ALPHA HOUSE powered by SACRED SUN

# HRL Series

## HRL12-320W (12V75Ah)

Alpha House powered by Sacred Sun HRL batteries feature a new design and structure, utilising automatic welding, through-partition welding, and heat sealing technology. The fully automated production process ensures excellent consistency. These batteries offer high power discharge, long floating backup time, and fast charging performance, making them ideal for use in data centres, UPS systems, and IDC rooms.

### Benefits

- Very long life according to EUROBAT Classification
- High power density, 30% higher than ordinary batteries
- Special lead paste formula and additives improve the battery service life
- Maximum charge efficiency
- Low self-discharge rate
- Wide range of power, easy sizing of batteries
- Easy installation and handling

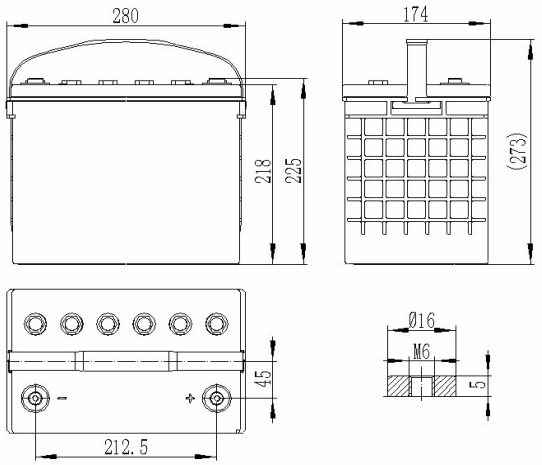
### Applications

- Data centre
- UPS
- IDC room
- Emergency power
- HVDC system

### Standards

- IEC 60896-21/22
- JIS C8704-1/2
- EUROBAT guide

### Drawing




### Specifications

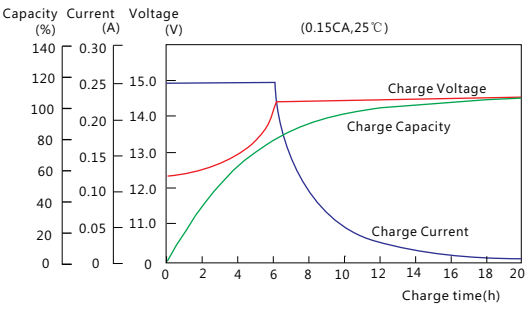
| | | | | |
|---|---|---|---|---|
| Battery Model | HRL12-320W | | | |
| Design Life (years, 25℃) | 15 | | | |
| Capacity (Ah, 25℃) | 10min (1.60V) | 15min (1.67V) | 1HR (48A, 1.70V) | 10HR(7.5A, 1.80V) |
| | 410 | 320 | 48 | 75 |
| Dimensions (mm) | Length | Width | Height | Total Height |
| | 280 | 174 | 218 | 225 |
| Approx. Weight (kg) | 26 | | | |
| Reference Internal Resistance (mΩ) | 3.3 ( fully charged @ 25℃) | | | |
| Maximum Discharge Current (A/3 Sec.) | 900 | | | |
| Self-Discharge (25℃) | ⩽2% per month | | | |
| Charge Voltage (V/cell, 25℃) | Cycle use | | Float use | |
| | 2.35(-3.5mV/℃/cell), max charge current: 18.75A | | 2.25 (-3.5mV/℃/cell) | |
| Short Circuit Current (A) | 2900 | | | |

## Discharge Data

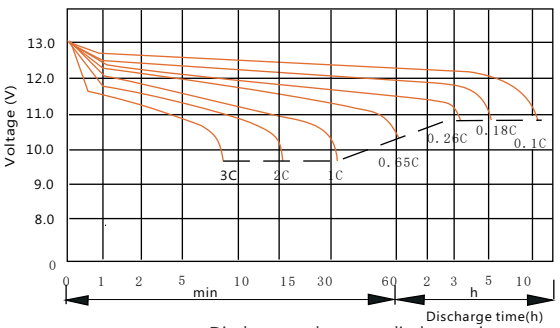
| Constant Power Discharge Data (25℃, W/cell) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| End Voltage (V/cell) | min | | | | | | | h | | | | | | | | |
| | 5 | 10 | 15 | 20 | 25 | 30 | 45 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 |
| 1.60 | 550 | 410 | 337 | 267 | 223 | 182 | 140 | 98.0 | 79.7 | 63.2 | 45.6 | 35.5 | 29.8 | 25.8 | 20.4 | 16.8 |
| 1.65 | 520 | 398 | 328 | 260 | 218 | 178 | 138 | 96.0 | 78.4 | 62.5 | 45.0 | 35.0 | 29.5 | 25.5 | 20.2 | 16.6 |
| 1.67 | 505 | 390 | 320 | 255 | 214 | 176 | 136 | 95.0 | 77.3 | 61.8 | 44.7 | 34.8 | 29.2 | 25.2 | 20.0 | 16.4 |
| 1.70 | 490 | 378 | 310 | 248 | 208 | 172 | 132 | 93.0 | 75.8 | 61.0 | 44.0 | 34.3 | 28.8 | 24.8 | 19.7 | 16.2 |
| 1.75 | 450 | 348 | 286 | 230 | 195 | 162 | 124 | 88.0 | 72.6 | 59.0 | 42.8 | 33.2 | 28.0 | 24.2 | 19.2 | 15.7 |
| 1.80 | 420 | 313 | 257 | 210 | 178 | 150 | 115 | 82.0 | 68.6 | 56.8 | 41.2 | 31.8 | 27.0 | 23.3 | 18.4 | 15.2 |

| Constant Current Discharge Data (25℃, A) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| End Voltage (V/cell) | min | | | | | | | h | | | | | | | | |
| | 5 | 10 | 15 | 20 | 25 | 30 | 45 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 |
| 1.60 | 326 | 236 | 188 | 147 | 120 | 96.8 | 74.5 | 51.6 | 41.3 | 32.7 | 23.5 | 18.3 | 15.3 | 13.2 | 10.4 | 8.5 |
| 1.65 | 305 | 228 | 183 | 143 | 118 | 95.0 | 72.6 | 50.3 | 40.5 | 32.2 | 23.2 | 18.0 | 15.0 | 13.0 | 10.2 | 8.4 |
| 1.67 | 290 | 220 | 178 | 138 | 115 | 92.8 | 71.0 | 49.3 | 39.8 | 31.8 | 22.8 | 17.8 | 14.8 | 12.8 | 10.0 | 8.3 |
| 1.70 | 280 | 213 | 170 | 134 | 110 | 90.3 | 68.8 | 48.0 | 38.8 | 31.2 | 22.5 | 17.5 | 14.7 | 12.6 | 9.8 | 8.2 |
| 1.75 | 260 | 192 | 155 | 124 | 103 | 84.5 | 64.0 | 45.0 | 36.8 | 30.0 | 21.6 | 16.8 | 14.0 | 12.2 | 9.6 | 7.8 |
| 1.80 | 230 | 168 | 137 | 110 | 93.0 | 77.7 | 58.5 | 41.5 | 34.5 | 28.5 | 20.6 | 16.0 | 13.5 | 11.6 | 9.2 | 7.5 |

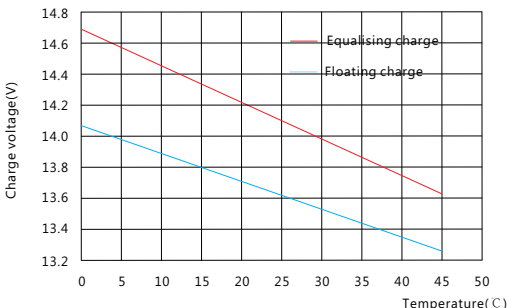
## Performance Curve



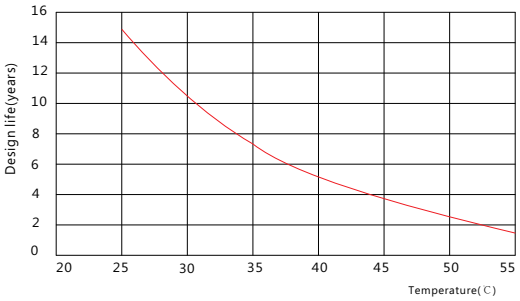

Charge performance




Discharge voltage vs. discharge time




Temperature vs. charge voltage




Design life vs. temperature

ISO9001 CEPREI ISO14001 CEPREI ISO18001 SA8000 Pb