IMPORTANT SAFETY WARNINGS
(SAVE THESE INSTRUCTIONS)

This manual contains important instructions regarding the installation and operation of this device. Read the manual thoroughly before attempting to unpack, install or operate the device.

CAUTION: To prevent the risk of fire or electric shock, install it in a temperature and humidity controlled indoor area free of conductive contaminants. (Please see specifications for allowable temperature and humidity range.)

CAUTION: To reduce the risk of electric shock, do not remove the cover except to replace the battery. The user replaceable parts are inside except the battery.

CAUTION: Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

CAUTION: This unit must be wall mounted. Do not use the unit unless it is mounted correctly.

INTRODUCTION

The CS36D12V provides increased flexibility and cost effectiveness by separating the power supply from the battery back up unit. The CS36D12V feeds 12Vdc to the ONT.

CAUTION:

1. Carry out the installation in a safe area that is free of excessive noise and hot adequate airflow.
2. Screws must be appropriate for total weight of the UPS unit and the mounting surface material.
3. Do not install the UPS where the temperature and humidity are outside the specified levels. (Refer to specifications in this manual.)

OVERVIEW (CS36D12V)

CS36D12V Front

1. Power Connector Compartment Cover
2. Strain Relief Lip
3. 8 Pin IDC Connector
4. Power LED Indicator
5. Screw Hole
6. Strain Relief Slot
7. Cable Channel
8. Input Power Cord (8 ft.)

CS36D12V Back

1. Battery Compartment Cover
2. Control Buttons (Remote Monitor, Battery LED, Power LED)
3. 5 LED Indicators (Battery Power Status / Replace Battery / Battery Power / System Status)
4. Battery Compartment
5. 8 Pin IDC Connector
6. Battery Pull Tab
7. Battery Compartment Cover / Power Cable Channel
8. Remove Screw Slot
9. Pass Through Hole / Harness/strain / & Power Cable

CAUTION! (SAVE THESE INSTRUCTIONS)

FCC NOTICE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

OPERATION GUIDE

When plugging the CS36D12V power supply into AC power, the unit is now ready to be placed into service. The CS36D12V has four LED indicators and two control buttons. The table below lists the functions of each.

NOTE: Recommended screw size: Self-tapping screw M4x20L (Truss head)

Step 1:

a. Press the battery cover release latch (A) and slide the cover to remove.

b. Slide unit so that the screw rests in the keyhole screw slot.

c. Place screw in keyhole screw slot and tighten half way.

d. Install the 9 position IDC connector to the unit (see Fig.1).

Step 2:

a. Connect the power cord to the power supply.

b. Connect the 9 position IDC connector.

c. Wrap the power cable around the strain relief lip.

Step 3:

a. Install the 9 position IDC connector to the unit (see Fig.1).

b. Press and hold the button to activate emergency battery capacity.

Step 4:

a. Battery is properly seated and battery is charged. At 45% battery capacity, unit signals low battery.

b. Battery is connected and in good condition.

The CS36D12V enters the maintenance mode approximately once every 45 days. If a 45% remaining capacity, the CS36D12V maintains both electrical power to the external device. The battery power supplies power to the load (ONT) in the event of 48V input voltage failure and a battery capacity of 45%.

NOTE: The CS36D12V enters the maintenance mode approximately once every 48 days.

Maintenance Mode

Maintenance mode deactivates existing battery file. During the 16 hour test, the battery is discharged to determine its state. The unit measures the rate of change in the battery charge. If the rate of discharge is excessive, the battery replacement indicator is activated.

NOTE:

1. Battery LED Flash Green
2. 1/2 sec beep
3. 1/2 sec beep
4. Open
5. Open

Lights are on when battery is in good condition.

NOTE:

1. Battery LED Flash Blue
2. 1/2 sec beep
3. 1/2 sec beep
4. Blue
5. Blue

Lights are on when battery needs to be replaced.

NOTE:

1. Battery LED Flash Blue
2. 1/2 sec beep
3. Open
4. Open

Lights are on when battery is in low state.

NOTE:

1. Battery LED Flash Blue
2. 1/2 sec beep
3. Open
4. Open

Lights are on when battery is supplying power.

CAUTION: When battery capacity is < 45% (approximately 12Vdc), unit signals low battery.

CAUTION: The battery must be replaced when the battery replacement indicator is activated. If the battery replacement indicator is activated, notify the customer and replace the battery.

CS36D12V Battery Replacement

Battery Type

The battery, a long-life sealed lead battery rated at 12Vdc / 12Ah. If required, the battery may be replaced with an approved 12Vdc / 7Ah battery.

NOTE: Batteries are maintained H2SO4 or NICD and need to be charged properly. Please refer to the user manual (on website) for proper placement and charging instructions.

NOTE: Auxiliary Power Connection (AUX)

Connection port for customer supplied DC input voltage (12Vdc). At 45% remaining capacity, the CS36D12V maintains both electrical power to the external device. The battery power supplies power to the load (ONT) in the event of 48V input voltage failure and a battery capacity of 45%.

NOTE: Maintenance Mode

Maintenance mode deactivates existing battery file. During the 16 hour test, the battery is discharged to determine its state. The unit measures the rate of change in the battery charge. If the rate of discharge is excessive, the battery replacement indicator is activated.

NOTE:

1. Battery LED Flash Green
2. 1/2 sec beep
3. 1/2 sec beep
4. Open
5. Open

Lights are on when battery is in good condition.

NOTE:

1. Battery LED Flash Blue
2. 1/2 sec beep
3. 1/2 sec beep
4. Blue
5. Blue

Lights are on when battery needs to be replaced.

NOTE:

1. Battery LED Flash Blue
2. 1/2 sec beep
3. Open
4. Open

Lights are on when battery is in low state.

NOTE:

1. Battery LED Flash Blue
2. 1/2 sec beep
3. Open
4. Open

Lights are on when battery is supplying power.

CAUTION: When battery capacity is < 45% (approximately 12Vdc), unit signals low battery.

CAUTION: The battery must be replaced when the battery replacement indicator is activated. If the battery replacement indicator is activated, notify the customer and replace the battery.

NOTE: Most retailers that sell batteries collect used batteries for recycling.

NOTE: Additional information and specifications can be found on the website. (CAUTION: Follow all local regulations regarding the disposal of batteries.)
USER’S MANUAL FOR
NXG-Vision
(Next Generation FTTx Micro UPS)
For Model Numbers: PS18L-U2 & PS18L-U7

WARNING:
Review the following important safety warnings to avoid bodily injury or damage to equipment during installation or operation of this device.
Read ALL instructions before attempting to install or operate this device.
This device is intended for indoor use only. To prevent the risk of fire or electrical shock, install in dry location free from damp or wet environment, or potentially damp or wet environment.
Adhere to all acceptable operating environment limitations as listed to prevent the risk of of fire or electrical shock (see user specifications within User’s Manual).
Risk of fire or explosion if improper battery pack is installed and attempted to operate with this device. Device is rated and approved for use with PowerTec Solutions Internation Li Ion Battery Pack ONLY.
Follow User Manual instructions for proper installation and removal of battery pack.
NO user-replaceable parts within this device. Do not remove cover for any reason.

NOTE: The reference to “NXG-Vision” within this User Manual refers to PowerTec Solutions Models PS18L-U2 and PS18L-U7 (Next Generation FTTx Micro UPS) and all package accessories as listed below.

CONTENTS OF NXG-Vision PACKAGE
NOTE: Please verify all standard contents are accounted for upon receipt of NXG-Vision.
STANDARD: (1) Power Supply/Charger; (1) Li Ion Battery Pack; (1) AC Power Cord; (1) 7-Pin Connector; (1) User’s Manual
Optional: (1) Universal Wall Mount Enclosure w/ Cover (associated with Model PS18LUN), or (1) Wall Mount Cradle w/ Cover (associated with Model PS18CR).

NXG-Vision INTRODUCTION
NXG-Vision is designed and intended for use as Desktop or Wall-mount (when ordered with optional Universal or Cradle wall mount enclosures) DC power supply and battery back up device for 12Vdc Optical Network Terminals (ONT). The NXG-Vision not only provides constant supply of DC power during normal operating conditions, but offers battery backup power in case of electrical power outage. NXG-Vision also provides customer facing Network Interface Reset Intelligence to provide integrated ONT reset technology designed to reduce Provider OPEX.

VISUAL INDICATORS

1. System Status Color-Green
NXG-Vision is receiving AC power load to operate under normal conditions.
2. DC Color-Green
NXG-Vision is working off Standby Power.
3. Mute Color-Yellow
Flashing-Audible Alarm silenced for 24hrs Solid-Audible Alarm silenced until manually enabled.
4. Battery Color-Red
Service or replace battery. Battery is not installed in NXG-Vision

CONTROL SWITCHES

5. Alarm Silence
Disables Audible Alarm function. Press and release to disable Audible Alarm for 24 hours. Press and hold for 15 seconds to disable Audible Alarm indefinitely. Press and hold for another 15 seconds to re-enable Audible Alarm function.
6. N.I.R. - (Function #1)
Allows NXG-Vision capability to "Cold Start" Vdc power from Battery Pack when AC line power is not present and new or replacement Battery Pack is connected. When new or replacement pack is connected, press and hold for 3 seconds.
N.I.R. - (Function #2)
Allows for Output Vdc line power reset of Optical Network Terminal when AC line power is present. Press and hold for 3 seconds to reset/reboot Optical Network Terminal.

VISUAL INDICATORS AND CONTROL SWITCHES

VISUAL INDICATORS

STATE
Normal
ON Battery
Replace Battery
Battery Missing
Low Battery

SYSTEM STATUS
System Status Indicator On
DC Indicator On
Battery Indicator On
Battery Indicator On
DC Indicator 1/2 second audible indicator every 15 min
DC Indicator Flashes

AUDIBLE INDICATOR
Operating under normal AC line power load and conditions, charges battery. Battery is connected and in good condition.
AC line power failure or AC cord disconnection. NXG-Vision is being supplied with battery power.
Replace faulty or end of life battery
NXG-Vision is operating on AC line power only without available standby power for outage scenario. When battery is removed from unit, battery indicator will illuminate after 15 sec.
Battery has reached equal to or less than 30% remaining capacity on battery discharge.

DESCRIPTION

ON Battery
Replace Battery
Battery Missing
Low Battery

VISUAL AND AUDIBLE STATUS/ALARM SIGNALS

NOTE:
MODEL PS18L-U2 OFFERS A 2 CONDUCTOR HARD WIRE VDC/TELEMETRY OUTPUT (BOTTOM VIEW OF MODEL PS18L-U7)

MODEL PS18L-U7
AUDIBLE ALARM YES
VISUAL ALARM YES
RELAY ALARM TO ONT YES

MODEL PS18L-U2
AUDIBLE ALARM YES
VISUAL ALARM YES
RELAY ALARM TO ONT NO

*RELAY ALARM FROM PS18L-U7 TO ONT (OPTICAL NETWORK TERMINAL) RELAYS BATTERY ALARMS: 1. LOW BATTERY; 2. ON BATTERY; 3. BATTERY MISSING; 4. REPLACE BATTERY

VISUAL INDICATORS

1
2
3
4
5
6

VISUAL INDICATORS

CONTENT POINTS FOR VAC (INPUT) AND VDC/TELEMETRY (OUTPUT)

DC Output/Telemetry Connector
AC Input Power Cord Connector

NOTE:
MODEL PS18L-U2 OFFERS A 2 CONDUCTOR HARD WIRE VDC OUTPUT CABLE ONLY IN PLACE OF THE 7 CONDUCTOR VDC/TELEMETRY OUTPUT OFFERED WITH MODEL PS18L-U7.
INSTALLATION

A. Slide NXG-Vision Battery Pack (FIGURE 2) onto NXG-Vision Power Supply/Charger (FIGURE 1) until NXG-Vision Battery Pack becomes fully flush with NXG-Vision Power Supply/Charger. You should hear a “click” when NXG-Vision Battery Pack is fully seated.

B. Connect provided AC Power Cord to AC Input Connector on bottom of NXG-Vision Power Supply/Charger.

C. Connect 3 Prong AC Power Cord Plug End into standard 3 Prong AC Receptacle rated for NEMA 5-15 3 Prong AC Plug.

D. Verify “System Status” LED is “On” with Green illumination

E. Connect NXG-Vision to ONT (Optical Network Terminal)

F. Ensure “System Status” LED is the only illuminated LED on NXG-Vision. If any additional LEDs are illuminated recheck NXG-Vision Battery Pack to make sure it is fully seated and ensure that all wiring from NXG-Vision to ONT is installed correctly as listed by ONT specific instructions.

BATTERY REPLACEMENT

As long as AC line power is available, NXG-Vision can resume operation while battery is replaced.

PROCEDURE:

1. Remove the NXG-Vision Battery Pack by sliding off in opposite direction of installation (FIGURE 4) and next follow “Installation Step A” above for installing the new NXG-Vision Battery Pack

NOTE: Please follow all State, Federal, and International Regulations when disposing or recycling Li Ion Battery Pack.

WARNING - Li Ion Battery Pack

- DO NOT DISASSEMBLE BATTERY PACK
- DO NOT DISPOSE OF IN FIRE
- CHARGE ONLY WITH SPECIFIED CHARGER
- DO NOT STORE IN TEMPERATURE OVER 65C

FCC NOTICE

This equipment has been tested and found to comply with the limit for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: (1) Reorient or relocate the receiving antenna. (2) Increase the separation between the equipment and receiver. (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. (4) Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Any changes or modifications could void the authority granted by the FCC to operate this equipment.
IMPORTANT SAFETY WARNINGS
(SAVE THESE INSTRUCTIONS)

This manual contains important instructions regarding the installation and operation of this device. Read this manual thoroughly before attempting to unpack, install or operate this device. Caution:

1. This product contains sealed non-spillable lead-acid battery, which must be recycled or shipped to the manufacturer in the replacement battery packaging material.

2. If you want to enable this feature, there is a button inside the hole, please insert a paper clip or small pointed object into the hole and press the button. In case of utility failure or battery, it will emit a long beep in case of low battery, and a short beep in case of normal operation. Do not expect full battery run time.

3. The Netherland Digital Signal Return, and pull-up resistors turn the open collector signals into logic levels.

4. If Switch : The default position of the buzzer switch is OFF.

5. The maximum combined weight of the Product and any accessories that ship with the Product is 5 lbs.

6. The CyberShield UPS is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

7. CyberShield power supplies are to be installed by an experienced radio/TV technician for help.

8. Battery replacement must be done by a qualified technician only.

9. This device is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

10. CyberShield power supplies are not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

11. This product contains sealed non-spillable lead-acid battery, which must be recycled or shipped to the manufacturer in the replacement battery packaging material.

12. Battery replacement must be done by a qualified technician only.

13. The maximum combined weight of the Product and any accessories that ship with the Product is 5 lbs.

14. The Netherland Digital Signal Return, and pull-up resistors turn the open collector signals into logic levels.

15. If Switch : The default position of the buzzer switch is OFF.

16. The maximum combined weight of the Product and any accessories that ship with the Product is 5 lbs.

17. The CyberShield UPS is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

18. Battery replacement must be done by a qualified technician only.

19. This device is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

20. CyberShield power supplies are not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

21. This product contains sealed non-spillable lead-acid battery, which must be recycled or shipped to the manufacturer in the replacement battery packaging material.

22. Battery replacement must be done by a qualified technician only.

23. The maximum combined weight of the Product and any accessories that ship with the Product is 5 lbs.

24. The Netherland Digital Signal Return, and pull-up resistors turn the open collector signals into logic levels.

25. If Switch : The default position of the buzzer switch is OFF.

26. The maximum combined weight of the Product and any accessories that ship with the Product is 5 lbs.

27. The CyberShield UPS is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

28. Battery replacement must be done by a qualified technician only.

29. This device is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

30. CyberShield power supplies are not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

31. This product contains sealed non-spillable lead-acid battery, which must be recycled or shipped to the manufacturer in the replacement battery packaging material.

32. Battery replacement must be done by a qualified technician only.

33. The maximum combined weight of the Product and any accessories that ship with the Product is 5 lbs.

34. The Netherland Digital Signal Return, and pull-up resistors turn the open collector signals into logic levels.

35. If Switch : The default position of the buzzer switch is OFF.

36. The maximum combined weight of the Product and any accessories that ship with the Product is 5 lbs.

37. The CyberShield UPS is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

38. Battery replacement must be done by a qualified technician only.

39. This device is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

40. CyberShield power supplies are not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

41. This product contains sealed non-spillable lead-acid battery, which must be recycled or shipped to the manufacturer in the replacement battery packaging material.

42. Battery replacement must be done by a qualified technician only.

43. The maximum combined weight of the Product and any accessories that ship with the Product is 5 lbs.

44. The Netherland Digital Signal Return, and pull-up resistors turn the open collector signals into logic levels.

45. If Switch : The default position of the buzzer switch is OFF.

46. The maximum combined weight of the Product and any accessories that ship with the Product is 5 lbs.

47. The CyberShield UPS is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

48. Battery replacement must be done by a qualified technician only.

49. This device is not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.

50. CyberShield power supplies are not designed or intended for use in hazardous environments requiring fail-safe performance, including the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, or chemical processing.