TRICKLE CHARGER WITH SOLAR CHARGER

The charger is equipped with an universal PFC AC input for worldwide operation and a second input for solar modules.

It charges 2 batteries simultaneously (1x 12V and 1x 24V).

Charge process starts immediately when switched on.

The device has an I / U charging curve.

With the solar modules connected charge process automatically starts.

If the solar module delivers no power for more than 48 hours, the solar charge controller will enter hibernation mode (all LEDs are deactivated).
When solar module power is available again, charge controller resumes charging within 30 minutes.

Three multicolour LEDs indicating the operating status, state of charge and system failures.

Because of the light weight the charger can be installed or be used as a portable device.

APPLICATIONS

– Charging two (12V and 24V) batteries of military vehicles with grid electricity, solar energy or both at the same time

FEATURES

– 95-264VAC universal PFC input
– Solar modules input <60VDC max. 20A
– Two charging outputs
  12VDC / 2A and 24VDC / 2A
– Charging two batteries simultaneously
– Easy monitoring state of charge
– Dynamic charge control according on charge status of the batteries (priority to 12V main battery)
– Automatic recover after shutdown
– Suitable for systems with common ground
– Overcharging protection
– Power saving mode
– Reverse polarity protection of solar module input
– Output Short circuit protection
– IP 54 protected
– Light weight

Dual Charger | Convection cooled | Extended temperature range | Multiple electronic protection | Waterproof IP 54 | Light weight, compact size

SPECIFICATIONS

Electrical data mains charger	
Input voltage mains	PFC 95 - 264 VAC / 47 - 63 Hz
Input current max.	1.6 Arms
Input protection	Inrush current limiting Varistor Internal safety fuse Lower voltage than the specified minimum input will not damage the unit
Input isolation	2250Vdc input to chassis 4300Vdc input to output 8mm spacing 500Vdc output to chassis
Standards	Designed to meet UL and CSA standards, EN 60950-1, EN 62368-1 and CE
EMI	EN55032 Class A with margins
Switching Frequency	47kHz ± 2kHz
Output voltage / current	13.6Vdc ±0.1V/2A, adjustable 13-14Vdc 27Vdc ±0.2V/2A, adjustable 26-28Vdc
Output separation diode	Installed internally on each output
Line/Load Regulation	± 1.5% combined from 10% load to full load including output diodes
Output Ripple/Noise	Better than 30mVrms and 150mVpp on the 12V output, and 60mVrms and 300mV for the 24V output (20MHz BW)
Output Overload Protection	By built in current limiting resistors
Output Overvoltage Protection	Tranzsorb on the outputs

Environmental	
Operating Temperature Range	-20° C to 50° C
Humidity	5 - 95% non-condensing
Cooling	Convection cooling (no fan)
MTBF	130.000 @ 45° C
Environmental Protection	Ruggedizing, conformal coating

Electrical data solar charger		
System voltage	12 V (24 V)	
Own consumption	22 mA	
DC Input (Solar module) Open circuit voltage solar module (at minimum operating temperature)	< 60 V	
Maximum short-circuit current	20 A	
Reverse polarity protection	<= 36 V	
Battery charging	12 V System	24 V System
Permissible battery voltage range	9-17 V	17.1-34 V
Deep discharge pre-warning	12.0 V	24.0 V
Deep discharge protection	11.7 V	23.4 V
Switch-on voltage	12.5 V	25.0 V
Cut-off voltage for float charge (Float)	14.1 V	28.2 V
Cut-off voltage/activation for maintenance charge (Boost)	14.4 V / ≤ 12.7 V	28.8 V / ≤ 25.4 V
Cut-off voltage/activation for equalise charge (Equal) (only with the liquid battery type setting)	15.0 V / ≤ 12.2 V	30.0 V / ≤ 24.4 V
Maximum output current (depend on solar module)	2 A	

General	
Indicators	2 green LEDs for mains charger outputs OK 3 multicolour LEDs indicate the operating status, of solar charger
W x D x H Weight	375 x 200 x 700mm 2.3 kg
Protection	IP 54
AC input DC input DC output	IEC connector Hirschmann CA 3 GS VG95234B1-18-1PN [1] green cadmium coated not RoHS conform, RoHS conform on request
Safety	CE marked
RoHS Compliance	Compliant (depending on connectors, see [1])
Warranty	1 Year

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The Power Conversion Company