12HTB100

High Temperature Break through Innovation

Narada

stored energy solutions for a demanding world

313K 12V Series

High Temperature Batteries

Benefits

- Excellent deep cycling capability
- Suitable for continuous operation at temperatures in excess of 35°C
- Reduced system operating costs
- 25% electricity power saving
- Up to 100% air conditioner maintenance saving
- Up to 100% condensing agent saving
- 30% CO_2 gas emission reduce
- Less than 1 year payback period depend on environment

Designed and manufactured with 8 exclusive patented technologies, Narada have created an innovative range of high temperature batteries. The 313K series is designed to cope with the most extreme temperatures and environments.The advanced technology and unique manufacturing methods enable 313K batteries to deliver at least twice the cycle life of conventional lead-acid batteries, making them the first choice increasing power demands in remote hybrid telecom sites and other tough off-grid applications.

Standards

Test standards
IEC60896-21/-22, IEC61427, YD/T799 etc.
Safety standard,ventilation
EN 50272-2
Manufactured under system
ISO9001/TL9000 & ISO14001

Technical specifications

Electrical data	
Nominal voltage	12 V
Number of cells	6
Rated capacity(35℃)	102Ah- 10.2 A for 10h to 1.80V/cell
Rated capacity(25℃)	100Ah- 10 A for 10h to 1.80V/cell
Internal resistance	6.15 mΩ (acc. to IEC60896-21)
Short circuit current	2150 A (acc. to IEC60896-21)
Self discharge(35℃)	less than 5% per month
Design life at 35℃	10 years
Mechanical data	
Weight ready for use	35 kg (77.2 lbs)
Length	390 mm (15.4 in)
Width	108 mm (4.25 in)
Height of monobloc	287 mm (11.3 in)
Total height	287 mm (11.3 in)
Terminal	M6 female
Terminal hardware torque	8±1.0 Nm

Constant Current Discharge Data Units: Amperes (35℃,95°F)

End Voltage	Time (minutes)				Time (hours)										
	5	15	30	45	1	2	3	4	5	6	8	10	12	20	24
1.60V	324	180	109	79.0	63.9	36.3	28.5	21.8	19.6	16.5	12.8	10.6	8.93	5.55	4.63
1.67V	309	174	107	78.5	63.6	36.1	27.9	21.7	19.4	16.4	12.6	10.5	8.84	5.50	4.62
1.70V	301	171	106	77.9	63.0	35.8	27.7	21.5	19.2	16.3	12.4	10.4	8.75	5.49	4.61
1.75V	286	165	104	77.4	62.1	34.9	27.4	21.3	19.0	16.2	12.3	10.3	8.71	5.48	4.59
1.80V	256	155	100	74.2	60.5	34.6	27.2	21.0	18.5	15.9	12.2	10.2	8.68	5.42	4.58
1.83V	245	141	97.9	71.7	57.9	34.2	26.3	20.3	17.9	15.4	12.1	9.82	8.33	5.41	4.51
1.85V	230	137	91.7	68.8	56.0	32.8	25.6	20.0	17.4	15.0	11.7	9.74	8.28	5.30	4.47

Constant Power Discharge Data Units: Watts per cell (35℃,95°F)

End Voltage	Time (minutes)				Time (hours)										
	5	15	30	45	1	2	3	4	5	6	8	10	12	20	24
1.60V	559	316	197	148	121	68.4	54.1	42.0	37.5	31.7	24.8	20.6	17.2	11.0	9.20
1.67V	539	310	196	147	119	68.3	53.3	41.8	37.3	31.6	24.5	20.5	17.1	10.9	9.20
1.70V	536	307	195	146	118	68.0	53.0	41.6	37.0	31.5	24.3	20.1	17.0	10.9	9.19
1.75V	500	305	192	144	116	67.6	52.7	41.4	36.8	31.4	24.0	20.0	16.9	10.8	9.18
1.80V	467	288	191	143	115	67.4	52.6	41.1	36.0	31.2	23.9	19.8	16.7	10.8	9.14
1.83V	450	264	187	139	112	66.6	51.4	40.0	35.2	30.3	24.0	19.5	16.6	10.7	9.10
1.85V	426	258	174	134	109	64.5	50.0	39.4	34.4	29.7	23.3	19.3	16.5	10.7	9.03

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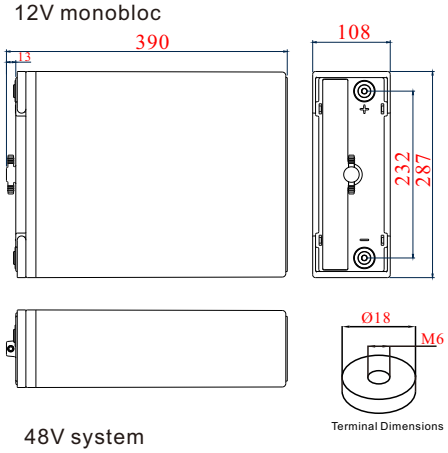
Construction

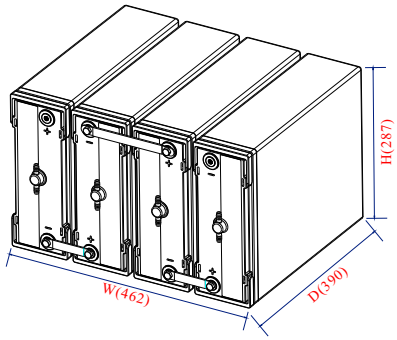
Positive plate	Reinforced grids in a corrosion-resistant pure lead, high tin, low calcium alloy
Negative plate	Lead-calcium alloy grid
Separator	High density microporous glass mat with low electrical resistance
Container & lid	High temperature ABS. Optional flame retardant versions available (UL94 FV-0 with L.O.I. of 28%)
Electrolyte	Sulphuric acid absorbed in AGM
Terminal design	Patented leak resistant seal configuration with brass insert
Safety valve	Calibrated opening pressure , the valve equipped with flame arrestors for increased operational safety and service life.

Dimensions（mm）

12V monobloc



48V system

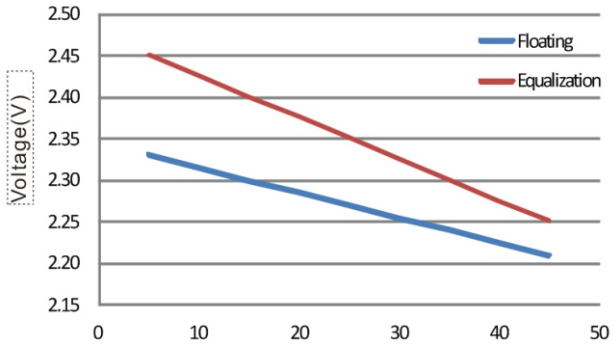


Installation and operation

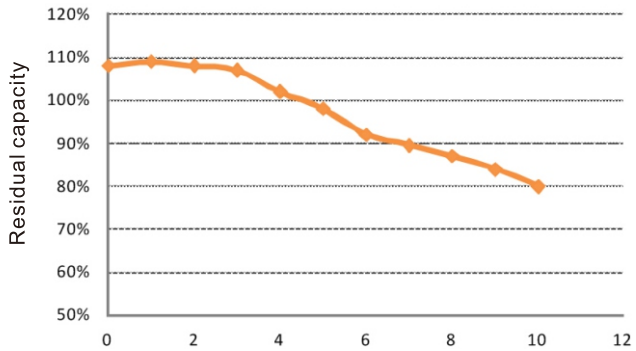
·Recommended float charge voltage	2.24V per cell at 35℃
compensation in function of temperature	-3mV/℃/cell
·Cycle and equalize charge voltage:	2.30V per cell at 35℃
compensation in function of temperature	-5mV/℃/cell
·CC-CV charge current	unlimited, otherwise 0.25C_{10}A max. if T>25℃
·Preferred operating temperature range	15℃ to 35℃(68℉ to 95℉)
·Maximum operating temperature range	-40℃ to 80℃(-40℉ to 176℉)
·A separate battery room	is not necessary
·Reduced maintenance	no water addition required.

Charge voltage and Expect life

Charge voltage vs temperature



Expect life at 35℃



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