

New Ni-Cd Single Cells

Technical data



S A F T

Ni-Cd Single Cells

The Single Cell portfolio comprises three ranges of high, medium and low rate discharge types.

H Range

The H range uses very thin plates and is designed for applications where there is a demand for a relatively high current over short periods, usually less than 30 minutes in duration. The applications can have frequent or infrequent discharges. The range is typically used in starting and power backup applications.

M Range

The M range is designed for applications where the batteries are usually required to sustain electrical loads for between 30 minutes to 3 hours or for "mixed" loads which involve a mixture of high and low discharge rates. The applications

can have frequent or infrequent discharges. The range is typically used in power backup applications.

L Range

The L range has the thickest plates and is designed for applications where the battery is required to provide a reliable source of energy over relatively long discharge periods. Normally, the current is relatively low in comparison with the total stored energy and the discharges are generally infrequent. Typical uses are power backup and bulk energy storage.

Performance 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 Saft supplies in this publication has both the fully charged data to IEC 623 and the fully charged data after prolonged float charge, which 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.

When calculating for deep discharges (0.65 V and 0.85 V) it is not necessary to take this effect into account.

Terminal seal

This is mechanically clipped and provides an excellent seal. This minimizes carbonation deposits.

Flame arresting vent

Plate group bus

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

Protective cover

Prevents dust accumulation and minimizes maintenance. Reduces handling and environmental risks.

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 tab

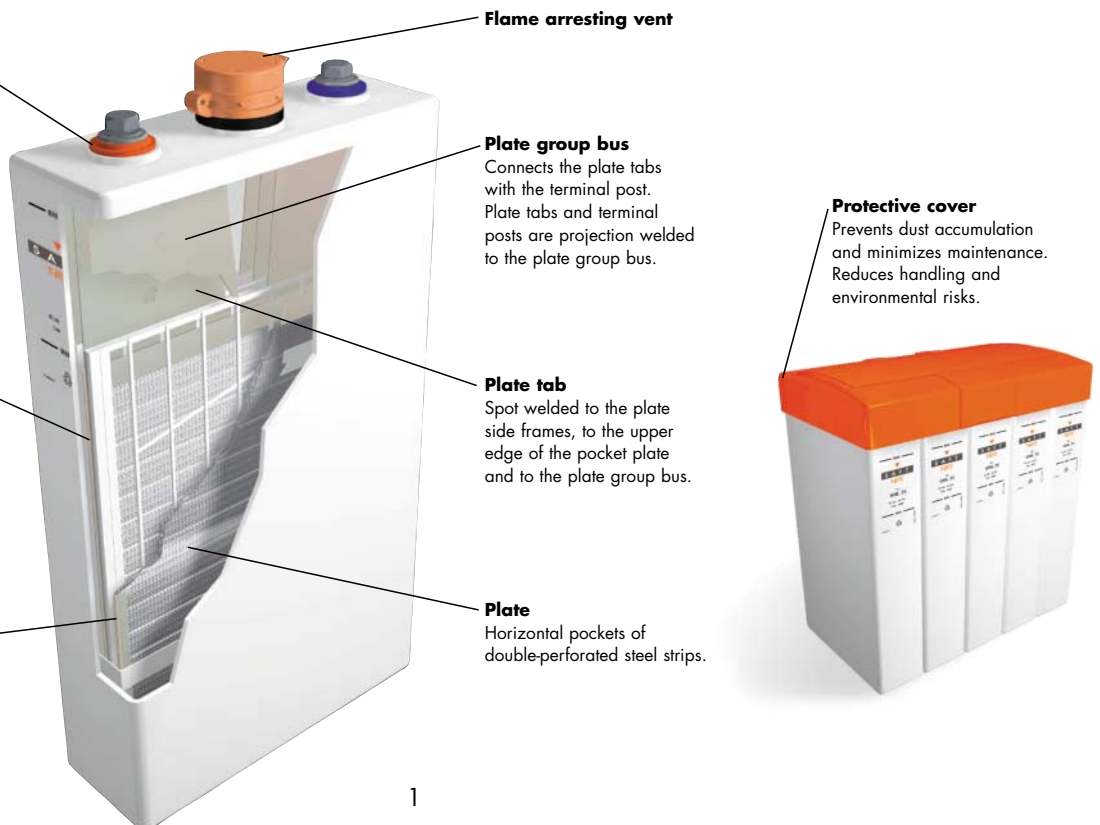
Spot welded to the plate side frames, to the upper edge of the pocket plate and to the plate group bus.

Plate frame

Seals the plate pockets and serves as a current collector.

Plate

Horizontal pockets of double-perforated steel strips.



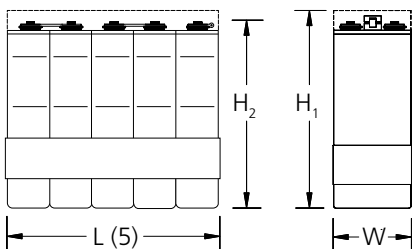
L Range

Cell dimensions and internal resistance

L type cells are normally supplied as single cells, taped together into blocks or assembled in steel crates.

Cell type	Capacity at the 5hr rate	Volume of liquid electrolyte above plates	Weight per cell	Overall height (with protective cover)	Overall height (without protective cover)	Width	Length per cell	Maximum number of cells as taped block	Internal resistance
	(Ah)			(cc)	(kg)		H ₁ (mm)		
SNL 10	10	146	1.64	282	275	121	42	5	15.0
SNL 15	15	146	1.69	282	275	121	42	5	10.0
SNL 21	21	143	1.86	282	275	121	42	5	7.14
SNL 30	30	143	1.96	282	275	121	42	5	5.00
SNL 38	38	238	3.00	282	275	121	66	5	3.95
SNL 45	45	238	3.00	282	275	121	66	5	3.33
SNL 59	59	235	3.26	282	275	121	66	5	2.54
SNL 70	70	559	5.96	373	358	192	68	3	1.78
SNL 85	85	552	6.64	373	358	192	68	3	1.45
SNL 105	105	552	6.64	373	358	192	68	3	1.17
SNL 135	135	546	7.23	373	358	192	68	2	0.91
SNL 170	170	771	9.56	373	358	192	93	2	0.72
SNL 205	205	765	10.2	373	358	192	93	-	0.60
SNL 220	220	771	11.3	429	414	192	93	-	0.65
SNL 260	260	765	12.1	429	414	192	93	-	0.55
SNL 310	310	1020	15.5	429	414	192	122	-	0.46
SNL 355	355	1015	16.2	429	414	192	122	-	0.40

▲ Taped block length = cell length x no. of cells + 2 mm



*add 2 mm to the width when calculating taped cell blocks.

Cell performance L range

Final voltage: 1.00 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C _s Ah	Hours						Minutes							Seconds		
		10	8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNL 10	10	1.02	1.26	2.00	3.18	4.50	5.59	7.00	9.20	10.2	10.8	11.7	13.1	16.1	17.2	20.3	22.8
SNL 15	15	1.52	1.89	3.00	4.77	6.75	8.38	10.5	13.8	15.3	16.2	17.5	19.7	24.1	25.7	30.4	34.2
SNL 21	21	2.13	2.65	4.20	6.68	9.45	11.7	14.7	19.3	21.4	22.7	24.5	27.6	33.8	36.0	42.6	47.8
SNL 30	30	3.05	3.79	6.00	9.55	13.5	16.8	21.0	27.6	30.6	32.4	35.0	39.4	48.2	51.5	60.9	68.3
SNL 38	38	3.86	4.80	7.60	12.1	17.1	21.2	26.6	35.0	38.8	41.0	44.3	49.9	61.1	65.2	77.1	86.6
SNL 45	45	4.57	5.68	9.00	14.3	20.3	25.2	31.5	41.4	45.9	48.5	52.5	59.1	72.3	77.2	91.3	103
SNL 59	59	6.00	7.45	11.8	18.8	26.6	33.0	41.3	54.3	60.2	63.6	68.8	77.5	94.9	101	120	134
SNL 70	70	7.11	8.84	14.0	22.7	31.5	41.2	53.9	69.3	79.1	85.4	95.2	110	141	153	172	186
SNL 85	85	8.64	10.7	17.0	27.5	38.3	50.0	65.4	84.2	96.0	104	116	133	172	186	208	225
SNL 105	105	10.7	13.3	21.0	34.0	48.8	61.7	80.8	104	119	128	143	165	212	230	257	279
SNL 135	135	13.7	17.0	27.0	43.7	62.8	79.4	104	134	153	165	184	212	273	295	331	358
SNL 170	170	17.3	21.5	34.0	55.1	79.0	99.9	131	168	192	207	231	267	343	372	417	451
SNL 205	205	20.8	25.9	41.0	66.4	95.3	121	158	203	232	250	279	322	414	449	502	544
SNL 220	220	22.4	27.8	44.0	71.1	102	129	165	213	244	264	293	336	433	469	528	546
SNL 260	260	26.4	32.8	52.0	84.0	121	152	195	252	289	312	346	398	512	554	624	645
SNL 310	310	31.5	39.1	62.0	100	144	182	233	301	344	372	412	474	610	661	743	769
SNL 355	355	36.1	44.8	71.0	115	165	208	266	344	394	426	472	543	699	757	851	881

Available amperes for fully charged cells after prolonged float charge

Cell type	C _s Ah	Hours						Minutes							Seconds		
		10	8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNL 10	10	1.02	1.26	2.00	3.18	4.28	5.03	6.09	7.64	8.37	8.74	9.33	10.5	12.7	13.6	16.0	18.0
SNL 15	15	1.52	1.89	3.00	4.77	6.41	7.55	9.13	11.5	12.6	13.1	14.0	15.8	19.1	20.3	24.0	27.0
SNL 21	21	2.13	2.65	4.20	6.68	8.98	10.6	12.8	16.0	17.6	18.3	19.6	22.1	26.7	28.5	33.7	37.8
SNL 30	30	3.05	3.79	6.00	9.55	12.8	15.1	18.3	22.9	25.1	26.2	28.0	31.5	38.1	40.7	48.1	54.0
SNL 38	38	3.86	4.80	7.60	12.1	16.2	19.1	23.1	29.0	31.8	33.2	35.5	39.9	48.3	51.5	60.9	68.4
SNL 45	45	4.57	5.68	9.00	14.3	19.2	22.6	27.4	34.4	37.7	39.3	42.0	47.3	57.2	61.0	72.1	81.0
SNL 59	59	6.00	7.45	11.8	18.8	25.2	29.7	35.9	45.1	49.4	51.6	55.1	62.0	74.9	79.9	94.5	106
SNL 70	70	7.11	8.84	14.0	22.7	29.9	37.0	46.9	57.5	64.9	69.1	76.2	87.9	112	121	136	147
SNL 85	85	8.64	10.7	17.0	27.5	36.3	45.0	56.9	69.9	78.8	84.0	92.5	107	136	147	165	178
SNL 105	105	10.7	13.3	21.0	34.0	46.4	55.6	70.3	86.3	97.3	104	114	132	168	182	203	220
SNL 135	135	13.7	17.0	27.0	43.7	59.6	71.4	90	111	125	133	147	170	215	233	261	283
SNL 170	170	17.3	21.5	34.0	55.1	75.1	89.9	114	140	158	168	185	214	271	294	329	356
SNL 205	205	20.8	25.9	41.0	66.4	90.5	108	137	168	190	203	223	257	327	354	397	430
SNL 220	220	22.4	27.8	44.0	71.1	97.0	116	144	177	200	214	234	269	342	371	417	431
SNL 260	260	26.4	32.8	52.0	84.0	115	137	170	209	237	253	277	318	404	438	493	510
SNL 310	310	31.5	39.1	62.0	100	137	164	202	250	282	301	330	379	482	522	587	608
SNL 355	355	36.1	44.8	71.0	115	156	187	232	286	323	345	378	434	552	598	673	696

Cell performance L range

Final voltage: 1.05 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours					Minutes							Seconds			
		10	8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNL 10	10	1.01	1.25	1.98	3.12	4.35	5.31	6.59	8.37	9.03	9.42	10.0	11.0	13.6	14.7	17.4	20.1
SNL 15	15	1.51	1.88	2.97	4.68	6.53	7.96	9.88	12.6	13.6	14.1	14.9	16.6	20.4	22.0	26.1	30.2
SNL 21	21	2.11	2.63	4.16	6.55	9.14	11.1	13.8	17.6	19.0	19.8	20.9	23.2	28.6	30.8	36.5	42.3
SNL 30	30	3.02	3.75	5.94	9.35	13.1	15.9	19.8	25.1	27.1	28.2	29.9	33.1	40.9	44.0	52.2	60.4
SNL 38	38	3.82	4.75	7.52	11.8	16.5	20.2	25.0	31.8	34.3	35.8	37.8	42.0	51.8	55.7	66.1	76.5
SNL 45	45	4.53	5.63	8.91	14.0	19.6	23.9	29.6	37.7	40.7	42.4	44.8	49.7	61.3	66.0	78.3	90.5
SNL 59	59	5.94	7.38	11.7	18.4	25.7	31.3	38.9	49.4	53.3	55.6	58.7	65.2	80.4	86.5	103	119
SNL 70	70	7.04	8.75	13.9	22.3	31.6	39.3	48.3	61.6	69.3	75.6	83.3	96.6	124	134	146	162
SNL 85	85	8.55	10.6	16.8	27.0	38.3	47.7	58.7	74.8	84.2	91.8	101	117	150	163	177	196
SNL 105	105	10.6	13.1	20.8	33.4	47.4	58.9	72.5	92.4	104	113	125	145	186	202	219	242
SNL 135	135	13.6	16.9	26.7	42.9	60.9	75.8	93.2	119	134	146	161	186	239	259	282	312
SNL 170	170	17.1	21.3	33.7	54.1	76.7	95.4	117	150	168	184	202	234	301	326	355	393
SNL 205	205	20.6	25.6	40.6	65.2	92.5	115	142	180	203	221	244	283	363	393	428	473
SNL 220	220	22.1	27.5	43.6	70.0	99.0	123	150	189	214	231	257	297	378	409	457	487
SNL 260	260	26.2	32.5	51.5	82.7	117	145	177	224	252	273	304	351	447	483	541	575
SNL 310	310	31.2	38.8	61.4	98.6	140	173	211	267	301	325	363	419	533	576	644	686
SNL 355	355	35.7	44.4	70.3	113	160	198	241	306	345	373	415	480	610	660	738	785

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours					Minutes							Seconds			
		10	8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNL 10	10	1.01	1.25	1.98	2.84	3.74	4.46	5.34	6.53	6.96	7.16	7.56	8.29	10.1	10.9	12.9	14.9
SNL 15	15	1.51	1.88	2.97	4.26	5.62	6.68	8.00	9.79	10.4	10.7	11.3	12.4	15.1	16.3	19.3	22.3
SNL 21	21	2.11	2.63	4.16	5.96	7.86	9.36	11.2	13.7	14.6	15.0	15.9	17.4	21.2	22.8	27.0	31.3
SNL 30	30	3.02	3.75	5.94	8.51	11.2	13.4	16.0	19.6	20.9	21.5	22.7	24.9	30.2	32.6	38.6	44.7
SNL 38	38	3.82	4.75	7.52	10.8	14.2	16.9	20.3	24.8	26.4	27.2	28.7	31.5	38.3	41.2	48.9	56.6
SNL 45	45	4.53	5.63	8.91	12.8	16.8	20.1	24.0	29.4	31.3	32.2	34.0	37.3	45.4	48.8	57.9	67.0
SNL 59	59	5.94	7.38	11.7	16.7	22.1	26.3	31.5	38.5	41.0	42.2	44.6	48.9	59.5	64.0	75.9	87.8
SNL 70	70	7.04	8.75	13.9	20.3	27.2	33.0	39.2	48.1	53.4	57.5	63.3	72.4	91.7	99.4	108	120
SNL 85	85	8.55	10.6	16.8	24.6	33.0	40.1	47.5	58.4	64.8	69.8	76.9	87.9	111	121	131	145
SNL 105	105	10.6	13.1	20.8	30.4	40.7	49.5	58.7	72.1	80.0	86.2	95.0	109	138	149	162	179
SNL 135	135	13.6	16.9	26.7	39.1	52.4	63.6	75.5	92.7	103	111	122	140	177	192	209	231
SNL 170	170	17.1	21.3	33.7	49.2	65.9	80.1	95.1	117	130	140	154	176	223	241	263	291
SNL 205	205	20.6	25.6	40.6	59.3	79.5	96.6	115	141	156	168	185	212	268	291	317	350
SNL 220	220	22.1	27.5	43.6	63.7	85.1	103	121	148	164	175	196	223	280	303	338	360
SNL 260	260	26.2	32.5	51.5	75.2	101	122	143	175	194	207	231	264	331	358	400	426
SNL 310	310	31.2	38.8	61.4	89.7	120	145	171	208	232	247	276	314	394	426	477	508
SNL 355	355	35.7	44.4	70.3	103	137	166	196	238	265	283	316	360	451	488	546	581

Cell performance L range

Final voltage: 1.10 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours					Minutes							Seconds			
		10	8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNL 10	10	1.01	1.23	1.94	3.06	4.20	5.10	6.05	7.11	7.69	8.00	8.47	9.21	11.1	12.0	14.3	16.1
SNL 15	15	1.52	1.84	2.91	4.59	6.30	7.65	9.08	10.7	11.5	12.0	12.7	13.8	16.6	18.1	21.5	24.1
SNL 21	21	2.12	2.57	4.08	6.43	8.82	10.7	12.7	14.9	16.1	16.8	17.8	19.3	23.3	25.3	30.0	33.8
SNL 30	30	3.02	3.68	5.83	9.18	12.6	15.3	18.2	21.3	23.1	24.0	25.4	27.6	33.3	36.1	42.9	48.2
SNL 38	38	3.83	4.66	7.38	11.6	16.0	19.4	23.0	27.0	29.2	30.4	32.2	35.0	42.2	45.8	54.4	61.1
SNL 45	45	4.54	6.00	8.74	13.8	18.9	22.9	27.2	32.0	34.6	36.0	38.1	41.4	49.9	54.2	64.4	72.3
SNL 59	59	5.94	7.23	11.5	18.1	24.8	30.1	35.7	41.9	45.3	47.2	50.0	54.3	65.5	71.1	84.4	94.9
SNL 70	70	7.05	8.58	13.6	21.6	29.9	35.6	42.0	52.6	59.5	63.7	70.0	82.5	105	114	127	137
SNL 85	85	8.56	10.4	16.5	26.2	36.2	43.3	51.0	63.8	72.3	77.3	85.0	100	127	138	154	167
SNL 105	105	10.5	12.9	20.4	32.4	44.8	53.4	63.0	78.8	89.3	95.5	105	124	157	171	190	206
SNL 135	135	13.6	16.5	26.2	41.6	57.6	68.7	81.0	101	115	123	135	159	202	220	245	265
SNL 170	170	17.2	20.8	33.0	52.4	72.5	86.5	102	128	145	155	170	200	255	277	308	333
SNL 205	205	20.6	25.1	39.8	63.2	87.4	104	123	154	174	187	205	242	307	334	371	402
SNL 220	220	22.1	27.0	42.7	67.8	93.2	110	130	163	182	196	216	255	326	350	378	383
SNL 260	260	26.2	31.9	50.5	80.1	110	131	153	192	216	232	255	302	385	413	447	452
SNL 310	310	31.3	38.0	60.2	95.5	131	156	183	229	257	276	304	360	459	493	533	539
SNL 355	355	35.8	43.5	68.9	109	150	178	209	263	294	316	348	412	526	564	610	617

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours					Minutes							Seconds			
		10	8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNL 10	10	0.96	1.19	1.75	2.54	3.36	3.98	4.60	5.19	5.61	5.76	6.02	6.45	7.77	8.43	10.0	11.3
SNL 15	15	1.44	1.78	2.62	3.81	5.04	5.97	6.90	7.78	8.42	8.64	9.03	9.67	11.7	12.7	15.0	16.9
SNL 21	21	2.01	2.50	3.67	5.34	7.06	8.35	9.66	10.9	11.8	12.1	12.6	13.5	16.3	17.7	21.0	23.6
SNL 30	30	2.87	3.57	5.24	7.62	10.1	11.9	13.8	15.6	16.8	17.3	18.1	19.3	23.3	25.3	30.0	33.8
SNL 38	38	3.64	4.52	6.64	9.65	12.8	15.1	17.5	19.7	21.3	21.9	22.9	24.5	29.5	32.0	38.1	42.8
SNL 45	45	4.31	5.35	7.86	11.4	15.1	17.9	20.7	23.3	25.2	25.9	27.1	29.0	35.0	38.0	45.1	50.6
SNL 59	59	5.64	7.01	10.3	15.0	19.8	23.5	27.1	30.6	33.1	34.0	35.5	38.0	45.8	49.8	59.1	66.4
SNL 70	70	6.70	8.32	12.2	17.9	23.9	27.8	31.9	38.4	43.5	45.9	49.7	57.8	73.5	79.8	88.8	96.1
SNL 85	85	8.13	10.1	14.9	21.7	29.0	33.7	38.8	46.6	52.8	55.7	60.4	70.2	89.2	96.9	108	117
SNL 105	105	10.0	12.5	18.3	26.9	35.8	41.7	47.9	57.5	65.2	68.8	74.6	86.7	110	120	133	144
SNL 135	135	12.9	16.0	23.6	34.5	46.1	53.6	61.5	74.0	83.8	88.4	95.9	111	142	154	171	185
SNL 170	170	16.3	20.2	29.7	43.5	58.0	67.5	77.5	93.2	106	111	121	140	178	194	216	233
SNL 205	205	19.6	24.4	35.8	52.4	69.9	81.4	93.5	112	127	134	146	169	215	234	260	281
SNL 220	220	21.0	26.2	38.4	56.3	74.6	86.1	98.6	119	133	141	153	179	228	245	265	268
SNL 260	260	24.9	30.9	45.4	66.5	88.1	102	117	140	157	167	181	211	270	289	313	317
SNL 310	310	29.7	36.9	54.2	79.3	105	121	139	167	188	199	216	252	321	345	373	377
SNL 355	355	34.0	42.2	62.0	90.8	120	139	159	192	215	228	247	288	368	395	427	432

Cell performance L range

Final voltage: 1.14 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours					Minutes							Seconds			
		10	8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNL 10	10	0.97	1.18	1.87	2.97	3.33	3.91	4.58	5.56	5.95	6.24	6.58	7.47	9.12	10.0	12.0	13.4
SNL 15	15	1.45	1.77	2.80	4.46	5.00	5.87	6.87	8.35	8.92	9.36	9.87	11.2	13.7	15.0	17.9	20.1
SNL 21	21	2.03	2.48	3.93	6.24	7.00	8.22	9.62	11.7	12.5	13.1	13.8	15.7	19.1	21.0	25.1	28.2
SNL 30	30	2.90	3.54	5.61	8.92	10.0	11.7	13.7	16.7	17.8	18.7	19.7	22.4	27.3	29.9	35.9	40.3
SNL 38	38	3.69	4.48	7.10	11.3	12.7	14.9	17.4	21.1	22.6	23.7	25.0	28.4	34.6	37.9	45.5	51.0
SNL 45	45	4.37	5.31	8.41	13.4	15.0	17.6	20.6	25.0	26.8	28.1	29.6	33.6	41.0	44.9	53.8	60.4
SNL 59	59	5.72	6.96	11.0	17.5	19.7	23.1	27.0	32.8	35.1	36.8	38.8	44.1	53.8	58.9	70.6	79.2
SNL 70	70	6.78	8.25	13.1	20.8	26.9	30.8	35.7	44.8	50.4	54.6	60.2	70.0	91.5	98.6	106	119
SNL 85	85	8.24	10.0	15.9	25.3	32.6	37.4	43.4	54.4	61.2	66.3	73.1	85.0	111	120	129	145
SNL 105	105	10.2	12.4	19.6	31.2	40.3	46.2	53.6	67.2	75.5	81.9	90.3	105	137	148	160	179
SNL 135	135	13.1	15.9	25.2	40.1	51.8	59.4	68.9	86.4	97.1	105	116	135	176	190	205	230
SNL 170	170	16.5	20.0	31.8	50.5	65.3	74.8	86.7	109	122	133	146	170	222	239	258	289
SNL 205	205	19.9	24.2	38.3	60.9	78.7	90.2	105	131	147	160	176	205	268	289	312	349
SNL 220	220	21.3	25.9	41.1	65.4	83.7	95.7	112	139	156	167	185	216	280	304	325	330
SNL 260	260	25.2	30.7	48.6	77.3	98.9	113	133	164	185	198	218	255	330	359	385	390
SNL 310	310	30.0	36.6	57.9	92.1	118	135	158	195	220	236	261	304	394	428	459	465
SNL 355	355	34.4	41.9	66.4	105	135	154	181	224	252	270	298	348	451	490	525	533

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours					Minutes							Seconds			
		10	8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNL 10	10	0.90	1.12	1.51	2.26	2.47	2.86	3.25	3.78	4.05	4.18	4.34	4.86	5.93	6.49	7.78	8.72
SNL 15	15	1.35	1.68	2.27	3.39	3.70	4.28	4.88	5.68	6.07	6.27	6.51	7.29	8.89	9.73	11.7	13.1
SNL 21	21	1.89	2.35	3.18	4.74	5.18	6.00	6.83	7.95	8.49	8.78	9.12	10.2	12.4	13.6	16.3	18.3
SNL 30	30	2.70	3.36	4.54	6.78	7.40	8.57	9.76	11.4	12.1	12.5	13.0	14.6	17.8	19.5	23.3	26.2
SNL 38	38	3.43	4.26	5.75	8.58	9.37	10.9	12.4	14.4	15.4	15.9	16.5	18.5	22.5	24.7	29.5	33.2
SNL 45	45	4.06	5.04	6.81	10.2	11.1	12.9	14.6	17.0	18.2	18.8	19.5	21.9	26.7	29.2	35.0	39.3
SNL 59	59	5.32	6.61	8.93	13.3	14.5	16.9	19.2	22.3	23.9	24.7	25.6	28.7	35.0	38.3	45.9	51.5
SNL 70	70	6.31	7.84	10.6	15.8	19.9	22.5	25.4	30.5	34.2	36.6	39.7	45.5	59.5	64.1	69.1	77.4
SNL 85	85	7.66	9.52	12.9	19.2	24.1	27.3	30.8	37.0	41.6	44.4	48.2	55.3	72.2	77.8	84.0	94.0
SNL 105	105	9.47	11.8	15.9	23.7	29.8	33.7	38.0	45.7	51.4	54.9	59.6	68.3	89.2	96.1	104	116
SNL 135	135	12.2	15.1	20.4	30.5	38.3	43.4	48.9	58.8	66.0	70.6	76.6	87.8	115	124	133	149
SNL 170	170	15.3	19.0	25.7	38.4	48.3	54.6	61.6	74.0	83.2	88.8	96.5	111	144	156	168	188
SNL 205	205	18.5	23.0	31.0	46.3	58.2	65.9	74.3	89.2	100	107	116	133	174	188	203	227
SNL 220	220	19.8	24.6	33.3	49.7	61.9	69.9	79.7	94.2	106	112	122	140	182	198	212	215
SNL 260	260	23.4	29.1	39.4	58.7	73.2	82.6	94.2	111	126	132	144	166	215	233	250	254
SNL 310	310	27.9	34.7	46.9	70.0	87.2	98.5	112	133	150	158	172	198	256	278	298	303
SNL 355	355	32.0	39.8	53.7	80.2	99.9	113	129	152	171	181	197	226	293	319	341	346

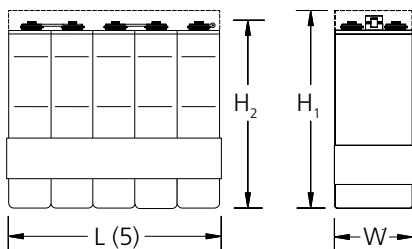
M Range

Cell dimensions and internal resistance

M type cells are normally supplied as single cells, taped together into blocks or assembled in steel crates.

Cell type	Capacity at the 5hr rate (Ah)	Volume of liquid electrolyte above plates (cc)	Weight per cell (kg)	Overall height (with protective cover) H ₁ (mm)	Overall height (without protective cover) H ₂ (mm)	Width W* (mm)	Length per cell L (mm)	Maximum number of cells as taped block ▲	Internal resistance (mOhm)
SNM 9	9	146	1.64	282	275	121	42	5	6.89
SNM 14	14	146	1.69	282	275	121	42	5	4.43
SNM 22	22	143	1.91	282	275	121	42	5	2.82
SNM 31	31	140	2.10	282	275	121	42	5	2.00
SNM 39	39	235	3.07	282	275	121	66	5	1.59
SNM 47	47	232	3.28	282	275	121	66	5	1.32
SNM 55	55	230	3.47	282	275	121	66	5	1.13
SNM 70	70	552	6.26	373	358	192	68	3	1.11
SNM 90	90	546	6.56	373	358	192	68	3	0.87
SNM 110	110	539	7.22	373	358	192	68	2	0.71
SNM 130	130	532	7.68	373	358	192	68	2	0.60
SNM 145	145	758	9.86	373	358	192	93	-	0.54
SNM 165	165	751	10.3	373	358	192	93	-	0.47
SNM 185	185	744	10.7	373	358	192	93	-	0.42
SNM 215	215	751	12.3	429	414	192	93	-	0.40
SNM 240	240	744	12.8	429	414	192	93	-	0.36
SNM 285	285	1005	16.2	429	414	192	122	-	0.30
SNM 310	310	996	16.7	429	414	192	122	-	0.28
SNM 335	335	989	17.3	429	414	192	122	-	0.26

▲ Taped block length = cell length x no. of cells + 2 mm



*add 2 mm to the width when calculating taped cell blocks.

Cell performance M range

Final voltage: 1.00 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours				Minutes								Seconds		
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNM 9	9	1.14	1.80	2.94	4.29	5.55	7.56	10.8	12.7	14.1	16.3	20.3	30.0	34.4	43.3	47.6
SNM 14	14	1.77	2.80	4.58	6.68	8.63	11.8	16.8	19.7	22.0	25.4	31.5	46.7	53.4	67.3	74.1
SNM 22	22	2.78	4.40	7.19	10.5	13.5	18.7	26.8	31.5	34.8	39.9	48.7	69.4	78.0	94.0	99.5
SNM 31	31	3.91	6.20	10.1	14.8	19.0	26.4	37.8	44.3	49.0	56.2	68.6	97.8	110	132	140
SNM 39	39	4.92	7.80	12.8	18.6	23.9	33.2	47.6	55.8	61.6	70.7	86.3	123	138	167	176
SNM 47	47	5.93	9.40	15.4	22.4	28.8	40.0	57.3	67.2	74.2	85.1	104	148	167	201	213
SNM 55	55	6.94	11.0	18.0	26.2	33.7	46.8	67.1	78.7	86.9	99.6	122	174	195	235	249
SNM 70	70	8.84	14.0	22.9	33.5	43.4	60.2	91.0	106	118	136	166	234	266	324	345
SNM 90	90	11.4	18.0	29.4	43.0	55.8	77.4	117	137	152	175	213	301	342	417	443
SNM 110	110	13.9	22.0	36.0	52.6	68.2	94.6	143	167	186	214	261	368	418	509	542
SNM 130	130	16.4	26.0	42.5	62.1	80.6	112	169	198	220	253	308	435	494	602	640
SNM 145	145	18.3	29.0	47.4	69.3	89.9	125	189	220	245	282	344	485	551	671	714
SNM 165	165	20.8	33.0	54.0	78.9	102	142	215	251	279	321	391	552	627	764	813
SNM 185	185	23.4	37.0	60.5	88.4	115	159	241	281	313	360	438	619	703	856	911
SNM 215	215	27.1	43.0	70.3	103	133	185	277	325	359	410	497	691	773	927	977
SNM 240	240	30.3	48.0	78.5	115	149	206	310	362	401	458	554	772	863	1030	1090
SNM 285	285	36.0	57.0	93.2	136	177	245	368	430	476	544	658	916	1030	1230	1300
SNM 310	310	39.1	62.0	101	148	192	267	400	468	518	592	716	997	1120	1340	1410
SNM 335	335	42.3	67.0	110	160	208	288	432	506	559	639	774	1080	1210	1440	1520

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours				Minutes								Seconds		
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNM 9	9	1.14	1.80	2.94	4.29	5.16	6.58	8.86	10.4	11.4	13.0	16.2	24.0	27.5	34.6	38.1
SNM 14	14	1.77	2.80	4.58	6.68	8.02	10.2	13.8	16.2	17.8	20.3	25.2	37.3	42.7	53.8	59.3
SNM 22	22	2.78	4.40	7.19	10.5	12.5	16.3	22.0	25.8	28.2	31.9	38.9	55.5	62.4	75.2	79.6
SNM 31	31	3.91	6.20	10.1	14.8	17.7	22.9	31.0	36.4	39.7	44.9	54.9	78.2	87.9	106	112
SNM 39	39	4.92	7.80	12.8	18.6	22.2	28.9	39.0	45.8	49.9	56.5	69.0	98.4	111	133	141
SNM 47	47	5.93	9.40	15.4	22.4	26.8	34.8	47.0	55.1	60.1	68.1	83.2	119	133	161	170
SNM 55	55	6.94	11.0	18.0	26.2	31.4	40.7	55.0	64.5	70.4	79.7	97.3	139	156	188	199
SNM 70	70	8.84	14.0	22.9	33.5	40.4	52.4	74.6	87.2	95.8	109	133	187	213	259	276
SNM 90	90	11.4	18.0	29.4	43.0	51.9	67.3	96.0	112	123	140	171	241	274	333	355
SNM 110	110	13.9	22.0	36.0	52.6	63.4	82.3	117	137	151	171	209	294	335	407	433
SNM 130	130	16.4	26.0	42.5	62.1	75.0	97.2	139	162	178	202	246	348	395	481	512
SNM 145	145	18.3	29.0	47.4	69.3	83.6	108	155	181	198	226	275	388	441	537	571
SNM 165	165	20.8	33.0	54.0	78.9	95.1	123	176	206	226	257	313	441	502	611	650
SNM 185	185	23.4	37.0	60.5	88.4	107	138	197	231	253	288	351	495	563	685	729
SNM 215	215	27.1	43.0	70.3	103	124	161	227	266	291	328	397	553	619	741	782
SNM 240	240	30.3	48.0	78.5	115	138	180	254	297	325	366	443	617	691	828	873
SNM 285	285	36.0	57.0	93.2	136	164	213	302	353	386	435	527	733	820	983	1040
SNM 310	310	39.1	62.0	101	148	179	232	328	384	419	473	573	797	892	1070	1130
SNM 335	335	42.3	67.0	110	160	193	251	354	415	453	511	619	862	964	1160	1220

Cell performance M range

Final voltage: 1.05 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours				Minutes							Seconds			
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNM 9	9	1.13	1.78	2.90	4.18	5.29	7.02	9.63	11.3	12.6	14.5	17.9	26.5	30.4	37.5	40.5
SNM 14	14	1.75	2.77	4.51	6.50	8.23	10.9	15.0	17.6	19.6	22.5	27.8	41.2	47.3	58.3	63.1
SNM 22	22	2.75	4.36	7.08	10.3	13.0	17.4	24.0	28.0	31.0	35.4	42.9	60.4	68.5	81.5	87.6
SNM 31	31	3.88	6.14	10.0	14.4	18.4	24.5	33.8	39.4	43.7	49.9	60.4	85.2	96.6	115	124
SNM 39	39	4.88	7.72	12.6	18.2	23.1	30.8	42.5	49.6	55.0	62.8	76.0	107	121	144	155
SNM 47	47	5.88	9.31	15.1	21.9	27.8	37.1	51.3	59.7	66.3	75.7	91.6	129	146	174	187
SNM 55	55	6.88	10.9	17.7	25.6	32.6	43.4	60.0	69.9	77.6	88.6	107	151	171	204	219
SNM 70	70	8.75	13.9	22.6	32.8	42.0	57.4	81.2	94.5	104	120	146	206	234	282	303
SNM 90	90	11.3	17.8	29.1	42.1	54.0	73.8	104	121	134	155	188	265	301	363	390
SNM 110	110	13.8	21.8	35.5	51.5	66.0	90.2	128	148	164	189	230	324	368	444	476
SNM 130	130	16.3	25.7	42.0	60.8	78.0	107	151	175	194	224	272	383	435	524	563
SNM 145	145	18.1	28.7	46.8	67.9	87.0	119	168	196	216	250	303	428	485	585	628
SNM 165	165	20.6	32.7	53.3	77.2	99.0	135	191	223	246	284	345	487	552	665	714
SNM 185	185	23.1	36.6	59.8	86.6	111	152	215	250	276	318	387	546	619	746	801
SNM 215	215	26.9	42.6	69.4	101	129	176	247	288	318	361	434	602	678	796	860
SNM 240	240	30.0	47.5	77.5	112	144	197	276	322	355	403	485	672	757	889	960
SNM 285	285	35.6	56.4	92.1	133	171	234	328	382	422	479	576	798	899	1060	1140
SNM 310	310	38.8	61.4	100	145	186	254	357	415	459	521	626	868	978	1150	1240
SNM 335	335	41.9	66.3	108	157	201	275	385	449	496	563	677	938	1060	1240	1340

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours				Minutes							Seconds			
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNM 9	9	1.13	1.78	2.90	3.76	4.50	5.76	7.51	8.61	9.58	11.0	13.4	19.9	22.8	28.1	30.4
SNM 14	14	1.75	2.77	4.51	5.85	7.00	8.95	11.7	13.4	14.9	17.1	20.9	30.9	35.5	43.8	47.3
SNM 22	22	2.75	4.36	7.08	9.23	11.1	14.2	18.7	21.2	23.6	26.9	32.2	45.3	51.4	61.1	65.7
SNM 31	31	3.88	6.14	10.0	13.0	15.6	20.1	26.4	29.9	33.2	37.9	45.3	63.9	72.4	86.1	92.6
SNM 39	39	4.88	7.72	12.6	16.4	19.6	25.3	33.2	37.7	41.8	47.7	57.0	80.4	91.1	108	117
SNM 47	47	5.88	9.31	15.1	19.7	23.7	30.4	40.0	45.4	50.4	57.5	68.7	96.8	110	131	140
SNM 55	55	6.88	10.9	17.7	23.1	27.7	35.6	46.8	53.1	59.0	67.3	80.4	113	129	153	164
SNM 70	70	8.75	13.9	22.6	29.5	35.7	47.0	63.3	71.8	79.3	91.6	110	155	176	212	227
SNM 90	90	11.3	17.8	29.1	37.9	45.9	60.5	81.4	92.3	102	118	141	199	226	272	292
SNM 110	110	13.8	21.8	35.5	46.3	56.1	73.9	99.5	113	125	144	173	243	276	333	357
SNM 130	130	16.3	25.7	42.0	54.7	66.3	87.4	118	133	147	170	204	288	326	393	422
SNM 145	145	18.1	28.7	46.8	61.1	73.9	97.5	131	149	164	190	228	321	364	439	471
SNM 165	165	20.6	32.7	53.3	69.5	84.1	111	149	169	187	216	259	365	414	499	536
SNM 185	185	23.1	36.6	59.8	77.9	94.3	124	167	190	210	242	290	409	464	559	601
SNM 215	215	26.9	42.6	69.4	90.5	110	145	193	219	242	275	326	452	509	597	645
SNM 240	240	30.0	47.5	77.5	101	122	161	215	244	270	306	364	504	568	667	720
SNM 285	285	35.6	56.4	92.1	120	145	192	256	290	320	364	432	599	674	792	855
SNM 310	310	38.8	61.4	100	131	158	208	278	316	349	396	470	651	733	861	930
SNM 335	335	41.9	66.3	108	141	171	225	300	341	377	428	508	704	793	931	1010

Cell performance M range

Final voltage: 1.10 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours				Minutes								Seconds		
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNM 9	9	1.10	1.75	2.81	3.97	4.93	6.21	8.37	9.81	10.9	12.6	15.5	22.8	26.0	31.9	33.7
SNM 14	14	1.72	2.72	4.37	6.17	7.67	9.66	13.0	15.3	16.9	19.6	24.1	35.4	40.5	49.6	52.4
SNM 22	22	2.70	4.27	6.86	9.75	12.1	15.4	20.7	24.2	26.6	30.3	36.7	52.1	58.4	69.4	73.6
SNM 31	31	3.80	6.02	9.67	13.7	17.1	21.7	29.1	34.1	37.5	42.8	51.8	73.5	82.2	97.8	104
SNM 39	39	4.78	7.57	12.2	17.3	21.5	27.3	36.7	42.9	47.2	53.8	65.1	92.4	103	123	130
SNM 47	47	5.76	9.13	14.7	20.8	25.9	32.9	44.2	51.7	56.9	64.8	78.5	111	125	148	157
SNM 55	55	6.74	10.7	17.2	24.4	30.4	38.5	51.7	60.5	66.6	75.9	91.8	130	146	174	184
SNM 70	70	8.58	13.6	21.9	31.3	39.5	51.1	69.3	81.9	90.3	103	125	176	199	236	259
SNM 90	90	11.0	17.5	28.2	40.2	50.8	65.7	89.1	105	116	132	160	227	256	304	333
SNM 110	110	13.5	21.4	34.4	49.2	62.0	80.3	109	129	142	162	196	277	313	372	407
SNM 130	130	15.9	25.2	40.7	58.1	73.3	94.9	129	152	168	191	231	327	370	439	481
SNM 145	145	17.8	28.2	45.4	64.8	81.8	106	144	170	187	213	258	365	413	490	537
SNM 165	165	20.2	32.0	51.6	73.8	93.1	120	163	193	213	243	294	416	470	557	611
SNM 185	185	22.7	35.9	57.9	82.7	104	135	183	216	239	272	329	466	527	625	685
SNM 215	215	26.3	41.7	67.3	96.1	121	157	211	247	271	310	370	516	576	680	719
SNM 240	240	29.4	46.6	75.1	107	135	175	235	276	302	346	413	576	643	759	803
SNM 285	285	34.9	55.3	89.2	127	161	208	279	328	359	410	490	684	764	902	953
SNM 310	310	38.0	60.2	97.0	139	175	226	304	357	391	446	533	744	831	981	1040
SNM 335	335	41.1	65.0	105	150	189	245	328	385	422	482	576	804	898	1060	1120

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours				Minutes								Seconds		
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNM 9	9	1.10	1.75	2.61	3.33	3.95	4.78	6.20	7.16	7.85	8.95	11.0	16.2	18.5	22.7	23.9
SNM 14	14	1.72	2.72	4.06	5.19	6.14	7.44	9.64	11.1	12.2	13.9	17.1	25.2	28.7	35.2	37.2
SNM 22	22	2.70	4.27	6.38	8.19	9.71	11.9	15.3	17.7	19.2	21.5	26.1	37.0	41.4	49.3	52.2
SNM 31	31	3.80	6.02	9.00	11.5	13.7	16.7	21.6	24.9	27.0	30.4	36.7	52.2	58.4	69.4	73.6
SNM 39	39	4.78	7.57	11.3	14.5	17.2	21.0	27.1	31.3	34.0	38.2	46.2	65.6	73.4	87.4	92.6
SNM 47	47	5.76	9.13	13.6	17.5	20.8	25.3	32.7	37.7	41.0	46.0	55.7	79.1	88.5	105	112
SNM 55	55	6.74	10.7	16.0	20.5	24.3	29.6	38.3	44.2	47.9	53.9	65.2	92.5	104	123	131
SNM 70	70	8.58	13.6	20.4	26.3	31.6	39.3	51.3	59.8	65.0	73.1	88.4	125	142	168	184
SNM 90	90	11.0	17.5	26.2	33.8	40.6	50.6	65.9	76.8	83.6	94.0	114	161	182	216	237
SNM 110	110	13.5	21.4	32.0	41.3	49.6	61.8	80.6	93.9	102	115	139	197	223	264	289
SNM 130	130	15.9	25.2	37.8	48.8	58.7	73.1	95.2	111	121	136	164	232	263	312	342
SNM 145	145	17.8	28.2	42.2	54.4	65.4	81.5	106	124	135	151	183	259	293	348	381
SNM 165	165	20.2	32.0	48.0	62.0	74.5	92.7	121	141	153	172	208	295	334	396	434
SNM 185	185	22.7	35.9	53.9	69.5	83.5	104	136	158	172	193	234	331	374	444	486
SNM 215	215	26.3	41.7	62.6	80.7	97.0	121	156	180	195	220	263	366	409	483	511
SNM 240	240	29.4	46.6	69.9	90.1	108	135	174	201	218	245	293	409	457	539	570
SNM 285	285	34.9	55.3	83.0	107	129	160	207	239	259	291	348	486	542	640	677
SNM 310	310	38.0	60.2	90.2	116	140	174	225	260	281	317	379	528	590	697	736
SNM 335	335	41.1	65.0	97.5	126	151	188	243	281	304	343	409	571	637	753	795

Cell performance M range

Final voltage: 1.14 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours				Minutes							Seconds			
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNM 9	9	1.06	1.68	2.68	3.70	4.43	5.40	7.20	8.46	9.45	10.8	13.2	19.7	22.3	26.6	29.5
SNM 14	14	1.65	2.62	4.17	5.75	6.89	8.40	11.2	13.2	14.7	16.8	20.6	30.6	34.7	41.4	45.9
SNM 22	22	2.59	4.11	6.58	9.11	11.0	13.2	17.8	20.7	22.9	26.2	31.5	44.4	49.9	58.0	60.1
SNM 31	31	3.66	5.79	9.27	12.8	15.5	18.6	25.1	29.1	32.2	36.9	44.3	62.6	70.3	81.8	84.7
SNM 39	39	4.60	7.29	11.7	16.1	19.5	23.4	31.6	36.7	40.5	46.4	55.8	78.8	88.4	103	107
SNM 47	47	5.54	8.79	14.1	19.5	23.5	28.2	38.1	44.2	48.9	56.0	67.2	94.9	107	124	128
SNM 55	55	6.49	10.3	16.4	22.8	27.5	33.0	44.5	51.7	57.2	65.5	78.7	111	125	145	150
SNM 70	70	8.25	13.1	21.0	29.5	36.0	44.1	59.5	69.3	77.7	88.2	106	153	171	199	208
SNM 90	90	10.6	16.8	27.0	37.9	46.3	56.7	76.5	89.1	99.9	113	137	196	220	256	267
SNM 110	110	13.0	20.6	33.0	46.3	56.6	69.3	93.5	109	122	139	167	240	268	313	326
SNM 130	130	15.3	24.3	39.0	54.7	66.9	81.9	111	129	144	164	198	283	317	370	386
SNM 145	145	17.1	27.1	43.5	61.1	74.7	91.4	123	144	161	183	220	316	354	413	430
SNM 165	165	19.5	30.8	49.5	69.5	85.0	104	140	163	183	208	251	359	402	470	490
SNM 185	185	21.8	34.6	55.5	77.9	95.3	117	157	183	205	233	281	403	451	527	549
SNM 215	215	25.4	40.2	64.5	90.3	111	135	181	211	232	264	316	443	492	567	587
SNM 240	240	28.3	44.9	72.0	101	123	151	202	235	259	295	353	495	550	633	656
SNM 285	285	33.6	53.3	85.5	120	146	180	239	279	308	351	419	588	653	752	779
SNM 310	310	36.6	57.9	93.0	130	159	195	260	304	335	381	456	639	710	818	847
SNM 335	335	39.5	62.6	101	141	172	211	281	328	362	412	493	691	767	884	915

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours				Minutes							Seconds			
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNM 9	9	1.06	1.68	2.28	2.85	3.32	3.89	4.97	5.75	6.33	7.24	8.87	13.2	15.0	17.8	19.8
SNM 14	14	1.65	2.62	3.55	4.43	5.16	6.05	7.73	8.95	9.85	11.3	13.8	20.5	23.3	27.8	30.8
SNM 22	22	2.59	4.11	5.59	7.01	8.25	9.50	12.3	14.1	15.3	17.5	21.1	29.8	33.4	38.9	40.3
SNM 31	31	3.66	5.79	7.88	9.88	11.6	13.4	17.3	19.8	21.6	24.7	29.7	42.0	47.1	54.8	56.7
SNM 39	39	4.60	7.29	9.91	12.4	14.6	16.8	21.8	24.9	27.2	31.1	37.4	52.8	59.3	68.9	71.4
SNM 47	47	5.54	8.79	11.9	15.0	17.6	20.3	26.3	30.0	32.7	37.5	45.1	63.6	71.4	83.1	86.0
SNM 55	55	6.49	10.3	14.0	17.5	20.6	23.8	30.7	35.2	38.3	43.9	52.7	74.4	83.6	97.2	101
SNM 70	70	8.25	13.1	17.9	22.7	27.0	31.8	41.1	47.1	52.1	59.1	71.3	102	114	134	139
SNM 90	90	10.6	16.8	23.0	29.2	34.8	40.8	52.8	60.6	66.9	75.9	91.6	131	147	172	179
SNM 110	110	13.0	20.6	28.1	35.7	42.5	49.9	64.5	74.1	81.8	92.8	112	161	180	210	219
SNM 130	130	15.3	24.3	33.2	42.1	50.2	59.0	76.3	87.5	96.7	110	132	190	212	248	258
SNM 145	145	17.1	27.1	37.0	47.0	56.0	65.8	85.1	97.6	108	122	148	212	237	277	288
SNM 165	165	19.5	30.8	42.1	53.5	63.7	74.9	96.8	111	123	139	168	241	270	315	328
SNM 185	185	21.8	34.6	47.2	60.0	71.4	83.9	109	125	138	156	188	270	302	353	368
SNM 215	215	25.4	40.2	54.8	69.5	82.9	97.5	125	143	156	177	212	297	330	380	394
SNM 240	240	28.3	44.9	61.2	77.6	92.5	109	139	160	174	198	236	332	368	424	439
SNM 285	285	33.6	53.3	72.7	92.2	110	129	165	190	206	235	281	394	437	504	522
SNM 310	310	36.6	57.9	79.1	100	120	141	180	207	224	255	305	428	476	548	567
SNM 335	335	39.5	62.6	85.4	108	129	152	194	223	242	276	330	463	514	592	613

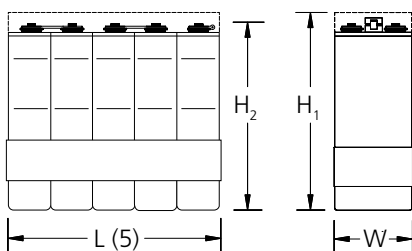
H Range

Cell dimensions and internal resistance

H type cells are normally supplied as single cells, taped together into blocks or assembled in steel crates.

Cell type	Capacity at the 5hr rate	Volume of liquid electrolyte above plates	Weight per cell	Overall height (with protective cover)	Overall height (without protective cover)	Width	Length per cell	Maximum number of cells as taped block	Internal resistance
	(Ah)			H ₁ (mm)	H ₂ (mm)		W* (mm)		
SNH 9	9	143	1.75	282	275	121	42	5	3.33
SNH 12	12	140	1.91	282	275	121	42	5	2.50
SNH 17	17	138	2.06	282	275	121	42	5	1.76
SNH 21	21	232	3.01	282	275	121	66	5	1.43
SNH 25	25	230	3.15	282	275	121	66	5	1.20
SNH 29	29	227	3.32	282	275	121	66	5	1.03
SNH 34	34	224	3.46	282	275	121	66	5	0.88
SNH 40	40	546	6.21	373	358	192	68	3	0.98
SNH 50	50	539	6.57	373	358	192	68	2	0.78
SNH 60	60	532	7.00	373	358	192	68	2	0.65
SNH 70	70	525	7.35	373	358	192	68	2	0.56
SNH 80	80	518	7.71	373	358	192	68	2	0.49
SNH 90	90	744	9.80	373	358	192	93	-	0.43
SNH 100	100	737	10.1	373	358	192	93	-	0.39
SNH 110	110	731	10.5	373	358	192	93	-	0.35
SNH 120	120	724	10.8	373	358	192	93	-	0.33
SNH 130	130	737	12.0	429	414	192	93	-	0.33
SNH 145	145	731	12.4	429	414	192	93	-	0.30
SNH 155	155	724	12.8	429	414	192	93	-	0.28
SNH 185	185	976	16.4	429	414	192	122	-	0.23
SNH 210	210	962	17.2	429	414	192	122	-	0.20

▲ Taped block length = cell length x no. of cells + 2 mm



*add 2 mm to the width when calculating taped cell blocks.

Cell performance H range

Final voltage: 1.00 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours				Minutes							Seconds			
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNH 9	9	1.14	1.80	2.96	4.39	5.78	8.46	15.4	20.4	23.7	28.2	35.9	55.6	62.9	78.9	84.1
SNH 12	12	1.52	2.40	3.95	5.86	7.70	11.3	20.5	27.2	31.7	37.6	47.8	74.1	83.9	105	112
SNH 17	17	2.15	3.40	5.59	8.30	10.9	16.0	29.1	38.5	44.9	53.3	67.7	105	119	149	159
SNH 21	21	2.65	4.20	6.91	10.2	13.5	19.7	35.9	47.6	55.4	65.8	83.7	130	147	184	196
SNH 25	25	3.16	5.00	8.22	12.2	16.0	23.5	42.7	56.7	66.0	78.4	99.6	154	175	219	234
SNH 29	29	3.66	5.80	9.54	14.2	18.6	27.3	49.6	65.8	76.5	90.9	116	179	203	254	271
SNH 34	34	4.29	6.80	11.2	16.6	21.8	32.0	58.1	77.1	89.7	107	135	210	238	298	318
SNH 40	40	5.05	8.00	13.2	19.5	25.7	37.6	68.4	92.8	109	129	165	245	282	354	388
SNH 50	50	6.31	10.0	16.4	24.4	32.1	47.0	85.5	116	136	161	206	307	352	442	485
SNH 60	60	7.58	12.0	19.7	29.3	38.5	56.4	103	139	163	194	247	368	423	531	583
SNH 70	70	8.84	14.0	23.0	34.2	44.9	65.8	120	162	190	226	288	429	493	619	680
SNH 80	80	10.1	16.0	26.3	39.0	51.3	75.2	137	186	217	258	329	491	563	708	777
SNH 90	90	11.4	18.0	29.6	43.9	57.8	84.6	154	209	245	290	370	552	634	796	874
SNH 100	100	12.6	20.0	32.9	48.8	64.2	94.0	171	232	272	323	412	613	704	885	971
SNH 110	110	13.9	22.0	36.2	53.7	70.6	103	188	255	299	355	453	675	775	973	1070
SNH 120	120	15.2	24.0	39.5	58.6	77.0	113	205	278	326	387	494	736	845	1060	1170
SNH 130	130	16.4	26.0	42.8	63.4	83.4	122	222	297	345	405	506	730	828	1010	1070
SNH 145	145	18.3	29.0	47.7	70.8	93.1	136	248	332	385	452	564	815	924	1120	1190
SNH 155	155	19.6	31.0	51.0	75.6	99.5	146	265	355	411	483	603	871	987	1200	1270
SNH 185	185	23.4	37.0	60.9	90.3	119	174	316	423	491	576	720	1040	1180	1430	1520
SNH 210	210	26.5	42.0	69.1	100	135	197	359	481	557	654	817	1180	1340	1630	1720

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours				Minutes							Seconds			
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNH 9	9	1.14	1.80	2.96	4.39	5.78	8.46	15.4	20.4	23.0	26.2	31.6	46.7	52.9	66.3	70.7
SNH 12	12	1.52	2.40	3.95	5.86	7.70	11.3	20.5	27.2	30.7	35.0	42.1	62.2	70.5	88.4	94.2
SNH 17	17	2.15	3.40	5.59	8.30	10.9	16.0	29.1	38.5	43.5	49.6	59.6	88.1	99.9	125	133
SNH 21	21	2.65	4.20	6.91	10.2	13.5	19.7	35.9	47.6	53.7	61.2	73.6	109	123	155	165
SNH 25	25	3.16	5.00	8.22	12.2	16.0	23.5	42.7	56.7	64.0	72.9	87.6	130	147	184	196
SNH 29	29	3.66	5.80	9.54	14.2	18.6	27.3	49.6	65.8	74.2	84.5	102	150	170	214	228
SNH 34	34	4.29	6.80	11.2	16.6	21.8	32.0	58.1	77.1	87.0	99.1	119	176	200	251	267
SNH 40	40	5.05	8.00	13.2	19.5	25.7	37.6	68.4	92.8	105	120	145	206	237	297	326
SNH 50	50	6.31	10.0	16.4	24.4	32.1	47.0	85.5	116	132	150	181	258	296	372	408
SNH 60	60	7.58	12.0	19.7	29.3	38.5	56.4	103	139	158	180	217	309	355	446	489
SNH 70	70	8.84	14.0	23.0	34.2	44.9	65.8	120	162	185	210	253	361	414	520	571
SNH 80	80	10.1	16.0	26.3	39.0	51.3	75.2	137	186	211	240	290	412	473	595	652
SNH 90	90	11.4	18.0	29.6	43.9	57.8	84.6	154	209	237	270	326	464	532	669	734
SNH 100	100	12.6	20.0	32.9	48.8	64.2	94.0	171	232	264	300	362	515	592	743	816
SNH 110	110	13.9	22.0	36.2	53.7	70.6	103	188	255	290	330	398	567	651	818	897
SNH 120	120	15.2	24.0	39.5	58.6	77.0	113	205	278	316	360	435	618	710	892	979
SNH 130	130	16.4	26.0	42.8	63.4	83.4	122	222	297	334	377	445	613	696	847	895
SNH 145	145	18.3	29.0	47.7	70.8	93.1	136	248	332	373	420	496	684	776	944	998
SNH 155	155	19.6	31.0	51.0	75.6	99.5	146	265	355	399	449	531	731	829	1010	1070
SNH 185	185	23.4	37.0	60.9	90.3	119	174	316	423	476	536	633	873	990	1210	1270
SNH 210	210	26.5	42.0	69.1	102	135	197	359	481	540	608	719	991	1120	1370	1450

Cell performance H range

Final voltage: 1.05 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours				Minutes								Seconds		
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNH 9	9	1.13	1.78	2.92	4.31	5.65	8.19	14.5	18.4	20.9	24.7	31.1	47.6	55.6	68.2	73.8
SNH 12	12	1.50	2.38	3.89	5.75	7.54	10.9	19.3	24.5	27.8	32.9	41.5	63.5	74.1	90.9	98.4
SNH 17	17	2.13	3.37	5.51	8.14	10.7	15.5	27.4	34.7	39.4	46.6	58.8	89.9	105	129	139
SNH 21	21	2.63	4.16	6.80	10.1	13.2	19.1	33.8	42.9	48.7	57.5	72.7	111	130	159	172
SNH 25	25	3.13	4.95	8.10	12.0	15.7	22.8	40.3	51.0	58.0	68.5	86.5	132	154	189	205
SNH 29	29	3.63	5.74	9.40	13.9	18.2	26.4	46.7	59.2	67.3	79.5	100	153	179	220	238
SNH 34	34	4.25	6.73	11.0	16.3	21.4	30.9	54.8	69.4	78.9	93.2	118	180	210	258	279
SNH 40	40	5.00	7.92	13.0	19.2	25.1	36.4	65.3	84.4	95.7	113	142	216	247	303	328
SNH 50	50	6.25	9.90	16.2	24.0	31.4	45.5	81.6	105	120	142	177	270	309	379	410
SNH 60	60	7.50	11.9	19.4	28.7	37.7	54.6	97.9	127	144	170	213	324	370	455	492
SNH 70	70	8.75	13.9	22.7	33.5	44.0	63.7	114	148	167	198	248	378	432	530	574
SNH 80	80	10.0	15.8	25.9	38.3	50.2	72.8	131	169	191	227	284	432	494	606	656
SNH 90	90	11.3	17.8	29.2	43.1	56.5	81.9	147	190	215	255	319	486	556	682	738
SNH 100	100	12.5	19.8	32.4	47.9	62.8	91.0	163	211	239	283	355	541	617	758	820
SNH 110	110	13.8	21.8	35.6	52.7	69.1	100	179	232	263	312	390	595	679	833	902
SNH 120	120	15.0	23.8	38.9	57.5	75.4	109	196	253	287	340	426	649	741	909	984
SNH 130	130	16.3	25.7	42.1	62.3	81.6	118	211	268	302	353	436	637	718	867	903
SNH 145	145	18.1	28.7	47.0	69.5	91.1	132	235	299	336	394	487	711	801	967	1010
SNH 155	155	19.4	30.7	50.2	74.2	97.3	141	251	320	360	421	520	760	856	1030	1080
SNH 185	185	23.1	36.6	59.9	88.6	116	168	300	381	429	503	621	907	1020	1230	1280
SNH 210	210	26.3	41.6	68.0	101	132	191	340	433	487	571	705	1030	1160	1400	1460

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours				Minutes								Seconds		
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNH 9	9	1.13	1.78	2.92	4.31	5.65	8.19	14.5	17.4	19.2	21.7	25.8	38.6	45.0	55.2	59.8
SNH 12	12	1.50	2.38	3.89	5.75	7.54	10.9	19.3	23.3	25.6	28.9	34.5	51.4	60.0	73.6	79.7
SNH 17	17	2.13	3.37	5.51	8.14	10.7	15.5	27.4	33.0	36.3	41.0	48.8	72.9	85.0	104	113
SNH 21	21	2.63	4.16	6.80	10.1	13.2	19.1	33.8	40.7	44.8	50.6	60.3	90.0	105	129	139
SNH 25	25	3.13	4.95	8.10	12.0	15.7	22.8	40.3	48.5	53.4	60.3	71.8	107	125	153	166
SNH 29	29	3.63	5.74	9.40	13.9	18.2	26.4	46.7	56.2	61.9	69.9	83.3	124	145	178	193
SNH 34	34	4.25	6.73	11.0	16.3	21.4	30.9	54.8	65.9	72.6	82.0	97.6	146	170	209	226
SNH 40	40	5.00	7.92	13.0	19.2	25.1	36.4	65.3	80.2	88.0	99.7	118	175	200	245	266
SNH 50	50	6.25	9.90	16.2	24.0	31.4	45.5	81.6	100	110	125	147	219	250	307	332
SNH 60	60	7.50	11.9	19.4	28.7	37.7	54.6	97.9	120	132	150	177	263	300	368	398
SNH 70	70	8.75	13.9	22.7	33.5	44.0	63.7	114	140	154	175	206	306	350	430	465
SNH 80	80	10.0	15.8	25.9	38.3	50.2	72.8	131	160	176	199	235	350	400	491	531
SNH 90	90	11.3	17.8	29.2	43.1	56.5	81.9	147	180	198	224	265	394	450	552	598
SNH 100	100	12.5	19.8	32.4	47.9	62.8	91.0	163	200	220	249	294	438	500	614	664
SNH 110	110	13.8	21.8	35.6	52.7	69.1	100	179	220	242	274	324	482	550	675	730
SNH 120	120	15.0	23.8	38.9	57.5	75.4	109	196	241	264	299	353	525	600	736	797
SNH 130	130	16.3	25.7	42.1	62.3	81.6	118	211	255	277	311	362	516	582	702	731
SNH 145	145	18.1	28.7	47.0	69.5	91.1	132	235	284	310	347	404	576	649	783	816
SNH 155	155	19.4	30.7	50.2	74.2	97.3	141	251	304	331	371	432	615	694	837	872
SNH 185	185	23.1	36.6	59.9	88.6	116	168	300	362	395	442	515	735	828	999	1040
SNH 210	210	26.3	41.6	68.0	101	132	191	340	411	448	502	585	834	940	1130	1180

Cell performance H range

Final voltage: 1.10 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours				Minutes							Seconds			
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNH 9	9	1.10	1.75	2.83	4.17	5.45	7.83	12.7	15.5	17.6	20.7	26.2	40.4	46.9	59.2	62.1
SNH 12	12	1.47	2.33	3.78	5.56	7.26	10.4	16.9	20.7	23.5	27.6	34.9	53.8	62.5	78.9	82.7
SNH 17	17	2.08	3.30	5.36	7.87	10.3	14.8	24.0	29.3	33.3	39.1	49.4	76.2	88.5	112	117
SNH 21	21	2.57	4.08	6.62	9.72	12.7	18.3	29.6	36.1	41.2	48.3	61.0	94.2	109	138	145
SNH 25	25	3.06	4.85	7.88	11.6	15.1	21.8	35.3	43.0	49.0	57.5	72.7	112	130	164	172
SNH 29	29	3.55	5.63	9.14	13.4	17.5	25.2	40.9	49.9	56.9	66.7	84.3	130	151	191	200
SNH 34	34	4.17	6.60	10.7	15.7	20.6	29.6	48.0	58.5	66.7	78.2	98.8	152	177	224	234
SNH 40	40	4.90	7.77	12.6	18.5	24.2	34.8	58.0	70.8	80.8	94.3	119	182	211	258	274
SNH 50	50	6.13	9.71	15.8	23.2	30.3	43.5	72.5	88.5	101	118	148	227	263	323	342
SNH 60	60	7.35	11.7	18.9	27.8	36.3	52.2	87.0	106	121	142	178	273	316	387	411
SNH 70	70	8.58	13.6	22.1	32.4	42.4	60.9	101	124	141	165	208	318	368	452	479
SNH 80	80	9.80	15.5	25.2	37.0	48.4	69.6	116	142	162	189	237	364	421	516	548
SNH 90	90	11.0	17.5	28.4	41.7	54.5	78.3	130	159	182	212	267	409	474	581	616
SNH 100	100	12.3	19.4	31.5	46.3	60.5	87.0	145	177	202	236	297	455	526	645	685
SNH 110	110	13.5	21.4	34.7	50.9	66.6	95.7	159	195	222	259	326	500	579	710	753
SNH 120	120	14.7	23.3	37.8	55.6	72.6	104	174	212	242	283	356	545	632	774	822
SNH 130	130	15.9	25.2	41.0	60.2	78.7	113	185	224	253	294	361	542	616	734	769
SNH 145	145	17.8	28.2	45.7	67.1	87.7	126	206	250	283	328	403	604	687	819	858
SNH 155	155	19.0	30.1	48.8	71.8	93.8	135	220	267	302	351	431	646	735	876	917
SNH 185	185	22.7	35.9	58.3	85.7	112	161	263	318	361	419	514	771	877	1150	1100
SNH 210	210	25.7	40.8	66.2	97.2	127	183	298	361	409	475	583	875	995	1190	1240

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours				Minutes							Seconds			
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNH 9	9	1.10	1.75	2.83	4.17	5.45	7.75	11.7	13.5	15.0	16.8	20.1	30.7	35.6	45.0	47.2
SNH 12	12	1.47	2.33	3.78	5.56	7.26	10.3	15.6	18.0	20.0	22.3	26.9	40.9	47.5	60.0	62.9
SNH 17	17	2.08	3.30	5.36	7.87	10.3	14.6	22.1	25.5	28.3	31.7	38.1	57.9	67.3	85.0	89.1
SNH 21	21	2.57	4.08	6.62	9.72	12.7	18.1	27.2	31.4	35.0	39.1	47.0	71.6	83.1	105	110
SNH 25	25	3.06	4.85	7.88	11.6	15.1	21.5	32.4	37.4	41.7	46.6	56.0	85.2	99.0	125	131
SNH 29	29	3.55	5.63	9.14	13.4	17.5	25.0	37.6	43.4	48.3	54.0	64.9	98.8	115	145	152
SNH 34	34	4.17	6.60	10.7	15.7	20.6	29.3	44.1	50.9	56.7	63.3	76.1	116	135	170	178
SNH 40	40	4.90	7.77	12.6	18.5	24.2	34.5	53.3	61.6	68.7	76.4	91.4	138	160	196	208
SNH 50	50	6.13	9.71	15.8	23.2	30.3	43.1	66.7	77.0	85.9	95.5	114	173	200	245	260
SNH 60	60	7.35	11.7	18.9	27.8	36.3	51.7	80.0	92.4	103	115	137	207	240	294	312
SNH 70	70	8.58	13.6	22.1	32.4	42.4	60.3	93.3	108	120	134	160	242	280	343	364
SNH 80	80	9.80	15.5	25.2	37.0	48.4	68.9	107	123	137	153	183	276	320	392	416
SNH 90	90	11.0	17.5	28.4	41.7	54.5	77.5	120	139	155	172	206	311	360	441	468
SNH 100	100	12.3	19.4	31.5	46.3	60.5	86.1	133	154	172	191	228	345	400	490	521
SNH 110	110	13.5	21.4	34.7	50.9	66.6	94.7	147	169	189	210	251	380	440	539	573
SNH 120	120	14.7	23.3	37.8	55.6	72.6	103	160	185	206	229	274	415	480	588	625
SNH 130	130	15.9	25.2	41.0	60.2	78.7	112	170	195	215	238	278	412	468	558	585
SNH 145	145	17.8	28.2	45.7	67.1	87.7	125	189	217	240	266	310	459	522	623	652
SNH 155	155	19.0	30.1	48.8	71.8	93.8	134	203	232	257	284	332	491	558	666	697
SNH 185	185	22.7	35.9	58.3	85.7	112	159	242	277	307	339	396	586	666	794	832
SNH 210	210	25.7	40.8	66.2	97.2	127	181	274	314	348	385	449	665	756	902	944

Cell performance H range

Final voltage: 1.14 V/cell

at 20 ± 5 °C

Available amperes for fully charged cells after constant current charging to IEC 623

Cell type	C ₅ Ah	Hours				Minutes								Seconds		
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNH 9	9	1.06	1.68	2.72	3.97	5.14	7.20	10.6	13.0	14.7	17.2	22.0	34.6	40.4	49.2	53.9
SNH 12	12	1.42	2.24	3.62	5.29	6.85	9.60	14.2	17.3	19.6	22.9	29.3	46.2	53.8	65.6	71.9
SNH 17	17	2.00	3.18	5.13	7.50	9.71	13.6	20.1	24.5	27.7	32.4	41.5	65.4	76.2	92.9	102
SNH 21	21	2.48	3.93	6.34	9.26	12.0	16.8	24.8	30.3	34.3	40.1	51.2	80.8	94.2	115	126
SNH 25	25	2.95	4.67	7.55	11.0	14.3	20.0	29.5	36.0	40.8	47.7	61.0	96.2	112	137	150
SNH 29	29	3.42	5.42	8.76	12.8	16.6	23.2	34.2	41.8	47.3	55.3	70.7	112	130	158	174
SNH 34	34	4.01	6.36	10.3	15.0	19.4	27.2	40.1	49.0	55.5	64.9	82.9	131	152	186	204
SNH 40	40	4.72	7.48	12.1	17.7	22.9	32.4	48.4	59.2	66.8	78.0	99.3	156	181	226	237
SNH 50	50	5.90	9.35	15.1	22.2	28.7	40.5	60.5	74.0	83.5	97.5	124	195	226	282	296
SNH 60	60	7.08	11.2	18.1	26.6	34.4	48.6	72.6	88.8	100	117	149	234	271	339	355
SNH 70	70	8.25	13.1	21.1	31.0	40.1	56.7	84.7	104	117	136	174	273	317	395	414
SNH 80	80	9.43	15.0	24.2	35.4	45.8	64.8	96.9	118	134	156	199	313	362	452	473
SNH 90	90	10.6	16.8	27.2	39.9	51.6	72.9	109	133	150	175	223	352	407	508	533
SNH 100	100	11.8	18.7	30.2	44.3	57.3	81.0	121	148	167	195	248	391	452	565	592
SNH 110	110	13.0	20.6	33.2	48.7	63.0	89.1	133	163	184	214	273	430	498	621	651
SNH 120	120	14.2	22.4	36.2	53.2	68.8	97.2	145	178	200	234	298	469	543	678	710
SNH 130	130	15.3	24.3	39.3	57.5	74.4	104	153	186	209	242	305	461	528	622	644
SNH 145	145	17.1	27.1	43.8	64.1	83.0	116	171	207	233	270	340	514	589	694	718
SNH 155	155	18.3	29.0	46.8	68.5	88.7	124	183	222	250	288	364	550	630	742	767
SNH 185	185	21.8	34.6	55.9	81.8	106	148	218	265	298	344	434	656	752	885	916
SNH 210	210	24.8	39.3	63.4	92.8	120	168	248	300	338	390	493	745	854	1010	1040

Available amperes for fully charged cells after prolonged float charge

Cell type	C ₅ Ah	Hours				Minutes								Seconds		
		8	5	3	2	90	60	30	20	15	10	5	1	30	5	1
SNH 9	9	1.06	1.68	2.72	3.97	5.14	6.77	9.03	10.5	11.6	12.9	15.8	24.6	28.7	34.9	38.3
SNH 12	12	1.42	2.24	3.62	5.29	6.85	9.02	12.0	14.0	15.5	17.2	21.1	32.8	38.2	46.6	51.0
SNH 17	17	2.00	3.18	5.13	7.50	9.71	12.8	17.1	19.8	21.9	24.3	29.9	46.4	54.1	66.0	72.3
SNH 21	21	2.48	3.93	6.34	9.26	12.0	15.8	21.1	24.5	27.1	30.1	36.9	57.3	66.9	81.5	89.3
SNH 25	25	2.95	4.67	7.55	11.0	14.3	18.8	25.1	29.2	32.2	35.8	43.9	68.3	79.6	97.0	106
SNH 29	29	3.42	5.42	8.76	12.8	16.6	21.8	29.1	33.8	37.4	41.5	50.9	79.2	92.3	113	123
SNH 34	34	4.01	6.36	10.3	15.0	19.4	25.6	34.1	39.7	43.8	48.7	59.7	92.8	108	132	145
SNH 40	40	4.72	7.48	12.1	17.7	22.9	30.4	41.2	47.9	52.8	58.5	71.5	111	129	160	168
SNH 50	50	5.90	9.35	15.1	22.2	28.7	38.1	51.5	59.9	65.9	73.1	89.3	139	161	201	210
SNH 60	60	7.08	11.2	18.1	26.6	34.4	45.7	61.7	71.9	79.1	87.7	107	166	193	241	252
SNH 70	70	8.25	13.1	21.1	31.0	40.1	53.3	72.0	83.9	92.3	102	125	194	225	281	294
SNH 80	80	9.43	15.0	24.2	35.4	45.8	60.9	82.3	95.9	106	117	143	222	257	321	336
SNH 90	90	10.6	16.8	27.2	39.9	51.6	68.5	92.6	108	119	132	161	250	289	361	378
SNH 100	100	11.8	18.7	30.2	44.3	57.3	76.1	103	120	132	146	179	277	321	401	420
SNH 110	110	13.0	20.6	33.2	48.7	63.0	83.7	113	132	145	161	197	305	353	441	462
SNH 120	120	14.2	22.4	36.2	53.2	68.8	91.3	123	144	158	175	214	333	386	481	504
SNH 130	130	15.3	24.3	39.3	57.5	74.4	97.8	130	151	165	181	220	327	375	442	457
SNH 145	145	17.1	27.1	43.8	64.1	83.0	109	146	168	184	202	245	365	418	493	510
SNH 155	155	18.3	29.0	46.8	68.5	88.7	117	156	180	197	216	262	390	447	527	545
SNH 185	185	21.8	34.6	55.9	81.8	106	139	186	214	235	258	313	466	534	628	650
SNH 210	210	24.8	39.3	63.4	92.8	120	158	211	243	267	293	355	529	606	713	738

Cell performance H range

at 20 ± 5 °C

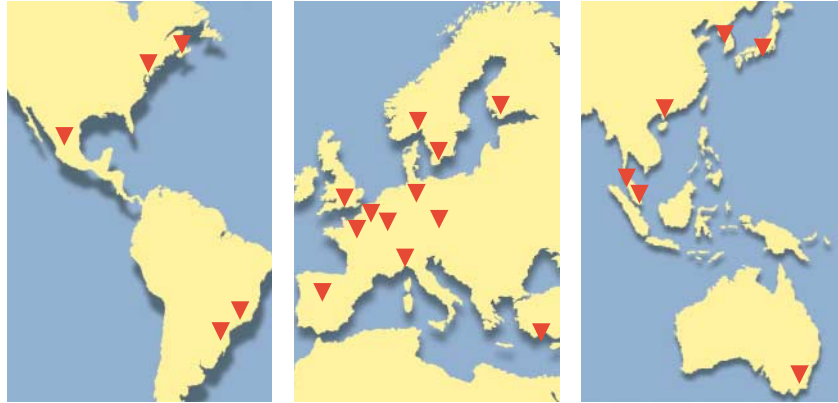
Available amperes for fully charged cells

Final voltage: 0.65 V/cell

Cell type	C _s Ah	Seconds					
		90	60	30	15	5	1
SNH 9	9	85.7	96.1	111	129	144	162
SNH 12	12	114	128	147	172	191	216
SNH 17	17	162	181	209	244	271	306
SNH 21	21	200	224	258	301	335	378
SNH 25	25	238	267	307	359	399	450
SNH 29	29	276	309	356	416	463	522
SNH 34	34	324	363	418	488	542	612
SNH 40	40	393	439	502	580	646	719
SNH 50	50	491	548	627	725	808	899
SNH 60	60	589	658	753	870	969	1080
SNH 70	70	687	768	878	1010	1130	1260
SNH 80	80	785	877	1000	1160	1290	1440
SNH 90	90	883	987	1130	1300	1450	1620
SNH 100	100	981	1100	1260	1450	1620	1800
SNH 110	110	1080	1210	1380	1590	1780	1980
SNH 120	120	1180	1320	1510	1740	1940	2160
SNH 130	130	1210	1340	1500	1720	1880	2040
SNH 145	145	1350	1490	1680	1920	2100	2280
SNH 155	155	1440	1600	1790	2050	2250	2430
SNH 185	185	1720	1910	2140	2440	2680	2900
SNH 210	210	1950	2160	2430	2770	3040	3300

Final voltage: 0.85 V/cell

Cell type	C _s Ah	Seconds					
		90	60	30	15	5	1
SNH 9	9	66.5	74.0	84.1	98.7	110	121
SNH 12	12	88.7	98.6	112	132	146	161
SNH 17	17	126	140	159	186	207	228
SNH 21	21	155	173	196	230	256	282
SNH 25	25	185	205	234	274	305	335
SNH 29	29	214	238	271	318	354	389
SNH 34	34	251	279	318	373	415	456
SNH 40	40	303	336	382	443	492	537
SNH 50	50	379	419	477	554	615	671
SNH 60	60	455	503	573	665	738	805
SNH 70	70	531	587	668	776	861	940
SNH 80	80	607	671	763	887	984	1070
SNH 90	90	682	755	859	998	1110	1210
SNH 100	100	758	839	954	1110	1230	1340
SNH 110	110	834	923	1050	1220	1350	1480
SNH 120	120	910	1010	1150	1330	1480	1610
SNH 130	130	922	1010	1130	1280	1390	1510
SNH 145	145	1030	1130	1260	1430	1550	1690
SNH 155	155	1100	1200	1340	1530	1660	1800
SNH 185	185	1310	1440	1610	1820	1980	2150
SNH 210	210	1490	1630	1820	2070	2250	2440



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