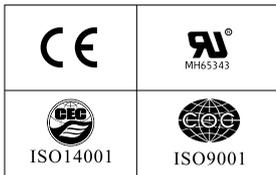


# PH-TEC™ Battery PH12-9



## Applications

For network connection equipment, power system, UPS, power station systems, railway and marine systems.



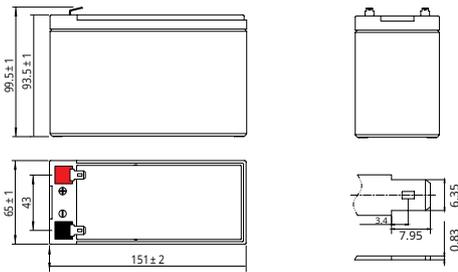
## Product Features

PH-TEC™ Battery uses high magnification lead paste formulations and high corrosion resistant alloy multi-grid, and special exhaust structure and sealing technology. It has many excellent features like high discharge capacity, long life, safe and reliable, very low self-discharge rate, flexible installation, convenient maintenance etc.

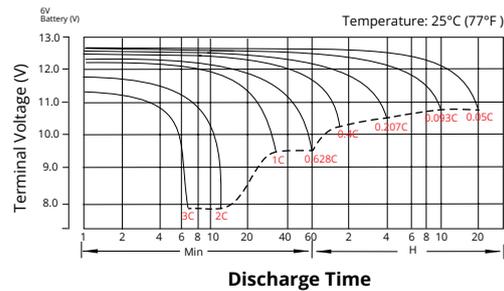
## Specifications

Nominal Voltage	12V	
Nominal Capacity (20HR, 1.60V/cell)	9.0 Ah	
Dimension	Length	151mm (5.95 in.)
	Width	65mm (2.56 in.)
	Total Height (with Terminal)	99.5mm (3.92 in.)
Approx Weight	2.50 Kg (5.51 lbs)	
Terminal	T2	
Container Material	ABS (UL94, HB)	
Max. Discharge Current	127.5A (5s)	
Internal Resistance	≤ 20m Ω	
Operating Temp. Range	Discharge	-20°C ~ 55°C (-4°F ~ 131°F)
	Charge	-20°C ~ 40°C (-4°F ~ 104°F)
	Storage	-15°C ~ 50°C (5°F ~ 122°F)
Standby Use (25°C)	Charging Current	≤ 2.7A
	Charging Voltage	13.5V ~ 13.8V
	Temp. Coefficient	-3mV/cell/°C
Cycle Use (25°C)	Charging Current	≤ 2.7A
	Charging Voltage	14.4V ~ 15.0V
	Temp. Coefficient	-5mV/cell/°C
Self Discharge	≤ 3% per month at 25°C	

## Dimensions



## Discharge Characteristics



## Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	30.0	21.0	16.7	12.7	9.7	7.0	5.7	4.11	3.17	2.25	1.75	1.46	1.24	0.97	0.78	0.400
1.80V/cell	33.0	23.5	17.4	13.2	10.0	7.1	5.8	4.18	3.22	2.29	1.78	1.48	1.26	0.98	0.79	0.425
1.75V/cell	36.0	24.0	18.2	13.8	10.2	7.3	5.9	4.25	3.27	2.32	1.80	1.50	1.27	0.99	0.80	0.430
1.70V/cell	39.0	25.0	18.9	14.3	10.5	7.4	6.0	4.32	3.32	2.36	1.83	1.52	1.29	1.00	0.81	0.440
1.67V/cell	42.0	25.5	19.3	14.9	10.6	7.5	6.1	4.36	3.35	2.38	1.84	1.53	1.30	1.01	0.82	0.445
1.60V/cell	45.0	26.5	19.5	15.4	10.9	7.7	6.2	4.46	3.42	2.42	1.89	1.56	1.33	1.04	0.84	0.450

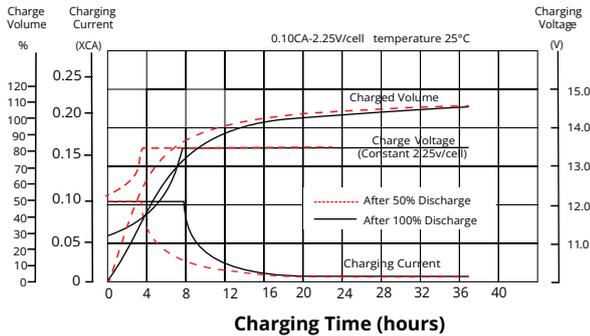


## Constant Power Discharge (Watts/cell) at 25°C (77°F)

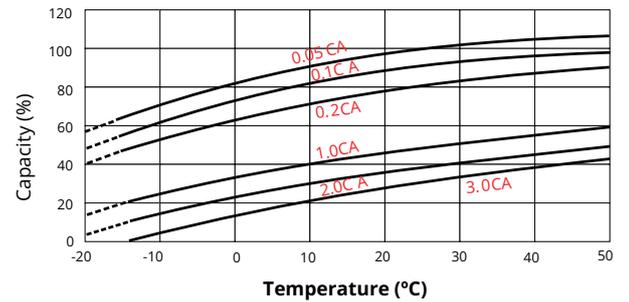
F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	58.6	41.5	32.2	25.3	19.0	13.6	11.2	8.03	6.20	4.43	3.45	2.88	2.45	1.92	1.55	0.84
1.80V/cell	62.0	43.8	33.9	26.0	19.3	13.8	11.4	8.14	6.28	4.49	3.50	2.91	2.48	1.94	1.57	0.85
1.75V/cell	64.0	45.3	35.0	27.2	19.7	14.0	11.5	8.25	6.37	4.54	3.54	2.95	2.51	1.96	1.59	0.86
1.70V/cell	68.0	47.2	36.0	28.3	20.0	14.2	11.7	8.36	6.45	4.60	3.58	2.98	2.54	1.99	1.61	0.87
1.67V/cell	70.6	48.7	36.5	29.5	20.2	14.4	11.8	8.43	6.50	4.63	3.60	3.00	2.56	2.00	1.62	0.87
1.60V/cell	73.6	50.3	37.0	30.6	20.7	14.7	12.0	8.57	6.61	4.71	3.66	3.05	2.59	2.03	1.64	0.90

## PH-TEC™ Battery PH12-9 Typical Curves

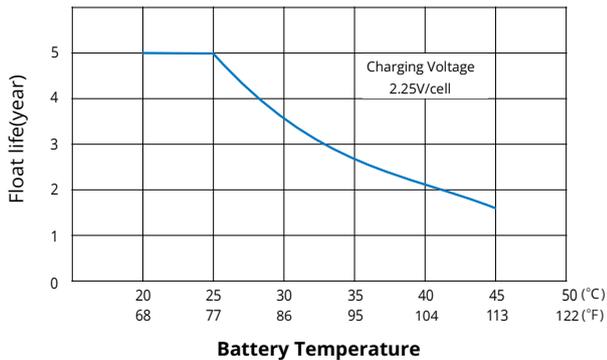
### Float Charging Characteristics



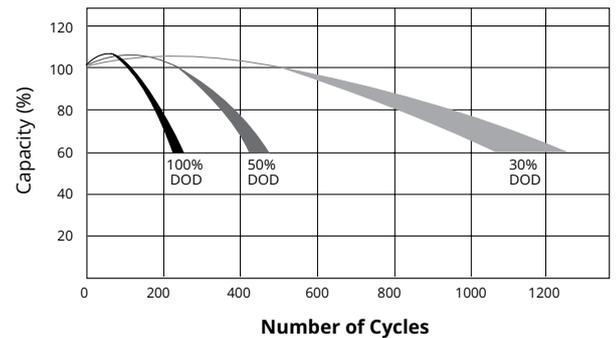
### Temperature Effects in Relation to Battery Capacity



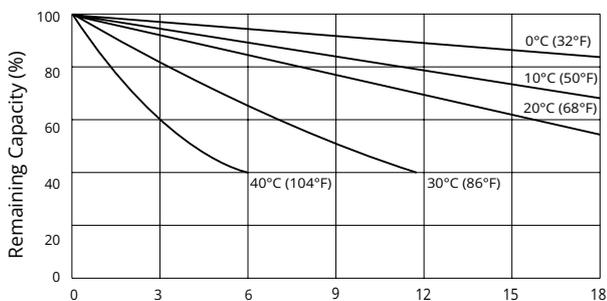
### Effect of Temperature on Long Term Float Life



### Cycle Life in Relation to Depth of Discharge



### Self Discharge Characteristics



PH-TEC™

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