SKYLLA-I

A modern and powerful battery charger that withstands the rigors of an adverse environment: heat, humidity and salt air.

Skylla-i

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Skylla-i (1+1): two outputs to charge 2 battery banks

The Skylla-i (1+1) 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.

Skylla-i (3): three full current outputs to charge 3 battery banks

The Skylla-i (3) features 3 isolated outputs. All outputs can supply the full rated output current.

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:

Synchronised parallel operation

Several chargers can be synchronised with the CAN bus interface. This is achieved by simply interconnecting the chargers with RJ45 UTP-cables. Please see the manual for details.

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.

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.

SPECIFICATIONS

Skylla-i	24/80	24/100
Input voltage	230 Vac	
Input voltage range	185 - 265 Vac	
Input voltage range	180 - 350 Vdc	
Maximum AC input current @180 Vac	16 A	20 A
Frequency	45 - 65 Hz	
Power factor	0,98	
Charge voltage "absorption"	28,8 V (Can be set with rotary switch or potentiometers)	
Charge voltage "float"	27,6 V	
Charge voltage "storage"	26,4 V	
Charge current	80 A	100 Amp
Number or outputs	1+1 or 3	
Charger current starter battery	4 Amp (only 1+1)	
Charge algorithm	7 stage adaptive	
Battery capacity	400 - 800 Ah	500 - 1000 Ah
Charge algorithm Li-Ion	3 stage, with on-off control or CAN bus control	
Temperature sensor	Yes	
Can be used as power supply	Yes	
Remoto on-off port	Yes (can be connected to a Li-Ion BMS)	
CAN bus communication port (VE.Can)	Two RJ45 connectors, NMEA2000 protocol, galvanically isolated	
Synchronised parallel operation	Yes, with VE.Can	
Alarm relay	DPST. AC rating: 240 Vac 4 Amp. DC rating: 4 A up to 35 Vdc, 1 A up to 60 Vdc	
Forced cooling	Yes	
Protection	Reverse polarity (fuse). Output short circuit. Over temperature	
Operating temp. range	-20 to 60 °C (Full output current up to 40 °C, Output will reduce to 80% at 50°C, and to 60% at 60°C)	
Humidity (non-condensing)	max 95 %	
Enclosure		
Material & colour	Aluminium (blue RAL 5012)	
Battery connection	M8 bolts	
230 Vac connection	Screw clamp 10 mm2 (AWG 7)	
Protection category	IP 21	
Weight	7 Kg	
Dimensions (h x w x d)	405 x 250 x 150 mm	
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	

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