CTEK D250S
CTEK supplies innovative battery chargers for all purposes. The D250S continues the tradition of offering chargers with a focus on simplicity, safety and versatility. The CTEK D250S is a fully automatic battery charger for both solar cell and generator for 12V batteries. At the same time, it can separate starter and consumer batteries in a multi-battery system. Perfect for boats, caravans, ambulances and other work vehicles.

• Fully automatic battery charger – for both charging and maintenance
No special knowledge is required to utilize the power and possibilities of the CTEK D250S. The D250S works fully automatically year in and year out without supervision using a multi CTEK charging curve with temperature compensation to ensure the condition of the batteries.

• Automatic separation of starter and consumer battery
Using a battery bank for both starting and general consumption is asking for trouble. With the D250S, only three connections are needed to separate a starter battery from a consumer battery. The D250S senses automatically when the engine is running and charges the consumer battery only when the generator or the solar panel provides sufficient power.

• Flexibility for different applications
The D250S can be charged by solar cells or generator, or both (with certain extra equipment). The D250S can charge consumer batteries, additional batteries in a boat, auxiliary starting batteries in a rescue vehicle, or operate as a highly efficient solar cell regulator.

• Green and efficient
With the D250S, batteries perform better and longer. Letting an engine idle to charge batteries or to power accessories in a car or boat can be expensive, detrimental to the environment and most often not even allowed. The D250S speeds up charging considerably, so the need of idling is more or less eliminated. Furthermore, the D250S features as much as 95% efficiency so practically all power will be used to advantage.

• Designed for tough conditions
IP65 means that the D250S is splash proof, and can be used in rain and storm. The D250S is dust proof and robust. The D250S adapts automatically to battery temperatures between -40°C and +70°C.

• Easy to install and expand
Weighing less than one kilo, and being a little more than one square decimetre in size, it can normally be placed close to the battery and easily connected. If the capacity is not sufficient, simply fit an extra D250S at the side to double it.

• Perfect for extra battery banks
Batteries for bow propeller, anchor winch or 230V inverters are often at a distance from the main battery. D250S compensates automatically for voltage drop and can be installed using light cables, as small as 4mm².

• Member of a family
CTEK has created a family of top grade, efficient and value-for-money 230V chargers. Together with the D250S you will have a combination that is hard to beat. They are designed to operate together in a perfect symbiosis.
**Technical data D250S**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input voltage</strong></td>
<td>12.8–22V DC (7–22V DC on request)</td>
</tr>
<tr>
<td><strong>Charging current</strong></td>
<td>20A max</td>
</tr>
<tr>
<td><strong>Own Consumption</strong></td>
<td>&lt;4mA</td>
</tr>
<tr>
<td><strong>Ambient temperature</strong></td>
<td>-40°C to +50°C, output power is reduced automatically at higher temperatures</td>
</tr>
<tr>
<td><strong>Charger type</strong></td>
<td>Multi-stage, fully automatic DC/DC charger with float/pulse maintenance</td>
</tr>
<tr>
<td><strong>Battery types</strong></td>
<td>12V lead-acid batteries (Wet, MF, AGM, Gel and Calcium)</td>
</tr>
<tr>
<td><strong>Dimensions (LxWxH)</strong></td>
<td>192x110x65mm</td>
</tr>
<tr>
<td><strong>Enclosure class</strong></td>
<td>IP65 (splash and dust proof)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>0.7 kg</td>
</tr>
<tr>
<td><strong>Battery temperature</strong></td>
<td>-40°C to +70°C</td>
</tr>
<tr>
<td><strong>Battery capacity</strong></td>
<td>40–500Ah</td>
</tr>
</tbody>
</table>

**CARAVAN/CAMPER**

**Situation:** One battery for all consumers.

**Problem:** The caravan battery is located a long way from the generator, resulting in considerable voltage drop at the trailer connection. The caravan battery is never fully charged by the generator.

**Solution:** The D250S gives a perfect charging curve for the caravan battery without discharging the starter battery.

**RESCUE AND WORK VEHICLES**

**Situation:** Consumers discharge the starter battery.

**Problem:** Equipment on board discharges starter batteries, or difficult to charge extra service battery.

**Solution:** The D250S senses that the engine has started and charges the service battery quickly and efficiently.

**SOLAR PANELS**

**Situation:** Solar panel.

**Problem:** A solar panel operates optimally at about 17V. Many regulators reduce the voltage by “burning off” energy.

**Solution:** The D250S searches for the optimum operating point (Maximum Power Point) and charges the battery perfectly at high degree of efficiency.

**BOW PROPELLER AND ANCHOR WINCH**

**Situation:** Consumers located at a distance and with current of short duration.

**Problem:** No individual charging, short life. Installation using heavy cables.

**Solution:** The D250S is placed close to the battery and charges it perfectly with adaptation to the battery temperature.

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**STEP CURRENT AMPERES**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Start Battery</th>
<th>Living Space Battery</th>
<th>Generator</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>STARTER BATTERY</td>
<td>TRAILER CONNECTOR</td>
<td>D250S</td>
</tr>
<tr>
<td>-</td>
<td>SERVICE BATTERY</td>
<td>CONSUMER BATTERY</td>
<td>D250S</td>
</tr>
</tbody>
</table>

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**STEP VOLTAGE**

- **Desulphation**
- **Soft start**
- **Bulk**
- **Absorption**
- **Analysis**
- **Recondition**
- **Float**
- **Pulse**

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**STEPS**

1. **Desulphation**
2. **Soft start**
3. **Bulk**
4. **Absorption**
5. **Analysis**
6. **Recondition**
7. **Float**
8. **Pulse**

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**IP65 SPLASH & DUST PROOF**