12HTB170

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 conditionermaintenance 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 by Narada

Technical specifications

Electrical data	
Nominal voltage	12 V
Number of cells	6
Rated capacity(35℃)	175Ah- 17.5 A for 10h to 1.80V/cell
Rated capacity(25℃)	170Ah- 17 A for 10h to 1.80V/cell
Internal resistance	5.06mΩ(acc. to IEC60896-21)
Short circuit current	2455A (acc. to IEC60896-21)
Self discharge(35℃)	less than 5% per month
Design life at 35℃	10 years
Mechanical data	
Weight ready for use	60.5 kg (133.4 lbs)
Length	546 mm (21.5 in)
Width	125 mm (4.92 in)
Height of monobloc	310 mm (12.20 in)
Total height	310 mm (12.20 in)
Terminal	M8 female
Terminal hardware torque	10 - 12 Nm

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

End voltage	5min	15min	45min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr	12hr	20hr	24hr
1.60Vpc	402	263	139	115	69.8	50.8	40.2	33.3	28.5	22.2	18.2	15.4	9.60	8.08
1.67Vpc	369	253	137	114	69.5	50.6	40.0	33.2	28.4	22.0	18.0	15.3	9.52	8.02
1.70Vpc	360	248	135	112	68.8	50.2	39.8	33.0	28.2	22.0	17.9	15.3	9.50	7.99
1.75Vpc	322	234	132	110	67.8	49.6	39.3	32.7	28.0	21.7	17.8	15.1	9.39	7.90
1.80Vpc	300	218	124	104	64.9	47.9	38.1	31.8	27.3	21.3	17.5	14.9	9.30	7.84
1.83Vpc	256	202	120	101	63.8	47.1	37.5	31.3	26.8	20.9	17.2	14.6	9.09	7.66
1.85Vpc	244	194	116	98.0	61.9	45.9	36.6	30.5	26.2	20.5	16.8	14.3	8.95	7.54

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

End voltage	5min	15min	45min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr	12hr	20hr	24hr
1.60Vpc	680	459	251	212	133	96.7	77.1	64.5	55.3	43.3	35.7	30.4	19.1	16.1
1.67Vpc	632	446	250	211	132	96.6	77.0	64.2	55.2	43.1	35.5	30.2	18.9	16.1
1.70Vpc	584	434	249	210	131	96.1	76.7	64.1	55.1	43.1	35.5	30.1	18.9	16.0
1.75Vpc	556	418	242	206	129	95.6	76.3	63.6	54.7	42.8	35.2	29.9	18.8	15.8
1.80Vpc	491	387	232	198	126	93.6	74.9	62.6	53.8	42.1	34.7	29.5	18.5	15.6
1.83Vpc	463	369	223	191	122	91.3	73.2	61.3	52.8	41.4	34.2	29.1	18.3	15.5
1.85Vpc	446	355	216	185	119	89.0	71.5	60.0	51.7	40.7	33.6	28.6	18.1	15.3

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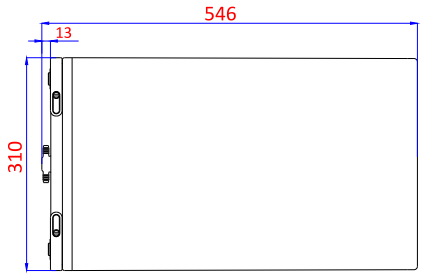
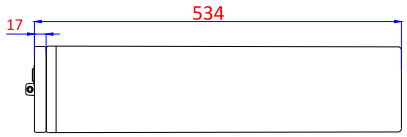
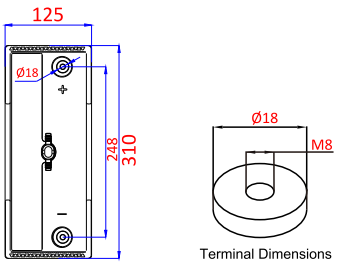
Construction

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)





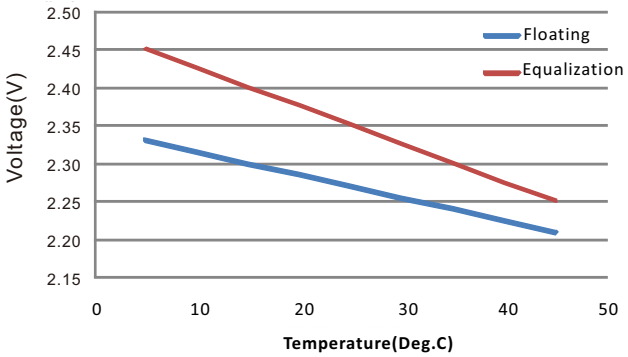


Installation and operation

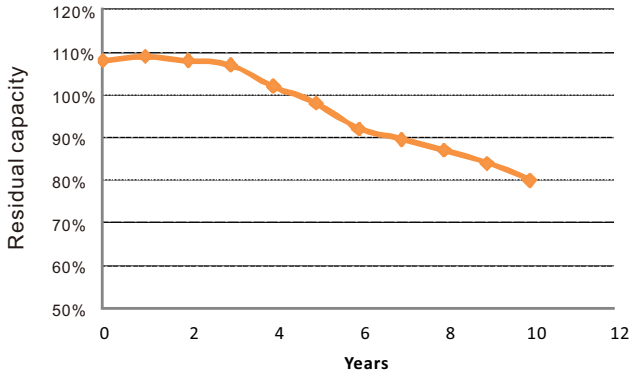
·Recommended float charge voltage	2.24V per cell at 35℃
compensation in function of temperature	-3mV/℃/cell
·Cycle and equalize charge voltage:	2.30V per cell at 35℃
compensation in function of temperature	-5mV/℃/cell
·CC-CV charge current	unlimited, otherwise 0.25C_{10}A max. if T>25℃
·Preferred operating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