

# Let's start - SOLARC!

First class solar technology!

## SOLARC

Your industrial partner for the development and production of high efficiency solar systems and charge regulators.

Start the future of independent mobile energy with us!



# SOLARC

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## Universal Control Unit for Solar Lamps SLS-1

The SLS-1 is a universally designed control unit for integration in self-sufficient, e.g. solar operated, lamps. It includes the following functional blocks, that can be operated separately or in any combination:

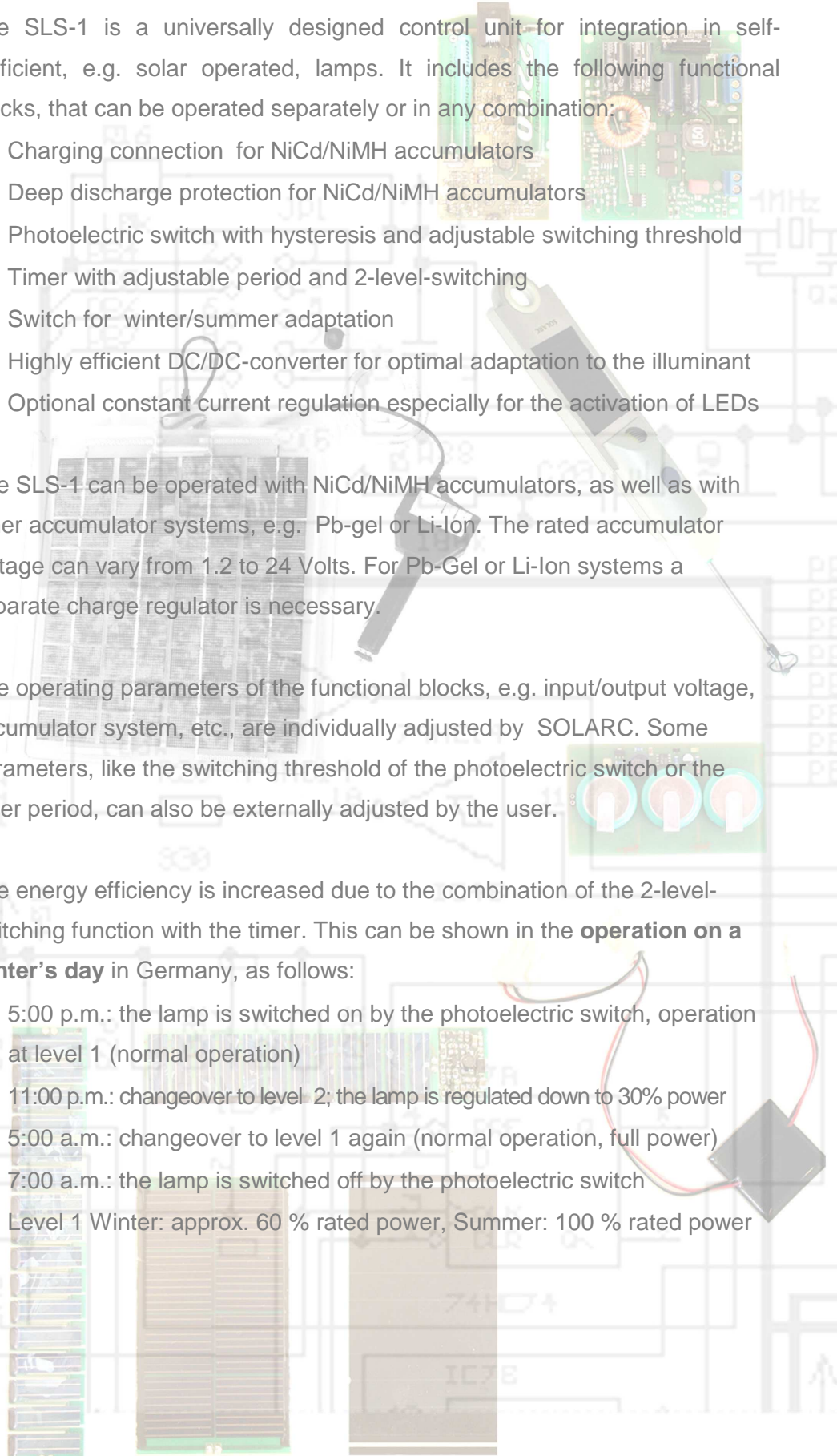
- Charging connection for NiCd/NiMH accumulators
- Deep discharge protection for NiCd/NiMH accumulators
- Photoelectric switch with hysteresis and adjustable switching threshold
- Timer with adjustable period and 2-level-switching
- Switch for winter/summer adaptation
- Highly efficient DC/DC-converter for optimal adaptation to the illuminant
- Optional constant current regulation especially for the activation of LEDs

The SLS-1 can be operated with NiCd/NiMH accumulators, as well as with other accumulator systems, e.g. Pb-gel or Li-Ion. The rated accumulator voltage can vary from 1.2 to 24 Volts. For Pb-Gel or Li-Ion systems a separate charge regulator is necessary.

The operating parameters of the functional blocks, e.g. input/output voltage, accumulator system, etc., are individually adjusted by SOLARC. Some parameters, like the switching threshold of the photoelectric switch or the timer period, can also be externally adjusted by the user.

The energy efficiency is increased due to the combination of the 2-level-switching function with the timer. This can be shown in the **operation on a winter's day** in Germany, as follows:

- 5:00 p.m.: the lamp is switched on by the photoelectric switch, operation at level 1 (normal operation)
- 11:00 p.m.: changeover to level 2; the lamp is regulated down to 30% power
- 5:00 a.m.: changeover to level 1 again (normal operation, full power)
- 7:00 a.m.: the lamp is switched off by the photoelectric switch
- Level 1 Winter: approx. 60 % rated power, Summer: 100 % rated power



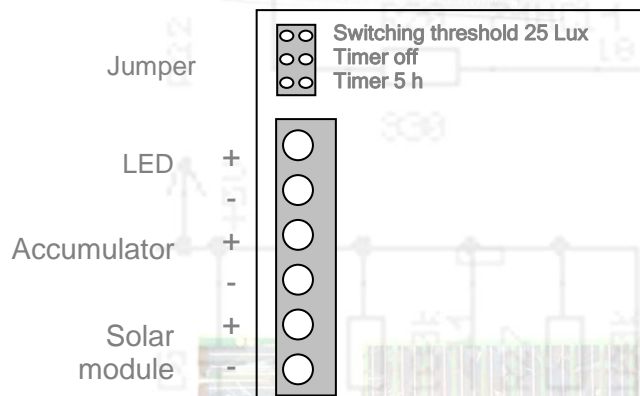
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Due to a number of variable parameters, the SLS-1 is momentarily only available as a customer-specific model. It can be delivered as a flat assembly group with an adherent surface on the underside and connectors in 5 mm grid or fully encapsulated in the module casing with customer-specific plug-in connectors. SOLARC offers a combination with the low-power charge regulator SCC20 for Pb-gel accumulators.

## Technical Data of the exemplary version SLS-1-NM2-8V

- Rated power solar module: 3.5 – 5.0V (at STC)
- Rated current solar module: 0.5 – 3.5A (at STC)
- Output voltage: 7.5V (2 white LEDs in series) at 70mA, 11V at 0mA
- Output current: 70mA at 7.5 V (level 1), 30 mA at 7.0V (level 2)
- Current consumption: 100µA (LED off), 1.5mA (LED on)
- Switching threshold On /Off: 4 Lux / 10 Lux (10 Lux / 25 Lux with Jumper)
- Timer operating-time level 1: 6 h (5 h with Jumper)
- Ambient temperature: - 30 ... + 50°C
- max. rel. Humidity: 95%
- Dimensions: 48 x 48 x 25mm (50 x 50 x 25mm in casing)
- Weight: 20g (40g in casing)

## Terminal assignment



Last updated 08/2011, subject to change without notice



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