

# Operating Instructions

## Charger for 2-8-cells Lithium-Fe-Phosphate-battery pack

Dear Customer,

With this battery charger you can charge 2-8-cells-Lithium-Fe-Phosphate (LiFePo4) battery packs. These operating instructions will help you to use the features of your charger in an optimum way. Please read the operating instructions carefully before use. Please retain these operating instructions.

### Safety Measures and Precautions

- ! Read the operating instructions carefully before use
- ! Charge only Lithium-Fe-Phosphate (LiFePo4) battery packs; do NOT charge primary cells, Li-Ion or Li-Polymer batteries - NiCd/NiMH or Lead Acid batteries - **Risk of Explosion and chemical danger.**
- ! Check the battery manufacturer's instructions. Do not charge batteries with too high charge current.
- ! Connect the charger to a suitable mains supply only. Connect the batteries with correct polarity to the charger.
- ! Disconnect charger from the mains and battery pack if it is not used for a longer time.
- ! Do not charge hot batteries. Batteries must be at ambient temperature before charging.
- ! Stop the charging process if the battery gets too hot during charging (>55-60 °C).
- ! Do not charge the batteries twice. Charging is only allowed after prior discharge.
- ! Do not expose the battery charger to rain, damp or hot conditions. Charger is for indoor use only.
- ! Do not leave the charger unattended during operation.
- ! Do not plug in the charger if there are signs of damage to the housing, cables, connectors or mains plug.
- ! Do not open equipment or carry out repairs. Authorized personnel may only carry out repairs.
- ! Do not cover equipment or obstruct ventilation, otherwise it may over-heat. Do not expose to direct sunlight.
- ! Do not charge more than one battery pack simultaneously.
- ! Charge only cells of the same type and capacity as a battery pack.
- ! Keep batteries, battery charger and cables away from combustible materials.
- ! Never place the charger inside the engine compartment. Keep leads away from moving parts.
- ! Rechargeable batteries must not be disposed of in domestic waste. Return used batteries to your dealer or to an authorised battery collecting point.

### How to pre-adjust the charger

There are two switches on the top of the charger. One switch is to adjust the charge end voltage according to the battery pack you want to charge. The other switch is to adjust the charge current. Please note that it is not allowed to charge every battery pack with all charge current you can adjust. Please refer to the list below to see the charge currents that are allowed according to the number of cells in battery pack. If you adjust the charger different to the values in the list the charger will be damaged.

number of cells	2	3	4	5	6	7	8
Charge-end voltage (V)	7.2	10.8	14.4	18	21.6	25.2	28.8
Charge-current adjustment allowed (A)	2.5	2.5	2.2	2	1.5	1.2	1
	2.2	2.2	2	1.8	1.2	1	--
	2	2	1.8	1.5	1	--	--
	1.8	1.8	1.5	1.2	--	--	--
	1.5	1.5	1.2	1	--	--	--
	1.2	1.2	1	--	--	--	--
	1	1	--	--	--	--	--

### Operation

To charge a battery pack, please first adjust the charger to the battery pack you want to charge and select a charge current that is allowed to the number of cells. Then put the power plug into a convenient mains socket. The green power-on-LED will light. After connecting the charger with the battery pack, charging starts automatically. The red charge indicator lights. The charging process is according to the CCCV-technology. After charge end the red charging indicator switches off and you can use the fully charged battery. To stop charging, disconnect the charger from the mains supply at any time before removing the battery from the charger.

### Deep discharged batteries

If a deep discharged battery is connected to the charger it is pre-charged with a pulsed charge current. The red charge indicator blinks during pre-charge. After battery voltage has increased the charger continues the charge process with normal charge current. The red charge LED lights.

### Short circuit protection

The charger has internal protection against short circuit. In case of short circuit the charge indicator blinks in red. Then please disconnect the battery for repair and then reconnect it.

### Technical Data

input voltage	100-240 V+-10%, 50/60 Hz
battery Types	2-8-cells Lithium-Fe-Phosphate (LiFePo4) battery packs
charge-method	CCCV
max. charge current	1-2.5A (depends on number of cells)
charge end voltage	depends on number of cells
no load output voltage	approx. 3V higher than pre-selected charge end voltage
safety timer	10h for CC and 10h for CV-phase
case protection	IP20
indicators	2 LED green: power-on indicator red: charge indicator
dimensions L x W x H in mm :	150 x 80 x 61

### Contents supplied

- 1 x Charger
- 1 x Operating Instructions
- 1 set of 8 secondary plugs

### Disclaimer

Information in these operating instructions can be changed without prior notice. ANSMANN AG cannot accept liability for direct, indirect, accidental or other claims or consequential damages originated by using this charger and information given in these operating instructions.

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