

OPzV12-160(12V160Ah)

RITAR®

Ritar OPzV series is Valve Regulated Lead Acid battery that adopts immobilized GEL and Tubular Plate technology to offer high reliability and performance. The Battery is designed and manufactured according to DIN standards and with die-casting positive grid and patented formula of active material OPzV series exceeds DIN standard values with more than 18 years floating design life at 25 °C ,and It is the best solution for cyclic use under extreme operating conditions.

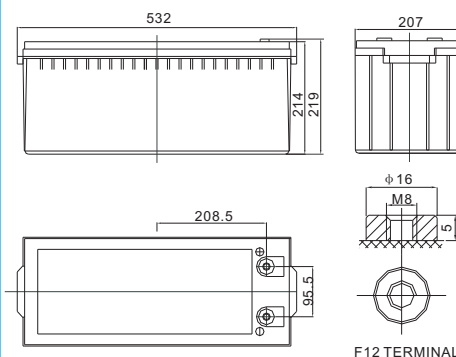
Specification

Cells Per Unit	6
Voltage Per Unit	12
Nominal Capacity	160Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 57.0 Kg (Tolerance± 1.5%)
Internal Resistance	Approx. 6.5 mΩ
Terminal	F16(M8)/F12(M8)
Max. Discharge Current	1600A (5 sec)
Design Life	18 years (floating charge)
Maximum Charging Current	32.0 A
Reference Capacity	C24 161.1AH C48 170.2AH C72 178.8AH C100 182.4AH C120 186.0AH C240 197.0AH
Float Charging Voltage	13.5 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.2 V~14.4 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°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 2% at 25°C. Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



Dimensions

Unit: mm



Length	532±1mm (20.9 inches)
Width	207±1mm (8.15 inches)
Height	214±1mm (8.43 inches)
Total Height	219±1mm (8.62 inches)
Torque Value	10~12 N*m

Constant Current Discharge Characteristics : A(25°C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90V	78.72	62.40	44.02	33.37	27.36	23.64	21.28	16.61	14.24	7.477
1.87V	88.00	68.80	47.22	35.38	28.88	24.87	22.56	17.38	14.88	7.812
1.83V	100.8	76.80	51.20	37.72	30.40	25.94	23.36	18.16	15.52	8.149
1.80V	112.0	83.20	53.12	38.79	31.01	26.56	24.00	18.62	16.00	8.402
1.75V	124.8	89.14	55.54	40.36	31.52	27.20	24.48	18.93	16.32	8.569
1.70V	137.6	92.02	57.14	41.14	32.07	27.52	24.80	19.09	16.48	8.651
1.65V	141.9	97.78	59.06	42.24	32.53	27.84	25.12	19.25	16.64	8.736
1.60V	148.0	101.1	61.30	44.02	33.44	28.32	25.44	19.40	16.80	8.821

Constant Power Discharge Characteristics : WPC(25°C)

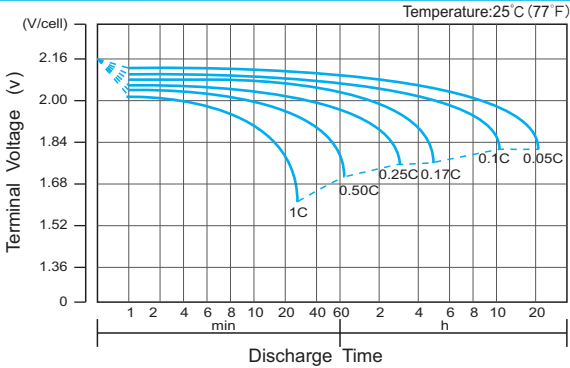
F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90V	150.7	119.8	85.04	64.65	53.57	46.56	42.08	33.21	29.03	15.24
1.87V	165.8	130.1	90.19	67.73	56.41	48.80	44.48	34.61	30.26	15.89
1.83V	185.7	141.8	96.00	71.23	59.20	50.72	45.92	35.85	31.35	16.46
1.80V	202.9	151.3	99.20	72.83	60.33	51.84	47.04	36.63	32.12	16.87
1.75V	220.1	158.0	102.4	75.08	61.10	53.12	47.84	37.09	32.59	17.11
1.70V	236.0	159.7	105.0	76.33	62.04	53.60	48.32	37.40	32.90	17.27
1.65V	240.1	166.8	107.9	78.04	62.87	54.08	48.80	37.71	33.05	17.36
1.60V	243.0	171.9	110.5	80.59	64.47	54.56	49.12	37.87	33.21	17.43

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

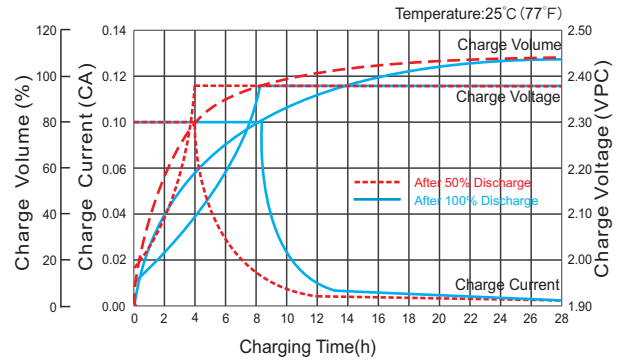
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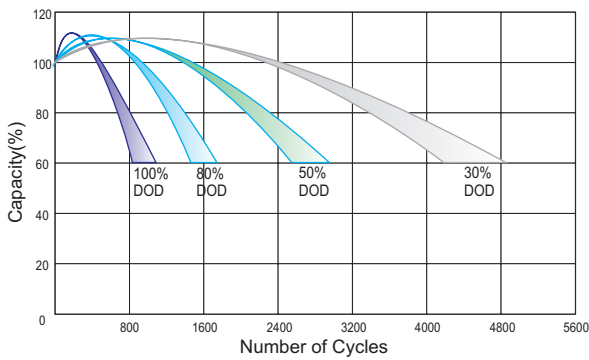
Discharge Characteristics Curve



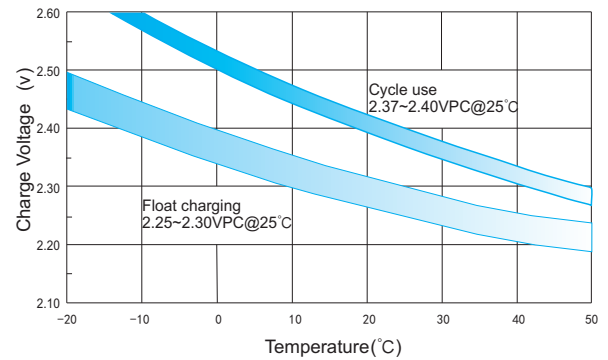
Charge Characteristic Curve for Cycle Use(IU)



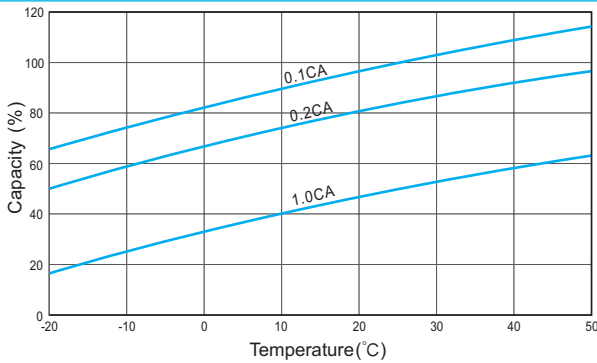
Cycle Life in Relation to Depth of Discharge



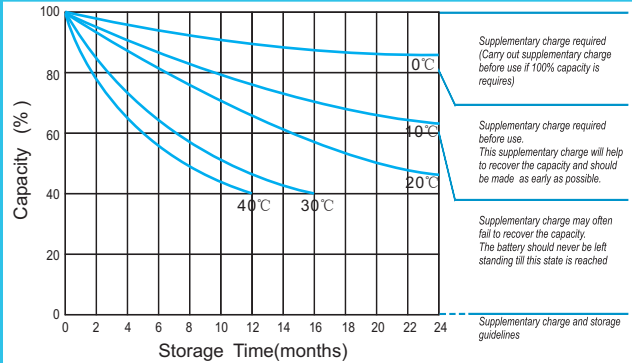
Relationship Between Charging Voltage and Temperature



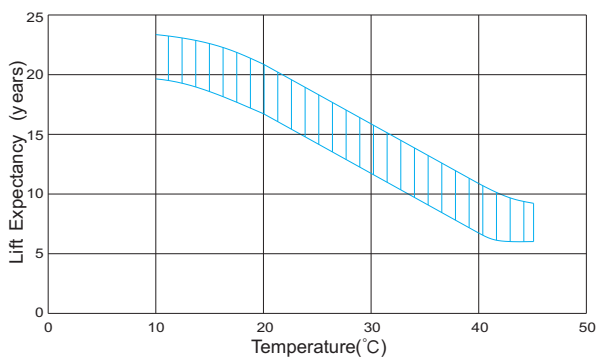
Temperature Effects on Capacity



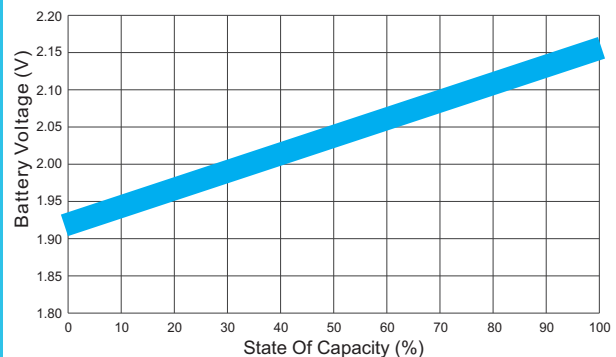
Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV And State of Charge(20°C)



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