# Lithionics Battery: KF-1220DLiFePO4 Lithium Charger User Manual

#### **Features:**

- 1. Short-circuit Protection: Charger O/P cut-off automatically when short circuit
- 2. Overload Protection: Charger O/P current-limited automatically when overload
- 3. Reverse Polarity Protection: Charger O/P cut-off automatically when battery reverse connection
- 4. Automatic charging function: Pre-charging, Equalizer Charge and Floating Charge
- Unique Digital Meter Display: Indicating charging voltage, current and charger status.
- 6. 2 LED Display: Red(power), dual-color Green(floating charge) & Yellow(equalizer charge)
- 7. Advanced SMD Technology: Reliable and Elegant
- 8. Stylish Aluminum Housing: Strongest and Efficient

### **Specifications:**

MODEL		12V-20A	
Innut	Voltage	AC110V-240V	
Input	Frequency	47-63HZ	
	Equalizer	(12\l) = DC14.6\l \ \ \ 0.2\l	
	Charge	(12V) = DC14.6V + -0.2V	
Output	Pre-charge1 current	5A +/-0.5A	
Output	Pre-charge2 current	10A +/-0.5A	
	Current	( 20A +/-0.5A )	
	Efficiency	> 87% (at Full Load)	
Protection	Battery Reverse	Yes	
	Short-circuit	Yes	
	Overload	Yes	
	Cooling Fan	Speed Controlled by Charging Stage	
Mechanical Dimensions (mm)		195X118X58	

#### **Operations:**

- 1. Connect the charger system to a wall receptacle strongly.
- 2. Connect the alligator clips to battery terminals (red clip→positive terminal; black clip→negative terminal)
- 3. Turn on the power switch which is located on the front panel of Charger, and the LED light will confirm that charger stage (Refer to the specifications) and also the unique LCD display will confirm that charger stage and battery level (refer to the specifications)

#### **LED Indication:**

AC Power Status	LED (Red Color)	Charging Status LED (Bi-Color)	
On	Off	Orange	off
AC Power OK	AC Power Fail	Equalizer Charge	Full charge

### **LED Meter:**

- 1. Indication output voltage.
- 2. Push switch one times for indication output Current.
- 3. Push switch again for indication output Power rate.

### Notices:

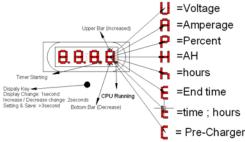
KF-DLSeries was designed for charging LiFePO4 Lithium Batteries only. It cannot be used as a DC power supply.

- 1. Avoid to charge the wrong type of battery
- 2. The battery maybe damaged if orange LED cannot be changed to off lighting after long time charge.
- 3. Always place the charger in well ventilated and dry environments
- 4. The charger was designed by aluminum housing as itself heat sink, avoid touching the case for safety purpose because the temperature is about 50°Con the case when charging

#### **CAUTION:**

- Not to recharging non-rechargeable batteries.
- During charging, the battery must be placed in a well ventilated area.
- The battery charger must only be plugged into an earthed socket-outlet.

## Digital Meter User Manual



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Item.	Description				
	Output Voltage "V" : Preinstall demonstration.				
(IOOR)	Output Current "A":				
	Press and hold "Display Key" for 3 seconds while displaying "A" to enable the				
	o/p current automatic zero calibration ((the period approximately 10 seconds).				
	Press "Display Key" for 2 seconds to disable "zero calibration" during the				
	period. (For safety purpose, we do not recommend to do " zero calibration")				
(888.)	Battery Level "P":				
	Press and hold "Display Key" for 3 seconds while displaying "P" to enable O/P				
	current adjustment (for authorized technicians only).				
(9.9 g ğ)	O/P Current Adjustment (for authorized technicians only):				
**	Upper Bar twinkle: Press " Display Key" to increase the value Bottom Bar				
	twinkle: Press " Display Key" to decrease the value				
	Press and hold "Display Key" for 3 seconds to save the new value.				
(0.00 H)	Total Charging Capacity "AH" (Ampere-Hour):				
(3.3.5 %)	Start AH calculation when charging current >1A, "H" twinkle when "AH"				
	function operating. Press and hold "Display Key" for 3 seconds while				
	displaying "H" to enable AH to zero. H" stop flashes light when "AH" function				
	stop operating.				
0.01%	Timer time after "AH" function operating				

# **Digital Meter User Manual**

1. O. E.

Charging Timer Setting (0.1H-0.2H-0.3H-...):

Start timer when voltage >setting value or current <30% of rating. Press & hold "Display Key" for 3 seconds while displaying "E" to enable timer setting. (Upper Bar: increase; Bottom Bar: decrease) Press and hold "Display Key" for 3 seconds to save the new setting value. The 3rd dot signal flashes light means timer is starting and while the timer stop the 3rd dot signal solid lights.

O. O. E.

Timer time after "E" (timer) function operating:

When current under setting value, timer operation, The 3rd dot signal flashes. It will display the total time of charge after full charge. According to the value, user can setting the perfect charging time for his own battery. Ex. If the total time is 1 hour, user can setting the value at 1.0.E.

End.

Stop Charging:

- 1. Current <10% of rating, the display will show "End" & "x.x.t."
- 2. When over timer setting but current >10% of rating, the 2<sup>nd</sup> dot of signal lits. Without float charge stage model will stop charging and LED off. (with float
- Charger switches to float charging and green LED lights. Press "Display Key" to reset.

888.

High Voltage:

If the battery voltage over the setting value, the display will show "H.V." & "xx.x.V.", at the same time stop charging & LED off. It will reset automatically when battery voltage becomes normal.

0.5.0.

Pre-charging:

When current >the setting value, the timer starting and O/P current limits to 50 % of rating ("C" flashes: timer operation, solid lights: timer stop).

When voltage>the setting value or the voltage can't reach the setting value within the setting time then switch to the max. charging current automatically. Press & hold "Display Key" for 3 seconds to enable timer setting.(Upper Bar: increase; Bottom Bar: decrease), Each time increase or decrease 0.1hr, Press and hold "Display Key" for 3 seconds to save the new setting value.