



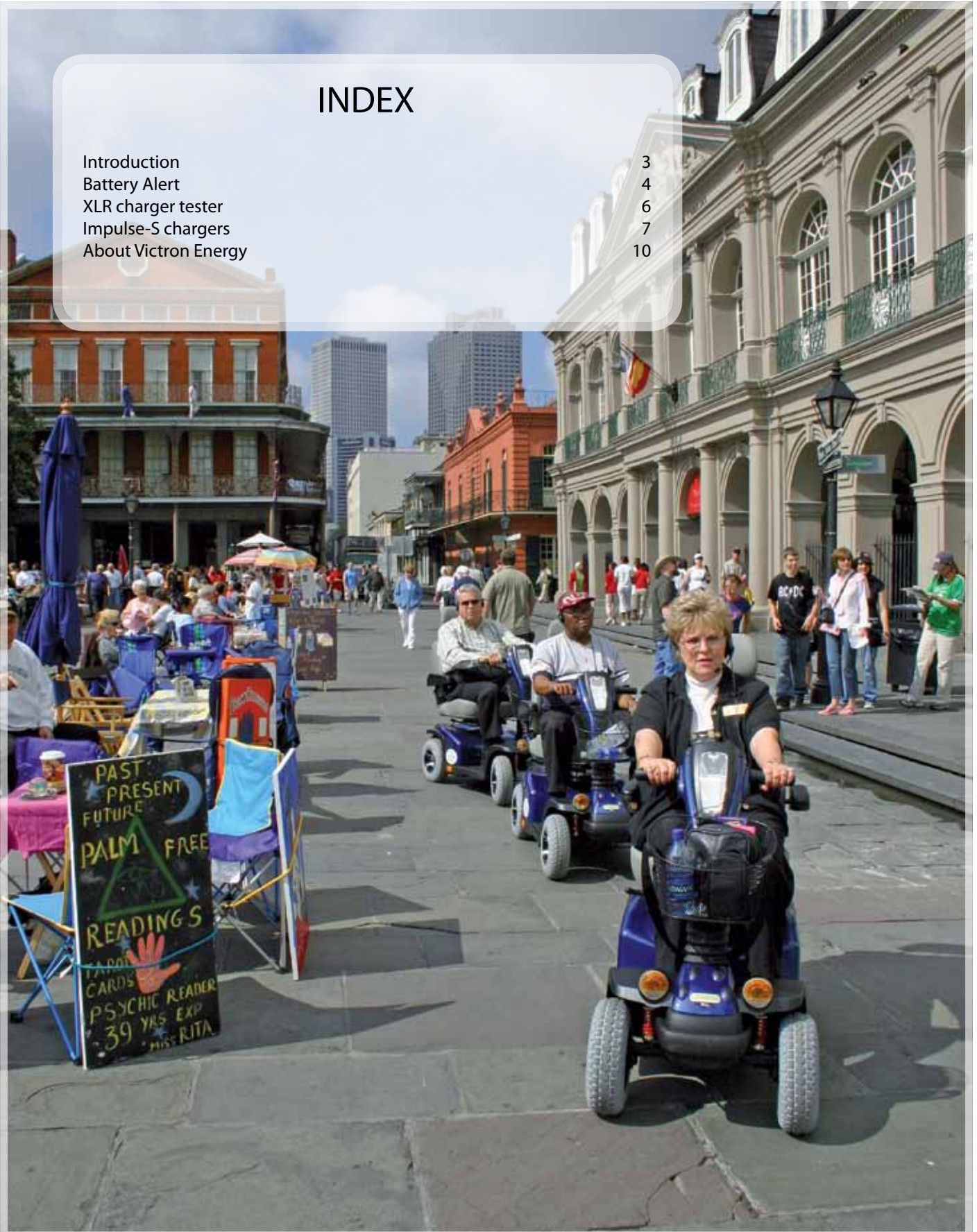
MOBILITY

ENERGY. ANYTIME. ANYWHERE.



INDEX

| | |
|----------------------|----|
| Introduction | 3 |
| Battery Alert | 4 |
| XLR charger tester | 6 |
| Impulse-S chargers | 7 |
| About Victron Energy | 10 |



INTRODUCTION

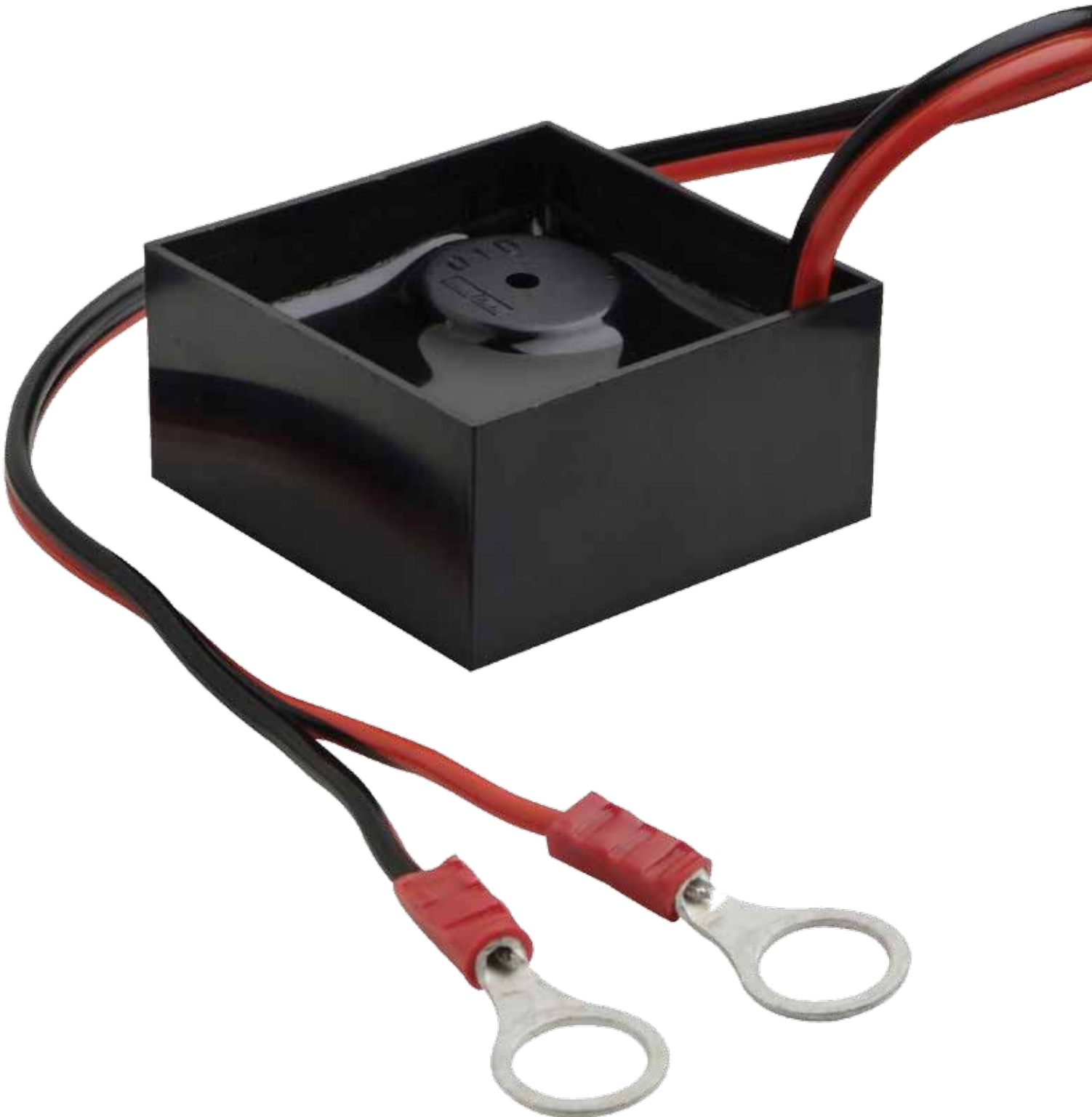
Mobility market

The mobility market is one of the markets for which power supply is of the utmost importance. Particularly scoot mobile and electrical wheelchair users depend on reliable power. And that is just what our extensive product range guarantees. Thanks to an optimal charging process of our battery chargers, the battery's service life is notably increased. This saves money and is more environment-friendly.



BATTERY ALERT

As the batteries' durability is of the utmost importance, Victron Energy has developed the Battery Alert®. A smart device that warns the user when the battery needs to be charged again. This way, maintenance costs and (early) replacement of batteries can be considerably reduced.



BATTERY ALERT

Intelligent warning system

Finally a product which prevents the batteries of your scooter from being discharged for longer periods of time. The "Battery Alert" warns its user when the batteries aren't being recharged after 12 hours of inactivity.

Extend the life of your batteries

It can be harmful for the operating life of your batteries when they are empty for a longer period of time. This damage can be prevented by recharging them in time.

Sustainable enclosure

The aluminum enclosure is watertight and does not cause an explosion hazard.

Clear audio signal

To prevent the signal from occurring unnoticed, it is clear and distinct from other types of warning signals. The steps which should be taken when the signal occurs are visualized on a sticker. This prevents unnecessary service-calls.

Preventing deep discharges

When (while using the scooter) the batteries are being discharged too deeply, the Battery Alert will warn its user by sending out a long tone. This tone will sound as soon as the batteries are being recharged. This prevents the batteries from being discharged too deeply; which extends their operating life.

Extremely low energy consumption

Considering its purpose, the BAV 601 should of course hardly ask for any power from the batteries. Therefore the audio signal requires only 1 M/AMP.

Only active when scooter is not in use

The batteries will evidently be discharged when the scooter is in use. Therefore a signal at this time is unnecessary. While using the scooter, the performance of the batteries can be observed via the so-called 'battery indicator'. The purpose of the Battery Alert is to prevent a self-discharge from being too deep. These occur mostly during wintertime.

Easy to install

No welding is required. The BAV 601 can be connected through the jacket of the battery cable; which is already in place.

Self resetting

The audio signal stops as soon as the batteries are being recharged.



System diagram

| BAV 601 Battery Alert | BAV 601 |
|-------------------------------------------------------|-------------------------------------|
| Enclosure | Watertight |
| Dimensions (h x w x d in mm) (h x w x d in inches) | 20x 40 x 40 (0.79 x 1.57 x 1.57) |
| Energy consumption | <1 M/AMP |
| | EN50081-1 |
| | EN50082-2 |

XLR CHARGER TESTER

The XLR charger tester is a module specifically designed to measure a wheelchair's charge/discharge current and battery voltage. The XLR charger tester is inserted in the connection between the charge device and the wheelchair charge plug. The XLR charger tester measures voltage from 0.0V to 30.0V and current from 0.0A to 19.9A.

Use:

Battery installation

Open the cover on the rear of the housing

Install a 9V battery block (Mind the polarity of the connections!)

Close the cover.

Connection with charge device

Connect the Neutrik female plug to the charge device.

Connection with the wheel chair

Connect the Neutrik male plug to the wheel chair.

Switch on side housing

Middle position: Disconnected.

U position: Measures the voltage on the connection between the charger and the wheelchair.

I position: Measures the current from the charger to the wheelchair.

Disconnection

Disconnect the "Voltage Current Module" after its use in order to prevent the battery from discharging.



| XLR Charger Tester | |
|-----------------------|--------------------------------|
| Supply voltage | +9VDC |
| Rated consumption | 1mA |
| Measuring range | 0.0V to 30.0V or 0.0A to 19.9A |
| Accuracy | 5% |
| Resolution | 0.1 |
| Temperature range | -10°C to +50°C |
| Dimensions(W x H x B) | 102.5x61.5x26mm |
| Cable length | 400mm |

IMPULSE-S CHARGERS

Multifunctional Impulse-S Chargers

The Impulse-S line includes multifunctional chargers available in 3 models:

| | | |
|-------------|-----|-----|
| Impulse-S6 | 24V | 6A |
| Impulse-S8 | 24V | 8A |
| Impulse-S12 | 24V | 12A |

Settings by means of software and/or dipswitch

The Impulse-S6 and the Impulse-S8 can be set by means of software.

The Impulse-S12 can be set by means of software and a dipswitch.

The chargers are suitable for both 12 and 24 Volts and multiple types of batteries, such as Gel batteries, AGM batteries or wet batteries. The charger's default setting is for Gel batteries.

During the charging process the following data are registered:

- Number of interrupted charge cycles
- Number of completed charge cycles
- Number of deep discharges
- Number of charged Ah
- Total number of hours during charging and stand-by
- The last 10 failures
- Charge phase, charge time, current, voltage and temperature
- The last 40 charge cycles, including time elapsed, charged Ah and max. voltage
- Online reading and graphical display of charge/discharge curves.



IMPULSE-S CHARGERS

| IMPULSE S 24V / 6A | | |
|---------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Primary voltage | 230 V AC - 50/60 Hz | |
| Secondary nominal voltage | 24 V | |
| Secondary maximum voltage | 35 V | |
| Secondary current | Can be set by the supplier/dealer; max. 6A for Impulse S 6 | |
| Battery type | Gel | |
| Battery capacity Impulse S 6 | Min. 40 Ah | Max. (in order to charge 80% capacity within 8 hours) 60 Ah |
| Protective devices | Protected against reversed polarity, Protected against overvoltage, Protected against high temperatures | |
| Input power | 195 W with Impulse S 6 | |
| Efficiency | Min. 80% (at full load) | |
| Ambient temperature | 0°C to + 40°C | |
| Dimensions cabinet | Height: 70 mm, Width: 150 mm, Depth: 200 mm | |
| Safety class | II | |
| International Protection class | IP44 (housing) | |
| Overall weight | Grey | |
| Standards | EN12184, EN60601, EN60335, EN61558, EN60529, ISO7176 | |
| IMPULSE S 24V / 8A | | |
| Primary voltage | 230 V AC - 50/60 Hz | |
| Secondary nominal voltage | 24 V | |
| Secondary maximum voltage | 35 V | |
| Secondary current | Can be set by the supplier/dealer; max. 8A for Impulse S 8 | |
| Battery type | Gel | |
| Battery capacity Impulse S 8 | Min. 60 Ah | Max. (in order to charge 80% capacity within 8 hours) 85 Ah |
| Protective devices | Protected against reversed polarity Protected against overvoltage Protected against high temperature | |
| Input power | 270 W with Impulse S 8 | |
| Efficiency | Min. 80% (at full load) | |
| Ambient temperature | 0°C to +40°C | |
| Dimensions cabinet | Height: 70 mm, Width: 150 mm, Depth: 200 mm | |
| Safety class | II | |
| International Protection class | IP44 (housing) | |
| Overall weight | 1.3 Kg | |
| Colour | Grey | |
| Standards | EN12184, EN60601, EN60335, EN61558, EN60529, ISO7176 | |



IMPULSE-S CHARGERS

| IMPULSE S 12-24V / 12A | |
|--------------------------------|-------------------------------------------------------------------------------------------------------|
| Primary voltage | 200-253 V AC - 50/60 Hz |
| Secondary nominal voltage | 12 / 24 V |
| Secondary maximum voltage | 35 V |
| Secondary current | Adjustable by dipswitches Max. 12A for Impulse 12 |
| Battery type | Gel, AGM, Wet, Yellow Top |
| Protective devices | Protected against reversed polarity Protected against overvoltage Protected against high temperatures |
| Efficiency | Min. 80% (at full load) |
| Ambient temperature | 0°C to +40°C |
| Dimensions cabinet | Height: 80 mm, Width: 182 mm, Depth: 220 mm |
| Safety class | II |
| International Protection class | IP21 |
| Overall weight | 1.55 Kg |
| Colour | Bronze-grey |

| Voltage | Battery type | Power |
|---------|------------------------------|-------|
| 24 V | Gel 40 - 60 Ah | 7A |
| 24 V | Gel 60 - 80 Ah | 9A |
| 24 V | Gel 60 - 100 Ah | 12A |
| 24 V | Wet 50 - 65 Ah | 8A |
| 24 V | Wet 70 - 85 Ah | 12A |
| 24 V | Wet 90 - 115 Ah | 12A |
| 24 V | Wet 120 - 140 Ah | 12A |
| 24 V | Yellow Top 60 Ah | |
| 24 V | Special M 60 Ah | 12A |
| 24 V | Maintenance free 60 - 120 Ah | 12A |
| 12 V | Gel 60 - 120 Ah | 12A |
| 12 V | Wet 50 - 65 Ah | 8A |
| 12 V | Wet > 65 Ah | 12A |
| 12 V | Yellow Top 60 Ah | 12A |



ABOUT VICTRON ENERGY

With over 35 years of experience, Victron Energy enjoys an unrivalled reputation for technical innovation, reliability and quality. Victron is a world leader in the supply of self-supporting electrical power. Our products have been designed to meet the most demanding situations faced by a diversity of craft, recreational and commercial alike. Victron's ability to meet the demand for customized off-grid systems is unprecedented. Our product range includes sine wave inverters and inverter/chargers, battery chargers, DC/DC converters, transfer switches, gel and AGM batteries, alternators, battery monitors, solar charge regulators, solar panels, complete network solutions and many other innovative solutions.

World-wide service and support

Having served the off-grid, industrial and vehicle markets as well as both the commercial and leisure marine sectors for over 35 years, Victron has an established network of dealers and distributors covering the whole world. Our customer base is such that providing prompt and competent local service is essential.

This is reflected in the capabilities of our support network. Our flexible approach to service support and our commitment to quick turnaround for repairs is marketleading. There are countless examples of Victron products that have provided for decades of reliable service in the most demanding applications. This level of reliability combined with the highest level of technical know-how results in Victron Energy power systems that offer the very best value available.



ENERGY.

ANYTIME.

ANYWHERE.





Victron Energy B.V. / De Paal 35
1351 JG Almere / The Netherlands
Phone: +31 (0)36 535 97 00
Fax: +31 (0)36 535 97 40
e-mail: pvos@victronenergy.com
www.victronenergy.com

SAL064138020
REV 00
2012-09