

Enclosed Sentry UL Series UL Approved Automatic Battery Chargers



* UL listed to:
UL1236 – Battery chargers for charging engine-starting batteries, and
CSA22.2 No. 107.2 – Battery chargers. See specifications for details.

Features

- Automatic float charging:
3A / 5A @ 24VDC, or 5A / 10A @ 12VDC
- Auto boost operation
- For vented lead acid or NiCd cells
- Temperature compensation
- Wall mounted, stainless steel enclosure
- For stationary engine, genset and standby power applications
- CE, cUL^{us} approvals

The Enclosed Sentry UL range provides automatic, current limited and thyristor controlled charging of vented lead acid or NiCd batteries. The units may be used in a wide range of industrial charging applications, including standby engines, pumps and generators.

The charger is supplied in a wall mounted stainless steel enclosure, complete with DC ammeter indication. Each unit also includes a transformer, rectifier and control circuit. The control circuit ensures that the charger maintains a battery voltage at the pre-calibrated float level, whilst supplying any additional loads current up to the specified maximum.

When used as a float charger, Sentry is designed to give a constant current output while battery voltage is below a 'knee point' (approx. 13V on a 12V LA). Above the knee-point, as the battery approaches its float voltage, the charger output current ramps down. This multi-stage charge regime gives an optimum combination of fast charge rate, followed by float charge without overcharging.

Auto Boost

All Sentry UL units include an Auto boost feature. Auto boost provides a temporary increase in output voltage, equalizing the charge between cells and maximizing battery life and capacity. Auto boost is triggered automatically when the battery falls below a preset voltage. Once the batteries have reached the boost voltage level, the charger reverts to its normal float charge mode, preventing battery over-charge and gassing.

Temperature compensation

The optimum charge voltage for lead acid and NiCd batteries varies with ambient temperature. All Sentry UL models are fitted with on-board temperature sensing and output compensation (3mV/cell decrease for each °C increase).

Electronic self-resetting fuse

An electronic poly-fuse provides protection against DC output reverse polarity and short circuit faults. The fuse automatically resets on battery disconnection, allowing correct reconnection without manual replacement of fuses.

Installation and connection

Electrical connection of the 120 VAC supply input and DC output is via spring clamp terminals, located on an internally mounted circuit board. Access to the connection terminals is through a removable cover; wiring harness access is through knock-out sections in the sides of the metal enclosure.

Warranty: a two year limited warranty on materials and workmanship is given with this product, details available on request.

Specifications

Power supply

Operating voltage: 120V units: 104 – 127 VAC

Operating frequency: 50/60 Hz.

DC Charge Output

Maximum power output, W
Nominal voltage, V
Maximum current limit, A
Float / boost voltages

ESUL100			ESUL120		
12	100	24	12	120	24
5		3	10		5

see 'output calibration' section

Physical

Operating temperature:

-10 to +55°C / +14 to +131°F

Dimensions: see Dimensions section

Weights:

ESUL100 models: 5.6 kg / 12.4 lb

ESUL120 models: 9.4 kg / 20.8 lb

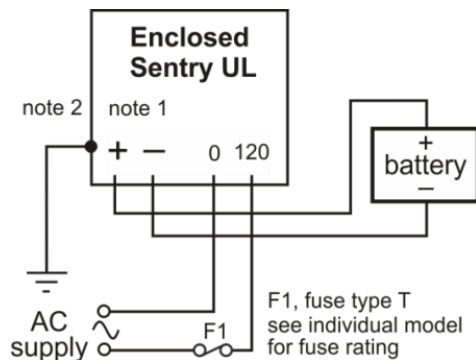
Electromagnetic compatibility:

EN 50081-2 / EN 50082-2

UL approvals

BBGQ: UL1236, CSA22.2 no. 107.2

Electrical connection



Notes:

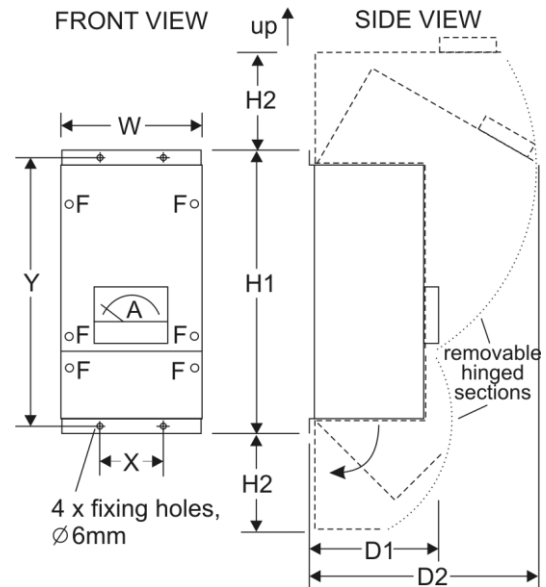
- 1) battery output is isolated from chassis.
- 2) chassis earth stud must be connected AC supply earth.

How to Order

Stock code	Model ref.	Description
42.70.0802	ESUL1001205CLA	Enclosed Sentry UL, 110VAC, 5A/12VDC
42.70.0803	ESUL1002403CLA	Enclosed Sentry UL, 110VAC, 3A/24VDC
42.70.0805	ESUL1202405CLA	Enclosed Sentry UL, 110VAC, 5A/24VDC
42.70.0807	ESUL1201210CLA	Enclosed Sentry UL, 110VAC, 10A/12VDC

Standard chargers are factory calibrated for vented lead-acid batteries. For other battery types, please specify at order (calibration tables shown right), or contact our technical department for further advice.

Dimensions



Overall:

W	142mm / 5.59"
H1	268mm / 10.55"
H2	85mm / 3.35"
D1	130mm / 5.12"
D2	222mm / 8.74"

Fixing holes:

X	64mm / 2.52"
Y	274mm / 10.79"

Approximate dimensions for reference only. Use actual product as a mounting template.

For safe heat dissipation, mount product in the orientation shown, with minimum air-gap clearance of 40mm above/below and 25mm at sides.

Output Calibration

Calibration figures at 20 deg C. Temperature compensation causes output voltage to automatically decrease (or increase) at a rate of 3mV per cell, per °C increase (or decrease) in temperature.

Battery type		float volts (V DC)	boost volts (V DC)
12V	Vented lead acid (6 cells)	13.5	14.1
	Calcium-Calcium (6 cells)	13.8	15.6
	NiCd (10 cells)	14.1	14.5
24V	Vented Lead acid (12 cells)	27.0	28.2
	Calcium-Calcium (12 cells)	27.6	31.2
	NiCd (18 cells)	25.6	26.1
	NiCd (20 cells)	28.2	29.0

Note: Sentry chargers are designed for vented batteries only, and are NOT suitable for VRLA or sealed batteries. If in doubt, contact our technical department



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