PHOENIX SMART IP43

With boat owners in mind this adaptive 5-step charger can provide charge to each of three battery banks. Bluetooth enabled. Adaptive, intelligent, dynamic charge features – see the datasheet below.

Phoenix Smart IP43 1+1

Phoenix Smart IP43 1+1

Phoenix Smart IP43 3

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The right amount of charge: variable absorption time

When only shallow discharges occur (a yacht connected to shore power for example) 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 will be fully charged.

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 charger will prevent damage due to excessive gassing by automatically limiting the rate of voltage increase once the gassing voltage has been reached (see the charge curve between 14,4 V and 15,0 V in fig. 2).

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 (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 (LiFePO4) batteries

Charger on-off control can be implemented by connecting a relay or open collector optocoupler output from a Li-ion BMS to the remote on-off port.
Alternatively full control of voltage and current can be achieved with Bluetooth.

Fully programmable charge algorithm

The charge algorithm can be programmed with help of Bluetooth or the VE.Direct interface. Three preprogrammed algorithms can be selected with the mode button (see specifications).

Remote on-off

The remote on/off consists of two terminals: Remote H and Remote L.
A remote on/off switch or relay contact can be connected between H and L. Alternatively, terminal H can be pulled high, or terminal L can be pulled low. See manual for details.

VE.Direct interface

For a wired data connection to a Color Control panel, PC or other devices. Please see the VictronConnect app under Downloads / Software on our website.

Programmable relay

Can be programmed using the VE.Direct interface or a Bluetooth enabled device to trip on an alarm or other events.

SPECIFICATIONS

Phoenix Smart IP43	12V 30 / 50 Amp	24 V 16 / 25 Amp
Input voltage	230 Vac (range 210 - 250 V)	
DC input voltage range	290 - 355 Vdc	
Frequency	45-65 Hz	
Power factor	0,7	
Back current drain	AC Disconnected: < 0,1 mA	AC connected and charger remote off: < 6 mA
Efficiency	12V 30A: 94 % 12V 50A: 92 %	94 %
Charge voltage "absorption"	Normal: 14,4 - Hight: 14,7 - Li-ion: 14,2 Vcc	Normal: 27,6 - Hight: 27,6 - Li-ion: 27,0 Vcc
Charge voltage "float"	Normal: 13,8 - Hight: 13,8 - Li-ion: 13,5 Vcc	Normal: 27,6 - Hight: 27,6 - Li-ion: 27,0 Vcc
Charge voltage "storage"	Normal: 13,2 - Hight: 13,2 - Li-ion: 13,5 Vcc	Normal: 26,4 - Hight: 26,4 - Li-ion: 27,0 Vcc
Number of output	1+1 or 3	1+1 or 3
Fully programable	Yes, with Bluetooth and/or VE.Direct	
Charge current service battery	30 / 50 Amp	16 / 25 Amp
Low current mode	15 / 25 Amp	8 / 12,5 Amp
Charge current starter battery	3 A (1+1 output models only)	
Charge algorithm	5 stage adaptive	
Protection	Battery reverse polarity (fuse, not user accessible) / Output short circuit / Over temperature	
Can be used as power supply	Yes, output voltage can be set with Bluetooth and/or VE.Direct	
Operating temp. range	-20 to 60 °C Rated output current up to 40 °C, derate linealy to 20% at 60 °C	
Enclosure		
Material & Colour	Aluminium (blue RAL 5012)	
Battery connection	Screw terminal 16 mm2 (AWG 6)	
AC connection	IEC 320 C14 inlet with retainer clip (AC cord with country specific plug must be ordered separately)	
Protection category	IP43 (electronic components), IP22 (connection area)	
Weight:	3,5 Kg	
Dimensions (h x w x d)	180 x 249 x 100 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	
Vibration	IEC 68-2-610 - 150 Hz / 1.0G	

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