

Power unit

SERIE SPC • SOLAR POWER CONTROL UNITS



The SPC series are ideal for medium and large sized solar photovoltaic systems in remote aids-to-navigation stations.

The SPC control unit provides full protection to the battery and loads against overcharging and over discharging. It also provides a complete interface between the solar array, the battery and the loads (lamp, beacon, motor...).

The control unit includes the DINTAH05 dual AH meter & datalogger to obtain complete information about the operational status of the solar power system by means of its LCD display.

Features

- Shunt-type solar charge regulator with Mosfet transistors.
- Completely automatic operation.
- Three level charge regulation: bulk, absorption and float.
- Temperature compensation.
- Overcharging and over discharging battery protection.
- Blocking device to prevent discharge of the battery through solar modules.
- Multicolour LED Visual indicator.
- Over voltage transitory protection by high-power voltage suppressors in the input and output circuits.
- Protection against polarity inversion, current overload and short-circuit.
- DINTAH05 dual AH meter & electronic datalogger ready to be remote monitored through its programming serial port RS232.
- Watertightness degree: IP-65.
- Electromagnetic Compatibility CE

Technical specifications

SERIE SPC	SPC2020	SPC5020	SPC8020
Max. PV current at 50 °C (A)	20 A	50 A	40+40 A
Max. Load current at 50 °C (A)	20 A	20 A	20 A
Weight	9 kg	16 kg	20 kg
Dimensions (mm)	540 x 440 x 200	747 x 536 x 300	747 x 536 x 300
Waterhightress degree	IP-65		
System voltage	Models of 12 V ó 24 V		
Temperature range	-25 + 50 °C		
Temperature compensation	-4 mV / K / Cell	-5 mV / K / V Cell	
Final charge voltage (Float)	13.7 V / 27.4 V		
Cycle charge activation	SOC < 40% 11.7 V / 23.4 V	12.4 V / 24.8 V Adjustable	12.4 V / 24.8 V Adjustable
Absorption voltage in 1h.	14.4 V / 28.8 V	14.0 V / 28.0 V	14.0 V / 28.0 V
Equalization activation	One hour every 30 days		
Load disconnect level	SOC < 30% (11.1 V)		
Load reconnect level	SOC < 50% (12.5 V)		
Battery low-voltage alarm	10.5 V / 21.0 V		
Battery over-voltage alarm	15.0 V / 30.0 V		
Temperature sensor	Yes		
Protections	Over voltage, inverse polarity, short-circuit		
Electronic protections	Over voltage, low voltage, PV and current overload, short-circuit, over temperature		
Over temperature (load disconnection)	Disconnection at 85 °C approx. Reconnection at 70 °C approx.		
Current overload disconnection	22 A		
Voltage drop	Automatically calculated & compensated. Battery sensor cable not needed.		



SPC5020



SPC2020

DINTAH03



The DINTAH05 is a complete dual AH meter & datalogger ideal for solar power control units & UPS systems, it provides information about the following field & historical data:

- Charge current (A).
- Discharge current (A).
- Battery voltage (V).
- Accumulated charge (AH) stored in memory up to 90 days.
- Accumulated discharge (AH) stored in memory up to 90 days.
- State of charge of the battery in % (V).