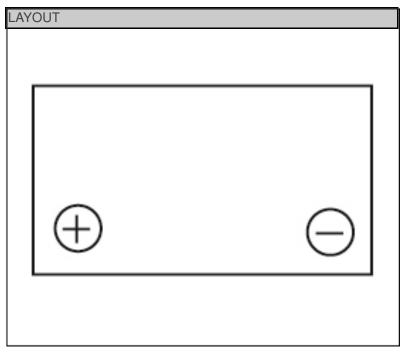
Data Sheet

NPH-Series - Valve Regulated Lead Acid Battery NPH5-12

20-hr rate Capacity to 1.75VPC at 20°C	SPECIFICATIONS		
10-hr rate Capacity to 1.75VPC at 20°C	Nominal voltage	12	V
DIMENSIONS Length	20-hr rate Capacity to 1.75VPC at 20°C	5.07	Ah
Length 90 (±1) mm mm Height 70 (±1) mm Height 102 (±0.5) mm (height over terminals) 106 (±2) mm mm Mass (typical) 1.85 (2.0) kg mm Mass (typical) 1.85 (2.0) kg TERMINAL TYPE FASTON (Quickfit / release) 6.35 mm OPERATING TEMPERATURE RANGE	10-hr rate Capacity to 1.75VPC at 20°C	4.63	Ah
Width 70 (±1) mm Height 102 (±0.5) mm (height over terminals) 106 (±2) mm Mass (typical) 1.85 (2.0) kg TERMINAL TYPE FASTON (Quickfit / release) 6.35 mm FASTON (Quickfit / release) 6.35 mm OPERATING TEMPERATURE RANGE Storage -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 % CASE MATERIAL Standard Option ABS (UL.94:HB) Flame retardant option (FR) ABS (UL.94:V0) CHARGE VOLTAGE 13.65 (±1%) V Float charge voltage temperature correction factor (for variations from the standard 20°C) -3 mV/cell/°C Cyclic (or Boost) charge at 20°C 14.5 (±3%) V Cyclic (or Boost) charge at 20°C 14.5 (±3%) V Cyclic (or Boost) charge at 20°C -4 mV/cell/°C CYclic (or Boost) charge at 20°C -4 mV/cell/°C CHARGE CURRENT No limit A Flo	DIMENSIONS		
Height	Length	90 (±1)	mm
Terminals 106 (±2) mm	Width	70 (±1)	mm
Mass (typical)	Height	102 (±0.5)	mm
TERMINAL TYPE	(height over terminals)	106 (±2)	mm
FASTON (Quickfit / release) 6.35 mm	Mass (typical)	1.85 (2.0)	kg
OPERATING TEMPERATURE RANGE -20°C to +60°C Charge -15°C to +50°C Discharge -20°C to +60°C STORAGE -20°C to +60°C STORAGE -20°C to +60°C STORAGE Capacity loss per month at 20°C (approx) 3 % CASE MATERIAL Standard Option ABS (UL.94:HB) Flame retardant option (FR) ABS (UL.94:HB) Flame retardant option (FR) ABS (UL.94:V0) CHARGE VOLTAGE Float charge voltage at 20°C 13.65 (±1%) V 2.275 (±1%) V/cell Float Charge voltage temperature correction factor (for variations from the standard 20°C) 14.5 (±3%) V Cyclic (or Boost) charge at 20°C 14.5 (±3%) V Cyclic Charge voltage temperature correction factor (for variations from the standard 20°C) 4 mV/cell/°C Cyclic Charge voltage temperature correction factor (for variations from the standard 20°C) 4 mV/cell Cyclic (or Boost) charge at 20°C 4 mV/cell Cyclic (or Boost) charge current limit No limit A Cyclic (or Boost) charge current limit 1.2675 A MAXIMUM DISCHARGE CURRENT 1 second 150 A 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A MI IMPEDANCE Measured at 1 kHz 25 mI PERFORMANCE & CHARACTERISTICS Refer to the technical manual	TERMINAL TYPE		
Storage	FASTON (Quickfit / release)	6.35	mm
Charge	OPERATING TEMPERATURE RANGE		
Discharge	Storage	-20°C to +60°C	
STORAGE	Charge	-15°C to +50°C	
Capacity loss per month at 20°C (approx) 3 % CASE MATERIAL ABS (UL.94:HB) Standard Option ABS (UL.94:V0) Flame retardant option (FR) ABS (UL.94:V0) CHARGE VOLTAGE 13.65 (±1%) V Float charge voltage at 20°C 13.65 (±1%) V/cell Float Charge voltage temperature correction factor (for variations from the standard 20°C) -3 mV/cell/°C Cyclic (or Boost) charge at 20°C 14.5 (±3%) V Cyclic Charge voltage temperature correction factor (for variations from the standard 20°C) -4 mV/cell/°C CYclic Charge voltage temperature correction factor (for variations from the standard 20°C) -4 mV/cell/°C CHARGE CURRENT No limit A Float charge current limit No limit A Cyclic (or Boost) charge current limit No limit A MAXIMUM DISCHARGE CURRENT 150 A 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A M Short-Circuit current N/A	Discharge	-20°C to +60°C	
CASE MATERIAL ABS (UL.94:HB) Standard Option ABS (UL.94:V0) Flame retardant option (FR) ABS (UL.94:V0) CHARGE VOLTAGE 13.65 (±1%) V Float charge voltage at 20°C 13.65 (±1%) V/cell Float Charge voltage temperature correction factor (for variations from the standard 20°C) -3 mV/cell/°C Cyclic (or Boost) charge at 20°C 14.5 (±3%) V Cyclic Charge voltage temperature correction factor (for variations from the standard 20°C) -4 mV/cell/°C CHARGE CURRENT Float charge current limit No limit A Cyclic (or Boost) charge current limit No limit A MAXIMUM DISCHARGE CURRENT 1.2675 A 1 second 150 A 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A ml Short-Circuit current N/A A Measured at 1 kHz 25 ml PERFORMANCE & CHARACTERISTICS Refer to the technical manual			
Standard Option ABS (UL.94:HB)	Capacity loss per month at 20°C (approx)	3	%
Flame retardant option (FR)	CASE MATERIAL		
CHARGE VOLTAGE	Standard Option	ABS (UL.94:HB)	
Total charge voltage at 20°C 13.65 (±1%) V	Flame retardant option (FR)	ABS (UL94:V0)	
Ploat charge voltage at 20°C 2.275 (±1%) V/cell	CHARGE VOLTAGE		
Float Charge voltage temperature correction factor (for variations from the standard 20°C) Cyclic (or Boost) charge at 20°C Cyclic Charge voltage temperature correction factor (for variations from the standard 20°C) Cyclic Charge voltage temperature correction factor (for variations from the standard 20°C) CHARGE CURRENT Float charge current limit No limit A Cyclic (or Boost) charge current limit 1.2675 A MAXIMUM DISCHARGE CURRENT 1 second 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A MPL Short-Circuit current N/A MPL Short-Circuit current Measured at 1 kHz PERFORMANCE & CHARACTERISTICS Refer to the technical manual	Float charge voltage at 20°C		V
(for variations from the standard 20°C) Cyclic (or Boost) charge at 20°C Cyclic Charge voltage temperature correction factor (for variations from the standard 20°C) CHARGE CURRENT Float charge current limit Cyclic (or Boost) charge current limit No limit A MAXIMUM DISCHARGE CURRENT 1 second 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A MPEDANCE Measured at 1 kHz PERFORMANCE & CHARACTERISTICS Refer to the technical manual		2.275 (±1%)	V/cell
Cyclic (or Boost) charge at 20°C			
(for variations from the standard 20°C) CHARGE CURRENT Float charge current limit Cyclic (or Boost) charge current limit 1.2675 A MAXIMUM DISCHARGE CURRENT 1 second 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A MI Short-Circuit current Measured at 1 kHz PERFORMANCE & CHARACTERISTICS Refer to the technical manual	Cyclic (or Boost) charge at 20°C		
Float charge current limit No limit A Cyclic (or Boost) charge current limit 1.2675 A MAXIMUM DISCHARGE CURRENT 1 second 150 A 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A m Short-Circuit current N/A A IMPEDANCE Measured at 1 kHz 25 m PERFORMANCE & CHARACTERISTICS Refer to the technical manual		-4	mV/cell/°C
Cyclic (or Boost) charge current limit MAXIMUM DISCHARGE CURRENT 1 second 1 150 A 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A Short-Circuit current N/A IMPEDANCE Measured at 1 kHz PERFORMANCE & CHARACTERISTICS Refer to the technical manual	CHARGE CURRENT		
MAXIMUM DISCHARGE CURRENT 150 A 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A m1 Short-Circuit current N/A A IMPEDANCE Weasured at 1 kHz 25 m1 PERFORMANCE & CHARACTERISTICS Refer to the technical manual Image: Control of the technical manual Image: Control of the technical manual Image: Control of the technical manual	Float charge current limit	No limit	A
1 second 150 A 1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A mil Short-Circuit current N/A A IMPEDANCE Weasured at 1 kHz 25 mil PERFORMANCE & CHARACTERISTICS Refer to the technical manual ————————————————————————————————————	Cyclic (or Boost) charge current limit	1.2675	А
1 minute 50 A SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A m Short-Circuit current N/A A IMPEDANCE Measured at 1 kHz 25 m PERFORMANCE & CHARACTERISTICS Refer to the technical manual	MAXIMUM DISCHARGE CURRENT		
SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE (according to EN IEC 60896-21) Internal resistance N/A ml Short-Circuit current N/A A IMPEDANCE Measured at 1 kHz 25 ml PERFORMANCE & CHARACTERISTICS Refer to the technical manual	1 second	150	A
(according to EN IEC 60896-21) Internal resistance N/A m Short-Circuit current N/A A IMPEDANCE Measured at 1 kHz 25 m PERFORMANCE & CHARACTERISTICS Refer to the technical manual	1 minute	50	A
Internal resistance N/A m Short-Circuit current N/A A IMPEDANCE Measured at 1 kHz 25 m PERFORMANCE & CHARACTERISTICS Refer to the technical manual	SHORT-CIRCUIT CURRENT & INTERNAL RESISTANCE		
Short-Circuit current N/A A IMPEDANCE Measured at 1 kHz 25 ml PERFORMANCE & CHARACTERISTICS Refer to the technical manual	(according to EN IEC 60896-21)		
IMPEDANCE Measured at 1 kHz PERFORMANCE & CHARACTERISTICS Refer to the technical manual	Internal resistance	N/A	ml
Measured at 1 kHz 25 ml PERFORMANCE & CHARACTERISTICS Refer to the technical manual	Short-Circuit current	N/A	A
PERFORMANCE & CHARACTERISTICS Refer to the technical manual	IMPEDANCE		
Refer to the technical manual	Measured at 1 kHz	25	ml
L L	PERFORMANCE & CHARACTERISTICS		
DESIGN LIFE	Refer to the technical manual	T	T
	DESIGN LIFE		
EUROBAT Classification: Standard Commercial 3 to 5 years	EUROBAT Classification: Standard Commercial	3 to 5	years
Yuasa design life @ 20°C up to 5 years			,
SAFETY			, 50.10





3RD PARTY CERTIFICATIONS

ISO 9001 - Quality Management Systems
ISO 14001 - Environmental Management Systems
EN 18001 - OHSAS Management Systems
UNDERWRITERS LABORATORIES Inc.



STANDARDS

IEC61056







ALL DATA IS SUBJECT TO CHANGE WITHOUT NOTICE Issue No.: V.1 / Issue Date: July 2010



YUASA BATTERY SALES UK LTD. Unit 22 Rassau Industrial Estate Ebbw Vale, Gwent NP23 5SD UK

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 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