



*Uninterruptible Power Supply*

## Battery Range Summary

The DataSafe® HX top terminal battery range of Valve Regulated Lead Acid (VRLA) batteries has been designed to offer superior solutions for the Information Technology (IT) and Uninterruptible Power Supply (UPS) markets.

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

Gas recombination technology for VRLA batteries has completely 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 top terminal batteries deliver superior performance.

### Features and Benefits

- Flame retardant case and cover (UL94) to meet UL1778
- Self-resealing, flame-arresting vents
- Battery containers and covers are hermetically sealed to provide leak resistance over the life of the product
- Absorbed Glass Mat (AGM) separators - the electrolyte is completely absorbed into the separator
- High performance brass threaded receptacle, bolt terminal or faston terminals
- Increased energy density
- Computer optimized electrochemistry for increased power up to the 15 minute rate to 1.67 Volts Per Cell (VPC)
- 100% initial battery capacity
- Classified as non-spillable



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## Construction

### High conductivity terminals

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

### High integrity terminal seal

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

### Self-sealing, flame-arresting vents

- Low pressure non-return valve prevents ingress of atmospheric oxygen.

### Rugged high performance positive plates

- Grids designed to resist corrosion and prolong active life.

### Balanced negative plates

- Ensure optimum recombination efficiency.

### Rigged cell containers

- Thick-wall plastic, highly resistant to shock and vibration. Flame retardant material is the standard offering.

### Absorbed Glass Mat (AGM) Separator

- Low resistance microporous AGM. The electrolyte is absorbed within this material.

## Installation and Operation

### Normal operating temperature range

- HX25-HX150: -4°F (-20°C) to 122°F (50°C)
- HX205-HX800: -22°F (-30°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 top terminal batteries can be safely recharged at high current rates.

### Storage time

- DataSafe HX top terminal batteries can be stored for up to six months at 77°F (25°C) before a freshening charge is required. At higher temperatures this time interval will be reduced.

### Torque specifications

- (Fig. C) M5 Receptacle - 31 in-lbs (3.5 Nm) ± 5%
- (Fig. D) M6 Receptacle - (HX80-HX150) 44 in-lbs (5 Nm) ± 5%
- (Fig.D) M6 Receptacle - (HX205-HX800) 60 in-lbs (6.8 Nm) ± 5%
- (Fig. E) M5 Bolt - 40 in-lbs (4.5 Nm) ± 5%
- (Fig. F) M6 Bolt - 58 in-lbs (6.5 Nm) ± 5%

## Standards

- UL listing - File No MH16464 (HX25-HX150) or MH12544 (HX205-HX800)
- The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified.
- Approved for shipping as non-hazardous, non-spillable - per IATA Special Provision A67 and 49 CFR.

## General Specifications

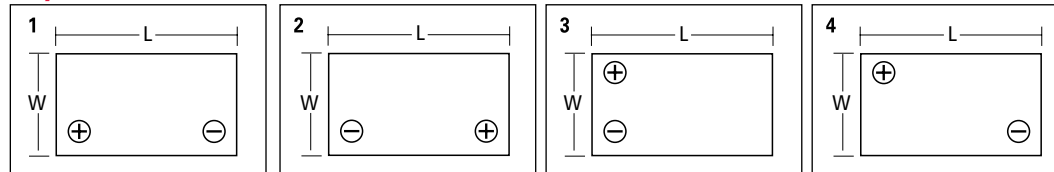
DataSafe® HX Battery Model	Nominal Voltage (V)	Nominal Ah		Watts/Cell		Nominal Dimensions									
		8 hr rate to 1.75 volts/cell end voltage at 77°F (25°C)	@ 15 min rate to 1.67 volts/cell end voltage at 77°F (25°C)	Length in	mm	Width		Overall* Height		Typical Weight		Short Circuit Current (A)	Internal Resistance (mΩ)**	Layout	Terminals
in	mm	in	mm			in	mm	lbs	kg						
12HX25	12	4.5	23	3.5	90	2.8	70	4.2	107	4.4	2.0	300	16.5	1	A/B
12HX35	12	7	36	5.9	151	2.6	65	3.9	100	6.1	2.8	500	13.2	3	A/B
6HX50	6	11	53	5.9	151	2.0	50	3.9	99	4.7	2.1	720	6.1	1	A/B
12HX50	12	11	53	6.0	152	3.9	99	3.9	99	9.1	4.1	720	12.2	3	A/B
12HX80	12	16	80	7.1	181	3.0	76	6.6	167	14.0	6.4	1000	8.5	2	C/E
12HX100	12	21	100	6.5	166	4.9	125	6.9	175	22.0	10.0	1500	7.1	2	C/E
12HX135B	12	28	135	7.8	198	5.1	130	7.1	180	26.0	11.8	1800	5.6	1	F
12HX135R	12	28	135	7.7	196	5.1	130	6.7	169	26.0	11.8	1800	5.6	1	C
12HX150	12	32	150	7.8	197	6.5	165	6.7	170	32.0	14.5	2400	5.0	2	D/F
12HX205	12	44	205	8.9	226	5.5	140	8.1	206	43.0	19.5	2775	4.5	1	D
12HX300	12	70	284	10.2	259	6.9	175	8.2	208	60.0	27.2	3175	3.9	1	D
12HX330	12	82	336	11.8	300	6.8	173	8.4	213	71.0	32.2	3700	3.4	1	D
12HX400	12	94	381	13.3	338	6.8	173	8.3	211	80.0	36.3	4225	3.0	1	D
12HX505	12	119	506	13.3	338	6.8	173	10.7	272	103.0	46.7	4510	2.8	1	D
12HX540	12	123	540	13.3	338	6.8	173	10.7	272	106.0	48.1	4775	2.6	1	D
6HX800	6	200	780	13.4	340	6.8	173	8.3	211	80.0	36.3	6200	1.0	4	D

\* Including Terminal

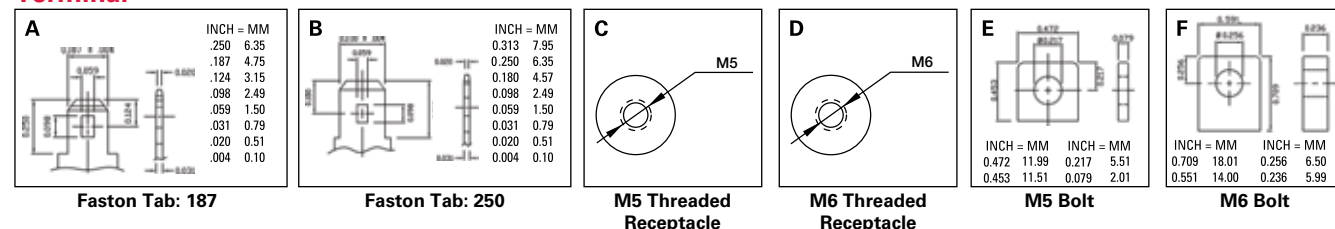
\*\* Resistance values are for reference only and not intended to represent an Ohmic Value or Baseline measurement.

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

## Layout



## Terminal



# Battery Range Summary

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

DataSafe® HX Battery Model	Standby Time (Minutes)						
	5	10	15	20	30	45	60
12HX25	47	30	23	18	13	10	8
12HX35	70	47	36	29	21	15	12
12HX50	105	70	53	43	32	23	18
12HX80	144	101	79	64	47	34	27
12HX100	180	128	100	82	62	46	37
12HX135	244	171	134	110	82	60	47
12HX150	270	195	152	127	96	71	57
12HX205	373	258	197	160	118	85	67
12HX300	513	357	277	227	173	128	102
12HX330	590	418	328	272	204	150	119
12HX400	671	478	371	308	230	170	136
12HX505	783	600	479	398	298	218	173
12HX540	835	638	511	425	318	233	186
6HX50	105	70	53	43	32	23	18
6HX800	1141	877	713	603	463	346	277

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

DataSafe® HX Battery Model	Standby Time (Minutes)						
	5	10	15	20	30	45	60
12HX25	49	31	23	19	13	10	8
12HX35	73	48	36	29	21	15	12
12HX50	110	72	54	44	32	23	18
12HX80	152	104	80	65	47	34	27
12HX100	192	133	103	84	63	46	37
12HX135	256	175	135	111	82	60	47
12HX150	289	205	158	130	97	71	57
12HX205	399	269	203	164	119	85	67
12HX300	545	369	283	231	174	128	102
12HX330	624	431	335	276	206	150	119
12HX400	708	493	380	313	232	170	136
12HX505	845	637	499	410	301	218	173
12HX540	897	675	532	439	326	236	186
6HX50	110	72	54	44	32	23	18
6HX800	1259	944	758	636	484	359	287

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

DataSafe® HX Battery Model	Standby Time (Minutes)						
	5	10	15	20	30	45	60
12HX25	50	32	23	19	13	10	8
12HX35	74	48	36	29	21	15	12
12HX50	113	73	54	44	32	23	18
12HX80	156	105	80	65	47	34	27
12HX100	197	135	103	84	63	46	37
12HX135	260	177	135	111	82	60	47
12HX150	299	209	160	131	97	71	57
12HX205	412	274	205	164	119	85	67
12HX300	558	373	284	231	174	128	102
12HX330	637	435	336	276	206	150	119
12HX400	722	498	381	313	232	170	136
12HX505	877	653	506	412	301	218	173
12HX540	931	691	540	444	326	236	186
6HX50	113	73	54	44	32	23	18
6HX800	1320	977	780	652	494	365	291

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

DataSafe® HX Battery Model	Standby Time (Minutes)						
	5	10	15	20	30	45	60
12HX25	50	32	23	19	13	10	8
12HX35	74	48	36	29	21	15	12
12HX50	114	73	54	44	32	23	18
12HX80	157	106	80	65	47	34	27
12HX100	200	136	103	84	63	46	37
12HX135	262	177	135	111	82	60	47
12HX150	304	211	160	131	97	71	57
12HX205	420	276	205	164	119	85	67
12HX300	563	375	284	231	174	128	102
12HX330	643	437	336	276	206	150	119
12HX400	729	500	381	313	232	170	136
12HX505	897	661	510	412	301	218	173
12HX540	951	699	545	445	326	236	186
6HX50	114	73	54	44	32	23	18
6HX800	1356	995	780	660	499	368	293

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

DataSafe® HX Battery Model	Standby Time (Minutes)						
	5	10	15	20	30	45	60
12HX25	51	32	23	19	13	10	8
12HX35	74	48	36	29	21	15	12
12HX50	115	73	54	44	32	23	18
12HX80	158	106	80	65	47	34	27
12HX100	202	136	103	84	63	46	37
12HX135	263	177	135	111	82	60	47
12HX150	309	212	160	131	97	71	57
12HX205	426	278	205	164	119	85	67
12HX300	567	375	284	231	174	128	102
12HX330	648	437	336	276	206	150	119
12HX400	734	500	381	313	232	170	136
12HX505	916	667	511	412	301	218	173
12HX540	970	706	549	445	326	236	186
6HX50	115	73	54	44	32	23	18
6HX800	1388	1011	780	667	503	370	294

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

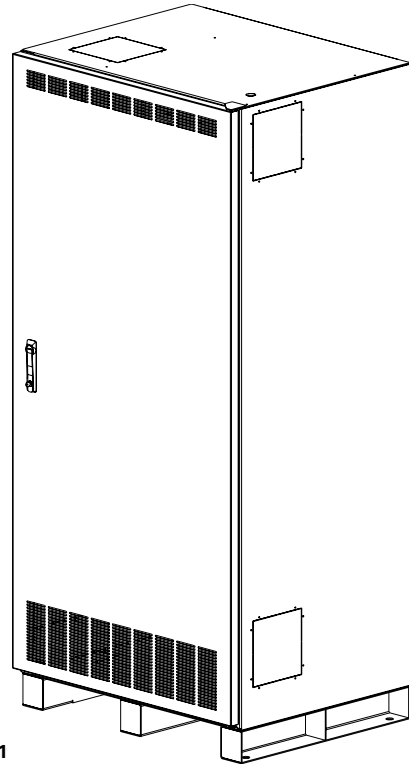
DataSafe® HX Battery Model	Standby Time (Minutes)						
	5	10	15	20	30	45	60
12HX25	51	32	23	19	13	10	8
12HX35	75	48	36	29	21	15	12
12HX50	116	73	54	44	32	23	18
12HX80	160	106	80	65	47	34	27
12HX100	204	136	103	84	63	46	37
12HX135	264	177	135	111	82	60	47
12HX150	315	214	160	131	97	71	57
12HX205	433	279	205	164	119	85	67
12HX300	571	375	284	231	174	128	102
12HX330	652	437	336	276	206	150	119
12HX400	739	500	381	313	232	170	136
12HX505	941	675	511	412	301	218	173
12HX540	995	714	550	445	326	236	186
6HX50	116	73	54	44	32	23	18
6HX800	1428	1029	780	674	507	372	296

## DataSafe® HX Top Terminal Battery Cabinets

DataSafe® HX Top Terminal 6V or 12V Series Battery Cabinets\* (See Figure 1) are certified to UBC Zone 4, at or below grade. Visit [www.enersys.com](http://www.enersys.com) for more information.

DataSafe® HX Battery Model	Zone 0 Data Sheet	Zone 4 Data Sheet
HX Top Terminal Series	N/A	US-HXCAB-RS

\* Battery Cabinet Accessories, inter-unit and inter-tier connections etc., for 120 VDC to 480 VDC Cabinets are included in the cabinet price as they are all sized at the 15 minute discharge rate to 1.67 VPC end voltage.



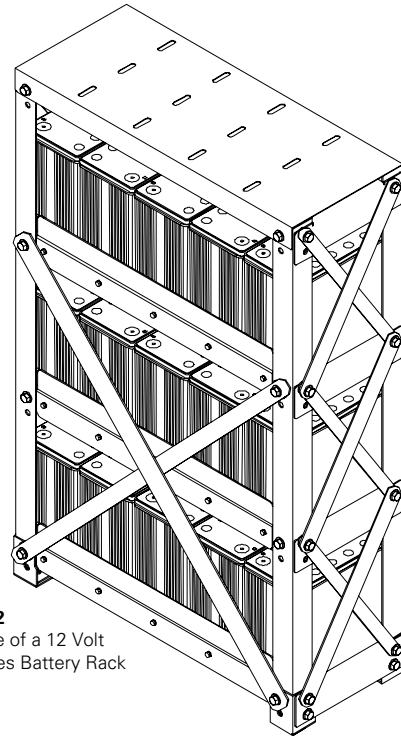
**Figure 1**  
Example of a 12 Volt HX Series Battery Cabinet

## DataSafe® HX Top Terminal Battery Racks

DataSafe® HX Top Terminal 6V or 12V Series Battery Racks\*\* (See Figure 2) are available in non-Seismic as well as UBC Zone 4, at or below grade. Visit [www.enersys.com](http://www.enersys.com) for more information.

DataSafe® HX Battery Model	Zone 0 Data Sheet	Zone 4 Data Sheet
12HX205	US-UAAx-RK	US-UJAx-RK
12HX300	US-UABx-RK	US-UJBx-RK
12HX330	US-UACx-RK	US-UJCx-RK
12HX400	US-UADx-RK	US-UJ Dx-RK
12HX505 12HX540	US-UAEEx-RK	US-UJEx-RK
6HX800	US-UAFx-RK	US-UJFx-RK

\*\* Battery Rack Accessories, inter-unit and inter-tier connectors etc., are not included in Rack or Battery prices as their size varies based on the specific site application or rates. Once properly sized and quoted by EnerSys®, Battery Rack Accessories are available and sold as separate line items.



**Figure 2**  
Example of a 12 Volt HX Series Battery Rack

