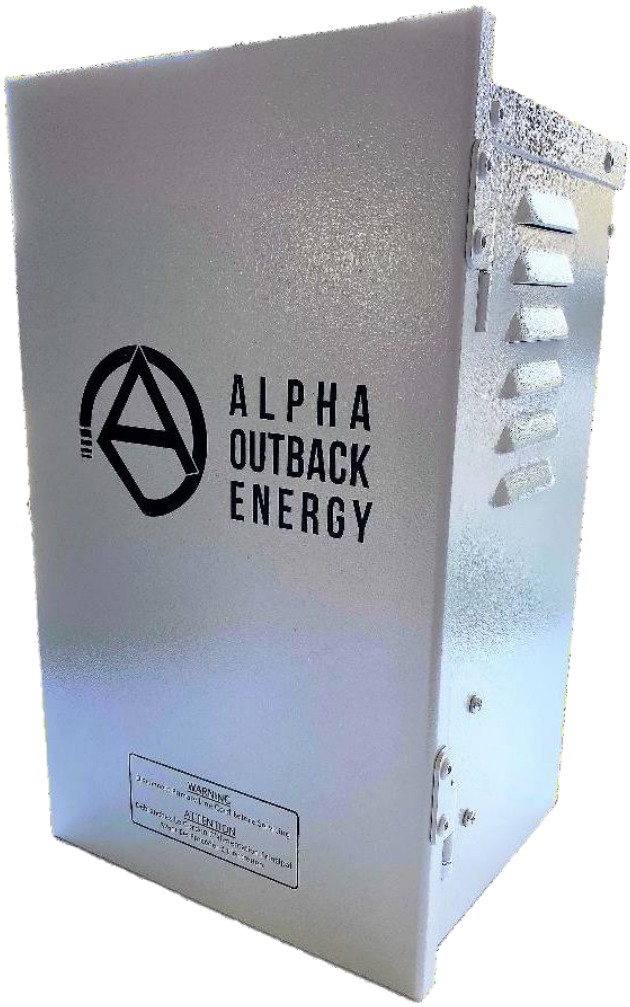
APX2PLUS-615G

Non-Standby Cable TV Power Supply

USER MANUAL



IMPORTANT SAFETY AND INSTALLATION WARNINGS

WARNING:

DO NOT ATTEMPT TO SERVICE THIS PRODUCT YOURSELF AS OPENING OR REMOVING COVERS MAY EXPOSE YOU TO DANGEROUS VOLTAGES OR OTHER HAZARDS. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.

SAFETY PRECAUTIONS:

- **Read this technical manual carefully and completely before proceeding.**
- **Installation and operation of the unit must be performed only by skilled personnel and always in accordance with applicable electrical codes.**
- **It is recommended that the user contacts local utilities to ensure that the installation does not interfere with existing utility cables.**
- **Do NOT connect the AC input while servicing the unit or installing the unit.**
- **The unit must be well grounded before proceeding with installation or operation. Failure to do so can cause electrical shock.**
- **The unit should be installed vertically, and the installation location chosen such that the unit is adequately ventilated.**
- **Verify that the AC input voltage matches the nominal voltage and frequency of the unit prior to installation.**
- **Verify that output voltage from the equipment matches the voltage requirements of the connected equipment (load).**
- **When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electrical shock or other hazards.**

The Alpha and Outback Energy APX2PLUS-615G is housed in powder coated aluminum enclosure which use metal hardware. All interior and exterior metal parts have smooth surfaces with rounded corners. There are no sharp metal corners or edges that could cause injury to any personnel.

When properly installed, the entire exterior of the housing is at ground potential and no shock or electrical hazards exist.

When the housing lid is open for set-up, maintenance, servicing etc., potentially harmful AC voltages may be present at many contact points inside the housing. Please become familiar with the internal circuits and the voltages that exit at all points of potential contact before any work is begun.

Field personnel must be aware of these hazards and caution should be exercised to avoid contact with all contact points throughout the enclosure that are not at direct ground potential (mechanically fastened to the housing chassis).

MOUNTING:

Mount this product only as described in the installation instructions, otherwise it may fall causing serious personal injury and/or damage the unit. Use only the bracket supplied with the product. Do not use attachments not recommended for this product as they may cause hazards.

SERVICING:

Remove power from this device and refer servicing to qualified personnel under the following conditions:

1. If the inside of the station has been exposed to rain or water.
2. If the station does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of the controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
3. If the unit has been dropped or the chassis has been damaged.
4. If the unit exhibits a distinct change in performance.

REPLACEMENT PARTS:

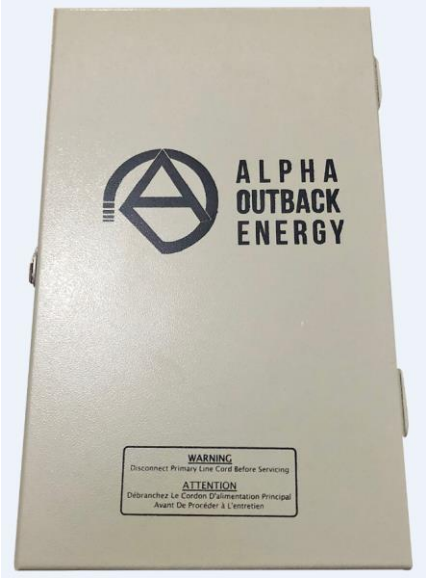
When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

SECTION 1 PRODUCT DESCRIPTION

1.1 General Description and Function

The Alpha and Outback Energy **APX2PLUS-615G** is a Cable Network Non-Standby Power Supply that produces 63VAC Quasi-Square Wave power for use in the CATV plant.

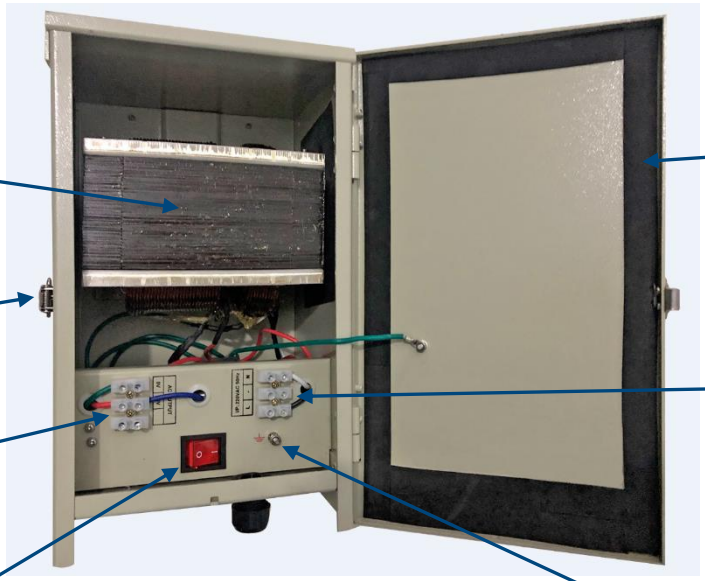
The unit is powered by 230VAC, 50Hz Utility power and can be pole or wall mounted with the included mounting bracket.



1.2 Specifications

Input Voltage	230VAC (-20% to +15%), 50Hz Sine Wave
Power Factor	0.90 at Full Load
Output Voltage	63VAC 50Hz Quasi-Square Wave
Output Voltage Regulation	+/-5%
Output Current	15 Amps
Output Protection	Current Limited
Output Power	900W
Short Circuit Current	150% of Max. Current Rating
Efficiency	≥ 90%
Dimensions	215 (W) x 338 (H) x 176 (D), mm 8.5” (W) x 13.3” (D) x 6.9” (H)
Finish	Powder Coated
Material	Aluminum
Output Connector	5/8” x 24 Coaxial Connector
Operating temperature	-40°C to 55°C
Humidity	0 to 90% Non-Condensing

1.3 Layout



Front View with Door Open

Bottom View

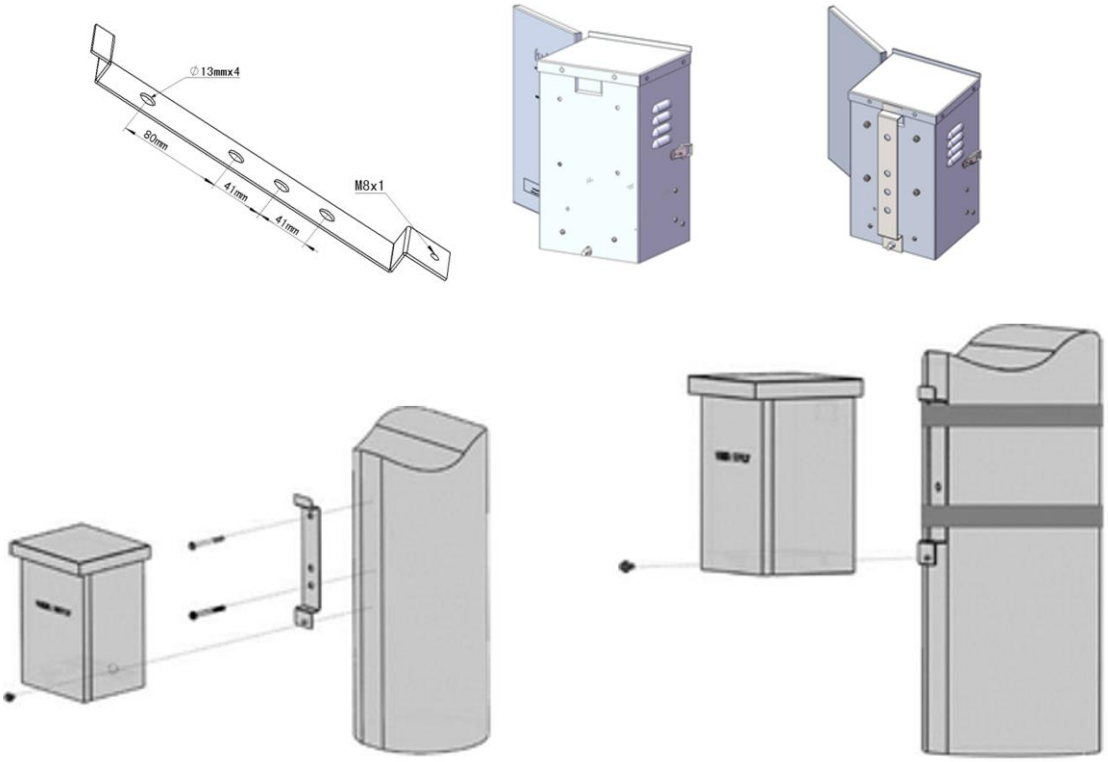
SECTION 2 INSTALLATION

2.1 Pre-Inspection

Upon receipt of the **APX2PLUS-615G** Power Supply inspect the carton for any external damage. If damage is present inspect the Power Supply exterior for damage. Report any apparent damage to the shipping agent and point of purchase.

2.2 Mounting Installation

The Power Supply can be easily mounted on a wooden/metal/concrete pole or on a flat vertical surface such as a wall using the supplied mounting bracket.



Wooden Pole Mounting:

- Use M12 machine bolts to install the bracket to the wooden pole.
- Hang the power supply on the bracket and fasten the housing bottom to the bracket using the M8 seizure hex bolt.

Metal/Concrete Pole Mounting:

- Use 2 mounting straps to secure the bracket to the steel/concrete pole.
- Hang the power supply on the bracket and fasten the housing bottom to the bracket using the M8 seizure hex bolt.

2.3 Electrical Connection

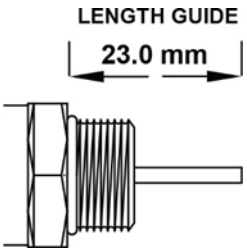
WARNING - In order to protect personnel responsible for operation, service and maintenance of this Power Supply and to protect equipment within the network, all installation sites MUST be provided with an earth ground bonding connection to the Power Supply bonding terminal. A reliable ground bonding connection also helps to protect the Power Supply from damage of high-energy transients, e.g. lightning strike.

The impedance between the Power Supply enclosure and earth must be 25 Ohms or less. Soil conditions may affect the grounding system meeting the 25 Ohm (maximum) resistance specified above. Please contact a local grounding system expert if required.

AC Output Connection:

Output connection of the power supply is made through the 5/8" x 24 coaxial female connector located on the bottom panel of the Power Supply.

A mating male cable connector appropriate for the coaxial hardline to be used must have the center pin prepared as follows:



Screw the male cable connector (external fitting) into the 5/8" female connection. The center pin is automatically seized by the female connector. Prepare and attach the coaxial hardline feeding the HFC plant to the male cable connector as per the manufacturer's instructions.

AC Input Connections:

An external service disconnect (UL listed) MUST be installed between the Utility power and APX2PLUS-615G Power Supply. The disconnect device is provided by the user. Please consult the local supplier, supplier of the service disconnect and your local utility for specific installation instructions and guidelines. All electrical codes apply.

Before attempting to connect the input supply wiring, ensure that the disconnect is in the disconnect (off) position. Using an RMS voltmeter, confirm that no voltage exists at the disconnect output.

The Utility power connection is made through the Power Supplies cable gland to the input terminal block. Ensure that no strands of bare wire are outside of the terminal block. Tighten each terminal screw with sufficient torque to ensure a good electrical and mechanical connection.

2.4 Start Up

Engage the external service disconnect and verify with an RMS voltmeter that 230VAC line voltage is present at the input terminal block.

Verify that the “Output On” LED Indicator is lit indicating output voltage is present.

Close the front door of the APX2PLUS-615G and engage the locking hasp. The hasp is provisioned for an external lock if so desired.

PLEASE SAVE THIS MANUAL FOR FUTURE REFERENCE.

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