

PowerBank Battery Management



PowerBank is the most advanced battery management system available today. Combining all our experience and know-how, the PowerBank incorporates multiple SmartBank Split Chargers, PowerGuard low battery protection devices and remote battery isolators in one compact unit. Added to this are many additional features ideal for OEM integration on vehicle and boat fleets.

Originally designed for (and in use) on several high profile military vehicle applications, PowerBank is the heart of the primary electrical system, prioritising and distributing charge and preventing battery banks from becoming weakened and damaged at the same time.

Remote Isolation

PowerBank act as a remote battery isolator controller for up to 4 separate battery banks. The remote isolator control can also be triggered by various internal alarms and auxiliary inputs (for example, we can switch off batteries if say, an on-board fire alarm activates).

Spilt Charging

PowerBank incorporates multiple SmartBanks to control unlimited charge sources on up to 4 battery banks. Charge Priority, Connect/ Disconnect/ Hold voltages are fully programmable.

Battery Protection.

Four PowerGuards provide flat battery protection. All parameters are programmable.

Unrivalled Accuracy

Unlike all other competitive systems, PowerBank use DSP (Digital Signal Processing) to filter the battery information it uses to make important management decisions. This prevents PowerBank being confused by voltage spikes and electrical inference.

Data Enabled.

PowerBank features an RS232 data exchange to facilitate interfacing with on-board computers and OEM Multi-Function Displays. This allows important battery information to be displayed on a control system, dashboard or navigation system. PowerBank will also directly interface with other M-Power Data Enabled products (for example, DataCell), to introduce other information on to the RS232 network (or even control some PowerBank functions).

Multiple Inputs/Outputs

Multiple input and outputs are provided with PowerBank. This allows you to control (or be controlled by) third party equipment. For example, PowerBank can automatically start generators when batteries are low, or disconnect charge sources when an external power source is connected. Through these inputs/outputs, PowerBank can also provide indication of certain operating or fault conditions (e.g. bringing on alarm buzzers, LED's etc at certain battery states), remote control (through a car-style key fob or mobile phone), ignition interlock/inhibits etc.

Remote Panel Options

A range of remote control panels are available. These range from simple

remote battery switch and emergency parallel control through to advanced models that also provide data from other Parallel control through to advanced models that also provide data from other M-Power connected devices such as DataCell.

Simple Programming

With such a flexible system, PowerBank operating and programming has to be easy to perform. Our propriety programming software is logical and straightforward, yet provides the necessary features to allow programming to suit an armoured vehicle. Separate Diagnostic software allows engineers to setup the system during installation and then diagnose and adjust its performance during final vehicle tests.

Product Highlights:

- **Intelligently manages the power created by all charging sources on-board, ensuring it's distributed in the correct priority to individual battery banks.**
- **Prevents the damage caused by over discharging or flattening batteries.**
- **Software programmable for ultimate flexibility via a simple to use windows based programme.**
- **Numerous remote control panel options, each connecting to the unit via a single data cable**

In the future, if the power profile on-board changes, a new program file can simply be downloaded to the system. PowerBank is suitable for a huge variety of applications. Custom configuration and programming is also available. For more information please contact us.

FEATURE	SPECIFICATION
INPUT VOLTAGE RANGE	7-40V DC
POWER INPUTS	3 INDIVIDUAL (AUTO SELECTION)
MEASUREMENT VOLTAGE RANGE	5-36V DC
VOLTAGE ACCURACY	0.3%, RESOLUTION 0.05V DC
CURRENT CONSUMPTION	0.015A (PLUS ACTIVATED RELAYS)
COMMUNICATIONS PROTOCOL	RS422 FULL DUPLEX 250,000bps
OUTPUT DATA PROTOCOL	RS232 SELECTABLE bps
SOFTWARE COMPATIBILITY	WINDOWS XP / VISTA PLATFORMS / 7.0
SPLIT CHARGE CONTROL	1 TO 4 BATTERY BANKS
SPLIT CHARGE CONNECTION VOLTAGES	12.5-14.0V DC / 25-28V DC (ADJUSTABLE / TIMED)
SPLIT CHARGE DISCONNECTION VOLTAGES	12-13.5V DC / 24-27V DC (ADJUSTABLE / TIMED)

FEATURE	SPECIFICATION
BATTERY ISOLATION	1 TO 4 BATTERY BANKS
FLAT BATTERY CONTROL	1 TO 4 BATTERY BANKS
FLAT BATTERY CONTROL VOLTAGES	10.5-12.7V DC / 21-25.4V DC (ADJUSTABLE / TIMED)
PRIMARY INPUTS	8 (PROGRAMMABLE)
PRIMARY OUTPUTS	8 (PROGRAMMABLE)
PRIMARY ALARMS	4 (PROGRAMMABLE)
MULTIPLEX COMPATIBLE	VIA ADDITIONAL MODULES
MAXIMUM MULTIPLEX LATENCY	50mS
STORAGE TEMPERATURE	-40C TO 150C
OPERATING TEMPERATURE	-25C TO 105C
APPROVALS	CE, E-MARK, ISO7637-2

PowerBank Panels

- PowerBank control and monitoring panels include a switch to remotely isolate each independent battery bank, a kill all switch (if required) and an emergency battery parallel switch.
- Battery monitoring information can be displayed via individual warning LED's of different colours or the system can be upgraded to include an LCD display which will report the remaining capacity as a % for each battery bank as well as voltage.

