

EnerSys[®]

Power/Full Solutions



data safe[®]
CX-M

Battery Performance Specifications



The DataSafe® CX-M battery is an economical multi-cell flat plate battery. The CX-M unit is optimized for high performance and provides excellent short duration discharge rates.

The DataSafe® CX-M battery now features the Slide-Lock™ post seal design. The DataSafe® CX-M battery features a larger copper insert in the Slide-Lock™ post. The number of plates and plate thickness are optimized with respect to the available electrolyte ensuring maximum performance during short duration discharges.

The DataSafe® CX-M battery was designed for easier maintenance since all the posts and connectors reside above the cell cover; maintenance routines, including individual cell monitoring and intercell resistance measurements are simplified. The economical design and footprint, combined with Slide-Lock™ post and excellent performance in short duration discharges makes this an ideal battery in Uninterruptable Power Supply (UPS) and switchgear applications.

Features and Benefits

- Slide-Lock™ post seal design
- Calcium alloy grids for lowest water loss, resulting in lowest maintenance costs
- Lead plated copper posts provide high 1-minute rates
- 100% Initial capacity
- 20 year life expectancy in floating applications where high ambient temperature is not a factor
- The number of plates and the plate thickness have been optimized with respect to the available free electrolyte to ensure maximum performance during short duration discharges without sacrificing component integrity
- Installation services and preventative maintenance packages available

Specifications

- Plate thickness:
Positive: 0.20 in/5.1 mm
Negative: 0.14 in/3.6 mm
- Plate dimensions:

Height	Width
Positive: 7.75 in/197 mm	8.00 in/203 mm
Negative: 7.75 in/197 mm	8.00 in/203 mm
- Plate suspension type:
Positive: Bottom supported
Negative: Bottom supported
- Container: Styrene Acrylonitrile Copolymer, optional PC
- Cover: Made from flame retardant PVC, (UL94-VO/L.O.I. 28%)
- Separators: Microporous plastic
- Bolt connectors: Stainless steel, Standard English measure, Hex-Head
- Inter-unit connectors: Tin-plated copper, Optional lead-plated copper
- Electrolyte over plates: 2.38 in/60.5 mm
- Vent type: Flame Arrestor, Fused Alumina
- Float voltage settings (1.215 S.G.): Acceptable min/max: 2.17/2.26 Vpc, Recommended: 2.21 Vpc
- Float voltage settings (1.250 S.G.): Acceptable min/max: 2.21/2.30 Vpc, Recommended: 2.25 Vpc
- Sediment space: 1.00 in/25.4 mm
- Post seal type: Slide-Lock™
- Specific gravity: 1.215 standard (1.250 available upon request)
- UL® (1989) recognized component, File no. MH15740
Note: Flame Arrestor Vent must be installed
- Manufactured in EnerSys® production facilities certified to ISO™ 9001
- Manufactured in EnerSys® production facilities certified to ISO™ 14001
- Available testing to IEEE 450 standards as well as customer specific applications

NOTE: All inter-cell, inter-tier, inter-step, end-to-end inter-rack and back-to-back inter-rack connectors for standard configurations are included with every battery. Across-aisle inter-rack connectors are not included.

Constant Power

1.215 Specific Gravity

Discharge Rates in kW per Cell* to 1.70Vpc at 77°F (25°C)

Cell Type	Nom Ah Cap ¹	Minutes																		
		5	10	11	12	13	14	15	16	17	18	19	20	25	30	45	60	90	120	180
CX-05M	93	0.338	0.263	0.252	0.242	0.232	0.224	0.216	0.209	0.202	0.196	0.190	0.185	0.163	0.146	0.113	0.093	0.071	0.059	0.044
CX-07M	122	0.480	0.377	0.362	0.347	0.334	0.322	0.311	0.300	0.291	0.282	0.273	0.265	0.233	0.208	0.160	0.132	0.099	0.081	0.060
CX-09M	178	0.624	0.497	0.477	0.459	0.443	0.427	0.413	0.400	0.388	0.376	0.365	0.355	0.314	0.281	0.219	0.181	0.138	0.113	0.085
CX-11M	205	0.758	0.608	0.585	0.563	0.543	0.525	0.508	0.492	0.477	0.463	0.450	0.438	0.387	0.347	0.268	0.221	0.167	0.136	0.102
CX-13M	233	0.888	0.716	0.690	0.665	0.642	0.621	0.601	0.583	0.566	0.550	0.534	0.520	0.459	0.412	0.318	0.261	0.196	0.159	0.118
CX-15M	260	1.016	0.822	0.793	0.766	0.740	0.716	0.694	0.673	0.653	0.635	0.617	0.601	0.532	0.476	0.367	0.301	0.225	0.182	0.134

1.215 Specific Gravity

Discharge Rates in kW per Cell* to 1.67Vpc at 77°F (25°C)

Cell Type	Nom Ah Cap ¹	Minutes																		
		5	10	11	12	13	14	15	16	17	18	19	20	25	30	45	60	90	120	180
CX-05M	93	0.355	0.271	0.259	0.248	0.238	0.229	0.220	0.213	0.206	0.199	0.193	0.187	0.164	0.147	0.113	0.093	0.071	0.059	0.044
CX-07M	122	0.504	0.389	0.372	0.356	0.342	0.329	0.317	0.306	0.296	0.286	0.277	0.269	0.235	0.210	0.160	0.132	0.099	0.081	0.060
CX-09M	178	0.658	0.515	0.493	0.474	0.455	0.438	0.422	0.408	0.395	0.383	0.372	0.361	0.317	0.284	0.219	0.181	0.138	0.113	0.085
CX-11M	205	0.797	0.630	0.604	0.581	0.559	0.539	0.520	0.503	0.487	0.472	0.458	0.445	0.391	0.350	0.269	0.221	0.167	0.136	0.102
CX-13M	233	0.934	0.742	0.713	0.686	0.661	0.638	0.616	0.597	0.578	0.561	0.544	0.529	0.465	0.415	0.318	0.261	0.196	0.159	0.118
CX-15M	260	1.068	0.853	0.820	0.790	0.762	0.736	0.712	0.689	0.668	0.648	0.630	0.612	0.538	0.481	0.368	0.301	0.225	0.182	0.134

1.215 Specific Gravity

Discharge Rates in kW per Cell* to 1.63Vpc at 77°F (25°C)

Cell Type	Nom Ah Cap ¹	Minutes																		
		5	10	11	12	13	14	15	16	17	18	19	20	25	30	45	60	90	120	180
CX-05M	93	0.365	0.275	0.263	0.251	0.241	0.231	0.222	0.214	0.207	0.200	0.194	0.188	0.164	0.147	0.113	0.093	0.071	0.059	0.044
CX-07M	122	0.518	0.394	0.377	0.361	0.346	0.332	0.320	0.308	0.298	0.288	0.279	0.270	0.236	0.210	0.160	0.132	0.099	0.081	0.060
CX-09M	178	0.677	0.524	0.501	0.480	0.461	0.443	0.427	0.412	0.399	0.386	0.374	0.363	0.318	0.284	0.219	0.181	0.138	0.113	0.085
CX-11M	205	0.821	0.641	0.614	0.590	0.567	0.545	0.526	0.508	0.491	0.476	0.462	0.448	0.393	0.350	0.269	0.221	0.167	0.136	0.102
CX-13M	233	0.961	0.756	0.725	0.697	0.671	0.646	0.623	0.603	0.583	0.566	0.549	0.533	0.467	0.416	0.318	0.261	0.196	0.159	0.118
CX-15M	260	1.099	0.869	0.835	0.803	0.774	0.746	0.720	0.697	0.675	0.654	0.635	0.617	0.541	0.482	0.368	0.301	0.225	0.182	0.134

¹ Nominal Capacity calculated at the 8hr rate to 1.75Vpc at 77°F (25°C) - 1.215 S.G.

* Initial Capacity shall be a minimum of 100% of these value per IEEE 450. Values include intercell connector drop.

All data subject to change without notice.

Constant Power

1.215 Specific Gravity

Discharge Rates in kW per Cell* to 1.60Vpc at 77°F (25°C)

Cell Type	Nom Ah Cap ¹	Minutes																		
		5	10	11	12	13	14	15	16	17	18	19	20	25	30	45	60	90	120	180
CX-05M	93	0.385	0.282	0.268	0.256	0.244	0.234	0.225	0.216	0.208	0.201	0.195	0.189	0.164	0.147	0.113	0.093	0.071	0.059	0.044
CX-07M	122	0.546	0.404	0.384	0.366	0.351	0.336	0.322	0.310	0.299	0.289	0.279	0.271	0.236	0.210	0.160	0.132	0.099	0.081	0.060
CX-09M	178	0.719	0.539	0.513	0.491	0.470	0.451	0.433	0.417	0.402	0.389	0.376	0.365	0.319	0.284	0.219	0.181	0.138	0.113	0.085
CX-11M	205	0.870	0.660	0.630	0.603	0.578	0.555	0.534	0.514	0.496	0.480	0.465	0.450	0.393	0.350	0.269	0.221	0.167	0.136	0.102
CX-13M	233	1.019	0.780	0.745	0.714	0.685	0.659	0.634	0.611	0.590	0.571	0.553	0.536	0.467	0.416	0.318	0.261	0.196	0.159	0.118
CX-15M	260	1.166	0.898	0.859	0.824	0.791	0.761	0.733	0.707	0.683	0.661	0.640	0.621	0.542	0.482	0.368	0.301	0.225	0.182	0.134

1.250 Specific Gravity

Discharge Rates in kW per Cell* to 1.75Vpc at 77°F (25°C)

Cell Type	Nom Ah Cap ¹	Minutes																		
		5	10	11	12	13	14	15	16	17	18	19	20	25	30	45	60	90	120	180
CX-05MB	99	0.341	0.272	0.262	0.252	0.244	0.236	0.228	0.222	0.215	0.209	0.203	0.198	0.175	0.157	0.123	0.102	0.078	0.064	0.048
CX-07MB	132	0.482	0.387	0.372	0.359	0.347	0.336	0.326	0.316	0.307	0.298	0.290	0.282	0.250	0.225	0.175	0.145	0.109	0.089	0.066
CX-09MB	195	0.636	0.517	0.500	0.484	0.469	0.455	0.442	0.429	0.418	0.408	0.398	0.389	0.348	0.315	0.249	0.207	0.158	0.130	0.097
CX-11MB	225	0.772	0.631	0.609	0.590	0.572	0.555	0.538	0.523	0.509	0.496	0.484	0.472	0.422	0.381	0.299	0.248	0.188	0.153	0.114
CX-13MB	255	0.908	0.745	0.720	0.697	0.676	0.655	0.636	0.618	0.601	0.586	0.571	0.557	0.496	0.447	0.349	0.289	0.218	0.177	0.131
CX-15MB	285	1.043	0.860	0.832	0.806	0.780	0.757	0.735	0.714	0.695	0.677	0.659	0.643	0.571	0.514	0.400	0.330	0.248	0.201	0.148

1.250 Specific Gravity

Discharge Rates in kW per Cell* to 1.70Vpc at 77°F (25°C)

Cell Type	Nom Ah Cap ¹	Minutes																		
		5	10	11	12	13	14	15	16	17	18	19	20	25	30	45	60	90	120	180
CX-05MB	99	0.373	0.293	0.281	0.270	0.260	0.250	0.241	0.233	0.226	0.219	0.212	0.206	0.181	0.162	0.124	0.102	0.078	0.064	0.048
CX-07MB	132	0.526	0.414	0.398	0.382	0.368	0.355	0.343	0.331	0.321	0.311	0.302	0.293	0.258	0.230	0.177	0.145	0.109	0.089	0.066
CX-09MB	195	0.698	0.560	0.539	0.520	0.502	0.486	0.471	0.457	0.444	0.431	0.419	0.408	0.363	0.326	0.254	0.209	0.159	0.130	0.097
CX-11MB	225	0.847	0.682	0.657	0.634	0.612	0.592	0.574	0.556	0.540	0.525	0.510	0.496	0.439	0.394	0.305	0.250	0.189	0.153	0.114
CX-13MB	255	0.994	0.804	0.775	0.748	0.723	0.699	0.677	0.656	0.637	0.619	0.601	0.585	0.517	0.462	0.356	0.291	0.218	0.177	0.131
CX-15MB	285	1.140	0.927	0.894	0.863	0.834	0.806	0.781	0.757	0.735	0.714	0.694	0.674	0.594	0.531	0.407	0.333	0.248	0.201	0.148

¹Nominal Capacity calculated at the 8hr rate to 1.70Vpc at 77°F (25°C) - 1.250 S.G.

* Initial Capacity shall be a minimum of 100% of these value per IEEE 450. Values include intercell connector drop.

All data subject to change without notice.

Constant Power

1.250 Specific Gravity

Discharge Rates in kW per Cell* to 1.67Vpc at 77°F (25°C)

Cell Type	Nom Ah Cap ¹	Minutes																		
		5	10	11	12	13	14	15	16	17	18	19	20	25	30	45	60	90	120	180
CX-05MB	99	0.391	0.302	0.289	0.277	0.266	0.256	0.246	0.238	0.230	0.222	0.215	0.209	0.182	0.162	0.124	0.102	0.078	0.064	0.048
CX-07MB	132	0.548	0.427	0.409	0.392	0.377	0.362	0.349	0.337	0.326	0.316	0.306	0.297	0.260	0.231	0.177	0.145	0.109	0.089	0.066
CX-09MB	195	0.729	0.581	0.558	0.537	0.518	0.500	0.483	0.468	0.454	0.441	0.428	0.416	0.367	0.329	0.254	0.209	0.159	0.130	0.097
CX-11MB	225	0.885	0.707	0.679	0.654	0.630	0.609	0.588	0.569	0.552	0.536	0.520	0.506	0.445	0.398	0.305	0.250	0.189	0.153	0.114
CX-13MB	255	1.039	0.832	0.801	0.771	0.743	0.718	0.694	0.672	0.651	0.631	0.613	0.596	0.523	0.467	0.356	0.291	0.218	0.177	0.131
CX-15MB	285	1.192	0.958	0.922	0.888	0.857	0.828	0.800	0.774	0.750	0.728	0.706	0.686	0.601	0.536	0.407	0.333	0.248	0.201	0.148

1.250 Specific Gravity

Discharge Rates in kW per Cell* to 1.63Vpc at 77°F (25°C)

Cell Type	Nom Ah Cap ¹	Minutes																		
		5	10	11	12	13	14	15	16	17	18	19	20	25	30	45	60	90	120	180
CX-05MB	99	0.411	0.312	0.297	0.284	0.272	0.261	0.250	0.241	0.232	0.224	0.217	0.210	0.182	0.162	0.124	0.102	0.078	0.064	0.048
CX-07MB	132	0.575	0.438	0.418	0.400	0.384	0.369	0.355	0.342	0.330	0.319	0.308	0.299	0.260	0.231	0.177	0.145	0.109	0.089	0.066
CX-09MB	195	0.766	0.601	0.576	0.553	0.532	0.512	0.494	0.477	0.462	0.448	0.435	0.422	0.370	0.330	0.254	0.209	0.159	0.130	0.097
CX-11MB	225	0.930	0.731	0.701	0.673	0.648	0.624	0.601	0.581	0.562	0.544	0.528	0.512	0.448	0.398	0.305	0.250	0.189	0.153	0.114
CX-13MB	255	1.092	0.861	0.826	0.793	0.763	0.735	0.709	0.684	0.662	0.641	0.621	0.603	0.526	0.467	0.356	0.291	0.218	0.177	0.131
CX-15MB	285	1.253	0.991	0.951	0.914	0.879	0.847	0.817	0.788	0.763	0.738	0.715	0.694	0.604	0.536	0.407	0.333	0.248	0.201	0.148

1.250 Specific Gravity

Discharge Rates in kW per Cell* to 1.60Vpc at 77°F (25°C)

Cell Type	Nom Ah Cap ¹	Minutes																		
		5	10	11	12	13	14	15	16	17	18	19	20	25	30	45	60	90	120	180
CX-05MB	99	0.424	0.316	0.301	0.287	0.274	0.263	0.252	0.242	0.232	0.224	0.217	0.210	0.182	0.162	0.124	0.102	0.078	0.064	0.048
CX-07MB	132	0.592	0.444	0.423	0.404	0.387	0.371	0.356	0.342	0.330	0.319	0.308	0.299	0.260	0.231	0.177	0.145	0.109	0.089	0.066
CX-09MB	195	0.791	0.612	0.586	0.561	0.539	0.518	0.499	0.482	0.465	0.451	0.437	0.423	0.370	0.330	0.254	0.209	0.159	0.130	0.097
CX-11MB	225	0.959	0.744	0.712	0.683	0.656	0.631	0.607	0.586	0.566	0.547	0.530	0.514	0.448	0.398	0.305	0.250	0.189	0.153	0.114
CX-13MB	255	1.126	0.876	0.839	0.805	0.773	0.743	0.715	0.690	0.666	0.644	0.624	0.604	0.526	0.467	0.356	0.291	0.218	0.177	0.131
CX-15MB	285	1.291	1.008	0.965	0.926	0.890	0.856	0.824	0.794	0.766	0.741	0.717	0.695	0.604	0.536	0.407	0.333	0.248	0.201	0.148

¹ Nominal Capacity calculated at the 8hr rate to 1.75Vpc at 77°F (25°C) - 1.250 S.G.

* Initial Capacity shall be a minimum of 100% of these value per IEEE 450. Values include intercell connector drop.

All data subject to change without notice.

CX-M Catalog Rint and Isc Catalog Values

Battery Model	Resistance*	Isc
	µOhm	Amps
CX-5M	927	2156
CX-7M	704	2845
CX-9M	553	3419
CX-11M	490	4121
CX-13M	426	4823
CX-15M	363	5525

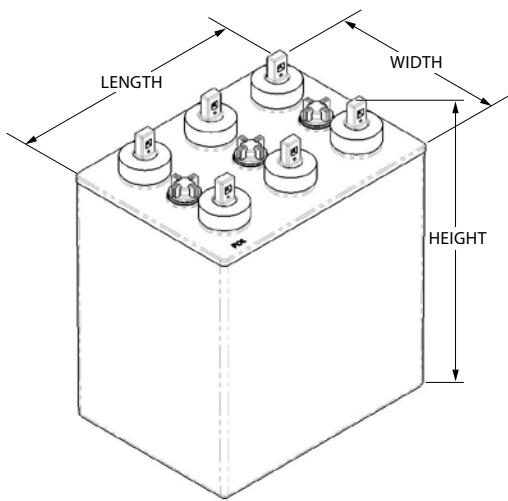
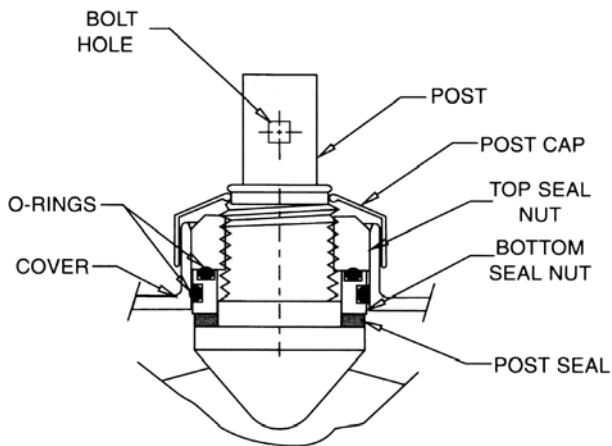
*Resistance values are for reference only (not intended to represent an ohmic value or base line measurement)

CX-MB Catalog Rint and Isc Catalog Values

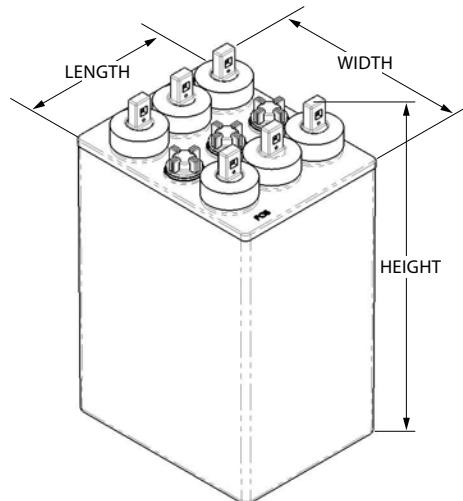
Battery Model	Resistance*	Isc
	µOhm	Amps
CX-5MB	907	2241
CX-7MB	701	2909
CX-9MB	567	3593
CX-11MB	493	4263
CX-13MB	419	4933
CX-15MB	345	5902

*Resistance values are for reference only (not intended to represent an ohmic value or base line measurement)

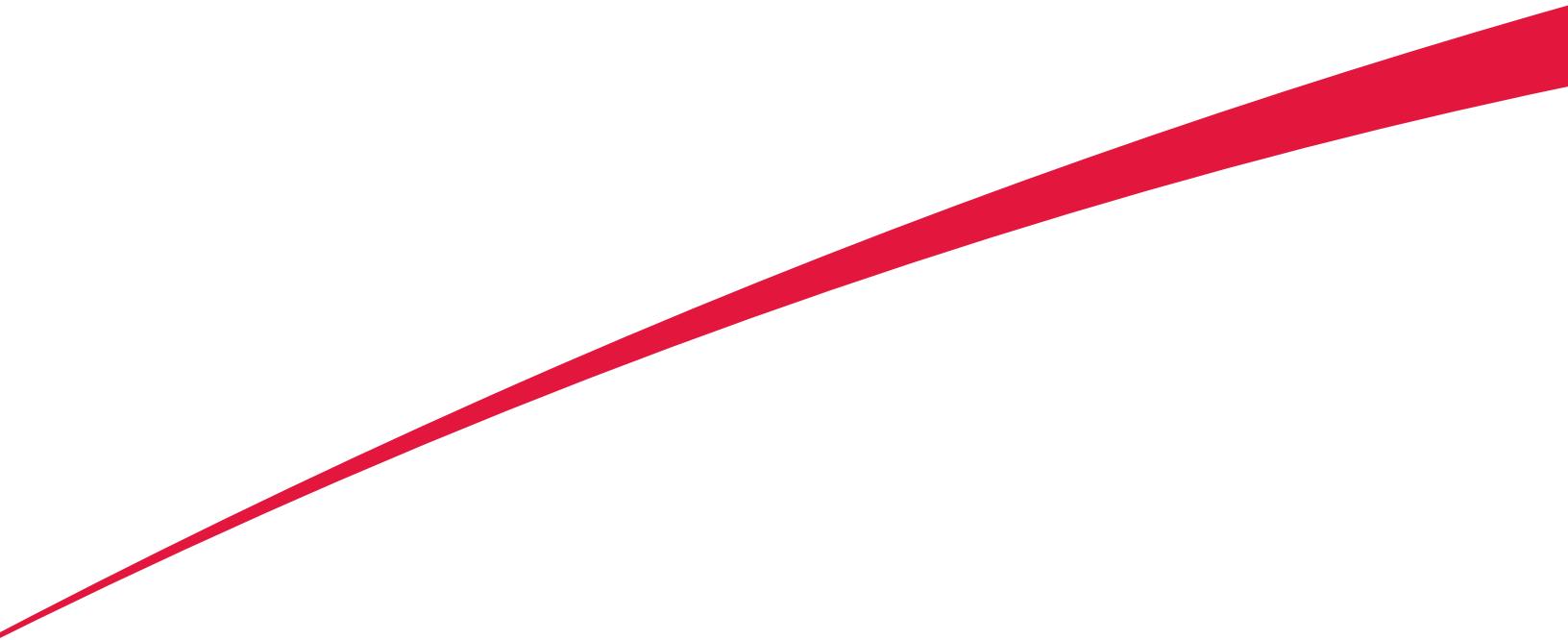
Slide-Lock™ Post Seal



CX-9M & 15M models shown



CX-5M & 7M models shown



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