



Telecommunications

**Battery Performance Specifications**



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## Features and Benefits

- Positive and negative plate grids made of lead-calcium-tin alloy for long life and efficient recharge
- Flame retardant case (UL94) and cover to meet UL1778
- Individual flame arresting cell vents
- DataSafe® HX top terminated 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 and bolt terminal
- Increased energy density
- 100% initial battery capacity

## Construction

- High conductivity terminals. Brass insert with threaded receptacle and bolt terminal for maximum conductivity and ease of installation
- High integrity terminal seal. Compression grommet or dual welded/epoxy seal designed for long life
- Self-regulating relief valve. 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
- Tough cell containers. Thick-wall plastic, highly resistant to shock and vibration. Flame retardant material
- Separators. Low resistance microporous Absorbant Glass Mat (AGM). The electrolyte is absorbed within this material

## Installation and Operation

- Normal operating temperature range: -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 terminated batteries can be safely recharged at high current rates when utilizing a constant voltage charger
- Storage time: DataSafe HX top terminated 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: 44 in-lbs (5 Nm) ± 5%
- DataSafe HX top terminated 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 MH12544
- 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

## General Specifications

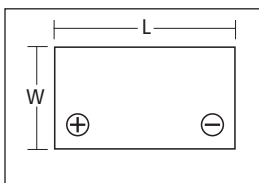
Cell Type	Nominal Voltage (V)	Nominal Ah	Watts/Cell	Nominal Dimensions						Typical Weight		Short Circuit Current (A)	Max Discharge Current (Amps-2 min rate)	Current Resistance (mΩ)**
		8hr rate to 1.75 volts/cell end voltage at 77°F (25°C)	@ 15 min. to 1.67 volts/cell end voltage at 77°F (25°C)	Overall Height*		Width		Length		lbs	kg			
12HX205	12	44	205	8.1	206	5.5	140	8.9	226	43.0	19.5	2775	439	4.5
12HX300	12	70	284	8.2	208	6.9	175	10.2	259	60.0	27.2	3175	503	3.9
12HX330	12	82	336	8.4	213	6.8	173	11.8	300	71.0	32.2	3700	586	3.4
12HX400	12	94	381	8.3	211	6.8	173	13.3	338	80.0	36.3	4225	670	3.0
12HX540	12	123	540	10.7	272	6.8	173	13.3	338	106.0	48.1	4775	961	2.6

\*Including Terminal

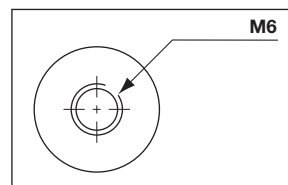
\*\* Resistance values are for reference only and not intended to represent an Ohmic Value or Baseline measurement

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

## Terminal Layout

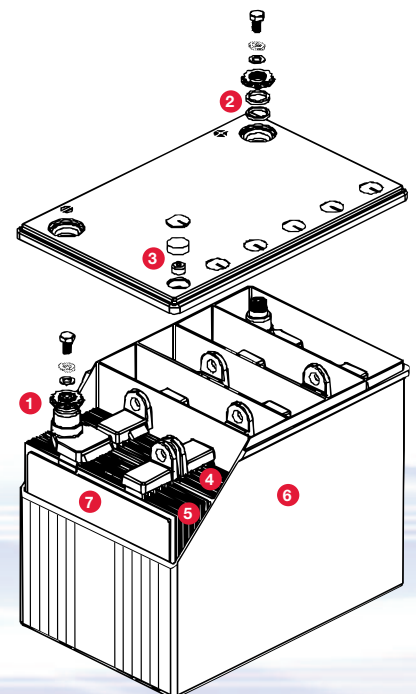


## Terminal Drawing



M6 Threaded Receptacle

1. High conductivity terminals
2. High integrity terminal seal
3. Self-regulating relief valve
4. Rugged high performance positive plates
5. Balanced negative plates
6. Tough cell containers
7. Separators



# Battery Performance Specifications

## Constant Current

### End Voltage 1.75 Vpc

#### Ampere Rating for Minutes to Specified End Voltage at 77°F (25°C)

PowerSafe® HX Battery	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
12HX205	331.3	106.0	61.9	44.0	34.4	18.7	12.8	9.9	8.1	6.9	6.0	5.4	4.4	2.3
12HX300	435.8	149.0	92.1	66.7	52.7	29.8	21.2	16.5	13.6	11.5	10.0	8.9	7.2	3.7
12HX330	498.1	177.4	108.0	78.3	61.7	34.8	24.7	19.3	15.8	13.4	11.7	10.3	8.4	4.3
12HX400	563.5	200.4	121.5	89.0	70.4	39.8	28.2	22.0	18.1	15.3	13.3	11.8	9.6	5.0
12HX540	613.1	279.1	169.3	123.0	97.3	53.4	37.3	28.7	23.5	19.9	17.4	15.4	12.6	6.6

### End Voltage 1.80 Vpc

#### Ampere Rating for Minutes to Specified End Voltage at 77°F (25°C)

PowerSafe® HX Battery	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
12HX205	284.8	99.4	59.2	42.6	33.6	18.7	12.8	9.9	8.1	6.9	6.0	5.4	4.4	2.3
12HX300	376.9	140.7	88.6	64.6	51.5	29.6	21.1	16.5	13.6	11.5	10.0	8.9	7.2	3.7
12HX330	430.3	168.2	103.9	75.7	60.2	34.5	24.7	19.3	15.8	13.4	11.7	10.3	8.4	4.3
12HX400	487.2	190.3	116.9	86.2	68.7	39.4	28.2	22.0	18.1	15.3	13.3	11.8	9.6	5.0
12HX540	516.6	257.4	160.5	117.5	93.2	52.1	36.7	28.5	23.4	19.9	17.4	15.4	12.6	6.6

### End Voltage 1.85 Vpc

#### Ampere Rating for Minutes to Specified End Voltage at 77°F (25°C)

PowerSafe® HX Battery	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
12HX205	236.2	89.3	54.7	39.9	31.6	17.6	12.2	9.5	7.8	6.7	5.8	5.2	4.3	2.3
12HX300	313.1	128.1	82.5	60.8	48.6	28.1	20.2	15.8	13.0	11.1	9.7	8.6	7.0	3.6
12HX330	358.4	153.7	96.7	71.2	56.8	32.8	23.5	18.4	15.2	12.9	11.3	10.0	8.1	4.2
12HX400	406.6	174.2	109.2	81.1	64.9	37.5	26.9	21.1	17.4	14.8	12.9	11.4	9.3	4.8
12HX540	420.1	227.8	146.6	108.9	87.0	48.9	34.5	26.9	22.1	18.9	16.5	14.7	12.1	6.5

## Discharge Rate in Watts

### End Voltage 1.75 Vpc

#### Watts per Cell Rating for Minutes to Specified End Voltage at 77°F (25°C)

PowerSafe® HX Battery	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
12HX205	578	197	118	85	67	37	26	20	16	14	12	11	8.7	4.7
12HX300	763	277	173	128	102	58	42	33	27	23	20	18	14	7.4
12HX330	872	328	204	150	119	68	48	38	31	27	23	21	17	8.7
12HX400	986	371	230	170	136	78	55	43	36	30	26	23	19	9.9
12HX540	1066	511	318	233	186	104	73	57	47	40	34	30	25	13

### End Voltage 1.80 Vpc

#### Watts per Cell Rating for Minutes to Specified End Voltage at 77°F (25°C)

PowerSafe® HX Battery	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
12HX205	512	187	113	83	65	37	26	20	16	14	12	11	8.7	4.7
12HX300	677	265	169	124	100	58	41	33	27	23	20	18	14	7.4
12HX330	773	315	198	146	117	67	48	38	31	27	23	21	17	8.7
12HX400	876	356	223	166	133	77	55	43	36	30	26	23	19	9.9
12HX540	921	478	304	225	179	102	72	56	46	39	34	30	25	13

### End Voltage 1.85 Vpc

#### Watts per Cell Rating for Minutes to Specified End Voltage at 77°F (25°C)

PowerSafe® HX Battery	Minutes				Hours									
	1	15	30	45	1	2	3	4	5	6	7	8	10	20
12HX205	436	170	106	78	62	35	25	19	16	13	12	10	8.5	4.6
12HX300	578	244	159	118	95	55	40	31	26	22	19	17	14	7.3
12HX330	661	292	187	139	112	65	46	37	30	26	22	20	16	8.5
12HX400	750	331	211	158	127	74	53	42	35	29	26	23	19	9.7
12HX540	777	431	281	210	169	96	68	54	44	38	33	29	24	13



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