



1. DEVICE DESCRIPTION

The charger has its own processor and PWM signal control technology. Due to this, the DL series charger has such advantages as: high efficiency, stability of parameters as well as low emission and energy efficiency. With automatic control of charging current and voltage, the charger provides full charge of battery without dangerous overcharging. The battery is protected during the charging process.

2. PACKAGE CONTENT

PACKAGE CONTENT!

Before first use, unpack the contents and check if all necessary elements are included in the package (table). It also should be checked if there are any missing or damaged components.

PACKAGE CONTENT

L.p.	Charger	Qty.
1	Charger	1
2	User manual	1
3	AC 230V wire	1

3. CHARGER MODEL AND PARAMETERS

3.1 MODEL

DL-240 12V 10A || DL-400 12V 20A || DL-900 12V 40A || DL-900 24V 20A || DL-2000 24V 50A || DL-1200 48V 20A || DL-300WP 12V 15A || DL-600WP 24V 18A || DL-1200WP 48V 18A

3.2 INPUT VOLTAGE (AC)

230V

Some models of the chargers are equipped with additional signal wires (12V).

These wires are intended to be used in the following cases:

- energy management systems, in camper vans or yachts (e.g. Energoblok, informing about the charging process),
- in order to perform the battery reactivation process, in case of an emergency disconnection by the BMS, due to excessive discharge protection (more in the Kon-TEC LiFePO₄ user manual, see point 4.4)

3.5 GREEN LED LIGHT (END OF CHARGING)

5-10 %CC

3.6 CHARGING METHOD

CC/CV

4. CHARGER USE

ATTENTION!

NON-COMPLIANCE TO CONNECTION ORDER MAY RESULT IN DAMAGE TO THE DEVICE AND WARRANTY VOID

Charger wires markings:

- black - negative terminal (-),
- red - positive terminal (+).

On the DC connector of the charger (connectors/clamps) there is always voltage. Do not ever allow to short circuit + i - wires anytime.

When using the charger it is NECESSARY to follow the connection order described in points 4.1 and 4.2.

4.1 Connecting the charger to the battery

Step 1: If the charger has an on/off switch (O/I) it has to be on off position.

Step 2: Connect the DC connector to the battery terminals (NECESSARY in correct polarity).

Step 3: Connect the AC plug to a 230V power source.

Step 4: If the charger has an on/off switch (O/I), turn it on (I position).

4.2 Disconnecting the charger from the battery

Step 1: If the charger has an on/off switch (O/I), turn it off (O).

Step 2: Disconnect the AC plug from the 230V power source.

Step 3: Disconnect the DC connector from the battery terminals, taking care of the charger DC wires (+ and -) do not contact. After disconnecting the DC connector from the battery, the voltage is still on wires for a few seconds (the internal charger capacitor maintains the voltage). Contact of the + i - wires, at this point, can cause charger damage.

ATTENTION!

After disconnecting from the battery, in the event of DC wires contact, the charger will be damaged.

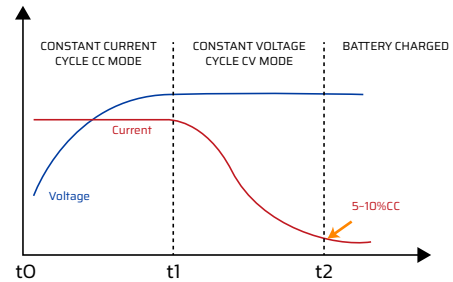
To avoid short circuiting the DC wires, observe the charger LED (with the wires disconnected from the battery, the LED remains red for a short period of time.

When LED goes out, it means that the voltage on the DC connector is no longer live).

4.3. When the device is not charging the battery, make sure that the charger connectors and plugs are disconnected.

4.4. LED1 indicates that the charger is on. Red colour indicates the device is ready to charge.

4.6. LED2 indicates the charging status. When charging it goes red, when the battery is fully charged it goes green.



Rys.1. Metoda ładowania ładowarkami Kon-TEC z serii DL.

5. RESTRICTIONS

5.1. Kon-TEC chargers are dedicated to charge LiFePO₄ batteries with charging voltage of 3.65V/cell.

5.2. It is forbidden to connect the charger in reverse polarity (replaced + and -).

5.3. It is forbidden to connect the charger suddenly/quickly i.e. the plugged charger to 230V AC cannot be connected to the battery. It is necessary to follow the connection order, points 4.1 and 4.2.

5.4. Slight sparking phenomenon when connecting the charger to the battery is normal, due to the charge of the capacitors.

5.5. To avoid damage due to vibration, it is not recommended to transport the device for a long time period in running vehicles.

5.6. Risk of electric shock. It is forbidden to perform any repair or unauthorized disassembly of the device.

5.7. The manufacturer is not responsible for any damages resulting from non-compliance with manual.

6. MAINTANANCE

ATTENTION!

Before performing the following steps, disconnect the charger from the power source and the battery.

6.1. ROUTINE MAINTANANCE

-Regularly remove dust from the vents and the fan that allows to keep it clean and proper heat dissipation.

- Periodically wipe the case with a cloth with a little alcohol.

- Do not use or store the device in high humidity or temperature places.

6.2. FUSE REPLACEMENT

If the charger does not start the charging process, please make sure the fuse is working.

If it is damaged, it must be replace. Use fuses only and only of the same type and parameters.

Also make sure that the replace fuse is properly seated in the hlder. The fuse can only be replaced when the charger is completely off.

6.3. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
After connecting the charger to the battery, the charger is not working or LED2 is green	Damaged fuse	Fuse replacement, then correct connection of the charger
	Incorrect connection, Incorrect relay working, OR Battery damage	
The battery is not fully charging, LED2 blinks green/red	The charger and the battery are not connected	Reconnect the battery and the charger
	Charger overheat, cool down and standby mode	Cool down the charger. The charger has automating activation after cool down
After connecting the charger to AC power, the charging process does not start, both LEDs are off	Connection lost. The charger is not connected to AC power.	Reconnect the AC wire and make sure it is not damaged
	Charger damage	Send the charger to authorized service. There is high voltage inside the charger. Do not disassembly the charger.