PIBAS®
Power & Industrial Battery Systems GmbH

OPzS

RANGE SUMMARY VENTED / FLOODED TUBULAR OPzS / LONG LIFE - LOW MAINTENANCE

PIBAS® OPzS batteries

Based on the more than 130 years of experience PIBAS® OPzS range is built on the well proven positive tubular plate design combined with new latest technology components. PIBAS® OPzS batteries are leading the battery world in terms price performance ratio. The PIBAS® OPzS battery design offers a 20 year service life and the most optimized CAPEX such as OPEX and total cost of ownership (TCO) in the market.

Field of application

OPzS Batteries are perfectly suited for all stationary standby energy storage applications and leading the market in Renewable Energy Storage, Power and Utilities, Telecom, UPS and Oil and Gas applications.

Important*

The rated capacity C10 is not the basis for the performance of the batteries. It is to take into account that the performance depends on the battery construction, i e on the different battery ranges. Therefore, our discharge tables should be used to find out the appropriated battery type for a specific application in comparison to prices, dimensions ...

The rated capacity C10 of PIBAS® OPzS range batteries is based on the available ampere hours (Ah) at a discharge rate of 10 hours to the final discharge voltage of 1.8V/cell or 10.8V/block which is stated in technical specification table per cell at 20 °C ± 5 °C.

Nominal voltage per block is 12 V or 6V and 2V for single cells.

PIBAS® OPzS batteries fulfil all requirements according DIN 40736-1, IEC 60896-11, IEC 61427 & DIN 43539-5.

Discharging conditions

The rated capacities C10 given in this brochure are only valid for fully charged batteries in accordance with IEC 60896-11.

Charging conditions

- Standby use: 2.25-2.30V/ cell
- Cycle use: 2.35-2.40V/cell
- Initial charging current: 0.2 C max

Advantages of PIBAS® OPzS batteries

- 20 year design life @ 20°C
- Excellent cycling capability
- Low maintenance design
- Robust flame retardant ABS case and lid compliant with UL94-V2 as standard
- Optimised for low rate applications where the discharge duration is one hour or more
- Low self-discharge - <3% per months @ 20°C
- Flame retardant polypropylene case and lid compliant with UL94-V0 as option
- Thermally welded case-to-lid bond to eliminate leakage
- Operation in upright and horizontalposition
- Easy and fast installation
- Easy to recycle

Configuration forms

PIBAS® OPzS can be assembled into many different configuration forms, for example:

- Putting up on battery racks and cabinets
- Mounting in shelters
- Assembling in plasti- Mounting in shelters
- Assembling in plastic/ stainless steel crates or battery troughs

Constructions

- Thick tubular positive plate design with special lead-tin-calcium alloy
- Pasted negative plates with lead-calcium alloy grid
- Low resistance microporous separators
- Transparent SAN containers (UL94 V-0 flame retardant ABS available as an option) provide high resistance to shocks and visible electrolyte level.
- A special two-part resin is used to seal boxes and lids
- Electrolyte: Dilute sulphuric acid 1.240 kg/l @ 20°C
- High integrity pillar seal
- Flame arresting vent plugs

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PIBAS® OPzS RANGE BLOCK DIMENSIONAL DETAILS

Type	Positive Plates Number	Size (Ah)	No. of Poles	C10 (Ah) 1.80 Vpc 20°C	C5 (Ah) 1.75 Vpc 20°C	C3 (Ah) 1.75 Vpc 20°C	C1 (Ah) 1.75 Vpc 20°C	Length (mm)	Width (mm)	Height$_1$ (mm)	Height$_2$** (mm)	Poles Dist. (mm)	Wet Weight (approx. kg)	Dry Weight (approx. kg)	Internal Resistance (mOhm)	Short Circuit Current (A)
6V 3 OPzS 150	7	22	2	150	105	114	79	307	169	220	225	-	28	20	4.8	1420
6V 4 OPzS 200	5	40	2	200	180	153	105	295	178	330	345	-	36	27	3.5	1800
6V 5 OPzS 250	6	40	2	250	225	192	132	295	178	330	345	-	40.5	29.5	3	2250
6V 6 OPzS 300	5	60	2	300	270	230	158	295	178	390	405	-	51	32.5	3	2600
12V 1 OPzS 50	2	25	2	60	54	45	31.5	260	168	214	214	-	23.5	16.5	9.5	1340
12V 2 OPzS 100	4	25	2	100	90	76	53	409	176	225	225	-	34.5	27	8.5	1500
12V 3 OPzS 150	7	22	2	150.4	135	115	79	532	207	224	224	-	53	40	6.1	2000
2V 2 OPzS 100	2	50	2	100	90	76	53	103	206	355	409	-	13.5	8.4	1.6	1020
2V 3 OPzS 150	3	50	2	150	135	115	79	103	206	355	409	-	15	11	1.1	1650
2V 4 OPzS 200	4	50	2	200	184	158	96	103	206	355	409	-	17	13	0.9	2200
2V 5 OPzS 250	5	50	2	250	225	191	132	124	206	355	409	-	20	15	0.8	2700
2V 6 OPzS 300	6	50	2	300	270	229	158	145	206	355	409	-	24.5	18.5	0.7	3200
2V 5 OPzS 350	5	50	2	350	315	267	184	124	206	471	525	-	27	20	0.68	2950
2V 6 OPzS 420	6	70	2	420	378	321	221	145	206	471	525	-	32	23.5	0.65	3400
2V 7 OPzS 490	7	70	2	490	450	369	234	166	206	471	525	-	35	25.5	0.6	4050
2V 5 OPzS 500	5	100	2	500	450	382	263	145	206	646	525	-	41	27	0.65	3700
2V 6 OPzS 600	6	100	2	600	540	459	316	145	206	646	700	-	43	31	0.6	4300
2V 7 OPzS 700	7	100	4	700	630	538	369	191	210	646	700	80	58	42	0.55	4900
2V 8 OPzS 800	8	100	4	800	720	615	422	191	210	646	700	80	60	44	0.5	5750
2V 9 OPzS 900	9	100	4	900	810	688	474	233	210	646	700	110	70	50	0.48	6600
2V 10 OPzS 1000	10	100	4	1000	900	765	527	233	210	646	700	110	73.5	52	0.45	7200
2V 12 OPzS 1200	12	100	4	1200	1080	918	632	275	210	646	700	140	86	62	0.35	8600
2V 11 OPzS 1400	11	125	4	1400	1260	1072	720	275	210	797	850	140	101	71	0.34	8500
2V 12 OPzS 1500	12	125	4	1500	1350	1149	780	275	210	797	850	140	105	75	0.32	9000
2V 14 OPzS 1700	13	125	6	1700	1530	1302	870	397	212	772	826	110	137	95	0.315	10200
2V 15 OPzS 1875	15	125	6	1875	1687	1367	950	397	212	772	826	110	144	103	0.31	11000
2V 16 OPzS 2000	16	125	6	2000	1800	1532	1020	397	212	772	826	110	148	108	0.3	12200
2V 20 OPzS 2250	18	125	8	2250	2025	1723.5	1125	487	212	772	826	110	180	122	0.28	13800
2V 20 OPzS 2500	20	125	8	2500	2250	1915	1250	487	212	772	826	110	187	130	0.25	15600
2V 24 OPzS 3000	24	125	8	3000	2700	2298	1500	576	212	772	826	140	220	157	0.2	18800

* Cells type according to DIN 40736-1 and monoblocks type according to DIN 40737
** includes installed connectors and shrouds.

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