



Military Electrical System Power Conversion Components

Military Grade Battery Equalizers

71- Series

81- Series



Internal Battery Monitoring
J-1939 CAN-Bus Communication

- Rugged and reliable 24V-12V power conversion
- 60A / 80A / 100A Output
- 12V power from 24V electrical system
- Full power up to 95C / De-rates at 55C
- Maintains battery balance / Extends battery life
- Silicone-gelled for extreme environments (IP-68)
- Designed to MIL Standards

Military Grade DC-DC Converters

NATO Power Converter



SP00158 IP-54 Rating
SP00158-GEL IP-68 Rating

Special Order Options

- NATO Trailer Lamp Interface PCB (SP00161)
- DC Conv / NATO Trailer Lamp Interface Module (NPM-45)

- 12V-24V (Step Up) 45A / 24V Output
- 24V power from a 12V electrical system
- Full power up to 90C / De-rates at 60C
- Silicone gelled for extreme applications (IP-68)
- Designed to MIL Standards



EXPERIENCE POWER... EXPERIENCE VANNER.



Military Power Management

12V or 24V - Model-based Battery Monitoring

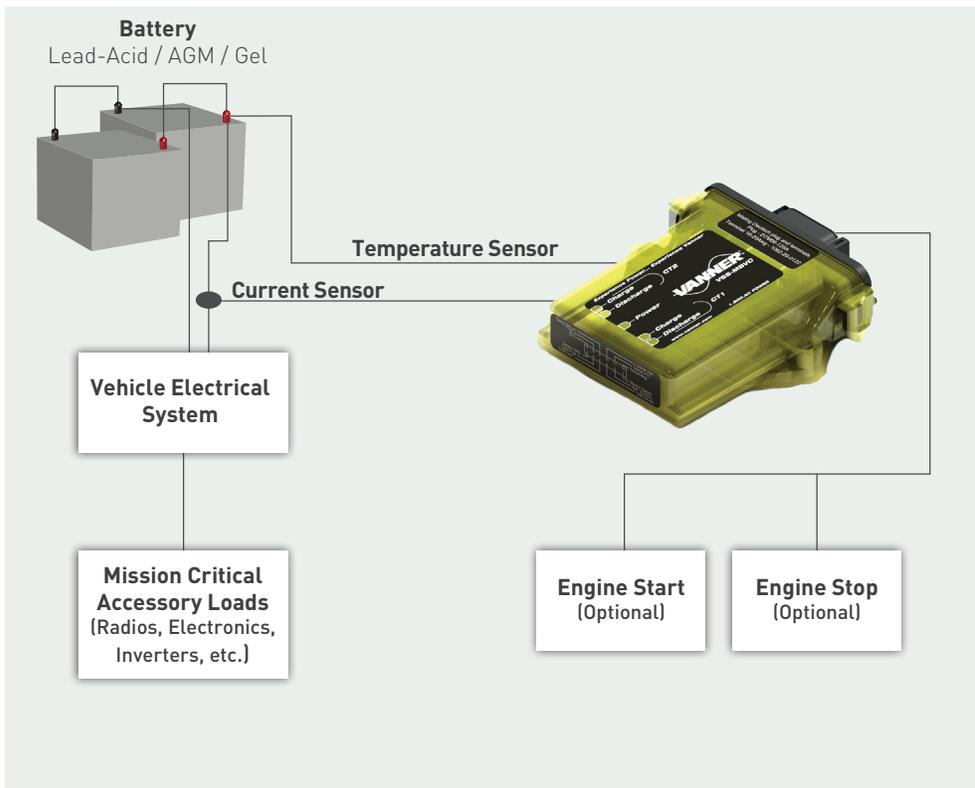


Continuously Monitors Battery and Broadcasts Information for:

- Battery-State-of-Charge is real-time re-calculation as loads change
- Battery-State-of-Health compares to the model-enabling battery trend analysis
- Over / Under Voltage through the VSS-VT Sensor
- Battery Temperature through the VSS-VT Sensor
- J-1939 CAN-Bus Communication with other on-board systems
- Communication with multiplex and telemetry systems
- User programmable for mission flexibility

Vanner's Model-based Battery Monitoring is available on the Silent Watch and as a 12V or 24V stand-alone system.

Proactive Electrical System Analysis

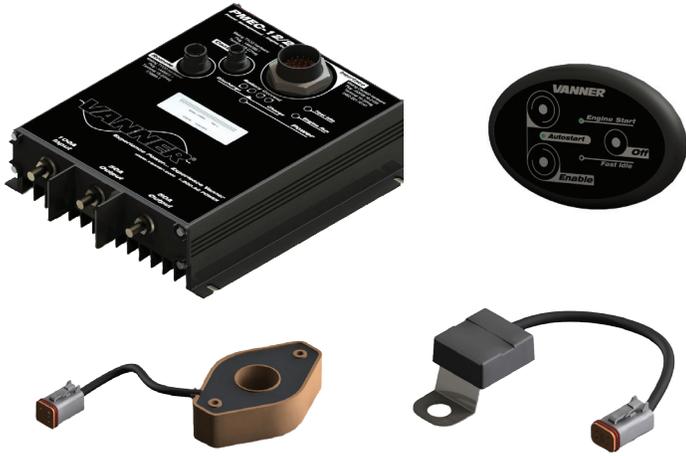


Obtain precise real time mission-critical electrical information that enables you to plan for preventive maintenance, save money, and prevent downtime disasters in the field.



Silent Watch

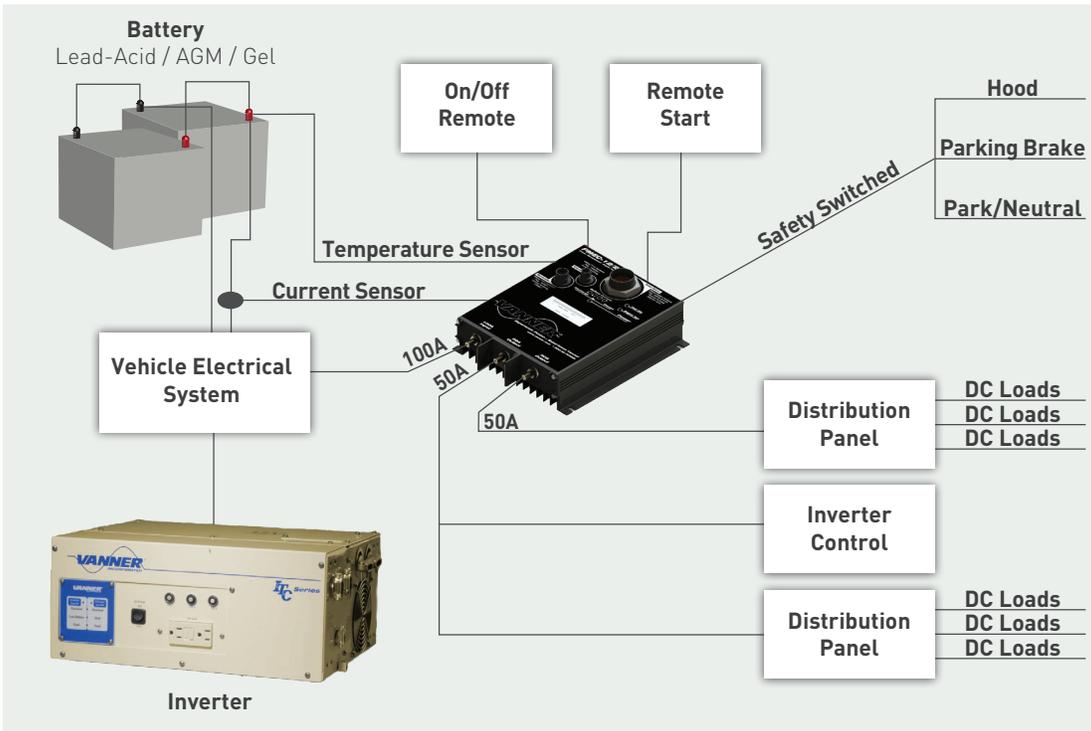
Engine Off AC/DC Power



Engine-Off Power for On-Board Electronics and Equipment

Use **Silent Watch** and an inverter to provide continuous AC power from the battery with the engine off. Constantly monitor battery voltage and state-of-charge with accurate time-to-run data.

Silent Watch alerts the operator to start the vehicle's engine or allow time to shed non-critical loads if the battery discharges below a predetermined voltage. If the mission allows, the **Silent Watch** offers an **auto-start kit** that can be added to the vehicle. This kit features programmable voltage settings to meet various mission requirements.



Silent Watch enables long-term storage of vehicles and maintains the batteries in a ready state-of-charge. Periodic engine starting also improves the vehicle dependability and readiness.

Inverters / AC Power Systems

Contact your Vanner representative for an expert analysis of your AC power needs



Tru-Sinewave®
1600W-3600W
Inverters
Inverter / Charger



Pure Sinewave
300W-3000W
Inverters



Pure Sinewave
3000W AC | 100A DC
Mobile Power System



Modified Sinewave
1000W AC GSA
Ambulance Inverters
Inverter / Charger



Vann-Guard Features	71-Series	71-CAN Series	81-CAN Series	Benefits
Available Models (Output Amps)	60, 80, 100	60, 80, 100	60, 80, 100	Wide 12V power range. Stackable for 12V loads greater than 100A
Internal Fuse Protection	Yes	Yes	Yes	Will not pass high transient spikes through to vehicle
Reverse Polarity Protection	-30V	-30V	-30V	Installation safety feature
Remote Battery Sensing	No	Yes	Yes	More precise equalization than sensing through battery cables
Peak Efficiency	97%	97%	97%	Increased time-to-run from batteries
Integrated Battery Cable Strain Relief	Yes	Yes	Yes	Eliminates loose connections due to cable movement.
Integrated Connection Post Separation	Yes	Yes	Yes	Installation safety feature
Silicone Gel Potted Design	Yes	Yes	Yes	Improved vibration and environmental protection (IP-68)
Ingress Protection Rating (IP)	IP-68	IP-68	IP-68	Ultimate moisture and debris protection
Dimensional Size	10.5" X 8.5"	10.5" X 8.5"	10.5" X 8.5"	Direct replacement when upgrading from other brand equalizers
Bolt Template	8.0" X 8.0"	8.0" X 8.0"	8.0" X 8.0"	Lighter weight than competitive brands
Weight	11.7 lbs.	11.7 lbs.	11.7 lbs.	Higher temperature rating for desert environments
Operating Temperature (High Temp. Derate @ +55C)	-40C to +95C	-40C to +95C	-40C to +95C	Communicates with J-1939 multiplex and telemetry systems
Storage Temperature	-54C to +105C	-54C to +105C	-54C to +105C	Precise voltage monitoring
J-1939 CANBUS Communication	No	Yes	Yes	Waterproof and rugged connector
Integrated System Voltage Monitoring	No	Yes	Yes	On-vehicle and mission specific programming
Integrated Deutsche Connector	No	Yes	Yes	Model-based technology. Battery state-of-charge, state-of-health. Immediate battery time-to-run recalculation as loads change.
CAN Control / User Adjustable Set Points	No	Yes	Yes	Integrated Battery Monitoring
Integrated Battery Monitoring	No	Yes (EM-70)	Yes (M1200)	Integrated Electrical System Analysis
Integrated Electrical System Analysis	No	No	Yes	SAE Standards - J1455, J-1113 (11/21/41)
SAE Standards - J1455, J-1113 (11/21/41)	Yes	Yes	Yes	MIL Standards - MIL202F
MIL Standards - MIL202F	Yes	Yes	Yes	100% Endurance Tested
100% Endurance Tested	Yes	Yes	Yes	Every unit is thoroughly tested through the full power range
EQUALIZER SPECIAL FEATURES		71-Series Fit, Form and Function plus...	81-CAN Series Fit, Form and Function plus...	
	Robust aluminum housing	J-1939 Communication	Electrical System Analysis	Continuously analyzes and broadcasts electrical system status
	High Temperature Rating	EM70 Battery Monitoring for ...	Battery State-of-Health	Model-based technology. More precise than just voltage and temperature monitoring.
	IP-68 Environmental Rating	Battery Overvoltage	Battery State-of-Charge	Monitors other electrical system components and sends error codes to allow maintenance before field failures occur.
		Battery Undervoltage	Bad Connection Alert	
	Battery Imbalance	System Voltage Fault		
	Equalizer Fault	Equalizer Fault		