Technical Data

**Type of Charger**
- 8 Step, fully automatic, switch mode with maintenance charging

**Type of Batteries**
- 12V Lead and rechargeable batteries (WET, MF, VRLA, AGM, GEL & Calcium)
- 12V Lead acid rechargeable batteries (WET, MF, VRLA, AGM, GEL & Calcium)

**Input Voltage**
- 220V-240VAC, 50/60Hz

**Output Voltage**
- Nominal: 12V

**Input Current**
- 0.8A (Tested from a distance of 50cm)

**Output Power**
- 60W

**Charging Voltage**
- 14.4V

**Charging Current**
- 0.8A

**Ambient Temperature**
- -30°C to 55°C, reduced output power at higher temperatures

**Battery Capacity**
- 1.2-120Ah (charging) up to 160 Ah for maintenance

**Ripple Voltage**
- ±0.25V

**Housing Protection**
- IP65 (dust and splash proof)

**Battery Voltage (V)**
- 80%

**Efficiency**
- 92%

**Charging Current**
- 5.0A

**Charging Voltage**
- 14.7V ±0.25V

**BOOST**
- 16.0V

**Back Current Drain**
- 0.8A

**Input Voltage AC**
- 220V-240VAC, 50/60Hz

**Output Voltage**
- 5.0A

**Contact**
- quick connection/disconnection using a snap-connector.

**Battery**
- NL 5Amp 8 Step Intelligent Battery Charger

**Size (Ah)**
- 120

**Charging using battery clamps**
- 1) Quick contact battery leads with clamps
  - 2) Quick contact battery leads with clamps (Ø 6.5mm) with in-line battery protection fuse (10A)

**Accumulative A/H Charge**
- MODE 12

**Weight**
- 0.75kg

**Technical Data**
- Batteries below 12Ah should not be charged with 5Amp current

**Charges**
- Flooded (WET), MF, VRLA, AGM, GEL & Calcium Batteries

**Charges & Maintains**
- A compact Dual Function 12Volt Battery Charger suitable for motorcycle, motor vehicle and Deep Cycle batteries

**Charging using battery clamps**
- 12V DC

**Charging using M6 eyelets**
- 220V AC

**UNIQUE FEATURES - ONE CHARGER DOES IT ALL !**

- Automatically Diagnoses, Recovers & Charges Flooded (WET), MF, VRLA, AGM, GEL, & Calcium Batteries
- Unique charging and maintenance feature enhances battery life
- 3-Step fully automatic smart charge & maintenance program
- 1.2Ah - 120Ah (charging) up to 160Ah battery capacity
- Rescues drained batteries over 2 Volt
- Includes Quick Connect battery clamps
- Includes Quick Connect fixing terminals

**Declaration of Compliance**
- Tested and approved by:
- EN 61000-3-2
- EN 61000-3-3
- EN 60335-2-29
- EN 60335-1
- EN 55014-2
- EN 55014-1
- EN 62233

**Street Addresses**
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- Eastleigh, Edenvale
- 1609 Johannesburg
- South Africa

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- info@nationalluna.com

**Website**
- www.nationalluna.com

**Tested and approved by**
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- EN 61000-3-3
- EN 60335-2-29
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GOOD REASONS FOR BUYING A BATTERY CHARGER

To get an understanding of good battery maintenance, this document will assist the user regarding the correct charging procedures in order to prolong the life of a battery. As a general rule, a battery should never be allowed to be left in a discharged state. (This causes unnecessary damage and greatly reduces the life of the battery).

There is a popular misconception that a battery can rapidly re-charge itself in a short space of time. (This is simply not true for most batteries). If not properly re-charged after use, irreparable damage to the battery will occur if not maintained with a full charge.

- Motorcycle - Typically a motorcycle is rarely used and the battery goes flat over time.
- Boating - When a boat is in storage the battery will naturally discharge over time. Most vehicles are fitted with an electronic alarm system that requires power from the battery. In the event of the vehicle being left in storage and not used (i.e. being on holiday) the battery could be completely discharged, causing irreparable damage. Connecting a maintenance charger will keep the battery in peak condition.
- Auxiliary - When camping, an additional auxiliary battery can be used to provide power for 12Volt lighting & refrigeration. (It can take up to 24Hrs to recharge the battery back to full capacity after use).
- Motor Vehicle - Many motor vehicles are driven short distances on a daily basis, and the battery is never able to reach full charge. When a Dual Battery System is installed in a vehicle the main battery remains fully charged and only the auxiliary battery is being used (discharged). Even though the car is driven for, say 6Hrs, and the main battery is fully charged, the auxiliary battery has not had sufficient time to recharge completely.
- Household - Should there be a power failure at home, back-up batteries used for motorised gates, computer UPS and alarm systems would need to be re-charged.

Choosing the correct Battery Charger

Previously the older type batteries could be serviced and the electrolyte (distilled water) added. Most common battery chargers were developed to charge these older type batteries. Most modern batteries are of a sealed maintenance free design, and require specialised charging. The battery charger must not subject the battery to over charging (gassing) as this will deplete the electrolyte and cause damage to the battery.

The National Luna Battery Charger is suitable for all battery types

How The National Luna 5Amp Battery Charger Works

CHARGING MODES

<table>
<thead>
<tr>
<th>Mode</th>
<th>For Batteries less than 12Ah</th>
<th>For Batteries greater than 12Ah</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode 1: 14.4V/0.8A</td>
<td>This mode is suitable for batteries less than 12Ah.</td>
<td>Mode 1: 14.4V/5.0A</td>
</tr>
<tr>
<td>Mode 2: 14.7V/0.8A</td>
<td>This mode is recommended for AGM batteries less than 12Ah. This mode is also suitable for charging batteries in sub-zero temperatures.</td>
<td>Mode 2: 14.7V/5.0A</td>
</tr>
<tr>
<td>Mode 3: 14.4V/0.8A + 16.0V/0.3A</td>
<td>This mode is suitable to recover severely discharged batteries smaller than 12Ah. (Recommended to boost at least once a year).</td>
<td>Mode 3: 14.4V/5.0A + 16.0V/1.5A</td>
</tr>
<tr>
<td>Mode 4: 14.7V/0.8A</td>
<td>This mode is suitable to recover severely discharged AGM batteries smaller than 12Ah or charging in sub-zero temperatures.</td>
<td>Mode 4: 14.7V/5.0A + 16.0V/1.5A</td>
</tr>
<tr>
<td>Mode 5: 14.4V/5.0A</td>
<td>This mode is recommended for AGM batteries.</td>
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</tr>
<tr>
<td>Mode 6: 14.7V/5.0A + 16.0V/1.5A</td>
<td>This mode is suitable to recover severely discharged AGM batteries or charging in sub-zero temperatures.</td>
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