Emergency Backup Power

WWW Undervoltage Solutions



UPD Lite

VFD VR CH ES DCH

BONITRON

<u>UPD Lite</u>

Some processes may not require uninterruptible power, but just enough to shut down safely or reset the equipment to a default position. For these applications, a Bonitron UPD can be undersized to 10-20% of the motor HP, greatly reducing the cost.

Bonitron UPD Systems (Uninterruptible Power for Drives) are the cost effective way to ensure your process safetly shuts down or resets to the default position. UPD Systems include a voltage regulator that monitors the drive's DC bus voltage. If drive voltage disappears, the system can turn on immediately or can be manually enabled to provide power to the DC bus so that the process is shutdown safely.

Uninterruptible Power for Drives (UPD)

Parallel Connection

- High Reliability
- Seamless power transfer

Increased Efficiency

- Ultra low standby power
- Sized to 10-20% of drive
- Few AC/DC conversions

Product Highlights

- Cost effective emergency power system for processes that do no require uninterruptible power
- Sized to 10-20% of the drive HP
- Provides low speed, safe shutdown or reset to default position

Industry Applications

Extruders

Purge system before solidification



Cranes & Hoists

Lower load to a safe position



Ovens

Move system before product or conveyor damaged by heat



Elevators

Move to nearest floor





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The Bonitron UPD Advantage

Electricity travels miles to reach the drives and motors that control your process. While outdoor power lines and substations are vulnerable to power outages caused by cars, weather, and even animals, the lines inside your plant are susceptible to power quality events as well.



Unlike typical plant wide solutions, Bonitron designed its UPD solutions to connect directly to the DC terminals of one or multiple drives. If drive voltage sags, the Bonitron UPD immediately provides power so motor speed is not affected and the process never sees a disturbance. When properly sized, Bonitron UPD systems provide drives with full-load power until the AC line is restored or generators are online.

Bonitron UPD Lite Systems use DC energy to power the DC bus of the drive via DC bus connection terminals on the drive. This eliminates an unnecessary and energy-wasting DC to AC conversion.

Drive front-end bypassed

during outage or sag

AC

DC

DC

DC Bus

DC

AC

Bonitron UPD Advantages

- Parallel Connection
- High reliability
- Seamless power source transfer
- Increased efficiency
 - Ultra-low standby power
 - Sized to drive system for reduced cost
 - Power supplied to DC bus for minimal conversions

AC

Line

Competitors' double conversion UPS systems convert DC voltage that is stored in batteries or capacitors back to AC voltage in order to power the drive, which in turn converts it back to DC. Variable frequency drives are not recommended for use with UPS Systems, as the drive input reactance interacts negatively with UPS inverters.

AC

DC

In-line UPS Disadvantages

- Series Connection
- Decreased reliability
- Decreased efficiency
- Unnecessary conversions
- Converts energy storage back to AC



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