

**General information:**

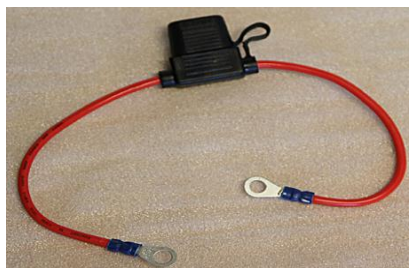
**EL600-1210-24** has been specifically developed to meet the DC powering requirements for telecommunications, industrial and marine applications. The unit has a 230Vac, power factor corrected single phase input with soft-start, and operates over a wide range of input voltage. The output is current limited, with short circuit protection. EL600-1210-24 is a high quality and reliable switch mode power supply with build in a 12V 24Ah battery. The power supply work in parallel with the 12V battery, giving a no-break power supply for different electronic equipments such as fire alarm systems, intruder alarm, access control systems aso. EL600-1210-24 has relay contacts output (potential free) giving information about battery condition, mains and charger failure. Light emitting diodes indicates battery condition, mains/charger "OK", overload and fuse errors.

**Details**

Tamper switch

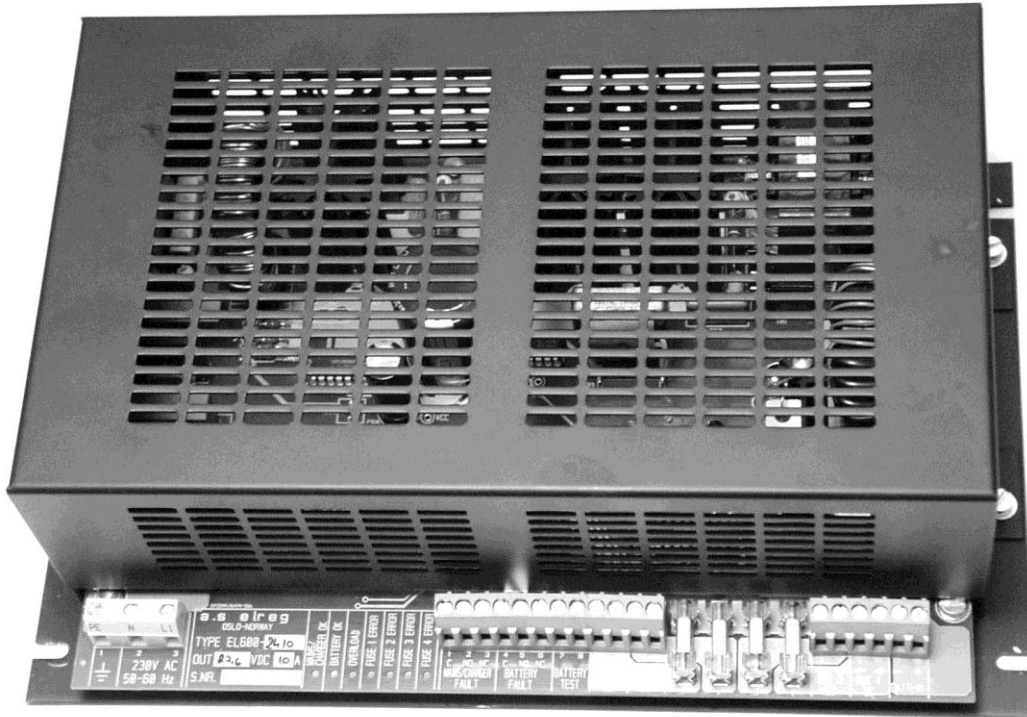


Battery cables with fuse (30A) included





Ventilation holes





- **EL600-1210-24 key data:**

- Output power (13,8V/10A)
- 4 output circuits with fuses and LED's which illuminates by fuse break.
- All outputs are secured against overload, short circuit and over voltage.
- Potential free alarm output for main/charger fault.
- Potential free alarm output for battery failure.
- Separate input for battery connection to achieve a "No-Break distribution system"
- Built in battery test function, controlled automatically or externally.
- Automatic protection against deep discharging of the battery.
- Approved by NEMKO and marked with CE label.  



### **Battery supervision and battery protection**

EL600-1210-24 has an automatic battery test procedure. The battery will be tested every 60 min. If the battery voltage falls below 11V, the LED marked BATTERY OK will be switched off.

This LED will illuminate again when battery voltage increases to 11,9V.

When mains disappear, the battery will supply current to the load and the LED will start flashing.

A battery test may be done manually by short circuiting the terminals marked BATTERY TEST a short time. During mains failure the battery will be discharged. In order to protect the battery from completely discharging and risk for destroying, the load will be disconnected when the battery voltage has fallen down to 9,5V. When the mains is back and the voltage has increased to 11,9V, the load will automatically be connected to the power supply again.



### **Supervising the Mains and the Charger**

The LED marked MAINS/CHARGER OK illuminates when the charger supplies current. This LED will turn off when the charger stops supplying current.



### **Alarm outputs**

EL600-1210-24 has separate outputs in order to send information about battery condition and mains/charger condition externally. The relay contacts are potential free and withstand a current up to 2 Amps

### **Mains/Charger faults:**

Relay contacts marked MAINS/ CHARGER FAULT C and NO is connected by mains/charger faults.

Relay contacts marked MAINS/ CHARGER FAULT C and NC is disconnected by mains/charger faults.

When these faults occur there is a time delay of 30 sec.before the relay contacts is activated.

This time delay is standard, but may be changed to 30 min by connecting the strap marked S1.

(See connecting diagram page 4)

### **Battery fault:**

Relay contacts marked BATTERY FAULT C and NO is connected by battery fault.

Relay contacts marked BATTERY FAULT C and NC is disconnected by battery fault.

### **Protection against overload and short-circuiting:**



The LED marked OVERLOAD illuminates when the current consumption exceeds the rated current of the rectifier.

The rectifier will limit the output current to max 10,5A and the output voltage decrease in order to maintain the output current constant without any danger for the power supply.

The charger is equipped with 4 separate outputs, each with a 10 amp fuse.

The basic purpose of these fuses are to protect the battery against irregular current draw.

Red LED`s on the front marked FUSE ERROR 1,2,3,4 illuminates when the respective fuses are broken. The fuses are marked in the same way (1,2,3,4)

The LED`s will only illuminate if a load is connected to the power supply.



### **Over voltage protection:**

The Mains input is protected by a MOV (Metal oxide varistor) against transients and over voltage. In addition a common mode and a diff. mode coil is connected together with X and Y capacitor to line / earth in order to attain the EMC requirements. On the secondary side of the power supply all inputs and outputs are equipped with tranzorb diodes to protect against static electricity or induced voltage transients from outside the cabinet through the cables.



**Technical data:**

**Input:**

Input voltage: 180 - 250VAC 47-63 Hz  
 Input power: 160W (On full load on all outputs)  
 Power factor: > 99%  
 Over voltage protection: Yes, MOV (metal oxide varistor)  
 Input fuse: 20x5mm glass fuse 2,5A slow blow  
 Connections: Screw terminals max 2,5mm<sup>2</sup>

**Output:**

Voltage: 13,8VDC +/- 100mV (Adjustable +/- 2,5V)  
 Current max: 10A continuously.  
 Power max: 138W  
 Voltage accuracy: <1% by 0-100% load and/or input voltage variations from 180 to 250VAC  
 Output circuits : 4 pcs. Each with a 20x5mm glass fuse 10A slow blow  
 Battery input: 12V 24Ah  
 Short circuit protected: Yes.  
 Protected against overload: Yes, Current limiting at 10,5Amp +/- 0,5Amp  
 Over voltage protection: Yes, level : 30V +/- 0,5V  
 Ripple and noise on output: <100mV p-p DC-30MHz, measured with a noise probe direct on the output connectors.  
 All connections: Screw terminals max 41mm<sup>2</sup>

**Information output / Input:**

Mains/charger faults: Potential free relay contacts no,nc,c max load 2 Amp  
 Battery fault: Potential free relay contacts no,nc,c max load 2 Amp  
 Battery test input : Active low , Internal pull up with 10Kohm  
 Connections: Screw terminals max 4mm<sup>2</sup>

**General data:**

Battery connections: Screw terminals max 4mm<sup>2</sup>  
 Switch-frequency: 80kHz  
 Efficiency: >84%, by full load.  
 Soft start: Yes  
 Cabinet: Wall mounted steel enclosure .  
 Weight: 20 kg inclusive battery  
 Dimensions: L\*W\*H: 410mm\*410mm\*210mm  
 Density: IP 22  
 Cooling: Free air passage  
 Ambient temperature: 0 - +40°C

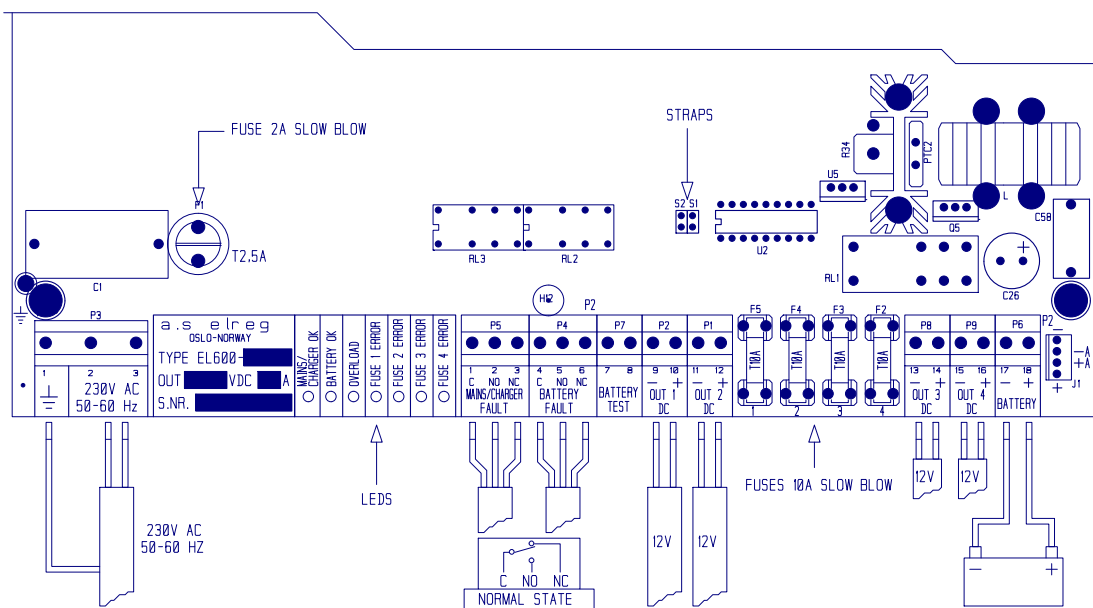
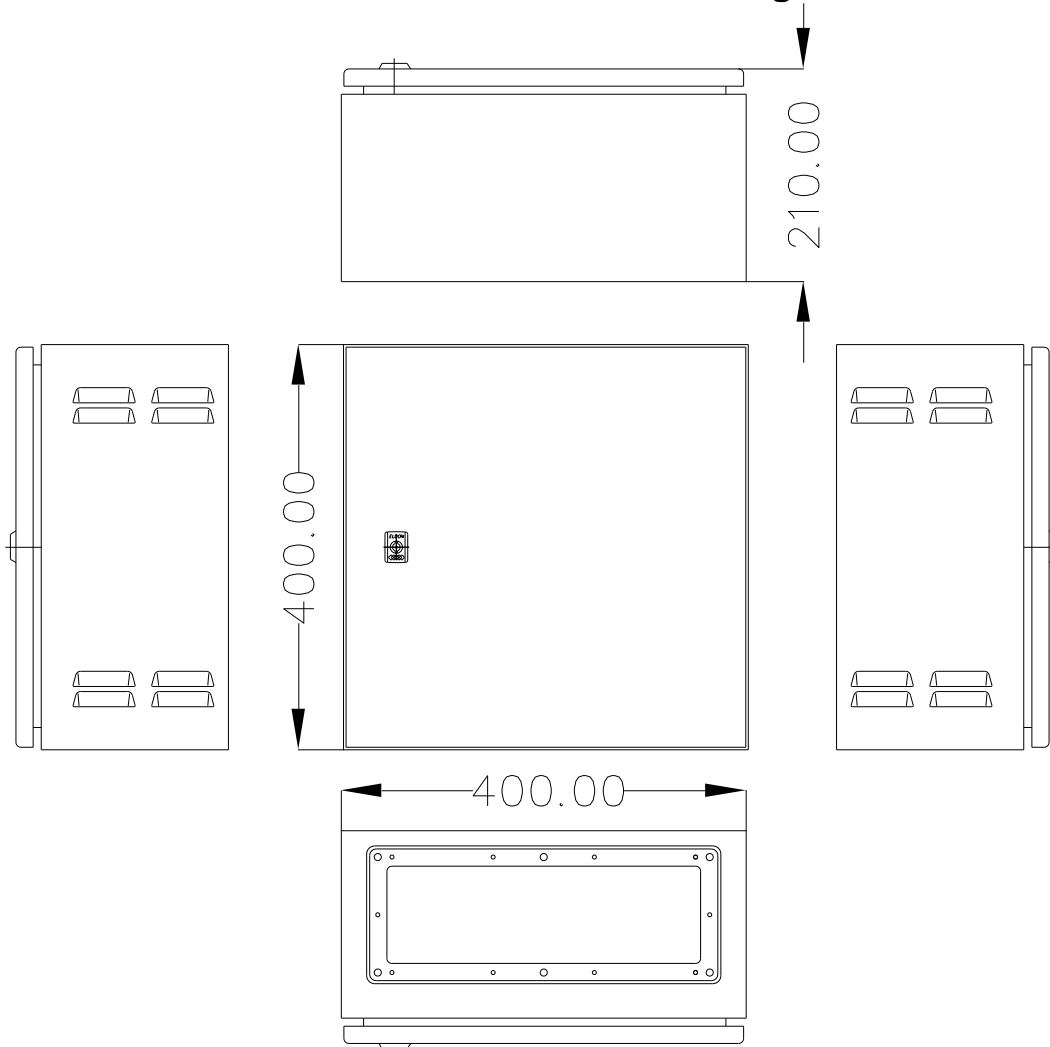
**Approvals:**

Meet the requirements in the safety standard EN60950.  
 Meet the requirements in RFI/EMI standard EN55022 level B  
 EL600-1210-24 is approved by NEMKO and marked with a CE label.



Power Supply **EL600-1210-24**

**Dimensions and connection diagram**





# TEST REPORT

Model:

**EL600-2410-24**

Serial no:.....

- **Output voltage adjustment**
- **Current limiting function tested**
- **Switching frequency tested**
- **Measured noise and ripple**
- **Battery control function tested**
- **Mains fault function tested**
- **Deapdischarge protection tested**
- **Fuses tested**
- **Earth connection / Isolation test acc.to EN50116**

Tested by:

Date:.....

Sign:.....