

STARMAX

The world's leading battery brand



XP SERIES-LONG LIFE **BATTERIES**

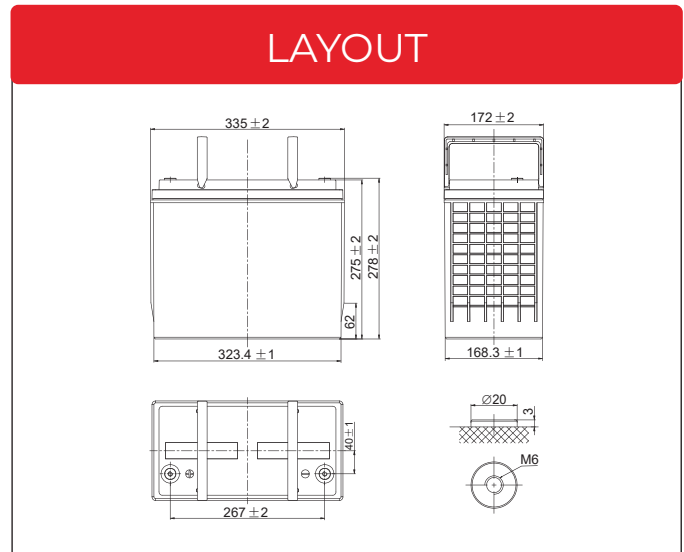
XP12-540



www.starmaxbatteries.com

XP Series

XP12-540



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 ₁₅ ,1.67V/cell)	540.1W/cell
Nominal Capacity	(C ₂₀ ,1.80V/cell)	155Ah
Dimensions	Length	335±3mm (13.19 inches)
	Width	172±2mm (6.77 inches)
	Container height	275±3mm (10.83 inches)
	Total height	278±3mm (10.94 inches)
Approx. weight	42.6 Kg (93.9 lbs)	
Terminal	M6	
Container material	ABS	
Rated capacity (25°C)	155.0 Ah	(20hr, 7.75A,1.80V/cell)
	147.0 Ah	(10hr, 14.7A,1.80V/cell)
	130.5 Ah	(5hr, 26.1A,1.75V/cell)
	120.3 Ah	(3hr, 40.1A,1.75V/cell)
	105.6 Ah	(1hr, 105.6A,1.67V/cell)
Max. discharge current	2015A	
Internal resistance (25°C)	Approx. 3.8mΩ	
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)	46.5A	
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	

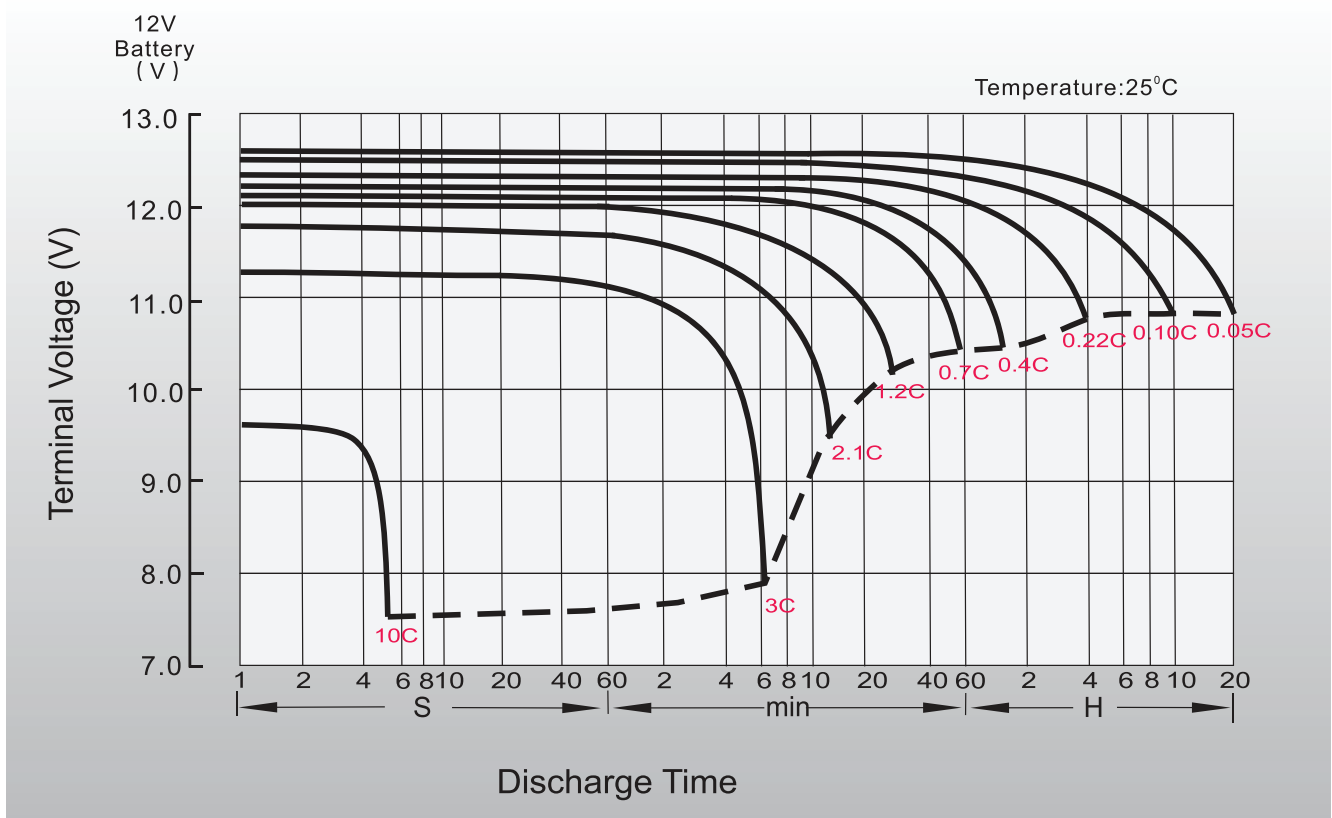
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	282.7	229.7	197.9	173.4	139.3	106.0	87.0	51.5	37.2	29.6	24.6	21.4	17.1	14.3	7.57
1.80V/cell	327.4	254.0	218.0	192.0	151.7	114.1	92.1	54.0	38.8	30.7	25.5	22.1	17.6	14.7	7.75
1.75V/cell	381.3	284.1	241.7	207.9	162.8	121.1	97.3	56.3	40.1	31.5	26.1	22.6	17.9	15.0	7.93
1.70V/cell	425.9	312.2	265.5	225.9	174.3	127.9	102.0	58.2	41.2	32.3	26.7	23.0	18.3	15.3	8.06
1.67V/cell	466.9	344.0	289.1	240.4	181.8	133.3	105.6	60.1	42.4	33.1	27.3	23.5	18.7	15.5	8.15
1.60V/cell	502.7	372.2	305.0	253.4	191.1	138.9	109.5	61.7	43.2	34.0	28.0	24.2	19.1	15.9	8.36

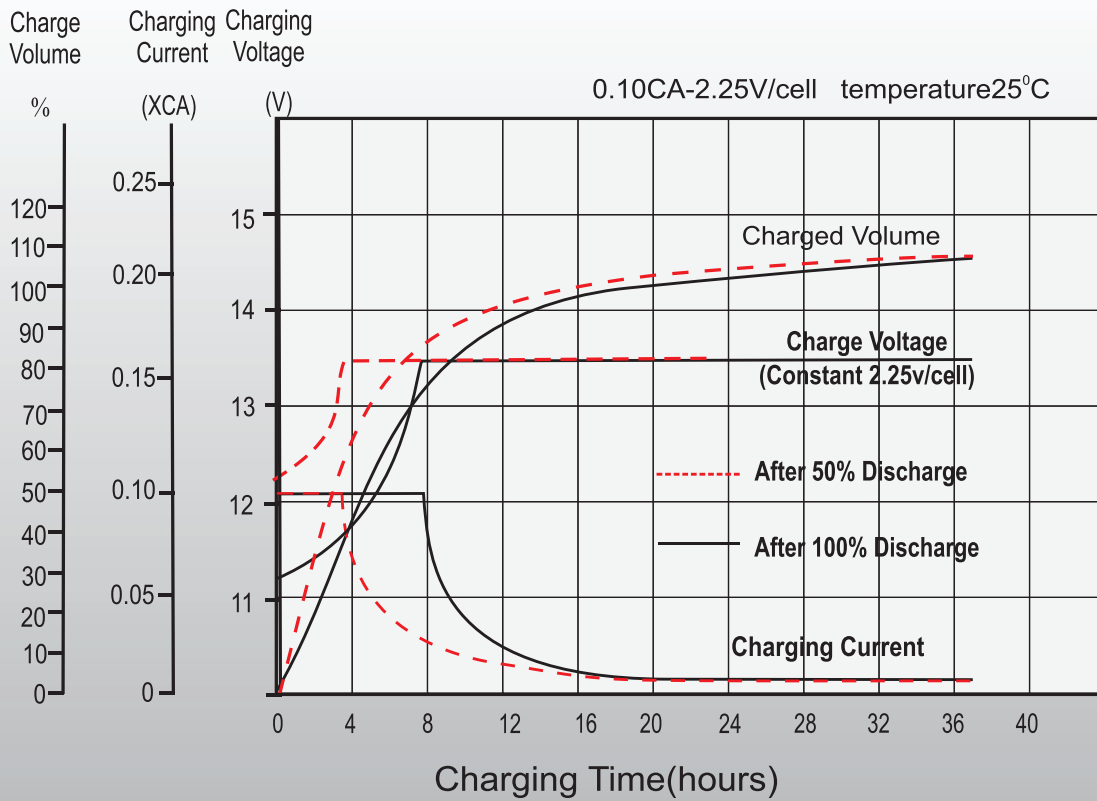
Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	537.7	441.9	383.5	339.5	273.0	209.1	172.5	102.8	74.4	59.5	49.8	43.5	34.9	29.5	15.6
1.80V/cell	615.4	484.6	418.6	373.2	295.0	223.2	181.3	106.8	77.1	61.2	51.1	44.4	35.6	30.0	15.9
1.75V/cell	710.1	534.9	459.8	400.9	314.2	235.1	190.2	110.7	79.2	62.5	52.0	45.2	36.1	30.4	16.2
1.70V/cell	785.4	582.5	500.2	432.4	334.1	246.5	197.9	113.6	80.8	63.8	53.0	45.8	36.7	30.9	16.4
1.67V/cell	852.0	635.1	540.1	456.6	346.4	255.5	203.8	116.8	82.8	65.0	53.9	46.6	37.2	31.2	16.5
1.60V/cell	898.8	672.8	559.7	471.1	356.4	261.2	207.5	117.7	82.9	65.5	54.3	47.1	37.5	31.3	16.6

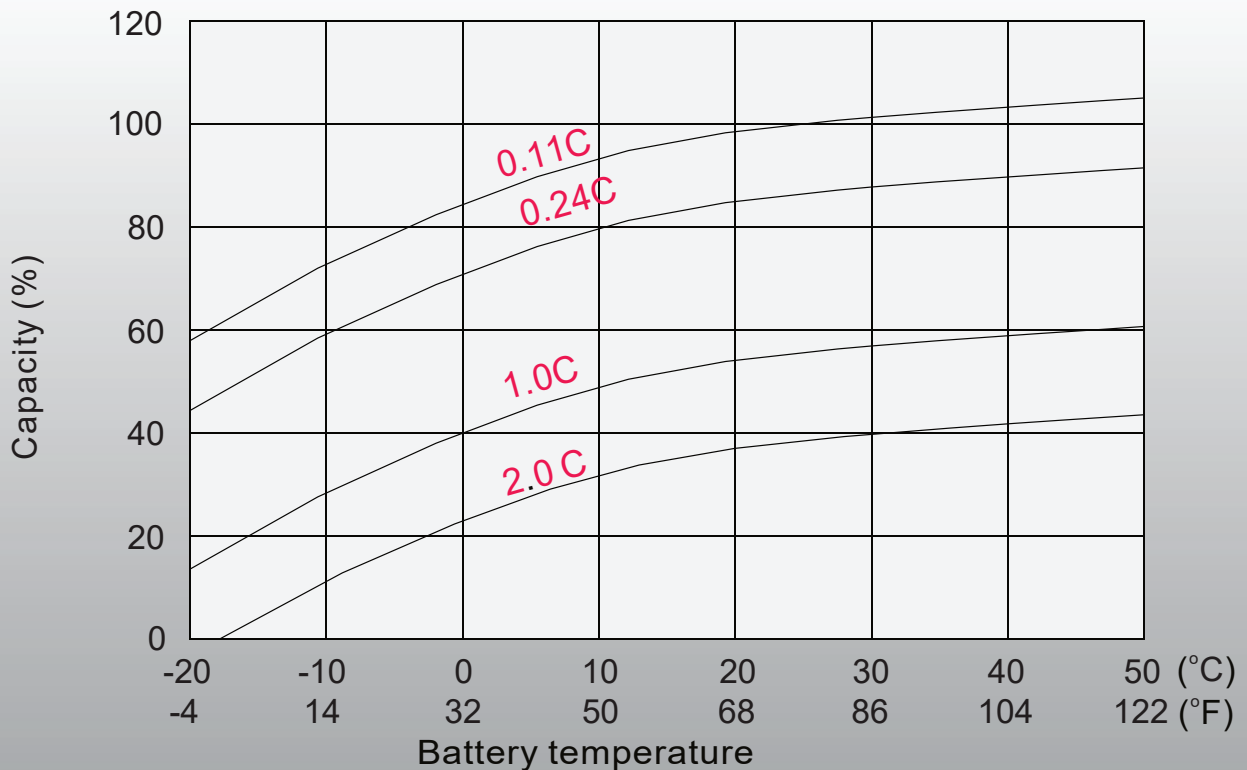
Discharge Characteristics



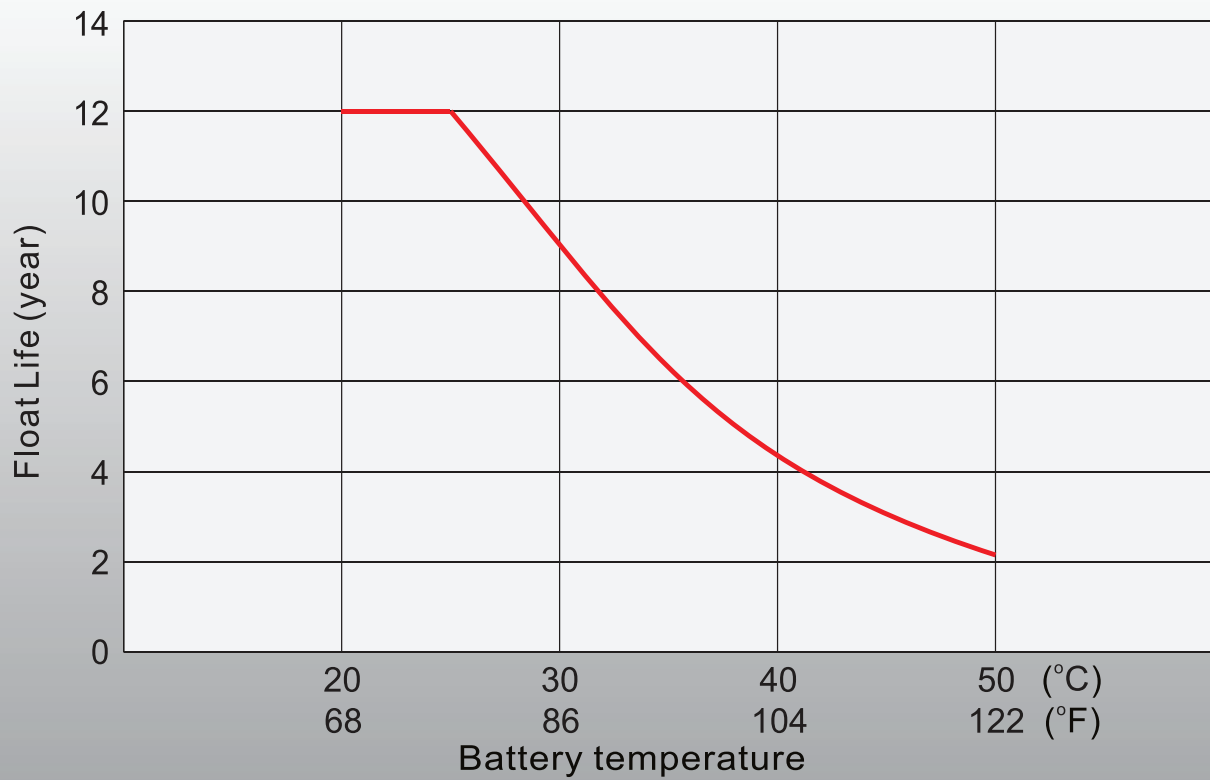
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Time Float Life





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