HG 250-12

Hybrid Gel Solar series

Specifications	
Nominal Voltage	12V
Nominal Operating Range	25°C ± 5°C
Dimensions	**Length** : 522 mm
	Width : 240 mm
	Total Height : 222 mm
Weight	57,0 Kg
Int. Resistance (25 ˚C)	3,2 mΩ
Float Service Lifetime	10-12 years
Container Material	A.B.S. UL94-HB (UL94-V0 Optional).

Characteristics	
Capacity 25ºC	253Ah 100HR (1.85V)
	202Ah 10HR (1.80V)
Charging Voltage (25 ˚C)	**Float use** : 13,5 to 13,8 VDC
	Cycle Use : 14,4 to 15,0 VDC
Max Charging Current	50,0A (recomm. 20A)
Self-Discharge (25°C)	less than 3% per month
Max Discharge Current	2400A (5sec)
Operating Temperature Range	**Discharge** : -40 to +60°C
	Charge : -20 to +50°C
	Storage : -20 to +50°C

Compliant Standards
IEC 60896-21/22:2004
BS 6290-3/4
IEC 62485-2
IEC 61427
Eurobat Guide 2015 classification : Long Life

Applications
Off – Grid Solar Systems
UPS/EPS/ Power systems
Telecommunications – Traffic Lights
Emergency lighting - Auto control system
Marine Signaling/Service applications

Technology

NORTHBATT HG Hybrid Gel series is designed for repeated Deep Cycle use, to be discharged and recharged hundreds of times. The consistency performance of group usage (groups with multiple connections) is much better than of other general series, making **HG** ideal for heavy duty applications.

By combining the newly developed Nanometer Gel electrolyte, high tin content cathode plate and AGM separator, **HG** series enjoys excellent discharging performance, long cycle life and stable performance at high and low temperature surrounding. It is suited for all kinds of ranges for the energy storage, especially for renewable solar energy systems etc.

It differs from conventional VRLA batteries, as it contains more lead, heavier plates and other special materials that are able to deliver more power and capacity over many charging cycles. The use of a special plate curing process for 10 days and extra superior pasting to the grids, ensuring long service life and fast recovery from deep discharge.

NORTHBATT HG Hybrid Gel provides excellent cyclic and recovery performance after over-discharging. It incorporates the latest Hybrid Gel VRLA technology and excellent know-how.

Features

- Nanosilica colloidal electrolyte and high tin positive plate alloy design to enhance battery performance.
- Relatively rich electrolyte, high temperature and low temperature performance is superior.
- Long cycle life, excellent deep cycle discharge ability.
- Excellent charge acceptance ability.
- Precision sealing technology.

Constant Current Discharge Table : Amperes (25ºC)

[A]	TIME - AMPERE CONSTANT CURRENT DISCHARGE (25 °C)									
	F.V	**15min**	**30min**	**1h**	**3h**	**5h**	**10h**	**20h**	**100h**	**120h**
	1.65V	359,56	222,20	132,31	54,94	36,87	20,71	10,91	.....	.....
	1.70V	351,48	218,16	131,30	54,14	36,46	20,50	10,80	.....	.....
	1.75V	340,37	216,14	129,28	53,53	36,06	20,30	10,75	.....	.....
	1.80V	317,14	207,05	126,25	53,13	35,15	20,20	10,70	2,57	2,18
	1.85V	282,80	188,87	117,16	50,10	33,33	19,49	10,61	2,53	2,12

Constant Power Discharge Table : Watts/cell (25ºC)

[W]	TIME - WATTS/CELL CONSTANT POWER DISCHARGE (25 °C)									
	F.V	**15min**	**30min**	**1h**	**3h**	**5h**	**10h**	**20h**	**100h**	**120h**
	1.65V	642,36	404,00	250,48	104,03	70,20	39,79	21,61	.....	.....
	1.70V	634,28	404,00	248,46	104,03	69,69	39,39	21,51	.....	.....
	1.75V	630,24	401,98	246,44	103,02	69,29	38,99	21,41	.....	.....
	1.80V	595,90	392,89	244,42	103,02	68,48	38,58	21,31	5,08	4,31
	1.85V	532,27	360,57	227,25	97,57	65,35	37,98	21,11	5,00	4,19

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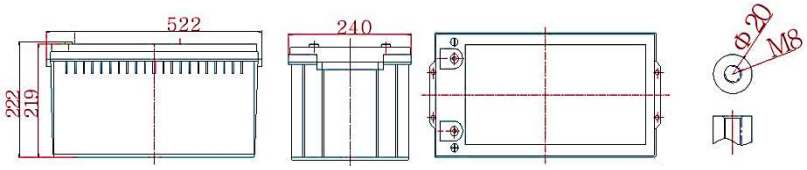
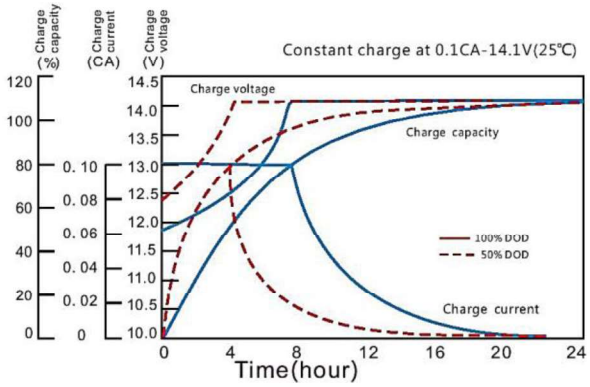
Dimensions – Terminals - Photo

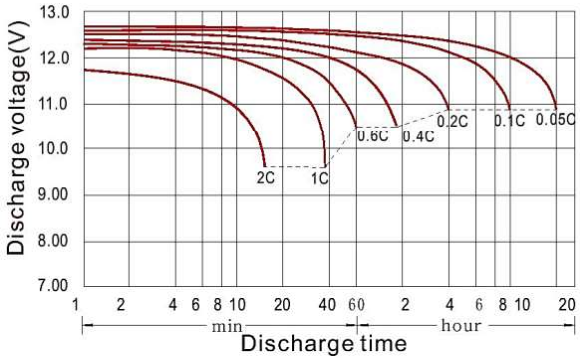


Performance Curves

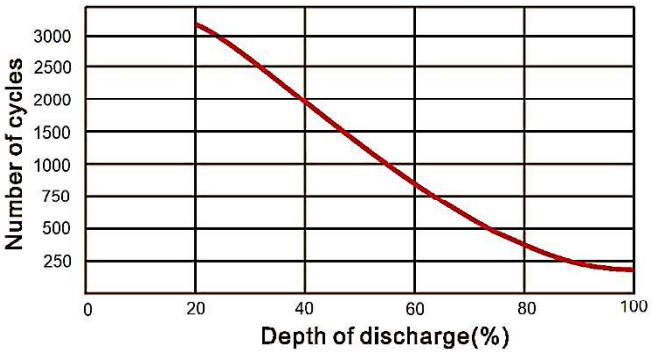
Charge characteristic Curve



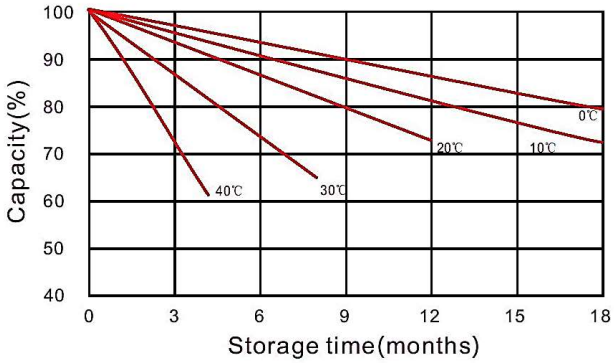
Discharge characteristic Curve



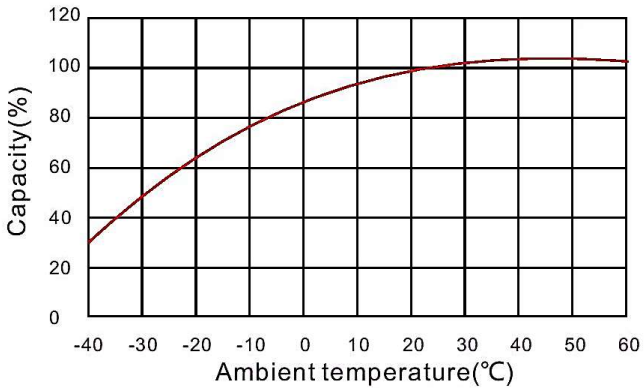
Life characteristics of cyclic use



Storage characteristic



Temperature vs Capacity



OCV vs Capacity