



GOLD SMF UPS

Product Data Sheet

Short Code: 1150

General

Enertec Code:	20BUG-1150-BLG
Technology:	Wet_Sealed Maintenance Free
Alloy:	Silver/Calcium
Maintenance:	Sealed Maintenance Free
Short Code:	1150-BLG
Charge Eye:	Yes

Electrical Specifications

Voltage:	12.8
Capacity (20 hrs):	100 AH

Test Specifications

CCA SAE (-18°C):	860
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Transportation

Classified as:	Lead Acid
Batteries, wet, filled with acid, electrical storage	
UN number:	UN 2794
Classification (ADR/RID)	Class 8
Packing Group	Not Assigned



LONGER
LIFE



PUNCHED
GRID



HIGH
HEAT



SILVER (Ag)
CALCIUM (Ca)

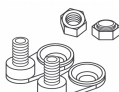
Dimensions / Mass

Max Length (L):	330 mm
Max Width (W):	172 mm
Max Height (H):	219 mm
Total Height (TH):	242 mm
Mass (Weight):	24.5 kg

Container

Flame Arrestor (FA)	Yes
Group Size:	G31
Case Material:	Polypropylene
Colour:	Black
Bottom Hold Down:	B00
Terminal Type:	Threaded Stud (13)
Layout:	LHP Middle (7)

Terminal



13

Layout

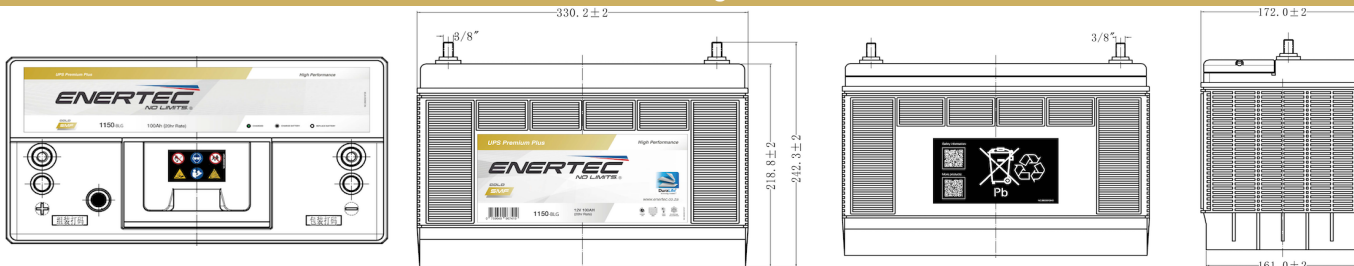


Hold-down



B00

Drawings



Grid Design

Silver - Calcium Duralife[®] Technology delivers consistent power reserves to meet any challenge. The grid alloy is formed of a positive Calcium - Silver grid and a negative Calcium grid, reducing the battery's water consumption to a minimum. Battery expected design life in a UPS application is between 3-5 years **under the correct operating conditions.**

Warranty

The **ENERTEC GOLD** battery is guaranteed for one year when used in UPS applications. The guarantee does not cover flat, or deeply discharged batteries, bent, burnt or broken terminals or casing, and if battery is fitted in applications for which it was not designed. The warranty covers the replacement of the defective battery with an equivalent new battery. This warranty does not in any way cover personal loss or damage owing to hidden defects. Before validating the warranty, Enertec Batteries (Pty) Ltd will recharge and test the battery. Enertec Batteries (Pty) Ltd or it's associates, distributors, or dealers will be final after testing.

Float charging of Enertec GOLD standby power batteries

ENERTEC GOLD standby power batteries, can be ***maintained at a full charge by float charging at 13.5 volts / 27°C (80 °F) for long periods of time** Battery electrolyte consists of a mixture of sulphuric acid (37%) at a full charge and water. Acid is heavier than water and will collect at the bottom of the cell, in stationary applications. To overcome this electrolyte stratification, it is recommended that the battery be given an equalisation charge at six-month intervals. An equalisation charge entails charging the battery (which is fully charged) at 15.8 volts / 27°C (80°F) for six hours. An equalisation charge promotes gassing which will effectively mix the electrolyte. Both float and equalisation voltages should be compensated for temperatures that are either above or below 27°C (80°F). For each degree below 27°C (80°F) add 0.033 (0.019) volts. Conversely for each degree rise above 27°C (80°F) subtract 0.033 (0.019) volts. Please note, however, that a battery has a large mass and does not respond quickly to changes in ambient temperature. It is also typical for standby batteries to be exposed to temperature swings and it may be necessary to select an average temperature value. The following table should be of help in applying temperature compensation to standby power applications.

***NOTE: 13.5 Volts will not recharge discharged batteries in cyclic applications.**

Battery Temp	Float Voltage	Equalisation Voltage
- 9.4 °C / 15 °F	14.7	16.7
- 6.7 °C / 20 °F	14.61	16.61
- 1.1 °C / 30 °F	14.42	16.42
4.4 °C / 40 °F	14.24	16.24
10 °C / 50 °F	14.06	16.06
15.6 °C / 60 °F	13.87	15.87
21.1 °C / 70 °F	13.69	15.69
27 °C / 80 °F	13.5	15.5
32.2 °C / 90 °F	13.32	15.32
37.6 °C / 100 °F	13.14	15.14
43.3 °C / 110 °F	12.96	14.96
48.9 °C / 120 °F	12.77	14.77

NOTE:

The above table is a guideline for exact charging at various temperatures. It may not be possible to adjust voltages on the existing charger. In this case, an average float voltage of 13.5 volts per 12 volt battery should be noted that 13.5 volts represents float voltage only. (ie: maintenance voltage once the battery is fully charged) A flat battery will not be fully recharged at 13.5 volts.

DURALIFE® Technology

DURALIFE®:

Duralife® Technology - (Battery separator technology)

1. Oxidation resistance increased by more than 40%;
2. Soluble organic carbon reduced by 50%;
3. Compared with other similar materials, the electric resistance is reduced by 10%;
4. The patented design of cross ribs on inner face improves the intensity of the separator;

New alloy Technology - (Grid technology)

1. The corrosion of the new alloy is 30% lower than that of the old alloy;
2. The corrosion interface of the new alloy is more uniform. And the grain structure is more compact resisting ACID corrosion.
3. **This technology can increase the battery's heavy duty life by more than 25%.**

Optimised frame design to minimise grid corrosion.



Carbon additives - (Lead paste formula)

The addition of highly conductive carbon materials can refine the crystal size of lead sulphate during high-rate discharge, effectively delaying the sulphation of the negative plate. **Cycle life performance is 2 times longer than that of ordinary batteries.**

Features:

- Ideal for high-temperature applications.
- Oxidation resistance improved by 40%
- Leachable organic carbons reduced by 50%
- 10% lower electrical resistance compared to similar polyethylene separators.
- Patented negative cross-rib design enhances separator strength.

Benefits:

- Extends battery life by up to 25%
- Reduces battery water loss by over 40% for antimony alloys and over 20% for non-antimony alloys.
- Improved envelope durability reduces early malfunction by up to 60%
- Reduces envelope punctures by more than 50% when used with expanded metal grids.

DURALIFE® PUNCHED GRIDS

“**Power Inside Grid**” is a patented technology that incorporates specific design features within the battery's internal grid structure (often a punched silver-calcium grid) to enhance its performance and durability.

Performance characteristics for 100 Amp Hour battery in UPS applications

Runtime (minutes)	1	2	5	7	10	15	20	25	30	60	90	120	180
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Output 2.00Vdc/cell, 12.00Vdc													
Current (amps)	185	128	103	84	66	50	40	38	36	29	25	21	15
Watts/cell	370	256	206	168	132	100	80	76	72	59	50	42	30
Watts/Battery	2220	1536	1236	1008	792	600	480	456	432	348	300	252	180
Ampere-hour	3	4	8	10	11	12	13	16	18	29	38	42	45

Output 1.92Vdc/cell, 11.52Vdc													
Current (amps)	220	203	146	105	98	87	75	69	63	47	36	29	23
Watts/cell	422	390	280	202	188	167	144	133	121	90	69	56	44
Watts/Battery	2532	2340	1680	1212	1129	1002	864	798	726	540	414	336	265
Ampere-hour	4	5	12	13	17	22	25	29	32	47	54	58	69

Output 1.83Vdc/cell, 10.98Vdc													
Current (amps)	266	232	182	157	135	112	98	85	77	48	37	31	24
Watts/cell	487	425	333	287	247	205	179	156	141	88	68	57	44
Watts/Battery	2922	2547	1998	1724	1482	1230	1076	933	846	527	406	340	264
Ampere-hour	5	7	15	19	23	28	32	36	39	48	56	62	72

Output 1.75Vdc/cell, 10.50Vdc													
Current (amps)	300	250	200	174	150	130	110	95	82	50	38	33	25
Watts/cell	525	438	350	315	268	228	193	166	144	88	67	58	44
Watts/Battery	3150	2625	2100	1890	1575	1365	1155	998	861	525	399	348	263
Ampere-hour	5	8	17	20	25	33	37	40	41	50	58	66	75

Output 1.67Vdc/cell, 10.02Vdc													
Current (amps)		280	230	200	170	140	118	103	91	56	41	35	26
Watts/cell		467	388	333	283	233	197	172	152	93	69	59	43
Watts/Battery		2800	2300	2060	1700	1400	1180	1030	910	560	414	354	260
Ampere-hour		8	18	24	29	35	39	43	46	56	61	70	78

Output 1.55Vdc/cell, 9.30Vdc													
Current (amps)			300	265	190	150	128	112	100	62	44	37	27
Watts/cell			465	411	295	233	198	174	155	96	68	57	42
Watts/Battery			2790	2465	1767	1395	1190	1042	930	576	408	344	251
Ampere-hour			24	31	32	38	42	47	50	62	66	74	81