



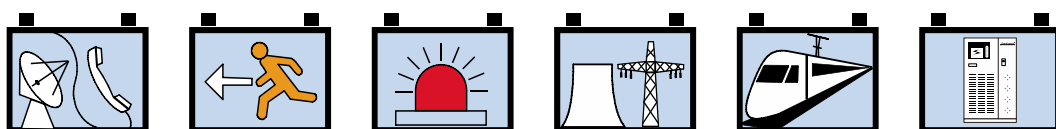
EverExceed®
power your applications

V4.3

Maintenance-free NiCd Battery



**»Premium quality for
uninterrupted communication«**



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ULTRA-HIGH RELIABILITY FREE MAINTENANCE

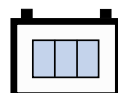
EverExceed SPM series is a powerful combination of proven pocket-plate construction and advanced design from the world leader in industrial nickel-cadmium battery technology. With a 20-year life and free maintenance requirements, EverExceed SPM series has become the cost-effective first choice – worldwide – for trouble-free standby power in the most demanding applications.

More Reliable

SPM series can continue to supply power for 20 years or more thanks to its corrosion free construction and EverExceed's tried and tested pocket-plate technology. No physical plate degradation and no sudden death with resulting costly downtime

Low life-cycle Cost

The cost of ownership of a battery system can be calculated across three distinct phases: the initial investment, including the cost of purchase and installation; on-going maintenance costs, including unexpected and expensive downtime periods; finally, the battery replacement costs, which include the expense of disposal as well as renewal. SPM series is the most cost-effective solution for any application – onshore or offshore – where long battery life, low maintenance costs, resistance to corrosion and total reliability are prime operating requirements.



More Adaptable

Offshore oil and gas, emergency lighting, fire and security, telecoms, utilities, photovoltaics. You can depend upon SPM series for perfect peace of mind.

No Water Filling

No water filling is necessary during the SPM series 20-year service life because of the controlled recombination and the valve regulated venting system (topping-up is possible if required).

More Durable

SPM series will survive treatment which would destroy lead acid batteries. This battery accepts ripple currents up to 0.2 C5 A and can be over-discharged or reversed without damage. Prolonged abusive overcharge can easily be compensated by refurbishment with water.

More Environmentally Tolerant

SPM series performs in the most severe conditions and can operate over a temperature range from 0°C to +40°C (+32°F to +104°F). It can survive extremes of temperature from as low as -50°C to as high as +70°C (-58°F to as high as +158°F).

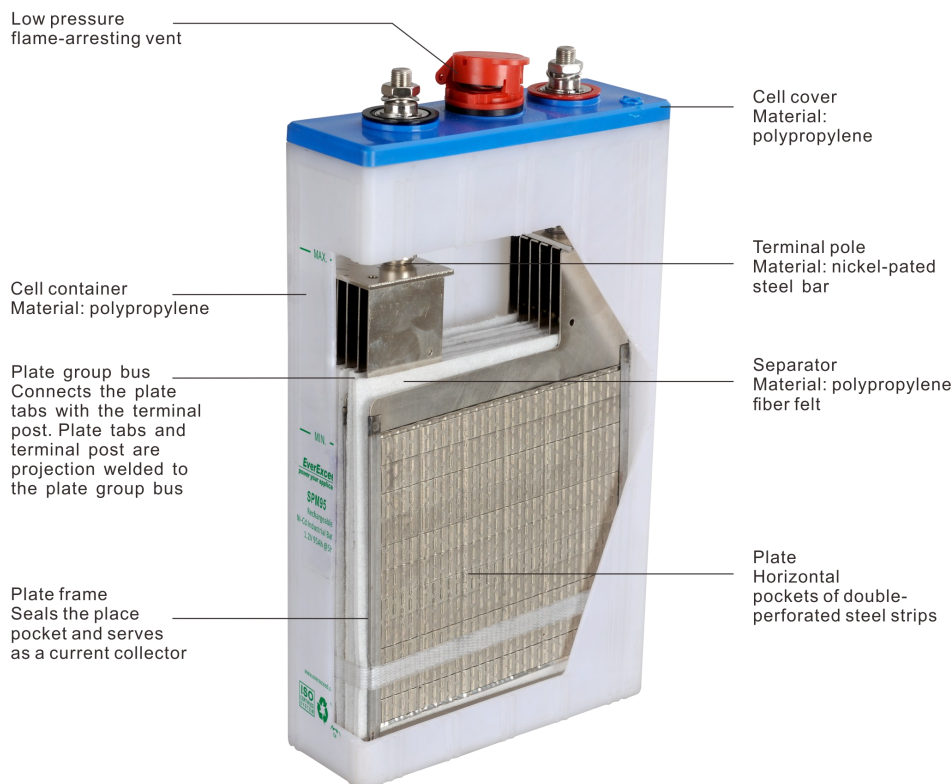
More Manageable

Compact and lightweight, SPM series is easy to transport and install. It can be stored for one year without need of refresher charges.

Float-corrected Data

Many nickel-cadmium batteries are used in stationary standby power applications where discharges occur infrequently and the battery is continuously charged by a float or constant potential charge. Under these circumstances there is a modification in the level of the discharge curve and allowances must be made for this when dimensioning the battery.

In order to simplify this process, the data EverExceed supplies in this publication takes into account this phenomenon. The data published by EverExceed is the performance after prolonged floating and it can be used directly to perform the battery calculation. This phenomenon occurs with all nickel cadmium batteries, but some other manufacturers of nickel-cadmium batteries may not take this effect into account in published data.



Meeting International Standards

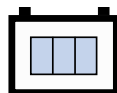
EverExceed batteries are manufactured under a strict ISO 9001 regime. Highest quality materials and rigorous quality checking procedures ensure all relevant international standards are met, including IEC 60623-2001, IEC 62259-2003.

Technology Superiority

- ☐ The electrode use steel tape as the framework. No react with electrolyte and remain complete during the whole service life.
- ☐ The separator is made of polypropylene fiber felt.
- ☐ No electrolyte replacement within service life.
- ☐ Terminals are made of steel or copper which has excellent electric conductivity and high mechanical strength.
- ☐ Battery case is made of high strength, corrosion resisting, translucent engineering plastics.
- ☐ No sudden death risk.
- ☐ Gas recombination efficiency can reach 85%~95%.
- ☐ Ultra high gas recombination efficiency, which reduces 90% water consumption.

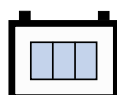
Application

- | | | | |
|--|--|---|--|
| ☐ Offshore oil and gas | ☐ Process control | ☐ Telecommunications | ☐ Wind/Solar energy |
| ☐ Fire and security systems | ☐ Switchgear | ☐ Mass transit | ☐ UPS |
| ☐ Railway signaling | | | |



SPM Series Electrical Specifications & Dimensions

Cell Type	Nominal Voltage (V)	Capacity (C ₈ Ah)	Max. External Dimensions (mm/inch)						Max. Weight (kg/lb.)		Electrolyte Volume (L)	Terminal	Container Material
			Length		Width		Height						
SPM30	1.2	30	70	2.8	135	5.3	285	11.2	3	6.6	0.7	M10	PP
SPM40	1.2	40	70	2.8	135	5.3	285	11.2	4	8.8	1	M16	PP
SPM50	1.2	50	70	2.8	135	5.3	285	11.2	4.2	9.3	1	M16	PP
SPM60	1.2	60	80	3.1	140	5.5	365	14.4	6	13.2	1.8	M16	PP
SPM70	1.2	70	80	3.1	140	5.5	365	14.4	6.4	14.1	1.5	M16	PP
SPM80	1.2	80	80	3.1	140	5.5	365	14.4	6.6	14.5	1.4	M16	PP
SPM90	1.2	90	105	4.1	165	6.5	345	13.6	9	19.8	2.4	M20	PP
SPM100	1.2	100	105	4.1	165	6.5	345	13.6	9.2	20.3	2.1	M20	PP
SPM120	1.2	120	165	6.5	167	6.6	345	13.6	12	26.4	4	M20	PP
SPM150	1.2	150	165	6.5	167	6.6	345	13.6	13	28.7	3.7	M20	PP
SPM200	1.2	200	165	6.5	167	6.6	345	13.6	14.5	32.0	3.1	M20	PP
SPM250	1.2	250	152	6.0	170	6.7	385	15.2	16.5	36.4	3.4	M20	PP
SPM300	1.2	300	162	6.4	200	7.9	450	17.7	23	50.7	5.1	2 x M16	PP
SPM350	1.2	350	162	6.4	200	7.9	450	17.7	24	52.9	5	2 x M16	PP
SPM400	1.2	400	175	6.9	290	11.4	500	19.7	36	79.2	9.2	2 x M20	ABS
SPM450	1.2	450	175	6.9	290	11.4	500	19.7	36.5	80.3	9.1	2 x M20	ABS
SPM500	1.2	500	175	6.9	290	11.4	500	19.7	37.5	82.5	8.8	2 x M20	ABS
SPM550	1.2	550	175	6.9	290	11.4	500	19.7	38.5	84.7	8.6	2 x M20	ABS
SPM600	1.2	600	175	6.9	290	11.4	500	19.7	39.5	86.9	8.3	2 x M20	ABS
SPM700	1.2	700	185	7.3	400	15.7	570	22.5	58.2	128	15.0	3 x M20	ABS
SPM800	1.2	800	185	7.3	400	15.7	570	22.5	60.2	132	13.0	3 x M20	ABS



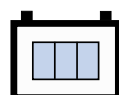
Discharge Data Table

Discharge performance data after fully charged by constant current according to IEC62259

Available amperes at +20°C ±5°C(+68°F ±9°F)

Final voltage: 1.14 V/cell

Cell Type	Capacity (C ₅ Ah)	Discharge Time in Hours							Discharge Time in minutes						Time in Seconds		
		10	8	5	3	2	1.5	1	30	20	15	10	5	1	30	5	1
SPM30	30	3.00	3.66	5.64	8.88	11.8	13.6	17.9	22.7	27.0	29.0	30.3	35.5	47.4	55.9	66.7	87.1
SPM40	40	4.00	4.88	7.52	11.8	15.8	18.2	23.8	30.3	36.0	38.6	40.4	47.3	63.2	74.6	89.0	116
SPM50	50	5.00	6.10	9.40	14.8	19.7	22.7	29.8	37.9	45.0	48.3	50.5	59.2	79.1	93.2	111	145
SPM60	60	6.00	7.32	11.3	17.8	23.6	27.3	35.8	45.5	54.0	58.0	60.6	71.0	94.9	112	133	174
SPM70	70	7.00	8.54	13.2	20.7	27.6	31.8	41.7	53.1	63.0	67.6	70.7	82.8	111	131	156	203
SPM80	80	8.00	9.76	15.0	23.7	31.5	36.4	47.7	60.6	72.1	77.3	80.8	94.7	126	149	178	232
SPM90	90	9.00	11.0	16.9	26.6	35.5	40.9	53.6	68.2	81.1	86.9	90.9	106	142	168	200	261
SPM100	100	10.0	12.2	18.8	29.6	39.4	45.5	59.6	75.8	90.1	96.6	101	118	158	186	222	290
SPM120	120	12.0	14.6	22.6	35.5	47.3	54.5	71.5	90.9	108	116	121	142	190	224	267	349
SPM150	150	15.0	18.3	28.2	44.4	59.1	68.2	89.4	114	135	145	151	177	237	280	334	436
SPM200	200	20.0	24.4	37.6	59.2	78.8	90.9	119	152	180	193	202	237	316	373	445	581
SPM250	250	25.0	30.5	47.0	74.0	98.5	114	149	189	225	241	252	296	395	466	556	726
SPM300	300	30.0	36.6	56.4	88.8	118	136	179	227	270	290	303	355	474	559	667	871
SPM350	350	35.0	42.7	65.8	104	138	159	209	265	315	338	353	414	553	653	779	1017
SPM400	400	40.0	48.8	75.2	118	158	182	238	303	360	386	404	473	632	746	890	1162
SPM450	450	45.0	54.9	84.6	133	177	205	268	341	405	435	454	532	711	839	1001	1307
SPM500	500	50.0	61.0	94.0	148	197	227	298	379	450	483	505	592	791	932	1112	1452
SPM550	550	55.0	67.1	103	163	217	250	328	417	495	531	555	651	870	1025	1224	1598
SPM600	600	60.0	73.2	113	178	236	273	358	455	540	580	606	710	949	1119	1335	1743
SPM700	700	70.0	85.4	132	207	276	318	417	531	630	676	707	828	1107	1305	1557	2033
SPM800	800	80.0	97.6	150	237	315	364	477	606	721	773	808	947	1265	1491	1780	2324



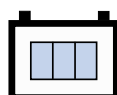
Discharge Data Table

Discharge performance data after fully charged by constant current according to IEC62259

Available amperes at +20°C ±5°C(+68°F ±9°F)

Final voltage: 1.10 V/cell

Cell Type	Capacity (C ₅ Ah)	Discharge Time in Hours							Discharge Time in minutes						Time in Seconds		
		10	8	5	3	2	1.5	1	30	20	15	10	5	1	30	5	1
SPM30	30	3.15	3.75	5.82	9.36	13.5	16.6	21.6	27.4	30.9	33.0	34.9	41.0	56.6	64.9	76.6	97.3
SPM40	40	4.20	5.00	7.76	12.5	18.1	22.1	28.8	36.6	41.2	44.1	46.5	54.7	75.5	86.5	102	130
SPM50	50	5.25	6.25	9.70	15.6	22.6	27.6	36.0	45.7	51.5	55.1	58.1	68.3	94.4	108	128	162
SPM60	60	6.30	7.50	11.6	18.7	27.1	33.1	43.2	54.9	61.8	66.1	69.8	82.0	113	130	153	195
SPM70	70	7.35	8.75	13.6	21.8	31.6	38.7	50.4	64.0	72.1	77.1	81.4	95.7	132	151	179	227
SPM80	80	8.40	10.0	15.5	25.0	36.1	44.2	57.6	73.2	82.4	88.1	93.0	109	151	173	204	260
SPM90	90	9.45	11.3	17.5	28.1	40.6	49.7	64.8	82.3	92.7	99.1	105	123	170	195	230	292
SPM100	100	10.5	12.5	19.4	31.2	45.1	55.2	72.0	91.5	103	110	116	137	189	216	255	324
SPM120	120	12.6	15.0	23.3	37.5	54.2	66.3	86.4	110	124	132	140	164	226	260	307	389
SPM150	150	15.8	18.8	29.1	46.8	67.7	82.9	108	137	155	165	174	205	283	324	383	487
SPM200	200	21.0	25.0	38.8	62.4	90.3	110	144	183	206	220	233	273	377	433	511	649
SPM250	250	26.3	31.3	48.5	78.0	113	138	180	229	258	275	291	342	472	541	639	811
SPM300	300	31.5	37.5	58.2	93.6	135	166	216	274	309	330	349	410	566	649	766	973
SPM350	350	36.8	43.8	67.9	109	158	193	252	320	361	386	407	478	660	757	894	1136
SPM400	400	42.0	50.0	77.6	125	181	221	288	366	412	441	465	547	755	865	1022	1298
SPM450	450	47.3	56.3	87.3	140	203	249	324	412	464	496	523	615	849	973	1149	1460
SPM500	500	52.5	62.5	97.0	156	226	276	360	457	515	551	581	683	944	1082	1277	1622
SPM550	550	57.8	68.8	107	172	248	304	396	503	567	606	640	752	1038	1190	1405	1784
SPM600	600	63.0	75.0	116	187	271	331	432	549	618	661	698	820	1132	1298	1533	1947
SPM700	700	73.5	87.5	136	218	316	387	504	640	721	771	814	957	1321	1514	1788	2271
SPM800	800	84.0	100	155	250	361	442	576	732	824	881	930	1093	1510	1730	2044	2596



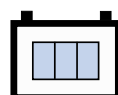
Discharge Data Table

Discharge performance data after fully charged by constant current according to IEC62259

Available amperes at +20°C ±5°C(+68°F ±9°F)

Final voltage: 1.05 V/cell

Cell Type	Capacity (C ₅ Ah)	Discharge Time in Hours							Discharge Time in minutes						Time in Seconds		
		10	8	5	3	2	1.5	1	30	20	15	10	5	1	30	5	1
SPM30	30	3.30	3.93	6.06	9.48	14.2	18.2	24.9	31.8	37.6	40.4	42.8	50.5	67.9	77.3	90.2	114
SPM40	40	4.40	5.24	8.08	12.6	18.9	24.2	33.2	42.4	50.2	53.9	57.1	67.3	90.6	103	120	152
SPM50	50	5.50	6.55	10.1	15.8	23.6	30.3	41.6	53.0	62.7	67.3	71.4	84.2	113	129	150	191
SPM60	60	6.60	7.86	12.1	19.0	28.3	36.4	49.9	63.6	75.3	80.8	85.7	101	136	155	180	229
SPM70	70	7.70	9.17	14.1	22.1	33.0	42.4	58.2	74.3	87.8	94.2	100	118	159	180	211	267
SPM80	80	8.80	10.5	16.2	25.3	37.7	48.5	66.5	84.9	100	108	114	135	181	206	241	305
SPM90	90	9.90	11.8	18.2	28.5	42.5	54.5	74.8	95.5	113	121	129	151	204	232	271	343
SPM100	100	11.0	13.1	20.2	31.6	47.2	60.6	83.1	106	125	135	143	168	226	258	301	381
SPM120	120	13.2	15.7	24.2	37.9	56.6	72.7	100	127	151	162	171	202	272	309	361	457
SPM150	150	16.5	19.7	30.3	47.4	70.8	90.9	125	159	188	202	214	252	340	386	451	572
SPM200	200	22.0	26.2	40.4	63.2	94.3	121	166	212	251	269	286	337	453	515	602	762
SPM250	250	27.5	32.8	50.5	79.0	118	152	208	265	314	337	357	421	566	644	752	953
SPM300	300	33.0	39.3	60.6	94.8	142	182	249	318	376	404	428	505	679	773	902	1143
SPM350	350	38.5	45.9	70.7	111	165	212	291	371	439	471	500	589	793	901	1053	1334
SPM400	400	44.0	52.4	80.8	126	189	242	332	424	502	539	571	673	906	1030	1203	1524
SPM450	450	49.5	59.0	90.9	142	212	273	374	477	565	606	643	757	1019	1159	1353	1715
SPM500	500	55.0	65.5	101	158	236	303	416	530	627	673	714	842	1132	1288	1504	1906
SPM550	550	60.5	72.1	111	174	259	333	457	583	690	741	785	926	1245	1416	1654	2096
SPM600	600	66.0	78.6	121	190	283	364	499	636	753	808	857	1010	1359	1545	1805	2287
SPM700	700	77.0	91.7	141	221	330	424	582	743	878	942	1000	1178	1585	1803	2105	2668
SPM800	800	88.0	105	162	253	377	485	665	849	1004	1077	1142	1346	1812	2060	2406	3049



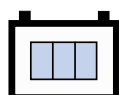
Discharge Data Table

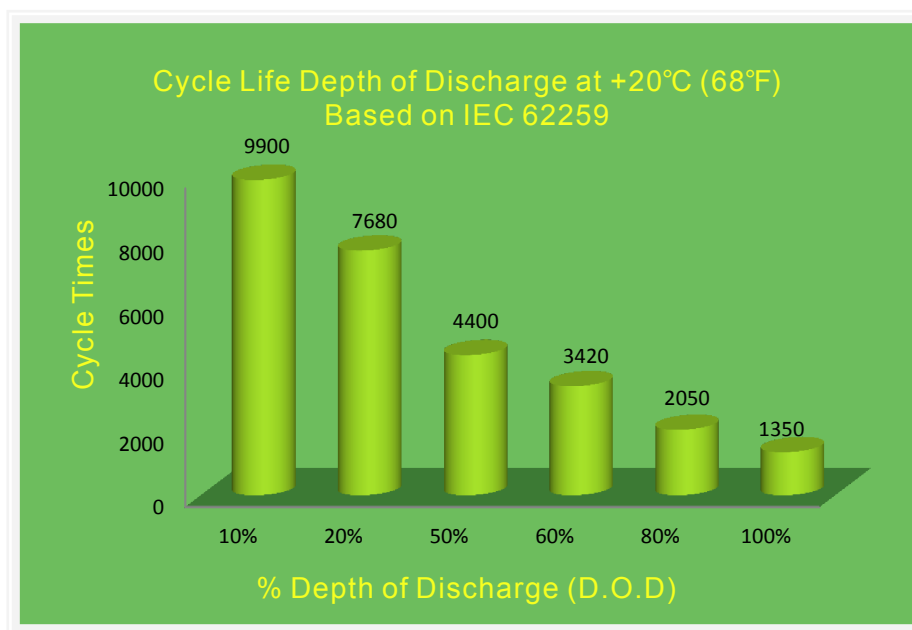
Discharge performance data after fully charged by constant current according to IEC62259

Available amperes at +20°C ±5°C(+68°F ±9°F)

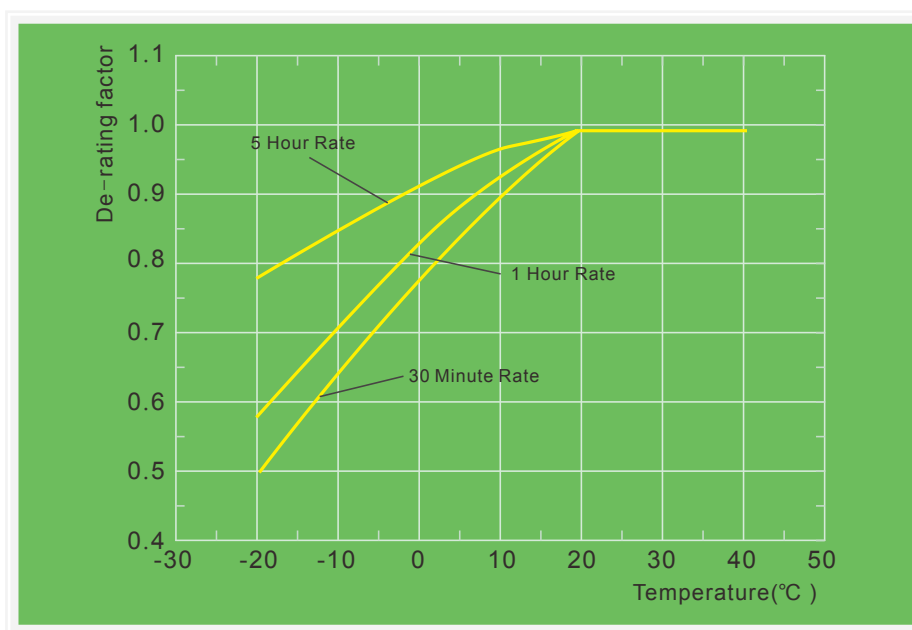
Final voltage: 1.00 V/cell

Cell Type	Capacity (C ₅ Ah)	Discharge Time in Hours							Discharge Time in minutes						Time in Seconds		
		10	8	5	3	2	1.5	1	30	20	15	10	5	1	30	5	1
SPM30	30	3.45	4.05	6.30	9.85	14.8	19.2	26.6	37.3	44.1	48.0	52.0	58.4	77.4	86.5	102	124
SPM40	40	4.60	5.40	8.40	13.1	19.7	25.6	35.4	49.8	58.8	64.1	69.4	77.9	103	115	136	165
SPM50	50	5.75	6.75	10.5	16.4	24.6	32.0	44.3	62.2	73.4	80.1	86.7	97.4	129	144	170	206
SPM60	60	6.90	8.10	12.6	19.7	29.5	38.4	53.1	74.7	88.1	96.1	104	117	155	173	204	247
SPM70	70	8.05	9.45	14.7	23.0	34.4	44.8	62.0	87.1	103	112	121	136	181	202	238	288
SPM80	80	9.20	10.8	16.8	26.3	39.3	51.1	70.9	99.6	118	128	139	156	206	231	272	330
SPM90	90	10.4	12.2	18.9	29.5	44.3	57.5	79.7	112	132	144	156	175	232	260	306	371
SPM100	100	11.5	13.5	21.0	32.8	49.2	63.9	88.6	124	147	160	173	195	258	288	340	412
SPM120	120	13.8	16.2	25.2	39.4	59.0	76.7	106	149	176	192	208	234	310	346	408	494
SPM150	150	17.3	20.3	31.5	49.2	73.8	95.9	133	187	220	240	260	292	387	433	510	618
SPM200	200	23.0	27.0	42.0	65.7	98.4	128	177	249	294	320	347	390	516	577	680	824
SPM250	250	28.8	33.8	52.5	82.1	123	160	221	311	367	400	434	487	645	721	850	1030
SPM300	300	34.5	40.5	63.0	98.5	148	192	266	373	441	480	520	584	774	865	1020	1236
SPM350	350	40.3	47.3	73.5	115	172	224	310	436	514	560	607	682	903	1009	1190	1442
SPM400	400	46.0	54.0	84.0	131	197	256	354	498	588	641	694	779	1032	1154	1360	1648
SPM450	450	51.8	60.8	94.5	148	221	288	399	560	661	721	780	877	1161	1298	1530	1854
SPM500	500	57.5	67.5	105	164	246	320	443	622	734	801	867	974	1290	1442	1700	2060
SPM550	550	63.3	74.3	116	181	271	352	487	684	808	881	954	1072	1419	1586	1869	2266
SPM600	600	69.0	81.0	126	197	295	384	531	747	881	961	1040	1169	1548	1730	2039	2472
SPM700	700	80.5	94.5	147	230	344	448	620	871	1028	1121	1214	1364	1806	2019	2379	2884
SPM800	800	92.0	108	168	263	393	511	709	996	1175	1281	1387	1559	2064	2307	2719	3296

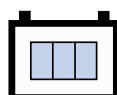


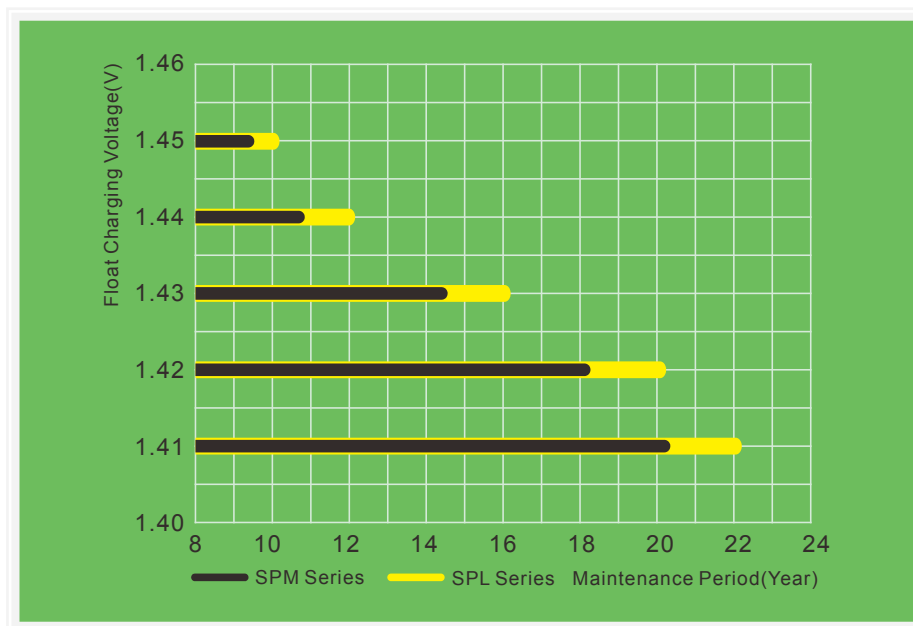


Deep of Discharge Curve of SPM Series

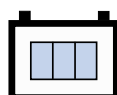
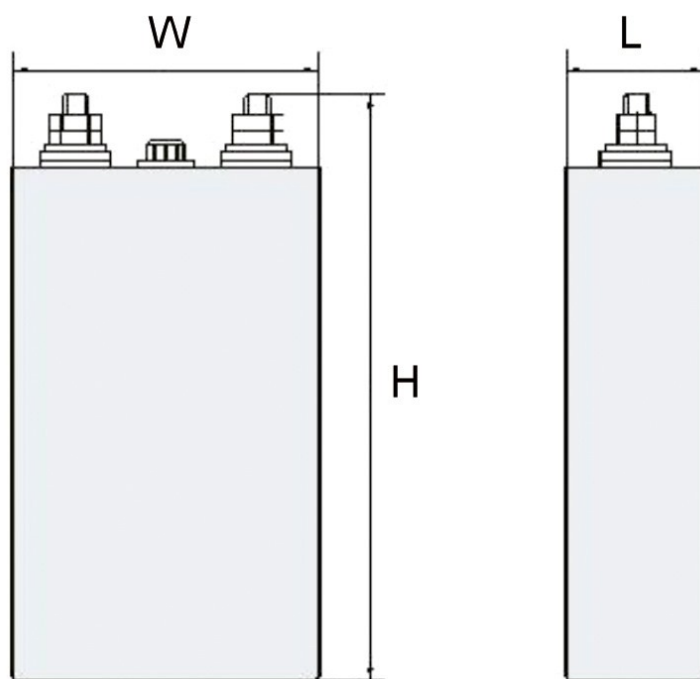


Temperature Effect Curves of SPM Series





Maintenance cycle of SPL series and SPM series battery under different float charging voltage(20°C)



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