

# HIGH FREQUENCY BATTERY CHARGER

**CHARGE  
BOX  
HF2**

1PHASIG  
190-240V // 50-60Hz

**CHARGE  
BOX  
HF3**

3PHASIG  
400V // 50-60Hz

**CHARGE  
BOX  
MULTI**

3PHASIG  
400V // 50-60Hz

**Made in  
EUROPE**



- > high frequency battery charger
- > very high efficiency
- > energy-saving
- > low ripple
- > data memory for the last 50 cycles of charge
- > one charger for all lead-acid battery types

Presented by:



# HIGH FREQUENCY BATTERY CHARGER

4Load HF2 and HF3 chargers will impress you with their high degree of efficiency and low energy consumption. Great value has been placed on safety, ease of operation and quality. The chargers are reliably protected against polarity reversal, short-circuiting and surges.

You have a choice of charging curves to suit every type of lead battery. Eight charging curves are pre-installed. And of course you have the option of free programming directly on the device or via the USB interface. The detailed display of the current charging status on the LCD graphic screen will also win you over. In addition, the last 50 charging processes are automatically saved.



## TECHNICAL HIGHLIGHTS

LCD-display	
> charging curve in real-time	> charging current (A)
> battery voltage (V)	> charging time (h)
> charged ampere hours (Ah)	> error message display
+ 4 state of charge LEDs	
Range of application: -10 to +40°C	
Selection of 8 different charging curves for lead batteries	
> wet battery	> GEL battery
> AGM battery	+ freely programmable
Also suited for deep cycled batteries	
Reverse battery protection, short circuit-proof + overload protection	
Options	
> signal light	> support fixing
> EUW- electrolyte mixing pump	



Box	Length	Width	Height
A	330	180	520
B	400	300	430
C	600	400	800

Legend:	
PzS:	tubular plate traction battery, wet
PzV:	tubular plate traction battery, gel, maintenance-free
AGM:	fleece battery, maintenance-free
GiS:	grid plate traction battery, wet
GiV:	grid plate traction battery, gel, maintenance-free
Odyssey:	specifically for Odyssey batteries only

Fittings		
Item no.	Type	Description
CB-HF2-L	Signal light	Green signal light – charge end
CB-HF2-ST	Support fixing	Support to fix on bottom
CB-HF2-EUW	EUW-Pump	Electrolyte mixing pump fixed in the charger
CB-HF3-EUW	EUW-Pump	Electrolyte mixing pump fixed in the charger

Charge Box HF2 + HF3	Item no.	Type	Charging time by capacity C5 in Ah														Charging time by capacity C10 in Ah				Box
			PzS								PzV		GiV		GiS		AGM		Odyssey		
			6,5 - 7,5 h		7,5 - 8,5 h		8,5 - 10,0 h		10,0 - 14,0 h		12,0 - 14,0 h		11,0 - 14,0 h		9,0 - 14,0 h		7,0 - 10,0 h		2,0 - 5,0 h		
1	2	3	4	5	6	7	8	8	8	8	8	8	8	8	8	8	8	8	8		
CB-HF2-24/50	24	50	250	313	313	400	400	455	455	625	334	417	278	417	375	600	250	500	80	200	A
CB-HF2-24/60	24	60	300	375	375	480	480	545	545	750	400	500	334	500	450	720	300	600	96	240	A
CB-HF2-24/70	24	70	350	438	438	560	560	636	636	875	467	583	389	583	525	840	350	700	112	280	A
CB-HF2-24/80	24	80	400	500	500	640	640	727	727	1000	534	666	445	666	600	960	400	800	128	320	A
CB-HF2-24/90	24	90	450	563	563	720	720	818	818	1125	600	750	500	750	675	1080	450	900	144	360	A
CB-HF2-24/100	24	100	500	625	625	800	800	909	909	1250	667	833	556	833	750	1200	500	1000	160	400	A
CB-HF2-24/120	24	120	600	750	750	960	960	1091	1091	1500	800	1000	667	1000	900	1440	600	1200	192	480	A
CB-HF3-24/140	24	140	700	875	875	1120	1120	1273	1273	1750	934	1166	778	1166	1050	1680	700	1400	224	560	C
CB-HF3-24/160	24	160	800	1000	1000	1280	1280	1454	1454	2000	1067	1333	890	1333	1200	1920	800	1600	256	640	C
CB-HF3-24/180	24	180	900	1125	1125	1440	1440	1636	1636	2250	1201	1499	1001	1499	1350	2160	900	1800	288	720	C
CB-HF3-24/200	24	200	1000	1250	1250	1600	1600	1818	1818	2500	1334	1666	1112	1666	1500	2400	1000	2000	320	800	C
CB-HF3-24/220	24	220	1100	1375	1375	1760	1760	2000	2000	2750	1467	1833	1223	1833	1650	2640	1100	2200	352	880	C
CB-HF3-24/240	24	240	1200	1500	1500	1920	1920	2182	2182	3000	1601	1999	1334	1999	1800	2880	1200	2400	384	960	C

CB-HF2-36/30	36	30	150	188	188	240	240	273	273	375	200	250	167	250	225	360	150	300	48	120	A
CB-HF2-36/40	36	40	200	250	250	320	320	364	364	500	267	333	222	333	300	480	200	400	64	160	A
CB-HF2-36/50	36	50	250	313	313	400	400	455	455	625	334	417	278	417	375	600	250	500	80	200	A
CB-HF2-36/60	36	60	300	375	375	480	480	545	545	750	400	500	334	500	450	720	300	600	96	240	A
CB-HF2-36/70	36	70	350	438	438	560	560	636	636	875	467	583	389	583	525	840	350	700	112	280	A
CB-HF2-36/80	36	80	400	500	500	640	640	727	727	1000	534	666	445	666	600	960	400	800	128	320	A
CB-HF2-36/90	36	90	450	563	563	720	720	818	818	1125	600	750	500	750	675	1080	450	900	144	360	A
CB-HF3-36/100	36	100	500	625	625	800	800	909	909	1250	667	833	556	833	750	1200	500	1000	160	400	B
CB-HF3-36/120	36	120	600	750	750	960	960	1091	1091	1500	800	1000	667	1000	900	1440	600	1200	192	480	B
CB-HF3-36/140	36	140	700	875	875	1120	1120	1273	1273	1750	934	1166	778	1166	1050	1680	700	1400	224	560	C
CB-HF3-36/160	36	160	800	1000	1000	1280	1280	1454	1454	2000	1067	1333	890	1333	1200	1920	800	1600	256	640	C
CB-HF3-36/180	36	180	900	1125	1125	1440	1440	1636	1636	2250	1201	1499	1001	1499	1350	2160	900	1800	288	720	C
CB-HF3-36/200	36	200	1000	1250	1250	1600	1600	1818	1818	2500	1334	1666	1112	1666	1500	2400	1000	2000	320	800	C
CB-HF3-36/220	36	220	1100	1375	1375	1760	1760	2000	2000	2750	1467	1833	1223	1833	1650	2640	1100	2200	352	880	C
CB-HF3-36/240	36	240	1200	1500	1500	1920	1920	2182	2182	3000	1601	1999	1334	1999	1800	2880	1200	2400	384	960	C

CB-HF2-48/30	48	30	150	188	188	240	240	273	273	375	200	250	167	250	225	360	150	300	48	120	A
CB-HF2-48/40	48	40	200	250	250	320	320	364	364	500	267	333	222	333	300	480	200	400	64	160	A
CB-HF2-48/50	48	50	250	313	313	400	400	455	455	625	334	417	278	417	375	600	250	500	80	200	A
CB-HF2-48/60	48	60	300	375	375	480	480	545	545	750	400	500	334	500	450	720	300	600	96	240	A
CB-HF2-48/70	48	70	350	438	438	560	560	636	636	875	467	583	389	583	525	840	350	700	112	280	A
CB-HF2-48/75	48	75	375	469	469	600	600	682	682	938	500	625	417	625	563	900	375	750	120	300	A
CB-HF2-48/80	48	80	400	500	500	640	640	727	727	1000	534	666	445	666	600	960	400	800	128	320	A
CB-HF3-48/100	48	100	500	625	625	800	800	909	909	1250	667	833	556	833	750	1200	500	1000	160	400	B
CB-HF3-48/120	48	120	600	750	750	960	960	1091	1091	1500	800	1000	667	1000	900	1440	600	1200	192	480	B
CB-HF3-48/140	48	140	700	875	875	1120	1120	1273	1273	1750	934	1166	778	1166	1050	1680	700	1400	224	560	C
CB-HF3-48/160	48	160	800	1000	1000	1280	1280	1454	1454	2000	1067	1333	890	1333	1200	1920	800	1600	256	640	C
CB-HF3-48/180	48	180	900	1125	1125	1440	1440	1636	1636	2250	1201	1499	1001	1499	1350	2160	900	1800	288	720	C
CB-HF3-48/200	48	200	1000	1250	1250	1600	1600	1818	1818	2500	1334	1666	1112	1666	1500	2400	1000	2000	320	800	C
CB-HF3-48/220	48	220	1100	1375	1375	1760	1760	2000	2000	2750	1467	1833	1223	1833	1650	2640	1100	2200	352	880	C
CB-HF3-48/240	48	240	1200	1500	1500	1920	1920	2182	2182	3000	1601	1999	1334	1999	1800	2880	1200	2400	384	960	C

CB-HF2-72/30	72	30	150	188	188	240	240	273	273	375	200	250	167	250	225	360	150	300	48	120	A
CB-HF2-72/40	72	40	200	250	250	320	320	364	364	500	267	333	222	333	300	480	200	400	64	160	A
CB-HF2-72/50	72	50	250	313	313	400	400	455	455	625	334	417	278	417	375	600	250	500	80	200	A
CB-HF3-72/60	72	60	300	375	375	480	480	545	545	750	400	500	334	500	450	720	300	600	96	240	B
CB-HF3-72/70	72	70	350	438	438	560	560	636	636	875	467	583	389	583	525	840	350	700	112	280	B
CB-HF3-72/80	72	80	400	500	500	640	640	727	727	1000	534	666	445	666	600	960	400	800	128	320	B
CB-HF3-72/100	72	100	500	625	625	800	800	909	909	1250	667	833	556	833	750	1200	500	1000	160	400	C
CB-HF3-72/120	72	120	600	750	750	960	960	1091	1091	1500	800	1000	667	1000	900	1440	600	1200	192	480	C
CB-HF3-72/140	72	140	700	875	875	1120	1120	1273	1273	1750	934	1166	778	1166	1050	1680	700	1400	224	560	C
CB-HF3-72/160	72	160	800	1000	1000	1280	1280	1454	1454	2000	1067	1333	890	1333	1200	1920	800	1600	256	640	C