FC Series

FC-2440

Microprocessor Controlled
*Intelligent*CHARGER

User Guide

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⚠ ***WARNING：Electric shock hazard***

Do not disassemble the IntelligentCHARGER. The IntelligentCHARGER does not contain any internal user-serviceable parts and attempting to service the unit yourself could result in electrical in electrical shock or burn.

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Specifications (Technical Details)：

Models	FC-2440
Output Current	40A
Output Charging Voltage	max.30VDC
Output Floating Voltage	26.4VDC
Input Voltage	220VAC / 50HZ
Multi-stage Charging	3 Stage Charging Mode (Constant-current / Constant –voltage / Equalizing / Floating)
Charger Efficiency（Nominal）	＜81％
Battery Types	Lead-Acid Battery
Recommended Battery Size（AH）	from 240AH ~ 400AH（@ 20HR）
Operating Temperature Range	-0℃ ~ 50℃
Storage Temperature	-30℃ ~ 70℃
Dimensions（mm）	320 X 265 X 232mm

Description：

1. FC Series can be available for Flood / Maintenance Free / VRLA lead-acid batteries.
2. Reverse Polarity Protection：When the battery terminal is wrongly connected, the charger will stop automatically and unable to use. To ensure the clamps do not connect in the wrong way.
3. Anti-Arc Protection：The clamps will not generate spark if touched together.
4. Low Battery Voltage Charging：This function will start when battery is at low voltage. When battery is over-discharged and voltage decreases to 1V or 1.5V per cell, the microcomputer of this charger will still be able to charge the battery.
5. Multi-stage Operating Mode : **Constant Current** (CC)，**Constant Voltage** (CV)，**Equalizing Charge Method** and **Floating Charge Method**.
6. Constant Current Charging Mode：Control the charging current at certain steady point to prevent the battery absorb great deal of currents during charging and cause the temperature rises rapidly and affect the service life of the battery and the charging efficiency.
7. Constant Voltage Charging Mode：Effectively control the charging voltage to prevent the damage of the battery cell plate due to over-charging.
8. Equalizing Charge Method：2.4V~2.5V value in every single cell allows both the old and new single cell to achieve saturated and not over-charge, the charging saturation degree achieves as high as 100％.
9. Floating Charge Method：2.25V value in every single cell allows battery to keep saturated charging and last longer.

10. Auto Detect Function：Check automatically to see the battery wiring and charging circuit are correct, then the microcomputer may start charging.
11. Microcomputer check：When battery is breakdown or cell plate is damaged and unable to achieve 70％ effective capacity or battery voltage is unable to achieve effective saturated voltage within 12 hours, the charger will stop automatically and the indicator will show the battery is abnormal.

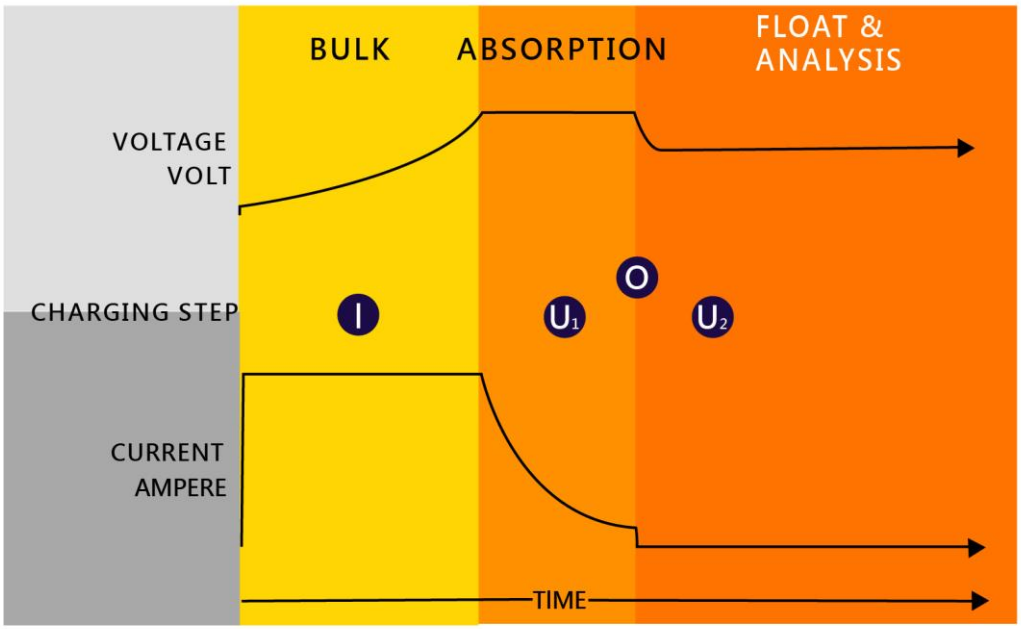
Features：

- No Power in the charge leads until connected to the batteries.
- No Arcing at the charge leads even when shorted together.
- No over-charging of batteries. By Constant Voltage Charging Method.
- Constant Current Charging Method to protect against DC overloads.
- 100% copper transformer & heavy duty rectifiers.
- Heavy Duty Clamps connect to battery without regard to 24V batteries.
- Ammeter shows actual current flow, no guessing with LED's.

Application：

Charging for 24V Lead-Acid Batteries which use in electric vehicles, electric mower, trolley, stacker, pallet truck, scissor lifts, sweepers,….etc.

Charging Curve：



Technology-Characteristic(IUoU)

I CONSTANT CURRENT　U1 CONSTANT VOLTAGE　O COMPLETE DETECT　U2 FLOAT VOLTAGE

Front and Rear Panel Switches and Indicators

【1】 AC Power Switch
【2】 DC Voltage Meter
【3】 DC Current Meter
【4】 Power On Indicator
【5】 Error Indicator
【6】 Charging Indicator
【7】 Complete Charging Indicator
【8】 DC Output Cables
【9】 AC Power Input Cable with Plug
【10】AC Fuse
【11】Fan

Operation

1) TURN ON the power switch【1】on the front panel.
2) Connect the red clamp of the charger to the positive terminal (＋) of the battery.
3) Connect the black clamp of the charger to the negative terminal (－) of the battery.
4) When charging is completed, TURN OFF the power switch.
5) Remove the black clamp and the red clamp from the battery terminal.

Troubleshooting

◎ **Power indicator does not light on when turning on the power switch：**
- Check fuse.
- Check cables and input power.

◎ **Charge rate does not come up to the selected charge rate initially：**
- The battery charger has already into CV stage charging mode.
- The AC voltage is below then 205VAC.
- The battery may be defective and resisting the charge current.