

# **BATTERY CHARGER**



Model UT201

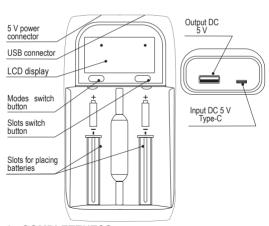


# 1. GENERAL DESCRIPTION

Battery charger VCH-UT201 - designed for safe multiple charge, discharge, testing and restoration of rechargeable battery power cells. The product meets European and national requirements for electromagnetic compatibility (EMC).

# 2. TECHNICAL DESCRIPTION

The charger is designed for charging Ni-MH/Ni-Cd, Li-ion/IMR/INR/ICR, LiFePO4 rechargeable batteries. The housing of the charger has a modern ergonomic design, equipped with an LCD display and two independent slots for batteries. The charger protects the batteries from short circuit, overcharging, overheating and incorrect polarity. With Li-ion/IMR/INR/ICR and Ni-MH/Cd batteries, the device works in automatic mode and does not require monitoring during charging.



# 3. COMPLETENESS

- Charger VCH-UT201
- USB Type-C cable
- Manual

Compatible rechargeable battery types	Ni-MN, Ni-Cd Li-ion/IMR/INR/ICR LiFePO4
Compatible rechargeable battery standards	AAAA, AAA, AA, A, SC,C, D 10440, 14500, 16340, 17500, 17650, 17670,18490, 18500,18650, 20700,217 00,22650,26500,26650,32650
Charge voltage of	Ni-MN/Cd batteries: 1.48 V Li-ion/IMR/INR/ICR: 4.2 V LiFePO4: 3.65 V
Power consumption	10W
Charge current	1000mA x 2 - Ni-MH/Cd 2000mA x 1, 1000mA x2 - Li-ion/IMR/INR/ ICR, LiFePO4
Automatic charge, discharge,	supported
testing, recovery of batteries	
Automatic recognition of faulty and	supported
incompatible power supplies	
Built-in protection against	supported
overheating, short circuit, incorrect	
polarity(+/-)	

### 4. CHARGER USAGE INSTRUCTION

# Preparation for use.

Make sure that the device and the power cable are free of mechanical or other damage. It is not allowed to use the device immediately after a sudden change in temperature. To prevent damage from condensation, leave the device indoors for 5 hours.

	Terms of use	Storage conditions
Temperature	0°C - +35°C	0°C - +40°C
Humidity	35% – 95%	45% – 80%
Atmospheric pressure	70—106 mm Hg.	

#### Network connection.

network, it is necessary to connect the USB Type-C cable to the corresponding connectors of a compatible adapter (5V/2A). And then connect the adapter to the outlet of the household network.

# Turning on the charger.

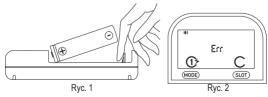


After turning on the device, the LCD display will light up. The device will be ready for further operation after a three-second internal test, when the «null» symbol appears on the display. A sound signal will notify you that the device is ready for work.

#### Installation of batteries.

Install one or two batteries in the charger slot, observing the polarity. The device allows the installation of batteries of various sizes, manual adjustment may be required to ensure the best contact between the metal parts of the charger and the contacts of the batteries. If the battery is installed correctly, a sound signal will notify the start of charging.

In case of incorrect installation or battery failure, the symbol «Err» will appear on the display and an audible signal will sound. The charger automatically determines the battery type (Ni-MH/Cd, Li-ion/IMR/INR/ICR). When installing LiFePo4 batteries, the Li-ion charge mode will be activated. For correct operation of the charger and battery, it is necessary to choose the appropriate one mode. To do this, within five seconds after installing the battery, it is necessary to press the «SLOT» button for two seconds. The battery type designation on the display will change from Li-ion to the required LiFePo4. Charging LiFePo4 batteries without selecting the appropriate mode is not allowed and will inevitably lead to their failure.



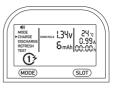
### Operating modes of the charger:

- 1. «CHARGE» battery charge;
- 2. «DISCHARGE» battery discharge;

#### «REFRESH» – battery recovery;

#### 4. «TEST» – battery testing.

When installing the battery in the charger compartment, the «CHARGE» mode is automatically selected. Button «MODE» is used to select the operating modes of the charger. The «SLOT» button allows to select the slot to use. Information about this slot will be shown on the display.



«CHARGE» mode – designed to charge the battery. The charge current depends on the type and number of installed batteries. The display shows the voltage, current, battery type and state of charge in real time. To switch the indication of the state of charge of the batteries in the first and in the second slots. Short press of the button «SLOT» for switching slots is required.

The «DISCHARGE» mode is used to discharge the batteries. It allows to extend the term of use of the battery and is activated by pressing the «MODE» button within five seconds after installing the battery. The discharge current of 350mA is set automatically.

«REFRESH» mode – allows to restore the properties of batteries that have not been used for a long time. The mode is activated using the «MODE» button. If battery recovery is not possible, the symbol «Err» will appear on the display and an acoustic signal will sound.

«TEST» mode - gives an opportunity to measure the current capacity of the battery. The maximum capacity is calculated in the charge-discharge-charge mode. The «TEST» mode is activated using the «MODE» button.

If two batteries are installed, to turn on the mode in the second slot, press the «MODE» button for two seconds and select the required mode.

After the operation of the selected mode is finished, the symbol «End» will appear in the upper right corner of the screen. It is allowed to heat the batteries during charging, after full charging they will gradually cool down to room temperature.

#### Power Bank function

The «Power Bank» function allows you to charge external devices, when lithium-ion batteries installed into slots of charger. To use charger as Power Bank, connect a USB cable to the charger with charged batteries. The device connected in this way will receive power with a current of 2A and with a voltage of 5V until the batteries are discharged.

### Indication during charging.

The display shows voltage(1), current(2), battery type(3) and its charge status(4) in real time. To switch the indication of the state of charge of the batteries in the first and second slots, a short press of the compartment switching button (5) is required. The display backlight turns off 30 seconds after the last action. For it's switching on will require a short press of the compartment switching button. When the battery is fully charged, «Full» appears on the display and charging stops.

# 5. SAFETY REQUIREMENTS

- Only compatible and working batteries may be used. Installation of incompatible, defective, non-rechargeable batteries may result in damage to the device or property. There is a risk of explosion.
- Don't use charger with damaged housing, there is a possibility of electric shock current
- Charger should only be used indoors under the conditions suggested above.
  Do not use the device in conditions of excessive humidity.
- · Do not disassemble or modify the charger.
- · Avoid mechanical damage or dropping the charger.

#### 6. MAINTENANCE

The product does not require maintenance. It is advisable to periodically clean the charger from dust. When cleaning charger must be disconnected from any electric source. It is allowed to use only dry and soft cloth for cleaning the housing of the charger. Do not use abrasives or liquids.

# 7. TRANSPORT AND STORAGE

The product must be stored and transported in the manufacturer's packaging. The device should be stored in a clean, dry room with ventilation at a temperature from 0 to 40°C.

# 8. DISPOSAL

The product does not contain harmful substances. In order to prevent damage to the environment, it is necessary to separate the product from ordinary household waste and dispose of it in the safest way.

# 9. WARRANTY

The warranty period is indicated on the packaging. During the warranty period, a faulty product can be exchanged or returned with prove of purchase and all components and accessories preserved. The following does not apply

with the scope of limited warranty:

- Misuse the product and cause the products components damage;
- Unauthorized disassemble or the presence of deep mechanical damage to the product:
- Damage due to force majeure.

The manufacturer reserves the right to make amendments of this user's manual. The manufacturer reserves the right to provide technical changes.

Importer: ALLEGRO OPT SP. Z O.O. W sprawie przyjęcia reklamacji skontaktuj się z Importerem. Data produkcji i numer partii są podane na produkcie i na opakowaniu.

