# Yuasa Technical Data Sheet

# Yuasa EN160-4 Industrial VRLA Battery

**Specifications** 

Nominal voltage (V) 4
10m rate Constant Power (Typ) to 1.6V/cell at 20°C (W/Cell)
10-hr rate Capacity to 1.8V/Cell at 20°C (Ah) 163

**Dimensions** 

 Length (mm)
 206 (±3)

 Width (mm)
 210 (±2)

 Height (mm)
 240 (±2)

 Mass (kg)
 25.6

**Terminal Type** 

Threaded terminal - (M=Male or F=Female) M8 (F) Torque (Nm)  $6 \pm 0.5$ 

**Operating Temperature Range** 

Storage (in fully charged condition)  $-20^{\circ}\text{C to } +50^{\circ}\text{C}$ Charge  $-15^{\circ}\text{C to } +50^{\circ}\text{C}$ Discharge  $-20^{\circ}\text{C to } +60^{\circ}\text{C}$ 

**Storage** 

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

**Case Material** 

Standard ABS (UL94:V0)

**Charge Voltage** 

Float charge voltage at 20°C (V)/Block 4.52 ( $\pm$ 1%) Float charge voltage at 20°C (V)/Cell 2.26 ( $\pm$ 1%)

Float Chg voltage tmp correction factor from std -3

20°C (mV)

Cyclic (or Boost) charge Voltage at 20°C (V)/Block 4.8 ( $\pm$ 2%) Cyclic (or Boost) charge Voltage at 20°C (V)/Cell 2.40 ( $\pm$ 2%) Cyclic Chg voltage tmp correction factor from std -4

20°C (mV)

**Charge Current** 

Float charge current limit (A) No limit Cyclic (or Boost) charge current limit (A) 40.75

**Maximum Discharge Current** 

1 second (A) 1500 1 minute (A) 960

**Short-Circuit Current & Internal Resistance** 

Internal resistance - according to EN IEC 60896-21 1.81 ( $m\Omega$ )

Short-Circuit current - according to EN IEC 3009

60896-21 (A)

Impedance Measured at 1 kHz (m $\Omega$ ) 1.2

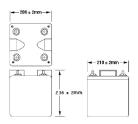
**Design Life & Approvals** 

EUROBAT Classification: Very Long Life 12+ years Yuasa design life at 20°C (yrs) 12 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.







