

Dolphin

Battery Chargers, Inverters & Accessories



Who is REYA?



Reya is the manufacturer of Dolphin Battery Chargers and is the largest manufacturer and distributor of marine electrical products in France.

Our history in brief

1928: Set up as a repair shop for automobiles in Cannes, France. Later expanding to include luxury yachts berthing in the nearby port.

1993: Became a manufacturer by acquiring AMFA, a pump supplier in Italy & went into partnership with PowerFirst, home of Dolphin Battery Chargers.

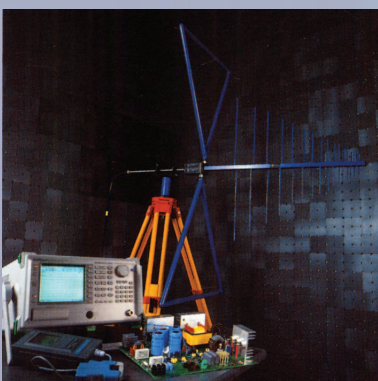
1995: Dolphin Battery Chargers created.

1995 - Present: 80 000 Dolphin Battery Chargers sold through our international distributor network in 20 countries worldwide.

2007: Reya International becomes part of the Alliance Marine group of companies. Alliance Marine is the 2nd largest French marine distribution company comprising 5 independent companies.



Nearby port of Cannes

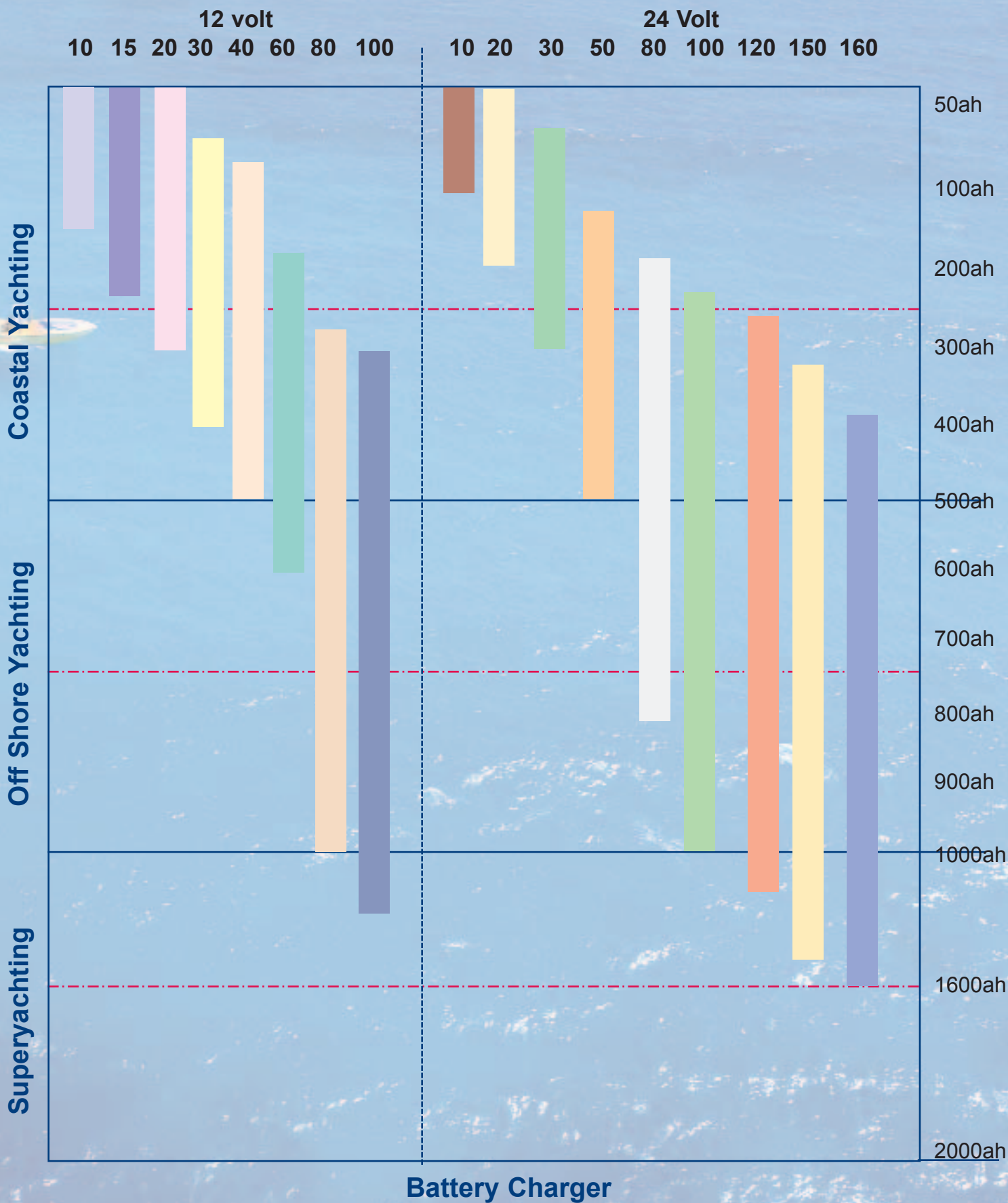


Charger testing in the Faraday Cage & in the laboratory



Custom Line 97

How to choose the right Dolphin Charger for your boat



We recommend a charging rate to a maximum of 20% of the amp hour capacity of the battery.
 Eg. The charger for a 300Ah battery is maximum 60amps.



3 x 24v100A Dolphin Battery Chargers in parallel, giving a MEGA 24V300A charge.

The Dolphin Mega smart charger product line forms the core of our product offering. Specifically designed to suit the megayacht world, our cutting edge customized engineering is what continues to bring us the largest share of this highly specialized market. Innovations like our 10 built-in Charging Program Selector, latest SMD manufacturing process and turnkey paralleling systems are just some of the examples of why Dolphin continues to flourish in the Megayacht market.

Using the connection cable you will essentially have one “massive battery charger” with a maximum charging capacity of 400 amps. Thanks to the master & slave combination technology your charging system operates as a stand alone unit. This will not disrupt the normal multiplex charging process, unlike standard parallel charger connections. The Master unit will take the lead and the slaves will power the system.

Wherever there is a demand for utmost reliability, high performance and compact dimensions Series Dolphin 2 Mega smart chargers are the premium choice.

Model	Part Number	Max Output Current
Dolphin 200 Mega	299724	200 amps
Dolphin 300 Mega	299725	300 amps
Dolphin 400 Mega	299729	400 amps



Navetta 30 from Custom Line Yachts (part of Ferretti Group) is fitted with a 300A DOLPHIN Mega Smart

For information on three phase battery chargers see P11

DOLPHIN BATTERY CHARGERS - FEATURES

Dolphin
charger

LED Display for Programming
& Monitoring Functions

Latest SMD electronic
construction Technology

Switch mode techno-
logy and three stage
charging design with
Power Supply

Temperature sensor for
battery compensation

Modern lightweight
and compact design
with white aluminum
powder coated casing

4 screw simple install
with easy access
removable panel



All Dolphin Battery Chargers and
accessories are **CE** marked

And manufactured to
and ABYC specifications



Universal AC input with
automatic voltage
115/230 VAC 50/60
censoring.

Program selector switch
including winterizing and 6
battery types

Internal connection
for LED remote panel

3 independent
DC outputs



ISO 9002 certified
manufacturing plant

Clearly indicated DC
access terminals with
an individual terminal
for each output

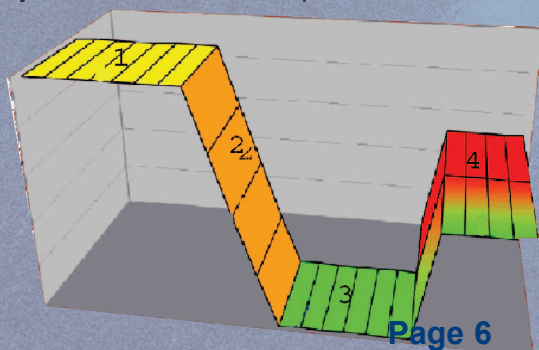
3 year warranty
(2 years for 12v10a /15a & 24v10a)

Model	12V10A	12V15A	12V20A	24V10A
Codes	299700	299702	299715	299772
Battery Capacity	160Ah	220Ah	300Ah	400Ah
Input				
AC input voltage range	115V or 230V (± 15%)			
AC input frequency	50/60 Hz (± 10%)			
115V/230V adjustment	manual	manual	automatic	automatic
AC consumption full load	250 VA	370 VA	350 VA	350 VA
Cos phi	0.7	0.7	1.0	1.0
Nominal battery voltage	12 VDC	12 VDC	12 VDC	24 VDC
Charge current ± 5%	10 Amps	15 Amps	20 Amps	10 Amps
Battery capacity	100/150 Ah	150/250 Ah	250/400 Ah	100/150 Ah
Battery type setting	Wet/calcium			
Output				
DC Outputs	2	3	3	3
Output voltage (boost/float) :				
Wet	14.4/13.8 V	14.4/13.8 V	14.4/13.8 V	28.8/27.2V
Calcium		15.0/13.8 V	15.0/13.8 V	30.0/27.2V
Protection:				
Short-circuit	Yes	Yes	Yes	Yes
Overload	Yes	Yes	Yes	Yes
Reverse polarity	Yes	Yes	Yes	Yes
Over-temp.	No	Yes	Yes	Yes
Display	On/Off led			
Operating temperature	0°C to +50°C / 32°F to 122°F			
Storage temperature	-20°C to +70°C / -4°F to 158°F			
Humidity	10% to 90%			
Cooling	Natural cooling	Speed controlled fan cooling	Speed controlled fan cooling	Speed controlled fan cooling
EMC standard	EN 50081-1 and EN 50082-1			
Safety standard	EN 60335-1			
Enclosure	Powder coated aluminium			
Weight (kg)	1.5	1.5	1.5	1.5
Dimensions (mm)	180x170x100	180x170x100	200x180x100	200x180x100
Category	Manual	Manual	Dual	Dual

M = Manual adjustment input voltage 115/230V 50/60Hz
D = Dual automatic input voltage 115/230V 50/60Hz

Four stage charging curve

- 1. Bulk Stage:** A high current is sent to the battery until it reaches approx 80% of full charge
- 2. Absorption Stage:** Voltage level is maintained & the current reduced until battery is 100% charged
- 3. Float Stage:** Voltage & current reduced to maintain battery. Float gives what the battery requires
- 4. Power Supply:** Charger "keeps up" with loads applied to the battery while it's attached to AC power.





Special Mention

Certificate



The jury has awarded this Special Mention to

Reya

in the category

Machinery, propulsion, mechanical and electrical systems and fittings

for the product

Dolphin Battery Charger

Chairman of the jury

T. Castro

Amsterdam, 18 November 2003



DAME is an initiative of the Marine Equipment Trade Show-METS

The Dolphin range of Battery Chargers has always been recognized for its outstanding quality, one that the manufacturer is proud to support with a 3 year warranty. Due to production on a wide scale, REYA is able to offer high quality, truly international battery chargers, at a reasonable price. Smart, indeed!

Dolphin Smart Battery Chargers are insensitive to international differences in input voltage and frequency. They automatically sense input power (90-264 VAC / 50-60 Hz), meaning that boat builders and boat owners worldwide no longer need worry about the compatibility of their batteries and chargers.

The features of the new Dolphin SM battery chargers are synonymous with reliability and high efficiency and have a worldwide supported warranty. This new generation of microprocessor controlled chargers represents a radical technological advance.

In recognition of the perfect combination of aesthetic design and functionality, Dolphin Battery Chargers were nominated for and received a **Special Mention in the DAME Awards at METS 2003 (Amsterdam)**.

In accordance with European Law, Dolphin Smart Battery Chargers have power factor correctors, so the charging process is quicker and more efficient. Not only is this one smart battery charger suitable for all types of batteries from 'AC Delco' to 'Wet', with a flick of a switch, it will keep your battery charged throughout periods of inactivity (like the winter) AND will restore flat batteries to life with its sulphation recovery program. Smart indeed!

Available worldwide, Dolphin Battery Chargers were first launched in September 2002 and are made in France by an ISO 9001 factory.

Dolphin SMART BATTERY CHARGERS (12V & 24V)

charger

- 6 charging programs
- Fully automatic multi stage battery charger
- Can charge up to three battery banks simultaneously
- Special sulphation recovery program.
- 2 winterizing programs
- Power supply position
- Automatic universal input voltage 115/230 Vac
- Insensitive to input frequency 50/60 Hz
- Protection features
 - Short-circuit protection
 - Over temperature shutdown
 - Overload
 - Input protection (fuses)
- Tolerant to high input voltage variations
- Advanced power switching technology
- Clean EMI/RFI output - no interference with other onboard electronics
- Built to ABYC and UL standards
- CE marked
- Marine-grade construction with conform tropicalized circuit boards.
- Advanced engineering and modern design
- Up to date SMD technology
- Aluminium casing with powder-coated treatment for a better corrosion resistance
- ISO 9001 assembling subcontractor
- 3 year warranty

Charging programs:

(By internal switch)

Switch position: 00

Wet or flooded electrolyte batteries.

Switch position: 01

Sealed lead batteries

Switch position: 02

Calcium-lead batteries

Switch position: 03

"DELPHI" batteries

Switch position: 04

"OPTIMA" batteries

Switch position: 05

Free lead batteries winterizing

Switch position: 06

Sealed lead batteries winterizing

Switch position: 07

Gel batteries

Switch position: 08

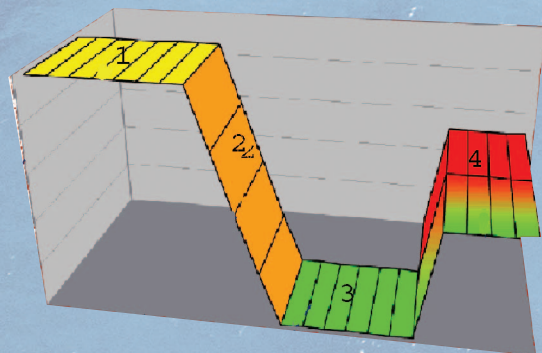
Power supply

Switch position: 09

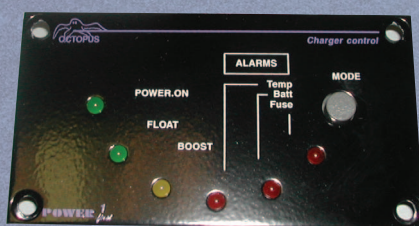
Sulphation recovery program

Four stage charging curve

1. **Bulk Stage:** A high current is sent to the battery until it reaches approx 80% of full charge
2. **Absorption Stage:** Voltage level is maintained & the current reduced until battery is 100% charged
3. **Float Stage:** Voltage & current reduced to maintain battery. Float gives what the battery requires
4. **Power Supply:** Charger "keeps up" with loads applied to the battery while it's attached to AC power.



Display unit



Part Number	299037
Description	Remote control panel for Dolphin battery chargers 5m cable as standard
Reference	REMOTE BC2



Model	30	40	60	80	100
Codes	299770	299703	299711	299708	299707
Battery Capacity	400Ah	500Ah	700Ah	1000Ah	1200Ah
Input					
Input voltage	115 VAC or 230 VAC				
Input voltage range	98 VAC - 130 VAC or 195 VAC - 265 VAC				
Changeover 115/230	Automatic				
Frequency	45 Hz to 65 Hz				
Harmonics	According to IEC 1000-3-2 or EN 61000-3-2				
Maximum current 115 VAC	4.8 A	6.4 A	10 A	14 A	18 A
230 VAC	2.4 A	3.2 A	5 A	7 A	9 A
Power factor	> 0.9				
Efficiency	80% typ.				
Power rating	490 W	650 W	980 W	1300 W	1900 W
Active Power	550 VA	735 VA	1100 VA	1450 VA	2100 VA
Fuse	T8A	T10A	T15A	T15A	2 x T15A
Output					
DC output	3 isolated				
Charging characteristic	10 charging programs				
Temp. compensation	+/- 15 mV / °C optional external sensor (optional sensor)				
Voltage share	+/- 2%				
Ripple	< 1%				
Max current	30 A (+/- 5%)	40 A (+/- 5%)	60 A (+/- 10%)	80 A (+/- 10%)	100A (+/- 10%)
Fuses	2 x F20A	2 x F30A	3 x F30A	4 x F30A	4 x F30A
Protection					
Output circuit	Overload, short-circuit, reversed polarity, over voltage				
Over temperature	Built-in sensor, battery sensor				
General failure	Fuse				
Display					
LED display	5 LEDs				
Remote control panel	Optional				
Push-button	Absorption				
General					
Control	Microprocessor based RISC technology				
Topology	Forward 50 KHz + built-in PFC				
EMC	Emission: EN 50081-1, immunity: EN 50082-1				
Safety	EN 60335-1				
Operating temperature	0°C to +50°C / 32°F to 122°F				
Storage temperature	-20°C to +70°C / -4°F to 158°F				
Enclosure	IP22				
Casing	White aluminium with powder coating treatment				
Ventilation	Forced fan cooling				
Fan speed	50% or 100% depending on internal temperature				
Mounting	Wall mounting - 4 screws M4				
Humidity	10% to 90% RH non-condensing				
Connections					
AC	2 x 4.0 mm ² terminal blocks				
Batteries	M6 Bolts	M6 Bolts	M8 Bolts	M8 Bolts	M8 Bolts
Temperature sensor	2 x 1.0 mm ² terminal blocks				
Weight (kg)	4	4	5	5	8
Dimensions (mm)	180x170x100	180x170x100	330x350x120	330x350x120	330x350x120
Category	Dual	Dual	Dual	Dual	Dual

D = Dual automatic input voltage 115/230V 50/60Hz

Model	20	30	50	80
Codes	299710	299712	299714	299716
Battery Capacity	300Ah	400Ah	600Ah	800Ah
Input				
Input voltage	115 VAC or 230 VAC		115 VAC or 230 VAC	
Input voltage range	98 VAC - 130 VAC or 195 VAC - 265 VAC		98VAC-130VAC or 195VAC-265VAC	
Changeover 115/230	Automatic	Automatic	Automatic	Automatic
Frequency	45 Hz to 65 Hz			
Harmonics	According to IEC 1000-3-2 or EN 61000-3-2			
Maximum current	4.8 Amps max 115 VAC 2.4 Amps max 230 VAC	10.0 Amps max 115 VAC 5.0 Amps max 230 VAC	18 Amps max 115 VAC 9.0 Amps max 230 VAC	26A Amps max 115 VAC 13.0 Amps max 230 VAC
Power factor	> 0.9	> 0.9	> 0.9	> 0.9
Efficiency	80% typ.	80% typ.	80% typ.	80% typ.
Power rating	650 W	980 W	1630 W	2700W
Active Power	735 VA	1100 VA	1850 VA	3000VA
Fuse	T8A	T15A	T20A	2x T20A
Output				
DC output	3 isolated			
Charging characteristic	10 charging programs			
Temp. compensation	+/- 30 mV / °C optional external sensor			
Voltage share	+/- 2%			
Ripple	< 1%			
Max current	20 A (+/- 5%)	30 A (+/- 5%)	50 A (+/- 10%)	80A (+5% -10%)
Fuses	F30A	2 x F25A	3 x F25A	4x F30A
Protection				
Output circuit	Overload, short-circuit, reversed polarity, over voltage			
Over temperature	Built-in sensor, battery sensor			
General failure	Fuse			
Display				
LED display	6 LEDs			
Remote control panel	Optional			
Push-button	Absorption			
General				
Control	Microprocessor based RISC technology			
Topology	Forward 50 KHz + built-in PFC			
EMC	Emission: EN 50081-1, immunity: EN 50082-1			
Safety	EN 60335-1			
Operating temperature	0°C to +50°C / 32°F to 122°F			
Storage temperature	-20°C to +70°C / -4°F to 158°F			
Enclosure	IP22			
Casing	White aluminium with powder coating treatment			
Ventilation	Forced fan cooling			
Fan speed	50% or 100% depending on internal temperature			
Mounting	Wall mounting - 4 screws M4			
Humidity	10% to 90% RH non-condensing			
Connections				
AC	2 x 4.0 mm ² terminal blocks			
Batteries	M6 Bolts	M8 Bolts	M8 Bolts	M8 Bolts
Temperature sensor	2 x 1.0 mm ² terminal blocks			
Weight (kg)	4	5	5	8
Dimensions (mm)	270x290x120	330x350x120	330x350x120	330x360x170
Category	Dual	Dual	Dual	Dual

D = Dual automatic input voltage 115/230V 50/60Hz
S = Single Input voltage 230V 50/60Hz

SMART BATTERY CHARGERS (24V) TECHNICAL DETAILS

Dolphin
charger

100

120

160

299717 1000Ah	299718 1200Ah	299719 1500Ah
230 VAC 195VAC-265VAC n/a	230 VAC 195VAC-265VAC n/a	230 VAC 195VAC-265VAC n/a
45 Hz to 65 Hz According to IEC 1000-3-2 or EN 61000-3-2		
n/a	n/a	n/a
16.0 Amps max 230 VAC > 0.9	7.0 Amps max 230VAC > 0.9	> 0.9
80% typ.	80% typ.	80% typ.
3400W	4050W	5400W
3800VA	4500VA	6000VA
2x T20A	3xT20A	4xT20A

3 isolated

10 charging programs
+/- 30 mV / °C external sensor
+/- 2%
< 1%

100A (+5% -10%) 4xF30A	120A (+5% -10%) 8x30A	160A (+5% -10%) 8x30A
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Overload, short-circuit, reversed polarity, over voltage
Built-in sensor, battery sensor
Fuse

6 LEDs
Optional
Absorption

Microprocessor based RISC technology
Forward 50 KHz + built-in PFC
Emission: EN 50081-1, immunity: EN 50082-1
EN 60335-1
0°C to +50°C / 32°F to 122°F
-20°C to +70°C / -4°F to 158°F
IP22

White aluminium with powder coating treatment
Forced fan cooling
50% or 100% depending on internal temperature
Wall mounting - 4 screws M4
10% to 90% RH non-condensing

2 x 4.0 mm² terminal blocks & earth

3 x 1.0 mm² terminal blocks

8	14.6	14.6
330x360x170	710x370x170	710x370x170
Single	Single	Single

24v 100a



24v 120a



THREE PHASE 24VDC DOPLPHIN BATTERY CHARGERS

Dolphin
charger

24V 120A



A **three-phase current** is the solution for strong electric outputs allowing excellent onboard comfort.

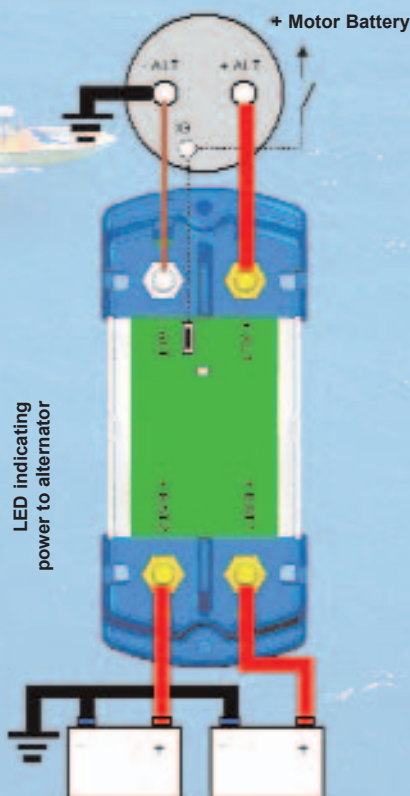
It is for this reason that **Reya** developed these chargers specifically for yachts equipped with generators producing a three-phase current.

Moreover, by absorbing a three-phase current, these chargers contribute to the phase balance and the efficiency of the onboard generators.

Model	24V/120A/3S	24V/150A/3S
Codes	299728	299730
Battery capacity	>> 1200 Ah	>> 1500 Ah
Input		
Power Supply	400V ± 15% (3 ph + N)	
Input frequency	50/60 Hz ± 10%	
Cos phi	0.9 typ.	
Efficiency	80%	
Max. current 115/230V	7A / phase	9A / phase
Power rating	4050 W	5400 W
Active power	4500 VA	6000 VA
Fuse	3 x T20A	4 x T20A
Output		
DC Output	3	3
Max. current	120A ± 10%	150A ± 10%
Charging curves	10 charging positions	
Voltage share	± 2%	
Ripple	< 1%	
Fuse	8 x F30A	8 x F30A
Protection		
Output circuit	Output overload - output short circuit	
Over temperature	Excessive internal or battery temperature (optional)	
Reverse polarity	faulty external temperature (optional) -	
General failure	over voltage - General fault	
Display		
LED display	6 LEDs	
Remote control	Octopus panel (optional)	
General information		
Control	Micro Processor based RISC technology	
Operating / Storage Temperature	32°F to +122°C / -4°F to +158°F	
Humidity	10% to 90% (without condensation)	
Electronic protection	By tropicalisation	
Convection	Forced Fan Cooling	
EMC	EN50081-1, EN50082-1, EN61000-3-2	
Security	EN60335-1	
Housing		
Construction	White aluminium powder coated treatment - blue plastic flanges	
Protection	IP22	
Mounting	Wall mounted M4 screws	
Dimensions (mm) H xWxD	710x370x170	
Weight (kg)	14.6	
Other functions		
1/2 charge	Yes	

100 OR 150AMP ELECTRONIC BATTERY ISOLATORS

MANTA II - Mosfet Splitter



Advantages of an electronic battery isolator

Unlike classic battery isolators with diodes, electronic isolators make it possible to have a very low drop between the alternator voltage level and that of the battery.

The higher the current is, the higher the voltage drop will be. The voltage drop reached, for 150A, on one channel, 90mV typ. / 120mV max (measured while warm).

At the end of the charging cycle, the current diminishes. The voltage drop becomes very weak (only a couple of mV), the batteries are thus optimally charged without having to modify the regulation circuit of the alternator.

During charging, the 150a isolator acts as a resistor of less than 1mOhm or the equivalent of a copper wire of 16mm² with a length of 1m.

Likewise, thanks to the low voltage drop, power losses are reduced thus increasing the global output of the charging circuit and reducing the heat to be vented. This diminishes the battery charging time (upon condition that the losses via the cables are negligible).

Input power	10 to 32V
Maximum charging current	100 or 150A
Alternateur consumption	~ 35 mA
Battery consumption	< 2 mA
Current leak	< 1 mA between 2 batteries
Voltage drop at max. current	~ 100mV
Voltage drop at max. current/2	~ 50mV
Voltage drop at end of charge	< 5mV
Operating temperature	-10°C to +60°C
Storage temperature	-20°C to +85°C
Cooling	Natural
Relative humidity	10% to 90%

PROTECTION	
By means of an external fuse adapted to the alternator's output current (not supplied)	
EMC & SAFETY STANDARDS	
Emission	EN 60081-1
Immunity	EN 60082-1
User safety	EN 60950-1
MECHANICAL	
Casing	Aluminium & plastic supports
Mounting	Horizontal or vertical with 2 x 4 mm screws
CONNECTIONS	
All connections	Terminal pins + M8 screws

Code	Description	Dimensions	Weight
299051	Battery Isolator 100a 1 Input 2 Output	165 x 70 x 35 mm	230 grs
299053	Battery Isolator 100a 1 Input 3 Output	165 x 106 x 35 mm	330 grs
299068	Battery Isolator 150a 1 Input 3 Output	165 x 106 x 35 mm	330 grs

VISION 4 BATTERY MONITOR

General information:

The VISION 4 Battery Supervisor is the last word in on board power supervision.

It is simple to connect and it automatically detects the input voltage (12 VDC or 24 VDC). CanBus SAE J1939 interface.

The VISION 4 battery monitor analyses battery voltage, battery efficiency, temperature and capacity on 2 battery banks (by means of an optional second shunt) also the voltage on 2 additional banks.

The VISION 4 includes a digital filter which allows it to avoid problems arising from motor start up, fuse faults, unballasting, etc...

The VISION 4 has a non volatile memory which allows it to retain configuration parameters even if there is no power source.

The VISION 4 has powerful calculating algorithms which take count of the current draw, the charge status and the type of battery, so it can supply precise indication of the remaining charge. This means that the VISION 4 is more than just a simple Ah counter. In fact, its energy counter takes into consideration:

- During the charge, output that diminishes according to the battery's charge.

- During the discharge, restored capacity which diminishes according to the draw.

What's more, the VISION 4 is not sensitive to the effects of the charging cycle because it automatically detects float mode.

It is thus not subject to drifting with each successive charge / discharge cycle.

Power supply characteristics:

Voltage:	10-30 VDC
Consumption:	10 mA approx. ("normal" mode). 30 mA approx. ("alarm" mode).

Display functions:

Display type:	Graphic OLED display 4 lines.
Parameter selection:	5 way navigation keypad

Parameters displayed:

Batteries 1 & 2:	Voltage, Current, Temperature & capacity.
Batteries 3 & 4:	Voltage.

Alarm functions:

Faults detected: Batteries 1 & 2:	Battery undervoltage (adjustable), Battery overvoltage, Excessive temperature, Low capacity.
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Batteries 3 & 4:	Battery undervoltage (adjustable), Battery overvoltage,
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Alarm output: Dry loop, 1 inv - 1 Amp max.

Supplied with:

Temperature sensor:	1 electric sensor
Shunt:	1 shunt 300 Amps/100 mV.

Optional extras & replacements

Temperature sensor:	Code 299405
Shunt 150 Amps/100 mV:	Code 299402
Shunt 300 Amps/100 mV:	Code 299403
Shunt 500 Amps/100 mV:	Code 299404
Delayed fuse 100mA:	Code 039715

Reya is proud to introduce the most advanced and yet most user friendly battery supervisor available on the market today. Readings are more visible than ever before thanks to the OLED display.

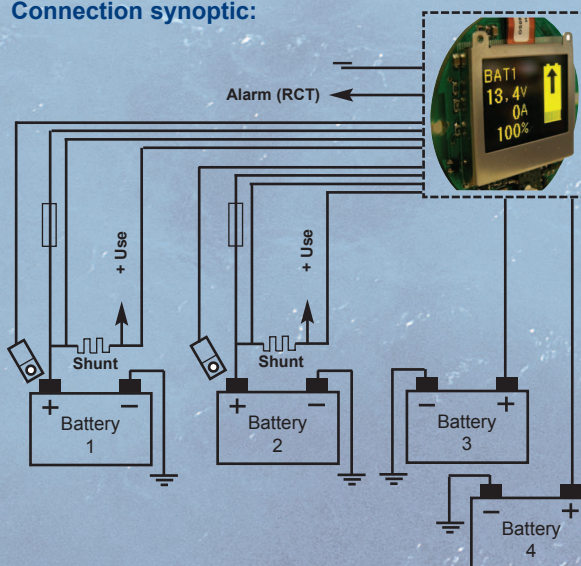
Flush fitted with a diameter of Ø 52 mm, the VISION 4 is part of the Dolphin family of products.

It is equipped with a numerous alarms and a cycle counter and a CAN BUS SAE J1939 interface.



Capacity	Voltage	Reference	Code
10 - 5000 Ah	12/24V	VISION4-5000A	299032

Connection synoptic:



General information:

Security:	Delayed fuse 100mA on +.
Operating /Stockage:	-10°C - +50°C / -20°C - +70°C.
Convection:	Natural.
Presentation:	Flush mounted Ø52 mm
W x H x D:	70 x 70 x 32 mm.
Weight:	< 500g
Connection:	2 screw terminals

VISION 4 BATTERY MONITOR

At the touch of a button you will be able to monitor a host of important information allowing you to answer questions like:

*How long will my batteries last?
How efficient is my battery system?
What is the status of my battery bank?
Is my charging system functioning normally?
Is the charger keeping up with my on board instruments?*

*Are my batteries fully charged yet?
What voltage am I charging at?
Do I need an extra battery?*

Simple Volt/Ammeters do not provide enough information to allow you to make expert decisions about managing your batteries.

Not to be confused with standard voltage based units, the Vision 4 battery monitor analyses battery voltage, battery efficiency, temperature and capacity on 2 battery banks (by means of an optional second shunt) also the voltage on 2 additional banks.

Armed with accurate battery information you can make informed decisions about when to stop or start charging - no longer will you be subject to unexpected flat batteries!



The Vision 4 uses a calibrated shunt for current measurement. Being remote from the actual unit means that it easily slots into existing wiring keeping installation quick and easy.

10 reasons why you need this product for your boat.

1. OLED display with high contrast, wide viewing angles from all directions, low power consumption and a long working life.
2. Surface mount and easy installation with cut-out 52mm Dia.
3. Complete status information for two independent battery banks
4. Voltage monitoring for up to 4 battery banks including alarms
5. Innovative 5 way navigation pad
6. Powerful microprocessor for accurate and reliable information
7. CAN Bus interface SAE J1939.
8. Compatible with 12 & 24 volt DC systems
9. Free "normally open contact" for external alarm (up to 1 amp)
10. 300 amp shunt and temperature sensor supplied as standard

OEM BATTERY CHARGER

12V20A & 40A 3 OUTPUT 115/230 VAC 50/60HZ

A product designed and developed with the specific needs of our OEM customers in mind, Reya is proud to present our OEM Battery Charger. We have paid special attention to the time necessary to install this charger - it's fast!

The features of this new Dolphin Battery Charger are synonymous with reliability and high efficiency and have a worldwide supported warranty and are insensitive to international differences in input voltage and frequency.



Models	20	40
Reya Reference	299520	299540
AC input:		
voltage range	115V/230V (±15%)	
frequency	50/60 Hz (± 10%)	
115V/230V adjustment	Internal	Automatic
AC consumption full load	575 VA	735 VA
Cos phi	0.6	0.9
Nominal battery voltage	12 Vac	
Charge current ± 5%	20 Amps	40 Amps
Battery capacity	200 Ah	400 Ah
Battery type setting	Lead Acid & Calcium Lead	9 positions
DC Outputs	3	
Output voltage (boost/float)		
Wet	14.4/13.6 V	14.4/13.2 V
Calcium	15.0/13.6V	14.2/13.6 V
Protection:		
Short-circuit	Yes	
Overload	Yes	
Reverse polarity	Yes	
Over-temp.	Yes	
Display	LED	Tricolour LED
Operating temperature	0°C to +50°C	
Storage temperature	-20°C to +70°C	
Humidity	10% - 90% (without condensation)	
Cooling	Forced fan cooling	
EMC standard	EN 50081-1 and EN 50082-1	
Safety standard	EN 60335-1	
Dimensions (HxLxD mm)	210x135x85	305x160x105
Weight	0.9kg	1.90kg
Enclosure	Powder coated aluminium	

Multi-charging programmes

Fully automatic multi-stage charger

Can charge up to 3 battery banks simultaneously

Protection features:

Short-circuit protection
Over-temperature shutdown
Overload
Input protection (fuses)

Tolerant to high input voltage variations

Advanced power switching technology

Built to ABYC and UL standards

CE marked

Marine-grade construction with conform tropicalized circuit boards.

Aluminium casing with powder-coated treatment for a better corrosion resistance

ISO 9001 assembling subcontractor

3 year warranty

Charging programmes

(12v40a *only* by means of an internal switch)

Switch position 00 Wet or flooded electrolyte batteries

Switch position 01 Sealed lead batteries

Switch position 02 Calcium-lead batteries

Switch position 03 "AC DELCO" batteries

Switch position 04 "Yellow Top" batteries

Switch position 05 Free lead batteries winterising

Switch position 06 Sealed lead batteries winterising

Switch position 07 Gel batteries

Switch position 08 Power Supply

Switch position 09 Inoperative

Dolphin
charger

WATERPROOF BATTERY CHARGER



Automatic Battery Charger Waterproof and shock resistant (IP65)

Nothing can damage this charger, not water, hydrocarbons or impurities. The housing is aluminium and the electronics are coated in resin.

Thermal protection

This battery charger can even be used in warmer areas of the boat like the machine room. The higher the ambient temperature, the lower the power output (60°C+) but not even this will damage the charger.

Automatic charger with 3 charging curves - IUoU

The battery is protected against all overloads and can remain permanently connected (operating in floating).

Installation

Quick & easy to install, it is suitable for indoor and outdoor use and can be positioned horizontally or vertically.

Model	12 Volts - 7 Amps	12 Volts - 17 Amps
Battery capacity	18 - 80 Ah	20 - 180 Ah
Input		
Input voltage	170 - 270 VAC	170 - 270 VAC
Input frequency	40 - 60 Hz	40 - 60 Hz
Output		
Number of outputs	1	1
Output voltage	14.4 / 13.8 VDC	14.4 / 13.8 VDC
Charging curve	IUoU	IUoU
Fuse (supplied)	6.3 / 10 Amps	6.3 / 20 Amps
Protection		
Short circuit	Yes	Yes
Reverse polarity	Yes (fuse)	Yes (fuse)
Temperature fault	Signalled by flashing LED	Signalled by flashing LED
General		
Operating temperature	-30 to +55°C	-30 to +55°C
Ventilation	natural	natural
Humidity	up to 100%	up to 100%
Visualisation		
Number of LEDs	2 (1 yellow + 1 green)	3 (1 yellow + 2 green)
LED (operation)	Boost / floating	Boost / floating
LED (alarm)	Reverse polarity - battery voltage too low - high temperature	
Housing		
Protection level	IP65 (Electronics immersed in resin)	
Material	Aluminium casing	
Colour	Grey	
Dimensions	155 x 80 x 43 mm	192 x 98 x 47 mm
Weight	1.1 Kg	1.4 Kg
Wiring		
Gauge	3 x 0.75 mm ² - 1.5m - with EU rated plugs 2P+T	
Battery Cable	2.5 mm ² red & black - x 2m long	
EMC		
Security - emissions	EN 60335-1 / EN 60335-2-29 / EN 55014 / EN 60555-2 / EN 60555-3 EN 55022 Cl.B / EN 61000-3-2 / EN 61000-3-3 / EN 61000-4-2 EN 61000-4-11 / e-marking 95-54-EG	
Code	498000	498100



SineWave



Remote Control Panel- Octopus

What is an inverter?

An inverter converts the DC electricity from sources such as batteries, solar panels, or fuel cells to AC electricity. It thus transforms the power found in the battery (DC) into power (AC) that can be used safely with household appliances, like fridges, laptop computers or televisions, which require a “pure” power supply.

The new Dolphin Inverter mirrors the Dolphin Charger perfectly. The charger takes shore power and sends it to the battery in the correct (DC) format for storage. Once there is a demand for AC power, the inverter springs to life and takes the stored battery power and transforms it. There is no wastage, only the required quantity is transformed.

Pure Sine Wave

This pure sine wave inverter guarantees a safe, pure and stable power supply that will not damage AC appliances.

Parallel up to 24V 9000VA

Up to three Dolphin Inverters can be used in parallel to provide a powerful onboard appliance and connected by means of a SubD cable. One of the inverters will act as the master and the other charger(s) as slave(s) giving up to 24v 12000VA

Battery safety

The Dolphin Inverter is designed to operate with battery voltage between 19V and 33 V, meaning that it will cut off once the battery levels reach 19V and thus not discharge the batteries. Similarly, an in-built safety characteristic means that if battery levels reach 33V, the inverter will sense it and cut off. Optimal start up voltage is 22V.

A wide range of domestic appliances can be used on board thanks to the Dolphin inverter



Model 24V 3000 VA

Code 299324

Input / Battery

Battery capacity (min.) > 200 Ah
 Battery Voltage 21 VDC - 32 VDC
 Efficiency 80%
 Low voltage cut off 19V
 High voltage cut off 33V
 Start up voltage 22V
 Nominal consumption 120A
 Standby consumption 200mA
 Fuse 6 x 30A fast

Output

AC Outputs **1 (isolated)**
 Max. current **230VAC**
 Frequency 50Hz
 Nominal output 3000 VA (cos 0.7)
 Max. output 4500 VA
 Fuse 15A (temporised)
 Wave Form THD <3%

Protection

Output circuit Battery over or under voltage
 Output overload - output short circuit
 Excessive internal temperature
 faulty external temperature -
 over voltage - General fuse fault

Visual Alarms

Internal inverter fault, Over current
 Battery voltage fault, Temperature

Display

LED display 6 LEDs
 Remote control Octopus panel (optional)

General information

Control Micro Processor based RISC technology
 Operating Temperature 0°C to + 50°C
 Storage Temperature -20°C to +70°C
 Humidity 10% to 90% (without condensation)
 Convection Forced Fan Cooling
 EMC EN50081-1, EN50082-1
 Security EN60335-1

Housing

Construction White aluminium powder coated treatment -
 blue plastic flanges
 Protection IP22
 Mounting Wall mounted M4 screws
 Dimensions (mm) H xWxD 440x390x190
 Weight (kg) 10

Additional functions

Parallelling Up to three inverters
 Connection SubD9 cable & output cables in parallel
 Connection between inverters by SubD cables
 Master / slave parameters

Octopus - Optional - Remote Control Panel

Code 299073

Connection Supplied with 5 m flat cable connections
 10m / 15 m cables available on request
 Fixation 4 x M4 screws
 Dimensions 120 x 65 mm (15 mm thick).

AllInOne

Part of the **Dolphin** family charger

Electrical cabinet

This new concept combines AC circuit protection with a battery charger.

The AC circuit protection includes a residual current device (RCD**) and 2 miniature circuit breakers (MCB).

The battery charger is an IUoU charging curve switch mode type with 2 or 3 outputs for engine and service batteries.

 **GFCI - Ground fault circuit interrupter

• In today's high tech world, more and more people need a compact and efficient source of electrical power on small craft. **REYA has developed an innovative "All-in-One" unit which combines an AC distribution system with a 12V switch mode battery charger**, all in the same compact box.

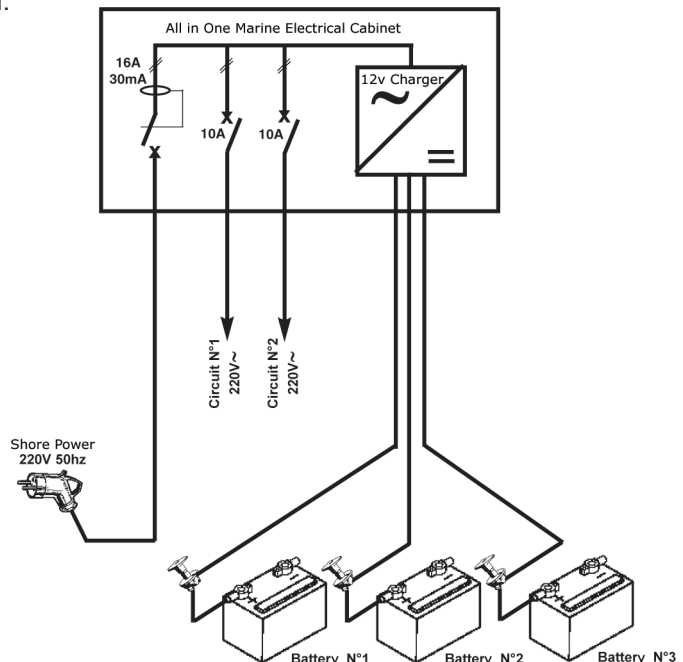
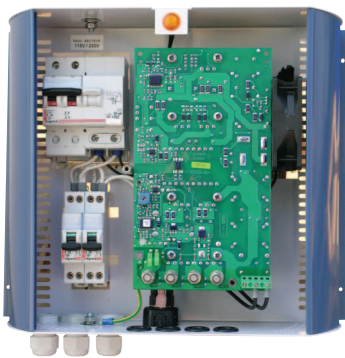
• **AC circuit protection is by means of a 30 mA, 16 amp R.C.C.B. unit.** Two AC loads can be connected, each with its own 10 amp double pole circuit breaker.

• **The battery charging function is identical to that of the standard Dolphin Battery Charger.**

• The "All-in-One" units are available in **4 different models**, 10amp, 15amp and 20amp. All have 2 or 3 outlets to provide charging for 2 or 3 separate banks if required.



Model:	10 amp	15 amp	20 amp
Voltage:	12 V	12 V	12 V
Charger outputs:	2	3	3
Charge:	10A	15A	20A
Charging characteristics:	IUoU	IUoU	IUoU



Norm

ISO 13297 (electrical systems-Alternating current installations)

3.7.5 Main supply circuits

A manually reset trip free double-pole circuit breaker shall be installed in conductors to the main power supply circuits.


3.8 Earth leakage protection / Ground fault protection

3.8.2 The main supply circuit shall be equipped with a double-pole RCD breaker having a maximum nominal trip sensitivity of 30 mA (this value is for quick tripping and protection against personal shock) and 100 milliseconds maximum trip time.

• The unit conforms to the latest ISO 13297 regulations.

Model	Reference	Code	Weight & Dimensions
12V 10amps	ALLINONE1210	299810	2.1kg & 265x280x110mm
12V 15amps	ALLINONE1215	299815	2.1kg & 265x280x110mm
12V 20amps	ALLINONE1220	299820	2.1kg & 265x280x110mm

Sail away with peace of mind

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