

USF12-170 (12V170AH)

Applications

- ◆ Telecom application (indoor or outdoor BTS)
(21" / 23" rack or cabinet)
- ◆ UPS, standby power supply
- ◆ Power station systems
- ◆ Railway and marine systems



Design

- ◆ Positive plate: flat plate and grid-plate in PbCaSn-alloy
- ◆ Negative plate: flat plate and grid-plate in PbCaSn-alloy
- ◆ Electrolyte: sulphuric acid
- ◆ Separator: AGM separator
- ◆ Safety valve: valve with flame arrestor

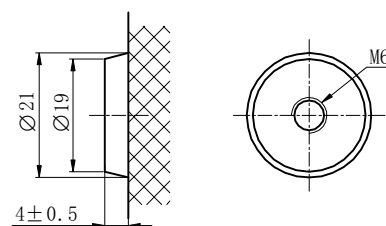
Features

- ◆ Long life: 12 years design life
- ◆ Good deep discharge resilience performance
- ◆ Special plate design, long cycle lifetime
- ◆ High thermal capacity, reduce the risk of thermal out of control and drying hard,
- ◆ Flame retardant container UL94-V0

Terminal

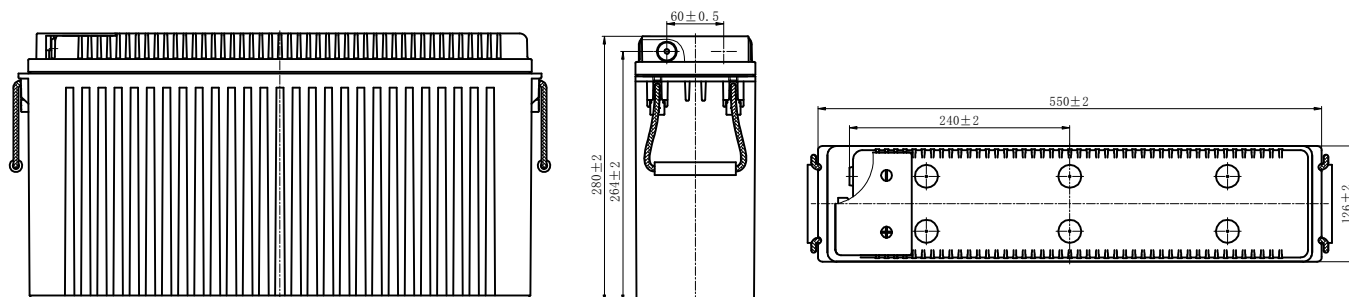
Terminal Model: T13

Unit: mm



Layout

Unit: mm



Front Terminal Battery-USF Series

Specification

Nominal Voltage	12V	
Rated Capacity (Ah)	170.0 AH/17.0A	(10hr, 1.80V/cell, 25°C)
	133.2AH/44.4A	(3hr, 1.75V/cell, 25°C)
	110.5AH/110.5A	(1hr, 1.60V/cell, 25°C)
Dimension	Length	550±2mm
	Width	126±2mm
	Container Height	280±2mm
	Total Height	280±2mm
Approx Weight	Approx 54.0kg	
Terminal	T13	
Container Material	ABS	
Max. Discharge Current	1360A (5s)	
Internal Resistance	Approx 2.9mΩ	
Operating Temp. Range	Discharge: -15~50°C Charge: 0~40°C Storage: -15~40°C	
Capacity affected by Temperature	40°C	106%
	25°C	100%
	0°C	86%
Cycle Use	Initial Charging Current less than 45.0A.	
	Voltage: 14.4V at 25°C	Temp. coefficient -30mV/°C
Standby Use	Equalization voltage: 14.1V at 25°C Temp. coefficient -18mV/°C	
	Float voltage: 13.5V at 25°C	Temp. coefficient -18mV/°C
Self Discharge	USF series batteries may be stored for up to 6 months at 25°C and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



ISO9001



ISO14001

Performance

Constant Current Discharge (Amperes) at 25 °C

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	245.8	216.2	193.8	158.8	122.4	98.9	57.7	42.2	33.8	28.4	24.6	19.5	16.3	8.61
1.80V/cell	285.6	249.6	216.2	170.7	129.4	103.5	59.8	43.7	34.9	29.2	25.2	20.2	17.0	9.00
1.75V/cell	315.2	268.6	230.5	177.5	133.5	106.6	61.1	44.4	35.3	29.6	25.6	20.5	17.2	9.09
1.70V/cell	335.6	281.5	239.7	183.6	136.0	108.3	62.0	45.0	35.8	29.9	25.9	20.8	17.4	9.15
1.67V/cell	350.9	291.0	244.8	187.3	138.9	110.5	62.8	45.4	36.2	30.3	26.2	21.0	17.5	9.20
1.60V/cell	366.2	299.2	251.9	191.1	141.0	112.2	63.6	46.0	36.5	30.6	26.4	21.2	17.7	9.25

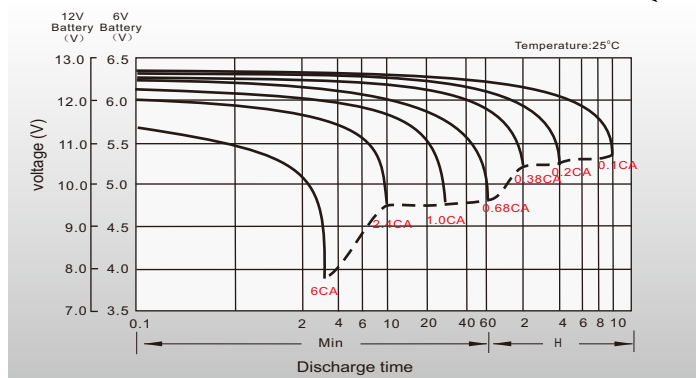
Constant Power Discharge (Watts/cell) at 25 °C

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	459.0	407.8	369.2	305.8	237.7	192.8	113.2	83.1	66.8	56.2	48.8	38.9	32.5	17.2
1.80V/cell	527.1	464.4	405.9	323.7	249.4	200.7	116.5	85.6	68.5	57.6	49.9	40.2	33.9	18.0
1.75V/cell	572.4	493.8	428.7	333.9	254.9	205.7	118.7	86.7	69.2	58.1	50.5	40.7	34.3	18.1
1.70V/cell	595.8	510.4	442.4	343.5	258.7	208.3	120.1	87.7	70.0	58.5	51.0	41.1	34.6	18.2
1.67V/cell	620.6	525.5	450.0	349.8	263.4	212.0	121.5	88.3	70.6	59.2	51.4	41.5	34.9	18.3
1.60V/cell	629.8	529.5	456.6	352.2	264.4	213.2	121.9	88.7	70.9	59.5	51.7	41.8	35.1	18.4

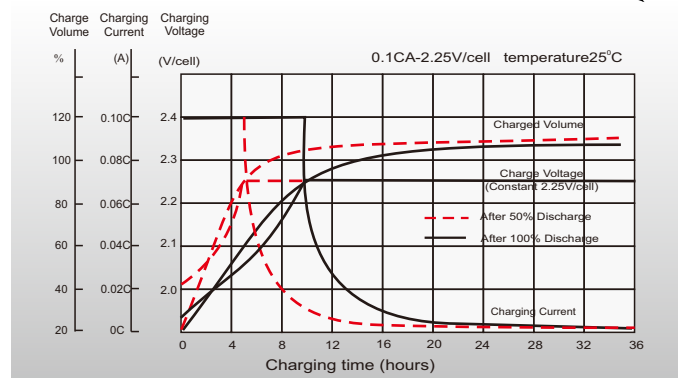
Front Terminal Battery-USF Series

Characteristic Curve

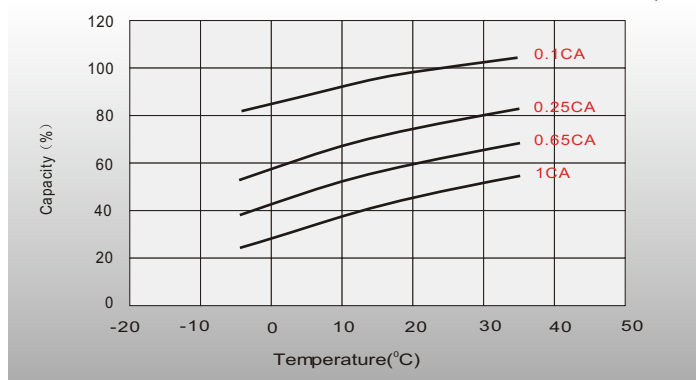
Discharge Characteristics



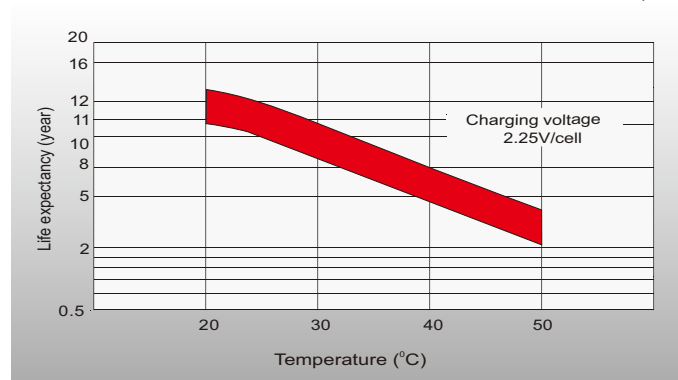
Float Charging Characteristics



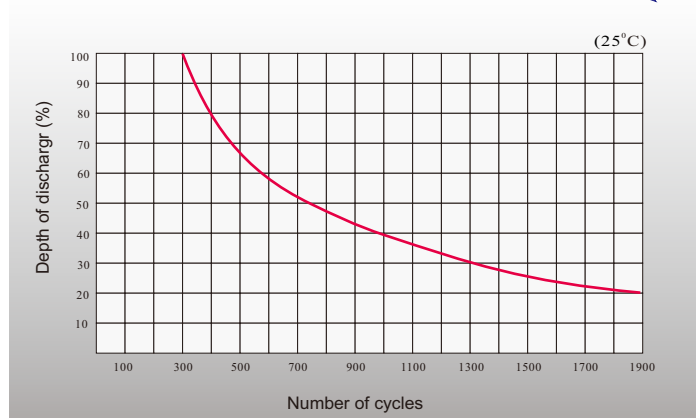
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



General Relation of Capacity VS. Storage Time

