

48V DC AIR-CONDITIONER KIT

V1.2

DATASHEET

| | APPLICABLE MODEL(S) |
|---------------|---------------------|
| Model: | DGWA1-DC48V-12K |
| Indoor Unit: | DGA1-DC48V-12K |
| Outdoor Unit: | DWA21-DC48V-12K |
| Capacity: | 3.5 kW |

Document Control

| | |
|-----------------|--------------------------------------|
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| Initial Author: | Sokchea Bin |

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|---------|----------------------|------------|------------------|
| 1.0 | Initial release | 19/07/2024 | Sokchea Bin |
| 1.1 | Template Update | 06/12/2024 | Sokchea Bin |
| 1.2 | Air Con – Logo Added | 09/12/2024 | Katterine Howell |
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Table of Contents

| | | |
|-----------|---|----------|
| 1. | Standards and Compliance | 3 |
| 2. | Systems and Components..... | 3 |
| 2.1 | General Arrangement - Indoor Unit | 4 |
| 2.2 | General Arrangement - Outdoor Unit..... | 4 |
| 2.3 | General Arrangement - Outdoor Unit Detailed | 5 |
| 3. | Technical Specifications | 6 |
| 3.1 | Hardware Data | 6 |
| 3.2 | Technical Data | 6 |
| 3.3 | Refrigerant Data..... | 6 |
| 3.4 | General Electrical Wiring Diagram..... | 7 |

1. Standards and Compliance

| Standards | Compliant |
|--|-----------|
| AS/NZS 1319 | Yes |
| AS/NZS 1571 | Yes |
| AS/NZS 3000 | Yes |
| AS/NZS 3500 | Yes |
| AS/NZS 4777 | Yes |
| AS/NZS 5033 | Yes |
| AS/NZS 5139 | Yes |
| AS/NZS 5149 | Yes |
| IEC 62109 | Yes |
| NCC 2022 Volume 3 | Yes |
| Australia and New Zealand Refrigerant Handling code of practice part 2 | Yes |

2. Systems and Components

| Item | Part Number | Model/Type | Additional Notes |
|-------------------------------|----------------|--|------------------|
| 48 DC Split System (Set x1) | CVDC4812-S | | Single set |
| 48 DC Split System (Set x2) | CVDC4812-2K | | Set of 2 |
| 48 DC Split System (Set x3) | CVDC4812-3K | | Set of 3 |
| Indoor Unit | CVDC4812-I | DGA1-DC48V-12K | |
| Remote Control | CVDC4812-RC | Solar ACDC Remote | 2x AAA Batteries |
| Outdoor Unit | CVDC4812-O | DWA21-DC48V-12K | |
| HVAC Control Box | SCDC4812-3 | DECON | |
| Indoor Unit Fan Motor | ZWR15-Qs2 | KAIBANG | |
| Indoor Unit Dust Filter | CVDC4812-IF | 0.12PKB Plain Weave PP Material, K Antibacterial | |
| Outdoor Unit Compressor | ASN98D22UFZ | GMCC | |
| Outdoor Unit Fan Motor | ZWR35-As1 | KAIBANG | |
| Piping Material | | Copper | |
| Piping Insulation | | UV Stabilized | |
| Outdoor Unit Security Cage | CVACSC-0825SM | DECON | Surfmist |
| | CVACSC-0825PE | | Pale Eucalypt |
| | CVACSC-0825PB | | Paperbark |
| Isolation Switch 4 Pole | ECISO32A4PDCSM | 32A 4 Pole 1500V | DC Surface mount |
| AC Power Failure Control Unit | ECFEFRI805B | | |

2.1 General Arrangement - Indoor Unit



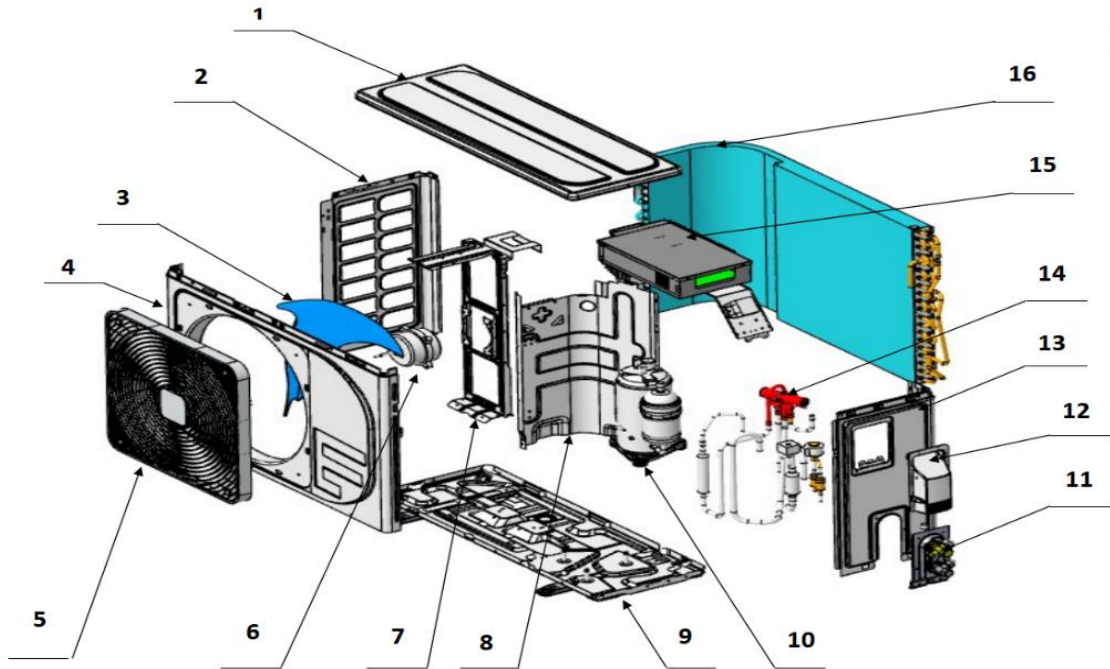
CVDC4812-I

2.2 General Arrangement - Outdoor Unit



CVDC4812-O

2.3 General Arrangement - Outdoor Unit Detailed



CVDC4812-O - EXPLODED

| Item | Serial Number | Item Description | Type |
|------|----------------|-----------------------------------|------------------|
| 1 | 20610203000024 | Top Cover | Sheet metal part |
| 2 | 20610207000018 | Left Side Panel | Sheet metal |
| 3 | 30100105000001 | Fan Blade | Parts |
| 4 | 20610205000066 | Front Panel | Sheet metal |
| 5 | 20610315000001 | Air Outlet Grill | Plastic |
| 6 | 30050205000006 | Brushless DC Motor (external fan) | Electrical |
| 7 | 20610204000002 | Motor Mount (2 rows of 9.52) | Sheet metal |
| 8 | 20610202000001 | Septum | Sheet metal |
| 9 | 20610201000001 | Chassis Assembly | Sheet metal |
| 10 | 30060301000089 | Compressor | Compressor |
| 11 | 20610603000001 | DRFC-40W Valve plate parts | Sheet metal |
| 12 | 20610316000001 | Large Handle | Plastic |
| 13 | 20610209000001 | Right Side Panel | Sheet metal |
| 14 | 20610604000007 | DWA2-DC48V-12K 4-way valve parts | Parts |
| 15 | 20610102000031 | Outdoor motor control assembly | Electronic |
| 16 | 20610601000002 | KFR-35W/BPACDC-A2 Condenser | Condenser |

3. Technical Specifications

3.1 Hardware Data

| Item | W x H x D | Kg | Clearances (mm) | | | | |
|-------------------------|-----------------|----|-----------------|------|-------|-------|--------|
| | | | Above | Left | Right | Below | Behind |
| Indoor Unit | 840 x 205 x 295 | 9 | 150 | 120 | 120 | 230 | - |
| Outdoor Unit | 564 x 802 x 323 | 32 | 500 | 300 | 60 | 200 | 300 |
| Indoor Unit Dust Filter | 340 x 300 | | - | - | - | - | - |
| HVAC Control Box | 380 x 300 x 170 | 2 | | | | | |

3.2 Technical Data

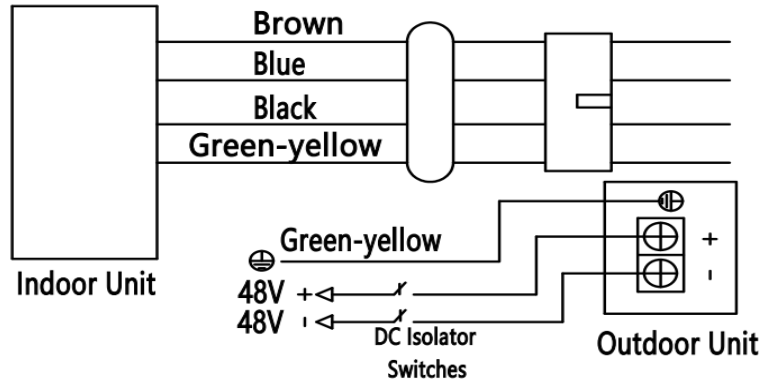
| | Measure | Value | Additional Notes |
|-------------------------------|---------|-----------|------------------|
| Maximum input power | Watts | 1500 | |
| Nominal input power | Watts | 1020 | |
| Average input power (Cooling) | Watts | 980 | |
| Average input power (Heating) | Watts | 1130 | |
| Maximum DC input voltage | V DC | 58 | |
| Minimum DC input voltage | V DC | 46 | |
| Nominal DC input voltage | V DC | 48 | |
| Protection Device | A DC | 32 | |
| Cooling Capacity | Btu/h | 12,000 | |
| Heating Capacity | Btu/h | 13,300 | |
| EER without solar input | BTU/W | 12.25 | |
| COP without solar input | BTU/W | 11.75 | |
| Nominal Operating Temp | C | -10 to 52 | |
| Sound Operating Level | dB | >26 | |
| Maximum Pipe length | M | 15 | |
| Pipe sizes | Inch | 1/4 3/8 | |

3.3 Refrigerant Data

| | Measure | Type/Value | Additional Notes |
|---------------------------------|---------|------------|------------------|
| Refrigerant type | | R410A | |
| Charge volume | g | 1020 | |
| Max design pressure (discharge) | Kpa | 4300 | |
| Max design pressure (suction) | Kpa | 1500 | |

3.4 General Electrical Wiring Diagram

General wiring only. Actual installation shall follow cabling requirements specified in Method of Procedure.



Indoor/Outdoor unit – General Wiring.

End of Document

CERTIFICATIONS & ACCREDITATIONS

- Decon Corporation holds Federal Safety Commission (FSC) Approval
- Decon Corporation holds ISO 14001:2015 Environmental Management System
- Decon Corporation holds ISO 45001:2018 Safety Management System
- Decon Corporation holds ISO 9001:2015 Quality Management System
- Decon Corporation is a member of the Clean Energy Council
- Decon Technical Services has full accreditation and insured design engineers
- RG Ladd are holders of Type Tested Certificates as certified by NATA and ASTA approved laboratories to comply with AS 3439.1
- RG Ladd hold IP56 & IP34 Test Certificate Kiosk Enclosure
- Decon Industries holds Electrical Contractor Licenses in VIC, NSW, SA, WA, NT, TAS & QLD

