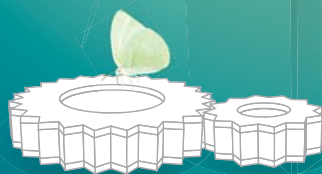


6-XFMJ-140

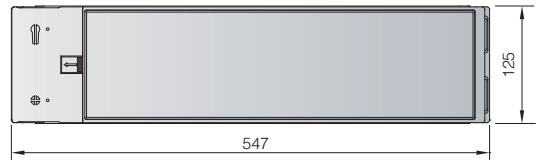
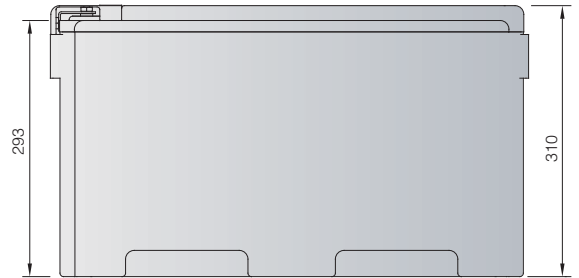
12V front terminal gel battery



shoto

power the future





views of battery

Application:

- > Telecom
- > Switching power supply
- > CATV
- > Oil and gas
- > UPS, medical facilities
- > Solar energy
- > 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 (77F)	140Ah@10hr to 10.8V 150Ah@20hr to 10.8V
Weight	Weight About59kg (129.8 lb)
Reference internal resistance (charged)	About 4.0m @ 25 (77F)
Short-circuit current	About 3000A (0.1s reference value)
Max discharge current	420A (5sec)
Self-discharge	<20% 180 days @ 25 (77F)
Temperature range	Application: -20~50 (-4~122F) Storage: 5~40 (41~104F) Recommendation: 20~30 (68~86F)
Max charge current	21A
Charge voltage @ 25 (77F)	Float charge: 13.5V, average charge: 14.1V Temperature compensation factor: -18 mV/
Terminal output	M8 copper terminal (HPb59-1)
Recharge time	See figure 2

Standard:

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

Structure feature of Shoto 12V front terminal 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 complex 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 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 pressure, 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 , 77F)

	Discharge time (min)					Discharge time (hr)											
	5	10	15	30	45	1	1.5	2	3	4	5	8	10	20	100	120	
11.4V	263	180	168	97.4	85.0	67.6	49.1	40.7	29.0	22.7	19.2	13.7	12.0	6.36	1.67	1.43	
11.1V	293	200	186	108.2	94.5	75.2	54.6	45.2	32.2	25.3	21.3	15.3	13.4	6.99	1.76	1.51	
10.8V	308	211	196	114.0	99.4	79.1	57.4	47.6	33.9	26.6	22.4	16.1	14.1	7.32	1.82	1.55	
10.5V	323	221	206	119.7	104.4	83.0	60.3	50.0	35.6	28.0	23.5	16.9	14.8	7.60	1.86	1.60	

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

	Discharge time (min)					Discharge time (hr)											
	5	10	15	30	45	1	1.5	2	3	4	5	8	10	20	100	120	
11.4V	2003	1546	1002	960	733	597	628	520	371	291	245	176	155	76.27	19.99	17.14	
11.1V	2559	1974	1280	1226	936	763.0	687	569	406	318	268	193	169	82.99	20.96	17.96	
10.8V	3083	2379	1541	1478	1128	919.8	711	590	420	330	277	200	175	86.10	21.41	18.27	
10.5V	3749	2547	1694	1524	1142	943.6	747	620	441	345	291	210	184	88.03	21.56	18.48	

Performance curve of 6-XFMJ gel battery

Figure 1 Discharge characteristic curve (20)

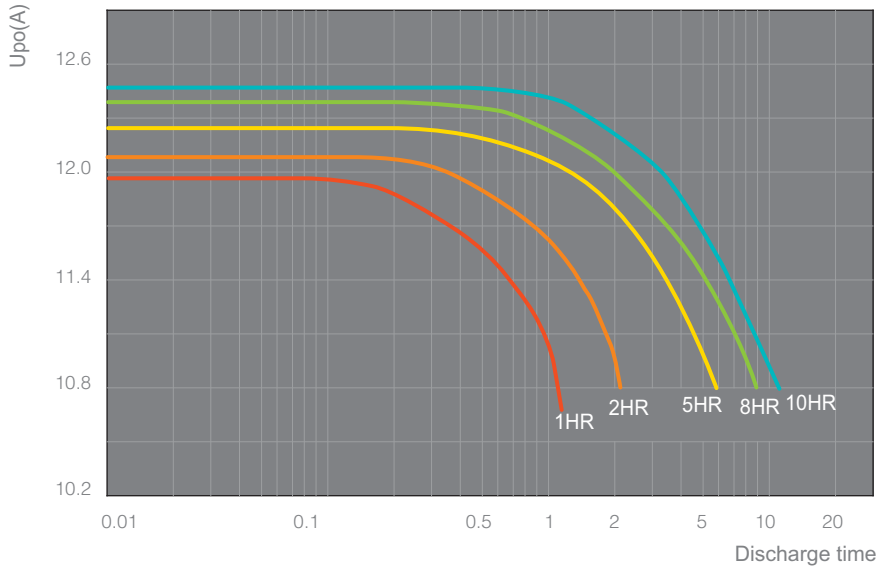


Figure 2 Constant voltage charge characteristic curve

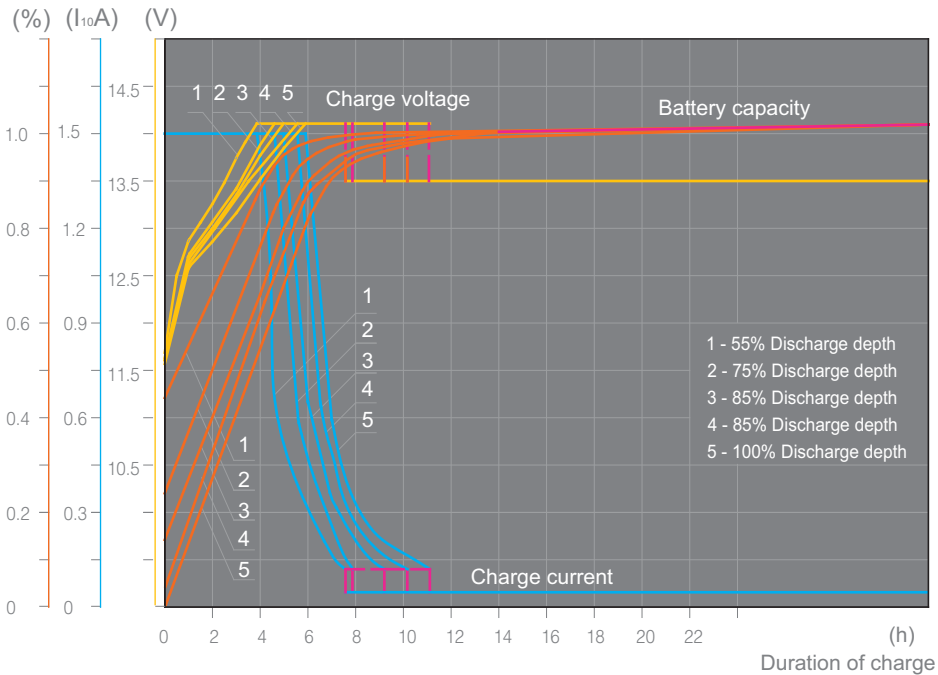


Figure 3 Relation curves of capacity and temperature

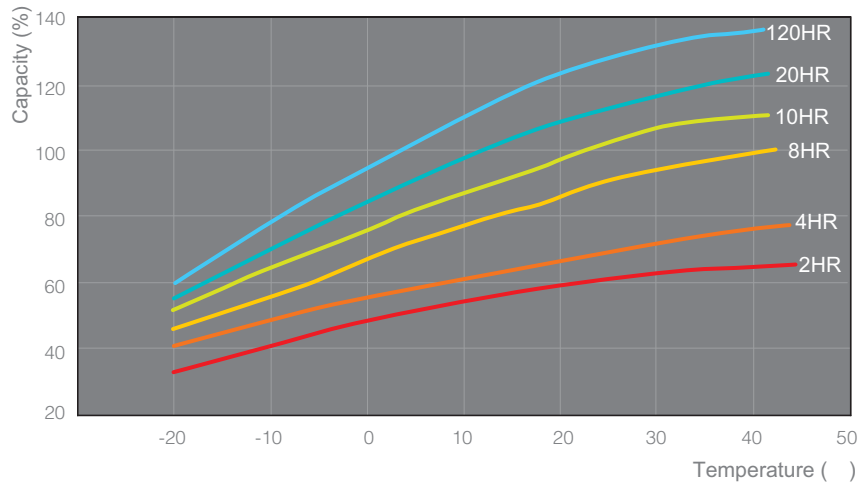


Figure 4 Self-discharge characteristic curve

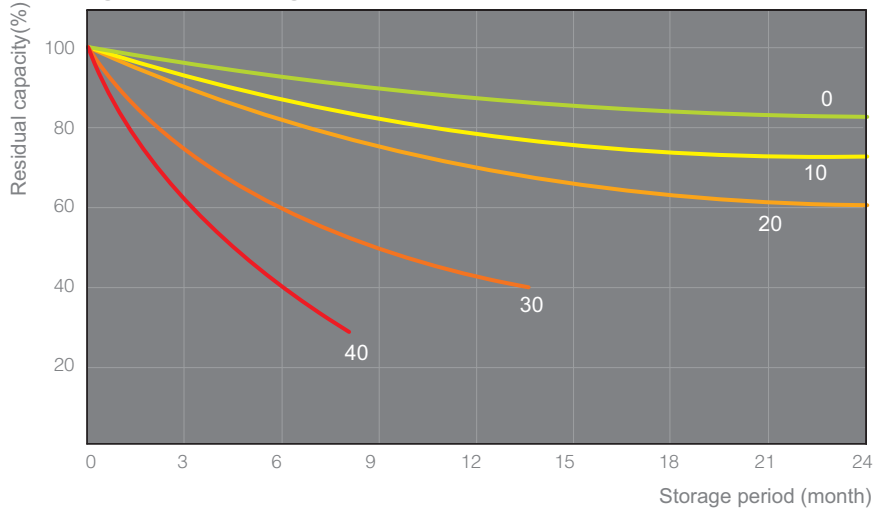
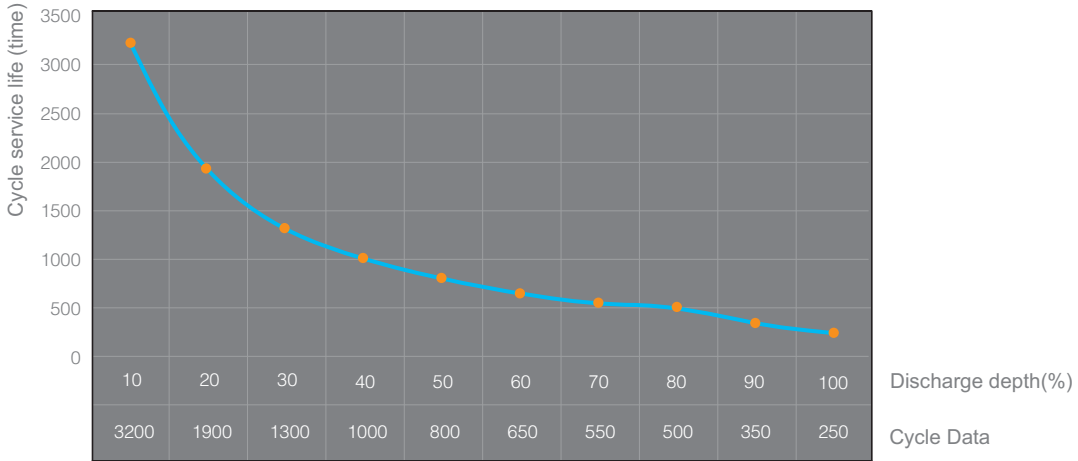
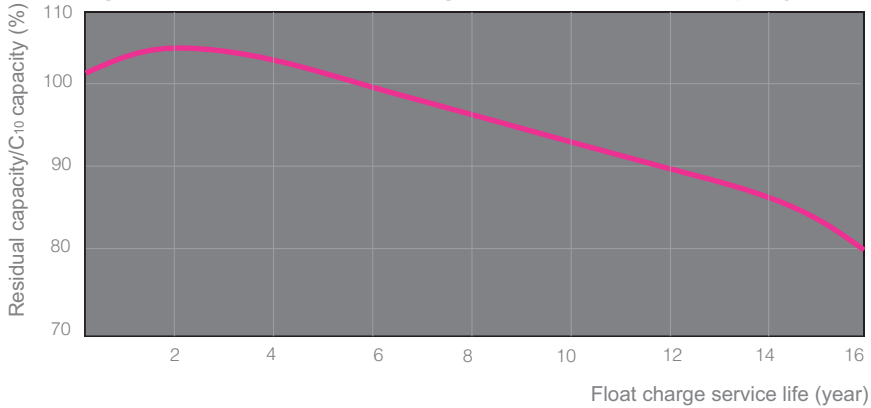


Figure 5 Relation curve between discharge depth and cycle service life



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

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



all data and specifications are subject to change without notice.

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