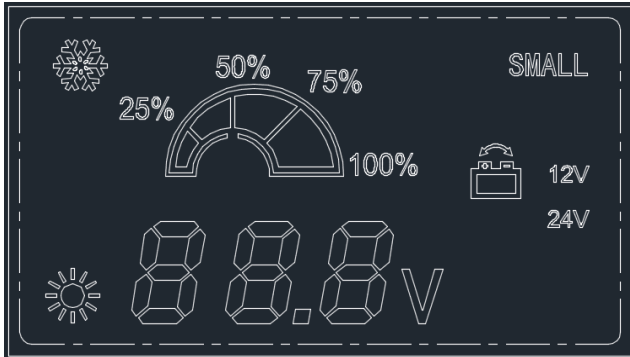


20A BATTERY CHARGER WITH LCD DISPLAY



VOLT
POLSKA

LCD Display



SELECT	LCD Display	Status
MODE1		Charging in Normal temperature
MODE2		Charging in Low temperature
MODE3		Charging in Silent mode
MODE4		Charging in Low temperature and Silent mode

Technical Data

Input Voltage	220 – 240 VAC ~ 50/60 Hz
Output Voltage	12V DC or 24V DC
Efficiency	>85%
Charging Voltage	14.3V DC ± 0.3V DC or 28.6V DC ± 0.3V DC
Charging Current	20A for 12V DC or 10A for 24V DC
Surrounding temperature	-10 Celsius to 40 Celsius
Battery type	Lead-Acid e.g. AGM
Generated noise	< 50 db (tested from distance of 50 cm)
Dimensions	292 x 118 x 60 mm
Weight	1,5 kg

OPERATION

Before use

- Before connecting the charger, the operating instructions must be observed. Furthermore, the instructions of the vehicle manufacturer regarding a permanently connected car battery must be observed. Secure the car, switch off the ignition. Clean the battery poles. Take care that while doing so, your eyes do not come into contact with the dirt.
- Ensure sufficient ventilation.

Connecting

- Connect the "+" pole clamp (red) of the charger to the "+" pole of the battery
- Connect the "-" pole clamp (Black) of the charger to the "-" pole of the battery
- Connect the mains cable with AC 230V VDE plug of the charger to the main socket

Before start charging, please press the Button of to Select which MODE you want.

Then press the button of . The charger start to work.

If you want to stop charging, please press the Button of , The charger will be stop.

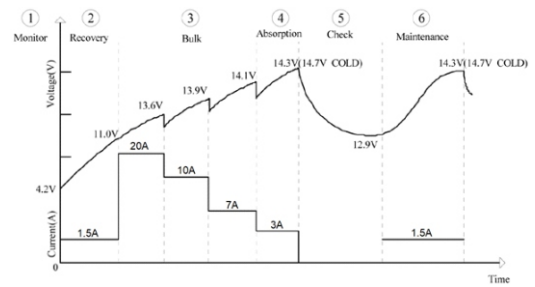
- The battery voltage display shows the current battery voltage after connecting.
- If the connecting is "Reverse" or "Short Circuit", Voltage display "88.8V" will be display "Err"
- The battery charger can automatic recognition 12V or 24V voltage after connecting.
- LCD display can automatic show the percent of voltage.

Disconnect

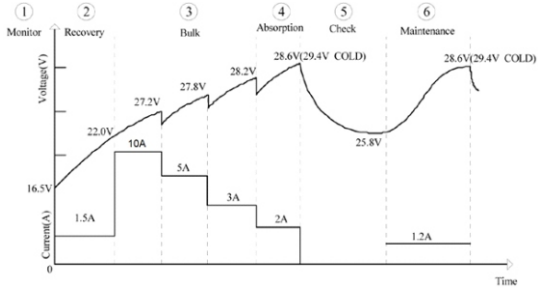
- Disconnect the appliance from mains supply.
- Remove the "-" pole clamp (black) from the "-" pole of the battery.
- Remove the "+" pole clamp (red) from the "+" pole of the battery.

6-step fully automatic charging cycle

Charging 12V



Charging 24V



WARNING!

Risk of chemical burns!

- Batteries contain acid, which could damage the eyes and skin. Charging batteries further generates gasses and vapours hazardous to the health.
- Avoid any contact with caustic battery acid. Immediately thoroughly flush skin and any objects which have come into contact with acid. If eyes have come into contact with battery acid, flush eyes with running water at least 5 minutes. Contact your physician.
- Use safety goggles and acid-proof safety gloves. Protect clothing, e.g. with an apron.
- Never tip the battery, as acid may leak.
- Always ensure adequate ventilation.
- Do not inhale emerging gasses and vapours.

Explosion and fire hazard!

- Gaseous hydrogen (detonating gas) may form when charging the battery. Contact with open fire (flame, embers, sparks) may result in explosions.
- Never charge the battery close to an open fire or in places where sparks may occur.
- Always ensure sufficient ventilation.
- Be sure the supply voltage matches the input voltage specified on the device (220-240 V-AC) to prevent damage to the device.
- Only connect and disconnect the battery connecting cables when the charger is disconnected from the mains.
- Do not cover the device while charging, as it may be damaged from extreme heating. Immediately stop using the device if you notice smoke or an unusual odour.
- Do not use the device in rooms where explosive or flammable substances are stored (e.g. petrol or solvents).

Risk of electrical shock!

- Chargers may interfere with the operation of active electronic implants, e.g. pacemakers, thus pose a personal hazard.
- Avoid pouring or dripping water or other liquids over it. If water penetrates electrical devices, the risk of electric shock increases.
- Ensure that all plugs and cables are free of moisture. Never connect the device to the mains with wet or moist hands.
- Never touch both connections at once when the device is in use.
- Unplug from mains before connecting or disconnecting the charging cable with the battery, or when the device is no longer being used.
- Remove all device cables from the battery before attempting to drive your vehicle.
- Always unplug device by the plug. The cable may be damaged.
- Do not use device if damaged. Damage to the power cable, the device or the charging cable increase the risk of electrical shock.
- Do not attempt to disassemble or repair the device. Immediately have a defective device or damaged power cable repaired or replaced by a speciality shop.
- Risk of short circuits! Do not allow the two connectors from the charging cable to touch if the power plug is plugged into the power outlet. Be sure not to connect the connectors on the battery poles through conductive objects (e.g. tools).
- Never use the cable to carry or pull the device.

Risk of injury!

- Never attempt to charge non-rechargeable, damaged or frozen batteries.
- Do not use this device to charge dry cell batteries. These could burst, resulting in personal property damage.

- Please read and follow the operating manual and all safety instructions for the batteries to be charged and the vehicle before using this device.

Risk of damage!

- Never place the device over or near the battery to be charged. Gasses from the battery could damage the unit. Place the device as far from the battery as the connecting cable will allow.
- Never operate the device if it has been dropped or damaged in any other way. For inspection and repair, take it to a qualified electrician.

Safety functions

The charger features the following safety features to prevent damage to the charger and the battery or the vehicle:

- Short circuit (defective battery),
- Incorrect connection (connected with reversed polarity),
- overheating
- excess current
- overcharging