



Fuel Cell Remote Battery Charger (RBC) Indicative Product Datasheet

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The Voller Remote Battery Charger (RBC) is an industrial fuel cell system designed to be mounted within a rack mount case enclosure occupying 4U of space.

The Voller RBC is designed to manually or automatically charge batteries. It is powered by hydrogen gas which can be supplied in two ways: a Voller Energy refillable cylinder which is mounted within the product or from a normal hydrogen cylinder, available from any compressed gas supplier, which can be connected externally. The system can be accessed via modem to determine fuel level, operational & battery condition statistics with the software provided.

The RBC can charge in two different modes; a *manual* charge mode where the unit simply charge a battery with a constant voltage OR an *automatic* charge mode, where the unit will go into sleep phase approximately 15 minutes after the battery voltage rises above the cut out voltage. When the battery voltage falls below the cut in voltage, the unit will automatically start the fuel cell system and charge the battery. These voltage levels are user adjustable.

The RBC continually stores the latest 48 sample statistical data including battery voltage. The period between samples can be set between 1 and 255 minutes so local conditions can be monitored over periods of 24 minutes to over 4 days. The data can be accessed locally or remotely via the service port and VTERM software.

The system is also equipped with a frost sensor which, provided the system is in standby mode, monitors the outside temperature and switches the system on automatically if the temperature falls below +2°C.

Features:

- Internal or external hydrogen supply
- Selectable fully automatic recharging
- Frost sensor
- Diagnostics software / cable supplied free of charge
- Remote diagnostics via modem available
- Systems parameters can be user-defined
- Clear back-lit LCD interface

Benefits:

- No external battery – fully integrated
- Fully integrated for ease of carrying
- Uses non-toxic fuel
- System does not emit any carbon dioxide
- Quiet, compact, portable, emission-free power for use anywhere - even underground!



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Dimensions	178 x 448 x 410 mm (4U). (Front panel 178 x 480 mm)
Weight	8 kg (without internal hydrogen cylinder)
Power Output	70 Watts Maximum @ 13.8V DC max.
Operational Temperature range	+5°C – +40°C (system equipped with a frost sensor which, provided the system is in standby mode, monitors the outside temperature and switches the system on automatically if the temperature falls below +2°C.)
Fuel	99.99% pure Hydrogen (maximum of 5 parts per million (ppm) of carbon monoxide) supplied from any standard size cylinder at 1 - 3 bar pressure. The rack unit can also be fitted with a smaller internal low pressure hydride cylinder. With a 50 Watt load, the unit consumes 1.4 standard litres of hydrogen per minute (SLPM). The internal hydride cylinder contains approximately 900 standard litres at a maximum of 16 bar.
Emissions	Zero greenhouse gases or toxic emissions. During normal operation a very small amount of pure water is produced.
Software	All software is supplied as standard. Updates are available via an RS232 serial port, via a local computer or a modem.
Support & Maintenance	First 12 months warranty free of charge. Remote diagnostics available via integrated RS232 serial port and modem (modem not supplied). Optional connection through local VPN and TCP/IP link. <ul style="list-style-type: none"> • Diagnostic cable & software included free of charge. • Modem Cable available at a charge.
System Safety Management	The unit will automatically manage the system and warn on certain failure conditions. In the unlikely event that a hydrogen leak is detected, the unit will shut down. However it is essential that adequate ventilation exists in any installation.
Approvals	CE Approval pending – awaiting feedback from industry. Made in the UK.

AVAILABLE FROM:

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Voller Energy is a UK-based manufacturer of fuel cell systems for portable and battery charging applications.



NATO registered firm
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Member of the British Compressed Gas Association (BCGA)
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