

## Sonnenschein A400 / A412/180A

### 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: NGA4120180HS0CA**



### 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](#)

**EXIDE Distributionscenter Frankfurt a.M.**

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## 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 3701W/Bloc<br>CC 10h 1,8V/C 20°C 180Ah |
| <b>Short circuit current</b> | 3227 A (IEC60896-21/22)                                     |
| <b>Internal resistance</b>   | 3,8 mΩ (IEC60896-21/22)                                     |

|                                 |                    |
|---------------------------------|--------------------|
| <b>Terminal</b>                 | A                  |
| <b>Terminal Torque</b>          | 8 Nm               |
| <b>Container</b>                | PP (Polypropylene) |
| <b>Temperature range</b>        | -40°C to 55°C      |
| <b>Dimensions (l x b/w x h)</b> | 274 x 518 x 238 mm |
| <b>Weight</b>                   | 64 kg              |
| <b>Origin</b>                   | Büdingen, Germany  |

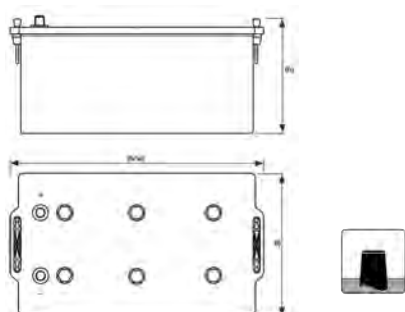
## CONSTANT POWER DISCHARGE

| 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 | 3475  | 3324  | 3112  | 2959  | 2679   | 2284   | 2011   | 1563   | 1215   | 1016 | 632 | 467 |
| 1,800 V/C | 4109  | 3898  | 3559  | 3336  | 3012   | 2595   | 2241   | 1756   | 1339   | 1105 | 687 | 507 |
| 1,750 V/C | 4556  | 4307  | 3950  | 3659  | 3316   | 2821   | 2399   | 1876   | 1414   | 1157 | 695 | 515 |
| 1,700 V/C | 4990  | 4742  | 4298  | 3929  | 3477   | 2976   | 2503   | 1945   | 1455   | 1185 | 697 | 517 |
| 1,650 V/C | 5419  | 5099  | 4628  | 4163  | 3589   | 3074   | 2565   | 1978   | 1475   | 1198 | 700 | 518 |
| 1,600 V/C | 5825  | 5395  | 4832  | 4361  | 3701   | 3130   | 2599   | 1994   | 1484   | 1204 | 702 | 519 |

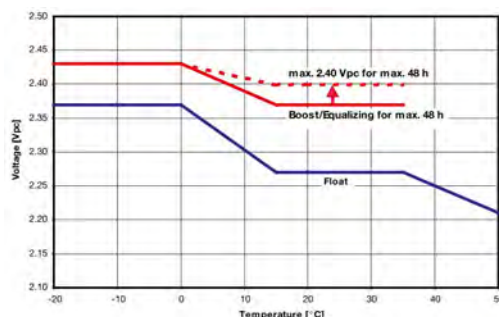
## CONSTANT CURRENT DISCHARGE

| 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 | 240   | 193    | 170    | 156    | 130    | 103    | 84  | 59  | 42,6 | 34,1 | 28,6 | 19,2 | 16,5 |
| 1,800 V/C | 291   | 235    | 195    | 171    | 144    | 112    | 90  | 62  | 44,7 | 35,5 | 29,7 | 19,9 | 18   |
| 1,750 V/C | 329   | 266    | 216    | 185    | 152    | 117    | 94  | 63  | 45,6 | 36,1 | 30,2 | 20,2 | 18   |
| 1,700 V/C | 366   | 287    | 234    | 199    | 156    | 120    | 95  | 64  | 46   | 36,4 | 30,4 | 20,2 | 18   |
| 1,650 V/C | 399   | 305    | 250    | 212    | 159    | 122    | 96  | 64  | 46   | 36,4 | 30,4 | 20,2 | 18   |
| 1,600 V/C | 439   | 322    | 258    | 217    | 162    | 123    | 96  | 64  | 46,1 | 36,4 | 30,4 | 20,2 | 18   |

## Technical drawing



## Float Voltage vs Temperature



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