

UPS ULTRA HIGH RATE

XP12-540FR (12V, 539.0WPC, 143.2AH)

Specification

Nominal Voltage	12V
Nominal Capacity(8 HR)	143.2 Ah at 1.75V/cell @ 25°C/77°F
Watts(15 min rate)	539.0 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 42.4 kg (93.5 lbs)
Terminal	T8 with copper alloy insert for a M6 bolt
Container Material	Flame Retardant ABS to UL94-V0
Rated Capacity	155.0 AH/7.75A (20hr, 1.80V/cell, 25°C/77°F)
	143.2 AH/17.9A (8hr, 1.75V/cell, 25°C/77°F)
	130.5 AH/26.1A (5hr, 1.75V/cell, 25°C/77°F)
	120.3 AH/40.1A (3hr, 1.75V/cell, 25°C/77°F)
	109.5 AH/109.5A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	2015A (5s)
Internal Resistance	Approx 3.1mΩ
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 46.5A. 14.4V~15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C
	40°C (104°F) 103%
Capacity affected by Temperature	25°C (77°F) 100%
	0°C (32°F) 86%
	Self Discharge



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	282.7	227.9	197.5	173.4	138.3	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	252.0	217.6	192.0	150.7	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	281.8	241.2	207.9	161.8	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	309.7	265.0	225.9	173.3	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	341.3	288.5	240.4	180.8	133.3	105.6	60.1	42.4	33.1	27.3	23.5	18.7	15.5	8.20
1.60V/cell	507.8	369.2	304.4	253.4	190.0	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)

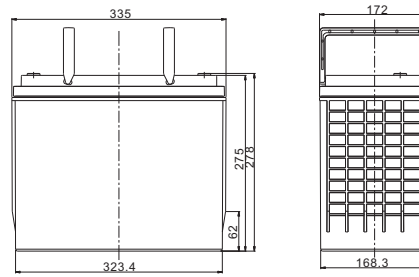
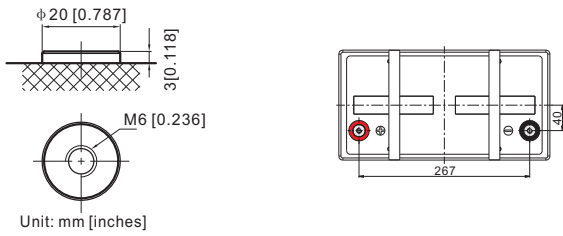
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	537.7	438.4	382.7	337.8	271.0	209.1	172.5	102.8	74.4	59.5	49.8	43.5	34.9	29.5	15.6
1.80V/cell	615.4	480.8	417.8	371.3	293.0	223.2	181.3	106.8	77.1	61.2	51.1	44.4	35.6	30.0	15.9
1.75V/cell	710.1	530.7	458.9	398.9	312.2	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	577.9	499.2	430.2	332.1	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	630.1	539.0	454.3	344.4	255.5	203.8	116.8	82.8	65.0	53.9	46.6	37.2	31.2	16.6
1.60V/cell	908.9	667.5	558.6	468.8	354.4	261.2	207.5	117.7	82.9	65.5	54.3	47.1	37.5	31.3	16.6



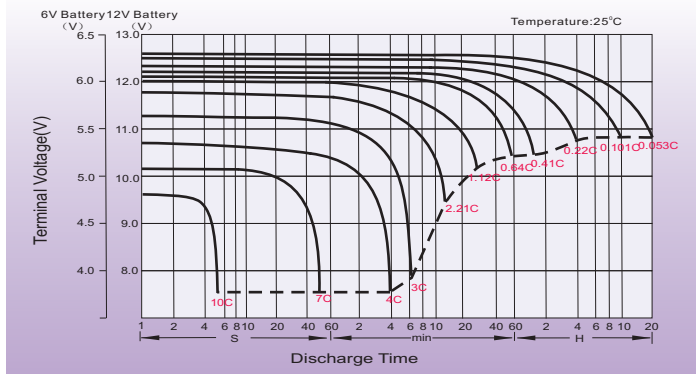
Dimensions

T8 Terminal

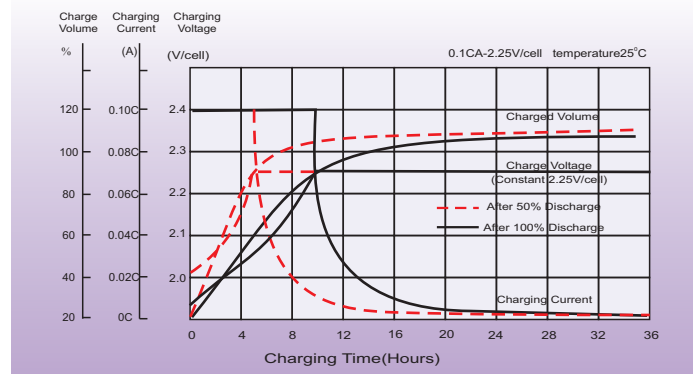
Unit: mm [inches]



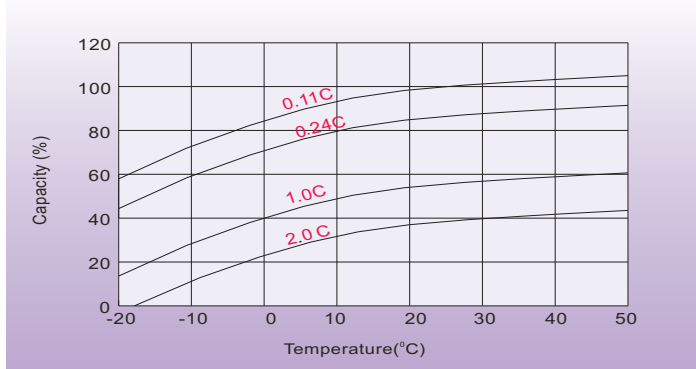
Discharge Characteristics



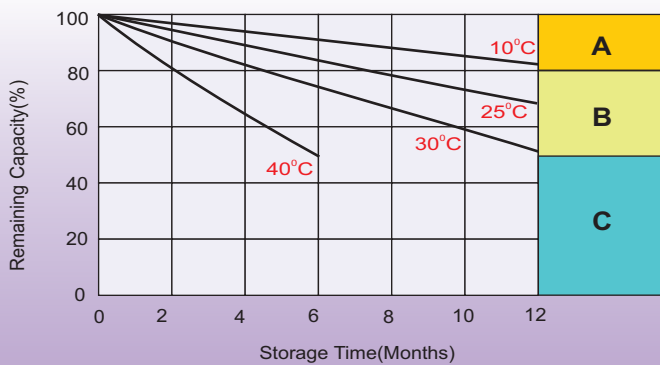
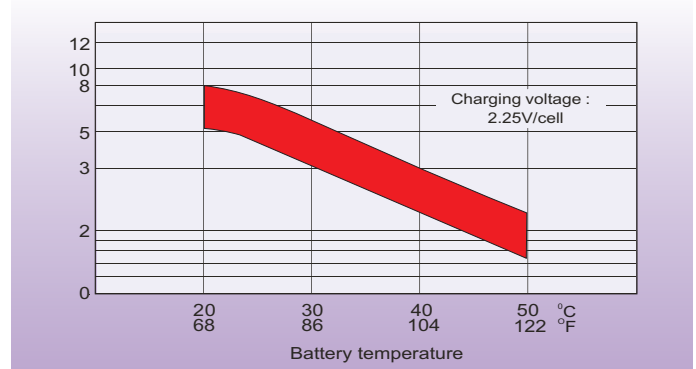
Float Charging Characteristics



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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