

# INTELLIGENT BATTERY CHARGER – MAXIBAT

## FEATURES

- Microcontroller based design
- User interface consisting of an LCD and three push buttons
- Battery voltage and current in addition to charge status are displayed
- Connection is via locking plug and socket connectors
- Leds for status indication

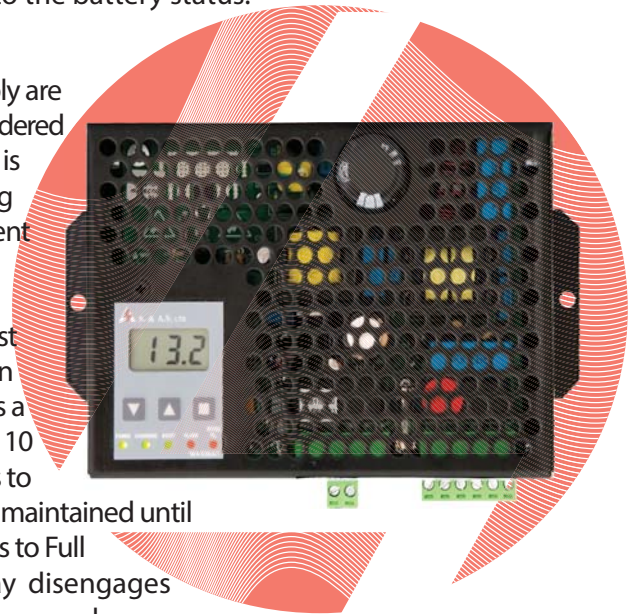
## DESCRIPTION

**MaxiBat** is an intelligent 12V battery charger with LCD display to show the charger mode, battery voltage and current.

**MaxiBat** operates in Trickle, Boost, Float and Full modes according to the battery status.

## OPERATION

The charging procedure starts when the battery and the AC power supply are connected. If the battery voltage is greater than 12.8V, the battery is considered full and the charging relay is not engaged. Otherwise, the charging relay is engaged after a 2 second delay, the **Charging** led is turned on and the charging procedure starts. On start-up, the charger mode is initializing (**ini**) and the current display shows scrolling dashes. This mode persists until the current stabilizes at the requested value. If the battery is deeply discharged, the charger is operated in Trickle (**trL**) mode. When the battery recovers, Boost (**bSt**) mode charging starts and the Boost led is turned on and remains on until the end of Boost mode charging. In this mode, the charger provides a constant charging current equal to the battery capacity (**cAP**) divided by 10 in addition to the load current set in parameter **Ldi**. The charger switches to Float (**FLo**) mode when the battery voltage exceeds 14.0V. Float mode is maintained until the charge current drops below a preset threshold after which it switches to Full (**FuL**) mode. When the current drops to almost zero, the charger relay disengages after a 5 second delay. The Charging led is turned off and the charger mode becomes idle (**idL**). The Alarm led and relay are engaged when the battery voltage drops below the value set in the parameter **uuS** for more than 2 seconds. On power up, the LCD displays the battery current. The **Next/-** and **Prev/+** push buttons are used to scroll between the current, voltage and charger mode. The menu is accessed by pressing the **Select/OK** push button. Once in the menu mode, the **Next/-** and **Prev/+** push buttons are used to scroll between the menu items and to decrement and increment values, respectively. The **Select/OK** push button selects the menu item for editing and saves the value.



## LEDS

**Power (Green Led):** turns on when the AC power is connected.

**Charging (Green Led):** turns on when the charging relay is engaged and the battery is being charged.

**Boost (Yellow Led):** turns on when the charger is in Boost mode.

**Alarm (Red Led):** turns on when the battery voltage drops below **uuS**.

**Reverse Pol. (Red Led):** turns on when the battery is connected in reverse polarity.

## ABSOLUTE MAXIMUM RATINGS

AC voltage	280vac
Battery voltage	15 Vdc
Charger current	5A
Alarm Relay Contact	16A 250V
Operating temperature	-30 to 70°C

## SPECIFICATION

AC voltage range	90-245Vac
Battery voltage range	7-14Vdc
Max charging current	5A
Alarm Relay Contact	10A 250V
Dimensions (WidthxHghtxDpht)	166x115x 44mm

## MENU DESCRIPTION

Display	Description	Factory Settings
cAP	Battery Capacity	50Ah
uuS	Under voltage setpoint	10.0V
Ldi	Load current	0.0A
FSt	Load Factory Settings	-
out	Exit Menu	-

