



CSR

CHARGE REGULATOR

The performances of a photovoltaic system are considerably influenced by a good matching between the charge regulator and the solar panel.

The charge regulator is an instrument that carries out two main functions:

-the first consists in protecting the batteries from overcharging (opening the circuit between the photovoltaic generator and battery when these have reached a certain voltage) thus preventing the electrolyte from boiling.

In fact for the lead batteries, the charge must not exceed 2.4-2.5 volts/element that equals 14.4V-15V., to avoid the forming of gas.

-the second consists in protecting the battery from overdischarging (excluding the charge if the battery reaches the consented level) thus avoiding irreversible damage.

The charge regulator optimizes the charge and discharge of the batteries, letting them work within a suitable tension gap.

When the battery starts to operate (charge or discharge), the voltage varies rapidly; to avoid problems arising from this variation, some phases of the regulator have a calculated delayed action thus obtaining maximum yield with minimum fatigue from the battery.

The CSR charge regulator takes care of all these functions and checks continually the batteries signaling by means of lighted LED the charging and the corresponding working period.

The CSR charge regulator is housed in a IP55 polycarbonate box that assures its correct functioning in the most hostile environment.



TECHNICAL DATA	CSR 1	CSR 2	CSR 3
Nominal voltage (V)	12		
Max. charge current (A)	7	13	18
Max. discharge current (A)	7		
Delay at end of charge (min)	10		
Delay of reinsertion of load (min)	100		
Current at end of charge (green LED on) (V)	13.3*		
	13.7**		
Current at reinsertion solar panels (yellow LED on) (V)	12.8		
Current at end of discharge (red LED on) (V)***	11*		
	11.7**		
Temperature compensation (mV/°C)	33		
Working temperature range (°C)	-20 + 50		
Weight (g)	900		
Dimensions (mm)	140 x 140 x 85		

* for lead batteries (Delphi)

** for sealed batteries (Dryfit)

*** the red LED is lighted by pressing the push button



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