Total Visibility

When you don't monitor your UPS and supporting infrastructure, it's like driving in the rain without windscreen wipers—you may be protected from the downpour, but your visibility is severely hindered.

That's why it's important to safeguard your IT equipment with a power monitoring solution that can keep your critical applications safe during interruptions.

Data loss and corruption, in the event of an extended power outage, can be avoided by installing monitoring software on equipment protected by UPS. Systems can be configured to safely shutdown and then powered back on once the power is restored.

There are several options on the market today, from basic network cards to multiple software platforms offering comprehensive monitoring and trending. Ultimately, obtaining the right data to make informed decisions is critical.

UPS Power Solutions offers a range of products and solutions that can be tailored to meet your monitoring and Service Level Agreement needs.

From the DIY monitoring products through to the centrally managed and 24/7 support escalation service, UPS Power Solutions works with you to ensure you have the right level of alarms and that notifications are provided to the right people through a range of mediums such as Email, SNMP, text messages and phone calls.

Our support solutions also include the provision of detailed event logging to assist in event diagnostics. This approach balances the Need to Know without overloading you with Too Much Information.

If you were to receive an alarm regarding your UPS, let UPS Power Solutions be your "Roadside Assistance". We offer varying levels of service agreements to meet your needs, including a 24/7 support offer backed by vendor trained and experienced UPS engineers to help get you "back on the road" (even in the rain).

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Monitoring Solutions

Today more than ever, we depend on systems that rely on power. The equipment that keeps that power stable and available is crucial.

There can be several different components between the power that comes from the street and the systems that keep our businesses running. Monitoring the status of these components is vital in order to prevent any risk of our systems shutting off without warning. These components include UPS, electrical distribution and physical environment such as air conditioning and humidity management solutions.

There are various products available that monitor these components and deliver real-time status and alerts to their condition. Electrical supply circuit breakers and power meters have monitoring options available such as dry-contact alarms for status and Modbus RTU for high level monitoring of measurement data and statuses such as closed (on), open (off) and tripped/overload shutdown.

The UPS provides high-level network monitoring options such as:

Ethernet:
- Email alerts, easy to setup and simple but offers no real-time information.
- SNMP traps for high-level and real-time measurement and statuses but requires 3rd party monitoring software and/or setup for custom GUI. Uses existing IT network infrastructure for connection.

Modbus RTU/JBUS:
- Best for integration with newer Building Management Systems (BMS) with Modbus support.
- High level monitoring of UPS status and measurements without the requirement of IT network infrastructure.
- Less cabling infrastructure required, as connections are daisy-chained with 2-wire or 4-wire interface.

Relay Contacts:
- Low-level monitoring is available via dry-contacts on a relay card for simple summary alarm status either
  a) locally with piezo/strobe connection
  b) via connection to an older BMS with IO input only

From the UPS, the equipment is connected through a Power Distribution Unit (PDU) with individual outlet monitoring of power usage. This is useful to alert when power usage is either
a) usage is little to none, indicating a cable unplugged or equipment power supply failure
b) usage is too high, indicating additional equipment has been plugged in and could cause a fuse or circuit breaker to trip.

The PDU has environment monitoring integration to provide real-time status of:

- **Temperature** – alert on high temperatures for battery conditions, which leads to early-life failures, swelling and fire risk. Equipment with batteries should be kept cool, usually between 18°C and 23°C to keep the battery operating conditions within the manufactures specification and prolong the service life of the battery.
- **Humidity** – Humid environments cause any dust that may be present in electronic equipment to become conductive and effect the way electronics operate in equipment, particularly high voltage componentry in UPS electronic modules. This can cause adverse effects on the way the UPS generates the output power which may lead to failure in the UPS supply to equipment.
- **Vibration/shock** – Provides security and alerting for cabinets and racks on forced entry/damage to remote cabinets, as well as seismic reporting for remote regions.
- **Smoke** – Pre-alert to fire, can be configured to trigger an emergency shutdown of power.
- **Water leak** – Alerts on areas subject to flooding or a failure of plumbing or sprinkler systems.
- **Door contacts** – Monitors and log access to cabinets, rooms and racks.

The PDU also has security and access integration with electronic locks, keypads and proximity cards to limit who can access rooms, cabinets and racks. The PDU can also be equipped with a camera to take photos of who is accessing the equipment for particular security requirements.

The monitoring of these systems and supporting equipment is best done with a software solution that is suited to your business to provide a single place to see the status of the entire system. There are a number of solutions available on the market, both open source options such as Nagios and PRTG as well as and vender specific solutions such as Eaton's Intelligent Power Manager software, Schneider Electric's APC Smart Connect software and Sunbird's Power IQ.

These solutions offer the ability to have a high-level overview of the entire system status with the ability to drill down into component detail and provide trends, event logs and control.