



ENGLISH

Datasheet: 537-7305

## RS Pro Rechargeable 12V Lead Acid Battery, 12 Ah



From RS Pro, this is a highly efficient, all purpose, sealed rechargeable lead acid battery. This battery is valve regulated and utilises recombination technology to ensure that it remains maintenance free. The battery casing is constructed from ABS resin, which offers high impact strength, good resistance to chemicals and excellent temperature performance.

### Storage:

This lead acid battery can be stored at +25 °C for more than 6 months with a self-discharge ratio of 3 %. It has an excellent standby life of five years. This lead acid battery features a high quality AGM separator which extends the cycle life and prevents micro short circuits.

### Features:

- Valve regulated
- Suitable for float or standby use
- Low gas emission
- The resin case features fire resistance to UL94-HB
- Silver coated fast-on F1 terminals improve conductivity

### Benefits:

- Maintenance free
- Leak proof
- Excellent recovery from deep discharge
- Five years standby life
- Road transport suitable as per UN2800
- Air transport suitable to Special Provision A67, IATA and ICAO
- Can be used in several orientations, but must not be used inverted

**Applications:**

This lead acid battery is an all purpose power solution. Suitable applications include:

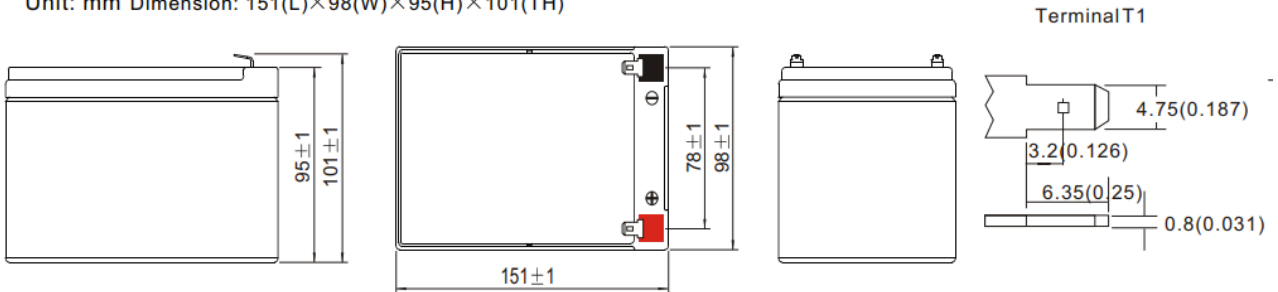
- Emergency backup power supplies
- Electric Power Systems (EPS)
- Uninterruptible Power Supplies (UPS)
- DC power supplies
- Communication power supplies
- Emergency lighting
- Railway and aircraft signalling
- Alarms and security systems
- Automated control systems

**Specification**

<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Capacity</b>	12.0Ah@20hr-rate to 1.80V per cell @25°C
<b>Weight</b>	Approx 3.50 kg
<b>Max. Discharge Current</b>	180 A(5 sec)
<b>Internal Resistance</b>	Approx 14mΩ
<b>Operating Temp.Range</b>	Discharge : -15~50°C (5~122°F) Charge : 0~40°C (32~104°F) Storage : -15~40°C (5~104°F)
<b>Nominal Operating Temp. Range</b>	25±3°C (77±5°F )
<b>Float charging Voltage</b>	13.5 to 13.8 VDC/unit Average at 25°C
<b>Recommended Maximum Charging Current Limit</b>	3.6A
<b>Equalization and Cycle Service</b>	14.4 to 15.0 VDC/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.
<b>Terminal</b>	T1
<b>Container Material</b>	A.B.S. (UL94-HB) , Flammability resistance of UL94-V0 can be available upon request.

**Dimensions:**

Unit: mm Dimension: 151(L)×98(W)×95(H)×101(TH)



**Discharge characteristics:**

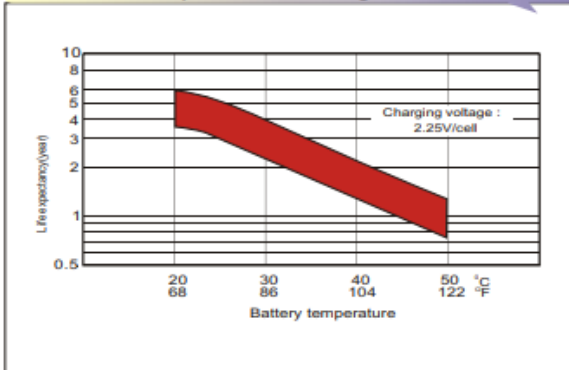
**Constant Current Discharge Characteristics : A (25 °C) Amps**

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	22.9	17.5	14.5	12.6	9.72	7.16	6.03	3.57	2.79	2.27	1.85	1.61	1.30	1.08	0.594
1.80V/cell	30.7	22.4	17.6	14.9	11.5	8.33	6.76	3.90	3.00	2.42	1.99	1.72	1.37	1.12	0.600
1.75V/cell	34.6	24.6	19.2	16.0	11.9	8.64	7.07	4.04	3.06	2.48	2.04	1.77	1.40	1.15	0.606
1.70V/cell	38.1	26.9	20.5	16.8	12.4	8.99	7.29	4.14	3.15	2.54	2.09	1.81	1.42	1.17	0.617
1.65V/cell	42.0	29.0	21.8	17.8	13.1	9.21	7.46	4.20	3.28	2.63	2.15	1.85	1.44	1.19	0.625
1.60V/cell	46.3	31.5	23.3	19.0	13.8	9.60	7.54	4.38	3.38	2.71	2.22	1.89	1.45	1.21	0.629

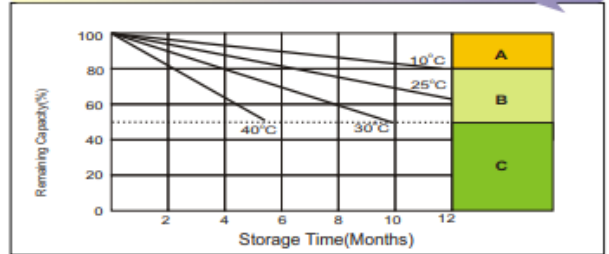
**Constant Power Discharge Characteristics : W (25 °C) Watts**

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	41.8	32.4	27.1	23.7	18.5	13.8	11.6	6.93	5.44	4.44	3.63	3.16	2.56	2.14	1.18
1.80V/cell	55.5	40.9	32.3	27.6	21.5	15.9	13.0	7.51	5.82	4.71	3.88	3.37	2.71	2.21	1.19
1.75V/cell	61.2	44.3	34.9	29.4	22.2	16.3	13.5	7.76	5.91	4.80	3.97	3.46	2.75	2.26	1.20
1.70V/cell	65.6	47.1	36.7	30.7	22.9	16.9	13.9	7.94	6.06	4.92	4.06	3.52	2.78	2.31	1.22
1.65V/cell	71.3	50.4	38.7	32.3	24.0	17.2	14.1	8.01	6.29	5.07	4.16	3.59	2.82	2.35	1.23
1.60V/cell	76.8	53.5	40.8	34.1	25.2	17.8	14.2	8.31	6.45	5.21	4.28	3.65	2.84	2.37	1.24

**Effect of Temperature on Long Term Float Life**

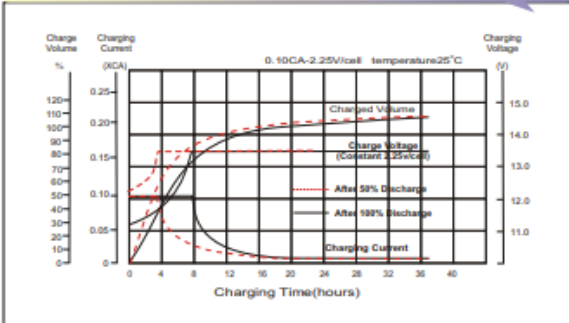


**Self Discharge Characteristics**

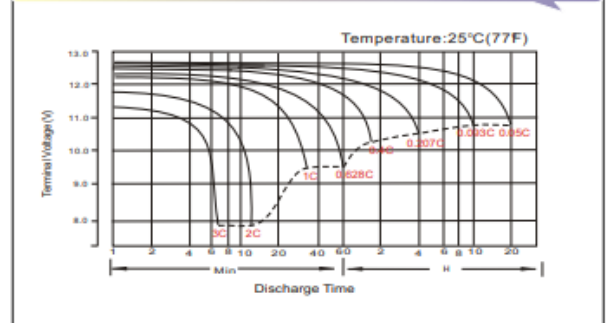


- A** No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:  
 1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
 2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
 3. Charged for 8-10 hours at limited current 0.05CA.
- C** Avoid this storage period unless regular Top charge. Supplementary charge may often fail to recover the full capacity

**Float Charging Characteristics**



**Discharge Characteristics**



**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%	76%	83%	90%	98%	100%	103%	107%	109%

**Discharge Current VS. Discharge Voltage**

Final Discharge Voltage V/cell	1.80V	1.75V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 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

**Maintenance & Cautions**

<b>Float Service:</b>
◆ It is recommended to check battery/Float voltage each month.
<b>Equalisation charge:</b>
◆ Equalisation charging is recommended once every 3 to 6 months using.
◆ Discharge 100% rated capacity.
◆ Charge 2.35v/cell constant voltage, maximum 0.3CA 24hrs.
<b>Cyclic Service:</b>
◆ Temperature compensation for varying temperatures:
- Charge voltage -3mV/Cell/degC from 25degC norm.
◆ The service life of your battery will be affected by:
- The number of discharge cycles, depth of discharge, ambient temperature and charging voltage.