

PS - 1221

12v/2.1Ah Flame retardant battery

VANDERBILT



Key Features include:

- UL94-V0 flame retardant case
- Compliant with EN60950-1 requirements for enclosures
- Tested & approved to latest industry standards
- Maintenance free sealed lead battery
- Low self-discharge rate
- Operational in any orientation
- Low internal resistance
- High long-term stability
- High capacity
- 100% recyclable

Description

■ Application

The maintenance free, sealed lead battery of the PS... Series are suitable for protection systems. They can be used for intrusion, fire and access control systems to guarantee their continuous operation in case of a power failure.

■ Features

The capacity of the maintenance free lead batteries are the product of the discharge current (A) and the discharge time (h) specified in ampere hour (Ah), whereas the capacity and the discharge voltage curve depend directly on the discharge current (see Fig. 1).

Several batteries can be connected in parallel to increase the total capacity, but it is required to use batteries with the same nominal capacity and voltage.

Several batteries can be connected in series to increase the closed circuit voltage, but it is required to use batteries with the same nominal capacity and voltage.

If possible the correct size of battery should be chosen for the load of the system.

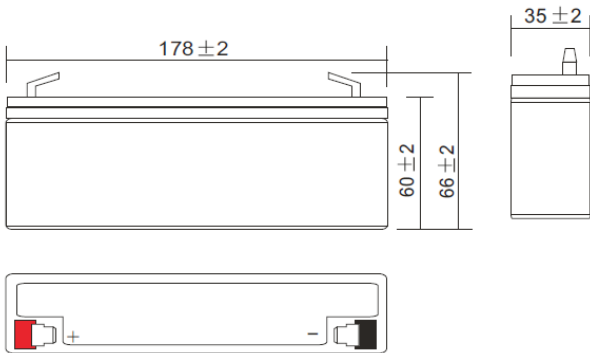
The operation of the battery below the end-point voltage will lead to a deep discharge of the battery. Deep discharged batteries cannot provide the initial capacity until they are fully recharged. The batteries of the PS... Series are protected against a deep discharge, which means they can be charged up to their nominal capacity again after a deep discharge, without any degradation of the capacity. Deep discharge situations should be avoided to help protect the life of the battery.

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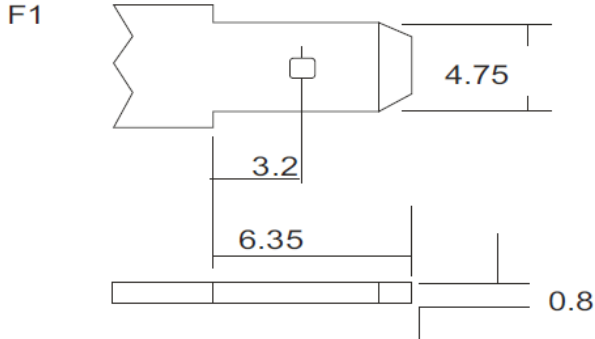
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■ Dimensions (mm)



■ Standard terminal (mm)



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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	4.42	3.08	2.54	2.20	1.77	1.36	1.11	0.679	0.517	0.425	0.361	0.312	0.248	0.207	0.114
1.80V/cell	5.43	3.67	2.94	2.49	1.96	1.48	1.20	0.721	0.544	0.447	0.376	0.326	0.258	0.214	0.115
1.75V/cell	6.43	4.15	3.25	2.71	2.09	1.57	1.26	0.752	0.563	0.461	0.386	0.334	0.265	0.218	0.116
1.70V/cell	7.30	4.58	3.51	2.91	2.19	1.63	1.31	0.783	0.581	0.472	0.396	0.342	0.269	0.222	0.118
1.65V/cell	8.05	4.93	3.72	3.06	2.29	1.70	1.37	0.806	0.596	0.482	0.405	0.349	0.273	0.225	0.120
1.60V/cell	8.45	5.13	3.87	3.15	2.35	1.74	1.40	0.831	0.610	0.494	0.413	0.356	0.279	0.229	0.121

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	8.33	5.86	4.88	4.27	3.45	2.66	2.19	1.34	1.03	0.484	0.722	0.627	0.500	0.416	0.230
1.80V/cell	10.1	6.93	5.61	4.79	3.79	2.89	2.34	1.42	1.07	0.886	0.748	0.650	0.515	0.428	0.231
1.75V/cell	11.8	7.76	6.13	5.17	4.02	3.05	2.45	1.47	1.11	0.908	0.764	0.662	0.526	0.434	0.232
1.70V/cell	13.3	8.46	6.58	5.51	4.19	3.15	2.54	1.52	1.14	0.925	0.778	0.674	0.530	0.439	0.235
1.65V/cell	14.5	8.99	6.87	5.73	4.33	3.25	2.63	1.56	1.16	0.940	0.792	0.684	0.536	0.443	0.237
1.60V/cell	14.9	9.24	7.08	5.84	4.41	3.29	2.67	1.60	1.18	0.957	0.803	0.694	0.545	0.448	0.237

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■ Discharge Characteristics (25°C, 77°F)

Rated Capacity	20hr Rate (1.80V/cell) 10hr Rate (1.80V/cell) 5hr Rate (1.75V/cell) 3hr Rate (1.75V/cell) 1hr Rate (1.60V/cell)	2.30AH 2.14AH 1.93AH 1.69AH 1.40AH	Constant Voltage Charge	Cycle	Initial Charging Current Less than 0.575A Voltage 14.40V ~ 15.0V At 25°C (77°F)
Capacity Affected by Temperature	40 °C (104°F) 25°C (77°F) 0°C (32°F)	103% 100% 86%		Standby	Recommended Charge Current less than 0.52A Voltage 13.5V 13.8V at 25°C (77°F)

■ Technical Data

Nominal voltage	12V
Nominal capacity (20HR)	2.1Ah
Material	Thick walled ABS UL94-V0
Transportation	Non-hazardous (air / sea / rail / road)
Operating temperature	
Storage temperature	
Life expectancy	3-5 years under float charge conditions
Internal resistance	90.0 Ω
Dimensions	
- Length	178 ± 2 mm
- Width	35 ± 2 mm
- Container height	60 ± 2 mm
- Terminal height	66 ± 2 mm
Terminal type	F1
Approvals	VdS – G 103145

■ Ordering Data

Type	Art. No.	Designation	Weight
PS1221	N54545-Z155-A100	Battery 12v/2.1Ah Flame Ret.	0.96Kg

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page 3

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