RELIABILITY IS YOUR SECURITY

Yuasa NP, NPC and NPH Batteries
Utilising the latest advance design Oxygen

Recombination Technology, Yuasa have applied their 75 years experience in the lead acid battery field to produce the optimum design of Sealed Lead Acid batteries

Features
Superb recovery from deep discharge
Electrolyte suspension system
Gas Recombination
Multipurpose: Float or Cyclic use
Usable in any orientation
Superior energy density
Lead calcium grids for extended life
Manufactured World wide
Application specific designs

TECHNICAL FEATURES

Sealed Construction
Yuasa’s unique construction and sealing technique ensures no electrolyte leakage from case or terminals

Electrolyte Suspension System
All NP batteries utilize Yuasa’s unique electrolyte suspension system incorporating a microfine glass mat to retain the maximum amount of electrolyte in the cells. The electrolyte is retained in the separator material by meniscus effect and there is no free electrolyte to escape from the cells. No gels or other contaminants are added.

Control of Gas Generation
The design of Yuasa’s NP batteries incorporates the very latest oxygen recombination technology to effectively control the generation of gas during normal use.

Low Maintenance Operation
Due to the perfect sealed construction and the recombination of gasses within the cell, the battery is almost maintenance free.

Terminals
NP batteries are manufactured using a range of terminals which vary in size and type. Please refer to details as shown.

Operation in any Orientation
The combination of sealed construction and Yuasa’s unique electrolyte suspension system allows operation in any orientation, with no loss of performance or fear of electrolyte leakage. (Excluding continuous use inverted)

Valve Regulated Design
The batteries are equipped with a simple, safe low pressure venting system which releases excess gas and automatically reseals should there be a build up of gas within the battery due to severe overcharge. However, on no account should the battery be charged in a sealed container.

Lead Calcium Grids
The heavy duty lead calcium alloy grids provide an extra margin of performance and life in both cyclic and float applications and give unparalleled recovery from deep discharge.

Terminals

Faston tab: 187

Bolt fastened terminal

JST No. VHR-2N

WIRE AWG #20 UL 1007

TERMINAL

JST SVH-21T-P1.1

TERMINAL
Long Cycle Service Life
Depending upon the average depth of discharge, over a thousand discharge/charge cycles can be expected.

Float Service Life
The expected service life is five years in float standby applications.

Separators
The use of the special separator material provides a very efficient insulation between plates preventing inter-plate short circuits and prohibiting the shedding of active materials.

Long Shelf Life
The extremely low shelf discharge rate allows the battery to be stored for extended periods up to one year at normal ambient temperatures with no permanent loss of capacity.

Operating Temperature Range
The batteries can be used over a broad temperature range permitting considerable flexibility in system design and location.

Charge – 15°C to 50°C
Discharge – 20°C to 60°C
Storage – 20°C to 50°C (fully charged battery)
INTELLIGENT BATTERY CHARGERS
Manufactured to BS3456, IEC335, UL 1236, EN60335, CE mark to EN5008-1

Features
Micro processor controlled
Short circuit protection
Reverse polarity protection
High temperature protection
Soft start current control
Fast constant current bulk charge
3 stage charging CI-CV-float
Constant voltage float/standby
Proportional timing
Flexibility, to match battery specification.

Standard Range

<table>
<thead>
<tr>
<th>Model</th>
<th>Current</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>YCP03A12</td>
<td>300mA</td>
<td>12v</td>
</tr>
<tr>
<td>YCP03A24</td>
<td>300mA</td>
<td>24v</td>
</tr>
<tr>
<td>YCP03A6</td>
<td>300mA</td>
<td>6v</td>
</tr>
<tr>
<td>YCP06A12</td>
<td>600mA</td>
<td>12v</td>
</tr>
<tr>
<td>YCP06A6</td>
<td>600mA</td>
<td>6v</td>
</tr>
<tr>
<td>YCP1.5A12</td>
<td>1.5A</td>
<td>12v</td>
</tr>
<tr>
<td>YCP1.5A24</td>
<td>1.5A</td>
<td>24v</td>
</tr>
<tr>
<td>YCP1.5A6</td>
<td>1.5A</td>
<td>6v</td>
</tr>
<tr>
<td>YCP10A12S</td>
<td>10A</td>
<td>12v</td>
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<tr>
<td>YCP1A12</td>
<td>1A</td>
<td>12v</td>
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<td>YCP1A6</td>
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<td>6v</td>
</tr>
<tr>
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<td>24v</td>
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<tr>
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<td>12v</td>
</tr>
<tr>
<td>YCP8A24S</td>
<td>8A</td>
<td>24v</td>
</tr>
</tbody>
</table>

NPH/SW
High performance batteries specially designed for applications requiring high rate discharge, supplying up to 50% (NPH), 75% (SW) more power (Watts) for short durations when compared to conventional NP models.

NPC
Specifically designed to suit the arduous requirements of cyclic applications allowing increased cycle life (at least double that of conventional types).

NPL Long Life Model also to BS6290pt4
Dedicated literature available on request. (NPL Shortform).

Applications
Yuasa NP batteries, having excellent deep discharge recovery characteristics coupled with long life on float standby, are ideal for numerous applications in both cyclic and standby modes. For advice on the use of NP batteries in your particular application please contact our Sales Office.

Charging
For Cyclic Applications see charging characteristic graph.

For Float Standby Applications
Charged at 2.275 volts per cell continuous. Battery will seek its own current level and float fully charged. However, users should be aware that when charging from fully discharged, the battery can draw an initial charge current of approximately 2cA. Care should therefore be taken to ensure that this initial charge current (if ungoverned) is within the output capability of the equipment. Final charge current at 2.275 volts per cell is typically between 0.0005cA to 0.004cA.

CAUTION
Do not Short Circuit
Do not charge in a sealed container
Service life and operational characteristics will be affected by temperature
AC Ripple reduces service life.

WARNING!
The battery type NP65-121 must never be installed permanently suspended by their handles; they are not designed for this purpose.
<table>
<thead>
<tr>
<th>Voltage</th>
<th>etric Energy (Wh/kg.20hr)</th>
<th>1hr to 1.60vpc 20ºC</th>
<th>5hr to 1.70vpc 20ºC</th>
<th>10hr to 1.75vpc 30ºC</th>
<th>20hr to 1.75vpc 30ºC</th>
<th>Terminality (mm)</th>
<th>Short Circuit current (A)</th>
<th>Specific Energy (Wh.kg.20hr)</th>
<th>Inter. Resistance (m.Ohms)</th>
<th>Maximum discharge (A)</th>
<th>Dimensions (mm)</th>
<th>Weight (Kg)</th>
<th>Terminal Layout</th>
<th>Terminal Torque Nm</th>
<th>Nominal Capacity (Ah)</th>
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</thead>
<tbody>
<tr>
<td>20hr to 1.75vpc 30ºC</td>
<td>8 17 24 5 12 6 7 10 21</td>
<td>120 30 63 12 69 84 96 120 210</td>
<td>300 500 800</td>
<td>12</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>2.45</td>
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<td>4.76</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10hr to 1.75vpc 30ºC</td>
<td>2 3 2 5 12 16 33</td>
<td>30mpc 10cm 59wpc 3cm</td>
<td>120 500 800</td>
<td>12</td>
<td>3</td>
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<td>-</td>
<td>2.45</td>
<td>2.45</td>
<td>4.76</td>
<td>-</td>
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</tr>
</tbody>
</table>
Yuasa in Europe

In line with Yuasa’s policy of development its worldwide manufacturing base, a plan was laid down in 1981 to supply the European market for NP batteries from a factory within the EEC.

In April 1981 as a preliminary move in establishing its European operation the Yuasa sales company was established in Swindon and direct marketing of the NP battery into the UK market began.

Based on the early success of the sales company Yuasa Japan quickly decided to locate a manufacturing plant in the UK.

In co-operation with the UK Government, Wales was chosen as the most suitable area and in October 1981 the manufacturing company was set up with a 50,000 square foot factory.

To keep pace with the global increase in demand for Yuasa battery products, the Corporate policy has been to increase manufacturing facilities World wide, here in Europe that has resulted in six expansions of the UK facility to its present size of almost 300,000 square feet, manufacturing 60 international model types.

The UK factory has been granted the Queens Award for export on two separate occasions, with other major achievements including the registration to ISO 9002 since 1990 and recently ISO 14001 in 2000 (both by BSI).

Yuasa Battery UK Ltd is a major contributor to the Yuasa policy to provide World Class products from a World Wide Company.