

# UPS ULTRA HIGH RATE

## XP12-490FR (12V, 490.9WPC, 134.4AH)

### Specification

Nominal Voltage	12V
Nominal Capacity(8 HR)	134.4 Ah at 1.75V/cell @ 25°C/77°F
Watts(15 min rate)	490.9 Watts/cell at 1.67V/cell @ 25°C/77°F
Dimensions	Length 335mm(13.19inches)
	Width 172mm(6.77inches)
	Container Height 275mm(10.83inches)
	Total Height (with Terminal) 278mm(10.94inches)
Approx Weight	Approx 42.0 kg (92.6 lbs)
Terminal	T8 with copper alloy insert for a M6 bolt
Container Material	Flame Retardant ABS to UL94-V0
Rated Capacity	142.0 AH/7.10A (20hr, 1.80V/cell, 25°C/77°F)
	134.4 AH/16.8A (8hr, 1.75V/cell, 25°C/77°F)
	124.0 AH/24.8A (5hr, 1.75V/cell, 25°C/77°F)
	114.0 AH/38.0A (3hr, 1.75V/cell, 25°C/77°F)
	103.0 AH/103.0A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	1848A (5s)
Internal Resistance	Approx 3.2mΩ
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 42.6A.
	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	261.7	216.4	189.1	168.9	133.2	101.1	82.1	48.4	35.1	28.0	23.4	20.2	16.0	13.30	6.93
1.80V/cell	310.5	243.6	210.2	183.6	143.0	107.7	87.2	50.6	36.7	28.9	24.1	20.8	16.4	13.60	7.10
1.75V/cell	355.0	277.1	230.3	196.8	150.7	113.2	91.7	52.5	38.0	29.9	24.8	21.4	16.8	13.80	7.26
1.70V/cell	391.7	297.6	245.7	208.7	158.2	118.5	95.6	54.7	38.9	30.5	25.4	21.8	17.1	14.00	7.38
1.67V/cell	426.0	320.2	262.8	220.4	166.6	124.0	99.4	56.6	40.1	31.4	25.9	22.2	17.4	14.20	7.51
1.60V/cell	463.5	347.8	278.9	232.3	174.7	128.7	103.0	58.1	41.1	32.1	26.6	22.7	17.7	14.50	7.63

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

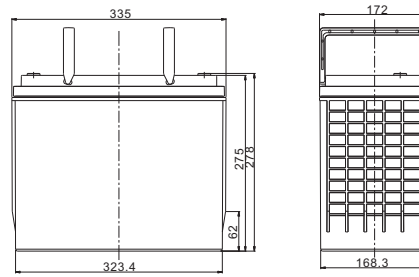
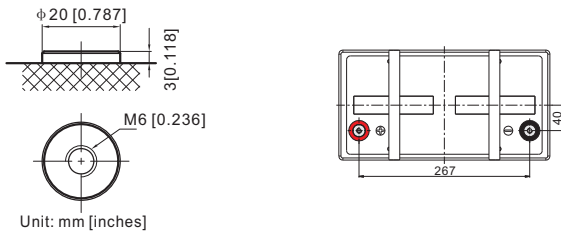
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	497.8	416.3	366.4	329.0	261.1	199.4	162.9	96.6	70.3	56.2	47.3	41.1	32.7	27.3	14.3
1.80V/cell	583.6	464.8	403.5	355.1	278.1	210.8	171.7	100.2	72.9	57.7	48.3	41.8	33.3	27.7	14.6
1.75V/cell	661.2	521.8	438.3	377.7	290.8	219.8	179.2	103.3	75.0	59.3	49.5	42.9	33.9	28.0	14.8
1.70V/cell	722.4	555.3	462.8	397.6	303.2	228.4	185.4	106.7	76.5	60.3	50.4	43.4	34.3	28.3	15.0
1.67V/cell	777.5	591.1	490.9	416.4	317.3	237.7	191.8	109.9	78.2	61.7	51.1	44.1	34.6	28.6	15.2
1.60V/cell	829.6	628.8	511.8	429.8	325.9	242.2	195.1	110.8	78.8	61.9	51.5	44.3	34.6	28.5	15.2



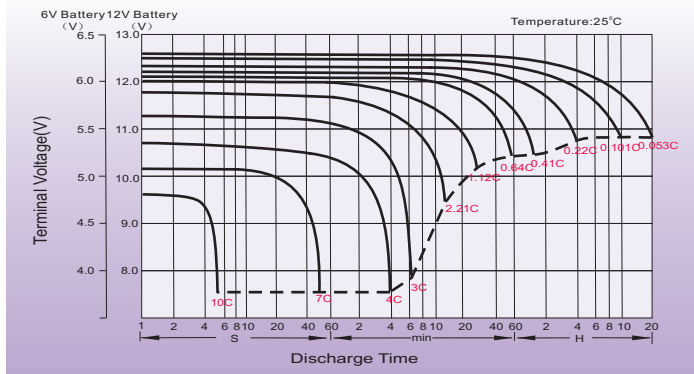
# Dimensions

## T8 Terminal

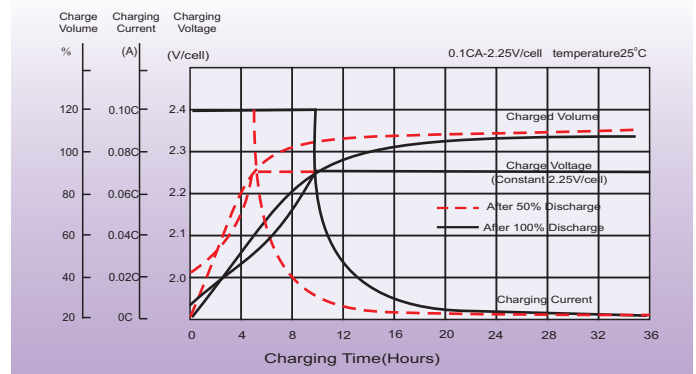
Unit: mm [inches]



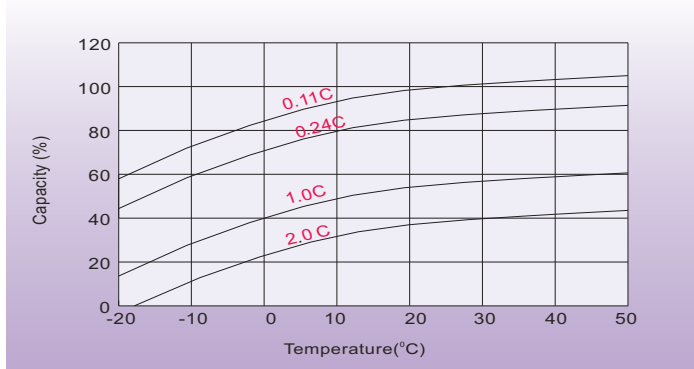
## Discharge Characteristics



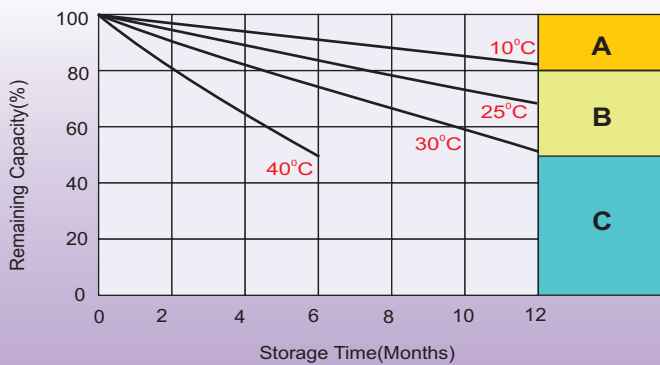
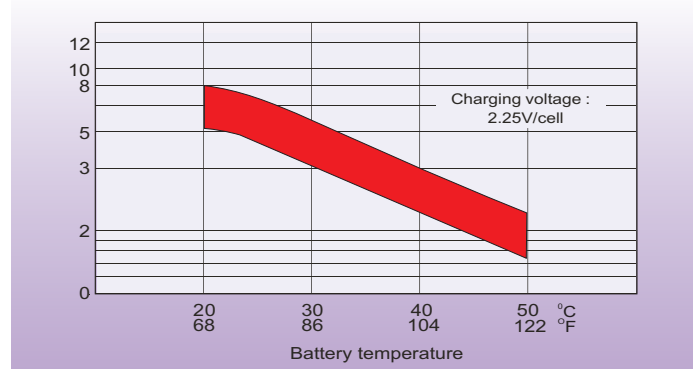
## Float Charging Characteristics



## 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 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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