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UPS-500VA Manual

(To be used exclusively with NB500, NB500-LE, NB1000, NB2000 or NB2000-HD2

Swinging Door Operators)

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WARNING!

IMPORTANT INSTALLATION INSTRUCTIONS IMPROPER INSTALLATION CAN LEAD TO SEVERE INJURY OR DEATH READ AND FOLLOW ALL INSTRUCTIONS

- Do not connect **UPS-500VA** system to source of power until instructed to do so.
- The **UPS-500VA** system shall be installed and serviced by a qualified technician, electrician or electrical maintenance person familiar with its operation and the potential hazards involved.
- Any person performing installation or service on this product shall read this manual first. Proper installation includes following all steps outlined in the **Installation Instructions**.
- Assure all electrical wiring and grounding is installed as specified in this manual and as required by any local codes. Proper installation can also reduce the risk of electrical shock, fire or explosion.
- The **UPS-500VA** system is a permanent or “hard” wired connection to the supply voltage. The electrical contractor shall install a dedicated breaker or line switch to disconnect each ungrounded pole of the door operator from the supply voltage. Each ungrounded pole shall have a minimum of 3mm contact separation.

WARNING!

IMPORTANT SAFETY INSTRUCTIONS
IMPROPER USAGE CAN LEAD TO SEVERE
INJURY OR DEATH
READ AND FOLLOW ALL INSTRUCTIONS

- No person shall perform any service or activate the **UPS-500VA** unless they have been properly trained in its safe usage and have read this manual.
- Prior to performing any service on this product (including the replacement of any fuses or circuit breakers), disconnect the **UPS-500VA** from the supply voltage and enter Service Mode by opening battery panel and following instructions inside panel cover.
- For continued protection against fire, replacement fuses or circuit breakers shall be of the same type and ratings as those being replaced.

SAVE THESE INSTRUCTIONS

Overview

Model **UPS-500VA** is an Uninterruptible Power Supply designed for use with our product line of swinging door operators. A high performance, hard-wired system for 120VAC/240VAC applications that will provide up to 500VA of battery-mode AC power for extended periods of time. Doors can be cycled continuously for up to 5 hours before re-charging is required. Buffering time will vary depending on actual load conditions.

This is accomplished when DC power from (2) 12Ah batteries is inverted into AC power during a main power interruption. This allows our swinging door operators to remain fully functional at all times, especially during activation of: safety features, fire/smoke alarm, security monitoring or any special customer I/O requirements.

Software that will monitor and configure the AC-UPS-IQ control unit can be downloaded directly from the manufacturer's website for free.

Sequence of Operation:

When in **Normal Operating Mode** (main power), **Test-Mode** or **Battery-Mode**, the green LED for 120V or 230V will be illuminated. During main power interruption (or **Test Mode**), the **Battery-Mode** LED light will illuminate in yellow. The LED bar graph indicating charge of battery will remain green in **Normal Operating Mode, Test Mode** or **Battery-Mode**, while the batteries are holding a charge. The batteries are in a charging state when the bar graph is flashing green. A single red bar indicates that batteries energy is low and needs recharging.

Installation Instructions (see Figure 1)

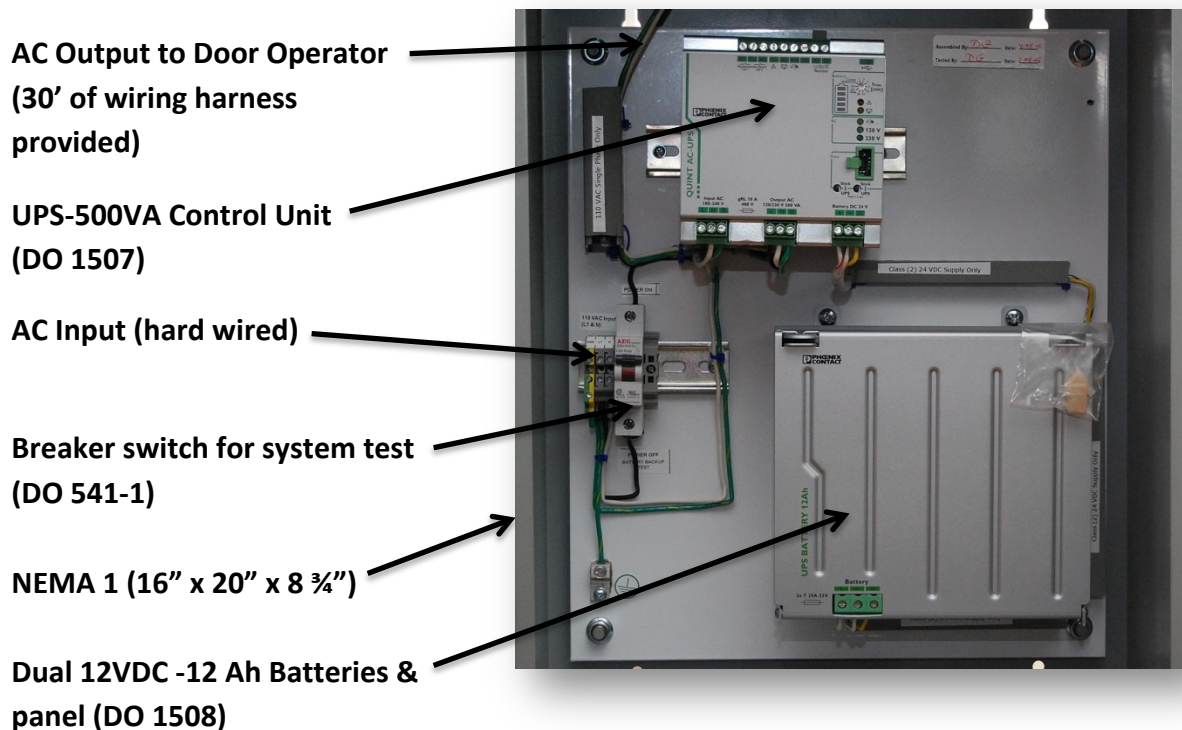
1. Check for physical damage that may have occurred during shipping.
2. Read all WARNING! Instructions at the beginning of this manual before proceeding further.
3. Mount NEMA 1 Enclosure indoors (see **Environment** and **Mounting** in **Specifications**)
4. Remove the (2) 25A battery fuses taped to the front of the battery housing panel. Open panel and install in fuse slots.
5. Before wiring the **UPS-500VA** to 120V/220V main power supply, assure power is disconnected at the main breaker and all "Lock-Out/Tag Out" Safety Procedures have been strictly adhered to.
6. Verify AC Input/Output power of **UPS-500VA** matches the AC Input power of the door operator being connected.

7. Connect wiring from the main panel to the **AC Input terminals L1, N & G** inside the UPS-500VA panel and the from the **AC Output wiring harness** to the door operator as shown in the **Wiring Diagram** in this manual.
8. Disconnect “Lock-Outs/Tag Outs” and turn main breakers on.
9. Check the following setting inside the UPS-500VA enclosure:
 - (a) Breaker test switch in “On” position
 - (b) Green LED (120V or 220V) indicating light is on
 - (c) Gray jumper in front terminal (R1, R2 Remote On)
 - (d) **tmax** trimpot set to the infinity position (∞)
 - (e) All 5 bars on LED bar graph are solid green indicating a full charge
10. Turn beaker test switch to the “OFF” position. The **Battery-Mode** indicating light should turn yellow in a few seconds. The system is now in Test-Mode.
11. Once the door operator has been properly installed, a full system test of all door operator functions can be performed while in **Test-Mode**.
12. Turn breaker switch back “On” to return to **Normal Operating Mode**.

Replacement Part List

Please refer to **Figure 1** for list of part numbers.

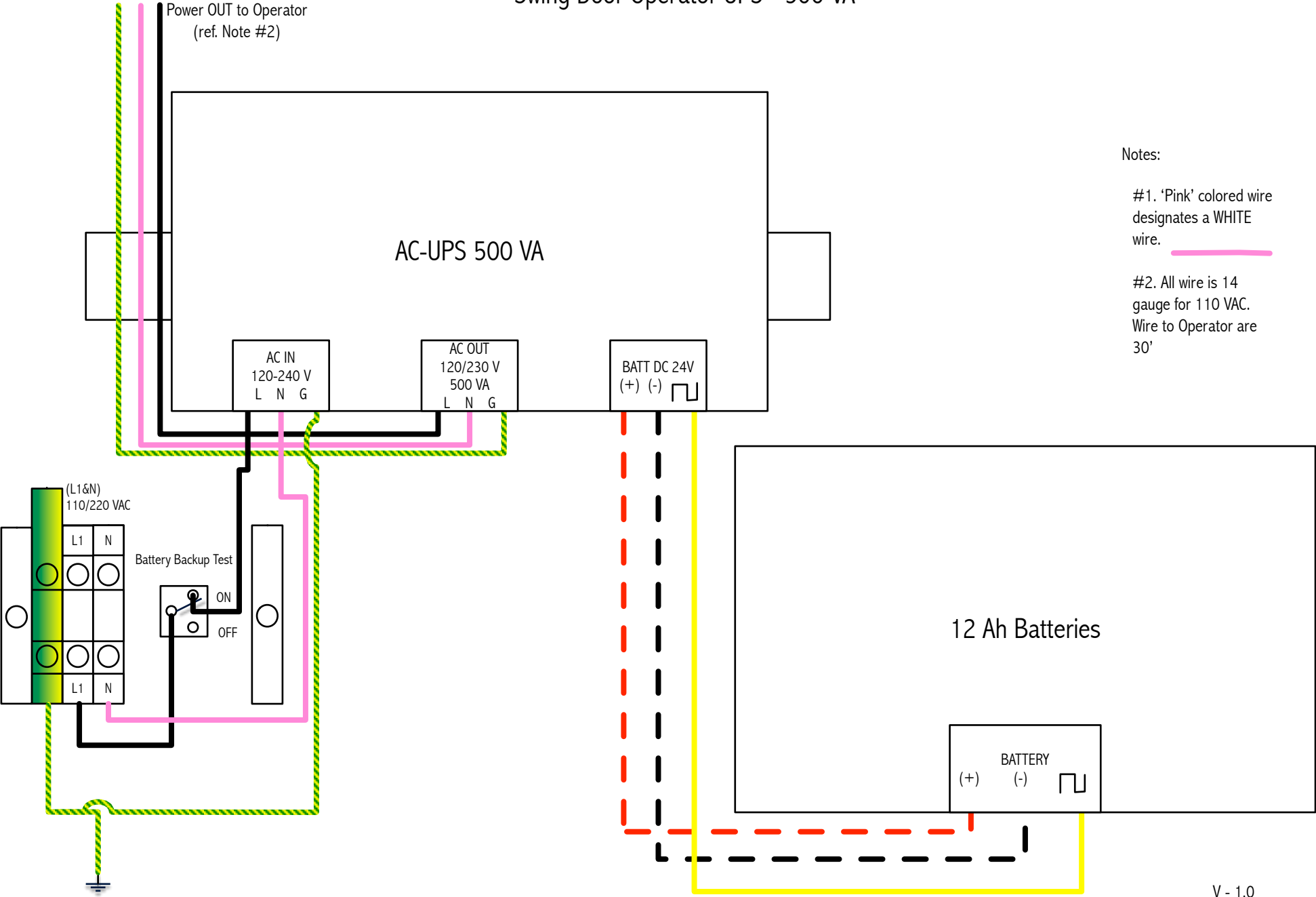
Figure 1



Specifications:

Input:	Supply voltage shall be specified when ordering 120VAC/(45-65)Hz 230VAC/(45-65)Hz
Output:	120VAC, 500VA, 5.2A 230VAC, 500VA, 2.7A
Max. Output Current:	50A (fused at batteries)
Enclosure:	NEMA 1 (16" x 20" x 8 ¾"). Cutouts for ½" diameter conduit.
Ventilation:	(2) 3" diameter vents.
Installation:	Exclusively with NB500, NB500-LE, NB1000, NB2000 or NB2000-HD2 Swinging Door Operators. Voltage of operator shall match supply voltage.
Environment:	Indoor use only. Ambient temperature Range: (32°F(0°C)- 104°F(40°C) Maximum relative humidity: 95% (non-condensing)
Mounting:	Use mounting hardware with sufficient strength to support the enclosure. Hardware shall be properly tightened and secured to existing structure.
System Test:	A breaker switch is provided that disconnects the AC main power supply when flipped to the off position, which automatically turns on the battery-mode AC power. This allows for a full system test to be performed with a connected door operator.

Swing Door Operator UPS - 500 VA



Notes:

#1. 'Pink' colored wire designates a WHITE wire.

#2. All wire is 14 gauge for 110 VAC. Wire to Operator are 30'

brookfield industries, inc.

Limited Warranty

***brookfield industries, inc.* warrants that model UPS-500VA is free from defects in material and workmanship according to the following terms and conditions:**

- 1) The limited warranty for all aforementioned products extends for (1) year beginning on the date of shipment from our facility.
- 2) During the limited warranty period, *brookfield industries, inc.* will repair or replace any defective component or any part that does not operate as originally specified or intended with a new or rebuilt part. No charge will be made to the consumer for any such parts. Credits or reimbursements, as well as associated shipping costs, will be issued only after any replacement parts have been returned by the consumer.
- 3) *brookfield industries, inc.* will also reimburse or credit the consumer for any reasonable labor charges associated with the repair or replacement of a particular part. Brookfield industries, inc. and the consumer must agree upon the dollar amount as well as the scope of work, before any amount is allocated. This amount may vary depending on the geographical location of the labor market. Travel expenses are not applicable.
- 4) *brookfield industries, inc.* shall not cover, nor will the consumer have any benefits under this limited warranty if any of the following conditions apply to any returned parts as determined through an evaluation by brookfield industries, inc. or any of its vendors:
 - a) The product has been subjected to: improper installation, installation practices or any settings not in accordance with the operator manual, abnormal use, abnormal conditions, exposure to moisture, dampness or any other severe environmental conditions, unauthorized modifications, unauthorized connections, unauthorized repair, misuse, neglect, abuse, accident, altercation, or other acts which are out of the control of brookfield industries, inc., such as damage caused by shipping.
 - b) Removing or altering any labels or any other action that prohibits *brookfield industries, inc.* from determining the original manufacturing date.

Troubleshooting UPS-500VA

Problem	Possible Cause
LED alarm is solid Red and LED bar graph is flashing red.	Battery fuses not plugged in. Battery fuses are blown. Battery wiring not connected.
Green LED for 120V or 230V AC power not on.	AC input power interrupted and batteries are discharged. AC input power interrupted and battery fuses blown. AC input power interrupted and R1, R2 jumper not installed or not in "ON" slot. UPS is damaged.
Yellow LED Battery-Mode not on when power is interrupted	R1, R2 jumper not installed or not in "ON" slot. tmax trimpot not set at infinity position.
No green or red bars on LED Bargraph	Batteries are totally discharged or no longer will take a charge. Bargraph needs resetting. Open battery panel door and go thru steps (1,8 & 9)
LED Alarm is red	In Service Mode-Open battery panel door and go thru steps (8 & 9)