

# **SCOPE OF WORK**

# BATTERY MONITORING SERVICES UXCT UNIVERSAL XPLORER CELL TEMPERATURE INSTALLATION AND START-UP PLUS SERVICE

Feature	Detail
On-Site Service	Includes 1 Annual Preventive Maintenance Service within the 12-month material warranty period on Alber UXCT System and Integrated Battery Monitors scheduled by the customer at the customer's convenience after the warranty period (excluding national holidays).
On-Site Service	One site trip within the 48 contiguous states after the system has been installed and cabling terminated. Visit to be scheduled at the customer's convenience (excluding national holidays).
Service Professional	Performed by Vertiv factory trained and authorized technician. Vertiv Services is the OEM service provider for Liebert products.

# SERVICE PERFORMED

- 1. Perform site walk through with customer and/or all appropriate on site personnel.
- 2. Verify materials ordered are received.
- 3. Perform a complete visual inspection of the equipment, checking for broken, damaged, or stressed components.
- 4. Clean any foreign material and dust from any parts from the UXCT system and associated parts (sensors, tab washers, tape sensors, connectors etc).
- 5. Verify system installation considerations such as Equipment location, rack mounting option, temperature sensors mounting options, battery string isolation and Cell Number 1 Identification.
- 6. If installing temperature sensors via tab washers, properly install the tab washers by determining tab washer placement.(Refer to the configuration Connection Diagram in the UXCT Installation manual).
- 7. If attaching temperature sensors using thermal transfer tape, properly install double-sided Thermal Transfer Adhesive tape for mounting sensors directly to the battery case.
- 8. Mount the equipment.
- 9. Properly install and connect the ambient temperature sensor network (if applicable).
- 10. Properly install and connect the cell temperature sensor network.
- 11. Run all associated RS485 cables, fiber optic cables and control wires to and from the equipment if applicable\*.
- 12. Connect the Hardware alarm contacts if applicable.
- 13. Connect the thermal runaway alarm contacts if applicable.
- 14. Connect the digital input dry contacts if applicable.
- 15. Power up UXCT unit.
- 16. Configure Alber series battery monitoring units for monitoring and alarm processing.
- 17. Test UXCT Battery Monitoring System.
- 18. Verify proper communication between battery string(s) and assigned PC.
- 19. Provide 4 hours of training on UXCT system.

\*RS485 port is used if the UXCT needs to be connected to BDSU or UXIM. Fiber optic cables are used if UXCT needs to be connected to BDS series products.



#### **Annual Preventive Maintenance**

- 1. Visually inspect all monitor system components for damaged or frayed power cords and cables and for damaged component panels, controls, and connectors. Perform corrective action to fix any issue found.
- 2. Properly complete system component cleaning of UXCT system and sensors.
- 3. Follow the battery manufactures recommendations for cleaning battery connections at tab washer or tape transfer connections.
- 4. Note the monitor system has no user replaceable components.

### **ASSUMPTIONS & CLARIFICATIONS**

- Any customer site visit is limited to eight (8) hours per visit. Any time beyond forty (40) hours/wk or eight (8) hrs/day or additional Startup visits will be billed separately.
- Parts coverage is in accordance with Product Warranty.

# **CUSTOMER RESPONSIBILITIES**

In order to provide timely, accurate and thorough execution of the services described herein, Vertiv requests the following:

- Point of Contact: Provide an authorized point of contact(s), specific for the scope of work, for scheduling and coordination purposes.
- Scheduling: Make dates available for scheduling service. All visits must be requested 10 business days in advance of need by contacting the Vertiv Services Customer Resolution Center at 1-800-543-2378.
- Site Access: Prior to time of scheduled work, provide site access including any customer required escort, security clearance, safety training and badging for Vertiv service personnel.
- Equipment Access: Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv service personnel of any special requirements for equipment access including lifts, ladders, etc.
- Shutdown: Service may require shutdown of load to ensure electrical connection integrity.
- Notification: If for any reason the work cannot be performed during scheduled time, notify Vertiv service personnel 24-hours prior to scheduled event.

# **TERMS AND CONDITIONS**

Subject to all Terms & Conditions as noted in the Vertiv Services Terms & Conditions or the terms of a Master Agreement between the parties, if any, shall apply.