



# SmartCharge 125-LC

## Automatic Battery Charger

DS-398/2

**SmartCharge 125-LC** Automatic battery chargers provide a cost effective solution to most industrial battery charging requirements.

Utilising the latest high efficiency switch-mode technology and micro-processor control, the SmartCharge 125-LC is suitable for charging most sealed or flooded batteries and is easily calibrated by the end user to suit the battery type. The multi-stage intelligent charging characteristic ensures accurate and efficient battery charging and is designed for permanent connection to the batteries maintaining them in a fully charged condition without overcharging. The SmartCharge 125-LC is fully protected against overload, reverse battery connection, over voltage and over temperature.



### Input Specification

Voltage Range, $V_{IN}$	100 - 264V AC
Frequency	47 - 63Hz
Input Current	2.3A rms max.
Leakage Current	<1mA / 240VAC

### Output Specification

Voltage / Current	12.0V Nominal 10.0A. 24.0V Nominal 5.0A. <i>Other Voltages on Request</i>
Ripple & Noise	±0.5%
Line Regulation	±0.5%
Load Regulation	±1.0%
Efficiency	Up to 88%
Overload Protection	Constant Current Limit
Over Temp. Protection	Output shutdown with automatic recovery
Reversed Battery Protection	Automatic protection. Disabled when in PSU mode.

### Alarms and Levels

DC Output Voltages	Float = Factory set to 13.8V (12V) or 27.6V (24V). Boost (Bulk/Absorb) = Float Voltage +4%.
AC / Charger Fail	Loss of AC input or DC output voltage control.
Low DC Voltage Alarm	Float Voltage -12% Alarm, -8% Reset.
High DC Voltage Alarm	Float Voltage +7% Alarm, +5% Reset.
Over Voltage Protection	16.0V (12V) or 30.5V (24V) instantaneous lockout.
Battery Disconnected	Open circuit on DC output (Disabled in PSU mode)

### FEATURES

- Cost effective
- Micro-processor control
- Small footprint and compact size
- DIN rail mounting
- Automatic multi-stage charging
- Continuously rated
- Protections:
  - Short circuit and overload
  - Over voltage
  - Over temperature
  - Reverse battery
- Universal AC input range
- Low ripple output
- Naturally cooled
- Simple calibration procedure
- Comprehensive alarm monitoring
- Fail alarm contact set

### APPLICATIONS

- Standby and prime power generators
- Engine driven pumps and compressors
- Switch gear tripping
- Robust PSU
- Industrial control systems
- Alarm systems
- Navigational aids



@ sales@jenelec.co.uk www.jenelec.com

+44 1379 853666

## Isolation

Withstand Voltage	I/P to O/P, I/P to Earth : 1.5kV AC
Isolation Resistance	I/P to O/P, I/P to Earth, O/P to Earth : 500V DC / 100M Ohms

## Environmental Specification

Working Temperature	-10°C to +50°C
Working Humidity	20 - 90% RH
Storage Temperature	-20°C to +85°C
Storage Humidity	10 - 95% RH
Unpacked Weight	750 grams

## Finish

Aluminium / RAL9005 black fine texture.

## Fail Alarm Relay Contact Set

Volt-free form C relay contact set for signalling of a fault alarm condition.

The relay contacts de-energise 60 seconds after a fault occurs. The over voltage protection shutdown alarm de-energises the contacts instantly.

## General Arrangement

## Termination

AC Input and DC Output:

Connections terminate to rising clamp screw terminals and will accept 6.0mm<sup>2</sup> stranded cable.

Fail Alarm:

Connections terminate to rising clamp screw terminals and will accept 2.5mm<sup>2</sup> stranded cable.

Connector 'C1' (Signals):

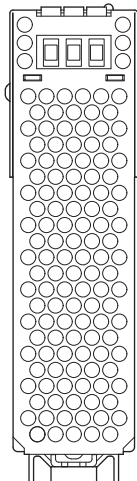
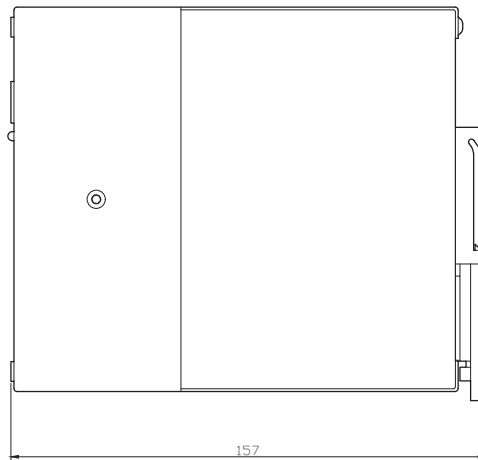
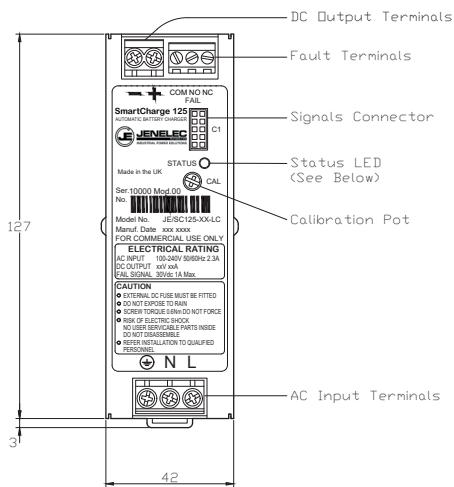
Pins 7 and 8 should be linked when the charger should also function as a PSU.

**NOTE:** Reverse battery and battery disconnected alarms are disabled in PSU mode.

The remaining pins are for expansion modules, communication interfaces, firmware upgrade etc. and should not be used.

## Ordering Information

Model No.	DC Output
JE/SC125-12-LC	12V 10A
JE/SC125-24-LC	24V 5A



Status LED			
Seconds	0.0	0.5	1.0
Solid Green	██████████	██████████	██████████
Charger OK (Relay On)			
Green/Red 1Hz	██████████	██████████	██████████
DC Over or Under Voltage Fault			
Off/Red 10Hz	██████████	██████████	██████████
DVP/AC/Charger Fault			
Red Pulse 0.1s	██████████	██████████	██████████
Battery Disconnected			
Green/Red 5Hz	██████████	██████████	██████████
Calibration Mode			
Off/Red 1Hz	██████████	██████████	██████████
Over Temperature			

TO CALIBRATE:

- DISCONNECT THE BATTERY. CONNECT A DC VOLTMETER TO THE +/- OUTPUT TERMINALS.
- TURN THE 'CAL' POTENTIOMETER FULLY ANTI-CLOCKWISE. WHEN THE STATUS LED FLASHES GREEN/RED @ 5Hz, ADJUST THE 'CAL' POTENTIOMETER AND SET THE DESIRED FLOAT VOLTAGE LEVEL.
- WHEN THE LED RED/GREEN @5Hz FLASH SEQUENCE ENDS THE UNIT IS CALIBRATED.

Top hat DIN rail mount. Optional screw down bracket available on request.