

# UPS ULTRA HIGH RATE

## XP12-350FR (12V, 370.3WPC, 89.6AH)

### Specification

Nominal Voltage	12V
Nominal Capacity(8 HR)	89.6 Ah at 1.75V/cell @ 25°C/77°F
Watts(15 min rate)	370.3 Watts/cell at 1.67V/cell @ 25°C/77°F
Dimensions	Length 305mm(12.0inches)
	Width 168mm(6.61inches)
	Container Height 207mm(8.15inches)
	Total Height (with Terminal) 210mm(8.27inches)
Approx Weight	Approx 28.0 kg (61.7 lbs)
Terminal	T6 with copper alloy insert for a M6 bolt
Container Material	Flame Retardant ABS to UL94-V0
Rated Capacity	95.0 AH/4.75A (20hr, 1.80V/cell, 25°C/77°F)
	89.6 AH/11.2A (8hr, 1.75V/cell, 25°C/77°F)
	83.5 AH/16.7A (5hr, 1.75V/cell, 25°C/77°F)
	77.1 AH/25.7A (3hr, 1.75V/cell, 25°C/77°F)
	67.5 AH/67.5A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	1425A (5s)
Internal Resistance	Approx 4.0mΩ
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 28.5A. 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	209.8	171.1	145.5	123.1	95.0	69.9	56.5	33.7	24.4	19.1	15.8	13.6	10.7	8.84	4.63
1.80V/cell	234.8	190.7	158.5	133.1	100.7	73.4	59.2	35.0	25.1	19.8	16.3	14.0	10.9	9.07	4.75
1.75V/cell	262.2	209.2	171.4	142.2	105.8	76.7	61.6	35.8	25.7	20.1	16.7	14.3	11.2	9.25	4.86
1.70V/cell	290.7	226.9	182.4	151.3	111.2	80.1	63.5	36.6	26.2	20.6	17.1	14.6	11.4	9.43	4.94
1.67V/cell	321.5	242.8	195.3	159.6	116.5	82.8	65.3	37.3	26.7	21.0	17.3	14.9	11.6	9.59	5.03
1.60V/cell	348.8	258.8	205.6	166.7	120.4	85.8	67.5	38.3	27.2	21.4	17.7	15.2	11.9	9.76	5.16

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

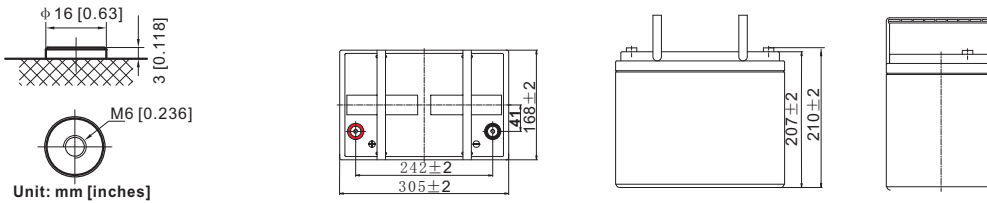
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	408.1	334.7	286.3	243.4	188.8	139.6	113.2	67.8	49.2	38.8	32.2	27.7	21.8	18.2	9.58
1.80V/cell	452.1	369.2	308.6	260.6	198.3	145.4	117.7	69.9	50.4	39.8	33.1	28.3	22.3	18.6	9.76
1.75V/cell	499.6	401.3	330.8	276.0	206.7	150.7	121.6	71.1	51.3	40.3	33.5	28.9	22.7	18.8	9.93
1.70V/cell	547.6	430.4	348.0	290.7	214.9	155.8	124.3	72.1	52.0	41.1	34.1	29.2	23.0	19.1	10.0
1.67V/cell	600.7	457.2	370.3	304.6	223.9	160.4	127.2	73.1	52.7	41.6	34.4	29.6	23.3	19.3	10.2
1.60V/cell	644.5	482.0	385.7	315.2	229.1	164.4	130.2	74.5	53.2	42.0	34.9	29.9	23.6	19.4	10.3



# Dimensions

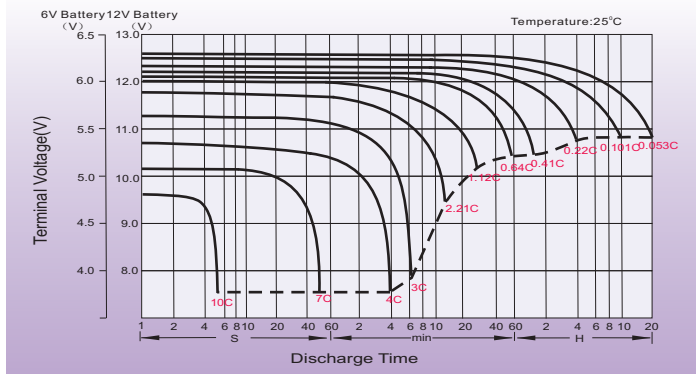
## T6 Terminal

Unit: mm [inches]

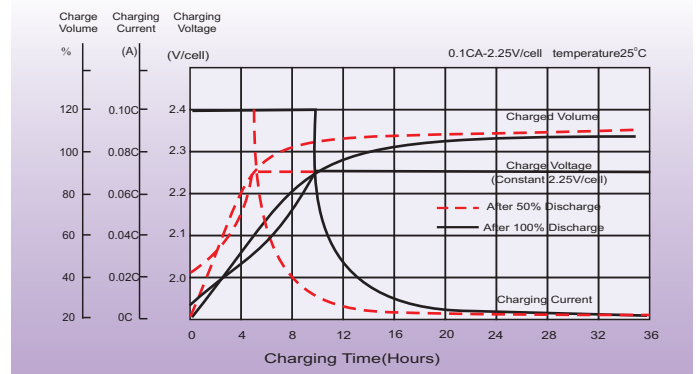


Unit: mm [inches]

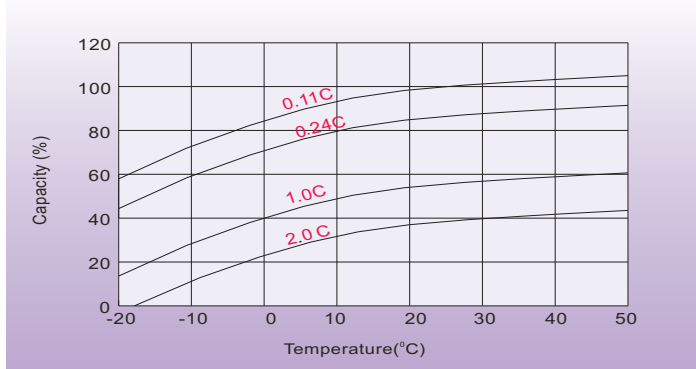
## Discharge Characteristics



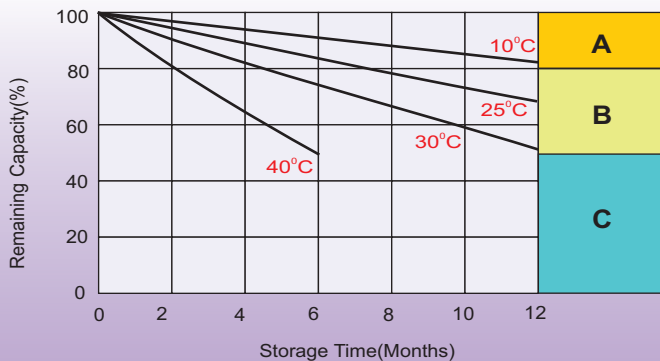
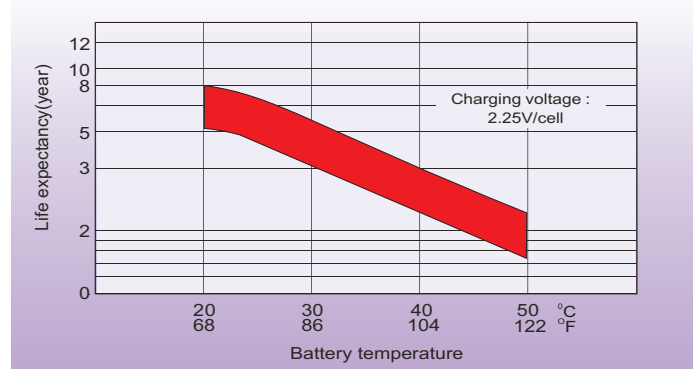
## Float Charging Characteristics



## 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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