

1. PRELIMINARY INFORMATIONS

Manufacturer : **elc** 59, avenue des Romains 74000 ANNECY-FRANCE
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 Web Site : www.elc.fr Email : commercial@elc.fr
 Instrument : OEM POWER SUPPLY
 Brand : **elc** Type : **ALE1225**

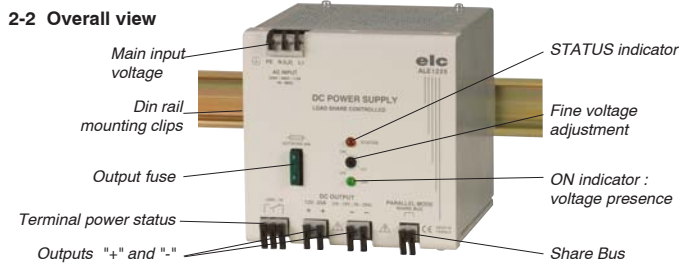
2. DESCRIPTION

2-1 Presentation

You have purchased an ALE1225 type power supply. We thank you and congratulate you for your good choice.

This device was manufactured in accordance with European standards in force. It is intended for professional and industrial use for peripherals associated with control equipment in fixed and stationary installations. This instructions manual contains informations and warnings the buyer must comply with in order to ensure safe and sustained operation.

2-2 Overall view

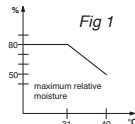


2-3 Technical specifications

Technical features at 23°C at the terminals of the power supply

- Output voltage : adjustable from 10 V to 15 V by potentiometer.
- Total ripple : < 3 mV rms
- Low freq. ripple : < 5 mV peak to peak
- Switching freq. ripple : < 8 mV peak to peak (with bandwidth 20 MHz).
- Switching peak : < 40 mV peak to peak (with bandwidth 20 MHz).
- Charge regulation : < 40 mV for a load change from 0 to 100%.
- Mains regulation : < 5 mV for a line change from 198 to 440 V.
- Dynamic regulation : < 1% for a load change from 10 to 90%.
- Hold-up time : 25 ms for half load and 12 ms for full load main at 200 V
- Output current : 25 A from 10 to 12 V and 20 A for 15V - 26,5 A in short circuit.
- Power : 300 W from 12 to 15 V, 250 W for 10 V.
- Paralleling : load share controller "share bus" (1 wire)
 Number of unit in parallel : unlimited (see § 3-2-3 paralleling).
- Protections : against short circuits by current regulation.
 against overcurrents on source by internal fuse **T3.15A**.
 against output overload by voltage limitation at 17 V.
 against current reverse power surges on the output by fuse
 against overheat by thermal circuit breaker.
- Input voltage : Nominal 220 - 400V, 50 - 60 Hz
 Range 198 - 440 V, 50 - 60 Hz
- Input current : 1.6 A rms at 220 V
- Call current : 45 Amps (1ms)
- Efficiency : > 80% in full load
- Insulation class : I
- Overvoltage Category : OVC II ; Pollution degree : 2
- Electric strength : 4000 VAC between input and output
 2500 VAC between Earth and input

- Environmental Conditions : of use : + 5 °C to + 45 °C ; storage : -10 °C to + 50 °C
 moisture : see curve (fig. 1)
- Installation altitude : ≤ 2000 m
- Protection level : IP 30
- Safety standard : EN 61010-1 ; EN 61010-2-201 ; EN 62368-1
- EMC standard : EN 61000-6-2, EN 61000-6-4
- Presentation : Galvanized steel case and front panel with epoxy finish.
- Dimensions : L = 120 mm H = 120 mm D = 120 mm
- Weight : 1400 g
- Mains input : 3 spring terminal blocks for 1.5 mm² (AWG16) wire.
- DC output : Dual spring terminal blocks with levers for 2.5 mm² (AWG12) wire.
- Status output : 3 spring terminal blocks for 2.5 mm² (AWG 12) wire.



3. WORKING

3-1 Safety instructions

DANGER: HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH
Only qualified persons should ensure the installation, use, repair and maintenance of electrical equipment.

Before installation or maintenance work requiring the opening of access doors, disconnect all power supplies to the equipment and connected equipment. The main circuit breaker must be opened and locked to prevent it from closing unintentionally. Check that the power supply is not present according to the indications with a correctly set voltage measuring device.

This equipment and associated products must only be connected to the power supply within the specified voltage range.

Before switching the power back on, check that the device is properly earthed and that all protections, wires, cables or other are correctly fixed. Install and use this product only in non-hazardous areas. Failure to follow these instructions may result in death or serious injury.

WARNING
This equipment must not be accessible during normal operation and must be used in a safe place, in accordance with the temperature and humidity specifications in the product instructions.

Install and use in a restricted access location with key or tool locks. (electrical equipment box or in closed box, ...). In order not to compromise the safety of the equipment and associated products, you must connect it to earth.

The common mode voltage between the earth and the outputs must not exceed 50Vac. A line circuit breaker must be included in the power supply circuit in the immediate vicinity of the device and must be easily accessible by the operator.

Power supply 220-240 V: Single-phase, Single-pole + Neutral 3A, curve C ; two-phase, two-pole 3A, curve C

Power supply 380-400 V: Two-phase, , two-pole 400V~ 2A, curve C.

Follow the installation and wiring instructions in this document; failure to do so may result in death, serious injury or property damage. If the equipment is used in an unspecified or unauthorized manner, the protection provided by the equipment may be compromised. Do not exceed the maximum output power or current listed in the product's instruction manual.

Use wires that can withstand temperatures of at least 75°C. For good convection, this appliance must be installed vertically. It is necessary to maintain a 50 mm clearance on all sides and not to obstruct the openings.

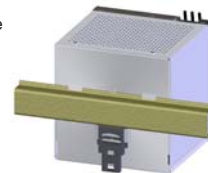
RISK OF BURNS
Avoid unprotected contact with hot surfaces; allow the product to cool for 30 minutes before touching it.

3-2 Mounting

Mounting by CLIP on the profiled 35x15 mm or 35x7,5 mm (DIN rails EN 50022).

- Engage the hooks on the top of the rail.
- Push the power supply against the rail, in order to lock the hook (push it back if necessary).

- To take it off :
 - Introduce a screwdriver into the part of the hook located under the power supply.
 - Push it toward the bottom.
 - Take it off, rocking it toward the top.



3-3 OPERATION

Before any connection, check that the main is not in your wire. The non-observance of the safety instructions can have as a consequence a contact with dangerous parts under voltage and can lead to death or serious wounds. Respect the connections of the main and of the output indicated on screenshot. The use of weak section or important length wire leads to a degradation of the characteristics. One meter of 2.5 mm² wire with a 10 amps current makes the voltage fall of approximately 80 mV. It it thus advised not to go under this section.

3-3-1 Normal operation

The ALE1225 is delivered adjusted at 12 V ±0.5%. After having plugged the wires on the load and on the main, close the circuit breaker, the power supply starts after 3 seconds. The green light switches on, the voltage is in the output.

3-3-2 Operation with a voltage output different from 12 V

- Plug to the main, close the circuit breaker, the power supply starts after 3 seconds. The green light switches on, the voltage is in the output.
- Connect a voltmeter on the output and adjust the desired voltage with the adjustment.
- Disconnect the voltmeter and open the circuit breaker.

- Connect the load.
- Close the circuit breaker, the power supply starts after 3 seconds. The green light switches on, the desired voltage is in the output.

3-3-3 Paralleling

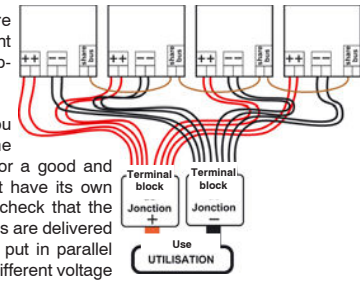
ALE1225 has a load share controller "Share Bus" which manages the share of the current between an unlimited number of power supplies of the same type.

Precautions
 In order to easier the wiring, we advise you not to exceed 4 power supplies on the same rail. Let a 50-mm-space between each for a good and natural cooling. Each power supply must have its own circuit breaker. Before any connections, check that the mains is not in the wire. The power supplies are delivered adjusted at 12 V ±0.5%, so they can be put in parallel directly. On the other hand, if you need a different voltage value, you will have to do the adjustment following § 3-2-2 with a max. variation of 3%, so 0.4 V between the power supplies. The output voltage value once connected in parallel will be given by the one with the highest voltage. The recommended wiring for paralleling is the following :

- link the "Share bus" (0.5 mm² wire) between the power supplies (2 points connector).
- link both "+" of each power supply with wires of the same length and same section (2.5 mm²) to a terminal block.
- link both "-" of each power supplies with wires of the same length and same section (2.5 mm²) to a terminal block.
- link "+" and "-" of the load to the terminal block with wires of appropriate cross section.

3-3-4 Contact dry «power status»

Terminal will provide information on power status. Once the equipment works and that the voltage output is greater than 10V, the normally open contact closes and opens normally closed. These contacts are completely isolated from the rest. The voltage-current values do not exceed the terminal are 250Vac - 1A.



4. OPERATION

ALE1225 is a switching and regulated DC power supply with a floating output (potential free), protected against short-circuits. If the requested current is superior to the one the ALE1225 can supply, a current limitation starts and the output voltage decreases.

- Indicator: Green LED : "ON" the output voltage is present.
- Red LED : "STATUS" the protection against overheat is active or a regulation defect limits the output voltage at 17 V.

5. MAINTENANCE

No particular maintenance is required for this instrument. Avoid dust, humidity, shocks : your instrument will be grateful to you for that. If indicator does not light up when plugging, check :
 - the connection to the main input voltage and Main voltage presence.
 if red LED lights up, check :
 - the output fuse (auto clip 30 A)
 If the problem remains, please return this power supply to our after sales service.

6.AFTER SALES SERVICE

During **TWO YEARS**, spare parts and workmanship are guaranteed. This guarantee does not apply to instrument presenting defects or failures caused by an improper use. Return expenses are borne by the client. Only devices returned with a dated purchasing invoice can be recovered by the guarantee. Any intervention carried out by unauthorized persons or organizations, shall void the guarantee.

7. DECLARATION OF CONFORMITY

Manufacturer : ELC
 Address : 59 avenue des Romains 74000 Anancy FRANCE declares the product
 Name : OEM regulated power supply (DC power supply)
 Type : **ALE1225**
 conformable to the requirements of the directives :
 - Low voltage 2014/35/UE,
 - Electromagnetic Compatibility 2014/30/UE,
 - RoHS 2011/65/UE.

The following harmonized standards have been applied :
 Safety : EN 61010-1:2010 ; EN 61010-2-201:2018
 EN 62368-1:2020
 EMC : EN 61000-6-2:2006, EN 61000-6-4:2007 + A1:2011

Anancy, December 18, 2020 H. CURRI, Manager

ELIMINATION OF MANUFACTURING WASTES BY THE PRIVATE USERS IN THE EU

The symbol written in its packaging indicates that this product must not be thrown in the garbage with your other wastes. It is your responsibility to rid of your manufacturing wastes bringing it to a specialized sorting office for the recycling of electrical and electronic instruments. The recycling of your wastes will contribute to preserve natural resources and guarantee a respectful of the environment and human health. For further information concerning the recycling center near your place of residence, contact your town hall, the elimination service of garbage heap or the store where you.

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