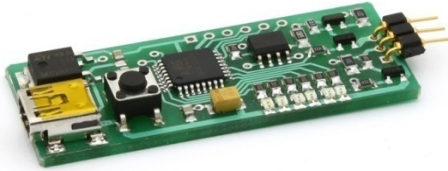
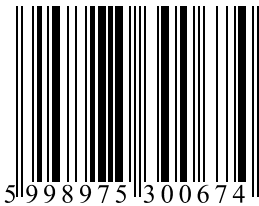


TM-42200



Intelligent battery charger for Car-System

User's manual



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Safety warning

During the operation of the device the specified technical parameters shall always be met. At the installation the environment shall be fully taken into consideration. The device must not be exposed to moisture and direct sunshine.

A soldering tool may be necessary for the installation and/or mounting of the devices, which requires special care.

During the installation it shall be ensured that the bottom of the device should not contact with a conductive (e.g. metal) surface!

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Features and properties

- Standard 3-pin connection to the vehicle
- Uniform USB charger connector according to the EU standard on environment protection
- Battery discharging and quick charging
- Battery level in percent
- Trickle charging
- Battery conditioning
- For vehicles provided with 2×1.2V battery

Technical parameters

Supply voltage: 5V

Idle mode current consumption: 20 mA

Max. current consumption: 100 mA

Dimensions: 50x21 mm

Short description

The circuit correctly charges the integrated button cells of the Car-System vehicles.

Quick charging and discharging functions for battery conditioning.

Due to the intelligent charging circuit the service time of the battery cells can be doubled approximately.

Status indicator LEDs

The charging/discharging process can be continuously monitored by means of the percent displaying LEDs.

0%, 25%, 75%, 100% LED-ek: Current percentage value related to the nominal capacity of the fully charged battery.

100% - Trickle LED: In this state the charging circuit slowly charges the battery in trickle charging mode up to full capacity.

ERROR LED: If the battery charger detects short circuit or too low cell voltage, it stops operating and gets into error status for protection.

If the charger indicates ERROR state in case of a battery, the latter is likely to have totally lost its capacity; it is not usable any longer.

Connection

A traditional mini USB-B connector is used for supply. During the connected status the device does not perform data communication, it uses exclusively the supply voltage of the computer.

The usage of a wall mounted USB adapter makes usage more comfortable.

Quick charging

Use quick charging only in case the vehicle is to be charged actually in extra short time. Consider that the frequent application of the quick charging mode shortens the life time of batteries.

To achieve the quick charging mode, shortly press the **"MODE"** button (max. 1 sec.). Then the charging status indicator blinks showing the active quick charging mode.

Discharging

At the discharging mode the battery charger discharges the batteries in the connected vehicle to a safe level then automatically changes over to normal charging state.

This process highly increases the battery life time.

To achieve the discharging mode, keep pressed the **"MODE"** button for min. 3 sec.

The active discharging state is indicated by the blinking of the percent display LEDs.

Guarantee and legal statement

Each parameter of the device was submitted to comprehensive testing prior to marketing. The manufacturer undertakes one year guarantee for the product. Defects occurred during this period will be repaired by the manufacturer free of charge against the presentation of the invoice.

The validity of the guarantee will cease in case of improper usage and/or treatment.

Attention! By virtue of the European EMC directive the product can be used solely with devices provided with CE marking.

The mentioned standards and branch names are the trademarks of the firms concerned.

Figure 1

