

SBM 231 - Cell data sheet

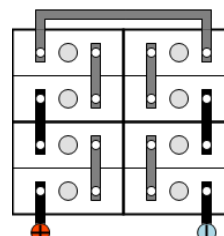
Classification

Brand	Saft
Cell type	SBM 231
Cell P/N	310048472
Capacity at 5 hours rate	231 Ah
IEC Designation	KM231P
According to IEC 60623	



Wiring principle

Normal



Physical data

Overall height	406 mm		
Cell height			
Width	195 mm	Weight per cell	12.5 Kg
Length	-	Block length - 2 cells	183 mm
Block length - 3 cells	268 mm	Block length - 4 cells	-
Block length - 5 cells	-	Block length - 6 cells	-
Block length - 7 cells	-	Block length - 8 cells	-
Block length - 9 cells	-	Block length - 10 cells	-

Construction

Container material	Polypropylene	No. of terminals/polarity	1
Separator type	Grid	Terminal material	Steel
Connection torque	30.0 +/- 3.0 Nm	Vent type	flame arresting vent (large)
Terminal size	M10 SW 16 mm	Handle	Yes

Plates

Positive		Negative	
Type of plates	Pocket	Type of plates	Pocket

Electrolyte

Electrolyte type: Renewal	E13	Max/Min	50 mm
Electrolyte type: Initial	E22	Vent oil quantity	
Electrolyte per cell: Liquid	3.0 liters		

Connection

Cable area of internal connection cables	120 mm²	End-lug (and external cable)	120 mm²
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Charging

Float voltage	1.4 V/Cell	High rate voltage (min)	1.45 V/Cell
Single-level voltage	1.43 V/Cell		

Resistance/Short circuit

Internal resistance	0.37 mOhm	Short circuit current	3629 A
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Performance data

Current discharge

After prolonged float charge of fully charged cells. Available amperes at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1.5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	23.5	29.1	46.2	75.5	110	137	194	264	305	330	377	444	599	668	798	844
1.05	23.3	28.9	45.8	74.7	104	132	175	223	263	287	314	363	508	572	673	725
1.1	22.9	28.5	45.0	69.8	96.7	117	142	178	216	225	257	308	429	478	564	600
1.14	22.3	27.6	43.5	65.6	84.6	97.5	115	139	160	173	198	248	346	383	443	457
1.16	21.7	26.6	40.1	60.8	71.1	77.1	95.3	119	136	143	159	198	290	323	364	387

Power discharge

Available power (W), after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1.5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	28.0	34.4	53.9	84.4	118	144	200	267	308	332	378	444	599	668	798	844
1.05	27.8	34.2	53.6	83.5	114	144	187	237	278	302	330	382	534	600	707	762
1.1	27.3	33.8	52.9	79.9	109	131	159	197	239	248	283	339	472	526	621	660
1.14	26.6	32.8	51.3	76.3	97.7	112	131	159	182	197	226	282	394	437	505	521
1.16	25.9	31.6	47.3	71.2	83.1	89.9	111	138	158	165	185	229	337	375	422	449

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Kt Factor

Current discharge

After prolonged float charge of fully charged cells. Kt factor at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1.5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	9.8	7.94	5.00	3.06	2.09	1.68	1.19	0.88	0.76	0.70	0.61	0.52	0.39	0.35	0.29	0.27
1.05	9.9	8.00	5.05	3.09	2.23	1.74	1.32	1.03	0.88	0.81	0.74	0.64	0.45	0.40	0.34	0.32
1.1	10.1	8.12	5.14	3.31	2.39	1.98	1.62	1.30	1.07	1.03	0.90	0.75	0.54	0.48	0.41	0.39
1.14	10.4	8.36	5.31	3.52	2.73	2.37	2.02	1.66	1.45	1.34	1.16	0.93	0.67	0.60	0.52	0.51
1.16	10.7	8.70	5.77	3.80	3.25	3.00	2.42	1.94	1.69	1.62	1.45	1.17	0.80	0.71	0.64	0.60

Power discharge

Kt factor power, after prolonged float charged of fully charged cells at +20°C +/- 5°C (+68°F +/- 9°F)

V/Cell	10h	8h	5h	3h	2h	1.5h	1h	30m	20m	15m	10m	5m	1m	30s	5s	1s
1	8.24	6.72	4.28	2.74	1.96	1.60	1.16	0.86	0.75	0.70	0.61	0.52	0.39	0.35	0.29	0.27
1.05	8.31	6.75	4.31	2.76	2.03	1.61	1.23	0.98	0.83	0.76	0.70	0.61	0.43	0.38	0.33	0.30
1.1	8.45	6.84	4.37	2.89	2.11	1.76	1.46	1.17	0.97	0.93	0.82	0.68	0.49	0.44	0.37	0.35
1.14	8.68	7.03	4.50	3.03	2.36	2.06	1.76	1.45	1.27	1.17	1.02	0.82	0.59	0.53	0.46	0.44
1.16	8.92	7.31	4.88	3.24	2.78	2.57	2.08	1.67	1.46	1.40	1.25	1.01	0.69	0.62	0.55	0.52