

# AESS OPTIMISER SYSTEM WITH BATTERY



## PRODUCT OVERVIEW

The Ekyrail AESS Optimiser System improves locomotive idle management by stabilizing voltage and reducing load on the main batteries. It helps prevent unnecessary engine restarts while ensuring essential onboard systems remain powered.

Designed to optimize the performance of Automatic Engine Start Stop (AESS) systems, it offloads the main batteries when the engine is shut down, extending battery life and reducing maintenance requirements.

The system integrates a LiFePO<sub>4</sub> auxiliary battery and an electronic control module, providing stable power to essential equipment and eliminating voltage drops during engine start cycles.

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## PERFORMANCE EQUIPMENT

### Battery system

Type	LiFePO <sub>4</sub> (Lithium Iron Phosphate)
Format	8D
Nominal voltage	51.2 VDC
Capacity	100 Ah
Short-circuit protection	Included
Weight	101 lb (45.9 kg)

### Electronic module

Enclosure	Aluminum enclosure with powder coating
Operating modes	Active circuit / bypass
Nominal output voltage	69 VDC
Maximum output current	25 A
Input voltage range	64 to 85 VDC
Protection	50 A breaker

### Battery protective enclosure

Boîtier	Reinforced thermoplastic enclosure
Protection	Protection against impacts, UV and contaminants
Ventilation	Ventilated enclosure
Conformité	USCG CFR 183.420 and ABYC E-10.7

### Battery certifications

Energy storage safety standard	UL1973
Thermal runaway propagation	CSA UL9540A
Lithium cell safety and reliability	IEC62619 / IEC62660

### Cabling

Input	2 x 8 AWG Exane – 20 ft
Output	2 x 8 AWG Exane – 20 ft
Module to battery	2 x 8 AWG Exane – 8 ft



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