



Technical Specification Valve-Regulated Lead-Acid Batteries (VRLA)



1. APPLICATION

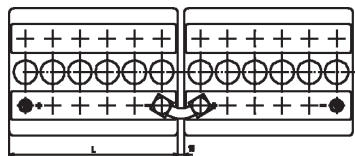
Photovoltaic power supply of

- telecommunication equipment as micro-wave amplifier, cellular phone stations, television relay installations etc,
- traffic equipment like traffic regulating systems, signal buoys, road lights
- remote weekend houses, farmsteads, huts in high mountains etc.

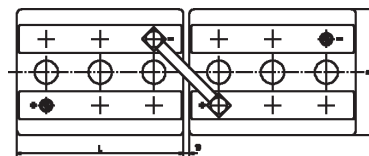
Solar and wind powered stations. In these cases the battery serves to buffer load peaks, to smooth the current and to reduce the operation time of Diesel engines at low power demand.

2. TECHNICAL DATA (REFERENCE TEMPERATURE 20 °C)

Type	C 100 Ah	C 72 Ah	C 20 Ah	C 10 Ah	C 1 Ah	Ri mΩ	Ik kA	Weight kg	Dimensions mm L x W x H
Ue 80 %	1.91 V	1.91 V	1.91 V	1.90 V	1.82 V				
Ue 100 %	1.80 V	1.80 V	1.80 V	1.80 V	1.67 V				
12 V 1 PVV 70	74	72	65	59	34	21.6	0.58	42.5	272 x 205 x 385
12 V 2 PVV 140	127	125	117	107	69	10.8	1.15	50.5	272 x 205 x 385
12 V 3 PVV 210	201	197	185	169	101	7.20	1.73	72	380 x 205 x 385
6 V 4 PVV 280	260	255	240	219	129	2.70	2.30	48	272 x 205 x 385
6 V 5 PVV 350	327	322	302	276	165	2.16	2.88	63	380 x 205 x 385
6 V 6 PVV 420	387	280	357	326	200	1.80	3.45	70	380 x 205 x 385



12V 1 PVV 70 to 12V 3 PVV 210



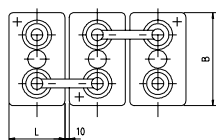
6V 4 PVV 280 to 6V 6 PVV 420

Terminals are designed as female poles with brass inlay M10 for solid or flexible fully insulated intercell and terminal connectors.

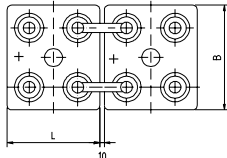
Technical Specification BAE *SECURA PVV solar*

Type	C 100 Ah	C 72 Ah	C 20 Ah	C 10 Ah	C 1 Ah	Ri mW	Ik kA	Weight kg	Dimensions mm L x W x H
Ue 80 %	1,91 V	1,91 V	1,91 V	1,90 V	1,80 V				
Ue 100 %	1,80 V	1,80 V	1,80 V	1,80 V	1,67 V				

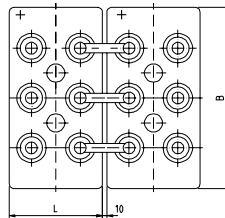
4 PVV 280	298	292	269	231	132	1,20	1,70	19,5	105 x 208 x 420
5 PVV 350	373	366	336	289	170	0,96	2,15	23,5	126 x 208 x 420
6 PVV 420	447	438	404	346	204	0,80	2,57	28	147 x 208 x 420
5 PVV 550	536	525	481	415	227	0,71	2,88	31	126 x 208 x 535
6 PVV 660	642	629	576	497	272	0,60	3,46	36,5	147 x 208 x 535
7 PVV 770	749	734	673	580	318	0,51	4,04	42	168 x 208 x 535
6 PVV 900	914	895	821	708	390	0,45	4,58	50	147 x 208 x 710
8 PVV 1200	1219	1194	1095	944	520	0,34	6,10	68	215 x 193 x 710
10 PVV 1500	1524	1492	1369	1180	650	0,27	7,63	82	215 x 235 x 710
12 PVV 1800	1834	1796	1647	1420	780	0,23	9,15	97	215 x 277 x 710
12 PVV 2280	2092	2048	1879	1620	870	0,24	8,58	120	215 x 277 x 855
16 PVV 3040	2790	2731	2506	2160	1159	0,18	11,4	160	215 x 400 x 815
20 PVV 3800	3487	3414	3132	2700	1449	0,14	14,3	200	215 x 490 x 815
24 PVV 4560	4185	4097	3758	3240	1739	0,12	17,1	240	215 x 580 x 815



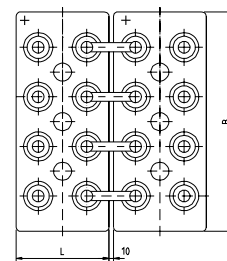
4 PVV 280 to 6 PVV 900



8 PVV 1200 to 12 PVV 2280



16 PVV 3040



20 PVV 3800 to 24 PVV 4560

Terminals are designed as female poles with brass inlay M10 for solid or flexible fully insulated intercell and terminal connectors.

3. NUMBER OF CYCLES AS FUNCTION OF DOD (DEPTH OF DISCHARGE)

Depth of discharge [DOD]	80 %	70 %	60 %	50 %	40 %	30 %	20 %	10 %
Cycles	1500	1800	2200	2800	3750	5200	8100	18000

4. CAPACITTY AS FUNCTION OF TEMPERATURE

Temperature	20 °C	15 °C	10 °C	5 °C	0 °C	-5 °C	-10 °C	-20 °C
C100	100 %	97 %	93 %	89 %	85 %	80 %	74 %	62 %

5. OPERATION

At lower voltages as U80% the battery has to be disconnected to avoid a damage of the battery.

Within one week up to 4 weeks the battery cells have to be charged to 100 %.

The charging current may vary from $5 \times I_{10}$ to $0.01 \times I_{10}$. The charging voltage has to be restricted to 2.30 V to 2.40 V.

At daily discharge below 0.4 C 10 →

2.30 V - 2.35 V

At daily discharge up to 0.6 C 10 →

2.35 V - 2.40 V

If the monthly average temperatures are below 10 °C, the charging voltage has to be increased by 0.03 V per 10 K.

6. STANDARDS

Test standard

IEC 60896-21, IEC 61427

Safety standard, ventilation

EN 50272-2



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