



- SWITCHING BATTERY CHARGERS NE287 Provided by MORDELETTRONICAL
- DC-DC POWER CONVERTER NE325



- SWITCHING BATTERY CHARGERS SERIE BC122
- SWITCHING BATTERY CHARGERS CB522-LT
- PT750 / NE363 PANEL TEST
- CAR BATTERY AUTOMATIC RECHARGING DEVICE CSB3-LT
- PRS350 SOLAR CHARGE REGULATORS
- PRM350 MPPT SOLAR CHARGE REGULATOR
- PRM400 MPPT SOLAR CHARGE REGULATOR
- AUTOMATIC SWITCH FOR SERVICE BATTERIES BDS200



**ALKO VEHICLE TECHNOLOGY ELECTRONICS** 





#### **SWITCHING BATTERY CHARGERS NE287**

The NE287 is a battery charger for lead, gel, AGM and lithium batteries. The batteries must have a nominal voltage of 12V and capacity suitable for the battery cherger current (check compatibility of the maximum charging current with the technical data sheet for the battery to be connected). The NE287 also work as a power supply unit.

MODEL	NE287-17A	NE287-21A
TECHNICAL DATA		
NOMINAL INPUT VOLTAGE	230Vac± 10%	230Vac± 10%
FREQUENCY	50Hz÷60 Hz	50Hz÷60Hz
MAX POWER	250W	300W
PROTECTION FUSE	4A	4A
OUTPUT TECHNICAL DATA		
MAX CURRENT	17A continuous	21A continuous
SHORT-CIRCUIT PROTECTION	YES	YES
OVER-LOAD PROTECTION	YES	YES
OVER VOLTAGE PROTECTION	YES	YES
OVER TEMPERATURE PROTECTION	YES	YES
OVER TEMPERATURE BATTERY PROTECTION	YES (with NTC sensor)	YES (with NTC sensor)
THERMAL PROTECTION	YES	YES
BATTERY TYPE SELECTOR	Dip-switch 4 position	Dip-switch 4 position
CHARGING LINE	IUoU - AGM / IUoU - GEL / IUoU	IUoU - AGM / IUoU - GEL / IUoU
	-Pb / IUoU -LiFePO4	-Pb / IUoU -LiFePO4
SIGNAL AC POWER SUPPLY (S)	12V (MAX 5mA)	12V (MAX 5mA)
GENERAL TECHNICAL DATA		
EFFICIENCY	86 %	86%
ROOM TEMPERATURE	0 ÷ 50° C	0 ÷ 50° C
VENTILATION	NO	YES
PROTECTION DEGREE	IP 20	IP 20
MAINS CONNECTION	3 poles IEC EN60320 C14	3 poles IEC EN60320 C14
BATTERY CONNECTION	"M5" screw	"M5" screw
DIMENSIONS (mm)	167x170x73mm	167x170x73mm
WEIGHT	1,5 kg	1,5 Kg
COLOUR	Black	Black

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#### **DC-DC POWER CONVERTER NE325**

The DC/DC converter NE325 is suitable for recharging the service battery with the alternator.

The alternators of Euro 6 engines often provide a charge voltage that is too low and therefore a DC/ DC converter is required to charge the service battery with the vehicle is running.

MODEL	NE325-25A	NE325-40A
TECHNICAL DATA		
NOMINAL INPUT VOLTAGE	11Vdc - 15Vdc	11Vdc - 15Vdc
MAXIMUM CURRENT INPUT	37A @11V	48A @11V
PROTECTION FUSE	30A on the negative pole	30A on the negative pole
OUTPUT TECHNICAL DATA		
MAX CURRENT	25A continuous	40A continuous
SHORT-CIRCUIT PROTECTION	YES	YES
OVER-LOAD PROTECTION	YES	YES
OVER VOLTAGE PROTECTION	YES	YES
OVER TEMPERATURE PROTECTION	YES	YES
OVER TEMPERATURE BATTERY PROTECTION	YES (optional with NTC sensor)	YES (optional with NTC sensor)
BATTERY TYPE SELECTOR	Dip-switch 4 position	Dip-switch 4 position
CHARGING LINE	IUoU - AGM / IUoU - GEL / IUoU -Pb / IUoU -LiFePO4	IUoU - AGM / IUoU - GEL / IUoU -Pb / IUoU -LiFePO4
INPUT D+ SIGNAL	12V	12V
GENERAL TECHNICAL DATA		
EFFICIENCY	90 %	90 %
ROOM TEMPERATURE	0 ÷ 50° C	0 ÷ 50° C
VENTILATION	NO	YES
PROTECTION DEGREE	IP 20	IP 20
MAINS CONNECTION	"M5" screw	"M5" screw
BATTERY CONNECTION	"M5" screw	"M5" screw
DIMENSIONS (mm)	167x170x73mm	167x170x73mm
WEIGHT	1,3 kg	1,3 Kg
COLOUR	Black	Black





# **SWITCHING BATTERY CHARGERS SERIE BC122**

The BC122 switching is a highefficiency battery charger (without cooling fan) for lead, gel, lithium and AGM batteries. The batteries must have a rated voltage of 12V and a capacity suitable for the battery charger current (check the compatibility of the maximum charging current with the technical data sheet of the battery to be connected for use). The BC122 also works as a power supply unit.

MODEL	BC122
TECHNICAL DATA	
RATED VOLTAGE	230Vac± 10%
FREQUENCY	50Hz÷60 Hz
MAXIMUM POWER	320W
PROTECTION FUSE	4A
OUTPUT TECHNICAL DATA	
MAXIMUM CURRENT	22A continuous
SHORT-CIRCUIT PROTECTION	YES
OVERLOAD PROTECTION	YES
OUTPUT OVERVOLTAGE PROTECTION	YES
OVERTEMPERATURE PROTECTION	YES
BATTERY OVERTEMPERATURE PROTECTION	Yes (with NTC sensor)
THERMAL PROTECTION	YES
BATTERY TYPE SELECTOR	Dip-switch
CHARGING LINE	IUoU - AGM / GEL / Pb / LiFePO4
NUMBER OF CHARGING LINES	8
NETWORK PRESENCE SIGNAL (S)	12V (MAX 150mA)
GENERAL TECHNICAL DATA	
EFFICIENCY	93 %
AMBIENT TEMPERATURE	- 20 ÷ 40° C
INTERNAL FAN	Absent
PROTECTION RATING	IP 20
MAINS CONNECTION	3 poles IEC EN60320 C14
BATTERY CONNECTION	"M6" screw
DIMENSIONS (mm)	146x183x65mm
WEIGHT	<0,8kg

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### **SWITCHING BATTERY CHARGERS CB522-LT**

The CB522-LT switch-mode battery charger has been designed for the charge of 12V lithium batteries only. It is protected against overtemperature and the 12V outputs are protected against short circuit and polarity inversion.

MODEL	CB522-LT
TECHNICAL DATA	
NOMINAL INPUT VOLTAGE	230Vac± 10%
FREQUENCY	50Hz÷60 Hz
MAX POWER	320W
PROTECTION FUSE	3,15A (glass 5 x 20)
ON/OFF SAFETY SWITCH	230V
OUTPUT TECHNICAL DATA	
BULK VOLTAGE (V)	14,5V
FLOAT VOLTAGE (V)	13,5V
MAX CURRENT	22A continuous
CHARGING LINE	IUoU
BATTERY TYPE SELECTOR	NO
SHORT-CIRCUIT AND POLARITY INVERSION PROTECTION	30A (blade)
THERMAL PROTECTION	YES
BATTERY OVERTEMPERATURE PROTECTION	Yes (with NTC sensor)
SIGNAL AC POWER SUPPLY (S)	12V; 50 mA
GENERAL TECHNICAL DATA	
EFFICIENCY	86 %
ROOM TEMPERATURE	0 ÷ 40°
VENTILATION	Forced, variable automatic regulation
PROTECTION DEGREE	IP 30
MAINS CONNECTION	Schuko socke
BATTERY CONNECTION	"M6" screw
CASE	Nylon + fiber glass self-extinguishing
DIMENSIONS (mm)	180 x 190 x 85H
WEIGHT	1,2kg
COLOUR	Graphite black

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**DIGITAL TOUCH TEST PANEL** 

With OLED display showing the charge status (%) of lithium and conventional batteries. Displays State of Charge (SoC), battery voltage and current -150A + 150A. With minimum brightness adjustment. Complete with shunt and cable L =5m. Built-in or wall-mounted version with supplied spacer; complete with Berker "BMAC1C" frame including the possibility for combination with "Modular Plates" and "Modular Plates Berker" series.









**CAR BATTERY AUTOMATIC RECHARGING DEVICE** 

For photovoltaic modules and for battery chargers, through the service battery. This device is suitable for operation with lithium service batteries and is installed close to the batteries, thus avoiding connecting the car battery to the solar charge regulator.

It charges the car battery with a current from 0.1A to max 4A, depending on the battery status and giving priority to the service battery. When the green LED is on, it means that the CSB3-LT is ready to recharge the car battery if necessary. Dimensions: 80 x 50 x 50mm









**PRS350** 





# **LITHIUM LINE**

#### **PRS350 SOLAR CHARGE REGULATOR**

The solar charge regulator PRS350 is compatible with 12V photovoltaic modules. Designed and developed with cutting-edge electronics, they offer high electrical performance and very low heat dissipation.

MODEL	PRS350
RATED VOLTAGE	12V
MAXIMUM VOLTAGE OF THE PHOTOVOLTAIC MODULE IN OPEN CIRCUIT (Voc)	28V
MAX POWER PHOTOVOLTAIC MODULES	350W
MAXIMUM OUTPUT CURRENT	20A
NUMBER OF PHOTOVOLTAIC MODULES CONNECTIONS	2
END-OF-CHARGE VOLTAGE	14,1V (A) - 14,3V (B) - 14,7V (C) - 14,5V (Li)
FLOAT VOLTAGE	13,5V (A) - 13,8V (B) - 13,6V (C) - 13,5V (Li)
BATTERY TYPE SELECTOR	Dip-Switch 4 position
NUMBER OF CHARGE LINES	8
BATTERY DESULPHATION	YES (except the lithium charge line)
REVERSE CURRENT BLOCKING PROTECTION	Electronic
REVERSE POLARITY PROTECTION	YES
TEST PANEL CONNECTION	PT 742
SELF-CONSUMPTION	OA (In the absence of sunlight, the regulator switches off completely)
AUTOMATIC SHUTDOWN	In the absence of sunlight
DIMENSIONS (mm)	115 x 90 H37

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#### **NEW PRM350 MPPT SOLAR CHARGE REGULATOR** FOR PHOTOVOLTAIC MODULE

The PRM350 solar charge regulator can charge lead (liquid, gel and AGM) and lithium 12V batteries automatically controlling and limiting the energy supplied by the connected photovoltaic modules.

It features a MPPT (Maximum Power Point Tracker) system that allows picking in every situation of the maximum power supplied by the photovoltaic module.

MODEL         PRM350           BATTERY RATED VOLTAGE         12V           MAXIMUM VOLTAGE OF THE PHOTOVOLTAIC MODULE IN OPEN CIRCUIT (Voc)         50V           MAX POWER PHOTOVOLTAIC MODULES         300W (32÷40 cells) – 350W (41÷72 cells)           MAXIMUM OUTPUT CURRENT         25A           NUMBER OF PHOTOVOLTAIC MODULES CONNECTIONS         2           PERFORMANCE         >95%           BATTERY TYPE SELECTOR         3 position dip-switch           END-0F-CHARGE VOLTAGE         14,1V (A) - 14,4V (B) - 14,7V (C) - 14,6V (L)           FLOAT VOLTAGE         13,5V (A) - 13,8V (B) - 13,8V (C) - 13,8V (L)           NUMBER OF CHARGE LINES         4
MAXIMUM VOLTAGE OF THE PHOTOVOLTAIC MODULES  MAX POWER PHOTOVOLTAIC MODULES  MAXIMUM OUTPUT CURRENT  NUMBER OF PHOTOVOLTAIC MODULES  CONNECTIONS  PERFORMANCE  BATTERY TYPE SELECTOR  END-OF-CHARGE VOLTAGE  13,5V (A) - 13,8V (B) - 13,8V (C) - 13,8V (Li)
TAIC MODULE IN OPEN CIRCUIT (Voc)  MAX POWER PHOTOVOLTAIC MODULES  MAXIMUM OUTPUT CURRENT  NUMBER OF PHOTOVOLTAIC MODULES CONNECTIONS  PERFORMANCE  BATTERY TYPE SELECTOR END-OF-CHARGE VOLTAGE  14,1V (A) - 14,4V (B) - 14,7V (C) - 14,6V (Li)  FLOAT VOLTAGE  300W (32÷40 cells) - 350W (41÷72 cells)  25A  25A  3 position dip-switch  14,1V (A) - 14,4V (B) - 14,7V (C) - 14,6V (Li)  FLOAT VOLTAGE  13,5V (A) - 13,8V (B) - 13,8V (C) - 13,8V (Li)
MAXIMUM OUTPUT CURRENT         25A           NUMBER OF PHOTOVOLTAIC MODULES CONNECTIONS         2           PERFORMANCE         >95%           BATTERY TYPE SELECTOR         3 position dip-switch           END-OF-CHARGE VOLTAGE         14,1V (A) - 14,4V (B) - 14,7V (C) - 14,6V (Li)           FLOAT VOLTAGE         13,5V (A) - 13,8V (B) - 13,8V (C) - 13,8V (Li)
NUMBER OF PHOTOVOLTAIC MODULES CONNECTIONS         2           PERFORMANCE         >95%           BATTERY TYPE SELECTOR         3 position dip-switch           END-OF-CHARGE VOLTAGE         14,1V (A) - 14,4V (B) - 14,7V (C) - 14,6V (Li)           FLOAT VOLTAGE         13,5V (A) - 13,8V (B) - 13,8V (C) - 13,8V (Li)
CONNECTIONS           PERFORMANCE         >95%           BATTERY TYPE SELECTOR         3 position dip-switch           END-OF-CHARGE VOLTAGE         14,1V (A) - 14,4V (B) - 14,7V (C) - 14,6V (Li)           FLOAT VOLTAGE         13,5V (A) - 13,8V (B) - 13,8V (C) - 13,8V (Li)
BATTERY TYPE SELECTOR 3 position dip-switch END-OF-CHARGE VOLTAGE 14,1V (A) - 14,4V (B) - 14,7V (C) - 14,6V (Li) FLOAT VOLTAGE 13,5V (A) - 13,8V (B) - 13,8V (C) - 13,8V (Li)
END-OF-CHARGE VOLTAGE 14,1V (A) - 14,4V (B) - 14,7V (C) - 14,6V (Li) FLOAT VOLTAGE 13,5V (A) - 13,8V (B) - 13,8V (C) - 13,8V (Li)
FLOAT VOLTAGE 13,5V (A) - 13,8V (B) - 13,8V (C) - 13,8V (Li)
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NUMBER OF CHARGE LINES 4
BATTERY DESULPHATION Electronic
REVERSE CURRENT BLOCKING YES PROTECTION
REVERSE POLARITY PROTECTION YES
TEST PANEL CONNECTION PT 742
SELF-CONSUMPTION OA (In the absence of sunlight, the regulator switches off completely)
AUTOMATIC SHUTDOWN In the absence of sunlight
DIMENSIONS (mm) 150 x 110 H48

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#### **LITHIUM LINE**

#### **NEW PRM400 MPPT SOLAR CHARGE REGULATOR** FOR PHOTOVOLTAIC MODULES

The PRM400 solar charge regulator can charge lead (liquid, gel and AGM) and lithium 12V batteries automatically, controlling and limiting the energy supplied by the connected photovoltaic modules. It features an MPPT (Maximum Power Point Tracker) system that allows for the maximum power supplied by the photovoltaic module to be drawn in every situation.

MODEL	PRM400
BATTERY RATED VOLTAGE	12V
MAXIMUM VOLTAGE OF THE PHOTOVOL- TAIC MODULE IN OPEN CIRCUIT (Voc)	50V
MAX POWER PHOTOVOLTAIC MODULES	350W (32÷40 cells) – 400W (41÷72 cells)
MAXIMUM OUTPUT CURRENT	28A
NUMBER OF PHOTOVOLTAIC MODULES CONNECTIONS	2
PERFORMANCE	>95%
BATTERY SELECTOR	4 position dip-switch
NUMBER OF CHARGE LINES	8
BATTERY DESULPHATION	Electronic
REVERSE CURRENT BLOCKING PROTECTION	YES
REVERSE POLARITY PROTECTION	YES
TEST PANEL CONNECTION	PT 742
SELF-CONSUMPTION	OA (In the absence of sunlight, the regulator switches off completely)
AUTOMATIC SHUTDOWN	In the absence of sunlight
DIMENSIONS (mm)	150 x 110 H48

**NEW** 

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#### **AUTOMATIC SWITCH** FOR SERVICE BATTERIES

The DUO-SYSTEM BATTERY is an electronic device with integrated microprocessor able to intelligently manage two lead, gel, AGM and lithium 12 V service batteries, both during charging (with alternator, battery charger and photovoltaic modules) and during discharging.

#### **APP - ONDA SMART SYSTEM**

The "ONDA SMART SYSTEM" App for mobile devices has been specially developed to manage and extend the functions of BDS200. The connection between the BDS200 and the mobile devices is via BluAetooth and it has an operating range limited to the area surrounding the vehicle.







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- PRS350 SOLAR CHARGE REGULATORS
- PRM350 MPPT SOLAR CHARGE REGULATOR
- PRM400 MPPT SOLAR CHARGE REGULATOR
- AUTOMATIC SWITCH FOR SERVICE BATTERIES BDS200



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