

TECHNICAL BRIEF

DLS Series Battery Chargers and NEC Energy Solutions ALM[®] Battery Designs



IOTA's **DLS-30**, **DLS-45**, and **DLS-90** battery chargers have been tested and approved by **NEC Energy Solutions** for use with their **ALM[®] battery** technology.

Using **lithium-ion technology**, the **ALM[®]** batteries from NEC Energy Solutions are compact, lightweight alternatives to traditional lead acid batteries. NEC Energy Solutions' **ALM[®]** batteries provide high rate power delivery, fast charging, and an exceptional cycle life even with 100% depth of discharge cycles.

Testing

NEC Energy Solutions tested three IOTA charger designs (DLS-30, DLS-45, and DLS-90) with the **ALM[®] 12V7s HP** battery, as well as an additional test of the DLS-90 with the **ALM[®] 12V35s** battery pack. Tests were conducted at room temperature, using both charge stages of the DLS (**13.6V float voltage** and **14.2V bulk voltage**).

For testing, the **ALM[®]** battery was discharged to a UVLO **low voltage state of 4.8V**. In all tests, the IOTA DLS chargers performed satisfactorily and results verified stable behavior - close loop stability with no ringing, dramatic overshoots, or oscillations. **In conclusion, NEC Energy Solutions' test results approve DLS battery chargers for use with ALM[®] batteries.**

For additional information, contact IOTA's Technical Services team at 1-855-363-9527. To learn more about, **NEC Energy Solutions** and **ALM[®]** battery technology, visit **www.neces.com**.

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