

# STARMAX

The world's leading battery brand



## XP SERIES-LONG LIFE **BATTERIES**

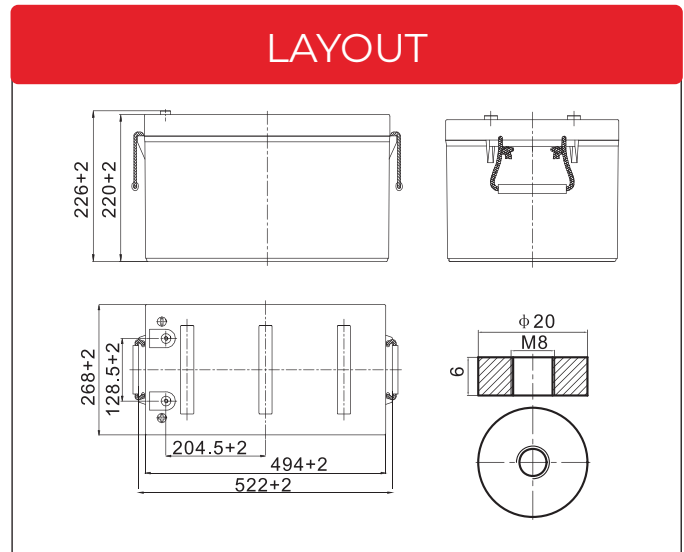
XP12-810



[www.starmaxbatteries.com](http://www.starmaxbatteries.com)

# XP Series

## XP12-810



## General Features

- ✓ Special designed grids for optimized high power density
- ✓ Oversized partition intercell welds, providing low resistance connections & minimal power loss
- ✓ Advanced lead tin calcium alloy, reduces grid corrosion & promotes long battery life
- ✓ Performance excels at high rates of discharge & recharge
- ✓ High integrity post seal for long life

## Applications

- ✓ UPS
- ✓ Hospitals & Testing Laboratories
- ✓ Emergency Power Supply
- ✓ Electric starting
- ✓ Telecommunications
- ✓ Data Centers

## Standards

- ✓ Compliance with IEC 60896 standards
- ✓ Classified as "Long Life" according to Eurobat
- ✓ CE, UL Certified
- ✓ Manufactured in Starmax, OHSAS 18001, ISO 9001 and ISO 14001 certified production facilities



# SPECIFICATIONS

Rated Voltage	12V		
Nominal Rate	(W <sub>15</sub> ,1.67V/cell)	810W	
Nominal Capacity	(C <sub>10</sub> ,1.80V/cell)	230Ah	
Dimensions	Length	522±2mm (20.6 inches)	
	Width	268±2mm (10.6 inches)	
	Container height	220±2mm (8.66 inches)	
	Total height	226±2mm (8.90 inches)	
Approx. weight	73.3kg (161.6 lbs)		
Terminal	M8		
Container material	ABS(UL94 V-0)		
Rated capacity (25°C)	230.0 Ah	C10(23.0A,1.80V/cell)	
	213.6 Ah	C8(26.7A,1.80V/cell)	
	202.5 Ah	C5(40.5A,1.75V/cell)	
	197.1 Ah	C3(59.7A,1.75V/cell)	
	146.4 Ah	C1(146.4A,1.60V/cell)	
Max. discharge current	2300A (5s)		
Internal resistance (25°C)	Approx 2.5mΩ		
Operating temp. range	Discharge	-20~55°C (-4~131°F)	
	Charge	-20~40°C (-4~104°F)	
	Storage	-15~50°C (5~122°F)	
Nominal operating temp. range	25±3°C (77±5°F)		
Max.Charging Current(25°C)	57.5A		
Charge voltage(25°C)	<b>Charge voltage</b>		<b>Temp. Coefficient</b>
	Float	2.25 ~2.30V/cell	-3mV/cell/°C
	Equalization	2.30~2.40V/cell	-4mV/cell/°C
Effect of temp. to Capacity	40°C (104°F)		106%
	25°C (77°F)		100%
	0°C (32°F)		86%
Self discharge	≤3%/month @ 25°C		

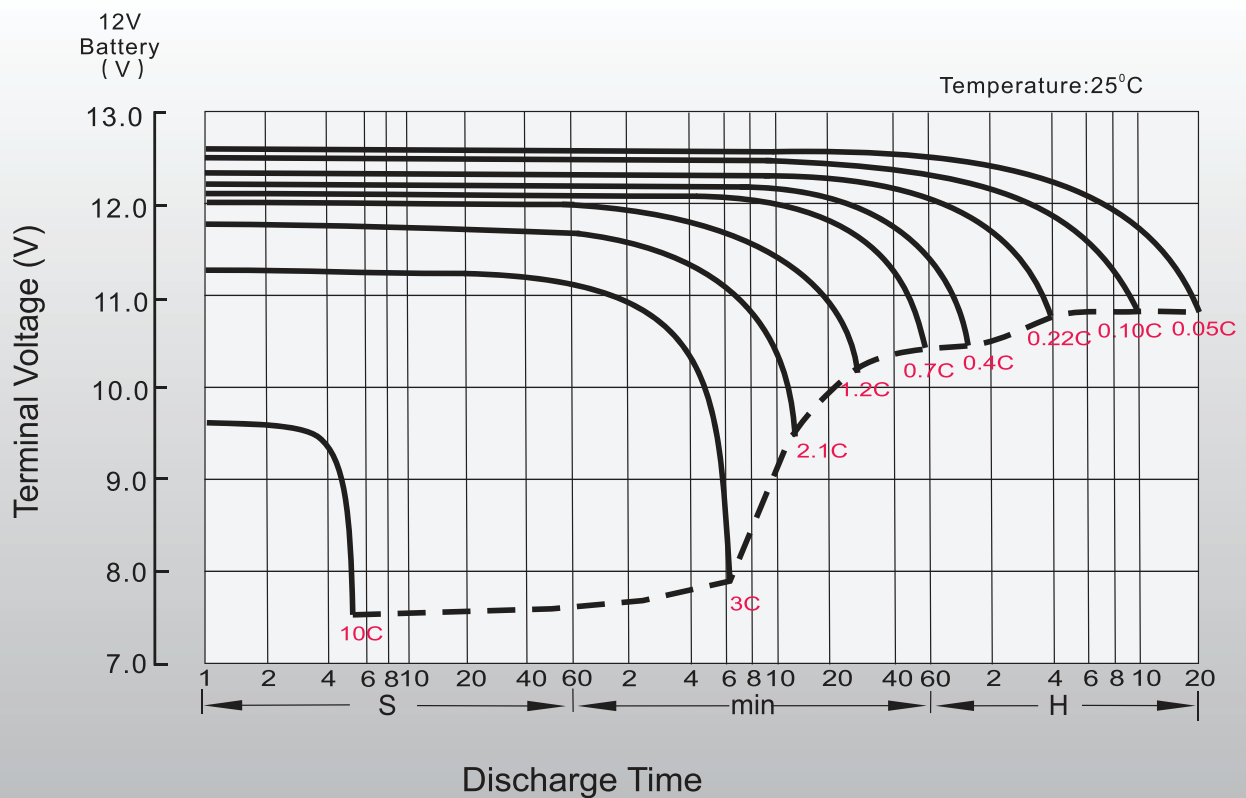
## Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h
1.85V/cell	490.5	391.6	339.5	267.0	188.4	140.9	126.6	93.0	76.0	56.6	44.8	37.9	26.2	22.4
1.80V/cell	557.9	444.5	384.8	301.9	212.4	150.5	130.8	95.8	80.5	58.5	46.4	39.4	26.7	23.0
1.75V/cell	605.9	482.1	416.5	325.9	228.5	157.5	136.2	99.7	83.6	59.7	48.0	40.5	27.0	23.1
1.70V/cell	647.8	514.0	442.4	345.6	242.2	163.1	142.2	103.9	85.6	61.1	49.1	41.4	27.4	23.2
1.67V/cell	670.4	530.3	455.3	355.0	248.0	171.2	143.7	106.6	87.6	62.4	49.8	42.0	27.7	23.6
1.60V/cell	694.1	548.4	469.4	364.1	254.0	180.7	146.4	110.2	89.3	64.0	50.9	42.8	27.8	23.7

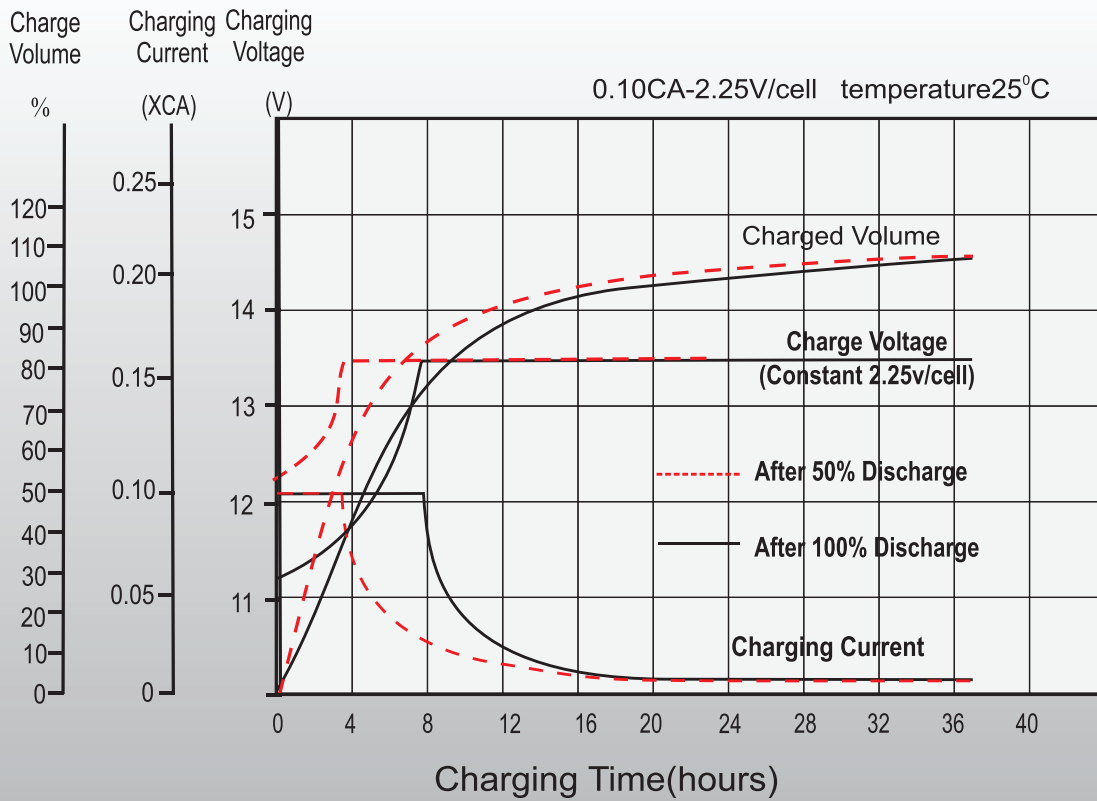
## Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h
1.85V/cell	916.1	736.7	642.9	507.9	360.0	270.8	244.8	180.2	147.9	110.6	87.8	74.6	51.9	44.5
1.80V/cell	1024.8	824.1	719.1	568.1	402.7	287.5	251.7	184.6	155.8	113.8	90.7	77.2	52.9	45.7
1.75V/cell	1093.7	879.6	767.5	606.3	429.8	299.0	260.9	191.4	161.1	115.9	93.4	79.2	53.2	45.8
1.70V/cell	1149.8	924.7	806.9	637.4	451.9	307.5	270.8	198.4	164.3	118.0	95.3	80.7	54.0	46.1
1.67V/cell	1168.5	939.7	810.0	647.8	459.2	321.0	272.3	202.6	167.5	120.0	96.2	81.5	54.5	46.7
1.60V/cell	1184.9	952.9	831.5	656.9	465.6	335.7	275.3	208.0	169.7	122.4	98.0	82.7	54.7	46.9

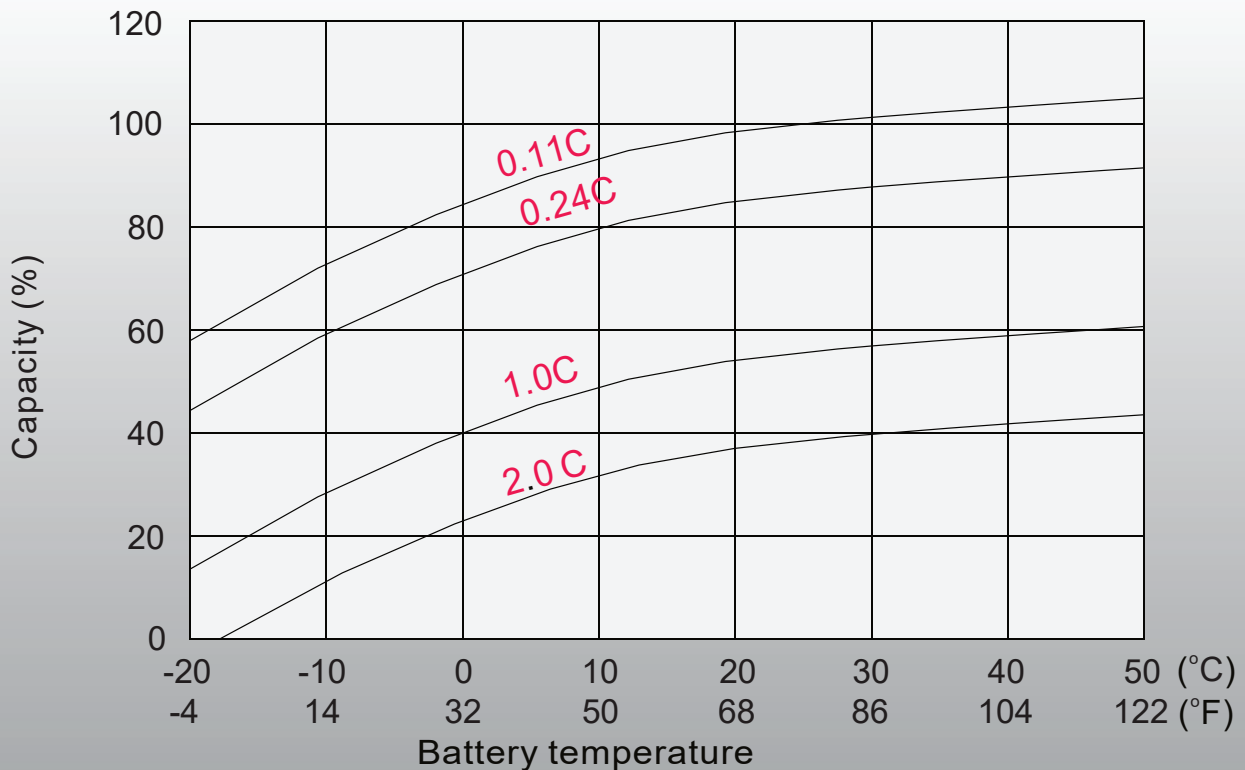
## Discharge Characteristics



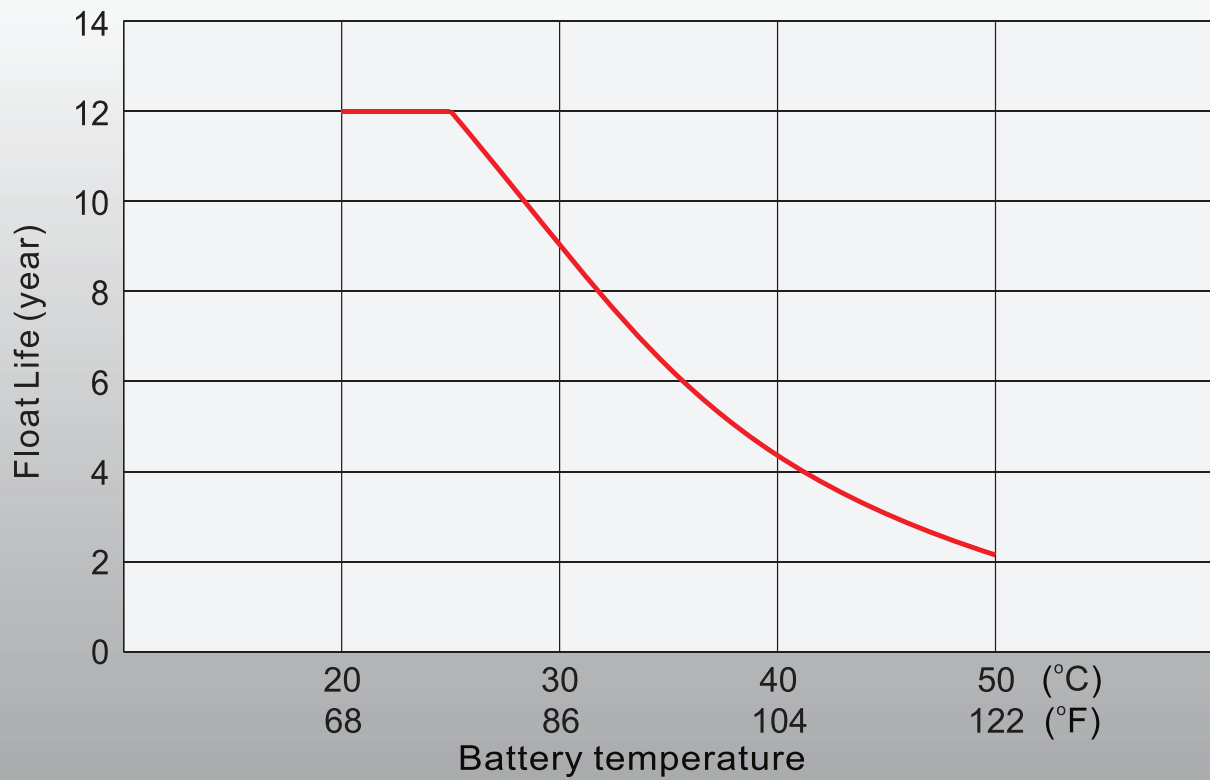
# Float Charging Characteristics



# Temperature Effects in Relation to Battery Capacity



# Effect of Temperature on Long Time Float Life





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