## Mobility Products









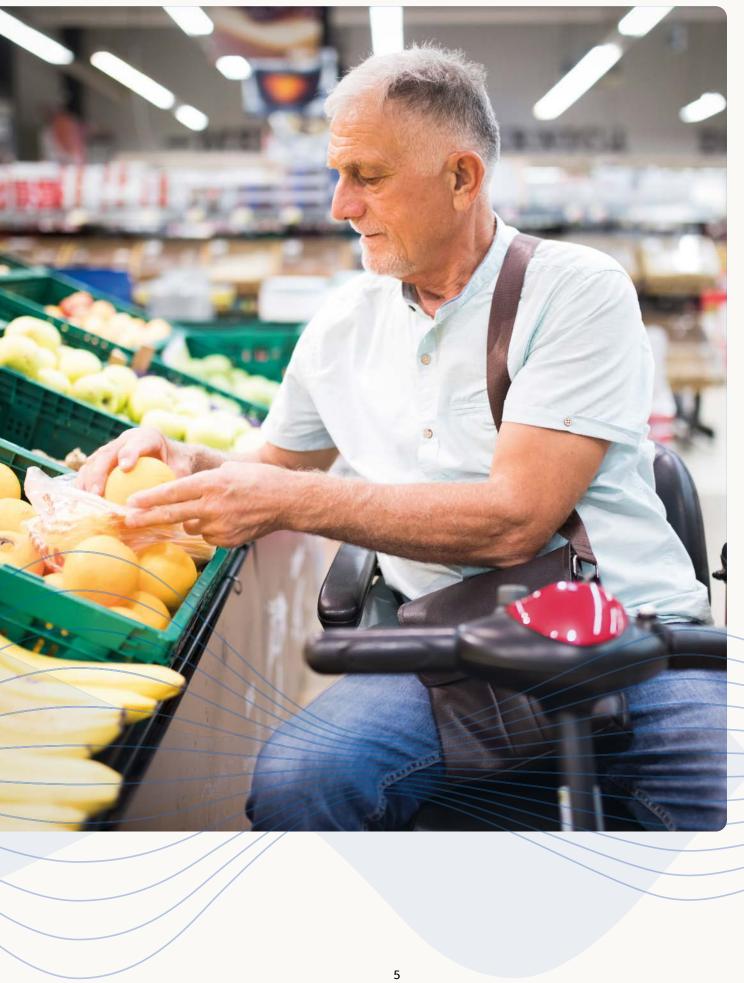
#### MOBILITY

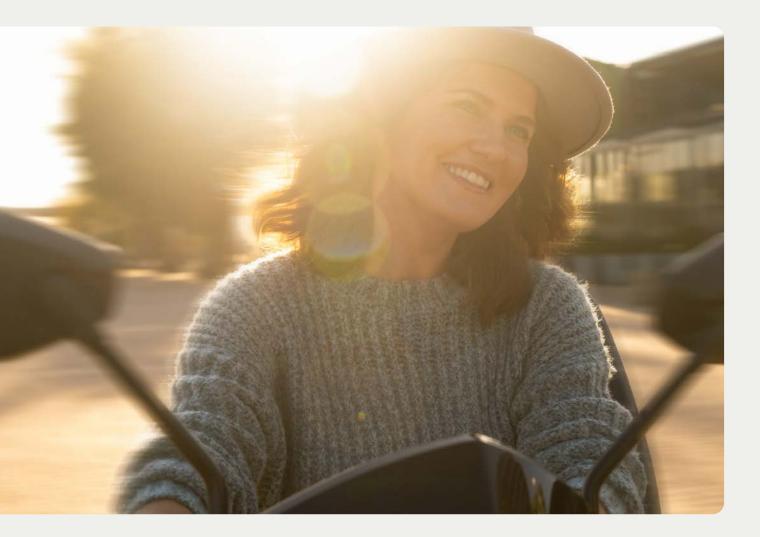
# How do you reliably charge mobility systems?

The solution is powered by know-how. With over 45 years of experience, we've learned what it takes to build chargers that stand the test of time and the environment. Our customers value the reassurance that our power solutions deliver, knowing they have our worldwide network of authorised dealers by their side. They know our family run business is built on a foundation of trust they can always depend on.

#### Energy. Anytime. Anywhere.









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Note - for our latest datasheets please refer to our website: <u>www.victronenergy.com</u>

## Independence. Powered by know-how.

If you need to charge your mobility system to go anywhere you want to go, it's good to know the power of know-how is by your side.

## Energy. Anytime. Anywhere.



#### MOBILITY

## Mobility and independence?

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.





#### MOBILITY

### 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.

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.

### XLR-plug

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

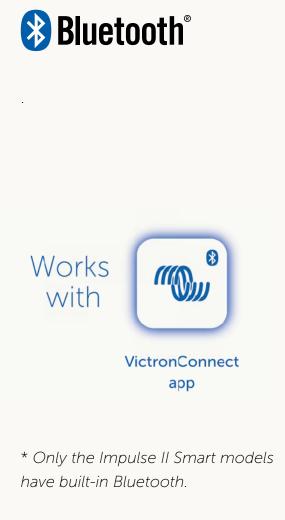






## VictronConnect App

The Impulse II Smart is the charger model that has built-in Bluetooth. The VictronConnect app allows you to check the charging status, using a smartphone, tablet of laptop. Real-time and historical data are available for service and maintenance.





#### 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 storagemode 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 LEDs 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									
ENCLOSURE										
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									
STANDARDS										
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



# Why Victron?

At Victron Energy we're as dedicated and driven to making and improving power solutions today as we were when we started in 1975. Thanks to our customer feedback loop, data and knowledge sharing, we innovate 24/7. We are powered by know-how, it keeps us going and our users going, ensuring peace of mind in off-grid for years to come.

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It's not one thing that makes it all work.

Our modular, robust and connected marine, off-grid and automotive systems have been proven to deliver unequalled reliability time and time again, even in the harshest of climates. But it's our unique combination of up-to-date hard- and software, intelligent monitoring apps, the network of highly trained authorised professionals and widespread repair centers that turns a Victron Energy system into an unbeatable system, that is powered by know-how. 02

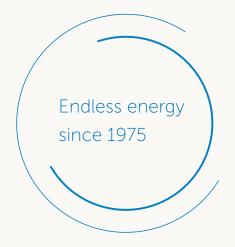


Reliability powers long service life cycles.

When making power supply investment decisions, calculations purely based on price can be deceptive.

Their true performance and expected service life cycle are equally important. Good thing Victron Energy equipment lives up to their specifications, both in terms of performance and expected life cycle (when used as designed). Our 5 or 10 year warranty and fair and fast repair policies mean your investments are protected and under most circumstances, won't let you down.





05

03



## How efficiency translates into great cost-effectiveness.

With battery-based systems, efficiency is always key to providing great levels of cost-effectiveness. From our incredibly efficient SmartSolar Charge Controllers to the way our inverter/ chargers can intelligently control and minimise generator use, with a Blue Power system you can be sure that all the details are thought through. This, combined with our reputation for extreme resilience and expected life cycles, translates into cost-effective solutions, especially when compared to 'cheaper' options. 04



## Intelligent monitoring means optimised systems.

Monitoring is crucial to fine tune and optimise energy harvest and use based on ever changing circumstances. With Victron you can experience the power of know-how right from your hand. Through our industry-leading and free-to-use VictronConnect app, you always have perfect control over your system from wherever you are. With our app and VRM portal you can monitor the complete system, change settings and catch potential issues early by programming alerts and alarms.



# Our worldwide network of authorised dealers is by your side.

Our global network of  $\pm 1000$  highly trained distributors, installers and service partners are always on hand to help. From stock advice, installation recommendations, after-care and technical support.

With the Victron Energy team, their partners and lively community you can always be sure the power of know-how is by your side. With the power of knowhow by your side, you get **Energy. Anytime. Anywhere.** 

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