

RHL28-12FR (Flame Retardant) 12 Volt, 28 Watt/Cell High Rate Industrial Battery

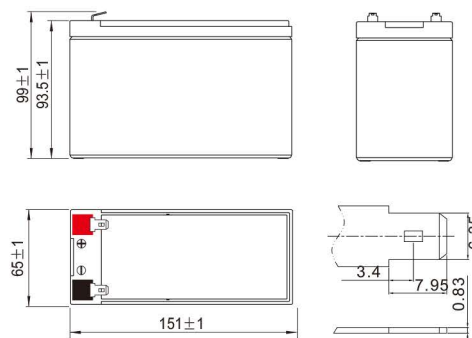
HALLE Industrial Battery

Features

- High Rate Industrial Battery 30% better high power discharge performance compared to conventional batteries
- Pure Lead Battery Technology improves battery theoretical lifetime
- UL 94-V0 Grade Flame Retardant Material

Specifications

Rated Voltage	12V		
Nominal Rate (W_{15r} , 1.67V/cell)	28W		
Nominal Capacity(C_{10} , 1.80V/cell)	6.5Ah		
Dimension	Length	151±1mm (5.94 inches)	
	Width	65±1mm (2.56 inches)	
	Container Height	93.5±1mm (3.68 inches)	
	Total Height	99±1mm (3.90 inches)	
Approx. Weight	2.08 Kg (4.54 lbs)		
Terminal	T1		
Container Material	ABS: UL 94 HB or V-0		
Rated Capacity (25°C)	6.51 Ah	(10hr, 0.651A, 1.80V/cell)	
	6.38 Ah	(8hr, 0.798A, 1.80V/cell)	
	6.00 Ah	(5hr, 1.20A, 1.75V/cell)	
	5.52 Ah	(3hr, 1.84A, 1.75V/cell)	
	4.49 Ah	(1hr, 4.49A, 1.67V/cell)	
Max. Discharge Current	90A		
Internal Resistance (25°C)	Approx. 29mΩ		
Operating Temp. Range	Discharge	-20 ~ 55°C (-4 ~ 131°F)	
	Charge	-20 ~ 40°C (-4 ~ 104°F)	
	Storage	-15 ~ 50°C (5 ~ 122°F)	
Recommended Operating Temperature	≤ 25°C		
Max. Charging Current(25°C)	1.75A		
Charge voltage(25°C)	Float	2.25 ~ 2.30V/cell	-3mV/cell/°C
	Equalization	2.30 ~ 2.40V/cell	-4mV/cell/°C
Effect of temp. to Capacity	40°C (104°F)	106%	
	25°C (77°F)	100%	
	0°C (32°F)	86%	
Self Discharge	≤3%/month @ 25°C		



Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	37.1	24.6	20.5	15.3	11.4	8.48	7.19	5.39	4.33	3.25	2.58	2.15	1.47	1.21
1.80V/cell	41.6	28.3	23.4	17.5	12.8	9.41	7.91	5.87	4.68	3.50	2.77	2.31	1.57	1.29
1.75V/cell	44.7	29.9	24.4	18.2	13.2	9.72	8.14	6.03	4.80	3.58	2.83	2.36	1.60	1.30
1.70V/cell	47.3	31.4	25.5	18.9	13.7	10.0	8.38	6.19	4.93	3.67	2.89	2.40	1.62	1.32
1.67V/cell	49.0	32.3	26.0	19.3	14.0	10.2	8.51	6.28	4.99	3.71	2.92	2.43	1.64	1.33
1.60V/cell	49.7	34.4	27.4	20.3	14.6	10.6	8.85	6.51	5.16	3.83	3.00	2.49	1.67	1.36

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Applications

- UPS
- For standard power cabinet
- Network connection equipment of communication system
- Power system of special network of local area network
- Power station systems

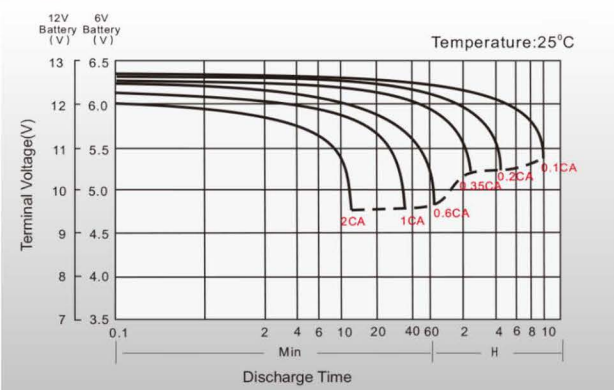
General Features

- 5 Years design life (20°C)
- Unique vent valve design: reduce water losing and prevent air/spark going inside

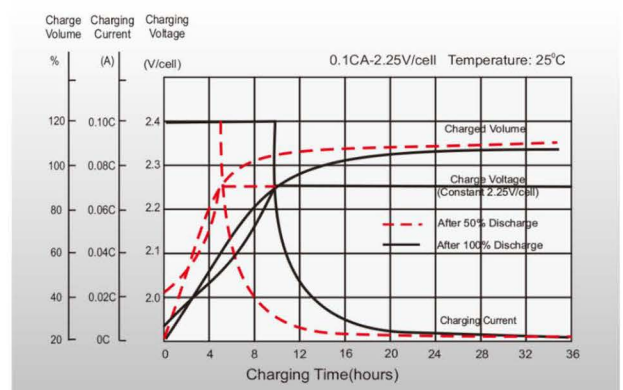
Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in IATF16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

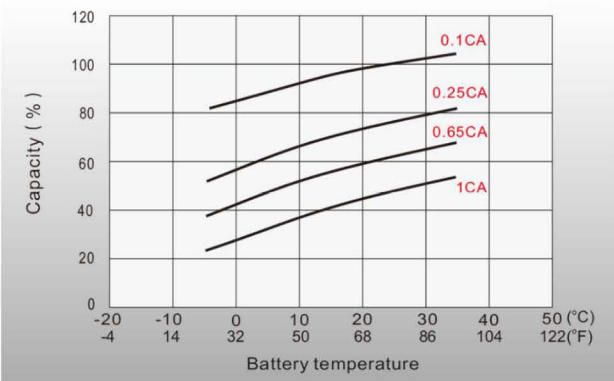
Discharge Characteristics



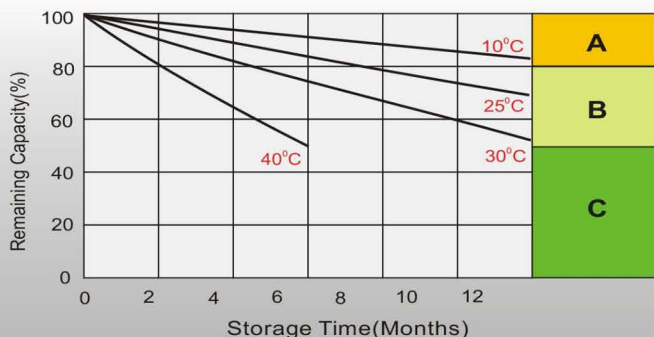
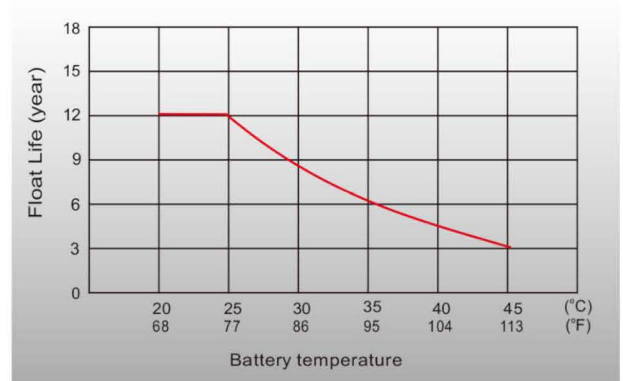
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics

- A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
 1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
 2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
 3. Charged for 8~10 hours at limited current 0.05CA .
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.