



# HRL Series

## HRL12-440W (12V98Ah)

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

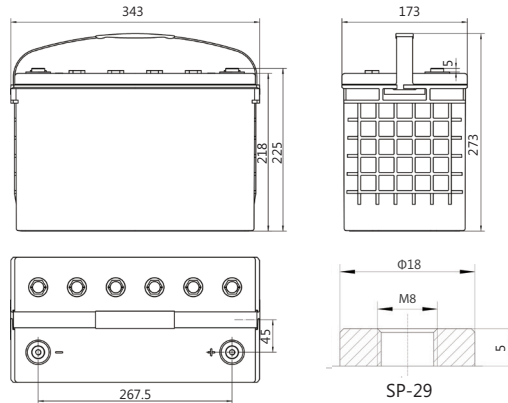
### Applications

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

### Standards

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

### Drawing



### Specifications

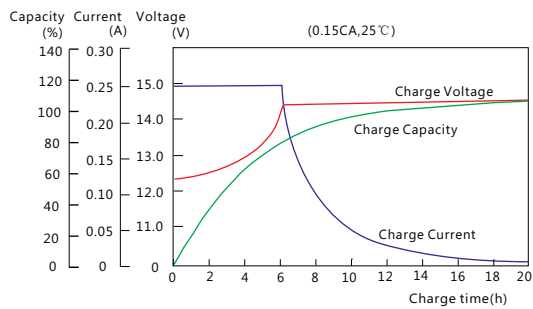
Battery Model	HRL12-440W			
Design Life (years, 25°C)	15			
Capacity (Ah, 25°C)	10min (1.60V)	15min (1.67V)	1HR (77.1A, 1.70V)	10HR(9.8A, 1.80V)
	560	440	77.1	98
Dimensions (mm)	Length	Width	Height	Total Height
	343	173	218	225
Approx. Weight (kg)	34.2			
Reference Internal Resistance (mΩ)	2.0 ( fully charged @ 25°C)			
Maximum Discharge Current (A/3 Sec.)	1270			
Self-Discharge (25°C)	≤ 2% per month			
Charge Voltage (V/cell, 25°C)	Cycle use		Float use	
	2.35(-4mV/°C/cell), max charge current: 29.4A		2.27 (-3mV/°C/cell)	
Short Circuit Current (A)	3200			

## Discharge Data

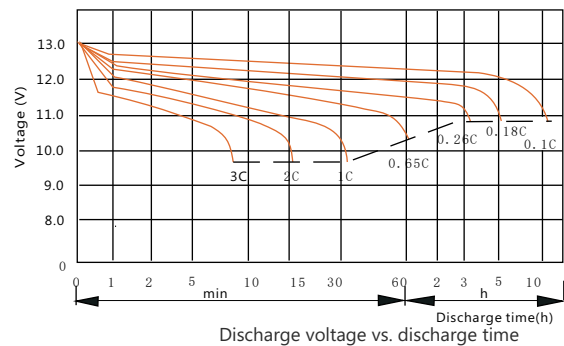
Constant Power Discharge Data (25°C, W/cell)																
End Voltage (V/cell)	min							h								
	5	10	15	20	25	30	45	1	1.5	2	3	4	5	6	8	10
1.60	725	560	452	380	323	273	202	155	106	80.1	59.0	44.5	37.9	32.6	25.9	21.3
1.65	714	552	445	374	317	267	199	154	105	79.5	58.6	44.1	37.6	32.4	25.6	21.1
1.67	704	545	440	369	312	262	196	152	104	78.9	58.2	43.8	37.4	32.2	25.5	21.0
1.70	692	537	432	362	306	256	193	150	102	78.1	57.7	43.3	37.0	31.9	25.2	20.8
1.75	662	516	414	347	291	242	186	146	99.2	76.3	56.4	42.3	36.3	31.2	24.7	20.3
1.80	626	491	392	328	273	225	177	140	95.5	74.2	55.0	41.1	35.3	30.5	24.1	19.8

Constant Current Discharge Data (25°C, 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	427	320	254	209	175	145	106	80.7	54.8	41.4	30.4	22.9	19.4	16.7	13.2	10.8
1.65	418	314	248	205	171	142	104	79.4	54.0	40.9	30.1	22.6	19.2	16.5	13.0	10.7
1.67	411	309	244	201	168	139	103	78.4	53.3	40.5	29.8	22.4	19.0	16.4	12.9	10.6
1.70	402	302	238	197	164	135	101	77.1	52.4	40.0	29.4	22.1	18.8	16.2	12.7	10.5
1.75	380	287	224	185	154	126	95.8	74.1	50.4	38.7	28.6	21.4	18.3	15.7	12.4	10.2
1.80	355	269	209	172	142	115	90.2	70.6	48.0	37.2	27.5	20.6	17.6	15.2	12.0	9.8

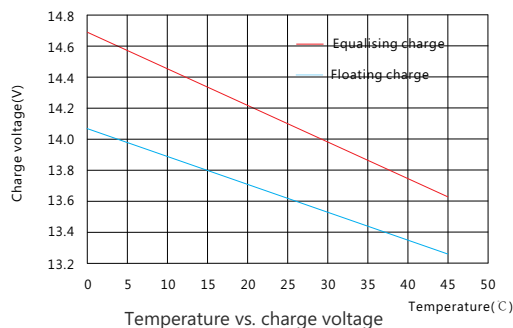
## Performance Curve



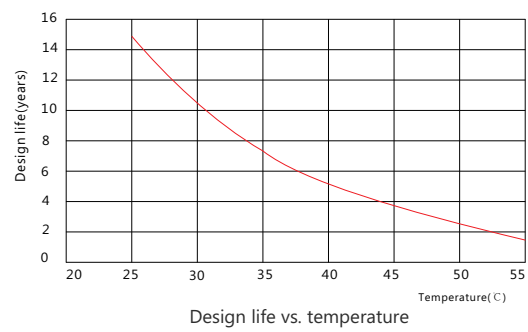
Charge performance



Discharge voltage vs. discharge time



Temperature vs. charge voltage



Design life vs. temperature



Disclaimer: The manufacturer reserves the right to amend and/or vary the specifications and parameters of the product and apply updates accordingly at any time. It is the sole responsibility of the buyer and user of the product to ensure all applicable product specifications referred to are valid, applicable and up to date at all times. All product specifications are available upon written request to Alpha House Ltd. All batteries must be installed, used and maintained at all times in accordance with standard BS EN IEC 62485-2:2018, and specifically installed, used and maintained at all times in accordance with manufacturer's guidelines and product specification documentation. (All top terminal, front terminal and top vented batteries must be positioned horizontally, plumb and level at all times unless specified otherwise by the manufacturer. Further details are available upon written request to Alpha House Ltd.)