

UPS ULTRA HIGH RATE

XP12-400FR (12V, 405.7WPC, 96.0AH)

Specification

Nominal Voltage	12V
Nominal Capacity(8 HR)	96.0 Ah at 1.75V/cell @ 25°C/77°F
Watts(15 min rate)	405.7 Watts/cell at 1.67V/cell @ 25°C/77°F
Dimensions	Length 325.5mm(12.81inches)
	Width 170mm(6.69inches)
	Container Height 213mm(8.39inches)
	Total Height (with Terminal) 216mm(8.50inches)
Approx Weight	Approx 31.4 kg (69.2 lbs)
Terminal	T8 with copper alloy insert for a M6 bolt
Container Material	Flame Retardant ABS to UL94-V0
Rated Capacity	100.0 AH/5.00A (20hr, 1.80V/cell, 25°C/77°F)
	96.0 AH/12.0A (8hr, 1.75V/cell, 25°C/77°F)
	89.5 AH/17.9A (5hr, 1.75V/cell, 25°C/77°F)
	80.4 AH/26.8A (3hr, 1.75V/cell, 25°C/77°F)
	71.2 AH/71.2A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	1650A (5s)
Internal Resistance	Approx 3.6mΩ
Operating Temp.Range	Discharge : -20~55°C (-4~131°F)
	Charge : 0~50°C (32~122°F)
	Storage : -20~55°C (-4~131°F)
Nominal Operating Temperature	20 to 25°C (68 to 77°F)
Standby Use (Float Voltage)	No limit on Initial Charging Current. 13.5V~13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C
Cycle Use	Initial Charging Current less than 30.0A. 14.4V~15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	≤3% of capacity declined per month at 25°C



Application

- ◆ Critical UPS (High rate) applications
- ◆ High power backup supply
- ◆ Emergency power supply
- ◆ Emergency lighting
- ◆ Electric starting

Compliant Standards

- Eurobat Classification:*
- ◆ High Performance (10~12 years design life)
 - ◆ IEC60896-21/22:2004
 - ◆ BS 6290 Part 4

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	222.1	179.5	161.7	139.3	104.9	76.1	59.9	33.8	25.0	20.0	16.8	14.6	11.4	9.37	4.94
1.80V/cell	264.0	204.6	179.2	152.0	112.4	80.3	62.5	35.2	26.0	20.8	17.5	15.0	11.7	9.60	5.00
1.75V/cell	297.0	225.1	193.1	161.7	119.2	84.0	65.5	36.5	26.8	21.4	17.9	15.4	12.0	9.81	5.20
1.70V/cell	324.7	239.6	203.6	169.6	124.0	87.6	68.2	37.9	27.6	21.9	18.2	15.7	12.2	10.0	5.26
1.67V/cell	355.1	254.1	214.0	177.2	128.3	90.3	70.3	39.0	28.4	22.5	18.7	16.1	12.5	10.1	5.30
1.60V/cell	372.2	264.8	220.6	181.8	131.0	91.8	71.2	39.7	28.9	22.8	18.9	16.3	12.6	10.3	5.33

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

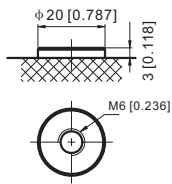
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	432.2	351.1	318.1	275.3	208.6	152.0	120.0	68.1	50.4	40.6	34.2	29.7	23.4	19.3	10.2
1.80V/cell	508.2	396.2	349.0	297.7	221.4	159.0	124.3	70.4	52.2	41.9	35.3	30.5	23.9	19.7	10.4
1.75V/cell	565.9	431.7	372.8	313.9	232.8	165.1	129.4	72.5	53.4	42.9	35.9	31.1	24.4	20.0	10.6
1.70V/cell	611.7	454.5	388.4	325.8	239.7	170.6	133.7	74.7	54.8	43.6	36.4	31.4	24.6	20.2	10.7
1.67V/cell	663.5	478.4	405.7	338.2	246.7	174.7	137.0	76.5	55.9	44.5	37.2	32.0	25.0	20.4	10.7
1.60V/cell	687.7	493.2	413.8	343.7	249.4	176.0	137.5	77.1	56.5	44.8	37.3	32.2	25.0	20.4	10.7



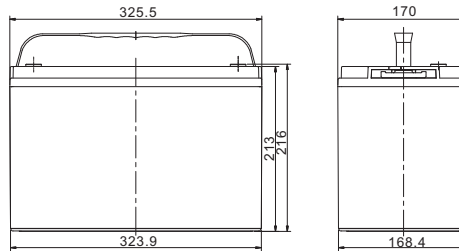
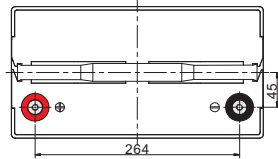
Dimensions

T8 Terminal

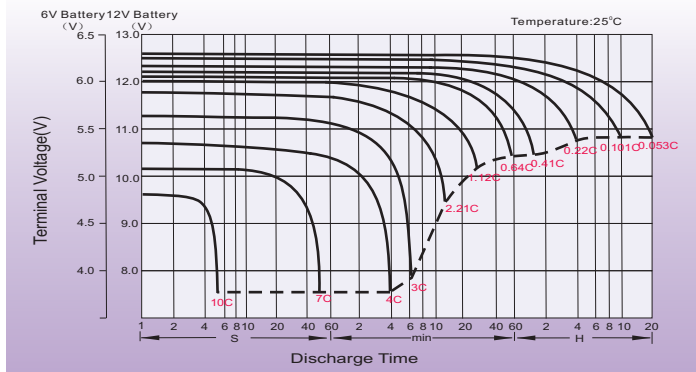
Unit: mm [inches]



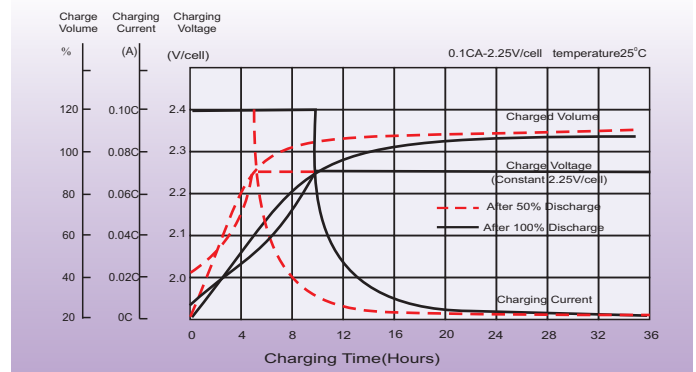
Unit: mm [inches]



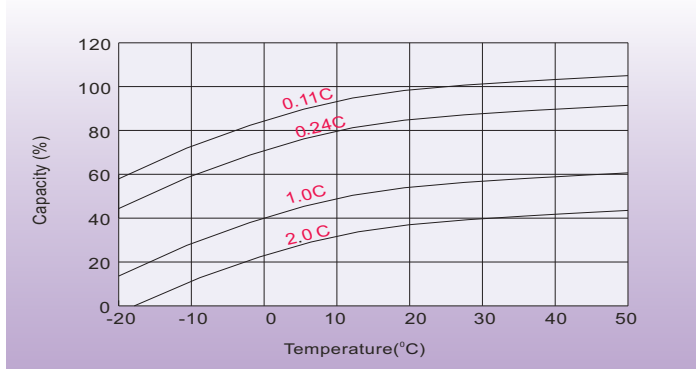
Discharge Characteristics



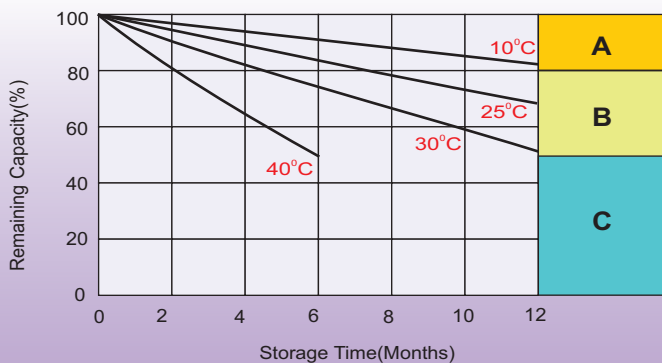
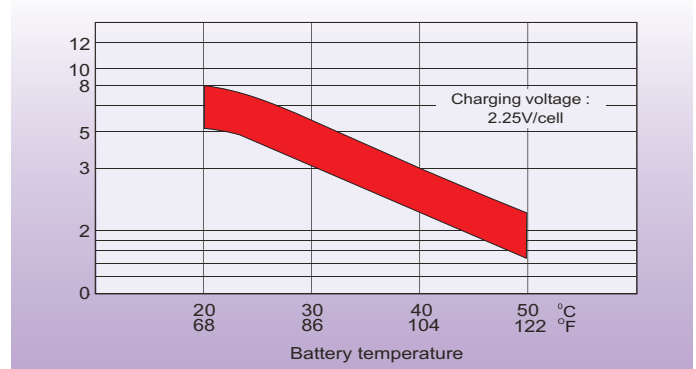
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics

- A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
 1. Charged for above 3 days at limited current 0.25CA and constant volatge 2.25V/cell.
 2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
 3. Charged for 8-10hours at limited current 0.05CA .
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

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