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# XHRL12410W ▶ 12V 410W

XHRL 12410W is specially designed for high efficient discharge and long life application. Its characteristics are high energy density , small footprint and high discharge efficiency. It can be used for more than 260 cycles at 100% discharge in cycle service, up to 10 years in standby service.



## Specification

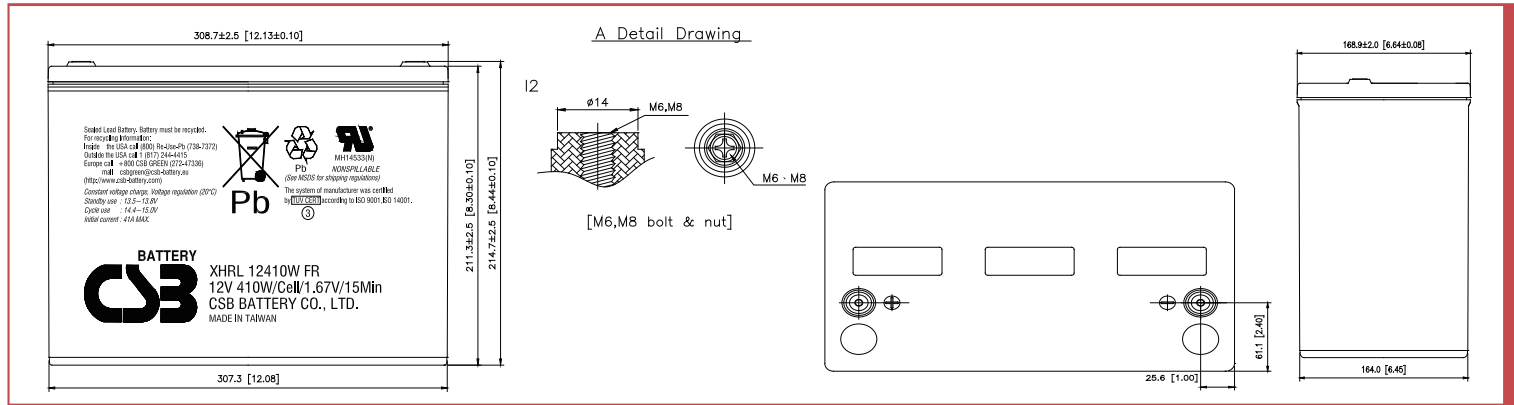
Cells per unit	6
Voltage per unit	12
Capacity	410W @15 min-rate to 1.67V per cell @25 °C (77°F)
Weight	Approx. 31 kg(68.34 lbs)
Maximum Discharge Current	800A(5sec)
Internal Resistance Approx.	Approx. 4.0mΩ
Operating Temperature Range	Discharge: -20°C~50°C (-4°F~122°F) Charge: -20°C~50°C (-4°F~122°F) Storage: -15°C~40°C (5 °F~104°F)
Nominal Operating Temperature Range	25°C ±3°C (77°F ±5°F)
Float Charging Voltage	13.5 to 13.8 VDC/unit Average at 25°C (77°F)
Recommended Maximum Charging Current Limit	41 A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C (77°F)
Self Discharge	CSB Batteries can be stored for more than 6 months at 25°C(77°F). Please charge batteries before using. For higher temperatures the time interval will be shorter.
Terminal	I2-Thread lead alloy recessed terminal to accept M6/M8 bolt
Container Material	Polypropylene(UL 94-HB) & Flammability resistance of (UL 94-V0) can be available upon request.



CSB-manufactured VRLA batteries are UL-recognized components under UL1989.

CSB is also certified by ISO 9001 and ISO 14001.

Dimensions :	Overall Height (H)	Container height (h)	Length (L)	Width (W)
Unit: mm (inch)	214.7±2.5 (8.44±0.10)	211.3±2.5 (8.30±0.10)	308.7±2.5 (12.13±0.10)	168.9±2.0 (6.64±0.08)



## Constant Current Discharge Characteristics Unit:A (25°C ,77°F)

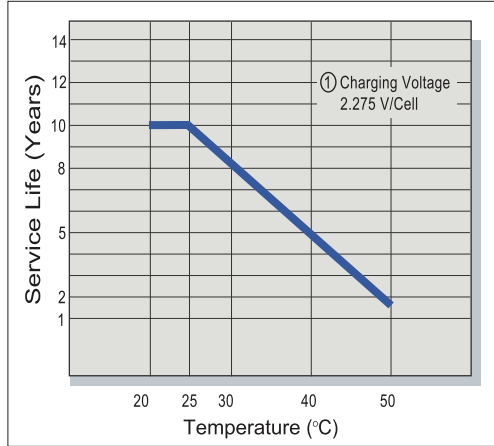
F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	546	447	372	319	279	212	169	121	68.8	48.6
1.67V	472	411	350	300	266	206	166	119	68.4	48.4
1.70V	435	378	339	294	258	202	162	118	67.9	48.1
1.75V	405	348	312	273	245	192	156	115	66.6	47.3
1.80V	373	331	285	249	226	177	146	108	64.9	46.2
1.85V	328	277	243	224	203	162	135	101	60.4	41.7

## Constant Power Discharge Characteristics Unit:W (25°C ,77°F)

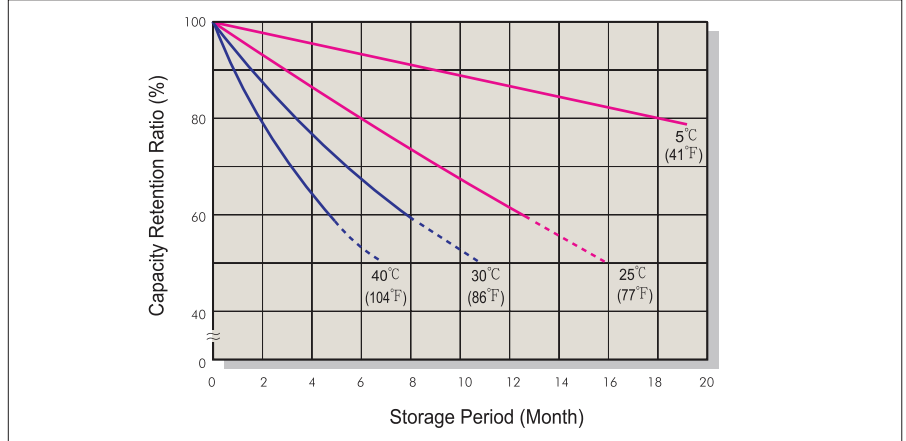
F.V/Time	2MIN	4MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	5,179	4,538	4,022	3,512	3,143	2,505	1,977	1,440	811	580
1.67V	4,702	4,177	3,806	3,369	3,016	2,462	1,950	1,412	809	575
1.70V	4,388	4,008	3,651	3,225	2,884	2,370	1,897	1,383	800	571
1.75V	4,095	3,792	3,503	3,052	2,735	2,264	1,820	1,355	787	560
1.80V	3,848	3,443	3,166	2,822	2,553	2,117	1,726	1,288	771	549
1.85V	3,135	2,930	2,776	2,544	2,298	1,922	1,597	1,202	716	519

Ratings presented herein are subject to revision without notice. Please refer to [www.csb-battery.com](http://www.csb-battery.com) to confirm the latest version.

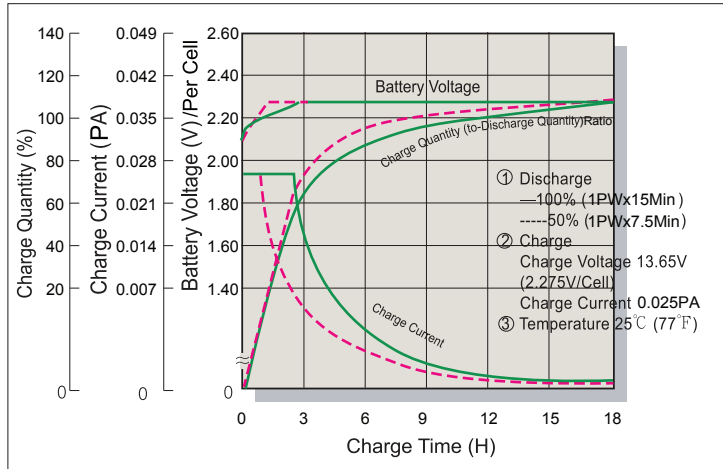
### Trickle (or Float) Service Life



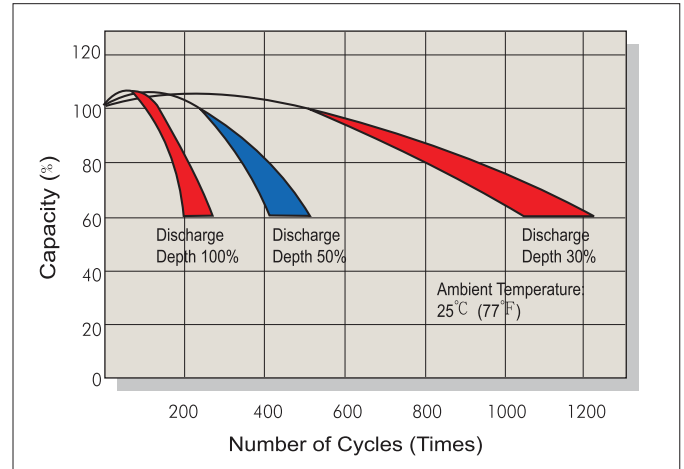
### Capacity Retention Characteristic



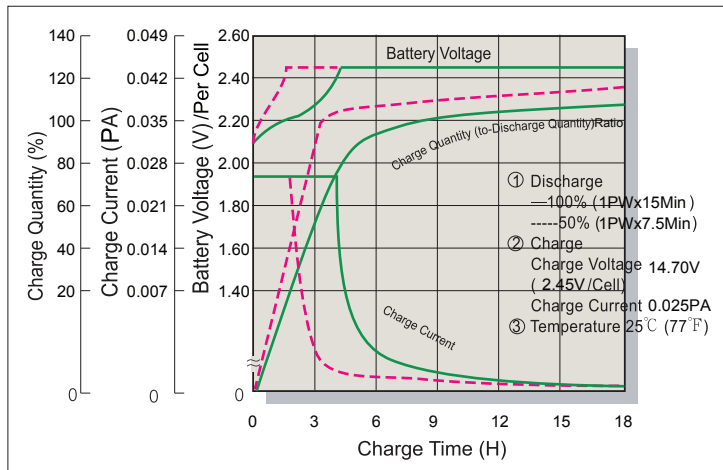
### Battery Voltage and Charge Time for Standby Use



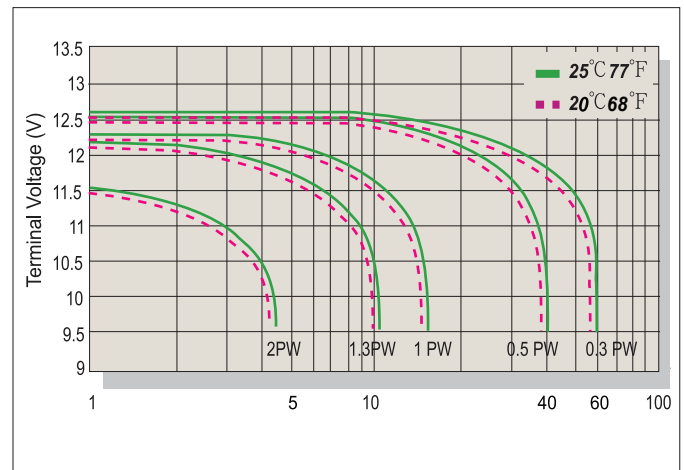
### Cycle Service Life



### Battery Voltage and Charge Time for Cycle Use



### Terminal Voltage (V) and Discharge Time



### Charging Procedures

Application	Charge Voltage(V/Cell)			Max.Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25°C(77°F)	2.45	2.40~2.50	0.1PA
Standby	25°C(77°F)	2.275	2.25~2.30	

### Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.75	1.70	1.60	1.30
Discharge Power(W)	0.1P>(W)	0.1P≤(W)<0.25P	0.25P≤(W)<1.0P	(W)≥1.0P

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