

# UPS ULTRA HIGH RATE

## XP12-810FR (12V, 810.0WPC, 244.8AH)



### Specification

Nominal Voltage	12V
Nominal Capacity(8 HR)	244.8 Ah at 1.75V/cell @ 25°C/77°F
Watts(15 min rate)	810.0 Watts/cell at 1.67V/cell @ 25°C/77°F
Dimensions	Length 522mm(20.55inches)
	Width 268mm(10.55inches)
	Container Height 220mm(8.66inches)
	Total Height (with Terminal) 226mm(8.90inches)
Approx Weight	Approx 73.0 kg (161.0 lbs)
Terminal	T11 with copper alloy insert for a M8 bolt
Container Material	Flame Retardant ABS to UL94-V0
Rated Capacity	266.0 AH/13.3A (20hr, 1.80V/cell, 25°C/77°F)
	244.8 AH/30.6A (8hr, 1.75V/cell, 25°C/77°F)
	222.5 AH/44.5A (5hr, 1.75V/cell, 25°C/77°F)
	193.8 AH/64.6A (3hr, 1.75V/cell, 25°C/77°F)
	165.0 AH/165.0A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	2500A (5s)
Internal Resistance	Approx 2.5mΩ
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 75.0A. 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	435.0	369.0	334.0	300.8	229.9	167.3	132.0	78.8	59.4	48.8	41.5	36.3	29.3	24.4	13.2
1.80V/cell	516.0	409.7	363.0	322.5	242.5	175.7	139.7	83.0	62.0	50.8	43.1	37.4	30.0	25.0	13.3
1.75V/cell	588.0	448.7	390.7	341.3	257.0	186.3	148.3	86.8	64.6	52.7	44.5	38.4	30.6	25.2	13.5
1.70V/cell	649.2	487.5	419.0	360.7	272.5	195.3	154.3	89.9	66.3	53.9	45.4	39.1	31.0	25.5	13.6
1.67V/cell	714.6	523.5	440.2	379.5	284.5	202.3	160.1	92.6	68.3	55.1	46.1	39.8	31.3	25.7	13.8
1.60V/cell	771.0	558.0	464.0	396.8	295.5	209.0	165.0	95.1	69.4	55.9	47.0	40.5	31.8	26.2	13.9

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

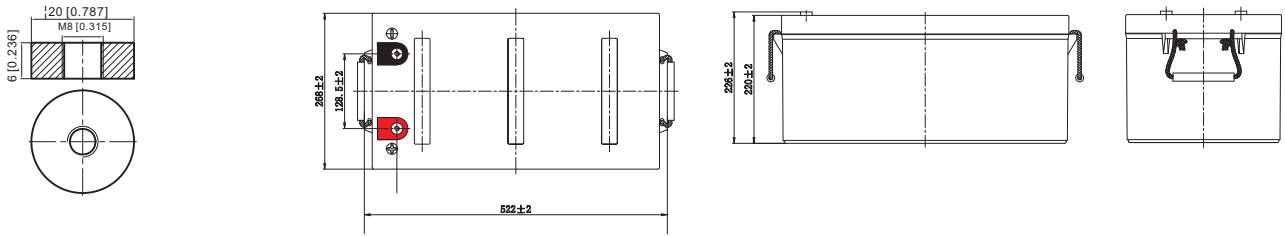
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	815.6	702.9	644.6	586.1	452.7	332.4	264.0	158.3	119.9	98.8	84.3	73.9	59.8	50.0	27.1
1.80V/cell	954.6	771.0	693.4	622.7	474.9	347.3	278.2	166.3	124.8	102.6	87.2	76.0	61.1	51.2	27.3
1.75V/cell	1071.2	832.5	738.1	652.3	499.4	366.5	294.1	173.1	129.5	106.0	89.9	77.8	62.1	51.6	27.6
1.70V/cell	1163.0	892.3	781.7	682.4	525.3	381.9	304.2	178.7	132.7	108.4	91.4	79.1	62.8	52.0	28.0
1.67V/cell	1253.7	942.3	810.0	709.6	543.7	392.7	313.4	183.4	136.2	110.3	92.6	80.1	63.4	52.4	28.3
1.60V/cell	1318.4	984.2	838.4	731.0	557.8	401.3	320.5	186.8	137.4	111.4	94.0	81.3	64.1	53.1	28.5



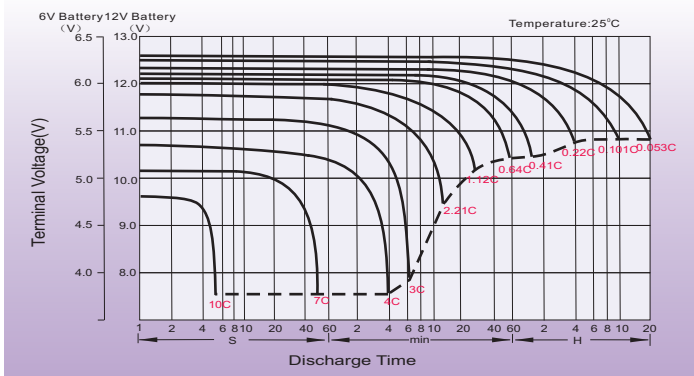
# Dimensions

## T11 Terminal

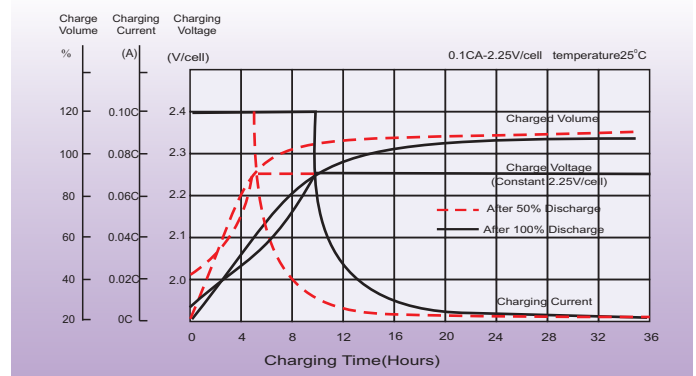
Unit: mm [inches]



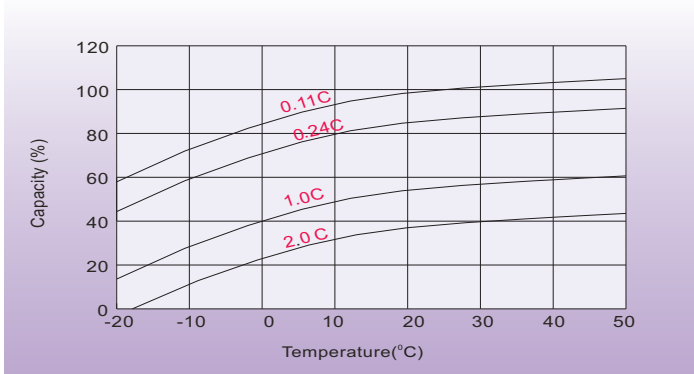
## Discharge Characteristics



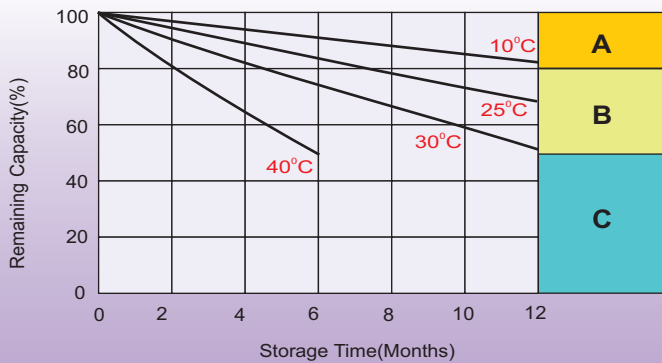
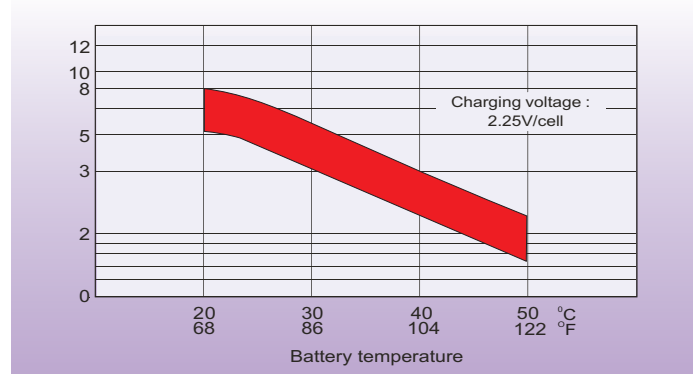
## Float Charging Characteristics



## 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 voltage 2.25V/cell.
  2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
  3. Charged for 8-10 hours 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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