12HTB170

High Temperature Break through Innovation

Narada

stored energy solutions for a demanding world

313K 12V Series

High Temperature Batteries

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.

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

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℃)	174Ah- 17.4 A for 10h to 1.80V/cell
Rated capacity(25℃)	170Ah- 17 A for 10h to 1.80V/cell
Internal resistance	3.52 mΩ (acc. to IEC60896-21)
Short circuit current	3200 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	58.0 kg (127.9 lbs)
Length	546 mm (21.5 in)
Width	125 mm (4.92 in)
Height of monobloc	310 mm (12.2 in)
Total height	310 mm (12.2 in)
Terminal	M8 female
Terminal hardware torque	10 - 12 Nm

Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)

End Voltage	Time (minutes)				Time (hours)										
	5	15	30	45	1	2	3	4	5	6	8	10	12	20	24
1.60V	543	297	180	131	105	60.5	47.4	36.3	32.6	27.4	21.3	17.7	14.9	9.25	7.72
1.67V	519	286	177	130	104	60.2	46.5	36.1	32.3	27.3	21.0	17.5	14.7	9.17	7.66
1.70V	504	282	174	128	103	59.7	46.3	35.9	32.0	27.2	20.8	17.3	14.6	9.14	7.65
1.75V	472	273	170	125	102	58.1	45.7	35.6	31.6	27.1	20.6	17.2	14.4	9.12	7.64
1.80V	424	254	166	122	100	57.7	45.4	35.4	30.8	26.5	20.4	17.0	14.2	9.03	7.63
1.83V	404	233	162	118	95.5	56.9	43.9	33.8	29.8	25.6	20.2	16.4	13.9	9.01	7.51
1.85V	379	226	151	114	92.6	54.8	42.7	33.4	29.1	25.1	19.6	16.2	13.8	8.84	7.45

Constant Power Discharge Data Units: Watts per cell (25℃,77℉)

End Voltage	Time (minutes)				Time (hours)										
	5	15	30	45	1	2	3	4	5	6	8	10	12	20	24
1.60V	924	522	325	245	198	115	90.1	69.7	62.6	52.9	41.3	34.3	28.8	18.4	15.3
1.67V	890	512	323	243	197	114	88.9	69.6	62.3	52.8	40.9	34.1	28.6	18.3	15.3
1.70V	884	507	321	242	196	113	88.6	69.4	61.7	52.7	40.6	33.6	28.4	18.2	15.3
1.75V	825	503	318	240	194	112	87.9	69.0	61.3	52.5	40.0	33.4	28.2	18.2	15.2
1.80V	771	475	314	237	193	111	87.3	68.1	60.0	52.0	39.7	33.2	28.0	18.1	15.2
1.83V	743	436	310	230	185	110	85.7	66.6	58.7	50.4	40.0	32.4	27.6	18.0	15.1
1.85V	704	425	288	220	180	107	83.3	65.7	57.2	49.4	38.7	32.1	27.5	17.8	15.0

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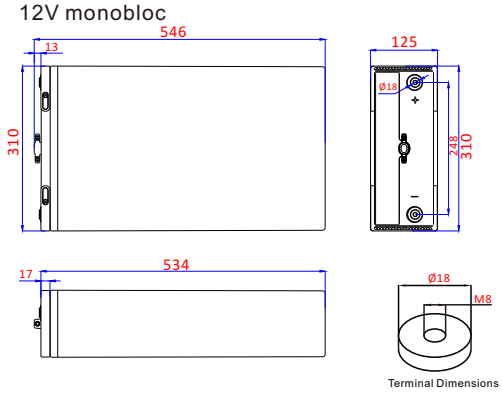
Construction

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

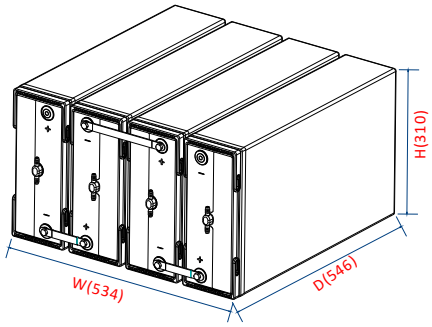


Terminal Dimensions

Installation and operation

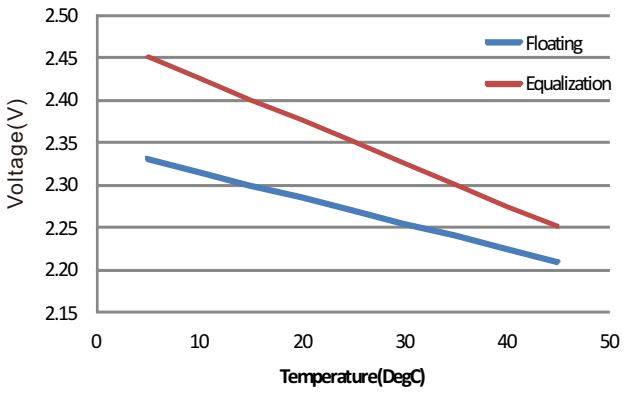
·Recommended float charge voltage	2.24V per cell at 35℃
compensation in function of temperature	-3mV/℃/cell
·Cycle and equalize charge voltage:	2.30V per cell at 35℃
compensation in function of temperature	-5mV/℃/cell
·CC-CV charge current	unlimited, otherwise 0.25C_{10}A max. if T>25℃
·Preferred operating 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.

48V system

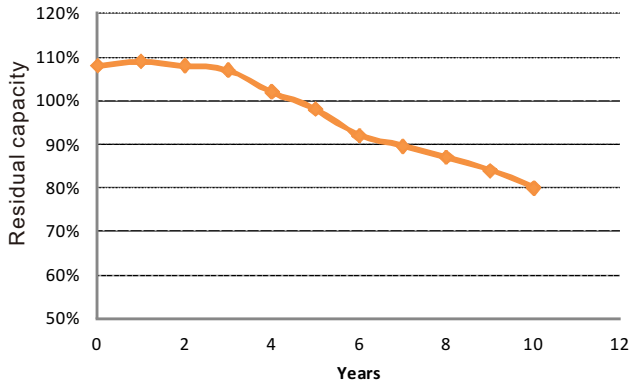


Charge voltage and Expect life

Charge voltage vs temperature



Expect life at 35℃



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