



**BATTERY  
MONITORING**



# BSI40™

# LIFE Network™

**POWERFUL FLEET MANAGEMENT  
FOR MOTIVE POWER BATTERIES**





# MAXIMISE FLEET EFFICIENCY

## EMPOWER YOUR OPERATIONAL EXCELLENCE WITH ENERSYS® BATTERY FLEET MANAGEMENT SOLUTIONS

In today's fast-paced materials handling industry, downtime is a major issue. EnerSys® battery monitoring tools and fleet management solutions help reduce downtime from battery charging and changes. By turning raw data into useful insights, our technology protects your equipment, boosts productivity, streamlines operations, and lowers your Total Cost of Ownership (TCO). Experience advanced diagnostics and proactive battery management to keep your operations running smoothly without interruption.



### PREDICTIVE ANALYTICS

Gain deep insights into battery and equipment usage. Understand patterns, predict failures before they occur, to enhance your fleet operations.



### DATA-DRIVEN INSIGHTS

Continuous monitoring of battery performance means you can manage charging cycles and reduce unplanned maintenance.



### INTELLIGENT ALERTS

Stay proactive with automated alerts that highlight when anomalies or potential issues are detected.



### TOTAL COST OF OWNERSHIP (TCO)

Experience a lower TCO by preventing downtime, extending battery life, reducing labour and repair costs, optimizing energy use and enhancing productivity.



# WHICH SOLUTION IS RIGHT FOR YOU?

If basic compatibility, simple reporting and added flexibility are important for your smaller and growing fleet size, the BSI40™ battery status indicator is the best solution for your operation. LifeNetwork™ battery fleet management system is exclusively for our NexSys®+ charger range. If your fleet requires more detailed management for greater efficiency and increased productivity, LifeNetwork™ battery fleet management system with enhanced reporting and intuitive energy management features, is suitable for you.

Below is a top-level comparison of these two battery monitoring solutions to help you choose the best option for your requirements.

## BSI40™

## LIFE Network™

	BSI40™	LIFE Network™
 <p><b>CHARGER COMPATIBILITY</b></p>	<ul style="list-style-type: none"> <li>• All EnerSys® high-frequency charger range</li> <li>• All non-EnerSys® high-frequency charger range</li> </ul>	<ul style="list-style-type: none"> <li>• Exclusively for EnerSys® NexSys®+ Charger(s)</li> </ul>
 <p><b>FUNCTIONALITY</b></p>	<ul style="list-style-type: none"> <li>• FiFo (First in, First out) battery rotation</li> </ul>	<ul style="list-style-type: none"> <li>• FiFo (First in, First out) battery rotation</li> <li>• Charging time control to maximize energy efficiency</li> </ul>
 <p><b>FLEET SIZING</b></p>	<ul style="list-style-type: none"> <li>• Connect with up to 40 chargers</li> <li>• Configure up to 10 truck types</li> </ul>	<ul style="list-style-type: none"> <li>• Connect with up to 512 chargers</li> <li>• Configure up to 10 truck types</li> </ul>
 <p><b>REPORTING</b></p>	<ul style="list-style-type: none"> <li>• Standard reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Reporting (e.g Alarms/Usage/Consumption)</li> </ul>
 <p><b>REPORTING FREQUENCY</b></p>	<ul style="list-style-type: none"> <li>• Reports manually generated</li> <li>• Real-time alarms</li> </ul>	<ul style="list-style-type: none"> <li>• Daily automatically generated reports</li> <li>• Live data view onsite and remotely</li> <li>• Real-time alarms</li> </ul>
 <p><b>DATA ACCESS</b></p>	<ul style="list-style-type: none"> <li>• On-site access</li> <li>• Download data when needed</li> </ul>	<ul style="list-style-type: none"> <li>• On-site real-time access</li> <li>• Remote access via LAN or Internet*</li> </ul>
 <p><b>DISPLAY OPTIONS</b></p>	<ul style="list-style-type: none"> <li>• LED Display for FiFo</li> </ul>	<ul style="list-style-type: none"> <li>• HD TV Screen for FiFo</li> </ul>

\* Varies based on selected options and company IT security standards. For more information, contact your EnerSys® sales representative



## FEATURES

- The BSI40™ battery status indicator helps to streamline battery change practices within your operation, which reduces downtime and improves overall productivity.
- The system is appropriate for both new and growing fleet management where an effective battery rotation is business critical.



## BENEFITS

- The indicator identifies when the next battery is ready and prevents the battery changing sequence from being interrupted.
- The BSI40™ battery status indicator enables a FiFo (First in, First out) battery rotation, ensuring the battery performance and service life is being maximised.
- The system includes an LED display that indicates the next available battery and can connect with up to 40 chargers which can be configured to manage up to 10 truck types.
- 1 primary and up to 3 secondary units can be networked and connected to multiple chargers (up to 160 in total).
- The indicator is compatible with our high-frequency charging range as well as non-EnerSys® chargers.
- The system features an alarm if the wrong battery is selected (optional).
- The system records the date, charging history and alarm log of each event. The data is then turned into a full analysis of your battery fleet operation.



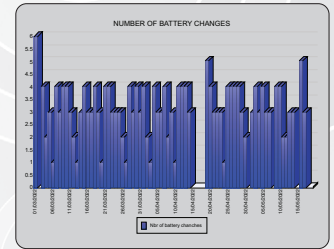
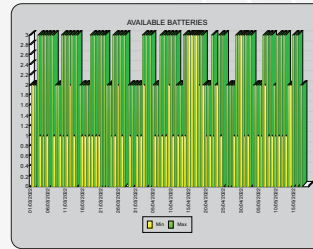
# FLEET MANAGEMENT REPORT EXAMPLE

# BSI40™

The BSI40™ battery status indicator provides a report via a PC application based on the data collected from the box.

The below battery report example provides:

- Total available batteries each day
- The number of battery changes per day
- Daily record of batteries charging per truck type



B.S.I REPORTING			Site: TEST 2					
BATTERY EVENTS			Period: 01/01/2022 to 31/12/2022					
			Group: All group					
Date	Day	Nbr of Change	MIN	Time	MAX	Time	Group	ALARMS
01/03/22	Tuesday	6	0	13:17	2	16:06	LG	2
02/03/22	Wednesday	0	2	17:10	2	17:10	LG	0
03/03/22	Thursday	4	1	10:04	3	00:19	LG	1
04/03/22	Friday	2	1	08:39	3	23:22	LG	0
05/03/22	Saturday	3	1	20:32	3	00:00	LG	0
06/03/22	Sunday	1	0	04:28	3	22:52	LG	0
07/03/22	Monday	4	1	11:10	3	00:00	LG	0
08/03/22	Tuesday	3	0	20:35	2	01:19	LG	1
09/03/22	Wednesday	4	0	15:35	2	00:00	LG	1

The below charger report example provides:

- The number of batteries charged as complete and incomplete
- The number of equalizations as complete and incomplete
- The start, end and total duration of charging that has taken place

B.S.I REPORTING			Site: TEST 2		
BATTERY EVENTS			Period: 01/01/2022 to 31/12/2022		
			Group: All group		
Charger	Group	Start of charge	End of charge	Charge time	Charge Status
2	Charger Group 1	17/05/2022 14:54:07	17/05/2022 23:16:11	08:22 m	Complete
3	Charger Group 1	17/05/2022 14:54:01	18/05/2022 01:06:12	10:12 m	Complete
1	Charger Group 1	17/05/2022 18:00:02	18/05/2022 02:42:12	08:42 m	Complete
Complete charge :		222		Incomplete charge : 5	
Complete Equalization :		91		Incomplete Equalization : 0	
Fault on charger :		0			



LifeNetwork™ battery fleet management system complements EnerSys® NexSys®+ chargers and adds some great new features for the charging room.

LifeNetwork™ battery fleet management system will help you derive optimum performance and service life from the battery fleet, having visibility and control of your battery charging operations. It also supports energy management by facilitating off-peak charging. LifeNetwork™ battery fleet management system is a real-time monitoring, web-based software application.



## BENEFITS

- LifeNetwork™ battery fleet management system reduces battery change time by allocating the best battery for each truck type with real-time FiFo (First in, first out) battery fleet management.
- Enables you to control and manage power consumption within the battery room.
- Set different power thresholds for day and night to optimize battery charging during off-peak rates.
- Your battery fleet can be controlled remotely to check all charge cycles as complete, incomplete or equalized.
- Provides different types of battery and charger reports including graphics of the charging process, consumption and more.

**When batteries are equipped with the Wi-IQ® battery monitoring device, LifeNetwork™ battery fleet management system enables you to:**

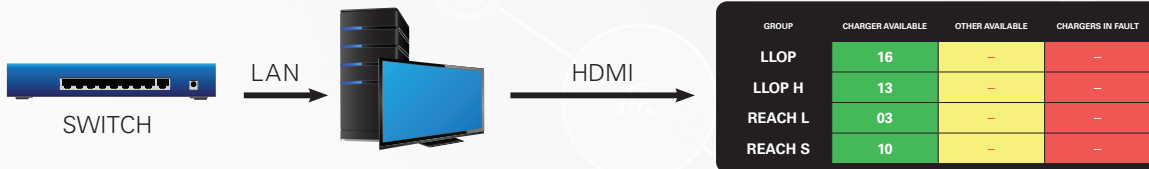
- Check the status of all batteries and operating temperatures.
- Identify potential faults (before breakdowns occur) and which batteries require water topping up.
- Instant alarming in case of issues.
- A large LED display gives operators clear visibility of battery charging status.



The LifeNetwork™ battery fleet management system has two installation options. A PC can be placed onsite connecting all chargers to it or the program is installed on a virtual server and the chargers are connected to this network.

## ON SITE OPTION

### Option 1a: Isolated System



A network cabinet is placed onsite in the charging room. A PC and a switch are required to connect all the chargers to the PC and have the system running. The FiFo (First in, First out) screen will be connected directly to the PC as an additional monitor. This PC can be optionally connected to the internet this way it can be accessed remotely.

### Option 1b: Local Network



A network cabinet is placed onsite in the charging room. Chargers will be connected via Ethernet to the customer network and a PC is connected to the same network. The devices will be recognised and no direct connection to this PC is needed. The FiFo (First in, First out) screen will be connected directly to the PC as an additional monitor. If a FiFo (First in, First out) screen is not required, a PC can be installed in a different location, but it should remain on the same network.

## REMOTE OPTION

### Option 2: Server Version



No on site installation is required. Chargers will be connected via Ethernet to the customer network. The program will be installed on the server the customer provides (same network as the chargers). This is an ideal way for management to view 'live data' from any location whether it be an office on the same site or from a different geographical location. FiFo (First in, First out) is optional within this option.

\* Varies based on company security standards



### **SERVICE AND SUPPORT**

Our battery support services range from system design, installation and certification to testing, maintenance and repair.



Our comprehensive recycling support program accepts lead acid batteries of all sizes, from all manufacturers.



### **BATTERY MONITORING**

Our advanced tools and technologies deliver actionable intelligence to optimize battery maintenance and operation.



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