



Mobility



**victron energy**  
BLUE POWER



Energy. Anytime. Anywhere.

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Mobility and independence are the keywords when it comes to using an electric wheelchair or scooter; the freedom to decide for yourself where to go. So of course, it's important to be able to take your mobility scooter with you. To this end, you can rely on smart solutions from Victron Energy

- **Impulse II battery charger:** a reliable battery charger with a long service life. This charger is also available with built-in Bluetooth: the Impulse II Smart. The Smart model can be operated from your smartphone.
- **XLR Charger Tester:** a smart and quick solution for testing your battery.

Products supplied by Victron Energy are reliable and easy-to-use. A fully charged battery will ease your mind when travelling. Our solutions give you the energy to go where you want.



### Impulse II charger

The multifunctional Impulse II battery charger is suitable for mobility scooters and electric wheelchairs. Most mobility scooters are fitted with two 12-volt batteries which are connected in series.

Together they generate a current of 24 volts. The Impulse II is suitable for 24 volts and a variety of batteries, such as GEL batteries, AGM batteries and wet batteries.

The Impulse II combines versatility with safety. For example, the battery charger has double insulation and is protected against reversed polarity, overvoltage and overheating. The Impulse II's compact and lightweight design allows you to store it without any problem in a shed or storage space. The charger can be quite easily moved or taken with you.

### XLR plug

The Impulse II comes with a so-called "XLR plug" which is the universal standard for mobility scooters and electric wheelchairs.



The Impulse II is a battery to set your mind at ease. It has a fully automated charging programme which optimises battery recharging. This 4-phase charging curve guarantees the best possible service life for your battery.

During the charging process, the charger goes through three different phases. The first sees high-power charging of the battery up to approx. 80% capacity. The last 20% or so is charged at lower power as part of the second phase. The third and final phase ensures that the batteries stay fully charged. During the last phase you can disconnect the charger from the mobility scooter.

### Bluetooth®

#### Built-in Bluetooth

The Impulse II Smart is the charger model that has built-in Bluetooth. The VictronConnect app allows you to read the charger remotely and operate it using a smartphone, tablet or laptop. This can be ideal for different purposes, such as service and maintenance.



### VictronConnect App

VictronConnect is an easy-to-use app that allows you to check the charging status. The Impulse Smart charger can be connected to your smartphone, tablet or laptop by means of built-in Bluetooth\*.

\* Only the Impulse II Smart models have built-in Bluetooth.

## Impulse II mobility charger



### Adaptive 4-stage charge algorithm: bulk – absorption – float – storage

The Impulse II charger features a microprocessor controlled 'adaptive' battery management system. The adaptive feature will automatically optimize the charging process relative to the way the battery is being used.

### Storage mode: less maintenance and aging when the battery is not in use

The storage mode kicks in whenever the battery has not been subjected to discharge during 24 hours. In the storage mode float voltage is reduced to 2,2V/cell (26,4V for a 24V battery) to minimize corrosion of the positive plates and loss of liquid due to gassing. Once a week the voltage is raised back to the absorption level to 'equalize' the battery. This feature prevents stratification of the electrolyte and sulfation, a major cause of early battery failure.

### Protected against overheating

Output current will reduce as ambient temperature increases up to more than 30°C, but the charger will not be disabled.

### Two LED's for status indication

Red LED: bulk, absorption

Green LED: float, storage en repeated absorption (refresh)

Both LEDs flashing: connected with reverse polarity, short circuit, over voltage

### Adjustable and readable (Smart version)

The Impulse II Smart is equipped with Bluetooth Smart wireless communication. With this you can get a read out of the state and settings can be changed with a smart phone, tablet or laptop.

Impulse II	24/6 24/6 Smart	24/8 24/8 Smart	24/11 Smart	24/12 Smart
Input voltage	230 VAC (range 180-265 VAC)			
Frequency	50/60 Hz (range 45-65 Hz)			
Efficiency	95%			
Power consumption in no-load operation	0.5 W			
Charge voltage 'absorption'	28.8 V			
Charge voltage 'float'	27.6 V			
Charge voltage 'storage'	26.4 V			
Temperature compensation	-32 mV/°C			
Charge algorithm	4-stage adaptive			
Charge current	6 A	8 A	11 A	12 A
Minimum battery capacity	60 Ah	80 Ah	110 Ah	120 Ah
Back current drain	1 mA (0,7 Ah/month)			
Protection	Reverse polarity    Output short circuit    Over temperature			
Temperature range	-30 to +60°C (rated output current up to 30°C)			
Cooling	Natural convection			
Bluetooth communication	Smart version only			
<b>ENCLOSURE</b>				
Material and colour	PC-ABS, dark grey (RAL7021)			
Battery connection	Black cable with XLR connector, length 1.9 meter			
230 V AC connection	Cable of 1,9 meter with CEE 7/17 plug			
Protection category	IP44 and IP65 versions available			
Weight	1.3 kg			
Dimensions (h x w x d)	60 x 105 x 190 mm			
<b>STANDARDS</b>				
Safety	IEC 60601, EN 60335-1, EN 60335-2-29, EN 12184, ISO 7176-14			
Emission	EN 55014-1, EN 61000-6-3, EN 61000-3-2, ISO 7176-26			
Immunity	EN 55014-2, EN 61000-6-1, EN 61000-6-2, EN 61000-3-3			

**XLR Charger Tester V2.0**

The XLR Charger Tester V2.0 is a module designed for measuring the charge/discharge current and battery voltage of a wheelchair. The XLR Charger Tester is placed in the connection between the charger and the wheelchair charging plug. The XLR Charger Tester can measure voltages from 0.0 V to 30.0 V and currents from 0.0 A to 19.9 A.

**New features of the XLR Charger Tester V2.0:****Renewed LED display**

Double LED display for current and voltage, better readability and no need to switch anymore are the main advantages. The switch on the side is therefore omitted. Voltage and charging current can be read in one go on a bright LED display.

**Power supply instead of a battery**

The V2.0 no longer runs on a battery. This version contains a power supply circuit that draws the energy from the battery/charger. This power supply has a range of 6.5 V to 100 V maximum, which makes the tester suitable for battery systems from 12 V to 48 V.

**Protected circuit**

The circuit is protected by a fuse and is also protected against reverse polarity by means of a diode. The battery currents are NOT protected, the current must always remain below 10 A. This limitation is mainly due to the XLR connections and cabling.

**Increased accuracy**

Thanks to the calibration options of the measuring instrument, the XLR Charger Tester V2.0 gives a higher accuracy for both voltage and current.

**Usage:****Connection to the charger**

Connect the Neutrik female plug to the charger.

**Connection to the wheelchair**

Connect the Neutrik male plug to the wheelchair.



XLR Charger Tester	
Power supply voltage	+9 VDC
Nominal consumption	1 mA
Measuring range	0,0 V to 30,0 V or 0,0 A to 19,9 A
Accuracy	95 %
Resolution	0.1
Temperature range	-10 °C to +50 °C
Dimensions (h x w x d)	102,5 x 61,5 x 26 mm
Cable length	400 mm





With over 46 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 46 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.





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**Victron Energy B.V.**

De Paal 35 • 1351JG Almere • The Netherlands  
Phone: +31 (0)36 535 97 00 • E-mail: [sales@victronenergy.com](mailto:sales@victronenergy.com)  
[www.victronenergy.com](http://www.victronenergy.com)

