

DC-UPS - 24VDC Back-Up With Only One 12V Battery

Power fluctuations and outages can cause damage to control equipment as well as unexpected down time. This situation can lead to lost productivity and revenue. As the number of power faults and outages increase across the US, many users are installing back-up systems as part of their standard equipment to prevent such losses and down time.

Why a DC-UPS?

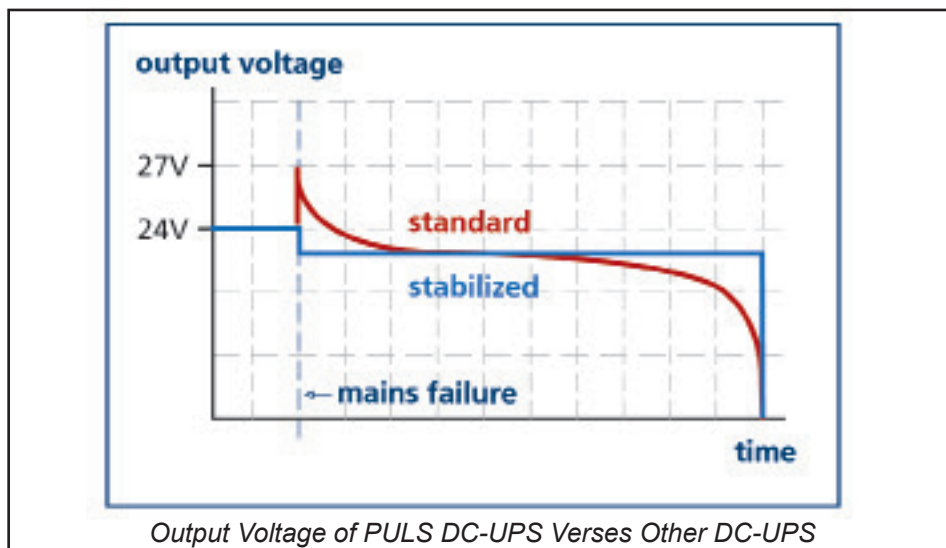
DC control has increased over the last several years and so it only makes sense that the back-up system be placed on the DC side instead of the AC. There are many lower cost AC back-up systems available, for instance for your personal computer. These devices do not take into account that a branch circuit device can open up or the power supply can fail leaving no way of supplying DC to your control system rendering the back-up system virtually useless. PULS is the leader in the design and development of DC supplies - you can expect the same quality and reliability in our DC-UPS.

Unique Features:

The PULS UB10.241 10 amp, 24V DC-UPS has many unique features that you will not find in other products.

Typical DC-UPS units require two batteries in series to back up the 24VDC load which may cause mismatching. When it comes time to replace the batteries, if only one is replaced you are left with one old and one new. This can lead to a shortened buffer time or damage to the newer battery especially if two different brands and types are used or if different amp-hour ratings are chosen.

be achieved. The superior battery management system charges and monitors the battery to achieve the longest service life. To make it easier to know when the battery might require maintenance, PULS has incorporated a "Replace Battery" contact to signal personnel or the PLC that it is near the end of its life. The built in microprocessor runs a series of tests every 8 hours and if

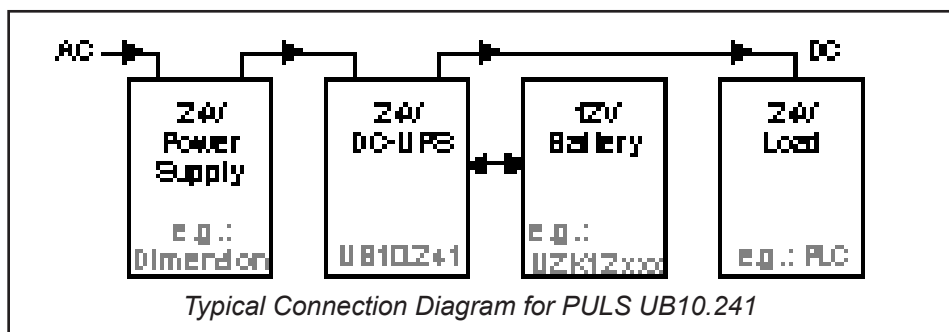


With PULS, the problem of mismatching is eliminated because we only require one battery with our DC-UPS units. This concept may be confusing to some but with only one battery, certain advantages can

3 consecutive tests fail, the contact closes alerting that maintenance is required on the battery. The UB10.241 also delivers a stabilized output during the entire discharge of the battery. This stabilized voltage allows the load to run for longer periods of time as well as protecting the load from low voltage. You do not find this in other products.

Protection Features:

There are many protection features built in to the DC-UPS. One of the most important is that the unit protects the battery from going into a deep



discharge. Draining the battery all the way down can damage it in a very short period of time, especially if this occurs multiple times. The unit also checks to see if the polarity of the battery connections and voltage are correct. For example, if a user would connect 24VDC to the input terminals for the battery there would be no harm to the DC-UPS. The controller unit also checks the input connections from the power supply to see if the wiring and input voltage are correct. All these features are designed to protect the control unit and/or the battery.

Other Features:

The DC-UPS can deliver up to 15A Bonus Power for up to 5 seconds in buffer mode allowing equipment to operate normally even with peak loading. The control unit has an extensive list of diagnostics which are easy to determine by a series of LED's or relay contacts. The three LED's indicate the status of the battery, diagnostics of the control unit and if the wiring and voltages are correct. Relay contacts can provide a remote signal to indicate that the battery is charged, the load is running on battery, or to replace the battery. There is also an inhibit mode which disables the buffering mode for maintenance or safety. There are no complicated manuals required to set up the PULS DC-UPS as only two dials have to be adjusted - one for the buffer time and the other for the "End of Charge" voltage (dependent on the temperature where the battery is located). PULS makes it simple!

Batteries:

The PULS DC-UPS controllers operate with VRLA non-spillable lead acid batteries rated between 3.9 and

130 Amp Hours. Larger battery sizes can be used with the UB10.242. For convenience, PULS offers two battery modules; one rated at 7Ah and the other at 26Ah. These battery modules have the battery terminal wired to a



PULS UZK12.071 Battery Module

terminal block so all the user has to do is connect the module to the control unit. The 7Ah module can be mounted on the DIN-rail and the 26Ah unit can be panel mounted.

Unit with Integrated Battery:

The PULS UBC10.241 offers the same features and benefits as the UB10.241 plus the convenience of an integrated 5Ah battery included with the package. This unit can also be DIN-rail mounted and only requires a power supply to complete the back-up system. There are many applications



PULS UBC10.241 DC-UPS with Integrated Battery

that only require a few minutes for the PLC to provide a controlled shutdown so the UBC10.241 is perfect for these situations. The buffer time dial is the only adjustment that needs to be set as the temperature setting is already programmed in the unit. When it comes time to replace the battery, the PULS unit has a simple procedure to accomplish the task, unlike other units on the market.

Dual Output Unit:

There are many control systems installed in remote locations that rely on radio telemetry to communicate the operational status. Many of the radios operate on 12VDC while the control system is running at 24VDC. It can be difficult to back up both systems, especially when the radio is needed to communicate that a power outage has occurred. PULS has solved this problem with the UB10.245. The control unit is the same as the UB10.241 but a small DC/DC



PULS UB10.245 Dual Output DC-UPS (Similar in Appearance to the PULS UB10.241 DC-UPS)

converter has been added to provide 5 amps @12VDC both during normal operation and during a buffered event. The UB series of DC-UPS are high quality reliable products from PULS when down time is not an option.