# Yuasa Technical Data Sheet

### Yuasa NPL78-12IFR Industrial VRLA Battery

**Specifications** 

Nominal voltage (V) 12 10-hr rate Capacity to 1.8V/Cell at 20°C (Ah) 72.1 20-hr rate Capacity to 1.75V/Cell at 20°C (Ah) 78

**Dimensions** 

 Length (mm)
  $380 (\pm 2)$  

 Width (mm)
  $166 (\pm 1)$  

 Height (mm)
  $174 (\pm 0.5)$  

 Mass (kg)
 27.5 

**Terminal Type** 

Threaded terminal - (M=Male or F=Female) M8 (F)
Torque (Nm) 6

**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 13.65 ( $\pm$ 1%) Float charge voltage at 20°C (V)/Cell 2.275 ( $\pm$ 1%)

Float Chg voltage tmp correction factor from std -3

20°C (mV)

Cyclic (or Boost) charge Voltage at 20°C (V)/Block 14.5 ( $\pm$ 3%) Cyclic (or Boost) charge Voltage at 20°C (V)/Cell 2.42 ( $\pm$ 3%)

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) 19.5

**Maximum Discharge Current** 

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

**Impedance** 

Measured at 1 kHz (m $\Omega$ ) <5

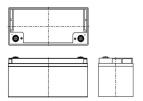
**Design Life & Approvals** 

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 orientations up to  $90\ensuremath{^\circ}$  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.







