

# 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 backup battery



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.



## Specification

<b>Model Number</b>	<b>TLU22/4</b>
<b>Size</b>	90 mm x 65 mm x 30 mm
<b>Fixing</b>	Velcro Strip
<b>Temperature Accuracy</b>	+ or - 0.5°C + 0.02°C per degree deviation from 25°C
<b>Operating Temperature Range</b>	-20°C to +70°C
<b>Temperature Bands</b>	0 - 50°C in 20 bands of 2.5°C + "Below 0°C" & "Above 50°C"
<b>Temperature Sample Rate</b>	Four per Hour
<b>Time period accuracy</b>	0.1%
<b>Weight</b>	150gms with backup battery
<b>Operating Voltage</b>	12 volts nominal, 9 volts min., 18 volts max.
<b>Supply Connections</b>	Flying leads, 1/4" quick connect Terminals
<b>Backup Battery</b>	PP3 Alkaline, 550mA/H
<b>Supply Current</b>	1 mA (Typ.)
<b>Data storage</b>	131,072 samples, 1,365 days
<b>O/P connector Isolation</b>	6,000 volts

### Battery Maintenance Contracts

UPS Systems rely upon their batteries to provide the UPS with power in the event of a mains interruption or a mains failure. Checking cell, block or battery voltage does not provide accurate information of the integrity of the battery. AVK | SEG (UK) LTD have invested in specialized battery test equipment that can provide an indication as to the condition of the battery and individual cells, without discharging the battery. This test can be included within the maintenance contract on ANY battery installation and also incorporates:

- 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

### Priority Faxback Enquiry

If you would like one of our qualified Service Engineers to call you back to discuss your requirements in more detail, or provide a full quotation, please complete the below contact information and...

**Fax Back to 01628 503999**

Full Name \_\_\_\_\_ Job Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

Signed \_\_\_\_\_ Date \_\_\_\_\_

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