

FROPzV12-160

(12V160Ah)



Specification

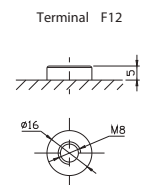
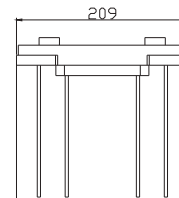
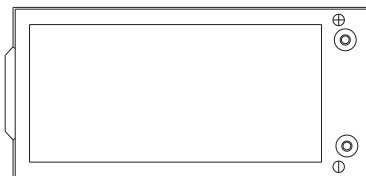
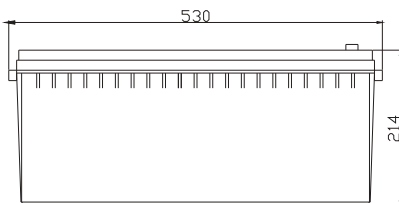
Cells Per Unit	6
Voltage Per Unit	12
Capacity	160Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 57.0 Kg(Tolerance ± 2%)
Max. Discharge Current	1600 A (5 sec)
Internal Resistance	Approx. 6.5 mΩ
Operating Temperature Range	Discharge: -40°C~70°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current	32A
Equalization and Cycle Service	14.2 to 14.4VDC/unit Average at 25°C
Self Discharge	FORTUNER Valve Regulated LeadAcid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	Terminal F12
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



ISO9001:2000 Certificate

Dimensions

Unit: mm Dimension: 530(L) × 209(W) × 214(H)



Constant Current Discharge Characteristics: A (25°C)

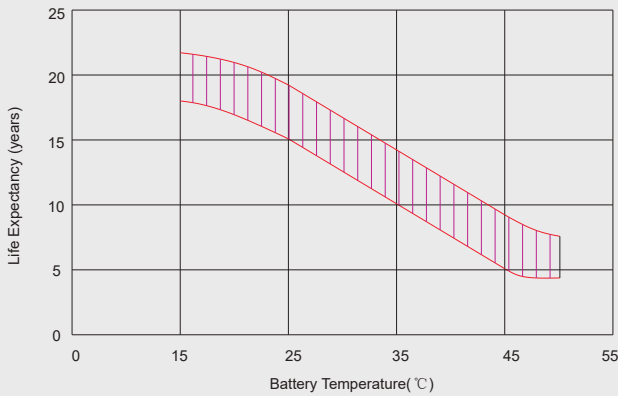
F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
11.4	78.72	62.40	44.00	33.37	27.36	23.64	21.28	16.61	14.24	7.476
11.2	88.00	68.80	47.20	35.39	28.88	24.87	22.56	17.38	14.88	7.812
11.0	100.8	76.80	51.20	37.72	30.40	25.95	23.36	18.16	15.52	8.148
10.8	112.0	83.20	53.12	38.80	31.01	26.56	24.00	18.62	16.00	8.400
10.5	124.8	89.12	55.52	40.35	31.52	27.20	24.48	18.93	16.32	8.568
10.2	137.6	92.00	57.12	41.13	32.07	27.52	24.80	19.09	16.48	8.652
9.90	141.9	97.76	59.04	42.24	32.53	27.84	25.12	19.24	16.64	8.736
9.60	148.0	101.1	61.28	44.00	33.44	28.32	25.44	19.40	16.80	8.820

Constant Power Discharge Characteristics: W (25°C)

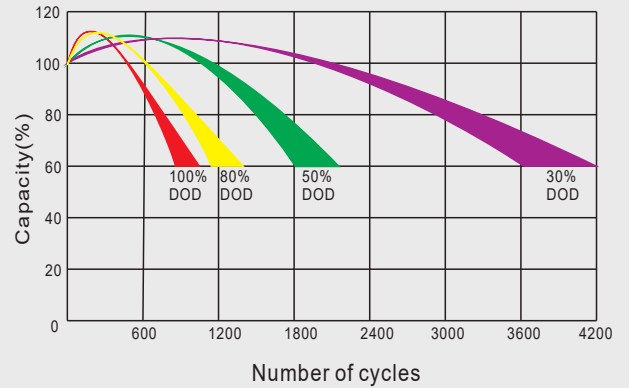
F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
11.4	904.0	718.8	510.4	387.8	321.3	279.4	252.5	199.3	174.1	91.42
11.2	994.7	780.5	541.3	406.3	338.6	292.8	266.9	207.7	181.6	95.33
11.0	1114	851.0	576.0	427.4	355.0	304.3	275.5	215.1	188.1	98.75
10.8	1218	907.9	595.3	437.0	361.8	311.0	282.2	219.8	192.8	101.2
10.5	1321	948.4	614.6	450.4	366.6	318.7	287.0	222.6	195.6	102.7
10.2	1416	958.0	630.0	458.1	372.4	321.6	289.9	224.4	197.4	103.6
9.90	1440	1000	647.4	468.1	377.2	324.5	292.8	226.3	198.3	104.1
9.60	1458	1031	662.8	483.5	386.9	327.4	294.7	227.2	199.3	104.6

All mentioned values are average values (Tolerance ± 2%).

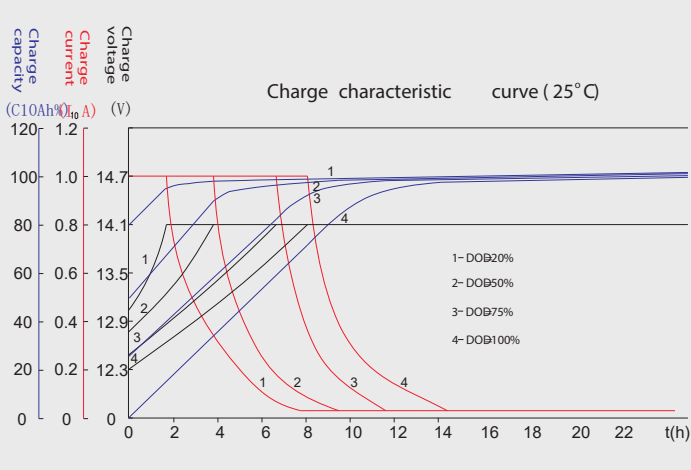
Effect of temperature on long term float life



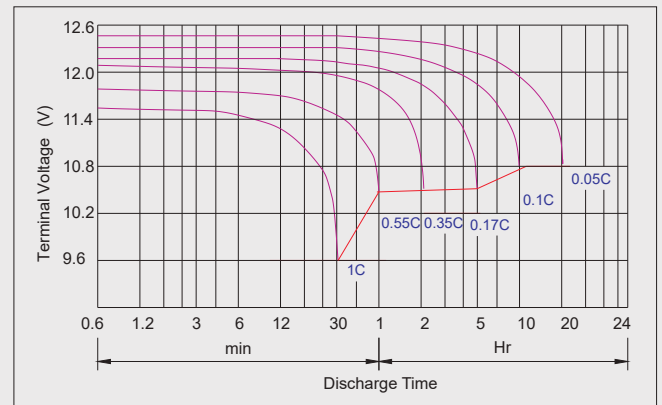
Life characteristics of cyclic use



Charge characteristic Curve for cyclic use



Discharge characteristic Curve



Long time discharge capacity for solar/wind application

Model	Capacity	C24 (Ah)	C48 (Ah)	C72 (Ah)	C100 (Ah)	C120 (Ah)	C240 (Ah)
	F.V=1.85VPC						
OPzV12-160		161.1	170.2	178.8	182.4	186.0	197.0

Capacity factors vs temperature (OPzV series)

Temperature	-30°C	-20°C	-10°C	0°C	10°C	20°C	25°C	30°C	40°C	45°C	50°C
Capacity	60%	75%	83%	89%	92%	99%	100%	103%	105%	107%	109%

Discharge Current VS. Final Voltage

Discharge current	Final voltage (V)
$I_{dis} \leq 0.11I_{10}$	1.90
$0.11I_{10} < I_{dis} \leq I_{10}$	1.85
$I_{10} < I_{dis} \leq 4I_{10}$	1.80
$4I_{10} < I_{dis} \leq 6I_{10}$	1.75
$6I_{10} < I_{dis} \leq 10I_{10}$	1.70
$I_{dis} > 15I_{10}$	1.60

Charge the batteries at least once every one year, if they are stored at 25°C.

Charging Method:

Constant Voltage	$-0.2C \times 2h + 14.1 \sim 14.4V, 24h, \text{Max. Current } 0.2CA$
Constant Current	$-0.2C \times 2h + 0.1CA \times 12h$

Maintenance & Cautions

Float Service:
※ Every month, recommend inspection every battery voltage.
※ Every three months, recommend equalization charge for one time.
Equalization charge method:
Discharge: 40~50% rate capacity discharge.
Charge: Max. current 0.2CA, constant voltage 14.1-14.4V charge 24h.
※ Effect of temperature on float charge voltage: $-3mV/^{\circ}C/\text{Cell}$.
※ Service life will be directly affected by the number of discharge cycles, depth of discharge, ambient temperature and charging method.