / BLACK	5.35MΩ	<100Ω
RED / BLACK	--	<1MΩ

INDOOR UNIT MOTORS		
Motor Code 001040410B		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	116kΩ	<100Ω
YELLOW / BLACK	198kΩ	<60kΩ
BLUE / BLACK	5.6MΩ	<1MΩ
RED / BLACK	--	<1MΩ

INDOOR UNIT MOTORS		
Motor Code 0150401250A		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	53kΩ	<100Ω
YELLOW / BLACK	170kΩ	<60kΩ
BLUE / BLACK	4.6MΩ	<1MΩ
RED / BLACK	1.3MΩ	<1MΩ

INDOOR UNIT MOTORS		
Motor Code 0150401253A		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	55kΩ	<100Ω
YELLOW / BLACK	171kΩ	<60kΩ
BLUE / BLACK	4.8MΩ	<1MΩ
RED / BLACK	1.3MΩ	<1MΩ

INDOOR UNIT MOTORS		
Motor Code 0150400714		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	1MΩ	<100Ω
YELLOW / BLACK	208kΩ	<60kΩ
BLUE / BLACK	5.2MΩ	<1MΩ
RED / BLACK	3.1MΩ	<1MΩ

INDOOR UNIT MOTORS		
Motor Code 0150401754A		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	2.2MΩ	<100Ω
YELLOW / BLACK	216kΩ	<60kΩ
BLUE / BLACK	--	<1MΩ
RED / BLACK	3.3MΩ	<1MΩ

OUTDOOR UNIT MOTORS		
Motor Code 0010403322A		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	49kΩ	<100Ω
YELLOW / BLACK	154kΩ	<60kΩ
BLUE / BLACK	--	<1MΩ
RED / BLACK	3.7MΩ	<1MΩ

OUTDOOR UNIT MOTORS		
Motor Code 0010401254B		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	49kΩ	<100Ω
YELLOW / BLACK	154kΩ	<60kΩ
BLUE / BLACK	--	<1MΩ
RED / BLACK	3.7MΩ	<1MΩ

OUTDOOR UNIT MOTORS		
Motor Code 0010401254		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	28kΩ	<100Ω
YELLOW / BLACK	247kΩ	<60kΩ
BLUE / BLACK	4.6MΩ	<1MΩ
RED / BLACK	4.7MΩ	<1MΩ

OUTDOOR UNIT MOTORS		
Motor Code 0010401087		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	53kΩ	<100Ω
YELLOW / BLACK	104kΩ	<60kΩ
BLUE / BLACK	63kΩ	<100Ω
RED / BLACK	1.3MΩ	<1MΩ

OUTDOOR UNIT MOTORS		
Motor Code 0010400771		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	53kΩ	<100Ω
YELLOW / BLACK	104kΩ	<60kΩ
BLUE / BLACK	63kΩ	<100Ω
RED / BLACK	4.7MΩ	<1MΩ

OUTDOOR UNIT MOTORS		
Motor Code 0010401832		
OHM MEASUREMENTS	**TYPICAL VALUE**	**FAULT VALUE**
WHITE / BLACK	52kΩ	<100Ω
YELLOW / BLACK	147kΩ	<60kΩ
BLUE / BLACK	--	<100Ω
RED / BLACK	4.7MΩ	<1MΩ

Function test mode:

Forced cold:

using the "test" button located in the split units (usually located near the terminal) you can "force" the unit in cooling mode for 30min, thus excluding the reading of the probes.

Do the following:

- With the machine off, press the "test" button until the buzzer will emit 2 consecutive "BEEPs".
- Release the button.

In this way the unit will be started in forced cooling. To exit this mode simply turn off the unit from the remote control or press the appropriate "test" button for 1 time.

Verification of operation

In order to determine the proper operation of an air conditioner in addition to the pressure of the refrigerant, the electrical absorption of the outdoor unit and the yield of the indoor unit ('t air intake - man.') must be considered (in an average cooling between 10 - 15°C of Δt, in heat pump on average between 20 - 30°C of Δt). There is also no precise operating pressure. It varies depending on the temperatures we have inside, outside and the type of refrigerant used.

- When operating in cooling mode under normal conditions of use, the difference between the temperature read with the thermometer in the OU gas tap* and the temperature read by the gauge (gas side) should be between 5-8°C (overheating reading). *** To obtain a more precise measurement, measure directly in the compressor intake pipe.**
- When operating in heating mode under normal conditions of use, the difference between the temperature read by gauge (gas side) and the temperature read with the thermometer in the OU liquid tap* should be between 3-5°C (supercooling reading). *** To obtain a more precise measurement, measure directly before the laminating member.**
- If the dynamic pressure is similar to static pressure it can indicate a leakage problem of the 4-way valve or a problem with the compressor. Usually the absorption of the compressor shows very low values.

- A pressure different than normal functioning can be a symptom of bad thermal exchange, crushed piping, incorrect refrigerant charge.
- Always ensure that the lengths and elevations are within the limits provided by the constructor.
- In the case of pipes exceeding the standard, make an additional charge of refrigerant according to the quantities listed in the catalog/installation manual.

The above measures may vary depending on the conditions of use, so these citations remain purely indicative and should be interpreted taking into account the other tests mentioned in this manual depending on the models in question.

Some of the phenomena below are usually accompanied by poor yield of the device.

Frequent issues during cooling operation:

The liquid pipe that part of the outdoor unit tends to frost

The main causes are as follows:

- Lack of refrigerant
- Dirty filters
- Faulty indoor unit fan
- Poor circulation of refrigerant (e.g. crushed pipes, capillary obstruction)

Dynamic pressure is relatively low compared to normal operation

- Refrigerant may be missing. Check for leaks and restore the system with the correct charge.
- The indoor unit may not have a proper thermal exchange, (filters, fan, exchanger, obstacles)
- Poor circulation of refrigerant (e.g. crushed pipes, capillary obstruction).

Dynamic pressure is relatively high compared to normal operation

- There may be too much gas due to an incorrect refill.
- The outdoor unit may not have a proper thermal exchange.

The indoor unit gives off bad smells

- It is important to check that the drain has the right slope, and it must also be verified that it has not been directly connected to the sewerage system.
- Check the cleaning of the exchanger and filters of the indoor unit.

Frequent issues during heat pump operation:

The outdoor unit is covered with ice

- Verify that the air conditioner has been sized correctly with respect to the place.
- Verify that the indoor unit does not work at room temperature below 16°C and there are no obstacles that can affect the thermal exchange of exchangers.
- Turning off the air conditioner resets the defrosting cycles, therefore sudden on and off can facilitate the formation of ice in the outdoor unit.
- Verify that the refrigerant charge matches the indicated rating plate data considering any additions for lengths longer than the standard.

Dynamic pressure is relatively low compared to normal operation

- Refrigerant may be missing. Check for leaks and restore the system with the correct charge.
- The outdoor unit may not have a proper thermal exchange.
- Operating temperatures (indoor/outdoor) are too low.

Dynamic pressure is relatively high compared to normal operation

- The indoor unit may not have a proper thermal exchange, (filters, fan, exchanger, obstacles).
- There may be too much gas due to an incorrect refill.
- Obstruction to the capillary, crushed pipes
- Operating temperatures (indoor/outdoor) are too high.

TROUBLESHOOTING REQUIREMENTS

- This page is intended as an example of what information can be gathered before a possible discussion with the technical depart-ment of HAIER.
- It is suggested that you print copies of this page to use as needed

Haier technical data collection form For confidential use for communions to be made with the HAIER technical office		
Installation date:	Current date:	
Outdoor unit model: Serial No.:	Indoor unit model [A]:	Serial No.:
	Indoor unit model [B]:	Serial No.:
	Indoor unit model [C]:	Serial No.:
	Indoor unit model [D]:	Serial No.:
	Indoor unit model [E]:	Serial No.:
Pipe length OU-IU [A] (m):	Pipe height difference OU-IU [A] (m):	
Pipe length OU-IU [B] (m):	Pipe height difference OU-IU [B] (m):	
Pipe length OU-IU [C] (m):	Pipe height difference OU-IU [C] (m):	
Pipe length OU-IU [D] (m):	Pipe height difference OU-IU [D] (m):	
Pipe length OU-IU [E] (m):	Pipe height difference OU-IU [E] (m):	
Any additional charge performed? YES ☐ NO ☐ qty? (kg):		
Has the machine always had the same problem since installation? YES ☐ NO ☐		
Current alarm signaling of outdoor unit:	OU historical alarms list (if any):	
Room dimensions in which IU [A] is installed (WxHxD) m^3:	Any alarm signals on indoor unit [A]:	
Room dimensions in which IU [B] is installed (WxHxD) m^3:	Any alarm signals on indoor unit [B]:	
Room dimensions in which IU [C] is installed (WxHxD) m^3:	Any alarm signals on indoor unit [C]:	
Room dimensions in which IU [D] is installed (WxHxD) m^3:	Any alarm signals on indoor unit [D]:	
Room dimensions in which IU [E] is installed (WxHxD) m^3:	Any alarm signals on indoor unit [E]:	
Gas pipe pressure in heating (bar):	Delta-T air in indoor unit [A] cooling (C°):	
Gas pipe pressure in cooling (bar):	Delta-T air in indoor unit [B] cooling (C°):	
Gas/liquid pipe temp. in heating (C°): /	Delta-T air in indoor unit [C] cooling (C°):	
Gas/liquid pipe temp. in heating (C°): /	Delta-T air in indoor unit [D] cooling (C°):	
Average outdoor exchanger temp in heating (C°):	Delta-T air in indoor unit [E] cooling (C°):	
Average outdoor exchanger temp in cooling (C°):	Delta-T air in indoor unit [A] heating (C°):	
Delta-T air in indoor unit cooling (C°):	Delta-T air in indoor unit [B] heating (C°):	
Delta-T air in indoor unit heating (C°):	Delta-T air in indoor unit [C] heating (C°):	
OU absorbed current in heating (A):	Delta-T air in indoor unit [D] heating (C°):	
OU absorbed current in cooling (A):	Delta-T air in indoor unit [E] heating (C°):	
Supply voltage value between Phase and Neutral (single-phase): L-N (Vac):		
Supply voltage value between Phase and Neutral (three-phase): R-N (Vac):	S-N (Vac):	T-N (Vac):
DC voltage value at the power module (Vdc):		

Haierhvac.eu 11

NOTE:

Setting Celsius/Fahrenheit degrees

In some indoor wall units, the temperature may appear in Fahrenheit instead of Celsius in the display.
Most of the time it happens due to an incorrect setting by the user but it may also occur due to sudden changes in the voltage or Eeprom memory loss.

However, the restore operation is as follows:

- Make sure you have the YR-HD01 remote control or similar remote controls that still have the "extra function" button or the dedicated F/C button.
- Turn on the split in cooling/heat pump mode
- Press the "EXTRA FUNCTION" button until the temperature in fahrenheit degrees flashes in the remote control display.
- Press the "CONFIRM" button
- Press the "EXTRA FUNCTION" button again, and the temperature in degrees centigrade will flash in the remote control display.
- Press the "CONFIRM" button
- Now both in the remote control and split display the temperature will need to be correctly set in centigrade degrees.

Selecting the room temperature/set-point on the display: (except Round flow cassette / FA-ZUN tower)

To switch the display between real temperature and environment set-point, press the LIGHT key of the remote control 10 times;
The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Temperature compensation: +/- 4°C on commercial units

If the temperature set in the wired controller does not respect the previously set temperature, try the following procedure. To do this you must:

- Make sure that no offsets have already been set up using the wired controller
- A receiver card (e.g. receiver in the cassette unit panel, or RE02 receiver interface)
- A remote control with the "SLEEP" button (for example, YR-HBS01)

THEN FOLLOW THE NOTES BELOW:

1. Turn on the unit using the remote control
2. From remote control, select the HEAT PUMP mode at 24°C
3. Press the "SLEEP" button 7 times in 5 seconds. The internal unit must issue 2 confirmation "BEEP" sounds. If you do not hear any sound repeat step 3
4. Turn off the unit via the remote control and you will hear 4 "BEEP" sounds for confirmation
5. Remove voltage and then restart the system

N.B.: If you want to set a different compensation temperature, set a higher or lower temperature in step 2 instead of setting 24 °C. Considering the starting 24 °C as point 0, each additional degree will give a positive compensation (e.g. 25 °C = +1 °C, 26 °C = +2 °C) instead, every less degree will give a negative compensation (e.g. 23 °C = -1 °C, 22 °C = -2 °C)

Selecting the automatic restart at power failure:

Press 10 times the "SLEEP" button on the remote control; the indoor unit will respond with 2 BEEPs for disabled function (not restarts) and with 4 BEEPs for enabled function (restarts after power failure with last settings).

Activating/deactivating power-saving feature of the fan motor in cooling mode:

Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.
By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

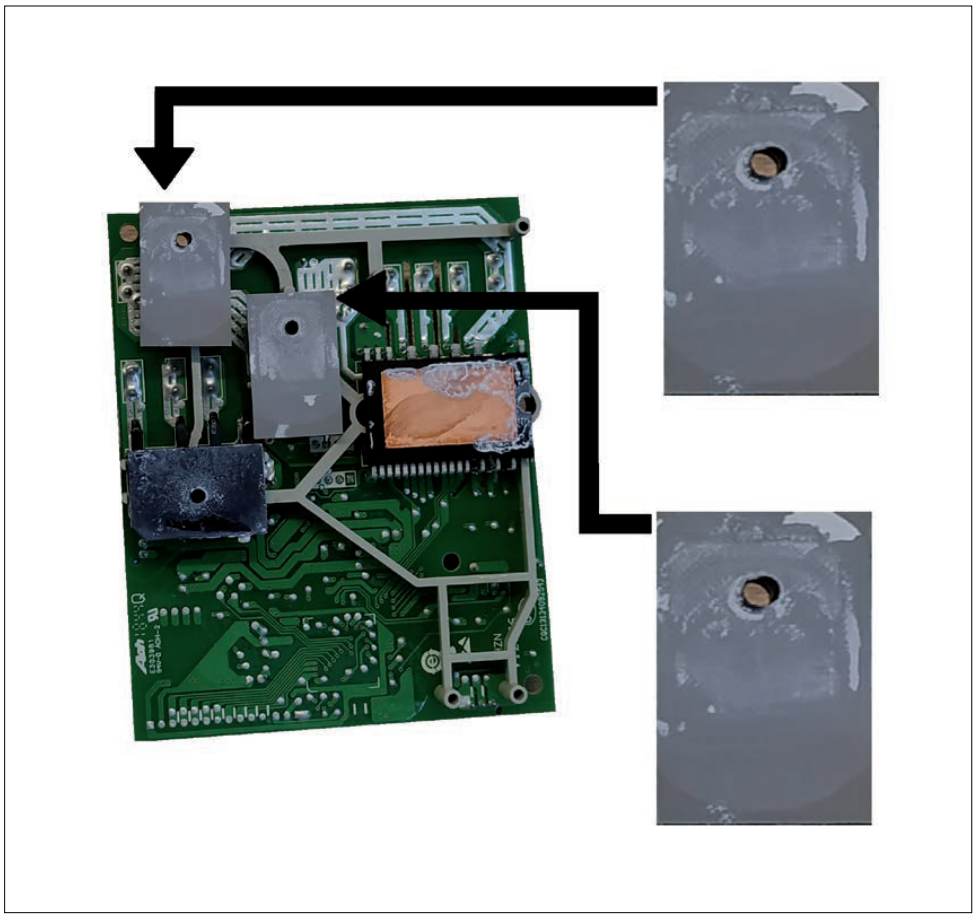
Haierhvac.eu 12

Replacement of the power module:

Attention: if it is necessary to replace the power module in an outdoor unit, it is likely that the replacement module that will be sent to you as a replacement will have no aluminum heat sink.

If so, when placing the new module, in addition to properly applying thermal paste to dissipate heat, it is recommended to check whether there are rubber insulators placed under the TRIACs.

If these insulators are mistakenly not placed, a short circuit may arise resulting in damage to the power module itself.



The figure shows the insulating sheets placed under the TRIACs.

During any module replacement, make sure that these insulators do not remain attached to the old power module

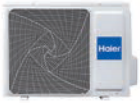
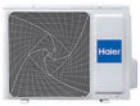
MONOSPLIT R32					
SERIES	**2.5 kW**	**3.5 kW**	**4.2 kW**	**5.0 kW**	**7.1 kW**
NEW **JADE** Super Match	 **AS25S2SJ1FA-3** 2501301Q4	 **AS35S2SJ1FA-3** 2501302Q4		 **AS50S2SJ1FA-3** 2501305Q4	
	 **1U25MECFRA-3** 2502301Q4	 **1U35MECFRA-3** 2502302Q4		 **1U50JECFRA-3** 2502305Q4	
JADE PHASED OUT	 **AS25JBJHRA-W** 2501301Q3	 **AS35JBJHRA-W** 2501302Q3		 **AS50JDJHRA-W** 2501305Q3	
	 **1U25JEJFRA** 2502301Q3	 **1U35JEJFRA** 2502302Q3		 **1U50REJFRA** 2502305Q3	

MONOSPLIT R32	
SERIES	**7.1 kW**
FA TOWER	 **AP71UFAHRA** 25013A6B2
	 **1U71REAFRA** 25023A6B2

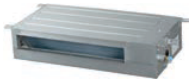
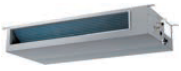
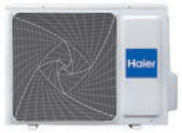
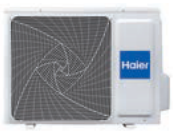
MONOSPLIT R32	
SERIES	**7.1 kW**
ZUN TOWER	 **AP71DFCHRA** 25013A6C2
	 **1U71RECFRA** 25023A6C2

MONOSPLIT R32					
SERIES	**2.5 kW**	**3.5 kW**	**4.2 kW**	**5.0 kW**	**6.8 kW**
NEW **PEARL**	 **AS25PBAHRA** 2501301HA	 **AS35PBAHRA** 2501302HA		 **AS50PDAHRA** 2501305HA	 **AS68PDAHRA** 2501306HA
	 **1U25YEGFRA** 2502301HA **1U25YEGFRA-1** 2502301IA	 **1U35YEGFRA** 2502302HA **1U35YEGFRA-1** 2502302IA		 **1U50MEGFRA** 2502305HA	 **1U68WEGFRA** 2502306HA

The expressed kW/Btu is for cooling classification. For exact values, see the technical data tables of the individual models.

MONOSPLIT R32					
SERIES	**2.5 kW**	**3.5 kW**	**4.2 kW**	**5.0 kW**	**7.1 kW**
NEW **EXPERT**	 **AS25XCAHRA** 2501301D2	 **AS35XCAHRA** 2501302D2		 **AS50XCAHRA** 2501305D2	
FLEXIS PLUS Black	 **AS25S2SF1FA-MB3** 2501301C2	 **AS35S2SF1FA-MB3** 2501302C2	 **AS42S2SF1FA-MB3** 2501304C2	 **AS50S2SF1FA-MB3** 2501305C2	 **AS71S2SF1FA-MB3** 2501306C2
FLEXIS PLUS White	 **AS25S2SF1FA-MW3** 2501301B2	 **AS35S2SF1FA-MW3** 2501302B2	 **AS42S2SF1FA-MW3** 2501304B2	 **AS50S2SF1FA-MW3** 2501305B2	 **AS71S2SF1FA-MW3** 2501306B2
IES PLUS PHASED OUT	 **AS25S2SF2FA-3** 2501301A2	 **AS35S2SF2FA-3** 2501302A2	 **AS42S2SF2FA-3** 2501304A2	 **AS50S2SF2FA-3** 2501305A2	 **AS71S2SF2FA-3** 2501306A2
CONSOLE	 **AF25S2SD1FA(H)** 2501421B2	 **AF35S2SD1FA(H)** 2501422B2	 **AF42S2SD1FA(H)** 2501424B2		
CASSETTE 620		 **AB35S2SC2FA-1** 2501452F2		 **AB50S2SC2FA-1** 2501455F2	
ROUND FLOW CASSETTE					 **AB71S2SG1FA** 2501456A2
CEILING / FLOOR CONVERTIBLE		 **AC35S2SG1FA** 2501402A2		 **AC50S2SG1FA** 2501405A2	 **AC71S2SG1FA** 2501406A2
SLIM DUCTED LOW PRESSURE **30 Pa**		 **AD35S2SS1FA(H)** 2504652C2		 **AD50S2SS1FA(H)** 2504655C2	 **AD71S2SS1FA(H)** 2504656C2
DUCTED MEDIUM PRESSURE **150 Pa**		 **AD35S2SM3FA(H)** 2501652D2		 **AD50S2SM3FA(H)** 2501655D2	 **AD71S2SM3FA(H)** 2501656D2
OUTDOOR UNIT MONOSPLIT	 **1U25S2SM1FA** 2502301T2 **1U25S2SM1FA-2** 2502301V2	 **1U35S2SM1FA** 2502302T2 **1U35S2SM1FA-2** 2502302V2	 **1U42S2SM1FA** 2502304T2	 **1U50S2SJ2FA** 2502305T2	 **1U71S2SR2FA** 2502306T2

The expressed kW/Btu is for cooling classification. For exact values, see the technical data tables of the individual models.

MONOSPLIT R32					
SERIES	**3.5 kW**	**5.0 kW**	**7.1 kW**	**10.0 kW**	**10.5 kW**
CASSETTE 620	 **AB35S2SC2FA-1** 2501452F2	 **AB50S2SC2FA-1** 2501455F2			
ROUND FLOW CASSETTE			 **AB71S2SG1FA** 2501456A2		 **ABH105H1ERG** 25014A80L
WALL 10 kW				**AS105S2SF2FA-2** 2501308A2	
CEILING / FLOOR CONVERTIBLE	 **AC35S2SG1FA** 2501402A2	 **AC50S2SG1FA** 2501405A2	 **AC71S2SG1FA** 2501406A2		 **AC105S2SH1FA** 2501408A2
SLIM DUCT LOW PRESSURE 30 Pa	 **AD35S2SS1FA(H)** 2504652C2	 **AD50S2SS1FA(H)** 2504655C2	 **AD71S2SS1FA(H)** 2504656C2		
DUCTED MEDIUM PRESSURE 150 Pa	 **AD35S2SM3FA(H)** 2501652D2	 **AD50S2SM3FA(H)** 2501655D2	 **AD71S2SM3FA(H)** 2501656D2		 **AD105S2SM3FA(H)** 2501658D2
DUCTED HIGH PRESSURE 210 Pa					
CABINET					
OUTDOOR UNIT MONOSPLIT					
SINGLE-PHASE	**1U35S2SM1FA** 2502302T2 / **1U35S2SM1FA-2** 2502302V2	**1U50S2SJ2FA** 2502305T2	**1U71S2SR2FA** 2502306T2	**1U105S2SS2FA** 2502308C2	**1U105S2SS2FA** 2502308C2
Number of fans	single fan / single fan	single fan	single fan	single fan	single fan
THREE-PHASE					**1U105S2SS1FB** 2502308B2
Number of fans					single fan

The expressed kW/Btu is for cooling classification. For exact values, see the technical data tables of the individual models.

MONOSPLIT R32				MONOSPLIT R410A	
12.5 kW	14.0 kW		16.0 kW	20.0 kW	25.0 kW
 **ABH125K1ERG** 25014A90L		 **ABH140K1ERG** 25014A95L	 **ABH160K1ERG** 25014A99L		
 **AC125S2SK1FA** 2501409A2		 **AC140S2SK1FA** 2501409B2	 **AC160S2SK1FA** 2501409C2		
 **AD125S2SM3FA** 2501659B2		 **AD140S2SM3FA** 2501659C2	 **AD160S2SM3FA** 2501659F2		
 **ADH125H1ERG** 25017A90L		 **ADH140H1ERG** 25017A95L		 **ADH200H1ERG** 25017A9DL	 **ADH250H1ERG** 25017A9HL
	 **AP140S2SK1FA(H)** 2501559B2				
 **1U125S2SN2FA** 2502309C2 single fan	 **1U140S2SN1FA** 2502309H2 single fan	 **1U140S2SN1FA** 2502309H2 single fan	 **1U140S2SP2FA** 2502309M2 double fan	 **1U160S2SP1FB** 2502309L2 double fan	 **1UH200W1ERK** 25023A9DL double fan	 **1UH250W1ERK** 25023A9HL double fan
1U125S2SN2FB 2502309G2 single fan	**1U140S2SN1FB** 2502309J2 single fan	**1U140S2SN1FB** 2502309J2 single fan	**1U140S2SP2FB** 2502309N2 double fan			

The expressed kW/Btu is for cooling classification. For exact values, see the technical data tables of the individual models.

SUPERMATCH: 100% COMBINATIONS - 50% STOCK REDUCTION

Universal indoor units for MonoSplit or MultiSplit systems.

OUTDOOR UNIT MONOSPLIT R32			1U25S2SM1FA 1U25S2SM1FA-2	1U35S2SM1FA 1U35S2SM1FA-2	1U42S2SM1FA	1U50S2SJ2FA	1U71S2SR2FA
INDOOR UNIT R32		kW	2.5 kW	3.5 kW	4.2 kW	5.0 kW	7.1 kW
 NEW EXPERT	AS25XCAHRA	2.5	●				
	AS35XCAHRA	3.5		●			
	AS50XCAHRA	5.0				●	
 FLEXIS PLUS Black	AS25S2SF1FA-MB3	2.5	●				
	AS35S2SF1FA-MB3	3.5		●			
	AS42S2SF1FA-MB3	4.2			●		
	AS50S2SF1FA-MB3	5.0				●	
	AS71S2SF1FA-MB3	7.1					●
 FLEXIS PLUS White	AS25S2SF1FA-MW3	2.5	●				
	AS35S2SF1FA-MW3	3.5		●			
	AS42S2SF1FA-MW3	4.2			●		
	AS50S2SF1FA-MW3	5.0				●	
	AS71S2SF1FA-MW3	7.1					●
 IES PLUS PHASED OUT	AS25S2SF2FA-3	2.5	●				
	AS35S2SF2FA-3	3.5		●			
	AS42S2SF2FA-3	4.2			●		
	AS50S2SF2FA-3	5.0				●	
	AS71S2SF2FA-3	7.1					●
 CONSOLE	AF25S2SD1FA(H)	2.5	●				
	AF35S2SD1FA(H)	3.5		●			
	AF42S2SD1FA(H)	4.2			●		
 CASSETTE 620	AB35S2SC2FA-1	3.5		●			
	AB50S2SC2FA-1	5.0				●	
 ROUND FLOW CASSETTE	AB71S2SG1FA	7.1					●
 CEILING / FLOOR CONVERTIBLE	AC35S2SG1FA	3.5		●			
	AC50S2SG1FA	5.0				●	
	AC71S2SG1FA	7.1					●
 SLIM DUCTED LOW PRESSURE 30 Pa	AD35S2SS1FA(H)	3.5		●			
	AD50S2SS1FA(H)	5.0				●	
	AD71S2SS1FA(H)	7.1					●
 DUCTED MEDIUM PRESSURE 150 Pa	AD35S2SM3FA(H)	3.5		●			
	AD50S2SM3FA(H)	5.0				●	
	AD71S2SM3FA(H)	7.1					●

The expressed kW/Btu is for cooling classification. For exact values, see the technical data tables of the individual models.

R32 SUPERMATCH Multisplit Range

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OUTDOOR UNIT R32 MULTISPLIT			1:2		1:3		1:4		1:5		
			2U40S2SM1FA	2U50S2SM1FA 2U50S2SM1FA-3*	3U55S2SR3FA 3U55S2SR5FA*	3U70S2SR5FA	4U75S2SR5FA	4U85S2SR3FA 4U85S2SR5FA*	5U90S2SS5FA	5U105S2SS5FA	5U125S2SN1FA
INDOOR UNIT R32		kW	4.0 kW	5.0 kW	5.5 kW	7.0 kW	7.5 kW	8.5 kW	9.0 kW	10.5 kW	12.5 kW
NEW JADE Super Match	AS25S2SJ1FA-3	2.5	●	●	●	●	●	●	●	●	
	AS35S2SJ1FA-3	3.5	●	●	●	●	●	●	●	●	
	AS50S2SJ1FA-3	5.0			●	●	●	●	●	●	
NEW EXPERT	AS20XCAHRA	2.0	●	●	●	●	●	●	●	●	
	AS25XCAHRA	2.5	●	●	●	●	●	●	●	●	
	AS35XCAHRA	3.5	●	●	●	●	●	●	●	●	
	AS42XCAHRA	4.2		●	●	●	●	●	●	●	
	AS50XCAHRA	5.0			●	●	●	●	●	●	
FLEXIS PLUS Black	AS20S2SF1FA-MB3	2.0	●	●	●	●	●	●	●	●	●
	AS25S2SF1FA-MB3	2.5	●	●	●	●	●	●	●	●	●
	AS35S2SF1FA-MB3	3.5	●	●	●	●	●	●	●	●	●
	AS42S2SF1FA-MB3	4.2		●	●	●	●	●	●	●	●
	AS50S2SF1FA-MB3	5.0			●	●	●	●	●	●	●
	AS71S2SF1FA-MB3	7.1				●	●	●	●	●	●
FLEXIS PLUS White	AS20S2SF1FA-MW3	2.0	●	●	●	●	●	●	●	●	●
	AS25S2SF1FA-MW3	2.5	●	●	●	●	●	●	●	●	●
	AS35S2SF1FA-MW3	3.5	●	●	●	●	●	●	●	●	●
	AS42S2SF1FA-MW3	4.2		●	●	●	●	●	●	●	●
	AS50S2SF1FA-MW3	5.0			●	●	●	●	●	●	●
	AS71S2SF1FA-MW3	7.1				●	●	●	●	●	●
IES PLUS PHASED OUT	AS20S2SF2FA-3	2.0	●	●	●	●	●	●	●	●	
	AS25S2SF2FA-3	2.5	●	●	●	●	●	●	●	●	
	AS35S2SF2FA-3	3.5	●	●	●	●	●	●	●	●	
	AS42S2SF2FA-3	4.2		●	●	●	●	●	●	●	
	AS50S2SF2FA-3	5.0			●	●	●	●	●	●	
	AS71S2SF2FA-3	7.1				●	●	●	●	●	
NEW PEARL	AS20PBAHRA	2.0	●	●	●	●	●	●	●	●	
	AS25PBAHRA	2.5	●	●	●	●	●	●	●	●	
	AS35PBAHRA	3.5	●	●	●	●	●	●	●	●	
	AS50PDAHRA	5.0			●	●	●	●	●	●	
CONSOLE	AF25S2SD1FA(H)	2.5		●	●	●					
	AF35S2SD1FA(H)	3.5		●	●	●					
	AF42S2SD1FA(H)	4.2		●	●	●					
CASSETTE 620	AB25S2SC2FA-1	2.5			●	●	●	●	●	●	DATA PENDING CHECK AT THE SITE
	AB35S2SC2FA-1	3.5			●	●	●	●	●	●	
	AB50S2SC2FA-1	5.0			●	●	●	●	●	●	
ROUND FLOW CASSETTE	AB71S2SG1FA	7.1				●	●	●	●	●	
CEILING / FLOOR CONVERTIBLE	AC35S2SG1FA	3.5			●	●	●	●	●	●	
	AC50S2SG1FA	5.0			●	●	●	●	●	●	
	AC71S2SG1FA	7.1				●	●	●	●	●	
SLIM DUCTED LOW PRESSURE 30 Pa	AD25S2SS1FA(H)	2.5			●	●	●	●	●	●	
	AD35S2SS1FA(H)	3.5			●	●	●	●	●	●	
	AD50S2SS1FA(H)	5.0			●	●	●	●	●	●	
	AD71S2SS1FA(H)	7.1				●	●	●	●	●	
DUCTED MEDIUM PRESSURE 150 Pa	AD35S2SM3FA(H)	3.5			●	●	●	●	●	●	
	AD50S2SM3FA(H)	5.0			●	●	●	●	●	●	
	AD71S2SM3FA(H)	7.1				●	●	●	●	●	

The expressed kW/Btu is for cooling classification.
For exact values, see the technical data tables of the individual models.

PAY ATTENTION TO THE SIZE OF THE PLACE IN REFERENCE TO THE EN378 STANDARD

Compatibility with Haier set of products

Outdoor unit monosplit R32			1:1			
			TUNDRA PLUS			
	Outdoor Units		*1U25YEGFRA	*1U35YEGFRA	1U50MEGFRA	1U68REEFRA
	Indoor Units	kW	2.5 kW	3.5 kW	5.0 kW	6.8 kW
	AS25TADHRA-2	2.5	●			
	AS35TADHRA-2	3.5		●		
	AS50TDDHRA-CLC	5.0			●	
	AS68TEDHRA-CLC	6.8				●

*: 50 - 100 gr of r32 should be added in addition to the standard charge

Outdoor unit monosplit R32			1:1					
			PEARL					
	Outdoor Units		1U25YEGFRA	1U35YEGFRA	1U50MEGFRA	1U68REEFRA	1U25YEGFRA-1	1U35YEGFRA-1
	Indoor Units	kW	2.5 kW	3.5 kW	5.0 kW	6.8 kW	2.5 kW	3.5 kW
	AS25PBAHRA	2.5	●				●	
	AS35PBAHRA	3.5		●				●
	AS50PDAHRA	5.0			●			
	AS68PDAHRA	6.8				●		

Outdoor unit monosplit R32			1:1		
			HEC TIDE		
	Outdoor Units		HEC25T0-OU	HEC35T0-OU	HEC50T0-OU
	Indoor Units	kW	2.5 kW	3.5 kW	5.0 kW
	HEC25T0-IN	2.5	●		
	HEC35T0-IN	3.5		●	
	HEC50T0-IN	5.0			●

Outdoor Unit Multisplit R32			1:2	
			HEC TIDE	
	Outdoor Units		2HEC40T0-OU-M	2HEC50T0-OU-M
	Indoor Units	kW	4.0 kW	5.0 kW
	HEC25T0-IN-M	2.5	●	●
	HEC35T0-IN-M	3.5	●	●

Outdoor unit monosplit R32			1:1		
			FLAIR		
	Outdoor Units		H1U09FAAOUT	H1U12FAAOUT	H1U18FAAOUT
	Indoor Units	kW	2.5 kW	3.5 kW	5.0 kW
	HAS09FAAIN	2.5	●		
	HAS12FAAIN	3.5		●	
	HAS18FAAIN	5.0			●

Outdoor Unit Multisplit R32			1:2	
			FLAIR	
	Outdoor Units		H2U14MAAOUT	H2U18MAAOUT
	Indoor Units	kW	4.0 kW	5.0 kW
	HAS09FAAIN	2.5	●	●
	HAS12FAAIN	3.5	●	●

Table of compatibility

*Nordic compatibility

Outdoor unit monosplit R32			1:1		
			Nordic		
	Outdoor Units		1U25S2SQ1FA-NR	1U35S2SQ1FA-NR	1U50S2SQ1FA-NR
	Indoor Units	kW	2.5 kW	3.5 kW	5.0 kW
	AS25S2SN1FA-NRC	2.5	●		
	AS35S2SN1FA-NRC	3.5		●	
	AS50S2SN1FA-NRC	5.0			●

* For foreign market only

Alarm on outdoor unit display / led	Description of the alarm	Description / Cause	Indoor units: ducted cassette ceiling/floor conv. console		Indoor unit panel display: ceiling/ floor conv. console wall	Display ducted cassette	Alarm on wired controller YR-E17 HW-BA116ABK	Alarm on wired controller YR-16A YR-16B YCZ-G001 YCZ-A003 HC-SA164DBT YCZ-A004	Failure on indoor/ outdoor unit
			Timer (yellow)	Operate / Run (green)					
	Indoor unit ambient temperature probe faulty.	Faulty sensor or short-circuit for more than 2 consecutive minutes.	0	1	E1	01	01	1	Indoor Unit
	Indoor unit exchanger temperature probe faulty.	Faulty sensor or short-circuit for more than 2 consecutive minutes.	0	2	E2	02	02	2	
	EEPROM faulty indoor unit board	EEPROM faulty indoor unit board	0	4	E4	04	04	4	
	Indoor unit ice protection	Indoor unit exchanger temperature too low	0	16	E5	10	10	16	
	Communication error between indoor and outdoor units	Lack of communication for more than 4 consecutive minutes	0	7	E7	07	07	7	
	Communication error between wired controller and indoor unit	Lack of communication for more than 4 consecutive minutes	0	8	E8	08 (07 flashing light on ducted version)	08	8	
	Condensed drainage system anomaly	Open floating contact for more than 25 minutes continuously/problem in wiring between board and float	0	12	E10	0C	0C	12	
	Power supply voltage anomaly	Voltage missing, voltage out-of-limits or internal board faulty	0	13	E3 / C1	0D	0D	13	
	Indoor unit DC fan motor faulty**	DC motor wiring interrupted, motor failure, electronic board damaged	0	14	E14	0E	0E	14	
	DC voltage too high or too low	DC voltage of DC motor inverter module too high or low	0	17			11		
	Outdoor unit generic alarm	Check the outdoor unit for any alarms				E20	E20		Outdoor Unit
1	Malfunctioning of the EEPROM of the outdoor unit	EEPROM outdoor unit motherboard faulty	2	1	F01	15	15	21	
2	IPM hardware (power module) overcurrent	The alarm goes out 3 times in an hour and locks the machine	2	2	F02	16	16	22	
3	Compressor overcurrent during deceleration	Overcurrent / faulty current control / phase sequence reversed (models ON OFF)	2	3	F03	17	17	23	
4	Abnormal communication between the control board and the compressor power module	Communication failure for more than 4 minutes between motherboard and SPDU/ISPM power module	2	4	F04	18	18	24	
5	Compressor overcurrent detected by control board	The alarm goes out 3 times in an hour and locks the machine.	2	5	F05	19	19	25	
6	High DC voltage or AC voltage	Voltage above 270 V or less than 187 V	2	6	F06	1A	1A	26	
7	Compressor current sampling circuit failure	The alarm goes out 3 times in an hour and locks the machine.	2	7	F07	1B	1B	27	
8	Compressor discharge temperature protection too high	Delivery temperature above 120°. The alarm goes out 3 times in an hour and locks the machine.	2	8	F08	1C	1C	28	
9	DC fan motor failure	The alarm goes out 3 times in an hour and locks the machine.	2	9	F09	1D	1D	29	
10	Outdoor unit defrosting temperature probe faulty (Te)	Temperature probe in short circuit or open circuit within last 60 seconds	3	0	F10	1E	1E	30	
11	Compressor intake temperature probe faulty (Ts)	Temperature probe in short circuit or open circuit within last 60 seconds	3	1	F11	1F	1F	31	
12	Outdoor unit ambient temperature probe faulty (Ta)	Temperature probe in short circuit or open circuit within last 60 seconds	3	2	F12	20	20	32	
13	Compressor delivery temperature probe faulty (Td)	Temperature probe in short circuit or open circuit within last 60 seconds	3	3	F13	21	21	33	
14	PFC circuit voltage too high	DC voltage too high on the inverter module	3	4	F14	22	22	34	
15	Communication error between indoor and outdoor units	Lack of communication for more than 4 consecutive minutes	3	5	F15	23	23	35	
16	Lack of refrigerant / clogging of refrigerant delivery tube	It reports an error and stops if it detects Td-Tci>=25°C for 1 minute after the compressor starts in cooling operating mode for 10 min. The alarm goes out after 3 times in an hour and locks the machine.	3	6	F16	24	24	36	
17	4-way valve switching failure	4-way valve coil damaged, disconnected or unpowered. Mechanical failure of the 4-way valve.	3	7	F17	25	25	37	

CONT'D →

Alarm on outdoor unit display / led	Description of the alarm	Description / Cause	Indoor units: ducted cassette ceiling/floor conv. console		Indoor unit panel display: ceiling/ floor conv. console wall	Display ducted cassette	Alarm on wired controller YR-E17 HW-BA116ABK	Alarm on wired controller YR-16A YR-16B YCZ-G001 YCZ-A003 HC-SA164DBT YCZ-A004	Failure on indoor/ outdoor unit
			Timer (yellow)	Operate / Run (green)					
18	Loss of compressor synchronism detection	Inverter / compressor circuit failure	3	8	F18	26	26	38	Outdoor Unit
19	DC voltage or AC voltage low / PWM selection circuit error in the power module.	The alarm goes out 3 times in an hour and locks the machine.	3	9	F19	27	27	39	
20	Temperature protection of indoor unit piping too high	Check heat exchange / refrigerant charge / sensors / electronic board	4	0	F20	28	28	40	
21	Temperature protection of indoor unit piping too low	Check heat exchange / refrigerant charge / sensors / electronic board	4	1	F21	29	29	41	
22	PFC circuit overcurrent	DC overcurrent at the power module	4	2	F22	2A	2A	42	
23	Temperature too high for the power module	SPDU/ISPM module temperature too high. The alarm goes out 3 times in an hour and locks the machine.	4	3	F23	2B	2B	43	
24	Failed to start compressor / Over-current	The alarm goes out 3 times in an hour and locks the machine.	4	4	F24	2C	2C	44	
25	U-V-W compressor phase overcurrent / Module input overcurrent	Unbalanced phases, damaged windings on the compressor, power module	4	5	F25	2D	2D	45	
26	Lack of a phase in the power module	System reset / compressor phase check / power module failure	4	6	F26	2E	2E	46	
27	Input current verification circuit failure	Detached compressor cables / faulty amperometric control	4	7	F27	2F	2F	47	
28	No charge/faulty amperometric control	Check compressor - power module wiring	4	8	F28	30	30	48	
37	Compressor overcurrent detected by power module	Verify voltage to power module - faulty module	5	7	F37	39	39	57	
38	Power module temperature sensor failure	Sensor disconnected, broken, or poorly positioned / power module failure	5	8	F38	3A	3A	58	
39	Heat exchanger temperature sensor (TC) failure	Sensor disconnected, broken, or poorly positioned	5	9	F39	3B	3B	59	
42	High pressure switch alarm	High pressure switch unplugged/ faulty/excessive refrigerant	6	2	F42	3E	3E	62	
43	Low pressure switch alarm	Low pressure switch unplugged/ faulty/lack of refrigerant	6	3	F43	3F	3F	63	
44	Temperature protection of outdoor heat exchanger TC too high	Operating temperature too high, heat exchange problems, excessive refrigerant	6	4	F44	40	40	64	
45	Low system pressure protection	Operating temperature too low, heat exchange problems, low refrigerant	6	5	F45	41	41	65	

ATTENTION:
It is possible that on some outdoor unit boards, error codes are indicated with 2 LEDs (LED1 and LED2).
In this case, the reading of the flashes should be done as indicated below:
Mx10+N, where M is the number of flashes of LED1 and N is the number of flashes of LED2
Example: LED1 1 flash; LED2 7 flashes = 17 flashes (1x10+7).
Below are some models that are equipped with boards with this error-reading logic: 1U90S2SS2FA 1U105S2SS1FA 1U105S2SS2FA

Alarm on outdoor unit display / led	Description of the alarm	Description / Cause	Indoor units: ducted cassette ceiling/floor conv. console		Indoor unit panel display:	Display ducted cassette	Wall-mounted unit				Alarm on wired controller YR-E17 HW-BA116ABK	Alarm on wired controller YR-16A YR-16B YCZ-G001	Failure on indoor/ outdoor unit
			Timer (yellow)	Operate / Run (green)	ceiling/ floor conv. console		DISPLAY	POWER	TIMER	OPERATE			
	Indoor unit ambient temperature probe faulty.	Faulty sensor or short-circuit for more than 2 consecutive minutes.	0	1	E1	01	E1	L	S	S	01	1	Indoor Unit
	Indoor unit exchanger temperature probe faulty.	Faulty sensor or short-circuit for more than 2 consecutive minutes.	0	2	E2	02	E2	L	A	A	02	2	
	Power supply voltage anomaly	Voltage missing, voltage out-of-limits or internal board faulty	0	13	E3 / C1	0D					0D	13	
	EEPROM faulty indoor unit board	EEPROM faulty indoor unit board	0	4	E4	04	E4	L	A	L	04	4	
	Communication error between wired controller and indoor unit	Lack of communication for more than 4 consecutive minutes	0	8	E8	08	E8				07 lamp	8	
	Indoor unit DC fan motor faulty**	DC motor wiring interrupted, motor failure, electronic board damaged	0	14	E14	0E	E14	S	A	L	0E	14	
	Outdoor unit generic alarm	Check the outdoor unit for any alarms				E20	E20	S	L	A			Outdoor Unit
1	EEPROM outdoor unit faulty	EEPROM outdoor unit motherboard faulty	2	1	F12	15	F12	S	L	S	15	21	
2	Power module protection	The alarm goes out 3 times in an hour and locks the machine	2	2	F1	16	F1	A	L	L	16	22	
3	AC overcurrent protection / reversed phase sequence	Overcurrent / faulty current control / phase sequence reversed (models ON OFF)	2	3	F22	17	F22	L	L	S	17	23	
4	Communication error between motherboard and SPDU/ISPM power module	Communication failure for more than 4 minutes between motherboard and SPDU/ISPM power module	2	4	F3	18	F3	S	L	S	18	24	
5	Compressor over current / high pressure	The alarm goes out 3 times in an hour and locks the machine.	2	5	F20	19	F20	S	L	A	19	25	
6	Voltage too low / too high	Voltage above 270 V or less than 187 V	2	6	F19	1A	F19	S	L	A	1A	26	
7	Locked compressor	The alarm goes out 3 times in an hour and locks the machine.	2	7	F27	1B	F27	S	L	S	1B	27	
8	Compressor delivery high temperature protection	Delivery temperature above 120°. The alarm goes out 3 times in an hour and locks the machine.	2	8	F4	1C	F4	S	L	S	1C	28	
9	Outdoor unit DC fan motor faulty	The alarm goes out 3 times in an hour and locks the machine.	2	9	F8	1D	F8	S	L	A	1D	29	
10	Outdoor unit defrosting temperature probe faulty	Temperature probe in short circuit or open circuit within last 60 seconds	3	0	F21	1E	F21	A	A	L	1E	30	
11	Compressor intake temperature probe faulty	Temperature probe in short circuit or open circuit within last 60 seconds	3	1	F7	1F	F7	S	L	S	1F	31	
12	Outdoor unit ambient temperature probe faulty	Temperature probe in short circuit or open circuit within last 60 seconds	3	2	F6	20	F6	A	L	S	20	32	
13	Compressor delivery temperature probe faulty	Temperature probe in short circuit or open circuit within last 60 seconds	3	3	F25	21	F25	L	A	S	21	33	
15	Communication error between indoor and outdoor units	Lack of communication for more than 4 consecutive minutes	3	5	E7	23	E7	S	S	L	07	35	
16	Lack of refrigerant / clogging of refrigerant delivery tube	It reports an error and stops if it detects Td-Tci>=25 for 1 minute after the compressor starts in cooling operating mode for 10 min. The alarm goes out after 3 times in an hour and locks the machine.	3	6	F13	24	F13	S	L	A	24	36	
17	4-way valve switching failure	4-way valve coil damaged, disconnected or unpowered. Mechanical failure of the 4-way valve.	3	7	F14	25	F14				25	37	
18	Loss of compressor synchronism detection	Inverter / compressor circuit failure	3	8	F11	26	F11	S	L	S	26	38	
19	Compressor overcurrent at fixed frequency (software threshold)	The alarm goes out 3 times in an hour and locks the machine.	3	9	F28	27	F28	S	L	S	27	39	
20	Protection of indoor unit piping too high	Check heat exchange / refrigerant charge / sensors / electronic board	4	0	E9	28	E9				28	40	Indoor Unit
20	Board/terminal overheating protection	Short circuit / overheating on components	4	0	F15	28	F15	S	L	A	28	40	Outdoor Unit

CONT'D →

Alarm on outdoor unit display / led	Description of the alarm	Description / Cause	Indoor units: ducted cassette ceiling/floor conv. console		Indoor unit panel display: ceiling/ floor conv. console	Display ducted cassette	Wall-mounted unit				Alarm on wired controller YR-E17 HW-BA116ABK	Alarm on wired controller YR-16A YR-16B YCZ-G001	Failure on indoor/ outdoor unit
			Timer (yellow)	Operate / Run (green)			DISPLAY	POWER	TIMER	OPERATE			
21	Protection of indoor unit piping too high	Check heat exchange / refrigerant charge / sensors / electronic board	4	0	E9	28	E9	A	S	L	28	40	Indoor Unit
22	Indoor unit ice protection	Indoor unit exchanger temperature too low	0	16	E5	10	E5	A	S	L	10	16	
23	SPDU/ISPM power module temperature protection	SPDU/ISPM module temperature too high. The alarm goes out 3 times in an hour and locks the machine.	4	3	F5	2B	F5				2B	43	Outdoor Unit
24	Failed to start compressor / Overcurrent	The alarm goes out 3 times in an hour and locks the machine.	4	4	F2	2C	F2	S	L	A	2C	44	
25	U-V-W compressor phase overcurrent / Module input overcurrent	Unbalanced phases, damaged windings on the compressor, power module	4	5	F23	2D	F23	S	L	A	2D	45	
26	Power module reset	Reset the faulty system / power module	4	6	F9	2E	F9				2E	46	
27	No charge/faulty amperometric control	Detached compressor cables / faulty amperometric control	4	7	F24	2F	F24	L	S	L	2F	47	
*28	Gas shortage or piping obstruction	Check refrigerant charge / refrigerant circuit obstructions											
28	Liquid pipe circuit "A" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	4	8	F10	30	F10	S	L	A	30	48	
29	Liquid pipe circuit "B" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	4	9	F16	31	F16	S	L	A	31	49	
30	Liquid pipe circuit "C" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	5	0	F17	32	F17	S	L	A	32	50	
31	Liquid pipe circuit "D" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	5	1	F18	33	F18	S	L	A	33	51	
32	Gas pipe circuit "A" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	5	2	F29	34	F29	S	L	A	34	52	
33	Gas pipe circuit "B" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	5	3	F30	35	F30	S	L	A	35	53	
34	Gas pipe circuit "C" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	5	4	F31	36	F31	S	L	A	36	54	
35	Gas pipe circuit "D" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	5	5	F32	37	F32	S	L	A	37	55	
36	Gas pipe circuit "E" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	5	6	F26	38	F26	S	L	A	38	56	
37	Outdoor exchanger temperature protection	Heat exchange problems/temperature probe failure	5	7	F34	39	F34				39	57	
38	Power module temperature sensor failure	Sensor disconnected, broken, or poorly positioned / power module failure	5	8	F35	3A	F35	S	L	A	3A	58	
39	Piping temperature probe "TC" faulty	Sensor disconnected, broken, or poorly positioned	5	9	F36	3B	F36	S	L	A	3B	59	
40	Liquid pipe circuit "E" temperature probe faulty	Sensor disconnected, broken, or poorly positioned	6	0	F33	3C	F33				3C	60	
42	High pressure switch alarm	High pressure switch unplugged/ faulty/excessive refrigerant	6	2	F39	3E	F39	S	L	A	3E	62	
43	Low pressure switch alarm	Low pressure switch unplugged/ faulty/lack of refrigerant	6	3	F40	3F	F40	S	L	A	3F	63	
44	Temperature protection of outdoor heat exchanger TC too high	Operating temperature too high, heat exchange problems, excessive refrigerant	6	4	F41	40	F41				40	64	
45	Low system pressure protection	Operating temperature too low, heat exchange problems, low refrigerant	6	5	F42	41	F42				41	65	
46	Indoor - outdoor unit communication protocol incorrect	Indoor - outdoor unit communication problem (check OU-IU compatibility)	6	6	F43	42	F43				42	66	

Alarm on outdoor unit display / led	Description of the alarm	Description / Cause	Indoor unit electronic board LED		Indoor unit panel display:	Alarm on wired controller YR-E17 HW-BA116ABK	Alarm on wired controller YR-16A YR-16B YCZ-G001 YCZ-A003 HC-SA164DBT YCZ-A004
			LED6	LED1			
	Indoor unit ambient temperature probe faulty.	Faulty sensor or short-circuit for more than 2 consecutive minutes.	0	1	E1	01	1
	Indoor unit exchanger temperature probe faulty.	Faulty sensor or short-circuit for more than 2 consecutive minutes.	0	2	E2	02	2
	EEPROM faulty indoor unit board	EEPROM faulty indoor unit board	0	4	E4	04	4
	Indoor unit ice protection	Indoor unit exchanger temperature too low	0	16	E5	10	16
	Outdoor unit high pressure	High pressure, damaged high-pressure switch, faulty electronic board	0	6	E6	06	2
	Overcurrent protection	Abnormal supply voltage or faulty electronic board	0	7	E7	07	7
	Communication error between control panel and indoor unit electronic board	Poor connection, faulty panel board or electronic board	0	8	E8	08	8
	Communication error between indoor and outdoor units	Wrong connection, faulty indoor/outdoor unit electronic board	0	9	E9	08	9
	Indoor unit DC fan motor faulty	DC motor wiring interrupted, motor failure, electronic board damaged	0	14	EA	0E	14
	High temperature on the compressor	Damaged compressor, faulty compressor probe, electronic board	0	/	FC		
2	IPM hardware (power module) overcurrent	The alarm goes out 3 times in an hour and locks the machine	2	2	F02	16	22
3	Compressor overcurrent during deceleration	Overcurrent / faulty current control / phase sequence reversed (models ON OFF)	2	3	F03	17	23
4	Abnormal communication between the control board and the compressor power module	Communication failure for more than 4 minutes between motherboard and SPDU/ISPM power module	2	4	F04	18	24
5	Compressor overcurrent detected by control board	The alarm goes out 3 times in an hour and locks the machine.	2	5	F05	19	25
6	High DC voltage or AC voltage	Voltage above 270 V or less than 187 V	2	6	F06	1A	26
7	Compressor current sampling circuit failure	The alarm goes out 3 times in an hour and locks the machine.	2	7	F07	1B	27
8	Compressor discharge temperature protection too high	Delivery temperature above 120°. The alarm goes out 3 times in an hour and locks the machine.	2	8	F08	1C	28
8	Outdoor unit exchanger probe failure	Check interrupted or faulty probe			E4		
9	DC fan motor failure	The alarm goes out 3 times in an hour and locks the machine.	2	9	F09	1D	29
10	Outdoor unit defrosting temperature probe faulty (Te)	Temperature probe in short circuit or open circuit within last 60 seconds	3	0	F10	1E	30
11	Compressor intake temperature probe faulty (Ts)	Temperature probe in short circuit or open circuit within last 60 seconds	3	1	F11	1F	31
12	Outdoor unit ambient temperature probe faulty (Ta)	Temperature probe in short circuit or open circuit within last 60 seconds	3	2	F12	20	32
13	Compressor delivery temperature probe faulty (Td)	Temperature probe in short circuit or open circuit within last 60 seconds	3	3	F13	21	33
14	PFC circuit voltage too high	DC voltage too high on the inverter module	3	4	F14	22	34
15	Communication error between indoor and outdoor units	Lack of communication for more than 4 consecutive minutes	3	5	F15	23	35
16	Lack of refrigerant / clogging of refrigerant delivery tube	It reports an error and stops if it detects Td-Tci>=25°C for 1 minute after the compressor starts in cooling operating mode for 10 min. The alarm goes out after 3 times in an hour and locks the machine.	3	6	F16	24	36
17	4-way valve switching failure	4-way valve coil damaged, disconnected or unpowered. Mechanical failure of the 4-way valve.	3	7	F17	25	37
18	Loss of compressor synchronism detection	Inverter / compressor circuit failure	3	8	F18	26	38
19	DC voltage or AC voltage low / PWM selection circuit error in the power module.	The alarm goes out 3 times in an hour and locks the machine.	3	9	F19	27	39

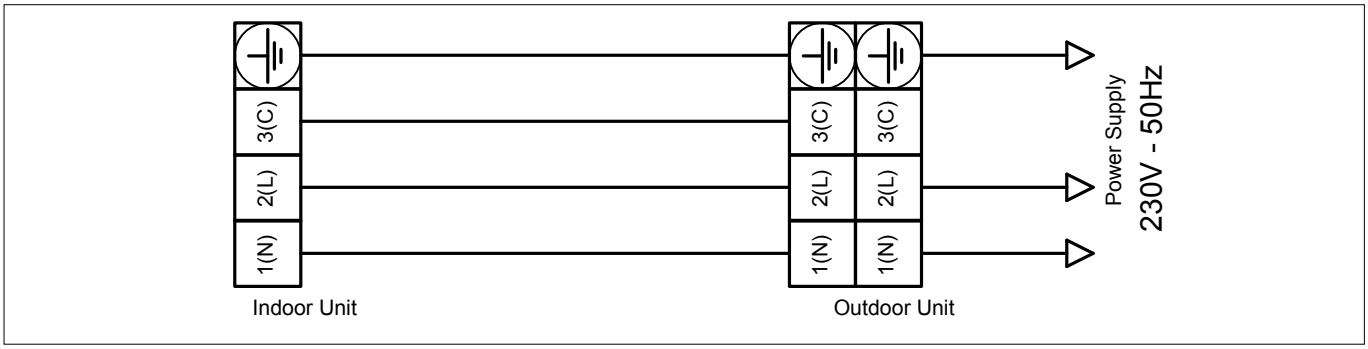
Alarm on outdoor unit display / led	Description of the alarm	Description / Cause	Indoor unit electronic board LED		Indoor unit panel display:	Alarm on wired controller YR-E17 HW-BA116ABK	Alarm on wired controller YR-16A YR-16B YCZ-G001 YCZ-A003 HC-SA164DBT YCZ-A004
20	Temperature protection of internal pipe too high	Check heat exchange / refrigerant charge / sensors / electronic board	4	0	F20	28	40
21	Temperature protection of internal pipe too low	Check heat exchange / refrigerant charge / sensors / electronic board	4	1	F21	29	41
22	PFC circuit overcurrent	DC overcurrent at the power module	4	2	F22	2A	42
23	Temperature too high for the power module	SPDU/ISPM module temperature too high. The alarm goes out 3 times in an hour and locks the machine.	4	3	F23	2B	43
24	Failed to start compressor / Overcurrent	The alarm goes out 3 times in an hour and locks the machine.	4	4	F24	2C	44
25	U-V-W compressor phase overcurrent / Module input overcurrent	Unbalanced phases, damaged windings on the compressor, power module	4	5	F25	2D	45
26	Lack of a phase in the power module	System reset / compressor phase check / power module failure	4	6	F26	2E	46
27	Input current verification circuit failure	Detached compressor cables / faulty amperometric control	4	7	F27	2F	47
28	No charge/faulty amperometric control	Check compressor - power module wiring	4	8	F28	30	48
37	Compressor overcurrent detected by power module	Verify voltage to power module - faulty module	5	7	F37	39	57
38	Power module temperature sensor failure	Sensor disconnected, broken, or poorly positioned / power module failure	5	8	F38	3A	58
39	Heat exchanger temperature sensor (TC) failure	Sensor disconnected, broken, or poorly positioned	5	9	F39	3B	59
42	High pressure switch alarm	High pressure switch unplugged/faulty/excessive refrigerant	6	2	F42	3E	62
43	Low pressure switch alarm	Low pressure switch unplugged/faulty/lack of refrigerant	6	3	F43	3F	63
44	Temperature protection of outdoor heat exchanger TC too high	Operating temperature too high, heat exchange problems, excessive refrigerant	6	4	F44	40	64
45	Low system pressure protection	Operating temperature too low, heat exchange problems, low refrigerant	6	5	F45	41	65

AS25S2SJ1FA-3 - 1U25MECFRA-3 (2.5 kW)

AS35S2SJ1FA-3 - 1U35MECFRA-3 (3.5 kW)

AS50S2SJ1FA-3 - 1U50JECFRA-3 (5.0 kW)

WIRING DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW

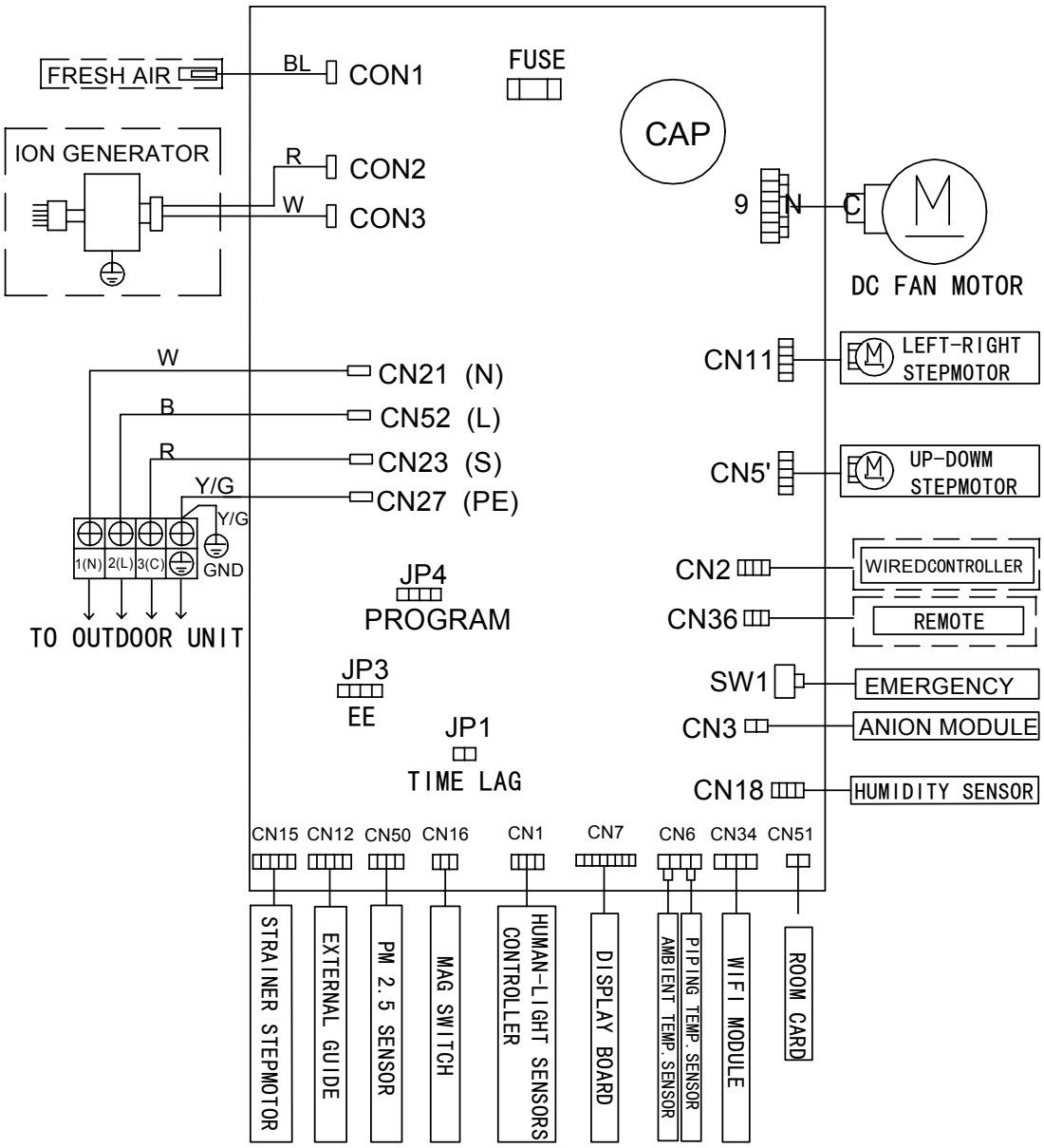


INDOOR UNIT	Model		**AS25S2SJ1FA-3**	**AS35S2SJ1FA-3**	**AS50S2SJ1FA-3**
OUTDOOR UNIT	Model		**1U25MECFRA-3**	**1U35MECFRA-3**	**1U50JECFRA-3**
Indoor unit technical data					
Treated air volume	H	m³/h	550	600	900
Net dimensions	WxDxH	mm	923x215x320	923x215x320	1050x235x350
Net weight		kg	12	12	14.9
Outdoor unit technical data					
Liquid pipe Ø		mm	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	12.7
Standard pipe length without additional refrigerant charge		m	7	7	7
Maximum pipe length		m	20	20	25
Maximum IU - OU height difference		m	10	10	15
Refrigerant charge in the factory		kg	0.74	0.74	0.95
Equivalent tons of CO_2		tCO_2EQ	0.50	0.50	0.64
Additional refrigerant charge beyond standard length		g/m	20	20	20
Net dimensions	WxDxH	mm	923x215x320	923x215x320	1050x235x350
Net weight		kg	12	12	14.9
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50
Outdoor unit power cable		mm^2	3G1.5		3G2.5
Outdoor unit - indoor unit cable		mm^2	4G1.5		4G1.5

DIAGNOSTICS 2.5 kW - 3.5 kW - 5.0 kW

Refer to **page 28**

IU CIRCUIT DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW



NOTE:

1.The dotted parts are optional
2.The two pins of CN51 should be shorted, when the J1 is Disconnected.

B	BLACK
R	RED
BR	BROWN
BL	BLUE
W	WHITE
Y/G	YELLOW/GREEN

INDOOR UNIT SETTING:

Selecting the frequency of remote control A or B:

Switch **J2** selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board):

Using switch **J1**, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (J5 - J6):

Using jumpers 5 and 6 you can select the power of the indoor unit:

	5.0 kW	3.5 kW	2.5 kW
J5	ON	OFF	OFF
J6	OFF	ON	OFF

Important: Cut the jumpers **J3**, **J4** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	JADE
J3	ON
J4	ON

Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Activating/deactivating power-saving feature of the fan motor in cooling mode:

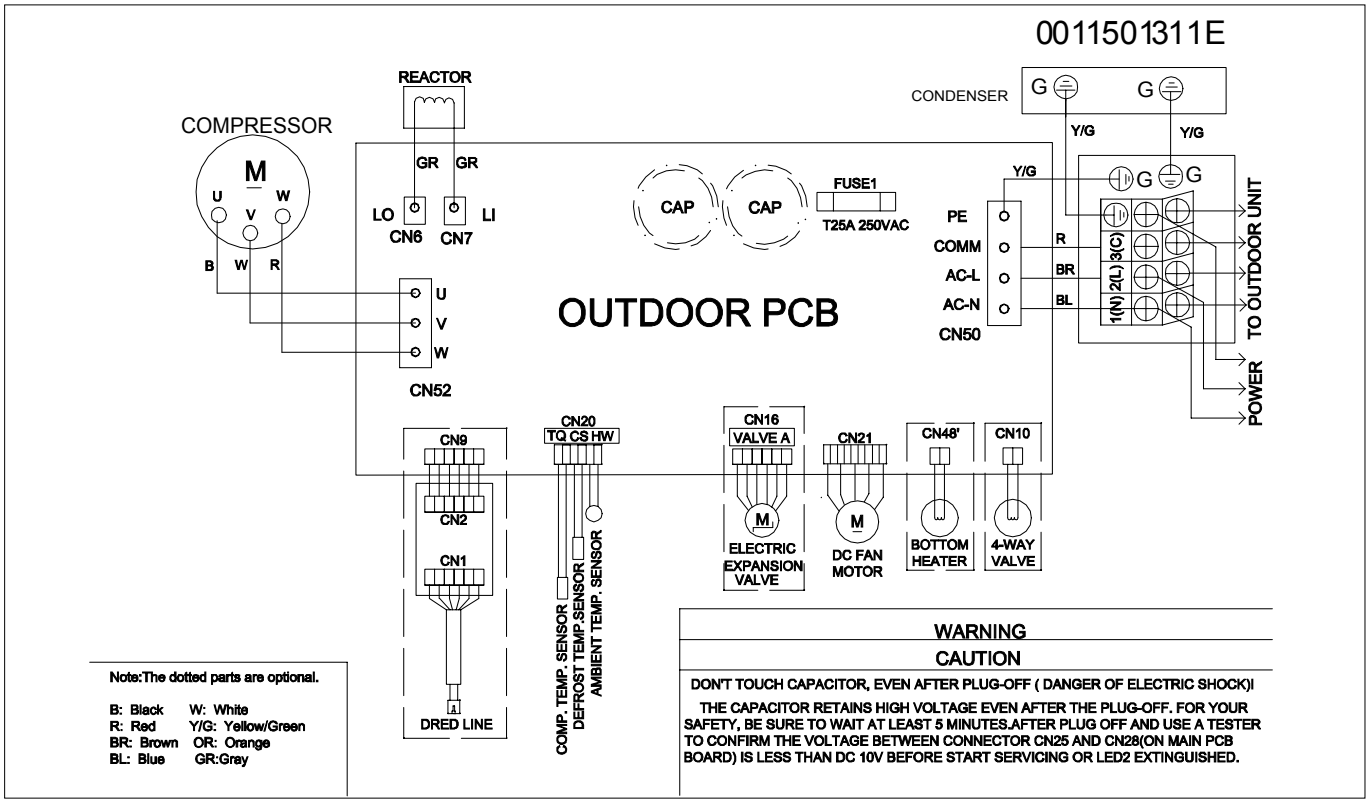
Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

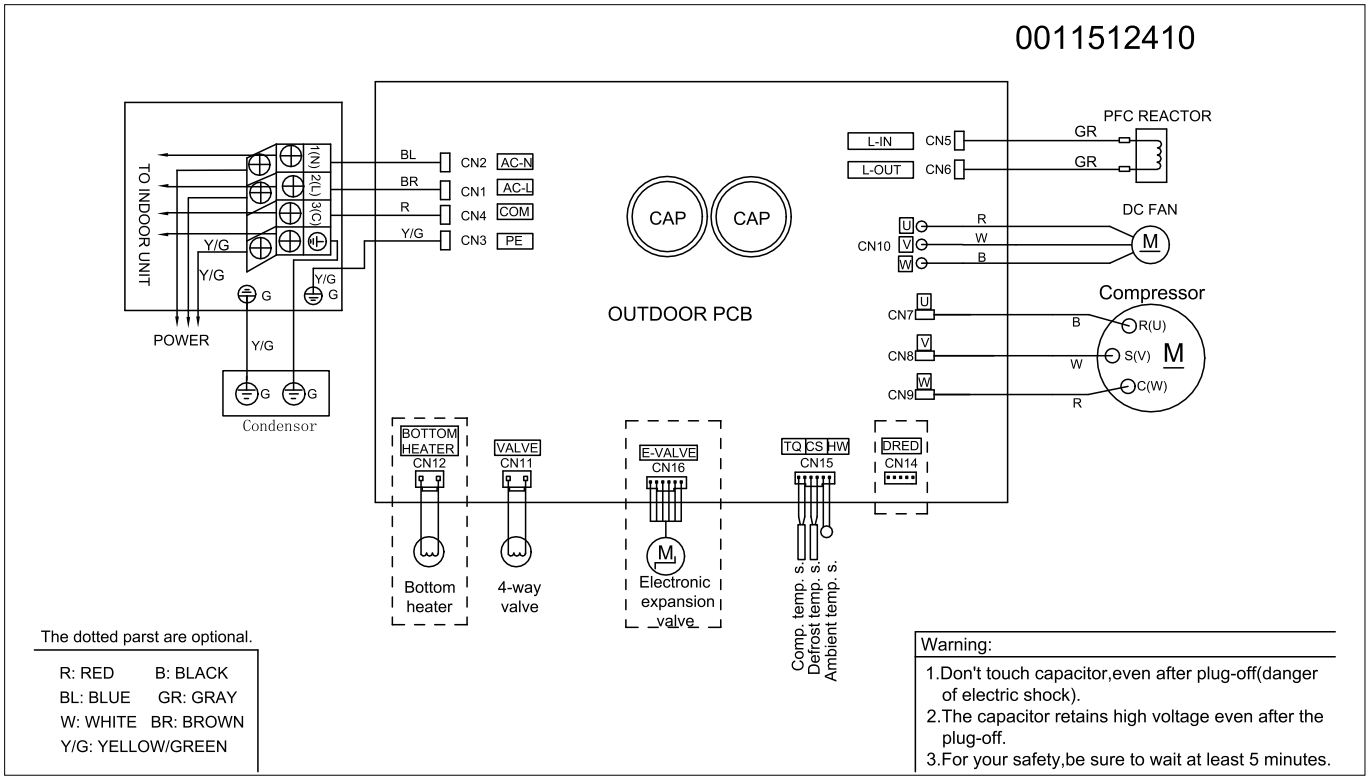
The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

OU CIRCUIT DIAGRAM 2.5 kW - 3.5 kW

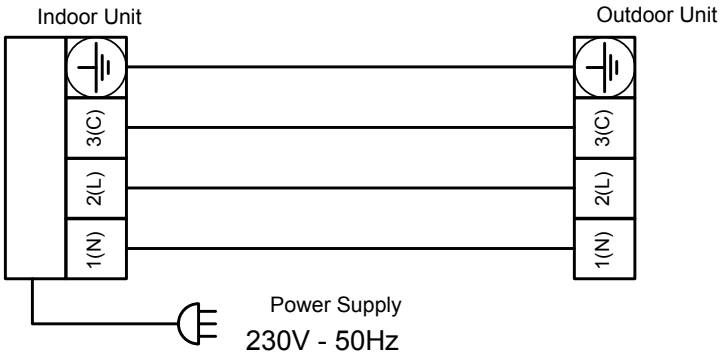


OU CIRCUIT DIAGRAM 5.0 kW



AP71UFAHRA - 1U71REAFRA (7.1 kW)

WIRING DIAGRAM 7.1 kW

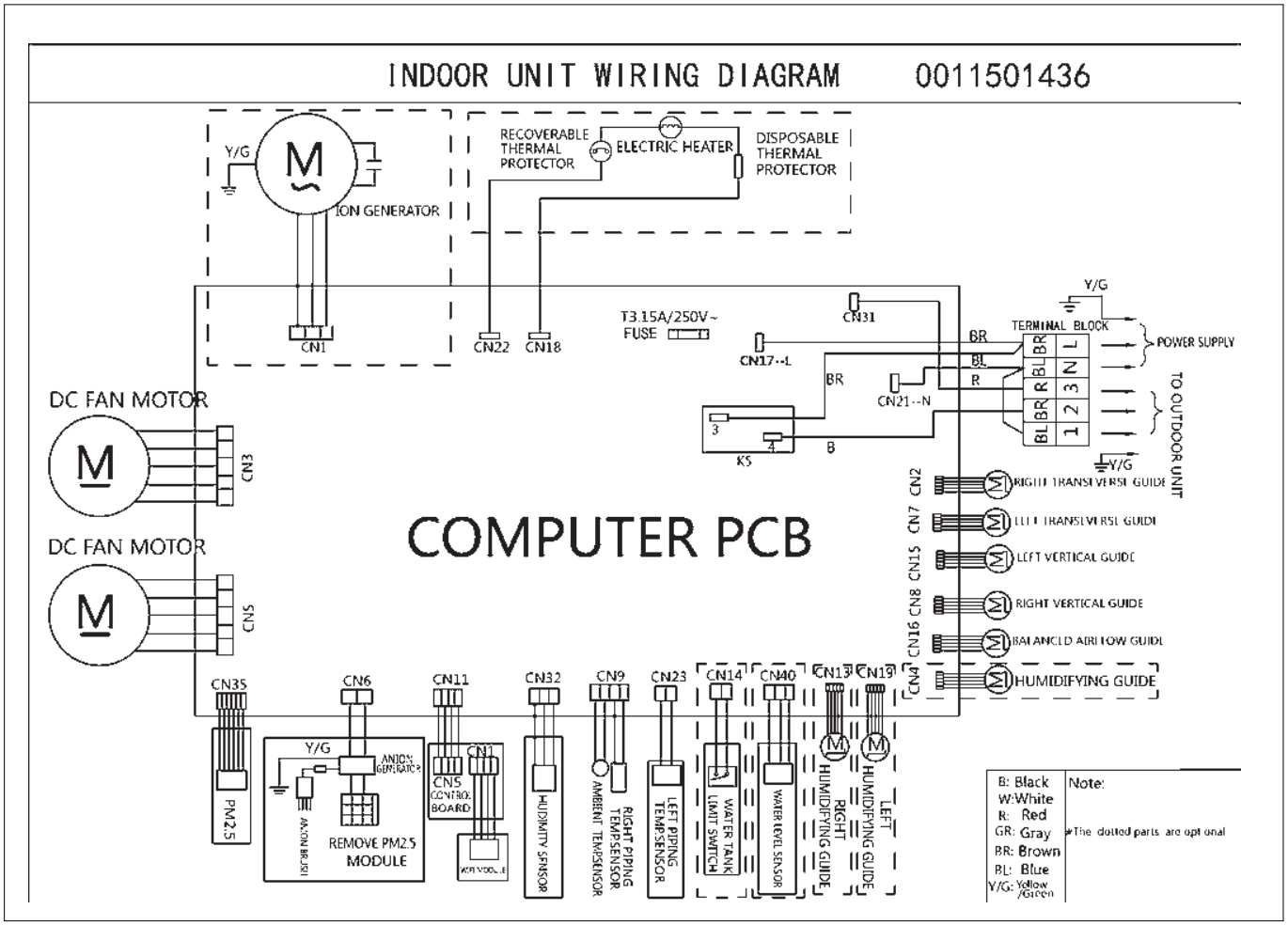


INDOOR UNIT	Model		**AP71UFAHRA**
OUTDOOR UNIT	Model		**1U71REAFRA**
Indoor unit technical data			
Treated air volume	H	m³/h	1200
Net dimensions	WxDxH	mm	505x330x1810
Net weight		kg	47
Outdoor unit technical data			
Liquid pipe Ø		mm	6.35
Gas pipe Ø		mm	12.7
Standard pipe length without additional refrigerant charge		m	7
Maximum pipe length		m	20
Maximum IU - OU height difference		m	10
Refrigerant charge in the factory		kg	1,6
Equivalent tons of CO_2		tCO_2EQ	1.01
Additional refrigerant charge beyond standard length		g/m	20
Net dimensions	WxDxH	mm	890x353x697
Net weight		kg	47
Power Supply		Ph/V/Hz	1/220~240/50
Indoor unit power cable		mm²	3G2.5
Outdoor unit - indoor unit cable		mm²	4G2.5

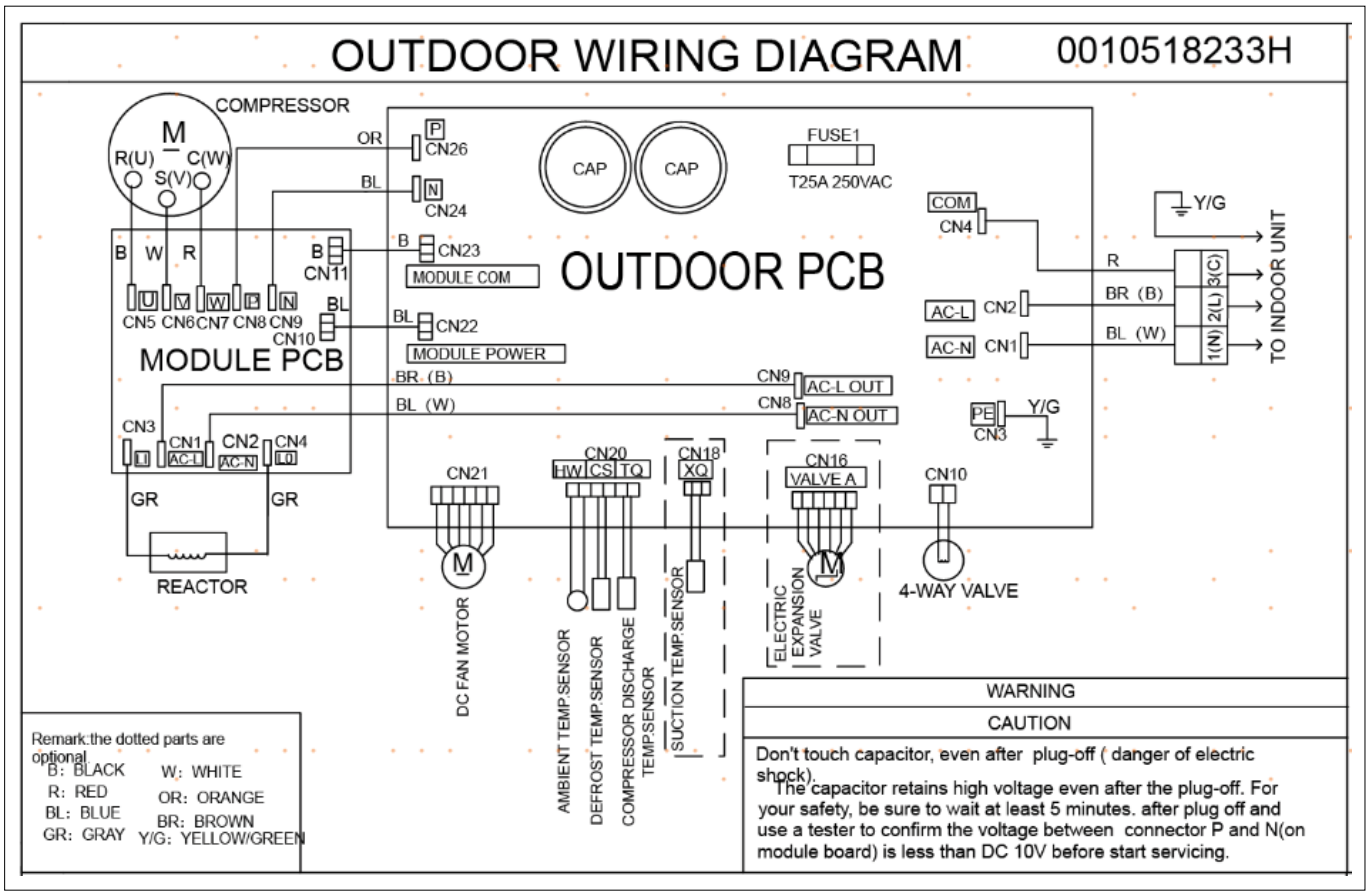
DIAGNOSTICS 7.1 kW

Refer to **page 28**

IU CIRCUIT DIAGRAM 7.1 kW

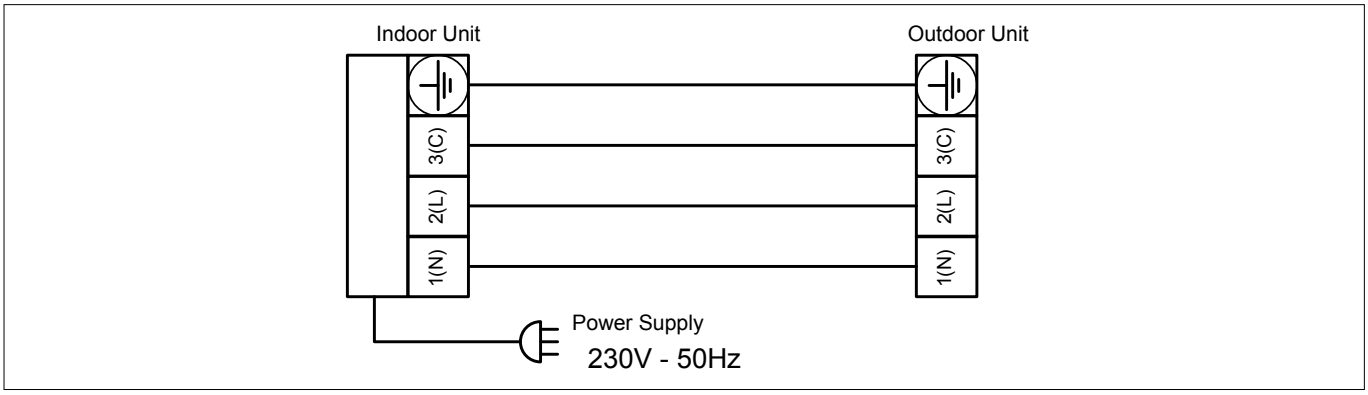


OU CIRCUIT DIAGRAM 7.1 kW



AP71DFCHRA - 1U71RECFRA (7.1 kW)

WIRING DIAGRAM 7.1 kW

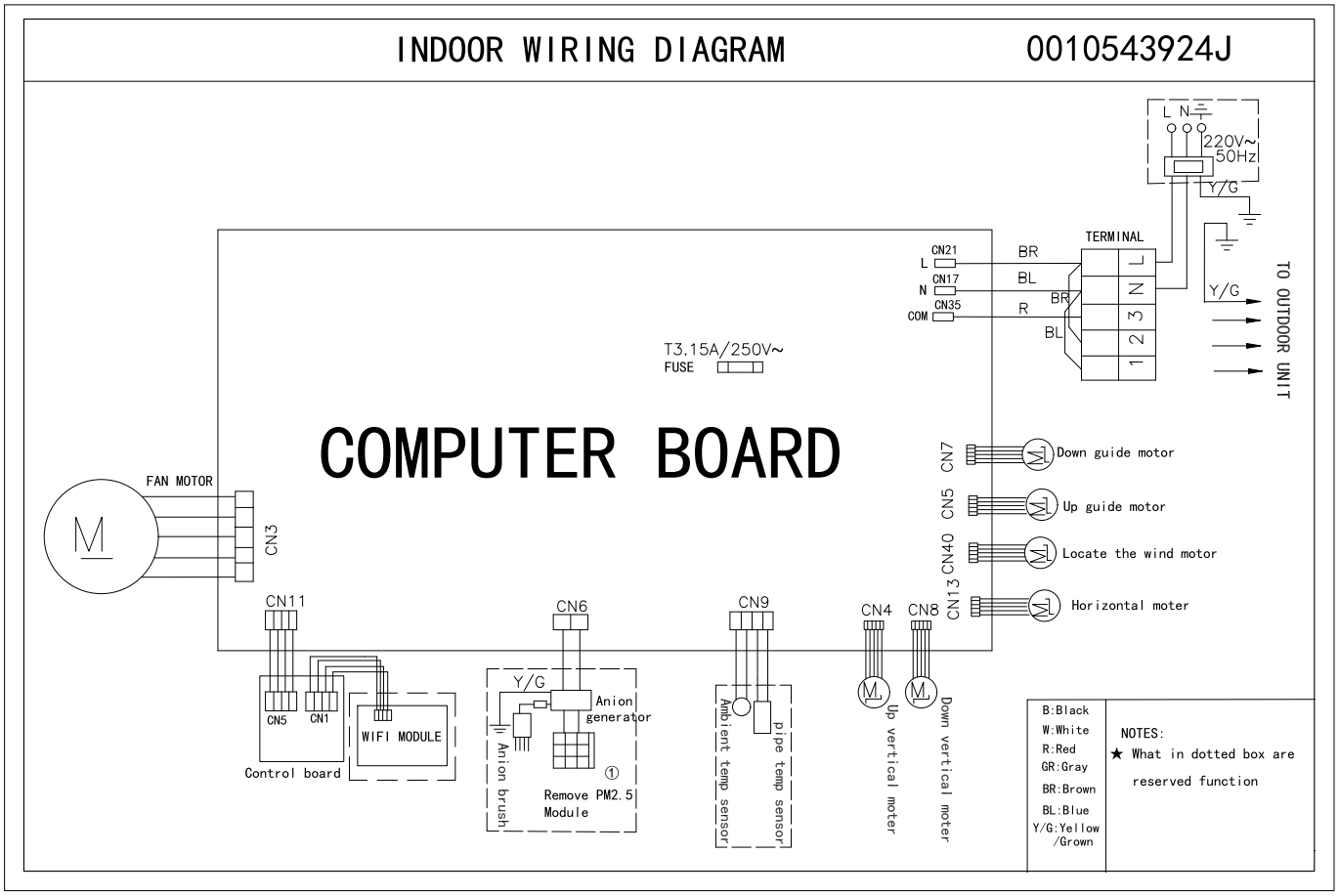


INDOOR UNIT	Model		**AP71DFCHRA**
OUTDOOR UNIT	Model		**1U71RECFRA**
Indoor unit technical data			
Treated air volume	H	m³/h	1200
Net dimensions	WxDxH	mm	407x377x1810
Net weight		kg	34
Outdoor unit technical data			
Liquid pipe Ø		mm	6.35
Gas pipe Ø		mm	12.7
Standard pipe length without additional refrigerant charge		m	7
Maximum pipe length		m	20
Maximum IU - OU height difference		m	10
Refrigerant charge in the factory		kg	1,6
Equivalent tons of CO_2		tCO_2EQ	1.08
Additional refrigerant charge beyond standard length		g/m	20
Net dimensions	WxDxH	mm	890x353x697
Net weight		kg	47
Power Supply		Ph/V/Hz	1/220~240/50
Indoor unit power cable		mm²	3G2.5
Outdoor unit - indoor unit cable		mm²	4G2.5

DIAGNOSTICS 7.1 kW

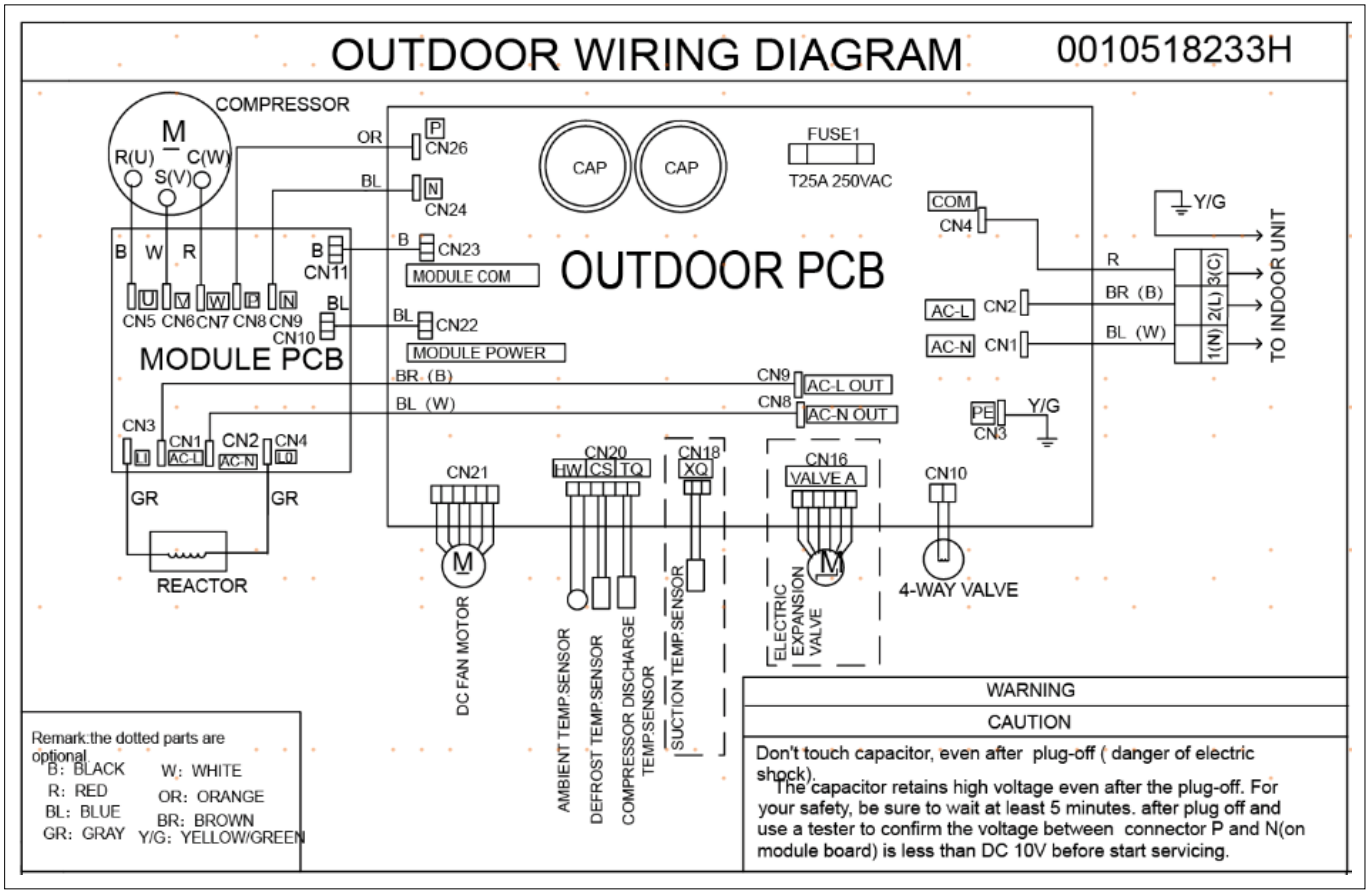
Refer to **page 28**

IU CIRCUIT DIAGRAM 7.1 kW



INDOOR UNIT SETTING AP71DFCHRA
J1: ON

OU CIRCUIT DIAGRAM 7.1 kW



AS25S2SJ1FA-3

AS35S2SJ1FA-3

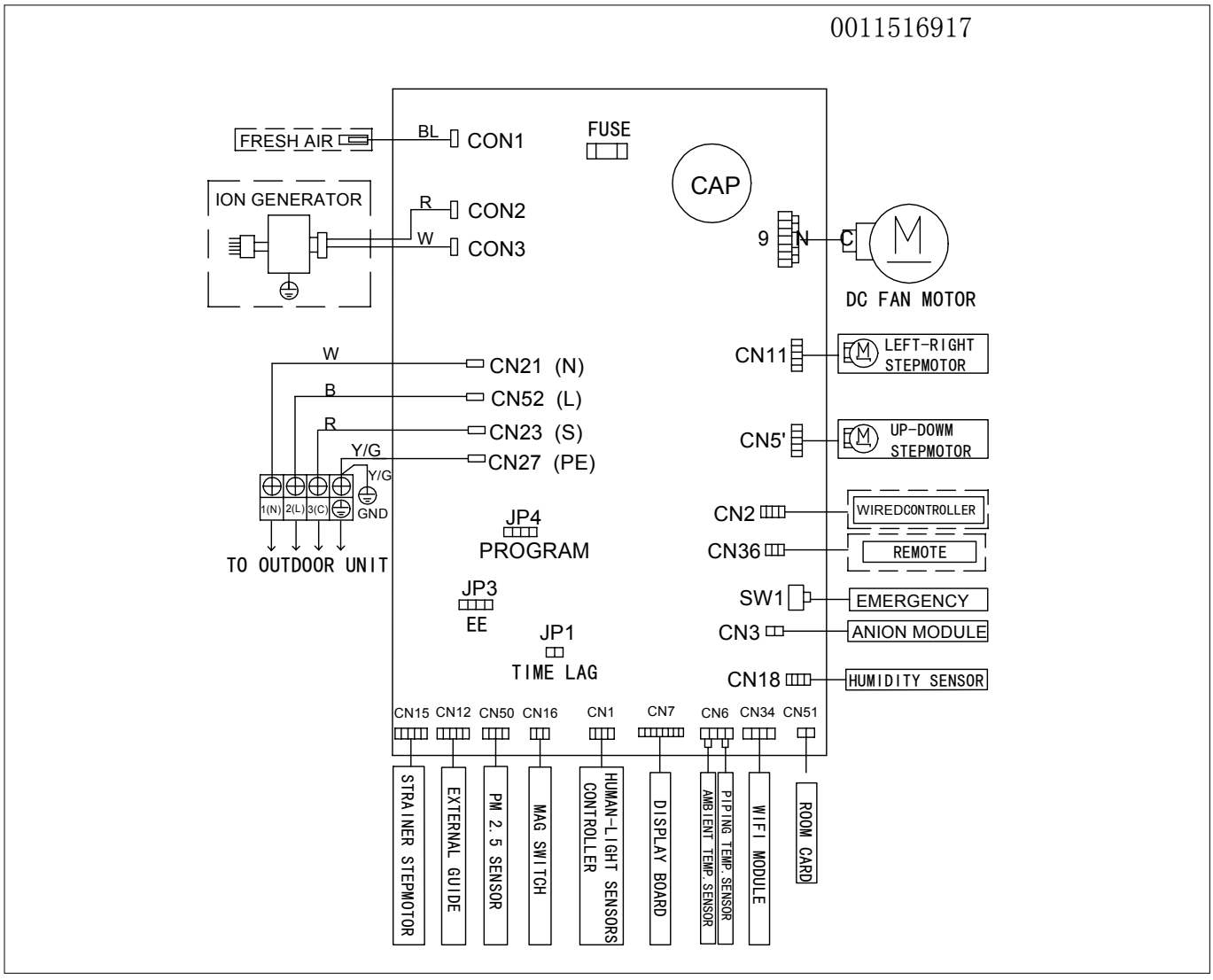
AS50S2SJ1FA-3

INDOOR UNIT	Model Black		AS25S2SJ1FA-3	AS35S2SJ1FA-3	AS50S2SJ1FA-3
Indoor unit technical data					
Liquid pipe Ø		mm	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	12.7
Power Supply		Ph/V/Hz	1/200~240/50	1/200~240/50	1/200~240/50
Treated air volume	H	m³/h	550	600	900
Net dimensions	WxDxH	mm	923x215x320	923x215x320	1050x235x350
Net weight		kg	12	12	14.9

DIAGNOSTICS 2.5 kW - 3.5 kW - 5.0 kW

See the list of alarms on **page 28**

IU CIRCUIT DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW



INDOOR UNIT SETTING:

Selecting the frequency of remote control A or B:

Switch **J2** selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board):

Using switch **J1**, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (J5 - J6):

Using jumpers 5 and 6 you can select the power of the indoor unit:

	5.0 kW	3.5 kW	2.5 kW
J5	ON	OFF	OFF
J6	OFF	ON	OFF

Important: Cut the jumpers **J3**, **J4** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	JADE
J3	ON
J4	ON

Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Activating/deactivating power-saving feature of the fan motor in cooling mode:
Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

AS20XCAHRA (multi only)

AS25XCAHRA

AS35XCAHRA

AS42XCAHRA

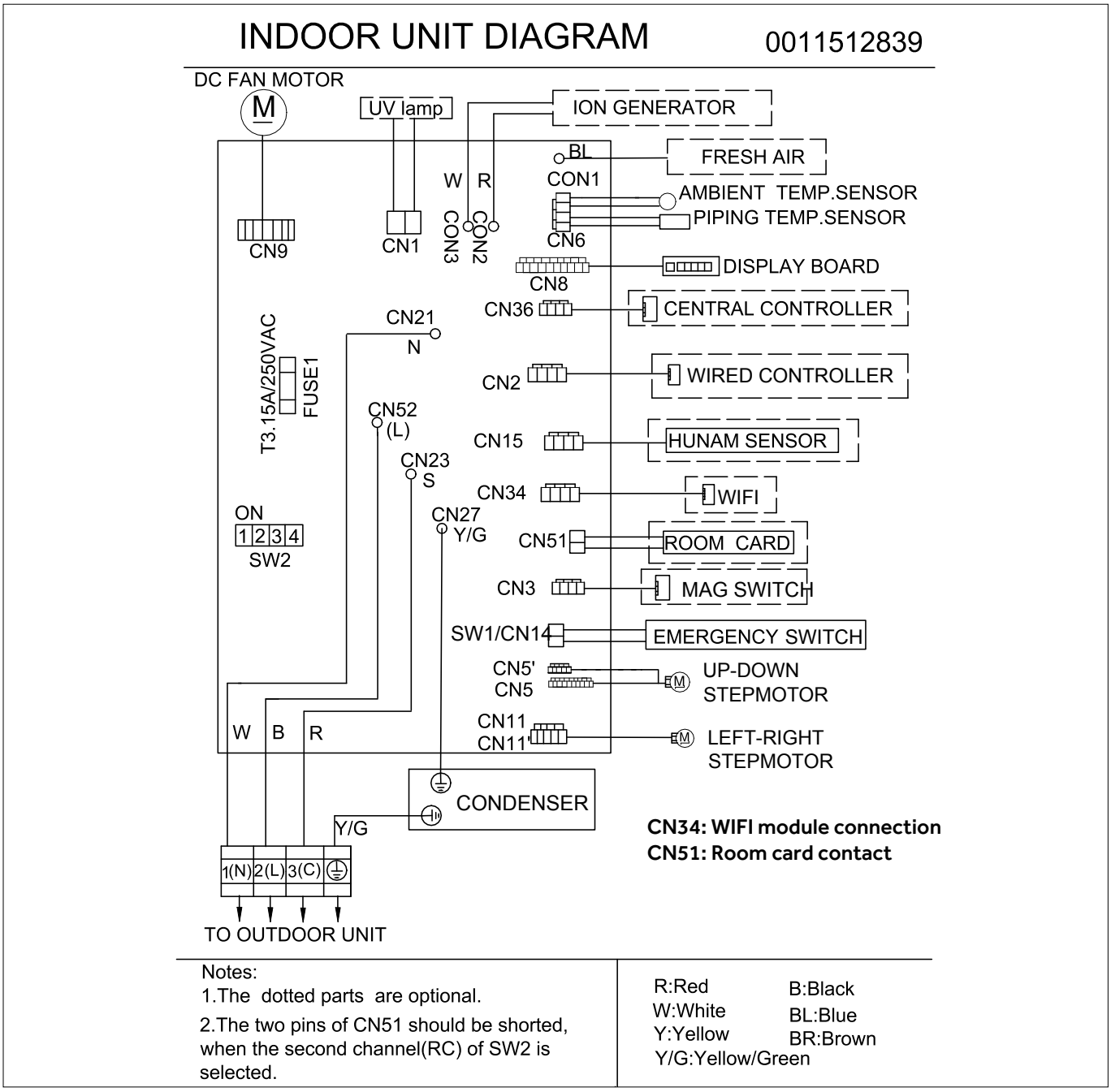
AS50XCAHRA

INDOOR UNIT	Model		AS20XCAHRA	AS25XCAHRA	AS35XCAHRA	AS42XCAHRA	AS50XCAHRA
Indoor unit technical data							
Liquid pipe Ø		mm	6.35	6.35	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	9.52	9.52	12.7
Power Supply		Ph/V/Hz	1/200~240/50	1/200~240/50	1/200~240/50	1/200~240/50	1/200~240/50
Treated air volume	H	m³/h	730	730	800	880	880
Net dimensions	WxDxH	mm	895x313x236	895x313x236	895x313x236	895x313x236	895x313x236
Net weight		kg	11.3	11.3	11.3	11.6	11.6

DIAGNOSTICS 2.0 kW (multi only) - 2.5 kW - 3.5 kW - 4.2 kW - 5.0 kW

See the list of alarms on **page 28**

IU CIRCUIT DIAGRAM 2.0 kW (multi only) - 2.5 kW - 3.5 kW - 4.2 kW - 5.0 kW



INDOOR UNIT SETTING:

Selecting the frequency of remote control A or B (SW2-1):

Switch 1 selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board) (SW2-2):

Using switch 2, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (SW2-3) and (SW2-4):

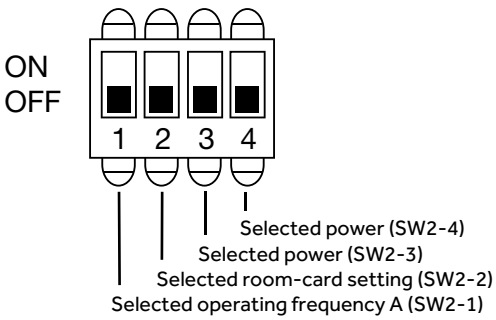
Using switches 3 and 4 you can select the power of the indoor unit:

	5.0 kW	4.2 kW	3.5 kW	2.5 kW	2.0 kW
SW2-3	ON	ON	OFF	OFF	OFF
SW2-4	OFF	OFF	ON	OFF	OFF

Important: Cut the jumpers **J1**, **J2** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	EXPERT
J1	ON
J2	OFF

SW2 setting example



Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Activating/deactivating power-saving feature of the fan motor in cooling mode:

Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

BLACK (MB3)

AS20S2SF1FA-MB3 2.0 kW **(multi only)**
AS25S2SF1FA-MB3 2.5 kW
AS35S2SF1FA-MB3 3.5 kW
AS42S2SF1FA-MB3 4.2 kW
AS50S2SF1FA-MB3 5.0 kW
AS71S2SF1FA-MB3 7.1 kW

WHITE (MW3)

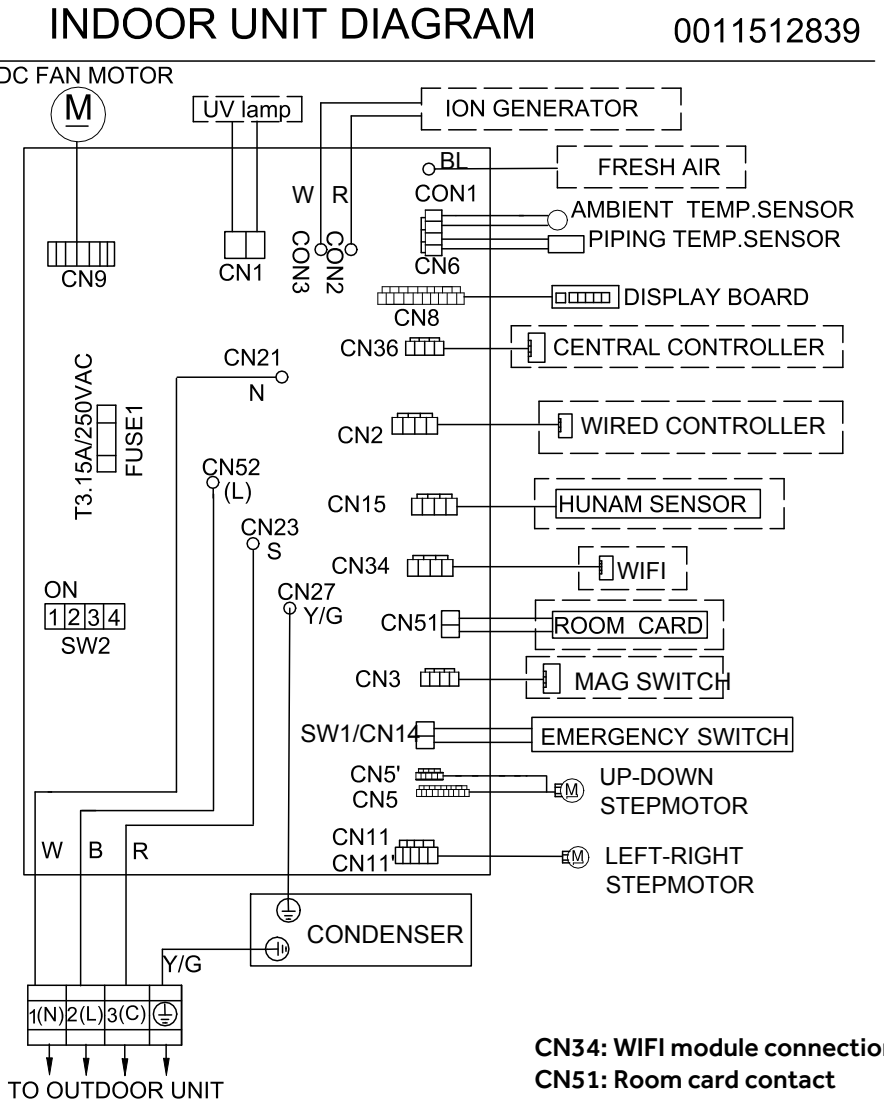
AS20S2SF1FA-MW3 2.0 kW **(multi only)**
AS25S2SF1FA-MW3 2.5 kW
AS35S2SF1FA-MW3 3.5 kW
AS42S2SF1FA-MW3 4.2 kW
AS50S2SF1FA-MW3 5.0 kW
AS71S2SF1FA-MW3 7.1 kW

INDOOR UNIT	Model BLACK		**AS20S2SF1FA-MB3**	**AS25S2SF1FA-MB3**	**AS35S2SF1FA-MB3**	**AS42S2SF1FA-MB3**	**AS50S2SF1FA-MB3**	**AS71S2SF1FA-MB3**
INDOOR UNIT	Model WHITE		**AS20S2SF1FA-MW3**	**AS25S2SF1FA-MW3**	**AS35S2SF1FA-MW3**	**AS42S2SF1FA-MW3**	**AS50S2SF1FA-MW3**	**AS71S2SF1FA-MW3**
Indoor unit technical data								
Liquid pipe Ø		mm	6.35	6.35	6.35	6.35	6.35	9.52
Gas pipe Ø		mm	9.52	9.52	9.52	9.52	12.7	15.88
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50
Treated air volume	H	m³/h	600	600	650	750	900	1100
Net dimensions	WxDxH	mm	856x197x300	856x197x300	856x197x300	856x197x300	999x225x323	1115x235x343
Net weight		kg	9.5	9.5	9.5	9.5	12	15.2

DIAGNOSTICS 2.0 kW (multi only) - 2.5 kW - 3.5 kW - 4.2 kW - 5.0 kW - 7.1 kW

See the list of alarms on **page 28**

IU CIRCUIT DIAGRAM 2.0 kW (multi only) - 2.5 kW - 3.5 kW - 4.2 kW - 5.0 kW - 7.1 kW



CN34: WIFI module connection
CN51: Room card contact

INDOOR UNIT SETTING:

Selecting the frequency of remote control A or B (SW2-1):

Switch 1 selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board) (SW2-2):

Using switch 2, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (SW2-3) and (SW2-4):

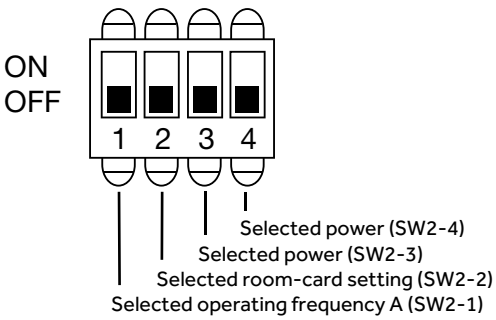
Using switches 3 and 4 you can select the power of the indoor unit:

	7.1 kW	5.0 kW	4.2 kW	3.5 kW	2.5 kW	2.0 kW
SW2-3	OFF	OFF	ON	OFF	OFF	OFF
SW2-4	OFF	OFF	OFF	ON	OFF	OFF

Important: Cut the jumpers **J1**, **J2** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	FLEXIS
J1	OFF
J2	OFF

SW2 setting example



Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Activating/deactivating power-saving feature of the fan motor in cooling mode:

Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

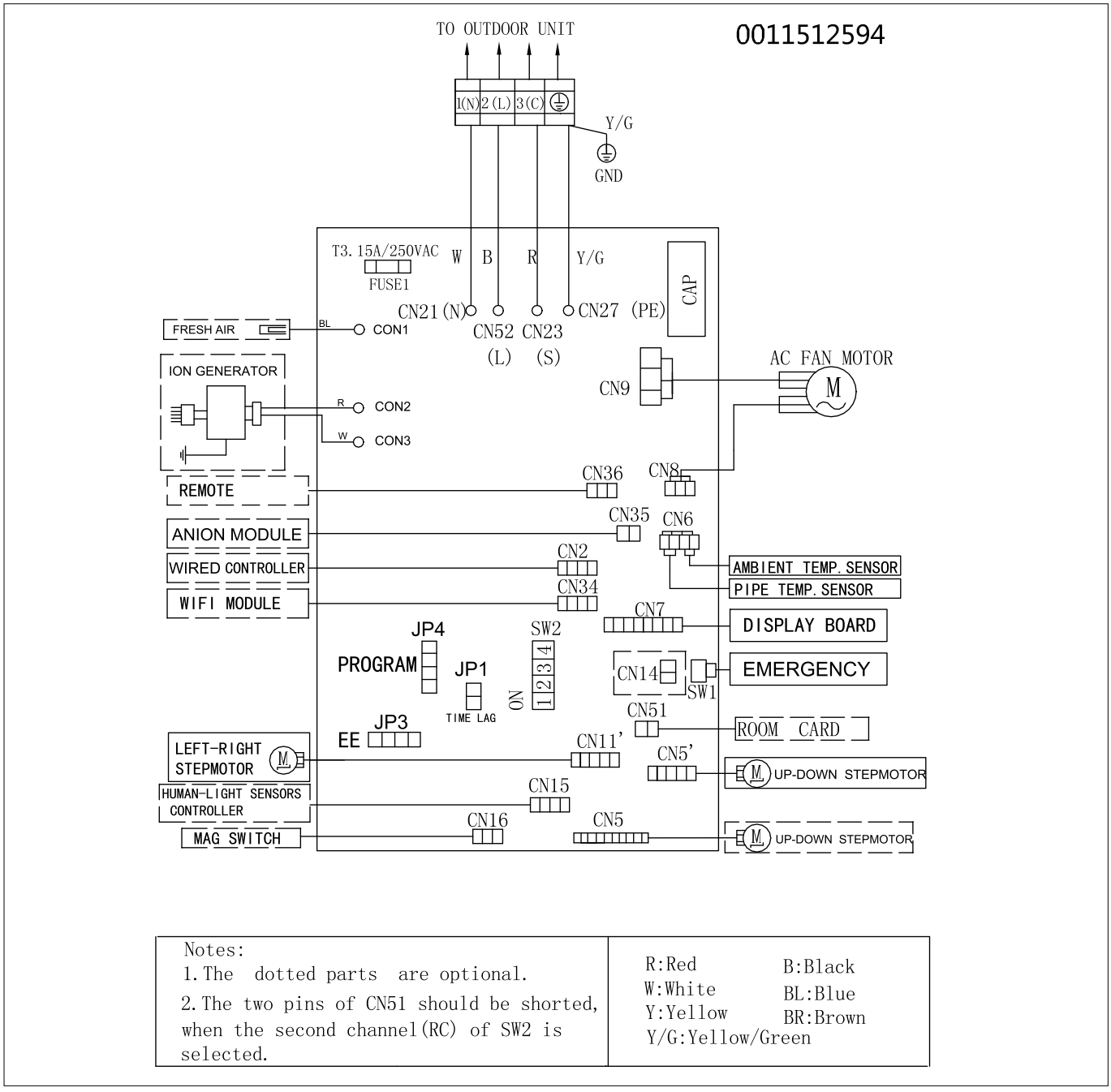
AS20PBAHRA (multi only)
AS25PBAHRA
AS35PBAHRA
AS50PDAHRA (multi only)
AS68PDAHRA (multi only)

INDOOR UNIT	Model		AS20PBAHRA	AS25PBAHRA	AS35PBAHRA	AS50PDAHRA	AS68PDAHRA
Indoor unit technical data							
Liquid pipe Ø		mm	6.35	6.35	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	9.52	12.7	12.7
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50
Treated air volume	H	m³/h	550	550	600	900	1100
Net dimensions	WxDxH	mm	805x200x290	805x200x290	805x200x290	975x220x320	975x220x320
Net weight		kg	8.3	8.3	8.3	11.6	11.6

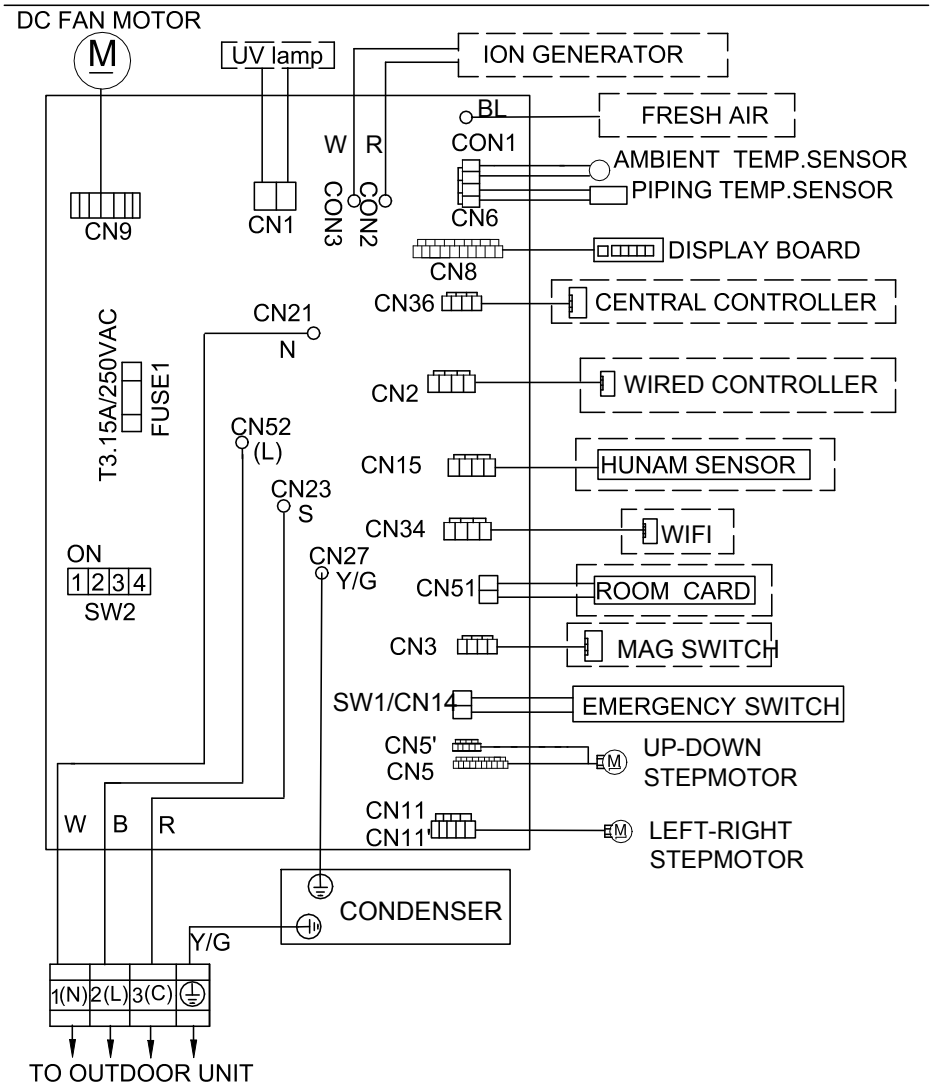
DIAGNOSTICS 2.0 kW (multi only) - 2.5 kW - 3.5 kW - 5.0 kW - 6.8 kW (mono only)

See the list of alarms on **page 28**

IU CIRCUIT DIAGRAM 2.0 kW (multi only) - 2.5 kW - 3.5 kW



IU CIRCUIT DIAGRAM 5.0 kW - 6.8 kW



Notes:
1.The dotted parts are optional.
2.The two pins of CN51 should be shorted, when the second channel(RC) of SW2 is selected.

R:Red
W:White
Y:Yellow
Y/G:Yellow/Green
B:Black
BL:Blue
BR:Brown

INDOOR UNIT SETTING:

Selecting the frequency of remote control A or B (SW2-1):

Switch 1 selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board) (SW2-2):

Using switch 2, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (SW2-3) and (SW2-4):

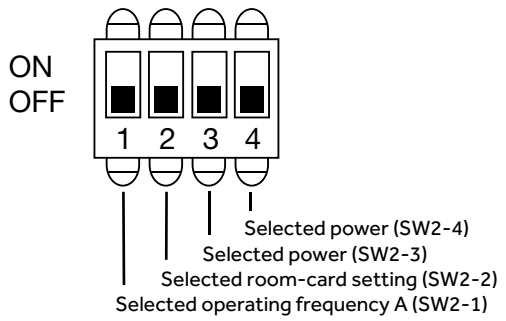
Using switches 3 and 4 you can select the power of the indoor unit:

	6.8 kW	5.0 kW	3.5 kW	2.5 kW	2.0 kW
SW2-3	OFF	OFF	OFF	OFF	OFF
SW2-4	ON	OFF	ON	OFF	OFF

Important: Cut the jumpers **J1**, **J2** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	PEARL
J1	ON
J2	OFF

SW2 setting example



Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Activating/deactivating power-saving feature of the fan motor in cooling mode:

Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

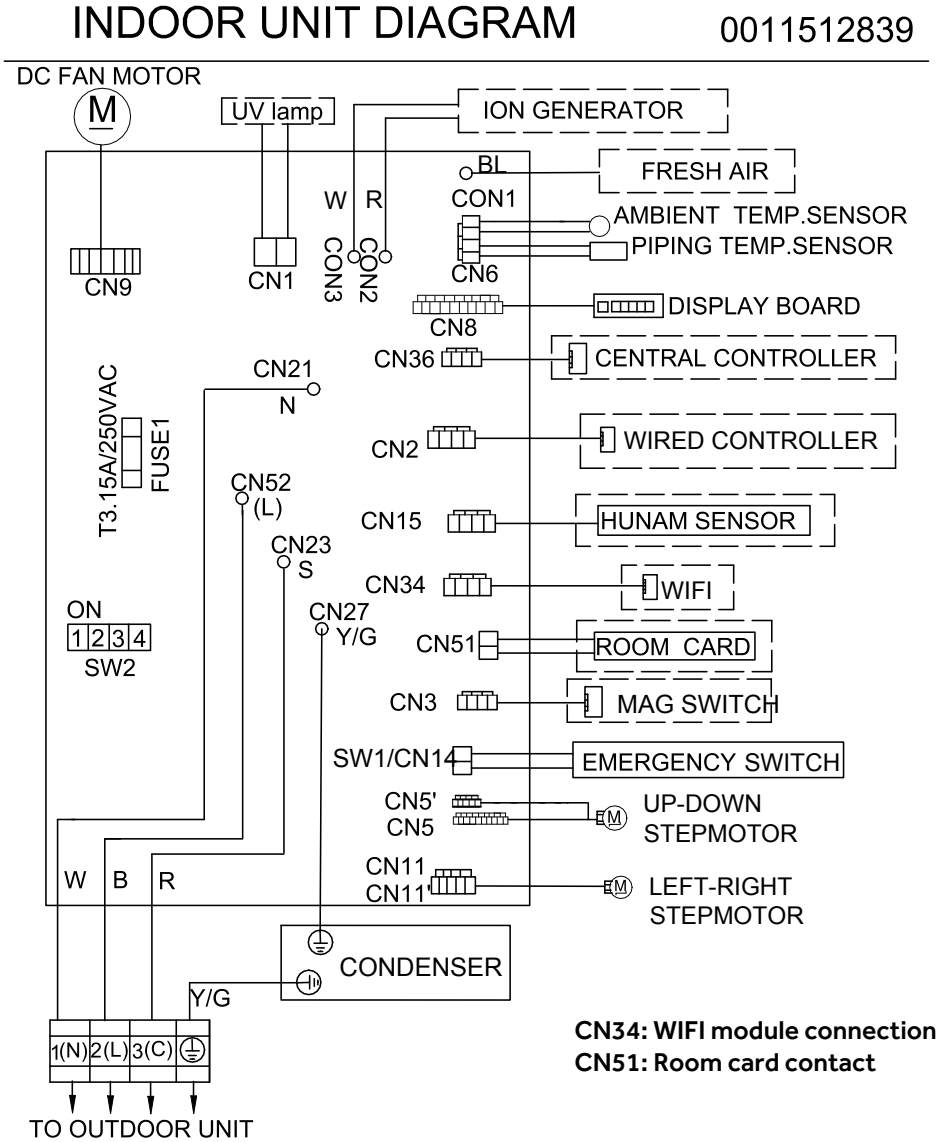
AS20S2SF2FA-3 2.0 kW **(multi only)**
AS25S2SF2FA-3 2.5 kW
AS35S2SF2FA-3 3.5 kW
AS42S2SF2FA-3 4.2 kW
AS50S2SF2FA-3 5.0 kW
AS71S2SF2FA-3 7.1 kW

INDOOR UNIT	Model		AS20S2SF2FA-3	AS25S2SF2FA-3	AS35S2SF2FA-3	AS42S2SF2FA-3	AS50S2SF2FA-3	AS71S2SF2FA-3
Indoor unit technical data								
Liquid pipe Ø		mm	6.35	6.35	6.35	6.35	6.35	9.52
Gas pipe Ø		mm	9.52	9.52	9.52	9.52	12.7	15.88
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50
Treated air volume	H	m³/h	600	600	650	750	900	1100
Net dimensions	WxDxH	mm	870x196x301	870x196x301	870x196x301	870x196x301	1009x223x327	1126x230x337
Net weight		kg	9.5	9.5	9.5	9.5	12.0	15.2

DIAGNOSTICS 2.0 kW (multi only) - 2.5 kW - 3.5 kW - 4.2 kW - 5.0 kW - 7.1 kW

See the list of alarms on **page 28**

IU CIRCUIT DIAGRAM 2.0 kW (multi only) - 2.5 kW - 3.5 kW - 4.2 kW - 5.0 kW - 7.1 kW



INDOOR UNIT SETTING:

Selecting the frequency of remote control A or B (SW2-1):

Switch 1 selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board) (SW2-2):

Using switch 2, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (SW2-3) and (SW2-4):

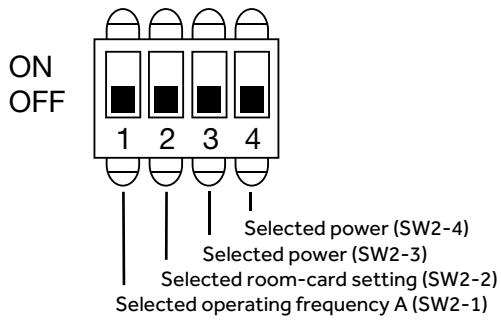
Using switches 3 and 4 you can select the power of the indoor unit:

	7.1 kW	5.0 kW	4.2 kW	3.5 kW	2.5 kW	2.0 kW
SW2-3	OFF	OFF	ON	OFF	OFF	OFF
SW2-4	ON	OFF	OFF	ON	OFF	OFF

Important: Cut the jumpers **J1**, **J2** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	IES PLUS
J1	ON
J2	OFF

SW2 setting example



Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Activating/deactivating power-saving feature of the fan motor in cooling mode:

Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

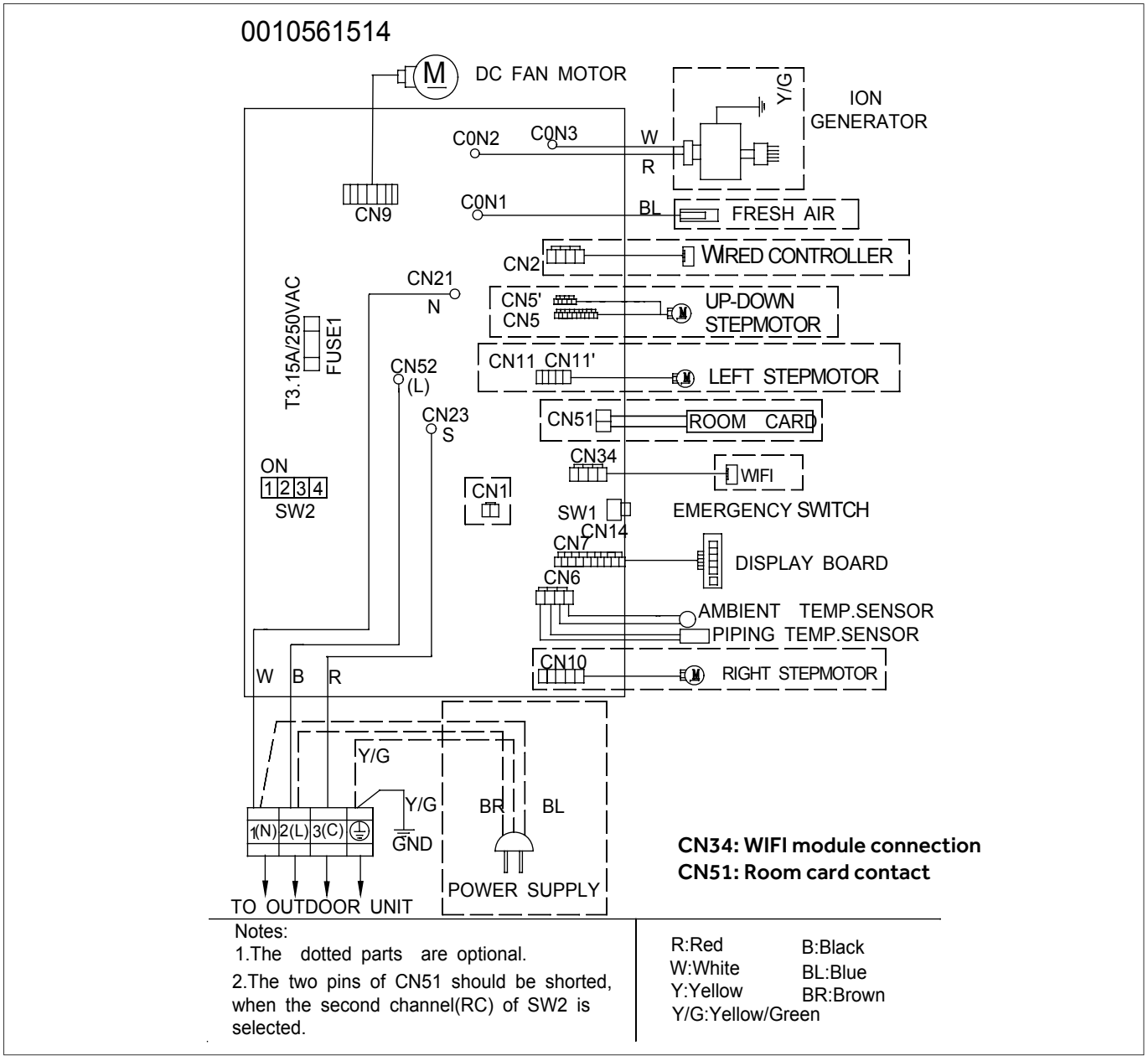
AS20TADHRA-2 2.0 kW **(multi only)**
AS25TADHRA-2 2.5 kW
AS35TADHRA-2 3.5 kW
AS50TDDHRA-CLC 5.0 kW **(mono only)**
AS68TEDHRA-CLC 6.8 kW **(mono only)**

INDOOR UNIT	Model		AS20S2SF2FA-2	AS25TADHRA-2	AS35TADHRA-2	AS50TDDHRA-CLC	AS68TEDHRA-CLC
Indoor unit technical data							
Liquid pipe Ø		mm	6.35	6.35	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	9.52	12.7	12.7
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50
Treated air volume	H	m³/h	600	500	550	900	1200
Net dimensions	WxDxH	mm	870x196x301	820x195x280	820x195x280	1008x225x318	1125x240x335
Net weight		kg	9.5	8.4	8.4	11.6	14

DIAGNOSTICS 2.0 kW (multi only) - 2.5 kW - 3.5 kW - 5.0 kW (mono only) - 6.8 kW (mono only)

See the list of alarms on **page 28**

IU CIRCUIT DIAGRAM 2.0 kW (multi only) - 2.5 kW - 3.5 kW - 5.0 kW (mono only) - 6.8 kW (mono only)



INDOOR UNIT SETTING:

Selecting the frequency of remote control A or B (SW2-1):

Switch 1 selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board) (SW2-2):

Using switch 2, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (SW2-3) and (SW2-4):

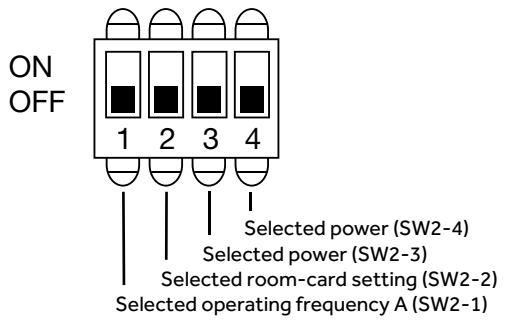
Using switches 3 and 4 you can select the power of the indoor unit:

	6.8 kW	5.0 kW	3.5 kW	2.5 kW	2.0 kW
SW2-3	OFF	OFF	OFF	OFF	OFF
SW2-4	ON	OFF	ON	OFF	OFF

Important: Cut the jumpers **J1**, **J2** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	TUNDRA PLUS
J1	ON
J2	OFF
J3	ON

SW2 setting example



Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Activating/deactivating power-saving feature of the fan motor in cooling mode:

Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

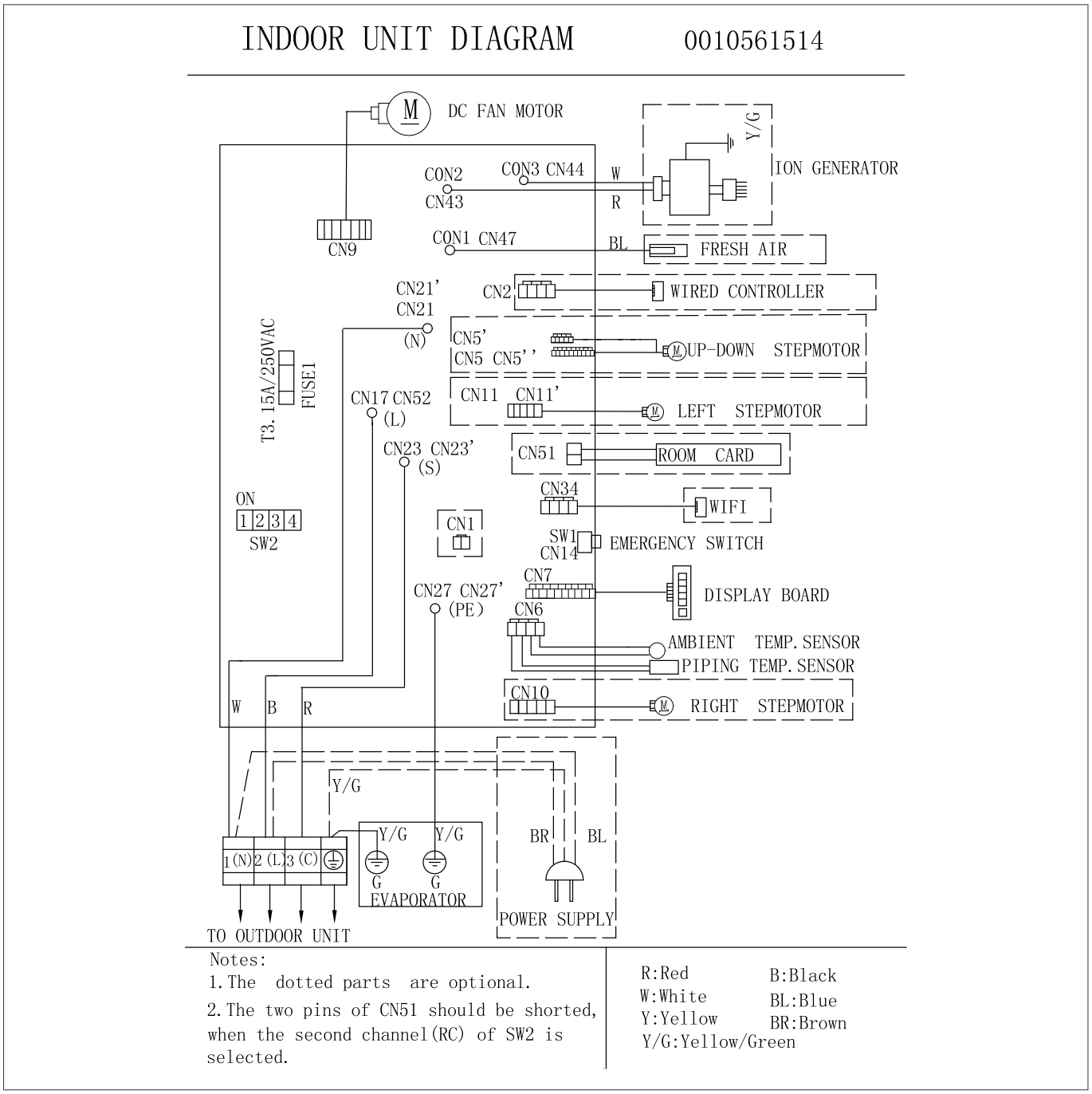
AS105S2SF2FA-2 10.5 kW

INDOOR UNIT	Model		**AS105S2SF2FA-2**
Indoor unit technical data			
Liquid pipe Ø		mm	9.52
Gas pipe Ø		mm	15.88
Power Supply		Ph/V/Hz	1/220-240/50/60
Treated air volume	H	m³/h	1300
Net dimensions	WxDxH	mm	1342x275x365
Net weight		kg	21

DIAGNOSTICS 10.5 kW

See the list of alarms on **page 28**

IU CIRCUIT DIAGRAM 10.5 kW



INDOOR UNIT SETTING:

Selecting the frequency of remote control A or B (SW2-1):

Switch 1 selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board) (SW2-2):

Using switch 2, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (SW2-3) and (SW2-4):

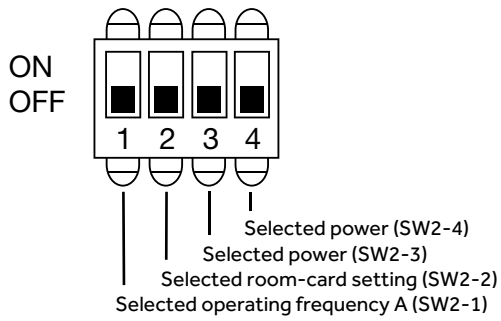
Using switches 3 and 4 you can select the power of the indoor unit:

	Wall 10kW
SW2-3	OFF
SW2-4	ON

Important: Cut the jumpers **J1**, **J2** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	Wall 10kW
J1	ON
J2	OFF

SW2 setting example



Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Activating/deactivating power-saving feature of the fan motor in cooling mode:

Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

AF25S2SD1FA(H)

AF35S2SD1FA(H)

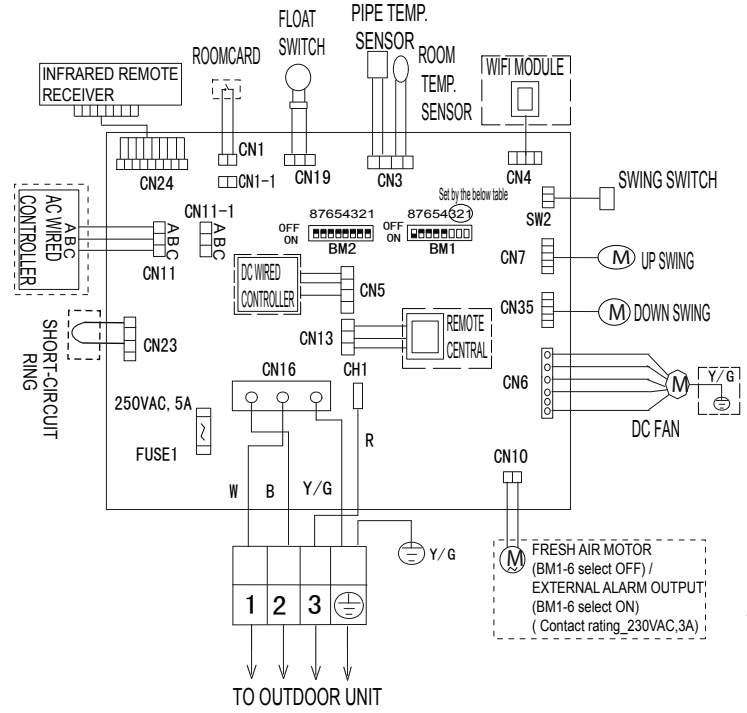
AF42S2SD1FA(H)

INDOOR UNIT	Model		AF25S2SD1FA(H)	AF35S2SD1FA(H)	AF42S2SD1FA(H)
Indoor unit technical data					
Liquid pipe Ø		mm	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	9.52
Power Supply		Ph/V/Hz	1/220~240/50/60	1/220~240/50/60	1/220~240/50/60
Treated air volume	H / M / L	m³/h	450/400/350/300/250	500/450/400/350/300	580/530/480/430/380
Net dimensions	WxDxH	mm	700x210x600	700x210x600	700x210x600
Net weight		kg	16.5	16.5	16.5

DIAGNOSTICS 2.5 kW - 3.5 kW - 4.2 kW

- To see the list of alarms for the indoor units connected to MONO outdoor units, go to **page 26**
- To see the list of alarms for the indoor units connected to MULTI outdoor units, go to **page 28**

IU CIRCUIT DIAGRAM 2.5 kW - 3.5 kW - 4.2 kW



BM1-1	BM1-2	BM1-3	CAPICITY(W)	
OFF	OFF	OFF	2500	AF25S2SD1FA(H)
ON	OFF	OFF	3500	AF35S2SD1FA(H)
OFF	ON	OFF	4200	AF42S2SD1FA(H)
ON	ON	OFF	7100	
OFF	OFF	ON	9000	
ON	OFF	ON	10500	
OFF	ON	ON	12500	
ON	ON	ON	14000	

BM1-4	Room card	BM1-5	Cooling Heating
ON	Available	ON	Cooling only available
OFF	Unavailable	OFF	Cooling & Heating

BM1-6	BM1-7	BM1-8	TYPE DEFINE
OFF	OFF	ON	Console

NOTE: 1.DASHED PARTS ARE OPTIONAL.
2. USER SHOULD NOT CHANGE THE DIP SWITCH BM1 AND BM2 WITHOUT GUIDANCE.

R:RED B:BLACK
W:WHITE
Y/G:YELLOW/GREEN
DC:DIRECT-CURRENT
AC:ALTERNATING-CURRENT
TEMP.:TEMPERATURE

0150547791

LED flash times of indoor PCB		Malfunction display	Contents of Malfunction	Possible reasons
LED6	LED1			
0	1	E1	Malfunction of indoor unit ambient temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	2	E2	Malfunction of indoor unit piping temperature sensor	Sensor disconected, or broken,or at wrong position,or short circuit
0	4	E4	EEPROM wrong of indoor PCB	EEPROM chip disconected or broken or wrong programmed,or PCB broken
0	7	E7	Abnormal communication between indoor and outdoor units	Wrong connection,or the wires be disconected or wrong adress setting of indoor unit or faulty power supply or faulty PCB or slave unit malfunction in MAXI system
0	8	E8	Abnormal communication between wired controller and indoor unit	Wrong connection or wired controller broken,or PCB faulty
0	12	E10	Malfunction of drain system	Pump motor disconnected or at wrong position,or the float switch,disconnected，or at wrong position,or the short circuit bridge disconnected
0	13	C1	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	E14	Indoor unit DC fan motor abnormal	DC Fan motor disconnected or DC Fan broken or circuit broken

Note:
1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED6 flash times stands for tens digit,and LED1 flash times stands for units digit, use this bidigitate figure minus 20,then will get the outdoor error code.For example,if the outdoor error code is 15,LED6 will flash 3 times firstly,two seconds later,LED1 will flash 5 times , and four seconds later the process will repeat again.
2.LED6 is a green one on the indoor PCB,LED1 is a yellow one.
3.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.

CN4: WIFI module connection
CN1/CN1_1: Room card connectors

INDOOR UNIT SETTINGS 2.5 kW - 3.5 kW - 5.0 kW:

Selector Bank BM1 (SW1)

BM1-1	BM1-2	BM1-3	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8	DESCRIPTION
OFF	OFF	OFF	---	---	---	---	---	Power 2.5 kW
ON	OFF	OFF	---	---	---	---	---	Power 3.5 kW
OFF	ON	OFF	---	---	---	---	---	Power 4.2 kW
---	---	---	ON	---	---	---	---	* Room card (enabled)
---	---	---	OFF	---	---	---	---	Room card (not enabled)
---	---	---	---	ON	---	---	---	Cooling only
---	---	---	---	OFF	---	---	---	Cooling/heating
---	---	---	---	---	OFF	---	---	Fan running signal (CN10)
---	---	---	---	---	ON	---	---	Alarm Signal (CN10)
---	---	---	---	---	---	OFF	ON	Console (DEFAULT)

*Room card: The unit can only be started by remote control/wired controller if both the CN1 and CN1_1 connectors are closed. (When the bridges are closed the unit does not restart automatically. It must be turned on by the user)

Selector Bank BM2 (SW2)

BM2-1	BM2-2	BM2-3	BM2-4	BM1-5
OFF	OFF	OFF	OFF	Reserved
BM2-5	**BM2-6**	**BM2-7**	**BM2-8**	**Indoor unit addresses for wired control**
OFF	OFF	OFF	OFF	0# (master)(default)
OFF	OFF	OFF	ON	1# (slave)
OFF	OFF	ON	OFF	2# (slave)
OFF	ON	ON	ON	3# (slave)
OFF	ON	OFF	OFF	4# (slave)
OFF	ON	OFF	ON	5# (slave)
OFF	ON	ON	OFF	6# (slave)
OFF	ON	ON	ON	7# (slave)
ON	OFF	OFF	OFF	8# (slave)
ON	OFF	OFF	ON	9# (slave)
ON	OFF	ON	OFF	10# (slave)
ON	OFF	ON	ON	11# (slave)
ON	ON	OFF	OFF	12# (slave)
ON	ON	OFF	ON	13# (slave)
ON	ON	ON	OFF	14# (slave)
ON	ON	ON	ON	15# (slave)

AB25S2SC2FA-1 2.5 kW **(multi only)**

AB35S2SC2FA-1 3.5 kW

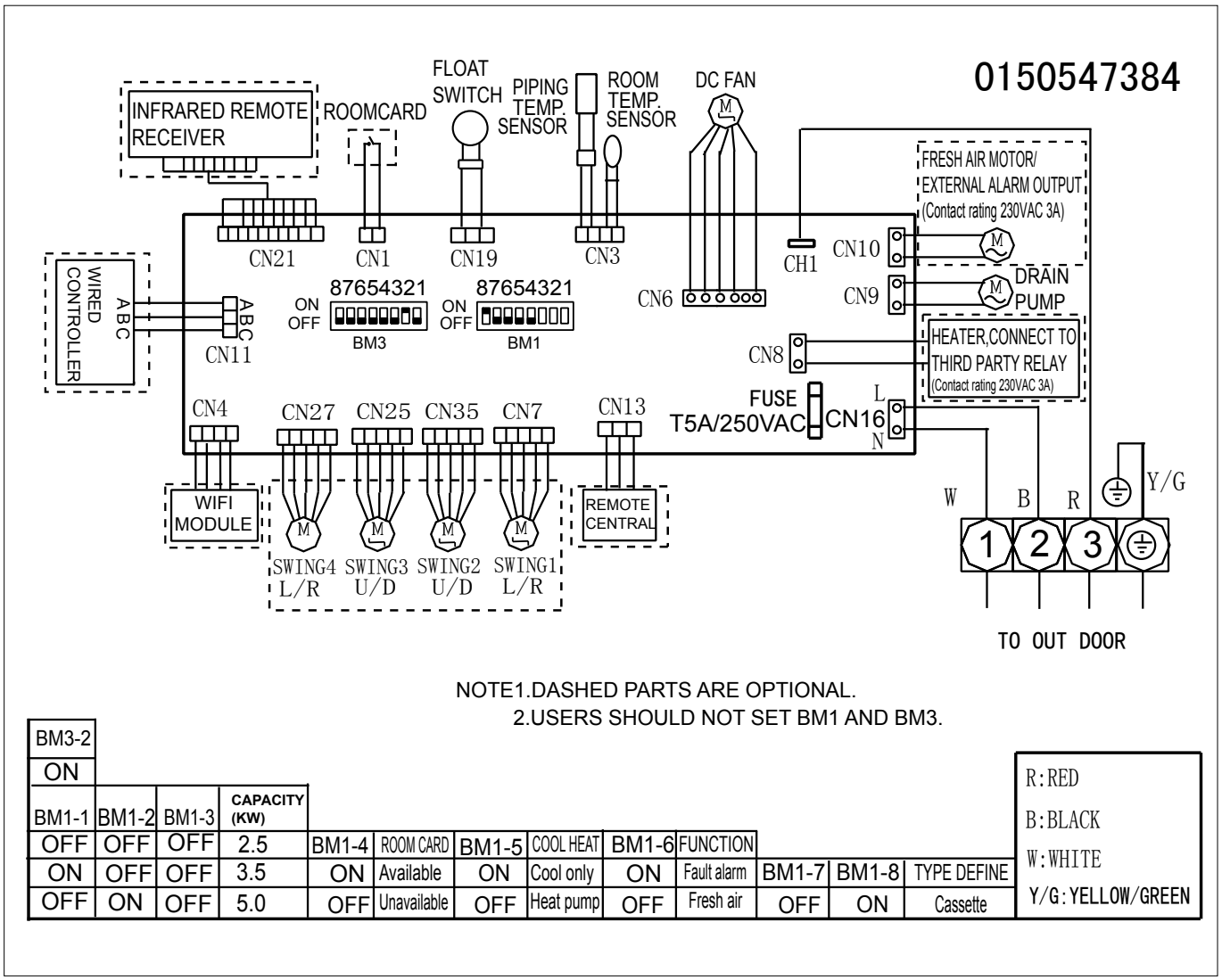
AB50S2SC2FA-1 5.0 kW

INDOOR UNIT	Model		AB25S2SC2FA-1	AB35S2SC2FA-1	AB50S2SC2FA-1
Indoor unit technical data					
Liquid pipe Ø		mm	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	12.7
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50
Treated air volume	H / M / L	m³/h	510/450/390/330	620/520/420/350	700/600/500/400
Net dimensions	WxDxH	mm	570x570x260	570x570x260	570x570x260
Net weight		kg	17	18.5	18.5

DIAGNOSTICS 2.5 kW - 3.5 kW - 5.0 kW

- To see the list of alarms for the indoor units connected to MONO outdoor units, go to **page 26**
- To see the list of alarms for the indoor units connected to MULTI outdoor units, go to **page 28**

IU CIRCUIT DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW



BM3-2													
ON													
BM1-1	BM1-2	BM1-3	CAPACITY (KW)	BM1-4	ROOM CARD	BM1-5	COOL HEAT	BM1-6	FUNCTION	BM1-7	BM1-8	TYPE DEFINE	
OFF	OFF	OFF	2.5	ON	Available	ON	Cool only	ON	Fault alarm	OFF	ON	Cassette	
ON	OFF	OFF	3.5	OFF	Unavailable	OFF	Heat pump	OFF	Fresh air				
OFF	ON	OFF	5.0										

R:RED
B:BLACK
W:WHITE
Y/G:YELLOW/GREEN

INDOOR UNIT SETTINGS 2.5 kW - 3.5 kW - 5.0 kW:

BM1 (SW1)								
Power			Room card	Mode: heating/ cooling	fresh air / failure alarm	Timer/ fiters	Region	DESCRIPTION
BM1-1	BM1-2	BM1-3	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8	
OFF	OFF	OFF	---	---	---	---	---	Power 2.5 kW
ON	OFF	OFF	---	---	---	---	---	Power 3.5 kW
OFF	ON	OFF	---	---	---	---	---	Power 5.0 kW
---	---	---	OFF	---	---	---	---	* Room card with restart
---	---	---	ON	---	---	---	---	Room card without restart
---	---	---	---	OFF	---	---	---	Heat pump (default)
---	---	---	---	ON	---	---	---	Cooling-only
---	---	---	---	---	OFF	---	---	Fan running signal on CN10 (220VAC) / Fresh air
---	---	---	---	---	ON	---	---	Alarm output on CN10 (220VAC)
---	---	---	---	---	---	OFF	---	Filter hours counter off (default)
---	---	---	---	---	---	ON	---	Filter hours counter enabled
---	---	---	---	---	---	---	OFF	America market
---	---	---	---	---	---	---	ON	Europe market (default)

*Room card: When the contact is closed, the unit will start again in automatic mode with set point at 24°C

INDOOR UNIT SETTINGS 2.5 kW - 3.5 kW - 5.0 kW:

Selecting the indoor unit power (BM1-1\2\3):

Using switches 1, 2, 3, you can select the cooling capacity of the indoor units. Following the combinations shown in the table, you can set the power from 2.5 kW up to 5 kW.

Selecting the room-card (indoor unit activation board) (BM1-4):

Switch 4 selects how the room-card input (CN1) operates, which through a clean contact allows you to control the unit from an external device (e.g. clock or window contact).

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in automatic mode at 24 °C. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote controller or wired controller).
With outdoor contact open, the controller cannot control the unit.

Selecting the cooling-only mode (BM1-5):

Using switch 5 you can decide whether to operate the indoor units in cooling-only mode or heat pump mode (normal factory setting)

OFF heat pump mode (as per factory settings)

ON cooling-only mode

Running / alarm signal (BM1-6):

If set to "**OFF**" a IU fan running signal will be given in the CN10 connector (220VAC) (the signal will be present at ON/OFF intervals of 20-minute). If set to "**ON**" a signal will be given in case of generic alarm on the CN10 connector (220VAC)

Filter cleanup (BM1-7):

Filter Cleanup Timer,"**OFF**" Disabled, "**ON**" Enabled

Select the unit type (BM1-8):

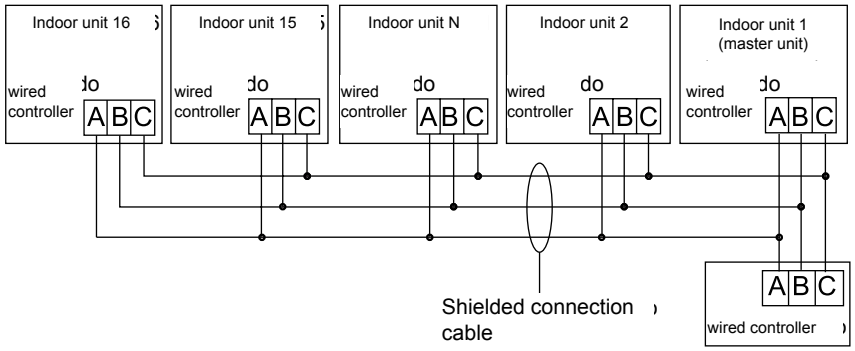
Selecting the cassette model (default)

BM3 UNIT ADDRESS FOR WIRED CONTROLLER

Addresses for communication of multiple units with a single wired controller.

SW3(BM3) 1=ON 0=OFF								
Not used				Wired Controller Address				Description
BM3-1	BM3-2	BM3-3	BM3-4	BM3-5	BM3-6	BM3-7	BM3-8	
OFF	ON	OFF	OFF	---	---	---	---	CASSETTE (default)
---	---	---	---	OFF	OFF	OFF	OFF	Master unit
---	---	---	---	OFF	OFF	0	ON	Slave address no. 1
---	---	---	---	OFF	OFF	ON	OFF	Slave address no. 2
---	---	---	---	ON	ON	ON	ON	Slave address no. 15

You can connect up to 16 indoor units using a single wired controller. Each unit must have its respective address:



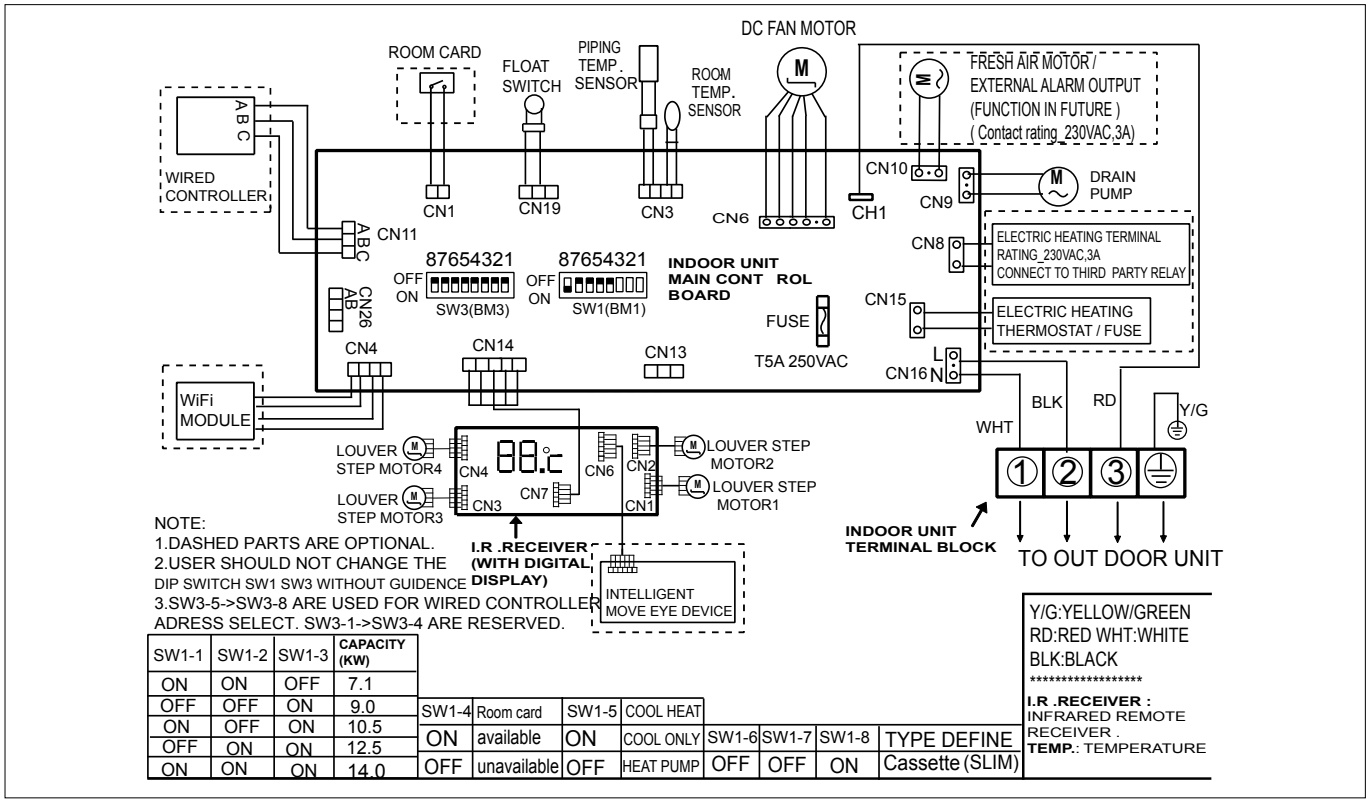
UNITS WITHOUT PRESENCE SENSOR (PB-950KB panel)	UNITS WITH PRESENCE SENSOR (PB-950KB panel)
AB71S2SG1FA 7.1 kW	AB71S2SG1FA(HS) 7.1 kW
ABH105H1ERG 10.5 kW	ABH105H1ERG(HS) 10.5 kW
ABH125K1ERG 12.5 kW	ABH125K1ERG(HS) 12.5 kW
ABH140K1ERG 14.0 kW	ABH140K1ERG(HS) 14.0 kW
ABH160K1ERG 16,0kW	ABH160K1ERG(HS) 16.0 kW

INDOOR UNIT (without sensor)	Model		**AB71S2SG1FA**	**ABH105H1ERG**	**ABH125K1ERG**	**ABH140K1ERG**	**ABH160K1ERG**
INDOOR UNIT (with sensor)			**AB71S2SG1FA(HS)**	**ABH105H1ERG(HS)**	**ABH125K1ERG(HS)**	**ABH140K1ERG(HS)**	**ABH160K1ERG(HS)**
COMPATIBLE UNITS R32 / R410A			●	●	●	●	
Indoor unit technical data							
Liquid pipe Ø		mm	9.52	9.52	9.52	9.52	9.52
Gas pipe Ø		mm	15.88	15.88	15.88	15.88	19.05
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50
Treated air volume	H / M / L	m³/h	1260/1070/820/680	1680/1530/1320/1190	1950/1600/1440/1200	1950/1600/1440/1200	2050/1600/1440/1220
Net dimensions	WxDxH	mm	840x840x204	840x840x246	840x840x288	840x840x288	840x840x288
Net weight		kg	27	31	32	32	32

DIAGNOSTICS 7.1 kW - 10.5 kW - 12.5 kW - 14.0 kW - 16.0 kW

- To see the list of alarms for the indoor units connected to MONO outdoor units, go to **page 26**
- To see the list of alarms for the indoor units connected to MULTI outdoor units, go to **page 28**

IU CIRCUIT DIAGRAM 7.1 kW



SW1-1	SW1-2	SW1-3	CAPACITY (KW)
ON	ON	OFF	7.1
OFF	OFF	ON	9.0
ON	OFF	ON	10.5
OFF	ON	ON	12.5
ON	ON	ON	14.0

SW1-4	Room card	SW1-5	COOL HEAT
ON	available	ON	COOL ONLY
OFF	unavailable	OFF	HEAT PUMP

SW1-6	SW1-7	SW1-8	TYPE DEFINE
OFF	OFF	ON	Cassette (SLIM)

INDOOR UNIT SETTINGS 7.1 kW:

Selector Bank BM1

BM1-1	BM1-2	BM1-3	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8	DESCRIPTION
ON	ON	OFF	---	---	---	---	---	Power 7.1 kW
---	---	---	OFF	---	---	---	---	* Room card with restart
---	---	---	ON	---	---	---	---	Room card without restart
---	---	---	---	OFF	---	---	---	Heat pump (default)
---	---	---	---	ON	---	---	---	Cooling-only
---	---	---	---	---	OFF	OFF	ON	Cassette (default)

* Room card: When the contact is closed, the unit will start again in automatic mode with set point at 24°C

INDOOR UNIT SETTINGS 2.5 kW - 3.5 kW - 5.0 kW:

Selecting the indoor unit power (BM1-1\2\3):

Using switches 1, 2, 3, you can select the cooling capacity of the indoor units. Following the combinations shown in the table, you can set the power from 2.5 kW up to 5 kW.

Selecting the room-card (indoor unit activation board) (BM1-4):

Switch 4 selects how the room-card input (CN1) operates, which through a clean contact allows you to control the unit from an external device (e.g. clock or window contact).

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in automatic mode at 24 °C. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote controller or wired controller).
With outdoor contact open, the controller cannot control the unit.

Selecting the cooling-only mode (BM1-5):

Using switch 5 you can decide whether to operate the indoor units in cooling-only mode or heat pump mode (normal factory setting)

OFF heat pump mode (as per factory settings)

ON cooling-only mode

Select the unit type (BM1-6-7-8):

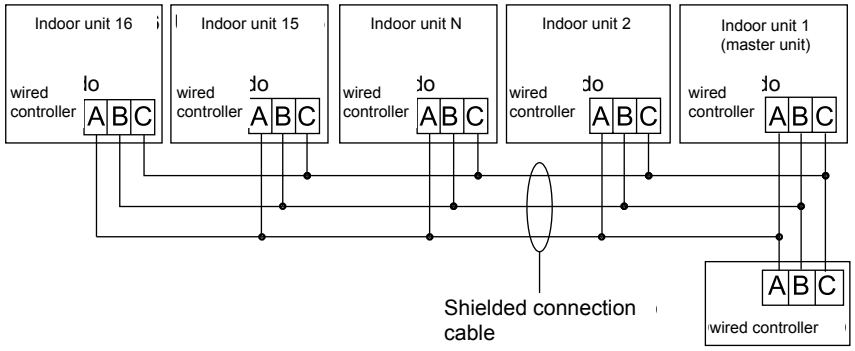
Selecting the unit type: By default, keep the selectors as shown in the table.

BM3 UNIT ADDRESS FOR WIRED CONTROLLER

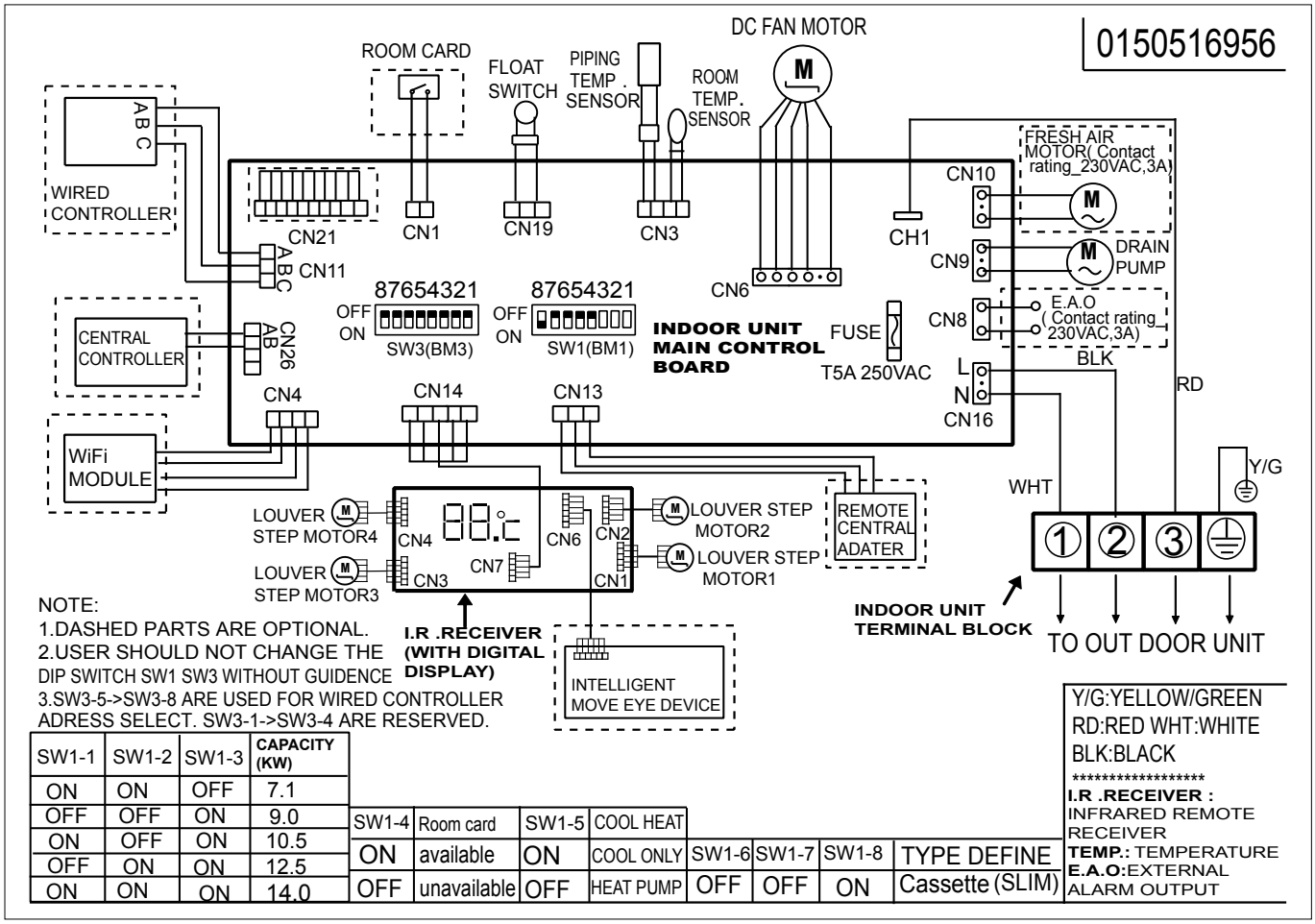
Addresses for communication of multiple units with a single wired controller.

SW3(BM3) 1=ON 0=OFF								
Not used				Wired Controller Address				Description
BM3-1	BM3-2	BM3-3	BM3-4	BM3-5	BM3-6	BM3-7	BM3-8	
OFF	OFF	OFF	OFF	---	---	---	---	Not used
---	---	---	---	OFF	OFF	OFF	OFF	Master unit
---	---	---	---	OFF	OFF	OFF	ON	Slave address no. 1
---	---	---	---	OFF	OFF	ON	OFF	Slave address no. 2
---	---	---	---	ON	ON	ON	ON	Slave address no. 15

You can connect up to 16 indoor units using a single wired controller. Each unit must have its respective address:



IU CIRCUIT DIAGRAM 10.5 kW - 12.5 kW - 14 kW

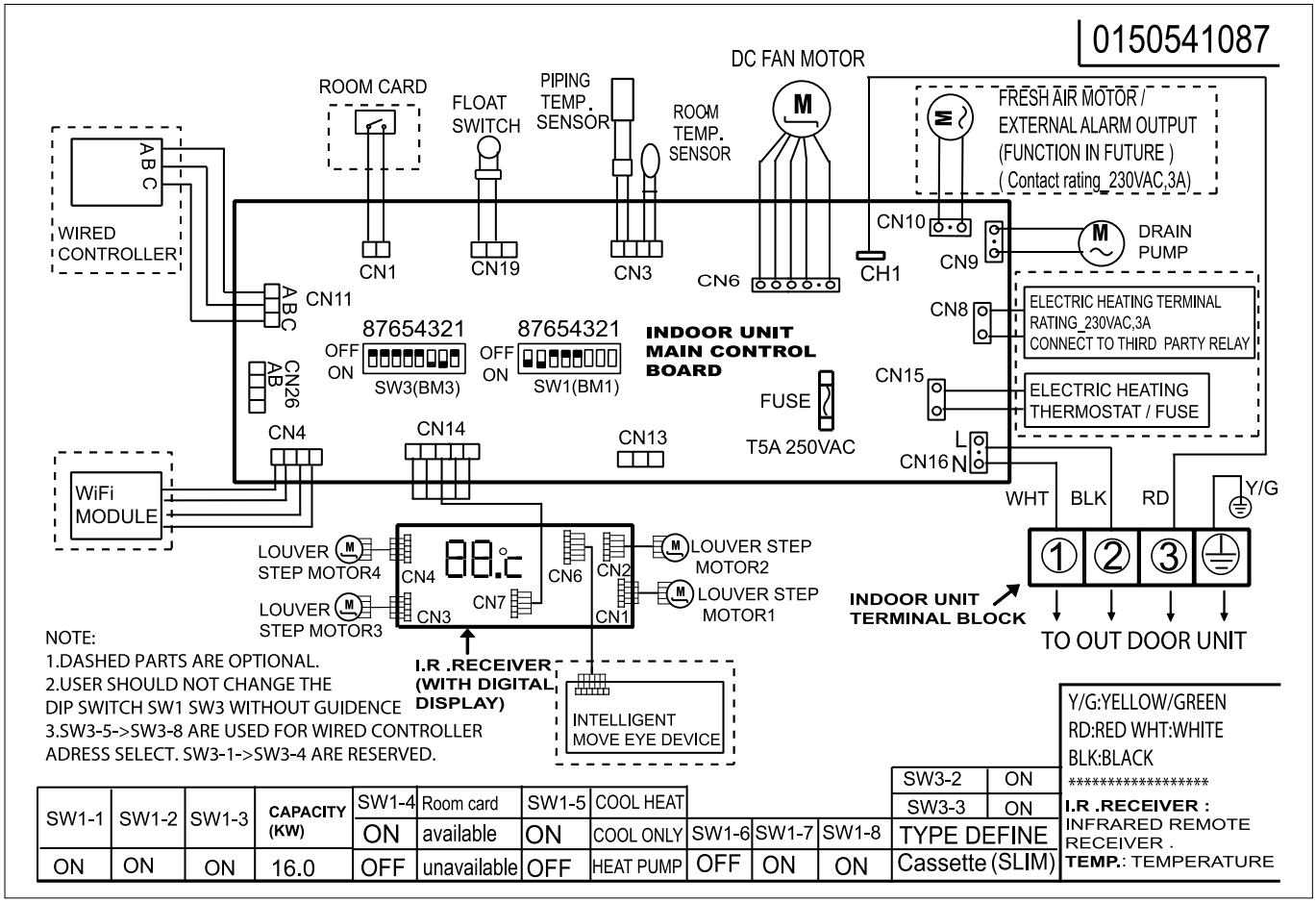


SW1-1	SW1-2	SW1-3	CAPACITY (KW)
ON	ON	OFF	7.1
OFF	OFF	ON	9.0
ON	OFF	ON	10.5
OFF	ON	ON	12.5
ON	ON	ON	14.0

SW1-4	Room card	SW1-5	COOL HEAT
ON	available	ON	COOL ONLY
OFF	unavailable	OFF	HEAT PUMP

SW1-6	SW1-7	SW1-8	TYPE DEFINE
OFF	OFF	ON	Cassette (SLIM)

IU CIRCUIT DIAGRAM 16kW



SW1-1	SW1-2	SW1-3	CAPACITY (KW)
ON	ON	ON	16.0

SW1-4	Room card	SW1-5	COOL HEAT
ON	available	ON	COOL ONLY
OFF	unavailable	OFF	HEAT PUMP

SW1-6	SW1-7	SW1-8	TYPE DEFINE
OFF	ON	ON	Cassette (SLIM)

SW3-2	ON
SW3-3	ON

UI SETTINGS 10.5 kW - 12.5 kW - 14 kW - 16 kW

Selector Bank BM1 (SW1)

BM1 (SW1)								
Power			Room card	Mode: heating / cooling	fresh air / failure alarm	Filter timer	Region	Description
BM1-1	BM1-2	BM1-3	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8	
ON	OFF	ON	---	---	---	OFF	---	Power: 10.5 kW
OFF	ON	ON	---	---	---	OFF	---	Power: 12.5 kW
ON	ON	ON	---	---	---	OFF	---	Power: 14.0 kW
ON	ON	ON	---	---	---	ON	---	Power: 16.0 kW
---	---	---	OFF	---	---	---	---	* Room card with restart
---	---	---	ON	---	---	---	---	Room card without restart
---	---	---	---	OFF	---	---	---	Heat pump (default)
---	---	---	---	ON	---	---	---	Cooling-only
---	---	---	---	---	OFF	---	---	Fan running signal on CN5 (220VAC) / Fresh air
---	---	---	---	---	ON	---	---	Alarm output SU CN5 (220VAC)
---	---	---	---	---	---	OFF	---	Filter hours counter off
---	---	---	---	---	---	ON	---	Filter hours counter enabled
---	---	---	---	---	---	---	OFF	America market
---	---	---	---	---	---	---	ON	Europe market

*Room card: When the contact is closed, the unit will start again in automatic mode with set point at 24°C

Selector Bank BM3 (SW3)

Addresses for communication of multiple units with a single wired controller.

BM3 (SW3)								
BM3-1	BM3-2	BM3-3	BM3-4	BM3-5	BM3-6	BM3-7	BM3-8	Description
OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	Master Unit
OFF	ON	ON	OFF	OFF	OFF	OFF	ON	Unit SLAVE 1
OFF	ON	ON	OFF	OFF	OFF	ON	OFF	Unit SLAVE 2
OFF	ON	ON	OFF	OFF	OFF	ON	ON	Unit SLAVE 3
OFF	ON	ON	OFF	---	---	---	---	Unit SLAVE --
OFF	ON	ON	OFF	ON	ON	ON	ON	Unit SLAVE 15

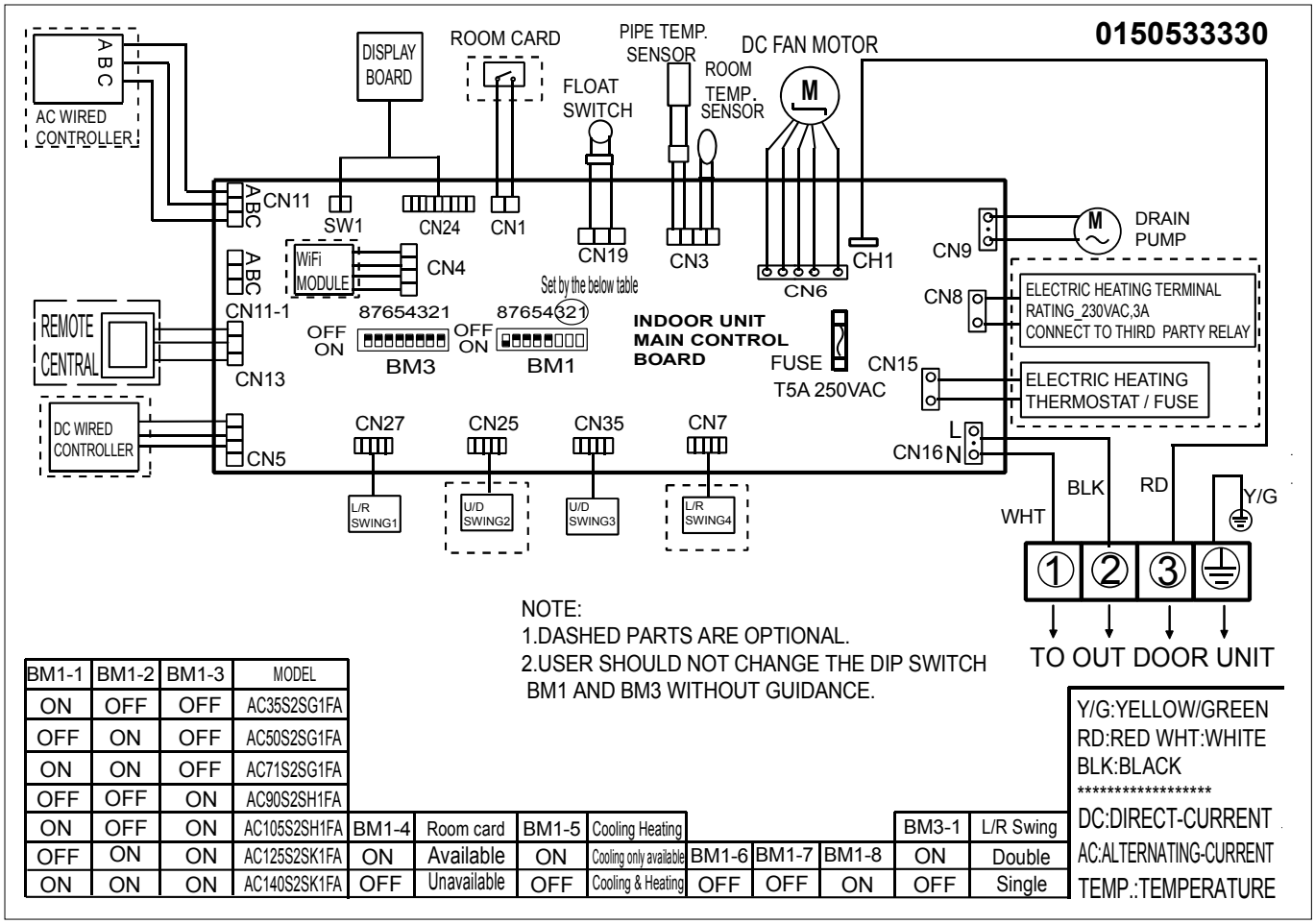
AC35S2SG1FA 3.5 kW
AC50S2SG1FA 5.0 kW
AC71S2SG1FA 7.1 kW
AC105S2SH1FA 10.5 kW
AC125S2SK1FA 12.5 kW
AC140S2SK1FA 14.0 kW
AC160S2SK1FA 16.0 kW

INDOOR UNIT	Model		AC35S2SG1FA	AC50S2SG1FA	AC71S2SG1FA	AC105S2SH1FA	AC125S2SK1FA	AC140S2SK1FA	ABH160K1ERG
COMPATIBLE UNITS R32 / R410A					●	●	●	●	
Indoor unit technical data									
Liquid pipe Ø		mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52
Gas pipe Ø		mm	9.52	12.7	15.88	15.88	15.88	15.88	19.05
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50
Treated air volume	H / M / L	m³/h	750/620/500/400	880/750/650/500	1250/1128/930/840	1600/1400/1280/1160	2050/1900/1600/1400	2150/1980/1800/1600	2150/1980/1800/1600
Net dimensions	WxDxH	mm	1000x230x680	1000x230x680	1325x230x680	1325x230x680	1650x230x680	1650x230x680	1650x230x680
Net weight		kg	26	26	33.5	33.5	43	43	43

DIAGNOSTICS 3.5kW - 5.0kW - 7.1kW - 10.5kW - 12.5kW - 14.0kW - 16.0kW

Indoor unit diagnostics may differ depending on the outdoor unit with which it is connected.
- To see the list of alarms for the indoor units connected to MONO outdoor units, go to **page 26**
- To see the list of alarms for the indoor units connected to MULTI outdoor units, go to **page 28**

IU CIRCUIT DIAGRAM 3.5 kW - 5.0 kW - 7.1 kW - 10.5 kW - 12.5 kW - 14.0 kW



BM1-1	BM1-2	BM1-3	MODEL
ON	OFF	OFF	AC35S2SG1FA
OFF	ON	OFF	AC50S2SG1FA
ON	ON	OFF	AC71S2SG1FA
OFF	OFF	ON	AC90S2SH1FA
ON	OFF	ON	AC105S2SH1FA
OFF	ON	ON	AC125S2SK1FA
ON	ON	ON	AC140S2SK1FA

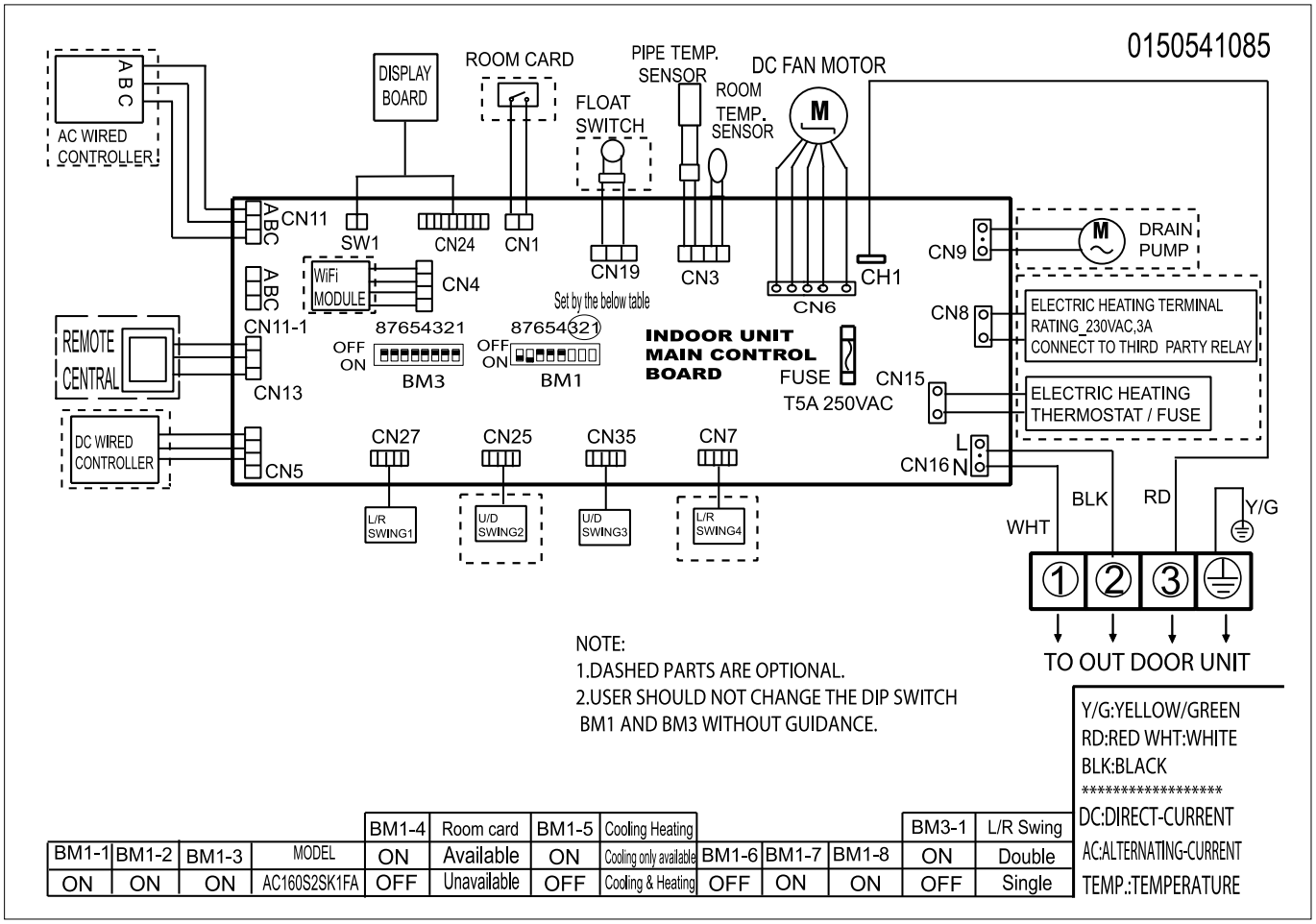
BM1-4	Room card
ON	Available
OFF	Unavailable

BM1-5	Cooling Heating
ON	Cooling only available
OFF	Cooling & Heating

BM1-6	BM1-7	BM1-8
OFF	OFF	ON

BM3-1	L/R Swing
ON	Double
OFF	Single

IU CIRCUIT DIAGRAM 16.0 kW



BM1-1	BM1-2	BM1-3	MODEL	BM1-4	Room card	BM1-5	Cooling Heating	BM1-6	BM1-7	BM1-8	BM3-1	L/R Swing
ON	ON	ON	AC160S2SK1FA	ON	Available	ON	Cooling only available	OFF	ON	ON	ON	Double
				OFF	Unavailable	OFF	Cooling & Heating				OFF	Single

INDOOR UNIT SETTINGS:

BM1-1	BM1-2	BM1-3	Indoor unit power
ON	OFF	OFF	3.5 kW
OFF	ON	OFF	4.2 kW
ON	ON	OFF	7.1 kW
OFF	OFF	ON	9.0 kW
ON	OFF	ON	10.5 kW
OFF	ON	ON	12.5 kW
ON	ON	ON	14 kW
ON	ON	ON	16 kW

BM1-4	Enabling the Room-Card
ON	* Enabled
OFF	** Disabled (default)

* **Enabled:** Upon restart, the unit remains off waiting for the user to switch it on
** **Disabled:** The contact is completely inhibited

BM1-5	Cooling-only mode
ON	Cooling-only
OFF	Cooling & heat pump

BM1-6	Fresh air / alarm output
ON	Alarm output on CN5 (220VAC)
OFF	Fan running signal on CN5 (220VAC) / Fresh air

BM1-7	Filter hours counter
ON	Active
OFF	Inactive (default)

BM1-8	N.D.
OFF	(default)

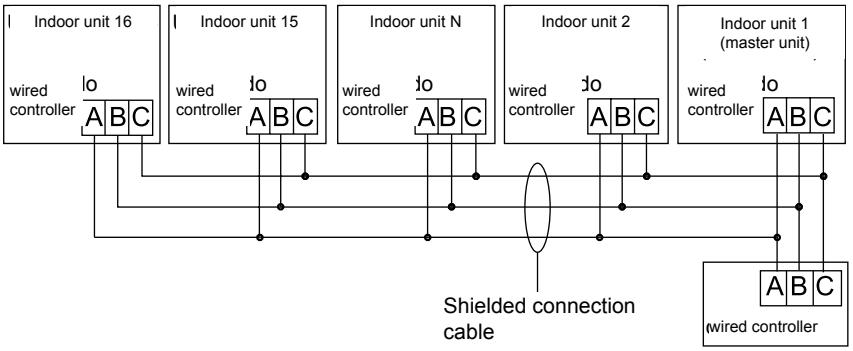
SELECTOR BANK BM3

BM3-1	SX/DX deflector management (optional)
ON	Double
OFF	Single

UNIT ADDRESS FOR WIRED CONTROLLER

SW3(BM3) 1=ON 0=OFF								
Not used				Wired Controller Address				Description
BM3-1	BM3-2	BM3-3	BM3-4	BM3-5	BM3-6	BM3-7	BM3-8	
---	---	---	---	OFF	OFF	OFF	OFF	Master unit
---	---	---	---	OFF	OFF	OFF	ON	Slave address no. 1
---	---	---	---	OFF	OFF	ON	OFF	Slave address no. 2
---	---	---	---	ON	ON	ON	ON	Slave address no. 15

You can connect up to 16 indoor units using a single wired controller. Each unit must have its respective address:



AD25S2SS1FA(H) 2.5 kW **(multi only)**

AD35S2SS1FA(H) 3.5 kW

AD50S2SS1FA(H) 5.0 kW

AD71S2SS1FA(H) 7.1 kW

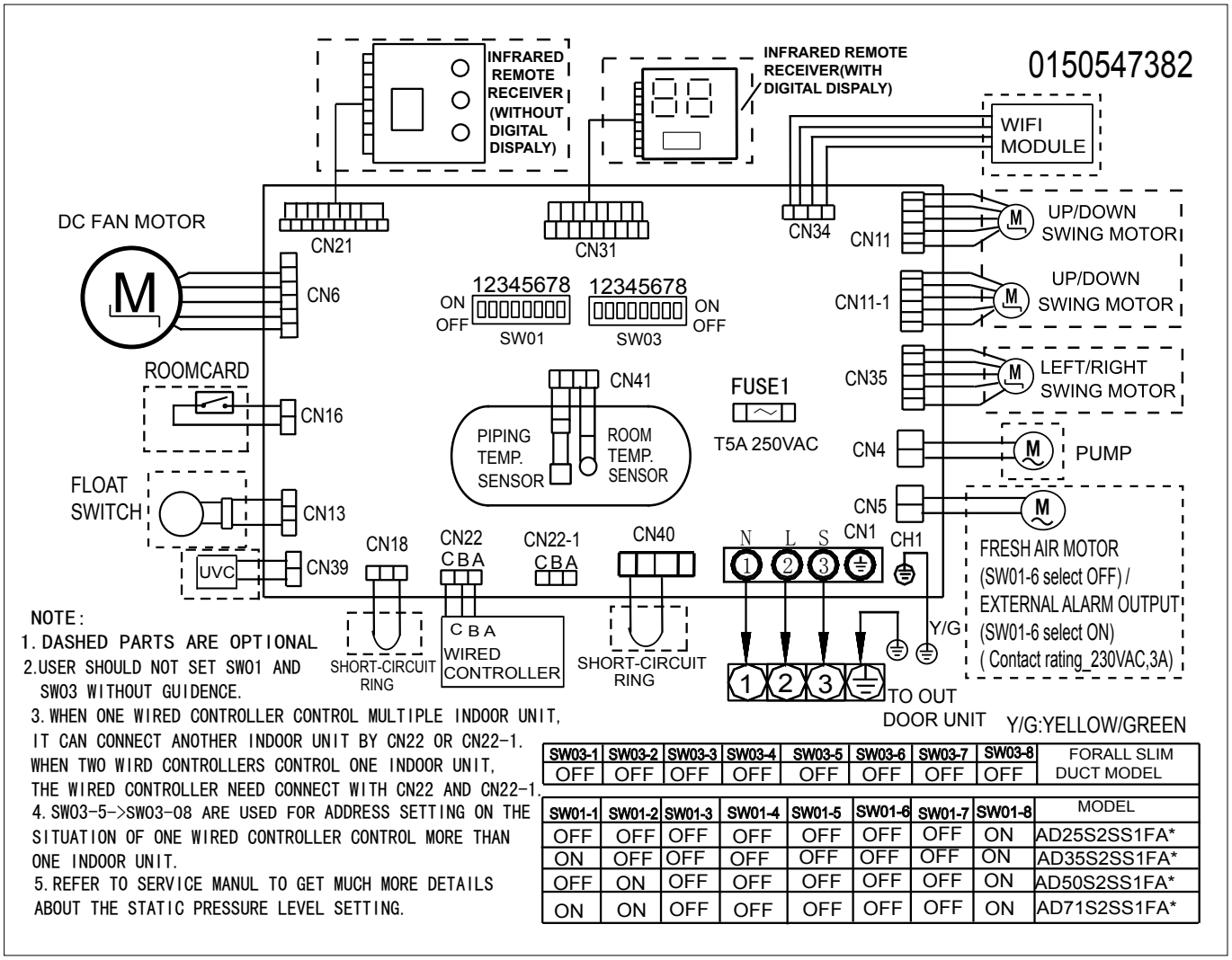
INDOOR UNIT	Model		AD25S2SS1FA(H)	AD35S2SS1FA(H)	AD50S2SS1FA(H)	AD71S2SS1FA(H)
COMPATIBLE UNITS R32 / R410A			only R32	only R32	only R32	●
Indoor unit technical data						
Liquid pipe Ø		mm	6.35	6.35	6.35	9.52
Gas pipe Ø		mm	9.52	9.52	12.7	15.88
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50
Treated air volume	H / M / L	m³/h	530/460/390/330	600/480/420/350	900/750/600	1000/850/750
Net dimensions	WxDxH	mm	850x420x185	850x420x185	1170x420x185	1170x420x185
Net weight		kg	16	16	22	24

DIAGNOSTICS 2.5 kW - 3.5 kW - 5.0 kW - 7.1 kW

Indoor unit diagnostics may differ depending on the outdoor unit with which it is connected.

- To see the list of alarms for the indoor units connected to MONO outdoor units, go to **page 26**
- To see the list of alarms for the indoor units connected to MULTI outdoor units, go to **page 28**

IU CIRCUIT DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW - 7.1 kW



NOTE:
1. DASHED PARTS ARE OPTIONAL
2. USER SHOULD NOT SET SW01 AND SW03 WITHOUT GUIDENCE.
3. WHEN ONE WIRED CONTROLLER CONTROL MULTIPLE INDOOR UNIT, IT CAN CONNECT ANOTHER INDOOR UNIT BY CN22 OR CN22-1. WHEN TWO WIRD CONTROLLERS CONTROL ONE INDOOR UNIT, THE WIRED CONTROLLER NEED CONNECT WITH CN22 AND CN22-1.
4. SW03-5->SW03-08 ARE USED FOR ADDRESS SETTING ON THE SITUATION OF ONE WIRED CONTROLLER CONTROL MORE THAN ONE INDOOR UNIT.
5. REFER TO SERVICE MANUL TO GET MUCH MORE DETAILS ABOUT THE STATIC PRESSURE LEVEL SETTING.

SW03-1	SW03-2	SW03-3	SW03-4	SW03-5	SW03-6	SW03-7	SW03-8	FORALL SLIM DUCT MODEL
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	

SW01-1	SW01-2	SW01-3	SW01-4	SW01-5	SW01-6	SW01-7	SW01-8	MODEL
OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	AD25S2SS1FA*
ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	AD35S2SS1FA*
OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	AD50S2SS1FA*
ON	ON	OFF	OFF	OFF	OFF	OFF	ON	AD71S2SS1FA*

INDOOR UNIT SETTINGS 2.5 kW - 3.5 kW - 5.0 kW - 7.1 kW

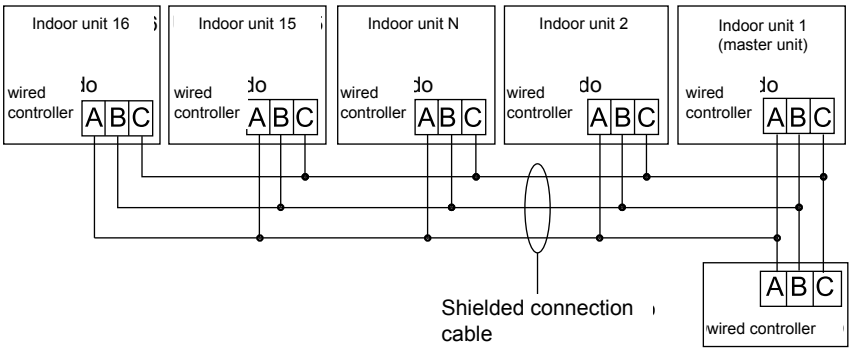
SW1 SELECTOR								
SW1-1	**SW1-2**	**SW1-3**	**SW1-4**	**SW1-5**	**SW1-6**	**SW1-7**	**SW1-8**	**DESCRIPTION**
OFF	OFF	OFF	---	---	---	---	ON	POWER 2.5 kW
ON	OFF	OFF	---	---	---	---	ON	POWER 3.5 kW
OFF	ON	OFF	---	---	---	---	ON	POWER 5.0 kW
ON	ON	OFF	---	---	---	---	ON	POWER 7,1 kW
OFF	OFF	ON	---	---	---	---	---	N.D.
ON	OFF	ON	---	---	---	---	---	N.D.
OFF	ON	ON	---	---	---	---	---	N.D.
ON	ON	ON	---	---	---	---	---	N.D.
---	---	---	OFF	---	---	---	---	* ROOM CARD (RESTART WITH CONTACT CLOSED)
---	---	---	ON	---	---	---	---	ROOM CARD (STAND BY WITH CONTACT CLOSED)
---	---	---	---	OFF	---	---	---	HEAT PUMP (DEFAULT)
---	---	---	---	ON	---	---	---	COOLING-ONLY
---	---	---	---	---	OFF	---	---	FAN RUNNING SIGNAL ON CN5 (220VAC) / FRESH AIR
---	---	---	---	---	ON	---	---	ALARM SIGNAL ON CN5 (220VAC)
---	---	---	---	---	---	OFF	---	FILTER CLEANUP ALARM DISABLED (DEFAULT)
---	---	---	---	---	---	ON	---	FILTER CLEANUP ALERT ENABLED

* Room card: When the contact is closed, the unit will start again in automatic mode with set point at 24°C

SW3 SELECTOR								
SW3-1	**SW3-2**	**SW3-3**	**SW3-4**	**SW3-5**	**SW3-6**	**SW3-7**	**SW3-8**	**DESCRIPTION**
OFF	OFF	OFF	---	---	---	---	---	NOT USED (DEFAULT)
---	---	---	OFF	---	---	---	---	SLIM DUCTED LOW PRESSURE
---	---	---	ON	---	---	---	---	DUCTED MEDIUM PRESSURE
---	---	---	---	OFF	OFF	OFF	OFF	MASTER UNIT
---	---	---	---	OFF	OFF	OFF	ON	1 SLAVE UNIT
---	---	---	---	OFF	OFF	ON	OFF	2 SLAVE UNITS
---	---	---	---	OFF	OFF	ON	ON	3 SLAVE UNITS
---	---	---	---	OFF	ON	OFF	OFF	4 SLAVE UNITS
---	---	---	---	OFF	ON	OFF	ON	5 SLAVE UNIT
---	---	---	---	OFF	ON	ON	OFF	6 SLAVE UNITS
---	---	---	---	OFF	ON	ON	ON	7 SLAVE UNITS
---	---	---	---	ON	OFF	OFF	OFF	8 SLAVE UNITS
---	---	---	---	ON	OFF	OFF	ON	9 SLAVE UNIT
---	---	---	---	ON	OFF	ON	OFF	10 SLAVE UNITS
---	---	---	---	ON	OFF	ON	ON	11 SLAVE UNITS
---	---	---	---	ON	ON	OFF	OFF	12 SLAVE UNITS
---	---	---	---	ON	ON	OFF	ON	13 SLAVE UNIT
---	---	---	---	ON	ON	ON	OFF	14 SLAVE UNITS
---	---	---	---	ON	ON	ON	ON	15 SLAVE UNITS

SW3 UNIT ADDRESS FOR WIRED CONTROLLER (Refer to SELECTORS SW3-5/8)

You can connect up to 16 indoor units using a single wired controller. Each unit must have its respective address:



Reading and modifying the static fan pressure (wired controller)

FOR READING/MODIFYING THE STATIC PRESSURE, OPERATE DIRECTLY THROUGH THE WIRED CONTROLLER (E.G. YR E-17)

1. With the controller on and without a screensaver active, press the "Fan" and "Set" keys for 5s at the same time; The static pressure icon flashes and its current value is displayed. Using the keys it is possible to modify the static pressure value. Press the SET key to confirm your modifications.
2. The unit number is displayed in the minutes field in the upper-left corner and the static pressure value in the minutes field of the timer field in the upper right. Press the TIME key to move to the unit number.
3. The unit number is displayed in decimal format between 00 and 15. The static pressure value is displayed in a decimal value between 01 and 04.
4. When modifying, press the ON/OFF key to exit the function and turn the unit on/off without confirming any changes.
5. The static pressure value is not retained when the auto restart function is not set.
6. The static pressure value of "slave" units, when connected in groups, is not modifiable.
7. The current/adjustable static pressure value of the indoor unit can be changed by the wired controller, only for certain models, from the advanced functions menu.

Prevalence setting of Ducted with remote control:

Set the mode: VENTILATION

Set the fan speed: HIGH

Quickly press HEALTH 4+n times, where "n" is the desired static pressure level

The Ducted responds with n+1 beeps, indicating the level set

NB:

Slim Ducted Low Pressure:	4 static pressure levels: 0/10/20/30
Medium Pressure:	10 static pressure levels: 25/37/50/70/90/100/110/120/130/150
High Pressure:	10 static pressure levels: 37/50/70/90/110/130/150/170/190/210

Example:

Slim Ducted Low Pressure AD35S2SS1FA

To set maximum static pressure:

- ventilation mode, high speed; quickly press HEALTH 4+4= 8 TIMES; the Ducted will respond with 4+1=5 BEEPs

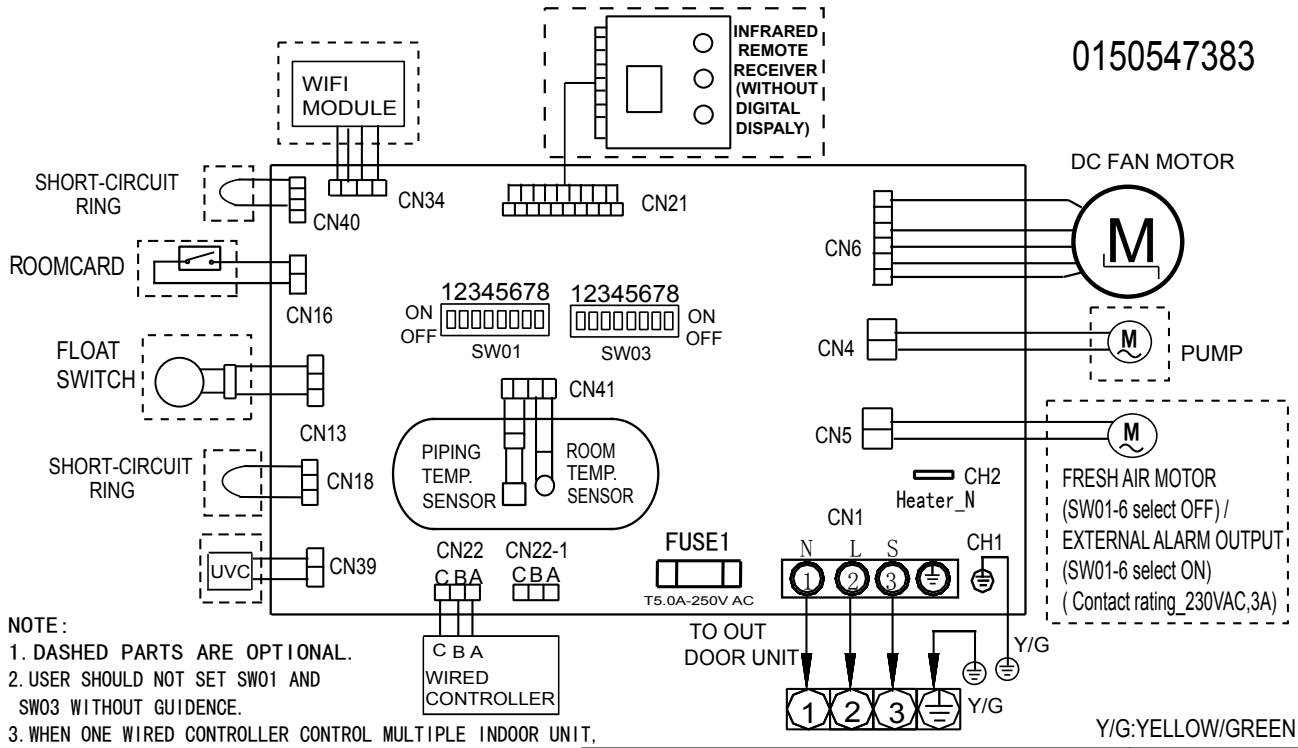
AD35S2SM3FA(H) 3.5 kW
AD50S2SM3FA(H) 5.0 kW
AD71S2SM3FA(H) 7.1 kW
AD105S2SM3FA(H) 10.5 kW
AD125S2SM3FA 12.5 kW
AD140S2SM3FA 14.0 kW
AD160S2SM3FA 16.0 kW

INDOOR UNIT	Model		AD35S2SM3FA(H)	AD50S2SM3FA(H)	AD71S2SM3FA(H)	AD105S2SM3FA(H)	AD125S2SM3FA	AD140S2SM3FA	AD160S2SM3FA
COMPATIBLE UNITS R32 / R410A			only R32	only R32	●	●	●	●	●
Indoor unit technical data									
Liquid pipe Ø		mm	6.35	6.35	9.52	9.52	9.52	9.52	9.52
Gas pipe Ø		mm	9.52	12.7	15.88	15.88	15.88	15.88	19.05
Power Supply		Ph/V/Hz	1/220~240/50/60	1/220~240/50/60	1/220~240/50/60	1/220~240/50/60	1/220~240/50/60	1/220~240/50/60	1/220~240/50/60
Treated air volume	H / M / L	m³/h	840/720/600/450	1080/900/780/660	1440/1140/900/800	1600/1480/1360/1240	2250/1960/1680/1500	2500/2160/1780/1500	2500/2160/1780/1500
Net dimensions	WxDxH	mm	700x700x248	1100x700x248	1100x700x248	1500x700x248	1500x700x248	1500x700x248	1500x700x248
Net weight		kg	26	32	32	46	48	48	48

DIAGNOSTICS 3.5kW - 5.0kW - 7.1kW - 10.5kW - 12.5kW - 14.0kW - 16.0kW

Indoor unit diagnostics may differ depending on the outdoor unit with which it is connected.
- To see the list of alarms for the indoor units connected to MONO outdoor units, go to **page 26**
- To see the list of alarms for the indoor units connected to MULTI outdoor units, go to **page 28**

IU CIRCUIT DIAGRAM 3.5 kW - 5.0 kW - 7.1 kW - 10.5 kW



NOTE:
1. DASHED PARTS ARE OPTIONAL.
2. USER SHOULD NOT SET SW01 AND SW03 WITHOUT GUIDENCE.
3. WHEN ONE WIRED CONTROLLER CONTROL MULTIPLE INDOOR UNIT, IT CAN CONNECT ANOTHER INDOOR UNIT BY CN22 OR CN22-1. WHEN TWO WIRD CONTROLLERS CONTROL ONE INDOOR UNIT, THE WIRED CONTROLLER NEED CONNECT WITH CN22 AND CN22-1.
4. SW03-5->SW03-08 ARE USED FOR ADDRESS SETTING ON THE SITUATION OF ONE WIRED CONTROLLER CONTROL MORE THAN ONE INDOOR UNIT.
5. REFER TO SERVICE MANUL TO GET MUCH MORE DETAILS ABOUT THE STATIC PRESSURE LEVEL SETTING.

SW03-1	SW03-2	SW03-3	SW03-4	SW03-5	SW03-6	SW03-7	SW03-8	FOR ALL DUCTED MODEL
OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	

SW01-1	SW01-2	SW01-3	SW01-4	SW01-5	SW01-6	SW01-7	SW01-8	MODEL
ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	AD35S2SM3FA*
OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	AD50S2SM3FA*
ON	ON	OFF	OFF	OFF	OFF	OFF	ON	AD71S2SM3FA*
OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	Reserved
ON	OFF	ON	OFF	OFF	OFF	OFF	ON	AD105S2SM3FA*

INDOOR UNIT SETTINGS 3.5 kW - 5.0 kW - 7.1 kW - 10.5 kW

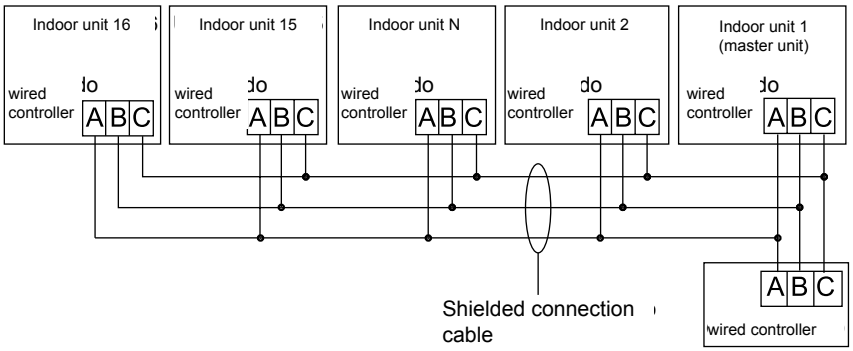
SW1 SELECTOR								
SW1-1	**SW1-2**	**SW1-3**	**SW1-4**	**SW1-5**	**SW1-6**	**SW1-7**	**SW1-8**	**DESCRIPTION**
OFF	OFF	OFF	---	---	---	---	ON	POWER 2.5 kW
ON	OFF	OFF	---	---	---	---	ON	POWER 3.5 kW
OFF	ON	OFF	---	---	---	---	ON	POWER 5.0 kW
ON	ON	OFF	---	---	---	---	ON	POWER 7,1 kW
OFF	OFF	ON	---	---	---	---	---	POWER 9.0 kW
ON	OFF	ON	---	---	---	---	---	POWER 10.5 kW
OFF	ON	ON	---	---	---	---	---	N.D.
ON	ON	ON	---	---	---	---	---	N.D.
---	---	---	OFF	---	---	---	---	* ROOM CARD (RESTART WITH CONTACT CLOSED)
---	---	---	ON	---	---	---	---	ROOM CARD (STAND BY WITH CONTACT CLOSED)
---	---	---	---	OFF	---	---	---	HEAT PUMP (DEFAULT)
---	---	---	---	ON	---	---	---	COOLING-ONLY
---	---	---	---	---	OFF	---	---	FAN RUNNING SIGNAL ON CN5 (220VAC) / FRESH AIR
---	---	---	---	---	ON	---	---	ALARM SIGNAL ON CN5 (220VAC)
---	---	---	---	---	---	OFF	---	FILTER CLEANUP ALARM DISABLED (DEFAULT)
---	---	---	---	---	---	ON	---	FILTER CLEANUP ALERT ENABLED

* Room card: When the contact is closed, the unit will start again in automatic mode with set point at 24°C

SW3 SELECTOR								
SW3-1	**SW3-2**	**SW3-3**	**SW3-4**	**SW3-5**	**SW3-6**	**SW3-7**	**SW3-8**	**DESCRIPTION**
OFF	OFF	OFF	---	---	---	---	---	NOT USED (DEFAULT)
---	---	---	OFF	---	---	---	---	SLIM DUCTED LOW PRESSURE
---	---	---	ON	---	---	---	---	DUCTED MEDIUM PRESSURE
---	---	---	---	OFF	OFF	OFF	OFF	MASTER UNIT
---	---	---	---	OFF	OFF	OFF	ON	1 SLAVE UNIT
---	---	---	---	OFF	OFF	ON	OFF	2 SLAVE UNITS
---	---	---	---	OFF	OFF	ON	ON	3 SLAVE UNITS
---	---	---	---	OFF	ON	OFF	OFF	4 SLAVE UNITS
---	---	---	---	OFF	ON	OFF	ON	5 SLAVE UNIT
---	---	---	---	OFF	ON	ON	OFF	6 SLAVE UNITS
---	---	---	---	OFF	ON	ON	ON	7 SLAVE UNITS
---	---	---	---	ON	OFF	OFF	OFF	8 SLAVE UNITS
---	---	---	---	ON	OFF	OFF	ON	9 SLAVE UNIT
---	---	---	---	ON	OFF	ON	OFF	10 SLAVE UNITS
---	---	---	---	ON	OFF	ON	ON	11 SLAVE UNITS
---	---	---	---	ON	ON	OFF	OFF	12 SLAVE UNITS
---	---	---	---	ON	ON	OFF	ON	13 SLAVE UNIT
---	---	---	---	ON	ON	ON	OFF	14 SLAVE UNITS
---	---	---	---	ON	ON	ON	ON	15 SLAVE UNITS

SW3 UNIT ADDRESS FOR WIRED CONTROLLER (Refer to SELECTORS SW3-5/8)

You can connect up to 16 indoor units using a single wired controller. Each unit must have its respective address:



Reading and modifying the static fan pressure (wired controller)

FOR READING/MODIFYING THE STATIC PRESSURE, OPERATE DIRECTLY THROUGH THE WIRED CONTROLLER (E.G. YR E-17)

1. With the controller on and without a screensaver active, press the "Fan" and "Set" keys for 5s at the same time; The static pressure icon flashes and its current value is displayed. Using the keys it is possible to modify the static pressure value. Press the SET key to confirm your modifications.
2. The unit number is displayed in the minutes field in the upper-left corner and the static pressure value in the minutes field of the timer field in the upper right. Press the TIME key to move to the unit number.
3. The unit number is displayed in decimal format between 00 and 15. The static pressure value is displayed in a decimal value between 01 and 04.
4. When modifying, press the ON/OFF key to exit the function and turn the unit on/off without confirming any changes.
5. The static pressure value is not retained when the auto restart function is not set.
6. The static pressure value of "slave" units, when connected in groups, is not modifiable.
7. The current/adjustable static pressure value of the indoor unit can be changed by the wired controller, only for certain models, from the advanced functions menu.

Prevalence setting of Ducted with remote control:

Set the mode: VENTILATION

Set the fan speed: HIGH

Quickly press HEALTH 4+n times, where "n" is the desired static pressure level

The Ducted responds with n+1 beeps, indicating the level set

NB:

Slim Ducted Low Pressure: 4 static pressure levels: 0/10/20/30

Medium Pressure: 10 static pressure levels: 25/37/50/70/90/100/110/120/130/150

High Pressure: 10 static pressure levels: 37/50/70/90/110/130/150/170/190/210

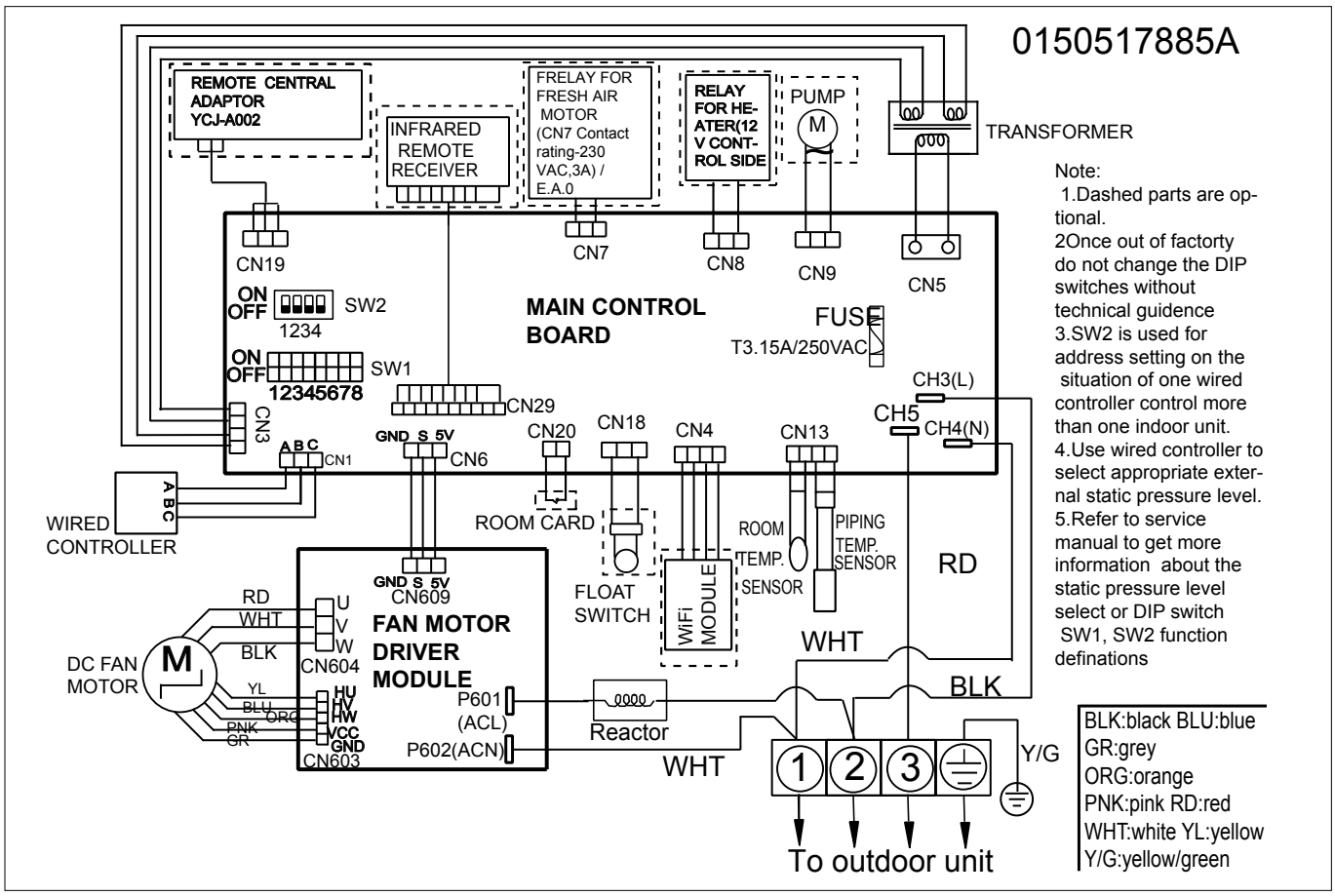
Example:

Slim Ducted Low Pressure AD35S2SS1FA

To set maximum static pressure:

- ventilation mode, high speed; quickly press HEALTH 4+4= 8 TIMES; the Ducted will respond with 4+1=5 BEEPs

IU CIRCUIT DIAGRAM 12.5 kW - 14.0 kW



INDOOR UNIT SETTINGS 12.5 kW - 14.0 kW

SW1 SELECTOR								
SW1-1	**SW1-2**	**SW1-3**	**SW1-4**	**SW1-5**	**SW1-6**	**SW1-7**	**SW1-8**	**MODELS**
ON	OFF	ON	---	---	---	---	---	ADH105M1ERG
OFF	ON	ON	---	---	---	---	---	ADH125M1ERG - AD125S2SM3FA
ON	ON	ON	---	---	---	---	---	ADH140M1ERG - AD140S2SM3FA
---	---	---	ON	---	---	---	---	Room card (ST-BY with closed contact)
---	---	---	OFF	---	---	---	---	Room card (RESTART with closed contact)
---	---	---	---	ON	---	---	---	Cooling-only mode
---	---	---	---	OFF	---	---	---	Heat pump mode (default)
---	---	---	---	---	OFF	ON	OFF	Ducted - Medium Pressure
---	---	---	---	---	ON	ON	OFF	Ducted - High Pressure

SW2 SELECTOR				
SW2-1	**SW2-2**	**SW2-3**	**SW2-4**	**ADDRESS OF WIRED CONTROLLER**
OFF	OFF	OFF	OFF	Master unit
OFF	OFF	OFF	ON	Slave unit 1
OFF	OFF	ON	OFF	Slave unit 2
---	---	---	---	Address No. --
ON	ON	ON	ON	Address No. 16

Reading and modifying the static fan pressure (wired controller)

FOR READING/MODIFYING THE STATIC PRESSURE, OPERATE DIRECTLY THROUGH THE WIRED CONTROLLER (E.G. YR E-17)

1. With the controller on and without a screensaver active, press the "Fan" and "Set" keys for 5s at the same time; The static pressure icon flashes and its current value is displayed. Using the keys it is possible to modify the static pressure value. Press the SET key to confirm your modifications.
2. The unit number is displayed in the minutes field in the upper-left corner and the static pressure value in the minutes field of the timer field in the upper right. Press the TIME key to move to the unit number.
3. The unit number is displayed in decimal format between 00 and 15. The static pressure value is displayed in a decimal value between 01 and 04.
4. When modifying, press the ON/OFF key to exit the function and turn the unit on/off without confirming any changes.
5. The static pressure value is not retained when the auto restart function is not set.
6. The static pressure value of "slave" units, when connected in groups, is not modifiable.
7. The current/adjustable static pressure value of the indoor unit can be changed by the wired controller, only for certain models, from the advanced functions menu.

Prevalence setting of Ducted with remote control:

Set the mode: VENTILATION
Set the fan speed: HIGH
Quickly press HEALTH 4+n times, where "n" is the desired static pressure level
The Ducted responds with n+1 beeps, indicating the level set

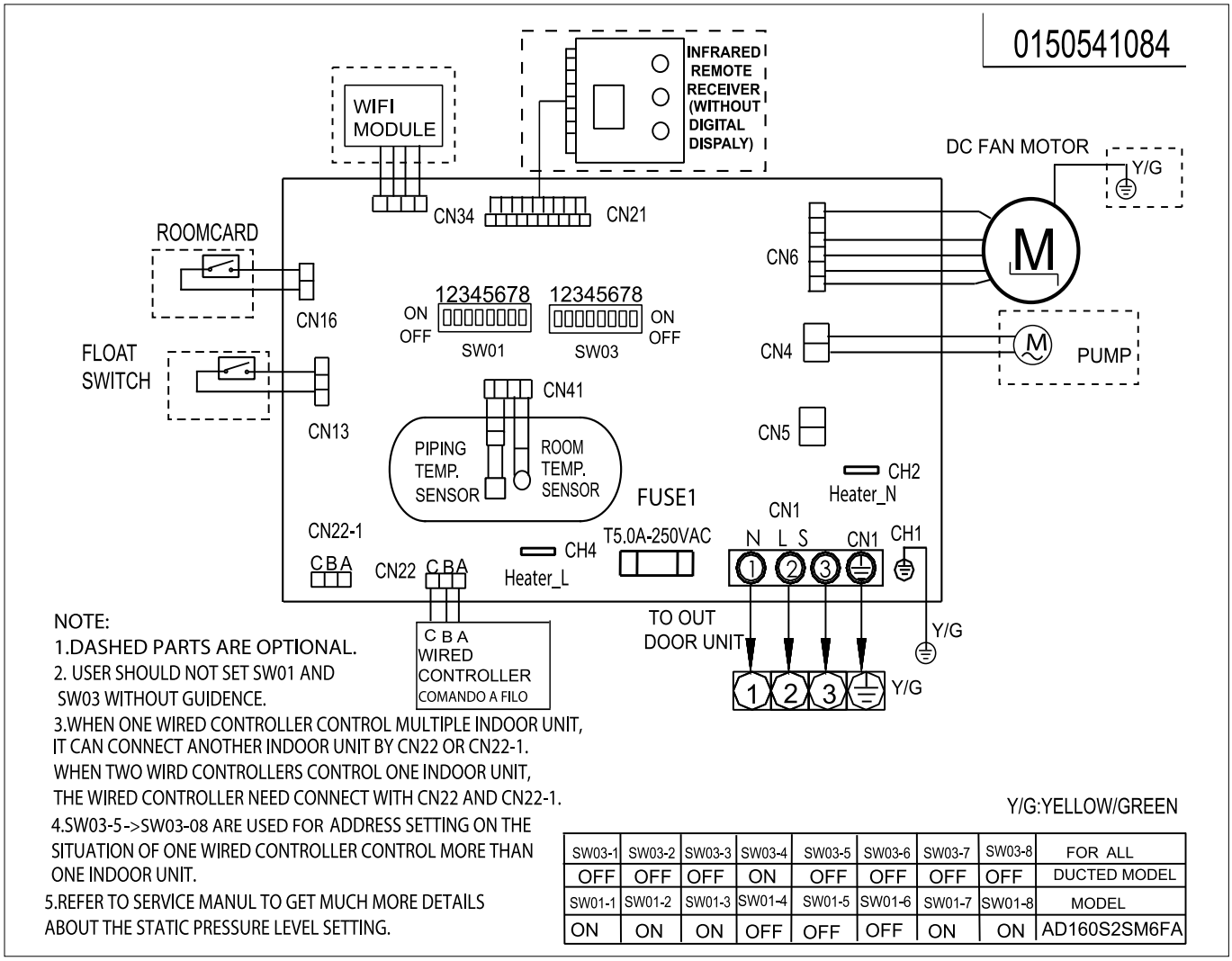
NB:

Slim Ducted Low Pressure: 4 static pressure levels: 0/10/20/30
Medium Pressure: 10 static pressure levels: 25/37/50/70/90/100/110/120/130/150
High Pressure: 10 static pressure levels: 37/50/70/90/110/130/150/170/190/210

Example:

Slim Ducted Low Pressure AD35S2SS1FA
To set maximum static pressure:
- ventilation mode, high speed; quickly press HEALTH 4+4= 8 TIMES; the Ducted will respond with 4+1=5 BEEPs

IU CIRCUIT DIAGRAM 16.0 kW



SW03-1	SW03-2	SW03-3	SW03-4	SW03-5	SW03-6	SW03-7	SW03-8	FOR ALL
OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	DUCTED MODEL
SW01-1	SW01-2	SW01-3	SW01-4	SW01-5	SW01-6	SW01-7	SW01-8	MODEL
ON	ON	ON	OFF	OFF	OFF	ON	ON	AD160S2SM6FA

IU SETTINGS 16 kW

Selector Bank (SW1)

SW1								
Power			Room card	Mode: heating / cool-ing	fresh air / failure alarm	Filter timer	Region	Description
SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	
ON	ON	ON	---	---	---	---	---	AD160S2SM3FA
---	---	---	OFF	---	---	---	---	* Room card disabled
---	---	---	ON	---	---	---	---	Room card with restart
---	---	---	---	OFF	---	---	---	Heat pump (default)
---	---	---	---	ON	---	---	---	Cooling-only
---	---	---	---	---	OFF	---	---	Fan running signal on CN5 (220VAC) / Fresh air
---	---	---	---	---	ON	---	---	Alarm signal on cn5 (220 vac)
---	---	---	---	---	---	OFF	---	Filter hours counter off (default)
---	---	---	---	---	---	ON	---	Filter hours counter enabled
---	---	---	---	---	---	---	OFF	America market
---	---	---	---	---	---	---	ON	Europe market

*Room card: When the contact is closed, the unit will start again in automatic mode with set point at 24°C

Selector Bank SW3

SW3								
SW3-1	**SW3-2**	**SW3-3**	**SW3-4**	**SW3-5**	**SW3-6**	**SW3-7**	**SW3-8**	**Description**
OFF	---	---	---	---	---	---	---	1 deflector motor / no deflector motor (default)
ON	---	---	---	---	---	---	---	2 deflector motors
---	OFF	OFF	---	---	---	---	---	N.D.
---	---	---	OFF	---	---	---	---	static pressure adjustment 4 steps
---	---	---	ON	---	---	---	---	static pressure adjustment 10 steps (default)

Selector bank BM3

Addresses for communication of multiple units with a single wired controller.

BM3								
BM3-1	**BM3-2**	**BM3-3**	**BM3-4**	**BM3-5**	**BM3-6**	**BM3-7**	**BM3-8**	**Description**
---	---	---	---	OFF	OFF	OFF	OFF	Master Unit
---	---	---	---	OFF	OFF	OFF	ON	Unit SLAVE 1
---	---	---	---	OFF	OFF	ON	OFF	Unit SLAVE 2
---	---	---	---	OFF	OFF	ON	ON	Unit SLAVE 3
---	---	---	---	---	---	---	---	Unit SLAVE --
---	---	---	---	ON	ON	ON	ON	Unit SLAVE 15

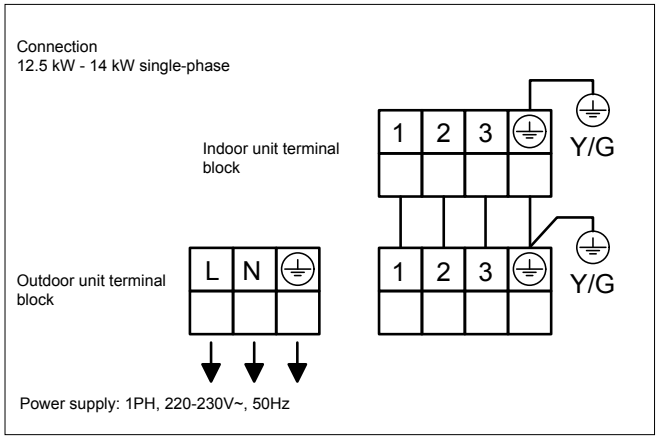
ADH125H1ERG 12.5 kW

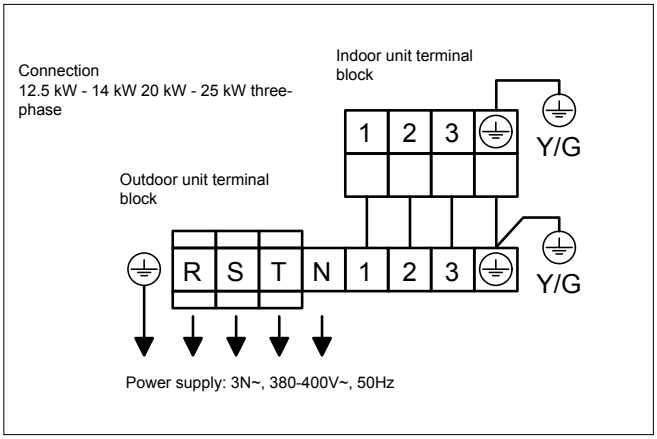
ADH140H1ERG 14.0 kW

ADH200H1ERG 20.0 kW

ADH250H1ERG 25.0 kW

WIRING DIAGRAM 12.5 kW - 14 kW - 20 kW - 25 kW





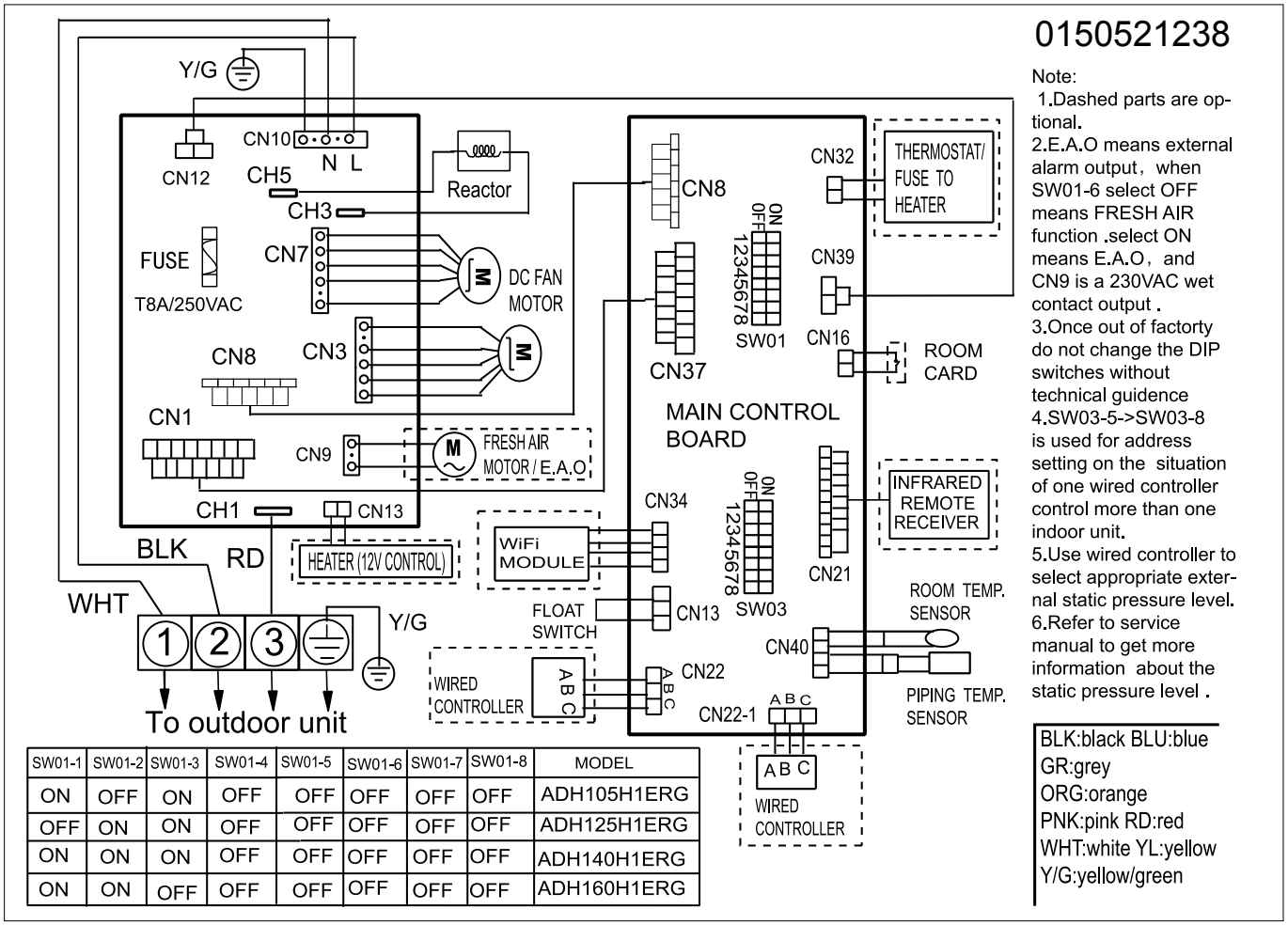
INDOOR UNIT	Model		ADH125H1ERG	ADH140H1ERG	ADH200H1ERG	ADH250H1ERG
COMPATIBLE UNITS R32 / R410A			●	●	R410A only	R410A only
Indoor unit technical data						
Liquid pipe Ø		mm	9.52	9.52	12.7	12.7
Gas pipe Ø		mm	15.88	15.88	19.05	*22,22
Power Supply		Ph/V/Hz	1/220~240/50/60	1/220~240/50/60	1/220~240/50/60	1/220~240/50/60
Treated air volume	H / M / L / SL	m³/h	3250/2750/2250/1750	3600/3100/2600/2100	4320/3780/3420/3060	5040/4500/3960/3600
Net dimensions	WxDxH	mm	1350x490x425	1350x490x425	1330x895x500	1330x895x500
Net weight		kg	61	61	96	96

* To connect the unit to the gas pipe, it is necessary to use a 19.05 mm pipe connector at collar, to be welded to the 22.22 mm gas pipe. The pipe connector is not supplied with the unit.

DIAGNOSTICS 12.5 kW - 14 kW - 20 kW - 25 kW

- To see the list of alarms for the indoor units connected to MONO outdoor units, go to **page 26**

IU CIRCUIT DIAGRAM 12.5 kW - 14 kW



SW01-1	SW01-2	SW01-3	SW01-4	SW01-5	SW01-6	SW01-7	SW01-8	MODEL
ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	ADH105H1ERG
OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	ADH125H1ERG
ON	ON	ON	OFF	OFF	OFF	OFF	OFF	ADH140H1ERG
ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	ADH160H1ERG

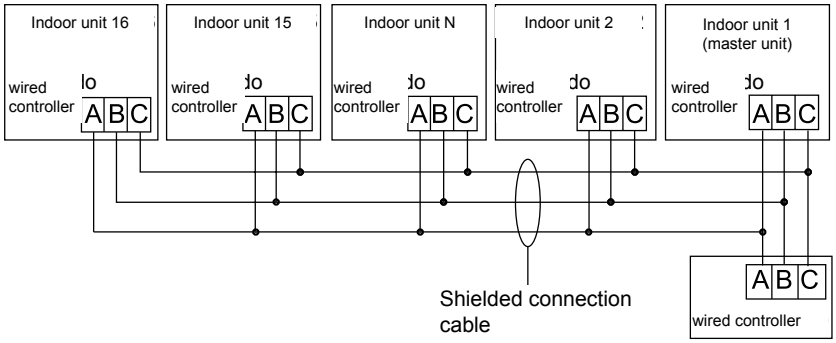
IU SETTINGS 12.5 kW - 14 kW

SW1(BM1) 1=ON 0=OFF								
Power (SW1-1 / SW1-3)			Room card	Cooling only / Heat pump	Enabling feature SMART FOLLOW			Description
SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	
ON	OFF	ON	---	---	---	---	---	Power: 10.5 kW
OFF	ON	ON	---	---	---	---	---	Power: 12.5 kW
ON	ON	ON	---	---	---	---	---	Power: 14.0 kW
ON	ON	OFF	---	---	---	---	---	Power: 16.0 kW
---	---	---	OFF	---	---	---	---	* Room card with restart
---	---	---	ON	---	---	---	---	Room card without restart
---	---	---	---	OFF	---	---	---	Heat pump
---	---	---	---	ON	---	---	---	Cooling-only
---	---	---	---	---	ON	ON	OFF	High pressure (default)

* Room card: When the contact is closed, the unit will start again in automatic mode with set point at 24°C

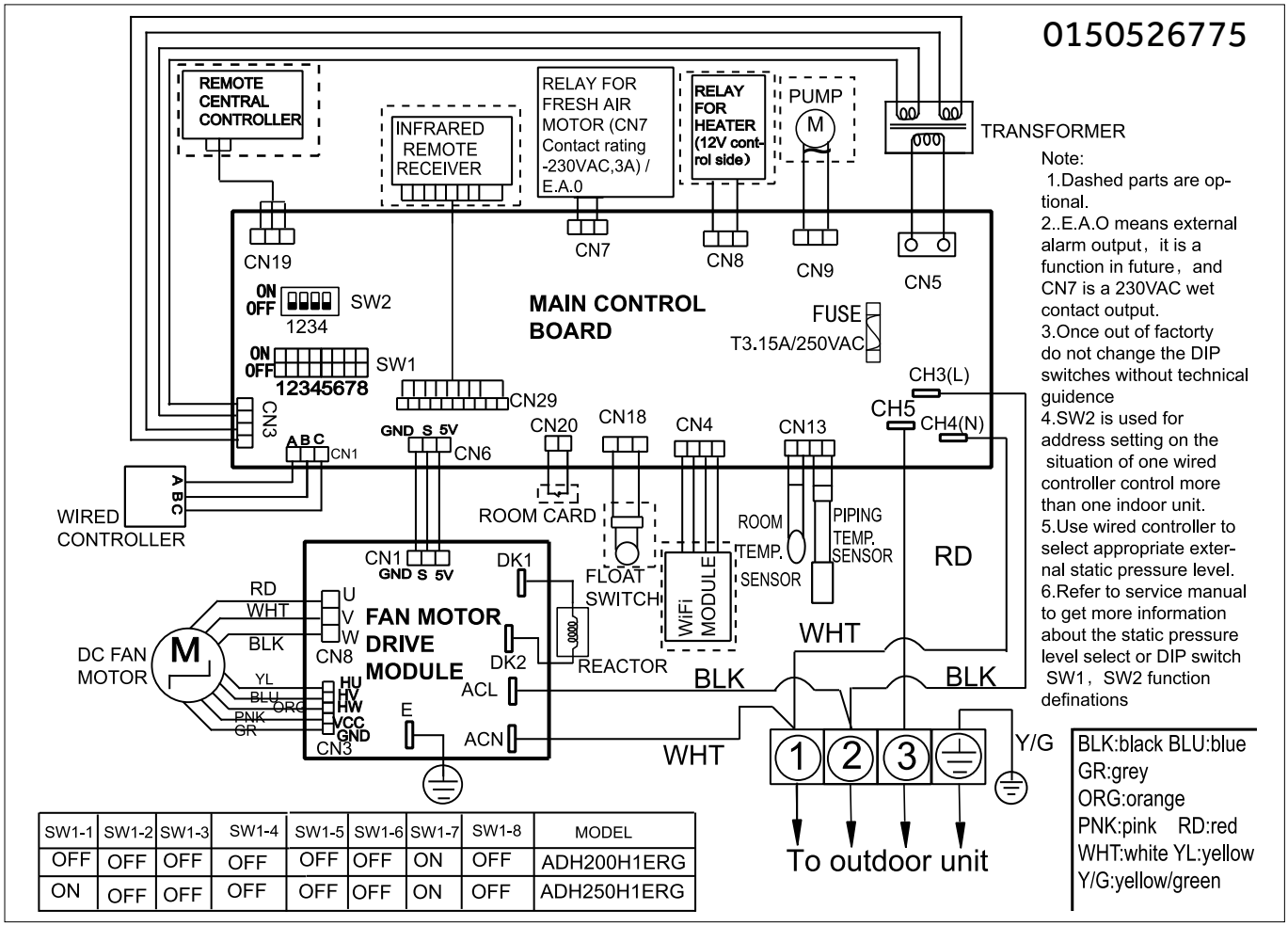
SW2 UNIT ADDRESS FOR WIRED CONTROLLER

Addresses for communication of multiple units with a single wired controller. You can connect up to 16 indoor units using a single wired controller. Each unit must have its respective address:



SW2	
master unit	ON OFF 1 2 3 4
slave unit 1	ON OFF 1 2 3 4
slave unit 2	ON OFF 1 2 3 4

IU CIRCUIT DIAGRAM 20 kW - 25 kW



SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	MODEL
OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	ADH200H1ERG
ON	OFF	OFF	OFF	OFF	OFF	ON	OFF	ADH250H1ERG

IU SETTINGS 20kW- 25 kW

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	MODELS
OFF	OFF	OFF	---	---	---	---	---	ADH200H1ERG
ON	OFF	OFF	---	---	---	---	---	ADH250H1ERG
---	---	---	OFF	---	---	---	---	* Room card with restart
---	---	---	ON	---	---	---	---	Room card without restart
---	---	---	---	OFF	---	---	---	Heat pump
---	---	---	---	ON	---	---	---	Cooling-only
---	---	---	---	---	OFF	ON	OFF	Default

* Room card: When the contact is closed, the unit will start again in automatic mode with set point at 24°C

Reading and modifying the static fan pressure (wired controller)

FOR READING/MODIFYING THE STATIC PRESSURE, OPERATE DIRECTLY THROUGH THE WIRED CONTROLLER (E.G. YR E-17)

1. With the controller on and without a screensaver active, press the "Fan" and "Set" keys for 5s at the same time; The static pressure icon flashes and its current value is displayed. Using the keys it is possible to modify the static pressure value. Press the SET key to confirm your modifications.
2. The unit number is displayed in the minutes field in the upper-left corner and the static pressure value in the minutes field of the timer field in the upper right. Press the TIME key to move to the unit number.
3. The unit number is displayed in decimal format between 00 and 15. The static pressure value is displayed in a decimal value between 01 and 04.
4. When modifying, press the ON/OFF key to exit the function and turn the unit on/off without confirming any changes.
5. The static pressure value is not retained when the auto restart function is not set.
6. The static pressure value of "slave" units, when connected in groups, is not modifiable.
7. The current/adjustable static pressure value of the indoor unit can be changed by the wired controller, only for certain models, from the advanced functions menu.

Prevalence setting of Ducted with remote control:

Set the mode: VENTILATION

Set the fan speed: HIGH

Quickly press HEALTH 4+n times, where "n" is the desired static pressure level

The Ducted responds with n+1 beeps, indicating the level set

NB:

Slim Ducted Low Pressure: 4 static pressure levels: 0/10/20/30

Medium Pressure: 10 static pressure levels: 25/37/50/70/90/100/110/120/130/150

High Pressure: 10 static pressure levels: 37/50/70/90/110/130/150/170/190/210

Example:

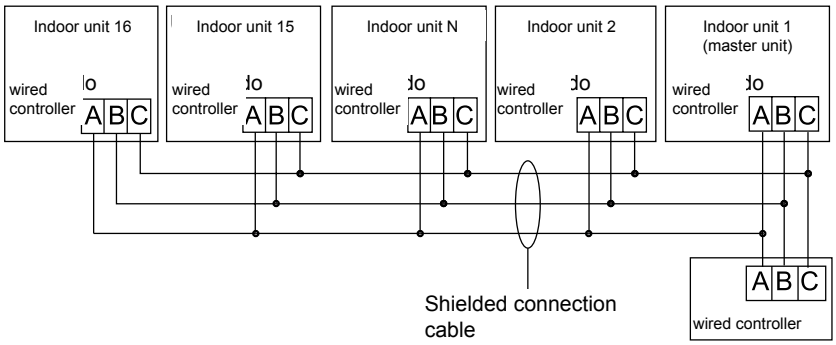
Slim Ducted Low Pressure AD35S2SS1FA

To set maximum static pressure:

- ventilation mode, high speed; quickly press HEALTH 4+4= 8 TIMES; the Ducted will respond with 4+1=5 BEEPs

SW2 UNIT ADDRESS FOR WIRED CONTROLLER

Addresses for communication of multiple units with a single wired controller. You can connect up to 16 indoor units using a single wired controller. Each unit must have its respective address:



SW2	
master unit	ON OFF 1 2 3 4
slave unit 1	ON OFF 1 2 3 4
slave unit 2	ON OFF 1 2 3 4

AP140S2SK1FA(H) 14.0 kW

INDOOR UNIT	Model		AP140S2SK1FA(H)
Indoor unit technical data			
Liquid pipe Ø		mm	9.52
Gas pipe Ø		mm	15.88
Power Supply		Ph/V/Hz	1/220~240/50/60
Treated air volume	H / M / L	m³/h	1850/1500/1350
Net dimensions	WxDxH	mm	600x350x1850
Net weight		kg	

DIAGNOSTICS IU 14 KW

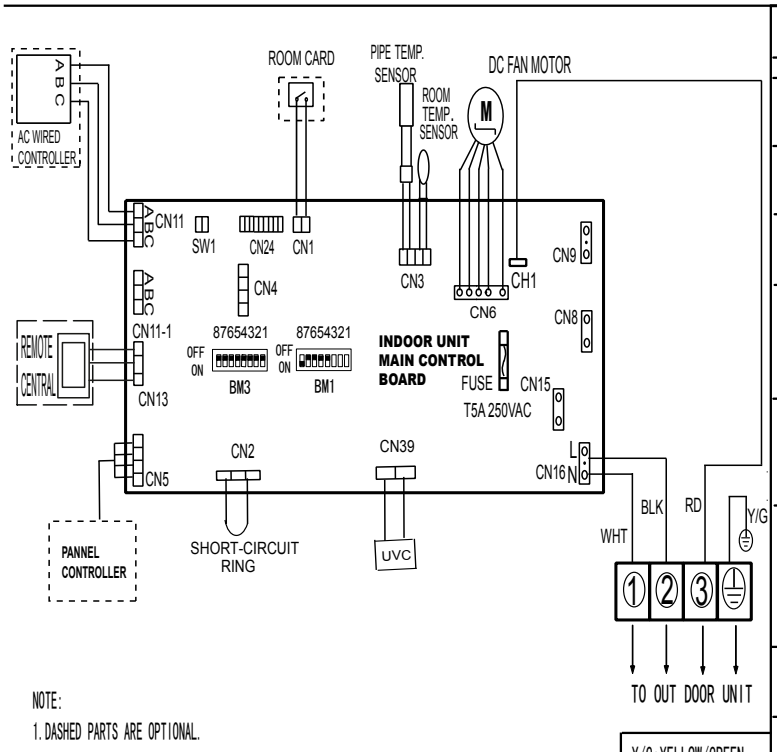
- To see the list of alarms for the indoor units connected to MONO outdoor units, go to **page 30**

NOTE: In case of "F7" alarm on the display, refer to the alarm indication on the outdoor unit, as the causes can be multiple.

IU CIRCUIT DIAGRAM 14 KW

INDOOR UNIT WIRING DIAGRAM &TROUBLE SHOOTING

0150547385



NOTE:
1. DASHED PARTS ARE OPTIONAL.
2. USER SHOULD NOT CHANGE THE DIP SWITCH BM1 AND BM3 WITHOUT GUIDANCE.

SW1-1	SW1-2	SW1-3	MODEL	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8
ON	ON	ON	AP140S2SK1FA (H)	OFF	OFF	OFF	OFF	ON

Y/G: YELLOW/GREEN
RD: RED WHT: WHITE
BLK: BLACK
****
DC: DIRECT-CURRENT
AC: ALTERNATING-CURRENT
TEMP.: TEMPERATURE

LED flash times of indoor PCB		display panel	Contents of Malfunction	Possible reasons
LED6	LED1			
0	1	E1	Malfunction of indoor unit ambient temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	2	E2	Malfunction of indoor unit piping temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	6	E6	Outdoor high pressure exceeds the setpoint	The pressure switch is damaged or bad control board
0	7	E7	Over-voltage protection	The power supply voltage,or the control board is damaged
0	8	E8	Abnormal communication between panel and indoor unit	Wrong connection or panel broken,or PCB faulty
0	9	E9	Indoor and outdoor unit communication failure	Indoor or outdoor control board is damaged; or the communication wiring is damaged
0	14	EA	Indoor unit DC fan motor abnormal	DC Fan motor disconected, or DC Fan broken or circuit broken
0	/	FC	Indoor pipe temperature is too high	The compressor is not running or damaged

Note:
1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED6 flash times stands for ten's place,and LED1 flash times stands for one's place, use this ten-digit number minus 20,then will get the outdoor error code.For example,if the outdoor error code is 15,LED6 will flash 3 times firstly,two seconds later,LED1 will flash 5 times , and four seconds later the process will repeat again.
2.LED6 is a green one on the indoor PCB,LED1 is a yellow one.
3.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.

IU SETTINGS 14 kW

Selector Bank BM1 (SW1)

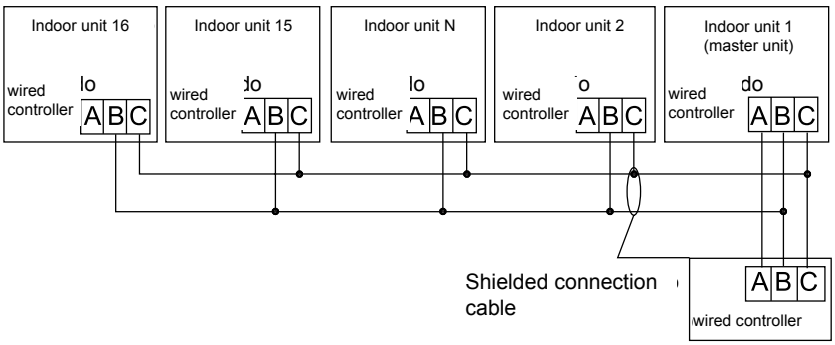
BM1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	DESCRIPTION
ON	ON	ON	---	---	---	---	---	AP140S2SK1FA
---	---	---	ON	---	---	---	---	Room card enabled
---	---	---	OFF	---	---	---	---	Room card disabled
---	---	---	---	ON	---	---	---	Cooling-only
---	---	---	---	OFF	---	---	---	Heat pump (default)
---	---	---	---	---	OFF	OFF	ON	Default
---	---	---	---	---	OFF	ON	OFF	N.D.

Selector Bank BM3 (SW3)

Indoor unit addresses (to be used in the case of multiple indoor units connected to a single wired controller)

BM3-1	BM3-2	BM3-3	BM3-4	BM3-5	BM3-6	BM3-7	BM3-8	DESCRIPTION
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Unit MASTER
OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	Unit SLAVE 1
OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	Unit SLAVE 2
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	Unit SLAVE 3
OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	Unit SLAVE 4
OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	Unit SLAVE 5
OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	Unit SLAVE 6
OFF	OFF	OFF	OFF	OFF	ON	ON	ON	Unit SLAVE 7
OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	Unit SLAVE 8
OFF	OFF	OFF	OFF	ON	OFF	OFF	ON	Unit SLAVE 9
OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	Unit SLAVE 10
OFF	OFF	OFF	OFF	ON	OFF	ON	ON	Unit SLAVE 11
OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	Unit SLAVE 12
OFF	OFF	OFF	OFF	ON	ON	OFF	ON	Unit SLAVE 13
OFF	OFF	OFF	OFF	ON	ON	ON	OFF	Unit SLAVE 14
OFF	OFF	OFF	OFF	ON	ON	ON	ON	Unit SLAVE 15

You can connect up to 16 indoor units using a single wired controller.
Each unit must have its respective address:



Note:
In tower units, pressing the "lock" button from the remote control not only locks the remote control but also the "lock" symbol appears on the tower display and the buttons are inhibited.

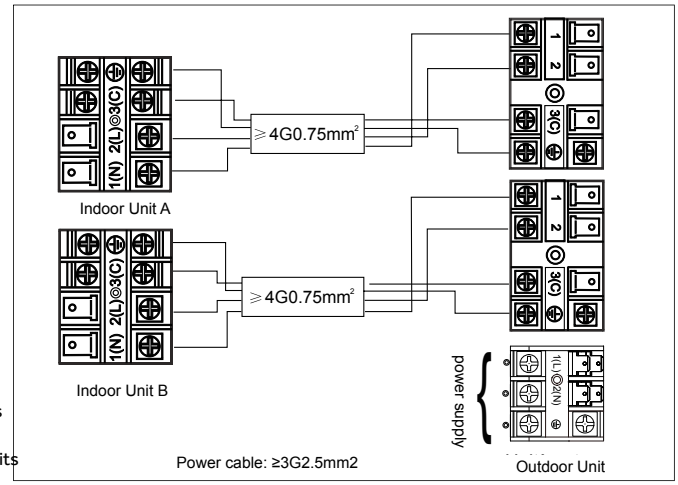
(2) 2U40S2SM1FA (2 couplings) 4.2 kW
2U50S2SM1FA (2 couplings) 5.0 kW
(1-2) 2U50S2SM1FA-3 (2 couplings) 5.0 kW
3U55S2SR3FA (3 couplings) 5.5 kW
(1-2) 3U55S2SR5FA (3 couplings) 5.5 kW
(1-2) 3U70S2SR5FA (3 couplings) 7.0 kW
(1-2) 4U75S2SR5FA (4 couplings) 7.5 kW
4U85S2SR3FA (4 couplings) 8.5 kW
(1-2) 4U85S2SR5FA (4 couplings) 8.5 kW
(1-2) 5U90S2SS5FA (5 couplings) 9.0 kW
(1-2) 5U105S2SS5FA (5 couplings) 10.5 kW
5U125S2SN1FA (5 couplings) 12.5 kW

1 **ATTENTION: Jade** indoor units are only compatible with the indicated outdoor units

2 **ATTENTION: Expert** indoor units are only compatible with the indicated outdoor units

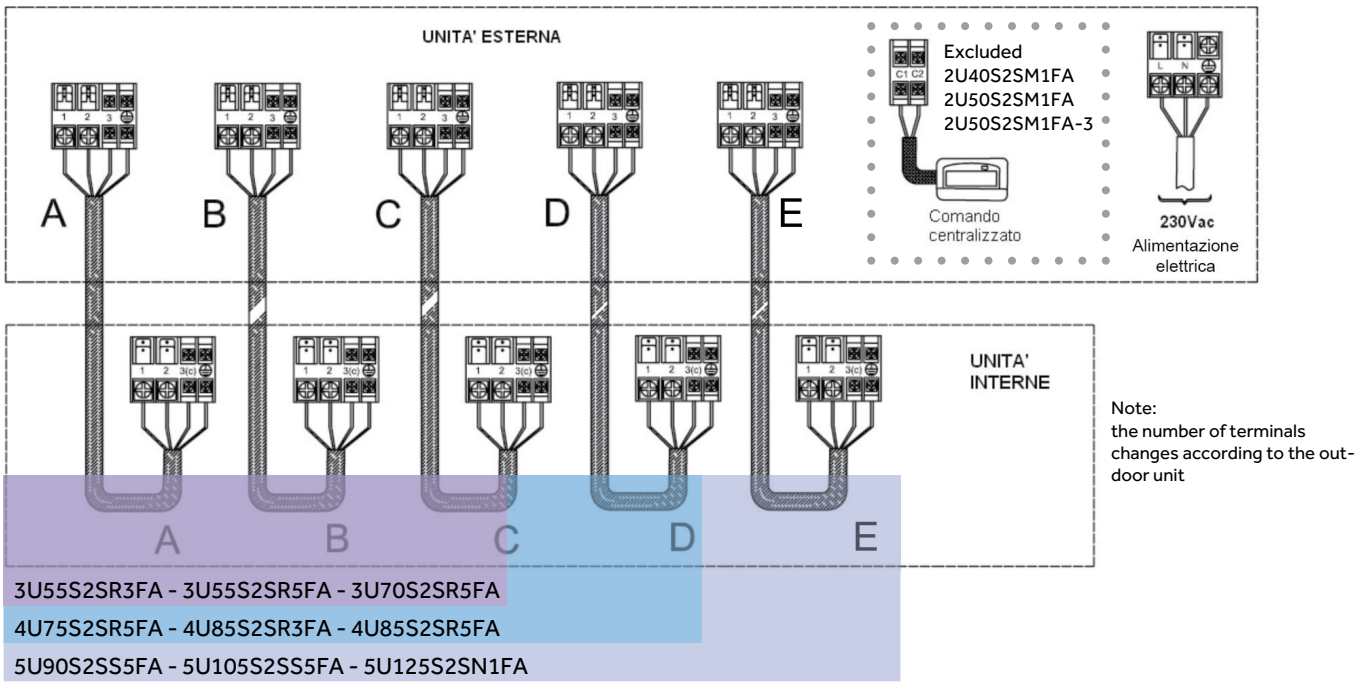
WIRING DIAGRAM 1:2

2U40S2SM1FA - 2U50S2SM1FA - 2U50S2SM1FA-3



WIRING DIAGRAM

1:3 3U55S2SR3FA - 3U55S2SR5FA- 3U70S2SR5FA/ 1:4 4U75S2SR5FA- 4U85S2SR3FA - 4U85S2SR5FA / 1:5 5U90S2SS5FA- 5U105S2SS5FA-5U125S2SN1FA



Note:
the number of terminals changes according to the out-door unit

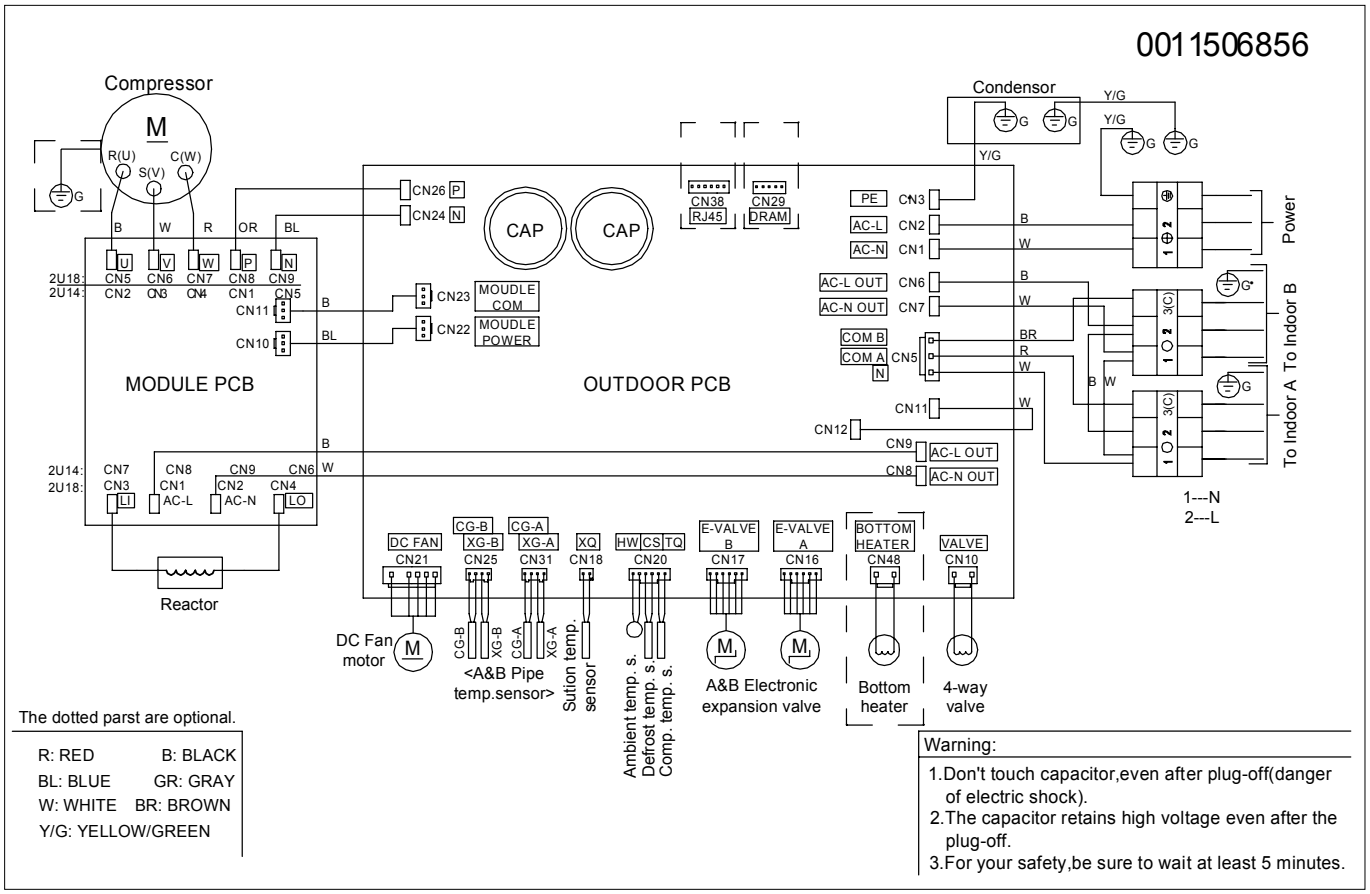
OUTDOOR UNIT	Model		2U40S2SM1FA	2U50S2SM1FA	2U50S2SM1FA-3	3U55S2SR3FA	3U55S2SR5FA	3U70S2SR5FA
Outdoor unit technical data								
Power Supply		Ph/V/Hz	1/220-240/50	1/220-240/50/60	1/220-240/50	1/220-240/50/60	1/220-240/50/60	1/220-240/50/60
Liquid pipe Ø		mm	2x6.35	2x6.35	2x6.35	3x6.35	3x6.35	3x6.35
Gas pipe Ø		mm	2x9.52	2x9.52	2x9.52	3x9.52	3x9.52	3x9.52
Total maximum pipe length		m	30	30	30	50	50	60
Maximum single line OU-IU pipe length		m	20	20	20	25	25	25
Standard pipe length without additional refrigerant charge		m	20	20	20	30	30	30
Maximum IU - OU height difference		m	15	15	15	15	15	15
Max IU - IU height difference		m	15	7.5	15	7.5	7.5	7.5
Refrigerant charge in the factory R32		kg	1.1	1.4	1.1	1,6	1.4	1,6
Additional refrigerant charge R32		g/m	20	20	20	20	20	20
Dimensions	WxDxH	mm	800x275x553	800x275x553	800x275x553	890x340x700	890x340x700	890x340x700
Net weight		kg	34	36	36	51	50	54
Outdoor unit power cable		mm²	3G1.5	3G1.5	3G1.5	3G2.5	3G2.5	3G2.5
Outdoor unit - Indoor unit cable		mm²	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5

DIAGNOSTICS FOR MULTI

Refer to the alarm list on **page 28**

OUTDOOR UNIT	Model		4U75S2SR5FA	4U85S2SR3FA	4U85S2SR5FA	5U90S2SS5FA	5U105S2SS5FA	5U125S2SN1FA
Outdoor unit technical data								
Power Supply		Ph/V/Hz	1/220-240/50/60	1/220-240/50/60	1/220-240/50/60	1/220-240/50/60	1/220-240/50/60	1/220-240/50/60
Liquid pipe Ø		mm	4x6.35	4x6.35	4x6.35	5x6.35	5x6.35	5x6.35
Gas pipe Ø		mm	3x9.52+1x12.7	3x9.52+1x12.7	3x9.52+1x12.7	3x9.52+2x12.7	3x9.52+2x12.7	3x9.52+2x12.7
Total maximum pipe length		m	70	70	70	80	80	100
Maximum single line OU-IU pipe length		m	25	25	25	25	25	25
Standard pipe length without additional refrigerant charge		m	40	40	40	40	40	50
Maximum IU - OU height difference		m	15	15	15	15	15	15
Max IU - IU height difference		m	7.5	7.5	7.5	7.5	7.5	7.5
Refrigerant charge in the factory R32		kg	2.2	2.2	2.2	2.4	2.4	2.5
Additional refrigerant charge R32		g/m	20	20	20	20	20	20
Dimensions	WxDxH	mm	890x340x700	890x340x700	890x340x700	920x372x760	920x372x760	950x370x965
Net weight		kg	61	61	61	66	66	79
Outdoor unit power cable		mm²	3G2.5	3G4	3G4	3G4	3G4	3G4
Outdoor unit - Indoor unit cable		mm²	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5

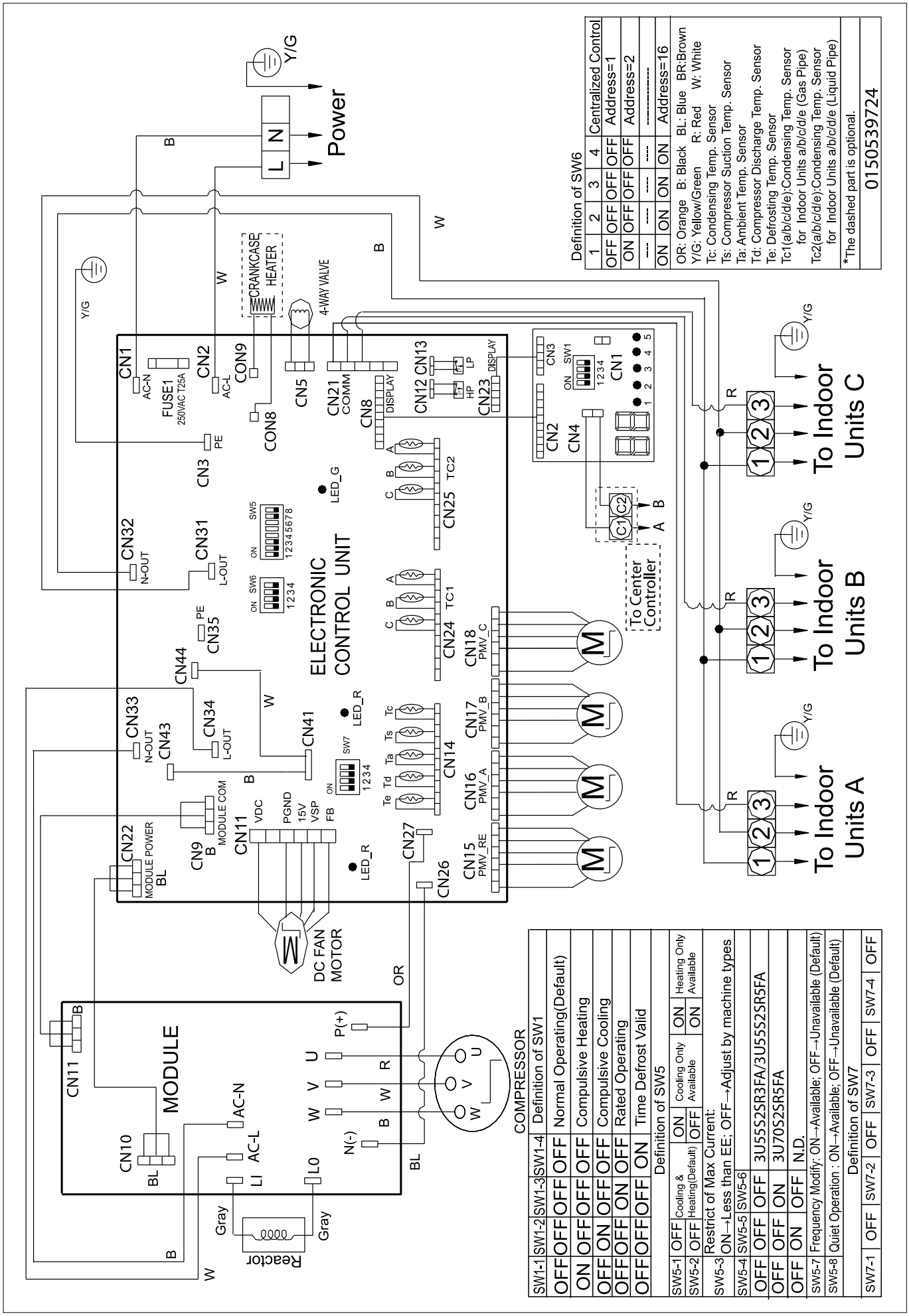
OU WIRING DIAGRAM 2U40S2SM1FA 4,0kW - 2U50S2SM1FA 5,0kW - 2U50S2SM1FA-3 5.0 kW



SETTINGS:

MODEL		J3
HAIER	2U40S2SM1FA	OFF
	2U50S2SM1FA	ON
	2U50S2SM1FA-3	ON

OU WIRING DIAGRAM 3U55S2SR3FA 5.5 kW - 3U55S2SR5FA 5.5 kW - 3U70S2SR5FA 7.0 kW



Definition of SW6				
1	2	3	4	Centralized Control
OFF	OFF	OFF	OFF	Address=1
ON	OFF	OFF	OFF	Address=2
---	---	---	---	----------
ON	ON	ON	ON	Address=16

OR: Orange B: Black BL: Blue BR:Brown
Y/G: Yellow/Green R: Red W: White
Tc: Condensing Temp. Sensor
Ts: Compressor Suction Temp. Sensor
Ta: Ambient Temp. Sensor
Td: Compressor Discharge Temp. Sensor
Te: Defrosting Temp. Sensor
Tc1(a/b/c/d/e):Condensing Temp. Sensor for Indoor Units a/b/c/d/e (Gas Pipe)
Tc2(a/b/c/d/e):Condensing Temp. Sensor for Indoor Units a/b/c/d/e (Liquid Pipe)

*The dashed part is optional.

0150539724

SW1-1	SW1-2	SW1-3	SW1-4	Definition of SW1
OFF	OFF	OFF	OFF	Normal Operating(Default)
ON	OFF	OFF	OFF	Compulsive Heating
OFF	ON	OFF	OFF	Compulsive Cooling
OFF	OFF	ON	OFF	Rated Operating
OFF	OFF	OFF	ON	Time Defrost Valid

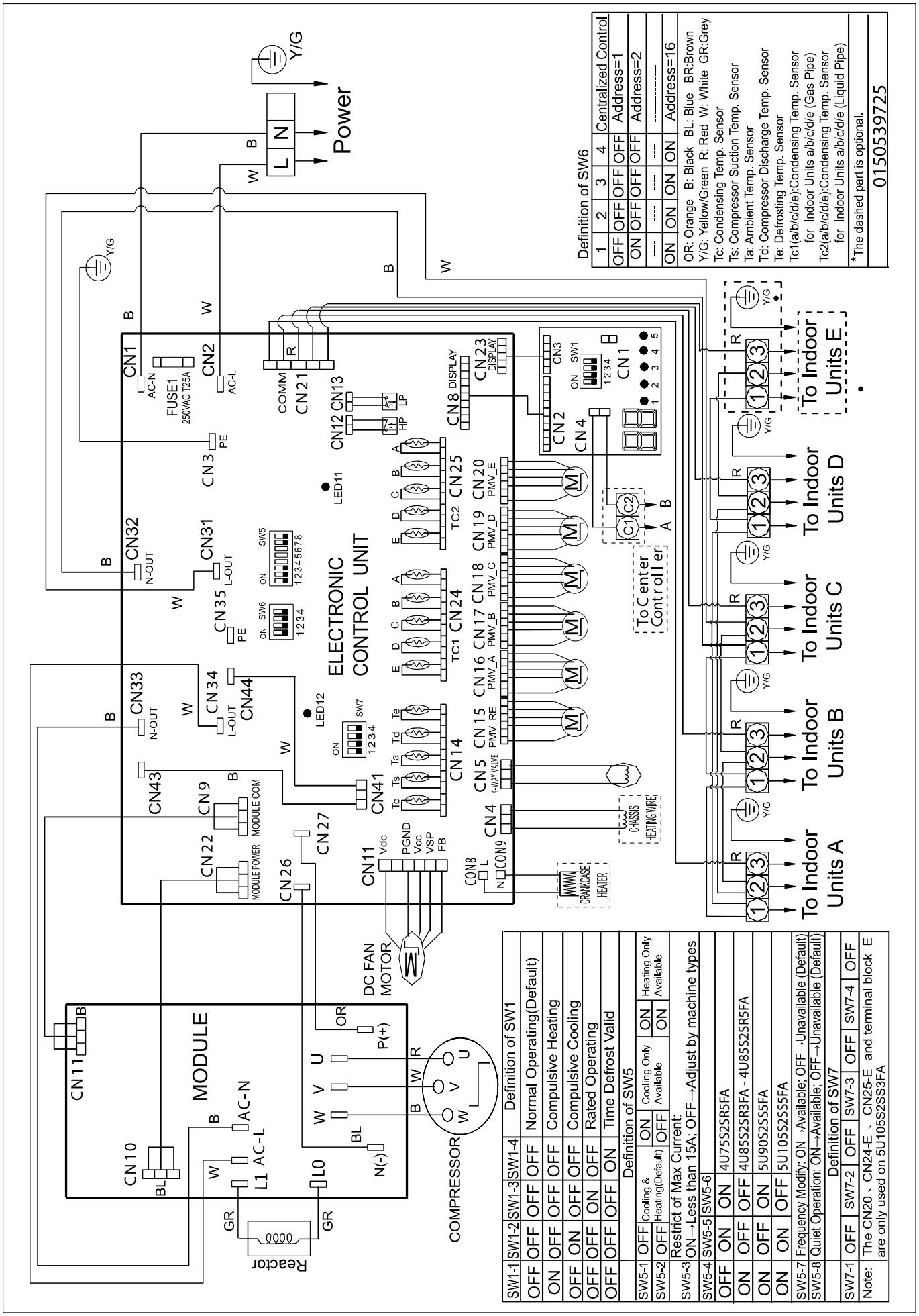
Definition of SW5

SW5-1	OFF	Cooling & Heating(Default)	ON	Cooling Only Available	Heating Only Available
SW5-2	OFF		OFF		
SW5-3	Restrict of Max Current: ON→Less than EE; OFF→Adjust by machine types				
SW5-4	SW5-5	SW5-6			
OFF	OFF	OFF	3U55S2SR3FA/3U55S2SR5FA		
OFF	OFF	ON	3U70S2SR5FA		
OFF	ON	OFF	N.D.		
SW5-7	Frequency Modify: ON→Available; OFF→Unavailable (Default)				
SW5-8	Quiet Operation : ON→Available; OFF→Unavailable (Default)				

Definition of SW7

SW7-1	SW7-2	SW7-3	SW7-4
OFF	OFF	OFF	OFF

OU WIRING DIAGRAM 4U75S2SR5FA 7.5 kW - 4U85S2SR3FA 8.5 kW - 4U85S2SR5FA 8.5 kW - 5U90S2SS5FA 9.0 kW - 5U105S2SS5FA 10.5 kW



OUTDOOR MOTHERBOARD SETTING 0151800364A (for 3U/4U/5U models):
The settings listed below are to be performed in the SW5 block of the motherboard:

SW5								DESCRIPTION
1	2	3	4	5	6	7	8	
OFF	OFF	---	---	---	---	---	---	HEAT PUMP (default)
ON	OFF	---	---	---	---	---	---	COOLING-ONLY
ON	ON	---	---	---	---	---	---	HEAT PUMP ONLY
---	---	OFF	---	---	---	---	---	ABSORPTION ACCORDING TO PAIRING
---	---	ON	---	---	---	---	---	MAX 15A ABSORPTION
---	---	---	OFF	OFF	OFF	---	---	MODEL 3U55S2SR3FA - 3U55S2SR5FA
---	---	---	OFF	OFF	ON	---	---	MODEL 3U70S2SR5FA
---	---	---	OFF	ON	ON	---	---	MODEL 4U75S2SR5FA
---	---	---	ON	OFF	OFF	---	---	MODEL 4U85S2SR3FA - 4U85S2SR5FA
---	---	---	ON	OFF	ON	---	---	MODEL 5U90S2SS5FA
---	---	---	ON	ON	OFF	---	---	MODEL 5U105S2SS5FA
---	---	---	---	---	---	OFF	---	TEMPERATURE CORRECTION DISABLED (DEFAULT)
---	---	---	---	---	---	ON	---	TEMPERATURE CORRECTION ENABLED
---	---	---	---	---	---	---	OFF	QUIET MODE DISABLED (DEFAULT)
---	---	---	---	---	---	---	ON	QUIET MODE ENABLED

Selecting the mode (SW5-1-2):
Selecting the default mode of operation: keep both selectors in OFF

Selecting the absorption limit (SW5-3):
The system has a limitation hat can lower the consumption of the device from the maximum reachable to the nominal. Raising the switch 3 of SW5 limits the absorption to a maximum of 15A.

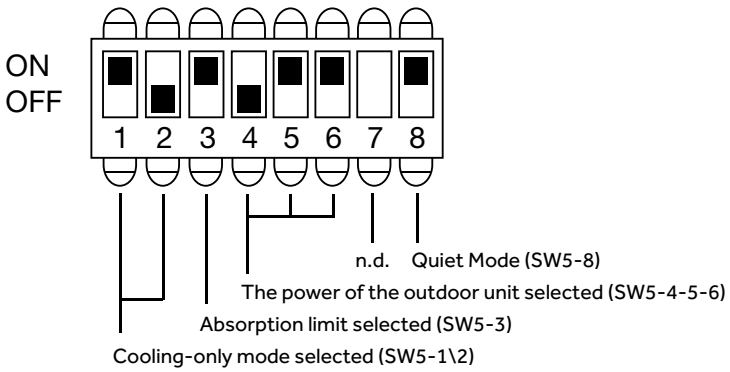
Selecting the outdoor unit power (SW5-4-5-6):
Through switches 4-5-6 of SW5, it is possible to select the power and consequently the model of the outdoor unit where the motherboard is to be applied.

Function not available (SW5-7):
Function not available, keep the selector in OFF.

QUIET mode (SW5-8):
The QUIET function allows you to reduce the frequency of the compressor so that the compressor becomes quieter.

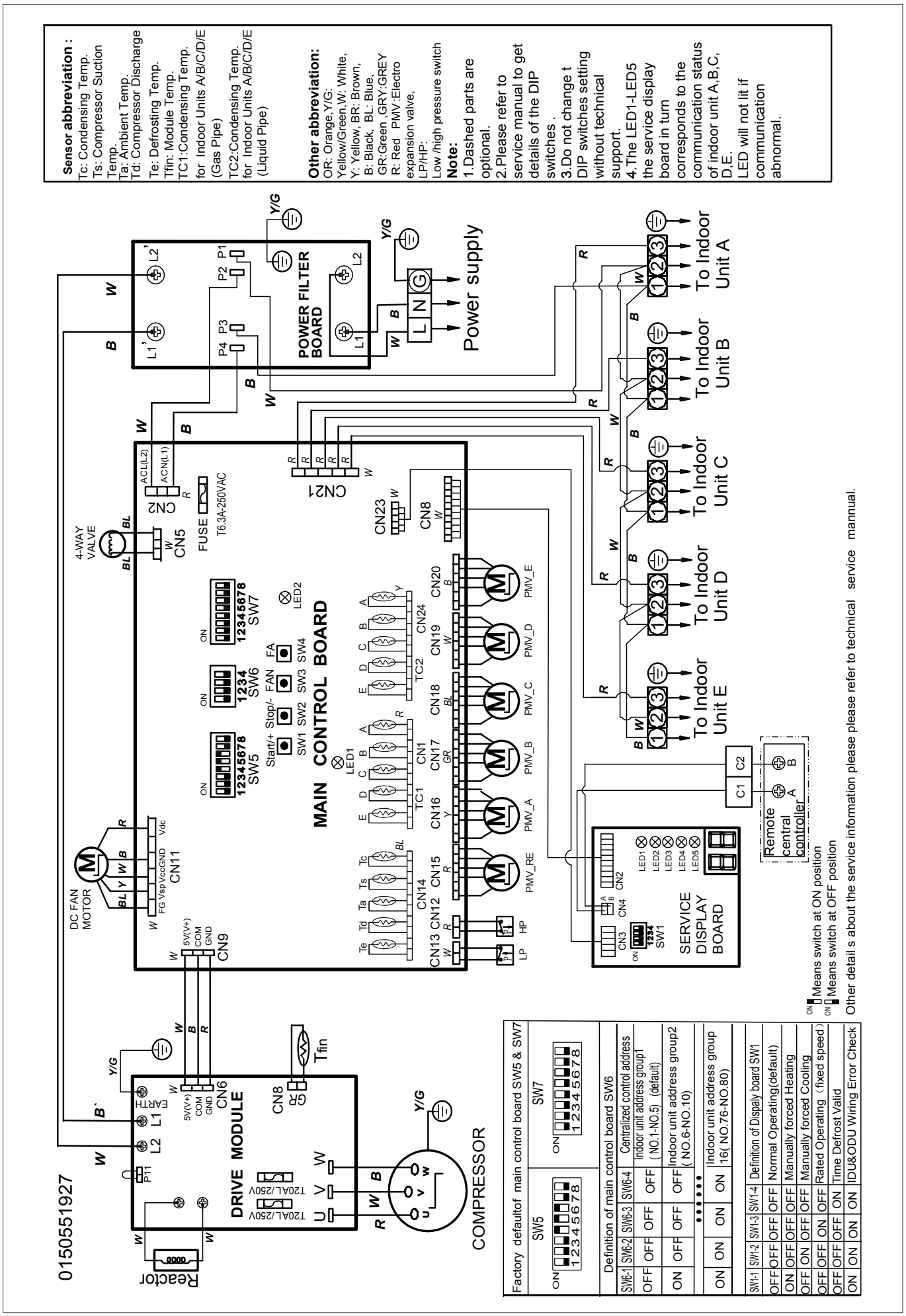
Settings example

SW5 setting



SW7				DESCRIPTION
1	2	3	4	
---	ON	ON	---	DEFROSTING THRESHOLD: 6°C
---	OFF	OFF	---	DEFROSTING THRESHOLD: 8°C (DEFAULT)

OU WIRING DIAGRAM 5U125S2SN1FA 12.5 kW



OUTDOOR MOTHERBOARD SETTING 0151800578A

The settings listed below are to be performed in the SW5 block of the motherboard:

SW5								DESCRIPTION
1	2	3	4	5	6	7	8	
OFF	---	---	---	---	---	---	---	HEAT PUMP (default)
ON	---	---	---	---	---	---	---	COOLING-ONLY
---	OFF	---	---	---	---	---	---	DEFROSTING THRESHOLD 8°C (DEFAULT)
---	ON	---	---	---	---	---	---	DEFROSTING THRESHOLD 6°C
---	---	OFF	---	---	---	---	---	ABSORPTION ACCORDING TO PAIRING
---	---	ON	---	---	---	---	---	MAX 15A ABSORPTION
---	---	---	ON	ON	ON	---	---	MODEL 5U125S2SN1FA
---	---	---	---	---	---	OFF	---	TEMPERATURE CORRECTION DISABLED (DEFAULT)
---	---	---	---	---	---	ON	---	TEMPERATURE CORRECTION ENABLED
---	---	---	---	---	---	---	OFF	QUIET MODE DISABLED (DEFAULT)
---	---	---	---	---	---	---	ON	QUIET MODE ENABLED

Selecting the mode (SW5-1):

Selecting the default mode of operation: keep both selectors in OFF

Selecting the mode (SW5-2):

Select the threshold for defrost intervention (8° default).

Selecting the absorption limit (SW5-3):

The system has a limitation hat can lower the consumption of the device from the maximum reachable to the nominal. Raising the switch 3 of SW5 limits the absorption to a maximum of 15A.

Selecting the outdoor unit power (SW5-4-5-6):

Through switches 4-5-6 of SW5, it is possible to select the power and consequently the model of the outdoor unit where the motherboard is to be applied.

Function not available (SW5-7):

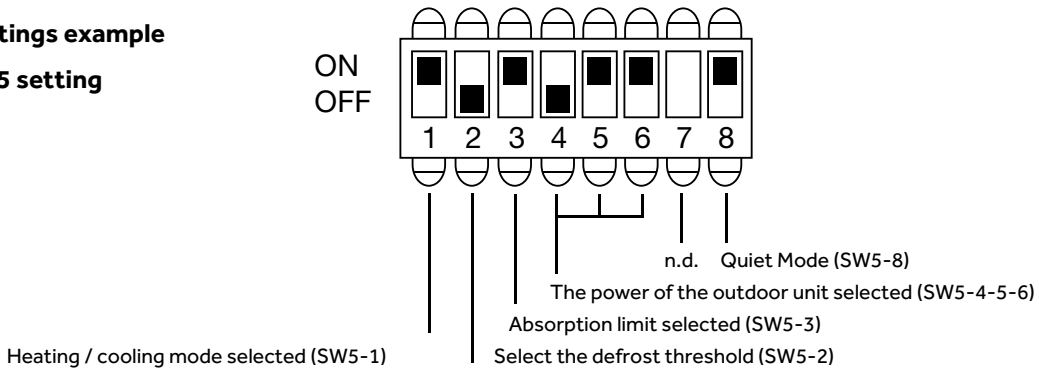
Function not available, keep the selector in OFF.

QUIET mode (SW5-8):

The QUIET function allows you to reduce the frequency of the compressor so that the compressor becomes quieter.

Settings example

SW5 setting



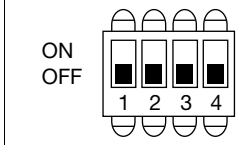
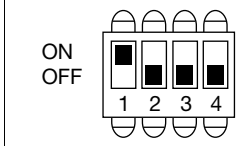
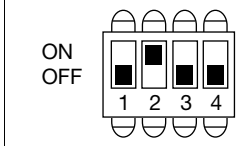
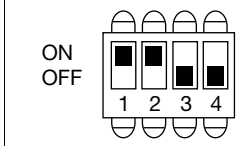
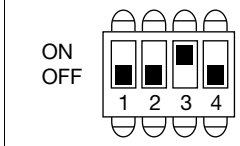
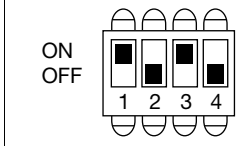
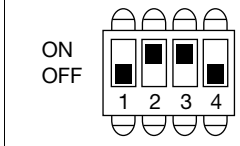
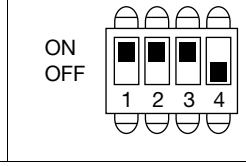
OUTDOOR UNIT ADDRESSING FOR PLANT MANAGEMENT VIA SW6 CENTRALIZED CONTROLLER SW6

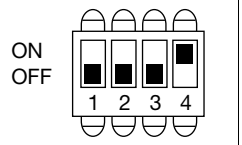
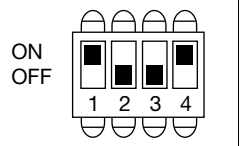
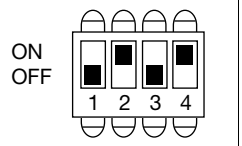
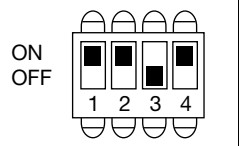
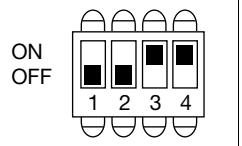
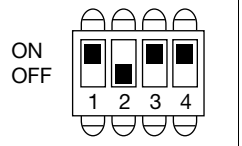
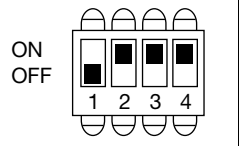
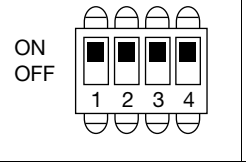
SW6 block of the main board of the outdoor unit is used to address indoor units in order to manage the plant by centralized controller (YCZ-A004 / YCZ-G001 / HC-SA164DBT).

The centralized controller reserves five indoor unit addresses for each connected outdoor unit (even if the outdoor has less than five couplings).

ATTENTION: Two-coupling outdoor units 2U40S2SM1FA, 2U50S2SM1FA and 2U50S2SM1FA-3 do not support centralized controllers YCZ-A004 / YCZ-G001 / HC-SA164DBT.

The setting to be performed is as follows:

OU NUMBER	SW6	IU ADDRESSES
1		1 to 5
2		6 to 10
3		11 to 15
4		16 to 20
5		21 to 25
6 **Limit for con-troller** **YCZ-G001**		26 to 30
7		31 to 35
8		36 to 40

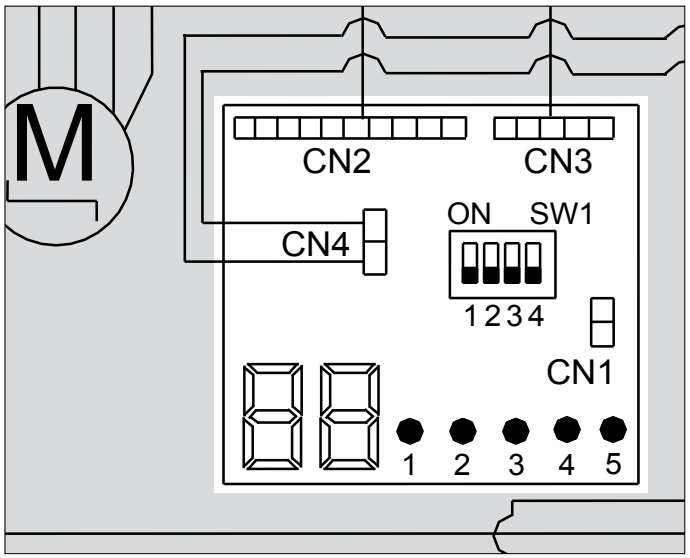
OU NUMBER	SW6	IU ADDRESSES
9		41 to 45
10		46 to 50
11		51 to 55
12 Limit for con-troller HC-SA164DBT		56 to 60
13		61 to 65
14		66 to 70
15		71 to 75
16		76 to 80

For the wiring diagram with YCZ-A004 interface, refer to the diagram on **page 223**.

For the wiring diagram with HC-SA164DBT interface, refer to the diagram on **page 228**.

CONTROL VIA SW1

Settings for service board on outdoor 0151800076A / 0151800076B



The settings listed below are to be performed in the SW1 block of the outdoor service board:

SW1	DESCRIPTION
ON OFF 1 2 3 4	DEFAULT SETTINGS NORMAL OPERATION
ON OFF 1 2 3 4	FORCED HEATING: 50HZ, outdoor fan in step 5, valve opening 200 °, the rest under normal conditions
ON OFF 1 2 3 4	FORCED COOLING: 60HZ, outdoor fan in step 7, valve opening 200 °, the rest under normal conditions
ON OFF 1 2 3 4	NOMINAL OPERATING LIMIT: limits the output of the unit to the respective rated power
ON OFF 1 2 3 4	FORCED DEFROST EVERY 50 MINUTES: The outdoor unit will perform a forced defrosting every 50 minutes if the outside ambient temperature is less than 7°C
ON OFF 1 2 3 4	INCORRECT WIRING TEST

Forcing the system (heating\cooling) (SW1-1\2):

The system has the ability to be forced into both cooling and heat pump via switches 1 and 2 of SW1.

- Raising switch 1 forces the plant into "Heat Pump"
- Raising the switch 2 forces the plant into "Cooling"

When performing this forced operation, the indoor units will start automatically, make sure before forcing the system that the indoor units are turned off.

Wrong wiring test (SW1-1\2\3\4)

To perform the "WRONG WIRING TEST" you have to place the dip switches of the SW1 block all to "ON" before powering on the system, so as to prevent other settings (e.g. FORCED COOLING).

The indoor units automatically turn on in cooling mode, the abbreviation "CH" starts flashing on the outdoor unit's display.

The outdoor unit opens the expansion valves one at a time and compares the data that the indoor units detect, so that you can see if the refrigerant passage occurs on the unit “A”, “B” and so on, to find the discrepancies between electrical connection and refrigerator and notify the user.

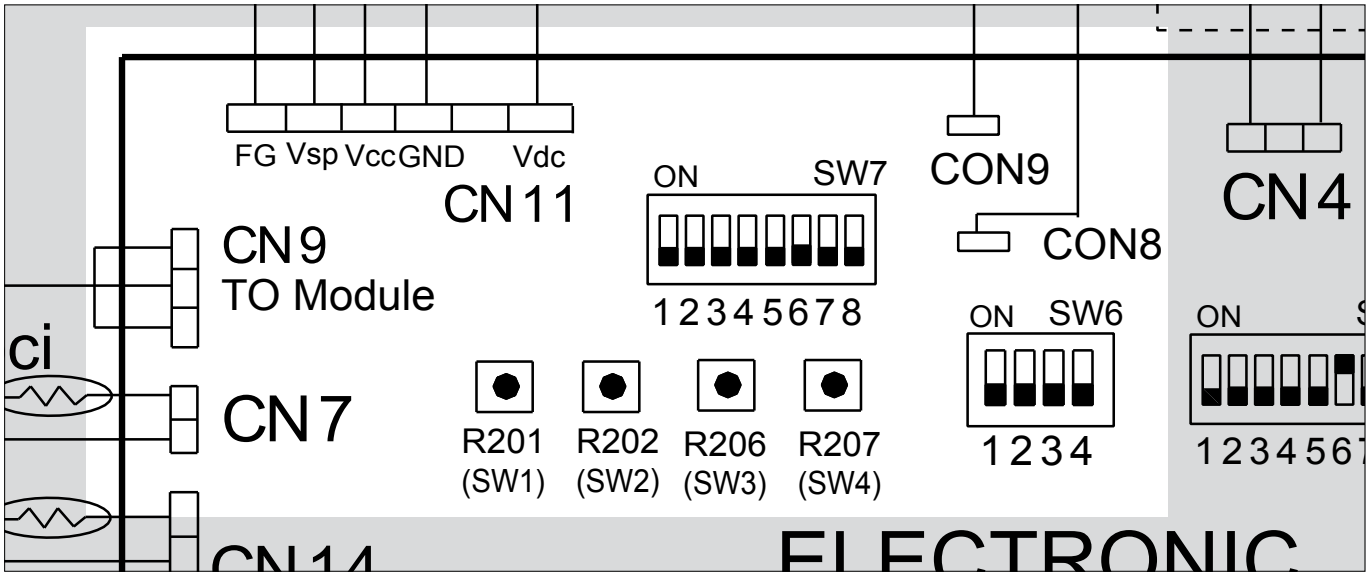
With regard to the test on the 3U55S2SR2FA unit, after about 20 minutes of operation, there is already a signal for incorrect wiring, with a flashing of the LEDs (of the service board) corresponding to the inverted indoor units.

After about 30 minutes the test cycle ends, the system automatically shuts down.

In the case of inversion of wiring, the abbreviation "EC" appears on the display of the service board and LEDs corresponding to the inverted internal units flash.

For models with multiple couplings, the test times are slightly longer, about 10 minutes per indoor unit.

MANUAL TEST MODE



Reading data

In the forced operation modes of the plant, both heat pump and cooling can be manually accessed and adjusted in the plant settings. Using the selection keys listed below you can enter the various menus to change the parameters. With DEFAULT settings, you have access to the read-only parameters, but you cannot make any adjustments.
In DEFAULT mode (NORMAL OPERATION) only parameters A0 and A9 can be displayed

Selection buttons:

- The "R201"/(SW1) bridge on the motherboard is used to increase the adjustment steps;
- The "R202"/(SW2) bridge on the motherboard is used to decrease the adjustment steps;
- The "R206"/(SW3) bridge on the motherboard is used to confirm the selected menu;
- The bridge "R207"/(SW4) on the motherboard is used to switch between functions (from function "A0" to function "A9").

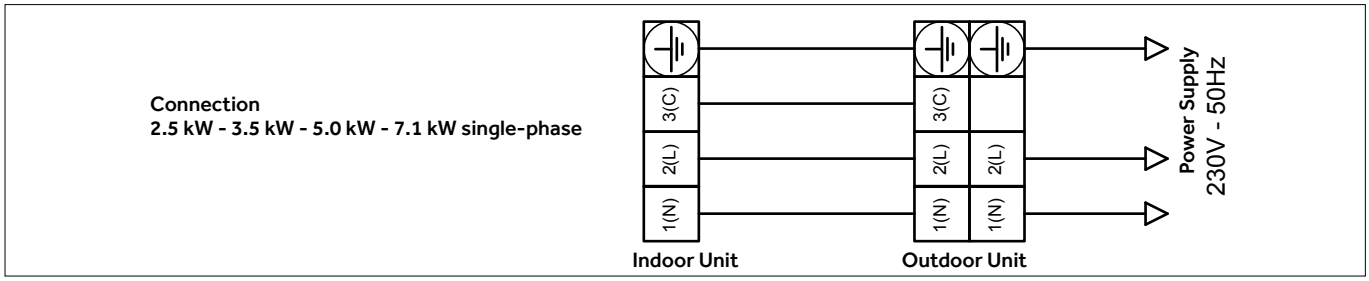
Unit control

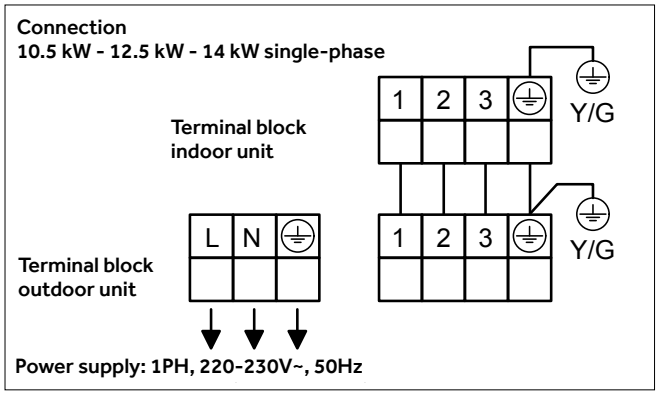
In Forced Mode, pressing the "R207" bridge accesses all the underlying functions. The "R201" and "R202" bridges change the operating parameters:

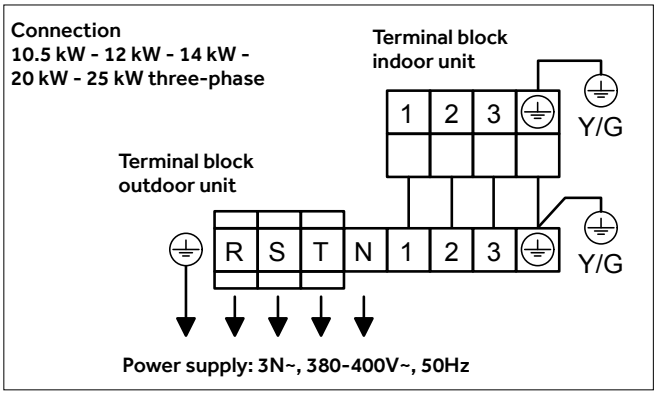
"A0"	Indoor Diagnostics The alarm list of connected indoor units is available;
"A1"	Outdoor fan motor speed You can test and adjust the speed of the outdoor fan in steps (steps range from 0 to 7);
"A2"	Compressor Frequency You can test and adjust the frequency of the compressor in steps (the frequency rises up to a maximum of 130Hz);
"A3"	Expansion valve opening "A" You can test and adjust the opening of expansion valve in degrees (from a minimum of 5° to 500°);
"A4"	Expansion valve opening "B" You can test and adjust the opening of expansion valve in degrees (from a minimum of 5° to 500°);
"A5"	Expansion valve opening "C" You can test and adjust the opening of expansion valve in degrees (from a minimum of 5° to 500°);
"A6"	Expansion valve opening "D" You can test and adjust the opening of expansion valve in degrees (from a minimum of 5° to 500°);
"A7"	Expansion valve opening "E" You can test and adjust the opening of expansion valve in degrees (from a minimum of 5° to 500°);
"A8"	Expansion valve opening "F" (PMV_RE) You can test and adjust the opening of expansion valve in degrees (from a minimum of 5° to 500°);
"A9"	Outdoor Diagnostics A list of the last 5 alarms related to the outdoor unit is available.

1U25S2SM1FA 2.5 kW
1U25S2SM1FA-2 2.5 kW
1U35S2SM1FA 3.5 kW
1U35S2SM1FA-2 3.5 kW
1U42S2SM1FA 4.2 kW
1U50S2SJ2FA 5.0 kW
1U71S2SR2FA 7.1 kW
1U105S2SS1FB 10.5 kW (three-phase)
1U105S2SS2FA 10.5 kW (single-phase)
1U125S2SN2FA 12.5 kW (single-phase)
1U125S2SN2FB (three-phase)
1U140S2SP2FA (single-phase)
1U140S2SP2FB (three-phase)
1U140S2SN1FA 14.0 kW (single-phase)
1U140S2SN1FB 14.0 kW (three-phase)
1U160S2SP1FB 16.0 kW

WIRING DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW - 7.1 kW - 10.5 kW - 12.5 kW - 14.0 kW - 16 kW







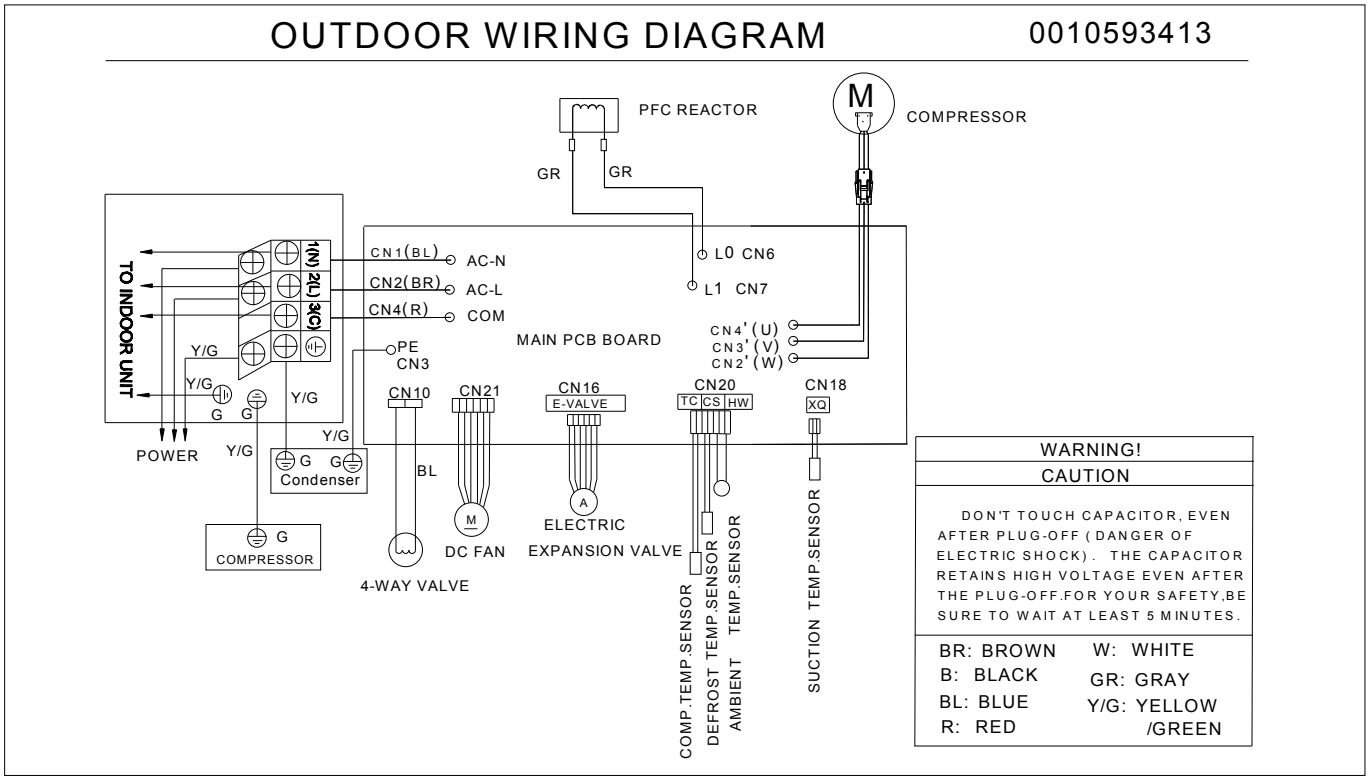
OUTDOOR UNIT	Model		1U25S2SM1FA	1U25S2SM1FA-2	1U35S2SM1FA	1U35S2SM1FA-2	1U42S2SM1FA	1U50S2SJ2FA	1U71S2SR2FA	1U105S2SS1FB	1U105S2SS2FA
Outdoor unit technical data											
Liquid pipe Ø		mm	6.35	6.35	6.35	6.35	6.35	6.35	9.52	9.52	9.52
Gas pipe Ø		mm	9.52	9.52	9.52	9.52	9.52	12.7	15.88	15.88	15.88
Standard pipe length without additional refrigerant charge		m	7	7	7	7	7	7	7	30	30
Maximum pipe length		m	20	20	20	20	20	25	50	50	50
Maximum IU - OU height difference		m	10	10	10	10	10	15	30	30	30
Refrigerant charge in the factory		kg	0.65	0.65	0.94	0.94	0.94	0.95	1.3	1.5	1.5
Equivalent tons of CO_2		tCO_2EQ	0.44	0.44	0.63	0.63	0.63	0.64	0.87	0.87	0.87
Additional refrigerant charge beyond standard length		g/m	20	20	20	20	20	20	45	45	45
Dimensions	WxDxH	mm	800x275x553	800x275x553	800x275x553	800x275x553	800x275x553	820x338x614	890x353x697	920x372x760	920x372x760
Net weight		kg	29	29	31.5	31.5	31.5	37.8	45	60	60
Power Supply		V-Ph-Hz	1/220-240/50	1/220-240/50	1/220-240/50	1/220-240/50	1/220-240/50	1/220-240/50	1/220-240/50	380-400-3N-50	1/220-240/50/60
Outdoor unit power cable		mm^2	3G1.5	3G1.5	3G1.5	3G1.5	3G1.5	3G2.5	3G2.5	3G4	3G4
Outdoor unit - indoor unit cable		mm^2	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5

OUTDOOR UNIT	Model		1U125S2SN2FA	1U125S2SN2FB	1U140S2SP2FA	1U140S2SP2FB	1U140S2SN1FA	1U140S2SN1FB	1U160S2SP1FB
Outdoor unit technical data									
Liquid pipe Ø		mm	9.52	9.52	9.52	9.52	9.52	9.52	9.52
Gas pipe Ø		mm	15.88	15.88	15.88	15.88	15.88	15.88	19.05
Standard pipe length without additional refrigerant charge		m	30	30	30	30	30	30	30
Maximum pipe length		m	50	50	70	70	70	70	70
Maximum IU - OU height difference		m	30	30	30	30	30	30	30
Refrigerant charge in the factory		kg	2	2	2.9	3.5	2.3	2.3	3.2
Equivalent tons of CO_2		tCO_2EQ	1.3	1.3	1.95	2.36	1.55	1.55	2.36
Additional refrigerant charge beyond standard length		g/m	45	45	45	45	45	45	45
Dimensions	WxDxH	mm	950x370x965	950x370x965	950x370x1350	950x370x1350	950x370x965	950x370x965	950x370x1350
Net weight		kg	82	83	105	101	84	85	101
Power Supply		V-Ph-Hz	1/220-240/50/60	3/380-415/50/60	1/220-240/50/60	3/380-415/50/60	1/220-240/50/60	3/380-415/50/60	3/380-415/50/60
Outdoor unit power cable		mm^2	3G4	5G2.5	5G2.5	5G2.5	5G2.5	5G2.5	5G2.5
Outdoor unit - indoor unit cable		mm^2	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5	4G1.5

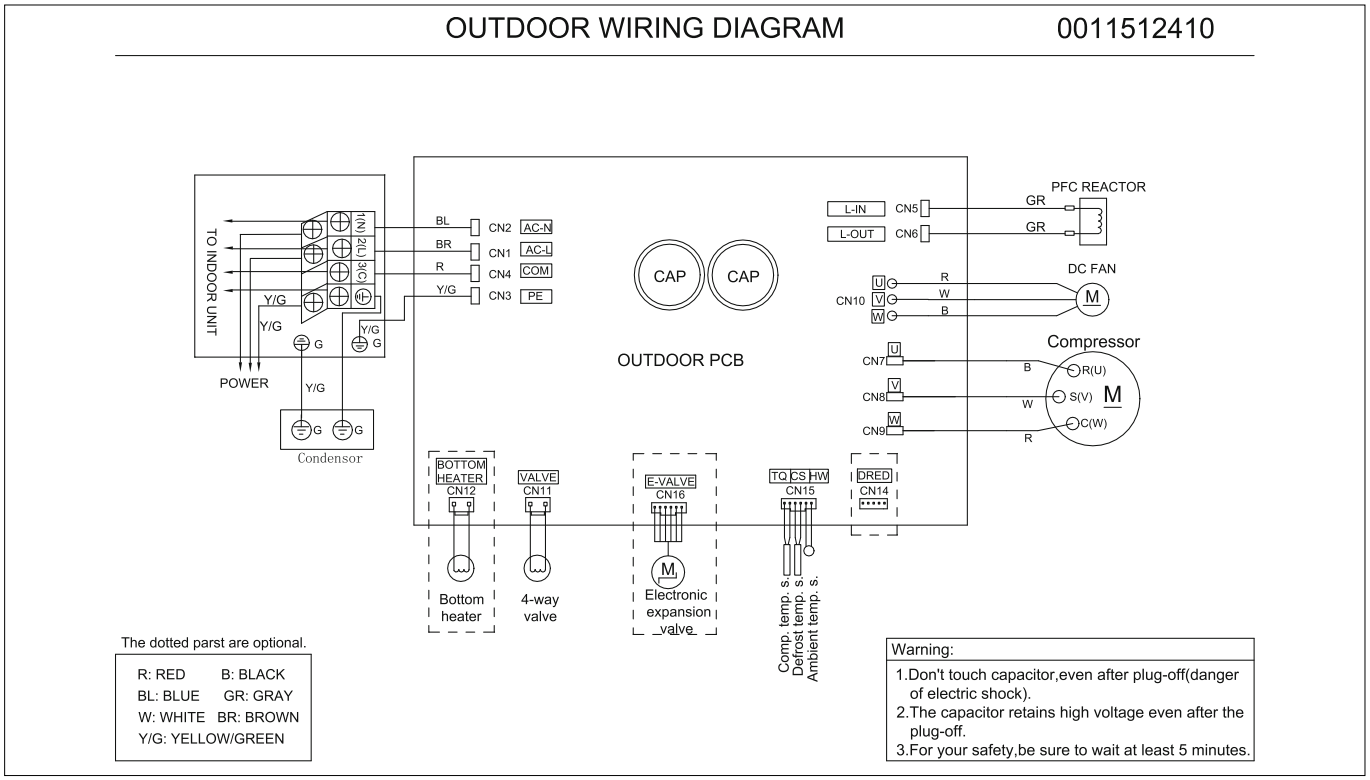
MONO DIAGNOSTICS

- If the indoor unit is a wall-mounted split, refer to the alarm list on **page 28.**
- If the indoor unit is a console / cassette / ducted / ceiling-floor convertible, go to **page 26**
- If the indoor unit is a 14kW tower, go to **page 30**

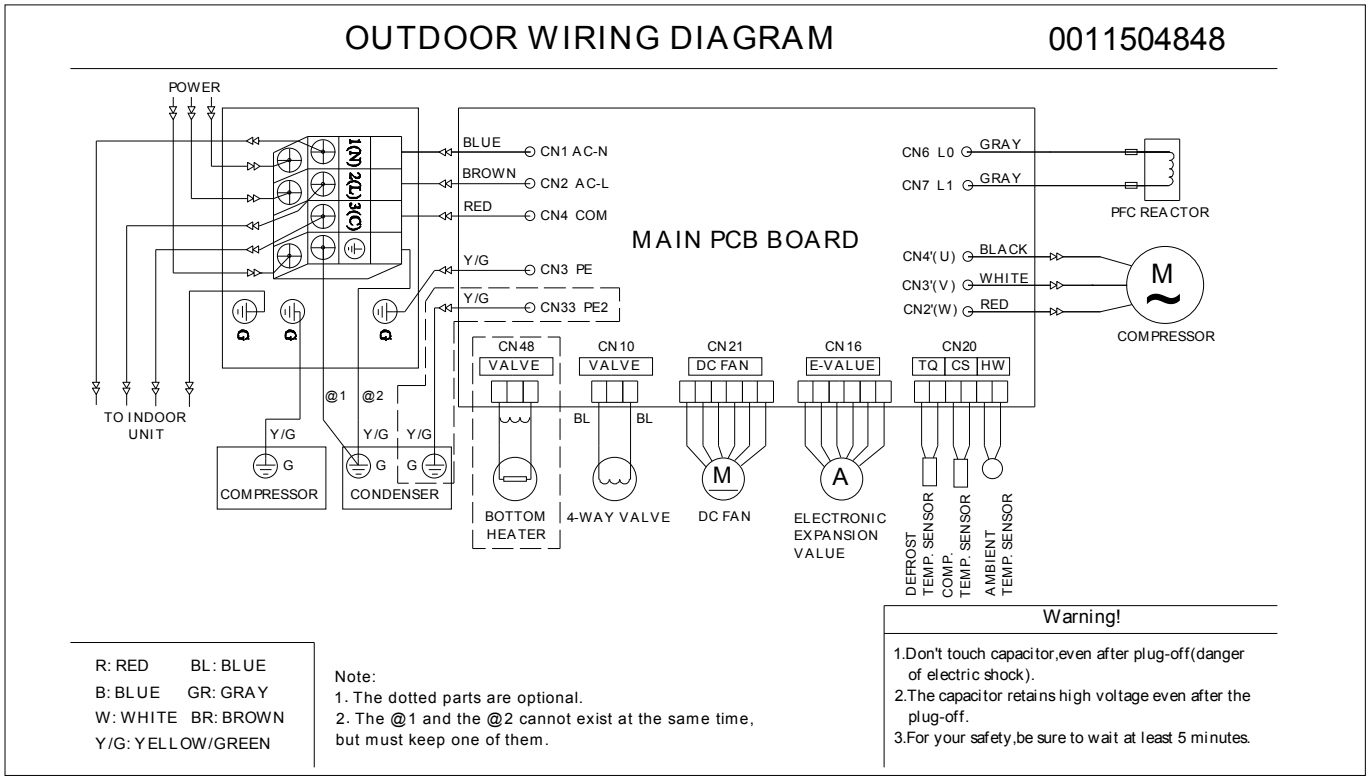
OU CIRCUIT DIAGRAM 1U25S2SM1FA 2.5 kW - 1U35S2SM1FA 3.5 kW



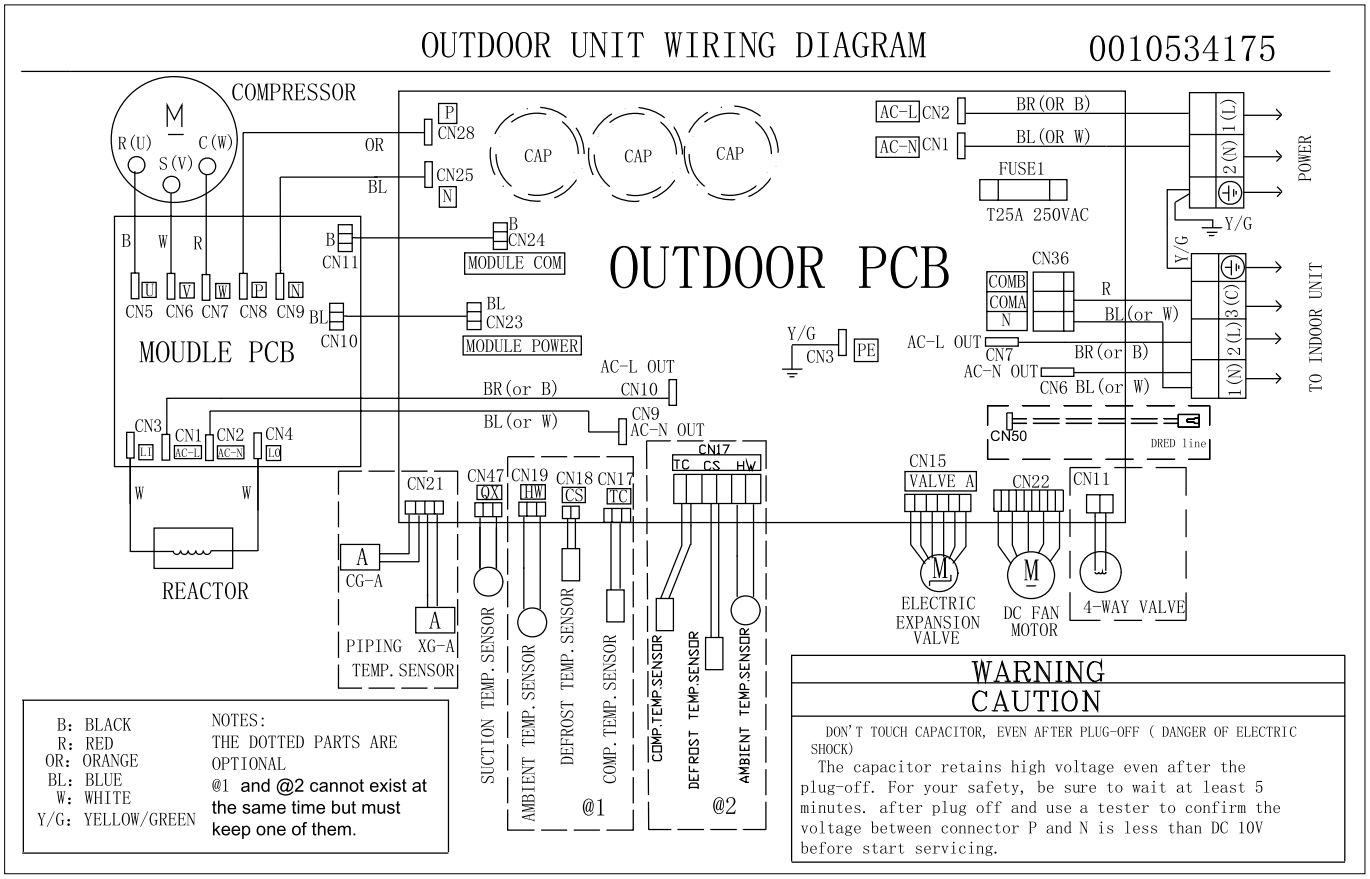
OU CIRCUIT DIAGRAM 1U25S2SM1FA-2 2.5 kW - 1U35S2SM1FA-2 3.5 kW



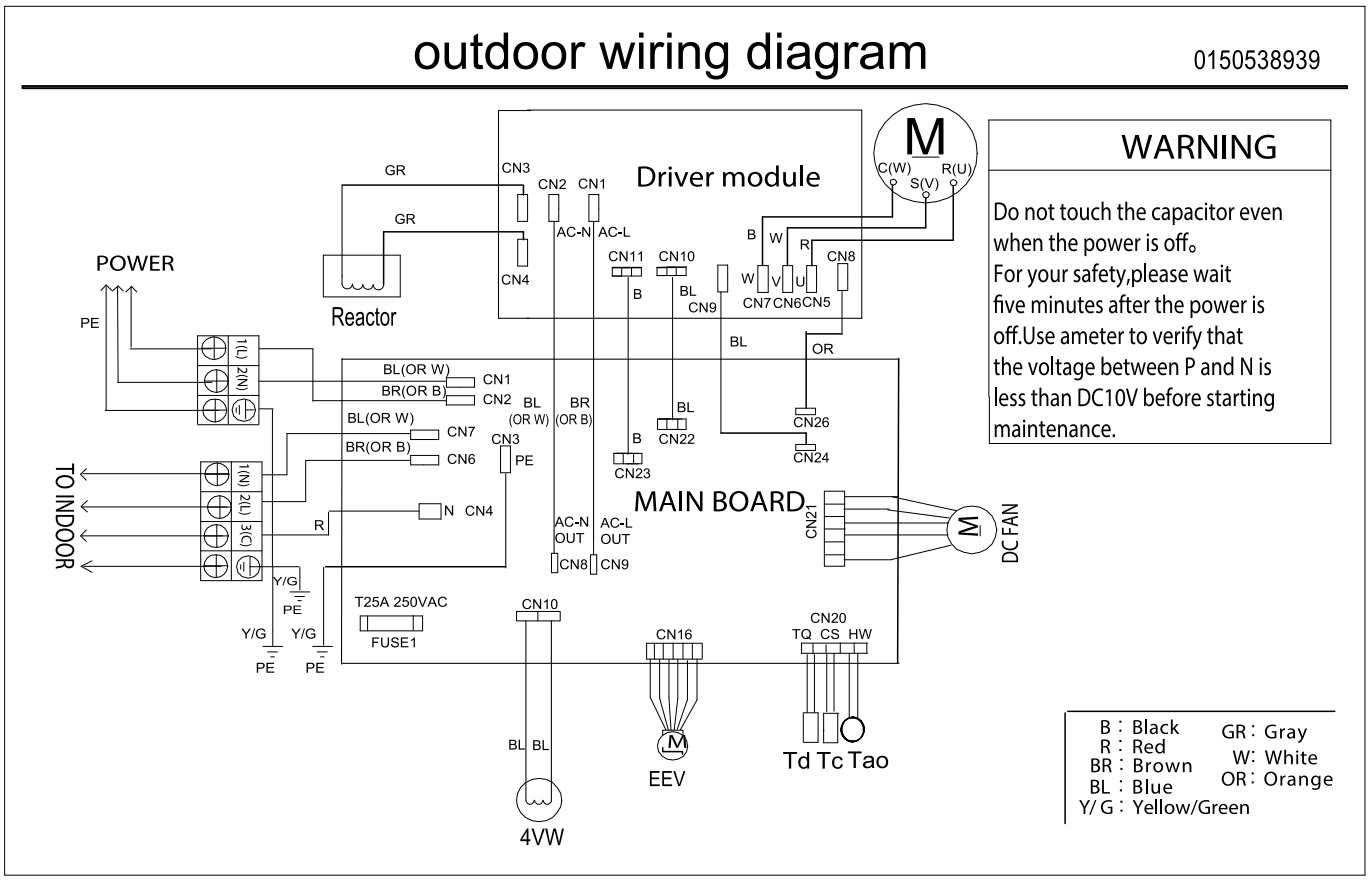
OU CIRCUIT DIAGRAM 4.2 kW



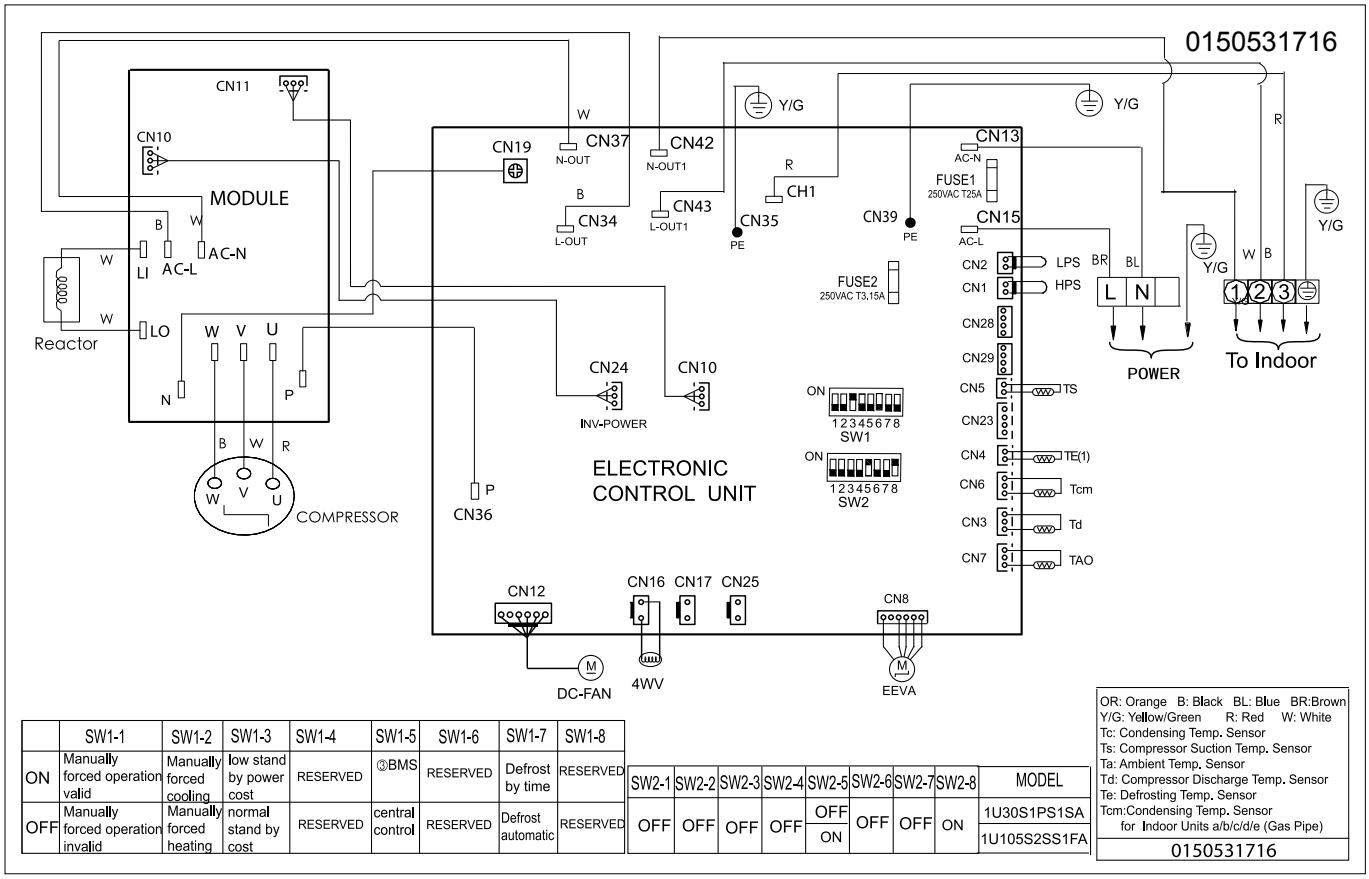
OU CIRCUIT DIAGRAM 5.0 kW



OU CIRCUIT DIAGRAM 7.1 kW



OU CIRCUIT DIAGRAM 10.5 kW single-phase (1U105S2SS2FA)



	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
ON	Manually forced operation valid	Manually forced cooling	low stand by power cost	RESERVED	③BMS	RESERVED	Defrost by time	RESERVED
OFF	Manually forced operation invalid	Manually forced heating	normal stand by cost	RESERVED	central control	RESERVED	Defrost automatic	RESERVED

SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	MODEL
OFF	OFF	OFF	OFF	OFF ON	OFF	OFF	ON	1U30S1PS1SA 1U105S2SS1FA

OR: Orange B: Black BL: Blue BR:Brown
Y/G: Yellow/Green R: Red W: White
Tc: Condensing Temp. Sensor
Ts: Compressor Suction Temp. Sensor
Ta: Ambient Temp. Sensor
Td: Compressor Discharge Temp. Sensor
Te: Defrosting Temp. Sensor
Tcm:Condensing Temp. Sensor
for Indoor Units a/b/c/d/e (Gas Pipe)

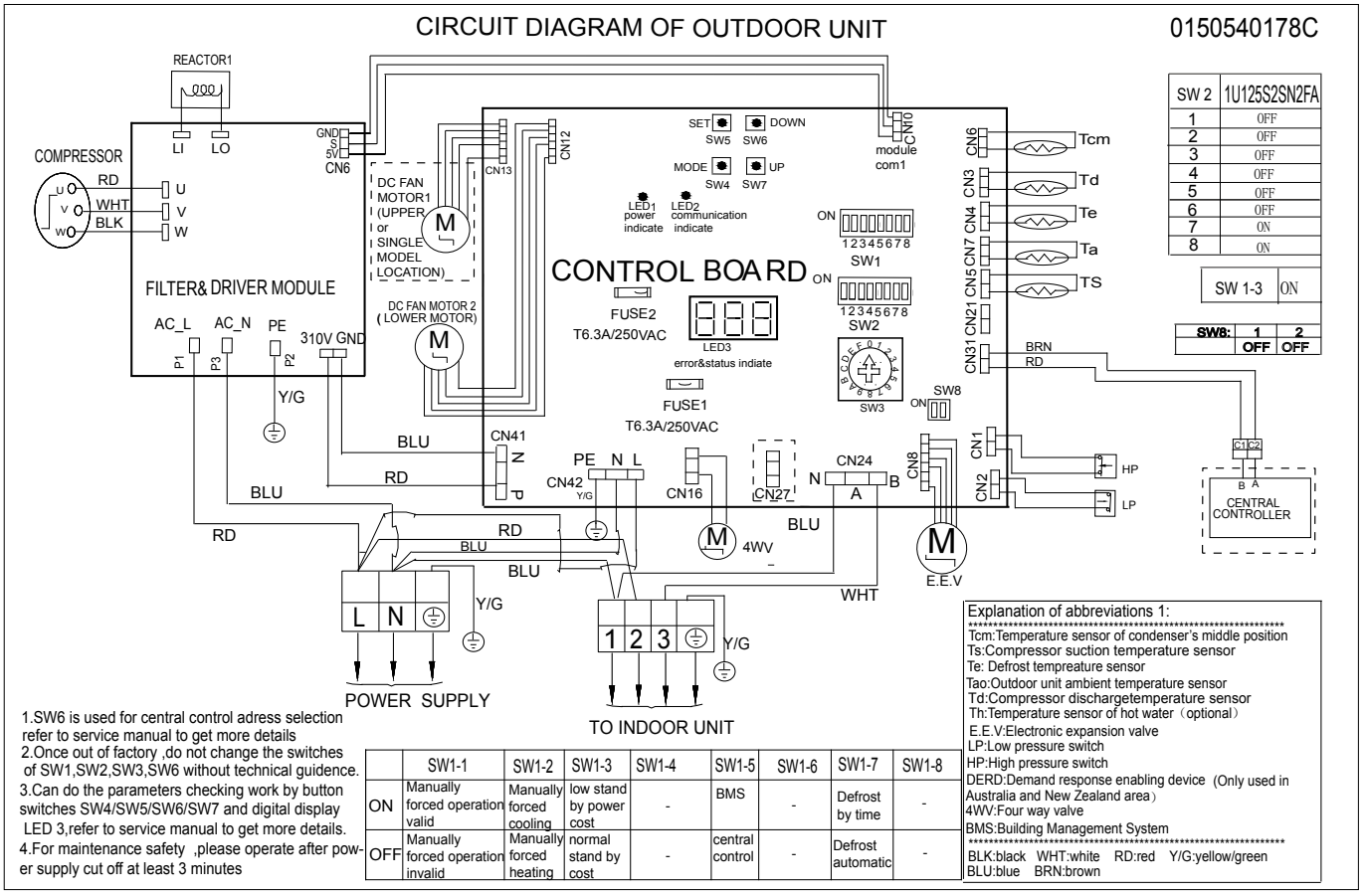
0150531716

OU SETTINGS 10.5 kW single-phase (1U105S2SS2FA)

SW1 SELECTOR								
SW1-1	**SW1-2**	**SW1-3**	**SW1-4**	**SW1-5**	**SW1-6**	**SW1-7**	**SW1-8**	**DESCRIPTION**
ON	---	---	---	---	---	---	---	Forced mode enabled
OFF	---	---	---	---	---	---	---	Force mode disabled
---	ON	---	---	---	---	---	---	Forced cooling
---	OFF	---	---	---	---	---	---	Forced heat pump
---	---	ON	---	---	---	---	---	Low consumption stand by
---	---	OFF	---	---	---	---	---	Normal consumption stand by
---	---	---	ON	---	---	---	---	N.D.
---	---	---	OFF	---	---	---	---	N.D. (DEFAULT)
---	---	---	---	ON	---	---	---	Connection to BMS system
---	---	---	---	OFF	---	---	---	Connection to centralized controller
---	---	---	---	---	ON	---	---	N.D.
---	---	---	---	---	OFF	---	---	N.D. (DEFAULT)
---	---	---	---	---	---	ON	---	Timed defrosting
---	---	---	---	---	---	OFF	---	Automatic defrosting
---	---	---	---	---	---	---	ON	N.D.
---	---	---	---	---	---	---	OFF	N.D. (DEFAULT)

SW2 SELECTOR								
SW2-1	**SW2-2**	**SW2-3**	**SW2-4**	**SW2-5**	**SW2-6**	**SW2-7**	**SW2-8**	**DESCRIPTION**
OFF	OFF	OFF	OFF	ON	OFF	OFF	ON	1U105S2SS1FA
OFF	OFF	OFF	OFF	ON	OFF	OFF	ON	1U105S2SS2FA

OU CIRCUIT DIAGRAM 12.5 kW (1U125S2SN2FA)



1.SW6 is used for central control adress selection refer to service manual to get more details
2.Once out of factory ,do not change the switches of SW1,SW2,SW3,SW6 without technical guidence.
3.Can do the parameters checking work by button switches SW4/SW5/SW6/SW7 and digital display LED 3,refer to service manual to get more details.
4.For maintenance safety ,please operate after power supply cut off at least 3 minutes

	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
ON	Manually forced operation valid	Manually forced cooling	low stand by power cost	-	BMS	-	Defrost by time	-
OFF	Manually forced operation invalid	Manually forced heating	normal stand by cost	-	central control	-	Defrost automatic	-

OU SETTINGS 12.5 kW (1U125S2SN2FA)

SW1 SELECTOR								
SW1-1	**SW1-2**	**SW1-3**	**SW1-4**	**SW1-5**	**SW1-6**	**SW1-7**	**SW1-8**	**DESCRIPTION**
ON	---	---	---	---	---	---	---	Forced mode enabled
OFF	---	---	---	---	---	---	---	Force mode disabled
---	ON	---	---	---	---	---	---	Forced cooling
---	**OFF**	---	---	---	---	---	---	Forced heat pump
---	---	ON	---	---	---	---	---	Low consumption stand by
---	---	**OFF**	---	---	---	---	---	Normal consumption stand by
---	---	---	**ON**	---	---	---	---	N.D.
---	---	---	OFF	---	---	---	---	N.D. (DEFAULT)
---	---	---	---	ON	---	---	---	Connection to BMS system
---	---	---	---	**OFF**	---	---	---	Connection to centralized controller
---	---	---	---	---	ON	---	---	N.D.
---	---	---	---	---	**OFF**	---	---	N.D. (DEFAULT)
---	---	---	---	---	---	ON	---	Timed defrosting
---	---	---	---	---	---	**OFF**	---	Automatic defrosting
---	---	---	---	---	---	---	ON	N.D.
---	---	---	---	---	---	---	**OFF**	N.D. (DEFAULT)

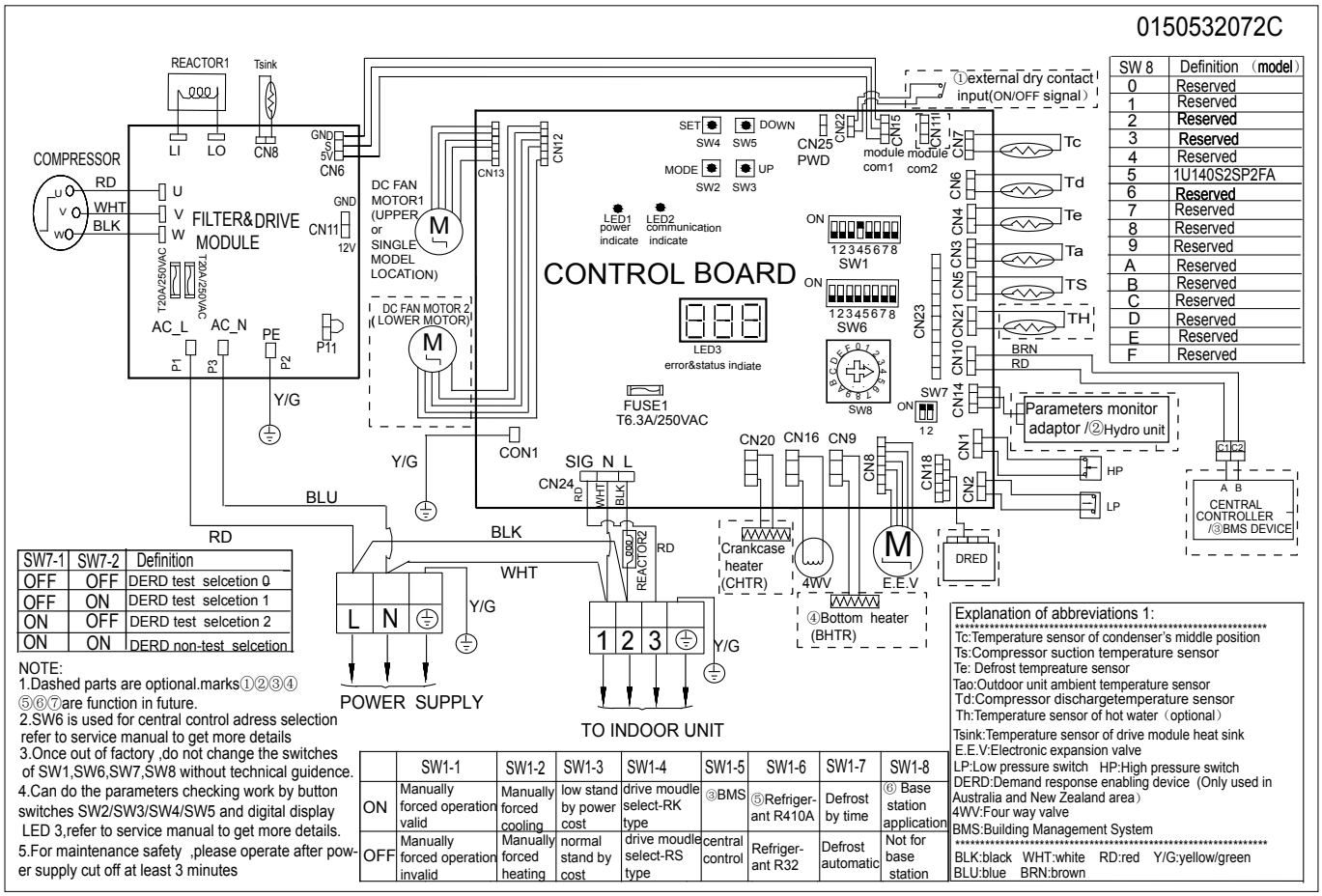
SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	DESCRIPTION
OFF	OFF	OFF	OFF	OFF	ON	ON	ON	1U140S2SN1FA
OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	1U140S2SN1FB
OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	1U160S2SN1FB
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	1U125S2SN2FA
OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	1U125S2SN2FB
OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	1U140S2SP2FB

SW3 SELECTOR	
ROTARY	**DESCRIPTION**
ON	1U125S2SN2FA

SW6 SELECTOR Address to centralized controller / BMS								
SW6-1	SW6-2	SW6-3	SW6-4	SW6-5	SW6-6	SW6-7	SW6-8	DESCRIPTION
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Address No. 1
OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	Address No. 2
OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	Address No. 3
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	Address No. 4
OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	Address No. 5
---	---	---	---	---	---	---	---	Address No. --
ON	ON	ON	ON	ON	ON	ON	ON	Address No. 128

SW7 SELECTOR		
SW8-1	SW2-2	DESCRIPTION
OFF	OFF	N.D. - DEFAULT

OU CIRCUIT DIAGRAM 14 kW single-phase (1U140S2SP2FA)



SW 8	Definition （model）
0	Reserved
1	Reserved
2	Reserved
3	Reserved
4	Reserved
5	1U140S2SP2FA
6	Reserved
7	Reserved
8	Reserved
9	Reserved
A	Reserved
B	Reserved
C	Reserved
D	Reserved
E	Reserved
F	Reserved

SW7-1	SW7-2	Definition
OFF	OFF	DERD test selcetion 0
OFF	ON	DERD test selcetion 1
ON	OFF	DERD test selcetion 2
ON	ON	DERD non-test selcetion

NOTE:
1.Dashed parts are optional.marks①②③④⑤⑥⑦are function in future.
2.SW6 is used for central control adress selection refer to service manual to get more details
3.Once out of factory ,do not change the switches of SW1,SW6,SW7,SW8 without technical guidence.
4.Can do the parameters checking work by button switches SW2/SW3/SW4/SW5 and digital display LED 3,refer to service manual to get more details.
5.For maintenance safety ,please operate after power supply cut off at least 3 minutes

	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
ON	Manually forced operation valid	Manually forced cooling	low stand by power cost	drive moudle select-RK type	③BMS	⑤Refriger-ant R410A	Defrost by time	⑥ Base station application
OFF	Manually forced operation invalid	Manually forced heating	normal stand by cost	drive moudle select-RS type	central control	Refriger-ant R32	Defrost automatic	Not for base station

Explanation of abbreviations 1:
Tc:Temperature sensor of condenser's middle position
Ts:Compressor suction temperature sensor
Te: Defrost tempreature sensor
Tao:Outdoor unit ambient temperature sensor
Td:Compressor dischargetemperature sensor
Th:Temperature sensor of hot water（optional）
Tsink:Temperature sensor of drive module heat sink
E.E.V:Electronic expansion valve
LP:Low pressure switch HP:High pressure switch
DERD:Demand response enabling device (Only used in Australia and New Zealand area）
4WV:Four way valve
BMS:Building Management System
BLK:black WHT:white RD:red Y/G:yellow/green
BLU:blue BRN:brown

OU SETTINGS 14kW (1U140S2SP2FA)

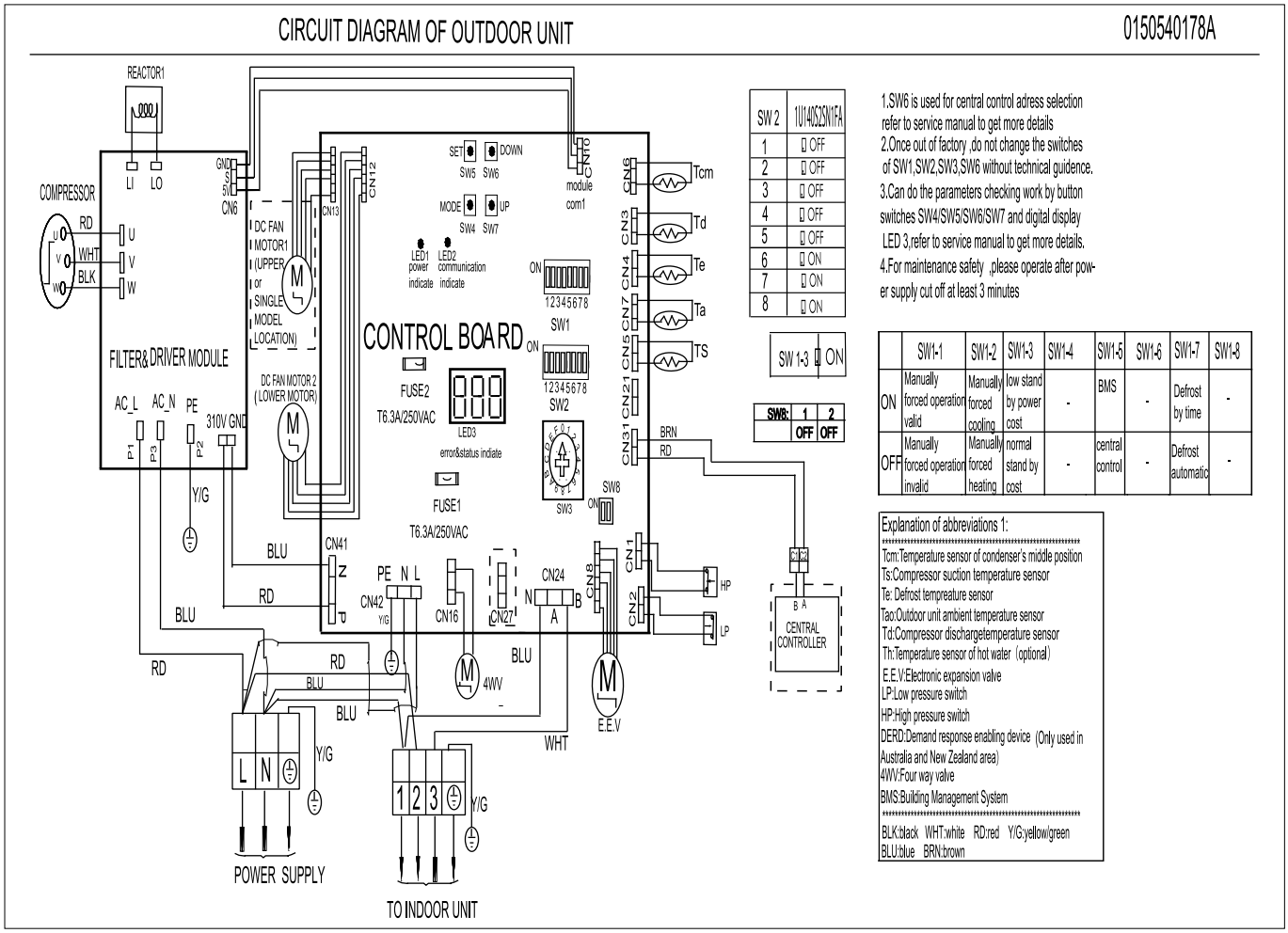
SW1 SELECTOR								
SW1-1	**SW1-2**	**SW1-3**	**SW1-4**	**SW1-5**	**SW1-6**	**SW1-7**	**SW1-8**	**DESCRIPTION**
ON	---	---	---	---	---	---	---	Forced mode enabled
OFF	---	---	---	---	---	---	---	Force mode disabled
---	ON	---	---	---	---	---	---	Forced cooling
---	**OFF**	---	---	---	---	---	---	Forced heat pump
---	---	ON	---	---	---	---	---	Low consumption stand by
---	---	**OFF**	---	---	---	---	---	Normal consumption stand by
---	---	---	**ON**	---	---	---	---	RK series power module - DEFAULT
---	---	---	OFF	---	---	---	---	RS series power module
---	---	---	---	ON	---	---	---	Connection to BMS system
---	---	---	---	**OFF**	---	---	---	Connection to centralized controller
---	---	---	---	---	ON	---	---	R410A refrigerant
---	---	---	---	---	**OFF**	---	---	R32 refrigerant - DEFAULT
---	---	---	---	---	---	ON	---	Timed defrosting
---	---	---	---	---	---	**OFF**	---	Automatic defrosting
---	---	---	---	---	---	---	ON	N.D.
---	---	---	---	---	---	---	**OFF**	N.D. (DEFAULT)

SW6 SELECTOR Address to centralized controller / BMS								
SW6-1	**SW6-2**	**SW6-3**	**SW6-4**	**SW6-5**	**SW6-6**	**SW6-7**	**SW6-8**	**DESCRIPTION**
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Address No. 1
OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	Address No. 2
OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	Address No. 3
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	Address No. 4
OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	Address No. 5
---	---	---	---	---	---	---	---	Address No. --
ON	ON	ON	ON	ON	ON	ON	ON	Address No. 128

SW7 SELECTOR		
SW7-1	**SW7-2**	**DESCRIPTION**
ON	ON	N.D. - DEFAULT

SW8 SELECTOR	
ROTARY	**DESCRIPTION**
4	1U125S2SN1FA
5	1U140S2SP1FA / 1U140S2SP2FA

OU CIRCUIT DIAGRAM 14 kW single-phase (1U140S2SN1FA)



SW 2	1U140S2SN1FA
1	OFF
2	OFF
3	OFF
4	OFF
5	OFF
6	ON
7	ON
8	ON

SW 1-3 ON

SW6:	1	2
	OFF	OFF

	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
ON	Manually forced operation valid	Manually forced cooling	low stand by power cost	-	BMS	-	Defrost by time	-
OFF	Manually forced operation invalid	Manually forced heating	normal stand by cost	-	central control	-	Defrost automatic	-

OU SETTINGS 14 kW single-phase (1U140S2SN1FA)

Selector Bank SW1

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	DESCRIPTION
OFF	---	---	---	---	---	---	---	FORCED DISABLING
ON	---	---	---	---	---	---	---	FORCED ENABLING
---	OFF	---	---	---	---	---	---	FORCED COOLING (SE SW1-1 ON)
---	ON	---	---	---	---	---	---	FORCED HEATING (SE SW1-1 ON)
---	---	ON	---	---	---	---	---	LOW CONSUMPTION IN STAND BY (DEFAULT)
---	---	OFF	---	---	---	---	---	NORMAL CONSUMPTION IN STAND BY
---	---	---	OFF	---	---	---	---	N.D.
---	---	---	---	ON	---	---	---	CONTROL VIA BMS
---	---	---	---	OFF	---	---	---	CONTROL VIA CENTRALISED CONTROLLER
---	---	---	---	---	OFF	---	---	N.D.
---	---	---	---	---	---	ON	---	DEFROSTING UNDER SPECIFIC CONDITIONS
---	---	---	---	---	---	OFF	---	AUTOMATIC DEFROSTING (DEFAULT)
---	---	---	---	---	---	---	ON	SILENT MODE ENABLED
---	---	---	---	---	---	---	OFF	SILENT MODE DISABLED (DEFAULT)

Selector Bank SW2

SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	DESCRIPTION
OFF	OFF	OFF	OFF	OFF	ON	ON	ON	1U140S2SN1FA
OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	1U140S2SN1FB
OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	1U160S2SP1FB

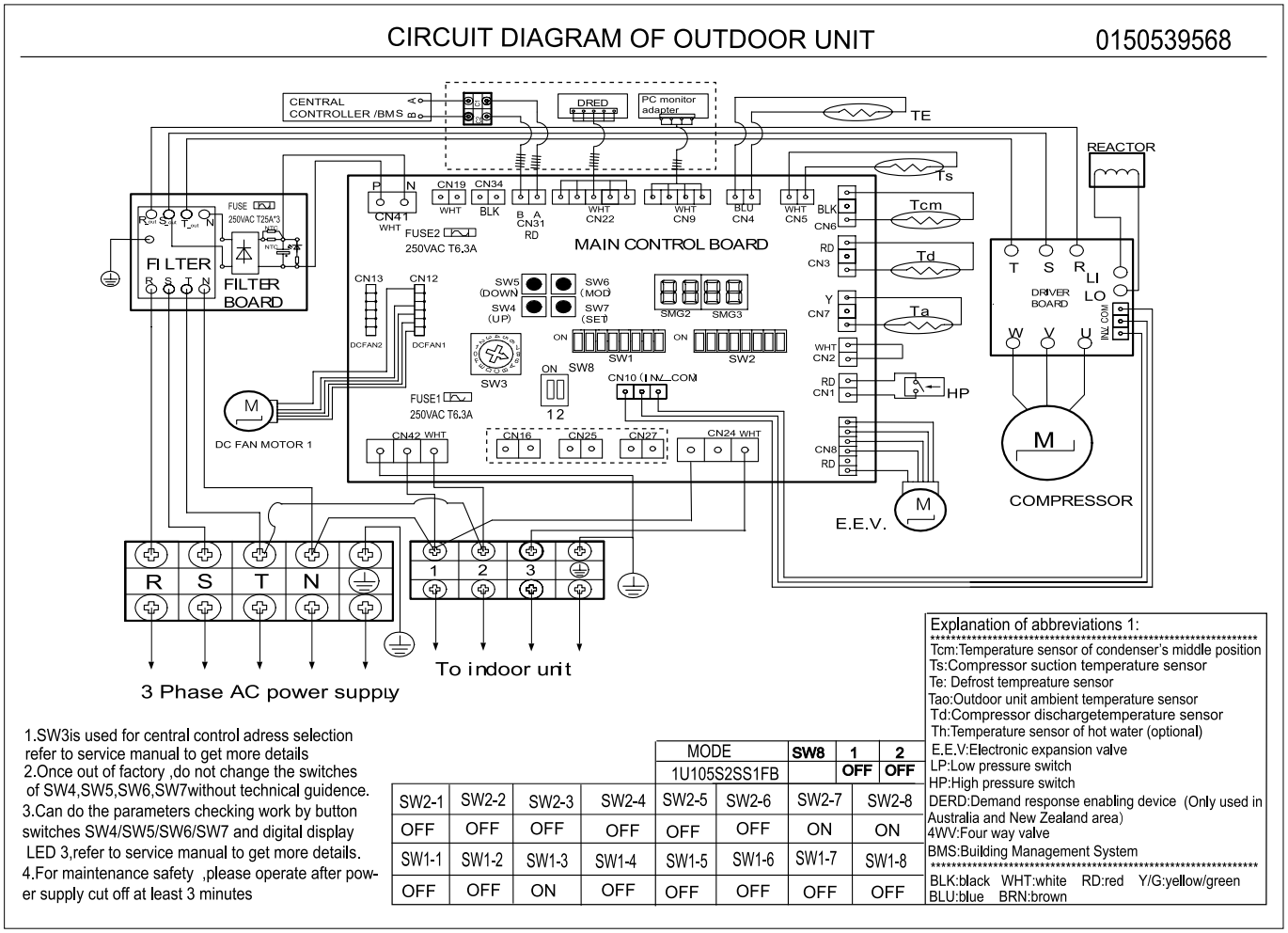
Selector SW3

SW3	DESCRIPTION
0	DEFAULT

Selector Bank SW8

SW8-1	SW8-2	DESCRIPTION
OFF	OFF	DEFAULT

OU 10.5 kW three-phase (1U105S2SS1FB)



1.SW3is used for central control adress selection refer to service manual to get more details
2.Once out of factory ,do not change the switches of SW4,SW5,SW6,SW7without technical guidence.
3.Can do the parameters checking work by button switches SW4/SW5/SW6/SW7 and digital display LED 3,refer to service manual to get more details.
4.For maintenance safety ,please operate after power supply cut off at least 3 minutes

MODE				SW8	1	2
1U105S2SS1FB					OFF	OFF
SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF

OU SETTINGS 10.5 kW three-phase (1U105S2SS1FB)

Selector Bank SW1

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	DESCRIPTION
OFF	---	---	---	---	---	---	---	FORCED DISABLING
ON	---	---	---	---	---	---	---	FORCED ENABLING
---	OFF	---	---	---	---	---	---	FORCED COOLING (SE SW1-1 ON)
---	ON	---	---	---	---	---	---	FORCED HEATING (SE SW1-1 ON)
---	---	ON	---	---	---	---	---	LOW CONSUMPTION IN STAND BY (DEFAULT)
---	---	OFF	---	---	---	---	---	NORMAL CONSUMPTION IN STAND BY
---	---	---	OFF	---	---	---	---	N.D.
---	---	---	---	ON	---	---	---	CONTROL VIA BMS
---	---	---	---	OFF	---	---	---	CONTROL VIA CENTRALISED CONTROLLER
---	---	---	---	---	OFF	---	---	N.D.
---	---	---	---	---	---	ON	---	DEFROSTING UNDER SPECIFIC CONDITIONS
---	---	---	---	---	---	OFF	---	AUTOMATIC DEFROSTING (DEFAULT)
---	---	---	---	---	---	---	ON	SILENT MODE ENABLED
---	---	---	---	---	---	---	OFF	SILENT MODE DISABLED (DEFAULT)

Selector Bank SW2

SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	DESCRIPTION
OFF	OFF	OFF	OFF	ON	OFF	ON	ON	1U105S2SS1FB

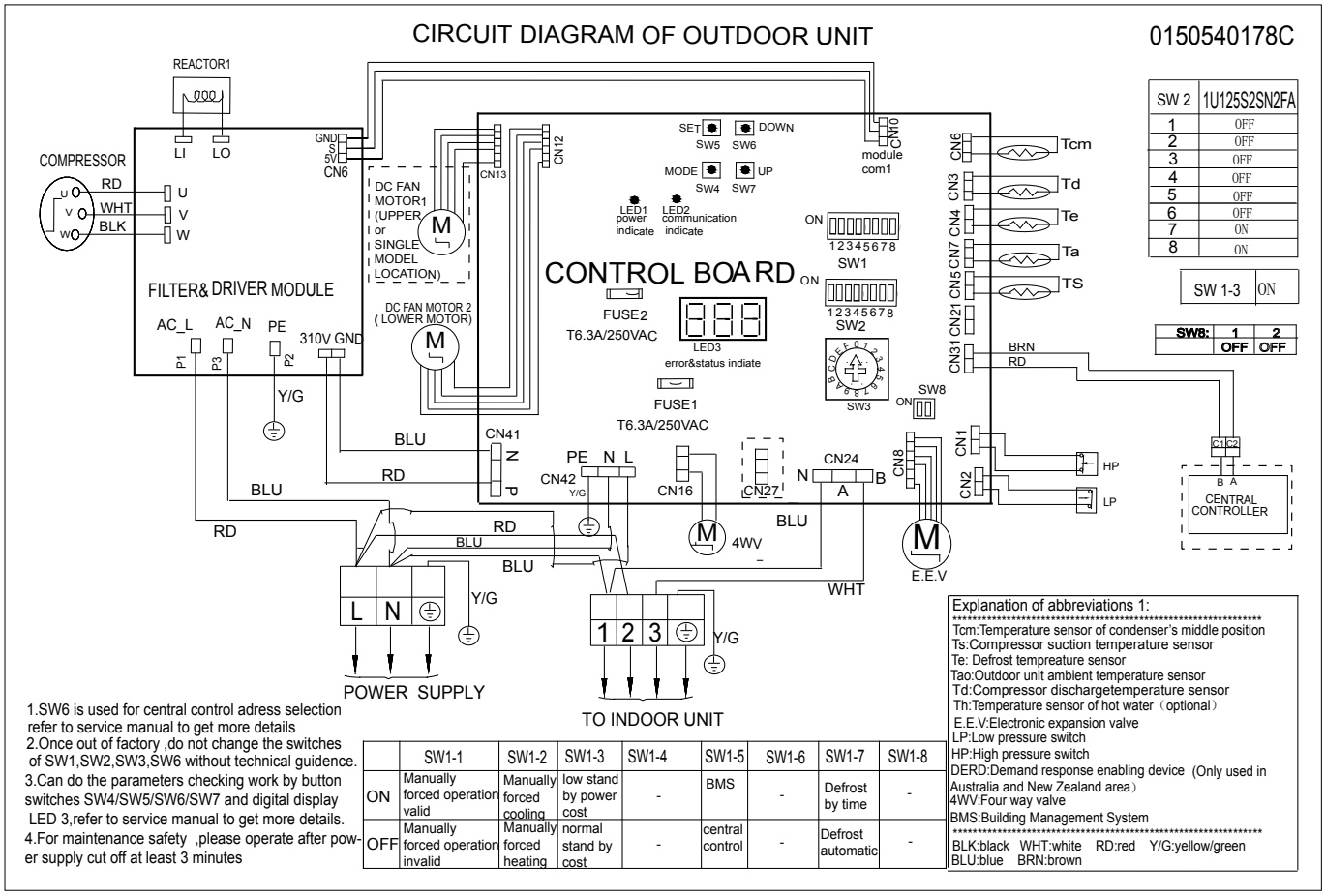
Selector SW3

SW3	DESCRIPTION
0	DEFAULT

Selector Bank SW8

SW8-1	SW8-2	DESCRIPTION
OFF	OFF	DEFAULT

OU CIRCUIT DIAGRAM 12.5 kW - 14 kW three-phase (1U125S2SN2FB - 1U140S2SP2FB)



1.SW6 is used for central control adress selection refer to service manual to get more details
2.Once out of factory ,do not change the switches of SW1,SW2,SW3,SW6 without technical guidence.
3.Can do the parameters checking work by button switches SW4/SW5/SW6/SW7 and digital display LED 3,refer to service manual to get more details.
4.For maintenance safety ,please operate after power supply cut off at least 3 minutes

	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
ON	Manually forced operation valid	Manually forced cooling	low stand by power cost	-	BMS	-	Defrost by time	-
OFF	Manually forced operation invalid	Manually forced heating	normal stand by cost	-	central control	-	Defrost automatic	-

OU SETTINGS 12.5 kW - 14 kW three-phase (1U125S2SN2FB - 1U140S2SP2FB)

SW1 SELECTOR								
SW1-1	**SW1-2**	**SW1-3**	**SW1-4**	**SW1-5**	**SW1-6**	**SW1-7**	**SW1-8**	**DESCRIPTION**
ON	---	---	---	---	---	---	---	Forced disabling
OFF	---	---	---	---	---	---	---	Forced enabling
---	ON	---	---	---	---	---	---	Forced cooling (se SW1-1 ON)
---	OFF	---	---	---	---	---	---	Forced heating (se SW1-1 ON)
---	---	ON	---	---	---	---	---	Low consumption in stand by (DEFAULT)
---	---	OFF	---	---	---	---	---	Normal consumption in stand by
---	---	---	ON	---	---	---	---	N.D.
---	---	---	OFF	---	---	---	---	Control via BMS
---	---	---	---	ON	---	---	---	Control via centralised controller
---	---	---	---	OFF	---	---	---	N.D.
---	---	---	---	---	ON	---	---	Defrosting under specific conditions
---	---	---	---	---	OFF	---	---	Automatic defrosting (DEFAULT)
---	---	---	---	---	---	ON	---	Silent mode enabled
---	---	---	---	---	---	OFF	---	Silent mode disabled (DEFAULT)

SW2 SELECTOR								
SW2-1	**SW2-2**	**SW2-3**	**SW2-4**	**SW2-5**	**SW2-6**	**SW2-7**	**SW2-8**	**DESCRIPTION**
OFF	OFF	OFF	OFF	OFF	ON	ON	ON	1U140S2SN1FA
OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	1U140S2SN1FB
OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	1U160S2SN1FB
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	1U125S2SN2FA
OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	1U125S2SN2FB
OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	1U140S2SP2FB

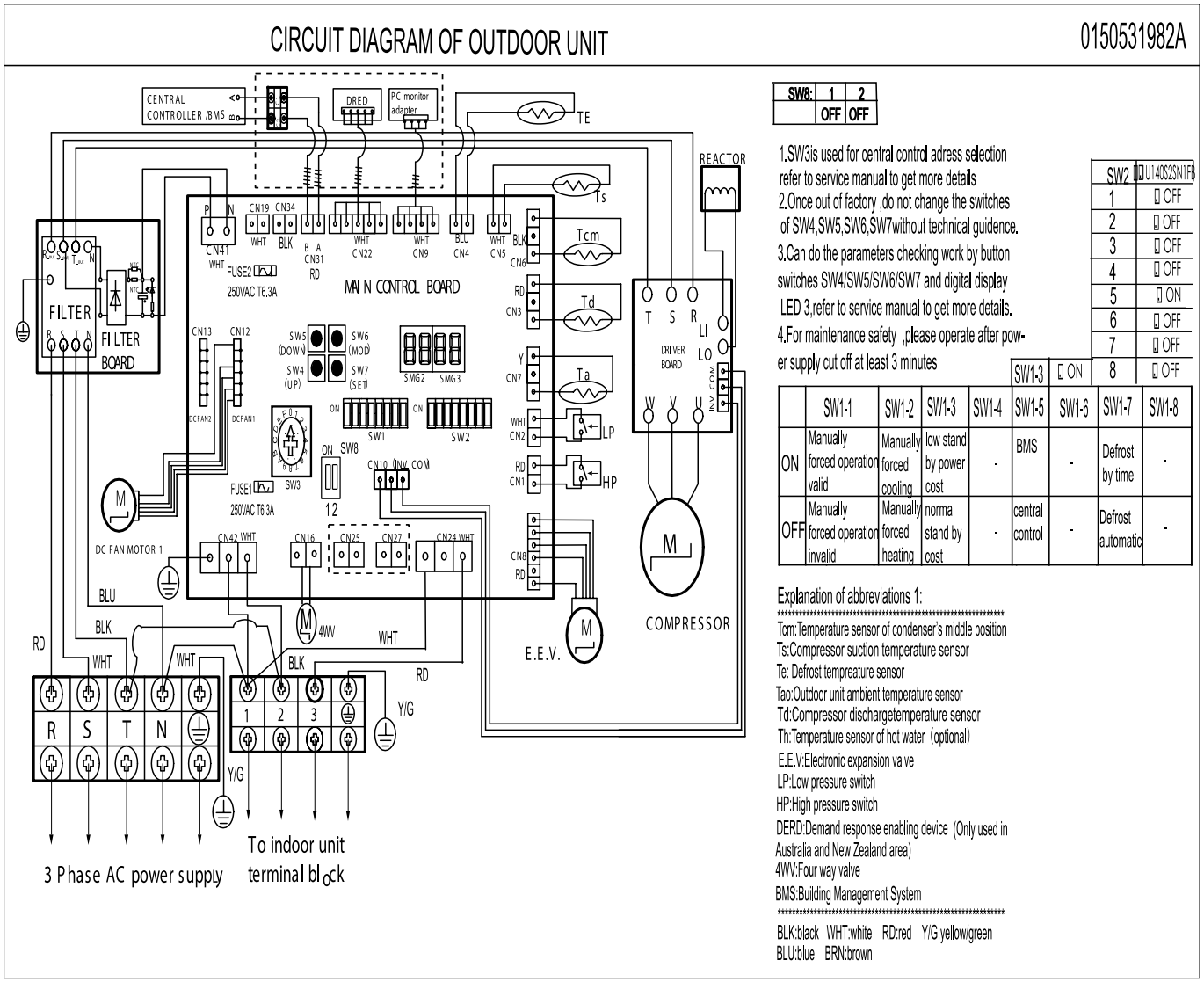
Selector Bank SW3

SW3	DESCRIPTION
0	DEFAULT

Selector Bank SW8

SW8-1	SW8-2	DESCRIPTION
OFF	OFF	DEFAULT

OU CIRCUIT DIAGRAM 14 kW three-phase (1U140S2SN1FB)



OU SETTINGS 14 kW three-phase (1U140S2SN1FB)

Selector Bank SW1

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	DESCRIPTION
OFF	---	---	---	---	---	---	---	FORCED DISABLING
ON	---	---	---	---	---	---	---	FORCED ENABLING
---	OFF	---	---	---	---	---	---	FORCED COOLING (SE SW1-1 ON)
---	ON	---	---	---	---	---	---	FORCED HEATING (SE SW1-1 ON)
---	---	ON	---	---	---	---	---	LOW CONSUMPTION IN STAND BY (DEFAULT)
---	---	OFF	---	---	---	---	---	NORMAL CONSUMPTION IN STAND BY
---	---	---	OFF	---	---	---	---	N.D.
---	---	---	---	ON	---	---	---	CONTROL VIA BMS
---	---	---	---	OFF	---	---	---	CONTROL VIA CENTRALISED CONTROLLER
---	---	---	---	---	OFF	---	---	N.D.
---	---	---	---	---	---	ON	---	DEFROSTING UNDER SPECIFIC CONDITIONS
---	---	---	---	---	---	OFF	---	AUTOMATIC DEFROSTING (DEFAULT)
---	---	---	---	---	---	---	ON	SILENT MODE ENABLED
---	---	---	---	---	---	---	OFF	SILENT MODE DISABLED (DEFAULT)

Selector Bank SW2

SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	DESCRIPTION
OFF	OFF	OFF	OFF	OFF	ON	ON	ON	1U140S2SN1FA
OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	1U140S2SN1FB
OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	1U160S2SP1FB

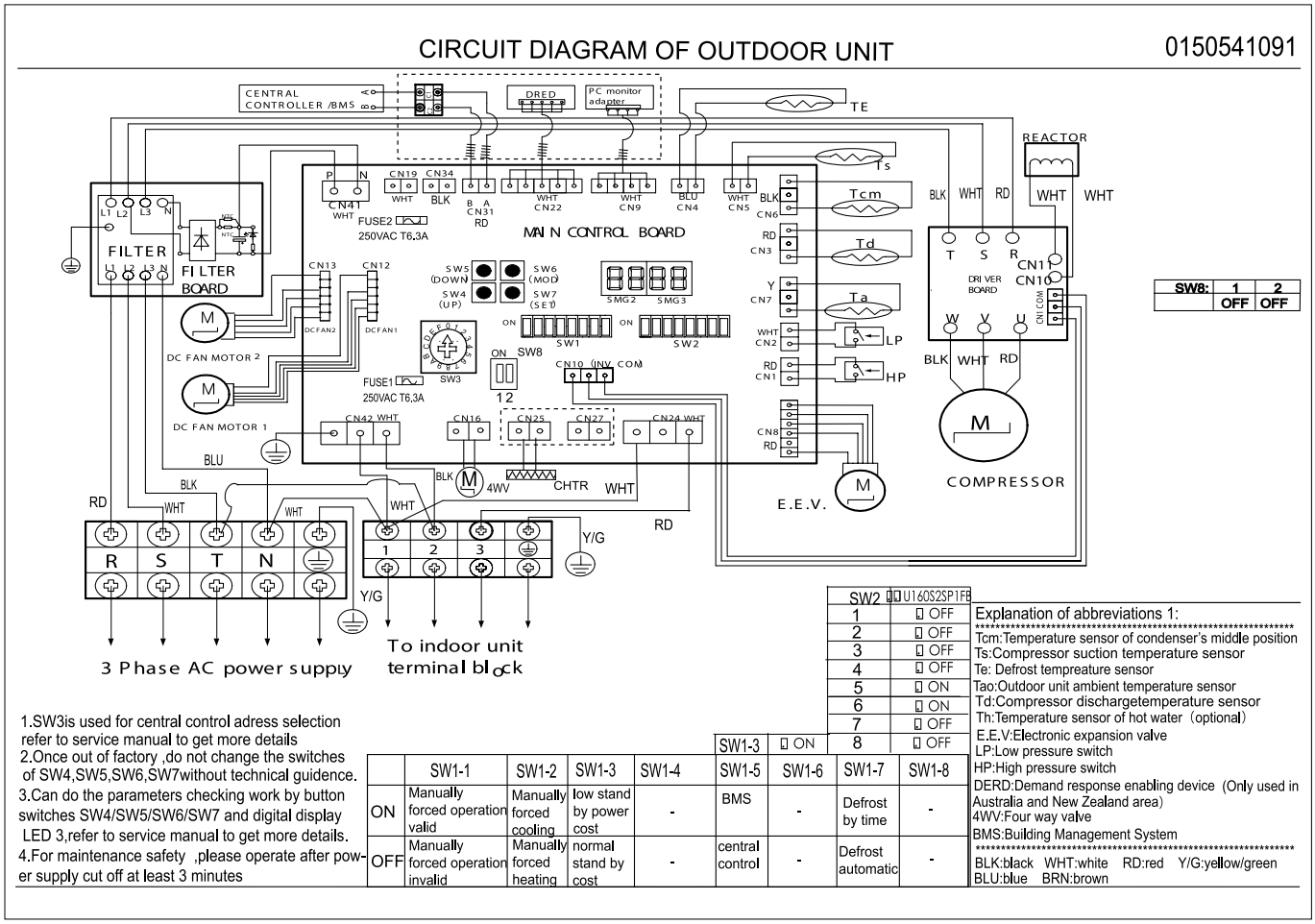
Selector SW3

SW3	DESCRIPTION
0	DEFAULT

Selector Bank SW8

SW8-1	SW8-2	DESCRIPTION
OFF	OFF	DEFAULT

OU CIRCUIT DIAGRAM 16 kW three-phase (1U160S2SP1FB)



1.SW3is used for central control adress selection refer to service manual to get more details
2.Once out of factory ,do not change the switches of SW4,SW5,SW6,SW7without technical guidence.
3.Can do the parameters checking work by button switches SW4/SW5/SW6/SW7 and digital display LED 3,refer to service manual to get more details.
4.For maintenance safety ,please operate after power supply cut off at least 3 minutes

	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
ON	Manually forced operation valid	Manually forced cooling	low stand by power cost	-	BMS	-	Defrost by time	-
OFF	Manually forced operation invalid	Manually forced heating	normal stand by cost	-	central control	-	Defrost automatic	-

OU CIRCUIT DIAGRAM 16 kW three-phase (1U160S2SP1FB)

Selector Bank SW1

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	DESCRIPTION
OFF	---	---	---	---	---	---	---	FORCED DISABLING
ON	---	---	---	---	---	---	---	FORCED ENABLING
---	OFF	---	---	---	---	---	---	FORCED COOLING (SE SW1-1 ON)
---	ON	---	---	---	---	---	---	FORCED HEATING (SE SW1-1 ON)
---	---	ON	---	---	---	---	---	LOW CONSUMPTION IN STAND BY (DEFAULT)
---	---	OFF	---	---	---	---	---	NORMAL CONSUMPTION IN STAND BY
---	---	---	OFF	---	---	---	---	N.D.
---	---	---	---	---	---	---	---	CONTROL VIA BMS
---	---	---	---	OFF	---	---	---	CONTROL VIA CENTRALISED CONTROLLER
---	---	---	---	---	OFF	---	---	N.D.
---	---	---	---	---	---	ON	---	DEFROSTING UNDER SPECIFIC CONDITIONS
---	---	---	---	---	---	OFF	---	AUTOMATIC DEFROSTING (DEFAULT)
---	---	---	---	---	---	---	ON	SILENT MODE ENABLED
---	---	---	---	---	---	---	OFF	SILENT MODE DISABLED (DEFAULT)

Selector Bank SW2

SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	DESCRIPTION
OFF	OFF	OFF	OFF	OFF	ON	ON	ON	1U140S2SN1FA
OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	1U140S2SN1FB
OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	1U160S2SP1FB

Selector SW3

SW3	DESCRIPTION
0	DEFAULT

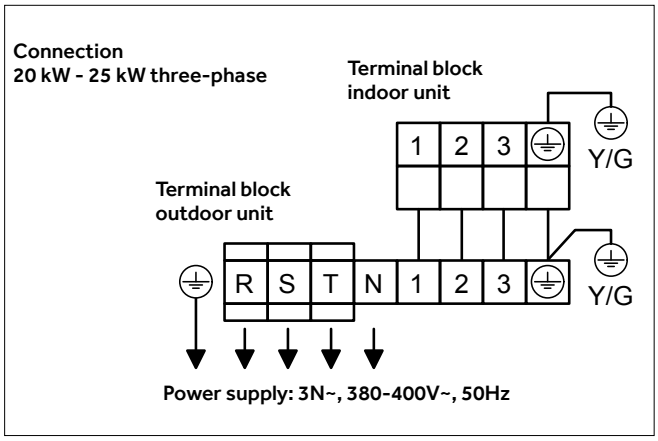
Selector Bank SW8

SW8-1	SW8-2	DESCRIPTION
OFF	OFF	DEFAULT

1UH200W1ERK (20 kW) (three-phase)

1UH250W1ERK (25 kW) (three-phase)

WIRING DIAGRAM 20 kW - 25 kW



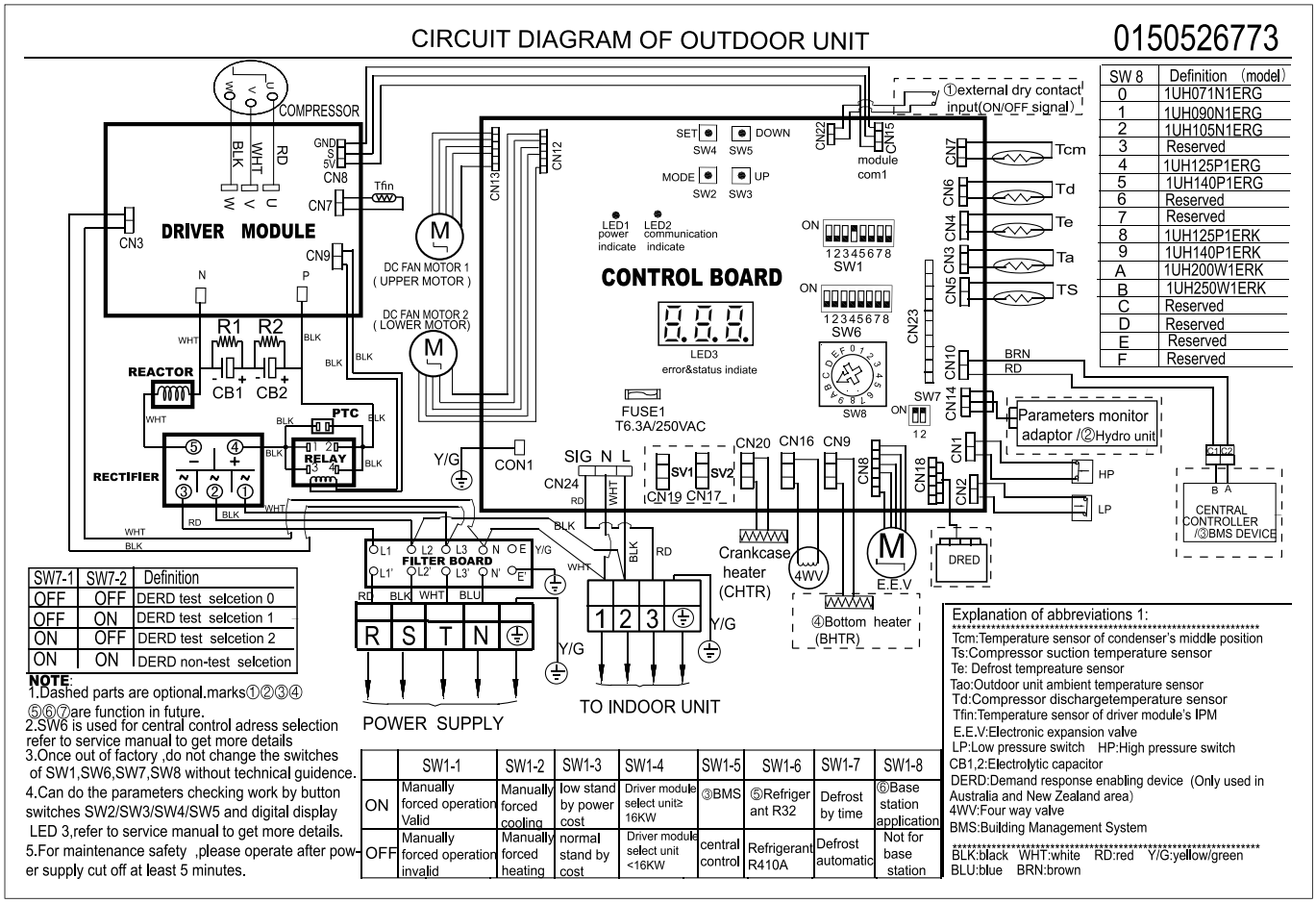
OUTDOOR UNIT	Model		1UH200W1ERK	1UH250W1ERK
Outdoor unit technical data				
Liquid pipe Ø		mm	9.52	9.52
Gas pipe Ø		mm	19.05	*22,22
Standard pipe length without additional refrigerant charge		m	30	30
Maximum pipe length		m	75	75
Maximum IU - OU height difference		m	50	50
Refrigerant charge in the factory		kg	6.10	6.10
Equivalent tons of CO_2		tCO_2EQ	13.25	13.25
Additional refrigerant charge beyond standard length		g/m	45	45
Power Supply		V-Ph-Hz	3/380~415/50/60	3/380~415/50/60
Outdoor unit power cable		mm^2	5G2.5	5G2.5
Outdoor unit - indoor unit cable		mm^2	4G1.5	4G1.5

* To connect the unit to the gas pipe, it is necessary to use a 19.05 mm pipe connector at collar, to be welded to the 22.22 mm gas pipe. The pipe connector is not supplied with the unit.

DIAGNOSTICS IU-OU 20 kW - 25 kW

See **page 26**

OU CIRCUIT DIAGRAM 20 kW (1UH200W1ERK) - 25 kW (1UH250W1ERK)



SW 8	Definition (model)
0	1UH071N1ERG
1	1UH090N1ERG
2	1UH105N1ERG
3	Reserved
4	1UH125P1ERG
5	1UH140P1ERG
6	Reserved
7	Reserved
8	1UH125P1ERK
9	1UH140P1ERK
A	1UH200W1ERK
B	1UH250W1ERK
C	Reserved
D	Reserved
E	Reserved
F	Reserved

SW7-1	SW7-2	Definition
OFF	OFF	DERD test selcetion 0
OFF	ON	DERD test selcetion 1
ON	OFF	DERD test selcetion 2
ON	ON	DERD non-test selcetion

NOTE:
1.Dashed parts are optional.marks①②③④⑤⑥⑦are function in future.
2.SW6 is used for central control adress selection refer to service manual to get more details
3.Once out of factory ,do not change the switches of SW1,SW6,SW7,SW8 without technical guidence.
4.Can do the parameters checking work by button switches SW2/SW3/SW4/SW5 and digital display LED 3,refer to service manual to get more details.
5.For maintenance safety ,please operate after power supply cut off at least 5 minutes.

	SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8
ON	Manually forced operation Valid	Manually forced cooling	low stand by power cost	Driver module select unit≥ 16KW	③BMS	⑤Refrigerant R32	Defrost by time	⑥Base station application
OFF	Manually forced operation invalid	Manually forced heating	normal stand by cost	Driver module select unit <16KW	central control	Refrigerant R410A	Defrost automatic	Not for base station

Explanation of abbreviations 1:
Tcm:Temperature sensor of condenser's middle position
Ts:Compressor suction temperature sensor
Te: Defrost tempreature sensor
Tao:Outdoor unit ambient temperature sensor
Td:Compressor dischargetemperature sensor
Tfin:Temperature sensor of driver module's IPM
E.E.V:Electronic expansion valve
LP:Low pressure switch HP:High pressure switch
CB1,2:Electrolytic capacitor
DERD:Demand response enabling device (Only used in Australia and New Zealand area)
4WV:Four way valve
BMS:Building Management System
BLK:black WHT:white RD:red Y/G:yellow/green
BLU:blue BRN:brown

OU SETTINGS 20 kW - 25 kW

SW1 1=ON 0=OFF									
Forced mode		Stand by	Mode	Remote control-ler	Refrigerant	Defrost	Reserved	Description	Default Position
SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8		
OFF	---	---	---	---	---	---	---	Manual forcing disabled	x
ON	---	---	---	---	---	---	---	Manual forcing enabled	
---	OFF	---	---	---	---	---	---	Forced heating	x
---	ON	---	---	---	---	---	---	Forced cooling	
---	---	OFF	---	---	---	---	---	Normal stand by	x
---	---	ON	---	---	---	---	---	Low consumption stand by	
---	---	---	OFF	---	---	---	---	Water heating - only heating	
---	---	---	ON	---	---	---	---	Air conditioning mode	x
---	---	---	---	OFF	---	---	---	Centralised controller	x
---	---	---	---	ON	---	---	---	BMS control	
---	---	---	---	---	OFF	---	---	R410A refrigerant	x
---	---	---	---	---	ON	---	---	R32 refrigerant	
---	---	---	---	---	---	OFF	---	Automatic defrosting	x
---	---	---	---	---	---	ON	---	Timed defrosting	
---	---	---	---	---	---	---	OFF	Reserved	x
---	---	---	---	---	---	---	ON	Reserved	

Enabling forced mode (SW1-1\2):

To force the air conditioner mode, set switch SW1-1 to ON, then use switch SW2-2 to select heating (OFF) or cooling (ON).

*** For forced operating mode, refer to page 108**

Stand by mode (SW1-3):

Placing this switch in ON enables low-power function when the air conditioner is on stand by

Water heater - air conditioning (SW1-4):

Placing in ON enables the "heating only" function. The factory setting is OFF.

Remote Control (SW1-5):

It is possible to control the air conditioner remotely using the centralized controller (e.g. YCZ-A004) with OFF switch, or by pc (e.g. BMS) with ON switch

Refrigerant (SW1-6):

Using this switch some parameters are changed. By default, keep in R410A mode with switch OFF.

Defrosting (SW1-7):

By setting the switch to ON if the outside temperature drops below 10°C, a defrost is performed every 50 minutes. Otherwise, if the switch remains in OFF the defrost is done only when it is necessary according to the recorded temperatures.

Reserved (SW1-8):

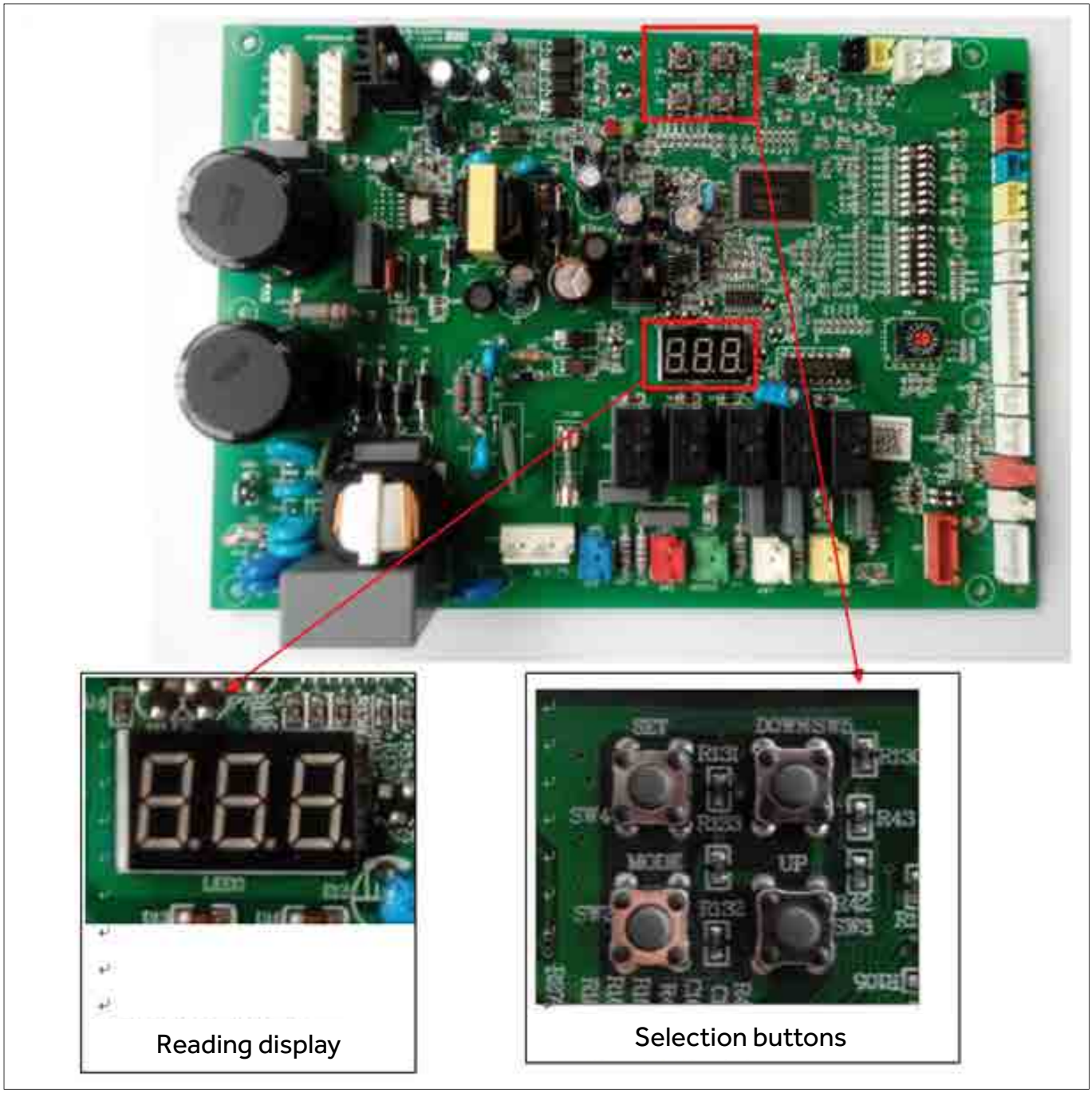
Function not used. Keep switch in OFF position as default.

SW6 1=ON 0=OFF								
Address of centralized controller / bms								Description
SW6-8	SW6-7	SW6-6	SW6-5	SW6-4	SW6-3	SW6-2	SW6-1	
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Address No. 1
OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	Address No. 2
OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	Address No. 3
OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	Address No. 4
OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	Address No. 5
---	---	---	---	---	---	---	---	Address No. --
ON	ON	ON	ON	ON	ON	ON	ON	Address No. 128

SW7 1=0N 0=OFF		
SW7-1	SW7-2	Description
OFF	OFF	DERD test 0
OFF	ON	DERD test 1
ON	OFF	DERD test 2
ON	ON	DERD function disabled (DEFAULT)

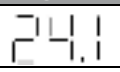
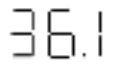
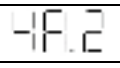
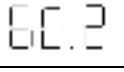
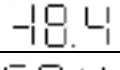
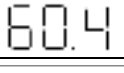
SW8 (rotary)	
Model selection	
Position	Description
0	**1UH071N1ERG**
1	**1UH090N1ERG**
2	**1UH105N1ERG**
3	Not used
4	**1UH125P1ERG**
5	**1UH140P1ERG**
6	Not used
7	**1UH160P1ERG**
8	**1UH125P1ERK**
9	**1UH140P1ERK**
A	**1UH200W1ERK**
B	**1UH250W1ERK**
C	Not used
D	Not used
E	Not used
F	Not used

READING / FORCING PARAMETERS



Parameters shown in the display

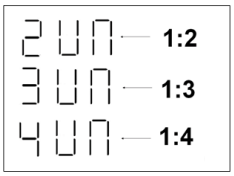
- As soon as the outdoor unit is powered, the corresponding power will appear in the display.

MODEL	MODEL CODE	DISPLAY
1UH071N1ERG	24.1	
1UH090N1ERG	30.1	
1UH105N1ERG	36.1	
1UH125P1ERG	48.2	
1UH140P1ERG	60.2	
1UH125P1ERK	48.4	
1UH140P1ERK	60.4	

- After a few seconds, the number of indoor units connected will appear

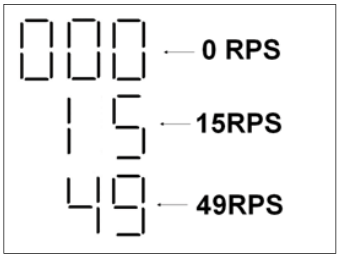
Monosplit systems 1:1

Maxisplit systems with 2/3/4 indoor units

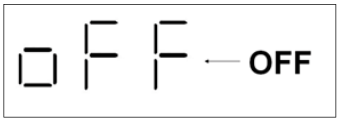


- As soon as the compressor starts, the startup mode will appear for a few seconds:
  Coo: Cooling
  HAE: Heating

- After a few seconds, operating frequency of the compressor will appear in the display

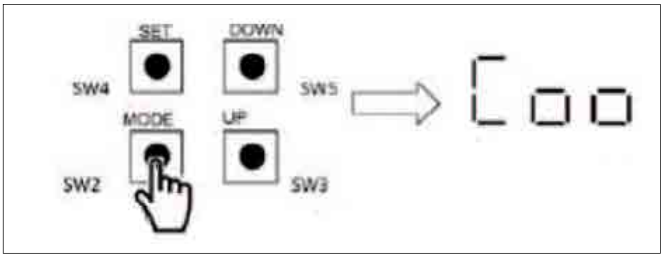


- As soon as the compressor is switched off, the off sign will appear for a few seconds, after which the display will remain off until the compressor restarts again.

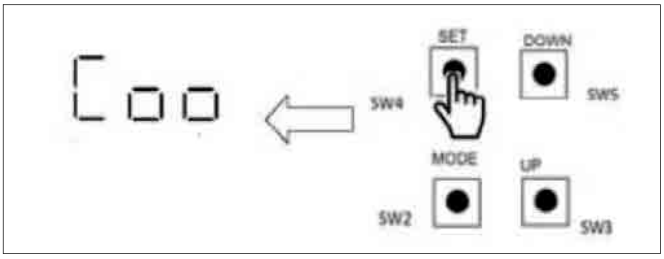


Forced cooling:

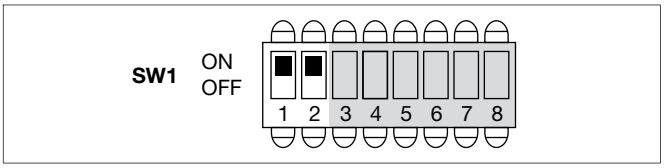
- Using the electronic board of the outdoor unit, press the "MODE" (SW2) button for 5 seconds and flashing "Coo" will appear on the display.



- Confirm by pressing the "SET" (SW4) button for 5 seconds.



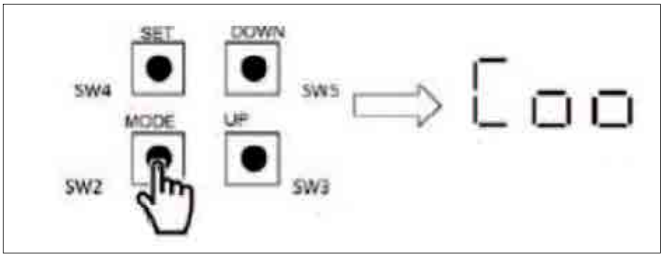
- Place switches 1 and 2 of the SW1 bank to "ON"
- From remote controller/wired controller turn on the indoor unit in cooling mode at 16°C with maximum ventilation. (*If the indoor unit remains off.)
- To turn off the outdoor unit, place the switches 1 and 2 of the SW1 bank back to "OFF".



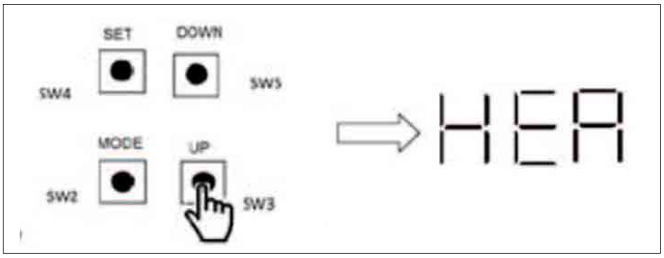
Forced heat pump:

-

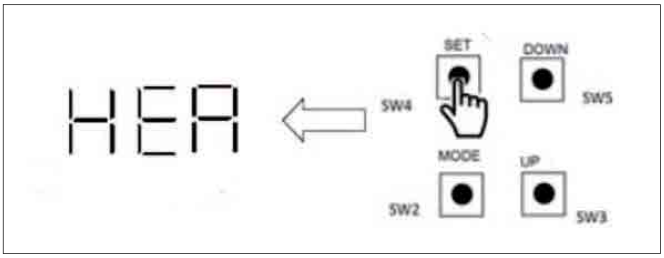
Using the electronic board of the outdoor unit, press the "MODE" (SW2) button for 5 seconds and flashing "Coo" will appear on the display.



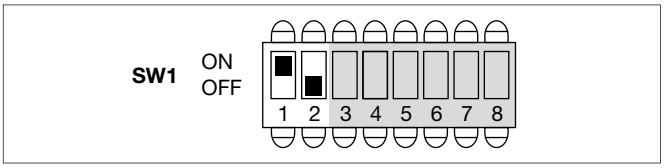
- Press the "UP" (SW3) button for 1 time and the flashing "HEA" appears in the display.



- Confirm by pressing the "SET" (SW4) button for 5 seconds.



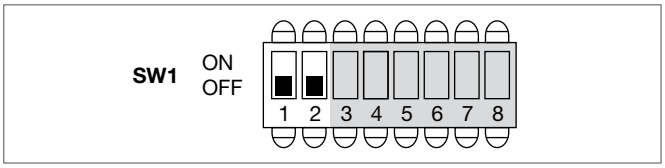
- Place switch 1 of the SW1 bank to "ON"
- From remote controller/wired controller turn on the indoor unit in heat pump mode at 30°C with maximum ventilation. (*If the indoor unit remains off.)
- To turn off the outdoor unit, place the switch 1 of the SW1 bank back to "OFF".



Parameter reading mode:

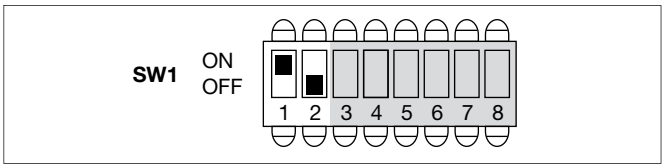
With this procedure it is possible to check some parameters, some of which can be "forced" in order to verify the actual functioning of the linked devices.

For read-only parameters, keep switch 1 of the SW1 bank in "OFF"



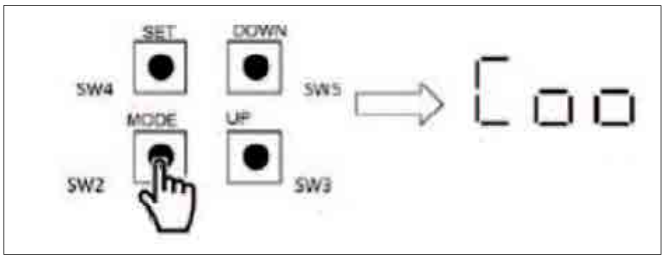
To force some parameters, instead, set the switch 1 of the SW1 bank to "ON".

****Once the verifications are complete, set the switch no. 1 to "OFF" again.**



Raise the switch only when you have already selected the function you want to force

- Using the electronic board of the outdoor unit, press the "MODE" button for 5 seconds. "Coo" will flash on the display.
- Press the "UP" (SW3) button 5 times until "Off" appears in the display
- Press the "SET" (SW4) button for 5 seconds and the display will stop flashing.
- Press the "SET" (SW4) button again for 5 seconds, a second menu will appear in the display with the following functions:



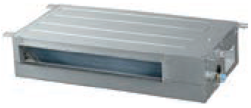
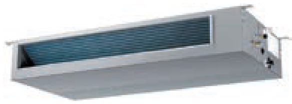
Abbreviation	Symbol	Description	Possibility of forcing (SW1, 1 "ON")	
Frq	FrQ	Compressor frequency	*	000 to 120 rps
opN	oPN	Electronic expansion valve opening	*	000 to 500
I.FN	I.FN	Indoor unit fan speed (002 to 004, 000 off)		
o.FN	o.FN	Outdoor unit fan speed	*	000 to 009
tAo	tAo	Outdoor unit ambient temperature		
tc	tC	Outdoor unit exchanger temperature		
td	td	Compressor delivery temperature		
tE	tE	Defrosting probe temperature		
tS	tS	Compressor intake temperature		
tdr	tdr	Power module temperature		
Idr	Idr	Current absorbed by compressor		
tH	tH	Hot water temperature (not used)		
tAI	tAI	Indoor unit ambient temperature		
TCI	tCI	Indoor unit exchanger temperature		
tSt	tSt	Indoor unit set temperature (in heat pump mode +3°C for compensation)		

- Press the "UP"(SW3) and "DOWN" (SW4) buttons to scroll through the various functions. If the chosen function allows forcing, raise the switch 1 of the SW1 bank
- To exit the menu, press the "MODE" (SW2) button for 15 seconds, which will result in the word "Qut" appearing in the display. Confirm by holding down the "SET" (SW4) button for 5 seconds.

INDOOR UNITS		CASSETTE			CEILING/FLOOR CONVERTIBLE		
							
OUTDOOR UNITS		**1:2**	**1:3**	**1:4**	**1:2**	**1:3**	**1:4**
10.5 kW		**AB50S2SC2FA-1** 2501455F2 **AB50S2SC2FA-1** 2501455F2	**AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2	**AB25S2SC2FA-1** 2501451F2 **AB25S2SC2FA-1** 2501451F2 **AB25S2SC2FA-1** 2501451F2 **AB25S2SC2FA-1** 2501451F2	**AC50S2SG1FA** 2501405A2 **AC50S2SG1FA** 2501405A2	**AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2	
SIN-GLE-PHASE	**1U105S2SS2FA** 2502308C2	**JOINT KIT FQG-2Y100A** 25030230L	**JOINT KIT FQG-3Y100A + ADAPTER** 25030239L	**JOINT KIT FQG-4Y200A + ADAPTER** 25030249L	**JOINT KIT FQG-2Y100A** 25030230L	**JOINT KIT FQG-3Y100A + ADAPTER** 25030239L	
THREE-PHASE	**1U105S2SS1FB** 2502308B2						
12.5 kW		**AB71S2SG1FA** 2501456A2 **AB71S2SG1FA** 2501456A2	**AB50S2SC2FA-1** 2501455F2 **AB50S2SC2FA-1** 2501455F2 **AB50S2SC2FA-1** 2501455F2	**AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2	**AC71S2SG1FA** 2501406A2 **AC71S2SG1FA** 2501406A2	**AC50S2SG1FA** 2501405A2 **AC50S2SG1FA** 2501405A2 **AC50S2SG1FA** 2501405A2	**AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2
SIN-GLE-PHASE	**1U125S2SN2FA** 2502309C2	**JOINT KIT FQG-2Y200A + ADAPTER** 25030234L	**JOINT KIT FQG-3Y200A + ADAPTER** 25030244L	**JOINT KIT FQG-4Y200A + ADAPTER** 25030249L	**JOINT KIT FQG-2Y200A + ADAPTER** 25030234L	**JOINT KIT FQG-3Y200A + ADAPTER** 25030244L	**JOINT KIT FQG-4Y200A + ADAPTER** 25030249L
THREE-PHASE	**1U125S2SN2FB** 2502309G2						
14.0 kW		**AB71S2SG1FA** 2501456A2 **AB71S2SG1FA** 2501456A2	**AB50S2SC2FA-1** 2501455F2 **AB50S2SC2FA-1** 2501455F2 **AB50S2SC2FA-1** 2501455F2	**AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2	**AC71S2SG1FA** 2501406A2 **AC71S2SG1FA** 2501406A2	**AC50S2SG1FA** 2501405A2 **AC50S2SG1FA** 2501405A2 **AC50S2SG1FA** 2501405A2	**AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2
SIN-GLE-PHASE	**1U140S2SN1FA** 2502309H2	**JOINT KIT FQG-2Y200A + ADAPTER** 25030234L	**JOINT KIT FQG-3Y200A + ADAPTER** 25030244L	**JOINT KIT FQG-4Y200A + ADAPTER** 25030249L	**JOINT KIT FQG-2Y200A + ADAPTER** 25030234L	**JOINT KIT FQG-3Y200A + ADAPTER** 25030244L	**JOINT KIT FQG-4Y200A + ADAPTER** 25030249L
THREE-PHASE	**1U140S2SN1FB** 2502309J2						
NEW **14.0 kW**		**AB71S2SG1FA** 2501456A2 **AB71S2SG1FA** 2501456A2	**AB50S2SC2FA-1** 2501455F2 **AB50S2SC2FA-1** 2501455F2 **AB50S2SC2FA-1** 2501455F2	**AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2	**AC71S2SG1FA** 2501406A2 **AC71S2SG1FA** 2501406A2	**AC50S2SG1FA** 2501405A2 **AC50S2SG1FA** 2501405A2 **AC50S2SG1FA** 2501405A2	**AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2
SIN-GLE-PHASE	**1U140S2SP2FA** 2502309M2	**JOINT KIT FQG-2Y200A + ADAPTER** 25030234L	**JOINT KIT FQG-3Y200A + ADAPTER** 25030244L	**JOINT KIT FQG-4Y200A + ADAPTER** 25030249L	**JOINT KIT FQG-2Y200A + ADAPTER** 25030234L	**JOINT KIT FQG-3Y200A + ADAPTER** 25030244L	**JOINT KIT FQG-4Y200A + ADAPTER** 25030249L
THREE-PHASE	**1U140S2SP2FB** 2502309N2						
16.0 kW		**AB71S2SG1FA** 2501456A2 **AB71S2SG1FA** 2501456A2	**AB50S2SC2FA-1** 2501455F2 **AB50S2SC2FA-1** 2501455F2 **AB50S2SC2FA-1** 2501455F2	**AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2 **AB35S2SC2FA-1** 2501452F2	**AC71S2SG1FA** 2501406A2 **AC71S2SG1FA** 2501406A2	**AC50S2SG1FA** 2501405A2 **AC50S2SG1FA** 2501405A2 **AC50S2SG1FA** 2501405A2	**AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2 **AC35S2SG1FA** 2501402A2
THREE-PHASE	**1U160S2SP1FB** 2502309L2	**JOINT KIT FQG-2Y200A + ADAPTER** 25030234L	**JOINT KIT FQG-3Y200A + ADAPTER** 25030244L	**JOINT KIT FQG-4Y200A + ADAPTER** 25030249L	**JOINT KIT FQG-2Y200A + ADAPTER** 25030234L	**JOINT KIT FQG-3Y200A + ADAPTER** 25030244L	**JOINT KIT FQG-4Y200A + ADAPTER** 25030249L

REQUIRED CONTROL-LERS AND ACCESSORIES	WIRED CONTROLLERS (REQUIRED FOR SYSTEM)			
				
	HW-BA101ABT 25030105J	**HW-BA116ABK** 25030104L	**YR-E17A** 25030106L	**YR-E16B** 25030105L

The data on this catalogue is purely indicative as the data may vary. Please be advised to check the accuracy of the data with the supplier before purchasing products.

SLIM DUCTED LOW PRESSURE 30 Pa			DUCTED MEDIUM PRESSURE 150 Pa		
					
1:2	1:3	1:4	1:2	1:3	1:4
AD50S2SS1FA(H) 2504655C2 AD50S2SS1FA(H) 2504655C2	AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2	AD25S2SS1FA(H) 2504651C2 AD25S2SS1FA(H) 2504651C2 AD25S2SS1FA(H) 2504651C2 AD25S2SS1FA(H) 2504651C2	AD50S2SM3FA(H) 2501655D2 AD50S2SM3FA(H) 2501655D2	AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2	
JOINT FQG-2Y100A 25030230L	JOINT KIT FQG-3Y100A + ADAPTER 25030239L	JOINT KIT FQG-4Y200A + ADAPTER 25030249L	JOINT FQG-2Y100A 25030230L	JOINT KIT FQG-3Y100A + ADAPTER 25030239L	
AD71S2SS1FA(H) 2504656C2 AD71S2SS1FA(H) 2504656C2	AD50S2SS1FA(H) 2504655C2 AD50S2SS1FA(H) 2504655C2 AD50S2SS1FA(H) 2504655C2	AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2	AD71S2SM3FA(H) 2501656D2 AD71S2SM3FA(H) 2501656D2	AD50S2SM3FA(H) 2501655D2 AD50S2SM3FA(H) 2501655D2 AD50S2SM3FA(H) 2501655D2	AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2
JOINT KIT FQG-2Y200A + ADAPTER 25030234L	JOINT KIT FQG-3Y200A + ADAPTER 25030244L	JOINT KIT FQG-4Y200A + ADAPTER 25030249L	JOINT KIT FQG-2Y200A + ADAPTER 25030234L	JOINT KIT FQG-3Y200A + ADAPTER 25030244L	JOINT KIT FQG-4Y200A + ADAPTER 25030249L
AD71S2SS1FA(H) 2504656C2 AD71S2SS1FA(H) 2504656C2	AD50S2SS1FA(H) 2504655C2 AD50S2SS1FA(H) 2504655C2 AD50S2SS1FA(H) 2504655C2	AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2	AD71S2SM3FA(H) 2501656D2 AD71S2SM3FA(H) 2501656D2	AD50S2SM3FA(H) 2501655D2 AD50S2SM3FA(H) 2501655D2 AD50S2SM3FA(H) 2501655D2	AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2
JOINT KIT FQG-2Y200A + ADAPTER 25030234L	JOINT KIT FQG-3Y200A + ADAPTER 25030244L	JOINT KIT FQG-4Y200A + ADAPTER 25030249L	JOINT KIT FQG-2Y200A + ADAPTER 25030234L	JOINT KIT FQG-3Y200A + ADAPTER 25030244L	JOINT KIT FQG-4Y200A + ADAPTER 25030249L
AD71S2SS1FA(H) 2504656C2 AD71S2SS1FA(H) 2504656C2	AD50S2SS1FA(H) 2504655C2 AD50S2SS1FA(H) 2504655C2 AD50S2SS1FA(H) 2504655C2	AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2	AD71S2SM3FA(H) 2501656D2 AD71S2SM3FA(H) 2501656D2	AD50S2SM3FA(H) 2501655D2 AD50S2SM3FA(H) 2501655D2 AD50S2SM3FA(H) 2501655D2	AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2
JOINT KIT FQG-2Y200A + ADAPTER 25030234L	JOINT KIT FQG-3Y200A + ADAPTER 25030244L	JOINT KIT FQG-4Y200A + ADAPTER 25030249L	JOINT KIT FQG-2Y200A + ADAPTER 25030234L	JOINT KIT FQG-3Y200A + ADAPTER 25030244L	JOINT KIT FQG-4Y200A + ADAPTER 25030249L
AD71S2SS1FA(H) 2504656C2 AD71S2SS1FA(H) 2504656C2	AD50S2SS1FA(H) 2504655C2 AD50S2SS1FA(H) 2504655C2 AD50S2SS1FA(H) 2504655C2	AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2 AD35S2SS1FA(H) 2504652C2	AD71S2SM3FA(H) 2501656D2 AD71S2SM3FA(H) 2501656D2	AD50S2SM3FA(H) 2501655D2 AD50S2SM3FA(H) 2501655D2 AD50S2SM3FA(H) 2501655D2	AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2 AD35S2SM3FA(H) 2501652D2
JOINT KIT FQG-2Y200A + ADAPTER 25030234L	JOINT KIT FQG-3Y200A + ADAPTER 25030244L	JOINT KIT FQG-4Y200A + ADAPTER 25030249L	JOINT KIT FQG-2Y200A + ADAPTER 25030234L	JOINT KIT FQG-3Y200A + ADAPTER 25030244L	JOINT KIT FQG-4Y200A + ADAPTER 25030249L

CENTRAL CONTROLLERS		Wi-Fi	
			
HC-SA164DBT 25030134J	YCZ-A004 25030132J	KZW-W001 25033108L	HI-WB201DEI 25033110L

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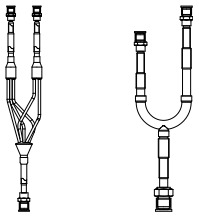
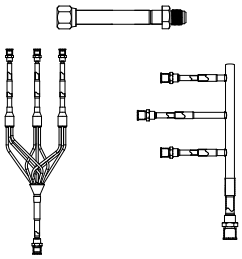
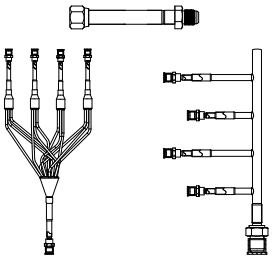
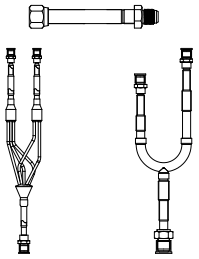
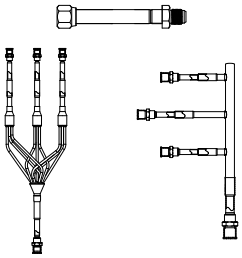
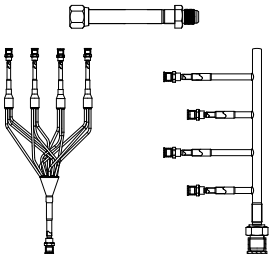
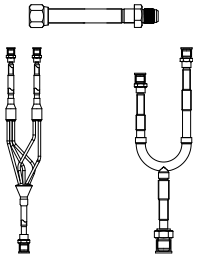
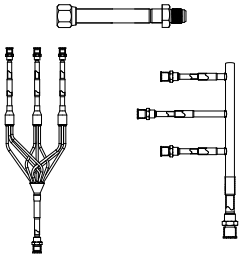
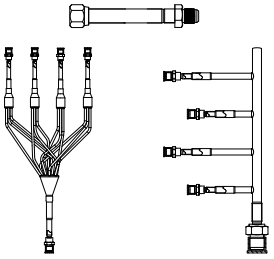
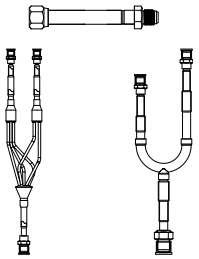
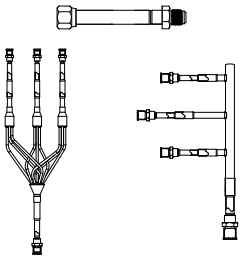
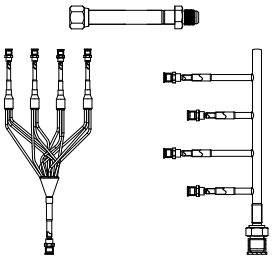
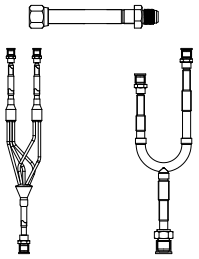
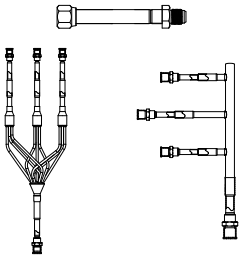
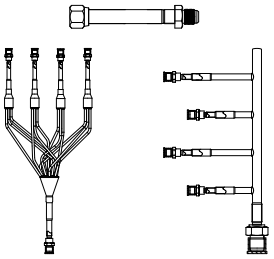
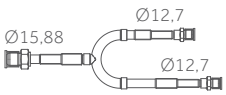
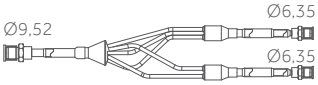
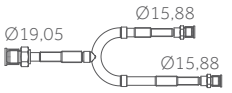
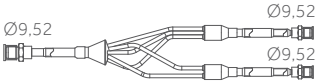
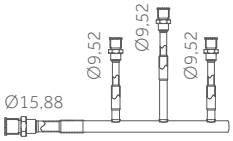
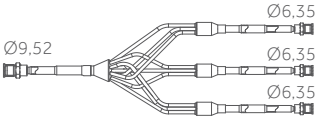
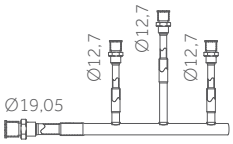
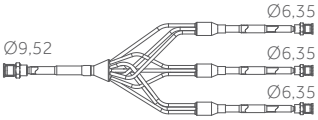
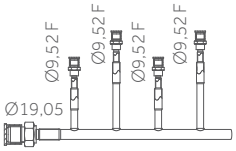
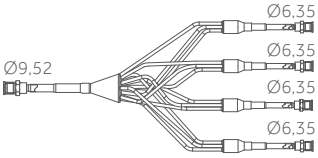
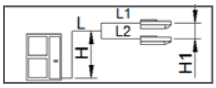
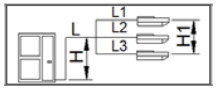
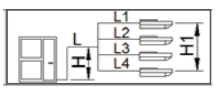
OUTDOOR UNITS		1:2	1:3	1:4
10.5 kW		JOINT FQG-2Y100A 25030230L  LIQUID GAS	JOINT KIT FQG-3Y100A + ADAPTER 25030239L  LIQUID GAS	JOINT KIT FQG-4Y200A + ADAPTER 25030249L  LIQUID GAS
SINGLE-PHASE	1U105S2SS2FA 2502308C2			
THREE-PHASE	1U105S2SS1FB 2502308B2			
12.5 kW		JOINT KIT FQG-2Y200A + ADAPTER 25030234L  LIQUID GAS	JOINT KIT FQG-3Y200A + ADAPTER 25030244L  LIQUID GAS	JOINT KIT FQG-4Y200A + ADAPTER 25030249L  LIQUID GAS
SINGLE-PHASE	1U125S2SN2FA 2502309C2			
THREE-PHASE	1U125S2SN2FB 2502309G2			
14.0 kW		JOINT KIT FQG-2Y200A + ADAPTER 25030234L  LIQUID GAS	JOINT KIT FQG-3Y200A + ADAPTER 25030244L  LIQUID GAS	JOINT KIT FQG-4Y200A + ADAPTER 25030249L  LIQUID GAS
SINGLE-PHASE	1U140S2SN1FA 2502309H2			
THREE-PHASE	1U140S2SN1FB 2502309J2			
NEW 14.0 kW		JOINT KIT FQG-2Y200A + ADAPTER 25030234L  LIQUID GAS	JOINT KIT FQG-3Y200A + ADAPTER 25030244L  LIQUID GAS	JOINT KIT FQG-4Y200A + ADAPTER 25030249L  LIQUID GAS
SINGLE-PHASE	1U140S2SP2FA 2502309M2			
THREE-PHASE	1U140S2SP2FB 2502309N2			
16.0 kW		JOINT KIT FQG-2Y200A + ADAPTER 25030234L  LIQUID GAS	JOINT KIT FQG-3Y200A + ADAPTER 25030244L  LIQUID GAS	JOINT KIT FQG-4Y200A + ADAPTER 25030249L  LIQUID GAS
THREE - PHASE	1U160S2SP1FB 2502309L2			

The expressed kW/Btu is for cooling classification. For exact values, see the technical data tables of the individual models.

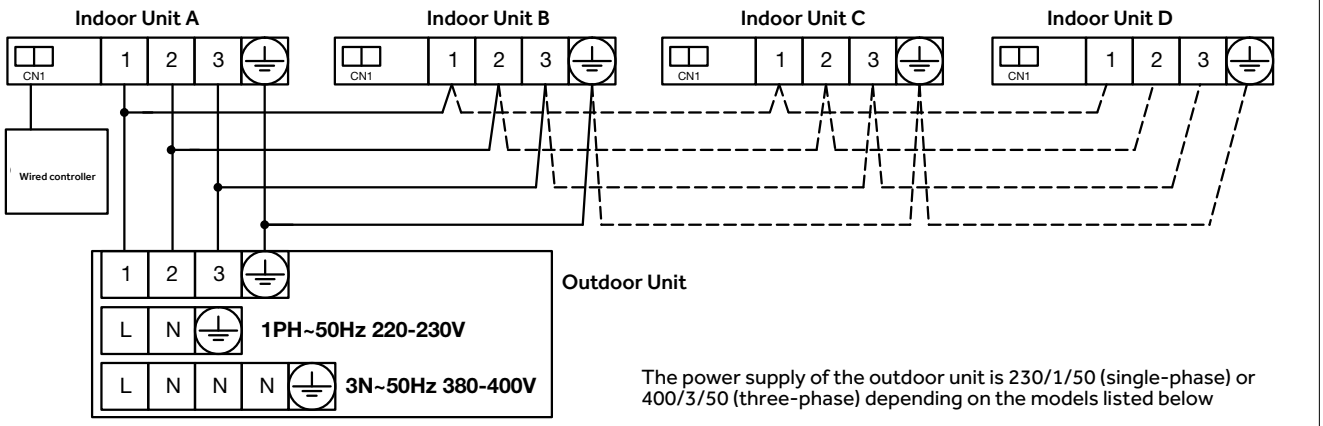
COLLECTOR SPECIFICATIONS

OUTDOOR UNITS	INDOOR UNITS	N° IU	WIRED CONTROLLER	GAS	LIQUID	JOINT
1U105S2SS2FA 1U105S2SS1FB	AB50S2SC2FA-1 AC50S2SG1FA AD50S2SS1FA(H) AD50S2SM3FA(H)	2	YR-E17			FQG-2Y100A
1U125S2SN2FA 1U125S2SN2FB 1U140S2SN1FA 1U140S2SN1FB 1U140S2SP2FA 1U140S2SP2FB 1U160S2SP1FB	AB71S2SG1FA AC71S2SG1FA AD71S2SS1FA(H) AD71S2SM3FA(H)	2	YR-E17			FQG-2Y200A
1U105S2SS2FA 1U105S2SS1FB	AB35S2SC2FA-1 AC35S2SG1FA AD35S2SS1FA(H) AD35S2SM3FA(H)	3	YR-E17			FQG-3Y100A
1U125S2SN2FA 1U125S2SN2FB 1U140S2SN1FA 1U140S2SN1FB 1U140S2SP2FA 1U140S2SP2FB 1U160S2SP1FB	AB50S2SC2FA-1 AC50S2SG1FA AD50S2SS1FA(H) AD50S2SM3FA(H)	3	YR-E17			FQG-3Y200A
1U105S2SS2FA 1U105S2SS1FB 1U125S2SN2FA 1U125S2SN2FB 1U140S2SN1FA 1U140S2SN1FB 1U140S2SP2FA 1U140S2SP2FB 1U160S2SP1FB	AB25S2SC2FA-1 AB35S2SC2FA-1 AC35S2SG1FA AD25S2SS1FA(H) AD35S2SS1FA(H) AD35S2SM3FA(H)	4	YR-E17			FQG-4Y200A

PIPE SPECIFICATIONS

NO. IU	Pipe diagram	Maximum pipe length (m)			Maximum OU - IU height difference (m)			Maximum single IU length (m)			Max IU - IU height difference (m)			Max pipe length difference (m)			Pipe diameter (mm)				Joints diameter (mm)		
2		L+L1+L2			H			L1 or L2			H1			L1-L2			liquid/gas				liquid/gas		
		Outdoor units			Outdoor units			Outdoor units			Outdoor units			Outdoor units			Outdoor units				Outdoor units		
		105	125	140 160	105	125	140 160	105	125	140 160	105	125	140 160	105	125	140 160	105	125	140	160	105	125	140 160
		≤50		≤75	≤30			≤20			≤0.5			≤10			9.52 15.88			9.52 19.05		9.52 15.88	9.52 15.88
3		L+L1+L2+L3			H			L1 or L2 or L3			H1			(Lx-Ly)x,y=1,2,3 x≠y			liquid/gas				liquid/gas		
		Outdoor units			Outdoor units			Outdoor units			Outdoor units			Outdoor units			Outdoor units				Outdoor units		
		105	125	140 160	105	125	140 160	105	125	140 160	105	125	140 160	105	125	140 160	105	125	140	160	105	125	140 160
		≤50	≤60	≤75	≤20	≤30		≤20			≤0.5			≤10			9.52 15.88			9.52 19.05	6.35 9.52	6.35 12.7	6.35 12.7
4		L+L1+L2+L3+L4			H			L1 or L2 or L3 or L4			H1			(Lx-Ly)x,y=1,2,3,4 x≠y			liquid/gas				liquid/gas		
		Outdoor units			Outdoor units			Outdoor units			Outdoor units			Outdoor units			Outdoor units				Outdoor units		
		105	125	140 160	105	125	140 160	105	125	140 160	105	125	140 160	105	125	140 160	105	125	140	160	105	125	140 160
		≤50	≤60	≤75	≤20	≤30		≤20			≤0.5			≤10			9.52 15.88			9.52 19.05	6.35 12.7	6.35 9.52	6.35 9.52

WIRING DIAGRAM



DIAGNOSTICS:
To see the list of alarms of indoor / outdoor units in combination MAXISPLIT, go to **page 26**

SETTINGS:
Indoor units
- Cassette (620) on **page 57**
- Round flow cassete on **page 60**
- Ceiling / Floor Convertible on **page 64**
- Ducted Low Pressure on **page 67**
- Ducted Medium Pressure on **page 70**

Outdoor units
- (10.5 kW - 12.5 kW - 14 kW) (single-phase) on **page 96**
- (12.5 kW - 14 kW) (three-phase) on **page 102**
- (16 kW) (three phase) on **page 104**

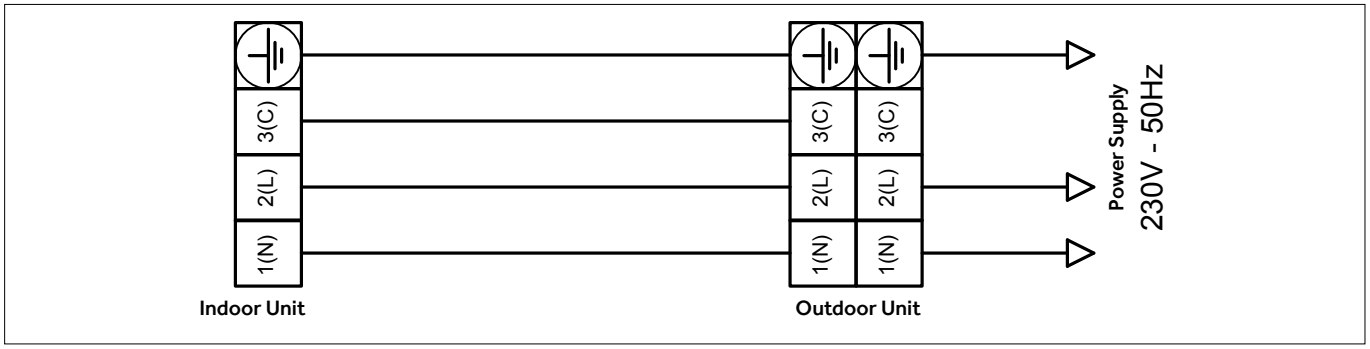
AS25TADHRA-2 - 1U25YEGFRA (2.5 kW)

AS35TADHRA-2 - 1U35YEGFRA (3.5 kW)

AS50TDDHRA-CLC - 1U50MEGFRA (5.0 kW)

AS68TEDHRA-CLC - 1U68REEFRA (6.8 kW)

WIRING DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW - 6.8 kW



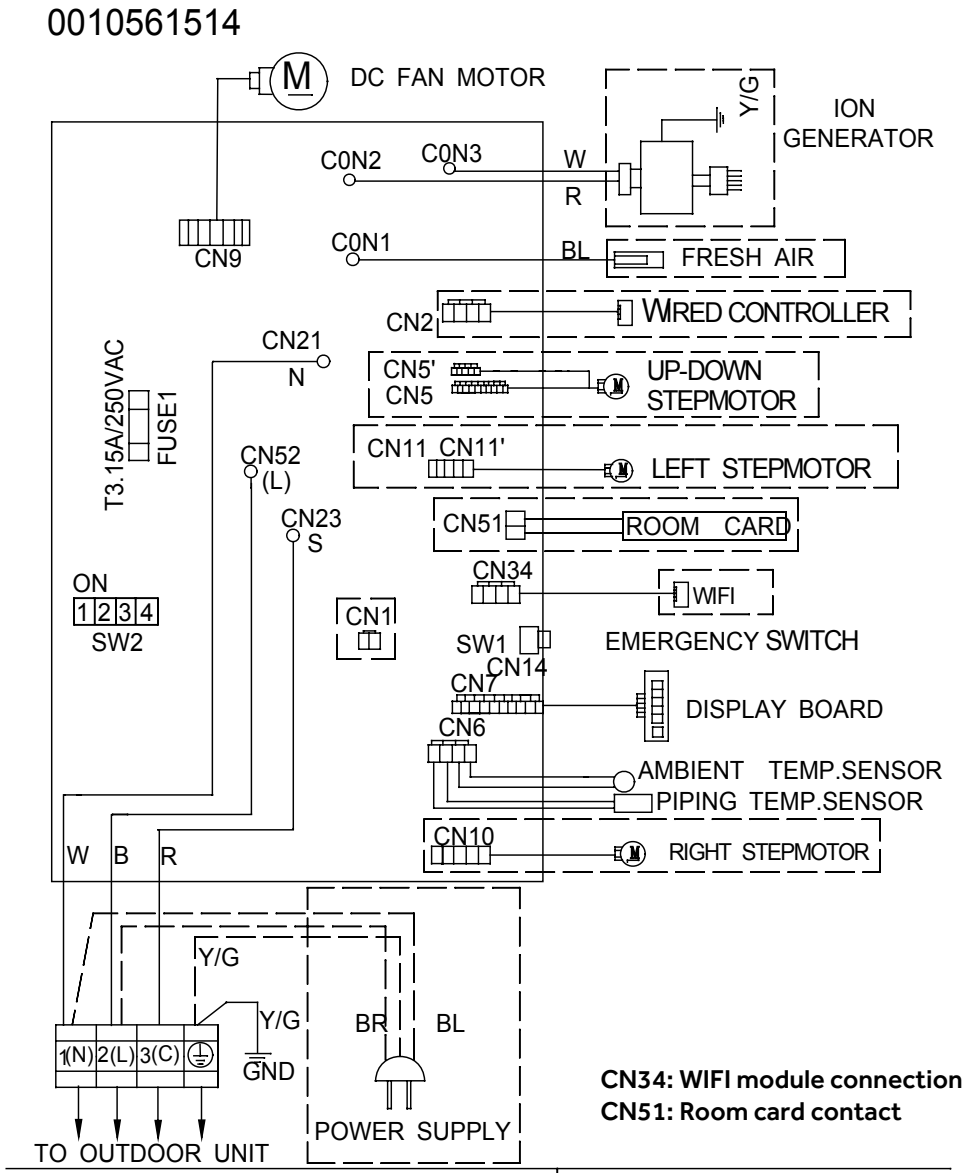
INDOOR UNIT	Model		AS25TADHRA-2	AS35TADHRA-2	AS50TDDHRA-CLC	AS68TEDHRA-CLC
OUTDOOR UNIT	Model		***1U25YEGFRA**	***1U35YEGFRA**	**1U50MEGFRA**	**1U68REEFRA**
Indoor unit technical data						
Treated air volume	H	m³/h	500	550	900	1200
Net dimensions	WxDxH	mm	820x195x280	820x195x280	1008x225x318	1125x240x335
Net weight		kg	8.4	8.4	11.6	14
Outdoor unit technical data						
Liquid pipe Ø		mm	6.35	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	12.7	12.7
Standard pipe length without additional refrigerant charge		m	5	5	7	7
Maximum pipe length		m	20	20	25	25
Maximum IU - OU height difference		m	10	10	15	15
Refrigerant charge in the factory		kg	0.55	0.62	0.90	1.20
Equivalent tons of CO_2		tCO_2EQ	0.33	0.42	0.60	0.81
Additional refrigerant charge beyond standard length		g/m	20	20	20	20
Net dimensions	WxDxH	mm	700x245x544	800x275x553	800x275x553	890x353x697
Net weight		kg	22.7	27	32.7	47.3
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50
Outdoor unit power cable		mm^2	3G1.5	3G1.5	3G2.5	3G2.5
Outdoor unit - indoor unit cable		mm^2	4G1.5	4G1.5	4G1.5	4G1.5

* (In addition to the standard charge for this combination, it is necessary to add 50 to 100 gr of refrigerant)

DIAGNOSTICS 2.5 kW - 3.5 kW - 5.0 kW - 6.8 kW

See **page 28**

IU CIRCUIT DIAGRAM 2.5kW - 3.5kW - 5.0kW - 6.8kW



INDOOR UNIT SETTING:

Selecting the frequency of remote control A or B (SW2-1):

Switch 1 selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board) (SW2-2):

Using switch 2, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used.
ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control).

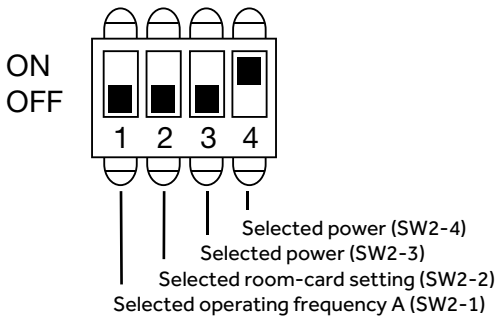
Selecting the indoor unit power (SW2-3) and (SW2-4):

Using switches 3 and 4 you can select the power of the indoor unit:

	6.8 kW	5.0 kW	3.5 kW	2.5 kW
SW2-3	OFF	OFF	OFF	OFF
SW2-4	ON	OFF	ON	OFF

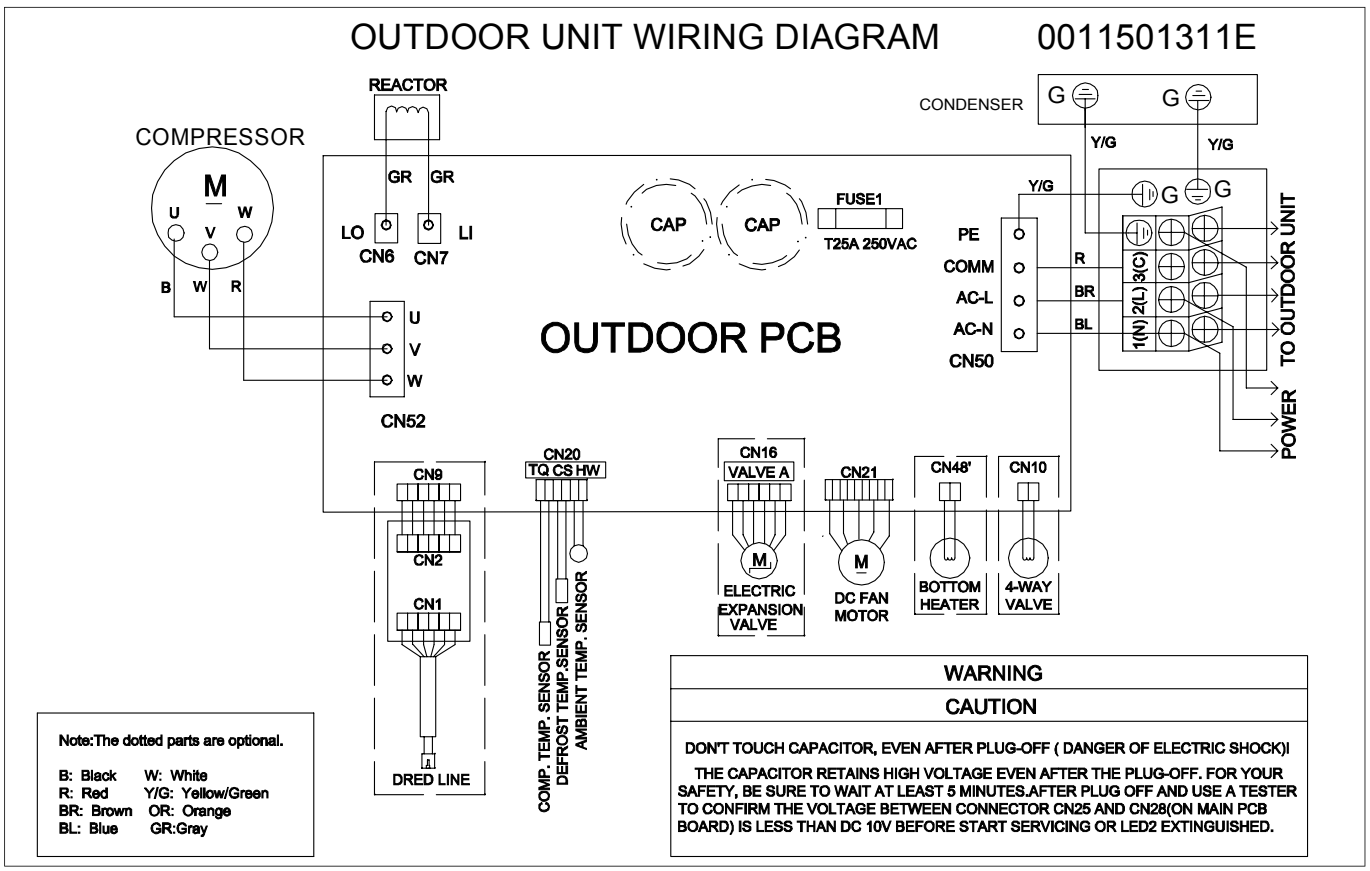
	TUNDRAPLUS
J1	ON
J2	OFF
J3	ON

SW2 setting example

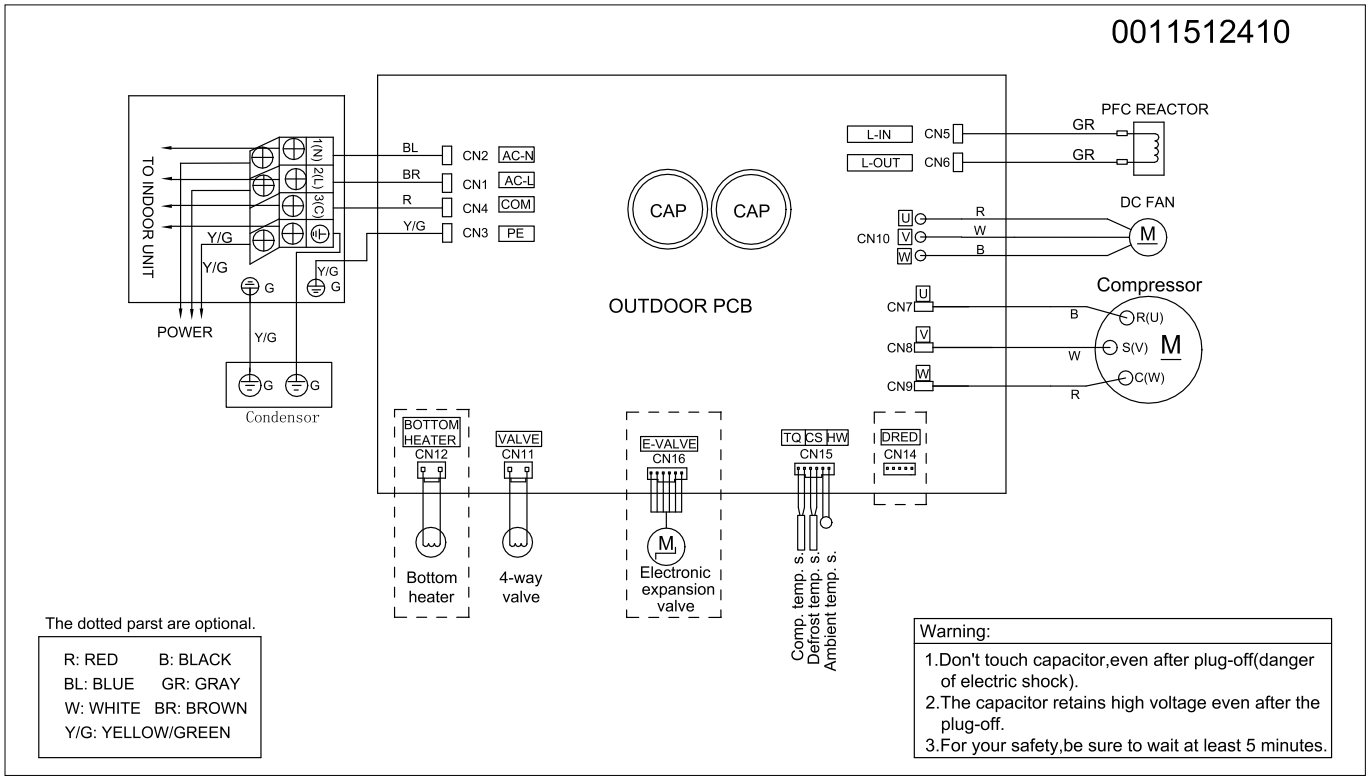


Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

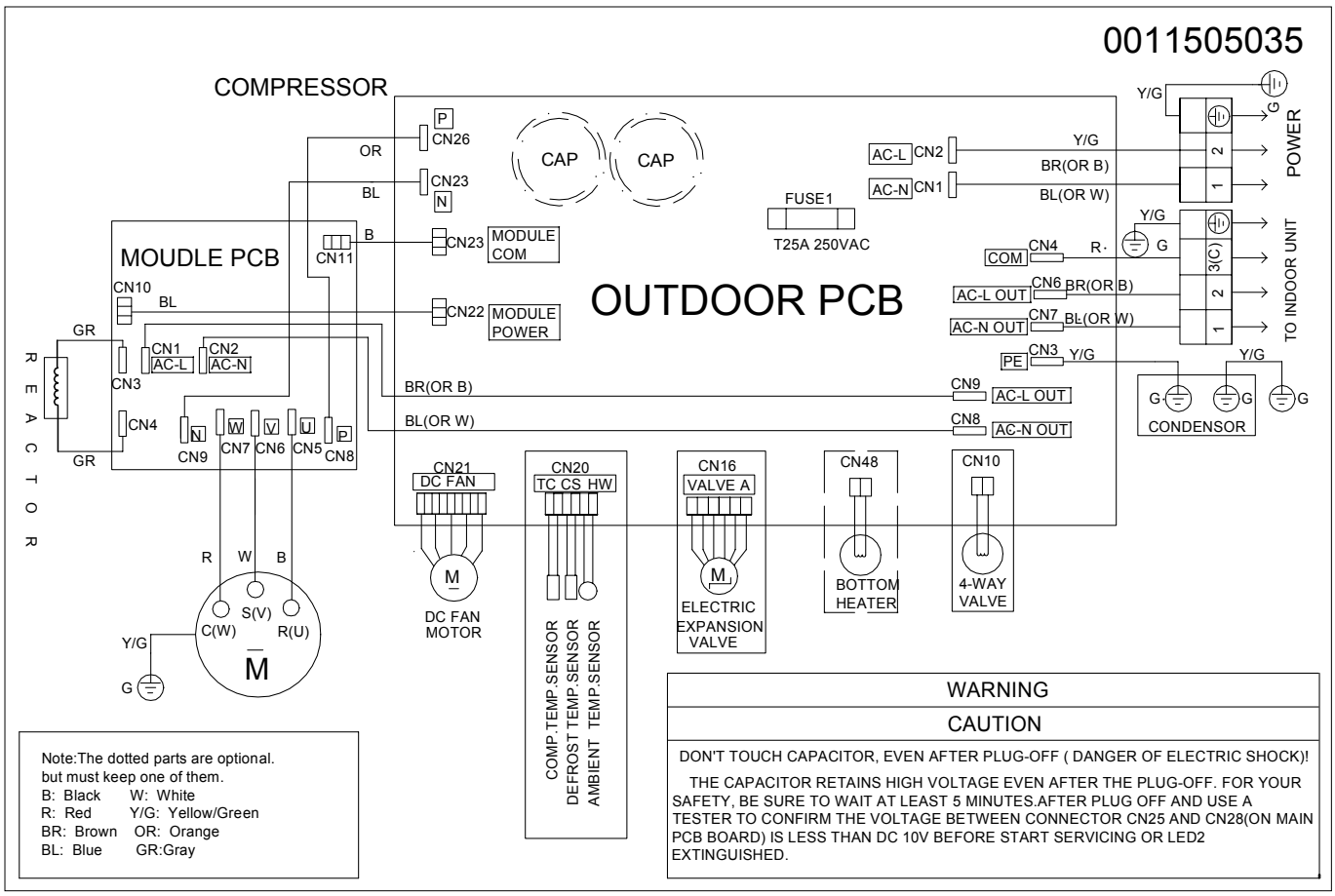
OU CIRCUIT DIAGRAM 2.5 kW (1U25YEGFRA) - 3.5 kW (1U25YEGFRA)



OU CIRCUIT DIAGRAM 5.0 kW (1U50MEGFRA)



OU CIRCUIT DIAGRAM 6.8 kW (1U68REEFRA)



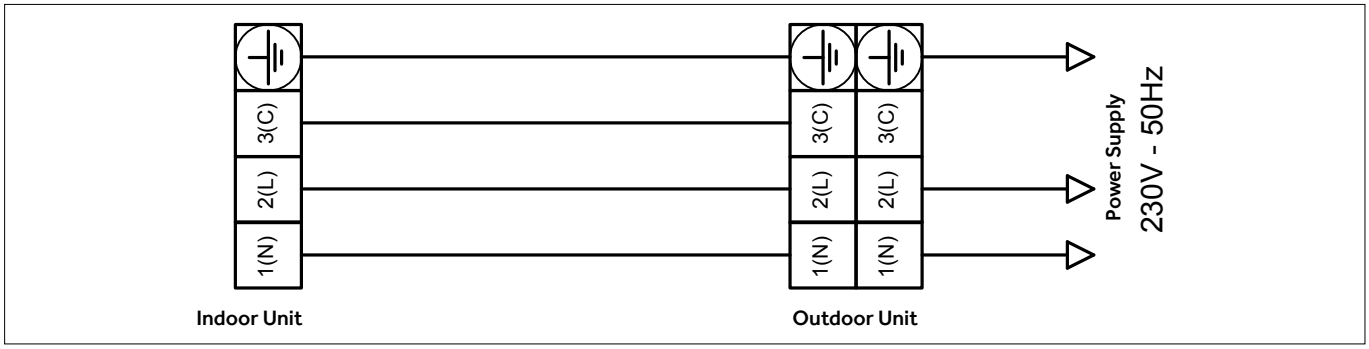
Indoor-outdoor units

AS25S2SN1FA-NRC - 1U25S2SQ1FA-NR

AS35S2SN1FA-NRC - 1U35S2SQ1FA-NR

AS50S2SN1FA-NRC - 1U50S2SQ1FA-NR

WIRING DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW

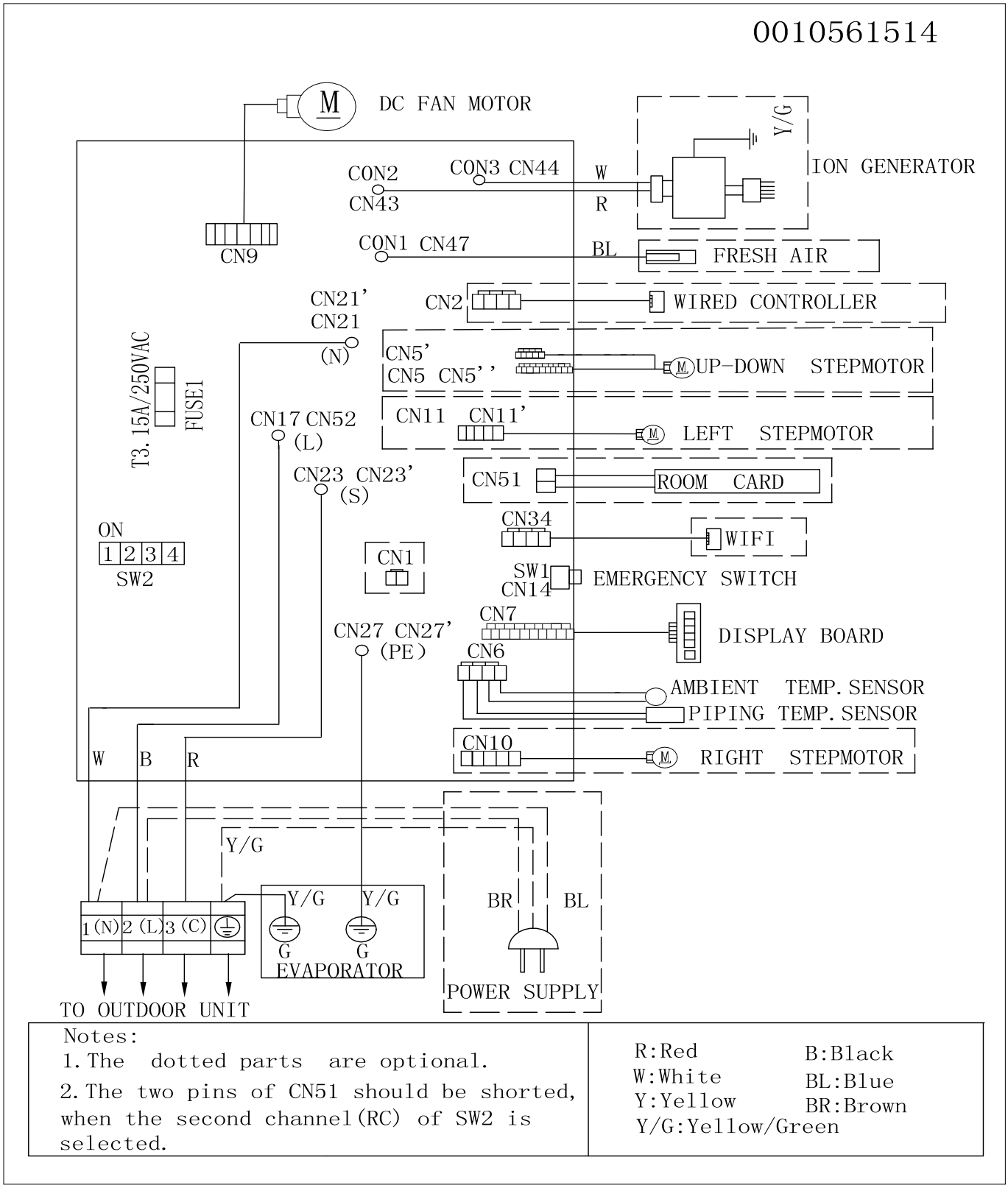


INDOOR UNIT	Model		AS25S2SN1FA-NRC	AS35S2SN1FA-NRC	AS50S2SN1FA-NRC
OUTDOOR UNIT	Model		1U25S2SQ1FA-NR	1U35S2SQ1FA-NR	1U50S2SQ1FA-NR
Indoor unit technical data					
Treated air volume	H	m³/h	650	700	900
Net dimensions	WxDxH	mm	900x210x310	900x210x310	997x230x322
Net weight		kg	11.5/14	11.5/14	13/16
Outdoor unit technical data					
Liquid pipe Ø		mm	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	12.7
Standard pipe length without additional refrigerant charge		m	7	7	7
Maximum pipe length		m	20/10	20/10	25/15
Maximum IU - OU height difference		m	10	10	15
Refrigerant charge in the factory		kg	1.0	1.0	1.2
Equivalent tons of CO_2		tCO_2EQ	0.67	0.67	0.81
Additional refrigerant charge beyond standard length		g/m	20	20	20
Net dimensions	WxDxH	mm	820x338x614	820x338x614	890x353x697
Net weight		kg	38.5/42	38.5/42	45.5/49.5
Power Supply		Ph/V/Hz	1/230/50	1/230/50	1/230/50
Outdoor unit power cable		mm²	3G1.5	3G1.5	3G2.5
Outdoor unit - indoor unit cable		mm²	4G1.0	4G1.0	4G1.0

DIAGNOSTICS

For diagnostics, see **page 28**.

INDOOR UNIT WIRING DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW



Notes:
1. The dotted parts are optional.
2. The two pins of CN51 should be shorted, when the second channel(RC) of SW2 is selected.

R:Red B:Black
W:White BL:Blue
Y:Yellow BR:Brown
Y/G:Yellow/Green

INDOOR UNIT SETTINGS 2.5 kW - 3.5 kW - 5.0 kW:

Selecting the frequency of remote control A or B (SW2-1):

Switch 1 selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board) (SW2-2):

Using switch 2, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (SW2-3) and (SW2-4):

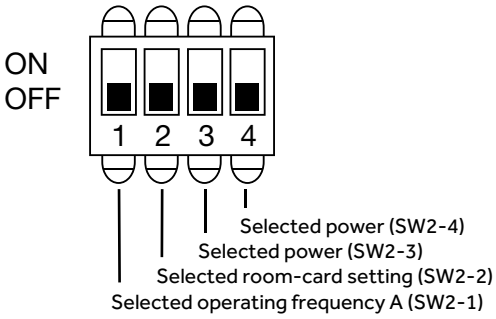
Using switches 3 and 4 you can select the power of the indoor unit:

	5.0 kW	3.5 kW	2.5 kW
SW2-3	ON	OFF	OFF
SW2-4	OFF	ON	OFF

Important: Cut the jumpers **J1**, **J2** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	NORDIC
J1	ON
J2	ON

SW2 setting example



Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

Activating/deactivating power-saving feature of the fan motor in cooling mode:

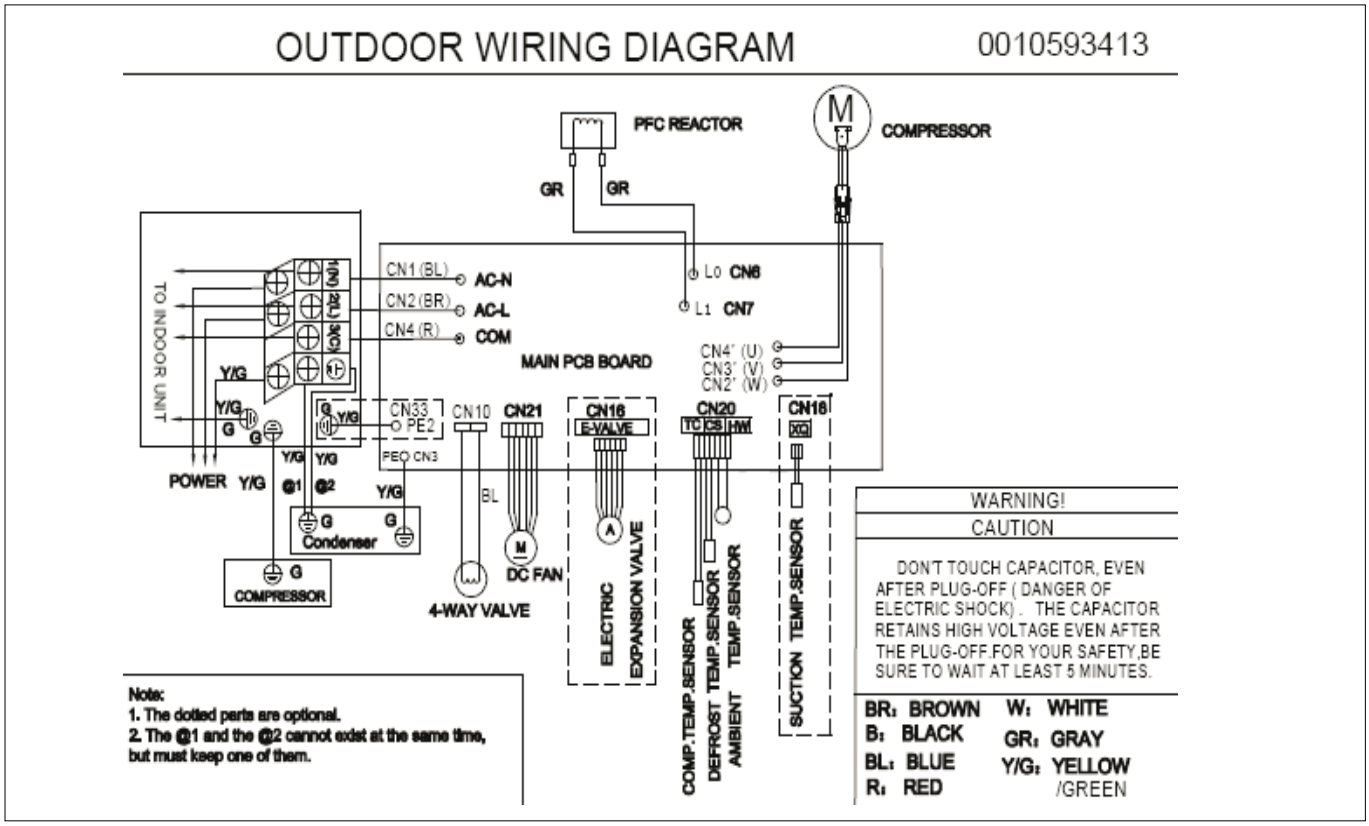
Directing the remote control to the indoor unit:

1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

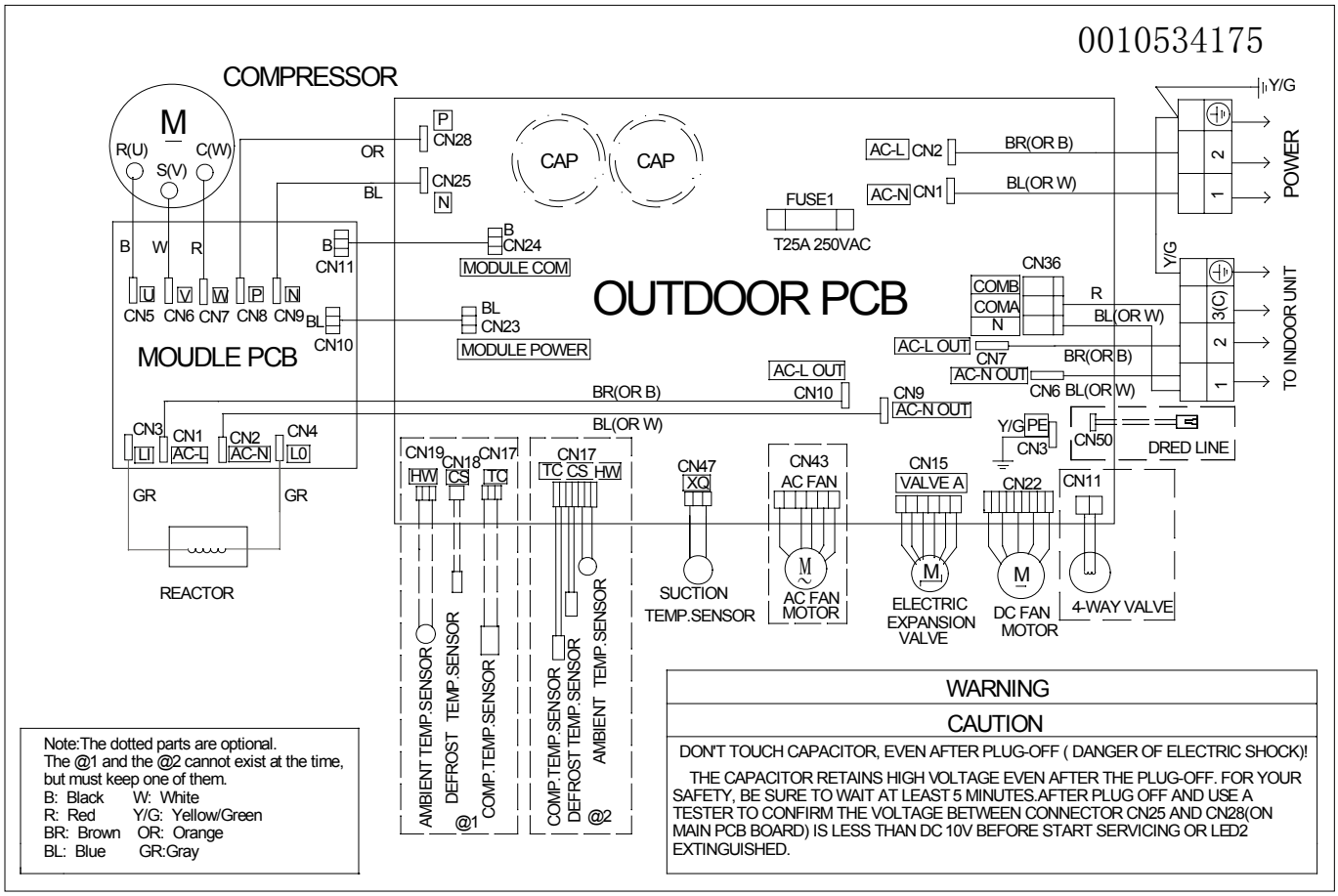
The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

OU CIRCUIT DIAGRAM 2.5 kW - 3.5 kW



OU CIRCUIT DIAGRAM 5.0 kW



Indoor-outdoor units

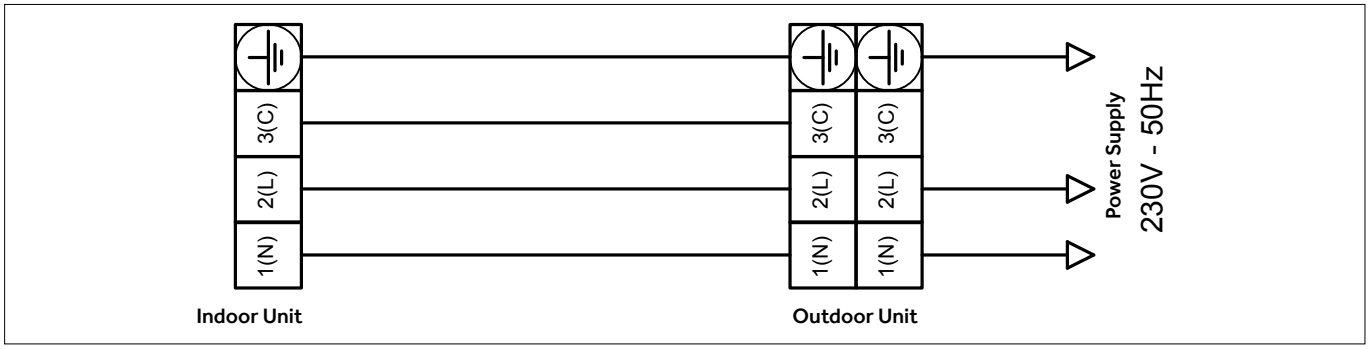
AS25PBAHRA - 1U25YEGFRA /1U25YEGFRA-1

AS35PBAHRA - 1U35YEGFRA / 1U35YEGFRA-1

AS50PDAHRA- 1U50MEGFRA

AS68PDAHRA- 1U68WEGFRA

WIRING DIAGRAM 2.5 kW - 3.5 kW - 5.0 kW - 6.8 kW

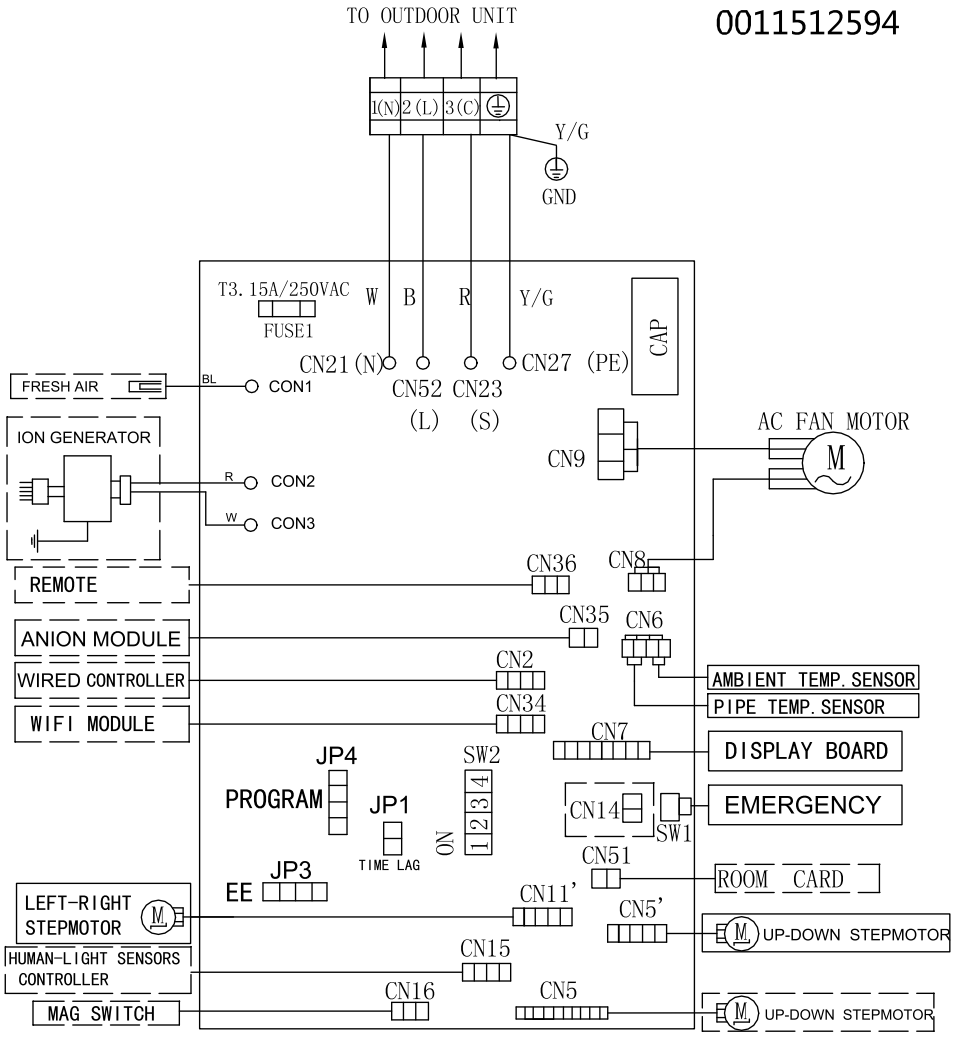


INDOOR UNIT	Model		AS25PBAHRA	AS35PBAHRA	AS50PDAHRA	AS68PDAHRA
OUTDOOR UNIT	Model		1U25YEGFRA / 1U25YEGFRA-1	1U35YEGFRA / 1U35YEGFRA-1	1U50MEGFRA	1U68WEGFRA
Indoor unit technical data						
Treated air volume	H	m³/h	550	600	900	1100
Net dimensions	WxDxH	mm	805x200x290	805x200x290	975x220x320	975x220x320
Net weight		kg	8.3	8.3	11.6	11.6
Outdoor unit technical data						
Liquid pipe Ø		mm	6.35	6.35	6.35	6.35
Gas pipe Ø		mm	9.52	9.52	12.7	12.7
Standard pipe length without additional refrigerant charge		m	5	5	7	7
Maximum pipe length		m	20	20	25	25
Maximum IU - OU height difference		m	10	10	15	15
Refrigerant charge in the factory		kg	0.52	0.53	0.9	1.1
Equivalent tons of CO_2		tCO_2EQ	0.35	0.36	0.60	0.74
Additional refrigerant charge beyond standard length		g/m	20	20	20	20
Net dimensions	WxDxH	mm	700x245x544	700x245x544	800x275x553	890x340x705
Net weight		kg	22.8	23.5	32.7	44
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/230/50
Outdoor unit power cable		mm²	3G1.5	3G1.5	3G2.5	3G2.5
Outdoor unit - indoor unit cable		mm²	4G1.5	4G1.5	4G1.5	4G1.5

DIAGNOSTICS

For diagnostics, see **page 28**.

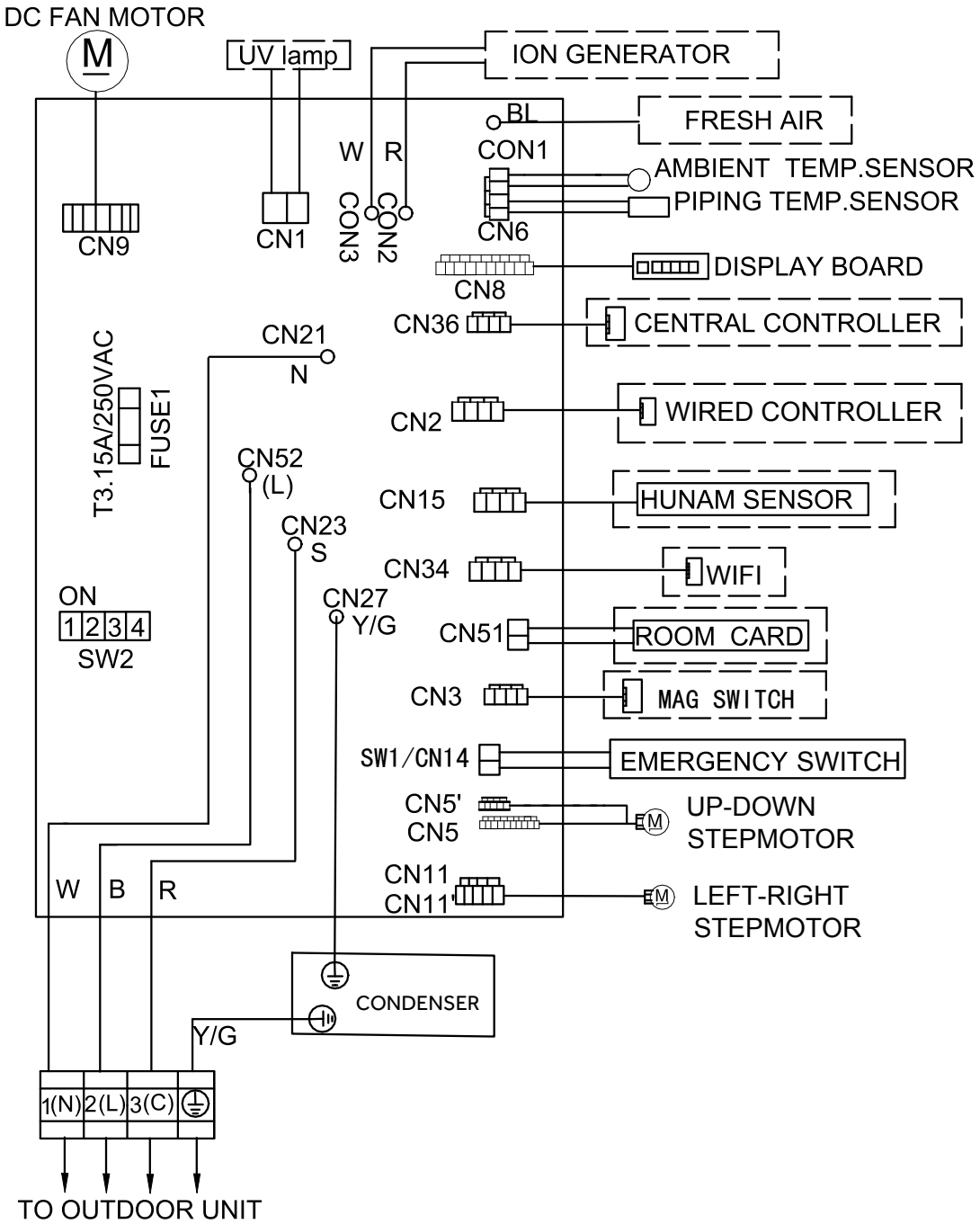
INDOOR UNIT WIRING DIAGRAM 2.5 kW - 3.5 kW



Notes:	
1. The dotted parts are optional. 2. The two pins of CN51 should be shorted, when the second channel(RC) of SW2 is selected.	R:Red B:Black W:White BL:Blue Y:Yellow BR:Brown Y/G:Yellow/Green

INDOOR UNIT WIRING DIAGRAM 5.0 kW - 6.8 kW

0011512839



Notes:
1.The dotted parts are optional.
2.The two pins of CN51 should be shorted, when the second channel(RC) of SW2 is selected.

R:Red
W:White
Y:Yellow
Y/G:Yellow/Green
B:Black
BL:Blue
BR:Brown

INDOOR UNIT SETTINGS 2.5 kW - 3.5 kW - 5.0 kW - 6.8 kW:

Selecting the frequency of remote control A or B (SW2-1):

Switch 1 selects the working frequency of the remote control of the indoor wall unit, from "A" to "B".
Set the same frequency on the remote control.

OFF operating frequency "A"
ON operating frequency "B"

Selecting the room-card (indoor unit activation board) (SW2-2):

Using switch 2, you can select the operating mode of the room-card (CN51), which is a clean contact where components (e.g. window contact) can be applied, so as to be able to manage the switching on and/or off of the indoor units in the system:

OFF With open contact the unit stops and with closed contact the unit starts (even if it was previously turned off) in the last mode used. With outdoor contact open, the local controller can turn the unit on/off.

ON With open contact the unit stops, and with closed contact the unit is ready to start (it is turned on by remote control). With outdoor contact open, the controller cannot control the unit.

Selecting the indoor unit power (SW2-3) and (SW2-4):

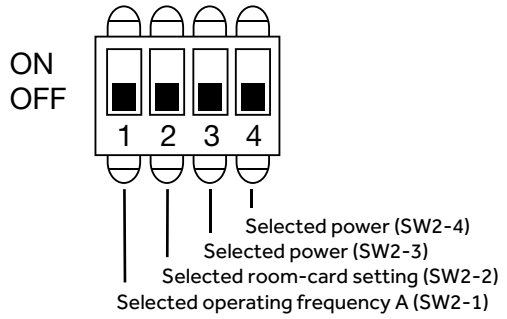
Using switches 3 and 4 you can select the power of the indoor unit:

	6.8 kW	5.0 kW	3.5 kW	2.5 kW
SW2-3	OFF	OFF	OFF	OFF
SW2-4	ON	OFF	ON	OFF

Important: Cut the jumpers **J1**, **J2** on board depending on the split on which the electronic board will be installed. (already cut in factory depending on the model).
This procedure is essential in order for the main board to communicate correctly with the receiving display/board.

	PEARL
J1	ON
J2	OFF

SW2 setting example



Selecting the room temperature/set-point on the display: To switch the display between real temperature and ambient set-point, press the LIGHT key of the remote control 10 times. The indoor unit will respond with: 2 BEEP sounds to display room temperature, 4 BEEP sounds to display set-point temperature.

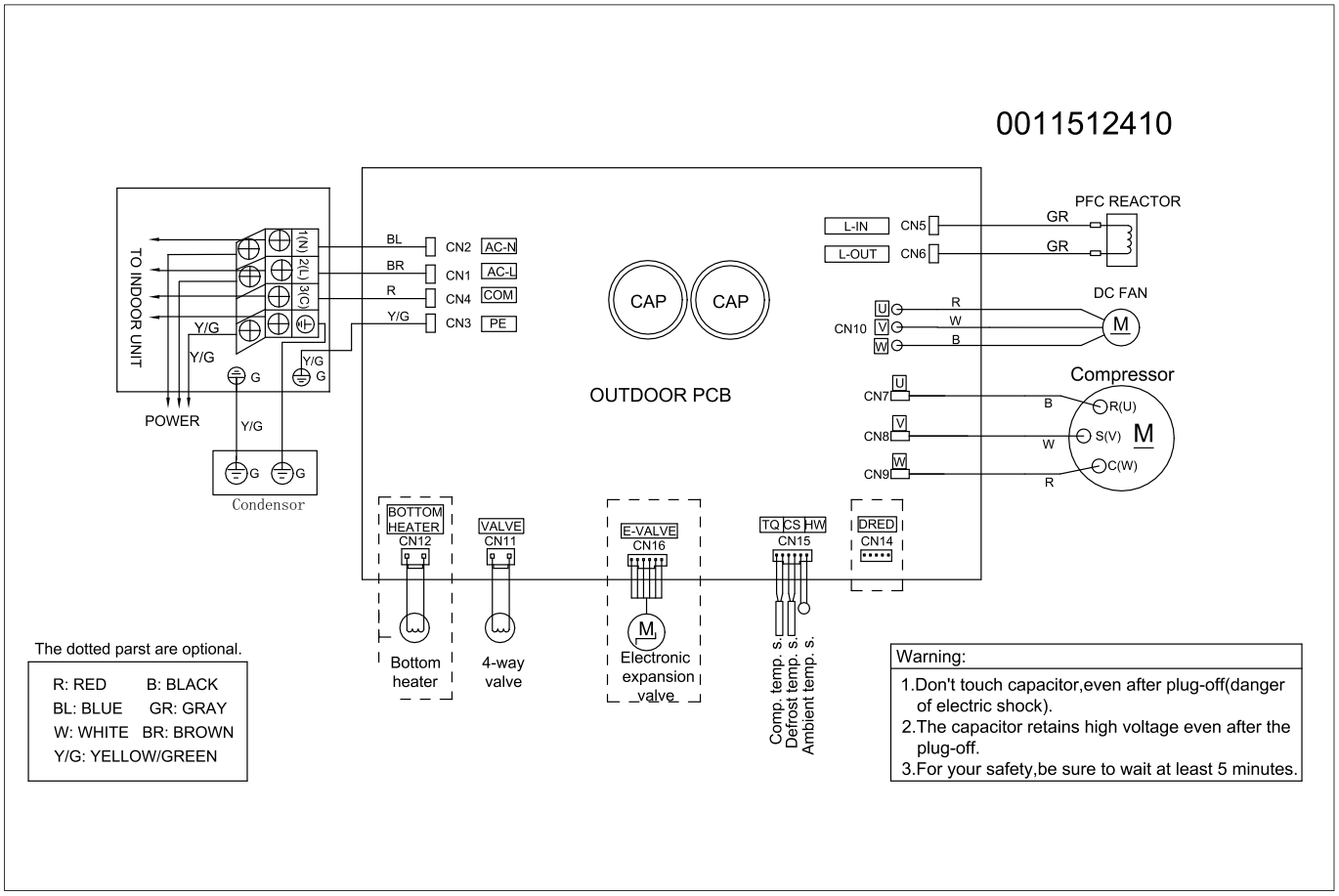
Activating/deactivating power-saving feature of the fan motor in cooling mode:

Directing the remote control to the indoor unit:
1. Press the “AUTO” (or “SMART”) button
2. Press the “HEALTH” button 6 times

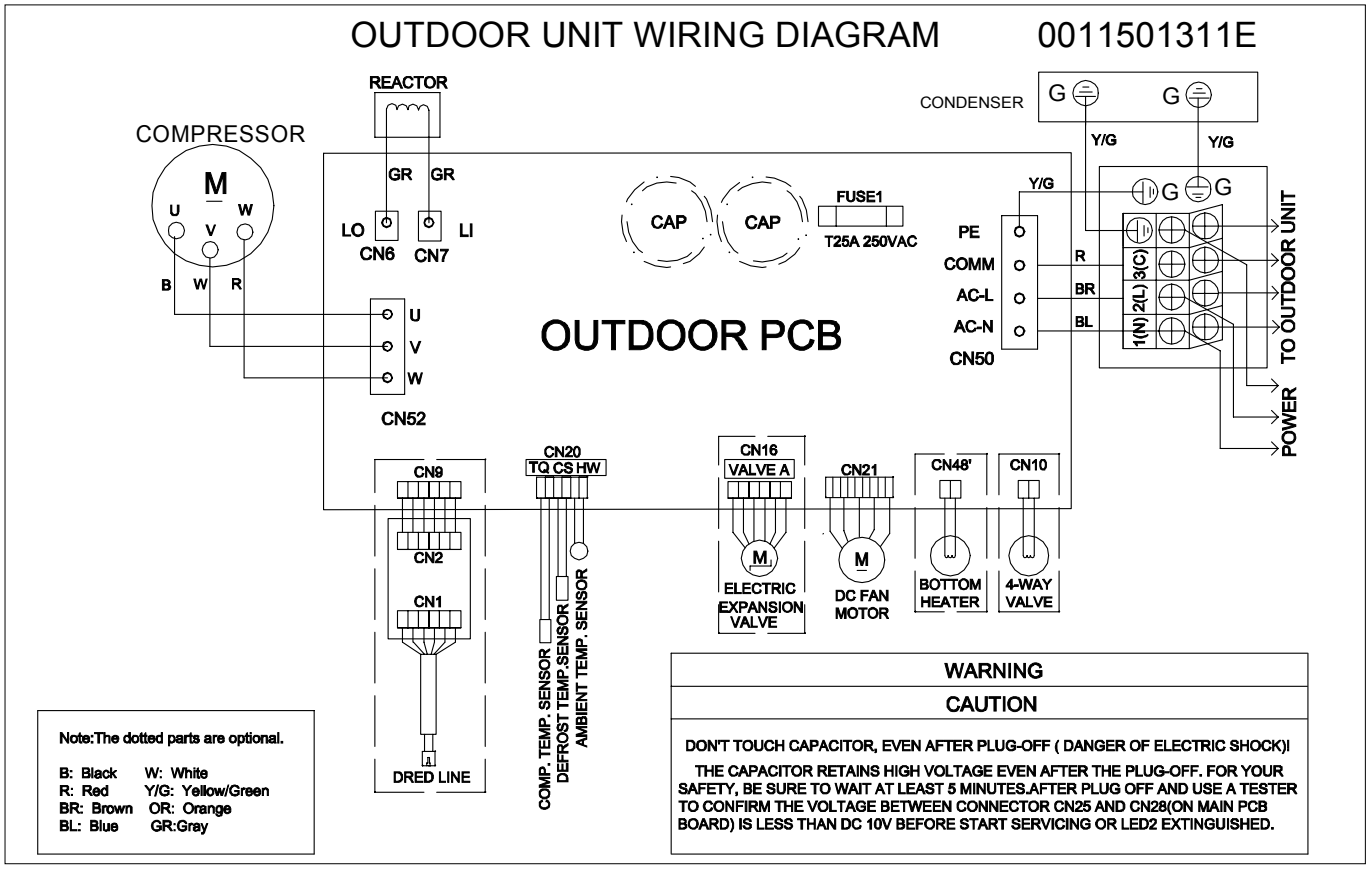
The indoor unit will respond with 2 “BEEP” sounds and the eco function will be disabled.
The fan will always be in operation, even if the set ambient temperature is reached.

By repeating steps 1 and 2, the indoor unit will respond with 4 "BEEP" sounds and the eco function will be reactivated.
The fan will be stopped when the set ambient temperature is reached.

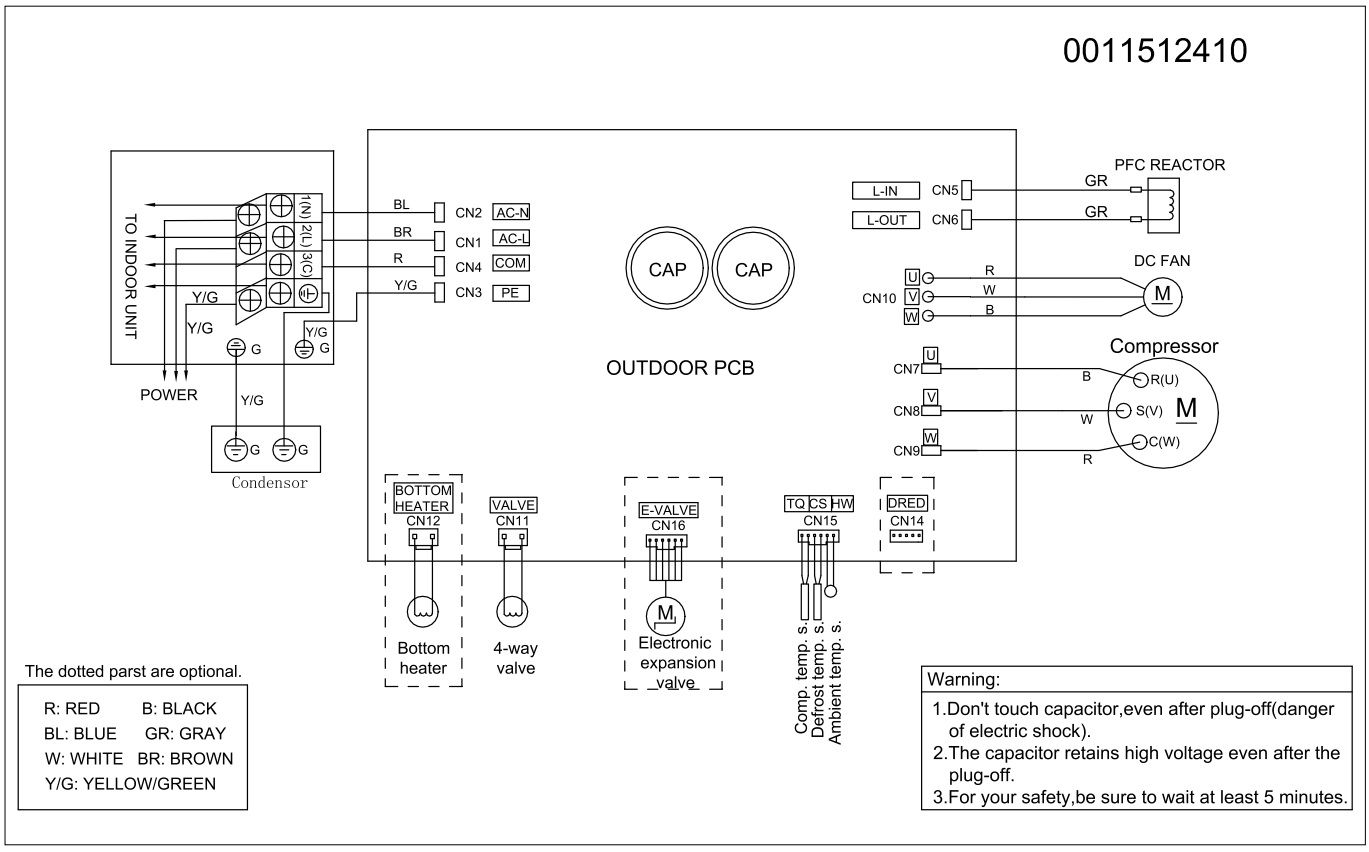
OU CIRCUIT DIAGRAM 2.5 kW (1U25YEGFRA-1)- 3.5 kW(1U35YEGFRA-1)



OU CIRCUIT DIAGRAM 2.5 kW (1U25YEGFRA)- 3.5 kW (1U35YEGFRA)



OU CIRCUIT DIAGRAM 5.0 kW - 6.8 kW



AU052FYCRA(HW)
AU082FYCRA(HW)
AU112FYCRA(HW)
AU162FYCRA(HW)

SUPER-WATER	Model		**AU052FYCRA(HW)**	**AU082FYCRA(HW)**	**AU112FYCRA(HW)**	**AU162FYCRA(HW)**
	Commercial code		25023005Z	25023008Z	25023012Z	25023016Z
Performance data						
HEATING (LWT 35°C / OAT 7°C)	Output power	kW	5.00	7.80	11.00	16.00
	Absorbed power	kW	0.99	1.77	2.61	3.86
	COP		5.05	4.40	4.22	4.15
HEATING (LWT 55°C / OAT 7°C)	Output power	kW	5.00	7.01	9.99	14.01
	Absorbed power		1.64	2.76	4.40	5.63
	COP		3.05	2.54	2.27	2.49
HEATING Climate conditions: Average Discharge water temperature: 35 °C	SCOP		4.59	3.87	4.35	4.00
	□s	%	180	152	171	157
	Energy class		A+++	A++	A++	A++
HEATING Climate conditions: Average Discharge water temperature: 55°C	SCOP		3.32	2.90	3.20	3.09
	□s	%	130	113	125	121
	Energy class		A++	A+	A++	A+
COOLING (LWT 18°C / OAT 35°C)	Output power	kW	5.00	7.00	13.50	16.00
	Absorbed power	kW	1.00	2.06	2.94	3.64
	EER		5.00	3.40	4.60	4.40
COOLING (LWT 7°C / OAT 35°C)	Output power	kWh/y	5.00	5.50	11.50	14.50
	Absorbed power	kWh/y	1.56	2.34	3.83	4.92
	EER		3.20	2.35	3.00	2.95
Outdoor temperature operating limits	HEATING	°C	-25~35	-20~35	-20~35	-20~35
	COOLING	°C	10~46	10~46	10~46	10~46
Discharge water temperature range	HEATING	°C	25~60	25~55	25~55	25~55
	COOLING	°C	5~20	5~20	5~20	5~20
Water flow		L/min	14.3	23.0	31.5	45.8
Minimum system water content		L	30	40	55	80
Indoor water pump	Brand		Wilo	Wilo	Grundfos	Grundfos
Technical data						
Liquid pipes Ø	In / Out	inch	3/4" F	1" F	1" F	1" F
Compressor	Amount	No.	1	1	1	1
	Type		DC inverter twin rotary	DC inverter twin rotary	DC inverter twin rotary	DC inverter twin rotary
	Brand		Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric	Mitsubishi Electric
Refrigerant			R32	R32	R32	R32
Refrigerant charge in the factory		kg	1.05	1.15	2.40	2.60
Equivalent tons of CO_2		tCO_2EQ	0.709	0.777	1.620	1.755
Net dimensions	WxDxH	mm	920x372x760	950x370x965	950x370x1490	950x370x1490
Gross dimensions	WxDxH	mm	1045x488x890	1023x480x1123	1023x480x1653	1023x480x1653
Net weight / Gross weight		kg / kg	69/80	87/97	145/157	145/157
Sound power		dB(A)	59	64	67	68
Power Supply	Ph-V-Hz		1/220~240/50/60	1/220~240/50/60	1/220~240/50/60	1/220~240/50/60
Maximum current	A		13.5	21.3	24.3	31.7
Accessories						
Wired controller		Standard	YR-E27A	YR-E27	YR-E27	YR-E27
PCB control terminal for connection to other devices		Optional	ATW-A01			
6- Y Filter		Standard	included in the packaging of the machine			

Notes:
- Energy Efficiency according to EN 14825;
- Performance testing according to EN 14511;
- LWT: Discharge water temperature;
- OAT: Outdoor air temperature;
- Sound power levels are measured in semi-anechoic chamber and sound power values are based on EN2012 under the conditions of EN 14825;
- The above data may change so it is advisable to contact the office for confirmation before signing the relevant order.

DIAGNOSTICS

Error code on outdoor unit

Error code	Description	Note
1	Failure of the indoor water temperature sensor (Twi)	Resettable
2	Failure of the outdoor water temperature sensor (Two)	
3	Failure of the indoor refrigerant temperature sensor (Thi)	
4	Failure of the outdoor refrigerant temperature sensor (Tho)	
7	Communication error for wired controller	
8	Water flow switch tripped	Resettable If it occurs 3 times in one hour, it stops functioning
10	Low water flow	
13	System water leakage	Not resettable
15	Freeze protection	Resettable If it occurs 3 times in one hour, it stops functioning
16	Water temperature at the inlet or outlet of the unit too high	Resettable
17	Water pump failure	Resettable
20	Defrost temperature sensor failure (Te)	
21	Ambient temperature sensor failure (Ta)	
22	Intake temperature sensor failure (Ts)	
23	Drainage temperature sensor failure (Td)	
28	High pressure sensor failure	
29	Low pressure sensor failure	
30	High pressure switch tripped	Resettable If it occurs 3 times in one hour, it stops functioning
34	Compressor drain high temperature protection (Td)	
35	4-way valve switching fault	
38	High-pressure protection (Pd), too low	
39	Low pressure protection (Ps), too low / compression ratio too high	
40	High-pressure protection (Pd), too high	
43	Compressor drain high temperature protection (Td)	
46	Communication error with the power module	Resettable
64	CT excessive current	Once confirmed, not resettable
68	Communication Error with I/O Box (ATW-A01)	Resettable
69	Hot sanitary water tank temperature sensor failure (ATW-A01)	Resettable
70	General Error I/O Box (ATW-A01)	Resettable
71	Outdoor unit fan motor failure	Resettable If it occurs 3 times in one hour, it stops functioning
75	Differential pressure switch tripped / no differential pressure	
81	Compressor power module high temperature	Once confirmed, not resettable
82	Compressor overcurrent protection	
83	Outdoor unit model / "BMxx" switches setting error	
110	Compressor power module overcurrent (hardware threshold)	
111	Compressor out of control	
117	Compressor power module overcurrent (software threshold)	

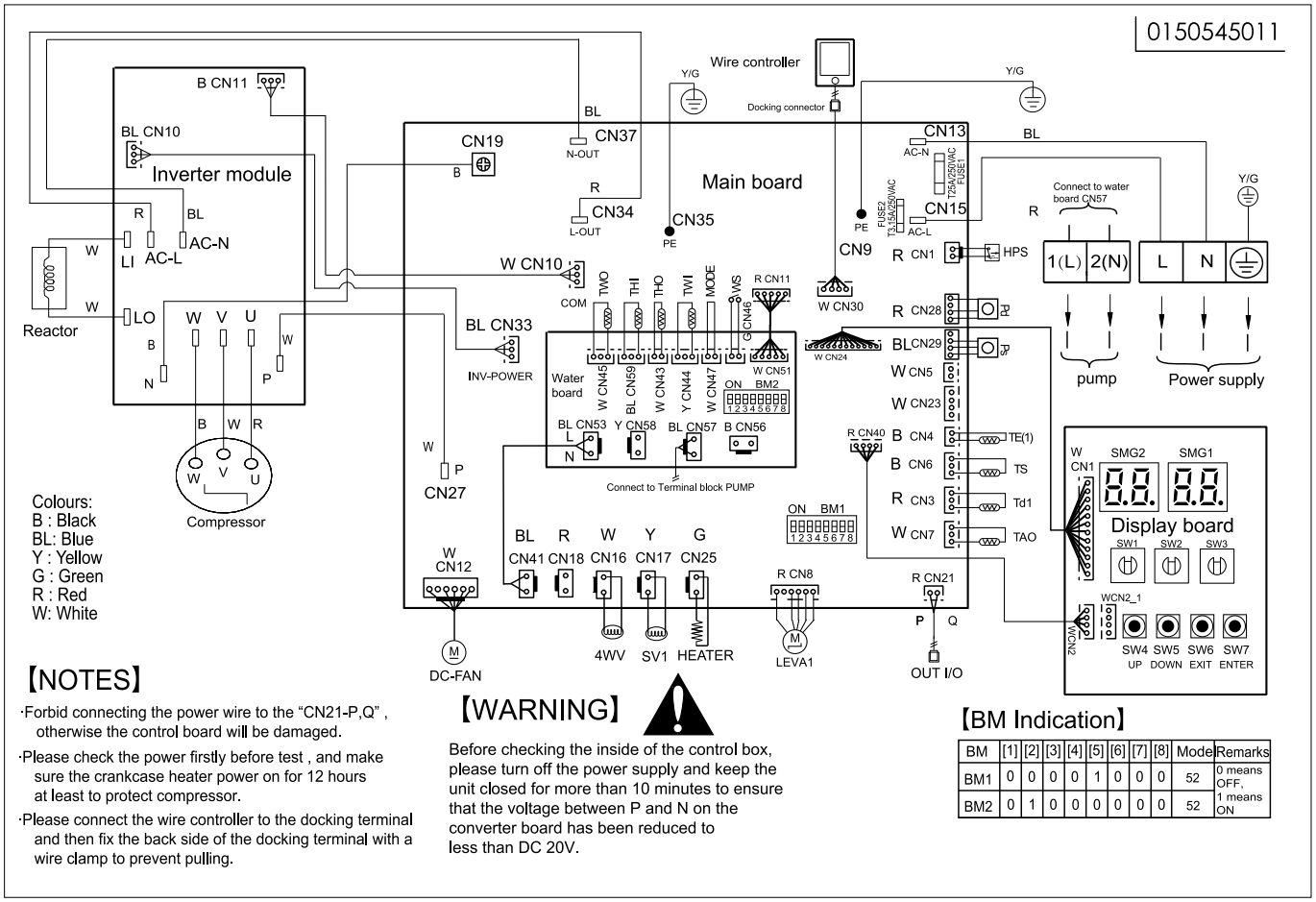
DIAGNOSTICS:

When the double-digit display on the outdoor unit shows the following code, the unit is in standby mode.

Check the parameters on basis of the reason for standby.

Standby code	Reason for standby	Note:
555.1	Outdoor ambient temperature.Ta>27°C; heating in standby	Resettable
555.3	Outdoor ambient temperature.Ta>54°C or Ta<-10°C, cooling in standby	
555.4	Low compressor casing oil temperature.	
555.5	The operating mode of the outdoor unit does not correspond to that of the indoor unit.	

OU CIRCUIT DIAGRAM 5 kW (AU052FYCRA(HW))



【NOTES】

·Forbid connecting the power wire to the “CN21-P,Q” , otherwise the control board will be damaged.

·Please check the power firstly before test , and make sure the crankcase heater power on for 12 hours at least to protect compressor.

·Please connect the wire controller to the docking terminal and then fix the back side of the docking terminal with a wire clamp to prevent pulling.

【WARNING】

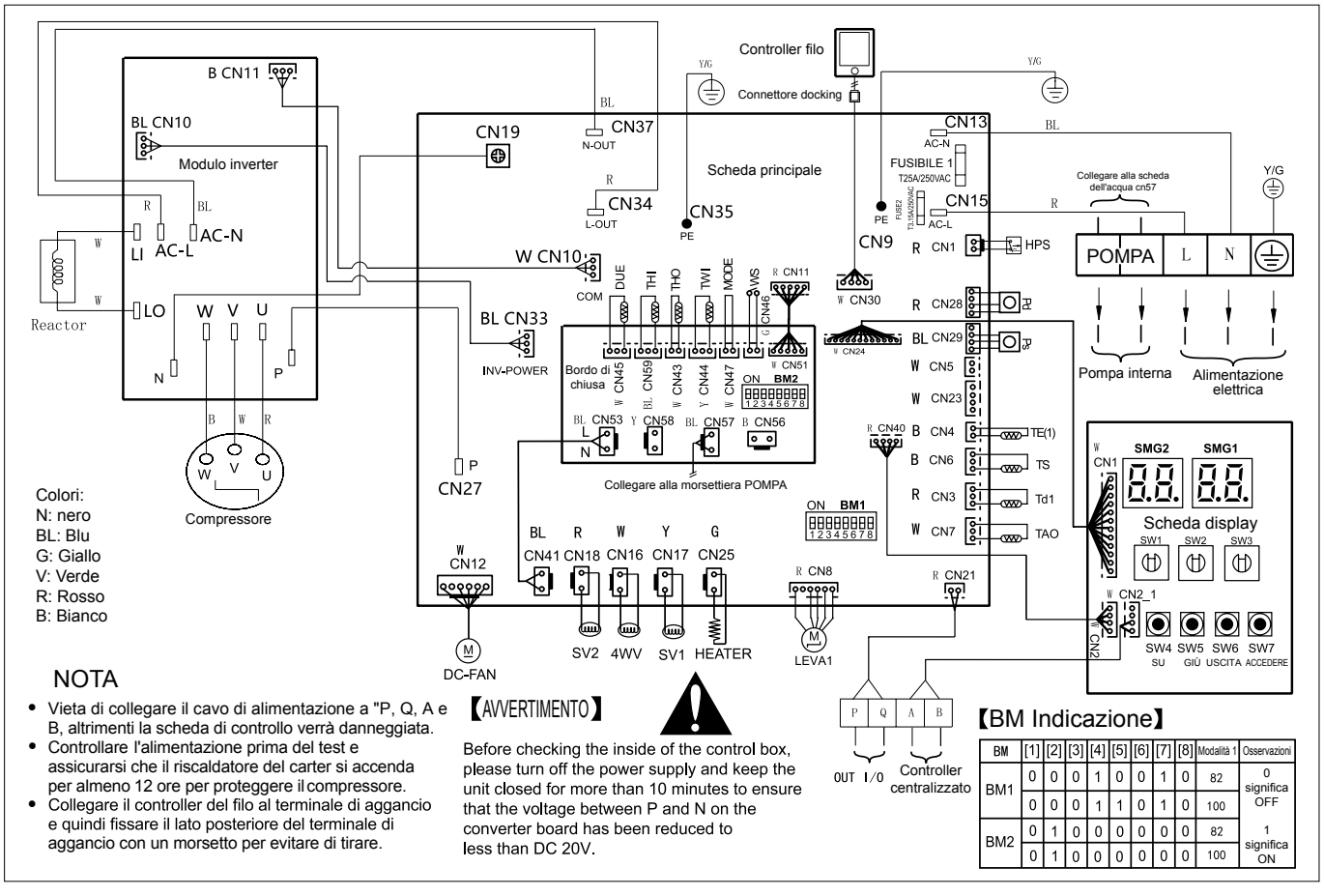
Before checking the inside of the control box, please turn off the power supply and keep the unit closed for more than 10 minutes to ensure that the voltage between P and N on the converter board has been reduced to less than DC 20V.

【BM Indication】

BM	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	Mode	Remarks
BM1	0	0	0	0	1	0	0	0	52	0 means OFF, 1 means ON
BM2	0	1	0	0	0	0	0	0	52	

Note: CN47 connector will not work if the ATW-A01 terminal box has been connected

OU CIRCUIT DIAGRAM 8 kW (AU082FYCRA(HW))



NOTA

- Vieta di collegare il cavo di alimentazione a "P, Q, A e B, altrimenti la scheda di controllo verrà danneggiata.
- Controllare l'alimentazione prima del test e assicurarsi che il riscaldatore del carter si accenda per almeno 12 ore per proteggere il compressore.
- Collegare il controller del filo al terminale di aggancio e quindi fissare il lato posteriore del terminale di aggancio con un morsetto per evitare di tirare.

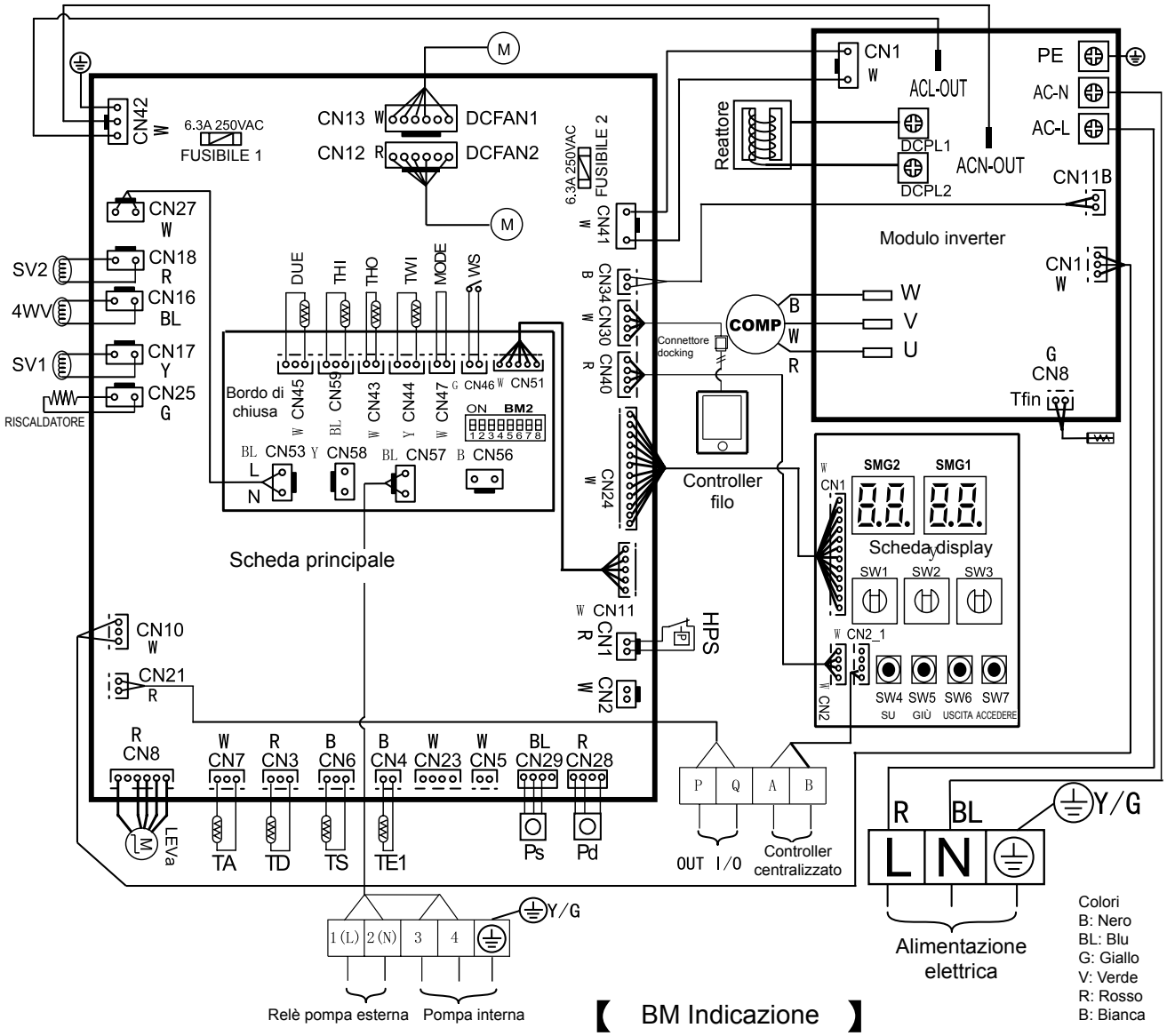
【AVVERTIMENTO】

Before checking the inside of the control box, please turn off the power supply and keep the unit closed for more than 10 minutes to ensure that the voltage between P and N on the converter board has been reduced to less than DC 20V.

【BM Indicazione】

BM	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	Modalità 1	Osservazioni
BM1	0	0	0	0	1	0	0	1	0	82	0 significa OFF
	0	0	0	0	1	1	0	1	0	100	
BM2	0	1	0	0	0	0	0	0	0	82	1 significa ON
	0	1	0	0	0	0	0	0	0	100	

OU CIRCUIT DIAGRAM 11 kW AU112FYCRA(HW) - 16 kW AU162FYCRA(HW)



【AVVERTIMENTO】

Prima di controllare l'interno della centralina, spegnere l'alimentazione e tenere l'unità chiusa per più di 10 minuti per assicurarsi che la tensione tra P e N sulla scheda del convertitore sia stata ridotta a meno di 20 V CC.

【 NOTA 】

- Vieta di collegare il cavo di alimentazione a "P, Q, A e B, altrimenti la scheda di controllo verrà danneggiata.
- Controllare l'alimentazione prima del test e assicurarsi che il riscaldatore del carter sia acceso per almeno 12 ore per proteggere il compressore.
- Collegare il controller del filo al terminale di aggancio e quindi fissare il lato posteriore del terminale di aggancio con un morsetto per evitare di tirare.

【 BM Indicazione 】

BM	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	Modalità 1	Osservazioni
BM1	0	0	1	0	0	0	1	0	112	0 significa OFF, significa ON
	0	0	1	0	1	0	1	0	162	
BM2	0	1	0	0	0	0	0	0	112	
	0	1	0	0	0	0	0	0	162	

Simbolo	Significazione
ACL	Filo sotto tensione
ACN	Filo neutro
RISCALDATORE	Riscaldamento
SV1	valvola di scarico
SV2	valvola spray
4WV	valvola a 4 vie
AB	Monitor
DCFAN1	ventola verso l'alto
DCFAN2	ventola verso il basso
LED1-4	luci

Simbolo	Significazione
HPS	interruttore di alta pressione
LPS	interruttore di bassa pressione
TD	sensore di scarico del compressore
TE(1)	sbrinamento del sensore di temperatura
Tfin	sensore di temperatura IPM
TS	sensore di aspirazione del compressore
TA	sensore di temperatura ambiente
EEV	valvola di espansione elettronica
LD1-3	tubi per display digitali
SW01,02	rotelle zigrinate

1. Method of installation and debugging of the outdoor machine

SW1	SW2	SW3	Digital segment display content LD2 ~ 4	
0	0	0	Error code: "000" means no error will occur	
0	2	0	Mode of operation: Stop: OFF; Cooling mode: CCC; Heating mode: HHH;	
0	3	0	Outdoor fan motor speed 1 (rpm)	"345" means 345 rpm. • The motor speed can be set by pressing "ENTER (SW7)" for 3 seconds, during which "111" will be displayed and the speed and speed class will be displayed in turn. The speed class can be increased by one degree by pressing "UP" once and can be decreased by one degree by pressing "DOWN" once; • "000" will be displayed by pressing "Exit (SW6)" for 3 seconds, and the setting mode will be closed.
0	4	0	Outdoor fan motor speed 2 (rpm)	
0	5	0		Effective compressor frequency (Hz): 90 means 90 Hz • The compressor frequency can be set by pressing "ENTER (SW7)" for 3 seconds, during which "111" will be displayed and the frequency will be indicated. The frequency can be increased by 1 Hz by pressing "UP" once and can be decreased by 1 Hz by pressing "DOWN" once; • "000" will be displayed by pressing "Exit (SW6)" for 3 seconds, and the setting mode will be closed.
0	7	0	Opening electronic expansion valve (LEVa1): 90 means 90 pls	
0	9	0	Opening electronic expansion valve (LEVa2): 90 means 90 pls	
0	B	0	Valve status: LD2: 4WV: (0-off, 1-on); LD3: SV1: (0-off, 1-on); LD4: SV2: (0-off, 1-on)	
0	C	0	Status of high and low pressure switch: LD2: High pressure switch: HPS: (0-off, 1-on) LD3: Low pressure switch: LPS: (0-off, 1-on); LD4: Reserved: "-"	
0	D	0	Reserved:	
0	E	0	Compressor electrical resistance outputs LD2: CH1: (0-off, 1-on);LD3: BH:(0-off, 1-on); LD4: reserved: "-"	
0	F	0	Software version: "1.0" means Ver1.0.	
0	0	1	Pd: Discharge pressure: unit: kg, one decimal fraction	
0	2	1	Ps: Intake pressure: unit: kg, one decimal fraction	
0	3	1	Td: Drain temperature: (unit:°C)	
0	5	1	Tdef: defrosting temperature: (unit:°C)	
0	7	1	Toil: oil temperature: (unit:°C)	
0	9	1	Tc: capacitor temperature (unit:°C)	
0	E	1	Ts: intake temperature (unit:°C)	
0	1	F	Tao Tao: ambient temperature (unit:°C)	
0	2	F	Pd_temp: condenser temperature (unit:°C)	
0	4	F	Ps_temp: evaporation temperature (unit:°C)	
0	5	F	Tliqsc (unit:°C)	
0	6	F	Tsco (unit:°C)	
0	8	F	Compressor running time: Unit: ora	
0	0	9	Temperature of liquid refrigerant tube Thi (°C)	
0	0	B	Temperature of the input water Tso (°C)	
0	0	C	Hydraulic characteristics: N.1: water flow switch (0-disconnected, 1-connected) N.2: Pump status (0-off, 1-on); No.3: Electric heating (0-off, 1-on) (i.e. "110" means the water flow switch is disconnected, the pump is On, and Electrical heating is Off)	
0	0	D	Hydraulic characteristics: N.1: water flow switch (0-disconnected, 1-connected) N.2: Unit on/off signal (0-off, 1-on); No.3: Output status of floor heating valve (0-off, 1-on) (i.e. "001" means water flow switch is connected, Indoor Unit On/Off signal is Off, while Output status of floor heating valve is On)	

2. PCB dipswitch setting of the outdoor unit, pay attention to the different PCB version.

In the table below, 1 is ON, 0 is OFF.

Introduction of BM1

BM1_1	Unit control mode	0	Control from wired controller YR-E27			
		1	Control from outdoor box ATW-A01			
BM1_2 BM1_3 BM1_4 BM1_5	Selecting the outdoor unit model	[2]	[3]	[4]	[5]	Selecting the outdoor unit model
		0	0	0	1	AU052FYCRA(HW)
		0	0	1	0	AU082FYCRA(HW)
		0	1	0	0	AU112FYCRA(HW)
		0	1	0	1	AU116FYCRA(HW)
BM1_6	Power supply selection	0	Single-phase (default)			
		1	Three-phase			
BM1_7	Reserved:	0	Reserved			
		1	Reserved (default):			
BM1_8	Outdoor box ATW-A01 presence	0	Without box ATW-A01 (default)			
		1	With ATW-A01 connected			

Introduction of BM2

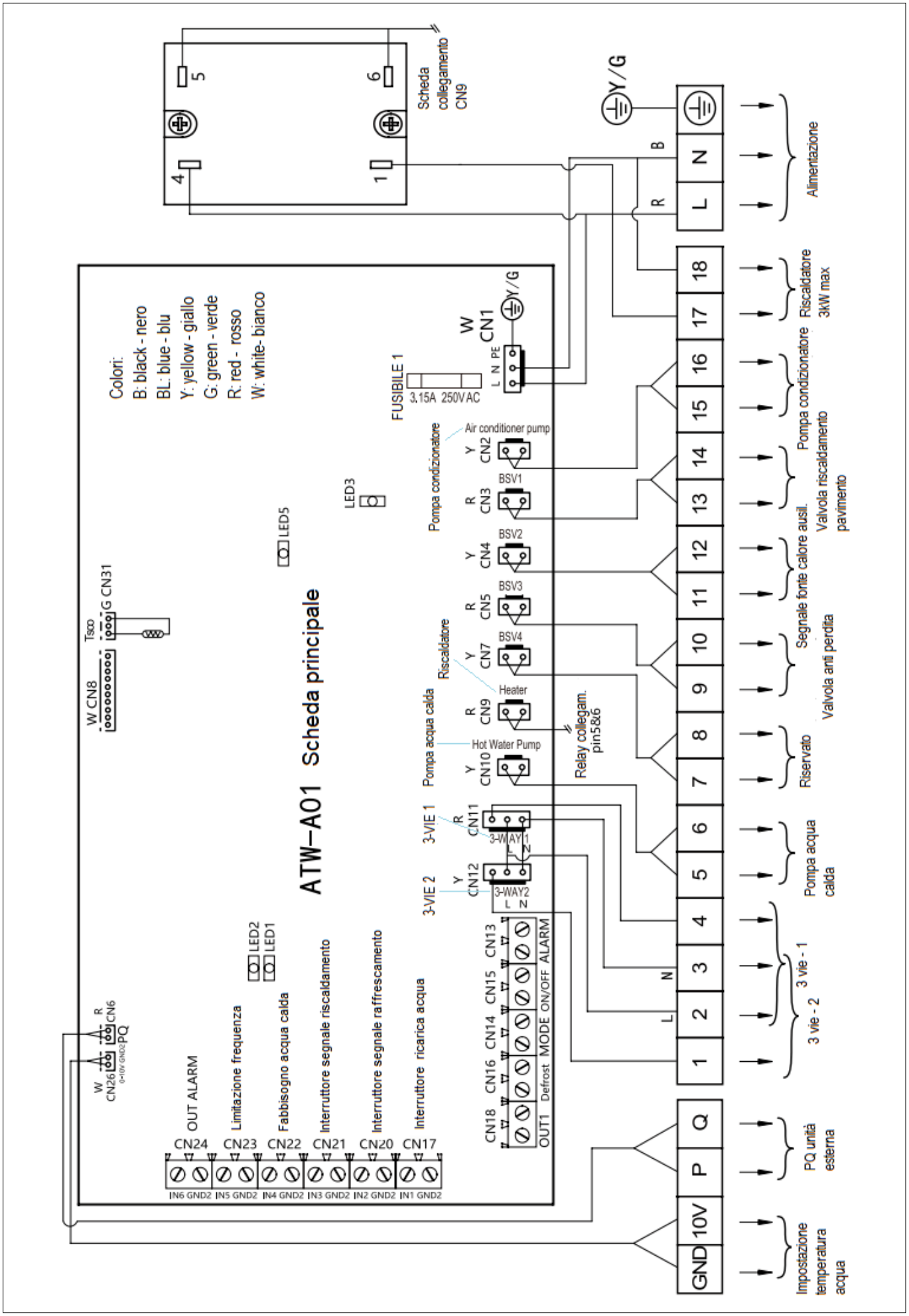
Type of heat exchanger	Control mode selection	Electrical heating control mode HU	Flow switch alarm management selection	PC and MODBUS selection	Operating mode selection		Sanitary hot water (SHW) mode selection	Description
BM2-1	BM2-2	BM2-3	BM2-4	BM2-5	BM2-6	BM2-7	BM2-8	
OFF	---	---	---	---	---	---	---	Heat exchanger for heating/cooling (default)
ON	---	---	---	---	---	---	---	Heat exchanger x hot water
---	OFF	---	---	---	---	---	---	Control only from YR-E27
---	ON	---	---	---	---	---	---	Control only from YR-E27 Outdoor contact
---	---	OFF	---	---	---	---	---	Reserved (default):
---	---	ON	---	---	---	---	---	Reserved
---	---	---	OFF	---	---	---	---	Normal (default)
---	---	---	ON	---	---	---	---	Delayed
---	---	---	---	OFF	---	---	---	N.D.
---	---	---	---	ON	---	---	---	N.D.
---	---	---	---	---	OFF	OFF	---	Normal (default)
---	---	---	---	---	OFF	ON	---	Power (max. compressor frequency)
---	---	---	---	---	ON	OFF	---	Silence (min. compressor frequency)
---	---	---	---	---	---	---	OFF	Without SHW control (default)
---	---	---	---	---	---	---	ON	1 With SHW control

3. Jumper instructions

CJ1: Short-circuited before power on: PCB checks its function (used for factory test).
Short-circuited after power on--accelerated time function, 60 seconds corresponds to 1 second.

CJ2: Reserved.

CIRCUIT DIAGRAM ATW-A01



MONOBLOCK HEAT PUMP WATER HEATER (R134A)

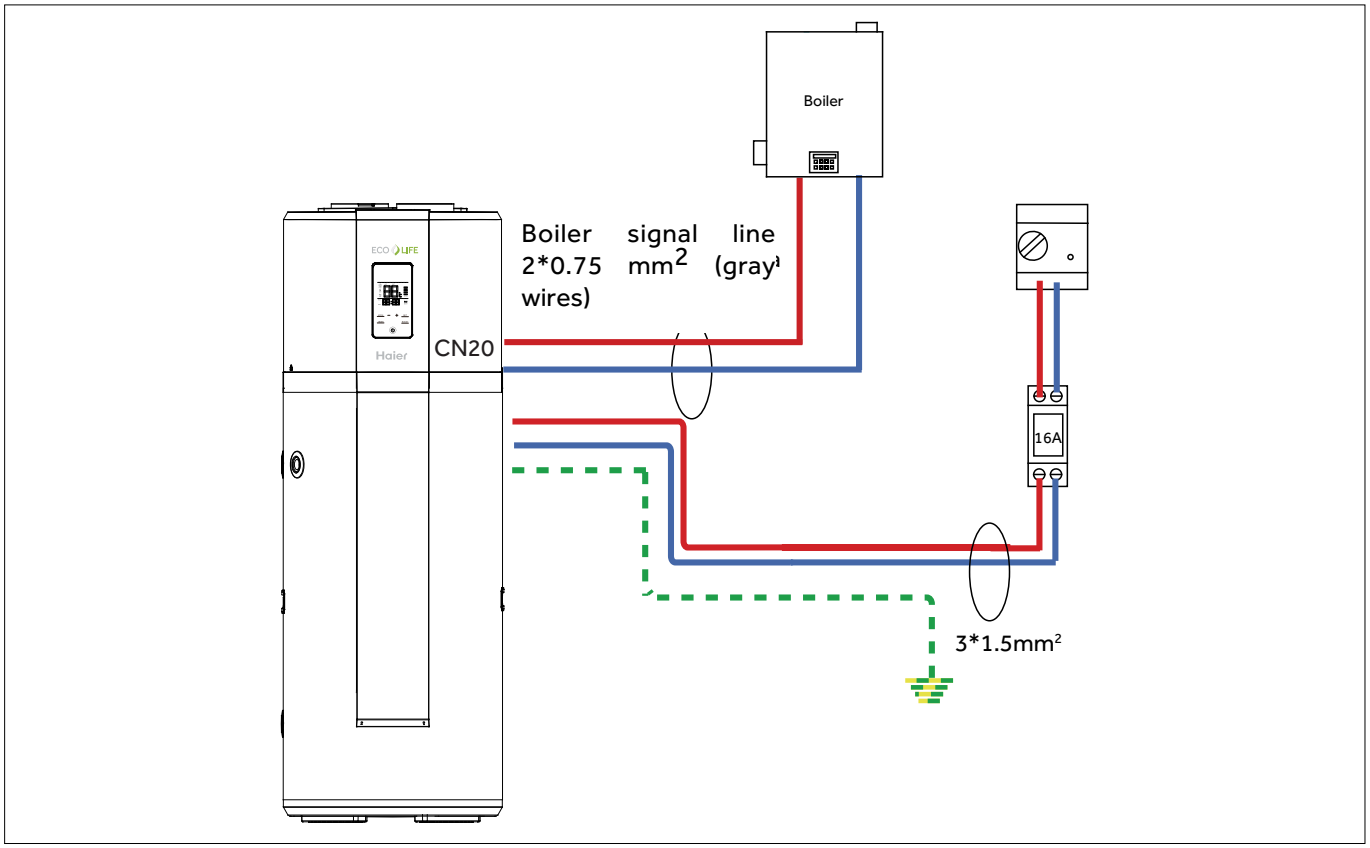
HP200M3

HP250M3

HP250M3C

Model M3 monoblock		HP200M3	HP250M3	HP250M3C
Commercial code		**25001022Y**	**25001051Y**	**25003051Y**
Tank				
Installation		Floor	Floor	Floor
Tank volume	L	195	246	240
Power Supply	V-Ph-Hz	220~240V/50Hz	220~240V/50Hz	220~240V/50Hz
Tank pressure	Bar	7	7	7
Extra coil / exchange surface		No	No	YES / 1m²
Anti-corrosion		Magnesium anode	Magnesium anode	Magnesium anode
IP protection class		IPX4	IPX4	IPX4
System data				
Auxiliary electrical resistance power	W	1500	1500	1500
Average power absorbed (heat pump only)	W	495	495	495
Maximum power absorbed (heat pump only)	W	865	865	865
Maximum power absorbed (with electrical resistance)	W	2365	2365	2365
Default water temperature	°C	55	55	55
Water temperature range with resistance	°C	35÷75	35÷75	35÷75
Water temperature range heat pump only	°C	35÷65	35÷65	35÷65
Refrigerant / quantity	kg	R134a / 0.9	R134a / 0.9	R134a / 0.9
Ozone-depleting potential (ODP)		0	0	0
Global warming potential (GWP)		1430	1430	1430
Sound power	dB(A)	57	58	59
Operating temperature (heat pump only)	min-max °C	-7÷45	-7÷45	-7÷45
Operating temperature (system)	min-max °C	-7÷45	-7÷45	-7÷45
Performance				
Extraction type		Ambient / Outdoor	Ambient / Outdoor	Ambient / Outdoor
COP@7 °C (EN16147)		3.04	3.02	3.10
COP@14 °C (EN16147)		3.39	3.41	3.56
Heating time (@7°C)	h	5h30	7h21	6h55
Heating time (@14°C)	h	4h41	6h10	6h
Tapping cycle (EN16147)		L	L	L
Power absorbed in standby / Pes (@7°C)	W	27	27	27
Maximum volume of usable hot water (EN16147)	L	224.4	311	332
Energy efficiency class (ERP)		A+	A+	A+
Dimensions and connections				
Water output	"	G3/4"F	G3/4"F	G3/4"F
Water inlet / Condensate drain	"	G3/4"F	G3/4"F	G3/4"F
Safety valve	"	G3/4"F	G3/4"F	G3/4"F
Duct hole diameter for air intake/air delivery	mm	Ø 180	Ø 180	Ø 180
Water heater dimensions (WxDxH)	mm	600x629x1692	600x629x1987	600x629x1987
Packing size without pallet (WxDxH)	mm	736x695x1810	736x695x2120	736x695x2120
Gross weight	kg	103	115	132
Net weight	kg	91	102	119

Electric connection with support boiler

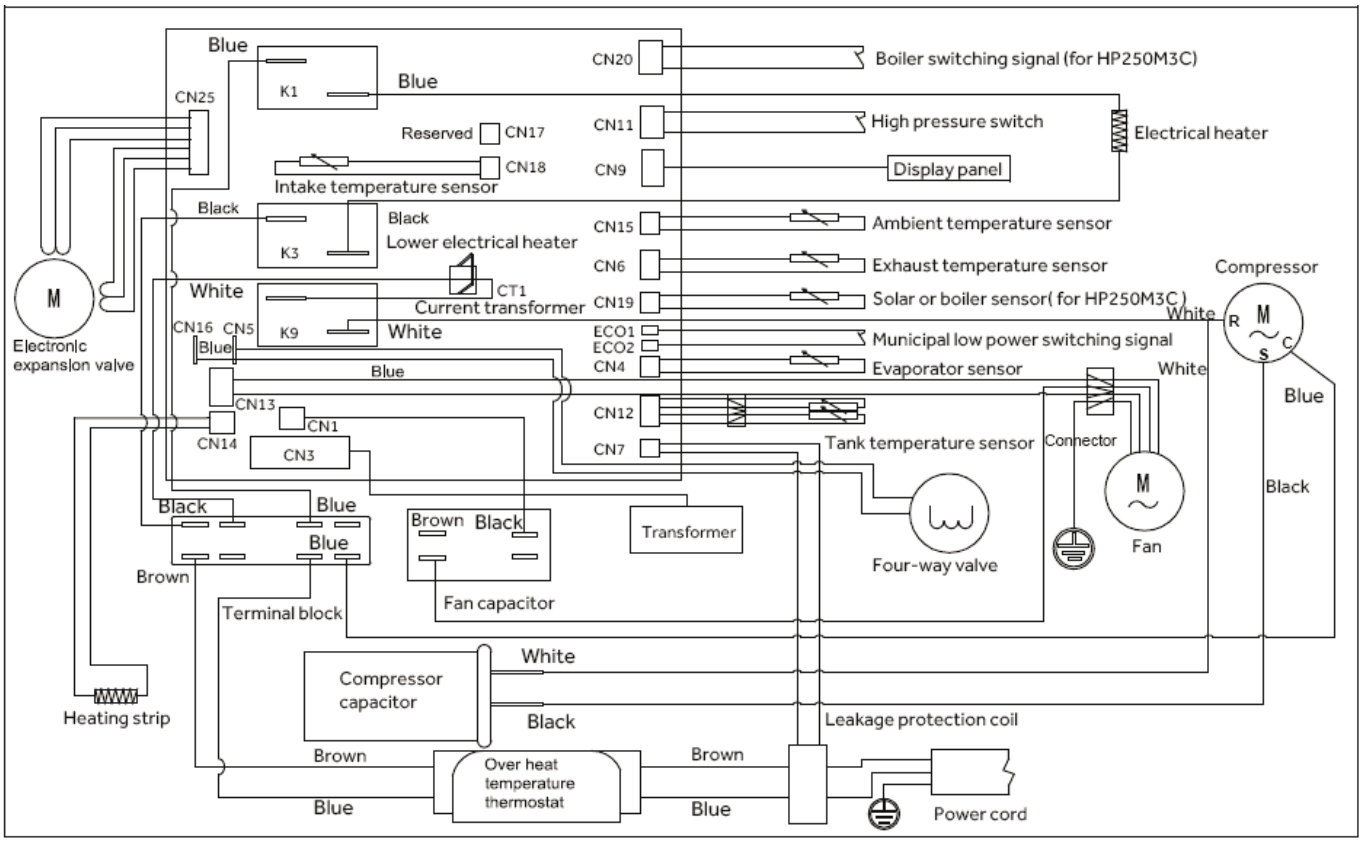


- Connect the boiler connector (support boiler). Consult the boiler's user manual.
- By consulting the water heater installation menu, adjust the parameters AH and 65.

DIAGNOSTICS

Failure and protection	Operating condition	Error code	Solution
Compressor protection	Operating temperature protection	F2	Eliminate the fault and power up again.
	Compressor drain temperature protection	F3	
	Evaporation temperature protection	F5	
Compressor overload protection	Overloaded protection	F6	
Ground failure alarm	The system is automatically switched off in the event of a ground failure	E1	
Overheating alarm	Tank water temperature ≥85°C	E2	
Tank temperature sensor failure	Short-circuited or interrupted sensor	E3	
Ambient temperature sensor failure	Short-circuited or interrupted sensor	E4	
Evaporator_1 temperature sensor failure	Short-circuited or interrupted sensor	E5	
Compressor drain temperature sensor failure	Short-circuited or interrupted sensor	E6	
Evaporator_2 temperature sensor failure	Short-circuited or interrupted sensor	ED	
Communication failure	Communication failure between main control panel and display	E7	
Pressure switch protection	Intervention of the expulsion pressure switch	E8	
Ambient temperature protection	Ambient temperature out of limits (<-7°C or >37°C)	E9	
Power supply switching signal Off-peak error	If the Off-peak signal is not received when switching signals are selected	EF	

Circuit diagram



Symbol Legend

Symbol	Description
	Turn on/off
MODE	Selecting the operating mode
SET	Confirmation button
TIMER	**Adjusting the clock.** Holding the TIMER button pressed lights up the "time" display. To adjust the clock, use the + / - buttons. The settings are automatically stored after 6 seconds without pressing any key. Pressing the TIMER button again returns to the original setting.
BOOST	**Rapid heating.** Holding down the BOOST button will illuminate the corresponding icon and activate the rapid heating mode.
AUTO	**Auto mode.** Before using the heat pump. If the heat pump operates more than the default 8 hours, electrical resistance starts. The default operation time can be adjusted in the installation settings.
ECO	**ECO mode:** Starts the heat pump to provide hot water in energy saving mode 1. The ECO mode allows heating the water and maintaining its temperature within a defined period of time. If the water heating is not finished during this period, heating will continue until the set temperature is reached. 2. After entering ECO mode, set the timer to schedule the energy saving operation. When the SET key is pressed, "LP" appears on the display, "On" flashes and time is displayed. Adjust the time with "+" / "-". Press SET again. "ON" turns off and "OFF" turns on. Adjust the minutes with the "+" / "-" as above. The settings are automatically stored.
VAC	**Vacation Mode** Starts the heat pump to provide hot water according to the user's return date after a vacation. Example of adjustment: You are on vacation from January 1 to January 5. You can set the number of days as (5-1) = 4 and the desired tempera-ture. The pump starts automatically as of 0:00 a.m. on January 5.
	Anti-legionella The anti-legionella function will be activated every 7 days to automatically heat the tank to 65°C.
	Hot water icon: Displays the amount of hot water remaining in the tank.

- For installation settings, press ⏻ to shut down the system, then press + and SET simultaneously for 10 seconds.
- When the relevant menu appears, press + or − to change the settings value.
- Press SET to confirm the settings.
- Press ⏻ to close the menu.

Parameters	Description	Factory Settings	Adjustment Range
LL NO,NC	**ECO signal input for exceeding power.** When using this signal, first inquire about how the external logic functions. This must be done only by professionally qualified personnel. - NO corresponds to Normally Open Signal. - NC corresponds to Normally Closed Signal.	NO	NO, NC
LP 01, 02	**ECO input logic type** - There are two ways to use the heat pump, set in the installation settings - 01 manual setting mode ECO (ECO1); - 02 signal switching by the power company (ECO2).	01	01, 02
AL ON, OF	**Anti Legionella** - This parameter is used to enable Legionella protection mode. - Once every 7 days, all the hot water in the tank is heated to 65°C.	ON	ON, OFF
AH 1, 2, 3	**Heating auxiliary circuit** - 1 corresponds to electrical device. - 2 corresponds to electrical device and boiler. - 3 corresponds to electrical and solar device.	1	1, 2, 3
CS NO,NC	**Boiler output signal type** - NO corresponds to normally open contact. - NC corresponds to normally closed contact.	NO	NO, NC
FS 1, 2, 3	**Fan speed** - 1 corresponds to the water heater without ducts. - 2 corresponds to semi-ducting with only one duct installed. - 3 corresponds to ducts on both air inlet and outlet openings.	1	1, 2, 3
AA 5-10	**Heat pump operation time** - If the heat pump operates for more than the Set Time, the heating is switched on via electrical resistances.	8h	5-10h

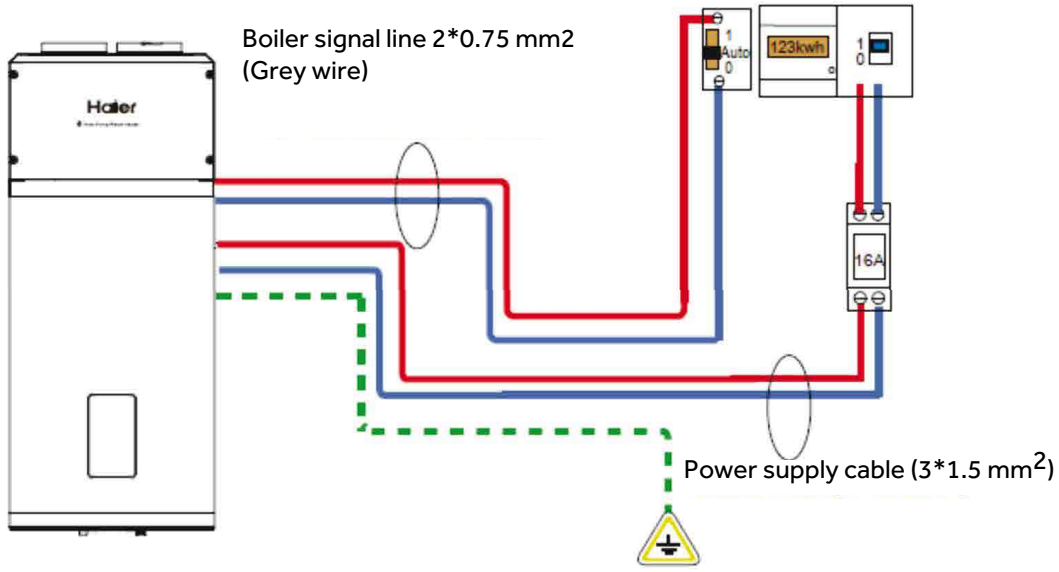
MONOBLOCK HEAT PUMP WATER HEATER (R134A)

HP80M5

HP110M5

Model M5 monoblock		HP80MS	HP110MS
Commercial code		**TS200HE-S1**	**TS300HE-S1**
Tank			
Installation		Wall cabinet / ducted	Wall cabinet / ducted
Tank volume	L	80	110
Power Supply	V-Ph-Hz	220~240V/50Hz	220~240V/50Hz
Tank pressure	Bar	8	8
Extra coil / exchange surface		No	No
Anti-corrosion		Magnesium anode	Magnesium anode
IP protection class		IPX4	IPX4
System data			
Auxiliary electrical resistance power	W	1200	1200
Average power absorbed (heat pump only)	W	240	240
Maximum power absorbed (heat pump only)	W	350	350
Maximum power absorbed (with electrical resistance)	W	1550	1550
Default water temperature	°C	55	55
Water temperature range with resistance	°C	35÷75	35÷75
Water temperature range heat pump only	°C	35÷65	35÷65
Refrigerant / quantity	kg	R134a / 0.45	R134a / 0.45
Ozone-depleting potential (ODP)		0	0
Global warming potential (GWP)		1430	1430
Sound power	dB(A)	50	50
Operating temperature (heat pump only)	min-max °C	-7÷45	-7÷45
Operating temperature (system)	min-max °C	-7÷45	-7÷45
Performance			
Extraction type		Ambient / Outdoor	Ambient / Outdoor
COP@7 °C (EN16147)		2.71	2.64
COP@14 °C (EN16147)		3.17	3.2
Heating time (@7°C)	h	4h58	6h35
Heating time (@14°C)	h	4h09	5h23
Tapping cycle (EN16147)		M	M
Power absorbed in standby / Pes (@7°C)	W	20	20
Maximum volume of usable hot water (EN16147)	L	102.5	132.6
Energy efficiency class (ERP)		A+	A+
Dimensions and connections			
Water output	"	G1/2"M	G1/2"M
Water inlet / Condensate drain	"	G1/2"M	G1/2"M
Safety valve	"	G1/2"M	G1/2"M
Duct hole diameter for air intake/air delivery	mm	Ø 180	Ø 180
Water heater dimensions (WxDxH)	mm	492x537x1170	492x537x1320
Packing size without pallet (WxDxH)	mm	587x587x1247	587x587x1397
Gross weight	kg	59	63
Net weight	kg	51	55

Electric connection with support boiler



DIAGNOSTICS

Failure and protection	Operating condition	Error code	Solution
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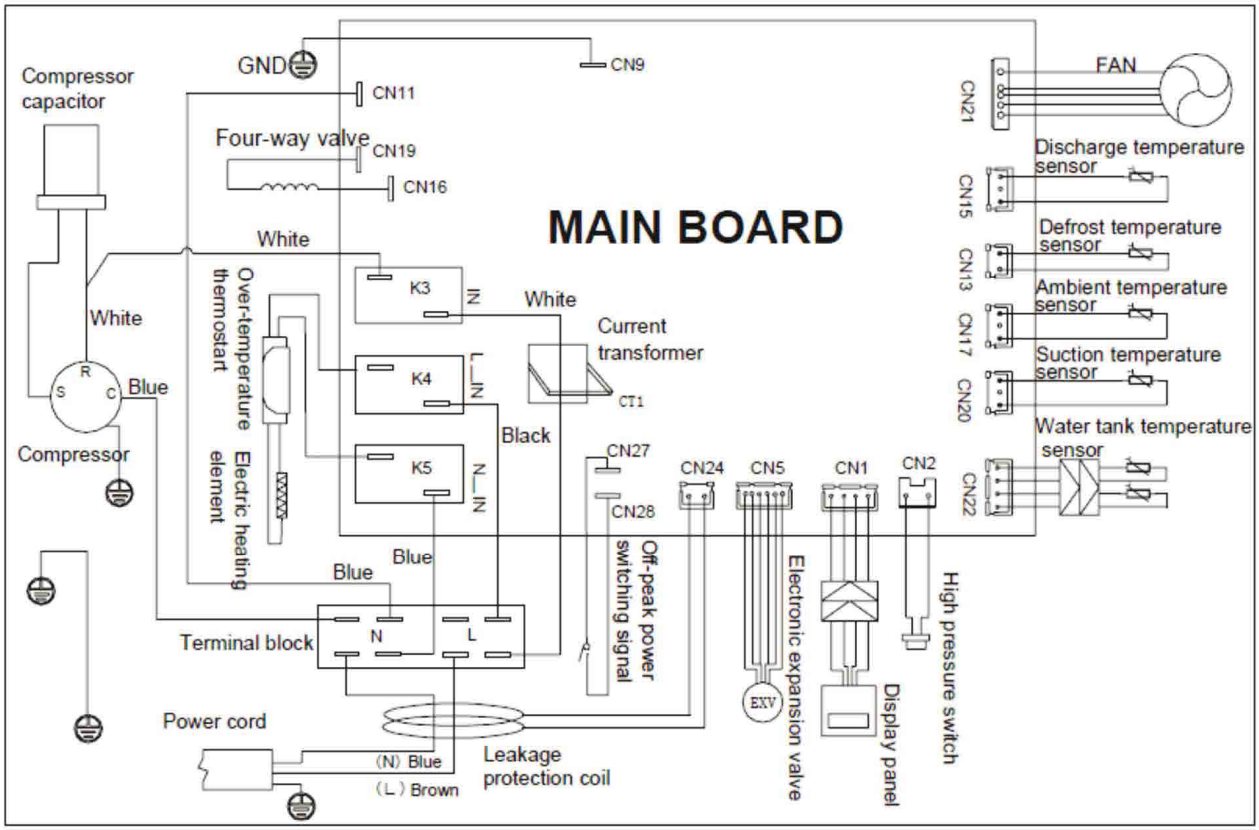
	Compressor drain temperature protection	F3	
	Evaporation temperature protection	F5	
Compressor overload protection	Overloaded protection	F6	
Ground failure alarm	The system is automatically switched off in the event of a ground failure	E1	
Overheating alarm	Tank water temperature ≥85°C	E2	
Tank temperature sensor failure	Short-circuited or interrupted sensor	E3	
Ambient temperature sensor failure	Short-circuited or interrupted sensor	E4	
Evaporator_1 temperature sensor failure	Short-circuited or interrupted sensor	E5	
Compressor drain temperature sensor failure	Short-circuited or interrupted sensor	E6	
Evaporator_2 temperature sensor failure	Short-circuited or interrupted sensor	ED	
Communication failure	Communication failure between main control panel and display	E7	
Pressure switch protection	Intervention of the expulsion pressure switch	E8	
Ambient temperature protection	Ambient temperature out of limits (<-7°C or >37°C)	E9	
Power supply switching signal Off-peak error	If the Off-peak signal is not received when switching signals are selected	EF	
Fan error	Fan blocked or communication between fan and PCB failed	EF	

Circuit diagram



Symbol Legend

Symbol	Description
	Turn on/off
MODE	Selecting the operating mode
SET	Confirmation button
TIMER	**Adjusting the clock.** Holding the TIMER button pressed lights up the "time" display. To adjust the clock, use the + / - buttons. The settings are automatically stored after 6 seconds without pressing any key. Pressing the TIMER button again returns to the original setting.
BOOST	**Rapid heating.** Holding down the BOOST button will illuminate the corresponding icon and activate the rapid heating mode.
24h AUTO	**Auto mode.** Before using the heat pump. If the heat pump operates more than the default 8 hours, electrical resistance starts. The default operation time can be adjusted in the installation settings.
ECO	**ECO mode:** Starts the heat pump to provide hot water in energy saving mode 1. The ECO mode allows heating the water and maintaining its temperature within a defined period of time. If the water heating is not finished during this period, heating will continue until the set temperature is reached. 2. After entering ECO mode, set the timer to schedule the energy saving operation. When the SET key is pressed, "LP" appears on the display, "On" flashes and time is displayed. Adjust the time with "+" / "-". Press SET again. "ON" turns off and "OFF" turns on. Adjust the minutes with the "+" / "-" as above. The settings are automatically stored.
VAC	**Vacation Mode** Starts the heat pump to provide hot water according to the user's return date after a vacation. Example of adjustment: You are on vacation from January 1 to January 5. You can set the number of days as (5-1) = 4 and the desired tempera-ture. The pump starts automatically as of 0:00 a.m. on January 5.
ELEC	**Heating with resistance** In this mode, the electrical resistance is active. This mode provides hot water in failure situations

Symbol	Description
	**Boost icon** In boost mode, the electrical resistance and compressor are activated at the same time
	**Running icon in heat pump**
	**Electrical resistance active icon**
	**Photovoltaic active icon** When the photovoltaic is active, the set value is automatically raised to 65°C by turning on the electrical resistance
	**SG active icon** When solar heating is on, the set value is automatically raised to 65°C
	**HC active icon** Contact on / off, when the contact is deactivated the machine does not work
	**Anti-legionella function** Anti-legionella is activated every 7 days and the set value is raised to 65°C
	**Hot water icon:** Displays the amount of hot water remaining in the tank.

- For installation settings, press ⏻ to shut down the system, then press + and SET simultaneously for 10 seconds.
- When the relevant menu appears, press + or − to change the settings value.
- Press SET to confirm the settings.
- Press ⏻ to close the menu.

Parameters	Description	Factory Settings	Adjustment Range
LL nO,nC	**ECO signal input for exceeding power.** When using this signal, first inquire about how the external logic functions. This must be done only by professionally qualified personnel. - NO corresponds to Normally Open Signal. - NC corresponds to Normally Closed Signal.	NO	NO, NC
LP 01, 02	**ECO input logic type** - There are two ways to use the heat pump, set in the installation settings - 01 manual setting mode ECO (ECO1); - 02 signal switching by the power company (ECO2).	01	01, 02, 03, 04
AL On, OF	**Anti Legionella** - This parameter is used to enable Legionella protection mode. - Once every 7 days, all the hot water in the tank is heated to 65°C.	ON	ON, OFF
AA 5-10	**Heating auxiliary circuit** - 1 corresponds to electrical device. - 2 corresponds to electrical device and boiler. - 3 corresponds to electrical and solar device.	8h	5 - 10h
Ct d1-d7	**Weekday selection** Select the day of the week from Monday to Sunday	ON	d1 - d7
EH On, OF	**Auxiliary heating system** -ON corresponds to activating the auxiliary heater. -OFF corresponds to deactivating the auxiliary heater.	ON	ON, OFF

MONOBLOCK HEAT PUMP WATER HEATER (R134A)

HP200S1 (outdoor unit) TS200HE-S1 (tank)

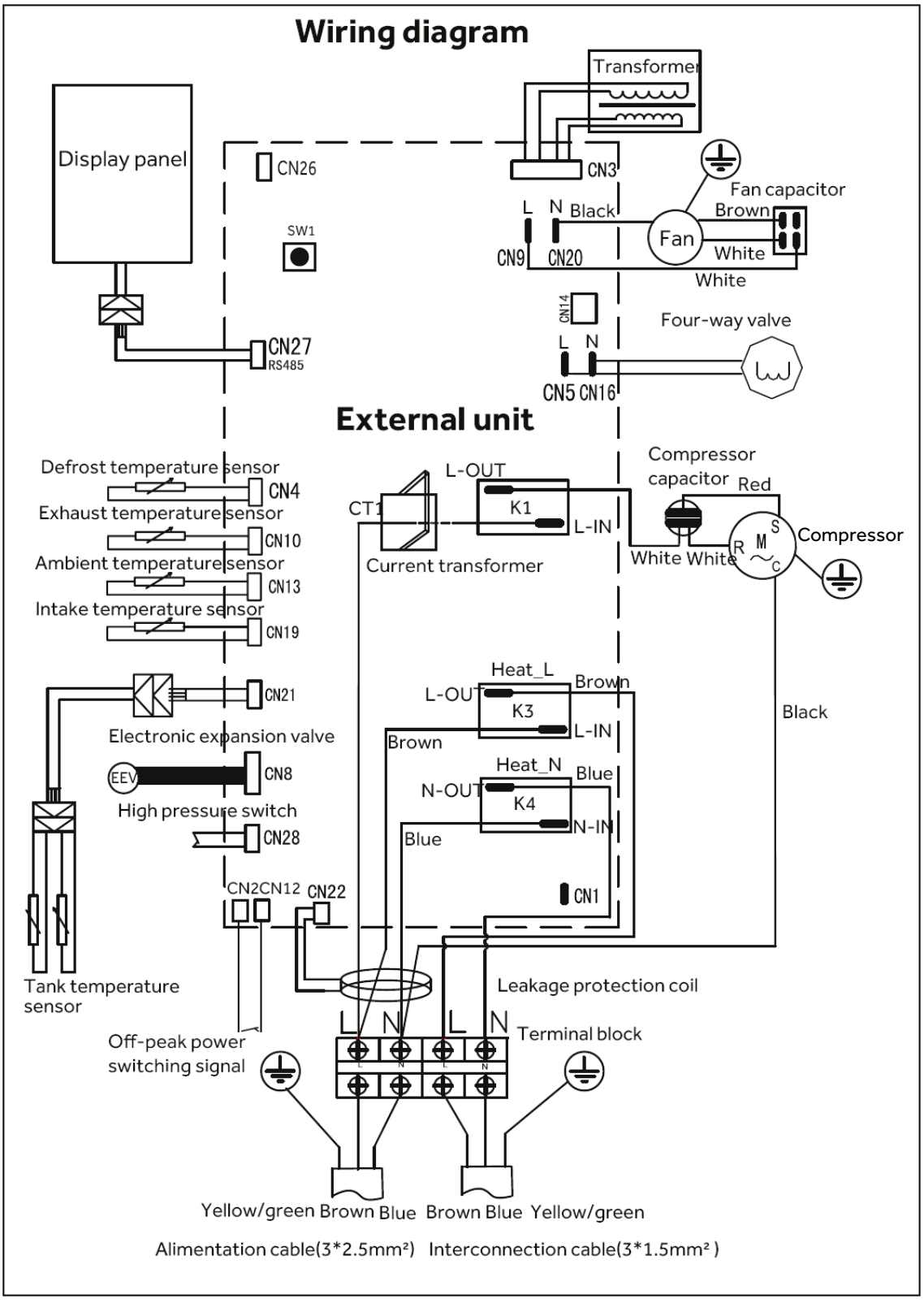
HP300S1 (outdoor unit) TS300HE-S1 (tank)

System model		HP200S1	HP300S1
Tank model		**TS200HE-S1**	**TS300HE-S1**
Tank			
Tank volume	L	195	293
Power Supply	V-Ph-Hz	220~240V/50Hz	220~240V/50Hz
Tank pressure	Bar	7	7
Extra coil / exchange surface		No	No
Anti-corrosion		Magnesium anode	Magnesium anode
IP protection class		IPX4	IPX4
Performance			
Auxiliary electrical resistance power	W	2150	2150
Average power absorbed (heat pump only)	W	665	850
Maximum power absorbed (heat pump only)	W	1000	1350
Maximum power absorbed (with electrical resistance)	W	3150	3500
Default water temperature	°C	55	55
Water temperature range with resistance	°C	35÷75	35÷75
Water temperature range heat pump only	°C	35÷65	35÷65
Refrigerant / quantity	kg	R134a /1,3	R134a / 1.5
Equivalent tons of CO_2	tCO_2EQ	1.85	2.14
Sound power	dB(A)	64	64
Operating temperature (heat pump only)	°C	-7÷45	-7÷45
Operating temperature (system)	°C	-7÷45	-7÷45
Performance			
Extraction type		Outdoor	Outdoor
COP@7 °C (EN16147)		3.09	3.20
COP@15 °C (EN16147)		3.54	3.80
Heating time (@7°C)	h	4h03	4h45
Heating time (@15°C)	h	3h32	3h49
Tapping cycle (EN16147)		L	XL
Power absorbed in standby / Pes (@7°C)	W	28	29
Maximum volume of usable hot water (EN16147)	L	245.1	382.6
Dimensions and connections			
Water output	"	G3/4"M	G3/4"M
Water inlet / Condensate drain	"	G3/4"M	G3/4"M
Safety valve	"	G3/4"M	G3/4"M
Maximum length of the air intake and outlet duct	m	2.5 + 2.5	2.5 + 2.5
Air intake and outlet duct diameters	mm	Ø 180	Ø 180
Water heater dimensions (WxDxH)	mm	544x6512x1765	632x300x1795
Packing size without pallet (WxDxH)	mm	676x636x1927	737x696x1958
Gross weight	kg	89	112
Net weight	kg	77	98
OU Dimensions (WxDxH)	mm	899x352x681	899x352x681
OU packaging dimensions without pallet (WxDxH)	mm	960x425x735	960x425x735

DIAGNOSTICS

Failure and protection	Operating condition	Error code	Solution
Compressor protection	Operating temperature protection	F2	Eliminate the fault and power up again.
	Compressor drain temperature protection	F3	
	Evaporation temperature protection	F5	
Compressor overload protection	Overloaded protection	F6	
Ground failure alarm	The system is automatically switched off in the event of a ground failure	E1	
Overheating alarm	Tank water temperature ≥85°C	E2	
Tank temperature sensor failure	Short-circuited or interrupted sensor	E3	
Ambient temperature sensor failure	Short-circuited or interrupted sensor	E4	
Evaporator_1 temperature sensor failure	Short-circuited or interrupted sensor	E5	
Compressor drain temperature sensor failure	Short-circuited or interrupted sensor	E6	
Evaporator_2 temperature sensor failure	Short-circuited or interrupted sensor	ED	
Communication failure	Communication failure between main control panel and display	E7	
Pressure switch protection	Intervention of the expulsion pressure switch	E8	
Ambient temperature protection	Ambient temperature out of limits (<-7°C or >37°C)	E9	
Power supply switching signal Off-peak error	If the Off-peak signal is not received when switching signals are selected	EF	

Circuit diagram



Symbol Legend

Symbol	Description
	Turn on/off
	Selecting the operating mode
	Confirmation button
	**Adjusting the clock.** Holding the TIMER button pressed lights up the "time" display. To adjust the clock, use the + / - buttons. The settings are automatically stored after 6 seconds without pressing any key. Pressing the TIMER button again returns to the original setting.
	**Rapid heating.** Holding down the BOOST button will illuminate the corresponding icon and activate the rapid heating mode.
	**Auto mode.** Before using the heat pump. If the heat pump operates more than the default 8 hours, electrical resistance starts. The default operation time can be adjusted in the installation settings.
	**ECO mode:** Starts the heat pump to provide hot water in energy saving mode 1. The ECO mode allows heating the water and maintaining its temperature within a defined period of time. If the water heating is not finished during this period, heating will continue until the set temperature is reached. 2. After entering ECO mode, set the timer to schedule the energy saving operation. When the SET key is pressed, "LP" appears on the display, "On" flashes and time is displayed. Adjust the time with "+" / "-". Press SET again. "ON" turns off and "OFF" turns on. Adjust the minutes with the "+" / "-" as above. The settings are automatically stored.
	**ECO+ mode:** In this mode, the compressor and electrical resistance are activated only in ECO function. It is possible to manage the heat pump with the LP parameter
	**Vacation Mode** Starts the heat pump to provide hot water according to the user's return date after a vacation. Example of adjustment: You are on vacation from January 1 to January 5. You can set the number of days as (5-1) = 4 and the desired temperature. The pump starts automatically as of 0:00 a.m. on January 5.
	**Boost icon** In boost mode, the electrical resistance and compressor are activated at the same time
	**Running icon in heat pump**
	**Electrical resistance active icon**
	**ON/OFF icon** When the icon is active, the outdoor ON contact is closed and the heat pump is working. With OFF contact, the PDC goes to OFF
	**Alarm icon**
	**Anti-legionella function** Anti-legionella is activated every 7 days and the set value is raised to 65°C
	**Hot water icon:** Displays the amount of hot water remaining in the tank.

- For installation settings, press ⏻ to shut down the system, then press + and SET simultaneously for 10 seconds.
- When the relevant menu appears, press + or − to change the settings value.
- Press SET to confirm the settings.
- Press ⏻ to close the menu.

Parameters	Description	Factory Settings	Adjustment Range
LI NO,NC	**ECO signal input for exceeding power.** When using this signal, first inquire about how the external logic functions. This must be done only by professionally qualified personnel. - NO corresponds to Normally Open Signal. - NC corresponds to Normally Closed Signal.	NO	NO, NC
LP 01, 02	**ECO input logic type** - There are two ways to use the heat pump, set in the installation settings - 01 manual setting mode ECO (ECO1); - 02 signal switching by the power company (ECO2).	01	01, 02
AL ON, OF	**Anti Legionella** - This parameter is used to enable Legionella protection mode. - Once every 7 days, all the hot water in the tank is heated to 65°C.	ON	ON, OFF
AA 5-10	**Heating auxiliary circuit** - 1 corresponds to electrical device. - 2 corresponds to electrical device and boiler. - 3 corresponds to electrical and solar device.	8h	5 - 10h
EH ON, OF	**Auxiliary heating system** -ON corresponds to activating the auxiliary heater. -OFF corresponds to deactivating the auxiliary heater.	ON	ON, OFF

Refrigerant recovery procedure in the machine:
Press the indicated button on the outdoor unit board.

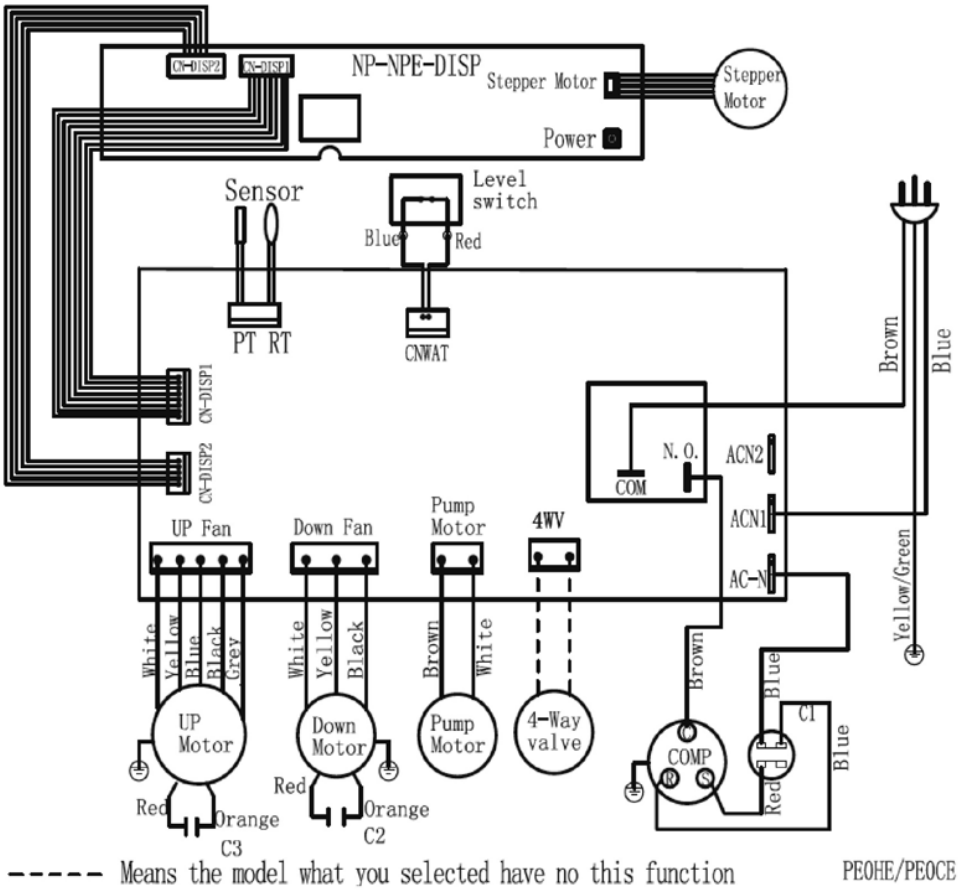
Another method is to hold down the "+" and "-" keys together for 3 seconds. "A5" will appear on the display, which means that the machine is in gas recovery mode. To exit the recovery mode, press the ON/OFF buttons.

AM09AA1TAA AM12AA1TAA (heat pump ver.)

AM09AA1GAA AM12AA1GAA (heat pump ver.)

PORTABLE	Model		AM09AA1TAA	AM09AA1GAA	AM12AA1TAA	AM12AA1GAA
	Commercial code		25000712A	25000715A	25000722A	25000725A
Performance data						
Output power	COOLING	Btu/h	9000	9000	12000	12000
		kW	2.6	2.6	3.5	3.5
Power Supply		Ph/V/Hz	1/220~240/50	1/220~240/50	1/220~240/50	1/220~240/50
Absorbed power	COOLING	kW	1.05	1.05	1.37	1.37
	HEATING	kW	-	1.0	-	1.35
Absorbed current	COOLING	A	4.8	4.8	5.9	5.9
Energy class	EER		2.61 (A)	2.61 (A)	2.61 (A)	2.61 (A)
	COP		-	2.8		2.75 (A)
Dehumidification		L/h	0.9	0.9	1.2	1.2
Treated air volume		m3/h	350	350	350	350
Noise		dB(A)	56/54/52	56/54/52	56/54/52	56/54/52
Dimensions (WxDxH)	WxDxH	mm	443x340x815	443x340x815	443x340x815	443x340x815
Weight		kg	25	25	28	28
Refrigerant charge in the factory		kg	0.235	0.235	0.245	0.245
Equivalent tons of CO_2		tCO_2EQ	0.70	0.70	0.73	0.73

CIRCUIT DIAGRAM



DIAGNOSTICS

"E1"	Piping temperature probe battery faulty	Check the room temperature tube sensor and its circuits
"E2"	Ambient temperature probe faulty	Check the room temperature sensor and its circuits
"E4"	Anti-freeze protection	It will reset the features automatically once the frost protection is finished.
Indicator light for water filling	Condensate drain tray full	Remove the water and restart the device.

AG10AA1TAA AG16AB2TAA
AG12AA1TAA AG20AB2TAA

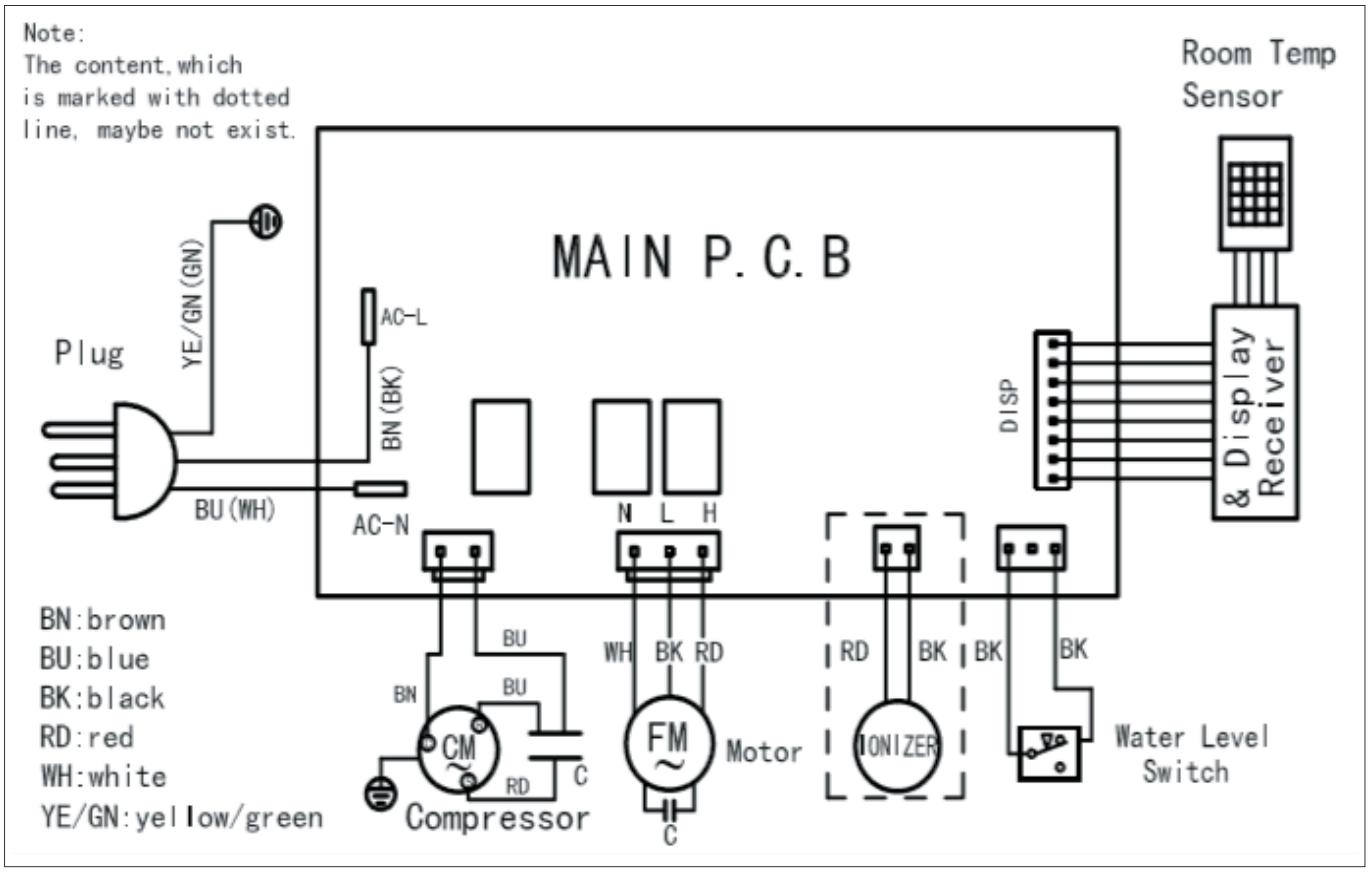
DEHUMIDIFIER	Model	AG10AA1TAA	AG12AA1TAA
	Commercial code	25000701A	25000703A
Performance data			
Dehumidification capacity	L/24H	10	12
Power Supply	Ph/V/Hz	1/220~240/50	1/220~240/50
Absorbed power	kW	0.24	0.24
Absorbed current	A	1.1	1.1
Treated air volume	m³/h	80	80
Maximum noise	dB(A)	42	42
For ambient up to	m²	10 - 12	12 - 15
Water tray capacity	L	1.8	1.8
Dimensions (W x D x H)	mm	296x217x416	296x217x416
Weight	kg	9.5	9.5
Refrigerant charge in the factory	kg	0.40	0.55

DEHUMIDIFIER	Model	AG16AB2TAA	AG20AB2TAA
	Commercial code	25000705A	25000707A
Performance data			
Dehumidification capacity	L/24H	16	20
Power Supply	Ph/V/Hz	1/220~240/50	1/220~240/50
Absorbed power	kW	0.25	0.40
Absorbed current	A	1.1	1.7
Treated air volume	m³/h	130	150
Maximum noise	dB(A)	44	45
For ambient up to	m²	20 - 25	25 - 30
Water tray capacity	L	2.0	2.0
Dimensions (W x D x H)	mm	292x190x501	292x190x501
Weight	kg	10	12
Refrigerant charge in the factory	kg	0.70	0.75

DIAGNOSTICS

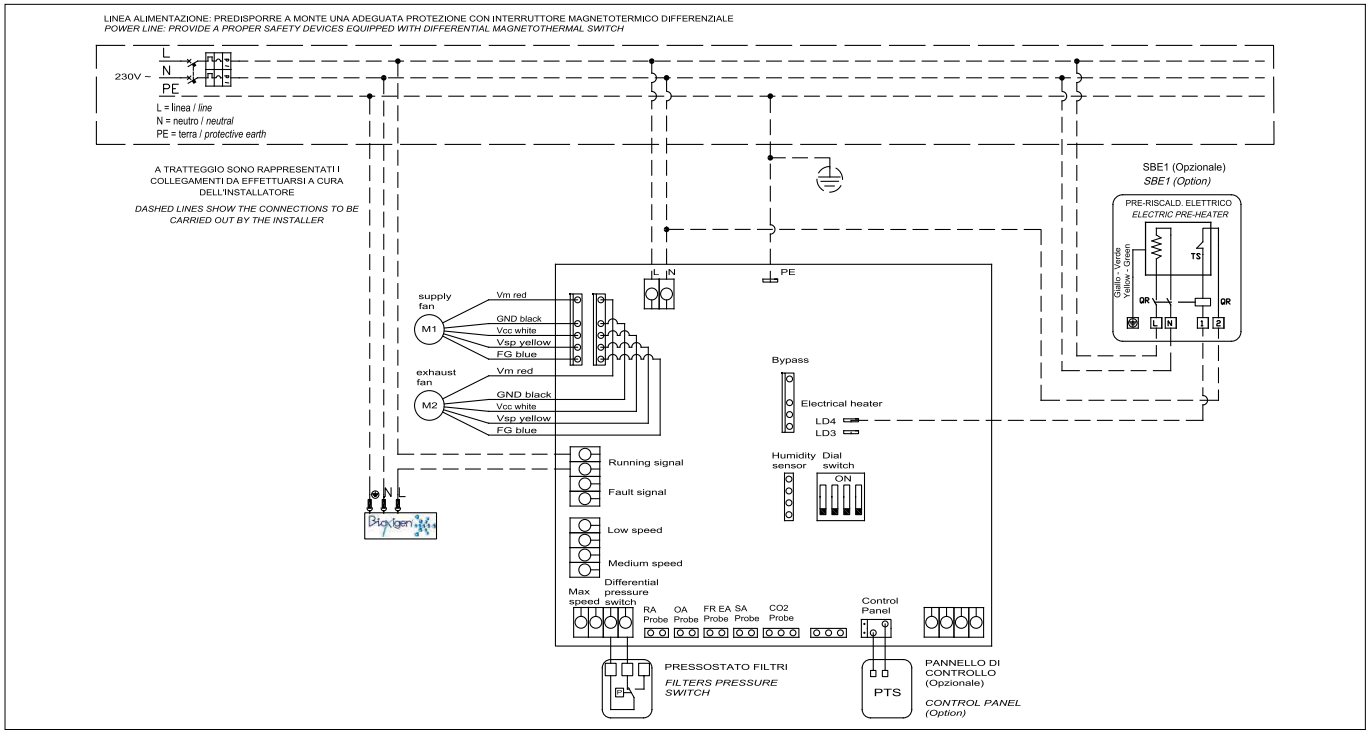
Alarm	Description
FL	Full tray alarm
E2:	Ambient temperature sensor failure
L0	The ambient temperature is too low
HI	The ambient temperature is too high
P1	Anti-ice alarm, wait for the exchanger to defrost

CIRCUIT DIAGRAM

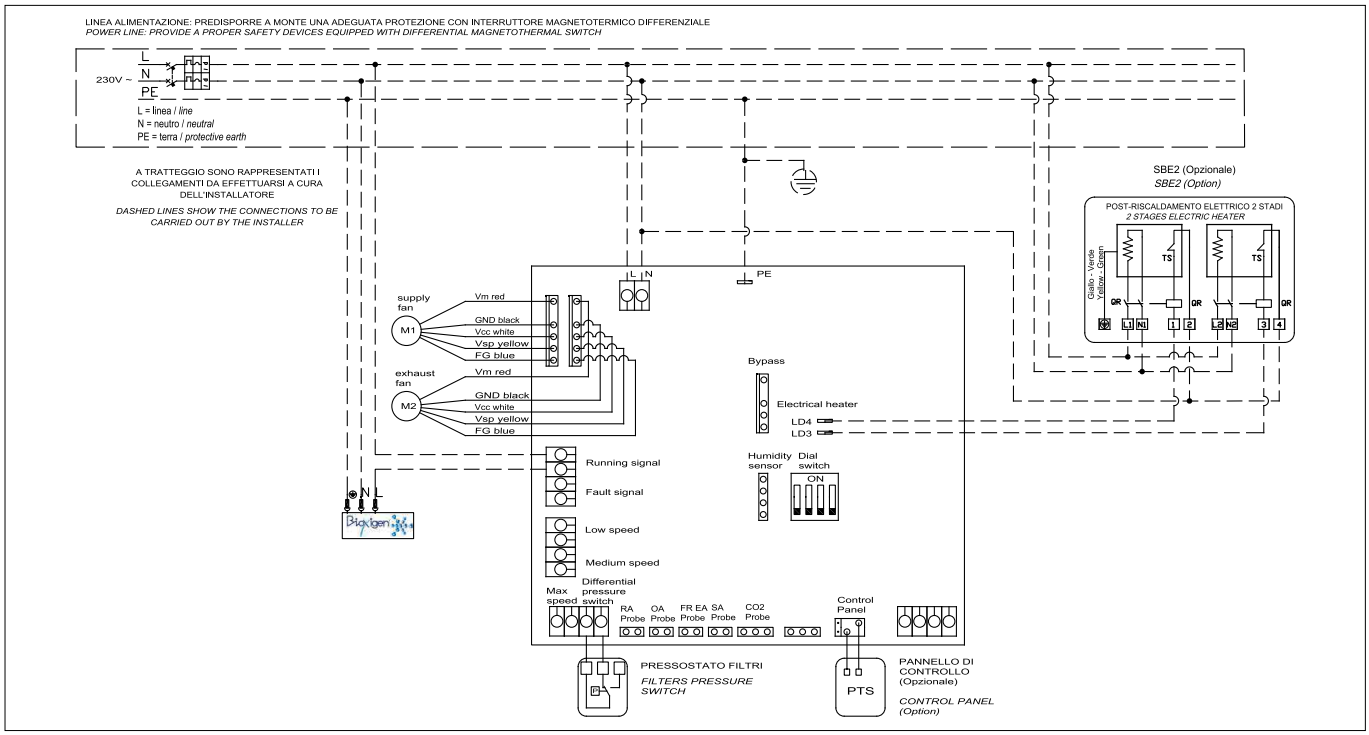


HACI-RP25 HACI-RP50 HACI-RP80 HACI-RP130
HACI-RP35 HACI-RP65 HACI-RP100

CIRCUIT DIAGRAM



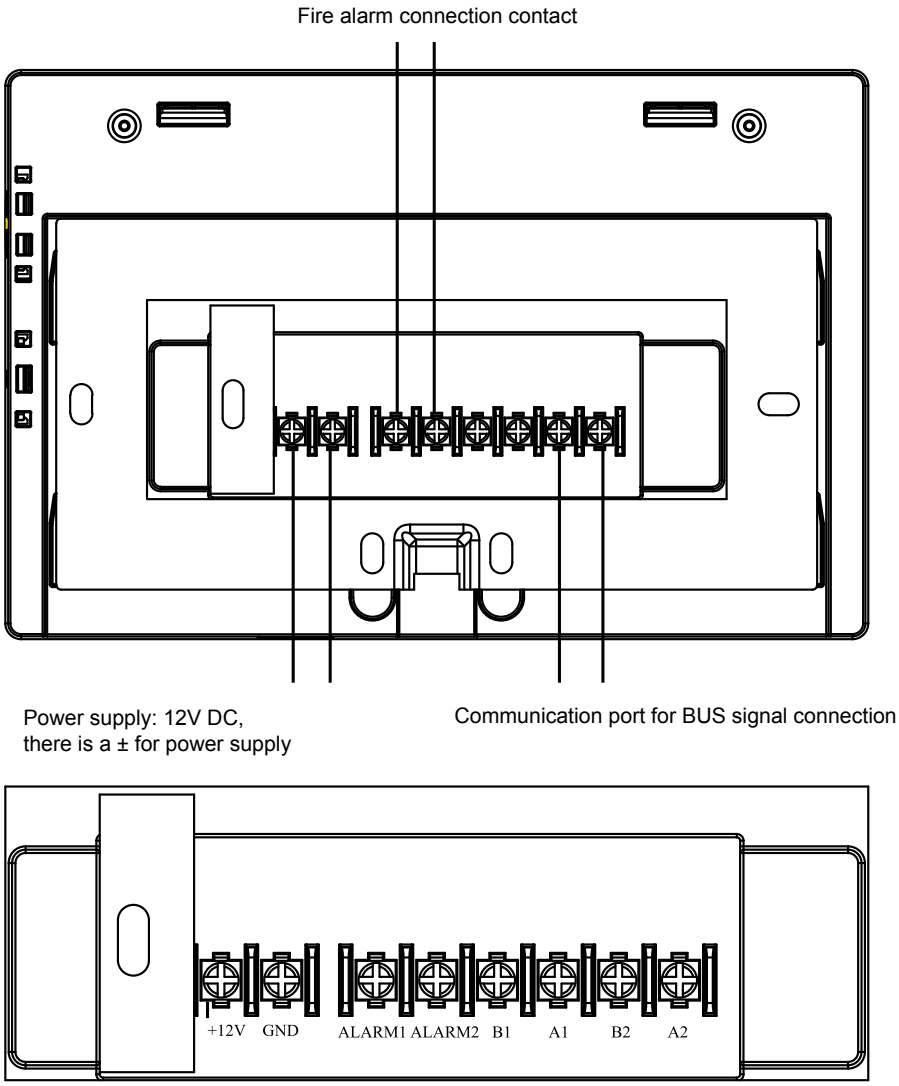
CIRCUIT DIAGRAM



DIAGNOSTICS

Error code	
E1	Outdoor air temperature sensor error
E2	EEPROM failure
E3	Return air temperature sensor error
E4	Exhaust air temperature sensor error
E5	Communication error
E6	Supply air temperature sensor error
E7	Fan motor detection error
E8	Fan motor failure

INFORMATION ON THE PARTS OF THE CENTRALIZED CONTROLLER



Power (12V, GND): 12V DC, pay attention to the + - of the power supply.
Fire alarm connection contact (ALARM1, ALARM2):
The air conditioner operates normally when the contact is closed, and is off when the contact is open.
B1, A1: Modbus communication port
B2, A2: RS485 communication port (A2=485+ / B2=485-)

USER MANUAL

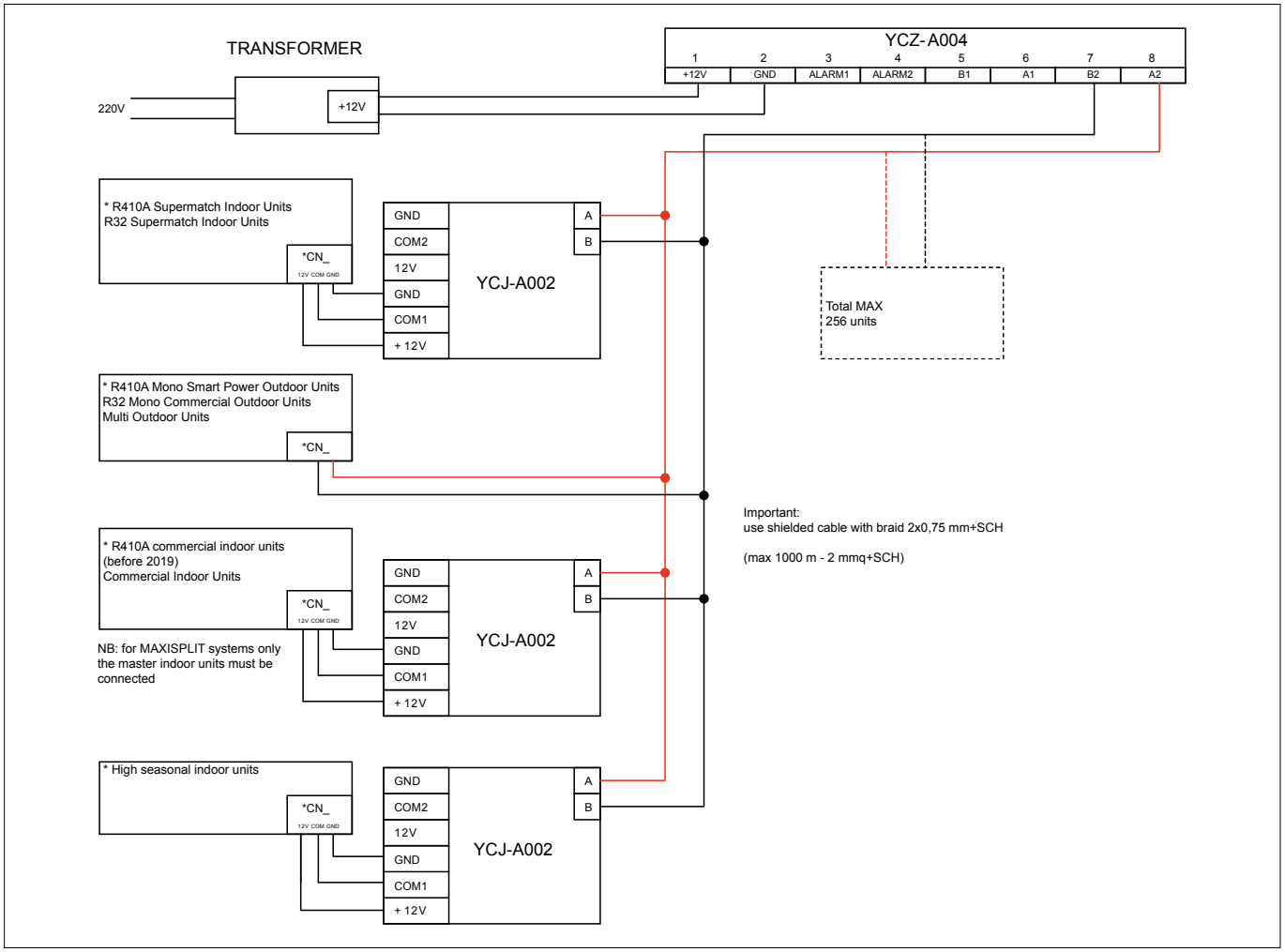
https://www.haiercondizionatori.it/media/626/d-1/t-file/YCZ-A004.pdf

HOME SCREEN ILLUSTRATION

After you turn on the centralized controller, the Home page will appear as in the image above and the detailed menu will look like below:

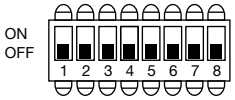
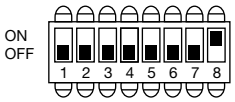
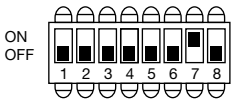
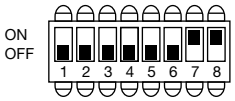
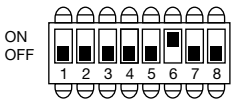
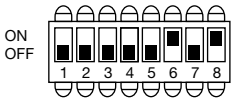
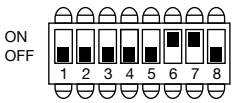
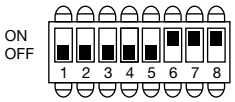
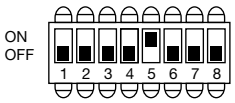
Menu/icon	Function
Detailed AC menu	After clicking on the icon, a pop-up window will open: AC unit online: indicates the online indoor units. AC unit offline: indicates indoor units that have lost communication. AC unit with timer function: indicates indoor units with the timer function activated. AC unit error: indicates units that do not function properly.
Equipment settings	Press to enter the equipment setting interface and make the following settings: View a list of all AC and condition information. Turn the page for more information The AC mode can be controlled and adjusted according to the zone/group. And the application range can be selected and All on/All off function can be performed.
Details	Click to access the details interface where the following information can be viewed: AC condition/AC mode, error code, operation times and parameters.
Weekly program setting	Click to enter the interface of weekly program settings where you can make the following setting: after accessing, all lists of weekly program settings will be displayed. One or more days of a week can be selected for the day setting. Timer on/off, temperature, mode, fan, temperature range(16-30°), etc.
System Settings	Click to enter the interface where you will be able to make the following setting: includes Extra, Energy, Password and Local settings.

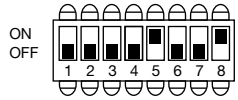
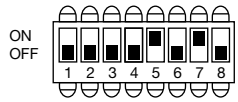
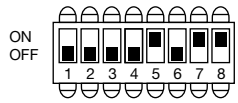
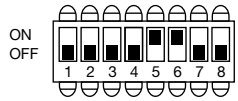
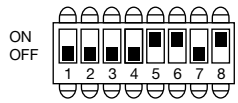
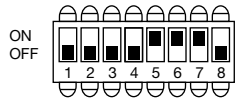
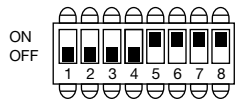
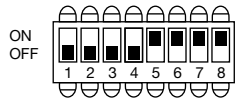
For more information about how it works, follow the instructions manual of the controller



Wall	**Connector**
AS__S2SJ1FA-3	CN36
AS__PBAHRA	CN36
AS__PDAHRA	CN36
AS__THMHRA-C	CN36
HEC__T0-IN-M	CN36
GES-NQG__IN	CN36
GES-NIG__IN-20	CN36
HAS__FAAIN	CN36
HAS09TAAIN	CN36
CY-__FAIN	CN36
CY-09TAIN - CY-12TAIN	CN36
CY-__TAIN-M	CN36
AS__S2SF2FA-3	CN36
AS__TAEHRA(M)	CN36
Cassette	**Connector**
AB__S2SC2FA-1	CN13
ABH__H1ERG	CN13
ABH__K1ERG	CN13
AB__S2SG1FA	CN13
Console	**Connector**
AF__S2SD1FA(H)	CN13
Tower	**Connector**
AP140S2SK1FA(H)	CN13
Ceiling-Floor	**Connector**
AC__S2SG1FA	CN13
AC__S2SH1FA	CN13
AC__S2SK1FA	CN13
Ducted	**Connector**
AD__S2SS1FA(H)	CN9
AD__S2SM3FA(H)	CN9
AD140S2SM3FA - AD125S2SM3FA	CN19
AD160S2SM3FA	CN9
ADH200H1ERG - ADH250H1ERG	CN19
ADH125H1ERG - ADH140H1ERG	CN24
Outdoor Mono	**Connector**
1UH__W1ERK	CN10
1U__S2SN2FA	CN31
1U__S2SN2FB	CN31
1U__S2SN1FA	CN31
1U__S2SN1FB	CN31
1U__S2SP2FA	CN10
1U__S2SP1FB	CN31
Outdoor Multi	**Connector**
H3U__TAAOUT	CN4
3U__S2SR3FA	CN4
3U__S2SR5FA	CN4
4U__S2SR5FA	CN4
5U__S2SS5FA	CN4
5U__S2SS5FA	CN4
5U__S2SN1FA	CN3

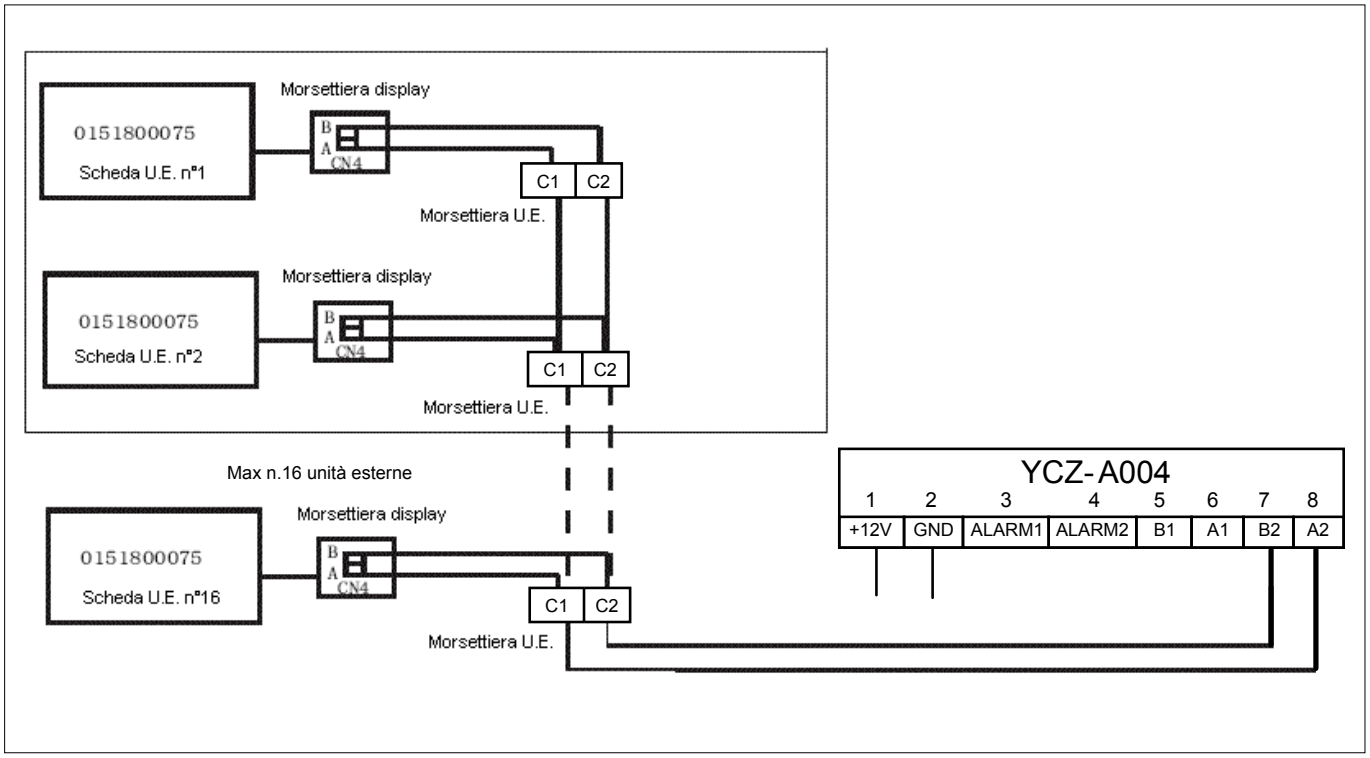
UNIT ADDRESS SETTINGS (to be set using switches on the YCJ-A002 interface)

SW01	Address 1-128
	1
	2
	3
	4
	5
	6
	7
	8
	9

SW01	Address 1-128
	10
	11
	12
	13
	14
	15
	16
	128

LEDs 1 and 3 on the YCJ-A002 interface indicate proper communication by blinking quickly.

CONNECTING MULTI 1:3 1:4 1:5 OUTDOOR UNITS TO A YCZ-A004 CENTRALISED CONTROLLER



With each YCZ-A004 centralized controller, up to 16 outdoor units can be connected, where each outdoor unit indiscriminately occupies 5 addresses in the centralized controller.

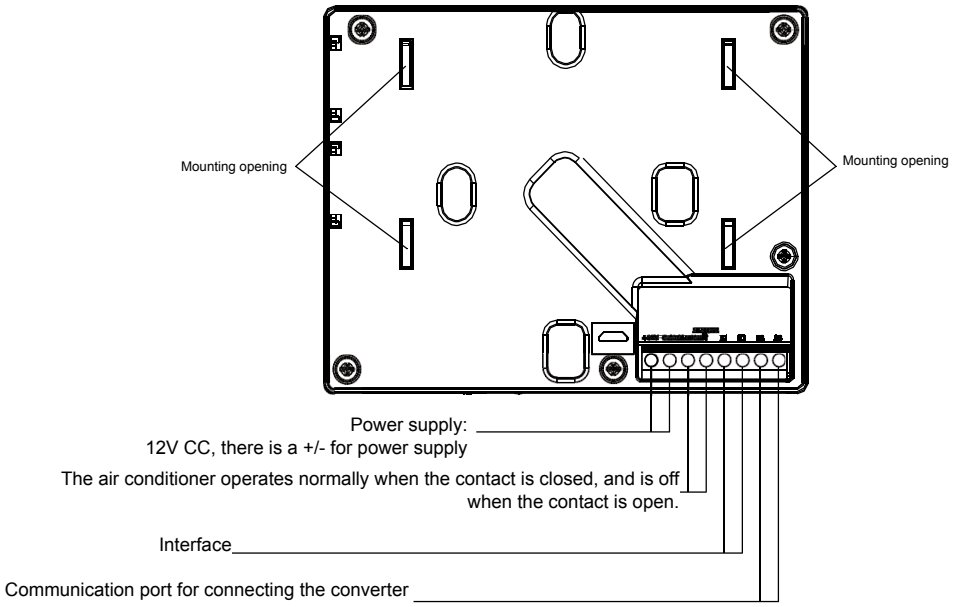
Use shielded cable (2x0.75 mmq) for the connection between centralized controller and outdoor units

Maximum system length 1000 m (2x1.5 mmq shielded).

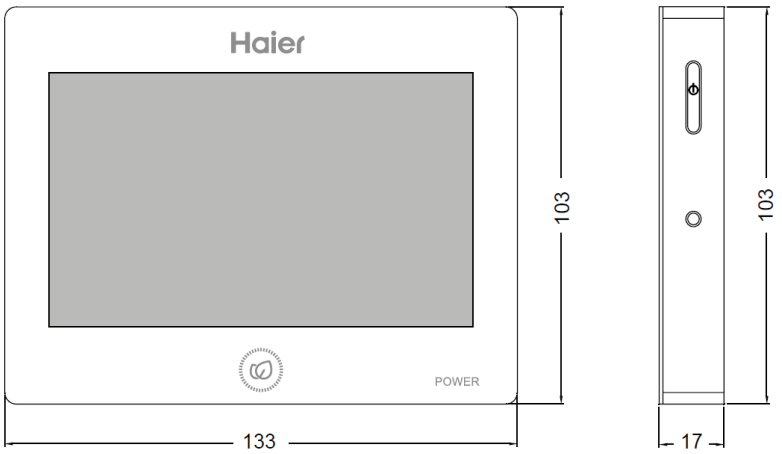
For setting addresses, refer to:

- page 89 for multi unit in **R32**

USER INTERFACE



Dimensions



USER MANUAL

https://www.haiercondizionatori.it/media/627/d-1/t-file/Manuale-HC-SA164DBT-IT.pdf

OPERATION

Parameters and control of indoor units

To see the settings for each indoor unit, touch the Air Conditioner icon.

The figure shows the On/Off, Mode, Set Temperature, Ambient Temperature, Fan Speed, and Control Mode icons for connected indoor units.

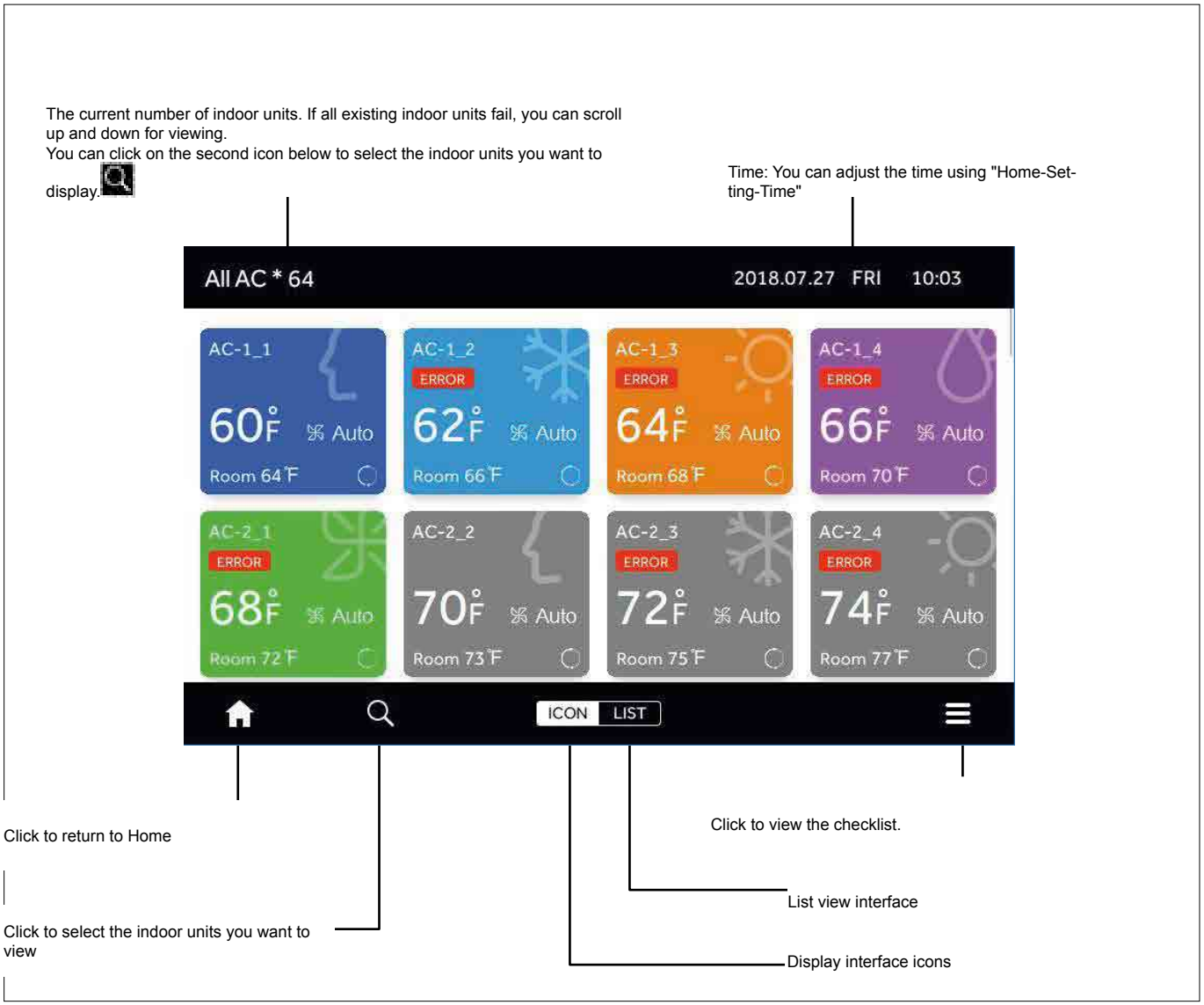
- Automatic mode - dark blue
- Cooling mode - blue
- Heating mode - orange
- Dehumidification mode - purple
- Fan mode - green
- Indoor unit turned off - gray

In the event of an indoor unit failure, the ERROR icon appears on the centralised controller.

Access the following interface: the icons show the internal switch, mode, set temperature, room temperature, airflow speed, and control mode.

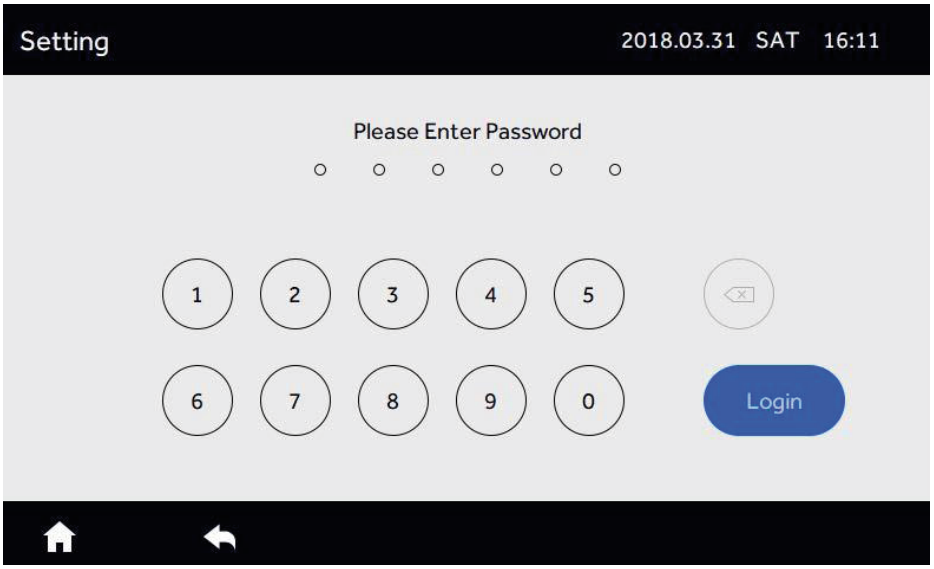
Dark blue indicates automatic mode, blue indicates cooling, orange indicates heating, purple indicates dehumidification, green indicates airflow and gray indicates off.

In the event of a failure, the error icon is displayed.

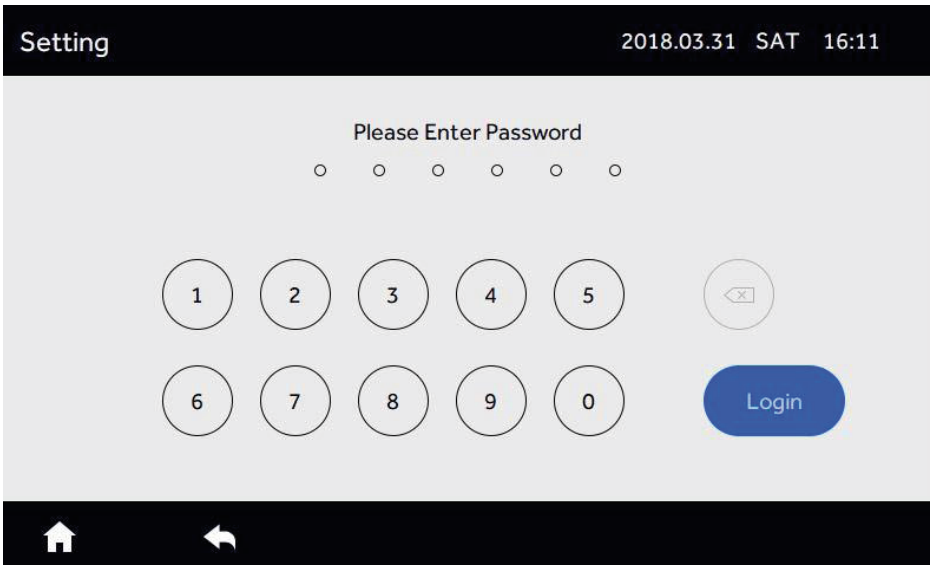


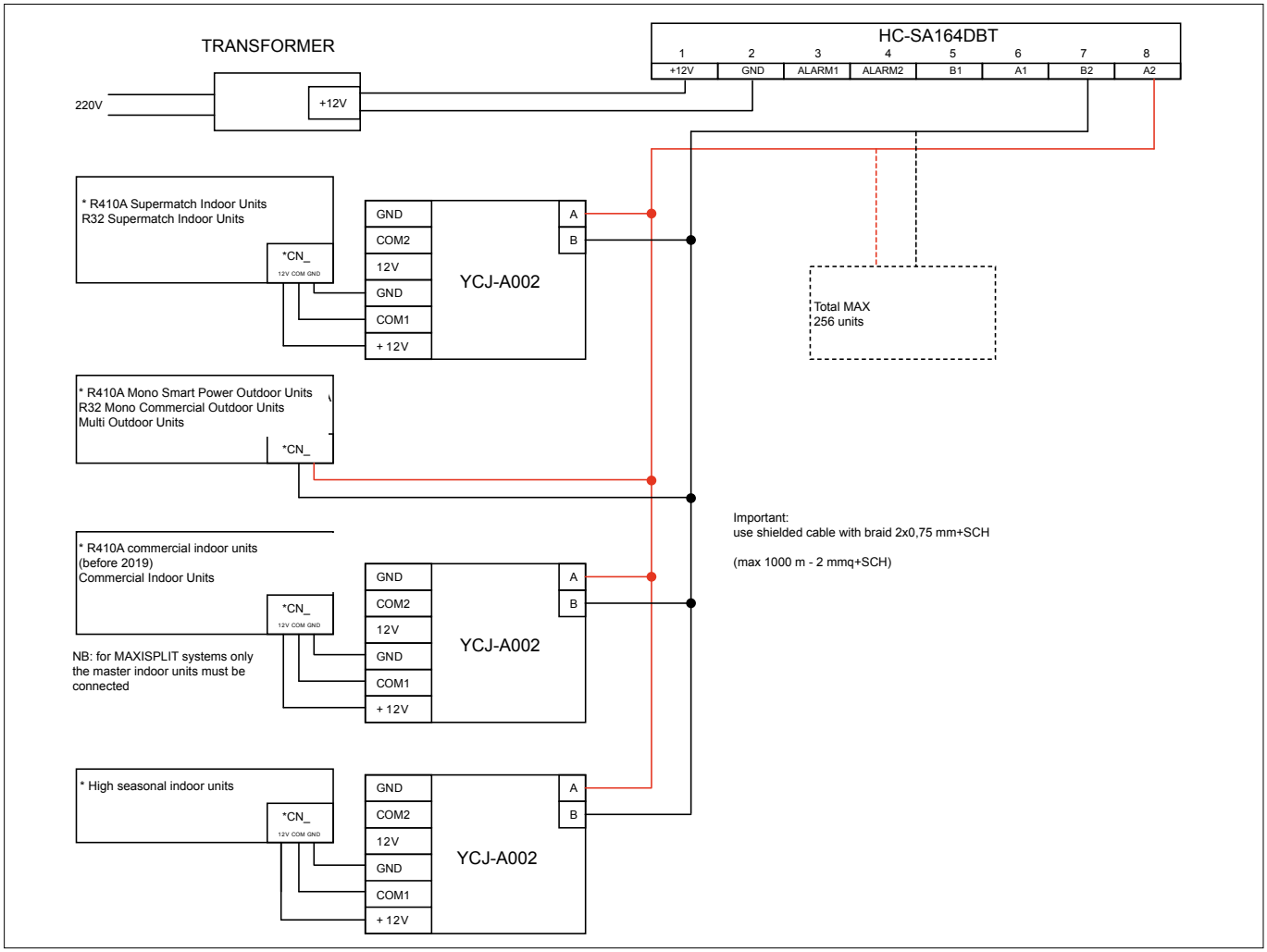
Service (Maintenance)

Press the "Service" key and the "Confirm" key in the pop-up window that prompts you to enter your password.



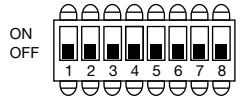
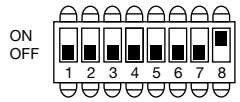
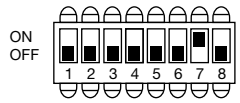
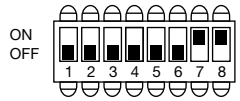
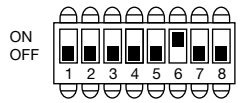
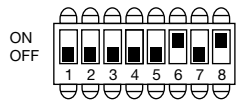
Enter the password 841226 and press "Login".

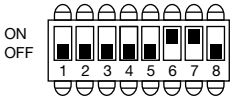
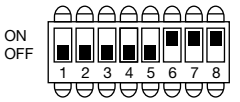
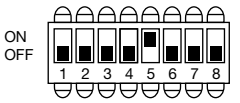
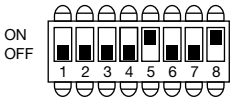
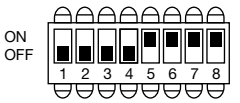
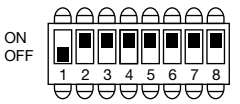




Wall	Connector
AS__S2SJ1FA-3	CN36
AS__PBAHRA	CN36
AS__PDAHRA	CN36
AS__THMHRA-C	CN36
HEC__T0-IN-M	CN36
GES-NQG__IN	CN36
GES-NIG__IN-20	CN36
HAS__FAAIN	CN36
HAS09TAAIN	CN36
CY-__FAIN	CN36
CY-09TAIN - CY-12TAIN	CN36
CY-__TAIN-M	CN36
AS__S2SF2FA-3	CN36
AS__TAEHRA(M)	CN36
Cassette	**Connector**
AB__S2SC2FA-1	CN13
ABH__H1ERG	CN13
ABH__K1ERG	CN13
AB__S2SG1FA	CN13
Console	**Connector**
AF__S2SD1FA(H)	CN13
Tower	**Connector**
AP140S2SK1FA(H)	CN13
Ceiling-Floor	**Connector**
AC__S2SG1FA	CN13
AC__S2SH1FA	CN13
AC__S2SK1FA	CN13
Ducted	**Connector**
AD__S2SS1FA(H)	CN9
AD__S2SM3FA(H)	CN9
AD140S2SM3FA - AD125S2SM3FA	CN19
AD160S2SM3FA	CN9
ADH200H1ERG - ADH250H1ERG	CN19
ADH125H1ERG - ADH140H1ERG	CN24
Outdoor Mono	**Connector**
1UH__W1ERK	CN10
1U__S2SN2FA	CN31
1U__S2SN2FB	CN31
1U__S2SN1FA	CN31
1U__S2SN1FB	CN31
1U__S2SP2FA	CN10
1U__S2SP1FB	CN31
Outdoor Multi	**Connector**
H3U__TAAOUT	CN4
3U__S2SR3FA	CN4
3U__S2SR5FA	CN4
4U__S2SR5FA	CN4
5U__S2SS5FA	CN4
5U__S2SS5FA	CN4
5U__S2SN1FA	CN3

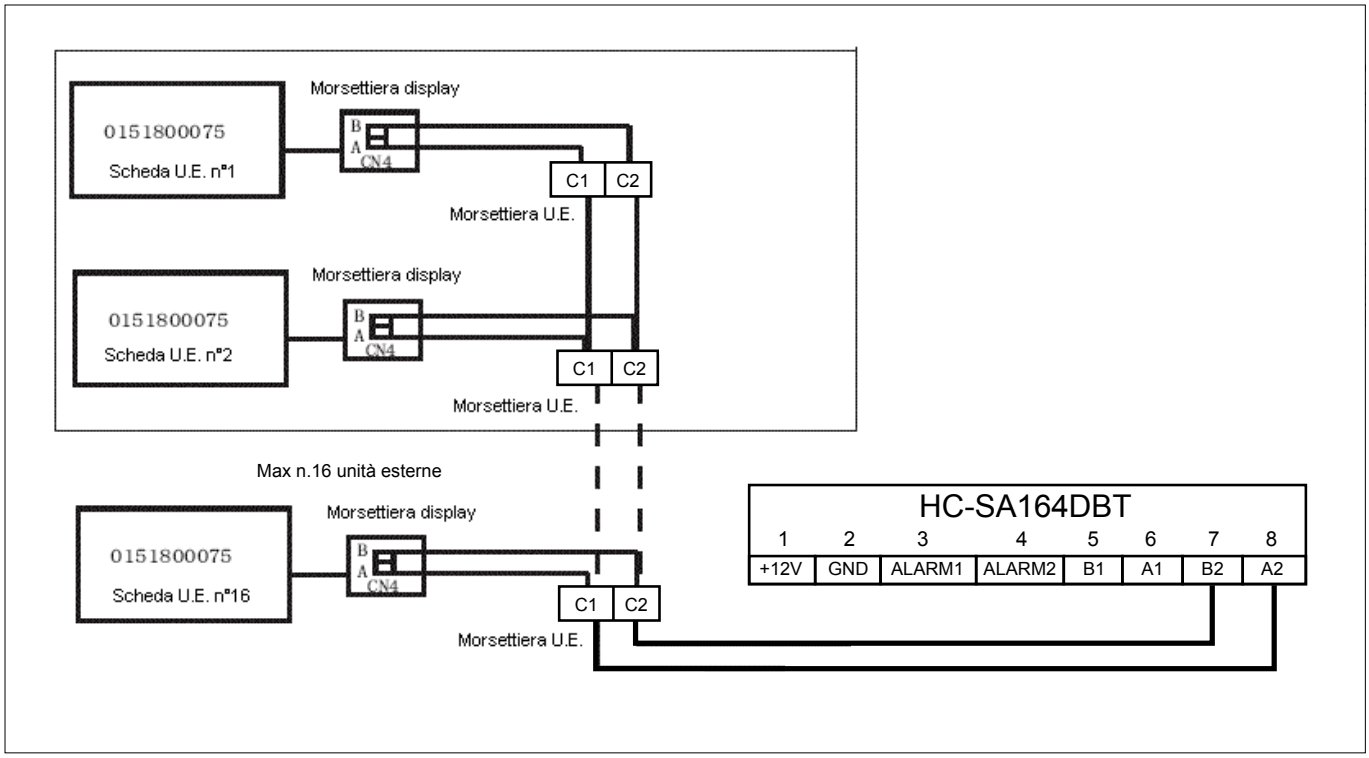
UNIT ADDRESS SETTINGS (to be set using switches on the YCJ-A002 interface)

SW01	DESCRIPTION
	1
	2
	3
	4
	5
	6

SW01	DESCRIPTION
	7
	8
	9
	10
	16
	128

LEDs 1 and 3 on the YCJ-A002 interface indicate proper communication by blinking quickly.

CONNECTING MULTI 1:3 1:4 1:5 OUTDOOR UNITS TO A HC-SA164DBT CENTRALISED CONTROLLER



With each HC-SA164DBT centralized controller, up to 12 outdoor units can be connected, where each outdoor unit indiscriminately occupies 5 addresses in the centralized controller.

Use shielded cable (2x0.75 mmq) for the connection between centralized controller and outdoor units

Maximum system length 1000 m (2x1.5 mmq shielded).

For setting addresses, refer to:

- **page 89** for multi unit in **R32**

USER INTERFACE

KEYS	
—	Left cursor: Selects operating mode on the main screen, serves as "back" key in other screens.
	Selects "smart" operating mode.
◀ ▶	Left/right, selects fan speed, adjusts deflector position on main screen, moves cursor.
▲ ▼	High/low, temperature adjustment set on the main screen, move cursor, and change values.
	Selects menu on the main screen, confirmation key.
—	Right cursor: Selects deflectors on the main screen, serves as "return to main menu" key in other screens. Ventilator speed selection when the deflector oscillation function is not set.
	On/Off

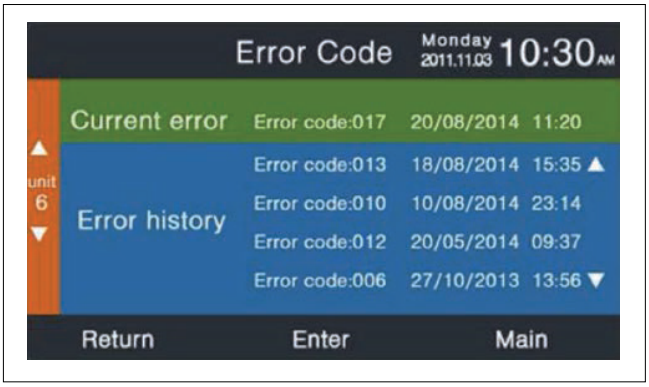
USER MANUAL

https://www.haiercondizionatori.it/media/623/d-1/t-file/YR-E16B.pdf

1. Error code

Press enter in the alarm signalling icon.

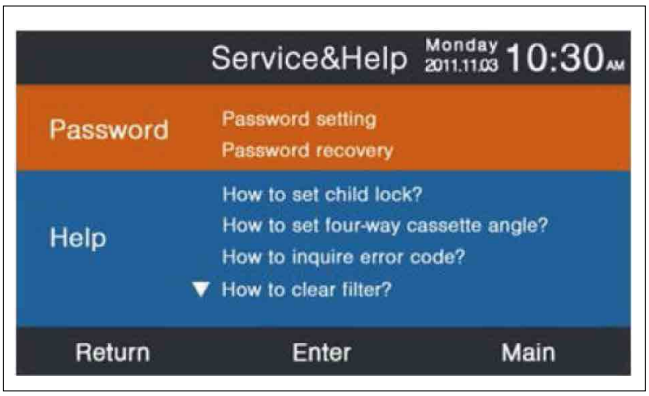
- The UP and DOWN keys select the unit, the RIGHT and LEFT keys change the page.
- Only one current alarm is visible while up to 35 historical alarms can be displayed.
- Press the left and right keys at the same time for 5 seconds to clear the error history of the current unit. Press the up and down keys simultaneously for 5 seconds to clear the history of all online units.



2. Password recovery

Press enter in the alarm signalling icon.

- Press enter in the service icon
- The password feature includes the password setting and password recovery. The default code is 841226.

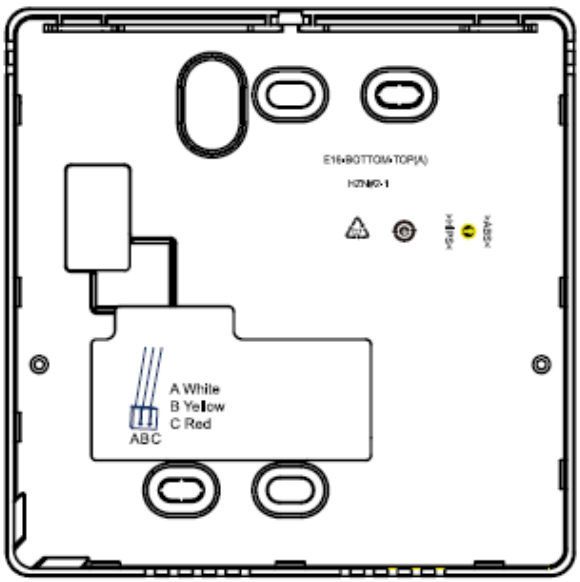


- If you have set up password recovery, the following screen will appear with cancel or confirm options.

- The recovery function is reserved only for some models. The information is gray when it is not selectable.

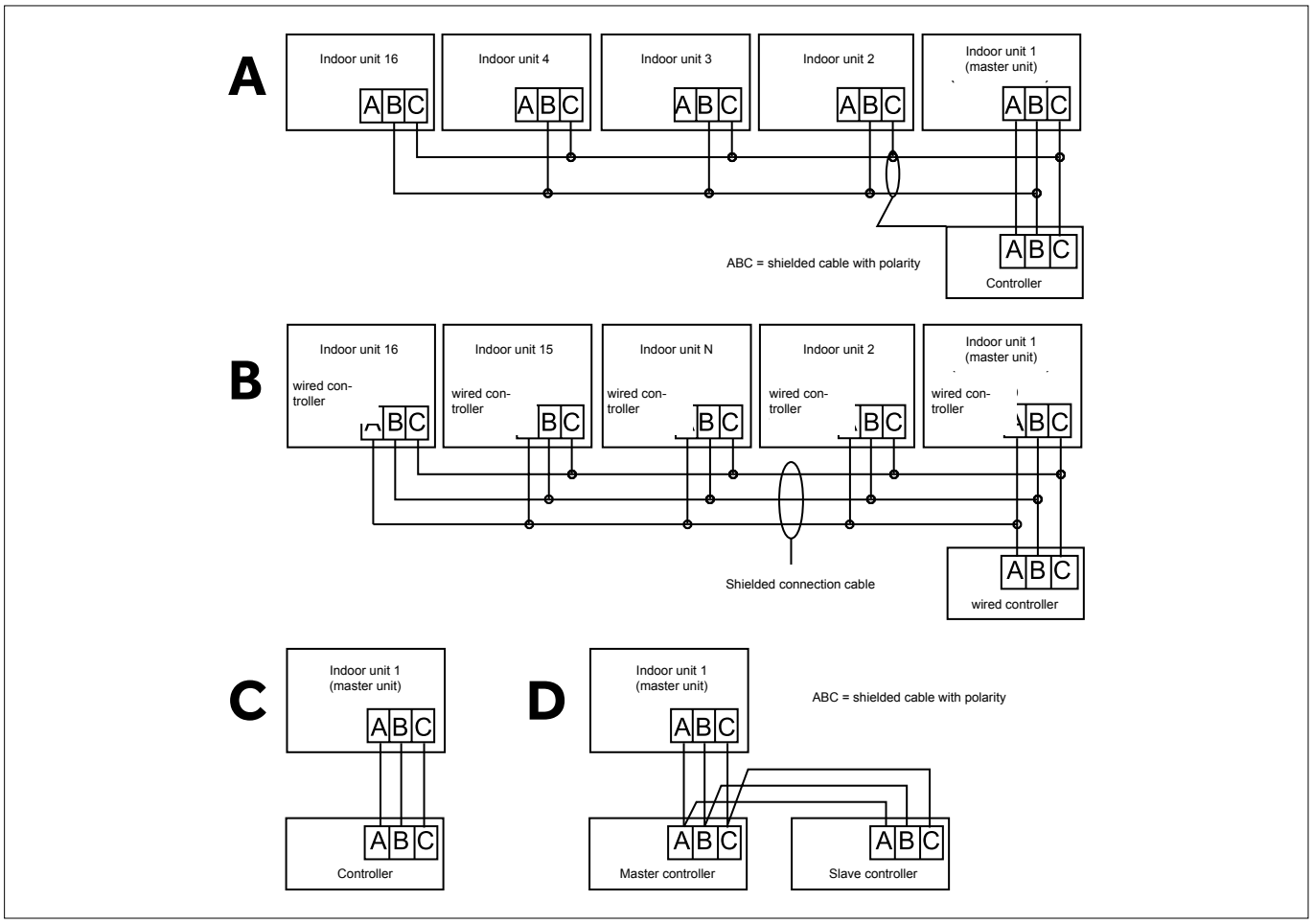
ELECTRICAL WIRING INSTRUCTIONS

1. First, put the communication cable through the hole of the back cover.
2. Connect the communication cable to the CON4 connector. Then put the front cover back on.



CONTROLLER WIRING

Electrical connections



There are four methods to connect the wired controller with the indoor units.

A. **(For boards with outdoor transformer)** a single wired controller can control up to 16 indoor units. The wired controller will be connected via a three-conductor polarized shielded cable (A-B-C) to the first indoor unit that will be addressed as "Master" (refer to the indoor unit board settings), while the other indoor units will be connected by a cable with only two conductors (B-C).

B. **(For boards with transformer on board)** same conditions as case A, but all indoor units will be connected by the same cable with three conductors (A-B-C).

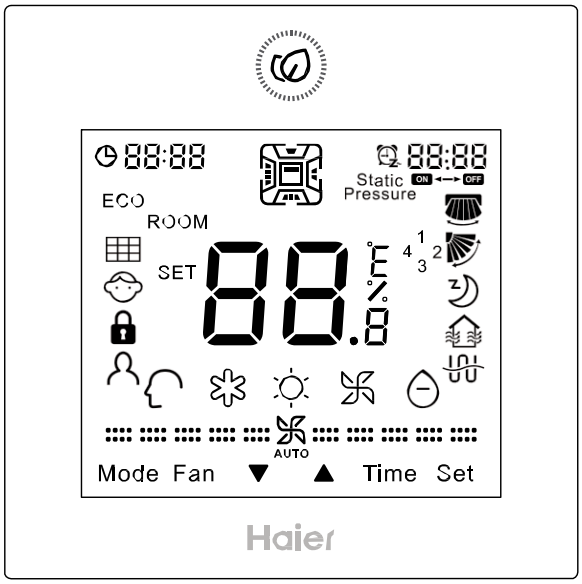
C. A wired controller controls a single indoor unit via a polarized three-conductor shielded cable (A-B-C)

D. Two wired controllers control a single indoor unit. The first wired controller, set as "Master" (SW1-OFF) is connected with the indoor unit and the second wired controller set as "Slave" (SW1-ON) via a polarized three-conductor shielded cable (A-B-C).

A-B-C communication cable specifications	
Cable length (m)	**Cable section**
<100	3x0.5mm² + SCH*
≥100 and <200	3x0.5mm² + SCH*
≥200 and <300	3x0.75 mm² + SCH*
≥300 and <400	3x1.5 mm² + SCH*
≥400 and <500	3x2 mm² + SCH*

*connect only one end of the screen to ground.

DISPLAY INTERFACE



USER MANUAL

https://www.haiercondizionatori.it/media/8332/d-1/t-file/Manuale-Uso-YR-E17A-ITA.pdf

OPERATION

Meaning SW1 Selection Dip Switches

The selection switches are located on the electronic board in the rear of the controller.

DIP 2 switch	Station On/Off	Function	Default settings
SW1-1	On	"Slave" controller	OFF
	Off	"Master" controller	
SW1-2	On	Ambient temperature view enabled	OFF
	Off	Ambient temperature view disabled	
SW1-3	On	Measurement of indoor unit ambient temperature	OFF
	Off	Measurement ambient temperature from wired controller	
SW1-4	On	Restart after power failure disabled	OFF
	Off	Restart after power failure enabled	
SW1-5	On	Old protocol	OFF
	Off	Self-adaptation	
SW1-6	On	Reserved	OFF
	Off	Reserved	
SW1-7	On	Selecting top/bottom and left/right deflectors	OFF
	Off	Select Up/Down deflectors	
SW1-8	On	Air exchange unit	OFF
	Off	General unit	

DIP switch 2	Station On/Off	Function	Default settings
SW1-1	On	Reserved	OFF
	Off	Reserved	
SW1-2	On	Do not display ambient humidity	OFF
	Off	Displays ambient humidity	
SW1-3	On	Reserved	OFF
	Off	Reserved	
SW1-4	On	Reserved	OFF
	Off	Reserved	

Alarm display

1) In case of malfunction, the main interface will display the ⚠ icon.

(2) When the back light is on, long press the TIME button for 10 seconds to enter the malfunction display interface. The malfunction code is displayed in the upper left corner, and the left side of the colon is the current malfunction, and the right side of the colon is the historical malfunction. And you can also press the TIME button to view more historical information about the malfunction. The lower right corner shows the unit number, which you can change with ▲ or ▼ button (if the controller controls multiple units).

(3) In the malfunction display state, long press the TIME button for 10 seconds to clear the current malfunction and a historical malfunction.

(4) If there is no malfunction, "- -" will be displayed.

Child Lock

(1) Press ▼ and MENU keys for 5 seconds to set/cancel the child lock. If the child lock function is set, the icon will be displayed in the main interface. In the child lock state, all keys are disabled.

(2) When controlling the Fresh Air unit, the main interface of the controller does not display ▲ and ▼ keys in the normal state. If you want to set the child lock function, first press the ▼ area of the key, then simultaneously press the MENU key for 5 seconds to set/cancel the child lock.

Reading parameters

(1) Keep pressing the MENU button for 5 seconds (if it is the 4-way/round cassette model, the time is 10 seconds) to enter the parameter search interface. The parameter value is displayed in the upper left corner, the parameter type is displayed in the center area (use ▲ or ▼ key to change it) and the unit number is displayed in the lower right corner (use the TIME key to change it).

(2)

Type	Meaning	Format of parameters
A	Tai internal temperature sensor	Decimal
B	Tc1 internal temperature sensor	Decimal
C	Tc2 internal temperature sensor	Decimal
D	Indoor unit PMV opening/2	Decimal
E	Indoor unit address	Hexadecimal
F	Central address of the indoor unit	Hexadecimal

Reading and modifying the static fan pressure

(1) When the controller is on, press the FAN and MENU buttons for 5 seconds to access the static pressure interface. The static pressure parameter is displayed in the upper left corner. And you can use ▲ or ▼ key to adjust it. After the adjustment, press the MENU key to confirm the changes.
The unit number is displayed in the lower right corner.

(2) The slave controller cannot set the static pressure function.

(3) You can also use this function through the circulation function.

Setting up ambient probe compensation

(1) This function is used to compensate for the ambient temperature. In the Off state and when the back light is on, long press the FAN button for 5 seconds to access the temperature compensation interface. Parameters can be adjusted with the ▲ or ▼ key. After the adjustment, press the MENU key to confirm the changes.

(2) When in Celsius form, the parameter adjustment range is -4~4. (8) When in Fahrenheit form, the parameter adjustment range is -8 ~ 8.

(3) This function is valid only during the ambient temperature collection of the wired controller.

Forced cooling/heating

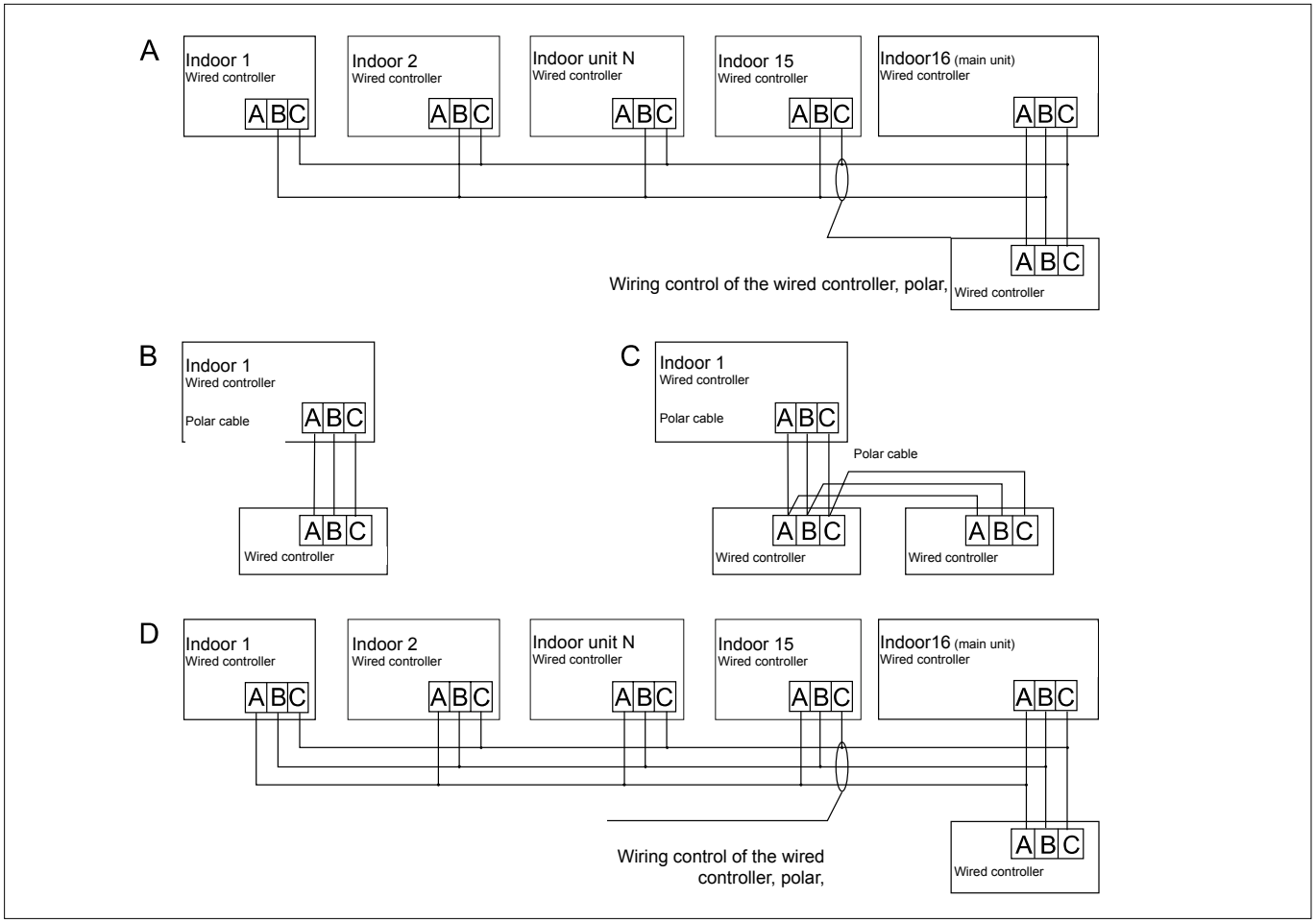
(1) After the controller is in cooling mode and turned off, long press the ON/OFF button for 10 seconds to enter the forced cooling function. At this point, the controller will be turned on and "LL" will flash in the center area to indicate that the forced cooling function is activated.

(2) After the controller is in heating mode and turned off, long press the ON/OFF button for 10 seconds to enter the forced heating function. At this point, the controller will be turned on and "HH" will flash in the center area to indicate that the forced heating function is activated.

(3) All keys are invalid except the ON/OFF key in forced cooling/heating mode.

(4) When forced cooling/heating is set, press the ON/OFF key to exit this function.

CONTROLLER WIRING



Notifications:

When connecting the wired controller, follow the instructions in the installation manual of the corresponding indoor unit.

Communication wiring	
Cable length (m/ft)	**Wiring dimensions**
<100/328ft	Shielded cable 0.3 mm^2x3 core (22 AWG, 3 wires)
≥100/328ft and <200/656ft	Shielded cable 0.5 mm^2x3 core (20 AWG, 3 wires)
≥200/656ft and <300/984ft	Shielded cable 0.75 mm^2x3 core (18 AWG, 3 wires)

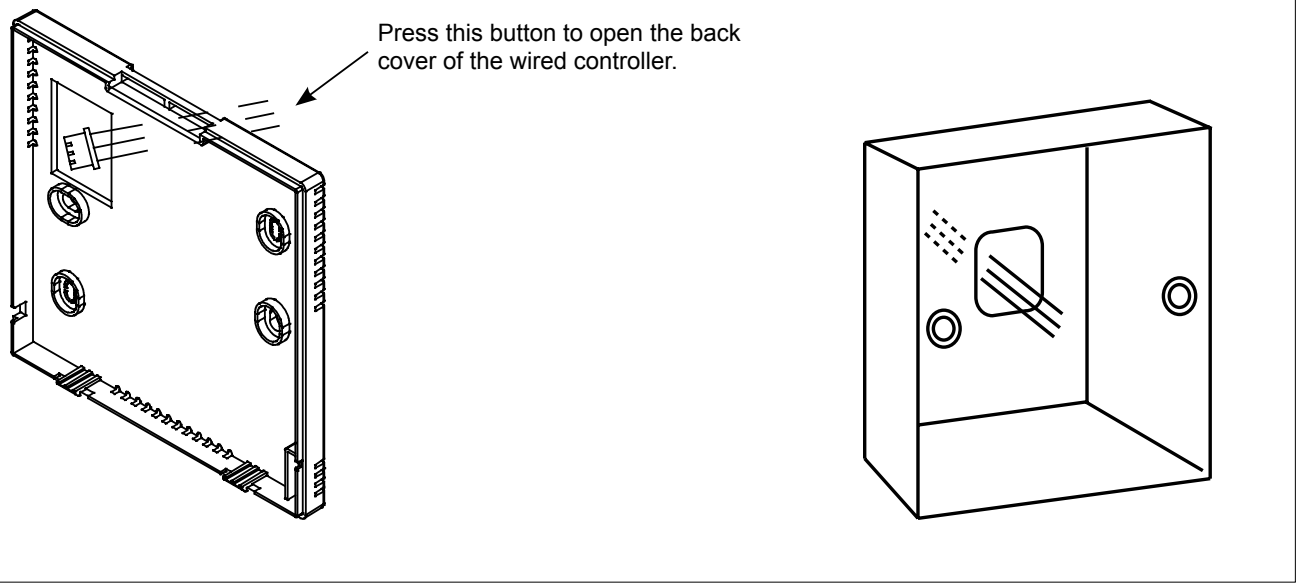
Note:

- One side of the shielding plate of the communication cable must be grounded.
- The total length of the communication cable cannot exceed 300 meters.

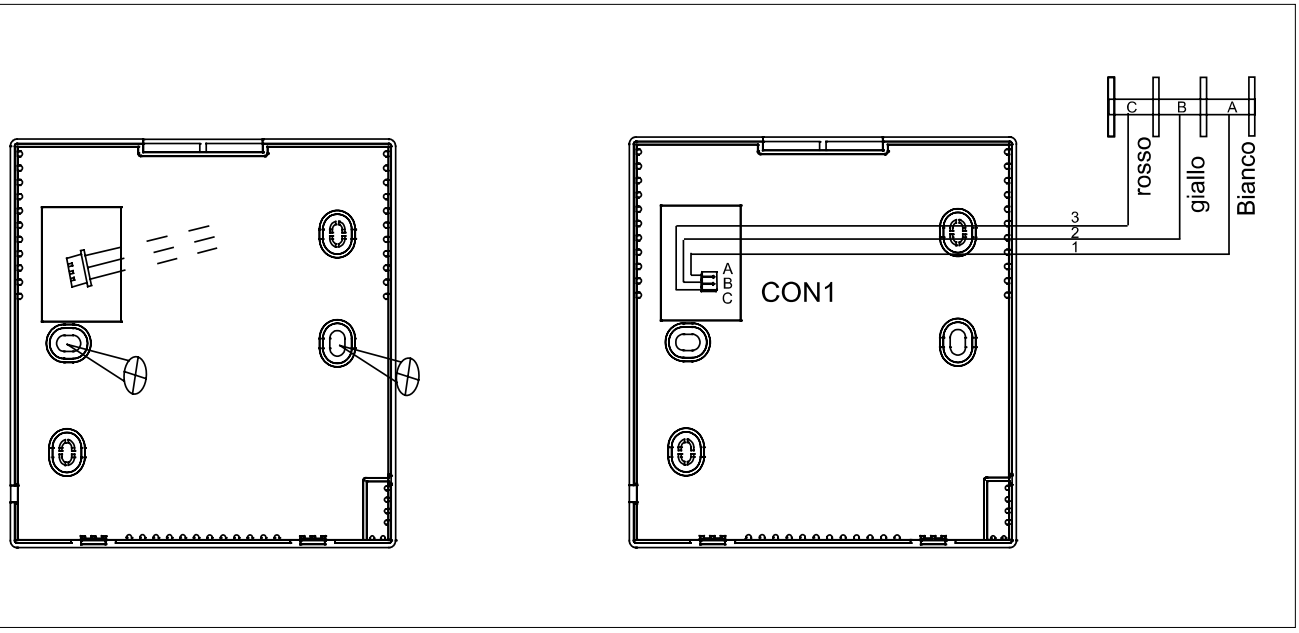
WIRED CONTROLLER WIRING INSTRUCTIONS

Installation of the controller

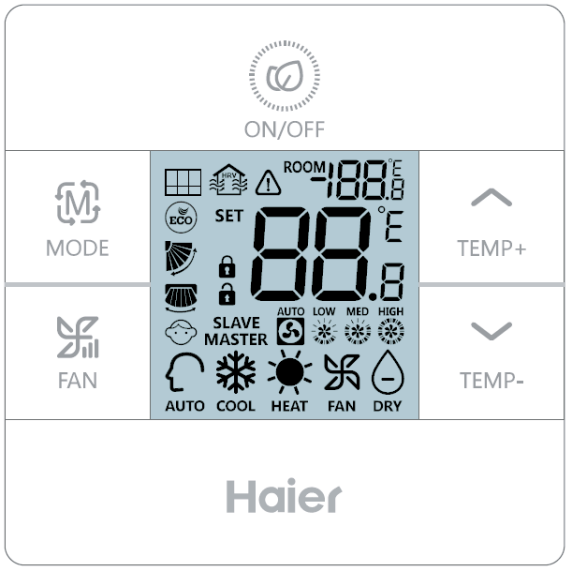
1. First, insert the communication cable through the hole in the back cover.



2. Attach the back cover to the support. Then, connect the communication cable to the CON1 port of the wired controller. Finally, place the front cover of the wired controller on the back cover to complete the installation.



DISPLAY INTERFACE



USER MANUAL

https://www.haiercondizionatori.it/media/621/d-1/t-file/HW-BA116ABK.pdf

OPERATION

Meaning SW1 Selection Dip Switches

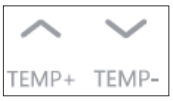
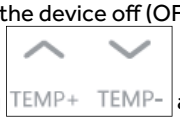
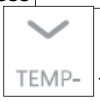
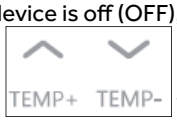
The selection switches are located on the electronic board in the rear of the controller.

SW1	ON	OFF	Default
SW1-1	Wired controller slave	Wired controller master	OFF
SW1-2	Room temperature display	No room temperature display	OFF
SW1-3	Ambient temperature detection from indoor unit probe	Detection of room temperature from Wired controller	OFF
SW1-4	Restart after power failure disabled	Restart after power failure enabled	OFF
SW1-5	Old protocol (models developed before August 2013)	New protocol	OFF
SW1-6	Backlight always on	Backlight on for 15 seconds in idle conditions.	OFF
SW1-7	Inclination UP/DOWN + inclination LEFT/ RIGHT	Inclination UP/DOWN	OFF
SW1-8	Reserved	Reserved	OFF

4-bit dip switch (SW2)

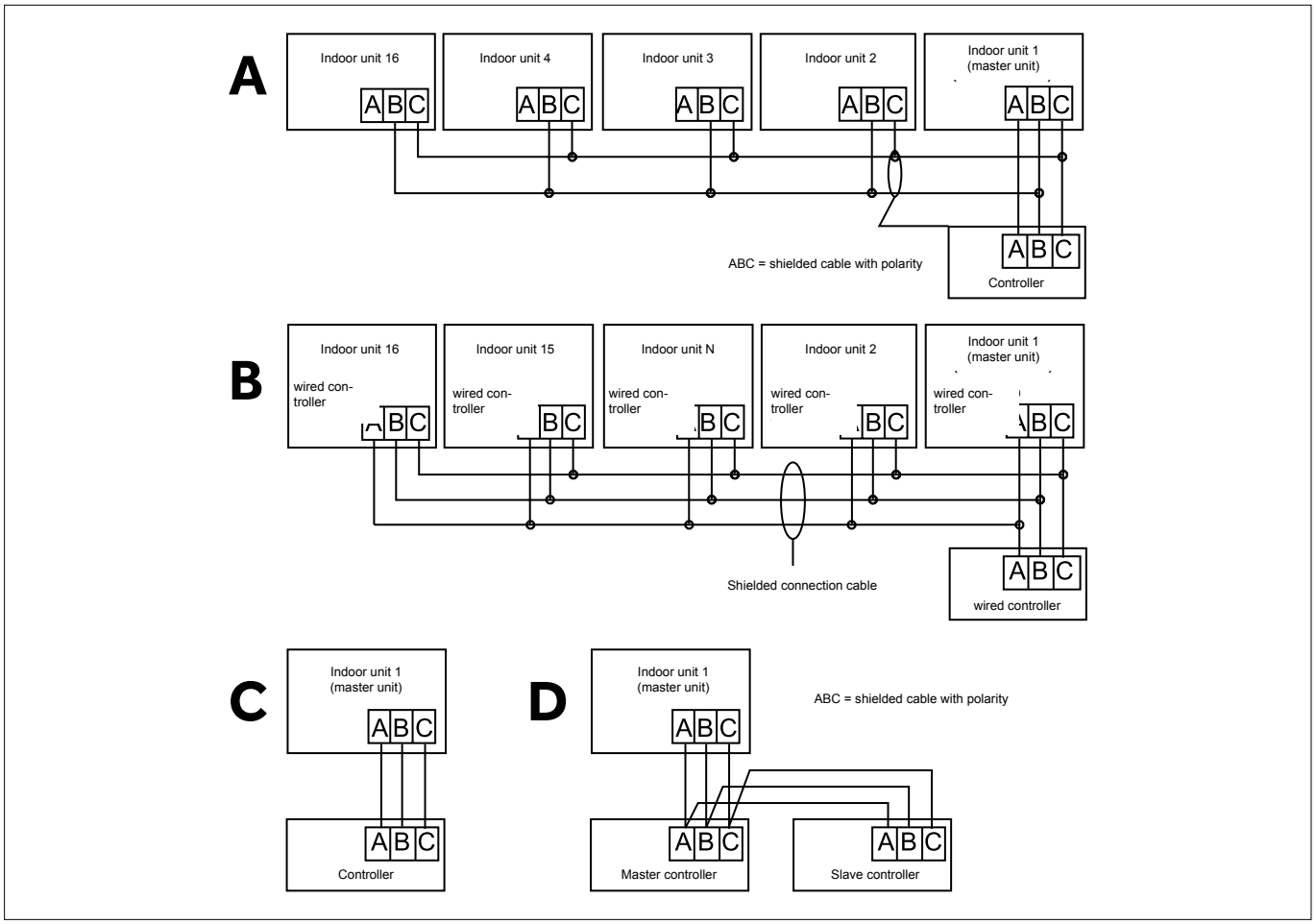
SW2	ON	OFF	Default
SW2-1	MODE key disabled	Normal	OFF
SW2-2	The buzzer does not sound when you press the key (normal buzzer when using the remote con-troller)	Normal	OFF
SW2-3	Reserved	Reserved	OFF
SW2-4	Reserved	Reserved	OFF

List of special functions

Functions	What to do
Function selection	In ON mode, press  for 5 seconds after turning on the backlight.
Forced cooling	Press  for 5 seconds in cooling mode at OFF state: the buzzer will sound for 2 times and the screen will show the LL symbol.
Forced heating	Press  for 5 seconds in heating mode at OFF state: the buzzer will sound for 2 times and the screen will show the HH symbol.
Child lock	When the device is on (ON), press  simultaneously for 5 seconds to set or cancel the child lock function. When the device is turned off (OFF),  press  simultaneously for 5 seconds to set or cancel the child lock after the backlight is turned on. The buzzer will sound for 1 time.
Temperature compensation	With the device off (OFF), press  for 5 seconds after the backlight is turned on, adjust using  and confirm by pressing  .
Error query (error codes)	After the backlight is turned on, press  for 5 s to access the error query condition. Under error query condition, press  for 5 seconds to clear the current error code and history.
Setting wired controller mode	When the device is off (OFF), press  for 10 seconds to access the settings. Then press  to adjust and confirm with  .
Switching from degrees Celsius to degrees Fahrenheit	Adjust the set temperature to 30 degrees Celsius (if the ECO temperature limit is set, adjust to maximum temperature.). Then press  for 15 seconds to switch to degrees Fahrenheit.
Switching from degrees Celsius to degree Fahrenheit	Adjust the set temperature to the lowest value in degrees Fahrenheit (if the ECO temperature limit is set, adjust to minimum temperature). Then press for 15 seconds to switch to degrees Celsius.

CONTROLLER WIRING

Electrical connections



There are four methods to connect the wired controller with the indoor units.

A. **(For boards with outdoor transformer)** a single wired controller can control up to 16 indoor units. The wired controller will be connected via a three-conductor polarized shielded cable (A-B-C) to the first indoor unit that will be addressed as "Master" (refer to the indoor unit board settings), while the other indoor units will be connected by a cable with only two conductors (B-C).

B. **(For boards with transformer on board)** same conditions as case A, but all indoor units will be connected by the same cable with three conductors (A-B-C).

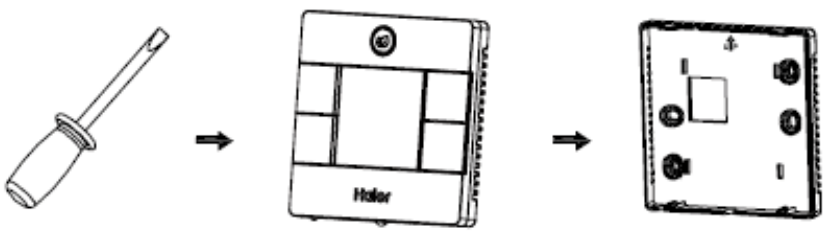
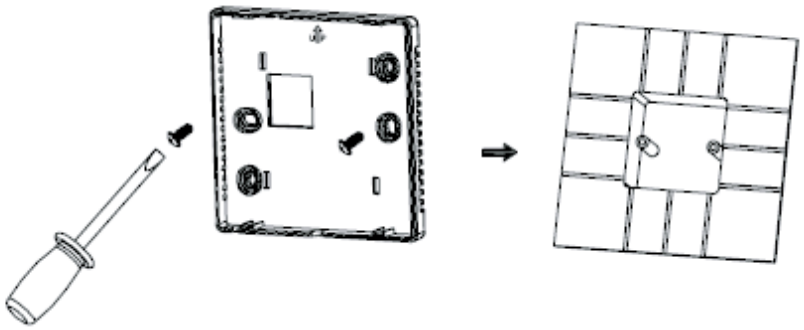
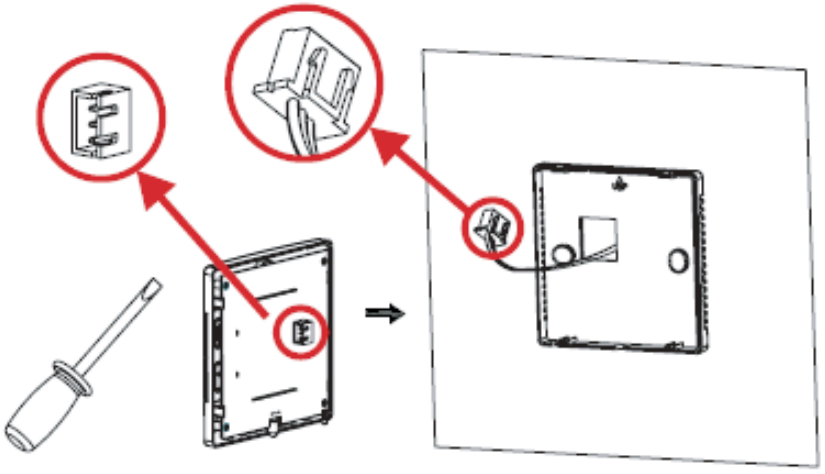
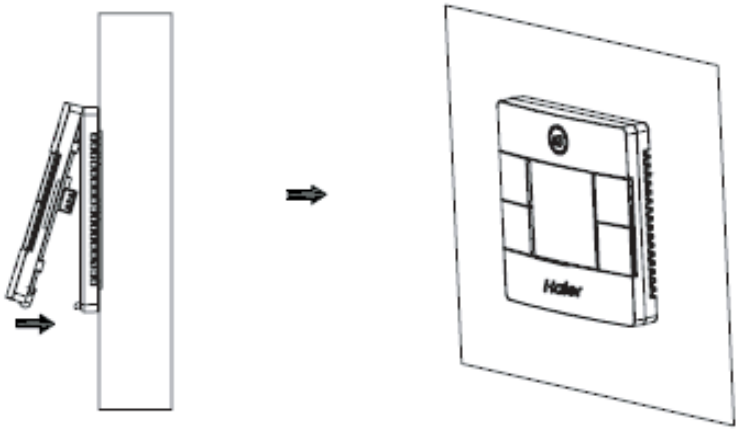
C. A wired controller controls a single indoor unit via a polarized three-conductor shielded cable (A-B-C)

D. Two wired controllers control a single indoor unit. The first wired controller, set as "Master" (SW1-OFF) is connected with the indoor unit and the second wired controller set as "Slave" (SW1-ON) via a polarized three-conductor shielded cable (A-B-C).

A-B-C communication cable specifications	
Cable length (m)	**Cable section**
<100	3x0.5mm² + SCH*
≥100 and <200	3x0.5mm² + SCH*
≥200 and <300	3x0.75 mm² + SCH*
≥300 and <400	3x1.5 mm² + SCH*
≥400 and <500	3x2 mm² + SCH*

*connect only one end of the screen to ground.

INSTRUCTIONS FOR WIRED CONTROLLER CABLING

Installation schemes	
1. Use a screwdriver to detach the front panel from the back panel.	
2. Fix the back panel.	
3. Insert the cable connector into the terminal block.	
4. Finally, re-assemble the front panel and the back as illustrated here.	

DISPLAY INTERFACE

USER MANUAL

https://www.haiercondizionatori.it/media/1149/d-1/t-file/HW-BA101ABT_ITA.pdf

OPERATION

Meaning SW1 Selection Dip Switches

The selection switches are located on the electronic board in the rear of the controller.

DIP switch		Position	Description	Default settings
SW3	SW3-1	ON	Wired controller SLAVE	OFF
		OFF	Wired controller MASTER	
	SW3-2	ON	Displays ambient temperature	OFF
		OFF	Does not display ambient temperature	
	SW3-3	ON	Ambient temperature reading from wire control	OFF
		OFF	Ambient temperature reading from indoor unit	
	SW3-4	ON	Data storage not active	OFF
		OFF	Data storage active	
	SW3-5	ON	Protocol 1.0	OFF
		OFF	Auto-adaptation protocol	
	SW3-6	ON	Backlight always on	OFF
		OFF	Backlight for 15 s	
	SW3-7	ON	Reserved	OFF
		OFF	Reserved	
	SW3-8	ON	Eco function selectable	OFF
		OFF	Eco function not selectable	

DIP switch		Position	Description	Default settings
SW3	SW2-1	ON	Limited mode function	OFF
		OFF	Normal mode function	
	SW2-2	ON	Buzzer not active when keys are pressed	OFF
		OFF	Buzzer active when keys are pressed	
	SW2-3	ON	Reserved	OFF
		OFF	Reserved	
	SW2-4	ON	Reserved	OFF
		OFF	Reserved	

Initialization

After turning on the wired controller or resetting it, all display icons will light up, the software version will be displayed, and 88.8 will be displayed until initialization is completed. If the wired controller fails to communicate normally with the indoor unit board after power on, initialization will be reset within 4 minutes, after which a communication error will be generated between the wired controller and indoor unit.

List of special functions (for other functions see the user manual)

Displaying Error Codes

In case of malfunction, the  icon will be displayed on the main screen.

Displaying Error Codes:

Hold down  and  for 5 seconds. The current error code will be displayed in the temperature display area (center), and the number of the indoor unit in error will be displayed in the lower right corner. (Indoor unit no. displayed in hexadecimal from 0 to F).

Press  to change the indoor unit number. (Note: "- -" indicates no malfunction)

To view any historical errors, press  and  .
Up to 4 historical errors are stored, the illumination of semicircle dots indicates the historical error number displayed.

Temperature compensation

This function is used for calibration and compensation of the displayed ambient temperature.

With the wired control Off, press and hold  and  for 5 seconds to set ambient temperature compensation after the backlight is on.

The parameter will appear in the temperature display area, and the default value is 0.

It can be changed via the  and  buttons in a range from -4°C to +4°C (-8 to +8°F).

After completing the adjustment, press  to confirm. If no button is pressed within 10 seconds, the parameter setting interface will be automatically closed and the parameter settings will be invalid.

Edit Static Pressure (ESP)

When the wired controller is off, press and hold  and  for 5 seconds to adjust the level of static pressure (ESP) after the backlight is on.

The value of the ESP parameter will appear in the temperature display area and it can be adjusted by pressing the  or  keys; the number of the indoor unit concerned is displayed in the lower right corner

(in hexadecimal 0 to F). Press  to change the indoor unit and press  to confirm the parameters.

Forced Cooling / Heating Mode

When the wired controller is Off, in Cooling mode, press and hold  for 5 seconds to turn it on and activate the forced cooling function. "LL" will flash in the temperature display area. In this mode, the system works in Cooling mode, fixed setpoint of 16°C and high-speed ventilation. In this mode, all keys are inhibited except the ON/OFF key.

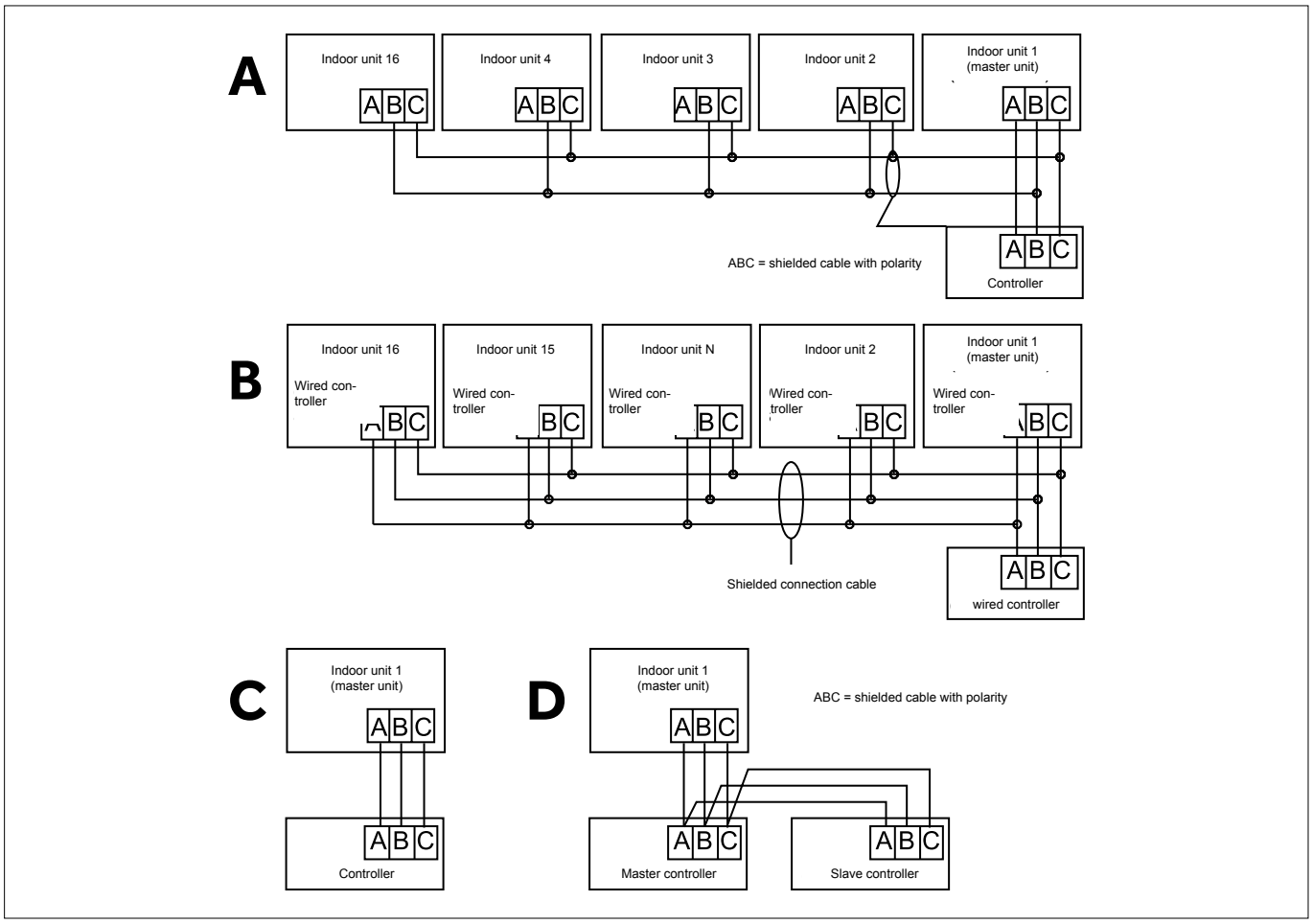
Press  o exit the forced mode and turn off the air conditioner.

When the wired controller is Off, in Heating mode, press and hold  for 5 seconds to turn it on and activate the forced heating function. "HH" will flash in the temperature display area. In this mode, the system works in Cooling mode, fixed setpoint of 30°C and high-speed ventilation. In this mode, all keys are inhibited except the ON/OFF key.

Press  o exit the forced mode and turn off the air conditioner.

CONTROLLER WIRING

Electrical connections



There are four methods to connect the wired controller with the indoor units.

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B. **(For boards with transformer on board)** same conditions as case A, but all indoor units will be connected by the same cable with three conductors (A-B-C).

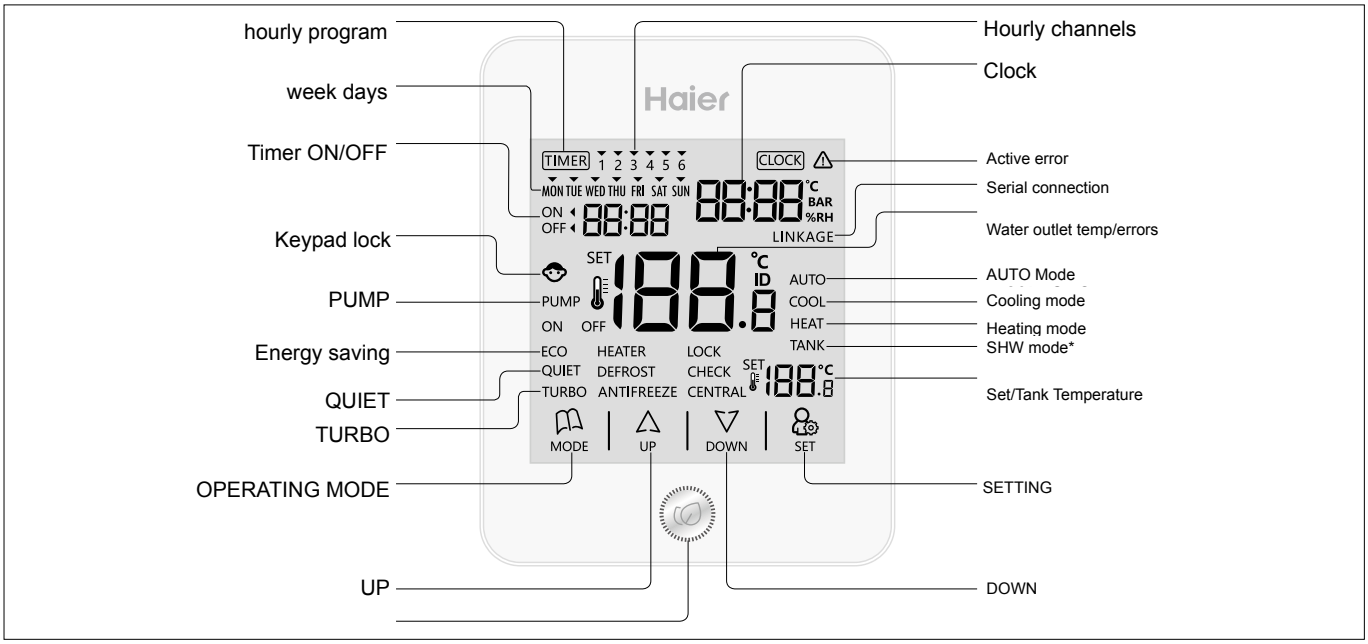
C. A wired controller controls a single indoor unit via a polarized three-conductor shielded cable (A-B-C)

D. Two wired controllers control a single indoor unit. The first wired controller, set as "Master" (SW1-OFF) is connected with the indoor unit and the second wired controller set as "Slave" (SW1-ON) via a polarized three-conductor shielded cable (A-B-C).

A-B-C communication cable specifications	
Cable length (m)	**Cable section**
<100	3x0.5mm² + SCH*
≥100 and <200	3x0.5mm² + SCH*
≥200 and <300	3x0.75 mm² + SCH*
≥300 and <400	3x1.5 mm² + SCH*
≥400 and <500	3x2 mm² + SCH*

*connect only one end of the screen to ground.

DISPLAY INTERFACE



PARTS AND FUNCTIONS

OFF	turned of by wired controller
ECO	Energy saving: the icon appears when the function is selected
QUIET	Silent function: the icon appears when the function is selected
TURBO	Turbo: the icon appears when the function is selected
AUTO	Automatic mode
COOL	Cooling mode
HEAT	Heating mode
TANK	Sanitary hot water mode
SET 188 °C .8	Setting sanitary hot water tank temperature
HEATER	Electrical resistance activated
DEFROST	Unit in defrosting
ANTIFREEZE	Antifreeze
LOCK	Locking
CHECK	Controlling
CENTRAL	Centralised
LINKAGE	Control function from outdoor box ATW-A01

For more information download the user manual

https://www.haiercondizionatori.it/media/1357/d-1/t-file/YR-E27_ITA.pdf

Hon application

Compatible product lines:

Wall-mounted unit:	
JADE NEW (Series -3)	AS25S2SJ1FA-3 / AS35S2SJ1FA-3 / AS50S2SJ1FA-3
EXPERT	AS20XCAHRA / AS25XCAHRA / AS35XCAHRA / AS42XCAHRA / AS50XCAHRA
FLEXIS PLUS	**black** AS20S2SF1FA-MB3 / AS25S2SF1FA-MB3 / AS35S2SF1FA-MB3 / AS42S2SF1FA-MB3 / AS50S2SF1FA-MB3 /AS71S2SF1FA-MB3
	white AS20S2SF1FA-MW3 / AS25S2SF1FA-MW3 / AS35S2SF1FA-MW3 / AS42S2SF1FA-MW3 / AS50S2SF1FA-MW3 / AS71S2SF1FA-MW3
IES PLUS	AS20S2SF2FA-3 / AS25S2SF2FA-3 / AS35S2SF2FA-3 / AS42S2SF2FA-3 / AS50S2SF2FA-3 / AS71S2SF2FA-3
TUNDRA PLUS	AS20TADHRA-2 / AS25TADHRA-2 / AS35TADHRA-2 / AS68TEDHRA-CLC
FLAIR	HAS09FAAIN / HAS12FAAIN / HAS18FAAIN
Console unit:	
Series (H)	AF25S2SD1FA(H), AF35S2SD1FA(H), AF42S2SD1FA(H)
Cassette unit:	
Series (-1)	AB25S2SC2FA-1 / AB35S2SC2FA-1 / AB50S2SC2FA-1
Slim ducted low pressure unit:	
Series (H)	AD25S2SS1FA(H) / AD35S2SS1FA(H) / AD50S2SS1FA H) / AD71S2SS1FA(H)
Slim ducted medium pressure unit:	
Series (H)	AD35S2SM3FA(H) / AD50S2SM3FA(H) / AD71S2SM3FA(H)

CANDY

For more information download the user manual

https://www.haiercondizionatori.it/media/8270/d-1/t-file/HAIER-Guida-App-1.27.3.pdf

Link to download the application:

IOS

ANDROID

Haiersmartair 2 application

Compatible product lines:

Wall-mounted unit:	
JADE (Series 2021)	AS25JBJHRA-W / AS35JBJHRA-W / AS50JDJHRA-W
WALL 10kW	AS105S2SF2FA-2
FA tower unit:	
AP71UFAHRA	
ZUN Tower Unit:	
AP71DFCHRA	
ROUND FLOW cassette unit:	
AB71S2SG1FA / ABH105H1ERG / ABH125K1ERG / ABH140K1ERG / ABH160K1ERG	
Ceiling/Floor Convertible unit:	
AC35S2SG1FA / AC50S2SG1FA / AC71S2SG1FA / AC105S2SH1FA / AC125S2SK1FA / AC140S2SK1FA / AC160S2SK1FA	
Slim ducted high pressure unit:	
ADH125H1ERG / ADH140H1ERG / ADH200H1ERG / ADH250H1ERG	
CABINET tower unit:	
AP140S2SK1FA(H)	

For more information download the user manual

https://www.haiercondizionatori.it/media/628/d-1/t-file/HAIER-Guida-Wi-Fi-V.-3.2.1-1.pdf

Link to download the application:

IOS

ANDROID

HAIER AC application

The additional module is required to use this application: HI-WA164DBI which in turn can be connected directly to:
- Centralised controller HC-SA164DBT

or

- MRV5 outdoor units

Compatible product lines:
any indoor unit that has been connected to a centralized HC-SA164DBT controller or connected to an MRV5 system.

For more information download the user manual

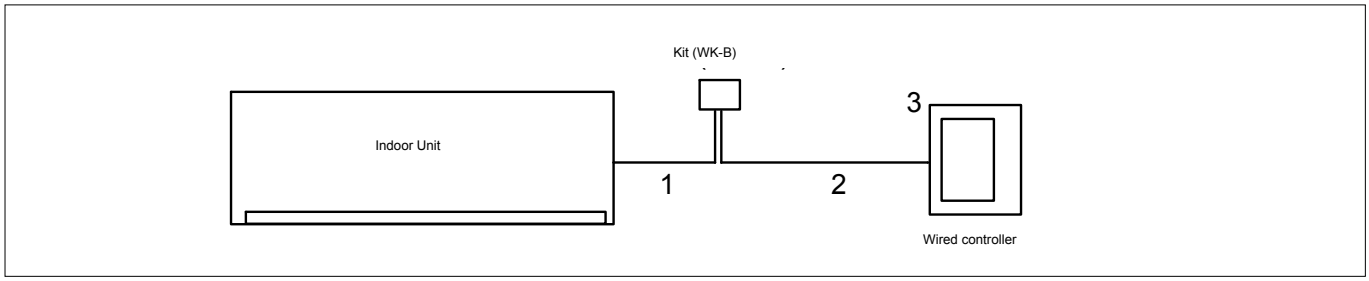
https://www.haiercondizionatori.it/media/1245/d-1/t-file/Istruzioni-App-Haier-AC-V0.1_ita_r5.pdf

Link to download the application:

IOS

ANDROID

(To connect the wired controller to a wall unit in series: DAWN, NEBULA, FLAIR, BREZZA,TUNDRA R32



INSTALLATION

Place the interface above or on the side of the split:

Figure 1

Figure 2

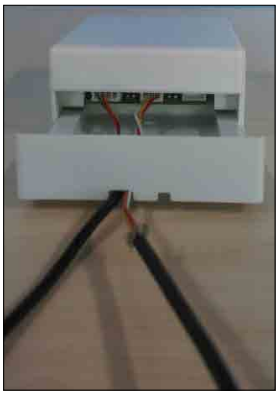
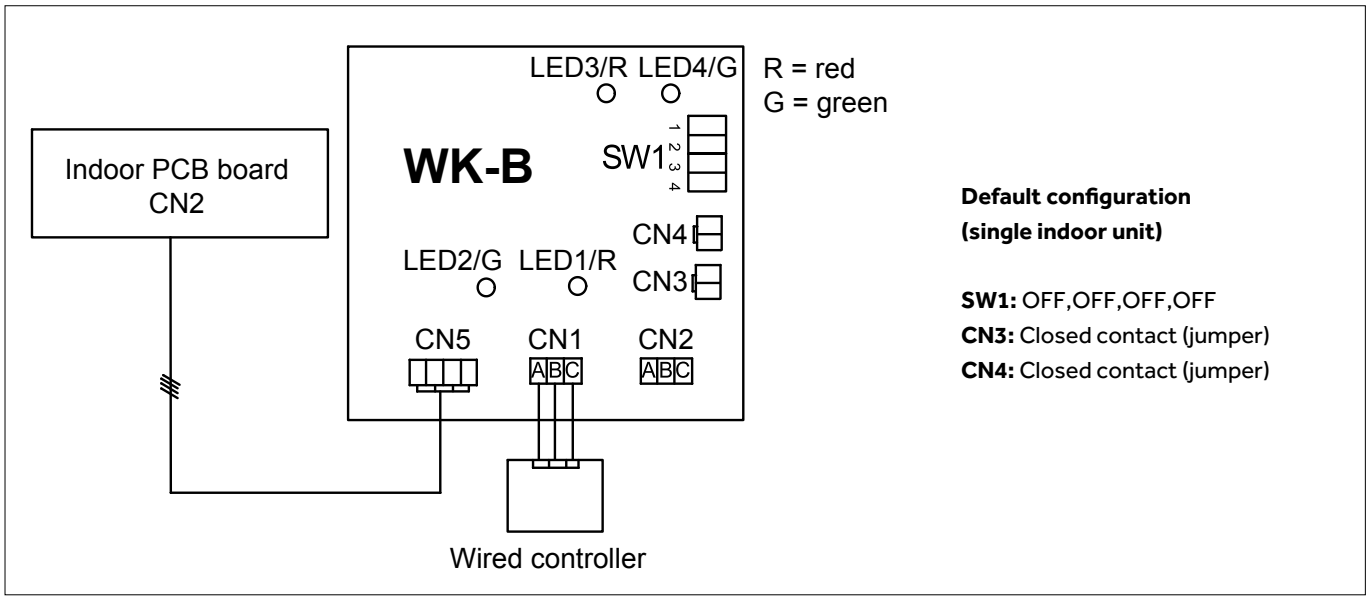


Figure 3

Figure 4

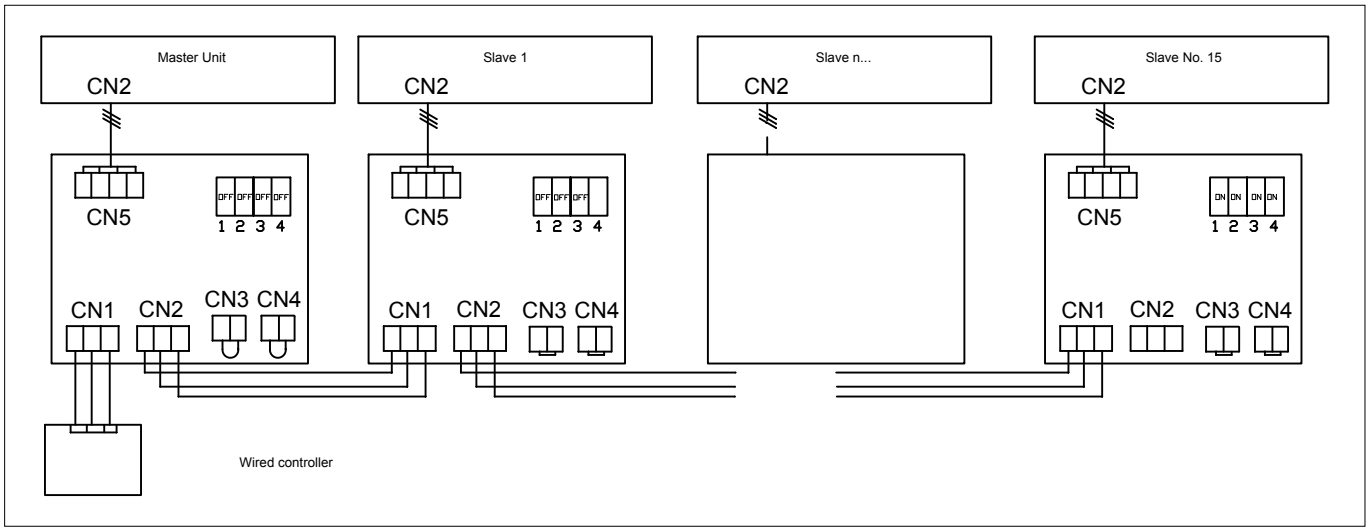
Figure 5

Circuit diagram



Cascading indoor unit configuration

Up to 16 indoor units can be connected



Type	Unit No	SW1 switch position
Master	0	off off off off
Slave	1	off off off on
	2	off off on off
	3	off off on on
	4	off on off off
	5	off on off on
	6	off on on off
	7	off on on on

Type	Unit No	SW1 switch position
Slave	8	on off off off
	9	on off off on
	10	on off on off
	11	on off on on
	12	on on off off
	13	on on off on
	14	on on on off
	15	on on on on

****CN3 AND CN4:** CN3 and CN4 contacts must only be closed on the **MASTER** unit, while they must remain open on all SLAVE units.

LED indication

The operation of LEDs in single unit or cascade mode is the same.

- LED1 indicates power, while LED2 indicates communication. Under normal conditions both LEDs flash continuously. LEDs are not visible with the lid closed.
- LED3 indicates any anomalies. Under normal conditions this LED remains off.
  1 flashing: Communication problem between indoor unit and WK-B interface
  2 flashing: Communication problem between the wired controller and the WK-B interface
- LED4 indicates that the interface is operational. Under normal operating conditions it remains on.

INTERFACE YCJ-A003

V2. 2009/01/10

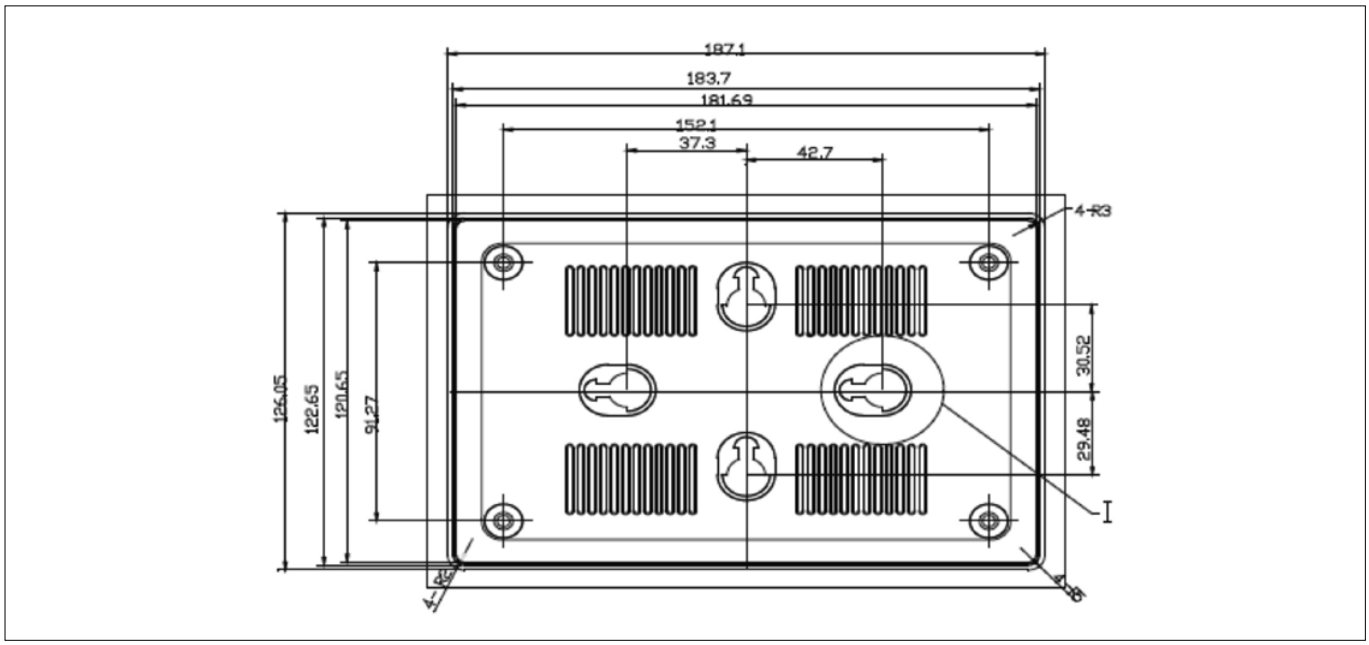
V2. 2011/01/28 (version with alarm delay)

**Check version in the back of the interface

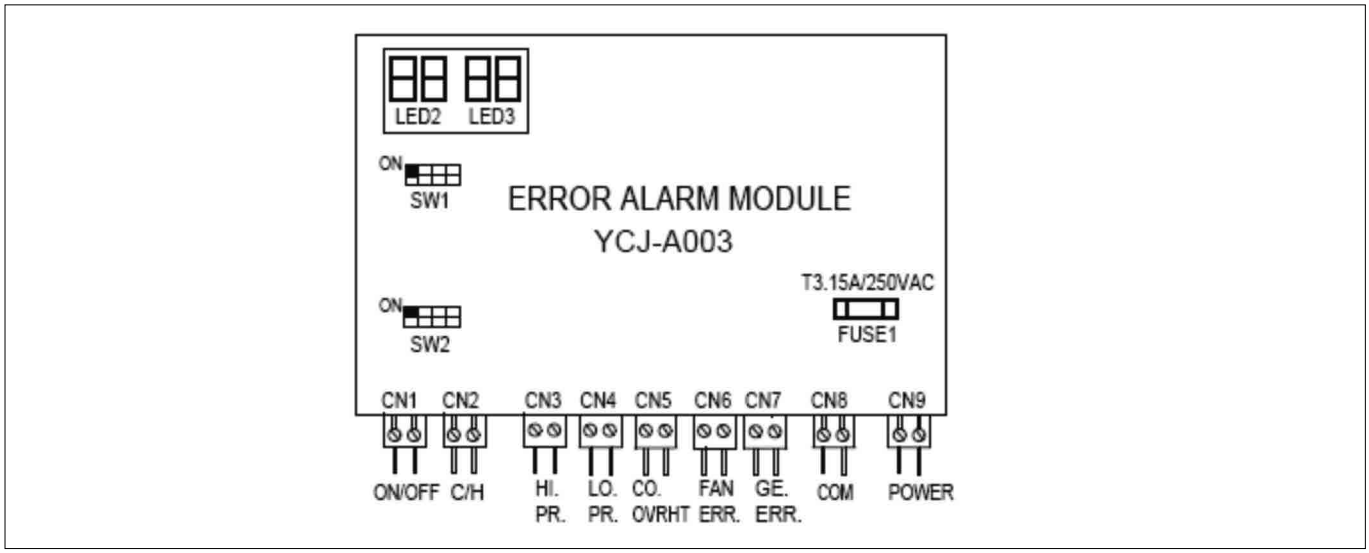
Per unit: CASSETTE, DUCTED, CEILING/FLOOR CONVERTIBLE

This interface allows you to control the air conditioner remotely and check some types of failures. It can be connected to a Super-match indoor unit with the following types: CASSETTE, DUCTED, CEILING/FLOOR CONVERTIBLE.

Dimensions:

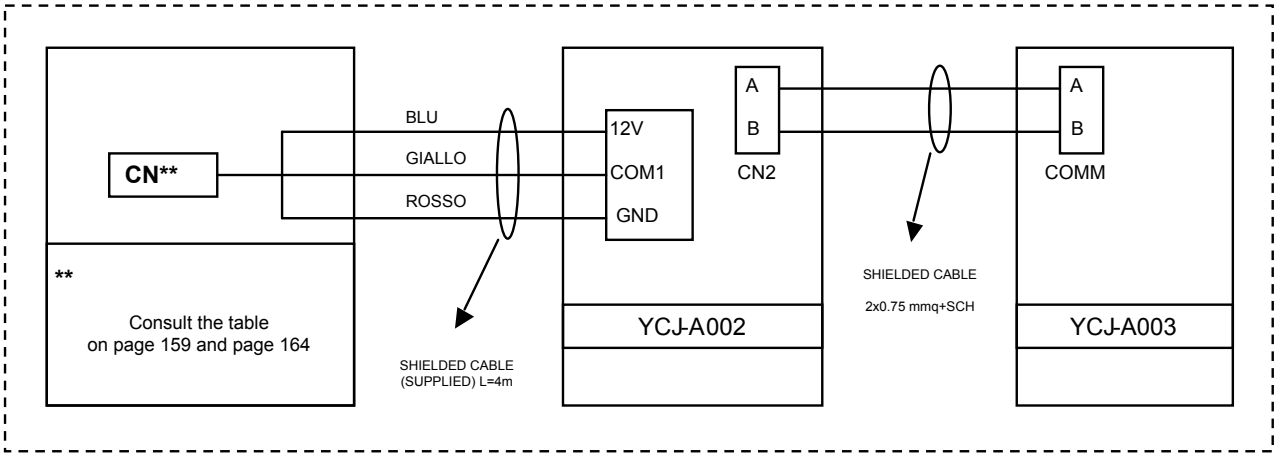


Functional diagram:



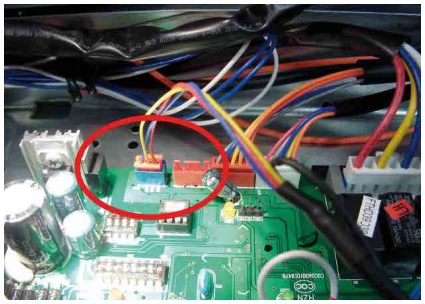
Wiring diagram

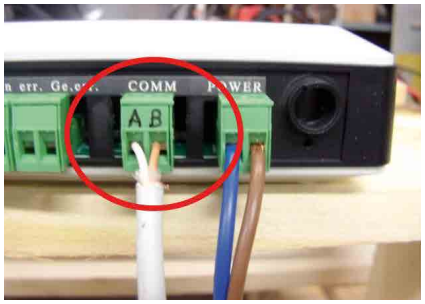
To connect the YCJ-A003 interface to an indoor unit, an additional communication interface (YCJ-A002) is required
The connections are as follows:



Important: Use a shielded cable with braid type: 2x0.75 mmq-SCH

Pay attention to the polarity of the cable! Residential wall units have a different connection than the commercial units.
Follow the tables on **page221**.



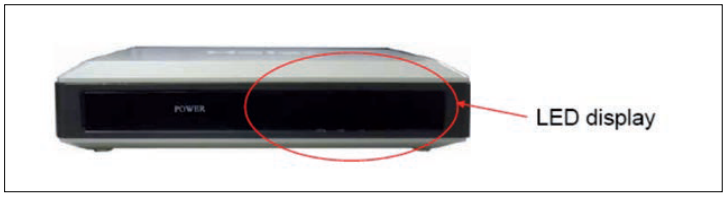


On the YCJ-A002 interface:

- SW1 switches from 1 to 8 should all be left in OFF.
- when interfaces communicate correctly with the indoor unit, LED 1 (red) and LED 2 (yellow) flash quickly together about twice per second

Display indications:

When the YCJ-A003 interface is on, the number of connected units will appear flashing at intervals of about 20 seconds.



In the event of an anomaly, the number of the unit in alarm status and the code related to the detected fault will appear on the display:

Example: 01 02

Unit number in Alarm code hexadecimal

Decimal	Hexadecimal
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A
11	B
12	C
13	D
14	E
15	F
16	10
17	11
18	12
19	13
20	14
21	15
22	16

Commands:

The following logical states can be changed by means of a dry ON-OFF external contact:

CN1 port:
CONTACT CLOSED = ON
CONTACT OPEN = OFF

CN2 port:
CONTACT CLOSED = HEAT PUMP
CONTACT OPEN = COOLING

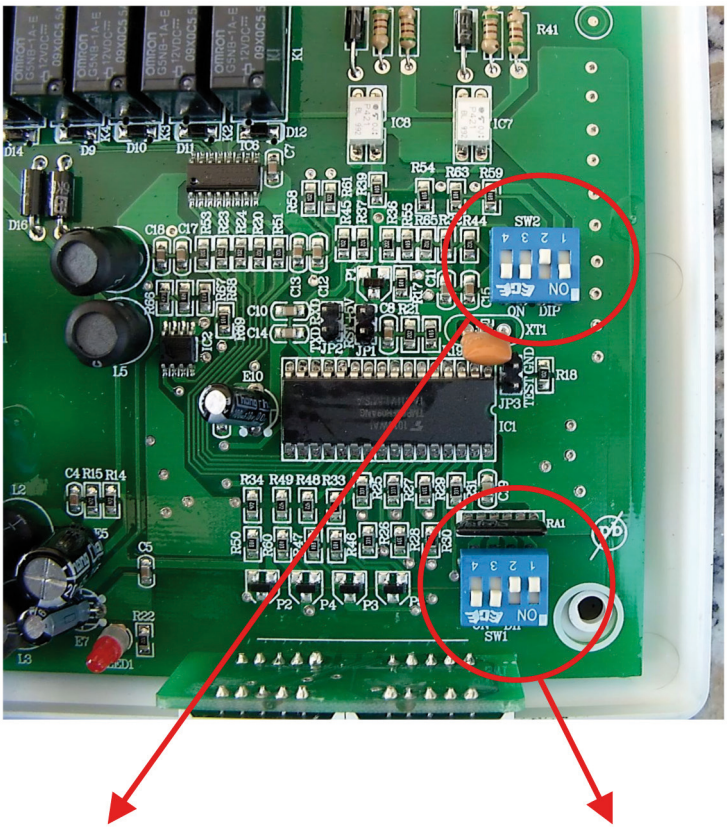
Selecting the operating temperatures:

Through the SW1 and SW2 switches in the YCJ-A003 interface, you can set the default temperature if you decide to select the heating/cooling mode from the CN2 port

SW1 = selecting temperature in cooling mode (cold)

SW2 = selecting temperature in heat pump mode (hot)

Temp.°C	SW1 / SW2	4	3	2	1
16	OFF				
	ON	■	■	■	■
17	OFF				■
	ON	■	■	■	
18	OFF			■	
	ON	■	■		■
19	OFF			■	■
	ON	■	■		
20	OFF		■		
	ON	■		■	■
21	OFF		■		■
	ON	■		■	
22	OFF		■	■	
	ON	■			■
23	OFF		■	■	■
	ON	■			
24	OFF	■			
	ON		■	■	■
25	OFF	■			■
	ON		■	■	
26	OFF	■		■	
	ON		■		■
27	OFF	■		■	■
	ON		■		
28	OFF	■	■		
	ON			■	■
29	OFF	■	■		■
	ON			■	
30	OFF	■	■	■	■
	ON				



Input signal description:

CN1=ON/OFF unit on and off (closed contact = ON)

CN2=HEATING/COOLING heating/cooling selection (contact closed = heating)

Output signal description:

CN3 = HIGH PRESSURE: Contact normally open, closes when it goes into high gas pressure alarm

CN4=LOW PRESSURE: Contact normally open, closes when it goes into low gas pressure alarm

CN5=COMPRESSOR OVERTEMPERATURE: Contact normally open, closes when it goes into overtemperature alarm

CN6=FAN FAILURE: Contact normally closed, opens when the outdoor unit fan goes into alarm or the YCJ-A003 interface remains without 220V power supply;

** For version V2.0 - 20110128 the CN6 fan alarm contact is normally open, it closes when the outdoor unit fan goes into alarm or YCJ-A003 interface remains without 220V power supply (with a delay of 10 min)

CN7 - GENERAL ALARM: Contact normally closed, opens in occurrence of one of the alarms that block the machine (see "alarm list") or in the absence of 220V power supply to the YCJ-A003 interface;

** For version V2.0 - 20110128 the CN7 general alarm contact is normally open, closes when one of the alarms that are blocking the machine occurs, or in the absence of 220V power supply to the YCJ-A003 interface (with a delay of 10min)

The CN3, CN4, CN5 ports have an open contact at rest. If a failure occurs the air conditioner will close the reference port.

The CN6 port has a closed contact at rest and in the presence of 230V voltage. Contact opens if there is a fan failure in the outdoor air conditioner unit or lack of power and/or communication with the indoor unit.

The CN7port has a closed contact at rest. It opens in occurrence of any alarm that locks the machine (see "alarm list" reported below).

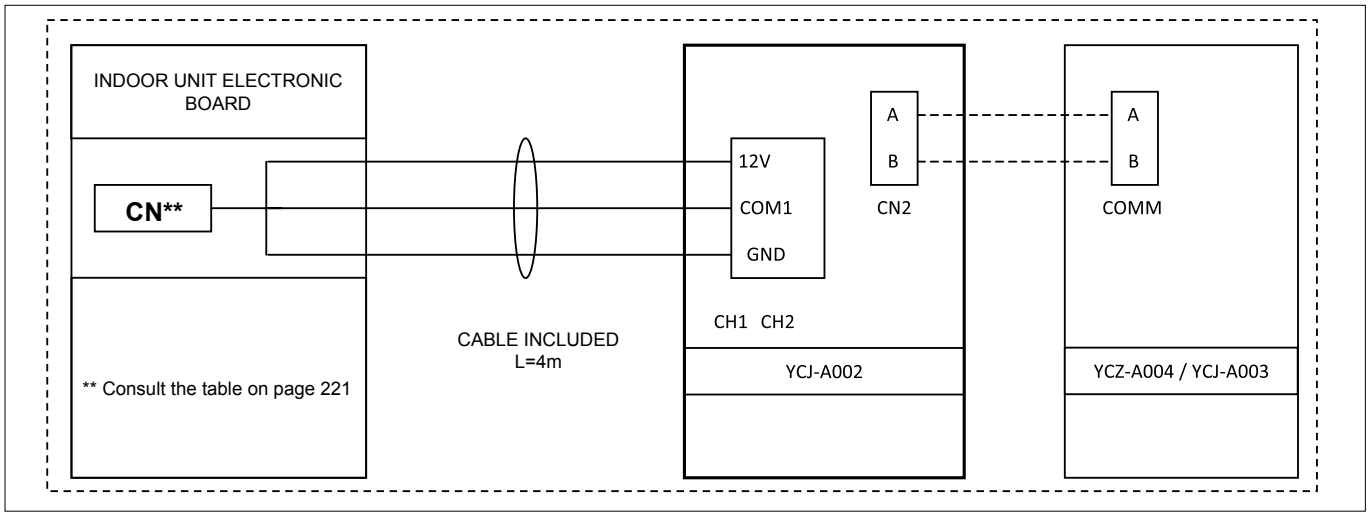
Alarm list:

Alarm code on display	Alarm description	Possible cause
1	Indoor unit ambient probe failure	Probe interrupted or short-circuited for 2 minutes
2	Indoor unit battery probe failure	Probe interrupted or short-circuited for 2 minutes
0B	Outdoor unit ambient probe failure	Probe interrupted or short-circuited for 2 minutes
0C	Outdoor unit battery probe failure	Probe interrupted or short-circuited for 2 minutes
0A	Outdoor unit overcurrent protection	Overcurrent for 3 times in 30 minutes
0E	High gas pressure	Low pressure switch intervention for 3 times in 30 minutes
16	Power supply out of limits	Phase failure, short circuit or voltage out of limits
5	Lack of communication between indoor and outdoor units	No communication for more than 4 minutes
15	Condensate drain system anomaly	Float failure or contact open for more than 25 minutes
1E	Outdoor alarm	No communication between interfaces YCJ-A003 and YCJ-A002
12	Compressor drain and/or intake probe failure	Probe interrupted or short-circuited for 2 minutes
11	EEPROM memory failure	Outdoor unit EEPROM memory failure
1A	Low gas pressure	Low pressure switch intervention
0F	Compressor overtemperature	Compressor drain temperature is greater than 120°C
7	Compressor or SPDU power module failure	Compressor or power module inverter failure
8	Outdoor unit direct current fan failure or system alarm	Faulty fan or abnormal unit operation

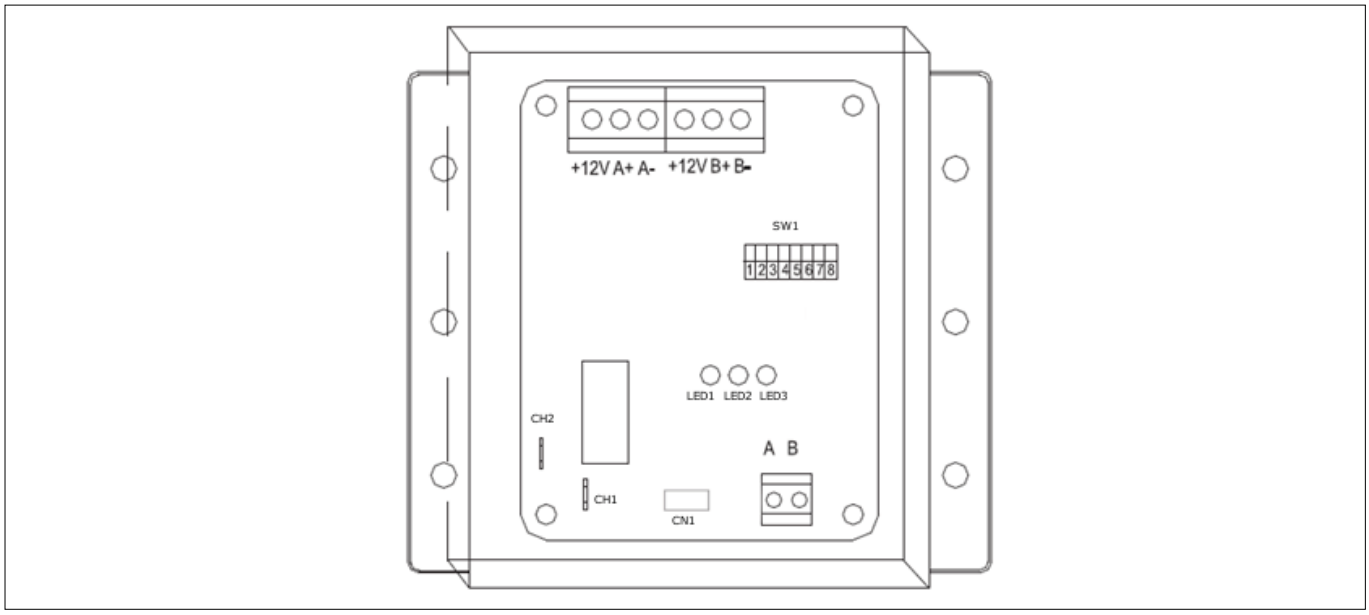
Communication Interface YCJ-A002

The YCJ-A002 interface can be used to:

- connect some indoor units to a centralized controller (e.g. YCZ-A004) or connect units to the interface for remote management (YCJ-A003)
- be connected to an indoor unit and report a possible failure alarm by opening a contact (CH1-CH2)
- Use an output with MODBUS protocol (terminals A-B)
- In case of failure in automatic power on of a backup unit / timed alternating operation of 2 systems.



Pay attention to the polarity of the cable! Residential wall units have a different connection than the commercial units.
Follow the tables on **page 221**.



Terminal block * (+12V A+ A-)(COM1): Connect the 3 wires that arrive from the connector connected to the indoor unit to the appropriate terminals.
Terminal block (+12V B+ B-)(COM2): Not used
Terminal block (A B): Connection terminal block for connection to centralized controller (ES:YCZ-A004) or to remote management interface (YCJ-A003). Or to be used for modbus protocol

CH1 – CH2 (ALARM CONTACT): Contact is closed at rest. If the connected indoor unit has an alarm, the contact CH1 – CH2 will open.

LED1 (Red): Communication with unit A
LED2 (Green): Communication with unit B (not used)
LED3 (Yellow): Communication with centralized controller

Under normal conditions of use, LEDs flash at a frequency of 0.5s. In case of an abnormality the LEDs flash at a frequency of 1s and remain off for 2s.

The YCJ-A002 interface is not compatible with AF__AS1ERA console indoor units and AB__CS2ERA cassettes

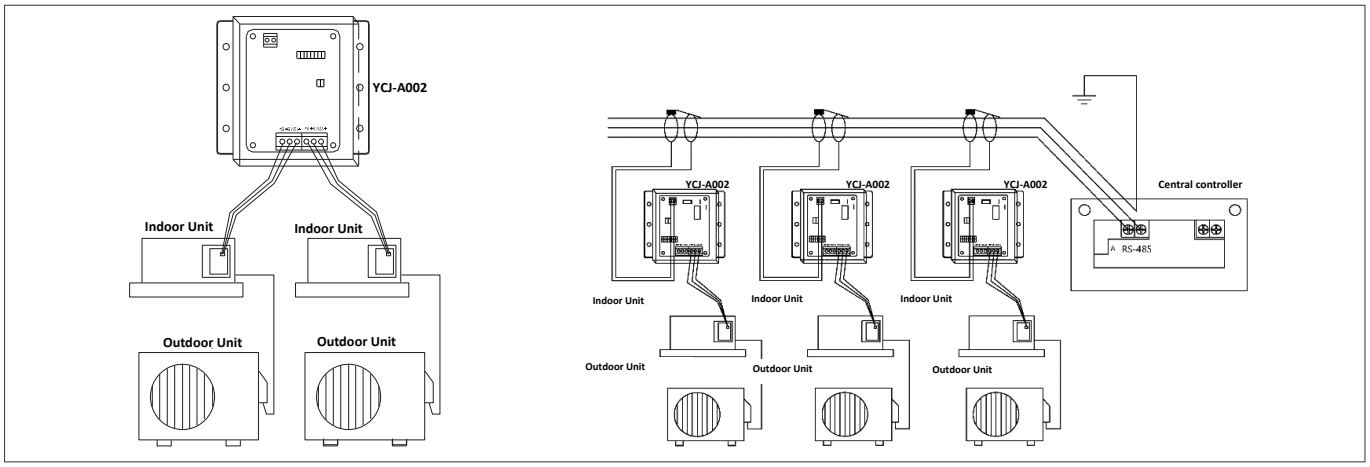
SW1 microswitch bank: Description of switches

SW1								
SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	Description
OFF	---	---	---	---	---	---	---	“Single” mode
ON	---	---	---	---	---	---	---	Timed alternating/backup operation
---	OFF	OFF	---	---	---	---	---	In "double" mode switch every 12 hours
---	OFF	ON	---	---	---	---	---	In "double" mode switch every 10 hours
---	ON	OFF	---	---	---	---	---	In "double" mode switch every 8 hours
---	ON	ON	---	---	---	---	---	In "double" mode switch every 24 hours
---	---	---	OFF	---	---	---	---	In "double" mode, both units will turn on if Ta>32°C
---	---	---	ON	---	---	---	---	In "double" mode, both units will turn on if Ta>28°C
---	---	---	---	OFF	OFF	OFF	OFF	Address no.1 - “double” mode
---	---	---	---	OFF	OFF	OFF	ON	Address no.2 - “double” mode
---	---	---	---	OFF	OFF	ON	OFF	Address no.3 - “double” mode
---	---	---	---	-	-	-	-	---
---	---	---	---	ON	ON	ON	OFF	Address no.15 - “double” mode
---	---	---	---	ON	ON	ON	ON	Address no.16 - “double” mode
---	---	---	---	---	---	---	---	---
---	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Address no.1 - “single” mode
---	OFF	OFF	OFF	OFF	OFF	OFF	ON	Address no.2 - “single” mode
---	---	---	---	---	---	---	---	---
---	ON	ON	ON	ON	ON	ON	OFF	Address no.127 - “single” mode
---	ON	ON	ON	ON	ON	ON	ON	Address no.128 - “single” mode

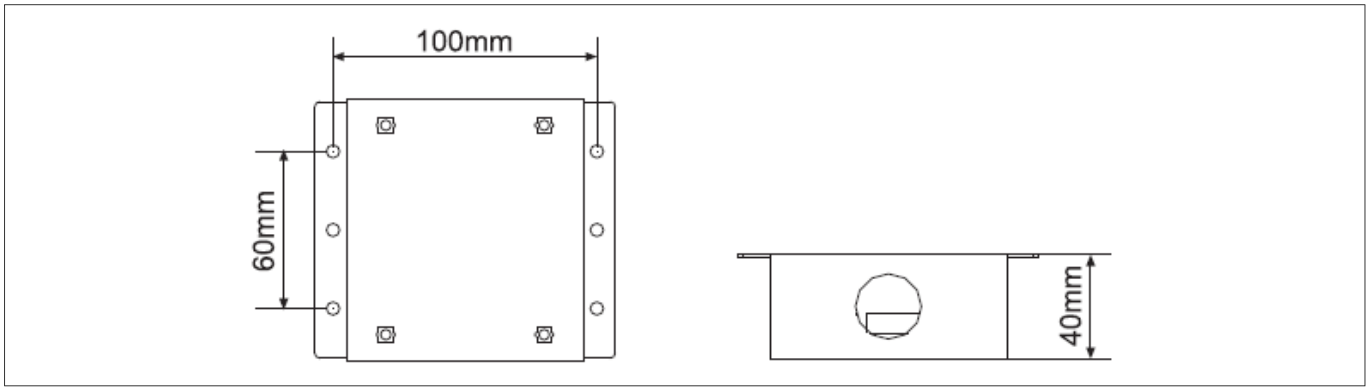
BM1 microswitch bank: Description of switches

BM1-1	BM1-2	Data transmission mode 485
OFF	OFF	Communication to YCZ-G001 / YCZ-A004 / HC-SA16DBT for mono units
ON	OFF	Communication to YCZ-G001 / YCZ-A004 / HC-SA16DBT for MRV systems
OFF	ON	Modbus RTU protocol
ON	ON	BMS connection

Wiring diagram:

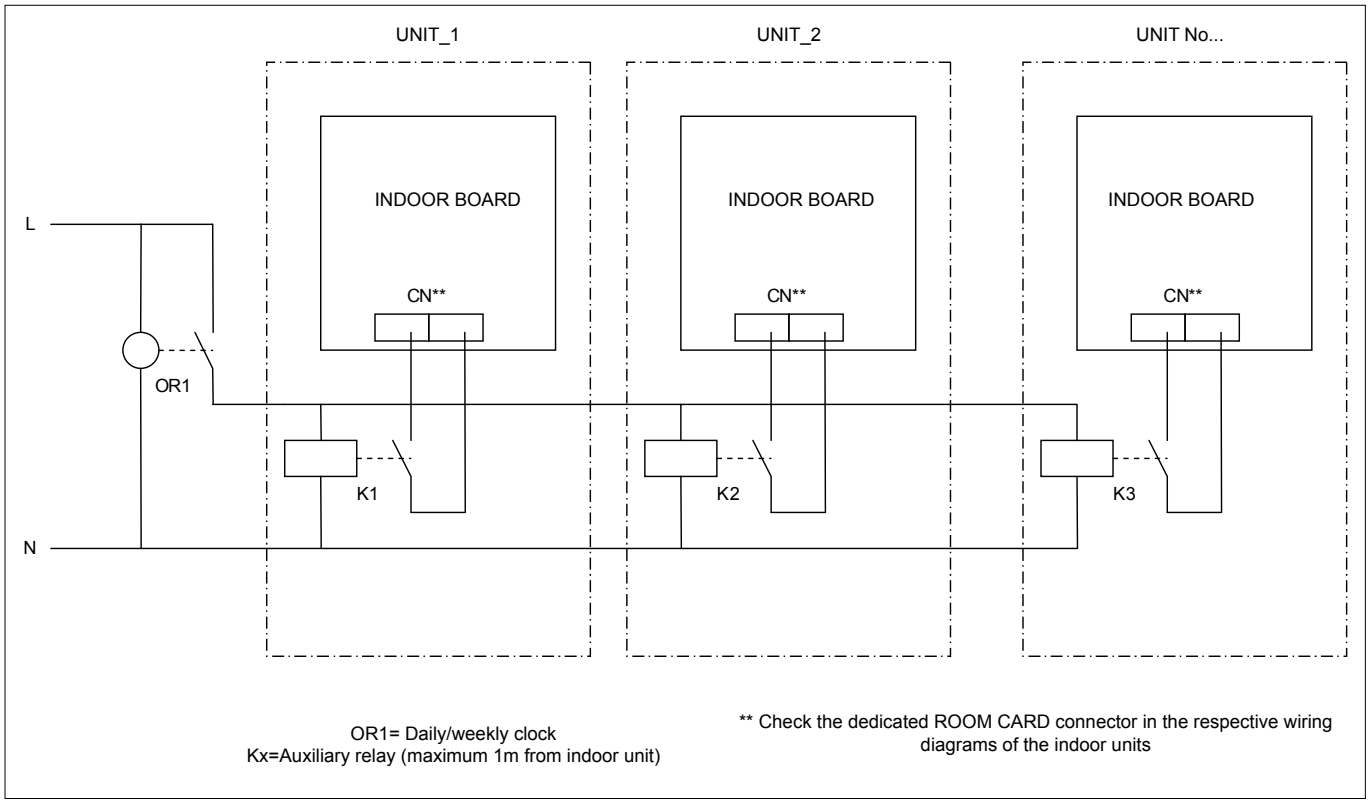


Dimensions



"ROOM-CARD" INPUT CONNECTION DIAGRAM

For indoor units with "Contact On - OFF" function



OR1= Daily/weekly clock
Kx=Auxiliary relay (maximum 1m from indoor unit)

** Check the dedicated ROOM CARD connector in the respective wiring diagrams of the indoor units

INTERFACE TD-03 and monitoring software

Through the TD-03 interface, it is possible to connect certain types of external units to a PC in order to monitor their operation over a given time frame and possibly make recordings.

Links to download monitoring software:
https://www.haiercondizionatori.it/media/1163/d-1/t-file/SW-x-CAT_r8.zip

Interface can be connected to these products:

PRODUCT FAMILY	Connection to TD03 interface	*Connector in the outdoor unit
Multi 1:3 - 1:4 - 1:5	RXD - GND	CN1
Mono commercial 12.5 - 14 - 16 -20 - 25 (kW)	A-B	CN14

*Refer to the wiring diagram of the outdoor unit.

Before using the monitoring software, it is necessary to install the TD-03 interface drivers; the drivers usually come on a CD in the box that contains the TD03 interface. Same drivers can also be downloaded via the above link along with the various monitoring software.

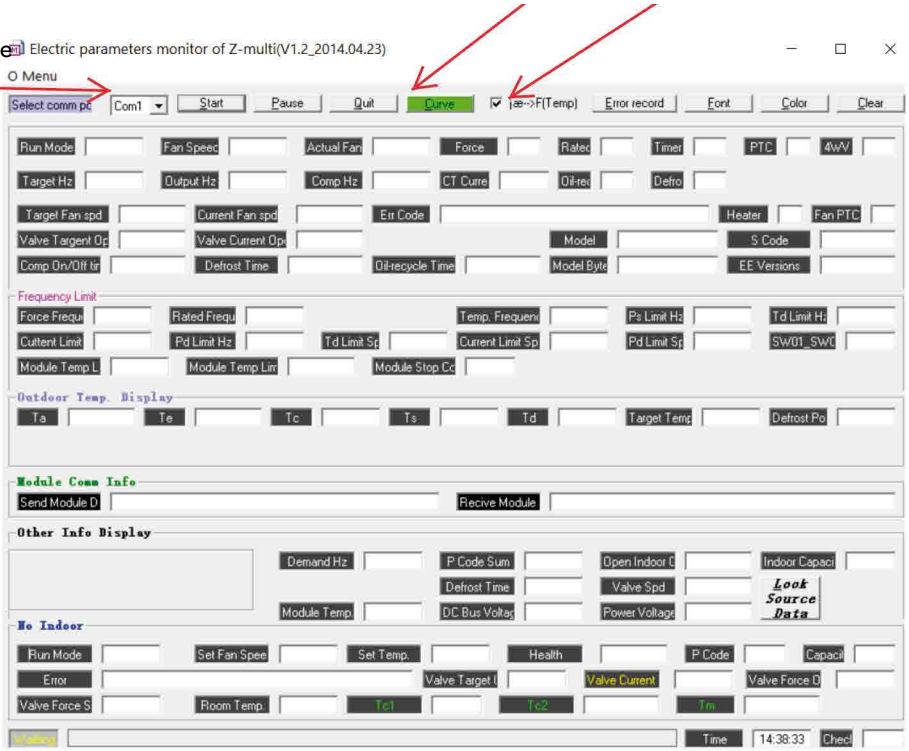
If in attempting to open any monitoring software an error appears where a ".ocx" format file is highlighted as missing (e.g. MSCOMM32.ocx), close the software and follow the instructions in the "Read Me" file located in OCX.zip to copy and record the files.

Monitoring software screen

Press "curve" to enter the record-ing screen

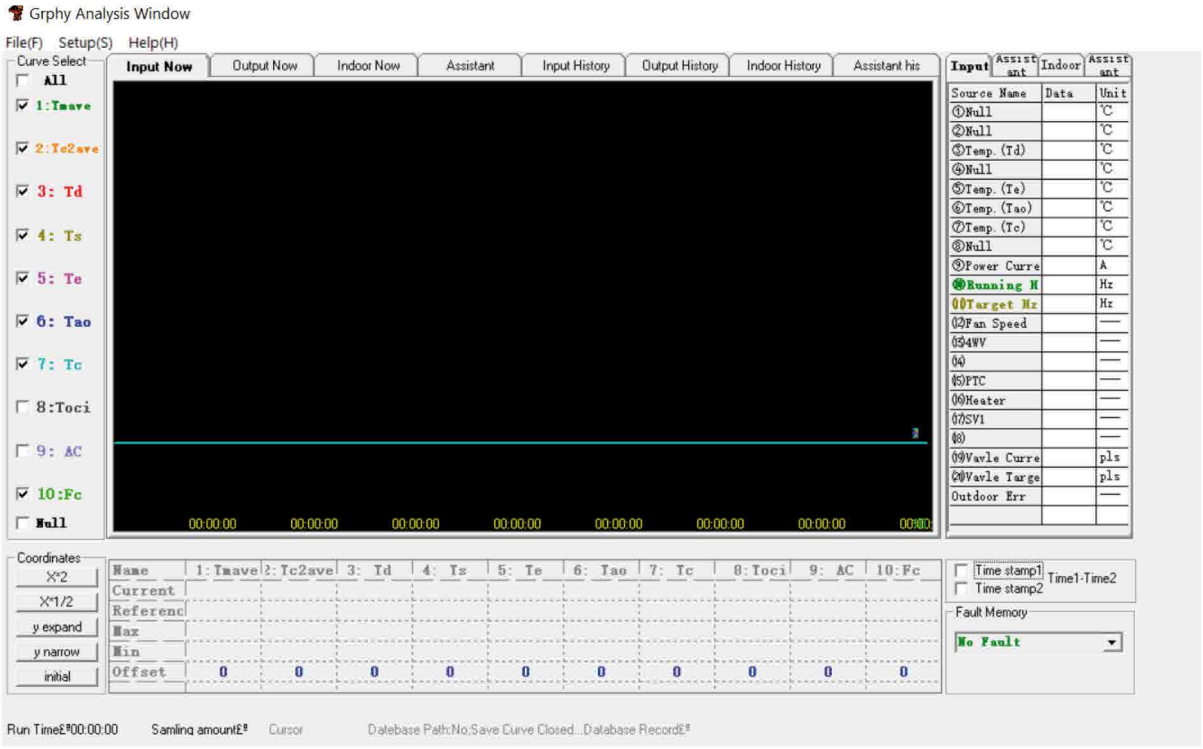
Temperature Fahrenheit / Centigrade

Select the COM port where the interface is connected to the PC

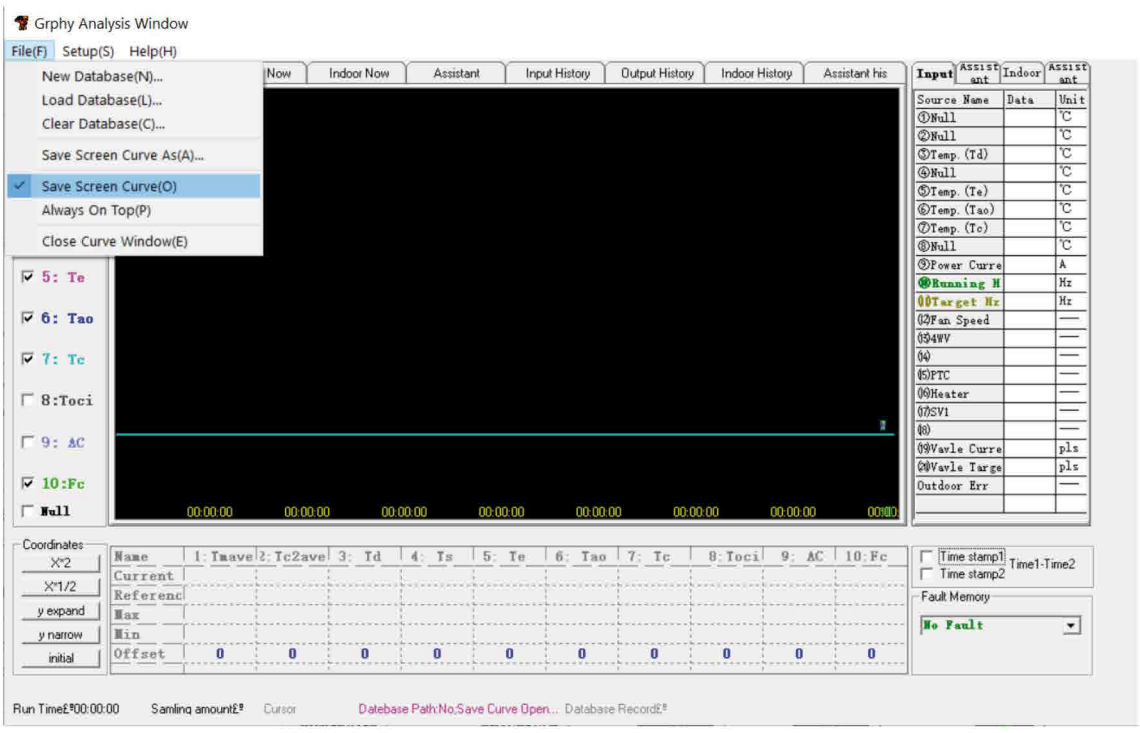


- Press the "Start" key to begin reading data

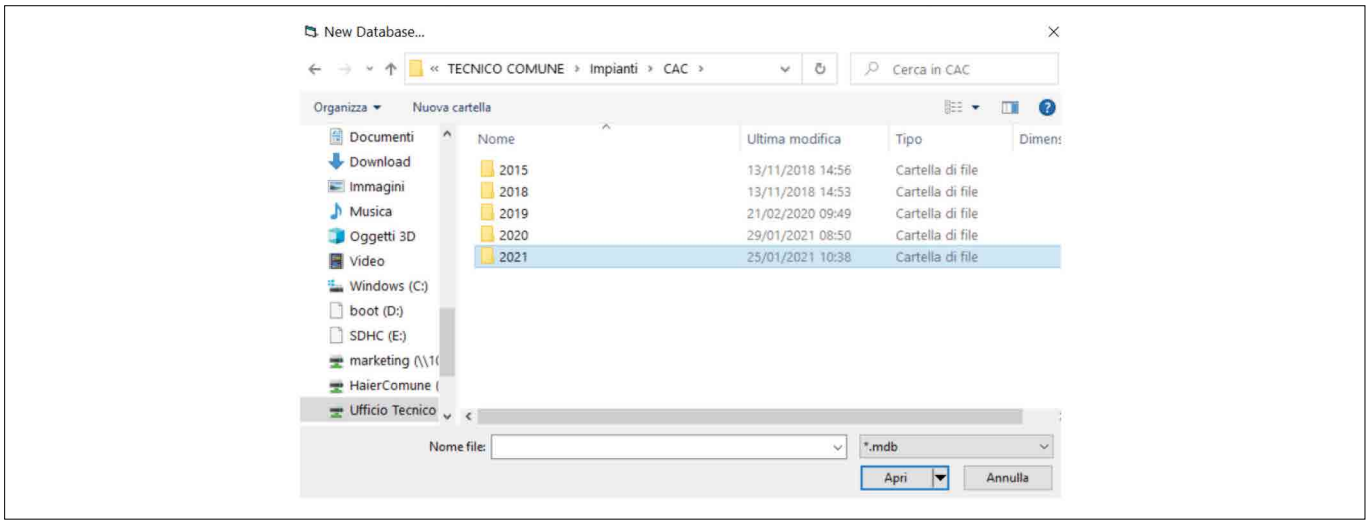
- Pressing the "curve" button takes you to the screen to record the data collected



- To start a recording, press the "file" button in the upper left corner
- Check the box " Savescreen curve (O)"



- Pres “New database(N)”
- Select a path where to create the database and name it as desired



- Should you wish to stop recording, simply exit the monitoring software by pressing the "Quit" button
- You can now archive/open the database that was created.

Summary table for monitoring by software:

Modello	PCB	Modulo di potenza	Connettore porta di comunicazione	Collegamenti con TD-03	Modello software
1U71S2SG1FA	0011800410RA	0011800377C	CN34	3-FILI (RX, TX,GND)	
1U71S2SR2FA	0011800930E	0011800377C	CN19	3-FILI (RX, TX,GND)	
1U105S2SS1FA	0151800349 prima di 07-04-2021 0151800349TA dopo 07-04-2021	0011800377AH	CN9	3-FILI (RX, TX,GND)	PAC_Modbus(V2.5-2021.08.24).exe
1U105S2SS1FA	0151800349TA	0011800377AH	CN19		
1U105S2SS1FB	0151800383BC	0150402092AC	CN9		
1U125S2SN1FA	0151800054BH	015041945CB	CN14	2-FILI (Tx,GND)	
1U125S2SN1FB	0151800054BE	0150402903			
1U140S2SP1FA	0151800054BH	015041945CA			
1U140S2SP2FA	0151800054BH	015041945CA			
1U140S2SP1FB	0151800054BE	0150402903			
1U140S2SN1FA	0151800383EA	0150401945CB	CN9	3-FILI (RX, TX,GND)	
1U125S2SN2FA	0151800383EA	0150401945CB			
1U140S2SN1FB	0151800383EA	0150402903			
1U125S2SN2FB	0151800383EA	0150402903			
1U140S2SN1FA	0151800383EA	0150401945CB			
1U140S2SN1FB	0151800383EA	0150402903			
1U140S2SP2FB	0151800383EA	0150402903C			
1U160S2SP1FB	0151800383EA	0150402903C			
3U55S2SR3FA 3U55S2SR5FA	0151800364E	0011800377C	CN1(TS_PC) su scheda display 0151800076A	2-FILI (Tx,GND)	PAC_Modbus(V2.5-2021.08.24).exe Electric parameters monitor of Z-multi(V1.2_2014.04.23)
3U70S2SR3FA 3U70S2SR5FA	0151800364E	0011800377C			
4U75S2SR3FA 4U75S2SR5FA	0151800364B	0011800377A			
4U85S2SR3FA 4U85S2SR5FA	0151800364B	0011800377A			
5U90S2SS3FA 5U90S2SS5FA	0151800364B	0011800377AA			
5U105S2SS3FA 5U105S2SS5FA	0151800364B	0011800377AA			
3U55S2SR2FA	0151800364A	0011800377C			
3U70S2SR2FA	0151800364A	0011800377C			
4U75S2SR2FA	0151800364	0011800377A			
4U85S2SR2FA	0151800364	0011800377A			
5U90S2SS2FA	0151800364	0011800377AA			
5U105S2SS2FA	0151800364	0011800377AA			
3U52S2SG1FA	0151800075B	0150400643C			
3U68S2SG1FA	0151800075B	0150400643C			
4U70S2SH1FA	0151800075B	015040175 6B			
4U85S2SH1FA	0151800075B	0150401756B			

CLASSIFICATION OF OUTDOOR UNIT TEMPERATURE PROBES

Unit	Family	Unit type	Model	Ambient probe	Pipe probe	Defrost probe	Compressor delivery probe
Outdoor	Supermatch R32	Mono Inverter	1U105S2SS1FB	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter	1U105S2SS2FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter	1U125S2SN2FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter	1U125S2SN2FB	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter (single-phase)	1U140S2SN1FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter (three-phase)	1U140S2SN1FB	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter (single-phase)	1U140S2SP2FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter (three-phase)	1U140S2SP2FB	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter (three-phase)	1U160S2SP1FB	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	High Seasonal R32 - Jade	Mono Inverter - Jade	1U25MECFRA-3	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter	1U25S2SM1FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter	1U25S2SM1FA-2	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Nordic	Mono Inverter - Nordic	1U25S2SQ1FA-NR	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Pearl / Tundra Plus	Mono Inverter - Pearl / Tundra Plus	1U25YEGFRA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Pearl / Tundra Plus	Mono Inverter - Pearl	1U25YEGFRA-1	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	High Seasonal R32 - Jade	Mono Inverter - Jade	1U35MECFRA-3	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter	1U35S2SM1FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter	1U35S2SM1FA-2	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Nordic	Mono Inverter - Nordic	1U35S2SQ1FA-NR	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Pearl / Tundra Plus	Mono Inverter - Pearl / Tundra Plus	1U35YEGFRA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Pearl / Tundra Plus	Mono Inverter - Pearl	1U35YEGFRA-1	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter	1U42S2SM1FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	High Seasonal R32 - Jade	Mono Inverter - Jade	1U50JECFRA-3	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Pearl / Tundra Plus	Mono Inverter - Pearl / Tundra Plus	1U50MEGFRA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Nordic	Mono Inverter - Nordic	1U50S2SQ1FA-NR	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Tundra 2.0 R32	Mono Inverter - Tundra 2.0	1U68REEFRA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Pearl / Tundra Plus	Mono Inverter - Pearl / Tundra Plus	1U68WEGFRA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	High Seasonal R32 - Tower (Fa)	Mono Inverter - Fa Tower	1U71REAFRA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	High Seasonal R32 - Tower (Fa)	Zun Tower	1U71RECFRA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Mono Inverter	1U71S2SR2FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R410A	Mono Inverter (three-phase)	1UH200W1ERK	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R410A	Mono Inverter (three-phase)	1UH250W1ERK	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	2U40S2SM1FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	2U50S2SM1FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	2U50S2SM1FA-3	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	3U55S2SR3FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	3U55S2SR5FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	3U70S2SR5FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	4U75S2SR5FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	4U85S2SR3FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	4U85S2SR5FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	5U105S2SS5FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	5U125S2SN1FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Supermatch R32	Multi Inverter	5U90S2SS5FA	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Super-Water	Mono Inverter (single-phase)	AU052FYCRA(HW)	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Super-Water	Mono Inverter (single-phase)	AU082FYCRA(HW)	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Super-Water	Mono Inverter (single-phase)	AU112FYCRA(HW)	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Super-Water	Mono Inverter (single-phase)	AU162FYCRA(HW)	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Flair	Mono Inverter - Flair	H1U09FAAOUT	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Trendy	Mono Inverter - Trendy	H1U09TAAOUT	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ

CLASSIFICATION OF OUTDOOR UNIT TEMPERATURE PROBES

Outdoor	Flair	Mono Inverter - Flair	H1U12FAAOUT	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Trendy	Mono Inverter - Trendy	H1U12TAAOUT	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Unit	**Family**	**Unit type**	**Model**	**Ambient probe**	**Pipe probe**	**Defrost probe**	**Compressor delivery probe**
Outdoor	Water heater A P.D.C. R134A	Mono Inverter - Water Heater	HP200S1	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ
Outdoor	Water heater A P.D.C. R134A	Mono Inverter - Water Heater	HP300S1	25°C=10kΩ	25°C=10kΩ	25°C=10kΩ	80°C=50kΩ

CLASSIFICATION OF INDOOR UNIT TEMPERATURE PROBES

Unit	Family	Unit type	Model	Ambient probe	Pipe probe
Indoor	Supermatch R32	Cassetta 620	AB25S2SC2FA-1	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Cassetta 620	AB35S2SC2FA-1	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Cassetta 620	AB50S2SC2FA-1	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Round Flow Cassette	AB71S2SG1FA	25°C=10kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Round Flow Cassette	ABH105H1ERG	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Round Flow Cassette	ABH125K1ERG	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Round Flow Cassette	ABH140K1ERG	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Round Flow Cassette	ABH160K1ERG	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ceiling / Floor Convertible	AC105S2SH1FA	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ceiling / Floor Convertible	AC125S2SK1FA	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ceiling / Floor Convertible	AC140S2SK1FA	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Ceiling / Floor Convertible	AC160S2SK1FA	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Ceiling / Floor Convertible	AC35S2SG1FA	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Ceiling / Floor Convertible	AC50S2SG1FA	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ceiling / Floor Convertible	AC71S2SG1FA	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ducted Medium Pressure	AD105S2SM3FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ducted Medium Pressure	AD125S2SM3FA	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ducted Medium Pressure	AD140S2SM3FA	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Ducted Medium Pressure	AD160S2SM3FA	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Slim Ducted Low Pressure	AD25S2SS1FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Slim Ducted Low Pressure	AD35S2SM3FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Slim Ducted Low Pressure	AD35S2SS1FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Slim Ducted Medium Pressure	AD50S2SM3FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Slim Ducted Low Pressure	AD50S2SS1FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ducted Medium Pressure	AD71S2SM3FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Slim Ducted Low Pressure	AD71S2SS1FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ducted High Pressure	ADH125H1ERG	25°C=23kΩ	25°C=10kΩ
Indoor	R32&R410A Compatible	Ducted High Pressure	ADH140H1ERG	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R410A	Ducted High Pressure	ADH200H1ERG	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R410A	Ducted High Pressure	ADH250H1ERG	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Console	AF25S2SD1FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Console	AF35S2SD1FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Console	AF42S2SD1FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Cabinet	AP140S2SK1FA(H)	25°C=23kΩ	25°C=10kΩ
Indoor	High Seasonal R32 - Zun Tower	Mono Inverter - Zun Tower	AP71DFCHRA	25°C=10kΩ	25°C=10kΩ
Indoor	High Seasonal R32 - Tower (Fa)	Fa Tower	AP71UFAHRA	25°C=10kΩ	25°C=10kΩ
Indoor	Wall 10kW	Wall 10Kw - Monospilt	AS105S2SF2FA-2	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Pearl - Split	AS20PBAHRA	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (Black) Plus - Split	AS20S2SF1FA-MB3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (White) Plus - Split	AS20S2SF1FA-MW3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32 / Tundra Plus R32	Tundra Plus - Split	AS20TADHRA-2	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Expert - Split	AS20XCAHRA	25°C=23kΩ	25°C=23kΩ
Indoor	Supermatch R32	Pearl - Split	AS25PBAHRA	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (Black) Plus - Split	AS25S2SF1FA-MB3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (White) Plus - Split	AS25S2SF1FA-MW3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Jade - Supermatch Split	AS25S2SJ1FA-3	25°C=23kΩ	25°C=10kΩ
Indoor	Nordic	Nordic - Split	AS25S2SN1FA-NRC	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32 / Tundra Plus R32	Tundra Plus - Split	AS25TADHRA-2	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Expert - Split	AS25XCAHRA	25°C=23kΩ	25°C=23kΩ
Indoor	Supermatch R32	Pearl - Split	AS35PBAHRA	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (Black) Plus - Split	AS35S2SF1FA-MB3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (White) Plus - Split	AS35S2SF1FA-MW3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Jade - Supermatch Split	AS35S2SJ1FA-3	25°C=23kΩ	25°C=10kΩ
Indoor	Nordic	Nordic - Split	AS35S2SN1FA-NRC	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32 / Tundra Plus R32	Tundra Plus - Split	AS35TADHRA-2	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Expert - Split	AS35XCAHRA	25°C=23kΩ	25°C=23kΩ
Indoor	Supermatch R32	Flexis (Black) Plus - Split	AS42S2SF1FA-MB3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (White) Plus - Split	AS42S2SF1FA-MW3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Expert - Split	AS42XCAHRA	25°C=23kΩ	25°C=23kΩ
Indoor	Pearl R32	Pearl - Split	AS50PDAHRA	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (Black) Plus - Split	AS50S2SF1FA-MB3	25°C=23kΩ	25°C=10kΩ

CLASSIFICATION OF INDOOR UNIT TEMPERATURE PROBES

Unit	Family	Unit type	Model	Ambient probe	Pipe probe
Indoor	Supermatch R32	Flexis (White) Plus - Split	AS50S2SF1FA-MW3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Jade - Supermatch Split	AS50S2SJ1FA-3	25°C=23kΩ	25°C=10kΩ
Indoor	Nordic	Nordic - Split	AS50S2SN1FA-NRC	25°C=10kΩ	25°C=10kΩ
Indoor	Tundra Plus R32	Tundra Plus - Split	AS50TDDHRA-CLC	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Expert - Split	AS50XCAHRA	25°C=23kΩ	25°C=23kΩ
Indoor	Pearl R32	Pearl - Split	AS68PDAHRA	25°C=10kΩ	25°C=10kΩ
Indoor	Tundra Plus R32	Tundra Plus - Split	AS68TEDHRA-CLC	25°C=10kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (Black) Plus - Split	AS71S2SF1FA-MB3	25°C=23kΩ	25°C=10kΩ
Indoor	Supermatch R32	Flexis (White) Plus - Split	AS71S2SF1FA-MW3	25°C=23kΩ	25°C=10kΩ

OHMIC VALUES DEPENDING ON TEMPERATURE

R25=23KΩ±2.5% B25/50=4200K±3%			
T(℃)	Rnom(KΩ)	T(℃)	Rnom(KΩ)
-20℃	281.34	32℃	16.65
-19℃	263.56	33℃	15.92
-18℃	247.04	34℃	15.22
-17℃	231.66	35℃	14.56
-16℃	217.35	36℃	13.93
-15℃	204.02	37℃	13.34
-14℃	191.61	38℃	12.77
-13℃	180.04	39℃	12.23
-12℃	169.24	40℃	11.71
-11℃	159.17	41℃	11.22
-10℃	149.77	42℃	10.76
-9℃	140.99	43℃	10.31
-8℃	132.78	44℃	9.89
-7℃	125.11	45℃	9.49
-6℃	117.93	46℃	9.1
-5℃	111.22	47℃	8.74
-4℃	104.93	48℃	8.39
-3℃	99.04	49℃	8.05
-2℃	93.52	50℃	7.73
-1℃	88.35	51℃	7.43
0℃	83.5	52℃	7.14
1℃	78.94	53℃	6.86
2℃	74.67	54℃	6.6
3℃	70.65	55℃	6.34
4℃	66.88	56℃	6.1
5℃	63.33	57℃	5.87
6℃	60	58℃	5.65
7℃	56.86	59℃	5.44
8℃	53.91	60℃	5.24
9℃	51.13		
10℃	48.51		
11℃	46.04		
12℃	43.72		
13℃	41.52		
14℃	39.45		
15℃	37.5		
16℃	35.66		
17℃	33.92		
18℃	32.27		
19℃	30.72		
20℃	29.25		
21℃	27.86		
22℃	26.54		
23℃	25.3		
24℃	24.12		
25℃	23		
26℃	21.94		
27℃	20.94		
28℃	19.99		
29℃	19.09		
30℃	18.23		
31℃	17.42		

R80=50KΩ±3% B25/80=4450K±3%			
T(℃)	Rnom(KΩ)	T(℃)	Rnom(KΩ)
-30	11600	22	592
-29	10860	23	553.6
-28	10170	24	536.6
-27	9529	25	511.1
-26	8932	26	486.9
-25	8375	27	464
-24	7856	28	442.3
-23	7372	29	421.7
-22	6920	30	402.1
-21	6498	31	383.6
-20	6104	32	366
-19	5736	33	349.3
-18	5392	34	333.5
-17	5071	35	318.4
-16	4770	36	304.1
-15	4488	37	290.5
-14	4225	38	277.6
-13	3978	39	265.3
-12	3747	40	253.6
-11	3531	41	242.5
-10	3328	42	232
-9	3138	43	221.9
-8	2960	44	212.3
-7	2793	45	203.2
-6	2636	46	194.5
-5	2489	47	186.3
-4	2351	48	178.4
-3	2221	49	170.9
-2	2099	50	163.7
-1	1984	51	155.9
0	1877	52	150.4
1	1775	53	144.2
2	1680	54	138.3
3	1590	55	132.7
4	1506	56	127.3
5	1426	57	122.1
6	1351	58	117.2
7	1280	59	112.5
8	1214	60	108
9	1151	61	103.8
10	1092	62	99.68
11	1036		
12	983.2		
13	933.4		
14	886.4		
15	841.9		
16	800		
17	760.8		
18	722.8		
19	687.3		
20	653.8		
21	622		

R25=10KΩ±3% B25/50=3700K±3%			
T(℃)	Rnom(KΩ)	T(℃)	Rnom(KΩ)
-20	90.79	32	7.52
-19	85.72	33	7.23
-18	80.96	34	6.95
-17	76.51	35	6.68
-16	72.33	36	5.43
-15	68.41	37	5.6
-14	64.73	38	5.59
-13	61.27	39	5.73
-12	58.02	40	5.52
-11	54.97	41	5.32
-10	52.1	42	5.12
-9	49.4	43	4.93
-8	46.86	44	4.9
-7	44.46	45	4.58
-6	42.21	46	4.42
-5	40.08	47	4.26
-4	38.08	48	4.11
-3	36.19	49	3.97
-2	34.41	50	3.83
-1	32.73	51	3.7
0	31.14	52	3.57
1	29.64	53	3.45
2	28.22	54	3.33
3	26.4	55	3.22
4	25.61	56	3.11
5	24.41	57	3.11
6	23.27	58	2.9
7	22.2	59	2.81
8	21.18	60	2.72
9	20.21	61	2.63
10	19.3	62	2.54
11	18.43	63	2.49
12	17.61	64	2.38
13	16.83	65	2.3
14	16.09	66	2.23
15	15.38	67	2.16
16	14.71	68	2.09
17	14.08	69	2.03
18	13.48	70	1.96
19	12.9	71	1.9
20	12.36	72	1.85
21	11.84	73	1.79
22	11.34	74	1.73
23	10.87	75	1.68
24	10.43	76	1.63
25	10	77	1.58
26	9.59	78	1.54
27	9.21	79	1.49
28	8.84	80	1.45
29	8.48		
30	8.15		
31	7.83		

PRODUCTION YEAR	CATEGORY	LINK QR CODE	
2002-2004	ENTRY LINE R407C		
2002-2004	H-MRV R407C		
2004	FREE MULTI R407C		
2004	UNITARY FREE R407C		
2005	X-MULTI R410A		
2004-2007	HIGH LINE WORLD TRADE R410A		
2004-2007	HIGH LINE SMART COOL R410A		
2004-2007	HIGH LINE HV R410A		
2004-2007	HIGH LINE COLORFUL SCREEN R410A		
2009	UNITARY SMART		
2011	TECHNICAL MANUAL 2011		
2012	TECHNICAL MANUAL 2012		
2013	TECHNICAL MANUAL 2013		
2014	TECHNICAL MANUAL 2014		
2015	TECHNICAL MANUAL 2015		
2016	TECHNICAL MANUAL 2016		
2017	TECHNICAL MANUAL 2017		

PREVIOUS DOCUMENTATION

PRODUCTION YEAR	CATEGORY	LINK QR CODE	
2018	TECHNICAL MANUAL 2018		
2019	TECHNICAL MANUAL 2019		
2020	TECHNICAL MANUAL 2020		
2021	TECHNICAL MANUAL 2021		

Haier

air conditioners

REFRIGERANT PRESSURE - TEMPERATURE REGULATION							
Pressure	Temperature °C						
Bar	R32	R410A		R407C		R134A	R290
		BUBBLE	DEW	BUBBLE	DEW		
0	-52.3	-51.7	-51.5	-43.7	-36.7	-26.1	
1	-37.4	-37	-36.8	-28.2	-21.5	-9.9	-42.41
2	-27.7	-27.3	-27.2	-18	-11.5	0.8	-25.45
3	-20.2	-19.9	-19.9	-10.2	-3.8	9	-14.18
4	-14.2	-13.8	-13.8	-3.7	2.5	15.8	-5.47
5	-9.0	-8.6	-8.7	1.8	7.9	21.6	1.73
6	-4.4	-4.1	-4.1	6.7	12.6	26.8	7.92
7	-0.3	0	0	11	16.9	31.4	13.4
8	3.4	3.8	3.7	15	20.8	35.6	18.32
9	6.8	7.2	7.1	18.7	24.3	39.5	22.81
10	9.9	10.3	10.3	22.1	27.6	43.1	26
11	12.9	13.3	13.2	25.3	30.7	46.5	30.79
12	15.6	16.1	16	28.3	33.6	49.6	34.38
13	18.2	18.7	18.6	31.1	36.4	52.6	37.76
14	20.7	21.2	21.1	33.8	39	55.5	40.96
15	23.0	23.5	23.5	36.4	41.5	58.2	43.99
16	25.3	25.8	25.8	38.9	43.8	60.8	46.88
17	27.4	28	27.9	41.2	46.1	63.3	49.64
18	29.5	30	30	43.5	48.3	65.6	52.28
19	31.4	32	32	45.7	50.4	68	54.82
20	33.3	34	33.9	47.8	52.4	70.2	57.26
21	35.2	35.8	35.8	49.8	54.4	72.3	59.61
22	36.9	37.6	37.9	51.8	56.2	74.4	61.88
23	38.7	39.4	39.4	53.7	58.1	76.4	64.08
24	40.3	41	41.1	55.5	59.9	78.4	66.2
25	41.9	42.7	42.7	57.3	61.6	80.3	68.26
26	43.5	44.3	44.3	59.1	63.3	82.1	70.26
27	45.0	45.8	45.9	60.8	64.9	84	72.2
28	46.5	47.3	47.4	62.4	66.5	85.7	74.09
29	48.0	48.8	48.9	64.1	68.1	87.4	75.92
30	49.4	50.3	50.4	65.7	69.6	89.1	77.71
31	50.8	51.7	51.8	67.2	71.1	90.8	79.45
32	52.2	53	53.2	68.7	72.5	92.4	81.15
33	53.5	54.4	54.5	70.2	74	94	82.81
34	54.8	55.7	55.9	71.7	75.4	95.5	84.43
35	56.0	57	57.2	73.1	76.7	97	86
36	57.3	58.3	58.4	74.5	78.1	98.5	87.55
37	58.5	59.5	59.7	75.9	79.4	100	89.05
38	59.7	60.7	60.9	77.2	80.7		90.52
39	60.9	61.9	62.1	78.6	82		
40	62.0	63.1	63.3	79.9	83.2		
41	63.2	64.3	64.5	81.2	84.4		
42	64.5	65.4	65.6	82.4	85.6		
43	65.4	66.5	66.8	83.7	86.8		
44	66.5	67.6	67.9	84.9			
45	67.5	68.7	69	86.1			

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Haier also takes care of the environment by reducing the consumption of paper for printing its materials and promoting the use of electronic media with a lower environmental impact.

REV. 2022/03

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