Bluetooth Smart built-in
The wireless solution to set-up, monitor, update and synchronise SmartSolar Charge Controllers.

Ultra-fast Maximum Power Point Tracking (MPPT)
Especially in case of a clouded sky, when light intensity is changing continuously, an ultra-fast MPPT controller will improve energy harvest by up to 30% compared to PWM charge controllers and by up to 10% compared to slower MPPT controllers.

Advanced Maximum Power Point Detection in case of partial shading conditions
If partial shading occurs, two or more maximum power points (MPP) may be present on the power-voltage curve. Conventional MPPTs tend to lock to a local MPP, which may not be the optimum MPP. The innovative SmartSolar algorithm will always maximize energy harvest by locking to the optimum MPP.

Outstanding conversion efficiency
No cooling fan. Maximum efficiency exceeds 98%.

Flexible charge algorithm
Fully programmable charge algorithm (see the software page on our website), and eight pre-programmed algorithms, selectable with a rotary switch (see manual for details).

Extensive electronic protection
Over-temperature protection and power derating when temperature is high. PV short circuit and PV reverse polarity protection. PV reverse current protection.

Internal temperature sensor
Compensates absorption and float charge voltage for temperature.

Optional external battery voltage and temperature sensing via Bluetooth
A Smart Battery Sense or a BMV-712 Smart Battery Monitor can be used to communicate battery voltage and temperature to one or more SmartSolar Charge Controllers.

VE.Direct
For a wired data connection to a Color Control GX, other GX products, PC or other devices.

Remote on-off
To connect for example to a VE.BUS BMS.

Programmable relay
Can be programmed to trip on an alarm, or other events.

Optional: SmartSolar pluggable LCD display
Simply remove the rubber seal that protects the plug on the front of the controller, and plug-in the display.
### SmartSolar Charge Controller

<table>
<thead>
<tr>
<th>Model</th>
<th>Battery voltage</th>
<th>Rated charge current</th>
<th>Nominal PV power, 12V</th>
<th>Nominal PV power, 24V</th>
<th>Nominal PV power, 36V</th>
<th>Nominal PV power, 48V</th>
<th>Max. PV short circuit current</th>
<th>Battery reverse polarity</th>
<th>PV reverse polarity</th>
<th>Operating temperature</th>
<th>Humidity</th>
<th>Maximum altitude</th>
<th>Protection category</th>
<th>Weight</th>
<th>Dimensions (h x w x d)</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>150/45</td>
<td>12 / 24 / 48V Auto Select</td>
<td>45A</td>
<td>650W</td>
<td>1300W</td>
<td>1950W</td>
<td>2600W</td>
<td>50A (max 30A per MC4 conn.)</td>
<td>fuse, not user accessible</td>
<td>Output short circuit</td>
<td>-30 to +60°C</td>
<td>95%, non-condensing</td>
<td>PD3</td>
<td>Tr models: 185 x 250 x 95 mm</td>
<td>EN/IEC 62109-1, UL 1741, CSA C22.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150/60</td>
<td></td>
<td>60A</td>
<td>860W</td>
<td>1720W</td>
<td>2580W</td>
<td>3440W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tr models: 215 x 250 x 95 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150/70</td>
<td></td>
<td>70A</td>
<td>1000W</td>
<td>2000W</td>
<td>3000W</td>
<td>4000W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MC4 models: 246 x 295 x 103</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150/85</td>
<td></td>
<td>85A</td>
<td>1200W</td>
<td>2400W</td>
<td>3600W</td>
<td>4900W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150/100</td>
<td></td>
<td>100A</td>
<td>1450W</td>
<td>2900W</td>
<td>4350W</td>
<td>5800W</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1a) If more PV power is connected, the controller will limit input power.
1b) The PV voltage must exceed Vbat + 5V for the controller to start. Thereafter the minimum PV voltage is Vbat + 1V.
2) A PV array with a higher short circuit current may damage the controller.
3) MC4 models: several splitter pairs may be needed to parallel the string of solar panels

Maximum current per MC4 connector: 30A (the MC4 connectors are parallel connected to one MPPT tracker)