

BATTERY MAINTENANCE CONTRACTS

Battery Service & Maintenance

Part of the UPS system, is the battery which provides the back up power to the UPS when there are mains disturbances or total black outs. The length of time the battery can support the UPS depends on two factors, a) the specified autonomy and b) the condition of the cells of each battery block.

Should any cells within the string become weak and build their internal resistance up or in the worst case become open circuit, this effects the whole battery performance. Where the UPS system battery is only one single string, this can have disastrous consequences, because as the UPS system switches onto the battery, the battery is unable to provide the necessary back up as one single cell has failed open circuit. This will cause the UPS to shutdown and the supply to the critical load will be lost.

Most internal problems with the battery will cause the internal resistance to rise, loss of electrolyte due to venting or leakage through seals, alternative high levels of corrosion of the grid bars where the plates are connected resulting in loss of conductive area.

For further advice and a full quotation on the right Service & Maintenance Contract for you, please telephone us on 01628 503900.

The Agreement

Regular testing of the battery to determine the condition of the battery, will highlight weak cells, which should be replaced and prevents total battery failure when the UPS system requires the back up power.

AVK | SEG (UK) LTD are able to carry out impedance testing on individual cells which can detect any one which are showing signs of weakening or are going open circuit when current is passed through the block.

The main advantage of impedance testing the battery as opposed to load testing is that following a discharge test the battery is unable to provide back up to the UPS until recharged. Whereas following the impedance test the battery would not have been discharged, therefore leaving the battery totally serviceable to provide back up power for the UPS system.



AVK | SEG (UK) LTD Standard Battery Maintenance Contract

Provides for the cost of carrying out maintenance & testing on the batteries during maintenance visits. We provide battery maintenance for UPS, Generators & 48V DC systems. A detailed report and analysis is provided following each visit.

Included in Contract:-

- *General Maintenance – Inspection & Cleaning*
- *Connections – Checking electrical connections*
- *Adjusting – Checking charging voltage is correct*
- *Reporting - Provision of Battery Status Report*
- *Provide Standard Report for Follow up*



“Service Your Profit” Your business depends on it!

STANDBY BATTERY TEMPERATURE LOGGING UNIT

Model TLU 22/4 – For Industrial Batteries

The AVK | SEG (UK) LTD Temperature Logging Unit (TLU) is a compact temperature recorder designed to monitor the temperature of industrial battery systems over an extended period, in order to ascertain adverse temperature conditions which affect the life expectancy of the battery. The unit is capable of storing the results of 130,000 temperature measurements over a period of almost four years.

Each TLU has a unique electronically stored serial number, which enables the retrieved data to be assigned to the specific temperature sensor. The stored Data can be downloaded to a computer using the software, which runs under Microsoft Windows environment. This allows temperature profiles to be presented and compared in numeric or graphical format. A battery life prediction is also made which can be used to plan replacement schedules or demonstrate the economic benefits of the control of the ambient environment.

Description

The TLU consists of a small insulated enclosure with a temperature sensing pad, an interface connector socket, a



compartment, an activity light and a push-button/lights to indicate backup battery condition.

The temperature sensing pad is in contact with the side of the block to give a reliable indication of internal temperature.

The unit may also be used to record ambient temperature around the battery.

The TLU is powered by a 12 volt supply derived from six cells of the battery being monitored. Any position in the string is suitable. The current drawn by the unit is very small compared with even standby float charge current and does not cause any measurable imbalance in the charge on any cell. The supply is totally isolated from the communications socket, eliminating electrical continuity from the battery to any other point.

Battery Life Predictions

By selecting from the menu it is possible to calculate life expectancy whether or not the charging system is temperature compensated. Where the system does not have a temperature compensation circuit it is possible to determine the optimum float voltage at which the charging circuit should be set to achieve maximum operational life.



Temperature Measurements

The TLU recovers from its passive state four times every hour, i.e. every 15 minutes, to make a temperature measurement. This accurate measurement is then sorted into one of 22 temperature bands ranging from below 0°C to above 50°C. The width of each band is 2.5°C. The TLU incorporates a counter for each temperature band capable of storing over 65,000 measurements.

This method of storing temperature measurements allows immediate indication of the most common temperature simply by viewing the figures and allows easy calculation of averages and deviations without complex data processing.

The model number (TLU22/4) indicates 22 temperature bands with 4 samples per hour.

AVK|SEG (UK) LTD
Power Systems House, Malvern Road
Maidenhead
Berkshire
SL6 7QY

Telephone: 01628 503900 Fax: 01628 503999
www.avk-seg.co.uk email: powersystems@avk-seg.co.uk