Overview

U-Charge® XP modules are designed to be assembled in series and parallel to reach your application's voltage and capacity requirements. Modularity reduces project development time and non-recurring engineering (NRE) expenses.

Hundreds of thousands U-Charge® systems have been deployed in a range of equipment since 2006. They have been successfully used in commercial vehicles such as EV buses, delivery trucks, port tractors, and marine vessels. XP modules are now being considered for new markets such as material handling, mining equipment and energy storage systems.

Features & Benefits

- > 4000 cycles (80% DOD)
- Exceptional voltage stability
- Configuration voltage range from 12V - 1000V
- Maintenance free
- Automatic inter-module balancing
- Rugged mechanical design
- LED battery status indicator
- Manufactured in standard BCI sizes for drop in replacement capability
- Module electronics monitors cell voltage, temperature, current & SOC
- Communication of monitored data via Battery Management System (BMS)
- BMS offers CANBus output
- Diagnostic and monitoring software included
- Stock available for quick delivery in US & Europe
### Common Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>U1-12XP</th>
<th>U24-12XP</th>
<th>U27-12XP</th>
<th>UEV-18XP</th>
<th>U24-24XP</th>
<th>U27-24XP</th>
<th>U27-36XP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Module Voltage</td>
<td>12.8 V</td>
<td>12.8 V</td>
<td>12.8 V</td>
<td>19.2 V</td>
<td>25.6 V</td>
<td>25.6 V</td>
<td>38.4 V</td>
</tr>
<tr>
<td>Nominal Capacity (C/5, 23°C)</td>
<td>40 Ah</td>
<td>110 Ah</td>
<td>138 Ah</td>
<td>69 Ah</td>
<td>59 Ah</td>
<td>72 Ah</td>
<td>46 Ah</td>
</tr>
<tr>
<td>Weight (approximate) kg</td>
<td>6.5 kg</td>
<td>15.8 kg</td>
<td>19.5 kg</td>
<td>14.9 kg</td>
<td>15.8 kg</td>
<td>18.6 kg</td>
<td>19.6 kg</td>
</tr>
<tr>
<td>Weight (approximate) lbs</td>
<td>14.3 lbs</td>
<td>34.8 lbs</td>
<td>42.9 lbs</td>
<td>32.8 lbs</td>
<td>34.8 lbs</td>
<td>42.9 lbs</td>
<td>43.1 lbs</td>
</tr>
<tr>
<td>Dimension incl. Terminals LxWxH (mm)</td>
<td>197 x 131 x 182</td>
<td>260 x 172 x 225</td>
<td>306 x 172 x 225</td>
<td>269 x 148 x 245</td>
<td>260 x 172 x 225</td>
<td>306 x 172 x 225</td>
<td>306 x 172 x 225</td>
</tr>
<tr>
<td>BCI Group Number</td>
<td>U1R</td>
<td>Group 24</td>
<td>Group 27</td>
<td>N/A</td>
<td>Group 24</td>
<td>Group 27</td>
<td>Group 27</td>
</tr>
<tr>
<td>Terminals, Female-Threaded</td>
<td>M6 x 1.0</td>
<td>M8 x 1.25</td>
<td>M8 x 1.25</td>
<td>M8 x 1.25</td>
<td>M8 x 1.25</td>
<td>M8 x 1.25</td>
<td>M8 x 1.25</td>
</tr>
<tr>
<td>Specific Energy</td>
<td>79 Wh/kg</td>
<td>89 Wh/kg</td>
<td>91 Wh/kg</td>
<td>89 Wh/kg</td>
<td>91 Wh/kg</td>
<td>95 Wh/kg</td>
<td>91 Wh/kg</td>
</tr>
<tr>
<td>Energy Density</td>
<td>110 Wh/l</td>
<td>139 Wh/l</td>
<td>148 Wh/l</td>
<td>136 Wh/l</td>
<td>142 Wh/l</td>
<td>148 Wh/l</td>
<td>148 Wh/l</td>
</tr>
<tr>
<td>Standard Discharging @ 25°C</td>
<td>80 A</td>
<td>150 A</td>
<td>150 A</td>
<td>120 A</td>
<td>200 A</td>
<td>118 A</td>
<td>144 A</td>
</tr>
<tr>
<td>DC internal resistance (max)</td>
<td>15 mΩ</td>
<td>6 mΩ</td>
<td>5 mΩ</td>
<td>10 mΩ</td>
<td>18 mΩ</td>
<td>15 mΩ</td>
<td>25 mΩ</td>
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<tr>
<td>Part Number</td>
<td>1004434</td>
<td>1004425</td>
<td>1004428</td>
<td>1004431</td>
<td>1008555</td>
<td>1008556</td>
<td>1005199</td>
</tr>
</tbody>
</table>

### Accessories

All packs made with XP Modules require a Battery Management System. If insulation measurements are required, select the appropriate model based on the system voltage. If not, the U-BMS-LV, which operates off the 12V supply, is recommended.

- U-BMS-LV operates from 10V - 150V
- U-BMS-HV operates from 100V - 450V
- U-BMS-SHV operates from 350V – 700V
- CANBus Monitoring Kit
- Diagnostic Kit

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Performance may vary depending on, but not limited to battery usage and application. If battery is used outside specifications, performance will diminish. All specifications are subject to change without notice. All information provided herein is believed, but not guaranteed, to be current and accurate.

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