



GERMANY TECHNOLOGY
28 OPzS 3500
(2V-3900AH @ C10)

HIGH PERFORMANCE



Specifications:

Very high operational reliability under rough operating conditions.

Low maintenance due to reduced antimony in the alloy and high electrolyte reserve.

20 years at 20°C (80% remaining capacity from C10).

Also designed for cyclic applications.

Also available in dry charged condition with separate electrolyte.

Low gassing due to PbSb1.6SnSe alloy (EN 50272-2).

Conforms to DIN 40 736 and DIN 40 737 T3.

Electrolyte: diluted sulphuric acid dN = 1.25 kg/l.

Optimized plate design produces increased capacities compared to DIN.

Completely recyclable.

Applications

Telecommunications

Emergency lighting

Microwave radio systems

Power generation plants

Photovoltaics

Innovative Features

- ◆ Tubular positive plates: Robust tubular plates consisting of a lead antimony alloy, optimized for high corrosion resistances.
- ◆ Pasted negative plates: Grid plate construction consisting of low antimony with long-life expander material.
- ◆ Separators: Microporous and robust, for electrical separation of the positive and negative plates and optimized for low internal resistance.
- ◆ Container: High impact, transparent SAN (Styrol-Acryl-Nitril).
- ◆ Safety Vents: Cells incorporate flame retardant ceramic plugs that filter out any drops of electrolyte from the escaping gases preventing any errant spark or flame from entering the battery.
- ◆ Poles: Screw connection for easy and safe assembly and maintenance-free connection with excellent conductivity.
- ◆ Post seals: Extremely high integrity post seal design to prevent electrolyte leakage and terminal corrosion.
- ◆ Connectors: Flexible, fully insulated cable connectors screwed to the terminal with an insulated screw having a probe hole on the top for electrical measurement.

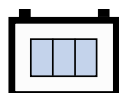
**PROVEN HIGH RELIABILITY ENERGY
STORAGE FOR CRITICAL APPLICATION**

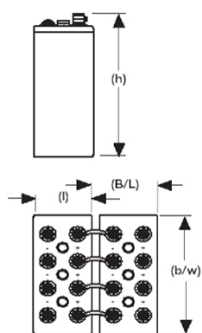
Standard and Compliance

DIN 40736 part 1

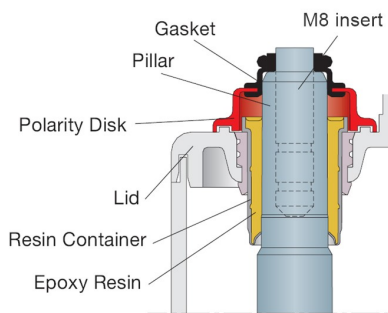
DIN 40737 part 2

IEC 896 part 1

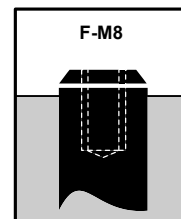




Dimension figure



High Reliability Post Seal



16 Nm

Container: SAN (acrylonitrile polystyrene),
UL 94 V-0 standard

Tubular OPzS Range Electrical Specifications & Dimensions

Part number	DIN Type	Nom. Voltage (V)	C8 AH to 1.75VPC	C10 AH to 1.80VPC	C100 AH to 1.80VPC	Outline Dimensions (mm)				Weight With acid (kg)	Acid Weight (kg)	Pole Pairs	Internal Resist. acc. to IEC 896-2 mOhms	Short Circuit Current	Terminal
						Length (l)	Width (b/w)	Height (h)	Installed Length (B/L)						
2TS283500	28 OPzS 3500	2	3904	3900	5135	215	580	815	225	250	63.0	4	0.22	19800	F-M8

Acid density $d_N = 1.250 \text{ kg/l}$

Tubular OPzS Range Discharge Data Amperes at 20°C

End Point Volts/Cell	Discharge Time in Minutes					Discharge Time in hours								
	5 min	10 min	15 min	20 min	30 min	1 hour	1.5 hour	2 hour	3 hour	4 hour	5 hour	8 hour	10 hour	20 hour
1.90	1150	1140	1119	1085	1119	907	830	752	645	560	503	376	322	173
1.87	1271	1263	1233	1196	1175	989	900	813	692	598	535	399	340	184
1.85	1391	1386	1346	1306	1231	1070	969	874	739	636	566	422	357	194
1.83	1559	1543	1510	1460	1365	1171	1051	945	783	667	594	437	371	203
1.80	1836	1821	1748	1683	1575	1317	1178	1041	857	723	636	460	390	215
1.75	2241	2206	2134	2035	1881	1544	1356	1176	947	792	689	488	406	223
1.70	2662	2613	2505	2376	2169	1747	1510	1293	1013	840	727	575	415	229
1.65	3088	3013	2865	2713	2440	1941	1641	1377	1059	875	756	511	422	232

Tubular OPzS Range Discharge Data Watts at 20°C

End Point Volts/Cell	Discharge Time in Minutes					Discharge Time in hours								
	5 min	10 min	15 min	20 min	30 min	1 hour	1.5 hour	2 hour	3 hour	4 hour	5 hour	8 hour	10 hour	20 hour
1.90	1873	1873	1838	1791	1727	1534	1423	1313	1140	1014	928	705	616	329
1.87	2357	2345	2293	2223	1983	1843	1686	1528	1295	1131	1022	771	667	363
1.85	2678	2666	2596	2526	2386	2048	1861	1674	1406	1208	1086	817	701	384
1.83	2963	2946	2882	2788	2625	2223	2001	1791	1482	1266	1134	842	722	398
1.80	3401	3378	3284	3185	2981	2479	2223	1966	1610	1365	1208	882	755	419
1.75	4083	4043	3914	3757	3488	2841	2497	2182	1750	1470	1301	929	782	434
1.70	4719	4661	4474	4282	3932	3156	2736	2351	1849	1540	1353	952	798	445
1.65	5314	5238	5005	4789	4352	3453	2923	2479	1913	1598	1400	963	803	448

Long Duration Discharge Capacity (Ah) at 20°C

Part No.	DIN Type	End Point Volts/Cell	C ₂₄	C ₄₈	C ₇₂	C ₉₆	C ₁₀₀	C ₁₂₀	C ₂₄₀
2TS283500	28 OPzS 3500	1.85	4326	4831	5047	5067	5084	5111	5165
		1.80	4369	4879	5097	5118	5135	5162	5217

Actual battery performance data may be +/-5% of figures shown above.

