



# HRL Series

## HRL12-300W (12V70Ah)

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

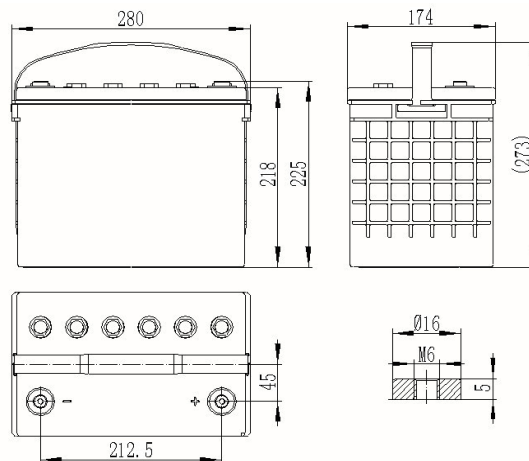
### Applications

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

### Standards

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

### Drawing



### Specifications

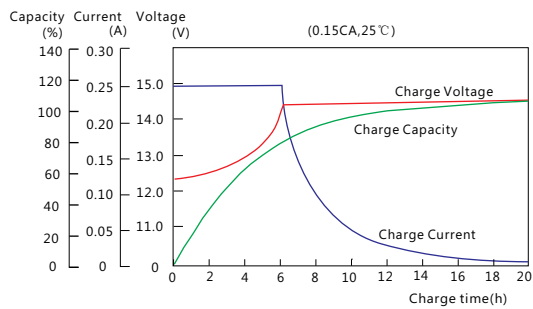
Battery Model	HRL12-300W			
Design Life (years, 25°C)	15			
Capacity (Ah, 25°C)	10min (1.60V)	15min (1.67V)	1HR (45A, 1.70V)	10HR(7.0A, 1.80V)
	380	300	45	70
Dimensions (mm)	Length	Width	Height	Total Height
	280	174	218	225
Approx. Weight (kg)	25.4			
Reference Internal Resistance (mΩ)	3.4 ( fully charged @ 25°C)			
Maximum Discharge Current (A/3 Sec.)	830			
Self-Discharge (25°C)	< 2% per month			
Charge Voltage (V/cell, 25°C)	Cycle use		Float use	
	2.35(-3.5mV/°C/cell), max charge current: 17.5A		2.25 (-3.5mV/°C/cell)	
Short Circuit Current (A)	2800			

## Discharge Data

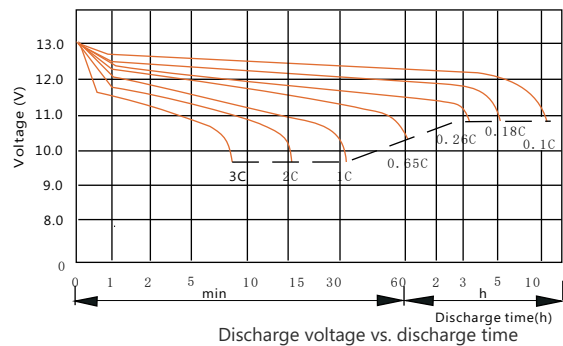
Constant Power Discharge Data (25°C, W/cell)																
End Voltage (V/cell)	min							h								
	5	10	15	20	25	30	45	1	1.5	2	3	4	5	6	8	10
1.60	530	380	316	250	210	188	133	93.0	75.3	59.6	43.0	33.7	28.0	24.4	19.2	15.8
1.65	480	370	307	243	204	185	130	91.0	74.0	58.8	42.4	33.3	27.7	24.2	19.0	15.6
1.67	470	360	300	238	200	180	127	89.0	72.8	58.2	42.0	32.8	27.5	23.8	18.8	15.4
1.70	460	352	290	230	194	175	124	87.0	71.4	57.3	41.4	32.5	27.0	23.5	18.5	15.2
1.75	440	336	260	213	180	170	116	82.3	68.0	55.3	40.0	31.4	26.3	22.8	17.8	14.7
1.80	410	320	240	193	164	150	106	76.3	64.0	53.0	38.4	30.0	25.2	21.8	17.2	14.0

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	310	230	177	138	113	96.0	69.8	48.6	39.0	30.8	22.2	17.4	14.4	12.5	9.8	8.0
1.65	290	222	170	133	110	93.6	68.0	47.4	38.2	30.3	21.8	17.0	14.2	12.3	9.6	7.9
1.67	280	215	166	130	107	91.7	66.4	46.4	37.5	29.8	21.5	16.8	14.0	12.0	9.5	7.8
1.70	265	206	160	125	104	89.0	64.3	45.0	36.6	29.3	21.0	16.5	13.8	11.8	9.3	7.7
1.75	240	185	145	114	95.2	85.3	59.5	42.0	34.6	28.0	20.3	15.8	13.2	11.5	9.0	7.4
1.80	220	170	128	102	85.4	75.5	53.8	38.5	32.2	26.6	19.3	15.0	12.6	10.8	8.5	7.0

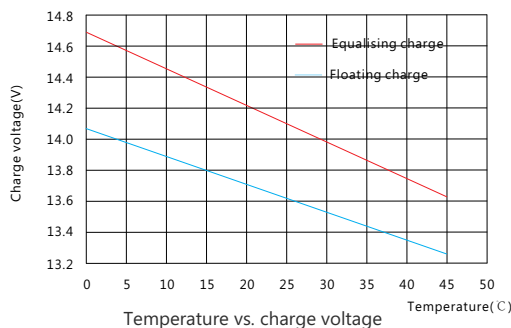
## Performance Curve



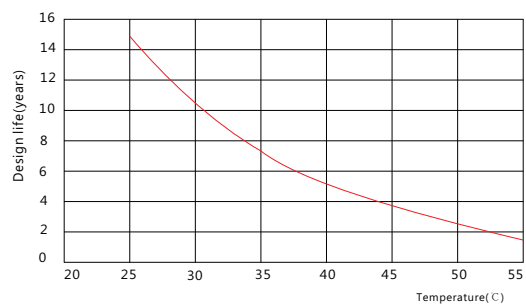
Charge performance



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.)