

# v-CELL

## GSE Battery Voltage Monitoring Module

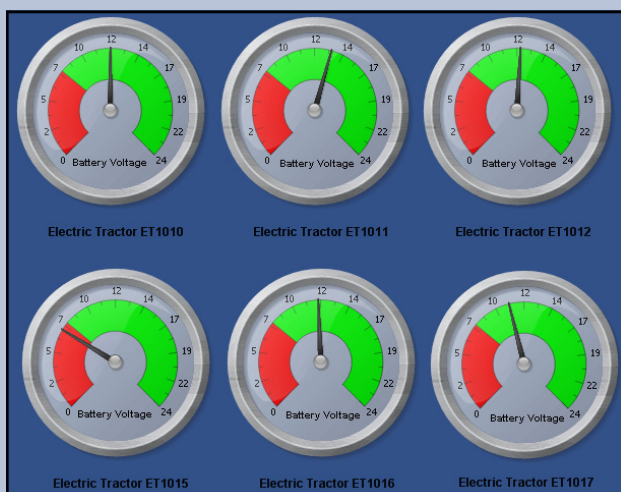
*..improve maintenance efficiency.....eliminate dead batteries.....improve equipment utilisation.....reduce costs.....*

Maintaining the health of your GSE batteries is a daunting task, as the typical usage profile of lots of short journeys and many start/stop cycles is not good for long-term performance. Defining the amount of energy remaining in a battery is complex as the age, discharge current and ambient temperature of the battery all influence its capacity.

One simple but useful indicator of battery status is terminal voltage. With our **v-CELL** module, you can have complete visibility of the latest battery voltage reading on all of your Ground Support Equipment, at any time.

Without interfering with battery performance, **v-CELL** connects the battery terminals to our **VTIS v-HUB** telematics unit, mounted on the vehicle. Whilst the engine is running or (in the case of electric vehicles) the ignition is "on", **v-CELL** regularly samples actual battery voltage level and transmit this data, via the **VTIS v-HUB** telematics unit, to our servers. From here, the data is formatted and made available to customers.

Historical and real-time vehicle battery voltage levels can be viewed on-line via our **v-VIEW** or



**v-DASH** reporting systems, or a daily summary can be sent to you via our **v-MAIL** service as an Excel spreadsheet.

**v-CELL** is easy to install, involving a small amount of hardware in addition to the **v-HUB** telematics unit. It does not drain the vehicle battery, and requires no ongoing maintenance.

Equipment	Box Serial Number	Message Time (UTC)	mVolts
C22	355632005612008	4/19/08 23:32	80000
C22	355632005612008	4/19/08 23:02	80000
C22	355632005612008	4/19/08 22:32	77075
C22	355632005612008	4/19/08 22:02	80000
C22	355632005612008	4/19/08 21:32	78985
C22	355632005612008	4/19/08 21:02	80000
C22	355632005612008	4/19/08 20:32	80000
C22	355632005612008	4/19/08 20:02	75776
C22	355632005612008	4/19/08 19:32	80000
C22	355632005612008	4/19/08 19:02	74500
C22	355632005612008	4/19/08 18:32	80000
C22	355632005612008	4/19/08 18:02	80000

All vehicle data is hosted on our servers and is protected, secure and available 24/7.

### Features

- Suitable for 12V, 24V, 48V and 80V systems
- Easy to install
- Does not drain battery
- Simple, robust hardware
- Instant alarms option
- Data can be viewed via secure, password-protected web-based reporting systems
- Compatible with **VTIS v-HUB** product range

### Benefits

- Improved maintenance efficiency
- Reduce or eliminate "non-starts" due to low battery voltage
- Improved equipment utilisation
- Identify batteries in need of maintenance or replacement
- Reduce costs
- Increased GSE availability
- Increased battery life
- Improved environmental performance
- Reduced maintenance call-outs due to flat batteries

*.....identify problem batteries.....reduce maintenance call-outs.....increase availability.....extend battery life.....*