



# SmartCharge 250-LC2

## Automatic Battery Charger

DS-399/2

**SmartCharge 250-LC2** 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 250-LC2 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 250-LC2 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	2.5A rms max.
Leakage Current	<1mA / 240VAC

### Output Specification

Voltage / Current	24.0V Nominal 10.0A. <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 27.6V. 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	30.5V 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



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## 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	1.2 kgs

## 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):

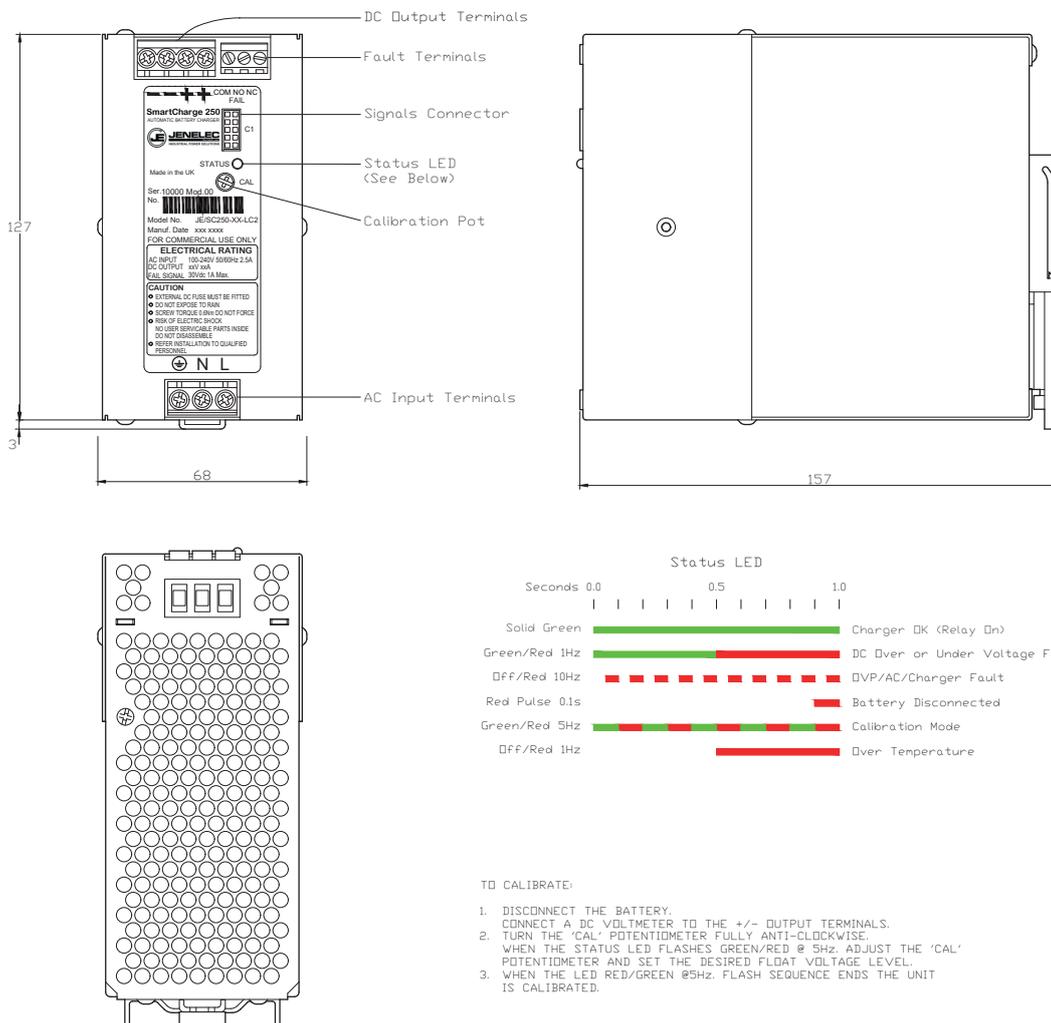
Pins 7 and 8 should be linked when the charger should also function as a PSU.

**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/SC250-24-LC2	24V 10A



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