



1. PRELIMINARY INFORMATIONS

Manufacturer : elc 59, avenue des Romains 74000 Annecy FRANCE  
 Phone : +33 (0)4 50 57 30 46 Fax : +33 (0)4 50 57 45 19  
 Web Site : www.elc.fr Email : commercial@elc.fr  
 Instrument : OEM SWITCHING AND REGULATED POWER SUPPLY  
 Brand : elc Type : ALE1502D

2. DESCRIPTION

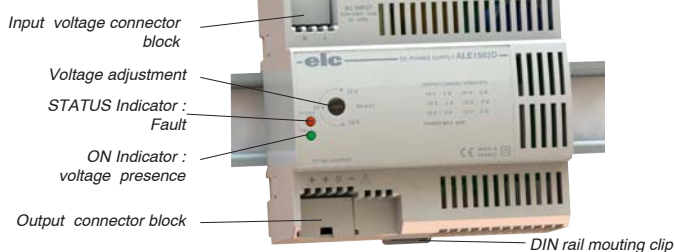
2-1 Overview

You have just purchased the ALE1502D elc power supply. We thank you and congratulate you for your good choice.

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. These instructions manual contains informations and warnings the buyer must comply with in order to ensure safe and sustained operation.

2-2 Overall view



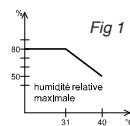
2-3 Technical features at 23°C at the terminals of the power supply

- Output voltage : adjustable from ±10 V to ±15 V by potentiometer.
- **Output +15V**
  - Charge regulation : < 20 mV for a load change from 0 to 100%
  - Main regulation : < 2 mV for a line change from 198 to 264 V.
  - Total ripple : < 3 mV rms
  - Switching freq. ripple : < 3 mV peak to peak (with bandwidth 20 MHz).
  - Low freq. ripple : < 5 mV peak to peak
  - Switching peak : < 12 mV peak to peak (with bandwidth 20 MHz).
  - Dynamic regulation : < 1% for a load change from 10 to 90%.
  - Hold-up time : 25 ms for charge 50% and 12 ms for 100% mains at 200 V
  - Efficiency : >83% for maximum power (60 W in output).
- **-15 Volts Output**
  - Charge regulation : < 20 mV for a load change from 0 to 100%
  - Main regulation : < 2 mV for a line change from 198 to 264 V.
  - Total ripple : < 3 mV rms
  - Low freq. ripple : < 4 mV peak to peak
  - Switching freq. ripple : < 4 mV peak to peak (with bandwidth 20 MHz).
  - Switching peak : < 15 mV peak to peak (with bandwidth 20 MHz).
  - Dynamic regul. : < 1% for a load change from 10 to 90%.
  - Efficiency : > 91% for maximum power (30 W in output).
- **+15 Volts output current (only)**
  - max I : 5.5 A in short-circuit.
  - 5 A on 10 to 12 V
  - 4 A on 15 V
- **-15 Volts output current (only)**
  - max I : 2,1 A in short-circuit.
  - 2 A on 10 to 15 V
- **Power**
  - Max power : 60 W ; ±15 V - 2 A
- **Protections**
  - against short-circuit by current limiting.
  - against overcurrent by internal fuse T3.15A 250V.
  - against overload by varistor.
  - against overheating by a thermal protection.

2.4 Other specifications

Input voltage : nominal : 220 - 240 V (Range 198 - 264 V), 50 - 60 Hz  
 Power in : 78 W max.  
 Insulation class : II  
 Overvoltage Cat. : OVC II ; Pollution degree : 2

Efficiency	: > 77% @ max power (60W output)
Electric strenght	: 3000 V between input and output
Operating Temp	: -25 °C to +60 °C, without ice or condensation ; derating : 1 W/°C over 40 °C.
Cond. storage	: -25 °C to +85 °C, without ice or condensation, humidity : 50 to 85%.
Protection level	: IP 30 ; Installation altitude : ≤ 2000 m
Safety	: EN 61010-1 ; EN IEC 61010-2-201 ; EN IEC 62368-1.
EMC	: EN 61000-6-2, EN 61000-6-4 standards.
Presentation	: Modular polycarbonate with silkscreen case 6 units of 17,5 mm (according DIN standard 43880) clipsable on profiled of 35 mm (DIN rail EN 50022) or wall mounting (fixings included).
Dimensions	: L = 58 mm H = 106 mm D = 95 mm ; (spaced fixings 108 mm)
Weight	: 305 g
Mains input	: Dual spring terminal blocks for 2,5 mm² wires (AWG12).
DC output	: Quadruple spring terminal blocks for 2,5 mm² wires (AWG12).



2.5 Accessories of the instrument

The ALE1502D is supplied with covers for terminal blocks and instruction manual.

3. INSTRUCTIONS FOR USE

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 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, ...) with a background in non-combustible material. The common mode voltage between the earth and the outputs must not exceed 50Vac. A line circuit breaker according to EN 60947-2 must be included in the power supply circuit in the immediate vicinity of the device and must be easily accessible by the operator : Single-phase, Single-pole + Neutral 1A, curve C ; two-phase, two-pole 1A, 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 top and bottom sides and not to obstruct the openings.**

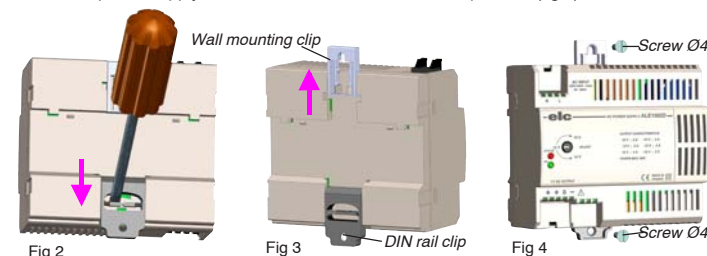
3-2 Mounting

The connection of supply lines and output should be possible after fixation. Before any connections, check that any hazardous voltage is not in your wires. 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 on the main and on the output indicated on screenprint. The input/output terminals are spring system. Switch levers backward to open the cages, engage the wires and bring back levers forward to lock. After connecting all the wires, it is imperative that the terminal block covers be inserted into the slots in the housing for safety.

**Mounting by CLIP** on the profiled 35x15mm or 35x7,5mm (DIN rail EN 50022) :  
 - Engage the hooks on the top of the rail and 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 and push it toward the bottom and take it off, rocking it toward the top.

Wall mounting :

- Change the clip position DIN rail by pushing down, for this, lift the two pins with a screwdriver to change the housing. (fig 2)
- Push strongly the mounting clip to lock it in a high position (fig 3)
- Fix the power supply with two screws of Ø4mm in the clip holes. (fig 4)



3-3-1 Standard operation

The ALE1502D is delivered adjusted at ±15 V ±1%. After having plugged the wires of the load in the outputs "+", "0" and "-", thus the main in the inputs "N" and "L", close the circuit breaker, the power supply starts immediately. The green light switches on, the voltages are in the outputs. If you have to adjust voltage, before operating, connect a voltmeter in the outputs instead of the load then adjust wanted voltage with the adjustment. Open the circuit breaker to disconnect the voltmeter and connect the load, then close the circuit breaker for operating. The use of weak section or important length wire leads to a degradation of the characteristics. One meter of 1,5 mm² wire with a 2 amps current make the voltage fall to approximately 120 mV. It is thus advised not to go under this section.

4. OPERATION

ALE1502D is regulated, stabilised and protected symmetrical power supply. The green LED "ON" enlightened indicates a voltage output presence. The red LED "STATUS" enlightened indicates one of two following faults :  
 - The power demand is higher than the power supply can provide and intensity limit is activated, the output voltage drops.  
 - The internal temperature of the power supply is too large and temperature protection is activated, the output voltage drops.  
 The power supply returned to normal operation when the current or the internal temperature will be within the specified ranges.

5. MAINTENANCE

No particular maintenance is required for this instrument. Avoid dust, moisture, shocks : your instrument will be grateful for that. If the green indicator does not light up when switching on, check :  
 - The mains voltage  
 - The connection to mains.

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. EU DECLARATION OF CONFORMITY

Manufacturer : ELC  
 Address : 59 avenue des Romains 74000 Annecy FRANCE  
 declares the product  
 Name : OEM stabilized switching power supply (DC power supply)  
 Type : ALE1502D  
 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 IEC 61010-2-201:2018  
 EN IEC 62368-1:2020  
 EMC : EN 61000-6-2:2006, EN 61000-6-4:2007 + A1:2011

Anncy, on December 10, 2020 H. CURRI, Manager

**ELIMINATION OF MANUFACTURING WASTES BY THE PRIVATE USERS IN THE EU**

The symbol written in the product or in its packaging indicates that this product must not be thrown in the garbage with your other waste. For the recycling of electrical and electronic instruments, bring it to a specialized sorting office for the recycling of electrical and electronic instruments. Collection and recycling separated of your wastes will contribute to preserve natural resources and guarantee a recycling 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 bought the instrument.