

# CBHF Series Hi Frequency Charger

**S.P.E.** ELETTRONICA  
INDUSTRIALE

ON-BOARD or STAND ALONE use: Lightweight, Compact, Customisable, universal input.



## TECHNICAL FEATURES.

- A high frequency charger with advanced technology.
- The charging process is fully controlled by microprocessor.
- Efficiency of  $\geq 90\%$ .
- Visual Lit display shows, charging current, battery voltage and charging time, of charge supplied in Ah and of the energy absorbed in KWh.
- Charging curve can be changed using dip switches. There are 16 standard pre-programmed curves for lead-acid, Gel and AGM batteries. Other curves are available on request for other battery types, including Li-Ion and Li-Po.
- Battery voltage and charging current can be changed using dipswitches.
- The charging process starts in soft start mode and is automatically reset when a new battery is connected.
- Charge cycles begin with batteries as low as 2volts.
- Protects against anomalies including reverse polarity, short circuits, or over voltages.
- Thermal insulation protects against overheating.
- Equipped with NC (normally closed) delay for safety interlock connections (only with on-board installation).
- Operating temperature range:  $-10^{\circ}\text{C} \div 45^{\circ}\text{C}$  ( $14^{\circ}\text{F} \div 113^{\circ}\text{F}$ ).
- Maximum relative humidity: 90%.
- International Protection rating IP30 with forced ventilation.
- Stop button on the front panel.
- Relevant information giving the last 30 charging cycles (shows duration of the charging cycle, Ah's delivered by the battery, voltage at the end of the charge and the possible error messages).

PRODUCT CODE	VOLTAGE	OUTPUT	MAINS (VAC)	INPUT CURRENT	8HR RECHARGE	12HR RECHARGE	DIMENSIONS	WEIGHT
CBHF2--XP-HK-12-35	12	35	230		220	320	270X255X97	2.5
CBHF2--XP-HK-12-40	12	40	230		260	360	270X255X97	2.5
CBHF2--XP-HK-24-35	24	35	230		220	320	270X255X97	2.5
CBHF2--XP-HK-24-40	24	40	230		260	360	270X255X97	2.5
CBHF2--XP-HK-36-30	36	30	230		180	280	270X255X97	2.5
CBHF2--XP-HK-48-22	48	22	230		140	220	270X255X97	2.5

# FORKLIFT AND TRACTION BATTERY HF MODULAR CHARGERS

Founded in 1972 by Sergio Poletti, S.P.E. Elettronica Industriale is a family-owned company. It has a long and proven history in manufacturing on-board and stand alone battery chargers. It's state of the art research and development techniques provides standard and custom built solutions for charging batteries of any type.

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## Green Series 2 and 4 Single Phase

### Green 2 Main features:

Power up to 2.5 kW  
From 24V up to 96V  
From 17A up to 70A

### Green 4 Main features:

Power up to 4.5 kW  
From 24V up to 96V  
From 17A up to 70A  
Power up to 4.5 kW  
Programmable from USB type A/B port or via display Graphical display.



## Green Series 6 and 8 Three Phase

### Green 6 Main features:

Modular system  
(3 configurable models)  
Power up to 8 kW, up to 150A@48V  
Up to 100A @ 80V, up to 75A@ 96V.  
Programmable via USB type A/B port or via display  
Graphical display.

### Green 8 Main features:

Modular system  
(4 configurable models)  
Power up to 10.5 kW, up to 200A@48V  
Up to 130A @ 80V, up to 100A@ 96V.  
Programmable via USB type A/B port or via display  
Graphical display. Programmable via USB type A/B port  
or via display Graphical display.



## Selection Table Single Phase (Green 2 and 4)

PRODUCT CODE	VOLTAGE	OUTPUT	MAINS (VAC)	INPUT CURRENT	8HR RECHARGE	12HR RECHARGE	DIMENSIONS	WEIGHT
24V50-01-SP	24	50	230	7.5	280-340	450-550	300x475x180	11
24V60-01-SP		60	230	9	340-410	540-660	300x475x180	11
24V70-01-SP		70	230	10.5	390-480	630-770	300x475x180	11
24V80-01-SP		80	230	12	450-550	720-880	333x520x180	13
24V90-01-SP		90	230	13.5	510-620	810-990	333x520x180	13
24V100-01-SP		100	230	15	560-690	900-1100	333x520x180	13
24V120-01-SP		120	230	18	680-830	1080-1320	333x520x180	13
36V40-01-SP	36	40	230	9	230-280	360-440	300x475x180	11
36V45-01-SP		45	230	10	250-310	410-550	300x475x180	11
36V50-01-SP		50	230	11	280-340	450-550	333x520x180	13
36V60-01-SP		60	230	13.5	340-410	540-660	333x520x180	13
36V70-01-SP		70	230	15.5	390-480	630-770	333x520x180	13
36V80-01-SP		80	230	18	450-550	720-880	333x520x180	13
36V90-01-SP		90	230	20	510-620	810-990	333x520x180	13
48V30-01-SP	48	30	230	9	170-210	270-330	300x475x180	11
48V40-01-SP		40	230	12	230-280	360-440	300x475x180	11
48V50-01-SP		50	230	15	280-340	450-550	333x520x180	13
48V60-01-SP		60	230	18	340-410	540-660	333x520x180	13
48V75-01-SP		75	230	22.5	420-520	680-830	333x520x180	13
72V25-01-SP	72	25	230	11	140-170	230-280	300x475x180	11
72V30-01-SP		30	230	13.5	170-210	270-330	333x520x180	13
72V40-01-SP		40	230	18	230-280	360-440	333x520x180	13
72V50-01-SP		50	230	22.5	280-340	450-550	333x520x180	13
80V20-01-SP	80	20	230	10	110-140	180-220	300x475x180	11
80V30-01-SP		30	230	15	170-210	270-330	333x520x180	13
80V40-01-SP		40	230	20	230-280	360-440	333x520x180	13

## Selection Table Three Phase (Green 6 and 8)

PRODUCT CODE	VOLTAGE	OUTPUT	MAINS (VAC)	INPUT CURRENT	8HR RECHARGE	12HR RECHARGE	DIMENSIONS	WEIGHT
24V50-03-SP	24	50	3x440	3	280-340	450-550	348X665X217	35
24V60-03-SP		60	3x440	4	340-410	240-660	348X665X217	35
24V70-03-SP		70	3x440	4.5	390-480	630-770	348X665X217	35
24V80-03-SP		80	3X440	5	450-550	720-880	348X665X217	35
24V100-03-SP		100	3x440	6	560-690	900-1100	348X665X217	35
24V120-03-SP		120	3x440	8	680-830	1080-1320	348X665X217	35
24V150-03-SP		150	3x440	10	840-1030	1350-1650	348X665X217	35
24V160-03-SP		160	3x440	10	900-1100	1440-1760	448X665X217	44
24V180-03-SP		180	3x440	12	1010-1240	1620-1980	448X665X217	44
24V200-03-SP		200	3x440	13	1130-1380	1800-2200	448X665X217	44
36V50-03-SP	36	50	3x440	5	280-340	450-550	348X665X217	35
36V60-03-SP		60	3x440	6	340-410	540-660	348X665X217	35
36V70-03-SP		70	3x440	7	390-480	530-770	348X665X217	35
36V80-03-SP		80	3x440	8	450-550	720-880	348X665X217	35
36V100-03-SP		100	3x440	10	560-690	900-1100	348X665X217	35
36V120-03-SP		120	3x440	12	680-830	1080-1320	348X665X217	35
36V150-03-SP		150	3x440	14	840-1030	1350-1650	348X665X217	35
36V160-03-SP		160	3x440	15	900-110	1140-1760	448X665X217	44
36V180-03-SP		180	3x440	17	1010-1240	1620-1980	448X665X217	44
36V200-03-SP		200	3x440	19	1130-1380	1800-2200	448X665X217	44
48V50-03-SP	48	50	3x440	6	280-340	450-550	348X665X217	35
48V60-03-SP		60	3x440	8	340-410	540-660	348X665X217	35
48V70-03-SP		70	3x440	9	390-480	630-770	348X665X217	35
48V80-03-SP		80	3x440	10	450-550	720-880	348X665X217	35
48V100-03-SP		100	3x440	13	560-690	900-1100	348X665X217	35
48V120-03-SP		120	3x440	15	680-830	1080-1320	348X665X217	35
48V130-03-SP		130	3x440	17	730-890	1170-1430	348X665X217	35
48V150-03-SP		150	3x440	19	840-1030	1350-1650	348X665X217	35
48V160-03-SP		160	3x440	21	900-1100	1440-1760	448X665X217	44
48V180-03-SP		180	3x440	23	1010-1240	1620-1980	448X665X217	44
48V200-03-SP	200	3x440	26	1130-1380	1800-2200	448X665X217	44	
72V30-03-SP	72	30	3x440	6	170-210	270-330	348X665X217	35
72V40-03-SP		40	3x440	7.5	230-280	360-440	348X665X217	35
72V50-03-SP		50	3x440	10	280-340	450-550	348X665X217	35
72V60-03-SP		60	3x440	12	340-410	540-660	348X665X217	35
72V80-03-SP		80	3x440	15	450-550	720-880	348X665X217	35
72V100-03-SP		100	3x440	19	560-690	900-1100	348X665X217	35
72V110-03-SP		110	3x440	21	320-760	990-1210	448X665X217	44
72V120-03-SP		120	3x440	23	680-830	1080-1320	448X665X217	44
72V130-03-SP		130	3x440	25	730-890	1170-1430	448X665X217	44

## Selection Table Three Phase (Green 6 and 8)

PRODUCT CODE	VOLTAGE	OUTPUT	MAINS (VAC)	INPUT CURRENT	8HR RECHARGE	12HR RECHARGE	DIMENSIONS	WEIGHT
80V30-03-SP	80	30	3x440	6.5	170-210	270-330	348X665X217	35
80V40-03-SP		40	3x440	8.5	230-280	360-440	348X665X217	35
80V50-03-SP		50	3x440	11	280-340	450-550	348X665X217	35
80V60-03-SP		60	3x440	13	340-410	540-660	348X665X217	35
80V80-03-SP		80	3x440	17	450-550	720-880	348X665X217	35
80V100-03-SP		100	3x440	21	560-690	900-110	348X665X217	35
80V110-03-SP		110	3x440	23	620-760	990-1210	448X665X217	44
80V120-03-SP		120	3x440	26	680-830	1080-1320	448X665X217	44
80V130-03-SP		130	3x440	28	730-890	1170-1430	448X665X217	44

## Charger Accessories

# Smart-App

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## BATTERY MONITORING DEVICES

Data logging is useful to understand if the batteries have been correctly charged and discharged to the optimum level

### Sending battery data to a PC

Through a USB stick all data can be sent to the SMART.VIEW Software, which makes it possible to display them in form of working cycles and diagrams.

### Sending battery data to the web

Data stored on a Flash USB driver can be uploaded to the SmartService WEB application for:

- automatic analysis and reports
- integrated "SmartIC-like" management fleet

### Main features:

- Measured instantaneous data: Voltage, Current, Charging/Discharging Time and Ah
- Storage and analysis of historical data
- Statistic analysis
- Data download on USB to the PC
- Data Memory: 400 working cycles
- For 24/36/48/72/80/96V batteries (12V available on request)
- Hall effect sensor
- Discharge time and capacity
- Battery faults and failures occurring during the charging process
- Temperature indication (when sensor is fitted)
- Low electrolyte level (when electrolyte level probe is fitted)
- Possibility of Serial Connection RS 485 and CAN BUS
- Protection IP54
- Working temperature from -20° to +50°



Model	AH Battery
T200	100+340
T400	350+740
T800	750+1500