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UPS Battery Impedance Testing

Part No.

Product Description

No battery within a UPS will last forever and it is common practice to replace battery stocks every 3-5 years when they come to the end of their natural life. Due to their very nature, every battery within a string will behave slightly differently. Each will be affected by a great deal of factors not least the temperature at which they are stored, how often they are called upon to work and the level to which they are discharged when needed.

It is possible then that a single battery may well fail well within its 3-5 year expected lifetime whilst all others around it are still in perfectly good condition. This then puts additional strain on adjacent batteries in the string which then begin to fail in a ‘domino-style’ effect.

UPS battery impedance testing carried out annually from the time they are installed from new, will provide an annual ‘health check’ and health ‘history’ over their lifetime. This is the case for every individual battery in the string as opposed to just the overall string itself. Should any individual battery show early signs of failure or weakness then this can be replaced as an individual unit avoiding the ‘usual’ practice and cost of replacing whole strings. Whilst this will never 'negate’ the eventual requirement for a full battery change it will help monitor and maintain the integrity of the string. This maximises its lifetime and avoids the high costs of ‘panic’ changing entire strings should a weakness be identified or worse still failure occur when under load.

Replacing a whole battery string is a costly exercise. A preventative annual UPS battery impedance check will test each individual cell within the string. This can identify any weak or failing individual unit, leading to a much lower replacement cost (or possibly the battery being re-conditioned) compared to the expense of swapping out an entire string. At the same time this will of course check the overall battery string health ensuring that any UPS will deliver the protection expected from it when needed.

A new test, based on looking at a cell’s internal resistance, is proving to be a very reliable indicator of state of health and should offer a cost-effective supplement/replacement solution to load testing. Field testing on all types of

batteries has proven that, if a cell's internal resistance increases to more than 25% above its known base line value, that cell will fail a capacity test.

We also offer a wealth of other battery and UPS services to help pro-long the life of your existing power protection systems.