

# Yuasa Technical Data Sheet

## Yuasa SWL+4000 12V 135Ah - Yuasa SWL+ series VRLA high rate battery

### Specifications

|                                                            |      |
|------------------------------------------------------------|------|
| Nominal Voltage (V)                                        | 12 V |
| 10m rate Constant Power (Typ) to 9.6V at 20°C (/Block)     | 4000 |
| 10m rate Constant Power (Typ) to 1.6V/cell at 20°C (/Cell) | 667  |
| 20-hr rate Capacity to 1.75V /Cell at 20°C (Ah)            | 135  |
| 10-hr rate Capacity to 1.8V /Cell at 20°C (Ah)             | 124  |

### Dimensions

|             |      |
|-------------|------|
| Length (mm) | 350  |
| Width (mm)  | 173  |
| Height (mm) | 272  |
| Weight (kg) | 49.2 |

### Terminal Type

|               |        |
|---------------|--------|
| Terminal Type | M8 (F) |
| Torque (Nm)   | 6      |

### Operating Temperature Range

|                                      |                  |
|--------------------------------------|------------------|
| Storage (in fully charged condition) | - 20°C to + 50°C |
| Charge                               | -15°C to + 50°C  |
| Discharge                            | -20°C to +60°C   |

### Storage

|                                             |   |
|---------------------------------------------|---|
| Capacity loss per month at 20°C (% approx.) | 3 |
|---------------------------------------------|---|

### Case Material

|                     |               |
|---------------------|---------------|
| Case Material       | ABS (UL94:HB) |
| Standard or FR Case | Standard      |

### Charge Voltage

|                                                             |       |
|-------------------------------------------------------------|-------|
| Float charge voltage at 20°C /Block (±1%)                   | 13.65 |
| Float charge voltage at 20°C /Cell (±1%)                    | 2.275 |
| Float Chg voltage tmp correction factor from std 20°C (mV)  | -3    |
| Cyclic (or Boost) charge Voltage at 20°C (V) /Block (±3%)   | 14.5  |
| Cyclic (or Boost) charge Voltage at 20°C (V) /Cell (±3%)    | 2.42  |
| Cyclic Chg voltage tmp correction factor from std 20°C (mV) | -4    |

### Charge Current

|                                            |    |
|--------------------------------------------|----|
| Cyclic (or Boost) charge current limit (A) | 31 |
|--------------------------------------------|----|

### Maximum Discharge Current

|                                  |      |
|----------------------------------|------|
| Maximum discharge current 1s (A) | 1200 |
| Maximum discharge current 1m (A) | 600  |

### Short-Circuit Current & Internal Resistance

|                                                          |        |
|----------------------------------------------------------|--------|
| Short-Circuit current - according to EN IEC 60896-21 (A) | 3000   |
| Internal resistance (mΩ)                                 | 3.0000 |

### Design Life & Approvals

|                        |                           |
|------------------------|---------------------------|
| EUROBAT Classification | Very long life: 12+ years |
| Eurobat Life           | 12 years or longer        |



### Certifications

ISO9001 Quality Management Systems  
ISO14001 Quality Management Systems  
UNDERWRITERS LABORATORIES Inc.



## Safety

### Installation

Can be installed and operated in orientations up to 90° from the upright position.

### Handles

Batteries must not be suspended by their handles (where fitted).

### Vent valves

Each cell is fitted with a low pressure release valve to allow gasses to escape and then reseal.

### Gas release

VRLA batteries release hydrogen gas which can form explosive mixtures in the air. Do not place inside a sealed container.

### Recycling

YUASA's VRLA batteries must be recycled at the end of life in accordance with local and national laws and regulations.

