



6-GFMJ-85 12V gel battery



Application

- Telecom
- Switching power supply
- CATV
- Oil and gas
- UPS, medical facilities
- Solar energy
- Street lamp
- Other situation with normal application

Features of performance application

- ✚ Designed service life of 15 years
- ✚ High cycle service life
- ✚ Wider temperature range
- ✚ Excellent deep cycle performance
- ✚ Excellent high rate discharge performance
- ✚ Stronger constant power discharge capability
- ✚ Better charge acceptability
- ✚ Better safety performance and reliability
- ✚ High Performance/price ratio and low yearly operating cost
- ✚ Environment protection and energy saving

Rated voltage	12 V
Capacity@ 25°C(77°F)	85Ah @ 10hr to 10.8V
Weight	About 38kg (83.6 lb)
Reference internal resistance (charged)	About 4.3mΩ@ 25°C(77°F)
Short-circuit current	About 2791A (0.1S reference value)
Max discharge current	255A (5sec)
Self-discharge	< 20% 180 days @ 25°C (77°F)
Temperature range	Application: -20°C ~ 50°C (-4°F ~ 122°F) Storage: 5°C~40°C(41°F~104°F) Recommendation: 20°C~30°C(68°F~86°F)
Max charge current	13A
Charge voltage @ 25°C(77°F)	Floater charge: 13.5V, average charge: 14.1V Temperature compensation factor: -18 mV/°C
Terminal output	M8 copper terminal (HPb59-1)
Recharge time	See figure 2

Execution standard:

IEC60896-21/22 BS EN 61427-2002
Q/321284KCC 03-2006 YD/T 1360

Authentication and certificate:

Certificate of Qualification on Perfecting Measurement & Measuring System
GB/T19022 ISO10012:2003、IDT

Quality Management System Authentication
GB/T19001 NO.03006Q10002R0M-2

Environmental Management System Authentication
ISO 14001 NO.010607E2024R1M-2

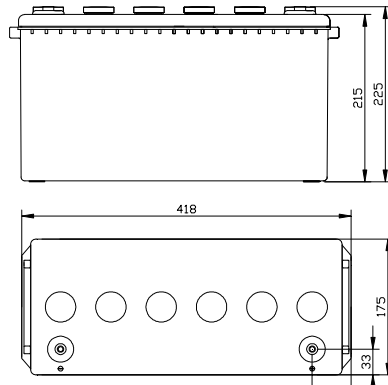
Occupational Health Management System Authentication
GB/T28001 NO.010607S10147R0M-2

Product authentication:
YD/T1360 NO.030074640566R1M

CE authentication
EN 61000-6-3:2001+A11:2004
EN 61000-6-1:2001

National Industrial Product Production License
XK06-044-00012

Product Quality Test Free Certificate



Structure feature of Shuangdeng 12V gel battery

- Electrolyte: primary material adopts Germany gas silicon dioxide, and special technology is adopted; the material will be the thin collosol state when it's injected initially, and the material will be gel state in finished battery, accordingly, leakage and lamination are avoided.
- Plate: both positive plate and negative plate adopt pasted plate, the distance is shorter, the strong current discharging capability is strong; the grid is composed of multi-component alloy whose hydrogen evolution potential is higher, the corrosion resistance is fine and service life is long; the utilization rate of active substance is high and charge receptivity is strong.
- Battery case lid: made of ABS material, corrosion is prevented, strength is high and appearance is beautiful. The case lid is sealed by hot-melting, reliability is high and potential leakage risk can be prevented.
- Separator: adopt special micro-pore PVC-SiO2 separator from Europe AMER-SIL Company, the porosity of separator is big and resistance is low. It has bigger electrolyte storage space.
- Terminal sealing: the built-in copper core lead-base terminal post has stronger current carrying capacity and corrosion resistance. The unique double sealing structure of terminal post can effectively avoid leakage, to guarantee reliability of terminal post sealing.
- Safety valve: adopt Germany technology, constant opening and closing valve, high reliability, the accumulator case expansion, damage and electrolyte dry up can be avoided.

Discharge current at different final voltages and different discharge rates unit: A (25°C, 77°F)

	5min	10min	15min	30min	45min	1hr	1.5hr	2hr	3hr	4hr	5hr	8hr	10hr	20hr	100hr	120hr
11.4	161.9	103.4	95.0	62.5	50.0	39.9	28.9	23.9	18.5	13.4	12.3	8.3	7.0	4.04	1.03	0.86
11.1	179	114	105	69.5	55.5	44.3	32.1	26.6	20.6	14.9	13.6	9.2	7.8	4.44	1.09	0.91
10.8	195	124	114	75.5	60.4	48.2	34.9	28.9	22.4	16.2	14.8	10.0	8.5	4.66	1.12	0.94
10.5	205	131	120	79.3	63.4	50.6	36.6	30.3	23.5	17.0	15.5	10.5	8.9	4.85	1.15	0.96

Discharge power at different final voltages and different discharge rates unit: W (25°C, 77°F)

	5min	10min	15min	30min	45min	1hr	1.5hr	2hr	3hr	4hr	5hr	8hr	10hr	20hr	100hr	120hr
11.4	1087	912	639	584	463	377	369	306	237	171	157	106	90	48.48	12.36	10.32
11.1	1389	1164	815	745	592	481	404	335	260	187	172	116	99	52.75	12.95	10.81
10.8	1673	1403	983	898	713	580	432	358	278	200	184	124	105	54.80	13.17	11.05
10.5	1941	1763	1113	1012	758	629	454	376	292	210	193	130	111	56.16	13.32	11.12



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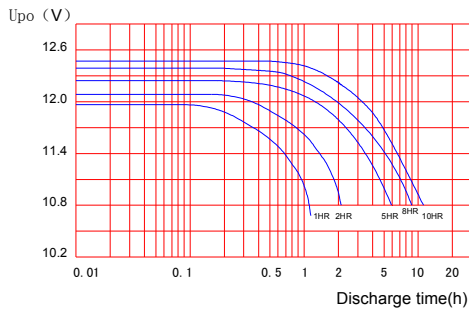


Figure 1 Discharge characteristic curve (20°C)

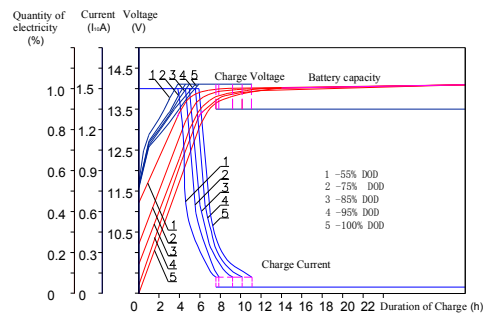


Figure 2 Constant voltage charge characteristic curve

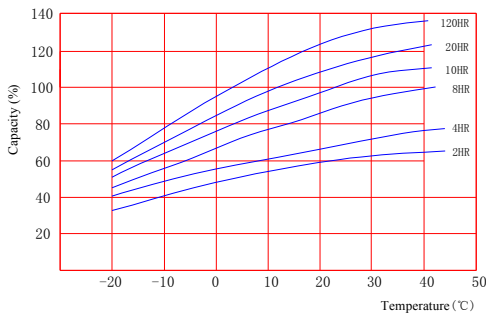


Figure 3 Relation curves between capacity and temperature

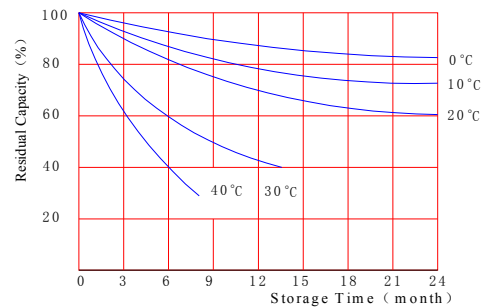


Figure 4 Self-discharge characteristic curve

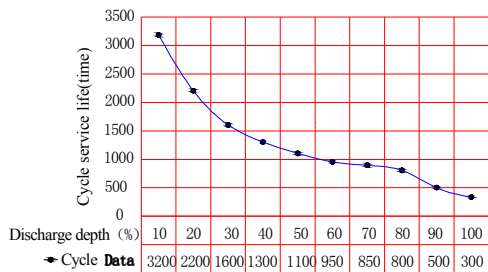


Figure 5 Relation curve between discharge depth and cycle service life

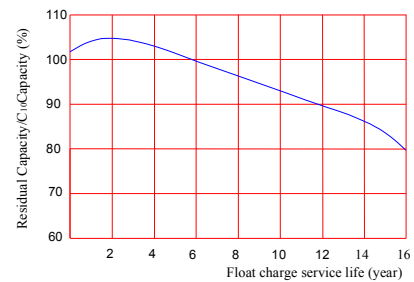


Figure 6 Relation curve between Float charge service life and residual capacity

- Remark: a) Test circumstances: 20-30°C, relative humidity is 50~80 percent;
 b) Charge mode: electricity of charge is equal to 105~115 percent of discharge
 c) Residual capacity is 80 percent C₁₀

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Shuangdeng Group promises to provide excellent engineering service for customers, including product solution, installation design and on-site maintenance.

The above data is only taken as reference instead of inspection standard. Additional notification won't be available for parameter change due to improvement and regulation of product. Inspection shall be performed in accordance with standards.

We must make a statement, when the battery service life and safe operating performance is confirmed, the test condition will be stricter; accordingly, the battery shall not be used in these conditions, because it's difficult for battery to reach expected service life.