Brief Specifications & Salient features of Microprocessor controlled Solar Charge regulator 120 V 30 Amp Charge CONTROLLER with LCD metering

Parameter	Details	Remarks
Input #1-per Module data 12 V nom	PV Panel C-Si Voc 21.5V I sc: ~ 4.5A, higher rating on request	Crystalline Silicon solar panel
Input # 2	Battery lead acid flooded electrolyte/VRLA as per user requirement	Adaptability As per final selection of user.
Max Input Voltage per Module data 12 V nom	22.5 V DC	By PV array
Type	Microcontroller based Series interrupting	Vd< 2.5 @ Ich~ 35A
Reverse current blocking	Mosfet, ON in day, blocked at Night.	Included in above
Self consumption	< 120mA	
PWM Charge circuit topology in brief	i) 3-stage/2-stage charge. ii) Auto periodic equalize ~ 30days/manual mode. iii) Load control dusk/dawn Enable/Disable selection. iv) Total Ah, remaining Ah settable. v) Bat lo disconnect,	Selection of mode & settings of values by pass word. From front panel key pads.
Indications & metering	i) charge ON (Vpv > Vbat, & I ch> 300~900mA) ii) charge disconnect & reconnect @ set value iii) Battery low./ Batt. disconnect Optional indicators i) Bat lo prealarm ii) Battery reverse polarity iii) Extarnal relay driven by bat lo pre-alarm Metering: 2 x16 character Alpha numeric display-scroll type	i)Positive charge indicator ii) as recommended by Manufacturer i) user warning ii) user action iii) user action Metering: display: Vpv, Ipv, Vbat, Icharge,Vsrc2,Isrc2, Ah remaining, I load,
User Interface. Front kep pad : 4 keys: Increase,Decrease, Display, set/enter. 2 x 16 LCD with display covered by protective transparent sheet.	Pass word protected, Two modes: Service OR Manual In manual mode user can view set points. In service mode user may change set points as desired, against using only authorized pass word.	Settings Service mode: No. of cells, Bat type:SMF/TUB.; Charge:3-stage/2-stage; Set points of Ch Disconn,Re conn.: Dusk-Dawn: Enable/disable, Timer for Load enable/disable: Bat lo Trip AH/V; set points: Total Ah, Ah remain, Cum Ah, Current range PV, V range PV, C,V range src2, C range load.
Protections	i) Over charge regulation ii) Temperature compensation for overcharge regulation @ approx. -2.5 mV/deg C T amb > 27 deg C iii) MOV at PV I/P	i) Limits overcharge ii) Longer life iii) Surge protection

Salient features and benefits

Equalize charging set in service on first connection	Good for battery charging of dry charged lead acid cells for remote sites, where battery may be connected first time to PV system,
Periodic equalize charge feature	Enhances SOC of battery.
Pre-Programmed user defined factory Settable set points for battery charge & load management without use of any Field potentiometer	High reliability. Dusk-dawn control, built in timer for load control after Dusk ON as a load control feature.

GENERAL:

The control unit is scalable by suitable voltage dividers and aux supplies, and shunts of suitable rating.

Power circuits are Typically Mosfet-Mosfet based switching devices, suitable MCB for Array, Fuse in battery path, Terminals as per current rating.

Options: RS 232 interface for remote monitoring VIA MODEM OR HyperTerminal to a local PC-windows XP with RS 232 serial port.

Enclosure: IP 30, suitable for indoor installation.
Cable entry: Bottom
Color Siemens Grey-powder coated finish.

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Since then::

- Real time clock added:
- Memory store for last 25 days daily generation values.
- Hyper terminal connectivity with windows XP Prof. via RS 232

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VISTAR ELECTRONICS PVT.LTD.