SmartStart IIe

The most trusted name in automatic engine start/stop (AESS) systems on the market

Expandable Technology

The microprocessor technology used in the SmartStart® IIe allows you to expand on the capability of the system by selecting from a variety of the optional features that can be provided at an additional cost. Some of these optional features pay for themselves in the additional fuel savings they offer. One such feature is the Extended Fuel Saver option, only allows you to save more fuel because of its refined shutdown logic, by incorporating a load shedding feature. The load shedding feature automatically sheds the lighting circuits and auxiliary loads based on specific parameters to reduce unnecessary restarts due to locomotive battery discharge.

Flexible Applications

SmartStart IIe can be applied to just about any locomotive—from relay logic to microprocessor—regardless of manufacturer, model, age, or usage. SmartStart IIe is a compact system designed to mount easily. On Dash 2 locomotives, SmartStart IIe can be mounted directly into the module rack, occupying two module slots.

SmartStart IIe Now Includes an Emissions Report

ZTR has been helping reduce the impact on the environment for over 20 years, and now with the fully-backwards-compatible SmartStart IIe, the NEW Emissions Report provides documentation and verification of reduction. SmartStart IIe continues to record actual savings (millions of gallons/liters of fuel) while it's working—usually paying for itself in less than 12 months. SmartStart IIe is also compatible with the new ZTR Virtual Technician™ diagnostic software.

Why You Should Choose SmartStart® IIe

Compare the Advantages of SmartStart IIe	SmartStart IIe System	Manual Shutdown Policy
Reductions		
Emissions	YES	YES
Fuel	YES	YES
Lube Oil	YES	YES
Smoke Exhaust (on restart)	YES	NO
Automation		
Management of locomotive shutdown	YES	NO
Locomotive in ready to use state	YES	NO
Verifies parameters prior to auto shutdown	YES	NO
Monitors restart parameters as required	YES	NO
Continuous Monitoring, Documentation & Verification		
ACTIVE 24/7/365	YES	NO
General locomotive conditions	YES	NO
Fuel savings (including colder climates)	YES	NO
Report emissions reduction	YES	NO

Save Fuel &
Reduce Emissions
with SmartStart IIe

SmartStart® Options

Operational Improvements

- EPA AESS Certificate: Conform to 40 CFR 1033.115g by re-qualifying your SmartStart system for rebuild and repower applications.

- Battery Saver: Used to reduce unnecessary drain on the locomotive batteries when being left shutdown and unattended for long periods of time. This option works electronically and disconnects all non-essential loads after a predetermined period of time (...much like a knife switch)

- Trainline Diode: Protects a SmartStart equipped locomotive, MU'd to other locomotives, from drawing cranking power through the trainline.

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Maximize Your Fuel Savings

- Extended Fuel Saver: Includes load shedding of the locomotive lighting circuits, auxiliary load shedding and shutdown time delay override.

- APU Interface: Interface SmartStart® with an APU system for increased fuel savings.

- Ditch Light Load Shedding: Works with auxiliary load shedding and turns off locomotive ditch lights at the same time as the headlights.

- Anti-Tampering Device: Reduces the likelihood of a SmartStart system being disabled by unauthorized personnel while the locomotive is in service.

- InteLevel® Fuel Measurement Sensor: With +/- 3% accuracy, this fuel sensor ensures precise fuel measurement and reporting on fuel in the toughest railroad conditions.

System Management - SmartStart SAVER™ Option

- GPS Location and Geofencing: 24/7/365 map of the latest GPS information and locomotive movement alerts.

- Fleet Reports: Find all your SAVER equipped locomotives at a glance • Export of SmartStart Reports - analyze data for continuous improvement.

- Automated Alarm Notification: Automated notifications via text message or e-mail. Having up-to-date information allows you to make better decisions that can save an organization time and money.

NOTE: SAVER available in select countries only; contact ZTR for an up-to-date list

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The **Most Trusted** Name in Automatic Engine Start/Stop (AESS) Systems **on the Market**

ZTR™ | Intelligent Equipment
Management Solutions