# Blue Smart IP67 Charger

230 VAC

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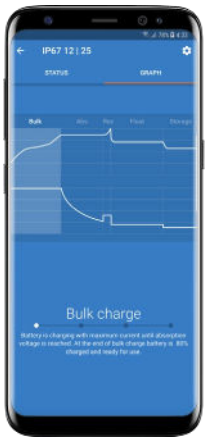
**Blue Smart IP67 Charger 12/25**




### Bluetooth Smart enabled

The Blue Smart IP67 Charger is the wireless solution to monitor voltage and current, to change settings and to update the charger when new features become available.
With Bluetooth, the functionality of the IP67 charger is enhanced and is similar to that of our IP22 and IP65 chargers.

### Completely encapsulated: waterproof, shockproof and ignition protected

Water, oil or dirt will not damage the Blue Smart IP67 Charger. The casing is made of cast aluminium and the electronics are moulded in resin.

### The highest efficiency ever!

Setting a new industry standard: with 92 % efficiency or better, these chargers waste three to four times less heat. And once the battery is fully charged, power consumption reduces to less than a Watt, some five to ten times better than the industry standard.

### Adaptive 6-stage charge algorithm: bulk – absorption – recondition – float – storage – repeated absorption

The Blue Smart Charger features a microprocessor controlled 'adaptive' battery management. The 'adaptive' feature will automatically optimise 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 2,2 V/cell (13,2 V for a 12 V battery) to minimise gassing and corrosion of the positive plates. Once a week the voltage is raised back to the absorption level to 'equalize' the battery. This feature prevents stratification of the electrolyte and sulphation, a major cause of early battery failure.

### Also charges Li-ion batteries

Li-ion batteries are charged with a simple bulk – absorption – float algorithm.

### Fully discharged battery recovery function

Will initiate charging even if the battery has been discharged to zero volts.
Will reconnect to a fully discharged Li-ion battery with internal disconnect function.

### Protected against overheating

Can be used in a hot environment such as a machine room. Output current will reduce as temperature increases up to 60 °C, but the charger will not fail.

### Two LEDs for status indication

Yellow LED: bulk charge (blinking fast), absorption (blinking slow), float (solid), storage (off) Green LED: power on

### Start interrupt output

The 12/25(1+si) & 24/12(1+si) models feature a start interrupt output, which can prevent the engine from being started while the vehicle is plugged in.

| Blue Smart IP67 Charger | 12/7 | 12/13 | 12/17 | 12/25 | 24/5 | 24/8 | 24/12 |
|---|---|---|---|---|---|---|---|
| Nominal voltage range and frequency | 220-240 VAC 50-60 Hz | | | | | | |
| Input voltage range and frequency | 180-265 VAC 45-65 Hz | | | | | | |
| Efficiency | 93 % | 93 % | 95 % | 95 % | 94 % | 96 % | 96 % |
| No load power consumption | 0.5 W | | | | | | |
| Charge voltage 'absorption' | Normal: 14,4 V High: 14,7 V Li-ion: 14,2 V | | | | Normal: 28,8 V High: 29,4 V Li-ion: 28,4 V | | |
| Charge voltage 'float' | Normal: 13,8 V High: 13,8 V Li-ion: 13,5 V | | | | Normal: 27,6 V High: 27,6 V Li-ion: 27,0 V | | |
| Charge voltage 'storage' | Normal: 13,2 V High: 13,2 V Li-ion: 13,5 V | | | | Normal: 26,4 V High: 26,4 V Li-ion: 27,0 V | | |
| Charge current, normal mode | 7 A | 13 A | 17 A | 25 A | 5 A | 8 A | 12 A |
| Charge current, LOW | 2 A | 4 A | 6 A | 10 A | 2 A | 3 A | 4 A |
| Charge algorithm | 5-stage adaptive | | | | | | |
| Can be used as power supply | Yes | | | | | | |
| Protection | Battery reverse polarity (fuse) Output short circuit Over temperature | | | | | | |
| Operating temp. range | -20 °C to +60 °C (full rated output up to 40 °C) Derate 3 % per °C above 40 °C | | | | | | |
| Humidity | Up to 100 % | | | | | | |
| Start interrupt option (12/25(1+si) and 24/12(1+si) models only) | Short circuit proof, current limit 0,5 A<br>Output voltage: max one volt lower than main output | | | | | | |
| **ENCLOSURE** | | | | | | | |
| Material & Colour | Aluminium (blue RAL 5012) | | | | | | |
| Battery-connection (black and red cable) | 1,68 m ± 10% | | | 1,2 m ± 10% | 1,68 m ± 10% | | |
| 230 VAC-connection | Cable of 1,5 meter with CEE 7/7 plug | | | | | | |
| Protection category | IP67 | | | | | | |
| Weight (kg) | 1,8 | 1,8 | 2,4 | 2,4 | 1,8 | 2,4 | 2,4 |
| Dimensions (h x w x d in mm) | 85 x 211 x 60 | 85 x 211 x 60 | 99 x 219 x 65 | 99 x 219 x 65 | 85 x 211 x 60 | 99 x 219 x 65 | 99 x 219 x 65 |
| **STANDARDS** | | | | | | | |
| Safety | EN 60335-1, EN 60335-2-29 | | | | | | |
| Emission Immunity | EN 55014-1, EN 61000-6-3, EN 61000-3-2 | | | | | | |
| Automotive Directive | EN 55014-2, EN 61000-6-1, EN 61000-6-2, EN 61000-3-3 | | | | | | |

Victron Energy B.V. | De Paal 35 | 1351 JG Almere | The Netherlands
General phone: +31 (0)36 535 97 00 | E-mail: sales@victronenergy.com
**www.victronenergy.com**