

SBIM

Intelligent Charger

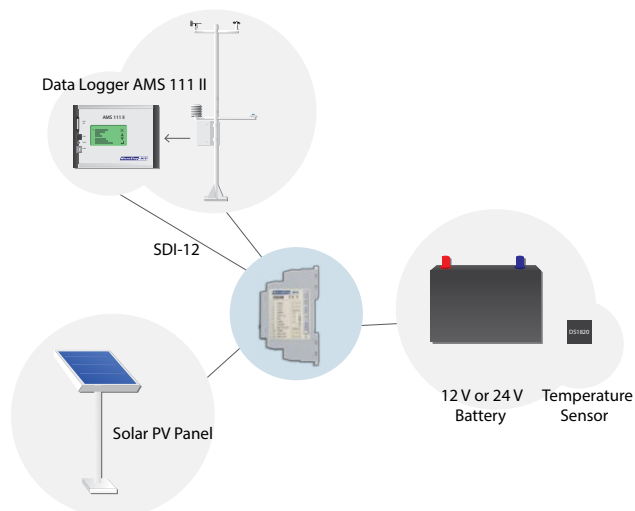
Developed and manufactured by MicroStep-MIS, SBIM is a low-cost intelligent solar charger and power supply provider combined into one compact unit.

SBIM charges the 12 V or 24 V lead-acid batteries and provides power supply to the connected devices. Solar charger SBIM is suitable for majority of powering systems where battery backup is needed or precise information about power supply is required.

Charging control is performed by using a powerful microcontroller. The intelligent charger supports connection of external temperature sensor DS18S20 for measuring battery temperature. SBIM features SDI-12 interface for parameters configuration and data access. Actual status is shown by four status LEDs and interface button brings additional features as turning of output, showing status and other.

Solar charger SBIM is made of durable hardware components housed in enclosure which complies with DIN 43880, thus guaranteeing problem-free operation in all common distribution boards.

Connection Diagram



Features

- Charging 12V or 24V lead-acid batteries with high rate current
- Power output with battery protection
- External temperature sensor for temperature compensation
- SDI-12 communication interface
- Operating currents, voltages and coulomb counting measurements
- Overload, overvoltage and reverse polarity resistant with notifications

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Electrical Specification

Number of lead-acid cells	6 (nom. 12 V) or 12 (nom. 24 V), automatic recognition
Charging current from PV panel	up to 16 A
Output current	up to 5 A
Solar panel input voltage range	15 to 50 V
Output voltage range	10.5 to 16 V (nom. 12 V battery) 21 to 28 V (nom. 24 V battery)
Load disconnection voltage	1.75 V/CELL
End charge voltage	2.3 to 2.45 V/CELL (adjustable) regulation error < 0.5 %
Temperature compensation	-3 mV/°C/CELL
Power consumption	0.7 mA (@12 V)
Communication interface	SDI-12

Environmental Specification

Heat dissipation	passive
Operating temperature range	-50 °C to +60 °C
Storage temperature range	-60 °C to +80 °C
Humidity (non-condensing)	0 to 100 % RH

Mechanical Specification

Housing classification	IP20
Housing material	polyamide
Type of connection	terminal block 16 A
Dimensions (h x w x d)	98 mm x 17.5 mm x 57 mm
Weight	52 g