

# Sonnenschein A400 / A412/12SR

## INDUSTRIAL BATTERIES / NETWORK POWER

The Sonnenschein A400 range is a reference for energy storage, with proven reliability in many installations worldwide. The success of A400 batteries comes from the superior dryfit technology, available in a wide range of models to provide a solution for every power need.

**Part Number: NGA4120012HS0RA**

### APPLICATIONS



### SPECIFICATIONS

- Exceptional energy storage capacity combined with long life
- Thick grid plates with high quality lead calcium alloy, for enhanced corrosion resistance and stability
- Very low gassing due to the internal gas recombination
- Classification according to EUROBAT 2015: "> 12 years – Very Long Life"
- Shelf life up to 2 years at 20°C without recharge due to the very low self discharge rate
- Designed in accordance with IEC 60896-21/-22
- Trouble-free transport of operational blocks, no restrictions for rail, road, sea and air transportation (IATA, DGR, clause A67)
- Approval: UL (Underwriter Laboratories)
- Manufactured in Europe in our ISO 9001 certified production plants



Design life  
15 years for  
blocks ≥ 20 Ah  
12 years for  
blocks < 20 Ah



Block  
battery



Grid plate



Recyclable



Valve  
regulated  
lead-acid  
batteries



Proof  
against deep  
discharge



Maintenance  
free (no  
topping up)

### RECYCLE WITH EXIDE.



Exide Technologies takes pride in its commitment to a better environment. An integrated approach to manufacturing, distributing and recycling of leadacid batteries has been developed to ensure a safe and responsible life cycle for all of its products.



For more information please  
[contact your local dealer](#)

## TECHNICAL CHARACTERISTICS AND DATA

|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| <b>Nominal voltage</b>       | 12 V                                                      |
| <b>Float charge</b>          | 2,27 V/C @ 20 °C                                          |
| <b>Capacity</b>              | CP 10min 1,6V/C 20°C 263W/Bloc<br>CC 10h 1,8V/C 20°C 12Ah |
| <b>Short circuit current</b> | 260 A (IEC60896-21/22)                                    |
| <b>Internal resistance</b>   | 47 mΩ (IEC60896-21/22)                                    |

|                                 |                       |
|---------------------------------|-----------------------|
| <b>Terminal</b>                 | SR-6.3                |
| <b>Container</b>                | ABS                   |
| <b>Temperature range</b>        | -40°C to 55°C         |
| <b>Dimensions (l x b/w x h)</b> | 181 x 76 x 157 mm     |
| <b>Weight</b>                   | 5,6 kg                |
| <b>Origin</b>                   | Castanheira, Portugal |

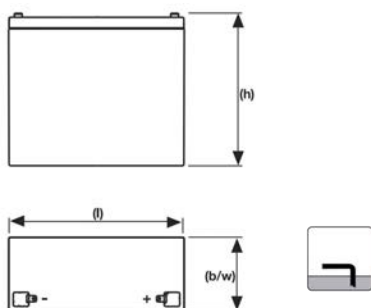
## CONSTANT POWER DISCHARGE

| W @ 20 °C | 2 min | 3 min | 5 min | 7 min | 10 min | 15 min | 20 min | 30 min | 45 min | 1 h  | 2 h | 3 h |
|-----------|-------|-------|-------|-------|--------|--------|--------|--------|--------|------|-----|-----|
| 1,850 V/C | 252   | 239   | 219   | 203   | 185    | 157    | 141    | 115    | 89,4   | 74,8 | 38  | 29  |
| 1,800 V/C | 314   | 292   | 258   | 235   | 208    | 177    | 153    | 125    | 95,8   | 79,2 | 42  | 31  |
| 1,750 V/C | 355   | 331   | 296   | 262   | 233    | 193    | 164    | 132    | 99,4   | 81   | 45  | 33  |
| 1,700 V/C | 394   | 366   | 323   | 286   | 247    | 203    | 170    | 135    | 101    | 82,5 | 45  | 33  |
| 1,650 V/C | 436   | 399   | 348   | 304   | 255    | 209    | 174    | 136    | 102    | 82,9 | 45  | 33  |
| 1,600 V/C | 474   | 424   | 358   | 317   | 263    | 213    | 176    | 137    | 102    | 83,2 | 45  | 33  |

## CONSTANT CURRENT DISCHARGE

| A @ 20 °C | 5 min | 10 min | 15 min | 20 min | 30 min | 45 min | 1 h | 2 h | 3 h | 4 h | 5 h | 8 h | 10 h |
|-----------|-------|--------|--------|--------|--------|--------|-----|-----|-----|-----|-----|-----|------|
| 1,850 V/C | 18    | 15     | 12     | 11     | 9      | 7      | 5,5 | 3,3 | 2,5 | 2   | 1,7 | 1,2 | 1,1  |
| 1,800 V/C | 21    | 18     | 14     | 12     | 10     | 8      | 6,2 | 3,7 | 2,8 | 2,2 | 1,9 | 1,3 | 1,2  |
| 1,750 V/C | 24    | 20     | 16     | 13     | 10     | 8      | 6,6 | 3,9 | 2,9 | 2,3 | 1,9 | 1,4 | 1,2  |
| 1,700 V/C | 28    | 21     | 16     | 13     | 10     | 8      | 6,8 | 4   | 2,9 | 2,3 | 2   | 1,4 | 1,2  |
| 1,650 V/C | 30    | 22     | 17     | 14     | 11     | 9      | 6,8 | 4   | 2,9 | 2,3 | 2   | 1,4 | 1,2  |
| 1,600 V/C | 33    | 23     | 17     | 14     | 11     | 9      | 6,8 | 4   | 2,9 | 2,3 | 2   | 1,4 | 1,2  |

## Technical drawing



## Float Voltage vs Temperature

