



Mobility

 victron energy  
B L U E   P O W E R



Energy. Anytime. Anywhere.

# INDEX

Introduction	3
The Impulse II charger	4
Impulse II mobility charger	6
XLR charger tester V2.0	7
About Victron Energy	9



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.



## The Impulse II charger

### 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 lader tester V2.0

De XLR lader tester V2.0 is een module ontworpen voor het meten van de laad/ontlaadstroom en accuspanning van een rolstoel. De XLR lader tester wordt geplaatst in de verbinding tussen laadapparaat en de rolstoel laadplug. De XLR lader tester kan de spanning meten van 0,0V tot 30,0V en de stroom van 0,0A tot 19,9A .

#### Nieuwe functies XLR lader tester V2.0:

##### Vernieuwd LED display

Dubbele LED display voor stroom en spanning, een betere afleesbaarheid en niet meer om hoeven te schakelen zijn de belangrijkste voordelen. De schakelaar aan de zijkant komt dan ook te vervallen. Spanning en laadstroom kunnen in één keer afgelezen worden op een heldere LED display.

##### Voeding in plaats van batterij

De V2.0 werkt niet meer op een batterij. In deze versie zit een voeding schakeling die de energie uit de accu/lader betreft. Deze voeding heeft een bereik van 6.5V tot 100V maximaal, dat maakt de tester geschikt voor accu systemen van 12V tot en met 48V.

##### Beveiligde schakeling

De schakeling is beveiligd door een zekering en met behulp van een diode beschermd tegen verkeerd om aansluiten. De accustromen zijn NIET beveiligd, de stroom moet altijd onder de 10A blijven. De beperking heeft vooral te maken met de XLR aansluitingen en bekabeling.

##### Hogere nauwkeurigheid

Dankzij de kalibratie voorzieningen op het meetinstrument geeft de XLR lader tester V2.0 een hogere nauwkeurigheid voor zowel de spanning als stroom.

#### Gebruik:

##### Verbinding met laadapparaat

Verbind de Neutrik female plug met laadapparaat.

##### Verbinding met de rolstoel

Verbind de Neutrik male plug met rolstoel.

XLR Lader tester	
Voedingsspanning	+9VDC
Nominaal verbruik	1mA
Meetbereik	0,0V tot 30,0V of 0,0A tot 19,9A
Nauwkeurigheid	95%
Resolutie	0.1
Temperatuur bereik	-10°C tot +50°C
Afmetingen(W x H x B)	102,5x61,5x26mm
Lengte snoeren	400mm



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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