

# 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

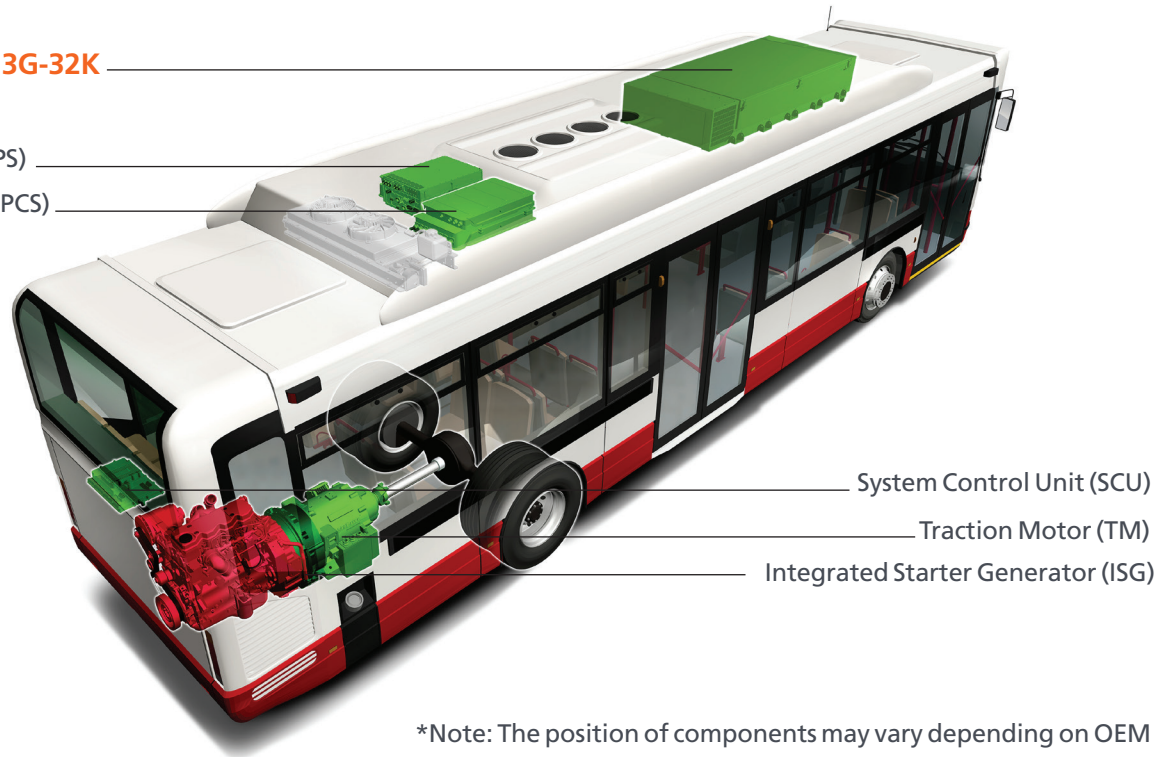
## Benefits

- 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)



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

#### Ratings

- Peak design power:  $\pm 200$  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.

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