

VARTA OPzV range

4 OPzV 200...24 OPzV 3000

Application

VARTA OPzV Valve Regulated OPzV batteries are especially suitable for applications with discharge over a long period where maintenance-free operation is required. The electrolyte is fixed as a gel.

Typical applications include reserve power supplies for telecommunication equipment and industrial plants and also safety power supply equipment for lighting, automation and metering systems.

Construction

Positive Electrode	Tubular plate with VARTA-Calcium-Tin alloy
Negative Electrode	Grid plate with calcium alloy
Separation	Micro-porous separator, Combined with corrugated Separator
Casing Material	Styrene acrylonitrile (SAN), impact resistant
Electrolyte	Dilute sulphuric acid Fixed as a gel
Terminal Design	Leakproof safety pole with brass insert, M10
Connectors	Solid copper (30 x 3 mm), insulated, bolt-on type, for horizontal installation optional flexible cable connector (70 mm ²) 3/0
Vent Plugs	Safety pressure relief valve
Charging	Float charge voltage: 2.23 volts/cell at 20°C
Temperature Range	-10°...+45°C (Preferred value 20°C)

Installation

VARTA OPzV batteries are mounted as standard in the upright position on insulated racking. For space saving installation it is also possible to install them in horizontal position (plates must be in the vertical plane, max. 1500 Ah) The safety provisions of the national and international standards must be observed.

Features

- **2V single cells**
- **Maintenance-free operation** throughout its operational life due to valve regulated construction
- **High level of operational safety** due to pressure relief safety valve, safety pole, insulated connectors and fixed electrolyte
- **Economic operation** in capacitive discharge over several hours
- **Space saving installation** due to optimized set-up
- **Low ventilation requirement**, using the reduction factors



Technical data

Type designation	Capacity (Ah)			Inner resistance	Theoretical short circuit current	Cell dimensions						Weight	
	C ₁₀	C ₈	C ₁			(mm)			(inch)			[kg]	[lb]
	Final voltage			without connectors, loaded	L	W	H*	L	W	H*			
	1.80	1.75	1.688	[mOhm/cell]	[A]								
4 OPzV 200	206	200	124	1.22	1670	103	206	405	4.06	8.11	15.94	19.5	43.0
5 OPzV 250	257	250	156	0.98	2090	124	206	405	4.88	8.11	15.94	23.5	51.8
6 OPzV 300	309	300	187	0.81	2510	145	206	405	5.71	8.11	15.94	27.4	60.4
	Final voltage												
	1.80	1.75	1.684										
5 OPzV 350	360	350	219	0.72	2830	124	206	520	4.88	8.11	20.47	31.5	69.4
6 OPzV 420	432	420	262	0.60	3400	145	206	520	5.71	8.11	20.47	37.0	81.6
7 OPzV 490	504	490	306	0.51	3960	166	206	520	6.54	8.11	20.47	42.4	93.5
	Final voltage												
	1.80	1.75	1.625										
6 OPzV 600	618	594	382	0.53	3800	145	206	695	5.71	8.11	27.36	48.8	107.6
8 OPzV 800	824	791	510	0.40	5070	210	191	695	8.27	7.52	27.36	67.9	149.7
10 OPzV 1000	1030	992	637	0.32	6340	210	233	695	8.27	9.17	27.36	83.2	183.4
12 OPzV 1200	1236	1184	764	0.27	7610	210	275	695	8.27	10.83	27.36	98.4	216.9
	Final voltage												
	1.80	1.75	1.617										
12 OPzV 1500	1545	1488	867	0.24	8340	210	275	845	8.27	10.83	33.27	123.5	272.3
16 OPzV 2000	2060	1984	1156	0.18	11120	212	397	822	8.35	15.63	32.36	170.6	376.1
20 OPzV 2500	2575	2480	1446	0.15	13900	212	487	822	8.35	19.17	32.36	210.0	463.0
24 OPzV 3000	3090	2984	1735	0.12	16680	212	576	822	8.35	22.68	32.36	249.3	549.6

The electrical values shown in the table relate to loadings from a fully charged condition and an ambient temperature of +25°C.

* Height includes connectors.

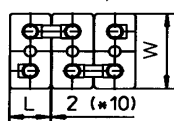
Project planning data

Final voltage = 1.75V/cell		discharge current in A									
Type		15'	30'	1h	2h	3h	5h	8h	10h		
4 OPzV 200		168	168	118	74.6	55.4	36.9	25.0	20.6		
5 OPzV 250		209	209	148	93.3	69.3	46.1	31.2	25.7		
6 OPzV 300		250	250	177	111	83.1	55.4	37.5	30.9		
5 OPzV 350		287	287	206	129	97.0	64.6	43.7	36.0		
6 OPzV 420		343	343	246	155	116	77.6	52.5	43.2		
7 OPzV 490		397	397	287	182	135	90.5	61.2	50.4		
6 OPzV 600		405	405	316	213	159	109	74.3	61.8		
8 OPzV 800		540	540	421	284	213	145	98.9	82.4		
10 OPzV 1000		676	676	526	355	265	181	124	103		
12 OPzV 1200		811	811	632	426	319	217	148	123		
12 OPzV 1500		918	918	735	506	391	272	186	154		
16 OPzV 2000		1229	1229	982	676	522	362	248	206		
20 OPzV 2500		1531	1531	1225	844	652	453	310	257		
24 OPzV 3000		1838	1838	1470	1013	782	543	373	309		

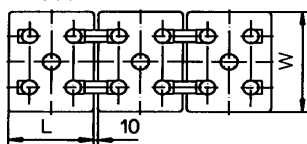
The current levels shown in the tables relate to loadings from a fully charged condition and an ambient temperature of +25°C. Connector losses are taken into account.

Terminals:

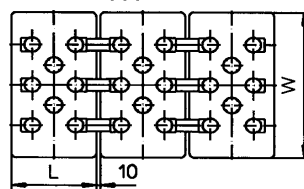
200 Ah –
490 Ah ;
600 Ah *)



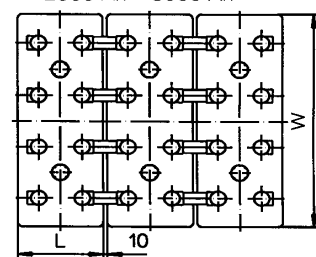
800 Ah – 1500 Ah



2000 Ah



2500 Ah – 3000 Ah



All dimensions and weights shown are subject to the usual manufacturing tolerances. Electrical values are approximate.

The right is reserved to make alterations with a view to technically improved execution without prior notice.



VARTA OPzV Solar

Longterm discharge capacities

Type	C10 [Ah] $U_f = 1.80 \text{ V/c}$	C24 [Ah] $U_f = 1.85 \text{ V/c}$	C48 [Ah] $U_f = 1.85 \text{ V/c}$	C120 [Ah] $U_f = 1.85 \text{ V/c}$	C240 [Ah] $U_f = 1.85 \text{ V/c}$
4 OPzV 200	212	240	250	254	259
5 OPzV 250	265	299	313	318	323
6 OPzV 300	318	359	375	382	388
5 OPzV 350	383	433	452	460	467
6 OPzV 420	459	519	542	551	560
7 OPzV 490	536	606	632	643	654
6 OPzV 600	696	786	821	835	849
8 OPzV 800	928	1049	1095	1114	1132
10 OPzV 1000	1160	1311	1369	1392	1415
12 OPzV 1200	1392	1573	1643	1670	1698
12 OPzV 1500	1584	1790	1869	1901	1932
16 OPzV 2000	2112	2387	2492	2534	2577
20 OPzV 2500	2640	2983	3115	3168	3221
24 OPzV 3000	3168	3580	3738	3802	3865

Capacities are related to 20 °C. When cyclic charging and discharging only 80% of the capacity rating shall be used. Deep discharge does not lead to immediate capacity loss, but may reduce the operation life time.