„Steca Electronics – Services and products for an ecological future.“
Brief overview over the company
The philosophy of Steca

Steca has long stood for ideas and innovations as an electronics service provider and manufacturer of Steca brand product lines – in solar electronics and battery charging systems.

Our ability and personal responsibility allow us to create high-quality individual electronic products and to distribute them on global scale.

Simple business processes, fair partnerships and transparent communication are perceptible and contribute to our joint success.
Regional and international
For your on-site

Memmingen
520 employees
Research and development, marketing and sales as well as logistics and production of electronic devices, complete electronic systems for home appliances, industry, solar electronics and battery charging systems

Bulgaria
145 employees
Production of cable technology, electronic devices and complete electronic systems
A road full of ideas
History and development

1976
Steca was founded by Karl Steinle and Manfred Casper as a company assembling, developing and producing battery charging systems.

1980
Dietmar Voigtsberger took the company with 3 employees over. Extension of the production facilities into a professional supplier of electronics.

1990
New production lines Cable Technology and Solar electronics were added. Gradual expansion to a full service electronic sub-supplier.

2000
Steca extends its building site up to 10,000 sqm. Introduction of integrative information systems. Update of Quality Assurance Certification Procedure.

2011
Today Steca produces on 22,000 sqm: services and products for an ecological future
Realisation of a new building with 7,000 sqm
Solar home systems – a short introduction
Solar home systems: basic systems

Solar charge controllers, energy saving lamps, small DC loads

- 3 A to 30 A, 12 V or 24 V
- Power supply for living rooms and cottages
Solar charge controllers, energy saving lamps, fridges and freezers:
– Power ranges from 3 A up to 30 A, from 12 V up to 24 V
– for supply of living spaces and cottages
– for medical storage in clinics
Solar home systems: nightlight systems

<table>
<thead>
<tr>
<th>Solar charge controller:</th>
<th>All night</th>
<th>After sunset</th>
<th>Before sunrise</th>
<th>Turn-on time delay</th>
<th>Maximum light current</th>
<th>Catalogue page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steca Solsum F</td>
<td>■*</td>
<td>0 - 12 h*</td>
<td>–</td>
<td>–</td>
<td>10 A</td>
<td>29</td>
</tr>
<tr>
<td>Steca PR</td>
<td>■</td>
<td>0 - 12 h</td>
<td>0 - 12 h</td>
<td>–</td>
<td>30 A</td>
<td>30</td>
</tr>
<tr>
<td>Steca PR 2020 IP</td>
<td>■</td>
<td>0 - 12 h</td>
<td>0 - 12 h</td>
<td>–</td>
<td>30 A</td>
<td>31</td>
</tr>
<tr>
<td>Steca Solarix FRS</td>
<td>■*</td>
<td>0 - 12 h*</td>
<td>–</td>
<td>–</td>
<td>30 A</td>
<td>32</td>
</tr>
<tr>
<td>Steca Solarix MPPT</td>
<td>■*</td>
<td>0 - 12 h*</td>
<td>–</td>
<td>–</td>
<td>20 A</td>
<td>33</td>
</tr>
<tr>
<td>Steca Tarom</td>
<td>■</td>
<td>0 - 12 h</td>
<td>–</td>
<td>0 - 3 h</td>
<td>15 A 200 A</td>
<td>35 60 61</td>
</tr>
<tr>
<td>Steca Power Tarom</td>
<td>■</td>
<td>0 - 12 h</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Steca PA 15/ Steca PA 15 with PA EV200 DC relay</td>
<td>■</td>
<td>0 - 12 h</td>
<td>–</td>
<td>0 - 3 h</td>
<td>15 A 200 A</td>
<td>35 60 61</td>
</tr>
</tbody>
</table>
Steca products for solar home systems
The Steca charge controllers

Steca PR 0505
- 12 V; 3 A / 5 A
- manual load switch
- electronic fuse
- LEDs for system info and battery charge state

Steca Solsum F
- 12 V / 24 V; 6 A / 8 A / 10 A
- LEDs for information on State of Charge (SOC)
- electronic fuse
- optional nightlight function
- programmability
Steca Solarix PRS

- 12 V / 24 V; 10 A, 15 A, 20 A, 30 A
- LED for system information and battery SOC
- Electronic fuse
- Optional nightlight function
- Programmability

Programming unit PA RC100
The Steca charge controllers
Programmability – RC100

The following controller ranges are fully programmable via programming unit PA RC100:
- Solsum F
- Solarix PRS
- Solarix MPPT

This concerns most frequently programming of a nightlight function.
The Steca charge controllers

Steca PR
- 12 V / 24 V; 10 A, 15 A, 20 A, 30 A
- user-friendly display
- manual load switch
- energetic datalogger
- morning-, evening- and nightlight function
- easy self-test
- easy programming, error detection and monitoring of the system without additional equipment

Steca PR 2020 IP
- IP 65 version
- programmability
- State-of-charge (SOC)

NEW!
Steca Solarix MPPT 1010 & 2010

- latest MPPT technology
- 12 V / 24 V, 10 A or 20 A
- 17 V – 100V input, 250 Wp / 500 Wp
- highest efficiency (98.8%)
- excellent low self consumption: <10mA
- programmability
- LEDs for system info and battery SOC

<table>
<thead>
<tr>
<th>Characterisation of the operating performance</th>
<th>MPPT 1010</th>
<th>MPPT 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>System voltage</td>
<td>12 V (24 V)</td>
<td></td>
</tr>
<tr>
<td>Nominal power</td>
<td>125 W (250 W)</td>
<td>250 W (500 W)</td>
</tr>
<tr>
<td>Max. efficiency</td>
<td>&gt; 98 %</td>
<td></td>
</tr>
<tr>
<td>Own consumption</td>
<td>10 mA</td>
<td></td>
</tr>
<tr>
<td>DC input side</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPP voltage</td>
<td>15 V (30 V) &lt; V_modu_1 &lt; 75 V</td>
<td>15 V (30 V) &lt; V_modu_1 &lt; 100 V</td>
</tr>
<tr>
<td>Open circuit voltage solar module</td>
<td>17 V ... 75 V (34 V ... 75 V)</td>
<td>17 V ... 100 V (34 V ... 100 V)**</td>
</tr>
<tr>
<td>Module current</td>
<td>9 A</td>
<td>18 A</td>
</tr>
<tr>
<td>DC output side</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charge current</td>
<td>10 A</td>
<td>20 A</td>
</tr>
<tr>
<td>Load current</td>
<td>10 A</td>
<td></td>
</tr>
<tr>
<td>End of charge voltage*</td>
<td>13.9 V (27.8 V)</td>
<td></td>
</tr>
<tr>
<td>Boost charge voltage*</td>
<td>14.4 V (28.8 V)</td>
<td></td>
</tr>
<tr>
<td>Equalisation charge*</td>
<td>14.7 V (29.4 V)</td>
<td></td>
</tr>
<tr>
<td>Reconnection voltage (LVR)*</td>
<td>12.5 V (25 V)</td>
<td></td>
</tr>
<tr>
<td>Deep discharge protection (LVD)*</td>
<td>11.5 V (23 V)</td>
<td></td>
</tr>
</tbody>
</table>

Operating conditions
- Ambient temperature: -25 °C … +40 °C

Fitting and construction
- Terminal (fine / single wire): 16 mm² / 25 mm² - AWG 6 / 4
- Degree of protection: IP 32
- Dimensions (X x Y x Z): 187 x 153 x 68 mm
- Weight: approx. 900 g

* see options

Technical data at 25 °C / 77 °F
The Steca charge controllers

Steca Tarom and Power Tarom
- 12 V / 24 V; 35 A, 45 A
  48 V; 40 A
- for PV hybrid systems
- SOC with Steca PA HS200 Shunt
- 2-line Display
- free programmability
- RJ-45 interface

Steca Tarom and Power Tarom
- 12 V / 24 V; 70 A, 140 A
  48 V; 55 A, 110 A, 140 A
- for PV hybrid systems
- SOC with Steca PA HS200 Shunt
- IP65-case
- 2-line Display
- free programmability
- RJ-45 interface
Charge controller topologies
Overview

- Shunt controller
- Series controller
- MPPT controller

And many more…!
Reference systems
### Reference systems

<table>
<thead>
<tr>
<th>Solar home system</th>
<th>Burkina Faso</th>
<th>Solar home system</th>
<th>Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solarix Sigma</td>
<td>12V / 24 V; 20 A</td>
<td>PR 0505</td>
<td>12 V; 5 A</td>
</tr>
<tr>
<td>Solsum ESL</td>
<td>11 W – 12 V</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Thank you very much for your attention!