

LCD Battery Computer S

How much residual charge does my board battery have? Is the battery state really "Full"? Why is energy taken from the battery, although the consumers had been switched-off? The VOTRONIC LCD Battery Computer S gives the answer to these questions - exactly to percentage (%) an ampere-hour (Ah). At the touch of a button, it informs comprehensively of the instantaneous charging state of the battery, the flowing battery current rates, as well as the voltage situation of the battery. Based on the proved VOTRONIC LCD Battery Computer, the LCD Battery Computer S had been developed. The various display functions and the high operating convenience had been extended by a neatly arranged LCD display with white background illumination, which offers excellent legibility, even from a distance and with unfavourable lighting conditions. Since the unit is permanently in contact with "its battery", it records and evaluates all battery actions. All charging and discharging currents are counted accurately. Battery size, self-discharge, battery load etc. are considered by programmed characteristic diagrams. Even the smallest leakage current is detected and recorded. The residual capacity of the battery is calculated from the measured values and the battery size. The result is a correct indication of the charging state (of the capacity, which is still available, the residual charge) of the board battery as numerical value in Ampere-hours ("Ah") and as percentage ("%"), as well as in form of a clear level bar, such as it is known from a fuel gauge. The LCD Battery Computer S is suitable for all battery types (acid, gel, AGM, lithium adjustable) with 12 V and 24 V battery voltage.

Of course, also the instantaneous battery voltage ("V") and the instantaneous battery current ("A") are displayed. Discharge current rates (consumers) are identified by a minus sign. Furthermore, the discharge current rates are marked with a well legible sign "Charge". Apart from that, there is a further display possibility for the voltage of a second battery, such as for control of the vehicle's starter battery.

The LCD Battery Computer S is equipped with a freely programmable terminal for control, supervision and warning purposes. It can, for example, be used for automatic switching of consumers, independently of the board battery's the charging state, or for warning signals. The on/off switching points can be adjusted freely and independently of each other as percentage (%) allowing any switching function. At the press of a button, manual control is possible at any time. Example for application: Automatic protection of the battery against harmful total discharge. The consumers are switched-off exactly according to charging state, for example, if the charging state is less than 25 %. An EMERGENCY-ON button allows continued supply of the consumers. Consequently, the unit can also be used as remote-controlled battery main switch (on/off) with protection against total discharge.

A plug-and-go cable connects display and robust precision measuring resistor (shunt), which is directly connected to the negative pole of the board battery, and which receives the voltage and current rates of the battery. The terminal for connection of signal transmitters or powerful switching relays is also located here. If the LCD Battery Computer S is used as total discharge protection and battery main switch, the application of the switching units VOTRONIC Switch Unit 40 or Switch Unit 100 is recommendable because of the efficiency and the extremely low current consumption.

Matching to the VOTRONIC modular system, appearance and mechanics (identical height 85 mm) of the unit are adapted to the other display modules, and the small mounting depth of only 18 mm allows an installation at almost any location.

Functions:

- **Battery voltage board battery**, 7 to 32 V (Volts), internal measuring scale 0.1 V.
Allows drawing conclusions from the battery behaviour in case of variations in load and serves as operational check, for instance, of the charger, the solar system, the dynamo etc.. Flashing warning signal in case of overvoltage.
- **Battery current** (+ = charge/- = discharge +/- to max. +/- 1800 A (Amperes, depending on type) internal measuring scale 0.1 A, control of the discharge current rates (load) by the consumers, indicated by the sign "-".
Control of the discharge current rates identified by a "Charge" sign.
- **Battery capacity "Ah"** (residual charge in Ampere-hours) from 0 Ah (empty) to nominal capacity (full), max. 2000 Ah.
- **Battery capacity "%" (percentage residual charge)** from 0 % (empty) to nominal capacity (full), 100 %.
- **Battery voltage starter battery**, 2nd battery, 7 to 32 V (Volts), internal measuring scale 0.1 V.
- **Terminal**, freely programmable and tactile (PNP, plus potential 12 V / 24 V, max. 0.5 A).

Note: The units are adapted to the measuring shunts being included in the delivery. They cannot be operated in connection with other measuring shunts or exchanged by each other!

Unit Type	Order No.	Battery Voltage	Measuring Shunt in the delivery scope	Current Consumption	Current Consumption Illumination	Nominal Capacity of Battery adjustable	Current Measuring Range	Current Measuring Range Shunt A	Weight
		V	A	mA	max. mA	Ah	A	Continuous/15/7 min.	g
LCD Battery Computer 100 S	1262	12 and 24	100	3	30	50-2000	+/- 450	100/150/200	220
LCD Battery Computer 200 S	1265	12 and 24	200	3	30	50-2000	+/- 900	200/300/400	240
LCD Battery Computer 400 S	1268	12 and 24	400	3	30	100-2000	+/- 1800	400/600/800	320

Display Dimensions: (WxHxD): 80x85x25 mm | **Assembly Dimensions:** (WxHxD): 65x70x22 mm

Shunt Dimensions: (WxHxD): 150x35x30 mm

Mark of Conformity: CE, E Test (EMV/Automotive Regulations)

Delivery Scope: Display unit, measuring shunt 100 A, 200 A or 400 A, connection cable of 5 m length, ground strap, fastening screws, manual, drilling jig

Recommendable Accessories: Casing S, order no. 2014; Extension connection cable of 5 m length, order no. 2005; Relay 12 V/70 A, order no. 2200 or High-capacity Cutoff Relay 12V/200A, order no. 2201; Switch Unit 40 or Switch Unit 100

**Fuel Gauge for the Battery,
AGM, Gel, Acid, Lithium**

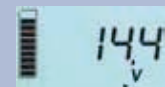
LCD Battery Computer S



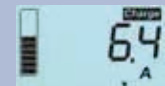
Display Examples



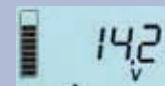
Available Capacity in %



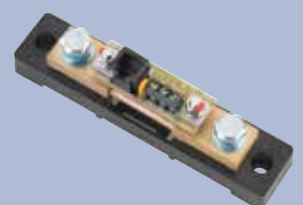
Voltage Board Battery



Battery Current during Charging



Voltage Starter Battery



incl. Precision Measuring Resistor
(Shunt) 100A, 200A oder 400A

