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FAST HF CHARGER

Total Charge Cycle Efficiency > 90%
& Peak Efficiency > 93%

REVOLUTION Fast Battery Chargers

MODULAR HIGH FREQUENCY SMART CHARGERS

The REVOLUTION Series is an innovative line of ultra-high frequency battery chargers that incorporates cutting edge modular power design that delivers peak efficiency greater than 93% and efficiencies greater than 90% throughout the entire charge cycle. As the charge cycle progresses and the output current tapers down, the charger will turn off unneeded modules, allowing the remaining modules to operate at peak efficiency.

The REVOLUTION Series is a combination of cutting edge charging and energy management technologies, with a smaller footprint, lower acquisition costs, easy maintenance, and flexible configurations, which makes updating your fleet of electric lift trucks a more attractive investment than ever before. Free your operation from spare batteries, daily battery changes, battery storage areas, and energy inefficient charging!

Unmatched energy savings

- *Highest charging efficiency throughout the entire charge cycle*
- *Lowest energy costs related to battery charging*
- *Latest generation MOSFET power conversion technology*
- *CEC Compliant+*
- *Minimize or even avoid peak demand cost related to battery charging*

Designed, Engineered and Manufactured In the USA

Cost effective with long term savings

- *Low initial cost versus traditional fast chargers*
- *Charger can be programmed for all lead acid and lithium batteries*
- *Wireless Communication*
- *With these unique design features, the Revolution eliminates the need to replace chargers as your lift truck/battery fleet changes in the future*

Innovative modular architecture

- *Multi-voltage 1.3kW power modules, that can be combined to produce over 30 kW output*
- *"Plug and Play" utility makes expansion easy and*
- *inexpensive*

No Downtime! Charger remains operational if a power module fails

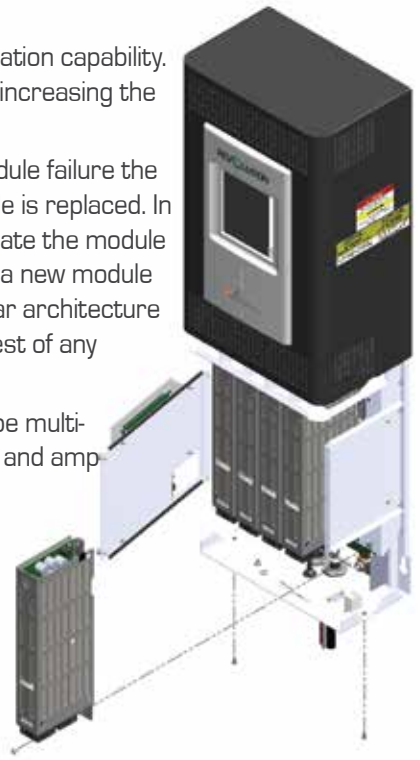
REVOLUTION

Variable Configuration Architecture

The REVOLUTION series of chargers are modular concept chargers offering multiple configuration capability. The independent power modules, installed in parallel, allow the user to add individual modules, increasing the charger's output for a minimal upgrade cost.

The parallel module design provides built-in redundancy that ensures that in the event of a module failure the charger will continue to operate, at a slightly lower current output, until the problematic module is replaced. In the event of a module failure, the module can quickly be replaced. The charger display will indicate the module failure and with the removal of a few screws, the faulted module can simply be unplugged and a new module plugged in, replace the door, re-energize the charger, and it is back to work. The unique modular architecture provides unmatched value, as diagnosis and repair of a REVOLUTION is the simplest and fastest of any charger in service today.

The REVOLUTION charger, when combined with the PowerTrac data logger, has the ability to be multi-voltage (24/36/48)*, allowing the charger to automatically charge a wide range of batteries and amp hour capacities, making the REVOLUTION the last charger you will need to purchase.



*48V chargers are capable of charging 24/36/48 batteries
36V chargers are capable of charging 24/36 batteries

REVOLUTION Series Features

- *Modular architecture that is scalable and reliable*
- *Small footprint and light weight with wall, post, or rack mounting options*
- *PowerTrac battery data logger option allows the REVOLUTION charger to have multi-voltage (24/36/48)* capabilities, giving the charger the ability to automatically adapt to the battery voltage and AH capacity*
- *PowerCharge.NET monitoring system option allows you to collect and analyze fleet utilization information from a single location, optimizing your cost savings*
- *The most efficient charger throughout the entire charge cycle*

REVOLUTION Fast Charger Specifications

Model	Module Size	Output Voltage	4kW	5kW	6kW	8kW	9kW	10kW	12kW	13kW	14kW	15kW	18kW	21kW	23kW	26kW	29kW	31kW
Maximum Current Output																		
5X	36	36V	90	120	150													
	48	36V/48V	75/67	100/90	125/112													
8X	36	36V			150	180	210	240										
	48	36V/48V			125/112	150/135	175/157	200/180										
12X	36	36V						240	270	300	330	350						
	48	36V/48V						200/180	225/202	250/225	275/247	300/270						
16X	36	36V										360	420	480				
	48	36V/48V										300/270	350/315	400/360				
24X	36	36V													540	600	660	700
	48	36V/48V													450/405	500/450	550/495	600/540
Number of Modules			3	4	5	6	7	8	9	10	11	12	14	16	18	20	22	24
Charger kW Rating			3.9	5.2	6.5	7.8	9.1	10.4	11.7	13.0	14.3	15.6	18.2	20.8	23.4	26.0	28.6	31.2
Input Current Draw			5.5	7.4	9.2	11.1	12.9	14.8	16.6	18.5	20.3	22.2	25.9	29.6	33.3	37.0	40.7	44.4
AC Breaker			**5X:** 15A		**8X:** 20A		**12X:** 30A		**16X:** 40A		**24X:** 60A							
Max. Input Current			**5X:** 10A		**8X:** 15A		**12X:** 22A		**16X:** 30A		**24X:** 44A							
Input Voltage			480VAC, 3-phase ± 10%															
Efficiency			Total charge cycle efficiency > 90%															
			Peak charging efficiency > 93%															
User Interface			LCD/Keypad, Ethernet (optional)															
Cooling			Forced air (fans)															
Dimensions (WxDxH)			**5X:** 12.5" x 8.5" x 20.25" **8X:** 18.5" x 9.5" x 21" **12X:** 26.5" x 9.5" x 21" **16X:** 22" x 10" x 48" **24X:** 30" x 10" x 48"															
Weight			**5X:** ≤ 56 lbs **8X:** ≤ 81 lbs **12X:** ≤ 120 lbs **16X:** ≤ 210 lbs **24X:** ≤ 300 lbs															
Certifications			UL and cUL listed; CEC Compliant+															

Based on 40% start rate

+ Contact Power Designers for CEC charger models that are compliant

Your Complete Power Solution Provider

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