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Lithium SAFEFLEX

SAFEFlex Charger DataSheet

Overview

The Lithium SAFEFlex Battery Charger is designed to operate with Material Handling (MH) and Ground Support Equipment (GSE) Lithium-ion batteries. This charger has universal AC power input, CANBus communications with the battery, has a touchscreen display, provides unity power factor with very low iTHD which results in very high charging efficiency, and has the smallest footprint in the MH and GSE charger industry.

This charger is offered in 15 KiloWatt (kW) and 30 kW models. Each model supports up to three simultaneous charging ports, and performs voltage auto-detect for each of the charging ports. This charger is scalable down to 5 kW and up to 30 kW, while each module has a default power level of 15 kW.

This charger supports local and remote management with an embedded Internet of Things (IoT) processor which provides real-time performance information of each charge session with a Lithium-ion battery. Local support and remote administrative staff can review and manage charger/truck integration and overall fleet performance. Access to the Internet is supported via an Ethernet port, WiFi communications, or GSM cellular communications via Sim card slot.

With this charger connected to our Maestro cloud-based applications, fleet managers can monitor all critical charging performance parameters such as voltage, temperature, charge/discharge current, charge time connected to the battery, Kilo-Watts delivered per charge session and warnings errors.

Features

- Modular 15 kW and 30 kW models
- CANBus communications
- IoT Management via wireless and wired communications
- Real time performance monitoring via Maestro cloud-based application
- Easy configuration via touchscreen display
- Industry's highest energy density and efficiency, with smallest footprint.

Performance Specifications

Parameter	Description	Value
General	Battery Voltage Range (Auto Detect)	20 – 118 V
	Maximum Output Charging Current	200 A per output (x3) or
		600 A output (x1) on 30kW model
	Power Loss in Standby Mode	< 10 W
	Weight (lbs)	15 KW = 32 kg / 70.6 lb
		30 KW = 42 kg / 92.6 lb
	Dimensions (W x D x H)	23.622" x 11.811" x 13.77"
Input	AC Input Supply	380 – 480 Vac, 3-phase (3W+PE)
	Maximum AC Input current	50 Amps
	Line Frequency	50 / 60 Hz
	Efficiency	> 97 %
	Power Quality	PF > 0.99; iTHD < 5%
	Connector and Wire	Phoenix Connector P/N: 1932504
		6 AWG 4core
Output	15 kW Model	100 – 300 A at 20 – 59 Vdc, or
		50 – 150 A at 60 – 118 Vdc
	30 kW Model	200 – 600 A at 20 – 59 Vdc, or
		100 – 300 A at 60 – 118 Vdc
	Cable Length	Custom lengths
	Connector Options	SB350, Euro A320 Connector
	Connector and Wire	M6 Studs x 2 per line
Communication	Wireless	Wi-Fi, GSM (via SIM card slot)
	Wired	Ethernet, USB
Charge Control	Loading Method	User Control
	Charging Profile	Default Factory Setting, User Configurable
Environmental	Operating Temperature	-4°F to +122°F
	Storage Temperature	-40°F to +176°F
	Relative Humidity	Max. 85%
	Ingress Protection Rating	IP21
	Enclosure Ratings	NEMA 1
Agency Approvals	United States	CEC UL 1564
	Canada	CSA 22.2 107.2-01
	Europe	IEC 62477-1

Model Specifications

Model	Power Output	Outputs	Battery Voltage (Nominal)	Output Current (Maximum)	Anderson Euro Connector	Cable Size	
FBC-1501	15kW	1	24V	300A	A320	4/0	
			36V	300A	A320	4/0	
			48V	300A	A320	4/0	
			72V	150A	A320	2/0	
FBC-1503	15kW	3	24V	100A	A320	2/0	
			36V	100A	A320	2/0	
FBC-3001	30kW	1	36V	320A	A320	4/0	
			36V	600A	A320 (2)	4/0	see note
			48V	320A	A320	4/0	
			48V	600A	A320 (2)	4/0	see note
			80V	300A	A320	4/0	
			96V	300A	A320	4/0	
FBC-3002	30kW	2	36V	300A	A320	4/0	
			48V	300A	A320	4/0	
FBC-3003	30kW	3	36V	200A	A320	2/0	
			48V	200A	A320	2/0	

NOTE: This configuration requires dual cables and is not recommended. We recommend using **Green Cubes' proprietary MultiVoltage Battery Technology** with our charger which allows fast charging at **twice the output voltage.**

ABOUT GREEN CUBES TECHNOLOGY

Green Cubes Technology harnesses over 30 years of industry experience to ensure we design, develop and deliver solutions for the most challenging energy needs. We offer battery technology innovation, application design and performance management to drive productivity, scalability and sustainability.

For more information, email **info@greencubestech.com**
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