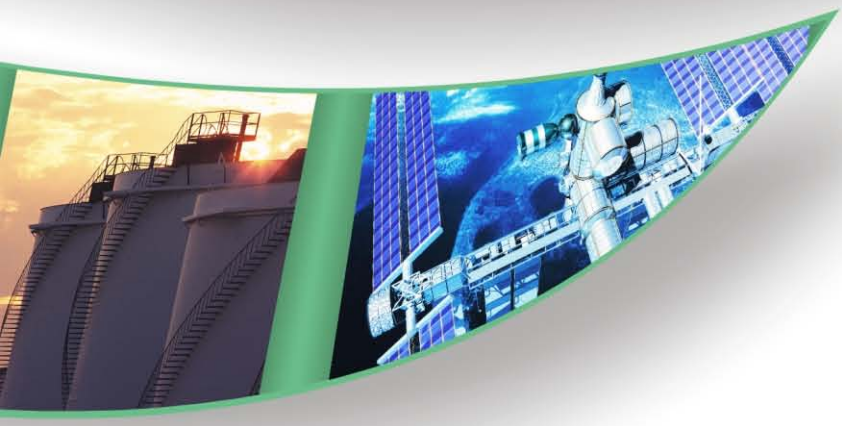
EverExceed®

power your applications

Ni-Cd Pocket Plate Range



SPL Range

Capacity: 10 Ah to 1210 Ah

The block battery – for dependability

The wide range of low, medium and high capacity types makes accurate selection easy, based on discharge time and end of discharge voltage. Robust construction and generous electrolyte reserve enable the battery to withstand wide temperature fluctuations in stationary cycling behaviour over its 20+ years' life.

Built with a future Nickel-cadmium plates are completely reliable, with no risk of thermal runaway or sudden death. Generally operating between temperatures of -20˚C to +50˚C(-4˚F to +122˚F), they can tolerate extremes of -50˚C to +70˚C (-58˚F to +158˚F) for short periods.

With only periodic checks, the block battery will provide up to 20+ years' completely faithful service.

Trouble-free long cycle life

The EverExceed nickel-cadmium block battery's unique electrochemistry enables it to regularly withstand any depth of discharge.

Following a deep discharge the block battery is designed to recharge very quickly and economically, using standard single or two-level charging equipment.

Be sure of a low overall cost

The Ni-Cd block battery is the most highly cost-efficient solution to stored power requirements.

- No downtime
- No replacement costs
- Minimal maintenance
- Ease of installation
- 20+ years' operating life.

Easy storage and installation

Nickel-cadmium block batteries are quick and easy to install as original equipment and may be stored for many years in a discharged state under correct conditions.

On installation a simple bolted connector enables the battery to be rapidly commissioned.

Assured reliability

Ni-Cd is equally dependable in controlled city environments or harsh, unpredictable conditions in the world's most remote and unpopulated areas.

The Ni-Cd battery's block construction makes it highly resistant to electrical abuse and transport over rough terrain, precluding risk of subsequent failure.

Optimized for performance:

An electrolyte solution of potassium hydroxide and a small amount of lithium hydroxide acts only as an ion transfer medium, delivering optimum performance without causing base material degradation.

Good reserves and circulation of the electrolyte are achieved by a wide inter-plate space. Injection moulded plastic grids both separate plate and insulate plate edges. For extremely low temperatures a special high density electrolyte is available.

The block battery is fitted with a specially designed flame arresting flip top vent and does not produce corrosive vapours. The tough polypropylene casing ensures the battery's structural integrity throughout its long life.

EverExceed supports these Single Cell ranges with:

- quality approved manufacture to ISO 9001
- Single Cell batteries have been developed in line with the safety requirements of EN-50272-2 and components used (such as insulated cable connectors and end lug covers) are defined to ensure high protection against electric shocks (Ip2 level).
- full recycling service to protect the environment

Protective cover
- to prevent external short-circuits
- in line with EN 50272-2 (safety) with IP2 level

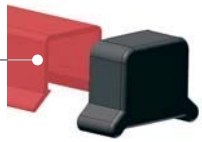
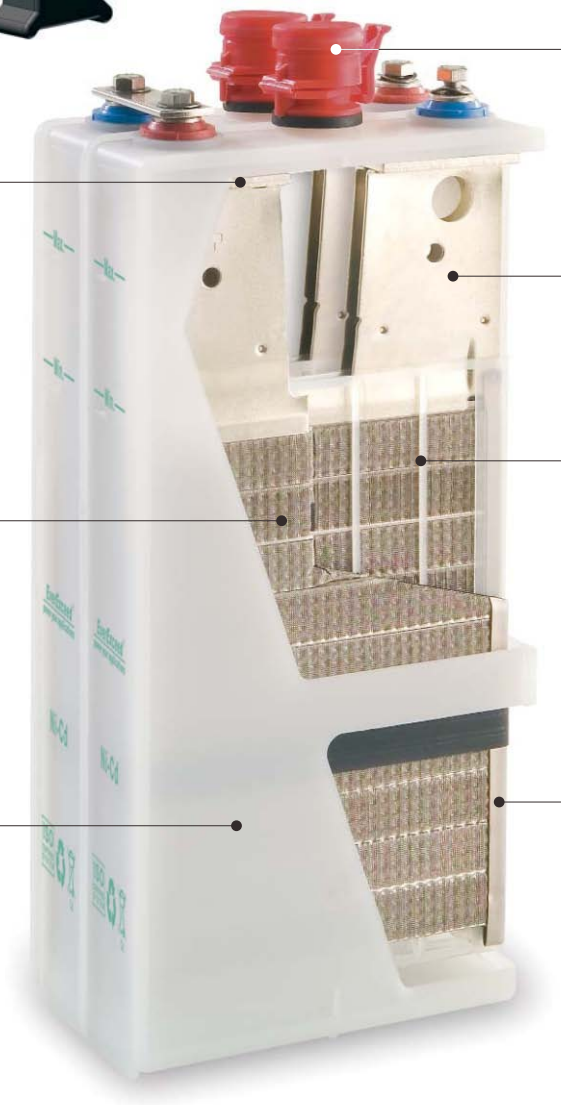


Plate group bus
Connects the plate tabs with the terminal post. Plate tabs and terminal post are projection- welded to the plate group bus.



Flame-arresting vents
Material: polypropylene.

Plate tab
Spot-welded both to the plate side-frames and to the upper edge of the pocket plate.

Separating grids
These separate the plates and insulate the plate frames from each other. The grids allow free circulation of electrolyte between the plates.

Plate
Horizontal pockets of double- perforated steel strips.

Plate frame
Seals the plate pockets and serves as a current collector.

Cell container
Material: translucent polypropylene.

The cells are welded together to form rugged blocks of 1 - 6 cells depending on the cell size and type.

The EverExceed Single Cell ranges fully comply and exceed the IEC 60623 standard requirements.

Application

SPL Series nickel cadmium batteries are designed for general industrial applications where absolute reliability is a necessity. Service-proven pocket-plate technology ensures long uninterrupted battery life without the risk of sudden loss of power.

SPL Series batteries are suitable for low discharge rate applications（between 1 hour to 100 hours）such as railroad signaling and control systems, photovoltaic, emergency lighting, telecommunications, etc.

SPL Feartures

⊙ Proven pocket-plate nickel-cadmium technology 50 years of experience in developing and manufacturing nickel-cadmium batteries.

⊙ High tolerance to electrical abuses such as overcharge and overdischarge

⊙ High tolerance to rough handling and mechanical abuse due to strong components and robust construction

⊙ Trouble-free long cycle life

⊙ No risk of sudden death due to the chemistry and the cell structure

⊙ Wide operating temperature: -40°C to 50°C

⊙ Generous electrolyte reserve for long maintenance intervals

⊙ Clear (MBS) or translucent (PP) plastic cell case for easy electrolyte level inspection

⊙ Plastic grid spacers eliminate separator deterioration problem

⊙ Custom cell dimensions available

⊙ 20 years service life in stationary applications

⊙ Conforms to IEC60623

Battery Charging

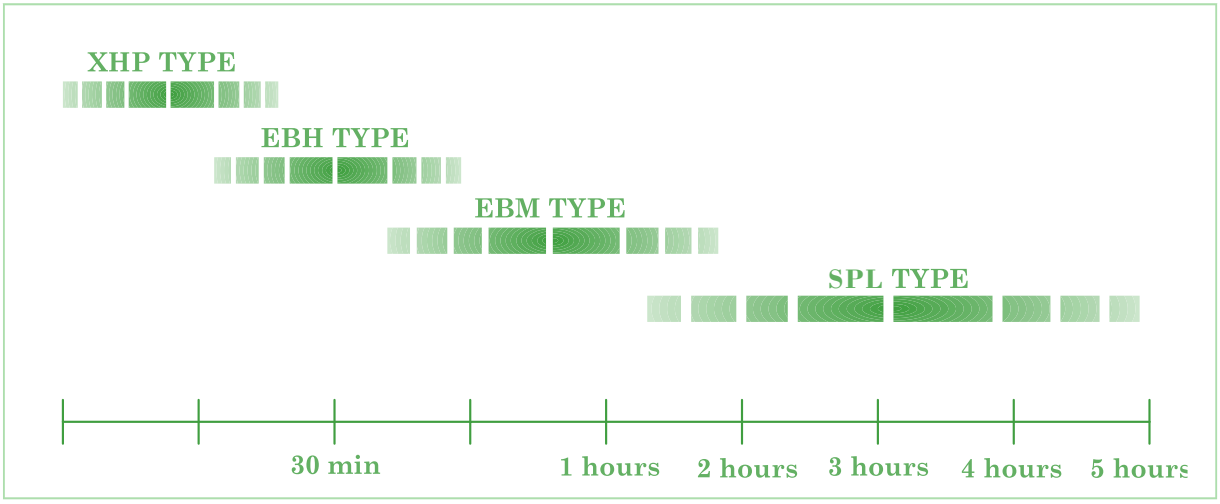
It is recommended to use Constant Voltage method of charging for Nickel Cadmium Batteries, usually with current limitation to C/5 or C/10. Charging voltages must be regularly checked. To optimize the battery performance, it is necessary to ensure that the voltage is kept within the following limits:

Recommended Charging Voltage Per Cell

Cell Type	IEC Type	Floating Charge	Equalizing Charge
XHP	KXP	1.38～1.40	1.46～1.49
EBH	KHP	1.42～1.45	1.55～1.60
EBM	KMP	1.42～1.45	1.55～1.60
SPL	KLP	1.48～1.50	1.55～1.60

Recommended Type Selection

According to backup time required by application:



Initial Charging

The whole charge should preferably be carried out at constant current. The charging time is inversely proportional to the current which is set by the current limit of the charging equipment.
Recommended rates for the first charging:
0.2 C5A for 10 hours
0.1 C5A for 20 hours

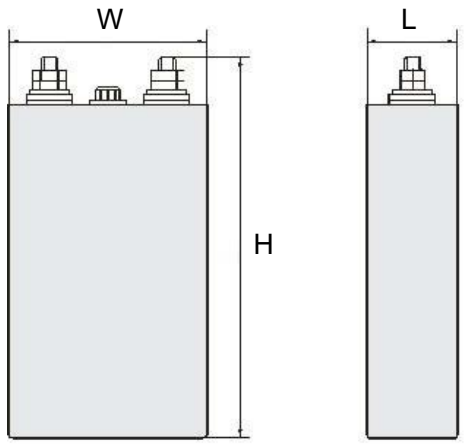
Capacity and dimensions

Cell Type	Capacity (C5 Ah)	Dimensions						Weight				Terminal	Cell Case Material
		Length		Width		Height		Without Electrolyte		With Electrolyte			
		mm	in	mm	in	mm	in	kg	l b.	k g	lb.		
SPL10	10	38	1.5	84	3.3	128	5.0	0.6	1.3	0.8	1.8	M6	MBS
SPL10 (II)	10	29	1.1	81	3.2	223	8.8	0.6	1.3	0.8	1.8	M6	PP
SPL10 (III)	10	38	1.5	84	3.3	137	5.4	0.6	1.3	0.8	1.8	M6	PP
SPL17	17	32	1.3	113	4.4	220	8.7	0.9	2.0	1.2	2.6	M6	PP
SPL20	20	32	1.3	113	4.4	220	8.7	1	2.2	1.2	2.6	M6	PP
SPL22	22	32	1.3	113	4.4	220	8.7	1.2	2.6	1.3	2.8	M6	MBS
SPL22-(II)	22	48	1.9	81	3.2	245	9.6	1.2	2.6	1.3	2.9	M6	MBS
SPL25	25	32	1.3	113	4.4	223	8.8	1.15	2.5	1.3	2.9	M6	MBS
SPL30	30	68	2.7	134	5.3	240	9.4	1.7	3.7	2.8	6.2	M10 X1	PP
SPL30-(II)	30	68	2.7	134	5.3	240	9.4	1.7	3.7	2.8	6.2	M10 X1	MBS
SPL40	40	68	2.7	134	5.3	240	9.4	2.1	4.6	3.0	6.6	M10 X1	PP
SPL40-(II)	40	68	2.7	134	5.3	240	9.4	2.2	4.9	3.0	6.6	M10 X1	PP
SPL40-(III)	40	70	2.8	134	5.3	285	11.2	2.4	5.3	3.0	6.6	M10 X1	PP
SPL45	45	68	2.7	134	5.3	240	9.4	2.4	5.3	3.0	6.6	M10 X1	MBS
SPL45-(II)	45	53	2.1	145	5.7	280	11.0	2.4	5.3	3.0	6.6	M10 X1	PP
SPL45-(III)	45	53	2.1	115	4.5	315	12.4	2.4	5.3	3.2	7.1	M10 X1	PP
SPL50	50	68	2.7	134	5.3	240	9.4	2.5	5.5	3.2	7.1	M10 X1	MBS
SPL50-(II)	50	53	2.1	145	5.7	280	11.0	2.5	5.5	3.2	7.1	M10 X1	PP
SPL50-(III)	50	68	2.7	134	5.3	240	9.4	2.5	5.5	3.0	6.6	M10 X1	PP
SPL50-(IV)	50	53	2.1	145	5.7	280	11.0	2.7	6.0	3.3	7.3	M10 X1	PP
SPL60	60	53	2.1	145	5.7	280	11.0	2.8	6.2	3.6	7.9	M10 X1	PP
SPL60-(II)	60	70	2.8	134	5.3	285	11.2	3.2	7.1	4.2	9.3	M10 X1	MBS
SPL60-(III)	60	49	1.9	135	5.3	365	14.4	3	6.6	3.6	7.9	M10 X1	MBS
SPL60-(IV)	60	68	2.7	134	5.3	245	9.6	3.2	7.1	3.8	8.4	M10 X1	PP
SPL60-(V)	60	70	2.8	134	5.3	285	11.2	3.2	7.1	4.2	9.3	M10 X1	PP
SPL70	70	70	2.8	134	5.3	285	11.2	4	8.8	4.3	9.5	M10 X1	MBS
SPL70-(II)	70	80	3.1	141	5.6	365	14.4	3.8	8.4	5.5	12.1	M10 X1	PP
SPL80	80	80	3.1	141	5.6	365	14.4	4	8.8	5.8	12.8	M10 X1	PP
SPL90	90	80	3.1	141	5.6	365	14.4	4.2	9.3	6.0	13.2	M10 X1	PP
SPL100	100	67	2.6	155	6.1	356	14.0	5	11.0	6.2	13.7	M10 X1	Steel Case
SPL100-(II)	100	80	3.1	141	5.6	365	14.4	4.5	9.9	6.2	13.7	M10 X1	PP
SPL100-(III)	100	80	3.1	141	5.6	365	14.4	5	11.0	6.3	13.9	M10 X1	PP
SPL115	115	80	3.1	141	5.6	365	14.4	4.9	10.8	6.3	13.9	M10 X1	PP
SPL120	120	80	3.1	141	5.6	365	14.4	5	11.0	6.4	14.1	M10 X1	PP
SPL125	125	80	3.1	141	5.6	365	14.4	5.3	11.7	6.5	14.3	M10 X1	PP
SPL125-(II)	125	53	2.1	190	7.5	402	15.8	5.3	11.7	6.5	14.3	M10 X1	PP
SPL130	130	80	3.1	141	5.6	365	14.4	5.3	11.7	6.5	14.3	M10 X1	PP
SPL135	135	92	3.6	141	5.6	365	14.4	6	13.2	7.8	17.2	M10 X1	PP
SPL135-(II)	135	80	3.1	141	5.6	370	14.6	5.5	12.1	6.6	14.6	M10 X1	PP
SPL140	140	92	3.6	141	5.6	365	14.4	6	13.2	8.0	17.6	M10 X1	PP
SPL140-(II)	140	106	4.2	164	6.5	345	13.6	6.5	14.3	9.0	19.8	M10 X1	PP
SPL143	143	92	3.6	141	5.6	365	14.4	6	13.2	8.0	17.6	M10 X1	PP
SPL150	150	106	4.2	164	6.5	345	13.6	6.8	15.0	9.0	19.8	M20	pp
SPL160	160	106	4.2	164	6.5	345	13.6	7	15.4	9.2	20.3	M20	PP
SPL165	165	70	2.8	190	7.5	405	15.9	6.8	15.0	9.0	19.8	M20	PP
SPL165-(II)	165	106	4.2	164	6.5	345	13.6	7.2	15.9	9.5	20.9	M20	PP
SPL170	170	106	4.2	164	6.5	345	13.6	7.6	16.8	9.8	21.6	M20	PP
SPL180	180	106	4.2	164	6.5	345	13.6	7.6	16.8	9.8	21.6	M20	PP
SPL200	200	164	6.5	167	6.6	345	13.6	8	17.6	12.5	27.6	M20	MBS
SPL200-(II)	200	106	4.2	164	6.5	345	13.6	8	17.6	10.0	22.0	M20	PP
SPL200-(III)	200	100	3.9	171	6.7	450	17.7	10	22.0	13.5	29.8	M20	PP
SPL230	230	164	6.5	167	6.6	345	13.6	9.5	20.9	13.0	28.7	M20	PP
SPL230-(II)	230	100	3.9	170	6.7	450	17.7	10	22.0	13.0	28.7	M20	PP
SPL230-(III)	230	138	5.4	276	10.9	425	16.7	12	26.5	18.5	40.8	M20	PP
SPL250	250	164	6.5	167	6.6	345	13.6	10	22.0	13.5	29.8	M20	MBS
SPL250-(II)	250	138	5.4	276	10.9	420	16.5	13	28.7	18.5	40.8	M20	MBS
SPL250-(III)	250	138	5.4	276	10.9	425	16.7	13	28.7	18.5	40.8	M20	PP
SPL250-(IV)	250	164	6.5	167	6.6	345	13.6	10	22.0	13.5	29.8	M20	PP
SPL250-(V)	250	162	6.4	200	7.9	450	17.7	14	30.9	21.0	46.3	M20	PP
SPL260	260	138	5.4	276	10.9	425	16.7	13	28.7	20.0	44.1	M20	PP
SPL280	280	138	5.4	276	10.9	450	17.7	14	30.9	21.0	46.3	M20	PP

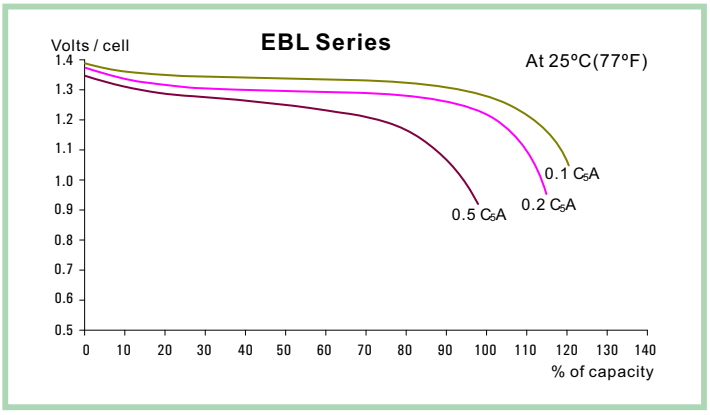
Capacity and dimensions

Cell Type	Capacity (C5 Ah)	Dimensions						Weight				Terminal	Cell Case Material
		Length		Width		Height		Without Electrolyte		With Electrolyte			
		mm	in	mm	in	mm	in	kg	l b.	k g	lb.		
SPL300	300	138	5.4	276	10.9	450	17.7	14	30.9	21.0	46.3	M16	PP
SPL300-(II)	300	138	5.4	276	10.9	490	19.3	14.5	32.0	24.0	52.9	M16	PP
SPL300-(III)	300	162	6.4	200	7.9	450	17.7	14.5	32.0	21.5	47.4	M16	PP
SPL300-(IV)	300	164	6.5	167	6.6	345	13.6	13	28.7	15.0	33.1	M16	PP
SPL315	315	138	5.4	276	10.9	450	17.7	15	33.1	21.6	47.6	M16	PP
SPL320	320	138	5.4	276	10.9	450	17.7	16	35.3	22.5	49.6	M16	PP
SPL340	340	162	6.4	200	7.9	450	17.7	15.5	34.2	22.0	48.5	M16	PP
SPL350	350	138	5.4	276	10.9	450	17.7	16	35.3	22.5	49.6	M16	PP
SPL365	365	138	5.4	276	10.9	450	17.7	16.5	36.4	22.0	48.5	M16	PP
SPL400	400	170	6.7	152	6.0	385	15.2	14.2	31.3	17.5	38.6	M16	PP
SPL400-(II)	400	138	5.4	276	10.9	450	17.7	17	37.5	23.0	50.7	M16	MBS
SPL400-(III)	400	171	6.7	231	9.1	420	16.5	17	37.5	23.0	50.7	M16	MBS
SPL400-(IV)	400	138	5.4	276	10.9	490	19.3	17	37.5	24.0	52.9	M16	PP
SPL400-(V)	400	138	5.4	276	10.9	490	19.3	17	37.5	23.0	50.7	M16	PP
SPL420	420	138	5.4	276	10.9	450	17.7	17.5	38.6	23.5	51.8	M16	PP
SPL450	450	138	5.4	276	10.9	450	17.7	18	39.7	24.0	52.9	M16	PP
SPL450-(II)	450	162	6.4	200	7.9	450	17.7	18	39.7	24.0	52.9	M16	PP
SPL500	500	138	5.4	276	10.9	450	17.7	19.5	43.0	25.0	55.1	M16	PP
SPL500-(II)	500	176	6.9	291	11.5	505	19.9	24.5	54.0	36.0	79.4	M16	MBS
SPL500-(III)	500	138	5.4	276	10.9	490	19.3	20	44.1	27.0	59.5	M16	PP
SPL500-(IV)	500	162	6.4	200	7.9	450	17.7	19	41.9	24.0	52.9	M16	PP
SPL600	600	176	6.9	291	11.5	505	19.9	27	59.5	38.0	83.8	M20	MBS
SPL700	700	176	6.9	291	11.5	505	19.9	29	63.9	39.0	86.0	M20	MBS
SPL700-(II)	700	186	7.3	398	15.7	565	22.2	36	79.4	56.0	123	M20	MBS
SPL800	800	186	7.3	398	15.7	565	22.2	39	86.0	59.0	130	M20	MBS
SPL900	900	186	7.3	398	15.7	565	22.2	41	90.4	60.0	132	M20	MBS
SPL1000	1000	186	7.3	398	15.7	565	22.2	44	97.0	61.0	134	M20	MBS
SPL1210	1210	186	7.3	398	15.7	565	22.2	53	117	73.0	161	M20	MBS
2SPL5	5	53	2.1	86	3.4	150	5.9	0.8	1.8	1.1	2.4	M6	MBS
10SPL22	22	150	5.9	460	18.1	250	9.8	13	28.7	16.0	35.3	M6	PP
10SPL40	40	200	7.9	240	9.4	285	11.2	20	44.1	24.0	52.9	M10 X1	PP
10SPL45	45	200	7.9	240	9.4	285	11.2	20.5	45.2	24.5	54.0	M10 X1	PP
10SPL60	60	175	6.9	630	24.8	390	15.4	33	72.8	42.0	92.6	M10 X1	PP
3SPL400	400	211	8.3	564	22.2	411	16.2	50	110	58.0	128	M16	PP

EverExceed EHP batteries fulfil all requirements specified by IEC publication 60623.



Discharging Curves



Data for stationary applications

Performance after prolonged float charge of fully charged cells

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

Final voltage: 1.14 V/cell

Cell Type	C5 Ah	Discharge Time in Hours							Discharge Time in Minutes							Time in Seconds		
		10	8	5	3	2	1.5	1	45	30	20	15	10	5	1	30	5	1
100	10	1.00	1.31	1.99	2.76	3.29	3.83	4.58	4.95	5.71	6.21	6.39	6.79	7.7	9.09	10.5	10.9	11.2
SPL10 (II)	10	1.00	1.31	1.99	2.76	3.29	3.83	4.58	4.95	5.71	6.21	6.39	6.79	7.7	9.09	10.5	10.9	11.2
SPL10 (III)	10	1.00	1.31	1.99	2.76	3.29	3.83	4.58	4.95	5.71	6.21	6.39	6.79	7.7	9.09	10.5	10.9	11.2
SPL17	17	1.70	2.23	3.38	4.69	5.59	6.51	7.79	8.42	9.71	10.6	10.9	11.5	13.1	15.5	17.9	18.5	19.0
SPL20	20	2.00	2.62	3.98	5.52	6.58	7.66	9.16	9.90	11.4	12.4	12.8	13.6	15.4	18.2	21.0	21.8	22.4
SPL22	22	2.00	2.87	4.37	6.08	7.2	8.43	10.1	10.9	12.5	13.6	14.1	14.9	16.9	19.8	21.7	24.1	24.6
SPL22-(II)	22	2.00	2.87	4.37	6.08	7.2	8.43	10.1	10.9	12.5	13.6	14.1	14.9	16.9	19.8	21.7	24.1	24.6
SPL25	25	2.27	3.26	4.97	6.91	8.18	9.58	11.5	12.4	14.2	15.5	16.0	16.9	19.2	22.5	24.7	27.4	28.0
SPL30	30	3.13	3.91	5.95	8.3	9.87	11.5	13.7	14.8	17.1	18.6	19.1	20.3	23	27.5	31.5	32.7	33.6
SPL30-(II)	30	3.13	3.91	5.95	8.3	9.87	11.5	13.7	14.8	17.1	18.6	19.1	20.3	23	27.5	31.5	32.7	33.6
SPL40	40	4.00	5.22	7.94	11.2	13.2	15.3	18.3	19.8	22.8	24.8	25.6	27.1	30.7	36.5	41.9	43.6	44.8
SPL40-(II)	40	4.00	5.22	7.94	11.2	13.2	15.3	18.3	19.8	22.8	24.8	25.6	27.1	30.7	36.5	41.9	43.6	44.8
SPL40-(III)	40	4.00	5.22	7.94	11.2	13.2	15.3	18.3	19.8	22.8	24.8	25.6	27.1	30.7	36.5	41.9	43.6	44.8
SPL45	45	5.00	5.87	8.93	12.4	14.8	17.3	20.6	22.3	25.7	27.9	28.7	30.5	34.6	40.6	44.3	49.1	50.4
SPL45-(II)	45	5.00	5.87	8.93	12.4	14.8	17.3	20.6	22.3	25.7	27.9	28.7	30.5	34.6	40.6	44.3	49.1	50.4
SPL45-(III)	45	5.00	5.87	8.93	12.4	14.8	17.3	20.6	22.3	25.7	27.9	28.7	30.5	34.6	40.6	44.3	49.1	50.4
SPL50	50	5.00	6.5	9.93	13.8	16.5	19.2	22.9	24.8	28.5	31	31.9	33.9	38.4	45.7	52.5	54.5	56.1
SPL50-(II)	50	5.00	6.5	9.93	13.8	16.5	19.2	22.9	24.8	28.5	31	31.9	33.9	38.4	45.7	52.5	54.5	56.1
SPL50-(III)	50	5.00	6.5	9.93	13.8	16.5	19.2	22.9	24.8	28.5	31	31.9	33.9	38.4	45.7	52.5	54.5	56.1
SPL50-(IV)	50	5.00	6.5	9.93	13.8	16.5	19.2	22.9	24.8	28.5	31	31.9	33.9	38.4	45.7	52.5	54.5	56.1
SPL60	60	6.00	7.83	11.9	16.7	19.7	23	27.5	29.7	34.2	37.2	38.3	40.7	46.1	54.7	62.9	64.4	67.2
SPL60-(II)	60	6.00	7.83	11.9	16.7	19.7	23	27.5	29.7	34.2	37.2	38.3	40.7	46.1	54.7	62.9	64.4	67.2
SPL60-(III)	60	6.00	7.83	11.9	16.7	19.7	23	27.5	29.7	34.2	37.2	38.3	40.7	46.1	54.7	62.9	64.4	67.2
SPL60-(IV)	60	6.00	7.83	11.9	16.7	19.7	23	27.5	29.7	34.2	37.2	38.3	40.7	46.1	54.7	62.9	64.4	67.2
SPL60-(V)	60	6.00	7.83	11.9	16.7	19.7	23	27.5	29.7	34.2	37.2	38.3	40.7	46.1	54.7	62.9	64.4	67.2
SPL70	70	7.31	9.1	13.8	19.3	23	26.8	32	34.7	40	43.4	44.7	47.5	53.8	63.8	73	76.4	78.4
SPL70-(II)	70	7.31	9.1	13.8	19.3	23	26.8	32	34.7	40	43.4	44.7	47.5	53.8	63.8	73	76.4	78.4
SPL80	80	8.35	10.4	15.8	22.1	26.3	30.6	36.6	39.6	45.7	49.6	51.1	54.3	61.5	72.9	83.4	87.3	89.6
SPL90	90	9.18	11.8	17.8	24.9	29.6	34.5	40.7	44.6	51.4	55.9	57.5	61.1	67.7	82.0	94.2	98.2	100
SPL100	100	10.0	13.1	19.8	27.6	32.9	38.3	45.8	49.5	57.1	62.1	63.9	67.9	73.9	91.0	105	109	112
SPL100-(II)	100	10.0	13.1	19.8	27.6	32.9	38.3	45.8	49.5	57.1	62.1	63.9	67.9	73.9	91.0	105	109	112
SPL100-(III)	100	10.0	13.1	19.8	27.6	32.9	38.3	45.8	49.5	57.1	62.1	63.9	67.9	73.9	91.0	105	109	112
SPL115	115	11.5	15.1	22.8	31.7	37.8	44.0	52.7	56.9	65.7	71.4	73.5	78.1	85.0	105	121	125	129
SPL120	120	12.0	15.7	23.8	33.1	39.5	46.0	55.0	59.4	68.5	74.5	76.7	81.5	88.7	109	126	131	134
SPL125	125	13.0	16.3	24.8	34.5	41.2	47.9	57.3	61.9	71.4	77.6	79.8	84.9	96.2	112	123	136	140
SPL125-(II)	125	13.0	16.3	24.8	34.5	41.2	47.9	57.3	61.9	71.4	77.6	79.8	84.9	96.2	112	123	136	140
SPL130	130	13.5	17.0	25.8	35.9	42.8	49.8	59.6	64.4	74.3	80.7	83.0	88.3	100	116	128	141	146
SPL135	135	14.0	17.6	26.8	37.3	44.5	51.7	61.9	66.9	77.1	83.8	86.2	91.7	104	121	133	147	151
SPL135-(II)	135	14.0	17.6	26.8	37.3	44.5	51.7	61.9	66.9	77.1	83.8	86.2	91.7	104	121	133	147	151
SPL140	140	14.6	18.3	27.8	38.6	46.1	53.6	64.2	69.3	80.0	86.9	89.4	95.1	108	125	138	152	157
SPL140-(II)	140	14.6	18.3	27.8	38.6	46.1	53.6	64.2	69.3	80.0	86.9	89.4	95.1	108	125	138	152	157
SPL143	143	14.9	18.6	28.4	39.5	47.1	54.8	65.6	70.8	81.7	88.8	91.3	97.1	110	128	141	156	160
SPL150	150	16.0	19.6	29.8	41.4	49.4	57.5	68.7	74.3	85.7	93.1	95.8	101	115	138	158	163	168
SPL160	160	17.1	20.9	31.8	44.2	52.7	61.3	73.3	79.3	91.4	99.3	102	108	123	147	169	174	179
SPL165	165	17.6	21.6	32.8	45.5	54.3	63.3	75.6	81.7	94.3	102	105	111	127	152	174	179	185
SPL165-(II)	165	17.6	21.6	32.8	45.5	54.3	63.3	75.6	81.7	94.3	102	105	111	127	152	174	179	185
SPL170	170	18.1	22.2	33.8	46.9	56.0	65.2	77.9	84.2	97.1	106	109	114	130	156	179	185	190
SPL180	180	19.2	23.5	35.8	49.7	59.3	69.0	82.4	89.2	103	112	115	121	138	166	190	196	202

Data for stationary applications

Performance after prolonged float charge of fully charged cells

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

Final voltage: 1.14 V/cell

Cell Type	C5 Ah	Discharge Time in Hours							Discharge Time in Minutes							Time in Seconds		
		10	8	5	3	2	1.5	1	45	30	20	15	10	5	1	30	5	1
SPL200	200	21.0	26.1	39.7	55.3	65.8	76.7	91.6	99.1	114	124	127	135	153	183	211	218	224
SPL200-(II)	200	21.0	26.1	39.7	55.3	65.8	76.7	91.6	99.1	114	124	127	135	153	183	211	218	224
SPL200-(III)	200	21.0	26.1	39.7	55.3	65.8	76.7	91.6	99.1	114	124	127	135	153	183	211	218	224
SPL230	230	24.2	30.0	45.7	63.6	75.7	88.2	105	114	131	143	146	155	176	210	243	251	258
SPL230-(II)	230	24.2	30.0	45.7	63.6	75.7	88.2	105	114	131	143	146	155	176	210	243	251	258
SPL230-(III)	230	24.2	30.0	45.7	63.6	75.7	88.2	105	114	131	143	146	155	176	210	243	251	258
SPL250	250	26.1	32.7	49.6	69.1	82.3	95.8	114	123	142	155	159	169	192	229	263	272	280
SPL250-(II)	250	26.1	32.7	49.6	69.1	82.3	95.8	114	123	142	155	159	169	192	229	263	272	280
SPL250-(III)	250	26.1	32.7	49.6	69.1	82.3	95.8	114	123	142	155	159	169	192	229	263	272	280
SPL250-(IV)	250	26.1	32.7	49.6	69.1	82.3	95.8	114	123	142	155	159	169	192	229	263	272	280
SPL250-(V)	250	26.1	32.7	49.6	69.1	82.3	95.8	114	123	142	155	159	169	192	229	263	272	280
SPL260	260	27.1	34.0	51.6	71.9	85.6	100	119	128	148	161	165	176	200	238	274	283	291
SPL280	280	29.2	36.6	55.6	77.4	92.2	107	128	138	159	174	178	189	215	256	295	305	314
SPL300	300	31.3	39.2	59.5	82.9	98.7	115	137	148	171	186	191	203	230	276	316	327	336
SPL300-(II)	300	31.3	39.2	59.5	82.9	98.7	115	137	148	171	186	191	203	230	276	316	327	336
SPL300-(III)	300	31.3	39.2	59.5	82.9	98.7	115	137	148	171	186	191	203	230	276	316	327	336
SPL300-(IV)	300	31.3	39.2	59.5	82.9	98.7	115	137	148	171	186	191	203	230	276	316	327	336
SPL315	315	32.9	41.2	62.5	87.0	104	121	144	155	180	195	201	213	242	290	332	343	353
SPL320	320	33.4	41.8	63.5	88.4	105	123	146	158	182	198	204	217	245	294	337	349	358
SPL340	340	35.5	44.4	67.4	94.0	112	130	155	168	194	211	216	230	261	313	358	371	381
SPL350	350	36.5	45.7	69.5	96.7	115	134	160	173	200	217	223	237	269	321	368	381	392
SPL365	365	38.1	47.7	72.5	101	120	140	167	180	209	226	233	247	281	335	384	397	409
SPL400	400	41.8	52.2	79.4	110	131	153	183	198	228	248	255	271	307	366	419	436	448
SPL400-(II)	400	41.8	52.2	79.4	110	131	153	183	198	228	248	255	271	307	366	419	436	448
SPL400-(III)	400	41.8	52.2	79.4	110	131	153	183	198	228	248	255	271	307	366	419	436	448
SPL400-(IV)	400	41.8	52.2	79.4	110	131	153	183	198	228	248	255	271	307	366	419	436	448
SPL400-(V)	400	41.8	52.2	79.4	110	131	153	183	198	228	248	255	271	307	366	419	436	448
SPL420	420	43.9	54.8	83.4	116	138	161	192	208	239	260	268	285	322	384	440	458	470
SPL450	450	47.0	58.7	89.3	124	147	172	206	223	257	279	287	305	345	412	471	491	504
SPL450-(II)	450	47.0	58.7	89.3	124	147	172	206	223	257	279	287	305	345	412	471	491	504
SPL500	500	52.2	65.3	99.2	138	164	192	229	247	285	310	319	339	384	457	522	545	560
SPL500-(II)	500	52.2	65.3	99.2	138	164	192	229	247	285	310	319	339	384	457	522	545	560
SPL500-(III)	500	52.2	65.3	99.2	138	164	192	229	247	285	310	319	339	384	457	522	545	560
SPL500-(IV)	500	52.2	65.3	99.2	138	164	192	229	247	285	310	319	339	384	457	522	545	560
SPL600	600	62.6	78.3	119	165	197	230	275	297	342	372	383	407	461	549	627	654	672
SPL700	700	73.0	91.3	138	193	230	268	320	346	400	434	447	475	538	637	731	763	784
SPL700-(II)	700	73.0	91.3	138	193	230	268	320	346	400	434	447	475	538	637	731	763	784
SPL800	800	83.5	104	159	221	263	307	366	396	457	496	511	543	615	729	845	873	896
SPL900	900	93.9	117	178	248	296	345	412	445	514	558	575	611	692	820	940	982	1008
SPL1000	1000	104	130	198	276	329	383	458	495	571	621	639	679	769	911	1043	1091	1120
SPL1210	1210	126	157	240	334	398	463	554	599	691	751	773	822	930	1102	1262	1320	1355
2SPL5	5	0.52	0.65	0.99	1.38	1.65	1.92	2.29	2.48	2.86	3.11	3.20	3.40	3.85	4.56	5.22	5.46	5.60
10SPL22	22	2.00	2.87	4.37	6.08	7.2	8.43	10.1	10.9	12.5	13.6	14.1	14.9	16.9	19.8	21.7	24.1	24.6
10SPL40	40	4.00	5.22	7.94	11.2	13.2	15.3	18.3	19.8	22.8	24.8	25.6	27.1	30.7	36.5	41.9	43.6	44.8
10SPL45	45	5.00	5.87	8.93	12.4	14.8	17.3	20.6	22.3	25.7	27.9	28.7	30.5	34.6	40.6	44.3	49.1	50.4
10SPL60	60	6.00	7.83	11.9	16.7	19.7	23	27.5	29.7	34.2	37.2	38.3	40.7	46.1	54.7	62.9	64.4	67.2
3SPL400	400	41.8	52.2	79.4	110	131	153	183	198	228	248	255	271	307	366	419	436	448

Data for stationary applications

Performance after prolonged float charge of fully charged cells

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

Final voltage: 1.10 V/cell

Cell Type	C5 Ah	Discharge Time in Hours							Discharge Time in Minutes							Time in Seconds		
		10	8	5	3	2	1.5	1	45	30	20	15	10	5	1	30	5	1
SPL10	10	1.05	1.31	2.03	2.98	3.73	4.67	5.53	6.00	6.84	7.56	8.10	8.46	9.31	10.8	11.5	13.7	14.3
SPL10 (II)	10	1.05	1.31	2.03	2.98	3.73	4.67	5.53	6.00	6.84	7.56	8.10	8.46	9.31	10.8	11.5	13.7	14.3
SPL10 (III)	10	1.05	1.31	2.03	2.98	3.73	4.67	5.53	6.00	6.84	7.56	8.10	8.46	9.31	10.8	11.5	13.7	14.3
SPL17	17	1.79	2.23	3.45	5.07	6.34	7.94	9.40	10.2	11.6	12.9	13.8	14.4	15.8	18.4	19.6	23.3	24.3
SPL20	20	2.10	2.62	4.06	5.96	7.46	9.34	11.1	12.0	13.7	15.1	16.2	16.9	18.6	21.6	23.0	27.4	28.6
SPL22	22	2.31	2.89	4.47	6.57	8.21	10.2	12.1	13.3	15.0	16.6	17.8	18.6	20.4	23.9	25.3	30.1	31.5
SPL22-(II)	22	2.31	2.89	4.47	6.57	8.21	10.2	12.1	13.3	15.0	16.6	17.8	18.6	20.4	23.9	25.3	30.1	31.5
SPL25	25	2.63	3.28	5.08	7.47	9.33	11.59	13.8	15.1	17.0	18.9	20.2	21.1	23.2	27.2	28.8	34.2	35.8
SPL30	30	3.15	3.94	6.1	8.96	11.2	14.0	16.6	18.0	20.5	22.6	24.3	25.3	27.9	32.6	35.9	41.1	43.0
SPL30-(II)	30	3.15	3.94	6.1	8.96	11.2	14.0	16.6	18.0	20.5	22.6	24.3	25.3	27.9	32.6	35.9	41.1	43.0
SPL40	40	4.21	5.25	8.13	11.9	14.9	18.6	22.1	24.0	27.3	30.2	32.4	33.8	37.2	43.5	47.5	54.9	57.4
SPL40-(II)	40	4.21	5.25	8.13	11.9	14.9	18.6	22.1	24.0	27.3	30.2	32.4	33.8	37.2	43.5	47.5	54.9	57.4
SPL40-(III)	40	4.21	5.25	8.13	11.9	14.9	18.6	22.1	24.0	27.3	30.2	32.4	33.8	37.2	43.5	47.5	54.9	57.4
SPL45	45	4.74	5.93	9.15	13.4	16.8	21.0	24.9	27.0	30.7	34	36.4	38	41.9	49	51.8	61.7	64.5
SPL45-(II)	45	4.74	5.93	9.15	13.4	16.8	21.0	24.9	27.0	30.7	34	36.4	38	41.9	49	51.8	61.7	64.5
SPL45-(III)	45	4.74	5.93	9.15	13.4	16.8	21.0	24.9	27.0	30.7	34	36.4	38	41.9	49	51.8	61.7	64.5
SPL50	50	5.26	6.57	10.1	14.9	18.6	23.3	27.6	30.0	34.2	37.8	40.5	42.3	46.5	54.4	59.0	68.6	71.7
SPL50-(II)	50	5.26	6.57	10.1	14.9	18.6	23.3	27.6	30.0	34.2	37.8	40.5	42.3	46.5	54.4	59.0	68.6	71.7
SPL50-(III)	50	5.26	6.57	10.1	14.9	18.6	23.3	27.6	30.0	34.2	37.8	40.5	42.3	46.5	54.4	59.0	68.6	71.7
SPL50-(IV)	50	5.26	6.57	10.1	14.9	18.6	23.3	27.6	30.0	34.2	37.8	40.5	42.3	46.5	54.4	59.0	68.6	71.7
SPL60	60	6.32	7.88	12.2	17.9	22.4	28.0	33.2	36.0	41.0	45.3	48.6	50.7	55.8	65.3	71.5	82.3	86.1
SPL60-(II)	60	6.32	7.88	12.2	17.9	22.4	28.0	33.2	36.0	41.0	45.3	48.6	50.7	55.8	65.3	71.5	82.3	86.1
SPL60-(III)	60	6.32	7.88	12.2	17.9	22.4	28.0	33.2	36.0	41.0	45.3	48.6	50.7	55.8	65.3	71.5	82.3	86.1
SPL60-(IV)	60	6.32	7.88	12.2	17.9	22.4	28.0	33.2	36.0	41.0	45.3	48.6	50.7	55.8	65.3	71.5	82.3	86.1
SPL60-(V)	60	6.32	7.88	12.2	17.9	22.4	28.0	33.2	36.0	41.0	45.3	48.6	50.7	55.8	65.3	71.5	82.3	86.1
SPL70	70	7.37	9.19	14.2	20.9	26.1	32.6	38.7	42.0	47.9	52.9	56.7	59.2	65.2	76.2	83.4	95.4	99.8
SPL70-(II)	70	7.37	9.19	14.2	20.9	26.1	32.6	38.7	42.0	47.9	52.9	56.7	59.2	65.2	76.2	83.4	95.4	99.8
SPL80	80	8.42	10.5	16.2	23.9	29.8	37.3	44.2	48.0	54.7	60.4	64.8	67.6	74.5	87.1	95.3	109	114
SPL90	90	9.46	11.8	18.3	26.9	33.6	42	49.8	54.0	61.6	68	72.9	76.1	83.8	97.6	108	123	129
SPL100	100	10.5	13.1	20.3	29.8	37.3	46.6	55.3	60.0	68.4	75.6	81.0	84.6	93.1	108	120	137	143
SPL100-(II)	100	10.5	13.1	20.3	29.8	37.3	46.6	55.3	60.0	68.4	75.6	81.0	84.6	93.1	108	120	137	143
SPL100-(III)	100	10.5	13.1	20.3	29.8	37.3	46.6	55.3	60.0	68.4	75.6	81.0	84.6	93.1	108	120	137	143
SPL115	115	12.1	15.1	23.3	34.3	42.9	53.6	63.6	69.0	78.7	86.9	93.2	97.3	107	124	138	158	164
SPL120	120	12.6	15.7	24.4	35.8	44.8	55.9	66.4	72.0	82.1	90.7	97.2	102	112	130	144	164	172
SPL125	125	13.1	16.4	25.5	37.3	46.6	58.3	69.1	75	85.5	94.5	101	105	116	136	144	171	179
SPL125-(II)	125	13.1	16.4	25.5	37.3	46.6	58.3	69.1	75	85.5	94.5	101	105	116	136	144	171	179
SPL130	130	13.6	17.1	26.5	38.8	48.5	60.6	71.9	78.0	88.9	98.3	105	109	121	141	150	178	186
SPL135	135	14.1	17.7	27.5	40.3	50.3	63.0	74.6	81.0	92.3	102	109	113	125	147	156	185	193
SPL135-(II)	135	14.1	17.7	27.5	40.3	50.3	63.0	74.6	81.0	92.3	102	109	113	125	147	156	185	193
SPL140	140	14.7	18.4	28.6	41.8	52.2	65.3	77.4	84.0	95.8	106	113	118	130	152	161	192	200
SPL140-(II)	140	14.7	18.4	28.6	41.8	52.2	65.3	77.4	84.0	95.8	106	113	118	130	152	161	192	200
SPL143	143	15.0	18.8	29.2	42.7	53.3	66.7	79.1	85.8	97.8	108	116	120	133	156	165	196	205
SPL150	150	15.8	19.7	30.5	44.8	56	70	83	90	102	113	121	126	139	163	179	205	215
SPL160	160	16.9	21.0	32.5	47.8	59.7	74.7	88.5	96.0	109	121	129	134	148	174	191	219	229
SPL165	165	17.4	21.7	33.6	49.3	61.6	77.0	91.3	99.0	112	124	133	139	153	179	197	226	237
SPL165-(II)	165	17.4	21.7	33.6	49.3	61.6	77.0	91.3	99.0	112	124	133	139	153	179	197	226	237
SPL170	170	17.9	22.3	34.6	50.8	63.5	79.3	94.1	102	116	128	137	143	158	185	203	232	244
SPL180	180	19.0	23.6	36.6	53.8	67.2	84.0	99.6	108	122	136	145	151	167	196	215	246	258

Data for stationary applications

Performance after prolonged float charge of fully charged cells

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

Final voltage: 1.10 V/cell

Cell Type	C5 Ah	Discharge Time in Hours							Discharge Time in Minutes							Time in Seconds		
		10	8	5	3	2	1.5	1	45	30	20	15	10	5	1	30	5	1
SPL200	200	21.1	26.2	40.6	59.7	74.7	93.3	110	120	136	151	162	169	186	217	238	274	287
SPL200-(II)	200	21.1	26.2	40.6	59.7	74.7	93.3	110	120	136	151	162	169	186	217	238	274	287
SPL200-(III)	200	21.1	26.2	40.6	59.7	74.7	93.3	110	120	136	151	162	169	186	217	238	274	287
SPL230	230	24.3	30.1	46.7	68.7	85.9	107	127	138	156	174	186	194	214	250	274	315	330
SPL230-(II)	230	24.3	30.1	46.7	68.7	85.9	107	127	138	156	174	186	194	214	250	274	315	330
SPL230-(III)	230	24.3	30.1	46.7	68.7	85.9	107	127	138	156	174	186	194	214	250	274	315	330
SPL250	250	26.3	32.8	50.8	74.7	93.3	116	138	150	171	189	202	211	232	272	288	343	358
SPL250-(II)	250	26.3	32.8	50.8	74.7	93.3	116	138	150	171	189	202	211	232	272	288	343	358
SPL250-(III)	250	26.3	32.8	50.8	74.7	93.3	116	138	150	171	189	202	211	232	272	288	343	358
SPL250-(IV)	250	26.3	32.8	50.8	74.7	93.3	116	138	150	171	189	202	211	232	272	288	343	358
SPL250-(V)	250	26.3	32.8	50.8	74.7	93.3	116	138	150	171	189	202	211	232	272	288	343	358
SPL260	260	27.4	34.1	52.8	77.7	97.0	121	144	156	178	197	210	219	241	283	300	357	372
SPL280	280	29.5	36.7	56.9	83.7	104	130	155	168	192	212	226	236	260	305	323	384	401
SPL300	300	31.5	39.4	61	89.6	112	140	166	180	205	226	243	253	279	326	345	411	430
SPL300-(II)	300	31.5	39.4	61	89.6	112	140	166	180	205	226	243	253	279	326	345	411	430
SPL300-(III)	300	31.5	39.4	61	89.6	112	140	166	180	205	226	243	253	279	326	345	411	430
SPL300-(IV)	300	31.5	39.4	61	89.6	112	140	166	180	205	226	243	253	279	326	345	411	430
SPL315	315	33.1	41.4	64.1	94.1	118	147	174	189	215	237	255	266	293	342	362	432	452
SPL320	320	33.6	42.0	65.1	95.6	119	149	177	192	219	241	259	270	298	348	368	438	459
SPL340	340	35.7	44.7	69.1	102	127	159	188	204	232	256	275	287	316	369	391	466	487
SPL350	350	36.8	45.9	71.1	104	130	163	193	210	239	264	283	296	326	381	403	480	502
SPL365	365	38.4	47.9	74.1	108	136	170	201	219	249	275	295	309	340	397	420	501	524
SPL400	400	42.1	52.5	81.3	119	149	186	221	240	273	302	324	338	372	435	460	549	574
SPL400-(II)	400	42.1	52.5	81.3	119	149	186	221	240	273	302	324	338	372	435	460	549	574
SPL400-(III)	400	42.1	52.5	81.3	119	149	186	221	240	273	302	324	338	372	435	460	549	574
SPL400-(IV)	400	42.1	52.5	81.3	119	149	186	221	240	273	302	324	338	372	435	460	549	574
SPL400-(V)	400	42.1	52.5	81.3	119	149	186	221	240	273	302	324	338	372	435	460	549	574
SPL420	420	44.2	55.1	85.4	125	156	195	232	252	287	317	340	355	391	457	483	576	603
SPL450	450	47.4	59.1	91.5	134	168	209	249	270	307	340	365	380	419	489	518	618	646
SPL450-(II)	450	47.4	59.1	91.5	134	168	209	249	270	307	340	365	380	419	489	518	618	646
SPL500	500	52.6	65.7	101	149	186	233	276	300	342	378	405	423	465	544	576	686	717
SPL500-(II)	500	52.6	65.7	101	149	186	233	276	300	342	378	405	423	465	544	576	686	717
SPL500-(III)	500	52.6	65.7	101	149	186	233	276	300	342	378	405	423	465	544	576	686	717
SPL500-(IV)	500	52.6	65.7	101	149	186	233	276	300	342	378	405	423	465	544	576	686	717
SPL600	600	63.1	78.8	122	179	224	280	332	360	410	453	486	507	558	653	691	823	861
SPL700	700	73.5	91.7	142	208	261	326	387	420	479	529	567	592	652	756	805	959	1000
SPL700-(II)	700	73.5	91.7	142	208	261	326	387	420	479	529	567	592	652	756	805	959	1000
SPL800	800	84.2	105	162	239	298	373	442	480	547	604	648	676	745	872	921	1098	1148
SPL900	900	94.7	118	183	268	336	420	498	540	615	680	729	761	838	980	1036	1235	1291
SPL1000	1000	105	131	203	298	373	466	553	600	684	756	810	846	931	1089	1152	1372	1435
SPL1210	1210	127	159	246	361	451	564	669	726	828	915	980	1024	1127	1318	1394	1660	1736
2SPL5	5	0.53	0.66	1.02	1.49	1.87	2.33	2.77	3.00	3.42	3.78	4.05	4.23	4.66	5.45	5.76	6.86	7.18
10SPL22	22	2.31	2.89	4.47	6.57	8.21	10.2	12.1	13.3	15.0	16.6	17.8	18.6	20.4	23.9	25.3	30.1	31.5
10SPL40	40	4.21	5.25	8.13	11.9	14.9	18.6	22.1	24	27.3	30.2	32.4	33.8	37.2	43.5	47.5	54.9	57.4
10SPL45	45	4.74	5.93	9.15	13.4	16.8	21	24.9	27	30.7	34	36.4	38	41.9	49	51.8	61.7	64.5
10SPL60	60	6.32	7.88	12.2	17.9	22.4	28	33.2	36	41	45.3	48.6	50.7	55.8	65.3	71.5	82.3	86.1

Data for stationary applications

Performance after prolonged float charge of fully charged cells

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

Final voltage: 1.05 V/cell

Cell Type	C5 Ah	Discharge Time in Hours							Discharge Time in Minutes							Time in Seconds		
		10	8	5	3	2	1.5	1	45	30	20	15	10	5	1	30	5	1
SPL10	10	1.06	1.32	2.05	3.08	4.24	6.19	6.67	7.32	7.38	8.64	9.36	10.2	11.3	13.1	14.2	16.0	16.8
SPL10 (II)	10	1.06	1.32	2.05	3.08	4.24	6.19	6.67	7.32	7.38	8.64	9.36	10.2	11.3	13.1	14.2	16.0	16.8
SPL10 (III)	10	1.06	1.32	2.05	3.08	4.24	6.19	6.67	7.32	7.38	8.64	9.36	10.2	11.3	13.1	14.2	16.0	16.8
SPL17	17	1.80	2.24	3.49	5.24	7.21	10.5	11.3	12.4	12.5	14.7	15.9	17.3	19.2	22.3	24.1	27.2	28.6
SPL20	20	2.12	2.64	4.10	6.16	8.48	12.4	13.3	14.6	14.8	17.3	18.7	20.4	22.6	26.2	28.4	32.0	33.6
SPL22	22	2.32	2.9	4.51	6.77	9.33	11.4	14.6	16.1	16.2	19.2	20.5	22.4	25	28.9	31.3	35.2	37.1
SPL22-(II)	22	2.32	2.9	4.51	6.77	9.33	11.4	14.6	16.1	16.2	19.2	20.5	22.4	25	28.9	31.3	35.2	37.1
SPL25	25	2.64	3.30	5.13	7.69	10.6	13.0	16.6	18.3	18.4	21.8	23.3	25.5	28.4	32.8	35.6	40.0	42.2
SPL30	30	3.17	3.95	6.14	9.23	12.7	15.5	20	21.9	22.2	25.9	28	30.6	34.1	39.4	42.7	48.0	50.6
SPL30-(II)	30	3.17	3.95	6.14	9.23	12.7	15.5	20	21.9	22.2	25.9	28	30.6	34.1	39.4	42.7	48.0	50.6
SPL40	40	4.23	5.27	8.19	12.3	16.9	20.7	26.6	29.2	29.5	34.5	37.4	40.8	45.5	52.5	57	64.0	67.5
SPL40-(II)	40	4.23	5.27	8.19	12.3	16.9	20.7	26.6	29.2	29.5	34.5	37.4	40.8	45.5	52.5	57	64.0	67.5
SPL40-(III)	40	4.23	5.27	8.19	12.3	16.9	20.7	26.6	29.2	29.5	34.5	37.4	40.8	45.5	52.5	57	64.0	67.5
SPL45	45	4.76	5.93	9.22	13.8	19	23.3	30	32.9	33.2	38.8	42.1	45.9	51.2	59.1	64.1	72.0	75.9
SPL45-(II)	45	4.76	5.93	9.22	13.8	19	23.3	30	32.9	33.2	38.8	42.1	45.9	51.2	59.1	64.1	72.0	75.9
SPL45-(III)	45	4.76	5.93	9.22	13.8	19	23.3	30	32.9	33.2	38.8	42.1	45.9	51.2	59.1	64.1	72.0	75.9
SPL50	50	5.29	6.59	10.2	15.3	21.2	25.9	33.3	36.6	36.9	43.2	46.8	51	56.5	65.7	71.3	80.1	84.3
SPL50-(II)	50	5.29	6.59	10.2	15.3	21.2	25.9	33.3	36.6	36.9	43.2	46.8	51	56.5	65.7	71.3	80.1	84.3
SPL50-(III)	50	5.29	6.59	10.2	15.3	21.2	25.9	33.3	36.6	36.9	43.2	46.8	51	56.5	65.7	71.3	80.1	84.3
SPL50-(IV)	50	5.29	6.59	10.2	15.3	21.2	25.9	33.3	36.6	36.9	43.2	46.8	51	56.5	65.7	71.3	80.1	84.3
SPL60	60	6.34	7.91	12.2	18.4	25.4	31.1	40	43.9	44.2	51.8	56.1	61.2	68.2	78.8	85.5	96	101
SPL60-(II)	60	6.34	7.91	12.2	18.4	25.4	31.1	40	43.9	44.2	51.8	56.1	61.2	68.2	78.8	85.5	96	101
SPL60-(III)	60	6.34	7.91	12.2	18.4	25.4	31.1	40	43.9	44.2	51.8	56.1	61.2	68.2	78.8	85.5	96	101
SPL60-(IV)	60	6.34	7.91	12.2	18.4	25.4	31.1	40	43.9	44.2	51.8	56.1	61.2	68.2	78.8	85.5	96	101
SPL60-(V)	60	6.34	7.91	12.2	18.4	25.4	31.1	40	43.9	44.2	51.8	56.1	61.2	68.2	78.8	85.5	96	101
SPL70	70	7.4	9.19	14.3	21.5	29.7	36.3	46.6	51.2	51.6	60.5	65.5	71.7	79.6	91.9	99.8	112	118
SPL70-(II)	70	7.4	9.19	14.3	21.5	29.7	36.3	46.6	51.2	51.6	60.5	65.5	71.7	79.6	91.9	99.8	112	118
SPL80	80	8.46	10.5	16.3	24.6	33.9	41.5	53.3	58.5	59	69.1	74.8	81.9	91	105	114	128	135
SPL90	90	9.48	11.8	18.4	27.7	38.2	46.7	60	65.9	66.4	77.8	84.2	92	102	118	128	144	152
SPL100	100	10.5	13.1	20.4	30.7	42.4	51.8	66.6	73.2	73.8	86.4	93.6	102	113	131	142	160	168
SPL100-(II)	100	10.5	13.1	20.4	30.7	42.4	51.8	66.6	73.2	73.8	86.4	93.6	102	113	131	142	160	168
SPL100-(III)	100	10.5	13.1	20.4	30.7	42.4	51.8	66.6	73.2	73.8	86.4	93.6	102	113	131	142	160	168
SPL115	115	12.1	15.1	23.5	35.3	48.8	59.6	76.6	84.2	84.9	99.4	108	117	130	151	163	184	193
SPL120	120	12.6	15.7	24.5	36.8	50.9	62.2	79.9	87.8	88.6	104	112	122	136	157	170	192	202
SPL125	125	13.2	16.4	25.6	38.4	53	64.8	83.3	91.5	92.2	108	117	127	142	164	178	200	210
SPL125-(II)	125	13.2	16.4	25.6	38.4	53	64.8	83.3	91.5	92.2	108	117	127	142	164	178	200	210
SPL130	130	13.7	17.1	26.6	39.9	55.1	67.4	86.6	95.2	95.9	112.3	122	132	148	171	185	208	218
SPL135	135	14.3	17.7	27.6	41.5	57.2	70.0	90.0	98.8	99.6	117	126	137	153	177	192	216	227
SPL135-(II)	135	14.3	17.7	27.6	41.5	57.2	70.0	90.0	98.8	99.6	117	126	137	153	177	192	216	227
SPL140	140	14.8	18.4	28.7	43.0	59.4	72.6	93.3	102	103	121	131	142	159	184	199	224	235
SPL140-(II)	140	14.8	18.4	28.7	43.0	59.4	72.6	93.3	102	103	121	131	142	159	184	199	224	235
SPL143	143	15.1	18.8	29.3	43.9	60.6	74.1	95.3	105	105	124	134	145	162	188	204	229	240
SPL150	150	15.8	19.7	30.7	46.1	63.6	77.8	100	109	110	129	140	153	170	197	213	240	253
SPL160	160	16.9	21.0	32.7	49.2	67.8	83.0	107	116	117	138	149	163	181	210	227	256	270
SPL165	165	17.4	21.7	33.8	50.7	70.0	85.6	110	120	121	142	154	168	187	217	234	264	278
SPL165-(II)	165	17.4	21.7	33.8	50.7	70.0	85.6	110	120	121	142	154	168	187	217	234	264	278
SPL170	170	17.9	22.3	34.8	52.2	72.1	88.2	113	124	125	146	159	173	193	223	241	272	287
SPL180	180	19.0	23.6	36.8	55.3	76.3	93.4	120	131	132	155	168	184	204	236	256	288	cc

Data for stationary applications

Performance after prolonged float charge of fully charged cells

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

Final voltage: 1.05 V/cell

Cell Type	C5 Ah	Discharge Time in Hours							Discharge Time in Minutes							Time in Seconds		
		10	8	5	3	2	1.5	1	45	30	20	15	10	5	1	30	5	1
SPL200	200	21.1	26.3	40.9	61.5	84.8	103	133	146	147	172	187	204	227	262	285	320	337
SPL200-(II)	200	21.1	26.3	40.9	61.5	84.8	103	133	146	147	172	187	204	227	262	285	320	337
SPL200-(III)	200	21.1	26.3	40.9	61.5	84.8	103	133	146	147	172	187	204	227	262	285	320	337
SPL230	230	24.3	30.2	47.0	70.7	97.5	118	153	168	169	198	215	235	261	301	328	368	388
SPL230-(II)	230	24.3	30.2	47.0	70.7	97.5	118	153	168	169	198	215	235	261	301	328	368	388
SPL230-(III)	230	24.3	30.2	47.0	70.7	97.5	118	153	168	169	198	215	235	261	301	328	368	388
SPL250	250	26.4	32.9	51.2	76.9	106	129	166	183	184	216	234	255	284	328	356	400	421
SPL250-(II)	250	26.4	32.9	51.2	76.9	106	129	166	183	184	216	234	255	284	328	356	400	421
SPL250-(III)	250	26.4	32.9	51.2	76.9	106	129	166	183	184	216	234	255	284	328	356	400	421
SPL250-(IV)	250	26.4	32.9	51.2	76.9	106	129	166	183	184	216	234	255	284	328	356	400	421
SPL250-(V)	250	26.4	32.9	51.2	76.9	106	129	166	183	184	216	234	255	284	328	356	400	421
SPL260	260	27.5	34.2	53.2	80.0	110	134	173	190	191	225	243	265	295	341	370	416	438
SPL280	280	29.6	36.8	57.3	86.1	119	144	186	205	206	242	262	286	318	367	399	448	472
SPL300	300	31.7	39.5	61.4	92.3	127	155	200	219	221	259	280	306	341	394	427	480	506
SPL300-(II)	300	31.7	39.5	61.4	92.3	127	155	200	219	221	259	280	306	341	394	427	480	506
SPL300-(III)	300	31.7	39.5	61.4	92.3	127	155	200	219	221	259	280	306	341	394	427	480	506
SPL300-(IV)	300	31.7	39.5	61.4	92.3	127	155	200	219	221	259	280	306	341	394	427	480	506
SPL315	315	33.3	41.5	64.5	96.9	133	163	210	230	232	272	294	321	358	414	448	504	531
SPL320	320	33.8	42.1	65.5	98.5	135	165	213	234	236	276	299	326	364	420	455	512	540
SPL340	340	35.9	44.8	69.6	105	144	176	227	248	250	294	317	347	386	447	484	544	573
SPL350	350	37	46.1	71.6	107	148	181	233	256	258	302	327	357	398	459	499	560	590
SPL365	365	38.6	48.1	74.7	112	154	189	243	267	269	315	341	372	415	479	520	584	615
SPL400	400	42.3	52.7	81.9	123	169	207	266	292	295	345	374	408	455	525	570	640	675
SPL400-(II)	400	42.3	52.7	81.9	123	169	207	266	292	295	345	374	408	455	525	570	640	675
SPL400-(III)	400	42.3	52.7	81.9	123	169	207	266	292	295	345	374	408	455	525	570	640	675
SPL400-(IV)	400	42.3	52.7	81.9	123	169	207	266	292	295	345	374	408	455	525	570	640	675
SPL400-(V)	400	42.3	52.7	81.9	123	169	207	266	292	295	345	374	408	455	525	570	640	675
SPL420	420	44.4	55.3	86.0	129	177	217	279	307	310	362	393	428	478	551	599	672	709
SPL450	450	47.6	59.3	92.1	138	190	233	299	329	332	388	421	459	512	591	641	720	759
SPL450-(II)	450	47.6	59.3	92.1	138	190	233	299	329	332	388	421	459	512	591	641	720	759
SPL500	500	52.9	65.9	102	153	212	259	333	366	369	432	468	510	569	657	713	801	843
SPL500-(II)	500	52.9	65.9	102	153	212	259	333	366	369	432	468	510	569	657	713	801	843
SPL500-(III)	500	52.9	65.9	102	153	212	259	333	366	369	432	468	510	569	657	713	801	843
SPL500-(IV)	500	52.9	65.9	102	153	212	259	333	366	369	432	468	510	569	657	713	801	843
SPL600	600	63.4	79.1	122	184	254	311	400	439	443	518	561	612	682	788	855	941	1012
SPL700	700	74	92.3	143	215	297	363	466	512	516	604	655	715	796	919	998	1121	1181
SPL700-(II)	700	74	92.3	143	215	297	363	466	512	516	604	655	715	796	919	998	1121	1181
SPL800	800	84.6	105	163	246	339	415	533	585	590	691	748	817	910	1051	1141	1281	1350
SPL900	900	95.2	118	184	277	381	467	600	658	664	777	842	919	1024	1182	1283	1441	1518
SPL1000	1000	105	131	204	307	424	518	666	732	738	864	936	1021	1138	1314	1426	1602	1687
SPL1210	1210	127	159	247	371	513	627	806	886	893	1045	1133	1235	1377	1590	1725	1938	2041
2SPL5	5	0.53	0.66	1.02	1.54	2.12	2.59	3.33	3.66	3.69	4.32	4.68	5.11	5.69	6.57	7.13	8.01	8.44
10SPL22	22	2.32	2.9	4.51	6.77	9.33	11.4	14.6	16.1	16.2	19.2	20.5	22.4	25	28.9	31.3	35.2	37.1
10SPL40	40	4.23	5.27	8.19	12.3	16.9	20.7	26.6	29.2	29.5	34.5	37.4	40.8	45.5	52.5	57	64	67.5
10SPL45	45	4.76	5.93	9.22	13.8	19	23.3	30	32.9	33.2	38.8	42.1	45.9	51.2	59.1	64.1	72	75.9
10SPL60	60	6.34	7.91	12.2	18.4	25.4	31.1	40	43.9	44.2	51.8	56.1	61.2	68.2	78.8	85.5	96	101
3SPL400	400	42.3	52.7	81.9	123	169	207	266	292	295	345	374	408	455	525	570	640	675

Data for stationary applications

Performance after prolonged float charge of fully charged cells

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

Final voltage: 1.00 V/cell

Cell Type	C5 Ah	Discharge Time in Hours							Discharge Time in Minutes							Time in Seconds		
		10	8	5	3	2	1.5	1	45	30	20	15	10	5	1	30	5	1
SPL10	10	1.06	1.32	2.06	3.12	4.42	5.68	7.69	8.58	9.76	10.5	10.8	11.8	12.6	15.0	15.6	19.1	19.5
SPL10 (II)	10	1.06	1.32	2.06	3.12	4.42	5.68	7.69	8.58	9.76	10.5	10.8	11.8	12.6	15.0	15.6	19.1	19.5
SPL10 (III)	10	1.06	1.32	2.06	3.12	4.42	5.68	7.69	8.58	9.76	10.5	10.8	11.8	12.6	15.0	15.6	19.1	19.5
SPL17	17	1.80	2.24	3.50	5.30	7.51	9.66	13.1	14.6	16.6	17.9	18.4	20.1	21.4	25.5	26.5	32.5	33.2
SPL20	20	2.12	2.64	4.12	6.24	8.84	11.36	15.4	17.2	19.5	21.0	21.6	23.6	25.2	30.0	31.2	38.2	39.0
SPL22	22	2.34	2.91	4.51	6.86	9.72	12.5	16.9	18.8	21.4	23.1	23.7	25.9	27.8	33	35.3	42	43
SPL22-(II)	22	2.34	2.91	4.51	6.86	9.72	12.5	16.9	18.8	21.4	23.1	23.7	25.9	27.8	33	35.3	42	43
SPL25	25	2.66	3.31	5.13	7.80	11.0	14.2	19.2	21.4	24.3	26.3	26.9	29.4	31.6	37.5	40.1	47.7	48.9
SPL30	30	3.18	3.96	6.15	9.4	13.2	17	23	25.7	29.2	31.5	32.4	35.4	37.9	48.9	52.7	57.3	58.7
SPL30-(II)	30	3.18	3.96	6.15	9.4	13.2	17	23	25.7	29.2	31.5	32.4	35.4	37.9	48.9	52.7	57.3	58.7
SPL40	40	4.25	5.29	8.21	12.8	17.6	22.7	30.7	34.3	39	42.1	43.2	47.2	50.5	64.7	70.5	76.4	78.3
SPL40-(II)	40	4.25	5.29	8.21	12.8	17.6	22.7	30.7	34.3	39	42.1	43.2	47.2	50.5	64.7	70.5	76.4	78.3
SPL40-(III)	40	4.25	5.29	8.21	12.8	17.6	22.7	30.7	34.3	39	42.1	43.2	47.2	50.5	64.7	70.5	76.4	78.3
SPL45	45	4.78	5.95	9.23	14	19.8	25.5	34.5	38.6	43.9	47.3	48.6	53.1	56.9	67.6	73.2	85.9	88.1
SPL45-(II)	45	4.78	5.95	9.23	14	19.8	25.5	34.5	38.6	43.9	47.3	48.6	53.1	56.9	67.6	73.2	85.9	88.1
SPL45-(III)	45	4.78	5.95	9.23	14	19.8	25.5	34.5	38.6	43.9	47.3	48.6	53.1	56.9	67.6	73.2	85.9	88.1
SPL50	50	5.31	6.62	10.2	15.9	22	28.4	38.4	42.9	48.8	52.6	54	59	63.2	81.4	88.2	95.5	97.9
SPL50-(II)	50	5.31	6.62	10.2	15.9	22	28.4	38.4	42.9	48.8	52.6	54	59	63.2	81.4	88.2	95.5	97.9
SPL50-(III)	50	5.31	6.62	10.2	15.9	22	28.4	38.4	42.9	48.8	52.6	54	59	63.2	81.4	88.2	95.5	97.9
SPL50-(IV)	50	5.31	6.62	10.2	15.9	22	28.4	38.4	42.9	48.8	52.6	54	59	63.2	81.4	88.2	95.5	97.9
SPL60	60	6.37	7.94	12.3	19.1	26.5	34.1	46.1	51.4	58.5	63.1	64.8	70.8	75.8	97.2	107	114	117
SPL60-(II)	60	6.37	7.94	12.3	19.1	26.5	34.1	46.1	51.4	58.5	63.1	64.8	70.8	75.8	97.2	107	114	117
SPL60-(III)	60	6.37	7.94	12.3	19.1	26.5	34.1	46.1	51.4	58.5	63.1	64.8	70.8	75.8	97.2	107	114	117
SPL60-(IV)	60	6.37	7.94	12.3	19.1	26.5	34.1	46.1	51.4	58.5	63.1	64.8	70.8	75.8	97.2	107	114	117
SPL60-(V)	60	6.37	7.94	12.3	19.1	26.5	34.1	46.1	51.4	58.5	63.1	64.8	70.8	75.8	97.2	107	114	117
SPL70	70	7.43	9.19	14.4	22.4	30.9	39.8	53.8	60	68.3	73.7	75.6	82.7	88.4	114	125	133	137
SPL70-(II)	70	7.43	9.19	14.4	22.4	30.9	39.8	53.8	60	68.3	73.7	75.6	82.7	88.4	114	125	133	137
SPL80	80	8.49	10.5	16.4	25.6	35.3	45.5	61.5	68.6	78	84.2	86.4	94.5	101	130	143	152	156
SPL90	90	9.55	11.9	18.5	28.5	39.7	51.2	69.2	77.2	87.8	94.6	97.2	106	114	147	160	172	176
SPL100	100	10.6	13.2	20.5	31.4	44.1	56.8	76.9	85.8	97.6	105	108	118	126	164	177	191	195
SPL100-(II)	100	10.6	13.2	20.5	31.4	44.1	56.8	76.9	85.8	97.6	105	108	118	126	164	177	191	195
SPL100-(III)	100	10.6	13.2	20.5	31.4	44.1	56.8	76.9	85.8	97.6	105	108	118	126	164	177	191	195
SPL115	115	12.2	15.2	23.6	36.1	50.7	65.3	88.4	98.7	112	121	124	136	145	189	204	220	224
SPL120	120	12.7	15.8	24.6	37.7	52.9	68.2	92.3	103	117	126	130	142	151	197	212	229	234
SPL125	125	13.2	16.5	25.6	38.9	55.2	71.1	96.1	107	121	131	135	147	158	187	195	238	244
SPL125-(II)	125	13.2	16.5	25.6	38.9	55.2	71.1	96.1	107	121	131	135	147	158	187	195	238	244
SPL130	130	13.7	17.2	26.6	40.5	57.4	73.9	99.9	111	126	136	140	153	164	194	203	248	254
SPL135	135	14.3	17.8	27.6	42.0	59.6	76.8	104	116	131	141	146	159	171	202	211	257	264
SPL135-(II)	135	14.3	17.8	27.6	42.0	59.6	76.8	104	116	131	141	146	159	171	202	211	257	264
SPL140	140	14.8	18.5	28.7	43.6	61.8	79.6	108	120	136	147	151	165	177	209	218	267	273
SPL140-(II)	140	14.8	18.5	28.7	43.6	61.8	79.6	108	120	136	147	151	165	177	209	218	267	273
SPL143	143	15.1	18.9	29.3	44.5	63.1	81.3	110	122	138	150	154	168	181	214	223	272	279
SPL150	150	15.9	19.8	30.7	47.4	66.1	85.3	115	128	146	157	162	177	189	245	265	286	293
SPL160	160	17.0	21.1	32.7	50.6	70.5	91.0	123	137	156	167	173	189	202	261	283	305	313
SPL165	165	17.5	21.8	33.8	52.1	72.7	93.8	127	141	161	173	178	195	208	270	292	315	322
SPL165-(II)	165	17.5	21.8	33.8	52.1	72.7	93.8	127	141	161	173	178	195	208	270	292	315	322
SPL170	170	18.0	22.4	34.8	53.7	74.9	96.7	130	145	165	178	184	201	214	278	300	324	332
SPL180	180	19.1	23.8	36.8	56.9	79.3	102.4	138.0	154	175	188	194	212	227	294	318	343	352

Data for stationary applications

Performance after prolonged float charge of fully charged cells

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

Final voltage: 1.00 V/cell

Cell Type	C5 Ah	Discharge Time in Hours							Discharge Time in Minutes							Time in Seconds		
		10	8	5	3	2	1.5	1	45	30	20	15	10	5	1	30	5	1
SPL200	200	21.2	26.4	41	63.2	88.3	113	153	171	195	210	216	236	252	325	353	382	391
SPL200-(II)	200	21.2	26.4	41	63.2	88.3	113	153	171	195	210	216	236	252	325	353	382	391
SPL200-(III)	200	21.2	26.4	41	63.2	88.3	113	153	171	195	210	216	236	252	325	353	382	391
SPL230	230	24.4	30.4	47.2	72.7	102	130	176	197	224	242	248	271	290	374	406	439	450
SPL230-(II)	230	24.4	30.4	47.2	72.7	102	130	176	197	224	242	248	271	290	374	406	439	450
SPL230-(III)	230	24.4	30.4	47.2	72.7	102	130	176	197	224	242	248	271	290	374	406	439	450
SPL250	250	26.5	33	51.3	79.3	110	142	192	214	243	263	270	295	316	375	390	477	489
SPL250-(II)	250	26.5	33	51.3	79.3	110	142	192	214	243	263	270	295	316	375	390	477	489
SPL250-(III)	250	26.5	33	51.3	79.3	110	142	192	214	243	263	270	295	316	375	390	477	489
SPL250-(IV)	250	26.5	33	51.3	79.3	110	142	192	214	243	263	270	295	316	375	390	477	489
SPL250-(V)	250	26.5	33	51.3	79.3	110	142	192	214	243	263	270	295	316	375	390	477	489
SPL260	260	27.6	34.3	53.4	82.5	114	148	200	223	253	274	281	307	329	390	406	496	509
SPL280	280	29.7	37.0	57.5	88.8	123	159	215	240	272	295	302	330	354	420	437	534	548
SPL300	300	31.8	39.6	61.5	94.2	132	170	230	257	292	315	324	354	379	450	468	573	587
SPL300-(II)	300	31.8	39.6	61.5	94.2	132	170	230	257	292	315	324	354	379	450	468	573	587
SPL300-(III)	300	31.8	39.6	61.5	94.2	132	170	230	257	292	315	324	354	379	450	468	573	587
SPL300-(IV)	300	31.8	39.6	61.5	94.2	132	170	230	257	292	315	324	354	379	450	468	573	587
SPL315	315	33.4	41.6	64.6	98.9	139	179	242	270	307	331	340	372	398	473	491	602	616
SPL320	320	33.9	42.2	65.6	100	141	181	245	274	311	336	346	378	404	480	499	611	626
SPL340	340	36.0	44.9	69.7	107	150	193	261	291	331	357	367	401	430	510	530	649	665
SPL350	350	37.1	46.3	71.8	112	154	199	269	300	341	368	378	413	442	526	546	668	685
SPL365	365	38.7	48.3	74.9	117	161	208	281	313	356	384	394	431	461	549	569	697	714
SPL400	400	42.4	52.9	82	129	176	227	307	343	390	421	432	472	505	601	624	764	783
SPL400-(II)	400	42.4	52.9	82	129	176	227	307	343	390	421	432	472	505	601	624	764	783
SPL400-(III)	400	42.4	52.9	82	129	176	227	307	343	390	421	432	472	505	601	624	764	783
SPL400-(IV)	400	42.4	52.9	82	129	176	227	307	343	390	421	432	472	505	601	624	764	783
SPL400-(V)	400	42.4	52.9	82	129	176	227	307	343	390	421	432	472	505	601	624	764	783
SPL420	420	44.5	55.5	86.1	135	185	238	322	360	410	442	454	496	530	631	655	802	822
SPL450	450	47.7	59.5	92.3	145	198	255	345	386	439	474	486	531	568	676	702	860	881
SPL450-(II)	450	47.7	59.5	92.3	145	198	255	345	386	439	474	486	531	568	676	702	860	881
SPL500	500	53.1	66.1	102	158	220	284	384	429	487	526	540	590	632	751	780	955	979
SPL500-(II)	500	53.1	66.1	102	158	220	284	384	429	487	526	540	590	632	751	780	955	979
SPL500-(III)	500	53.1	66.1	102	158	220	284	384	429	487	526	540	590	632	751	780	955	979
SPL500-(IV)	500	53.1	66.1	102	158	220	284	384	429	487	526	540	590	632	751	780	955	979
SPL600	600	63.7	79.3	123	189	265	341	461	514	585	631	648	708	758	901	936	1146	1174
SPL700	700	74.3	92.6	143	224	309	398	538	600	682	737	756	826	885	1062	1093	1337	1370
SPL700-(II)	700	74.3	92.6	143	224	309	398	538	600	682	737	756	826	885	1062	1093	1337	1370
SPL800	800	84.9	105	164	253	353	455	615	686	780	842	864	945	1011	1202	1249	1528	1566
SPL900	900	95.5	119	184	286	397	511	691	772	878	947	972	1063	1138	1351	1405	1719	1762
SPL1000	1000	106	132	205	317	441	568	768	858	975	1035	1080	1181	1264	1503	1561	1910	1958
SPL1210	1210	128	160	248	384	534	687	929	1038	1180	1252	1307	1429	1529	1819	1889	2311	2369
2SPL5	5	0.53	0.66	1.03	1.59	2.21	2.84	3.84	4.29	4.88	5.18	5.40	5.91	6.32	7.52	7.81	9.55	9.79
10SPL22	22	2.34	2.91	4.51	6.86	9.72	12.5	16.9	18.8	21.4	23.1	23.7	25.9	27.8	33.0	35.3	42.0	43.0
10SPL40	40	4.25	5.29	8.21	12.8	17.6	22.7	30.7	34.3	39	42.1	43.2	47.2	50.5	64.7	70.5	76.4	78.3
10SPL45	45	4.78	5.95	9.23	14	19.8	25.5	34.5	38.6	43.9	47.3	48.6	53.1	56.9	67.6	73.2	85.9	88.1
10SPL60	60	6.37	7.94	12.3	19.1	26.5	34.1	46.1	51.4	58.5	63.1	64.8	70.8	75.8	97.2	107	114	117
3SPL400	400	42.4	52.9	82	129	176	227	307	343	390	421	432	472	505	601	624	764	783

Calculation Methods

Information required for battery capacity calculation

The following informat on needed for a precise battery capacity calculation:

-Nominal voltage of the system	-Load current required	-Backup time required
-Maximum voltage (for charging)	-Minimum voltage	-Temperature range
-Battery layout and available space	-Physical condition	

Float Voltage Operation

In these conditions the float voltage, being the voltage at which the general load circuit will operate, then a decision will have to be reached on the cell float voltage needed to maintain the battery in the required condition.

$$\text{Number of cells required} = \frac{\text{Circuit voltage}}{\text{Cell Float voltage}} \qquad \text{Minimum cell voltag} = \frac{\text{Minimum D.C. voltage}}{\text{Number of cells}}$$

The most commonly used float voltages are 1.40-1.48 voltage per cell, but the exact figure has to be related carefully to circumstances.

For Example

An EverExceed Nickel Cadmium battery is required to maintain an inverter load of 50KVA at 0.8 power factor for a backup time of 30 minutes, at 20~25°C temperature. The DC voltage to the inverter operates within the limit of 265 volts with the battery on float charge to a minimum of 202 volts at end of back up time. The inverter has an 85% efficiency rate.

-Number of Cells (at recommended float of 1.44VPC) = 265/1.44≈184cells
-Minimum Cell Voltage = 202/184≈1.10 volts per cell
-Maximum Battery Current

$$= \frac{\text{Inverter load in KVA x Power factor}}{\text{Min. cell voltage x Number of cells x Inverter efficiency}}$$

$$= \frac{50\text{KVA} \times 0.80}{1.10 \times 184 \times 0.85} = 232.5 \text{ Amps}$$

We shall choose the battery with capacity equal or just above 232.5Amps.
To meet the 30 minutes backup time requirement, we determine to choose the battery size from EBM Range.
From our catalogue data, the cell type is EBM300.
Battery shall comprise 184 cells of EverExceed Nickel Cadmium type EBM300.

System Voltage	Number of Cells	Spread Range Number of Cells
24	20	18～21
36	30	27～31
48	40	36～41
110	92	88～93
220	184	180～186

The number of cells in a battery may be determined by simply dividing the nominal voltage of the system by the nominal voltage of a cell (1.2 Volts).

EverExceed®

Supplied Worldwide by:

EverExceed Corporation