Installation manual

Rechargeable lead-acid battery 65Ah/12V

ZS-65

ZEUS

AAT SYSTEMY BEZPIECZEŃSTWA Sp. z o.o.
ul. Puławska 431, 02-801 Warszawa, tel. 22 546 05 46, faks 22 546 05 01
www.aat.pl

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper/ Pug	Fiberglass	Sulfuric acid

General Features

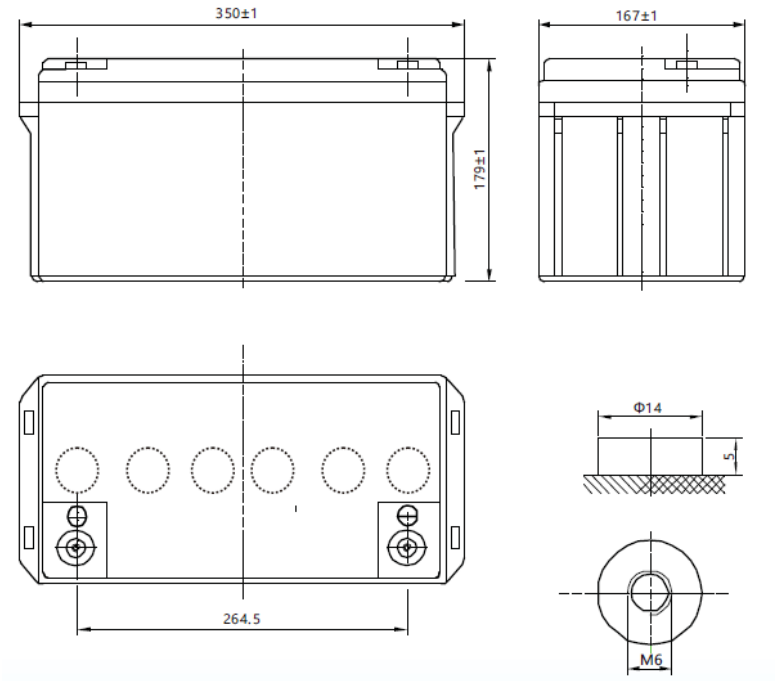
- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from
- electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

Battery Specification

Nominal Voltage	**12V**
Number of cell	**6**
Design life	**10 lat**
Nominal Capacity 77°F (25°C)	
20 hour rate (3,40 A; 10,8 V)	**68,0 Ah**
10 hour rate (6,50 A; 10,8 V)	**65,0 Ah**
5 hour rate (11,0 A; 10,5 V)	**55,0 Ah**
1 hour rate (37,6 A; 9,6 V)	**37,6 Ah**
Internal Resistance	
Fully Charged battery 77°F (25°C)	**≤6,8 mOhm**
Self-Discharge	
3% of capacity declined per month at 20°C (average)	
Operating Temperature Range	
Discharge	**-20°C—60°C**
Charge	**-10°C—60°C**
Storage	**-20°C—60°C**
Max. Discharge Current 77°F (25°C)	**780 A (5 s)**
Short Circuit Current	**1700 A**
Charge Methods: Constant Voltage Charge 77°F (25°C)	
Cycle use	**14.4—14.7 V (2,40—2,45 VPC)**
Maximum charging current	**26 A**
Temperature compensation	**-30 mV/°C**
Standby use	**13,2—13,68 V (2,2—2,23 VPC)**
Temperature compensation	**-20 mV/°C**

Dimensions and Weight

Length (mm / inch)	**350 / 13,8**
Width (mm / inch)	**167 / 6,57**
Height (mm / inch)	**179 / 7,05**
Total Height (mm / inch)	**179 / 7,05**
Approx. Weight (Kg / lbs)	**19,1 / 42,02**
* Weight devation:	**± 3%**



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

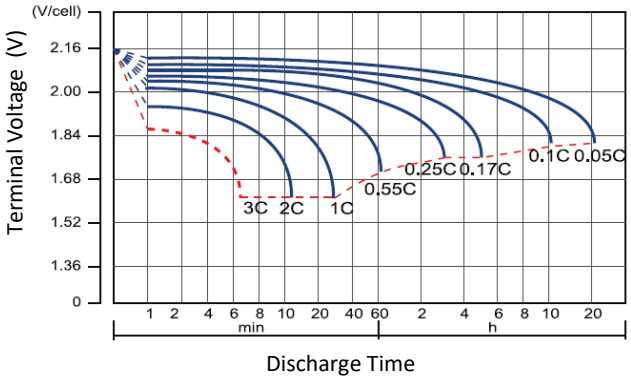
End Point Volts/Cell	5 min	10 min	15 min	30 min	1 h	3 h	5 h	10 h	20h
1,60 V	212	151	126	75,4	45,1	18,4	11,8	6,70	3,48
1,65 V	201	144	121	73,3	44,0	18	11,6	6,58	3,46
1,70 V	189	137	115	71,3	43,0	17,6	11,3	6,56	3,44
1,75 V	177	129	109	69,2	41,9	17,2	11,0	6,53	3,42
1,80 V	164	120	102	66,9	41,0	16,9	10,7	6,50	3,40

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

End Point Volts/Cell	5min	10 min	15 min	30 min	45 min	1 h	2 h	3 h	5 h
1,60 V	378	275	207	129	99,1	81,8	47,5	33,8	22,5
1,65 V	356	261	203	128	97,6	80,0	46,6	33,2	22,3
1,70 V	335	246	200	127	95,7	78,3	45,6	32,5	22,0
1,75 V	314	231	196	124	93,6	76,5	44,5	31,8	21,7
1,80 V	302	215	187	122	91,3	75,7	43,3	31,1	21,4

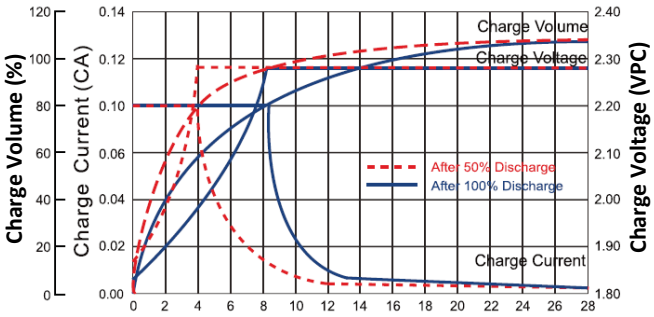
Note! The above characteristics data are average values abtained within threecharge / discharge cycles.
All data shall be changed without notice, AAT SYSTEMY BEZPIECZEŃSTWA sp. z o.o. reserves the right to explain and updated the information.

Discharge Characteristics Curve (25°C)



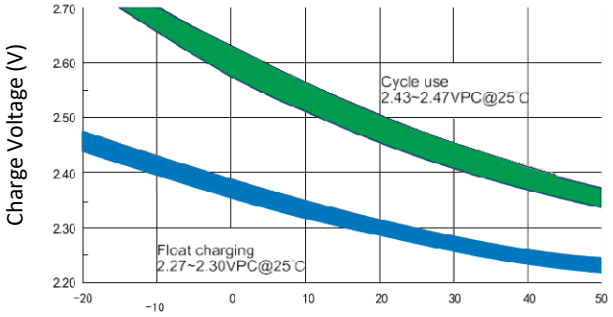
Discharge Time

Charge Characteristic Curve For Standby Use (25°C)



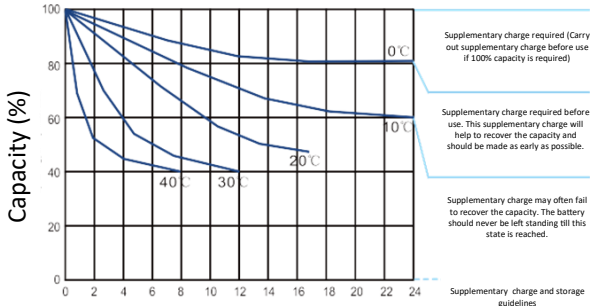
Charging Time (h)

Relationship Between Charging Voltage And Temperature



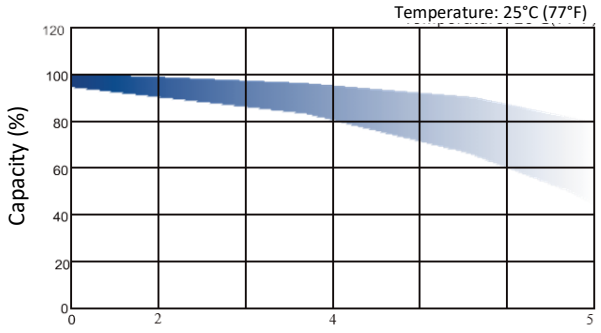
Temperature (°C)

Storage Characteristics



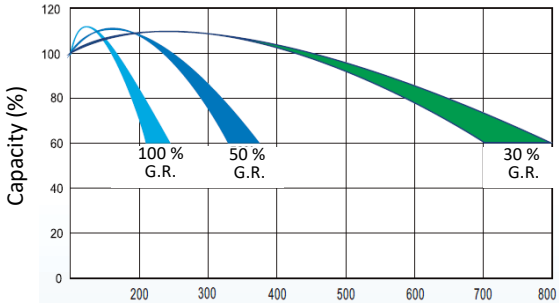
Storage Time (months)

Life Characteristics Of Standby Use



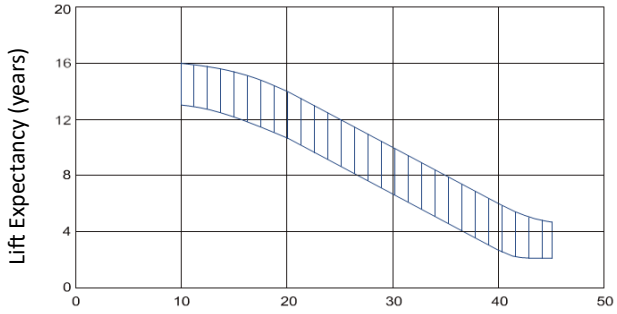
Life expectancy (years)

Cycle Life in Relation To Depth Of Discharge



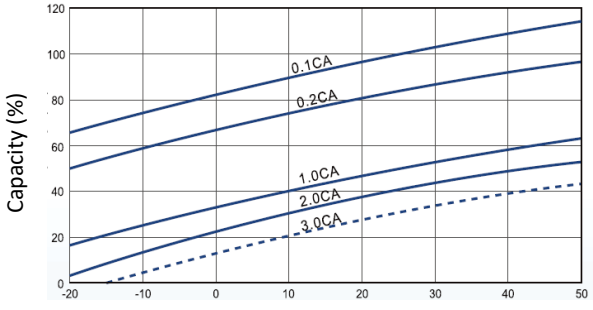
Number of Cycles

Effect Of Temperature On Long Term Life



Temperature (°C)

Temperature Effects On Capacity



Temperature (°C)

Notes

AAT SYSTEMY BEZPIECZEŃSTWA Sp. z o.o.

ul. Puławska 431, 02-801 Warszawa tel. 22 546 05 46, faks 22 546 05 01 e-mail: aat.warszawa@aat.pl, www.aat.pl	Warszawa
ul. Koniczynowa 2a, 03-612 Warszawa tel./faks 22 811 13 50, 22 743 10 11 e-mail: aat.warszawa-praga@aat.pl, www.aat.pl	Warszawa II
Antoniuk Fabryczny 22, 15-741 Białystok tel./faks 85 688 32 33, 85 688 32 34 e-mail: aat.bialystok@aat.pl, www.aat.pl	Białystok
Fordońska 183, 85-737 Bydgoszcz tel./faks 52 342 91 24, 52 342 98 82 e-mail: aat.bydgoszcz@aat.pl, www.aat.pl	Bydgoszcz
ul. Ks. W. Siwka 17, 40-318 Katowice tel./faks 32 351 48 30, 32 256 60 34 e-mail: aat.katowice@aat.pl, www.aat.pl	Katowice
ul. Prosta 25, 25-371 Kielce tel./faks 41 361 16 32, 41 361 16 33 e-mail: aat.kielce@aat.pl, www.aat.pl	Kielce
ul. Biskupińska 14, 30-737 Kraków tel./faks 12 266 87 95, 12 266 87 97 e-mail: aat.krakow@aat.pl, www.aat.pl	Kraków
90-019 Łódź, ul. Dowborczyków 25 tel./faks 42 674 25 33, 42 674 25 48 e-mail: aat.lodz@aat.pl, www.aat.pl	Łódź
ul. Racławicka 82, 60-302 Poznań tel./faks 61 662 06 60, 61 662 06 61 e-mail: aat.poznan@aat.pl, www.aat.pl	Poznań
Al. Niepodległości 606/610, 81-855 Sopot tel./faks 58 551 22 63, 58 551 67 52 e-mail: aat.sopot@aat.pl, www.aat.pl	Sopot
ul. Zielona 42, 71-013 Szczecin tel./faks 91 483 38 59, 91 489 47 24 e-mail: aat.szczecin@aat.pl, www.aat.pl	Szczecin
ul. Na Niskich Łąkach 26, 50-422 Wrocław tel./faks 71 348 20 61, 71 348 42 36 e-mail: aat.wroclaw@aat.pl, www.aat.pl	Wrocław

NIP: 9512500868, REGON: 385953687

Wpisana do rejestru przedsiębiorców prowadzonego przez Sąd Rejonowy dla m.st. Warszawy w Warszawie,
XIII Wydział Gospodarczy Krajowego Rejestru Sądowego pod numerem KRS 0000838329,
kapitał zakładowy wpłacony w całości w wysokości: 17 005 000,00 zł