

Yuasa NP Range VRLA Batteries



- Typical 5 year service life
- Suitable for use in any orientation (excluding continuous use inverted)
- Standard case material is flame retardant to (UL94) HBO
- Manufactured within ISO9002 Quality Assurance Standard
-  Approval

Description

AN ENHANCED DESIGNED OF VALVE REGULATED LEAD ACID BATTERY

The Yuasa NP range provide an extremely reliable and versatile valve regulated lead acid battery. Their unique construction and sealing techniques ensures that no electrolyte leakage can occur, and provides safe and effective operation in any orientation, and meets all requirements of the International Air Transport Association (I.A.T.A Dangerous Goods Regulations) to allow transportation by air.

They require low maintenance i.e. there is no need to check specific gravity or add water etc. All Yuasa NP batteries conform to BS EN61056-1 and IEC1056-1 regulations.

They are equipped with a safe, low pressure venting system which is designed to release excess gas and reseal automatically in the event the internal gas pressure rises to an unacceptable level, making the Yuasa NP range one of the safest valve regulated batteries available.

The Yuasa NP range is typically suited for standby power applications, examples of which are:

- Alarm Systems
- Communications Equipment
- Control Equipment
- Emergency Lighting Systems
- Fire & Security Systems
- Medical Equipment
- Solar Powered Systems
- Uninterruptible Power Supplies

Product Specification

Voltage Range:

nominal voltages 4V, 6V and 12V ranges

Capacity Range:

nominal capacity
4V range 4.2Ah and 10Ah
6V range 1Ah - 12Ah
12V range 0.8 Ah - 65Ah

Charging

charging methods constant voltage charging
(recommended) Two stage constant voltage charging

recommended float charge 2.275 Volts per cell \pm 0.005V
(at 20°C)

NOTE: High ripple current will greatly reduce the service life of a battery

General:

operating temperature range
charge -15 to +50°C
discharge -20 to +60°C
storage -20 to +50°C
(fully charged condition)

Conforms to BS EN61056-1 / IEC1056-1

Battery Selection Chart

TABLE 1 CONSTANT CURRENT DISCHARGE PERFORMANCE DATA

20Hr Capacity	TOTAL AH DISCHARGE AT 20 DEG C						
	MINUTES		HOURS				
	10	30	1	3	5	10	20
0.8	0.25	0.38	0.48	0.62	0.68	0.74	0.80
1.2	0.37	0.57	0.72	0.92	1.02	1.11	1.20
2	0.61	0.95	1.20	1.54	1.70	1.85	2.00
2.1	0.64	1.00	1.26	1.62	1.79	1.90	2.10
2.3	0.71	1.09	1.38	1.77	1.96	2.13	2.30
2.8	0.86	1.33	1.68	2.16	2.38	2.60	2.80
3.2	0.98	1.52	1.92	2.46	2.72	3.00	3.20
4	1.23	1.90	2.40	3.08	3.40	3.70	4.00
7	2.15	3.33	4.20	5.39	5.95	6.48	7.00
12	3.68	5.71	7.20	9.24	10.20	11.10	12.00
17	5.22	8.09	10.20	13.09	14.45	13.88	17.00
24	7.37	11.42	14.40	18.48	20.40	22.20	24.00
38	11.67	18.09	22.80	29.26	32.30	35.15	38.00
65	19.96	30.94	39.00	50.05	55.25	60.13	65.00

Table 1, above, will allow battery selection to be made for Constant Current load conditions. It should be used by mapping the required load time to the batteries 20 hour capacity rate. The figure obtained is the total AH output available for that battery in the indicated time.

Example: Load condition 30A constant current
Load time 30 minutes
Load voltage, nominal 24V

1. Calculate total capacity required by multiplying load in hours by constant current load condition value, i.e. $0.5 \times 30 = 15\text{AH}$
2. Using table 1, load time column for "30 minutes", locate minimum battery capacity required i.e. 38AH
3. From table 2, below, select battery model and quantity, i.e. NP38-12 times 2pcs.

TABLE 2 GENERAL SPECIFICATION

Model	Nominal Voltage	Nominal Capacity (Ah)		Dimensions			
	(V)	(20Hr)	(10Hr)	L (mm)	W (mm)	Height over Terminals (mm)	Weight Approx (Kg)
NP0.8-12	12	0.8	0.74	96	25	61.5	0.35
NP1.2-12	12	1.2	1.11	97	48	54.5	0.58
NP2-12	12	2	1.85	150	20	89/85	0.7
NP2.1-12	12	2.1	1.9	178	34	64	0.82
NP2.3-12	12	2.3	2.13	178	34	64	0.95
NP2.8-12	12	2.8	2.6	134	67	64	1.12
NP3.2-12	12	3.2	3	134	67	64	1.2
NP4-12	12	4	3.7	90	70	106	1.75
NP7-12	12	7	6.48	151	65	97.5	2.65
NP12-12	12	12	11.1	151	98	97.5	4.05
NP17-12	12	17	13.88	181	75	167	6.1
NP24-12	12	24	22.2	166	175	125	9
NP38-12	12	38	35.15	197	165	170	14.2
NP65-12	12	65	60.13	350	166	174	23

CAUTION

Follow these precautions when using and charging these batteries:



- Avoid short-circuit
- Do not charge in a sealed container
- Service life and operational characteristics will be affected by temperature
- AC Ripple reduces service life

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