

# Yuasa Technical Data Sheet



## Yuasa SWL1850 Industrial VRLA Battery

### Specifications

|                                                             |      |
|-------------------------------------------------------------|------|
| Nominal voltage (V)                                         | 12   |
| 10m rate Constant Power (Typ) to 9.6V at 20°C (W/Block)     | 1916 |
| 10m rate Constant Power (Typ) to 1.6V/cell at 20°C (W/Cell) | 319  |
| 20-hr rate Capacity to 10.5V at 20°C (Ah)                   | 74   |
| 10-hr rate Capacity to 10.8V at 20°C (Ah)                   | 66   |

### Dimensions

|             |          |
|-------------|----------|
| Length (mm) | 350 (±2) |
| Width (mm)  | 166 (±1) |
| Height (mm) | 174 (±2) |
| Mass (kg)   | 23.3     |

### Terminal Type

|                                          |        |
|------------------------------------------|--------|
| Threaded terminal - (M=Male or F=Female) | M6 (F) |
| Torque (Nm)                              | 4.8    |

### 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

|                      |               |
|----------------------|---------------|
| Standard             | ABS (UL94:HB) |
| FR version available | UL94:V0       |

### Charge Voltage

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

### Charge Current

|                                            |          |
|--------------------------------------------|----------|
| Float charge current limit (A)             | No limit |
| Cyclic (or Boost) charge current limit (A) | 16.5     |

### Maximum Discharge Current

|              |     |
|--------------|-----|
| 1 second (A) | 800 |
| 1 minute (A) | 500 |

### Short-Circuit Current & Internal Resistance

|                                                          |      |
|----------------------------------------------------------|------|
| Internal resistance - according to EN IEC 60896-21 (mΩ)  | 9.35 |
| Short-Circuit current - according to EN IEC 60896-21 (A) | 1529 |

### Impedance

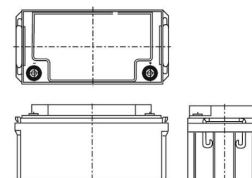
|                        |     |
|------------------------|-----|
| Measured at 1 kHz (mΩ) | 4.4 |
|------------------------|-----|

### Design Life & Approvals

|                                   |                |
|-----------------------------------|----------------|
| EUROBAT Classification: Long life | 10 to 12 years |
| Yuasa design life at 20°C (yrs)   | up to 10 years |



### Layout



### 3rd Party Certifications

ISO9001 - Quality Management Systems  
ISO14001 - Environmental Management Systems  
ISO45001 OHSAS Management Systems  
UNDERWRITERS LABORATORIES Inc.

## Safety

### Installation

Can be installed and operated in any orientation except permanently inverted.

### 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.

