

## FEATURES

- An excellent long-life expectancy of 14 years
- The battery can be stored for more than 6 months at 25°C
- A.B.S. UL94 -HB container
- Nominal voltage of 12V

## RS PRO Lead Acid Battery 12V, 90Ah

RS Stock No.: 174-8862



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

## Product Description

These RS PRO lead-acid batteries are suitable for standby and floating load applications. These rechargeable batteries have a long service life.

## General Specifications

<b>Technology</b>	AGM
<b>Designed for Cyclic Application</b>	No
<b>Designed High Rate Application</b>	No
<b>Container Material</b>	A.B.S. (UL94-HB)
<b>Application</b>	Standby & float applications

## Electrical Specifications

<b>Capacity</b>	90Ah
<b>Nominal Voltage</b>	12V
<b>Terminal Type</b>	T14
<b>Cells Per Unit</b>	6V
<b>Voltage Per Unit</b>	12V
<b>Max. Discharge Current</b>	1080A (5 sec)
<b>Max. Charging Current Limit</b>	2.70A
<b>Float charging Voltage</b>	13.5VDC to 13.8VDC/unit Average at 25°C
<b>Internal Resistance</b>	5.0 mOhm
<b>Equalization and Cycle Service</b>	14.4VDC to 15.0VDC/unit Average at 25°C
<b>Self-Discharge</b>	The batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.

## Mechanical Specifications

<b>Dimensions</b>	306mm x 168mm x 208mm
<b>Height</b>	306mm
<b>Length</b>	168mm
<b>Width</b>	208mm
<b>Weight</b>	27.5kg

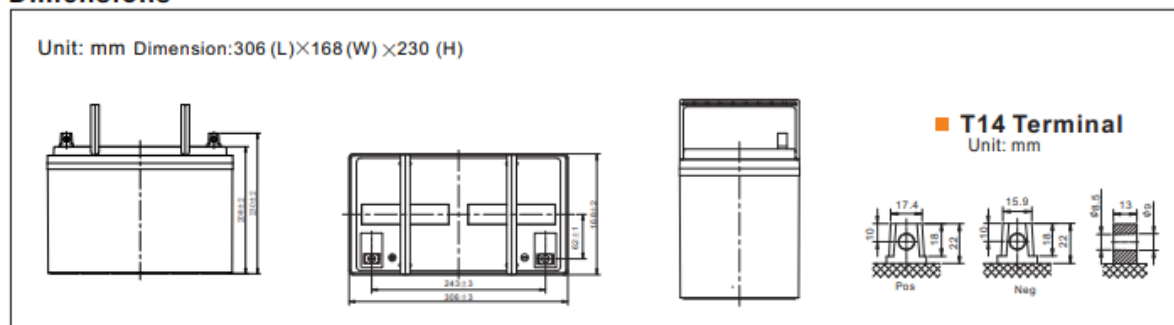
## Operation Environment Specifications

<b>Operating Temperature Range</b>	Discharge : -15°C to 50°C Charge : 0°C to 40°C Storage : -15°C to 40°C
<b>Nominal Operating Temperature Range</b>	25 ±3°C (77 ±5°F)

## Approvals

<b>Compliance/Certifications</b>	UL94-HB
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## Dimensions



## Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.80V	1.75V	1.60V
Discharge Current (A)	(A) $\leq 0.2C$	$0.2C < (A) < 1.0C$	(A) $\geq 1.0C$

**Charge the batteries at least once every six months, if they are stored at 25°C.**

### Charging Method:

Constant Voltage	-0.2Cx2h+2.4~2.45V/Cellx24h,Max. Current 0.3CA
Constant Current	0.1C until the voltage reaching 14.4V,then 0.1Cx4h

### Available Capacity Subject to Temperature

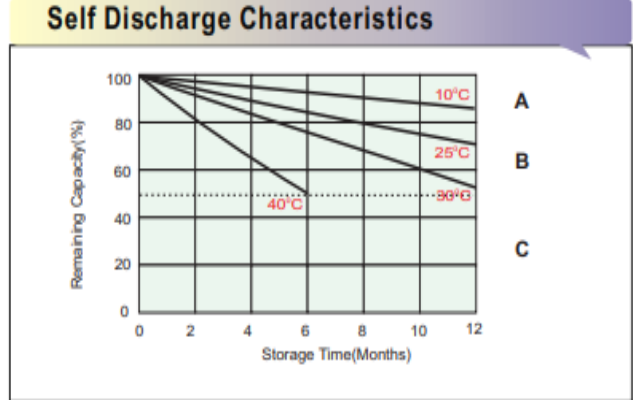
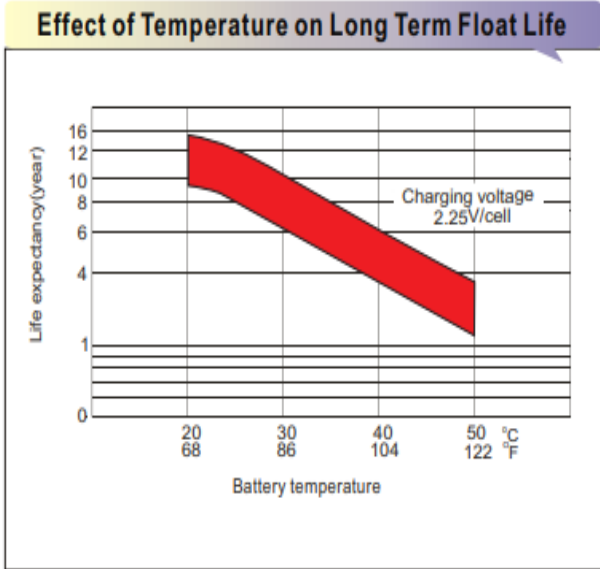
Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
AGM Battery	6V&12V	46%	66%	86%	89%	93%	98%	100%	102%	103%	105%

### Constant Current Discharge Characteristics : A (25°C)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	105.3	88.6	78.6	65.2	50.3	43.0	27.9	20.9	17.2	14.4	12.6	10.1	8.72	4.65
1.80V/cell	120.5	99.4	86.9	70.8	54.2	45.4	29.9	22.5	18.2	15.3	13.4	10.7	9.00	4.82
1.75V/cell	136.8	112.1	96.0	76.9	59.2	49.5	31.1	23.4	18.9	15.7	13.8	11.0	9.24	4.94
1.70V/cell	154.6	124.4	106.0	84.0	63.7	52.4	32.8	24.6	19.7	16.6	14.5	11.5	9.60	5.06
1.65V/cell	166.0	133.1	112.7	88.6	67.4	54.2	34.0	25.6	20.5	17.1	15.0	11.9	9.87	5.22
1.60V/cell	182.6	145.8	122.5	94.5	70.1	55.8	34.9	26.3	20.9	17.5	15.3	12.1	10.1	5.30

### Constant Power Discharge Characteristics : W (25°C)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	196.6	167.0	149.7	125.5	97.7	83.8	54.7	41.2	33.9	28.6	25.1	20.2	17.4	9.31
1.80V/cell	222.4	185.1	163.1	134.2	104.5	88.0	58.4	44.1	35.8	30.2	26.5	21.2	18.0	9.62
1.75V/cell	248.5	206.0	178.5	144.7	112.9	95.5	60.5	45.6	36.9	30.8	27.2	21.9	18.4	9.85
1.70V/cell	274.4	225.4	195.6	157.1	121.2	100.8	63.6	48.0	38.5	32.5	28.5	22.8	19.1	10.1
1.65V/cell	292.0	239.5	206.5	164.4	127.1	103.5	65.5	49.7	39.9	33.4	29.4	23.5	19.6	10.4
1.60V/cell	314.0	258.1	221.9	174.3	131.4	106.0	66.9	50.7	40.7	34.1	29.9	23.9	20.0	10.6



- 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 voltage 2.25V/cell.
  2. Charged for above 20hours at limited current 0.25CA and constant voltage 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.

