data safe® HX

RANGE SUMMARY

EnerSys®
Power/Full Solutions

RESERVE POWER

Publication No: US-HX-RS-011 - March 2009

Introduction to . . . The DataSafe® HX Battery Range

The DataSafe® HX battery range of valve regulated lead acid batteries has been designed to offer superior solutions for the Information Technology and Uninterruptible Power Supply markets.

DataSafe HX batteries are the ideal source of power to protect vital systems. DataSafe HX batteries incorporate select design features that maximize reliability while ensuring superior performance and an excellent service life.

Gas recombination technology for valve regulated lead acid batteries has totally changed the concept of standby power.

The minimal level of gas evolution allows battery installation in cabinets or on stands, in offices or near main equipment, maximizing space utilization and reducing storage and maintenance costs.

DataSafe HX batteries deliver superior performance, occupying less space than conventional standby power batteries.

Construction

1 **High conductivity terminals**
Brass insert with threaded receptacle (HX80-HX800), bolt terminal (HX80 - HX150), or faston tab (HX25-HX50) for maximum conductivity and ease of installation.

2 **High integrity terminal seal**
Compression grommet (HX205-HX800) or dual welded/epoxy seal (HX25-HX150) designed for long life.

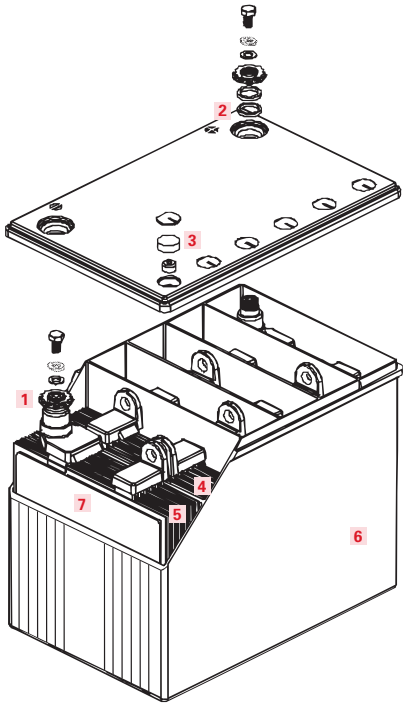
3 **Self-regulating relief valve**
Low pressure non-return valve prevents ingress of atmospheric oxygen.

4 **Rugged high performance positive plates**
Grids designed to resist corrosion and prolong active life.

5 **Balanced negative plates**
Ensure optimum recombination efficiency.

6 **Tough cell containers**
Thick-wall plastic, highly resistant to shock and vibration. Flame retardant material is the standard offering.

7 **Separators**
Low resistance microporous glass fiber. The electrolyte is absorbed within this material.



Features & Benefits

- Positive and negative plate grids made of lead-calcium-tin alloy for long life and efficient recharge.
- Flame retardant case and cover to meet UL1778.
- Individual cell vents.
- DataSafe® HX battery containers and covers are hermetically sealed to provide leak resistance over the life of the product.
- AGM separators - The electrolyte is completely absorbed into the separator.
- High performance brass threaded receptacle, bolt terminal, and faston terminals.
- Increased energy density.
- Computer optimized electrochemistry for increased power up to the 15 minute rate.
- 100% initial battery capacity.

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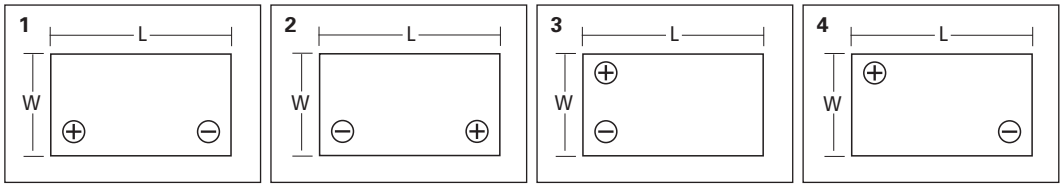
GENERAL SPECIFICATIONS

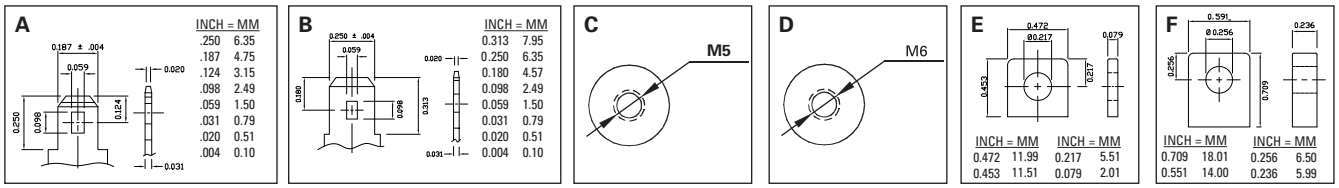
Type	Nominal Voltage (V)	Nominal Ah: 8 hr rate to 1.75 volts/cell end voltage at 77°F/25°C	Watts/Cell: @ 15 min. rate to 1.67 volts/cell end voltage at 77°F/25°C	Nominal Dimensions: Overall * Height mm	Overall * Height inch	Width mm	Width inch	Length mm	Length inch	Typical Weight kg	Typical Weight lbs	Short Circuit Current (A)	Max Discharge Current (Amps-2 min rate)	Internal Resistance (mΩ)	Layout	Terminals
12HX25	12	4.5	23	107	4.2	70	2.8	90	3.5	2.0	4.4	300	41	16.5	1	A/B
12HX35	12	7	36	100	3.9	65	2.6	151	5.9	2.8	6.1	500	62	13.2	3	A/B
6HX50	6	11	53	99	3.9	50	2.0	151	5.9	2.1	4.7	720	93	6.1	1	A/B
12HX50	12	11	53	99	3.9	99	3.9	152	6.0	4.1	9.1	720	93	12.2	3	A/B
12HX80	12	16	80	167	6.6	76	3.0	181	7.1	6.4	14.0	1000	140	8.5	2	C/E
12HX100	12	21	100	175	6.9	125	4.9	166	6.5	10.0	22.0	1500	171	7.1	2	C/E
12HX135B	12	28	135	180	7.1	130	5.1	198	7.8	11.8	26.0	1800	238	5.6	2	F
12HX135R	12	28	135	169	6.7	130	5.1	196	7.7	11.8	26.0	1800	238	5.6	2	C
12HX150	12	32	150	170	6.7	165	6.5	197	7.8	14.5	32.0	2400	277	5.0	2	D/F
12HX205	12	44	204	206	8.1	140	5.5	226	8.9	19.5	43.0	2775	439	4.5	1	D
12HX300	12	70	284	208	8.2	175	6.9	259	10.2	27.2	60.0	3175	503	3.9	1	D
12HX330	12	82	336	213	8.4	173	6.8	300	11.8	32.2	71.0	3700	586	3.4	1	D
12HX400	12	94	381	211	8.3	173	6.8	338	13.3	36.3	80.0	4225	670	3.0	1	D
12HX505	12	119	506	272	10.7	173	6.8	338	13.3	46.7	103.0	4510	913	2.8	1	D
12HX540	12	123	540	272	10.7	173	6.8	338	13.3	48.1	106.0	4775	961	2.6	1	D
6HX800	6	200	780	211	8.3	173	6.8	340	13.4	36.3	80.0	6200	1272	1.0	4	D

** Including Terminal*
All dimensions given are +/-0.08 in (2mm)

LAYOUT



TERMINAL



Faston Tab: 187 | **Faston Tab: 250** | **Threaded Receptacle** | **Threaded Receptacle** | **M5 Bolt** | **M6 Bolt**

- Normal operating temperature range -4°F/-20°C to 122°F/50°C
- Float charging voltage
  2.25 - 2.28 Volts per cell at 77°F/25°C
- Charging current
  DataSafe® HX batteries can be safely recharged at high current rates.
- Storage time
  DataSafe HX batteries can be stored for up to 6 months at 77°F/25°C before a freshening charge is required.
  At higher temperatures this time interval will be reduced.
- Torque specifications -
  M5 Bolt - 40 in-lbs (4.5 Nm) ± 5%
  M6 Bolt - 58 in-lbs (6.5 Nm) ± 5%
  M5 Receptacle - 31 in-lbs (3.5 Nm) ± 5%
  M6 Receptacle - (HX80-HX150) 44 in-lbs (5 Nm) ± 5%
  M6 Receptacle - (HX205-HX800) 60 in-lbs (6.8 Nm) ± 5%
- DataSafe HX batteries are designed to be installed on their base. Consult your local EnerSys® dealer before installing in any other orientation.

Standards

- UL listing - File No MH16464 (HX25-HX150) or MH12544 (HX205-HX800)
- Manufactured to EnerSys standards in ISO 9001 registered production facilities worldwide.
- Approved for shipping as non-hazardous, non-spillable - per IATA Special Provision A67 and 49 CFR

Constant Power Discharge (Watts per cell) to 1.75Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
12HX25	41	27	21	17	13	9	7
12HX35	65	43	33	27	20	14	11
6HX50	96	63	48	39	29	21	17
12HX50	96	63	48	39	29	21	17
12HX80	144	95	73	59	44	32	25
12HX100	180	119	91	74	55	40	32
12HX135	244	161	123	100	74	54	43
12HX150	271	179	136	111	82	60	47
12HX205	363	257	197	160	117	85	67
12HX300	499	343	265	215	168	123	98
12HX330	569	400	314	260	196	144	115
12HX400	643	458	356	295	220	162	130
12HX505	772	597	479	398	298	218	173
12HX540	826	634	511	424	317	233	185
6HX800	1141	877	713	603	463	346	277

Constant Power Discharge (Watts per cell) to 1.70Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
12HX25	44	29	22	18	13	9	7
12HX35	69	45	34	28	20	15	12
6HX50	101	66	50	41	30	22	17
12HX50	101	66	50	41	30	22	17
12HX80	153	100	76	61	45	33	26
12HX100	191	125	94	77	56	41	32
12HX135	258	168	127	103	76	55	44
12HX150	287	187	142	115	84	62	48
12HX205	393	269	203	163	119	85	67
12HX300	540	363	278	224	174	127	101
12HX330	613	424	329	270	203	149	118
12HX400	695	485	373	306	228	167	133
12HX505	835	636	499	410	301	218	173
12HX540	891	674	532	438	326	236	186
6HX800	1259	944	758	636	484	359	287

Constant Power Discharge (Watts per cell) to 1.67Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
12HX25	45	29	23	18	13	10	8
12HX35	71	46	36	28	20	15	12
6HX50	104	67	53	41	30	22	17
12HX50	104	67	53	41	30	22	17
12HX80	157	102	80	62	46	33	26
12HX100	197	127	100	78	57	41	33
12HX135	265	172	135	105	77	56	44
12HX150	295	191	150	117	85	62	49
12HX205	408	273	204	164	119	85	67
12HX300	561	373	284	228	177	128	102
12HX330	637	435	336	276	206	150	119
12HX400	722	498	381	312	231	169	134
12HX505	872	653	506	412	301	218	173
12HX540	929	691	540	444	326	236	186
6HX800	1320	977	780	652	494	365	291

Constant Power Discharge (Watts per cell) to 1.65Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
12HX25	46	30	23	18	13	10	8
12HX35	72	46	36	28	21	15	12
6HX50	106	68	53	41	30	22	17
12HX50	106	68	53	41	30	22	17
12HX80	160	103	80	63	46	33	26
12HX100	200	129	100	78	57	42	33
12HX135	270	174	135	106	77	56	44
12HX150	300	193	150	117	86	63	49
12HX205	417	275	205	163	119	85	67
12HX300	572	378	287	230	178	129	102
12HX330	650	441	340	279	207	151	120
12HX400	739	505	386	315	233	170	135
12HX505	896	660	510	412	301	218	173
12HX540	953	699	545	445	326	236	186
6HX800	1356	995	780	660	499	368	293

Constant Power Discharge (Watts per cell) to 1.63Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
12HX25	47	30	23	18	13	10	8
12HX35	73	47	36	28	21	15	12
6HX50	108	69	53	42	30	22	17
12HX50	108	69	53	42	30	22	17
12HX80	162	104	80	63	46	33	26
12HX100	203	130	100	79	57	42	33
12HX135	274	175	135	106	78	56	44
12HX150	306	194	150	118	86	63	49
12HX205	423	277	205	163	119	85	67
12HX300	580	382	289	231	179	129	103
12HX330	661	446	342	280	208	152	120
12HX400	752	510	389	316	234	170	135
12HX505	919	666	511	412	301	218	173
12HX540	976	705	549	446	326	236	186
6HX800	1388	1011	780	667	503	370	294

Constant Power Discharge (Watts per cell) to 1.60Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
12HX25	47	30	23	18	13	10	8
12HX35	74	47	36	28	21	15	12
6HX50	109	69	53	42	31	22	17
12HX50	109	69	53	42	31	22	17
12HX80	165	105	80	63	46	34	26
12HX100	206	131	100	79	58	42	33
12HX135	278	177	135	107	78	57	45
12HX150	309	196	150	119	86	63	49
12HX205	432	279	205	163	119	85	67
12HX300	592	387	292	233	180	130	103
12HX330	678	453	346	283	209	152	121
12HX400	771	518	393	319	235	171	135
12HX505	950	674	511	412	301	218	173
12HX540	1007	714	550	446	326	236	186
6HX800	1428	1029	780	674	507	372	296

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