

# User manual



## LiFePO<sub>4</sub> 4-channel battery equalizer KT-04



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## 1. TECHNICAL DATA

PARAMETER	VALUE
LiFePO <sub>4</sub> Battery nominal voltage	n*12V LiFePO <sub>4</sub>
Number of LiFePO <sub>4</sub> batteries connected in series	Min. 2, Max. 4
Optimizing current	0-1,5A
Quiescent current	<3mA
Dimensions	150×140×40 mm
Protection	Thermal protection
Low voltage disconnect	n*10V LiFePO <sub>4</sub>

n – number of batteries connected in series, min. 2, max. 4.

## 2. GENERAL INFORMATION

The KT-04 equalizer is used, when LiFePO<sub>4</sub> batteries are connected in series, to maintain the voltage of each battery at the same level, during charging process. During operation of batteries connected in series, their voltages may vary due to the chemical composition of the cells or their temperature. The self-discharge process also impacts the voltage difference, which is slightly different for each cell. Due to the fact that the cells are not the same, they behave differently. Then the batteries are unstable, e.g. one of the battery is overcharged and the other is undercharged. Additionally, differences in the voltages of the batteries, connected in series, occur before the load is connected. Connecting batteries in series without equalizer may cause premature battery degradation.

## 3. OPERATION AND APPLICATION

KT-04 equalizer works with the principle of electricity transfer.

The device starts working when:

- one of the batteries charging voltage reaches 14V,
- the voltage difference between two or more batteries is 0,1V.

The equalizer is connected all the time to the battery to automate the energy balancing process without the need of manual intervention.

## 4. TERMS OF USE

**4.1.** The KT-04 equalizer is intended for use with dedicated Kon-TEC batteries and chargers.

**4.2.** It is not recommended to leave the equalizer connected to batteries that are not used for a long period of time (couple months). In this case, the device's low current consumption may cause discharge of batteries. Periodic control of state of charge status is recommended.

### ⚠ ATTENTION

Failure to follow the instructions may result in damage to the device, battery, charger or even cause a fire.

### 4.3. Installation.

Connect as follows:

- First, screw the wires into the plug.
- Then connect each of the wires to proper battery terminals.
- Finally, install the plug into the equalizer socket.

The drawings show the correct connections of the equalizer with batteries (different voltage configurations).

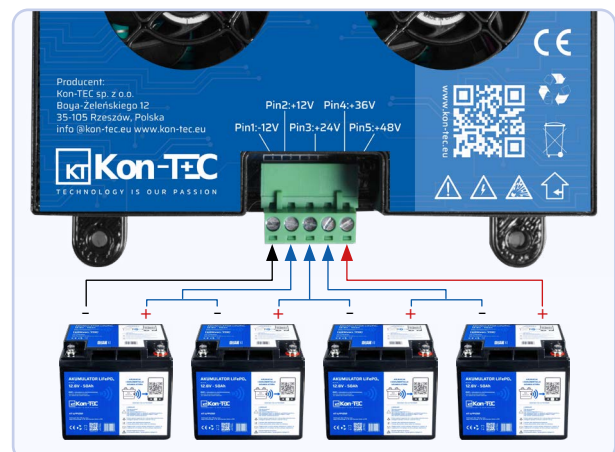
### 24V



### 36V



### 48V



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