



OPzS

CARACTERÍSTICAS TÉCNICAS





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Los elementos OPzS ofrecen una robusta solución de almacenamiento de energía, con una tecnología probada durante décadas en aplicaciones que requieren una batería segura y fiable con una larga vida útil.

Ventajas:

- Cumple las normas DIN 40736 y DIN 40737.
- Diseño optimizado de placas.
- Mínimo mantenimiento gracias a su bajo contenido en antimonio y gran reserva de electrolito.
- Ideales para aplicaciones cíclicas gracias a sus placas tubulares.
- Larga vida útil: Más de 15 años carga flotante.
- Operativa de -10° a 50° C.
- Disponible en: 2V y monoblocs de 6V y 12V.
- Servida en carga seca o húmeda.
- Compatible con los tipos estándar de instalación.

Los OPzS se distinguen por su alta capacidad de soportar ciclos y su larga vida en modo standby. Están diseñados y fabricados de acuerdo con las normas DIN estándar.

Los elementos y monoblocs OPzS cubren un gran campo de aplicaciones, entre las que destacan:

Aplicaciones:

- Energías renovables (solar, eólica...).
- Telecomunicaciones.
- Control y monitorización de sistemas en plantas de energía y estaciones distribuidoras.
- Ferrocarriles.
- Señalización, control y sistemas de regularización.
- Sistemas de proceso de datos.
- UPS.
- Aplicaciones aeroportuarias.

CARACTERÍSTICAS TÉCNICAS

TIPO	PLACA POSITIVA		CAPACIDAD AH 20°C			DIMENSIONES (MM)					PESO (KG)		VOLUMEN DE ELECTROLITO (L)
			C10 1,80V	C100 1,85V	C120 1,85V								
Monoblocs	No	(Ah)	C10	C100	C120	a	b	h1	h2	e	con electrolito	sin electrolito	
6V 3 OPzS 150	3 x 3	50	177	239	242	234	201	345	378	-	41.2	29.8	9.2
6V 4 OPzS 200	3 x 4	50	215	280	283	272	205	350	362.5	-	47.1	35.2	9.6
6V 5 OPzS 250	3 x 5	50	287	384	389	380	205	350	362.5	-	60.9	43.5	14.0
6V 6 OPzS 300	3 x 6	50	312	403	408	380	205	350	362.5	-	67.1	50.5	13.4
12V 1 OPzS 50	6 x 1	50	63	85	86	272	205	350	362.5	-	37.7	24.4	10.7
12V 2 OPzS 100	6 x 2	50	103	130	132	272	205	350	362.5	-	49.4	37.7	9.4
12V 3 OPzS 150	6 x 3	50	150	188	191	380	205	350	362.5	-	69.8	53.0	13.5
2V elementos	No	(Ah)	C10	C100	C120	a	b	h1	h2	e	con electrolito	sin electrolito	
2 OPzS 100*	2	50	126	184	187	103	206	355	380	-	13.8	8.4	4.4
3 OPzS 150*	3	50	180	258	263	103	206	355	380	-	15.7	10.7	4.0
4 OPzS 200	4	50	215	296	300	103	206	355	380	-	17.5	13.0	3.6
5 OPzS 250	5	50	270	373	378	124	206	355	380	-	21.4	15.4	4.8
6 OPzS 300	6	50	324	448	454	145	206	355	380	-	25.7	18.5	5.8
5 OPzS 350	5	70	396	544	533	124	206	471	496	-	28.4	20.7	6.2
6 OPzS 420	6	70	474	651	661	145	206	471	496	-	33.5	24.3	7.4
7 OPzS 490	7	70	541	739	750	166	206	471	496	-	38.6	27.9	8.6
5 OPzS 500*	5	100	609	886	904	145	206	646	671	-	42.0	28.8	10.6
6 OPzS 600	6	100	672	949	966	145	206	646	671	-	45.8	33.0	10.3
7 OPzS 700*	7	100	836	1207	1230	191	210	646	671	80	60.0	42.7	14.0
8 OPzS 800	8	100	893	1256	1278	191	210	646	671	80	63.8	46.8	13.7
9 OPzS 900*	9	100	1028	1458	1484	233	210	646	671	110	73.0	53.0	16.1
10 OPzS 1000	10	100	1114	1565	1592	233	210	646	671	110	78.2	57.3	16.9
12 OPzS 1200	12	100	1329	1874	1908	275	210	646	671	140	91.3	66.2	20.2
11 OPzS 1400*	11	125	1623	2251	2286	275	210	796	821	140	110.5	76.0	27.8
12 OPzS 1500	12	125	1630	2195	2226	275	210	796	821	140	115.1	81.1	27.4
14 OPzS 1700*	14	125	1978	2728	2770	397	212	772	797	2 x 110	143.3	96.3	37.9
15 OPzS 1875	15	125	2114	2879	2921	397	212	772	797	2 x 110	148.9	102.6	37.3
16 OPzS 2000	16	125	2186	2933	2972	397	212	772	797	2 x 110	154.5	108.8	36.9
20 OPzS 2500	20	125	2926	4017	4076	487	212	772	797	3 x 110	201.0	135.0	53.2
24 OPzS 3000	24	125	3361	4555	4620	576	212	772	797	3 x 140	230.0	158.0	58.1

Sobre la gama DIN.

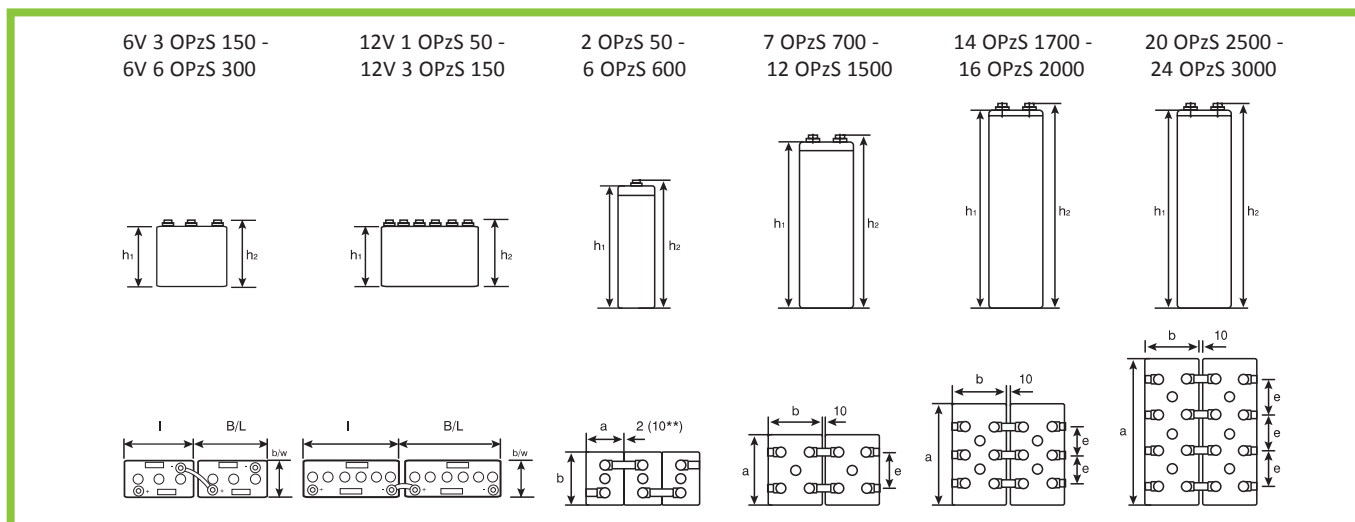


TABLA DE DESCARGA EN AMPERIOS

VOLTAJE FINAL 1.90 V/POR ELEMENTO										
MONOBLOC	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
6V 3 OPzS 150	7.5	13.3	15.8	21.9	29.9	37.1	42.9	50.8	56.5	63.8
6V 4 OPzS 200	9.6	17.3	20.5	28.5	38.9	48.5	56.0	66.4	73.8	83.5
6V 5 OPzS 250	12.4	21.9	25.9	35.7	48.8	60.6	69.5	82.2	91.0	102.1
6V 6 OPzS 300	14.4	25.6	30.4	42.0	57.4	71.4	81.9	96.9	107.3	120.4
12V 1 OPzS 50	2.6	4.6	5.5	7.5	10.4	12.9	14.8	17.5	19.4	22.0
12V 2 OPzS 100	4.8	8.6	10.3	14.4	19.7	24.7	28.6	34.1	38.1	43.5
12V 3 OPzS 150	7.21	12.9	15.3	21.3	29.3	36.5	42.3	50.3	56.0	63.6
2V ELEMENTO	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
2 OPzS 100	5.3	9.3	11.1	15.2	20.6	25.5	29.3	34.5	38.1	42.9
3 OPzS 150	7.7	13.6	16.2	22.3	30.3	37.6	43.1	51.1	56.6	63.9
4 OPzS 200	9.8	17.5	20.7	28.8	39.2	48.7	56.1	66.4	73.7	82.9
5 OPzS 250	12.5	22.0	26.1	36.0	49.3	61.3	70.4	83.4	92.6	104.3
6 OPzS 300	14.9	26.4	31.3	43.1	58.8	73.0	83.7	99.2	109.8	123.3
5 OPzS 350	17.2	30.3	35.8	49.0	66.2	81.7	92.7	108.9	119.1	132.3
6 OPzS 420	20.6	36.3	42.8	58.7	79.0	97.5	110.4	129.7	141.5	157.0
7 OPzS 490	24.0	42.2	49.9	68.2	91.7	113.1	127.9	150.1	163.4	181.2
5 OPzS 500	25.3	43.9	51.6	69.9	92.7	113.5	127.6	147.8	160.3	175.2
6 OPzS 600	29.5	51.4	60.4	82.0	108.9	133.3	149.7	173.4	187.9	204.9
7 OPzS 700	35.1	60.9	71.5	96.9	128.5	157.1	176.4	204.0	221.1	241.1
8 OPzS 800	39.4	68.7	80.8	109.7	146.1	179.1	201.4	233.8	253.8	277.4
9 OPzS 900	44.5	77.6	91.2	123.8	164.5	201.7	226.6	262.8	285.1	311.5
10 OPzS 1000	49.1	85.7	100.8	137.1	182.5	223.8	251.7	292.1	317.0	346.9
12 OPzS 1200	58.8	102.3	120.3	163.2	217.2	264.6	297.1	343.1	371.8	404.0
11 OPzS 1400	69.0	118.3	138.2	184.8	242.3	291.6	325.4	368.1	396.6	427.0
12 OPzS 1500	74.4	127.8	149.2	199.8	262.1	315.7	352.4	398.7	430.0	462.0
14 OPzS 1700	88.5	151.6	177.0	236.4	309.9	372.8	416.0	471.0	506.0	545.0
15 OPzS 1875	94.0	161.4	188.6	252.5	331.2	399.3	446.0	506.0	544.0	586.0
16 OPzS 2000	99.5	171.5	200.6	269.6	354.6	429.0	480.0	547.0	590.0	636.0
20 OPzS 2500	126.7	217.9	254.8	342.0	450.0	544.0	609.0	694.0	750.0	808.0
24 OPzS 3000	150.1	258.2	301.9	405.0	533.0	643.0	719.0	817.0	882.0	951.0



TABLA DE DESCARGA EN AMPERIOS

VOLTAJE FINAL 1.87 V/POR ELEMENTO										
MONOBLOC	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
6V 3 OPzS 150	8.0	14.5	17.3	24.2	33.5	41.9	48.6	58.2	65.0	73.8
6V 4 OPzS 200	10.3	18.8	22.4	31.4	43.6	54.9	63.6	76.3	85.2	96.7
6V 5 OPzS 250	13.2	23.8	28.4	39.7	54.9	68.6	79.2	94.4	105.1	118.9
6V 6 OPzS 300	15.4	27.9	33.3	46.5	64.5	80.9	93.5	111.6	124.1	140.4
12V 1 OPzS 50	2.8	5.0	6.0	8.3	11.6	14.5	16.8	20.0	22.4	25.4
12V 2 OPzS 100	5.1	9.4	11.2	15.8	22.0	27.9	32.4	39.0	43.9	50.1
12V 3 OPzS 150	7.7	14.0	16.7	23.5	32.8	41.3	48.0	57.6	64.6	73.5
2V ELEMENTO	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
2 OPzS 100	5.7	10.2	12.1	16.9	23.1	28.8	33.1	39.5	43.9	49.8
3 OPzS 150	8.2	14.9	17.6	24.6	34.0	42.5	49.1	58.5	65.3	74.0
4 OPzS 200	10.5	19.0	22.6	31.7	43.9	55.1	63.8	76.2	85.0	96.4
5 OPzS 250	13.2	24.0	28.5	39.9	55.3	69.3	80.2	95.8	106.8	121.2
6 OPzS 300	15.9	28.7	34.1	47.7	66.1	82.7	95.6	113.9	126.8	143.6
5 OPzS 350	18.5	33.2	39.4	54.6	75.0	92.8	106.6	125.5	138.4	154.9
6 OPzS 420	22.1	39.7	47.2	65.4	89.6	110.6	127.1	149.3	164.7	184.0
7 OPzS 490	25.9	46.3	54.9	76.1	104.1	128.5	147.5	172.9	190.3	212.4
5 OPzS 500	27.2	48.3	57.1	78.4	105.8	129.3	147.2	170.6	186.9	205.4
6 OPzS 600	31.9	56.7	67.0	92.0	124.4	152.2	173.0	200.6	219.2	240.4
7 OPzS 700	37.8	67.1	79.3	108.8	146.8	179.3	203.7	236.0	257.8	282.6
8 OPzS 800	42.5	75.6	89.4	123.1	166.7	204.1	232.6	270.0	295.8	325.4
9 OPzS 900	48.0	85.4	101.0	138.9	187.9	229.9	261.7	303.6	332.3	365.2
10 OPzS 1000	52.9	94.3	111.6	153.7	208.3	255.1	290.7	337.5	369.8	407.0
12 OPzS 1200	63.4	112.9	133.4	183.3	247.4	302.3	343.3	397.4	434.0	475.0
11 OPzS 1400	74.7	131.2	154.4	209.3	277.7	335.5	375.7	431.0	463.0	503.0
12 OPzS 1500	80.5	141.6	166.8	226.3	300.6	363.4	407.0	467.0	503.0	545.0
14 OPzS 1700	95.8	168.0	197.7	268.0	355.2	429.0	480.0	550.0	592.0	642.0
15 OPzS 1875	101.8	178.8	210.5	285.8	379.6	459.0	515.0	590.0	635.0	690.0
16 OPzS 2000	107.6	189.8	223.7	304.4	406.0	492.0	553.0	637.0	688.0	749.0
20 OPzS 2500	136.9	241.1	284.0	386.1	515.0	625.0	702.0	809.0	874.0	952.0
24 OPzS 3000	162.5	286.0	336.9	458.0	610.0	739.0	831.0	954.0	1029.0	1119.0



TABLA DE DESCARGA EN AMPERIOS

VOLTAJE FINAL 1.85 V/POR ELEMENTO										
MONOBLOC	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
6V 3 OPzS 150	8.2	15.0	17.8	25.1	35.2	44.6	51.8	62.5	70.3	80.0
6V 4 OPzS 200	10.6	19.4	23.1	32.7	45.9	58.4	68.0	82.0	92.1	104.8
6V 5 OPzS 250	13.6	24.6	29.4	41.3	57.9	73.1	84.8	101.8	114.0	128.7
6V 6 OPzS 300	15.8	28.8	34.4	48.6	68.1	86.3	100.1	120.3	134.6	152.3
12V 1 OPzS 50	2.9	5.2	6.2	8.7	12.2	15.4	17.8	21.5	24.1	27.5
12V 2 OPzS 100	5.3	9.6	11.6	16.4	23.1	29.6	34.6	42.0	47.3	54.3
12V 3 OPzS 150	7.9	14.5	17.3	24.5	34.5	44.0	51.2	62.0	69.8	79.7
2V ELEMENTO	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
2 OPzS 100	5.8	10.6	12.5	17.5	24.3	30.8	35.3	42.4	47.5	53.8
3 OPzS 150	8.5	15.4	18.2	25.6	35.8	45.2	52.3	62.9	70.6	80.2
4 OPzS 200	10.8	19.6	23.4	33.1	46.3	58.7	68.1	82.1	92.0	104.4
5 OPzS 250	13.6	24.8	29.5	41.6	58.3	73.8	85.6	103.0	115.6	131.2
6 OPzS 300	16.4	29.7	35.3	49.8	69.6	88.1	102.1	122.7	137.4	155.5
5 OPzS 350	19.0	34.3	40.8	57.2	79.4	99.5	114.4	135.9	150.6	169.0
6 OPzS 420	22.8	41.1	49.0	68.6	95.0	118.9	136.6	161.9	179.1	200.9
7 OPzS 490	26.6	48.0	57.1	79.8	110.5	137.9	158.6	187.6	207.1	232.0
5 OPzS 500	28.0	50.2	59.5	82.4	112.8	139.1	158.8	185.7	203.1	225.8
6 OPzS 600	32.7	58.8	69.7	96.9	132.6	163.8	186.9	218.4	238.7	264.7
7 OPzS 700	38.9	69.8	82.6	114.5	156.3	192.9	220.0	256.9	280.8	311.3
8 OPzS 800	43.5	78.5	93.2	129.5	177.5	219.7	251.2	294.0	321.7	357.9
9 OPzS 900	49.3	88.7	105.2	146.2	200.2	247.4	282.5	330.6	361.5	402.0
10 OPzS 1000	54.4	97.9	116.2	161.6	221.8	274.4	313.7	367.5	402.0	447.0
12 OPzS 1200	65.2	117.3	139.1	193.0	263.8	325.3	371.0	433.0	473.0	523.0
11 OPzS 1400	76.9	136.7	161.5	221.6	298.1	361.5	409.0	469.0	508.0	552.0
12 OPzS 1500	82.9	147.6	174.5	239.7	322.7	391.5	443.0	507.0	551.0	597.0
14 OPzS 1700	98.6	175.1	206.8	283.6	381.1	462.0	522.0	599.0	649.0	704.0
15 OPzS 1875	104.7	186.4	220.2	302.4	407.0	494.0	559.0	642.0	697.0	757.0
16 OPzS 2000	110.7	197.6	233.7	321.8	435.0	530.0	601.0	693.0	753.0	822.0
20 OPzS 2500	140.8	251.0	296.5	408.0	552.0	672.0	762.0	878.0	956.0	1046.0
24 OPzS 3000	167.1	297.9	351.9	484.0	654.0	795.0	901.0	1037.0	1128.0	1228.0



TABLA DE DESCARGA EN AMPERIOS

VOLTAJE FINAL 1.83 V/POR ELEMENTO										
MONOBLOC	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
6V 3 OPzS 150	8.4	15.3	18.2	25.8	36.5	46.8	54.7	66.6	75.0	85.9
6V 4 OPzS 200	10.8	19.9	23.7	33.6	47.6	61.2	71.7	87.3	98.4	112.6
6V 5 OPzS 250	13.9	25.2	30.1	42.5	60.0	76.7	89.5	108.6	121.8	138.6
6V 6 OPzS 300	16.1	29.6	35.2	50.0	70.7	90.5	105.8	128.3	144.2	164.0
12V 1 OPzS 50	2.9	5.3	6.3	8.9	12.6	16.1	18.8	22.8	25.7	29.4
12V 2 OPzS 100	5.4	9.9	11.9	16.8	23.9	30.9	36.4	44.6	50.4	58.1
12V 3 OPzS 150	8.0	14.8	17.7	25.1	35.7	46.0	54.0	66.0	74.4	85.5
2V ELEMENTO	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
2 OPzS 100	6.0	10.8	12.8	18.0	25.3	32.2	37.5	45.2	50.7	57.7
3 OPzS 150	8.6	15.7	18.7	26.3	37.0	47.3	55.2	67.0	75.3	85.9
4 OPzS 200	11.0	20.1	24.0	34.0	48.0	61.6	71.9	87.4	98.4	112.2
5 OPzS 250	13.9	25.4	30.2	42.7	60.4	77.3	90.4	109.8	123.4	141.0
6 OPzS 300	16.7	30.4	36.2	51.2	72.4	92.4	107.9	130.9	147.0	167.4
5 OPzS 350	19.3	35.2	41.8	59.1	82.9	105.0	121.4	145.2	162.0	181.5
6 OPzS 420	23.2	42.1	50.1	70.7	99.3	125.4	145.0	173.0	192.8	215.9
7 OPzS 490	27.1	49.1	58.5	82.4	115.4	145.7	168.3	200.6	223.2	249.5
5 OPzS 500	28.6	51.4	61.0	85.2	118.2	147.6	169.2	199.3	219.8	244.0
6 OPzS 600	33.4	60.2	71.5	100.3	139.2	173.9	199.3	234.7	258.2	286.4
7 OPzS 700	39.7	71.4	84.7	118.6	164.2	204.8	234.5	275.8	303.5	336.7
8 OPzS 800	44.5	80.3	95.5	134.0	186.1	233.0	267.5	315.6	348.1	386.6
9 OPzS 900	50.4	90.9	107.9	151.3	209.9	262.5	301.1	355.0	391.3	434.0
10 OPzS 1000	55.5	100.3	119.1	167.3	232.5	291.0	334.2	394.5	435.0	484.0
12 OPzS 1200	66.6	120.1	142.6	199.9	277.1	345.9	395.9	465.0	511.0	566.0
11 OPzS 1400	78.8	140.5	166.4	230.9	314.7	386.5	438.0	507.0	550.0	601.0
12 OPzS 1500	84.8	151.7	179.7	249.6	340.6	419.0	475.0	549.0	596.0	652.0
14 OPzS 1700	100.9	180.1	213.2	295.5	402.0	494.0	559.0	648.0	702.0	769.0
15 OPzS 1875	107.2	191.5	226.7	314.8	430.0	528.0	600.0	694.0	754.0	826.0
16 OPzS 2000	113.3	202.9	240.5	334.5	458.0	566.0	643.0	748.0	815.0	895.0
20 OPzS 2500	144.1	257.6	305.0	424.0	580.0	717.0	815.0	948.0	1032.0	1138.0
24 OPzS 3000	171.0	305.8	362.2	504.0	689.0	850.0	965.0	1120.0	1218.0	1339.0



TABLA DE DESCARGA EN AMPERIOS

VOLTAJE FINAL 1.80 V/POR ELEMENTO										
MONOBLOC	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
6V 3 OPzS 150	8.5	15.6	18.6	26.5	37.8	48.9	57.8	71.4	80.9	93.8
6V 4 OPzS 200	11.0	20.2	24.2	34.6	49.4	64.2	75.9	93.8	106.3	123.1
6V 5 OPzS 250	14.2	25.7	30.7	43.7	62.2	80.6	95.0	117.0	131.9	151.9
6V 6 OPzS 300	16.5	30.2	36.0	51.4	73.4	95.1	112.4	138.4	156.2	179.9
12V 1 OPzS 50	3.0	5.4	6.4	9.1	13.0	16.8	19.9	24.5	29.6	32.1
12V 2 OPzS 100	5.5	10.1	12.1	17.2	24.7	32.2	38.3	47.6	54.3	63.4
12V 3 OPzS 150	8.2	15.1	18.0	25.8	36.9	48.1	57.0	70.7	80.2	93.3
2V ELEMENTO	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
2 OPzS 100	6.1	11.1	13.1	18.5	26.2	33.6	39.6	48.6	54.8	63.0
3 OPzS 150	8.8	16.0	19.1	27.1	38.4	49.6	58.5	72.0	81.3	93.9
4 OPzS 200	11.2	20.5	24.5	34.9	49.9	64.5	76.3	94.1	106.3	122.7
5 OPzS 250	14.2	25.9	30.9	43.9	62.5	81.0	95.8	117.9	133.3	154.0
6 OPzS 300	17.0	31.1	37.0	52.7	74.9	97.0	114.5	140.9	159.0	183.3
5 OPzS 350	19.7	36.0	42.9	61.0	86.4	110.8	130.0	157.8	176.8	200.9
6 OPzS 420	23.7	43.1	51.4	73.0	103.4	132.7	155.4	188.3	210.7	239.1
7 OPzS 490	27.7	50.2	59.9	85.0	120.5	154.5	180.5	218.5	244.1	276.5
5 OPzS 500	29.2	52.7	62.7	88.3	124.0	157.2	182.4	217.9	241.9	270.2
6 OPzS 600	34.0	61.8	73.6	103.8	146.0	185.5	215.1	256.8	284.6	317.5
7 OPzS 700	40.5	73.3	87.1	122.6	172.4	218.6	253.2	301.9	334.5	373.0
8 OPzS 800	45.4	82.4	98.1	138.5	195.3	248.4	288.3	345.3	383.2	429.0
9 OPzS 900	51.4	93.1	110.9	156.4	220.3	279.8	324.7	388.2	431.0	482.0
10 OPzS 1000	56.6	102.8	122.4	172.9	243.8	310.1	360.2	431.0	479.0	535.0
12 OPzS 1200	67.9	123.3	146.7	206.9	291.1	369.4	428.0	510.0	564.0	628.0
11 OPzS 1400	80.2	144.6	171.8	240.1	333.5	417.0	477.0	559.0	611.0	672.0
12 OPzS 1500	86.5	156.1	185.5	259.6	361.0	451.0	517.0	604.0	662.0	728.0
14 OPzS 1700	102.9	185.4	219.9	307.3	426.0	533.0	609.0	713.0	781.0	858.0
15 OPzS 1875	109.2	197.1	234.0	327.1	455.0	570.0	652.0	764.0	838.0	922.0
16 OPzS 2000	115.5	208.6	247.9	347.4	484.0	608.0	699.0	822.0	904.0	998.0
20 OPzS 2500	146.9	264.7	314.4	440.0	612.0	770.0	884.0	1041.0	1146.0	1265.0
24 OPzS 3000	174.4	314.5	373.7	523.0	729.0	913.0	1048.0	1232.0	1353.0	1491.0



TABLA DE DESCARGA EN AMPERIOS

VOLTAJE FINAL 1.75 V/POR ELEMENTO										
MONOBLOC	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
6V 3 OPzS 150	8.7	16.1	19.1	27.2	38.9	51.0	60.9	76.6	88.2	104.5
6V 4 OPzS 200	11.3	20.8	24.8	35.5	50.9	66.8	80.0	100.8	116.3	137.5
6V 5 OPzS 250	14.5	26.5	31.5	44.9	64.4	84.3	100.4	126.0	144.8	170.5
6V 6 OPzS 300	16.9	31.0	37.0	52.9	75.9	99.6	118.9	149.4	171.8	202.3
12V 1 OPzS 50	3.0	5.6	6.6	9.4	13.4	17.5	20.8	26.1	30.1	35.6
12V 2 OPzS 100	5.6	10.4	12.4	17.7	25.5	33.5	40.2	50.8	58.8	70.1
12V 3 OPzS 150	8.4	15.5	18.5	26.5	38.1	50.1	60.0	75.7	87.4	103.9
2V ELEMENTO	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
2 OPzS 100	6.2	11.3	13.5	19.0	27.1	35.2	41.8	52.2	59.9	70.4
3 OPzS 150	9.0	16.4	19.5	27.7	39.6	51.7	61.6	77.3	88.9	104.8
4 OPzS 200	11.5	21.1	25.2	35.9	51.4	67.3	80.4	101.1	116.3	137.4
5 OPzS 250	14.5	26.5	31.7	45.1	64.7	84.6	100.9	126.9	146.0	172.3
6 OPzS 300	17.5	31.8	38.0	54.1	77.5	101.4	120.9	151.7	174.3	205.4
5 OPzS 350	20.2	37.1	44.1	62.6	89.6	116.7	138.7	172.3	196.4	228.0
6 OPzS 420	24.3	44.4	52.9	75.0	107.4	139.8	166.0	206.1	234.5	271.8
7 OPzS 490	28.3	51.7	61.6	87.5	125.1	162.8	193.2	239.5	272.1	314.6
5 OPzS 500	29.9	54.3	64.5	91.0	129.5	167.1	196.9	241.4	271.8	309.8
6 OPzS 600	34.9	63.7	75.7	107.2	152.8	197.4	232.8	285.1	320.8	365.2
7 OPzS 700	41.5	75.5	89.5	126.6	180.2	232.4	273.8	335.2	376.9	429.0
8 OPzS 800	46.6	84.9	100.9	142.9	203.8	263.7	311.3	382.4	431.0	491.0
9 OPzS 900	52.8	96.0	114.0	161.4	230.1	297.4	350.9	430.0	485.0	552.0
10 OPzS 1000	58.1	105.9	125.9	178.4	254.5	329.2	388.9	478.0	538.0	615.0
12 OPzS 1200	69.8	127.0	150.9	213.8	304.8	393.6	464.0	568.0	638.0	723.0
11 OPzS 1400	82.5	148.9	176.6	248.8	351.5	449.0	524.0	630.0	698.0	780.0
12 OPzS 1500	88.9	160.8	190.8	269.1	380.5	487.0	568.0	683.0	757.0	846.0
14 OPzS 1700	105.8	190.8	226.3	318.5	449.0	575.0	669.0	804.0	892.0	996.0
15 OPzS 1875	112.2	202.9	240.6	339.0	479.0	613.0	716.0	861.0	957.0	1069.0
16 OPzS 2000	118.6	214.9	255.0	359.7	510.0	654.0	765.0	924.0	1030.0	1155.0
20 OPzS 2500	150.9	272.7	323.2	455.0	645.0	828.0	968.0	1169.0	1303.0	1464.0
24 OPzS 3000	179.2	323.8	384.2	542.0	767.0	983.0	1149.0	1386.0	1542.0	1729.0



TABLA DE DESCARGA EN AMPERIOS

VOLTAJE FINAL 1.70 V/POR ELEMENTO										
MONOBLOC	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
6V 3 OPzS 150	-	16.3	19.4	27.6	39.8	52.4	62.7	79.5	92.5	111.4
6V 4 OPzS 200	-	21.1	25.2	36.0	52.1	68.6	82.3	104.7	122.0	147.1
6V 5 OPzS 250	-	26.8	31.9	45.7	65.8	86.5	103.6	131.4	152.5	183.2
6V 6 OPzS 300	-	31.4	37.5	53.7	77.6	102.1	122.6	155.9	181.3	217.8
12V 1 OPzS 50	-	5.6	6.7	9.5	13.7	18.0	21.4	27.1	31.5	37.8
12V 2 OPzS 100	-	10.6	12.6	17.9	26.0	34.3	41.3	52.6	61.6	74.4
12V 3 OPzS 150	-	15.7	18.8	26.9	38.9	51.4	61.7	78.5	91.6	110.8
2V ELEMENTO	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
2 OPzS 100	-	11.4	13.7	19.4	27.6	36.1	43.0	54.3	62.8	75.2
3 OPzS 150	-	16.6	19.8	28.2	40.5	53.1	63.4	80.1	93.2	112.0
4 OPzS 200	-	21.4	25.5	36.5	52.6	69.1	82.8	105.1	122.3	147.3
5 OPzS 250	-	26.9	32.1	45.8	66.0	86.8	104.0	131.9	153.3	184.4
6 OPzS 300	-	32.3	38.6	54.9	79.2	103.9	124.4	158.0	183.5	220.4
5 OPzS 350	-	37.5	44.7	63.7	91.7	120.0	143.5	180.9	209.0	248.1
6 OPzS 420	-	45.0	53.6	76.4	110.1	143.7	172.0	216.6	250.1	296.1
7 OPzS 490	-	52.4	62.5	89.2	128.3	167.5	200.3	252.2	290.8	343.7
5 OPzS 500	-	55.0	65.5	92.9	132.7	172.4	205.5	256.3	293.1	342.0
6 OPzS 600	-	64.6	76.9	109.3	156.6	203.9	243.1	303.5	346.9	404.0
7 OPzS 700	-	76.5	91.0	129.3	184.7	240.2	286.0	356.4	407.0	474.0
8 OPzS 800	-	86.1	102.5	145.9	209.0	272.2	324.9	406.0	465.0	543.0
9 OPzS 900	-	97.3	115.8	164.8	235.9	307.1	366.2	457.0	523.0	611.0
10 OPzS 1000	-	107.4	127.9	182.0	260.9	339.9	406.0	507.0	581.0	679.0
12 OPzS 1200	-	128.8	153.4	218.3	312.4	407.0	485.0	605.0	690.0	802.0
11 OPzS 1400	-	151.5	179.9	254.7	361.5	468.0	553.0	680.0	767.0	874.0
12 OPzS 1500	-	163.5	194.4	275.5	391.5	508.0	600.0	737.0	832.0	949.0
14 OPzS 1700	-	194.0	230.5	326.0	462.0	598.0	706.0	868.0	978.0	1117.0
15 OPzS 1875	-	206.2	245.1	347.0	493.0	639.0	755.0	928.0	1048.0	1198.0
16 OPzS 2000	-	218.3	259.5	367.9	524.0	680.0	805.0	994.0	1125.0	1291.0
20 OPzS 2500	-	276.9	328.9	466.0	662.0	858.0	1015.0	1255.0	1421.0	1634.0
24 OPzS 3000	-	329.0	391.1	554.0	788.0	1022.0	1209.0	1491.0	1687.0	1934.0



TABLA DE DESCARGA EN AMPERIOS

VOLTAJE FINAL 1.65 V/POR ELEMENTO										
MONOBLOC	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
6V 3 OPzS 150	-	-	16.9	28.0	40.3	53.0	63.9	81.5	95.4	116.1
6V 4 OPzS 200	-	-	25.5	36.4	52.8	69.6	83.8	107.4	125.7	153.5
6V 5 OPzS 250	-	-	32.4	46.3	66.8	87.7	105.6	134.7	157.5	191.4
6V 6 OPzS 300	-	-	38.0	54.4	78.7	103.8	125.2	160.0	187.3	228.0
12V 1 OPzS 50	-	-	6.8	9.7	13.9	18.2	21.8	27.8	32.4	39.3
12V 2 OPzS 100	-	-	12.8	18.2	26.4	34.8	42.0	53.8	63.3	77.4
12V 3 OPzS 150	-	-	19.0	27.2	39.5	52.0	62.8	80.4	94.3	115.4
2V ELEMENTO	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
2 OPzS 100	-	-	13.8	19.5	28.0	36.5	43.8	55.6	64.7	78.4
3 OPzS 150	-	-	20.1	28.5	41.0	53.8	64.7	82.3	96.0	116.7
4 OPzS 200	-	-	25.9	36.9	53.3	70.2	84.4	107.9	126.1	153.6
5 OPzS 250	-	-	32.6	46.4	66.9	87.9	105.9	135.2	158.2	192.6
6 OPzS 300	-	-	39.0	55.6	80.3	105.5	127.0	162.0	189.4	230.2
5 OPzS 350	-	-	45.3	64.6	93.0	122.2	146.9	186.3	217.5	262.1
6 OPzS 420	-	-	54.3	77.5	111.5	146.5	176.1	223.3	260.3	313.3
7 OPzS 490	-	-	63.3	90.3	130.0	170.8	205.3	260.1	302.9	364.2
5 OPzS 500	-	-	66.3	94.1	134.7	176.2	210.4	265.4	307.0	365.2
6 OPzS 600	-	-	77.9	110.8	159.1	208.5	249.2	315.0	364.3	433.0
7 OPzS 700	-	-	92.2	131.0	187.7	245.6	293.3	369.9	428.0	508.0
8 OPzS 800	-	-	103.9	147.7	212.3	278.2	332.8	421.0	487.0	580.0
9 OPzS 900	-	-	117.3	166.9	239.6	313.8	375.3	474.0	549.0	652.0
10 OPzS 1000	-	-	129.6	184.4	265.0	347.4	416.0	525.0	609.0	726.0
12 OPzS 1200	-	-	155.4	221.1	317.6	416.0	497.0	629.0	726.0	861.0
11 OPzS 1400	-	-	182.3	258.2	368.5	479.0	570.0	713.0	815.0	950.0
12 OPzS 1500	-	-	196.9	279.3	399.1	520.0	619.0	772.0	885.0	1032.0
14 OPzS 1700	-	-	233.4	330.4	471.0	613.0	727.0	909.0	1039.0	1212.0
15 OPzS 1875	-	-	248.2	351.7	502.0	654.0	777.0	972.0	1114.0	1301.0
16 OPzS 2000	-	-	262.9	372.9	534.0	695.0	829.0	1037.0	1191.0	1398.0
20 OPzS 2500	-	-	333.2	472.0	674.0	878.0	1044.0	1308.0	1502.0	1764.0
24 OPzS 3000	-	-	396.2	561.0	803.0	1045.0	1245.0	1558.0	1788.0	2094.0



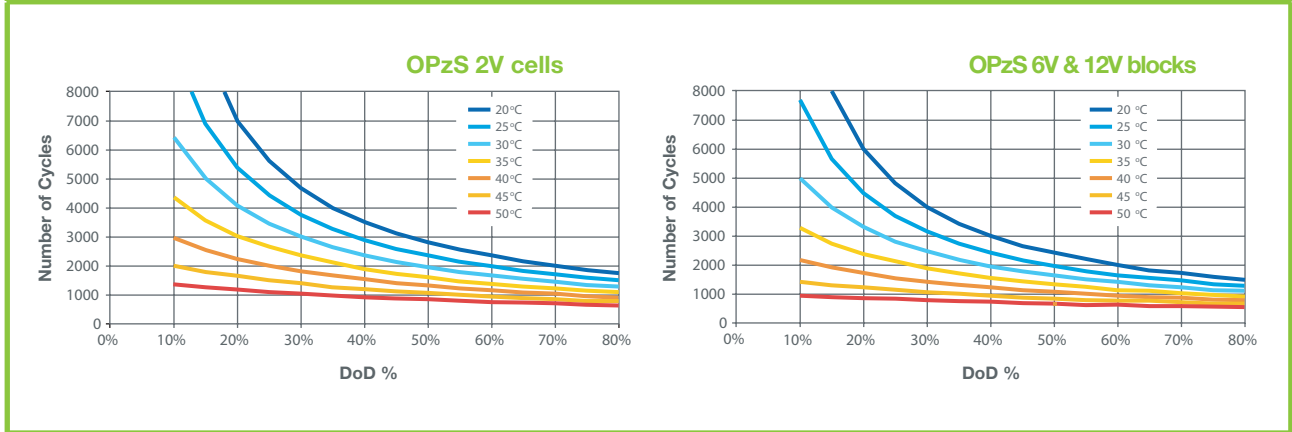
TABLA DE DESCARGA EN AMPERIOS

VOLTAJE FINAL 1.60 V/POR ELEMENTO										
MONOBLOC	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
6V 3 OPzS 150	-	-	-	28.4	40.8	53.7	64.6	82.8	97.3	119.4
6V 4 OPzS 200	-	-	-	36.9	53.4	70.4	85.1	109.1	128.5	157.9
6V 5 OPzS 250	-	-	-	46.9	67.6	89.0	107.1	137.1	161.2	197.4
6V 6 OPzS 300	-	-	-	55.1	79.7	105.2	127.0	162.8	191.8	235.3
12V 1 OPzS 50	-	-	-	9.81	14.1	18.5	22.1	28.2	33.0	40.4
12V 2 OPzS 100	-	-	-	18.4	26.7	35.3	42.6	54.7	64.5	79.5
12V 3 OPzS 150	-	-	-	27.6	40.0	52.7	63.7	81.7	96.3	118.7
2V ELEMENTO	20 H	10 H	8 H	5 H	3 H	2 H	1.5 H	1 H	45 MIN.	30 MIN.
2 OPzS 100	-	-	-	19.8	28.4	37.1	44.4	56.6	66.2	80.7
3 OPzS 150	-	-	-	28.9	41.5	54.5	65.5	83.6	98.1	119.9
4 OPzS 200	-	-	-	37.4	53.9	71.7	85.7	109.6	129.0	158.2
5 OPzS 250	-	-	-	47.0	67.7	89.2	107.5	137.5	161.6	198.2
6 OPzS 300	-	-	-	56.4	81.3	107.0	128.9	164.8	193.8	237.3
5 OPzS 350	-	-	-	65.4	94.3	123.9	149.0	190.3	223.1	271.9
6 OPzS 420	-	-	-	78.5	113.0	148.5	178.7	228.2	267.1	325.3
7 OPzS 490	-	-	-	91.5	131.8	173.1	208.3	265.9	311.1	378.3
5 OPzS 500	-	-	-	95.3	136.5	178.7	214.2	271.7	316.3	381.8
6 OPzS 600	-	-	-	112.2	161.3	211.4	253.8	322.3	375.7	453.0
7 OPzS 700	-	-	-	132.6	190.2	248.9	298.5	378.6	441.0	531.0
8 OPzS 800	-	-	-	149.6	215.0	282.1	338.7	431.0	502.0	607.0
9 OPzS 900	-	-	-	169.0	242.7	318.1	381.9	485.0	566.0	682.0
10 OPzS 1000	-	-	-	186.8	268.5	352.2	423.0	538.0	627.0	758.0
12 OPzS 1200	-	-	-	224.1	321.9	422.0	507.0	643.0	750.0	903.0
11 OPzS 1400	-	-	-	261.6	373.5	488.0	584.0	733.0	847.0	1007.0
12 OPzS 1500	-	-	-	282.9	405.0	529.0	632.0	796.0	920.0	1094.0
14 OPzS 1700	-	-	-	334.7	478.0	623.0	744.0	936.0	1081.0	1284.0
15 OPzS 1875	-	-	-	356.3	509.0	664.0	795.0	1000.0	1156.0	1376.0
16 OPzS 2000	-	-	-	377.8	541.0	706.0	845.0	1066.0	1236.0	1475.0
20 OPzS 2500	-	-	-	478.0	683.0	891.0	1065.0	1344.0	1558.0	1860.0
24 OPzS 3000	-	-	-	569.0	813.0	1063.0	1271.0	1602.0	1856.0	2211.0

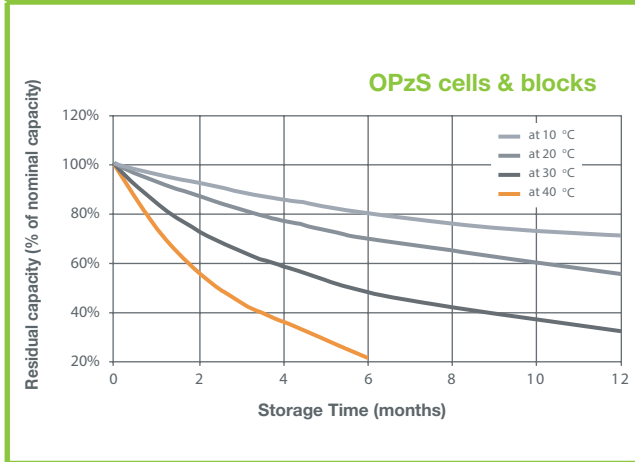


CURVAS DE RENDIMIENTO

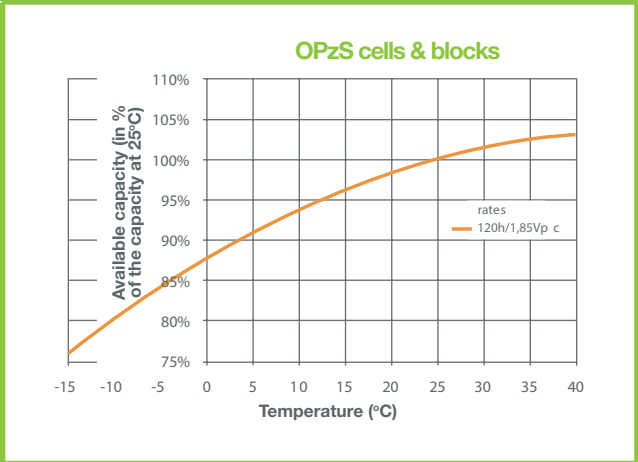
Expected Number of Cycles vs. DoD



Self-discharge characteristics



Capacity vs temperature



Guidance for the Initial Low-voltage Disconnect Settings (25°C Reference Temperature)

