

SIMPLE TECHNICAL MANUAL

YKD 012

Monosplit / DC Inverter



YKD 012



COMPATIBLE WITH
HKD

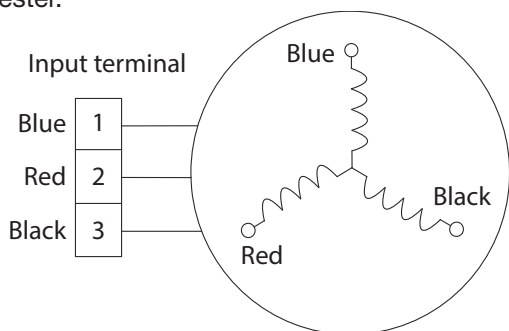


[TECHNICAL DATA]

| Outdoor unit YKD 012 | | |
|-------------------------------------|-----------|-----------------------|
| Cooling capacity | kW | 3.54 (1.3-4.4) |
| Input power (cooling) | kW | 1.00 |
| Heating capacity | kW | 3.5 (1.2-4.8) |
| Input power (heating) | kW | 0.97 |
| Circuit breaker rating | A | 10 |
| Sound pressure level outdoor unit | dB(A) | 53 |
| Weight outdoor unit | kg | 29.1 |
| Refrigerant charge | kg (5m) | 0.95 |
| Additional charge | g/m | 15 |
| Annual energy consumption (cooling) | kW/h | 193 |
| Annual energy consumption (heating) | kW/h | 1124 |
| Max length | m | 25 |
| Max height | m | 10 |
| Refrigerant control | type | Capillary tube |

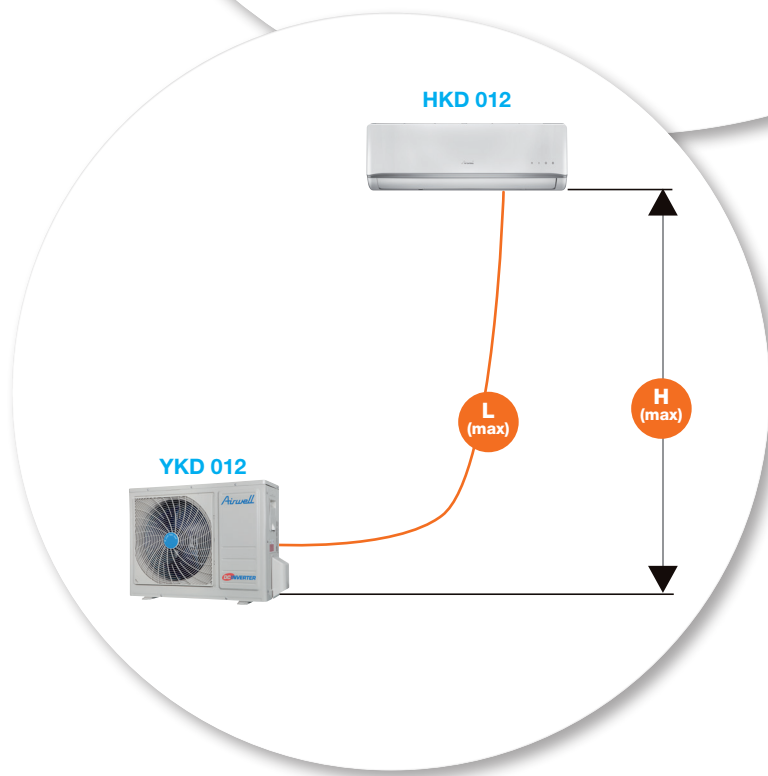
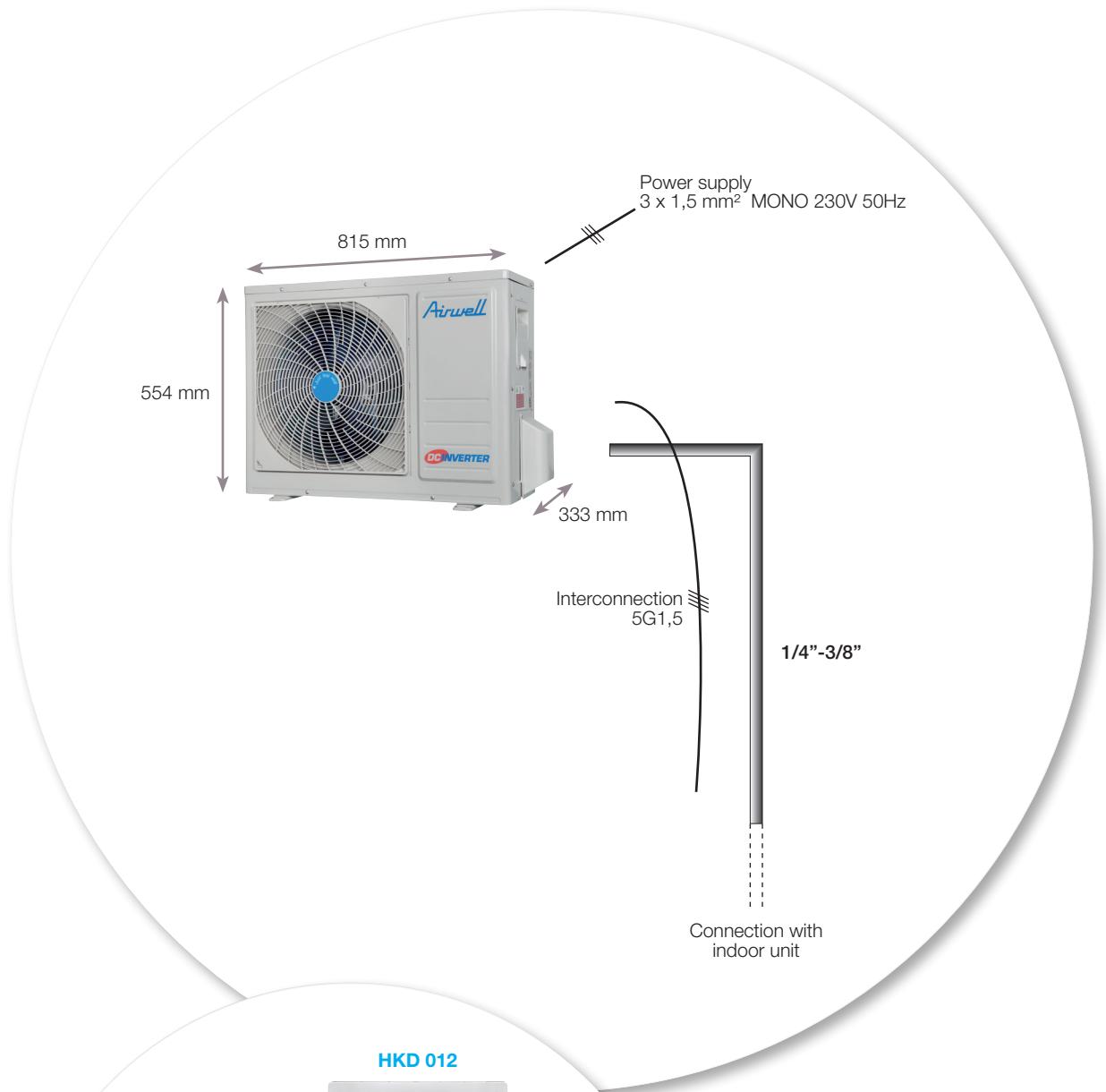
[COMPRESSOR CHECKING]

→ Measure the resistance value of each winding by using the tester.



| Position | Resistance Value | | |
|--------------|------------------|-------------------|-------------------|
| | ASN108D22UEZ | DA130M1C-31FZ | DA150S1C-20FZ |
| Blue - Red | | | |
| Blue - Black | 1,5 Ω (20 °C) | 1,77 Ω (20 °C) | 0,95 Ω (20 °C) |
| Red - Black | | | |





→ L(max) = 25 m

→ H(max) = 10 m

- Cable
- ▬ Pipe
- ≡ Number of wires

[FAULT CODE DISPLAY FROM HKD]

| Displayed though IDU | | | Fault description |
|----------------------|-----------|-----------|---|
| Display | LEDs | Displayed | |
| E0 | ☆ 1 time | □ | IDU Bad EEPROM |
| E1 | ☆ 2 times | □ | Communication failure IDU/ODU |
| E2 | ☆ 3 times | □ | Zero crossing error (for HKD009 and HKD024) |
| E3 | ☆ 4 times | □ | IFAN failure |
| E4 | ☆ 5 times | □ | RAT failure |
| E5 | ☆ 6 times | □ | ICT failure |
| EC | ☆ 7 times | □ | Refrigerant Leakage Detection |
| F1 | ☆ 2 times | ■ | OAT failure |
| F2 | ☆ 3 times | ■ | OCT failure |
| F3 | ☆ 4 times | ■ | CTT failure |
| F4 | ☆ 5 times | ■ | ODU Bad EEPROM |
| F5 | ☆ 6 times | ■ | OFAN failure |
| P0 | ☆ 1 times | ☆ | IPM fault |
| P1 | ☆ 2 times | ☆ | Over voltage / under voltage |
| P2 | ☆ 3 times | ☆ | Compressor overload |
| P4 | ☆ 5 times | ☆ | Compressor drive failure |

□ LED light off / ■ LED light on / ☆ LED blink

[FAULT CODE DISPLAY FROM YKD]

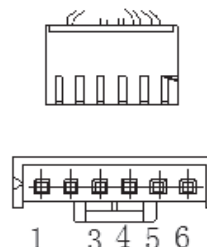
| Displayed though ODU | | | Description |
|----------------------|--------------|------------|---|
| Indoor fault code | LED2 (green) | LED3 (red) | |
| P1 | ■ | ■ | Over voltage to low voltage protection |
| | ■ | □ | Normal standby |
| | □ | ■ | Normal operation |
| P4 | □ | ☆ | Compressor speed is abnormal |
| P4 | ☆ | ■ | Compressor phase error |
| P0 | ☆ | □ | IGBT over current or IPM protection |
| P4 | ☆ | ☆ | Communication error between ODU main chip and compressor drive chip |

□ LED light off / ■ LED light on / ☆ LED blink

[OUTDOOR DC FAN MOTOR (CONTROL CHIP IS IN FAN MOTOR)]

→ Power on and when the unit is in standby, measure the voltage of pin1-pin3, pin4-pin3 in fan motor connector. If the value of the voltage is not in the range showing in below table, the PCB must has problems and need to be replaced.

| DC motor voltage input and output | | | |
|-----------------------------------|--------|--------|-----------|
| N° | Color | Signal | Voltage |
| 1 | Red | Vs/Vm | 280~380 V |
| 2 | - | - | - |
| 3 | Black | GND | 0 V |
| 4 | White | Vcc | 14~17,5 V |
| 5 | Yellow | Vsp | 0~5,6 V |
| 6 | Blue | FG | 14~17,5 V |



[SOME FREQUENTLY-USED R-T DATA FOR RAT, ICT, OCT, OAT SENSOR]

| Temperature | °C | 5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 |
|------------------|----|------|------|------|------|----|----|-----|-----|-----|
| Resistance Value | kΩ | 26,9 | 20,7 | 16,1 | 12,6 | 10 | 8 | 5,2 | 3,5 | 2,4 |

Remark:RAT - Room Air Thermistor. ICT - Indoor Coil Thermistor. OCT - Outdoor Coil Thermistor. OAT- Outdoor Air Thermistor.

[SOME FREQUENTLY-USED R-T DATA FOR CTT SENSOR]

| Temperature | °C | 5 | 15 | 25 | 35 | 60 | 70 | 80 | 90 | 100 |
|------------------|----|-------|----|------|------|------|-----|-----|----|-----|
| Resistance Value | kΩ | 141,6 | 88 | 56,1 | 36,6 | 13,8 | 9,7 | 6,9 | 5 | 3,7 |

Remark: CTT- Compressor Discharge Thermistor.

Our Aftersales Service

Export

Tel. ■ +33 (0)1 76 21 82 95

SPARE PARTS ORDERS:
e-mail ■ sp@airwell-res.com

TECHNICAL SUPPORT:
e-mail ■ technical-spfr@airwell-res.com

Airwell
Residential