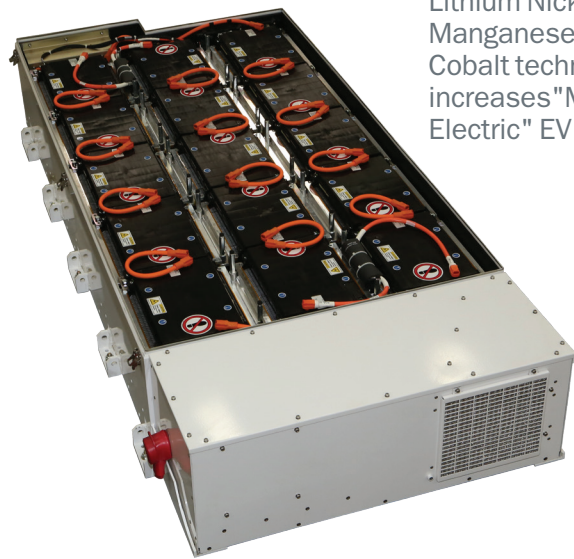


ESS-3G-32K (Energy Storage System)

BAE Systems offers several energy storage system options. Our new ESS-3G-32K offers higher capacity energy storage, enabling more pure electric range. This new battery system uses high-performance lithium nickel manganese cobalt chemistry to achieve longer life and periods of pure electric operation when you need it. Series-ER (Extended-Range Hybrid) with ESS-3G-32K gets you zero emission miles when and where you need it without the range challenges of a full-battery solution. ESS-3G-32K supports Stop/Start technology, Depot Drive, and Extended-Range modes of operation.

High-performance
Lithium Nickel
Manganese
Cobalt technology
increases "More
Electric" EV capability



Series-ER Enables EV Modes:

Stop/Start:

Reduces idling at bus stops for quieter boarding.

Depot Drive:

Shuts engine off while maneuvering in depots for improved air quality and noise.

Extended Range:

Allows zero-emission revenue-service driving in designated areas for periods of time.

Features

- Lithium Nickel Manganese Cobalt (Li-NMC) chemistry
- High-performance for longer life and operational benefits
- 31.8 kWh nominal capacity
- Environmentally-sealed battery compartment
- J1939 SAE messaging
- Allows for system level compliance to OBD
- Finger-tip proof, high voltage connectors (IPXXB)
- Fully-engineered thermal management system

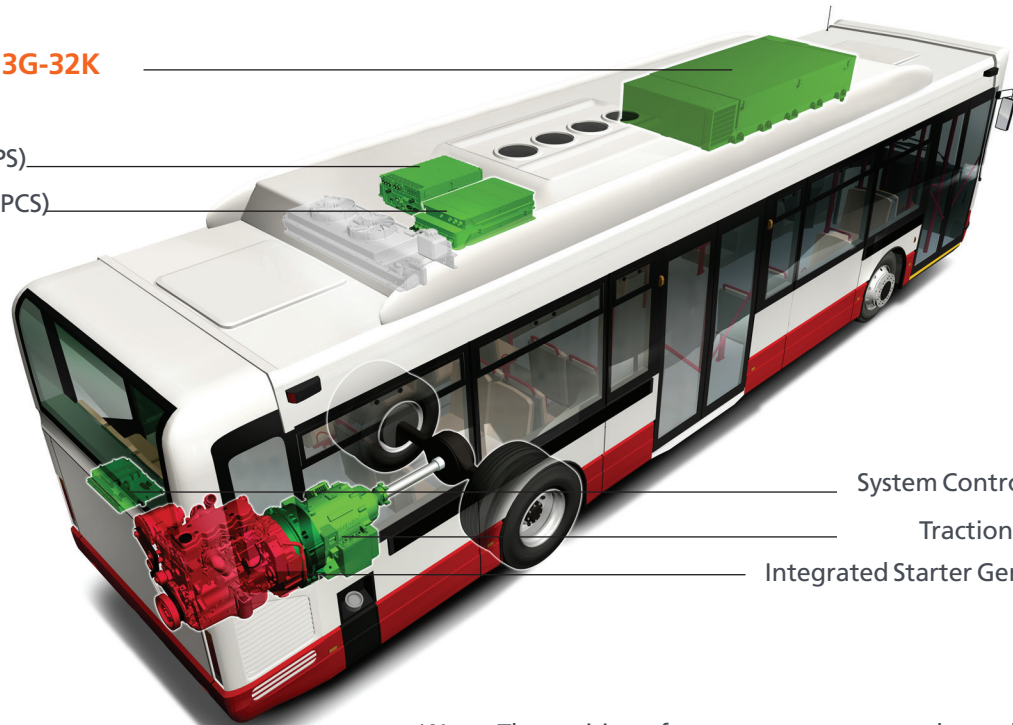
Benefits

- Longer battery life, decreasing total life cycle costs
- Maximizes regenerative energy recovery from regenerative braking to improve fuel economy
- Supports full-electric accessories
- Supports Stop/Start, anti-idling technology and EV operating modes, such as Depot Drive and Extended-Range
- Provides a path to zero-emission technology

Energy Storage System 3G-32K

Accessory Power System (APS)

Propulsion Control System (PCS)



System Control Unit (SCU)

Traction Motor (TM)

Integrated Starter Generator (ISG)

*Note: The position of components may vary depending on OEM

Series-E: Energy Storage System ESS-3G-32K

Ratings

- Peak design power: ± 200 kW
- Nominal voltage: 660Vdc
- Total capacity: 31.8 kWh
- Operating temperature: -40°F to 125°F (-40°C to 52°C)

Size

- Height: 13.5 in (.343 m)
- Width: 40.1 in (1.018m)
- Length: 85.3 in (2.167 m)
- Weight: 1150 lbs (520 kg)
- Cabinet material: aluminum

Cooling/Heating or Thermal Management

- Internally recirculated forced air with either chilled-air cooling or resistive heating

The new ESS-3G-32K is available for HDS100, HDS200, HDS300 family of products.

BAE Systems
1098 Clark Street
Endicott, NY 13760

BAE Systems
Marconi Way
Rochester, Kent ME1 2XX
www.hybridrive.com

This document gives only a general description of products and services and except where expressly provided otherwise shall not form part of any contract. From time to time, changes may be made in the products or conditions of supply.

Published work © 2016 BAE SYSTEMS. All rights reserved.

BAE SYSTEMS is a registered trade mark of BAE Systems plc.

CS-16-B63