



DataSafe® 12HX1000F-FR Battery Range Summary

DataSafe® HX front terminal 12HX1000F-FR battery systems offer more power in a smaller space than top terminated 12V UPS batteries. Ideal for space restricted applications, the 12HX1000F-FR occupies up to 6% less space than top terminated batteries and utilizes 33% less strings and connections.

Equipped with Valve Regulated Lead Acid (VRLA) technology, 12HX1000F-FR batteries feature unmatched energy density designed for the most demanding mission-critical applications. Rated at 100% initial capacity at initial discharge, 12HX1000F-FR batteries provide unmatched security and reliability for mission-critical systems.

Full front access terminals make the batteries easy to install, while easy-to-access terminals and no slide out tray simplify maintenance. 12HX1000F-FR batteries can also accommodate monitoring systems and scale easily to large capacity UPS systems.

Features and Benefits

- Smaller footprint per kilowatt vs. top terminated 12V batteries
- 6% system space savings vs. 12V top terminal systems
- True front terminal front access installation
- Scales easily with expanding large capacity UPS systems
- 1000 WPC design requires fewer parallel strings
- Easy terminal access simplifies maintenance
- No costly slide out trays required

Construction

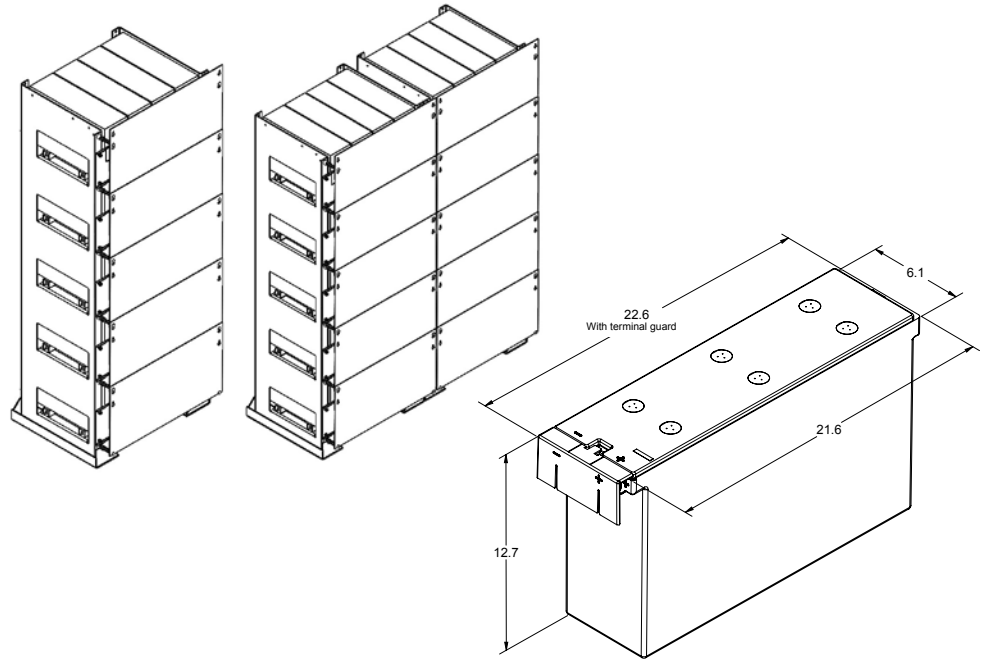
- Insulating covers and voltmeter probe access enhance safety and simplify maintenance routines
- Polypropylene strap handle simplifies installation, removal and replacement
- Self-resealing, flame-arresting vents prevent ingress of atmospheric oxygen
- Tin-plated copper busbars reduce connection resistance to enhance power delivery from the battery system
- Plasma welded current conductors are a high current, low resistance method of construction similar to our ODYSSEY® Extreme Series™ and Performance Series™ batteries
- True front terminal reduces connection points and maintenance checks
- Thick-wall plastic containers, highly resistant to shock and vibration. Flame retardant material is the standard offering
- Low resistance microporous Absorbed Glass Mat (AGM) separator. The electrolyte is absorbed within this material
- FR-ABS case and cover designed to resist bulging

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)
- DataSafe® HX 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 specification: 160 IN LB (18 Nm)

Standards

- UL listing – File No: MH12544
- The management systems governing the manufacture of this product are ISO 9001 and ISO 14001 certified



Battery Specifications

Battery Model	Nominal Voltage (V)	Nominal Ah	Watts/Cell	Nominal Dimensions				Short Circuit Current A	Internal Resistance (mΩ)**	Electrolyte (1.300 SF)							
		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*		Width	Overall Height			Typical Weight	Volume		Weight				
				in	mm	in	mm	in	mm	lbs	kg			gals	liters	lbs	kg
12HX1000F-FR	12	240	1000	21.6	549	6.1	155	12.7	323	196	88.9	6903	0.304	3.1	11.7	33.6	15.2

*Length with terminal guard is 22.6". 12HX1000F-FR is compatible with all major OEM cabinets for 1000 watt per cell batteries.

** 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).

12HX1000F-FR Constant Power Discharge (Watts per cell at 77°F (25°C))

End Volts	Standby Time (Minutes)																		
	5	6	7	8	9	10	11	12	13	14	15	20	25	30	45	60	90	120	180
1.75	1378	1313	1255	1203	1155	1111	1071	1030	992	957	924	788.9	688.2	610.0	454.7	363.1	260.8	203.7	143.1
1.70	1475	1408	1342	1281	1227	1177	1132	1090	1051	1013	976	826.5	715.7	630.4	464.4	366.6	260.8	203.7	143.1
1.67	1523	1450	1385	1321	1263	1211	1162	1118	1077	1038	1000	842.4	726.5	637.7	464.4	366.6	260.8	203.7	143.1
1.65	1552	1476	1409	1346	1285	1230	1180	1134	1091	1051	1014	850.9	731.5	640.6	464.4	366.6	260.8	203.7	143.1
1.63	1579	1500	1430	1366	1305	1248	1196	1148	1104	1063	1024	857.8	735.5	640.6	464.4	366.6	260.8	203.7	143.1
1.60	1608	1534	1459	1392	1330	1271	1216	1166	1120	1077	1037	865.4	736.2	640.6	464.4	366.6	260.8	203.7	143.1

Please note: These rates include an interbattery connector resistance of 10µΩ. Sizing calculations should be reviewed if connection resistance is higher than 10µΩ.

Battery Range Summary

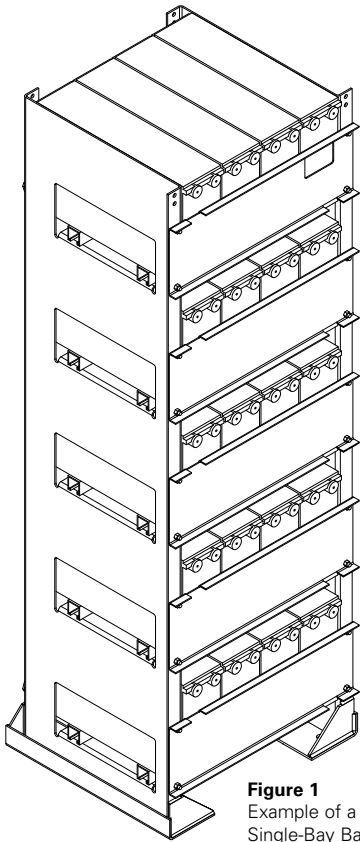


Figure 1
Example of a 5-Tier 12-Volt HX-FT Series
Single-Bay Battery Rack

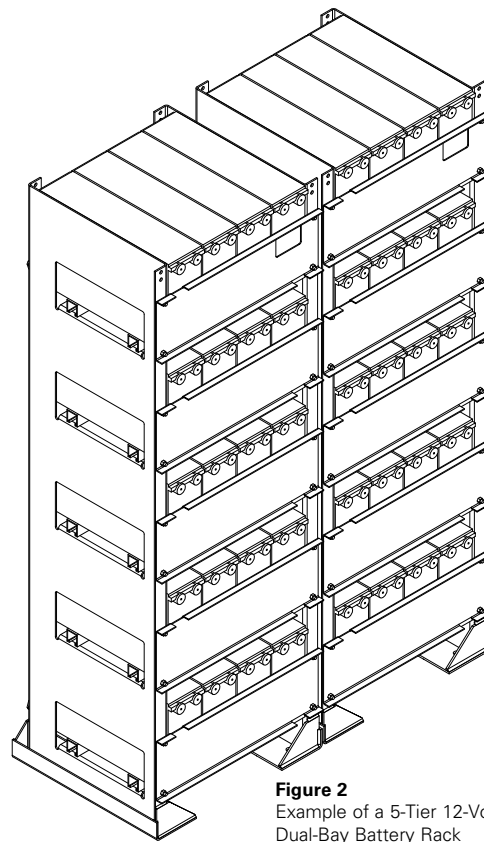


Figure 2
Example of a 5-Tier 12-Volt HX-FT Series
Dual-Bay Battery Rack

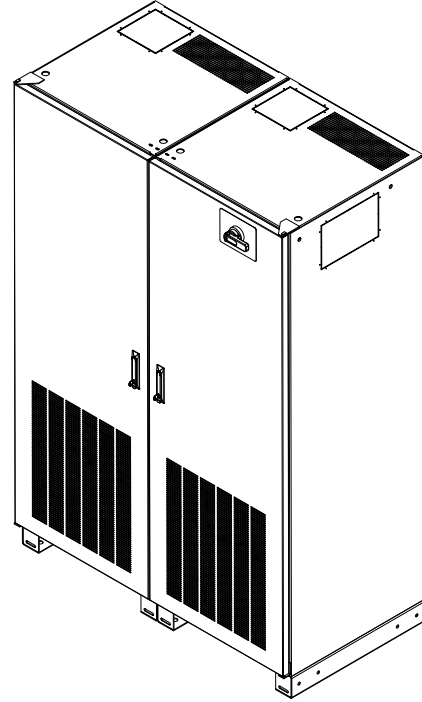
Rack Model

Model Number	Quantity	Model	# of Units	Volts	Width		Depth		Height		Single-String System Weight	
					in	mm	in	mm	in	mm	lbs	kg
I12HX1K4J5TSA	2	12HX1000F-FR	40	480	61.4	1559	26.2	665	77.6	1971	8500	3856
I12HX1K4J4TSA	2	12HX1000F-FR	32	384	61.4	1559	26.2	665	65.6	1666	6816	3092
I12HX1K4J3TSA	2	12HX1000F-FR	24	288	61.4	1559	26.2	665	47.6	1209	5034	2284
I12HX1K4J5TSA	1	12HX1000F-FR	20	240	30.7	779	26.2	665	32.6	828	4250	1928
I12HX1K4J4TSA	1	12HX1000F-FR	16	192	30.7	779	26.2	665	65.6	1666	3408	1546
I12HX1K4J3TSA	1	12HX1000F-FR	12	144	30.7	779	26.2	665	47.6	1209	2567	1164
I12HX1K4J2TSA	1	12HX1000F-FR	8	96	30.7	779	26.2	665	32.6	828	1725	782
I12HX1K4J1TSA	1	12HX1000F-FR	4	48	30.7	779	26.2	665	17.6	447	884	401

Cabinet Model

Model Number	Quantity	Model	# of Units	Volts	Width		Depth		Height		Single-String System Weight	
					in	mm	in	mm	in	mm	lbs	kg
87E1E1K4801B***#0?S1BT	1	12HX1000F-FR	40	480	56.0	1422	29.6	752	84	2133	8650	3923
87E1E1K4321B***#0?S1BT	1	12HX1000F-FR	36	432	56.0	1422	29.6	752	84	2133	7926	3595
87E1E1K3841B***#0?S1BT	1	12HX1000F-FR	32	384	56.0	1422	29.6	752	84	2133	7202	3266
87E1E1K3601B***#0?S1BT	1	12HX1000F-FR	30	360	56.0	1422	29.6	752	84	2133	6840	3102
87E1E1K2881B***#0?S1BT	1	12HX1000F-FR	24	288	56.0	1422	29.6	752	84	2133	5754	2610

Cabinet	Legend	Choices
87	Cabinet Size	87
E1E	EnerSys	1 string
1K	12HX1000F-FR	12HX1000F-FR
480-288	Bus Voltage	480, 432, 384, 360, 288
1B	1 Breaker	1 Breaker or Call
***	Breaker Size	300-800 Amps
#	Aux Contacts	0, 1 or 2
0	Bell Alarm	0 = NO, 1 = YES
?	Breaker Options	W = 24 VDC Shunt X = 48 VDC Shunt H = 24 UVR J = 48 UVR
S1	Seismic	IBC 2015, 2016 CBC
??	Cabinet Color	OB = Beige, BT = Black



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