

# STARMAX

The world's leading battery brand



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

XP12-210



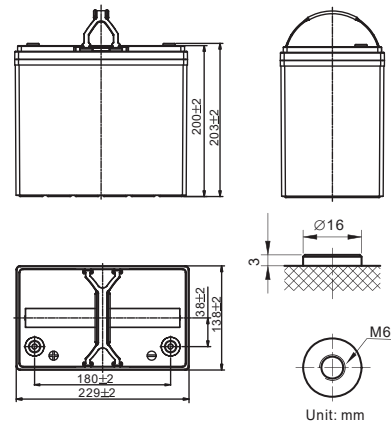
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# XP Series

## XP12-210



### LAYOUT



## 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)	240.8W/cell
Nominal Capacity	(C <sub>20</sub> ,1.80V/cell)	55Ah
Dimensions	Length	229±2mm (9.02 inches)
	Width	138±2mm (5.43 inches)
	Container height	200±2mm (7.87 inches)
	Total height	203±2mm (7.99 inches)
Approx. weight	17.7 Kg (39.0 lbs)	
Terminal	M6	
Container material	ABS	
Rated capacity (25°C)	55.0 Ah	(20hr, 2.75A,1.80V/cell)
	52.6 Ah	(10hr, 5.26A,1.80V/cell)
	47.4 Ah	(5hr, 9.47A,1.75V/cell)
	43.8 Ah	(3hr, 14.6A,1.75V/cell)
	39.5 Ah	(1hr, 39.5A,1.67V/cell)
Max. discharge current	825A	
Internal resistance (25°C)	Approx. 5.0mΩ	
Operating temp. range	Discharge	-15~50°C (5~122°F)
	Charge	-20~40°C (-4~104°F)
	Storage	-15~40°C (5~104°F)
Nominal operating temp. range	25±3°C (77±5°F)	
Max.Charging Current(25°C)	16.5A	
Charge voltage(25°C)	Float	13.5V
	Temp. Coefficient	-3mV/cell/°C
	Equalization	14.1~14.4V
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self discharge	≤3%/month @ 25°C	

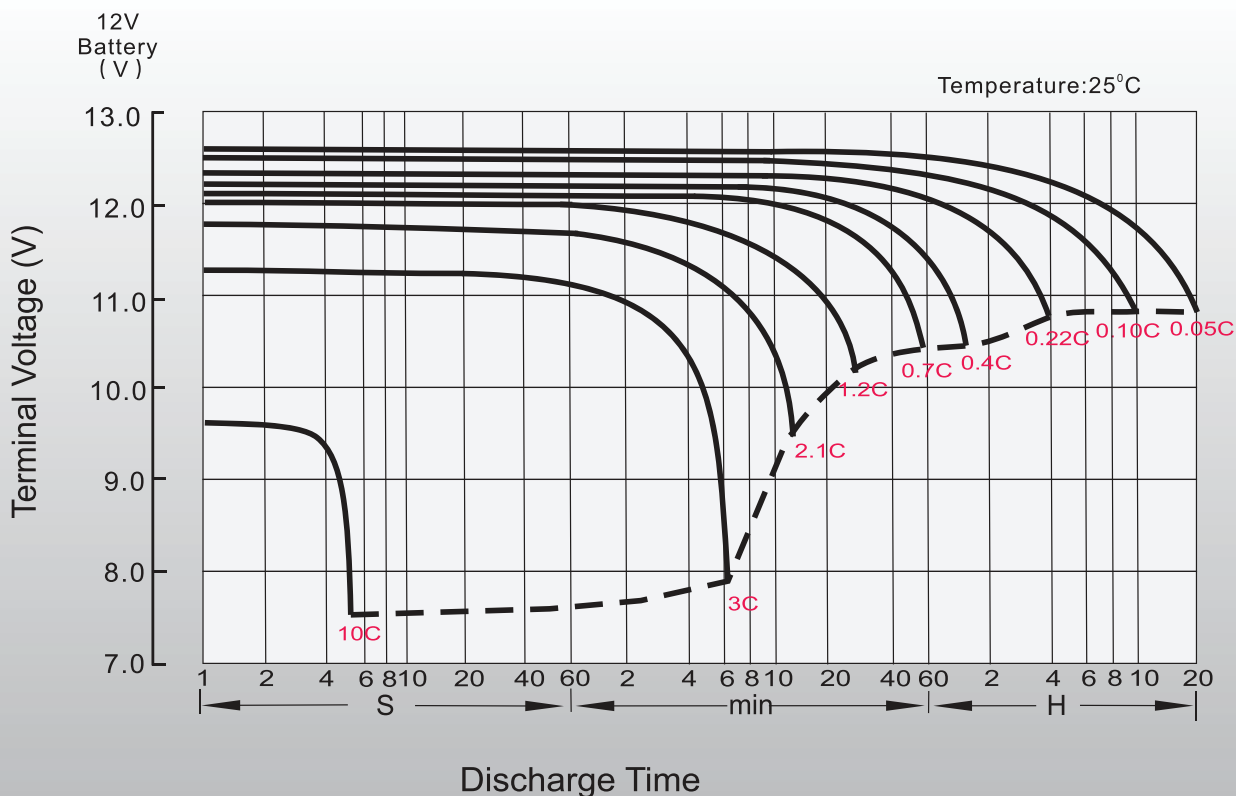
## Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	147.1	107.6	90.4	74.4	59.7	42.6	34.1	19.2	13.7	10.8	8.99	7.75	6.16	5.13	2.64
1.80V/cell	175.1	122.4	102.4	81.9	64.2	45.2	35.9	20.0	14.2	11.2	9.28	7.97	6.33	5.26	2.75
1.75V/cell	202.2	135.5	110.6	87.7	67.2	47.3	37.1	20.6	14.6	11.4	9.47	8.13	6.45	5.36	2.81
1.70V/cell	219.3	147.6	118.6	93.2	70.6	48.9	38.4	21.0	15.0	11.7	9.69	8.32	6.59	5.45	2.86
1.67V/cell	237.5	156.0	127.0	98.1	73.1	50.6	39.5	21.6	15.2	11.9	9.88	8.49	6.71	5.56	2.91
1.60V/cell	255.6	166.8	132.4	102.2	75.7	52.4	40.8	22.0	15.5	12.2	10.1	8.73	6.88	5.68	2.99

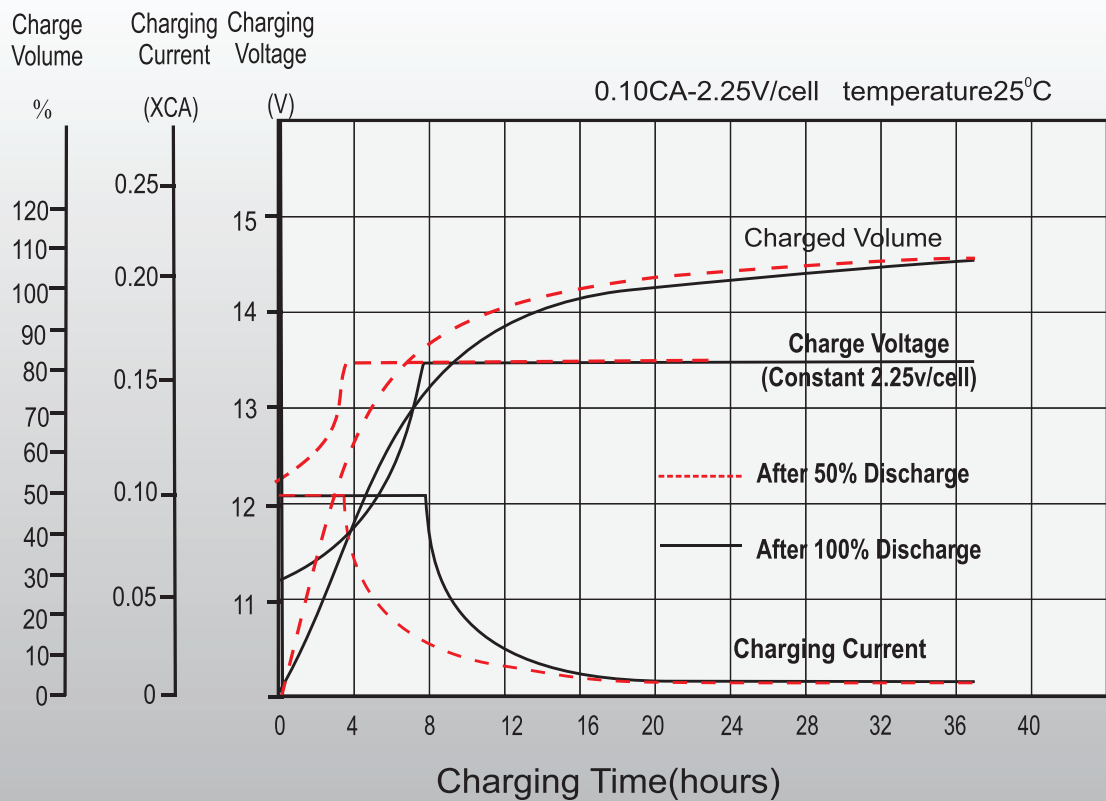
## Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	286.3	210.7	177.9	147.0	118.6	85.2	68.2	38.5	27.7	21.9	18.3	15.8	12.6	10.5	5.46
1.80V/cell	336.9	237.0	199.4	160.4	126.3	89.6	71.3	39.9	28.6	22.5	18.8	16.2	12.9	10.8	5.65
1.75V/cell	385.5	259.9	213.5	170.1	131.3	92.7	73.4	41.0	29.2	22.9	19.0	16.4	13.1	10.9	5.75
1.70V/cell	413.0	280.0	226.2	179.0	136.5	95.1	75.3	41.4	29.7	23.3	19.3	16.7	13.3	11.0	5.81
1.67V/cell	443.8	293.8	240.8	187.2	140.6	98.0	77.1	42.3	30.0	23.6	19.6	16.9	13.4	11.2	5.89
1.60V/cell	472.3	310.7	248.5	193.1	144.2	100.4	78.9	42.7	30.4	24.0	20.0	17.2	13.6	11.3	5.98

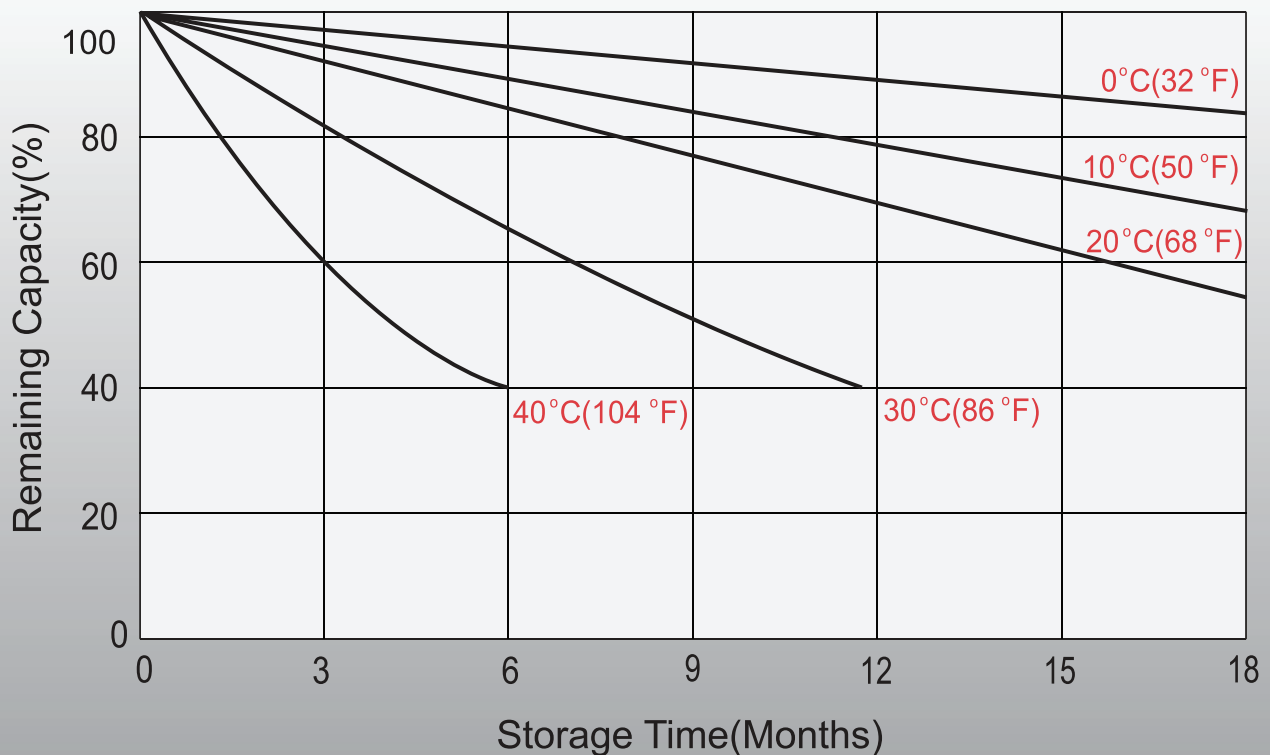
## Discharge Characteristics



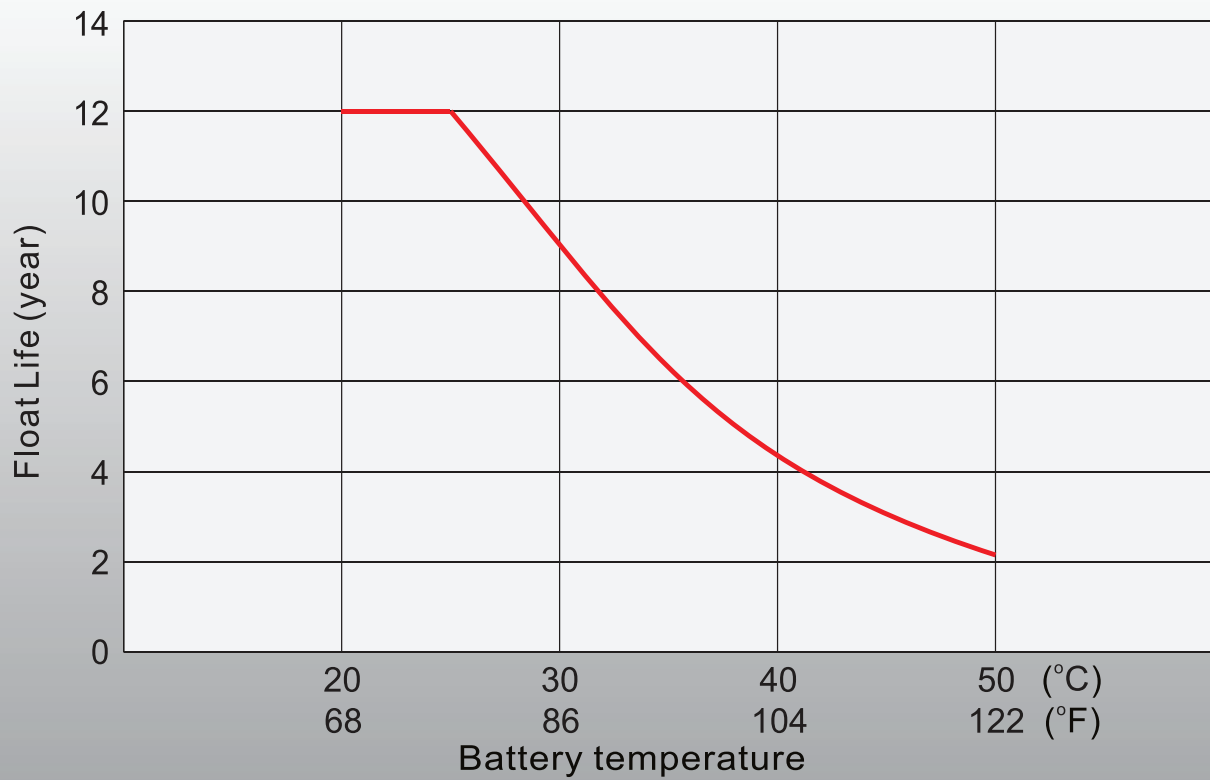
# Float Charging Characteristics



# Self-Discharge Characteristics



# Effect of Temperature on Long Time Float Life





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