Eaton UPS DC Battery System
Cable Installation Test Report - SKIDS

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Revision History

Revision No.	Revision Date	Summary of Changes	Created	Checked	Approved
01	24/10/2024	First Release	RVDK/ESG	ESG/RVDK	LW

Health and Safety

This test script shall list all safety requirements and PPE required whilst performing the below tasks.

- Safety hard hat
- Safety glasses
- Safety Ark flash high visibility clothing (jacket and trousers)
- Safety Ark Flash gloves
- Safety ankle support boots (no riggers)

Furthermore, **whenever working on batteries ensure that**:

- Only use insulated tools.
- Remove all metal Jewelry and watches etc.
- Eye wash facilities to be stored in a known and locally accessible location.

General Notes:

- A calibrated Insulation Resistance Meter and Digital Multimeter must be used, and the certificates of calibration attached to these results.
- Battery safety links must be removed whilst taking these readings.
- All readings must be taken with both ends of each cable fully dressed and lugged.
- **All DC cables must be disconnected and not touching any other cable or equipment at either end.**

Equipment Details

Microsoft Equipment ID	LON01-COLO3-CE1-UPS02-BMS01-SKID04
Eaton UPS Model No.	9395P-123-HS PFO.95 LON01
Eaton UPS Serial No.	HPO00020781
SKID Serial No.	J3EATONSKIDLONBASHRD0120
No. of Battery Cabinets per SKID	7

DC Cable Point-to-Point Tests

These tests are required to ensure that cable has been installed and identified correctly and no circuits have been crossed or polarity swapped.

The starting point for this test is with ALL DC cables disconnected and isolated at both ends. Using a test jumper lead, at the DC Tie Panel, connect the +Ve cable to the cabinet earth. At the UPS, use a digital Multimeter to measure the resistance to earth on all cables. Ensure that only the expected cable has a resistance below 1Ω. All other cables should read open circuit. Once the correct cable has been confirmed, ensure it is correctly labelled and color coded. Change the jumper test lead on to the next cable and repeat until all cables have been tested.

Multimeter Manufacturer and Model	
Multimeter Serial Number	
Multimeter Date of Last Calibration	

Cable	Point to point test confirms correct cable at each end		Cable fitted with correct color sleeve at each end		Cable fitted with correct cable ID at each end	
	✓	✗	✓	✗	✓	✗
DC Tie Panel 1 **+ve**	☐	☐	☐	☐	☐	☐
DC Tie Panel 1 **-ve**	☐	☐	☐	☐	☐	☐
DC Tie Panel 2 **+ve**	☐	☐	☐	☐	☐	☐
DC Tie Panel 2 **-ve**	☐	☐	☐	☐	☐	☐

DC Cable Insulation Resistance Readings

With ALL DC cables disconnected and isolated at both ends, use an insulation resistance test meter to record the resistance of each DC +ve and -ve cable conductor to earth. The insulation resistance meter test voltage to be 1000V. Perform the test from the UPS. Anything other than the maximum resistance recorded by the meter should be investigated and reported.

Insulation Resistance Meter Manufacturer and Model	Megger MFT1552
Insulation Resistance Meter Serial Number	080808/7940
Insulation Resistance Meter Date of Last Calibration	03/06/25

Cable	Cable Insulation Resistance Reading *(MΩ)*
DC Tie Panel 1 **+ve**	
DC Tie Panel 1 **-ve**	
DC Tie Panel 2 **+ve**	
DC Tie Panel 2 **-ve**	

Complete Form

Final QA and Sign Off			
Only when all tests are complete, the DC connection can be finally terminated, torqued, and marked with a **BLUE** indelible pen.			
Time Stamped Photos have been taken of the Torqued and Marked DC Terminals in the DC Tie Panel as well as the UPS and have been uploaded to Compass.			Yes ☐ No ☐
The Calibration Certificate for the Cable Insulation Resistance Meter has been uploaded to Compass.			Yes ☐ No ☐
The Calibration Certificate for the Digital Multimeter has been uploaded to Compass.			Yes ☐ No ☐
Engineer Name		Signature	
Date			