

As the cost of electrical energy continues to rise and as energy consumption in applications such as data centres continues to grow, energy efficiency has become a topic of growing interest and concern for the UPS industry. Furthermore, the ever-growing awareness over the impact of energy consumption on the environment has put additional pressure on decision makers to develop genuine power management strategies and to invest in eco-friendly initiatives. As a result, reducing costs and power usage through green initiatives has now become a critical target for many UPS players who have tried to respond by developing higher efficiency power management systems in order to reduce energy losses and ultimately operating costs.

EnerSys®, one of the world's largest industrial battery manufacturers and a leader in stored energy solutions, is proud to be doing its part by developing the most effective and innovative products for a wide range of applications. EnerSys' DataSafe® HX Plus range can significantly contribute to helping customers ultimately achieve their business goals in mission-critical power back-up applications. Using proven and advanced Thin Plate Pure Lead Technology (TPPL), combined with the selection of high grade, high purity materials enables EnerSys to deliver products with outstanding features and benefits and ultimately excellent value for money.

### Features & Benefits

- 360, 420, 506 & 560 Watts per Cell sizes (15min/1.67Vpc/25°C)
- Specifically designed for high-rate discharge applications
- Excellent power density
- 10-12 year design life
- Low energy consumption
- UL94 V-0 rated flame retardant ABS plastic
- Low total cost of ownership



## Construction

- High performance positive plates designed for long life and efficient recharge
- Negative plates provide perfect balance with positive plates to ensure optimum recombination efficiency
- Separators in low resistance microporous glass fibre. The electrolyte is absorbed within this material, preventing acid leakage in case of accidental damage
- Electrolyte - high grade dilute sulphuric acid absorbed into separator material
- Containers and lids in strong, UL94 V-0 rated flame retardant ABS plastic
- High integrity dual pillar seal design to ensure leak-free operation
- Self regulating pressure relief valves - prevent ingress of atmospheric oxygen

- A strong, detachable handle, designed to provide maximum flexibility during installation, is supplied with every pallet/case

- Operating temperature range: -20°C to +45°C

## Installation & Operation

- Monoblocs are designed for installation in cabinets or on stands, close to the point of use. A separate battery room is not necessary
- It is recommended that DataSafe® HX+ monoblocs are installed on their base
- Recommended float charge voltage: 2.280Vpc at 20°C (68°F)  
2.265Vpc at 25°C (77°F)
- Up to two year shelf life
- Reduced maintenance: no water addition required

## Standards

- Tested according to international standard IEC 60896-21 and compliant to defined requirements of IEC 60896-22
- Classified as "High Performance" according to Eurobat Guide 1999
- Recognised by UL (UL Standard 1989)
- Approved to be shipped as non-spillable cargo in accordance with the requirements of IMDG (International Maritime code for Dangerous Goods) and ICAO (International Civil Aviation Organisation)
- Manufactured in EnerSys® ISO 9001:2008 and ISO 14001:2004 certified production facilities

## General Specifications

Battery Type	Nominal Voltage (V)	Watts/Cell	Nominal Dimensions						Typical Weight		Short Circuit Current (A)	Internal Resistance (mΩ)	Terminals
		15min rate to 1.67Vpc @25°C	Length	Width		Height		kg	lbs				
			mm	in	mm	in	mm	in					
12HX360FR+	12	360	302	11.9	175	6.89	227	8.94	30.2	66.6	2447	4.10	M6 F
12HX420FR+	12	420	302	11.9	175	6.89	227	8.94	32.8	72.4	2700	3.80	M6 F
12HX505FR+	12	506	338	13.3	173	6.81	273	10.7	41.7	91.9	3500	3.50	M6 F
12HX560FR+	12	560	338	13.3	173	6.81	273	10.7	44.7	98.5	3800	3.30	M6 F

### 12HX360FR+ Constant Power Discharge Data (Watts per cell, 25°C)

Vpc	Standby Time (Minutes)							
	5	10	15	20	30	45	60	
1.60	656.2	468.8	364.8	299.7	221.4	159.6	125.8	
1.63	656.2	466.6	363.8	299.3	220.9	159.3	125.8	
1.65	656.2	464.3	362.2	298.4	220.6	159.0	125.7	
1.67	656.2	461.8	359.6	296.4	219.6	158.4	125.2	
1.70	656.2	458.4	355.8	292.2	216.8	157.1	124.4	

### 12HX420FR+ Constant Power Discharge Data (Watts per cell, 25°C)

Vpc	Standby Time (Minutes)							
	5	10	15	20	30	45	60	
1.60	765.5	546.9	425.6	349.7	258.4	186.3	146.8	
1.63	765.5	544.4	424.5	349.2	257.8	185.9	146.8	
1.65	765.5	541.6	422.5	348.1	257.4	185.6	146.7	
1.67	765.5	538.7	419.5	345.8	256.2	184.8	146.1	
1.70	765.5	534.8	415.1	340.9	252.9	183.3	145.2	

### 12HX505FR+ Constant Power Discharge Data (Watts per cell, 25°C)

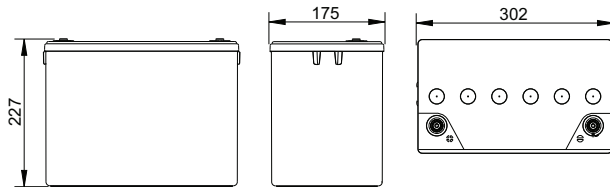
Vpc	Standby Time (Minutes)							
	5	10	15	20	30	45	60	
1.60	950.3	673.9	511.2	412.1	301.2	217.8	172.7	
1.63	915.4	667.0	510.9	412.0	301.2	217.8	172.7	
1.65	895.6	660.0	509.8	412.1	301.2	217.8	172.7	
1.67	871.7	652.9	506.0	412.1	301.2	217.8	172.7	
1.70	834.7	636.0	498.5	409.5	301.2	217.8	172.7	

### 12HX560FR+ Constant Power Discharge Data (Watts per cell, 25°C)

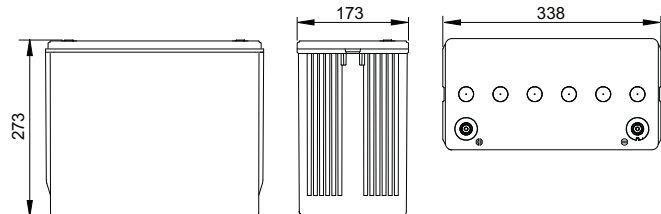
Vpc	Standby Time (Minutes)							
	5	10	15	20	30	45	60	
1.60	1123	750.4	576.2	472.3	351.6	257.7	202.9	
1.63	1089	739.2	571.0	469.5	350.5	257.3	202.7	
1.65	1064	729.8	566.0	466.4	349.0	256.5	202.2	
1.67	1037	718.9	560.0	462.5	346.9	255.4	201.5	
1.70	994.8	699.8	548.8	455.0	342.7	253.0	199.8	

## Outline Drawings

12HX360FR+ & 12HX420FR+



12HX505FR+ & 12HX560FR+



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