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|  |
| Floor Standing Indoor Unit |
|  |
| Technical Support Division |
| 2021-6-2 |

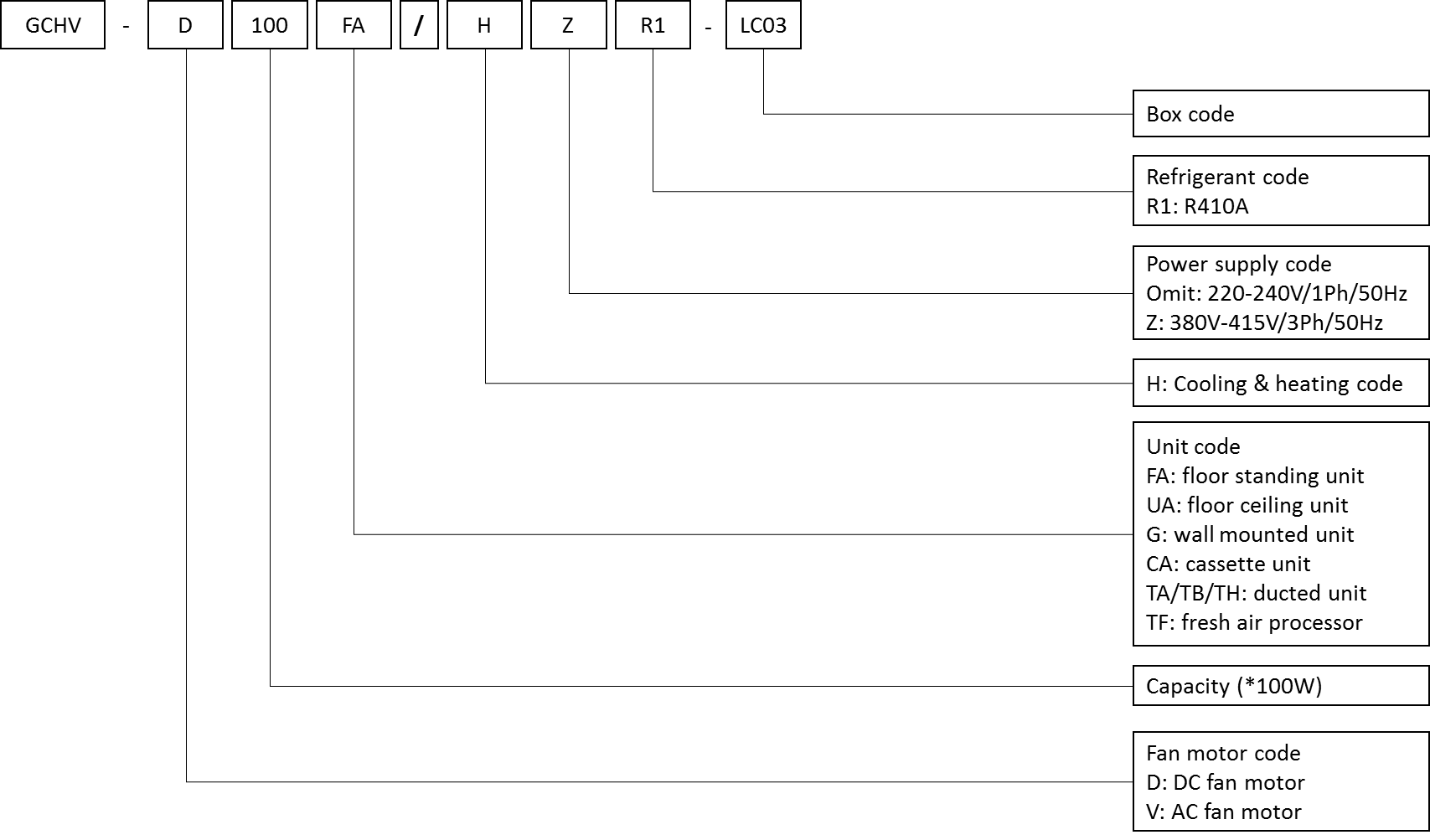
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1. **Nomenclature**



1. **Specifications**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | | | D80FA/HR1-LC03 | D100FA/HR1-LC03 |
| Power supply | | | 220-240V/1N/50Hz | 220-240V/1N/50Hz |
| Capacity | Cooling | kW | 8 | 10 |
| Heating | kW | 8.8 | 11 |
| Max. Power Input | | W | 90 | 100 |
| Max. Current | | A | 0.8 | 0.9 |
| Fan motor | Model |  | DR-310-170-8 | DR-310-170-8 |
| Type |  | DC | DC |
| Brand |  | OCEAN | OCEAN |
| Capacitor | μF | - | - |
| Speed (Hi/Med/Low) | r/min | 490/450/400 | 500/460/400 |
| Indoor coil | Number of rows |  | 3 | 3 |
| Fin type |  | Hydrophilic | Hydrophilic |
| Tube diameter and type | mm | Φ7 | Φ7 |
| Air flow (High speed) | | m3/h | 1350 | 1400 |
| Sound pressure level | | dB(A) | 46/44/41 | 47/45/41 |
| Body | Dimension (W×H×D) | mm | 549×1853×419 | 549×1853×419 |
| Packing (W×H×D) | mm | 645× 1960×510 | 645× 1960×510 |
| Net/Gross weight | kg | 52/62 | 52/62 |
| Refrigerant type | |  | R410A | R410A |
| Throttle type | |  | EXV | EXV |
| Design pressure | | MPa | 4.5 | 4.5 |
| Liquid pipe / Gas pipe | | mm | 9.52/15.88 | 9.52/15.88 |
| Connecting wire | Power wire | mm2 | 2.5\*2+2.5(below20m) 4\*2.5+2.5(below50m) | 2.5\*2+2.5(below20m) 4\*2.5+2.5(below50m) |
| Signal wire | mm2 | 0.75\*2 (2-core shielded wire) | 0.75\*2 (2-core shielded wire) |
| Drainage water pipe | | mm | 20 | 20 |
| Controller | Standard |  | Remote controller | Remote controller |
| Optional |  | Wired controller | Wired controller |
| Operation temp | | ˚C | 16~32 | 16~32 |

***Notes:***

1. *Nominal cooling capacities are based on the following conditions.*

* *Outdoor temperature: 35°C DB*
* *Return air temperature: 27°C DB, 19°C WB*

1. *Nominal heating capacities are based on the following condition.*

* *Outdoor temperature: 7°C DB, 6°C WB*
* *Return air temperature: 20°C DB*

1. *The above data may be changed without notice for future improvement on quality and performance.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model | | | D140FA/HR1-LB05 | GCHV-D160FA/HR1-LB05 |
| Power supply | | | 220-240V/1N/50Hz | 220-240V/1N/50Hz |
| Capacity | Cooling | kW | 14 | 16 |
| Heating | kW | 15 | 17 |
| Max. Power Input | | W | 120 | 120 |
| Max. Current | | A | 1 | 1 |
| Fan motor | Model |  | DR-310-170-8 | DR-310-170-8 |
| Type |  | DC | DC |
| Brand |  | OCEAN | OCEAN |
| Capacitor | μF | - | - |
| Speed (Hi/Med/Low) | r/min | 490/450/400 | 490/450/400 |
| Indoor coil | Number of rows |  | 3 | 3 |
| Fin type |  | Hydrophilic | Hydrophilic |
| Tube diameter and type | mm | Φ7 | Φ7 |
| Air flow (High speed) | | m3/h | 1700 | 1700 |
| Sound pressure level | | dB(A) | 49/47/44 | 49/47/44 |
| Body | Dimension (W×H×D) | mm | 645×1920×406 | 645×1920×406 |
| Packing (W×H×D) | mm | 740×2080×540 | 740×2080×540 |
| Net/Gross weight | kg | 56.5/68.5 | 56.5/68.5 |
| Refrigerant type | |  | R410A | R410A |
| Throttle type | |  | EXV | EXV |
| Design pressure | | MPa | 4.5 | 4.5 |
| Liquid pipe / Gas pipe | | mm | 9.52/15.88 | 9.52/15.88 |
| Connecting wire | Power wire | mm2 | 2.5\*2+2.5(below20m) 4\*2.5+2.5(below50m) | 2.5\*2+2.5(below20m) 4\*2.5+2.5(below50m) |
| Signal wire | mm2 | 0.75\*2 (2-core shielded wire) | 0.75\*2 (2-core shielded wire) |
| Drainage water pipe | | mm | 20 | 20 |
| Controller | Standard |  | Remote controller | Remote controller |
| Optional |  | Wired controller | Wired controller |
| Operation temp | | ˚C | 16~32 | 16~32 |

***Notes:***

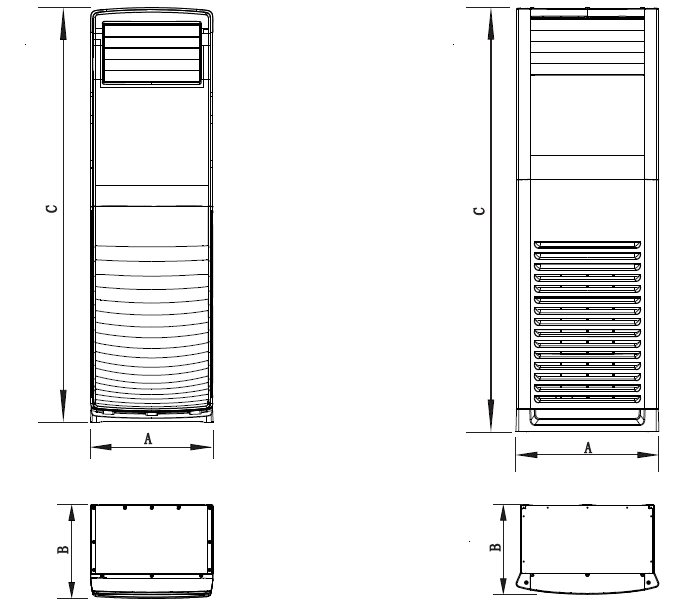
1. *Nominal cooling capacities are based on the following conditions.*

* *Outdoor temperature: 35°C DB*
* *Return air temperature: 27°C DB, 19°C WB*
* *Equivalent piping length: 8m in horizontal*

1. *Nominal heating capacities are based on the following condition.*

* *Outdoor temperature: 7°C DB, 6°C WB*
* *Return air temperature: 20°C DB*
* *Equivalent piping length: 8m in horizontal*

1. *Sound pressure level: Semi-anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.4 m.*
2. *The above data may be changed without notice for future improvement on quality and performance.*
3. **Dimensions**

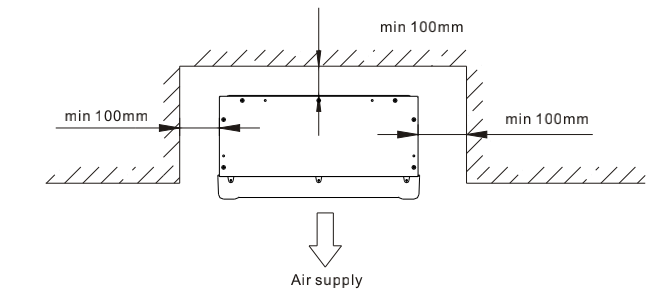
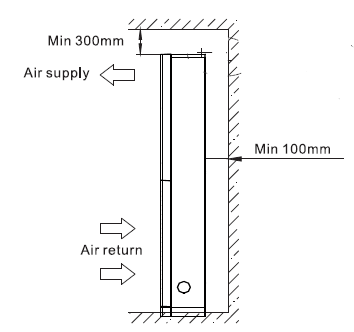


8~10kW 14~16kW

|  |  |  |  |
| --- | --- | --- | --- |
| Model | Body dimension (mm) | | |
| **A** | **B** | **C** |
| GCHV-D80FA/HR1-LC03 | 549 | 419 | 1853 |
| GCHV-D100FA/HR1-LC03 | 549 | 419 | 1853 |
| GCHV-D140FA/HR1-LB05 | 648 | 406 | 1922 |
| GCHV-D160FA/HR1-LB05 | 648 | 406 | 1922 |

1. **Service space**

* There is enough room for installation and maintenance.
* The outlet and the inlet are not impeded, and the influence of external air is the least.
* The air flow can reach throughout the room.
* The connecting pipe and drainpipe could be extracted out easily.
* There is no direct radiation from heaters.

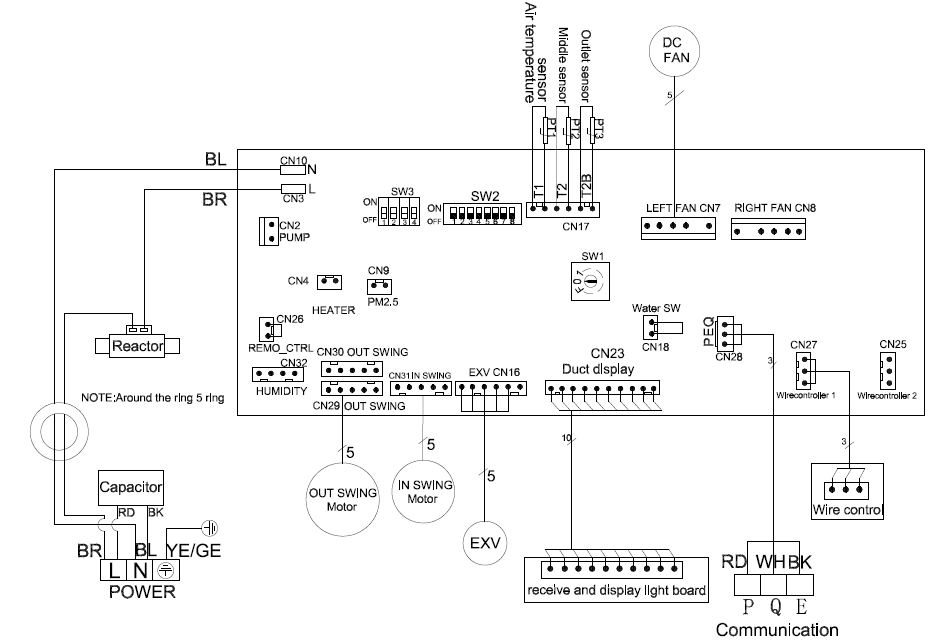


1. **Piping diagram**

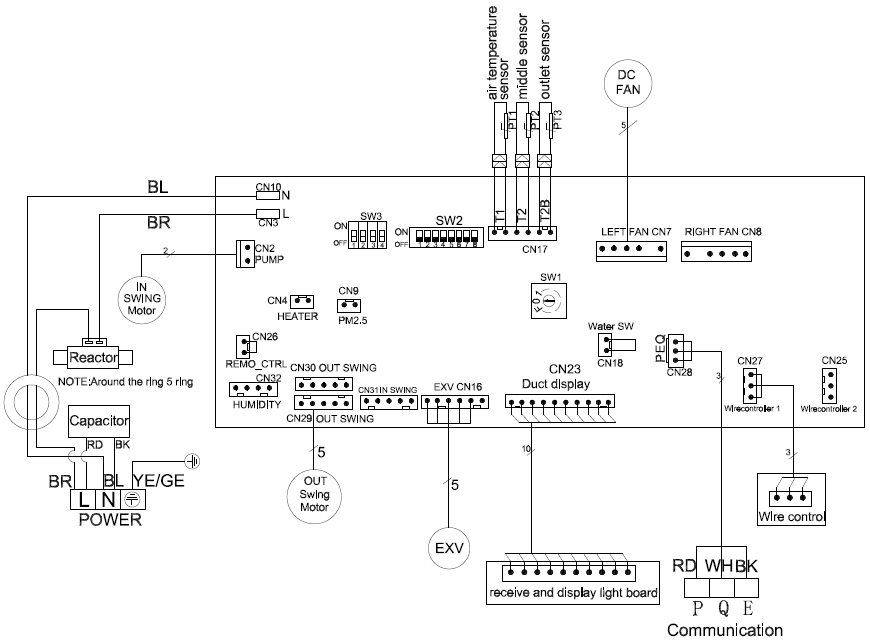


***Notes:***

1. *T1: Room temperature sensor*
2. *T2: Temperature sensor of middle heat exchanger*
3. *T2B: Temperature sensor of heat exchanger outlet*
4. *EXV: Electrical expansion valve*
5. **Wiring diagram**
6. 8kW and 10kW

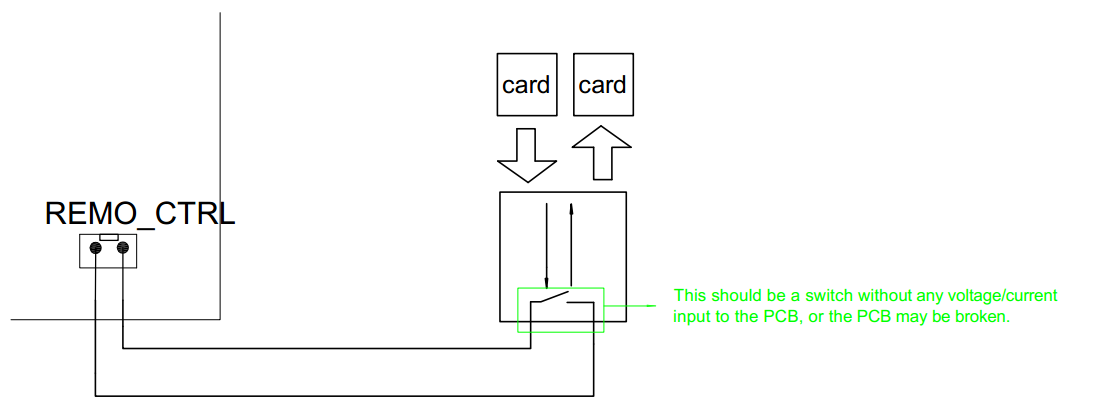


1. 14kW and 16kW



***Chigo VRF indoor unit connect with card key***

Connect the remote control terminal on the indoor PCB to the hotel card module.



NOTE: The terminal in the hotel card module must be a switch without any voltage/current input to the PCB, otherwise the PCB will be broken.

* 1. Dial switches

1. SW1: Capacity switch.

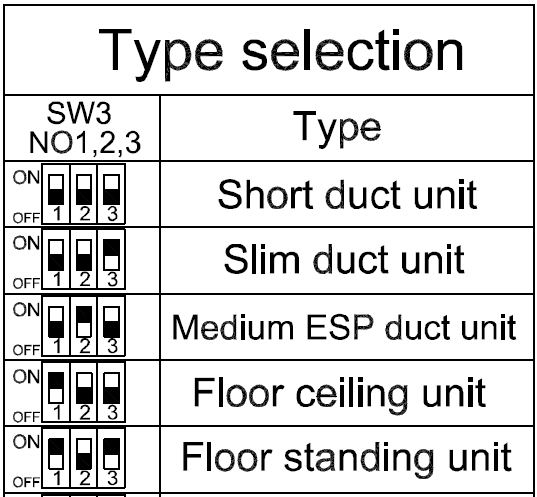
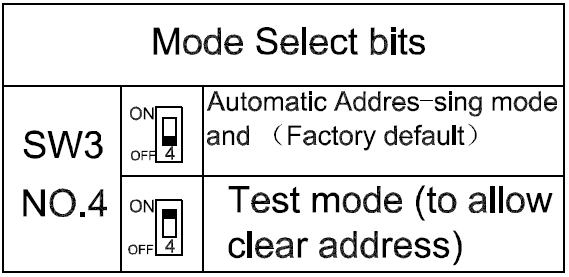
Different number in the switch indicates different capacity. It is set in factory; leave it as default setting,

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| HP | 0.8 | 1 | 1.2 | 1.7 | 2 | 2.5 |
| Capacity (kW) | 1.8/2.2 | 2.5/2.6/2.8 | 3.2/3.5/3.6 | 4.0/4.5/4.6 | 5.0/5.1/5.6 | 6.0/6.3/6.6/7.1 |
| Code | 0 | 1 | 2 | 3 | 4 | 5 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| HP | 3 | 3.2 | 4 | 5 | 6 |
| Capacity (kW) | 8.0 | 8.8/9.0 | 10.0/11.0/11.2 | 12.0/12.5/14.0 | 15.0/16.0 |
| Code | 6 | 7 | 8 | 9 | A |

1. SW3

1. SW2

|  |  |
| --- | --- |
| Name | Switch number 1 of SW2 |
| Function | Cooling temperature compensation temperature value select bits |
| Setting |  |

|  |  |
| --- | --- |
| Name | Switch number 2 of SW2 |
| Function | Heating temperature compensation temperature value select bits |
| Setting |  |

|  |  |
| --- | --- |
| Name | Switch number 3,4 of SW2 |
| Function | Anti-cold wind off the fan temperature selection bit |
| Setting |  |

|  |  |
| --- | --- |
| Name | Switch number 5 of SW2 |
| Function | Heating stop the fan time to choose |
| Setting |  |

|  |  |
| --- | --- |
| Name | Switch number 6of SW2 |
| Function | According to the contract custom ppower lost memory functions |
| Setting |  |

|  |  |
| --- | --- |
| Name | Switch number 8 of SW2 |
| Function | HIGH/SUPER HIGH SPEED |
| Setting |  |

1. **Capacity tables**
2. Cooling

**TC**: Total Capacity **SC**: Sensible Capacity **WB**: Wet-bulb Temperature **DB**: Dry-bulb Temperature

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| capacity (kW) | Outdoor temperature (˚C DB) | Indoor temperature (˚C WB/DB) | | | | | | | | | | | | | |
| 14/20 | | 16/23 | | 18/26 | | 19/27 | | 20/28 | | 22/30 | | 24/32 | |
| TC | SC | TC | SC | TC | SC | TC | SC | TC | SC | TC | SC | TC | SC |
| kW | kW | kW | kW | kW | kW | kW | kW | kW | kW | kW | kW | kW | kW |
| 8.0 | 10 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.71 | 6.18 | 9.32 | 6.27 | 9.70 | 5.62 |
| 12 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.71 | 6.18 | 9.32 | 6.27 | 9.61 | 5.57 |
| 14 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.71 | 6.18 | 9.24 | 6.21 | 9.52 | 5.52 |
| 16 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.71 | 6.18 | 9.16 | 6.16 | 9.44 | 5.47 |
| 18 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.71 | 6.18 | 9.07 | 6.10 | 9.35 | 5.42 |
| 19 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.71 | 6.18 | 8.99 | 6.04 | 9.27 | 5.37 |
| 21 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.71 | 6.18 | 8.91 | 5.99 | 9.18 | 5.31 |
| 23 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.71 | 6.18 | 8.82 | 5.93 | 9.09 | 5.26 |
| 25 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.71 | 6.12 | 8.74 | 5.87 | 9.01 | 5.21 |
| 27 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.63 | 6.06 | 8.66 | 5.82 | 8.92 | 5.16 |
| 29 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.55 | 6.01 | 8.57 | 5.76 | 8.83 | 5.11 |
| 31 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.47 | 5.95 | 8.49 | 5.70 | 8.75 | 5.06 |
| 33 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.38 | 5.83 | 8.41 | 5.65 | 8.66 | 5.01 |
| 35 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.80 | 8.26 | 5.77 | 8.32 | 5.59 | 8.58 | 4.96 |
| 37 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.77 | 8.14 | 5.66 | 8.24 | 5.48 | 8.41 | 4.86 |
| 39 | 5.54 | 5.00 | 6.54 | 5.22 | 7.54 | 5.81 | 8.00 | 5.74 | 8.08 | 5.60 | 8.16 | 5.42 | 8.32 | 4.81 |
| 41 | 5.54 | 5.00 | 6.54 | 5.22 | 7.44 | 5.81 | 7.92 | 5.71 | 8.00 | 5.54 | 8.08 | 5.36 | 8.23 | 4.76 |
| 43 | 5.54 | 5.00 | 6.54 | 5.22 | 7.36 | 5.81 | 7.84 | 5.69 | 7.92 | 5.48 | 8.00 | 5.31 | 8.15 | 4.71 |
| 46 | 5.54 | 5.00 | 6.41 | 5.12 | 7.12 | 5.81 | 7.76 | 5.66 | 7.84 | 5.42 | 7.92 | 5.25 | 8.08 | 4.66 |
| 48 | 5.54 | 5.00 | 6.34 | 5.06 | 6.88 | 5.63 | 7.52 | 5.60 | 7.76 | 5.36 | 7.68 | 5.19 | 7.84 | 4.61 |
| 50 | 5.44 | 5.00 | 6.28 | 5.01 | 6.64 | 5.57 | 7.28 | 5.45 | 7.52 | 5.30 | 7.44 | 5.14 | 7.60 | 4.56 |
| 10 | 10 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.81 | 11.65 | 7.92 | 12.12 | 7.11 |
| 12 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.81 | 11.65 | 7.92 | 12.01 | 7.05 |
| 14 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.81 | 11.55 | 7.85 | 11.90 | 6.98 |
| 16 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.81 | 11.44 | 7.78 | 11.80 | 6.92 |
| 18 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.81 | 11.34 | 7.71 | 11.69 | 6.86 |
| 19 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.81 | 11.24 | 7.64 | 11.58 | 6.79 |
| 21 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.81 | 11.13 | 7.57 | 11.47 | 6.73 |
| 23 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.81 | 11.03 | 7.50 | 11.37 | 6.67 |
| 25 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.74 | 10.92 | 7.43 | 11.26 | 6.61 |
| 27 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.79 | 7.67 | 10.82 | 7.36 | 11.15 | 6.54 |
| 29 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.68 | 7.59 | 10.72 | 7.29 | 11.04 | 6.48 |
| 31 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.58 | 7.52 | 10.62 | 7.22 | 10.94 | 6.42 |
| 33 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.48 | 7.38 | 10.51 | 7.15 | 10.83 | 6.35 |
| 35 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.33 | 7.30 | 10.40 | 7.07 | 10.72 | 6.29 |
| 37 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.30 | 10.17 | 7.16 | 10.30 | 6.93 | 10.51 | 6.16 |
| 39 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.26 | 10.10 | 7.08 | 10.20 | 6.86 | 10.40 | 6.10 |
| 41 | 6.92 | 6.25 | 8.17 | 6.53 | 9.30 | 7.34 | 9.90 | 7.23 | 10.00 | 7.01 | 10.10 | 6.79 | 10.29 | 6.04 |
| 43 | 6.92 | 6.25 | 8.17 | 6.53 | 9.20 | 7.34 | 9.80 | 7.19 | 9.90 | 6.94 | 10.00 | 6.72 | 10.19 | 5.98 |
| 46 | 6.92 | 6.25 | 8.01 | 6.39 | 8.90 | 7.34 | 9.70 | 7.16 | 9.80 | 6.86 | 9.90 | 6.65 | 10.10 | 5.91 |
| 48 | 6.92 | 6.25 | 7.93 | 6.33 | 8.60 | 7.12 | 9.40 | 7.09 | 9.70 | 6.79 | 9.60 | 6.58 | 9.80 | 5.85 |
| 50 | 6.92 | 6.25 | 8.17 | 6.53 | 9.42 | 7.34 | 10.00 | 7.34 | 10.89 | 7.81 | 11.65 | 7.92 | 12.12 | 7.11 |

**TC**: Total Capacity **SC**: Sensible Capacity **WB**: Wet-bulb Temperature **DB**: Dry-bulb Temperature

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| capacity (kW) | Outdoor temperature (˚C DB) | Indoor temperature (˚C WB/DB) | | | | | | | | | | | | | |
| 14/20 | | 16/23 | | 18/26 | | 19/27 | | 20/28 | | 22/30 | | 24/32 | |
| TC | SC | TC | SC | TC | SC | TC | SC | TC | SC | TC | SC | TC | SC |
| kW | kW | kW | kW | kW | kW | kW | kW | kW | kW | kW | kW | kW | kW |
| 14 | 10 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.24 | 11.00 | 16.32 | 11.15 | 16.97 | 10.01 |
| 12 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.24 | 11.00 | 16.32 | 11.15 | 16.82 | 9.92 |
| 14 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.24 | 11.00 | 16.17 | 11.05 | 16.67 | 9.84 |
| 16 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.24 | 11.00 | 16.02 | 10.95 | 16.52 | 9.75 |
| 18 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.24 | 11.00 | 15.88 | 10.86 | 16.37 | 9.66 |
| 19 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.24 | 11.00 | 15.73 | 10.76 | 16.22 | 9.57 |
| 21 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.24 | 11.00 | 15.59 | 10.66 | 16.06 | 9.48 |
| 23 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.24 | 11.00 | 15.44 | 10.56 | 15.91 | 9.40 |
| 25 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.24 | 10.90 | 15.29 | 10.46 | 15.76 | 9.31 |
| 27 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 15.10 | 10.79 | 15.15 | 10.36 | 15.61 | 9.22 |
| 29 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 14.96 | 10.69 | 15.01 | 10.26 | 15.46 | 9.13 |
| 31 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 14.82 | 10.59 | 14.86 | 10.16 | 15.31 | 9.04 |
| 33 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 14.67 | 10.39 | 14.71 | 10.06 | 15.16 | 8.95 |
| 35 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.34 | 14.46 | 10.28 | 14.57 | 9.96 | 15.01 | 8.87 |
| 37 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.29 | 14.24 | 10.08 | 14.42 | 9.77 | 14.71 | 8.69 |
| 39 | 9.69 | 8.75 | 11.44 | 9.14 | 13.19 | 10.34 | 14.00 | 10.22 | 14.14 | 9.98 | 14.28 | 9.67 | 14.56 | 8.60 |
| 41 | 9.69 | 8.75 | 11.44 | 9.14 | 13.02 | 10.34 | 13.86 | 10.18 | 14.00 | 9.87 | 14.14 | 9.57 | 14.41 | 8.51 |
| 43 | 9.69 | 8.75 | 11.44 | 9.14 | 12.88 | 10.34 | 13.72 | 10.13 | 13.86 | 9.77 | 14.00 | 9.47 | 14.26 | 8.43 |
| 46 | 9.69 | 8.75 | 11.22 | 8.95 | 12.46 | 10.34 | 13.58 | 10.09 | 13.72 | 9.67 | 13.86 | 9.37 | 14.14 | 8.34 |
| 48 | 9.69 | 8.75 | 11.10 | 8.86 | 12.04 | 10.03 | 13.16 | 9.99 | 13.58 | 9.57 | 13.44 | 9.27 | 13.72 | 8.25 |
| 50 | 9.52 | 8.75 | 10.99 | 8.77 | 11.62 | 9.93 | 12.74 | 9.72 | 13.16 | 9.47 | 13.02 | 9.17 | 13.30 | 8.16 |
| 16 | 10 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.42 | 12.57 | 18.65 | 12.75 | 19.39 | 11.44 |
| 12 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.42 | 12.57 | 18.65 | 12.75 | 19.22 | 11.34 |
| 14 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.42 | 12.57 | 18.48 | 12.63 | 19.05 | 11.24 |
| 16 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.42 | 12.57 | 18.31 | 12.52 | 18.88 | 11.14 |
| 18 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.42 | 12.57 | 18.15 | 12.41 | 18.70 | 11.04 |
| 19 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.42 | 12.57 | 17.98 | 12.29 | 18.53 | 10.94 |
| 21 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.42 | 12.57 | 17.82 | 12.18 | 18.36 | 10.84 |
| 23 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.42 | 12.57 | 17.64 | 12.07 | 18.18 | 10.74 |
| 25 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.42 | 12.45 | 17.48 | 11.95 | 18.01 | 10.64 |
| 27 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.26 | 12.34 | 17.31 | 11.84 | 17.84 | 10.54 |
| 29 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 17.09 | 12.22 | 17.15 | 11.73 | 17.67 | 10.44 |
| 31 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 16.93 | 12.10 | 16.98 | 11.61 | 17.50 | 10.33 |
| 33 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 16.77 | 11.87 | 16.81 | 11.50 | 17.33 | 10.23 |
| 35 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.81 | 16.53 | 11.75 | 16.65 | 11.39 | 17.16 | 10.13 |
| 37 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.76 | 16.28 | 11.52 | 16.48 | 11.16 | 16.81 | 9.93 |
| 39 | 11.08 | 10.00 | 13.08 | 10.44 | 15.08 | 11.82 | 16.00 | 11.69 | 16.16 | 11.40 | 16.32 | 11.05 | 16.64 | 9.83 |
| 41 | 11.08 | 10.00 | 13.08 | 10.44 | 14.88 | 11.82 | 15.84 | 11.64 | 16.00 | 11.29 | 16.16 | 10.93 | 16.47 | 9.73 |
| 43 | 11.08 | 10.00 | 13.08 | 10.44 | 14.72 | 11.82 | 15.68 | 11.58 | 15.84 | 11.17 | 16.00 | 10.82 | 16.30 | 9.63 |
| 46 | 11.08 | 10.00 | 12.82 | 10.23 | 14.24 | 11.82 | 15.52 | 11.53 | 15.68 | 11.05 | 15.84 | 10.71 | 16.16 | 9.53 |
| 48 | 11.08 | 10.00 | 12.69 | 10.13 | 13.76 | 11.47 | 15.04 | 11.42 | 15.52 | 10.93 | 15.36 | 10.60 | 15.68 | 9.43 |
| 50 | 10.88 | 10.00 | 12.56 | 10.02 | 13.28 | 11.35 | 14.56 | 11.11 | 15.04 | 10.82 | 14.88 | 10.48 | 15.20 | 9.33 |

1. Heating

**TC**: Total Capacity **WB**: Wet-bulb Temperature **DB**: Dry-bulb Temperature

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Capacity (kW) | Outdoor temperature (˚C) | | Indoor temperature (˚C DB) | | | | | |
| 16 | 18 | 20 | 21 | 22 | 24 |
| TC | TC | TC | TC | TC | TC |
| WB | DB | kW | kW | kW | kW | kW | kW |
| 8.0 | -20 | -19.8 | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| -19 | -18.8 | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| -17 | -16.7 | 5.67 | 5.67 | 5.67 | 5.67 | 5.67 | 5.67 |
| -15 | -14.7 | 5.85 | 5.85 | 5.85 | 5.85 | 5.85 | 5.85 |
| -13 | -12.6 | 6.03 | 6.03 | 6.03 | 6.03 | 6.03 | 6.03 |
| -11 | -10.5 | 6.30 | 6.30 | 6.30 | 6.30 | 6.30 | 6.30 |
| -10 | -9.5 | 6.57 | 6.57 | 6.57 | 6.57 | 6.57 | 6.57 |
| -9.1 | -8.5 | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 | 6.75 |
| -7.6 | -7 | 6.84 | 6.84 | 6.84 | 6.84 | 6.84 | 6.84 |
| -5.6 | -5 | 7.11 | 7.11 | 7.11 | 7.11 | 7.11 | 7.11 |
| -3.7 | -3 | 7.47 | 7.47 | 7.47 | 7.47 | 7.47 | 7.47 |
| -0.7 | 0 | 8.01 | 8.01 | 8.01 | 8.01 | 8.01 | 7.56 |
| 2.2 | 3 | 8.46 | 8.46 | 8.46 | 8.46 | 8.28 | 7.56 |
| 4.1 | 5 | 8.62 | 8.62 | 8.62 | 8.62 | 8.28 | 7.56 |
| 6 | 7 | 9.00 | 9.00 | 8.80 | 8.73 | 8.28 | 7.56 |
| 7.9 | 9 | 9.27 | 9.27 | 8.80 | 8.73 | 8.28 | 7.56 |
| 9.8 | 11 | 9.54 | 9.54 | 8.80 | 8.73 | 8.28 | 7.56 |
| 11.8 | 13 | 9.90 | 9.72 | 8.80 | 8.73 | 8.28 | 7.56 |
| 13.7 | 15 | 10.17 | 9.72 | 8.80 | 8.73 | 8.28 | 7.56 |
| 10 | -20 | -19.8 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 | 6.16 |
| -19 | -18.8 | 6.60 | 6.60 | 6.60 | 6.60 | 6.60 | 6.60 |
| -17 | -16.7 | 6.93 | 6.93 | 6.93 | 6.93 | 6.93 | 6.93 |
| -15 | -14.7 | 7.15 | 7.15 | 7.15 | 7.15 | 7.15 | 7.15 |
| -13 | -12.6 | 7.37 | 7.37 | 7.37 | 7.37 | 7.37 | 7.37 |
| -11 | -10.5 | 7.70 | 7.70 | 7.70 | 7.70 | 7.70 | 7.70 |
| -10 | -9.5 | 8.03 | 8.03 | 8.03 | 8.03 | 8.03 | 8.03 |
| -9.1 | -8.5 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 | 8.25 |
| -7.6 | -7 | 8.36 | 8.36 | 8.36 | 8.36 | 8.36 | 8.36 |
| -5.6 | -5 | 8.69 | 8.69 | 8.69 | 8.69 | 8.69 | 8.69 |
| -3.7 | -3 | 9.13 | 9.13 | 9.13 | 9.13 | 9.13 | 9.13 |
| -0.7 | 0 | 9.79 | 9.79 | 9.79 | 9.79 | 9.79 | 9.24 |
| 2.2 | 3 | 10.34 | 10.34 | 10.34 | 10.34 | 10.12 | 9.24 |
| 4.1 | 5 | 10.67 | 10.67 | 10.67 | 10.67 | 10.12 | 9.24 |
| 6 | 7 | 11.00 | 11.00 | 11.00 | 10.67 | 10.12 | 9.24 |
| 7.9 | 9 | 11.33 | 11.33 | 11.00 | 10.67 | 10.12 | 9.24 |
| 9.8 | 11 | 11.66 | 11.66 | 11.00 | 10.67 | 10.12 | 9.24 |
| 11.8 | 13 | 12.10 | 11.88 | 11.00 | 10.67 | 10.12 | 9.24 |
| 13.7 | 15 | 12.43 | 11.88 | 11.00 | 10.67 | 10.12 | 9.24 |

**TC**: Total Capacity **WB**: Wet-bulb Temperature **DB**: Dry-bulb Temperature

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Capacity (kW) | Outdoor temperature (˚C) | | Indoor temperature (˚C DB) | | | | | |
| 16 | 18 | 20 | 21 | 22 | 24 |
| TC | TC | TC | TC | TC | TC |
| WB | DB | kW | kW | kW | kW | kW | kW |
| 14 | -20 | -19.8 | 8.68 | 8.68 | 8.68 | 8.68 | 8.68 | 8.68 |
| -19 | -18.8 | 9.30 | 9.30 | 9.30 | 9.30 | 9.30 | 9.30 |
| -17 | -16.7 | 9.77 | 9.77 | 9.77 | 9.77 | 9.77 | 9.77 |
| -15 | -14.7 | 10.08 | 10.08 | 10.08 | 10.08 | 10.08 | 10.08 |
| -13 | -12.6 | 10.40 | 10.40 | 10.40 | 10.40 | 10.40 | 10.40 |
| -11 | -10.5 | 10.90 | 10.90 | 10.90 | 10.90 | 10.90 | 10.90 |
| -10 | -9.5 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 |
| -9.1 | -8.5 | 11.60 | 11.60 | 11.60 | 11.60 | 11.60 | 11.60 |
| -7.6 | -7 | 11.80 | 11.80 | 11.80 | 11.80 | 11.80 | 11.80 |
| -5.6 | -5 | 12.30 | 12.30 | 12.30 | 12.30 | 12.30 | 12.30 |
| -3.7 | -3 | 12.90 | 12.90 | 12.90 | 12.90 | 12.90 | 12.90 |
| -0.7 | 0 | 13.80 | 13.80 | 13.80 | 13.80 | 13.80 | 13.00 |
| 2.2 | 3 | 14.60 | 14.60 | 14.60 | 14.60 | 14.30 | 13.00 |
| 4.1 | 5 | 15.00 | 15.00 | 15.00 | 15.00 | 14.30 | 13.00 |
| 6 | 7 | 15.50 | 15.50 | 15.00 | 15.00 | 14.30 | 13.00 |
| 7.9 | 9 | 16.00 | 16.00 | 15.50 | 15.00 | 14.30 | 13.00 |
| 9.8 | 11 | 16.40 | 16.40 | 15.50 | 15.00 | 14.30 | 13.00 |
| 11.8 | 13 | 17.10 | 16.70 | 15.50 | 15.00 | 14.30 | 13.00 |
| 13.7 | 15 | 17.50 | 16.70 | 15.50 | 15.00 | 14.30 | 13.00 |
| 16 | -20 | -19.8 | 10.08 | 10.08 | 10.08 | 10.08 | 10.08 | 10.08 |
| -19 | -18.8 | 10.80 | 10.80 | 10.80 | 10.80 | 10.80 | 10.80 |
| -17 | -16.7 | 11.43 | 11.43 | 11.43 | 11.43 | 11.43 | 11.43 |
| -15 | -14.7 | 11.70 | 11.70 | 11.70 | 11.70 | 11.70 | 11.70 |
| -13 | -12.6 | 12.42 | 12.42 | 12.42 | 12.42 | 12.42 | 12.42 |
| -11 | -10.5 | 12.60 | 12.78 | 12.78 | 12.78 | 12.78 | 12.78 |
| -10 | -9.5 | 13.14 | 13.14 | 13.14 | 13.14 | 13.14 | 13.14 |
| -9.1 | -8.5 | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 | 13.50 |
| -7.6 | -7 | 13.68 | 13.68 | 13.68 | 13.68 | 13.68 | 13.68 |
| -5.6 | -5 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 |
| -3.7 | -3 | 14.94 | 14.94 | 14.94 | 14.94 | 14.94 | 14.94 |
| -0.7 | 0 | 16.02 | 16.02 | 16.02 | 16.02 | 16.02 | 15.12 |
| 2.2 | 3 | 16.92 | 16.92 | 16.92 | 16.92 | 16.56 | 15.12 |
| 4.1 | 5 | 17.00 | 17.00 | 17.00 | 17.00 | 16.56 | 15.12 |
| 6 | 7 | 17.00 | 17.00 | 17.00 | 17.00 | 16.56 | 15.12 |
| 7.9 | 9 | 17.54 | 17.54 | 17.00 | 17.00 | 16.56 | 15.12 |
| 9.8 | 11 | 18.08 | 17.78 | 17.00 | 17.00 | 16.56 | 15.12 |
| 11.8 | 13 | 18.80 | 18.04 | 17.00 | 17.00 | 16.56 | 15.12 |
| 13.7 | 15 | 19.34 | 18.44 | 17.00 | 17.00 | 16.56 | 15.12 |

1. **Electrical characteristics**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **Indoor unit** | | | | **MFC** | **Power cable** | | | **Signal cable** |
| **Hz** | **Voltage** | **Minimum** | **Maximum** | **L ≤ 20m** | **L ≤ 50m** | **Grounded** |
| GCHV-D80FA/HR1-LC03 | 50Hz | 220-240V | 198 | 264 | 15 | 2\*2.5mm2 | 2\*4.0mm2 | 2.5mm2 | 2\*0.75 mm2 |
| GCHV-D100FA/HR1-LC03 | 50Hz | 220-240V | 198 | 264 | 15 | 2\*2.5mm2 | 2\*4.0mm2 | 2.5mm2 | 2\*0.75 mm2 |
| GCHV-D140FA/HR1-LB05 | 50Hz | 220-240V | 198 | 264 | 15 | 2\*2.5mm2 | 2\*4.0mm2 | 2.5mm2 | 2\*0.75 mm2 |
| GCHV-D160FA/HR1-LB05 | 50Hz | 220-240V | 198 | 264 | 15 | 2\*2.5mm2 | 2\*4.0mm2 | 2.5mm2 | 2\*0.75 mm2 |

***Notes:***

1. *Minimum: Permitted minimum operating voltage, lower than this value may damage the system*
2. *Maximum: Permitted maximum operating voltage, higher than this value may damage the system*
3. *MC: Minimum Current (A)*
4. *MFC: Maximum Fuse Current (A)*
5. *L: Total length of cable (m)*
6. **Sound levels**
7. Test condition



***Notes:***

*Semi-anechoic chamber conversion value, measured at a point 1.5m in front of the unit at a height of 1m*

1. Test data (Sound pressure level)

|  |  |  |  |
| --- | --- | --- | --- |
| **Model** | **Sound pressure level (dB(A))** | | |
| **High speed** | **Medium speed** | **Low speed** |
| GCHV-D80FA/HR1-LC03 | 46 | 44 | 41 |
| GCHV-D100FA/HR1-LC03 | 47 | 45 | 41 |
| GCHV-D140FA/HR1-LB05 | 49 | 47 | 44 |
| GCHV-D160FA/HR1-LB05 | 49 | 47 | 44 |

***Notes:***

*During actual operation, these values are normally somewhat higher as a result of ambient conditions.*

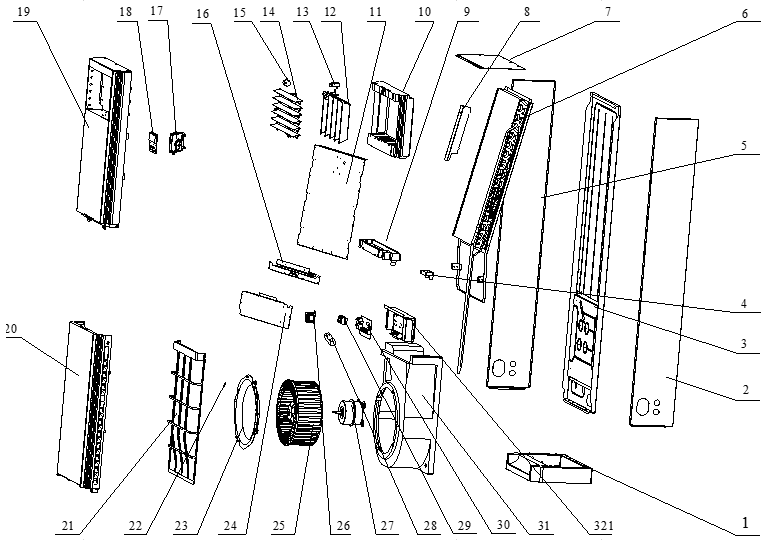
1. **Accessories**
2. Standard accessories.

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **Quantity** | **Shape** | **Usage** |
| Installation manual for indoor unit | 1 | / | Must deliver to customer |
| Insulation sheath | 2 |  | Thermal insulation for the jointing part of piping |
| U shape insulation termination points | 3 |  | For wiring |
| Remote controller | 1 |  | For controlling indoor unit |
| Batteries | 2 |  | Power to remote controller |
| Ribbon | 6 |  | Bind up cables and connecting pipes |
| Dome Insulated tip | 6 |  | Used to connect wires |
| Drain Pipe | 1 |  | Used to drain water |
| EXV component | 1 |  | / |
| Bag | 4 |  | For bagging accessories |

1. Local buy accessories.

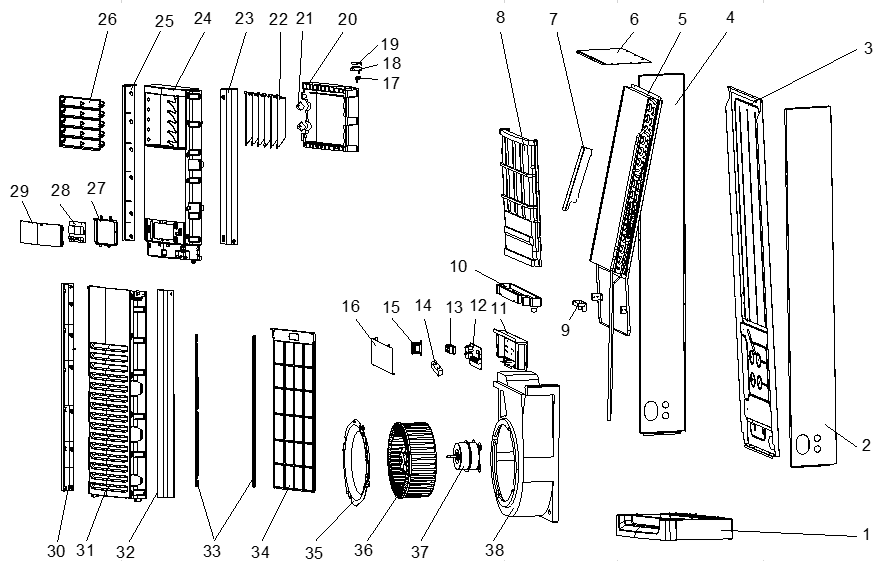
|  |  |
| --- | --- |
| **Item** | **Specification** |
| Liquid side copper pipe | Ø9.53mm\*0.75mm |
| Gas side copper pipe | Ø15.88mm\*1.0mm |
| Drainage pipe | PVC |
| Pipe insulation | Thickness ≥ 10mm |
| Power cables | 2\*2.5 mm2 (When total cable length is ≤20m)  2\*4.0 mm2 (When total cable length is ≤50m) |
| Grounded cable | 2.5 mm2 |
| Signal cables | 2\*0.75 mm2 (AVP, RVP, RVVP) |

1. **Exploded view**

* GCHV-D80FA/HR1-LC03, GCHV-D100FA/HR1-LC03

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Part name** | **Quantity** | **No.** | **Part name** | **Quantity** |
| **1** | Inside Base | 1 | **19** | Up Panel | **1** |
| **2** | Right Plate | 1 | **20** | Down panel | 1 |
| **3** | Back Plate | 1 | **21** | Air Filter | 1 |
| **4** | Rubber Water Drainage | 1 | **22** | Indoor Sensor | 1 |
| **5** | Left Plate | 1 | **23** | Lead Flow Circle | 1 |
| **6** | Evaporator | 1 | **24** | Inside Electrical Box Cover | 1 |
| **7** | Top Plate | 1 | **25** | Centrifugal Fan | 1 |
| **8** | Pipe Cover | 1 | **27** | Indoor Motor | 1 |
| **9** | Water Drainage | 1 | **28** | Terminal (LN) | 1 |
| **10** | Out Blow Casing Foam | 1 | **29** | Terminal (PQE) | 1 |
| **11** | Heat insulation board | 1 | **30** | Main PCB | 1 |
| **12** | Vertical Vane | 1 | **31** | Volute Casing | 1 |
| **13** | Synchronization Motor | 1 | **32** | Inside Electrical Box | 1 |
| **14** | Horizontal Vane | 1 | **33** | Remote Controller | 1 |
| **15** | Vertical Vane Motor | 1 | **34** | Indoor Sensor | 1 |
| **16** | Middle Supporter | 1 | **35** | Drainage hose | 1 |
| **17** | Display PCB Box | 1 | **36** | Indoor Carton | 1 |
| **18** | Display PCB | 1 | **37** | EXV part | 1 |

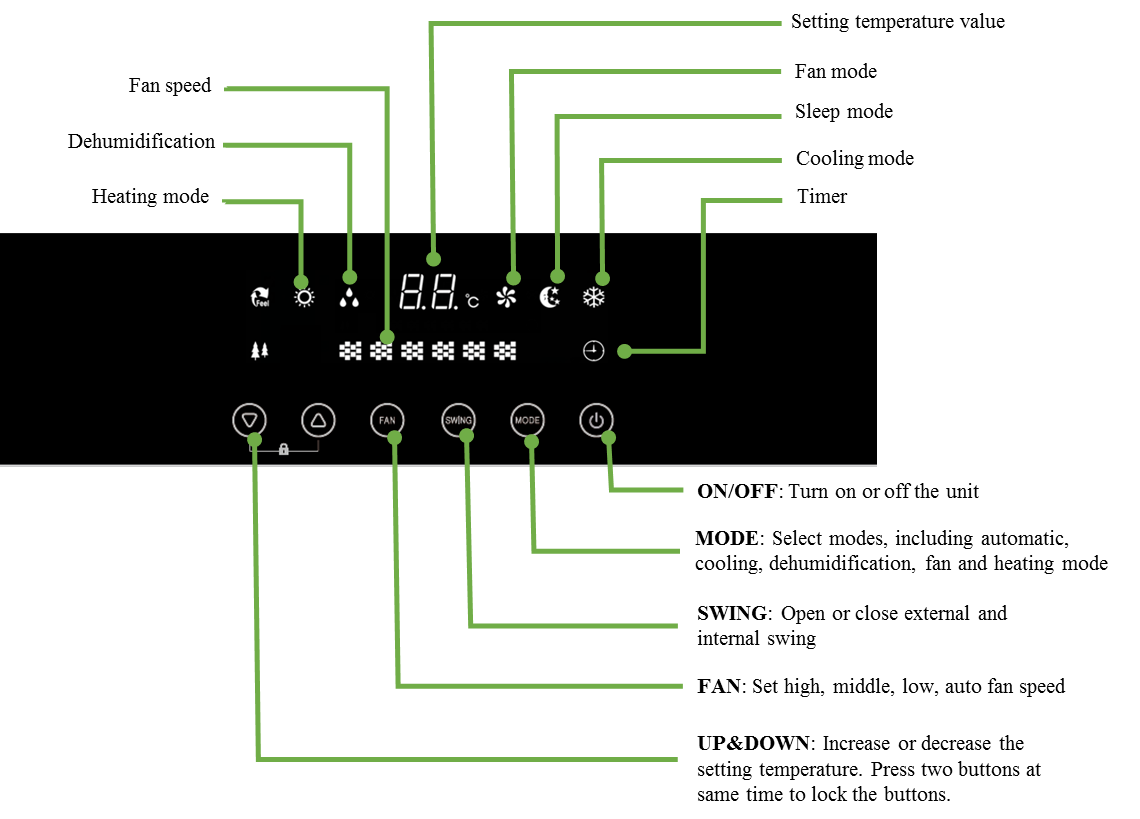
* GCHV-D140FA/HR1-LB05, GCHV-D160FA/HR1-LB05



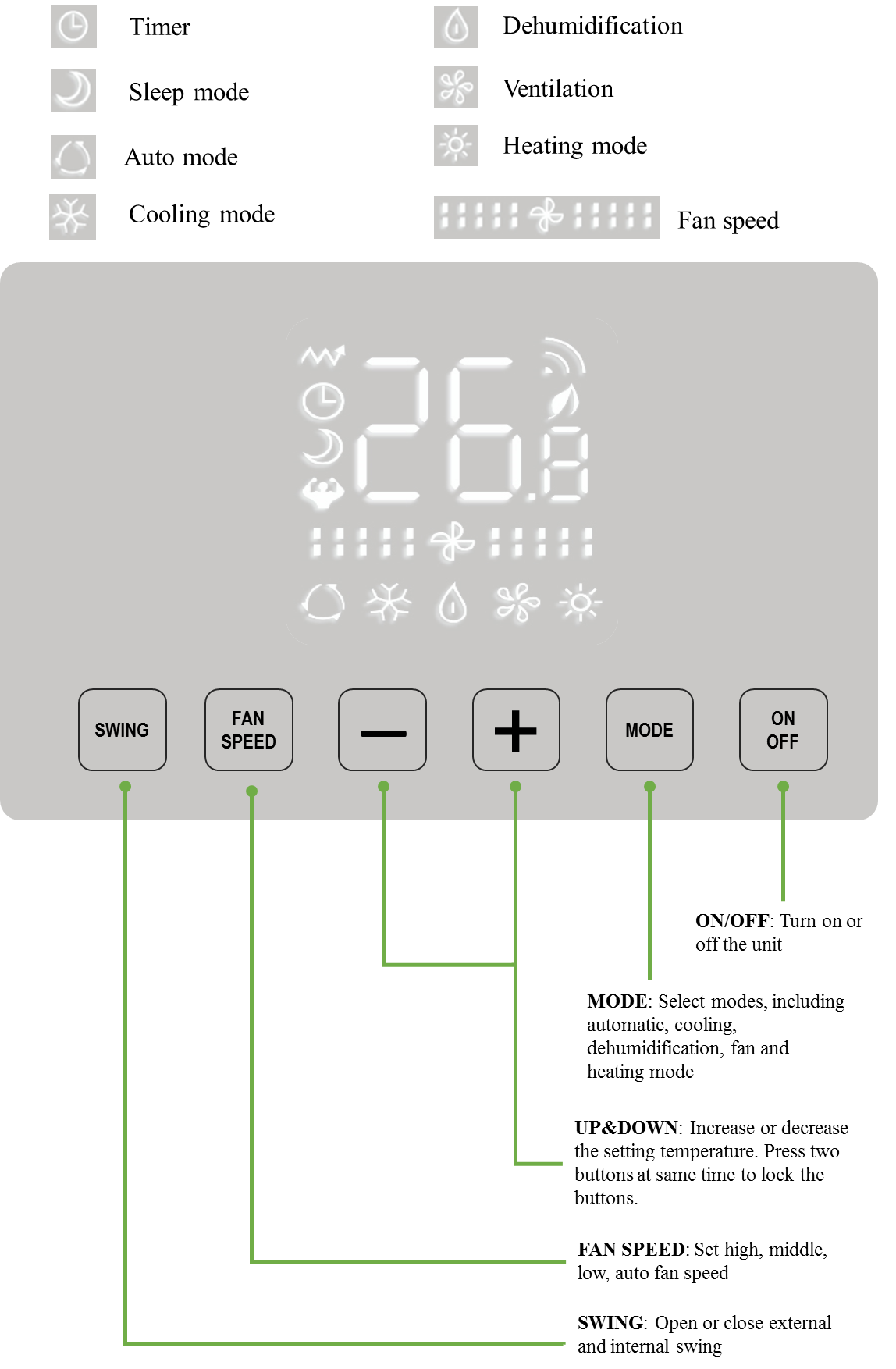
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Part name** | **Quantity** | **No.** | **Part name** | **Quantity** |
| **1** | Inside Base | 1 | **23** | Up-Left Ornamental Panel | 1 |
| **2** | Right Plate | 1 | **24** | Up Panel | 1 |
| **3** | Back Plate | 1 | **25** | Up-Right Ornamental Panel | 1 |
| **4** | Left Plate | 1 | **26** | Horizontal Vane | 1 |
| **5** | Evaporator | 1 | **27** | Display PCB Supporter | 1 |
| **6** | Top Plate | 1 | **28** | Display PCB | 1 |
| **7** | Pipe Cover | 1 | **29** | Display PCB Cover | 1 |
| **8** | Heat insulation board | 1 | **30** | Down-Left Ornamental Panel | 1 |
| **9** | Rubber Water Drainage | 1 | **31** | Down panel | 1 |
| **10** | Water Drainage | 1 | **32** | Down-Right Ornamental Panel | 1 |
| **11** | Inside Electrical Box | 1 | **33** | Air Filter Lead | 1 |
| **12** | Main PCB | 1 | **34** | Air Filter | 1 |
| **13** | Terminal (LN) | 1 | **35** | Lead Flow Circle | 1 |
| **14** | Capacitor | 1 | **36** | Centrifugal Fan | 1 |
| **15** | Reactor | 1 | **37** | Indoor Motor | 1 |
| **16** | Inside Electrical Box Cover | 1 | **38** | Volute Casing | 1 |
| **17** | Vertical Vane Connector | 1 | **39** | Room temp. Sensor | 1 |
| **18** | Synchronization Motor | 1 | **40** | Remote Controller | 1 |
| **19** | Synchronization Motor Cover | 1 | **41** | Drainage hose | 1 |
| **20** | Out Blow Casing Foam | 1 | **42** | Indoor Carton | 1 |
| **21** | Step Motor | 1 | **43** | EXV part | 1 |
| **22** | Vertical Vane | 1 | **44** | Up-Left Ornamental Panel | 1 |

**13 Display panel**

* GCHV-D80FA/HR1-LC03, GCHV-D100FA/HR1-LC03



* GCHV-D140FA/HR1-LB05, GCHV-D160FA/HR1-LB05



**14 Troubleshooting**

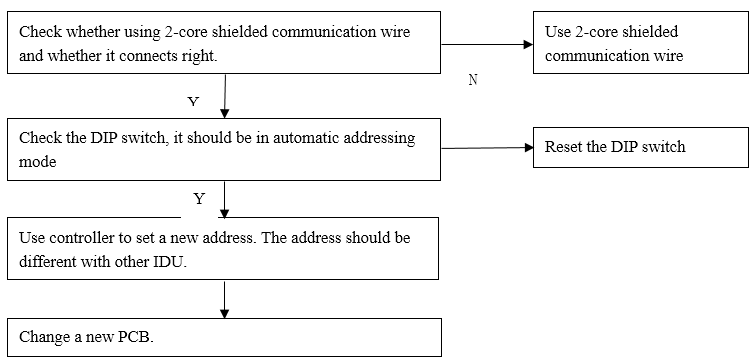
14.1 Error code list

|  |  |
| --- | --- |
| **Error code** | **Definitions** |
| FE | Indoor unit is without address when first switch on |
| E0 | Phase sequence fault or loose phase fault |
| E1 | Communication fault between indoor and outdoor unit |
| E2 | T1 temperature sensor fault |
| E3 | T2 temperature sensor fault |
| E4 | T2B temperature sensor fault |
| E5 | Outdoor unit fault |
| E6 | Zero-cross detection signal fault |
| E7 | EEPROM error |
| E8 | PG motor/DC motor fan speed detection fault |
| E9 | Communication fault between indoor unit and wired controller |
| EE | Alarming fault of water level switch |
| EF | Mode conflict |

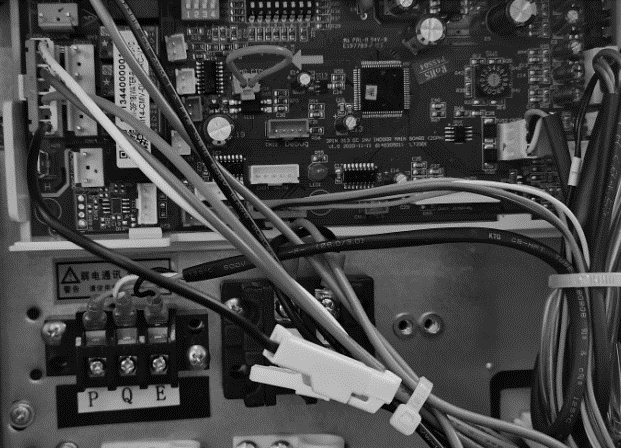
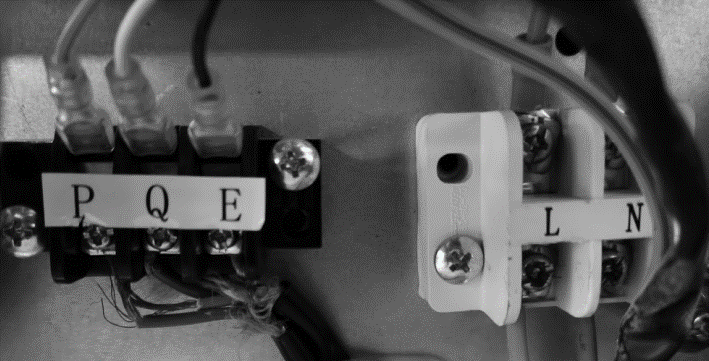
14.2 Troubleshooting

1. **FE: No address when first power on**

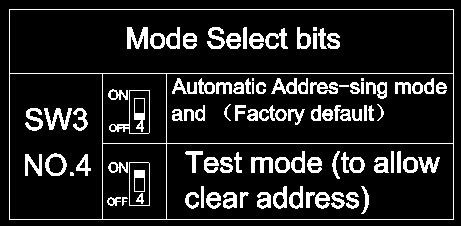
Fault reason: indoor unit doesn’t have address



* Check the communication wire PQE (PCB→ terminal→ communication wire)

* Check the DIP switch. It should be in automatic addressing mode.



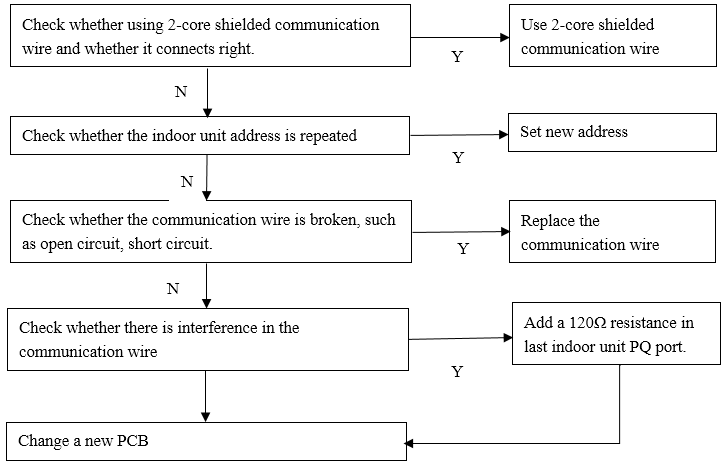
* Using wired controller or wireless controller to set a new address and the new address should be different with other indoor units. You can also repower on outdoor unit.
* The above steps are normal, replace the main board.

1. **E0：Phase sequence error or phase failure**

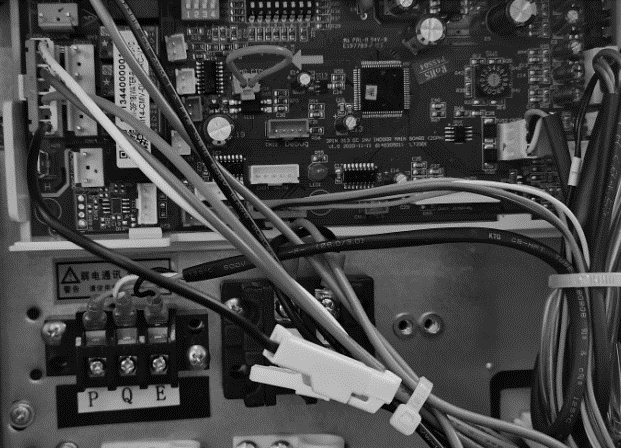
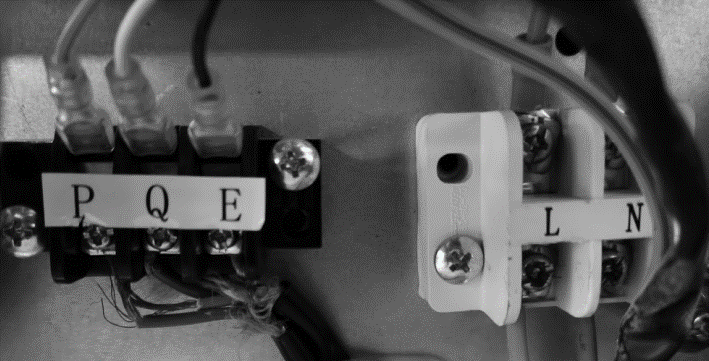
* Normally, indoor unit doesn’t have this error. If it shows this error, the main PCB or display board is broken.

1. **E1：Communication error between IDU and ODU**

Fault reason: The communication between the IDU and ODU is interrupted, and the IDU has an address.



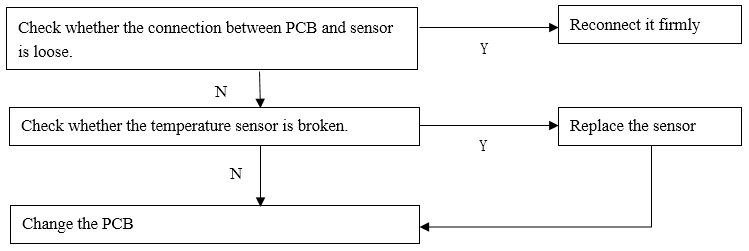
* Check the communication wire PQE (PCB→ terminal→ communication wire) .

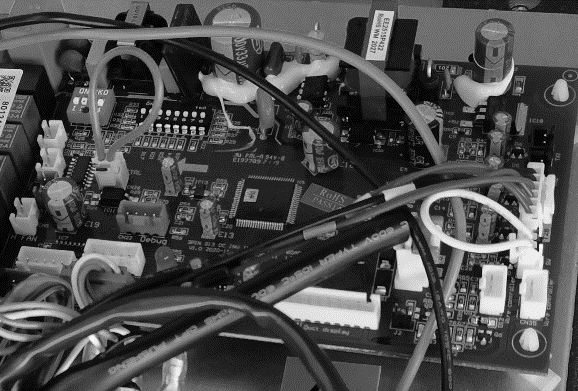
* Check whether the indoor unit address is repeated. If yes, reset a different address.
* If the address is not repeated and it is still faulty, check whether the communication wire is broken or open circuit/short circuit, use a multimeter to measure the resistance between PQ to check whether there is a short circuit; if there is no short circuit, short circuit PQ, and measure whether there is open circuit from the PQ terminal of the outdoor unit.
* If it is confirmed that there is no open circuit/short circuit, it may be a communication interference. Connect a 120Ω resistance between the PQ port of the last indoor unit. If it still cannot be solved, check the interference source and eliminate it. If it still does not solve it, replace the main PCB.

1. **E2/E3/E4：T1/T2/T2B temperature sensor fault**

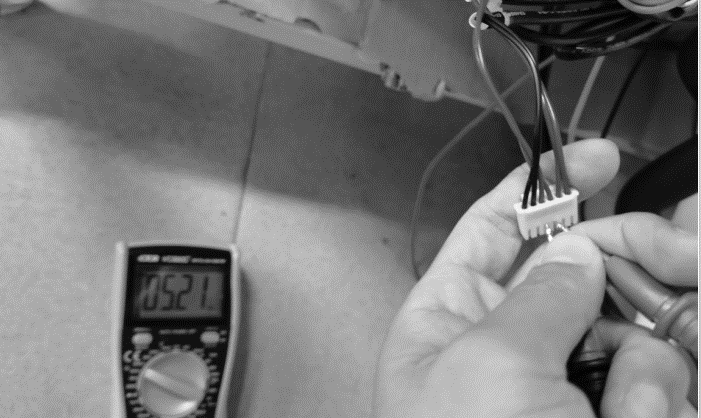
Fault reason: PCB reads the sensor resistance value abnormally.



* Confirm whether the sensor is firmly connected, and check the sensor socket to ensure that the connection is secure;



* Unplug the sensor, use a multimeter to measure the resistance, check whether there is an open circuit/short circuit, if yes, replace the sensor; check the resistance table to check whether the sensor has resistance drift, otherwise replace the main control board



* See appendix 1 for the sensor resistance table

1. **E5：Outdoor unit error**

* Check the fault code of the outdoor unit, and solve it according to the specific fault of the outdoor unit.

1. **E6：Zero-cross signal fault**

Fault reason: Main PCB zero-crossing detection circuit problem

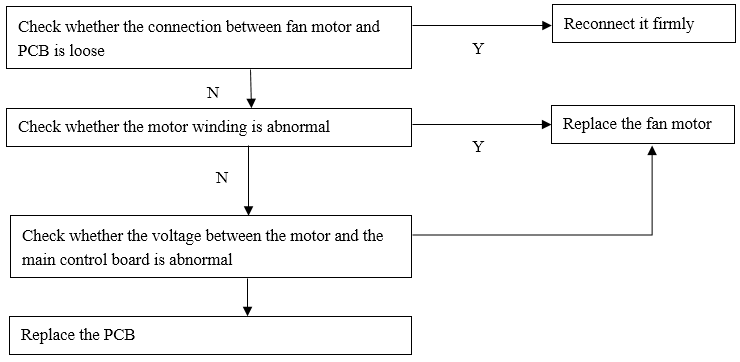
* Replace the PCB

1. **E7：EEPROM error**

* Replace the PCB

1. **E8：PG motor/DC motor fan speed detection fault**

Fault reason: The main control board detects that the fan speed signal is abnormal (DC motor internal machine)

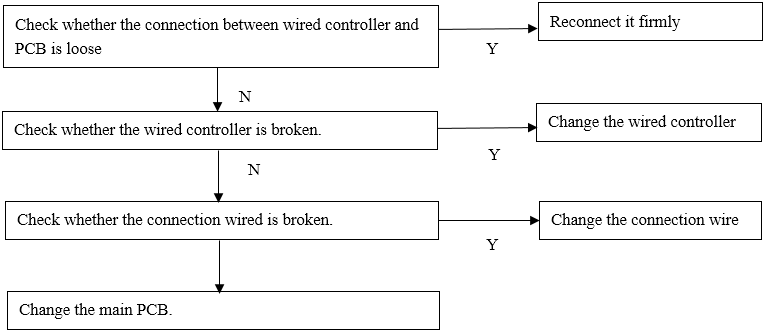


* Check whether the connection wire between the motor and the PCB is firmly connected, then proceed to the next step.
* If the motor is connected with a three-core cable, measure the voltage between the UVW cables, if there is voltage, replace the motor, otherwise replace the fan module board (normally fan module and the PCB are integrated board)
* If the motor is connected with a five-core cable, measure the following voltages in sequence:

* Check whether the power supply is normal, the power supply phase voltage is 220-240V.
* Use a multimeter to measure the voltage of Vm-GND and Vcc-GND, whether it is DC310V/380V and DC15V, if not, replace the PCB, otherwise proceed to the next step.
* Use a multimeter to measure the Vsp-GND voltage (DC0-6.5V), DC0V when the fan is stopped. And voltage fluctuates when there is a demand when the fan is turned on. If not, replace the PCB.
* Use a multimeter to measure FG-GND, the DC voltage will jump with the fan speed change, otherwise replace the motor.

1. **E9：Wired controller communication fault**

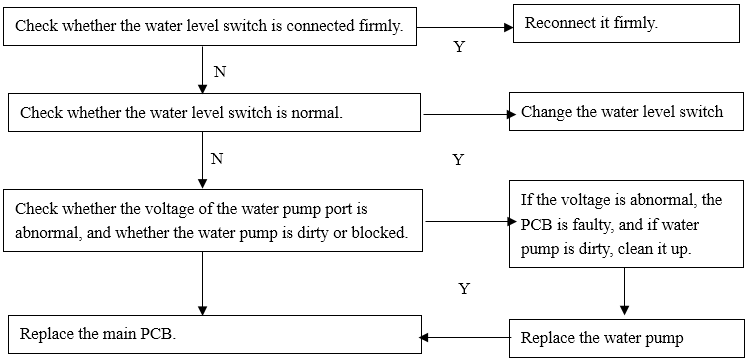
Fault reason: The communication between the PCB and the wire controller is interrupted



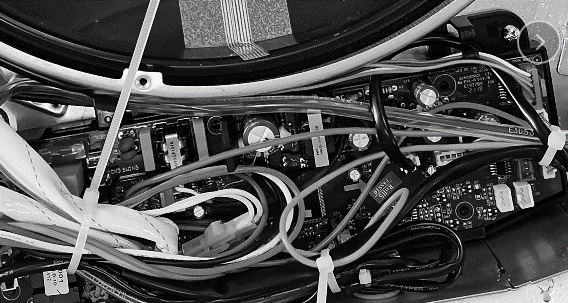
* Check whether the communication wire of the wired controller is firmly connected, confirm that the communication wire is not damaged, open/short, and reconnect it firmly.
* If the communication is no problem, replace the wired controller. If it can’t be solved, replace the PCB.

1. **EE：Water level alarm**

Fault reason: The detection port of the water level switch continues to be open-circuited for more than three minutes



* Check whether the water level switch is firmly connected; (if the unit is without water pump, the water level switch port needs to be short-circuited)



* Check whether the power voltage of the water pump is normal, and the voltage is 220-240V; check whether the drain port of the water pump is abnormal and whether it is blocked.
* If the power port and drain port of the water pump are normal and the water pump cannot discharge water, replace the water pump.
* Check whether the water level switch is normal. Use a multimeter to measure the resistance of the water level switch. Infinity means disconnection, and resistance means conduction. If the water pump is in working condition and the resistance value of the water level switch is infinite, the water level switch is damaged (CN1/SW can be short-circuited directly, if the fault disappears, the water level switch is faulty. If the fault does not disappear, the water level switch is normal)
* If the above steps are all normal, replace the main control board；

1. **EF：Mode conflict**

Fault reason: some indoor units are in cooling mode and some indoor units are in heating mode in one system.

* Set indoor units to same mode. If it can’t solve it, replace the PCB.