



SPIRAL BATTERY SP12-85



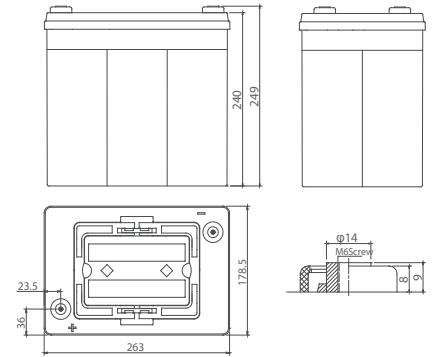
Main Applications

- ▶ UPS
- ▶ Communication station
- ▶ Solar energy storage
- ▶ Smart grid
- ▶ Different standby power supply

Benefits

- ▶ Applicable in $-45^{\circ}\text{C} \sim 75^{\circ}\text{C}$
- ▶ The cycle life of 100% DOD reaches more than 350 times
- ▶ The designed float life is 15 years
- ▶ The time of high rate discharge is two times more than ordinary battery

Dimensions



Technical Parameters

Nominal Voltage	12 V
Capacity	85 Ah @ 20hr to 1.80V per cell @ 25°C (77°F)
Weight	25 kg (55.12 lbs)
Dimensions	Length: 263 mm (10.35 in) Width: 178.5 mm (7.03 in) Height: 240 mm (9.45 in) Total height: 249 mm (9.80 in)
Internal Resistance (full charged)	2.4 mΩ
Short-circuit Current	2695 A
Self Discharge @25°C(77°F)	Less than 8% after 90 days storage
Operating Temperature Range	Discharge: $-45^{\circ}\text{C} \sim 75^{\circ}\text{C}$ ($-49^{\circ}\text{F} \sim 167^{\circ}\text{F}$) Charge: $-20^{\circ}\text{C} \sim 50^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim 122^{\circ}\text{F}$) Storage: $-20^{\circ}\text{C} \sim 40^{\circ}\text{C}$ ($-4^{\circ}\text{F} \sim 104^{\circ}\text{F}$)
Recommended Operating Temperature	$15^{\circ}\text{C} \sim 35^{\circ}\text{C}$
Recommended Charging Current	7.5 A~30 A
Charging Voltage @25°C(77°F)	Float: 2.25 V/cell, Temps coefficient $-3\text{mV}/\text{cell}\cdot^{\circ}\text{C}$ Cycle: 2.40 V/cell
Terminal	M6
Capacity Affected by Temperature(C_{10})	105% @ 40°C (104°F) 95% @ 0°C (32°F) 80% @ -20°C (-4°F)

Certification

- ISO 9001
- ISO 14001
- ISO 18001

Technical Features

- ▶ With ultra-thin high purity lead frame design, a higher charge efficiency with trickle current is achieved
- ▶ With unique spiral wound design, the dehydration and bulging deformation of the battery are avoided in high-temperature
- ▶ Excellent fast charging performance, more than 95% of electricity is gained within 40 minutes
- ▶ Good battery consistency, available more strings in parallel



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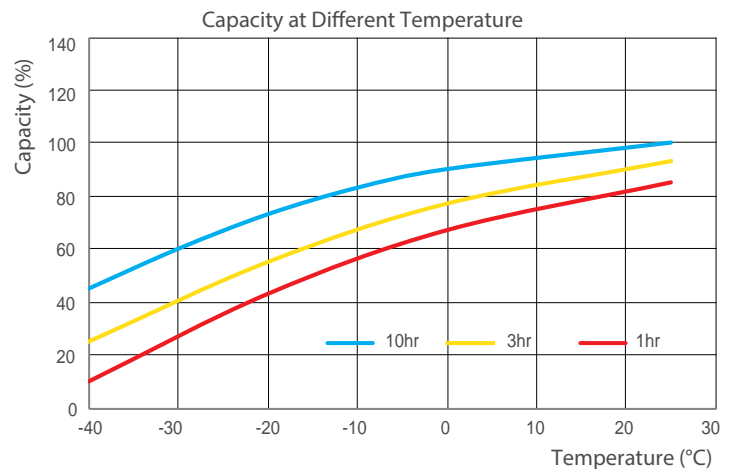
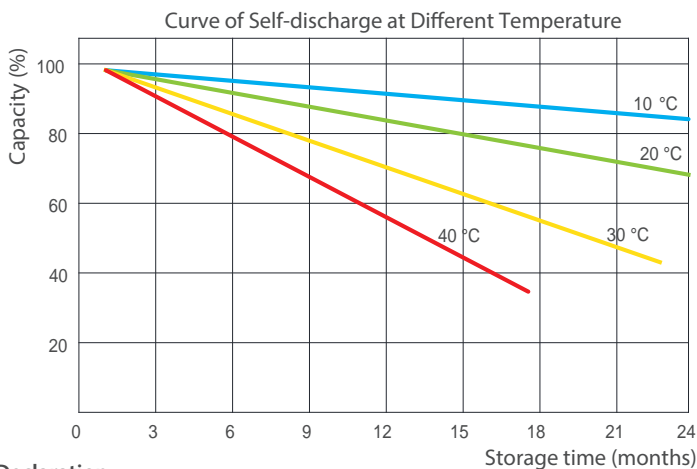
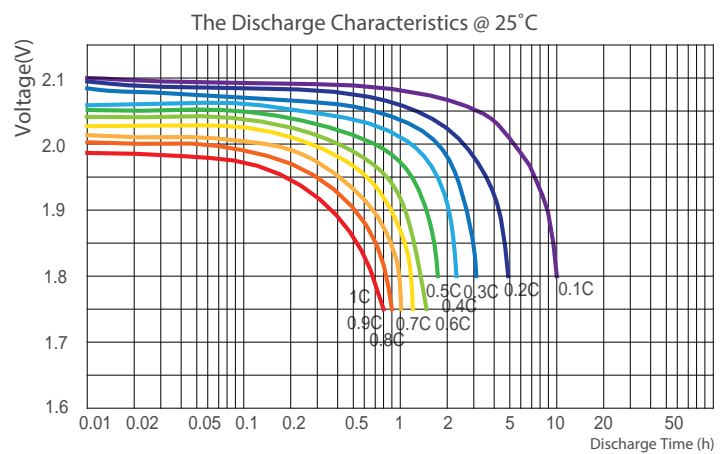
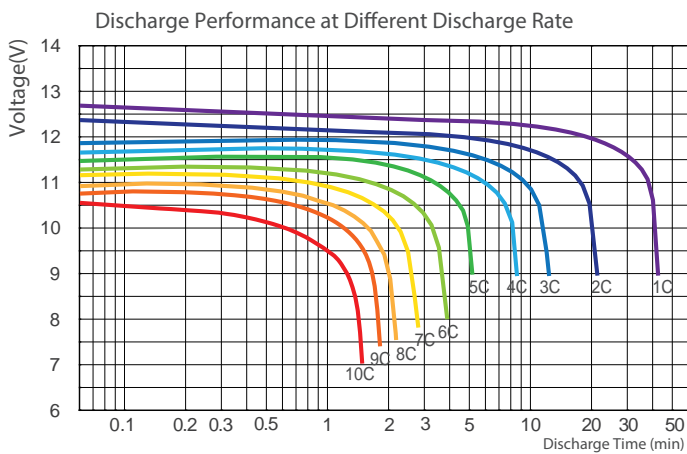
Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

F.V/Time	2min	5min	10min	15min	20min	30min	45min	1hr	2hr	3hr	4hr	5hr
1.85V	390.0	282.9	190.0	147.0	124.5	95.2	66.7	54.5	31.6	20.6	14.7	12.1
1.75V	529.9	356.0	230.0	179.4	133.7	99.3	70.5	57.5	32.2	22.4	16.9	13.2
1.65V	618.1	389.9	247.8	184.7	141.1	105.2	73.6	58.5	32.7	22.9	17.0	13.3

Constant Power Discharge Characteristics Unit: W/cell (25°C, 77°F)

F.V/Time	2min	5min	10min	15min	20min	30min	45min	1hr	2hr	3hr	4hr	5hr
1.85V	725.0	541.7	375.0	285.0	245.0	176.8	131.7	110.8	61.3	40.2	29.0	24.0
1.75V	916.7	654.2	448.3	333.3	275.0	193.5	141.7	113.3	61.6	43.3	32.8	26.1
1.65V	1058.3	716.7	457.3	341.7	280.0	198.2	143.3	115.0	62.0	44.2	33.2	26.3

Performance curve



*Declaration:

This information is generally descriptive only and is not intended to make or imply any representation, guarantee or warranty with respect to any cells and batteries. Cell and battery designs/specifications are subject to modification without notice.