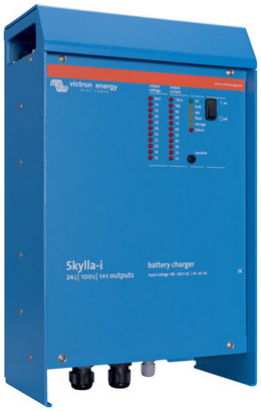
Skylla-i Battery Charger 24V

Li-Ion ready

www.victronenergy.com



Skylla-i 24/100

Rugged

Aluminium epoxy powder coated cases with drip shield and stainless steel fixings withstand the rigors of an adverse environment: heat, humidity and salt air.
Circuit boards are protected with an acrylic coating for maximum corrosion resistance.
Temperature sensors ensure that power components will always operate within specified limits, if needed by automatic reduction of output current under extreme environmental conditions.

Flexible

Next to a CAN bus (NMEA2000) interface, a rotary switch, DIP switches and potentiometers are available to adapt the charge algorithm to a particular battery and its conditions of use.
Please refer to the manual for a complete overview of the possibilities

Important features:

The right amount of charge for a lead-acid battery: variable absorption time

When only shallow discharges occur the absorption time is kept short in order to prevent overcharging of the battery. After a deep discharge the absorption time is automatically increased to make sure that the battery is completely recharged.

Preventing damage due to excessive gassing: the BatterySafe mode

If, in order to quickly charge a battery, a high charge current in combination with a high absorption voltage has been chosen, the Skylla-i will prevent damage due to excessive gassing by automatically limiting the rate of voltage increase once the gassing voltage has been reached

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

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 (26,4 V for 24 V battery) to minimise gassing and corrosion of the positive plates. Once a week the voltage is raised back to the absorption level to 'refresh' the battery. This feature prevents stratification of the electrolyte and sulphation, a major cause of early battery failure.

To increase battery life: temperature compensation

Every Skylla-i comes with a battery temperature sensor. When connected, charge voltage will automatically decrease with increasing battery temperature. This feature is especially recommended for sealed lead-acid batteries and/or when important fluctuations of battery temperature are expected.

Battery voltage sense

In order to compensate for voltage loss due to cable resistance, the Skylla-i is provided with a voltage sense facility so that the battery always receives the correct charge voltage.

Suitable for AC and DC supply (AC-DC and DC-DC operation)

The chargers also accept a DC supply.

Use as a power supply

As a result of the perfectly stabilized output voltage, the Skylla-i can be used as a power supply if batteries or large buffer capacitors are not available.

Two outputs to charge 2 battery banks

The Skylla-i features 2 isolated outputs. The second output, limited to approximately 4 A and with a slightly lower output voltage, is intended to top up a starter battery.

Li-Ion (LiFePo4) ready

Simple charger on-off control can be implemented by connecting a relay or open collector optocoupler output from a Li-Ion BMS to the remote control port of the charger. Alternatively complete control of voltage and current can be achieved by connecting to the galvanically isolated CAN bus port.

Learn more about batteries and battery charging

To learn more about batteries and charging batteries, please refer to our book 'Energy Unlimited' (available free of charge from Victron Energy and downloadable from www.victronenergy.com).

Skylla-i	24/80	24/100
Input voltage (VAC)	230	
Input voltage range (VAC)	185-265	
Input voltage range (VDC)	180-350	
Maximum AC input current @ 180 VAC	16	20
Frequency (Hz)	45-65	
Power factor	0,98	
Charge voltage 'absorption' (VDC) (1)	28,8	
Charge voltage 'float' (VDC)	27,6	
Charge voltage 'storage' (VDC)	26,4	
Charge current house batt. (A) (2)	80	100
Charge current starter batt. (A)	4	
Charge characteristic	7 stage adaptive	
Battery capacity (Ah)	400-800	500-1000
Charge curve, Li-Ion	4 stage, with on-off control or Can bus control	
Temperature sensor	Yes	
Can be used as power supply	Yes	
Remote on-off port	Yes (can be connected to a Li-Ion BMS)	
CAN bus communication port	Two RJ45 connectors, NMEA2000 protocol, galvanically isolated	
Remote alarm relay	DPST AC rating: 240VAC/4A DC rating: 4A up to 35VDC, 1A up to 60VDC	
Forced cooling	Yes	
Protection	Battery reverse polarity (fuse) Output short circuit Over temperature	
Operating temp. range	-20 to 60°C (Full output current up to 40°C)	
Humidity (non condensing)	max 95%	
ENCLOSURE		
Material & Colour	aluminium (blue RAL 5012)	
Battery-connection	M8 bolts	
230 VAC-connection	screw-clamp 10mm² (AWG 7)	
Protection category	IP 21	
Weight kg (lbs)	7 (16)	
Dimensions hxwxd in mm (hxwxd in inches)	405 x 250 x 150 (16.0 x 9.9 x 5.9)	
STANDARDS		
Safety	EN 60335-1, EN 60335-2-29	
Emission	EN 55014-1, EN 61000-6-3, EN 61000-3-2	
Immunity	EN 55014-2, EN 61000-6-1, EN 61000-6-2, EN 61000-3-3	

1) Output voltage range 20-36V. Can be set with rotary switch or potentiometers.

2) Up to 40°C (100°F) ambient. Output will reduce to 80% at 50°C, and to 60% at 60°C.

BMV 600S Battery Monitor

The BMV 600S Battery Monitor features an advanced microprocessor control system combined with high resolution measuring systems for battery voltage and charge/discharge current

The software includes complex calculation algorithms, like Peukert's formula, to exactly determine the state of charge of the battery. The BMV 600S selectively displays battery voltage, battery current, consumed Ah or time to go.

Skylla-i Control

The PCC panel provides remote control and monitoring of the charge process with LED indication of the charger status. In addition, the remote panel also offers output current adjustment that can be used to limit the output current and thus the power drawn from the AC supply. This is particularly useful when operating the charger from limited shore power or small gensets. The panel can also be used to change several battery charging parameters.

Victron Energy B.V. | De Paal 35 | 1351 JG Almere | The Netherlands
General phone: +31 (0)36 535 97 00 | Fax: +31 (0)36 535 97 40
E-mail: sales@victronenergy.com | **www.victronenergy.com**