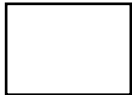




Linear Equipment Range of Automatic Battery Chargers

GENERAL INFORMATION

Please read the following information before installing. Connection and Operating instructions are given on Page 2 of this datasheet. A visual inspection of this product for damage during shipping is recommended before installation. It is your responsibility to ensure that qualified mechanical and electrical technicians install this product. If in doubt, please contact your local Computronic representative.



(shown in protective cover)

Description

The Linear Equipment Charger is a highly efficient high performance charger. The very smooth output is configured for accurate fast charging, optimum battery life and reliability. The charger is designed to cater for continuous float charging and standby battery applications when used in it's manual boost mode. Due to its very smooth output (< 1% ripple) the charger is suitable for VRLA or vented lead acid batteries. The charger has a jumper switchable between two modes of operation, auto 3 stage (jumper off) and manual boost mode (jumper on) as outlined below -

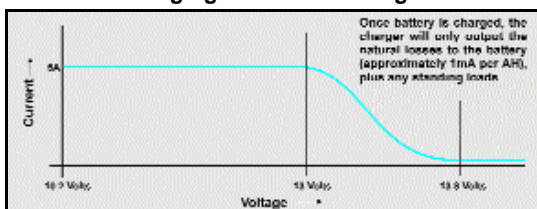
Auto 3 Stage Operation

The output current of the charger is limited to a low value until the battery reaches a specific voltage, preventing high charge current if a cell is shorted. Above this level the bulk charge phase starts supplying maximum current to the battery. This is indicated by the yellow "bulk" LED. This continues until the bulk voltage is reached when the current will start to fall. When it has fallen to 10% of the maximum bulk current the float phase will begin, indicated by the green "float" LED.

Manual Boost Operation

The charger will give a constant current output up to its knee point (13V on a 12V LA) at which point the current will ramp down as the battery reaches it's float voltage (see graph below). This gives an optimum charge time to ensure that the battery voltage is maintained at the pre-calibrated float level, whilst supplying any additional standing load current up to a specified maximum. The battery charger is designed so that it can be permanently connected to the battery.

Charging current vs voltage



The 'boost' mode of operation provides increased voltage output. Selection of boost mode is by connecting between the Negative output and Boost (Bst) terminals. Table over leaf shows details of float and boost voltages.

- **Float Charging**
1A @ 6V or 12V - 600mA @ 24V
- **VRLA or vented lead acid**
- **Low Ripple**
- **Auto 3 stage operation**
- **Optional boost mode**
- **Optional protective cover**

Product Specification

Power Supply:

nominal operating voltages	110-120V AC (115V units) 205-254V AC (230V units)
nominal operating frequency	50 - 60Hz

DC Charge Output:

output current ADC	1	1	0.6
nominal voltage VDC	6	12	24
line regulation	< 1%		
load regulation	< 1%		
output ripple	< 1%		
float / bulk voltages	see table overleaf		

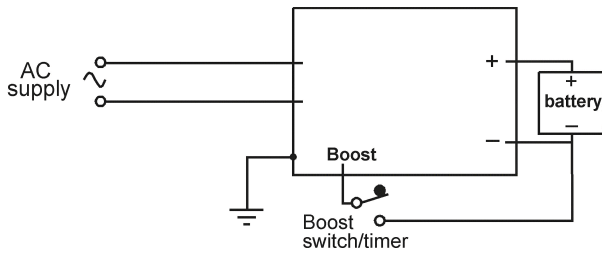
General:

operating temperature	0 to +40°C
overall dimensions (w x h x d)	see overleaf
weight	1.28Kg in cover (2.8lbs) 0.9Kg open frame (1.98lbs)
EMC emission / immunity	EN 58801-2 / EN50082-2

Warranty

A one year limited warranty on materials and workmanship is given with this product. Details are available upon request.

Electrical connection



Notes on fuse protection:

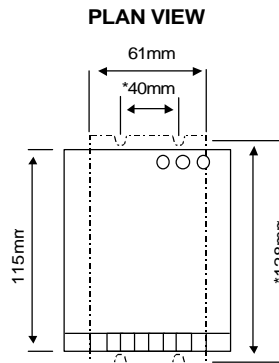
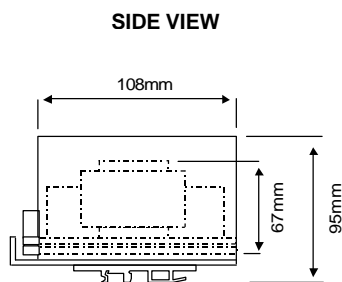
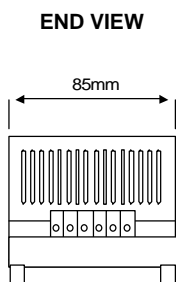
- 1) Input is protected via 1A Quick Blow 20mm Fuse
- 2) Output is protected via self-resetting 1.35A Polyfuse

Calibration

Battery type		float volts (VDC)	boost volts (VDC)
6V	Lead Acid (6 cells)	6.8	7.5
12V	Lead Acid (12 Cells)	13.6	15.0
24V	Lead Acid (24 Cells)	27.2	30.0

The above are factory standard settings, specials are available on request.

Dimensions



	Width (mm)	Height (mm)	Depth (mm)
Open Frame			
All Models	61	135*	67
With Cover			
All Models	85	125	95

N.B. *The open frame model has an extended back plate which has 4 mounting holes for easy installation whilst the Protective cover is fitted with DIN clips.

ELECTRICAL CONNECTION & OPERATING INSTRUCTIONS



WARNING: DANGER OF INJURY OR DEATH. Before connection, disconnection or handling of LER battery charger, ensure that all AC power supplies are isolated. Connection to or disconnection from live wiring can also cause damage to internal components.

- NOTE:** Isolate AC supply to charger before connecting DC outputs
 Observe correct input voltage on charger (95-135 or 205-254VAC)
 Observe correct battery voltage and type as stipulated on the unit itself

CONNECTION OF AC SUPPLY & DC OUTPUT

Terminals labelled L (Live) N (Neutral) E (Earth) are for AC input supply

Terminals labelled + (+V) and - (-V) are for DC output connection

Terminal labelled BST is for manual boost operation (see notes below on operation and Page 1 of this datasheet for fuller explanation of charging operation)

SELECTION OF AUTO-3 STAGE or MANUAL BOOST OPERATION

Selection of charging mode, as outlined on Page 1 of this datasheet, is made via a 2-Pin Black Jumper located to the right of the input and output terminal connections.

With the Jumper off the charger will operate as a Auto-3 stage unit (see page 1 and note below)

Note: Auto-3 stage operation should only be selected when no standing loads are present on battery, a standing load is a continuous drain on the battery even whilst charger is connected and running. *If in doubt always use the manual boost mode.*

With the Jumper on, thereby linking the pins, the charger will operate as outlined in the manual boost mode (see page 1)

*Notes on manual boost operation

If using the charger in the manual boost mode (i.e. with jumper on), and the boost link is active (BST terminal connected to battery negative), care should be taken so overcharge does not take place, the boost link should be timed or monitored until battery voltage reaches required level. **Continuous boost charging will damage the batteries.**

NB: All units are shipped with the 2 pin jumper fitted so the charger operates in the manual boost mode.

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