

Afrison DC Micro-Grid Kits

Afrison Distributes a wide range of DC Micro Grid systems. We also distribute DC Appliances like Radio, TV, DSTV, Refrigerator, Freezer and Fridge/Freezer combos. These systems are mainly used for Rural Electrification.



Afrison SS10 Series (Not Expandable)



SS10 COMPONENTS

- 1 X Stainless steel tamper proof SS10 Smart DB Box
Cell phone charger socket USB output, 3 Lighting outputs, internal 12VDC 12AH battery, 10A charge controller, 10A fusing
- 1 X 12VDC Output socket
- 1 X USB Output socket (for cell phone charging)
- 1 X USB Universal cell phone charger adapter (multiple cell phone adapters)
- 3 X 3W Interior lights (LED new generation)
- 3 X E27 light fittings with light switches
- 1 X 25Wp Prime crystalline solar PV panel
- 20m X 0.75mm Cabtyre cable
- 4m X 2.5mm Solar module cable (red)
- 4m X 2.5mm Solar module cable (black)
- The SS10 Series System only come in one size and can not be expanded. This is our basic system.

Afrison SS20 Series (Expandable)

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SPECIALIZED SOLAR SYSTEMS

DC MICRO-GRIDS



SS20 DC MICRO-GRID
 SYSTEMS OVERVIEW
 COMPONENTS
 WIRING DIAGRAMS
 ACCESSORIES
 INSTALLATION & MAINTENANCE



The SS20 is Afrison's most commonly supplied off-grid solar DC micro-grid system and is designed using proven solar energy technologies. The SS20 has many applications and is commonly used where grid-electrification is not available. It can also be used to supplement grid power.

The standard SS20 base-line system will generate enough power to provide adequate lighting and entertainment. The unit has an interactive screen on the smart DB box that indicates battery voltage, load output in Amps, panel input in Amps and screen confirming the efficiency of the system at all times. The design is tamper proof with seals in the battery box and in the load output of the smart box. The fusing system' design functions not only as a current limiter, but also offers the necessary protection against short circuits and overloads.

EXPANDABLE

All the SS20 DC micro-grids are modular and expandable. The units have the ability for 'top up' upgrades such as accommodating further batteries and a total of 240 watts of solar panels, allowing a user to add further DC appliances as the need arises. The SS20 DC micro-grids can also be designed to accommodate load specifications.

OPTIONAL EXTRA-REMOTE SYSTEM MANAGEMENT

All the SS20 DC micro-grid product range has an optional extra that allows remote web based system management. A 'world first', SSS-EPOWER is essentially an off-grid solar energy management utility that provides all the necessary tools for sustainable remote solar energy and client management. Some of the features include:

- Remotely accessible centralized online management platform.
- Macro and micro energy management portfolios.
- Remote system switching - ON/WARNING/OFF.
- Fully automatic monthly and Pay-as-You-Go debiting systems .
- P.O.S. Vendor setup and funds management module for client payment management.
- Detailed audit trail logging and historic data.
- Accurate GPS stock allocation.
- Multi-level user control.

SS20 SMART DB BOX LAYOUT

1. DCconnector blocks for load (lightsetc).
2. Mounting bracket.
3. DCCell phone charging plug.
4. Reset/activate DCmicro-grid*
5. Mainfuse:

- ATQBlade Type
- 40 amp
- Purplebody
- Voltage rating: 32v andless

6. LCDbattery monitor display.

7. 20mm Spragfor battery cables.

Battery cables comprise of the following:

- 1m x 6mm red and black single flex cable
- 6 x 10mm Lugs for battery connection

8. Warning LED (available with managed units).

9. Current spade fuse:

- ATQBlade Type
- 20 amp

- Yellow body
- Voltage rating: 32v andless

10. Ceramic load fuse:

- MCE 10x 38 fuse
- 10amp
- EC269

11. Smoked plastic door with IP65 standard housing.

12. (DB box side) Fridgeplug.

13. (DB box side) Connector blocks for solarpanels.

14. (DB box side) Transport Switch (available with managed units)



UNMANAGED

SS20-75DC BASE-LINE

The SS20-75DC micro-grid is the most common system and is TV ready. This base-line unit consists of the following components:

- SS20 Smart DB Box.
- Plug box for TV/radio/DSTV/AC point.
- Battery box.
- 75W Prime crystalline solar panel.
- 102AH Battery.
- 3 X 3W Interior lights.
- External 2.4W 54 LED spotlight.
- 4 X Pull switches.
- ES27 Fittings and lamp shades.
- Galvanised solar module frame (roof & floor mountable).
- 20m 0.75mm Cabtyre cable.
- 4m 2.5mm Solar Module Cable.
- 12V DC Radio.
- Warranty and installation booklet.



SS20-90DC

The SS20-90DC micro-grid is designed to power further lighting and consists of the following components:

- SS20 Smart DB Box.
- Plug box for TV/radio/DSTV/AC point.
- Battery box.
- 90W Prime crystalline solar panel.
- 102AH Battery.
- 6 X 3W Interior LED lights.
- 2 X External 2.4W 54 LED spotlight.
- 8 X Wall mountable DC light switches.
- ES27 Fittings and lamp shades.
- Galvanised solar module frame (roof & floor mountable).
- 40m 0.75mm Cabtyre cable.
- Warranty and booklet.

Optional Appliances that can be added to SS20-75DC & SS20-90DC



MANAGED

SS20-150DC

The SS20-150DC micro-grid is used in areas where demand for energy usage is higher. The unit consists of the following components:

- SS20 Smart DB Box.
- Plug box for TV/radio/DSTV/AC point.
- 2 X Battery boxes.
- 2 X 75W Prime crystalline solar panel
- 2 X 102AH batteries.
- 6 X 3W Interior LED lights.
- 2 X External 2.4W 54 LED spotlights.
- 8 X Wall mountable Dc light switches
- E27 Fittings and lamp shades
- Galvanised Solar module frame (roof & floor mountable)
- 40m 0,75mm Cabtyre cable
- 4m 2,5mm solar panel cable



SS20-240DC

The SS20-240DC micro-grid is designed to power the GREENLINE DC refrigeration unit and consists of:

- SS20 Smart DB Box.
- Plug box for TV/radio/DSTV/AC point.
- 3 X battery boxes.
- 2 X 120W Prime crystalline solar panels
- 3 X 102AH Batteries
- 5 X 3W Interior LED lights.
- 2 x External 2.4W 54 LED spotlights.
- 7 X Wall mountable DC light switches.
- ES27 Fittings and lamp shades
- Galvanised solar module frames (roof & floor mountable)
- 40m 0.75mm Cabtyre cable.
- 12V DC Radio.
- Fridge ready (not included)
- Warranty and booklet.

Optional Appliances that can be added to SS20-150DC & SS20-240DC

