

## SBY-AGM-12-12 // 12V 12Ah

### AGM-Bleiakku für Standby-Anwendungen

Wartungsfreie AGM Blei-Akkus von battery-direct arbeiten mit der Absorbent Glass Mat Technologie, bei der der Elektrolyt in Glasfasermatten gebunden ist. AGM-Akkus sind auslaufsicher und weisen einen überdurchschnittlich hohen Blei-Reinheitsgrad von 99,9% auf.



### SPEZIFIKATION

|                                      |                             |          |           |
|--------------------------------------|-----------------------------|----------|-----------|
| Nennspannung                         | 12 V                        |          |           |
| Kapazität                            | 12 Ah (C20)                 |          |           |
| Gewicht                              | 3.67 kg                     |          |           |
| Abmaße (lxbxh)                       | 151x98x95 (101) mm          |          |           |
| Poltyp                               | T2                          |          |           |
| Gehäusematerial                      | ABS (UL.94:HB)              |          |           |
|                                      | ABS (UL.94:V0) optional     |          |           |
| Innenwiderstand                      | < 17mΩ                      |          |           |
| Max. Entladestrom                    | 180 A (5 sec)               |          |           |
| Max. Ladestrom                       | 4.8 A                       |          |           |
| Schwebeladespannung (20°C)           | 13.65 V (± 1%)              |          |           |
| Lebensdauer (25°C)                   | bis zu 5 Jahren             |          |           |
| Kapazitätsverlust pro Monat bei 20°C | 3%*                         |          |           |
| Betriebstemperatur-Bereich           | Lagerung                    | Ladung   | Entladung |
|                                      | -20~60°C                    | -10~60°C | -20~60°C  |
|                                      |                             |          |           |
| Verpackungseinheit                   | 3 pro Box / 252 pro Palette |          |           |

### SICHERHEIT

#### Ventile

Um den Gasdruck auszugleichen, ist jede Zelle mit einem Niederdruckventil ausgestattet, das nach dem Öffnen wieder schließt.

#### Gasung

VRLA Batterien setzen Wasserstoffgas frei, das in Verbindung mit Luft eine explosive Mischung bilden kann. Nicht in gasdichten Gehäusen lagern.

#### Einbau

Kann in beliebiger Lage installiert und betrieben werden. Jedoch sollte ein dauerhafter Betrieb und Laden über Kopf vermieden werden.

#### Transport

battery-direct Batterien sind kein Gefahrgut und unterliegen keiner Transportbeschränkung (Schiene, Straße, Wasser und Luft).

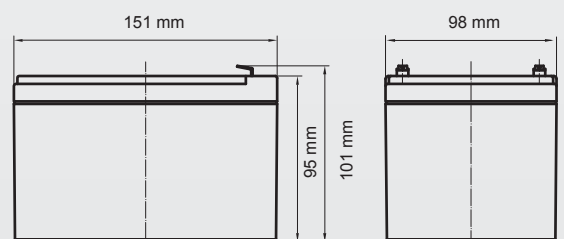


\* Vorsicht Selbstentladung! Spätestens bei einer Spannung von 12.6V nachladen.

### BESONDERHEITEN

- ✓ AGM-Technologie (Absorbent Glass Mat) für wartungsfreien Betrieb.
- ✓ Lange Lebensdauer und überdurchschnittlich viele Zyklen (Laden-Entladen) durch hochwertige Materialien (z.B. 99,9% reines Blei) und sorgfältige Verarbeitung.
- ✓ Optimale Materialabstimmung für maximale Leistung durch Glasvlies-Separatoren mit maximiertem Absorptionsgrad und ausgewogenem Elektrolyt.
- ✓ Hohe Kapazität durch Zinnsulfat.
- ✓ Effiziente Gas-Rekombination (bis zu 99%) durch optimale Plattengröße.
- ✓ Hohe Effizienz durch asymmetrische Blei-Calcium-Gitterstruktur.

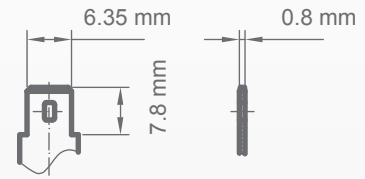
### SKIZZE - ABMASSE



### Konstanter Entladestrom: Ampere pro Zelle (25°C)

| Zeit<br>Volt/Zelle | Zeit |       |       |       |      |      |      |      |      |  |
|--------------------|------|-------|-------|-------|------|------|------|------|------|--|
|                    | 5min | 10min | 15min | 30min | 1h   | 3h   | 5h   | 10h  | 20h  |  |
| 1.60V              | 46.4 | 31.7  | 24.8  | 13.8  | 8.14 | 3.18 | 2.12 | 1.18 | 0.61 |  |
| 1.65V              | 45.0 | 30.8  | 24.3  | 13.5  | 8.04 | 3.15 | 2.10 | 1.17 | 0.61 |  |
| 1.70V              | 43.5 | 29.9  | 23.7  | 13.3  | 7.94 | 3.12 | 2.07 | 1.16 | 0.61 |  |
| 1.75V              | 42.1 | 29.0  | 23.2  | 13.0  | 7.85 | 3.09 | 2.05 | 1.14 | 0.60 |  |
| 1.80V              | 40.6 | 28.2  | 22.6  | 12.7  | 7.75 | 3.06 | 2.02 | 1.12 | 0.59 |  |

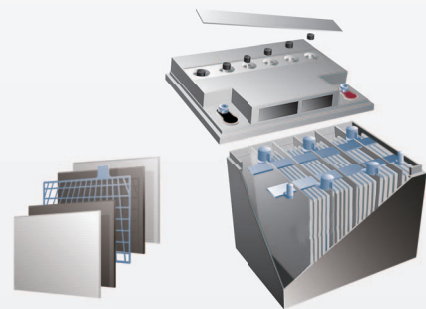
### ABMASSE POLTYP: T2



### Konstante Entladeleistung: Watt pro Zelle (25°C)

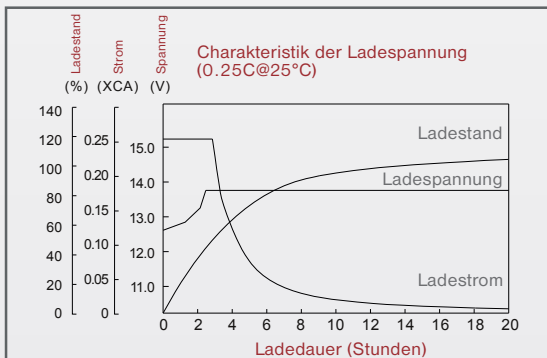
| Zeit<br>Volt/Zelle | Zeit |       |       |       |       |      |      |      |      |  |
|--------------------|------|-------|-------|-------|-------|------|------|------|------|--|
|                    | 5min | 10min | 15min | 30min | 45min | 1h   | 2h   | 3h   | 5h   |  |
| 1.60V              | 86.2 | 58.7  | 46.7  | 27.0  | 20.6  | 16.1 | 8.50 | 6.50 | 4.20 |  |
| 1.65V              | 84.1 | 57.7  | 46.0  | 26.6  | 20.4  | 16.0 | 8.42 | 6.44 | 4.17 |  |
| 1.70V              | 81.9 | 56.6  | 45.3  | 26.2  | 20.1  | 15.8 | 8.33 | 6.37 | 4.14 |  |
| 1.75V              | 79.8 | 55.6  | 44.6  | 25.8  | 19.9  | 15.7 | 8.25 | 6.31 | 4.11 |  |
| 1.80V              | 77.6 | 54.6  | 43.9  | 25.4  | 19.6  | 15.5 | 8.16 | 6.24 | 4.08 |  |

### KONSTRUKTION (exemplarisch)

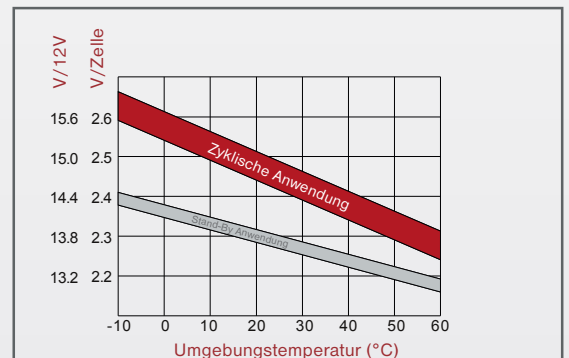


### KENNLINIEN

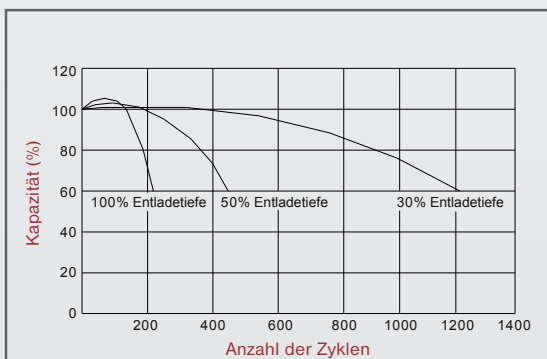
#### Ladecharakteristik



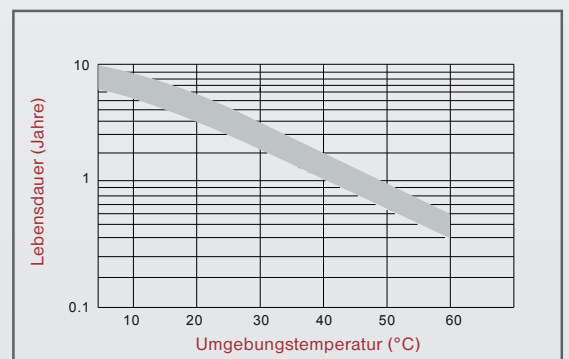
#### Verhältnis zwischen Ladespannung und Temperatur



#### Zyklen im Verhältnis zur Entladetiefe



#### Auswirkung der Temperatur auf die Lebensdauer



## SBY-AGM-12-12 // 12V 12Ah

**AGM – Sealed Lead Acid battery for Standby Applications**  
Maintenance-free AGM Sealed Lead Acid batteries by battery-direct work with the Absorbent Glass Mat Technology, where the electrolyte is ligated in glass fibre mats. AGM Sealed Lead Acid batteries are leak proof and report an above-average high lead level of purity of 99,9%.



### SPECIFICATION

|                                    |                             |          |           |
|------------------------------------|-----------------------------|----------|-----------|
| Nominal voltage                    | 12 V                        |          |           |
| Capacity                           | 12 Ah (C20)                 |          |           |
| Weight                             | 3.67 kg                     |          |           |
| Dimensions (LxWxH)                 | 151x98x95 (101) mm          |          |           |
| Terminal                           | T2                          |          |           |
| Case material                      | ABS (UL.94:HB)              |          |           |
|                                    | ABS (UL.94:V0) optional     |          |           |
| Internal resistance                | < 17mΩ                      |          |           |
| Max. Discharge current             | 180 A (5 sec)               |          |           |
| Max. Charging current              | 4.8 A                       |          |           |
| Floating charge voltage (20°C)     | 13.65 V (± 1%)              |          |           |
| Life period (25°C)                 | until 5 years               |          |           |
| Capacitance loss per month at 20°C | 3%*                         |          |           |
| Operating temperature area         | Storage                     | Charge   | Discharge |
|                                    | -20~60°C                    | -10~60°C | -20~60°C  |
| Packing unit                       | 3 per Box / 252 per Palette |          |           |

### SECURITY

#### Valves

In order to balance the gas pressure, each cell is provided with a low pressure valve that closes after opening.

#### Gassing

VRLA Batteries lay freely hydrogen gas which in combination with air can compose an explosive mixture. Do not storage in gas density casing.

#### Installation

Can be installed and operated in any position. However, a permanent operating and loading overhead should be avoided.

#### Transport

battery-direct batteries are no dangerous goods and are not subjected to any transport restrictions (Rail, Road, Water and Air)

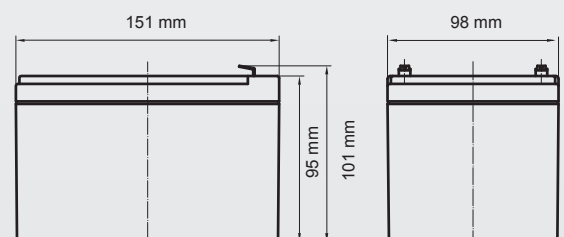


\* Attention self-discharge! Re-charge latest at voltage 12.6V.

### CHARACTERISTICS

- ✓ AGM-Technology (Absorbent Glass Mat) for a leak-proof operation.
- ✓ Long Lifespan and above-average many cycles (Charging-Discharging) through high-quality materials (e.g. 99,9% pure lead) and accurate handling.
- ✓ Ideal Material adjustment for maximum performance through Glass mat-separators with maximum absorptance and balanced electrolyte.
- ✓ High capacity through tin sulphate.
- ✓ Efficient Gas-Recombination (until 99%) through ideal size discs.
- ✓ High efficiency through asymmetric Lead-Calcium-Grid structure.

### DRAFT-DIMENSIONS



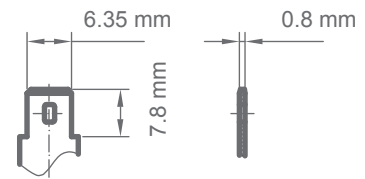
### Constant discharge current: Ampere per cell (25°C)

| Volt/Cell \ Time | 5min | 10min | 15min | 30min | 1h   | 3h   | 5h   | 10h  | 20h  |
|------------------|------|-------|-------|-------|------|------|------|------|------|
| 1.60V            | 46.4 | 31.7  | 24.8  | 13.8  | 8.14 | 3.18 | 2.12 | 1.18 | 0.61 |
| 1.65V            | 45.0 | 30.8  | 24.3  | 13.5  | 8.04 | 3.15 | 2.10 | 1.17 | 0.61 |
| 1.70V            | 43.5 | 29.9  | 23.7  | 13.3  | 7.94 | 3.12 | 2.07 | 1.16 | 0.61 |
| 1.75V            | 42.1 | 29.0  | 23.2  | 13.0  | 7.85 | 3.09 | 2.05 | 1.14 | 0.60 |
| 1.80V            | 40.6 | 28.2  | 22.6  | 12.7  | 7.75 | 3.06 | 2.02 | 1.12 | 0.59 |

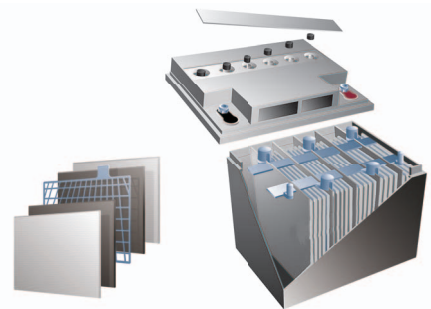
### Constant unload performance: Watt per cell (25°C)

| Volt/Cell \ Time | 5min | 10min | 15min | 30min | 45min | 1h   | 2h   | 3h   | 5h   |
|------------------|------|-------|-------|-------|-------|------|------|------|------|
| 1.60V            | 86.2 | 58.7  | 46.7  | 27.0  | 20.6  | 16.1 | 8.50 | 6.50 | 4.20 |
| 1.65V            | 84.1 | 57.7  | 46.0  | 26.6  | 20.4  | 16.0 | 8.42 | 6.44 | 4.17 |
| 1.70V            | 81.9 | 56.6  | 45.3  | 26.2  | 20.1  | 15.8 | 8.33 | 6.37 | 4.14 |
| 1.75V            | 79.8 | 55.6  | 44.6  | 25.8  | 19.9  | 15.7 | 8.25 | 6.31 | 4.11 |
| 1.80V            | 77.6 | 54.6  | 43.9  | 25.4  | 19.6  | 15.5 | 8.16 | 6.24 | 4.08 |

### DIMENSIONS Terminal: T2

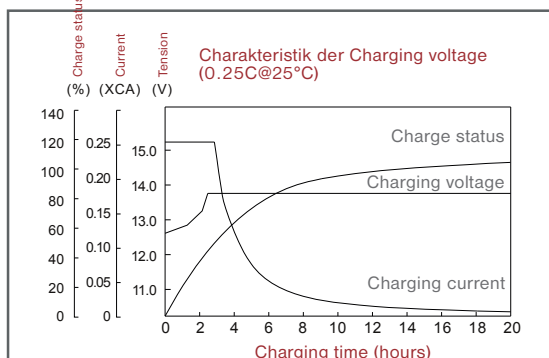


### CONSTRUCTION (exemplary)

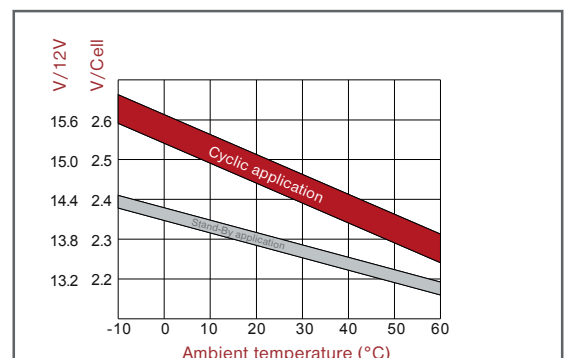


### HEAD CURVES

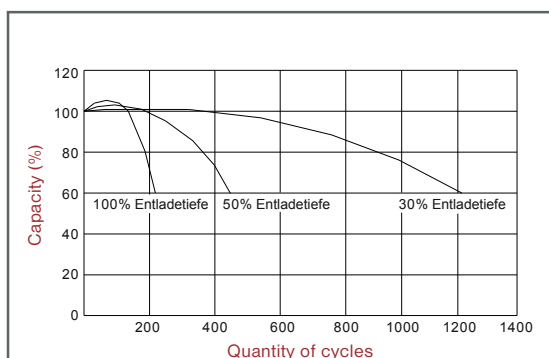
#### Charging characteristic



#### Relation between charging current and temperature



#### Cycles in relationship to discharge



#### Impact of the temperature on lifespan

