12V- 18Ah

ener safe
A brand of legrand

Specification

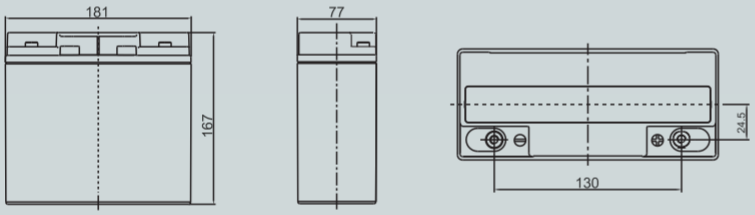
Cells Per Unit	6
Voltage Per Unit	12
Capacity	80W @ 15min- rate to 1.67V per cell @25
Weight	Approx. 6.2 Kg (Tolerance ± 4.0%)
Internal Resistance	Approx. 12m Ω
Terminal	F13- BP (M5)
Max. Discharge Current	200A (5 sec)
Short Circuit Current	900A
Design Life	Could Reach 8 years
Max. Charging Current	6.0 A
Reference Capacity	C10 17.0AH C20 18.0AH
Standby Use Voltage	13.7 V ~ 13.9 V @ 25°C Temperature Compensation: -3mV/ / Cell
Equalization Voltage	14 V~14.8 V @25 °C Temperature Compensation: -4mV/ / Cell
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C±5°C
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C.Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

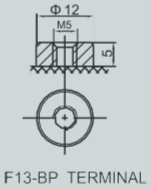
The HR (High Rate) series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 8 years design life in float service. By using strong grids and specially designed active material the HR series is with lower I.R, lower self discharge rate, high power, and longer service life performance. Generally the HR series offers 30% more power output than the standard range. Suitable for high power standby and cycling situation, such as UPS, datacenter,

ISO 9001 ISO 14001 OHSAS 18001

MH 28539

Dimensions





F13-BP TERMINAL

Length	181±2mm (7.13 inches)
Width	77±2mm (3.03 inches)
Height	167±2mm (6.57 inches)
Total Height	167±2mm (6.57 inches)
Terminal	Value
M5	6~7 N·m
M6	8~10 N·m
M8	10~12 N·m

Unit: mm

Constan Current Discharge Characteristics: A (25°C)

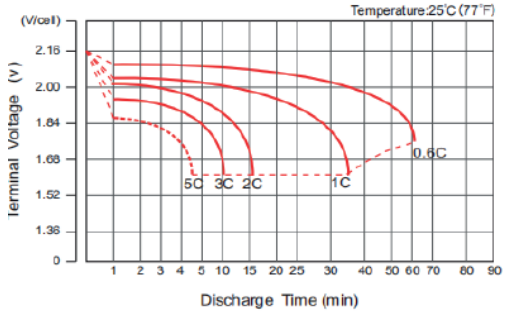
F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	93.88	82.53	67.41	59.04	46.33	36.42	25.95	14.55	10.32
1.67V	85.20	74.89	61.64	54.42	43.33	34.38	24.59	13.87	9.874
1.70V	81.52	71.66	59.19	52.44	42.00	33.46	23.98	13.57	9.689
1.75V	75.51	66.37	55.14	49.14	39.67	31.79	22.98	13.11	9.395
1.80V	69.16	60.79	50.97	45.85	37.67	30.29	21.97	12.62	9.063
1.85V	59.14	51.98	43.42	38.92	32.30	26.31	19.43	11.41	8.289

Constan Power Discharge Characteristics: WPC (25°C)

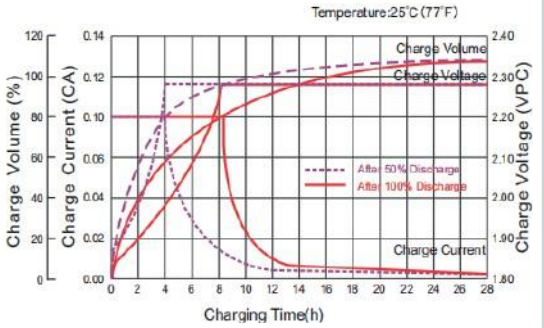
F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	168.7	148.3	121.6	106.9	84.67	67.05	47.96	27.28	19.53
1.67V	155.0	136.3	112.7	99.94	80.00	63.99	46.17	26.26	18.86
1.70V	149.7	131.6	109.1	96.97	78.33	62.62	45.09	25.84	18.57
1.75V	140.0	123.1	102.7	92.02	74.67	60.24	43.66	25.12	18.09
1.80V	130.0	114.2	96.11	86.74	71.33	57.86	42.23	24.40	17.61
1.85V	112.9	99.27	83.05	74.54	62.00	50.71	37.58	22.21	16.17

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values

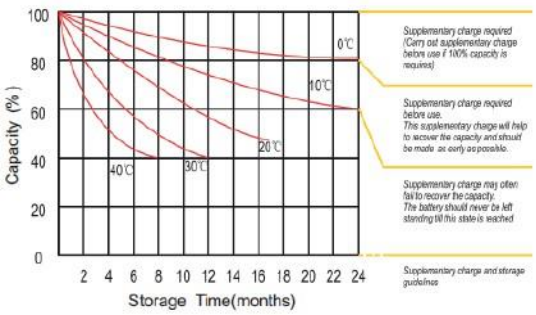
Discharge Characteristics Curve



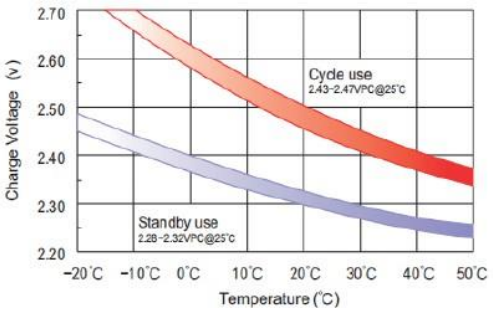
Charge Characteristic Curve For Standby Use



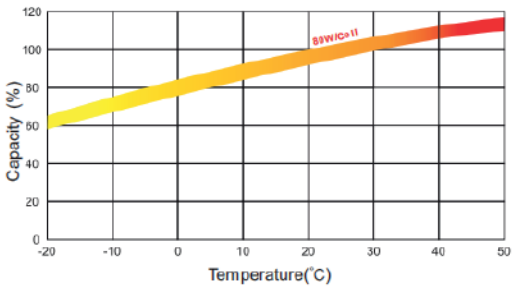
Storage Characteristics



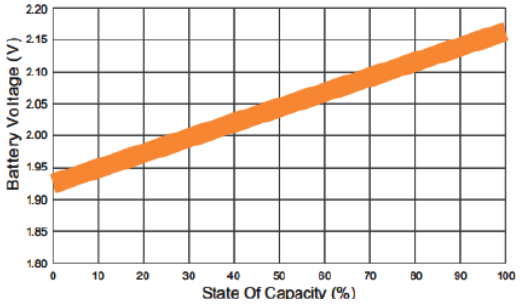
Relationship Between Charging Voltage And Temperature



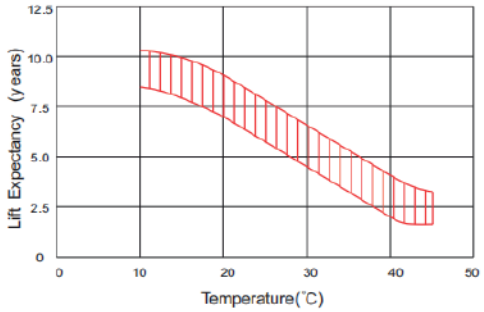
Temperature Effects On Capacity



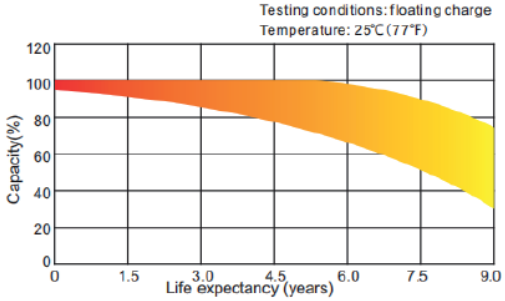
Relationship of OCV And State of Charge(20℃)



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, EnerSafe reserves the right to explain the lates informa-