

# Yuasa Technical Data Sheet



## Yuasa SWL780FR Industrial VRLA Battery

### Specifications

Nominal voltage (V)	12
10m rate Constant Power (Typ) to 9.6V at 20°C (W/Block)	815
10m rate Constant Power (Typ) to 1.6V/cell at 20°C (W/Cell)	136
10-hr rate Capacity to 1.8V/Cell at 20°C (Ah)	27
20-hr rate Capacity to 1.75V/Cell at 20°C (Ah)	28.8

### Dimensions

Length (mm)	166 (±2)
Width (mm)	125 (±1)
Height (mm)	175 (±2)
Mass (kg)	10.3

### Terminal Type

Threaded terminal - (M=Male or F=Female)	M5 (F)
Torque (Nm)	2.5

### Operating Temperature Range

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

### Storage

Capacity loss per month at 20°C (% approx.)	3
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### Case Material

Standard	ABS (UL94:V0)
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### 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)	6.125

### Maximum Discharge Current

1 second (A)	500
1 minute (A)	150

### Short-Circuit Current & Internal Resistance

Internal resistance - according to EN IEC 60896-21 (mΩ)	18
Short-Circuit current - according to EN IEC 60896-21 (A)	800

### Impedance

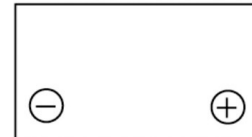
Measured at 1 kHz (mΩ)	8.5
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### Design Life & Approvals

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.

