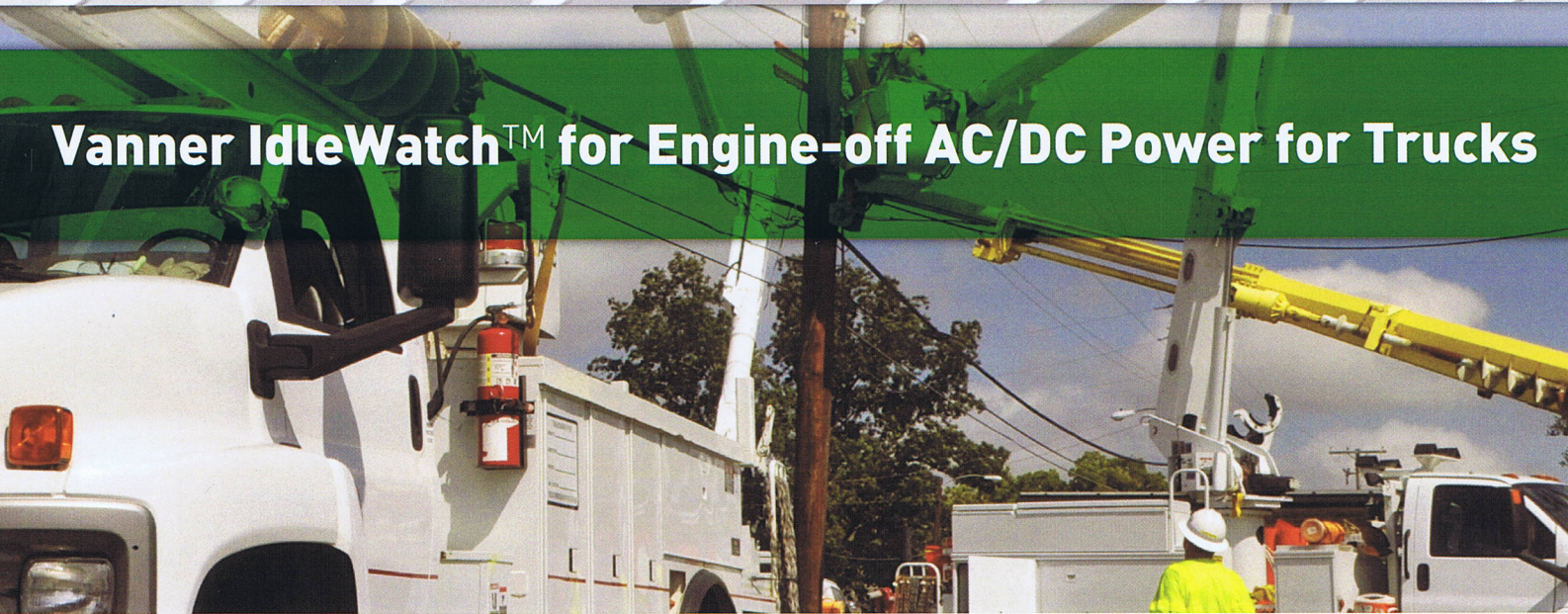




Vanner IdleWatch™ for Engine-off AC/DC Power for Trucks



Vanner's IdleWatch™ helps meet the industry's no-idle regulations, while increasing battery life and improving fleet efficiency

Vanner announces its **new IdleWatch™ “Hybrid” Idle Reduction System** that helps fleets work more efficiently and meet the industry's no-idle regulations—providing the benefits of reduced fuel consumption and exhaust emissions, and silent AC power access in residential areas.

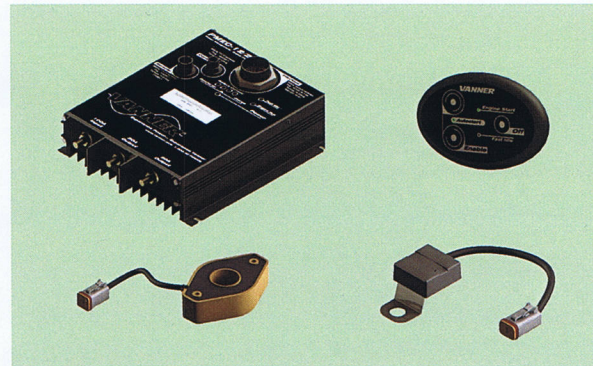
The IdleWatch™ recharges a battery fully before shutting off the engine to increase a vehicle's battery life. It enables fleets to operate AC and DC power tools and equipment from the battery when the engine is *not* running.

IdleWatch™ constantly monitors the battery state-of-charge. Should the battery discharge below the user's predetermined point, the **IdleWatch™** will auto start the vehicle to recharge the battery, or notify the driver with a signal, such as a horn or buzzer, to start the vehicle's engine or turn the equipment off. Fleets have uninterrupted AC and DC power when the auto start feature is engaged, improving worker efficiency with less on-the-job downtime. If the battery state-of-charge falls below a preset level, **IdleWatch™** can **shut off** the load or sound an alarm or start the engine with appropriate safety checks before engaging.

The IdleWatch™ can be installed in any 12-volt or 24-volt electrical system and any make or model vehicle. It can also be used with an inverter.

The system can also be installed on new vehicles at the truck equipment manufacturer before delivery or retrofitted on existing vehicles in the fleet.

Key system features, such as battery discharge levels, mobile AC power availability and fast-idle can be programmed and customized to each vehicle's use.



Pilot testing in progress. Products will be available in **June/July 2010.**

Contact your Vanner representative to pre-order for your 2011 vehicles.

A market leader for more than 30 years, Vanner's patented power conversion and power management technologies include: High Voltage DC-DC Converters, Idle-Reduction Systems, Ultracapacitor Start Assist Systems, Model-based Battery Monitoring, Battery Equalizers with Internal Battery Monitoring and J-1939 CAN Bus Communication, and our broad offering of AC Power options for traditional and hybrid powered commercial buses, ambulances, military vehicles, luxury coaches, mobile offices and heavy duty/work trucks.

EXPERIENCE POWER... EXPERIENCE VANNER.

General Specification

IdleWatch controls loads, interlocks, engine starts and safety features. The system also contains Vanner's patented Model Based Battery Monitor (MBBM™) for battery state-of-charge status. It can be used on both 12V and 24V electrical systems, on any make and model vehicle.

Functionality

IdleWatch uses data from the MBBM™ and makes decisions for load control, protective conditions, enabling conditions and engine control. The two high current outputs can be configured through software for customized system function of the four inputs.

Functionality

"Hybrid" mode can be activated through the remote panel when both enable flags are true and both disable flags are false.

"Hybrid" mode is disabled if any of the control or safety functions become false. The system must be calibrated with the battery type, nominal voltage (12V or 24V) and quantity of batteries.

Outputs

- (2) 50 amp maximum continuous outputs for load control
- Outputs are self protected with a programmable current limit
- 5 amp - Hazard output, indicating that the hybrid system is active
- 12V Engine-start signal output
- 12V Fast-idle request (If alternator charging rate is too low)

Inputs

- (1) 100 amp input connection
- CAN connection
- (2) System Enable Inputs
- (2) System Disable Inputs
- Transmission out-of-park or neutral input
- Control power (8-36V DC operation)

