



OPzS Solar

Flooded Deep Cycle Batteries

With an extensive product range available ReFortis prides itself on world-class product design, production processes, technical development, cost structure and global location.

ReFortis flooded lead-acid batteries for the solar power & renewable energy market. Optimised design results in a low maintenance, reliable energy storage solution for critical and unstable conditions.

OPzS Solar Technology

Positive plate

High energy density tubular design with low antimony alloy for extended watering intervals

Negative plate

Industry leading negative plate design

Separator

High-porosity and corrosion-resistant ensures maximum capacity for the lifetime of the cell

Container

Manufactured from Styrene-Acrylonitrile resin (SAN) which is durable and heat resistant



Terminal

Maintains an airtight seal even when the plates expand and grow throughout the lifetime of the cell

Gauntlet

Non-woven, high-capacity polyester gauntlet

Electrolyte

Acid density of 1.24kg/l ensures low self-discharge rates and long design life of the cell

Lid

Manufactured from Acrylonitrile-Butadiene-Styrene (ABS) which is durable and heat resistant

Features of OPzS Solar Batteries...

- High energy density
- Robust tubular positive electrode design, compliant with DIN 40736
- Minimal maintenance due to low antimony alloy and large electrolyte volume
- Operating temperature 15°C to +35°C
- Low self discharge rate of approximately 3% per month at 20°C
- EUROBAT design life: Long Life > 12 years
- Fully recyclable with low CO2 footprint
- 3000+ cycles at 60% D.O.D @ IUI charging
- High cyclic performance

Applications...

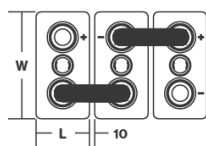
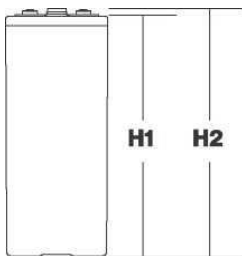
- Solar / Wind Power Systems
- Traffic Systems
- Hydro Power Generation
- Off grid Solutions
- Telecommunications
- Power Distribution Companies

Compliant with: Recyclable EC 60896-21/22/ IEC61427

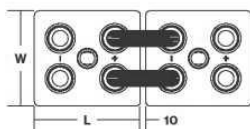
Cell Specification

Cell Type	Plate (Ah)	Length (mm)	Width (mm)	Height over lid (mm)	Height over pillar (mm)	Dry weight (kg)	Filled weight (kg)	Internal resistance (mOhm)	Short circuit current (A)
RE OPzS 160SOLAR	50	103	206	355	368	8.3	13.3	0.95	1075
RE OPzS 235SOLAR	50	103	206	355	368	10.5	15.3	0.94	1613
RE OPzS 315SOLAR	50	103	206	355	368	12.9	17.7	0.89	2150
RE OPzS 395SOLAR	50	124	206	355	368	15.5	21.3	0.74	2650
RE OPzS 475SOLAR	50	145	206	355	368	18.3	25.2	0.63	3200
RE OPzS 520SOLAR	70	124	206	471	484	20.0	27.4	0.67	2850
RE OPzS 625SOLAR	70	145	206	471	484	23.4	33.3	0.57	3450
RE OPzS 725SOLAR	70	166	206	471	484	26.7	36.9	0.5	4050
RE OPzS 915SOLAR	100	145	206	647	660	32.1	41.1	0.47	4300
RE OPzS 1070SOLAR	100	145	206	647	660	43.0	57.0	0.35	5000
RE OPzS 1220SOLAR	100	210	191	647	660	45.0	60.4	0.33	5700
RE OPzS 1375SOLAR	100	210	233	647	660	52.5	71.5	0.27	6400
RE OPzS 1525SOLAR	100	210	233	647	660	54.5	73.6	0.27	7100
RE OPzS 1680SOLAR	100	210	275	647	660	59.5	83.5	0.23	7850
RE OPzS 1830SOLAR	100	210	275	647	660	63.8	86.7	0.23	8550
RE OPzS 1925SOLAR	125	210	275	797	810	71.5	101.5	0.23	7746
RE OPzS 2100SOLAR	125	210	275	797	810	77.1	105.6	0.23	8450
RE OPzS 2250SOLAR	125	210	275	797	810	82.0	110.9	0.22	9872
RE OPzS 2450SOLAR	125	214	399	772	785	93.5	133.5	0.17	10650
RE OPzS 2600SOLAR	125	214	399	772	785	97.5	142.5	0.17	11391
RE OPzS 2800SOLAR	125	214	399	772	785	103.8	146.2	0.17	12150
RE OPzS 3000SOLAR	125	214	399	772	785	110.9	150.7	0.15	12920
RE OPzS 3150SOLAR	125	214	399	772	785	115.6	155.1	0.15	13700
RE OPzS 3300SOLAR	125	212	487	772	785	122.0	172.0	0.13	14440
RE OPzS 3500SOLAR	125	212	487	772	785	127.5	178.8	0.13	15200
RE OPzS 3675SOLAR	125	212	575	772	785	132.1	191.7	0.11	15989
RE OPzS 3850SOLAR	125	212	575	772	785	138.4	200.8	0.11	16750
RE OPzS 4025SOLAR	125	212	575	772	785	141.0	200.4	0.11	17538
RE OPzS 4200SOLAR	125	212	575	772	785	147.1	209.1	0.11	18300
RE OPzS 4375SOLAR	125	212	575	772	785	153.4	213.5	0.11	19038
RE OPzS 4550SOLAR	125	212	575	772	785	159.5	222	0.11	19800

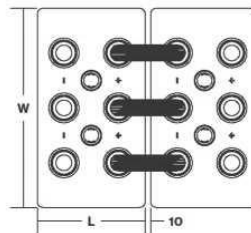
H1: Height over lid
H2: Height over pillar
M10 threaded terminal
Torque: 23Nm
Not to scale



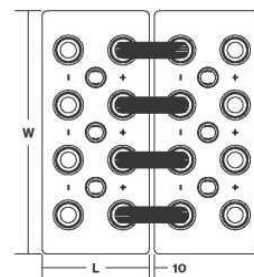
RE OPzS160SOLAR to
RE OPzS1070SOLAR



RE OPzS1220SOLAR to
RE OPzS2250SOLAR



RE OPzS2450SOLAR to
RE OPzS3150SOLAR



RE OPzS3300SOLAR to
RE OPzS4550SOLAR

Capacities C10 - C240

OPzS Solar									
Cell Type Ue (100%) / VPC Ref Temp	C10 1.80 25°C)	C12 1.80 25°C	C20 1.80 25°C	C24 1.80 25°C	C48 1.80 25°C)	C72 1.80 25°C	C100 1.85 25°C	C120 1.85 25°C	C240 1.85 25°C
RE OPzS160SOLAR	116	117	128	134	144	152	158	163	169
RE OPzS235SOLAR	174	176	192	201	216	229	237	244	254
RE OPzS315SOLAR	232	235	255	268	288	305	316	325	339
RE OPzS395SOLAR	288	293	317	335	359	381	394	407	423
RE OPzS475SOLAR	345	351	379	402	431	457	474	488	508
RE OPzS520SOLAR	12	419	453	464	465	499	519	536	557
RE OPzS625SOLAR	494	503	544	557	559	597	623	644	668
RE OPzS725SOLAR	577	586	637	650	658	697	727	747	780
RE OPzS 915SOLAR	711	721	783	804	877	937	915	942	981
RE OPzS 1070SOLAR	829	843	913	940	1025	1096	1069	1102	1146
RE OPzS1220SOLAR	948	961	1044	1072	1168	1249	1218	1257	1307
RE OPzS 1375SOLAR	1066	1080	1174	1206	1314	1406	1371	1416	1470
RE OPzS1525SOLAR	1185	1201	1304	1340	1461	1563	1523	1571	1634
RE OPzS1680SOLAR	1303	1320	1435	1474	1607	1718	1676	1730	1796
RE OPzS1830SOLAR	1421	1441	1566	1608	1753	1875	1828	1885	1960
RE OPzS 1925SOLAR	1558	1575	1709	1754	1821	1917	1923	1983	2062
RE OPzS 2100SOLAR	1700	1718	1864	1914	1987	2091	2098	2163	2250
RE OPzS2250SOLAR	1841	1861	2014	2074	2144	2266	2273	2343	2437
RE OPzS2450SOLAR	1983	2004	2168	2233	2309	2440	2448	2524	2624
RE OPzS2600SOLAR	2124	2148	2323	2393	2474	2614	2623	2704	2812
RE OPzS2800SOLAR	2266	2291	2478	2552	2639	2788	2797	2884	2999
RE OPzS3000SOLAR	2408	2434	2632	2711	2810	2962	2973	3064	3187
RE OPzS3150SOLAR	2549	2577	2787	2871	2976	3136	3148	3245	3374
RE OPzS3300SOLAR	2691	2720	2941	3030	3141	3310	3322	3425	3562
RE OPzS3500SOLAR	2833	2863	3096	3190	3306	3484	3497	3605	3749
RE OPzS 3675SOLAR	2974	3008	3252	3350	3478	3660	3672	3786	3937
RE OPzS3850SOLAR	3116	3151	3407	3509	3644	3834	3847	3966	4124
RE OPzS4025SOLAR	3257	3294	3579	3668	3821	4008	4021	4025	4186
RE OPzS4200SOLAR	3399	3437	3735	3827	3987	4182	4196	4326	4499
RE OPzS 4375SOLAR	3540	3580	3890	3988	4154	4356	4104	4507	4687
RE OPzS4550SOLAR	3682	3723	4046	4147	4320	4530	4268	4687	4874

Cycles vs DOD

Cycles life of OPZV-RFTSOLAR @20°C

