

BLOCS FROM LINCAD: HOW TO ACHIEVE SAFER, MORE ACCURATE STATE OF CHARGE DATA DISPLAY FOR BATTERIES IN STORAGE OR TRANSPORT

An interview with Peter Coplestone, Operations Director, Lincad



Peter Coplestone

Leading UK designer and manufacturer of bespoke battery and charger systems, Lincad, has developed the Battery Logistics and Operational Compliance System (BLOCS) – an innovative label printing system that identifies accurate states of charge and automatically prints out traceable labels to enable safe storage and IATA-compliant battery transport via air.

Below, Peter discusses the idea behind the development of the BLOCS label printing technology and explains how it can benefit customers operating within the defence and military sectors and beyond, around the globe.

Q. Why did Lincad decide to develop a battery label printing system like BLOCS?

A. Many of our clients regularly use our high performance lithium-ion batteries, which are optimally stored at 50% state of charge. This helps prolong battery life and ensures safer storage. It's very important to be able to identify a battery's state of charge when it's not in use to ensure that it is being stored correctly. In addition, IATA transportation regulations require batteries to have a state of charge equal to or less than 30% when transported by air.

Our BLOCS label printer system ensures that batteries being stored or transported cannot only comply with these conditions, but that their state of charge data can be quickly and easily identified. This is vital to the successful, timely preparation and transport of mission-critical defence and military application batteries.

Q. How does the BLOCS label printer work?

A. Our BLOCS label printer automatically prints a status label showing accurate state of charge data and other information for each battery being charged or discharged by the connected charger or conditioning system. It can connect directly to compatible Lincad battery conditioners and chargers fitted with the BLOCS interface.

These include our Caravel Mk2 single and four-channel battery charger, as well as our Armada battery conditioning systems. Once a battery's state of charge level has reached its optimum level for storage or transport, Lincad's BLOCS



printer produces the status label to accompany it during storage or transport. This label clearly displays accurate state of charge data for easy identification and quicker, simpler logistics.

Q. Does BLOCS work with any batteries and electrochemistries, or just Lincad's own lithium-ion products?

BLOCS not only works with Lincad's own lithium-ion batteries, but also with many other battery types from other original equipment manufacturers and other electrochemistries. This makes the system extremely useful for larger battery fleets, as well as smaller, more bespoke requirements. For customers requiring mission-critical, IATA-compliant battery transport at short notice, this flexibility is a huge advantage, as lots of batteries' states of charge can be identified and labelled using a single system in just one operation. It's pretty impressive!

Q. How many batteries can be charged at once per single BLOCS label printer?

A. BLOCS can have as many as 32 compatible conditioners or chargers attached to it via the network, to allow rapid processing and a streamlined logistics process. As many as 192 batteries can be processed and labelled simultaneously using Lincad's six-channel Armada conditioner.

Customers can also attach different types of conditioners or chargers at any one time for added versatility. Each status label can then be directly traced back to the individual battery it has recorded for complete accountability.

Q. What data does the label include?

A. As well as the recorded state of charge and status of the battery, each label printed out by BLOCS provides a time and date stamp to confirm when it was conditioned or charged. The type of conditioner or charger used is identified, along with its serial number. The same information is included for the battery – type and serial number. This ensures that the customer will always know which battery goes with the printed label and will avoid any confusion.

The data on the label also includes requirements for shelf life and recharging, organisation details and space for customisable text to include data around factory or user configurations and management software details. Everything someone checking for battery status or compliance might need to know is all there on one easy-to-read, authenticated label.

Q. How can a BLOCS printer be added to an existing battery charging system?

A. BLOCS is available as a factory add-on option and works as an automated, stand-alone system that does not require any external inputs once set up. This makes it easy to install and simple to disconnect and move around as required. It is incredibly robust, and works best when placed on a flat surface in a sheltered environment with free air.

Q. You say that BLOCS is primarily for the military and defence sectors – can other industries benefit from it too?

A. Indeed, they can. Although a large number of Lincad customers come from these two important sectors, we work with people in many other busy industries too, including commercial, industrial, petrochemical and medical. Each of these sectors has stringent quality management and safety requirements for storing lithium-ion batteries. We are keen to support their needs too, by helping them produce accurate state of charge labels for easier identification and optimum storage.

Our customers hail from all over the world, meaning that many need to transport batteries by air on a regular basis without flouting IATA regulations around states of charge and compromising safety.

Q. What's next for BLOCS and Lincad's investment in state of charge label printing and support?

A. As with all of our products and services, we are always looking at what lies ahead in terms of what customers need and how technology is developing. BLOCS has been extremely well received by customers in the military and defence sectors, as well as beyond, since we launched the system last year.

We are looking forward to taking the system out to even more customers around the world and supporting their requirements around safe battery storage and transport as part of our work to enable logistics and transportation operations. ●

