EAN CODE : 3760244880062

POWERFUL **ALR3220**

1 output
Powerfull

**VISUAL** : Large graphic display
**SOFT-TOUCH** : Sensitiv keypad
**CONNECTED** : USB, RS232, RS485, (LAN option*) & 0-10 V isolated
LabVIEW™ drivers and executable provided
**PERFORMANCE** : output in the rear-panel,used for remote-sensing
**FUNCTIONS** : Arbitrary, square, positive and negative ramp,
rise or fall time
**ELEGANT** : New design and feathery
**SPACE-SAVING** : vertical & COMPACT BOX / 640 W
**PRACTICAL** : Lightweight with built-in handle and cord
storage area.
**QUIET** : Silent temperature-controlled fan cooling.
**LOCKING** : configuration & stand-by


*OPTIONS : RSETHER RSWIFI

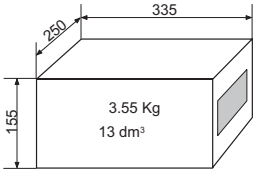
## 640 WATTS

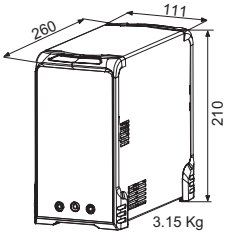
## (LAN)* LabVIEW™

0 - 32 V 0 - 20 A

LabVIEW™

ULTRA-COMPACT




## Specifications

### Voltage

- Floating outputs : on 4 mm safety terminals in the front-panel, and on screw terminal block for 2.5 mm² on the rear-panel.
- Automatic constant voltage operation.
- Adjustable from 0 to 32.00 Volts (0 to ±10 mV) ; resolution : 10 mV.
- Setting accuracy : 0,03% + 10 mV.
- Regulation : < 50 mV for a load change from 10 to 90%.
  < 1 mV for a ±10% line change.
- Ripple : < 1 mV rms including :
  < 3 mV peak to peak of noise (BP 20 MHz)
  < 15 mV peak to peak of switching spikes
- Internal resistance : < 4 mΩ.
- Display : 4 digits on graphic LCD.
- Accuracy measurement : 0,03% + 10 mV.

### Current

- Automatic constant current operation.
- Adjustable from 0 to 20.00 Amps ; resolution : 10 mA.
- Setting accuracy : 0,05% + 10 mA.
- Regulation : < 10 mA for a load charge from 10 to 90%.
  < 1 mA for a ±10% line charge.
- Ondulation : < 6 mA peak to peak or 2 mA rms.
- Display : 4 digits on graphic LCD.
- Accuracy measurement : 0,05% + 10 mA.

### Protections

- Against short-circuits, by current regulation.
- Against overtemperature by fan and thermal circuit-breaker.
- Against overcurrent on main input, by internal fuses.

### Various and functions

- Dispaly : Graphic LCD 128 x 64 pixels with white backlight.
  Visualization of all parameters
  CV (Constant Voltage) mode or CC (Constant Current)
- Memories : 16 including 15 configurable.
- OVP/OCP : Against overvoltage and overcurrent, adjustable from 0 to maxi.
- Functions : 6 available on U or I
  (Arbitrary, square, rising and falling periodically ramp, rise or fall time single shot).
  Time adjustement from 10 ms to 60 mn.
- Remote sensing : automatic function on the front side output.
  4 wires mode on the back-side's terminal blocks.
  Correction of the voltage drop in the wires : 2 V
- Standby : output, enable / disabled and standby of the power supply.

### Interfaces

All the interfaces are insulated of the output (150 VDC max).

- USB, RS232 and RS485 as a standard.
- *ETHERNET option : WIFI /RS232 / RS485 / RS422 adapter kit to ETHERNET.
- LabVIEW™'s drivers as a standard.
- Controller 0 – 10 V : for U and I by direct input 0 - 10 V
  or potentiometer or adjustable resistance 10 kΩ.
  In the back side on disconnect scribe terminal blocks.

## Other specifications

- Safety : Class I, enhanced safety between mains input and outputs.
  Complies with EN 61010-1, CAT II.
- CEM : Complies with EN 61326-1 and EN 55011.
- Input voltage : 220 - 240 Volts ±10%, 50/60Hz.
- Mains input : Socket CE14 with C13, 2 poles + earth cable removable
- Power consumption : 770 W maxi.
- Efficiency : > 84% of the maxi powerful.
- Operating temperature : +5 to +40 °C.
- Coefficient of temperature /°C : 0.01% for the voltage ; 0.05% for the current.
- Voltage on the earth : 150 VDC Max.
- Presentation : Front-panel with sensitiv keypad, rear-panel with handle and cord storage area, metallic case with epoxy finish.

EAN CODE : 3760244880871

DOUBLE **ALR3206D**

**2 outputs Powerfull**


**VISUAL** : Large graphic display
**SOFT-TOUCH** : Sensitiv keypad
**CONNECTED** : USB, RS485, (LAN option)* & 0-10 V isolated LabVIEW™ drivers and executable provided
**PERFORMANCE** : output in the rear-panel with remote-sensing
**COUPLING** : Auto mode : Series, Parallel, Tracking
**FUNCTIONS** : Arbitrary, square, positive and negative ramp, rise or fall time
**ELEGANT** : New design and feathery
**SPACE-SAVING** : vertical & COMPACT BOX / 385 W
**PRACTICAL** : Lightweight with built-in handle and cord storage area.
**QUIET** : Silent temperature-controlled fan cooling.
**LOCKING** : configuration & stand-by

## 385 WATTS

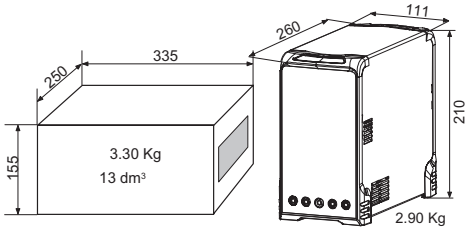
## (LAN)* LabVIEW™

2 x 0 - 32 V 0 - 6 A or
1 x ± 0 - 32 V 0 - 6 A or
1 x 0 - 64 V 0 - 6 A or
1 x 0 - 32 V 0 - 12 A

*OPTIONS : RSETHER RSWIFI

LabVIEW™

ULTRA-COMPACT




## Specifications

- Floating outputs : on 4 mm safety terminals in the front-panel, and on spring terminal block with levers for 2 mm² on the rear-panel.
- Automatic constant voltage and current operation.

| Channel 1 and 2 | MASTER AND SLAVE | | | |
|---|---|---|---|---|
| | Independent | Tracking | Series | Parallel |
| **Output voltage** | **2 x 0 - 32 V** | **± 0 - 32 V** | **0 - 64 V** | **0 - 32 V** |
| Minimum voltage | ± 10 mV | ± 10 mV | ± 20 mV | ± 10 mV |
| Adjustement accuracy | 0.03% +10 mV (20 mV in series) | | | |
| Ripple (mV rms) | < 0.7 mV | < 0.7 mV | < 1.5 mV | < 1 mV |
| Pics of commutation (BP 20 MHz) | < 15 mVpp | < 15 mVpp | < 30 mVpp | < 30 mVpp |
| Regulation / load 0 to 100% | 12 mV | 12 mV | 24 mV | 40 mV |
| Regulation / source ±10% | 1 mV | 1 mV | 2 mV | 1 mV |
| Time of answer load 10 to 90% | 2 ms | 2 ms | 2 ms | 5 ms |
| Display resolution | 10 mV | 10 mV | 20 mV | 10 mV |
| Accuracy measurement | 0.03% + 10 mV (20 mV in series) | | | |
| Display | 4 digits + parameters on graphic LCD | | | |
| **Output current** | **2 x 0 - 6 A** | **± 0 - 6 A** | **0 - 6 A** | **0 - 12 A** |
| Minimum current | 2 mA | 2 mA | 2 mA | 10 mA |
| Adjustement accuracy | 0.03% + 2 mA (10 mA in series) | | | |
| Ripple (mArms) | <1 mA | <1 mA | <1 mA | <1 mA |
| Regulation / load 0 to 100% | 1 mA | 1 mA | 2 mA | 2 mA |
| Regulation / source ±10% | 1 mA | 1 mA | 1 mA | 1 mA |
| Display resolution | 2 mA | 2 mA | 2 mA | 10 mA |
| Accuracy measurement | 0.03% 2 mA (10 mA in series) | | | |
| Display | 4 digits + parameters on graphic LCD | | | |

### Protections

- Against short-circuits, by current regulation.
- Against overtemperature by fan and thermal circuit-breaker.
- Against overcurrent on main input, by internal fuses.

### Various and functions

- Dispaly : Graphic LCD 128 x 64 pixels with white backlight. Visualization of all parameters (CV, CC, RMT, etc....)
- Memory : 16, including 15 configurable.
- OVP/OCP : Against overvoltage and overcurrent, adjustable from 0 to maxi.
- Functions : 6 available on U or I (Arbitrary, square, rising and falling periodically ramp, rise or fall time single shot). Time adjustement from 10 ms to 60 mn.
- Remote sensing : 4 wires mode on the back-side's terminal blocks. Correction of the voltage drop in the wires : 2 V
- Standby : output, enable / disabled and standby of the power supply.

### Interfaces

All the interfaces are insulated of the output (150VDC max).

- USB and RS485 are standard.
- *ETHERNET option : WIFI /RS232 / RS485 / RS422 adapter
- LabVIEW™'s drivers as a standard.
- 0 – 10 V command : for U & I for CH1 or U for CH1 & CH2 by direct input 0-10 V or 10 kΩ adjustable potentiometer/resistance. In the back side on disconnect scribe terminal blocks.

## Other specifications

- Safety : Class I, enhanced safety between mains input and outputs. Complies with EN 61010-1, CAT II.
- CEM : Complies with EN 61326-1 and EN 55011.
- Input voltage : 220-240 Volts ±10%, 50/60Hz.
- Mains input : socket C14 with C13 2 poles + earth cable removable
- Power consumption : 490 W maxi.
- Efficiency : > 78% of the maxi powerful.
- Operating temperature : +5 to +40 °C.
- Coefficient of temperature /°C : 0.01% for the voltage and the current.
- Voltage on the earth : 150 VDC Max.
- Presentation : Front-panel with sensitiv keypad, rear-panel with handle and cord storage area, metallic case with epoxy finish.

EAN CODE : 3760244880888

TRIPLE **ALR3206T**

**3 outputs Powerfull**


**VISUAL** : Large graphic display
**SOFT-TOUCH** : Sensitiv keypad
**CONNECTED** : USB, RS485, (LAN option)* & 0-10 V isolated LabVIEW™ drivers and executable provided
**PERFORMANCE** : CH1 and CH2 outputs in the rear-panel with remote-sensing
**COUPLING** : Auto mode : Series, Parallel, Tracking
**FUNCTIONS** : Arbitrary, square, positive and negative ramp, rise or fall time
**ELEGANT** : New design and feathery
**SPACE-SAVING** : vertical & COMPACT BOX / 400 W
**PRACTICAL** : Lightweight with built-in handle and cord storage area.
**QUIET** : Silent temperature-controlled fan cooling.
**LOCKING** : configuration & stand-by

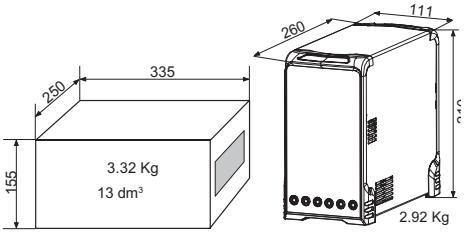
## 400 WATTS (LAN)* LabVIEW™

2 x 0 - 32 V 0 - 6 A or
1 x ± 0 - 32 V 0 - 6 A or
1 x 0 - 64 V 0 - 6 A or
1 x 0 - 32 V 0 - 12 A +
1 x 1 - 15 V 3 A/1 A (15 W)

*OPTIONS : RSETHER RSWIFI

LabVIEW™

ULTRA-COMPACT




## Specifications

- Floating outputs : on 4mm safety terminals in the front-panel, and on spring terminal block with levers for 2mm² on the rear-panel for CH1 & CH2.
- Automatic constant voltage and current operation.

| Channel | CH1 and CH2 (MASTER AND SLAVE) | | | | CH3 |
|---|---|---|---|---|---|
| | Independant | Tracking | Series | Parallel | Variable |
| **Output voltage** | **2 x 0 - 32 V** | **± 0 - 32 V** | **0 - 64 V** | **0 - 32 V** | **1 - 15 V** |
| Minimum voltage | ± 10 mV | ± 10 mV | ± 20 mV | ± 10 mV | 1 V±10 mV |
| Adjustement accuracy | 0.03% + 10 mV (20 mV in series) | | | | ±10 mV |
| Ripple (mV rms) | < 0.7 mV | < 0.7 mV | < 1.5 mV | < 1 mV | < 2 mV |
| Pics of commutation (BP 20 MHz) | < 15 mVpp | < 15 mVpp | < 30 mVpp | < 30 mVpp | < 15 mVpp |
| Regulation / load 0 to 100% | 12 mV | 12 mV | 24 mV | 40 mV | 20 mV |
| Regulation / source ±10% | 1 mV | 1 mV | 2 mV | 1 mV | 1 mV |
| Response Time load 10 to 90% | 2 ms | 2 ms | 2 ms | 5 ms | 5 ms |
| Display resolution | 10 mV | 10 mV | 20 mV | 10 mV | 10 mV |
| Accuracy measurement | 0.03% + 10 mV (20 mV in series) | | | | ±10 mV |
| Display | 4 digits + parameters on graphic LCD | | | | |
| **Output current** | **2 x 0 - 6 A** | **± 0 - 6 A** | **0 - 6 A** | **0 - 12 A** | **3 A / 1A** |
| Minimum current | 2 mA | 2 mA | 2 mA | 10 mA | - |
| Adjustement accuracy | 0.03% + 2 mA (10 mA in series) | | | | - |
| Ripple (mArms) | < 1 mA | < 1 mA | < 1 mA | < 1 mA | - |
| Regulation / load 0 to 100% | 1 mA | 1 mA | 2 mA | 2 mA | - |
| Regulation / source ±10% | 1 mA | 1 mA | 1 mA | 1 mA | - |
| Display resolution | 2 mA | 2 mA | 2 mA | 10 mA | 10 mA |
| Accuracy measurement | 0.03% + 2 mA (10 mA in series) | | | | ±10 mA |
| Display | 4 digits + parameters on graphic LCD | | | | 3 digits |

### Protections

- Against short-circuits, by current regulation.
- Against overtemperature by fan and thermal circuit-breaker.
- Against overcurrent on main input, by internal fuses.

### Various and functions

- Dispaly : Graphic LCD 128 x 64 pixels with white backlight. Visualization of all parameters (CV, CC, RMT, etc....)
- Memory : 16, including 15 configurable.
- OVP/OCP : Against overvoltage and overcurrent, adjustable from 0 to maxi.
- Functions : 6 available on CH1 & CH2 in U or I (Arbitrary, square, rising and falling periodically ramp, rise or fall time single shot). Time adjustement from 10 ms to 50 mn.
- Remote sensing : 4 wires mode on the back-side's terminal blocks. Only on CH1&CH2 ; correction of the voltage drop in the wires : 2 V
- Standby : outputs, enable/disabled and standby of the power supply.

### Interfaces

All the interfaces are insulated of the output (150 VDC max).

- USB and RS485 are standard. *RSETHER option : adapter kit to ETHERNET.
- LabVIEW™'s drivers and executable are in standard.
- 0 – 10 V command : for U & I for CH1 or U for CH1 & CH2 by direct input 0-10 V or 10 kΩ adjustable potentiometer/resistance.
- ON/OFF command : configurable on 3 channels.
- Command inputs : in the back side on disconnect scribe terminal blocks.

## Other specifications

- Safety : Class I, enhanced safety between mains input and outputs. Complies with EN 61010-1, CAT II.
- CEM : Complies with EN 61326-1 and EN 55011.
- Input voltage : 220-240 Volts ±10%, 50/60Hz.
- Mains input : socket C14 with C13 2 poles + earth cable removable
- Power consumption : 495 W maxi.
- Efficiency : > 80% of the maxi powerful.
- Operating temperature : +5 to +40 °C.
- Coefficient of temperature /°C : 0.01% for the voltage and the current.
- Voltage on the earth : 150 VDC Max.
- Presentation : Front-panel with sensitiv keypad, rear-panel withhandle and cord storage area, metallic case with epoxy finish.

EAN CODE : 3760244880925

COMPACT ALR3203

1 output Compact

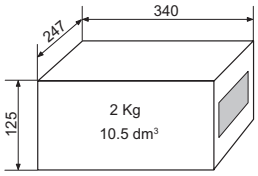

**VISUAL** : Large graphic display
**SOFT-TOUCH** : Sensitiv keypad
**CONNECTED** : USB isolated, LabVIEW™ drivers and executable provided
**FUNCTIONS** : Arbitrary, square, positive and negative ramp, rise or fall time
**ELEGANT** : New design and feathery
**SPACE-SAVING** : vertical case, COMPACT DESIGN
**PRACTICAL** : Lightweight with built-in handle and cord storage area.
**QUIET** : Without fan.
**LOCKING** : configuration & stand-by

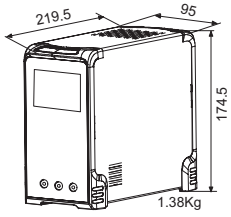
## 96 WATTS
## LabVIEW™

0 - 32 V 0 - 6 A
(96 WATTS MAX.)

LabVIEW™

ULTRA-COMPACT

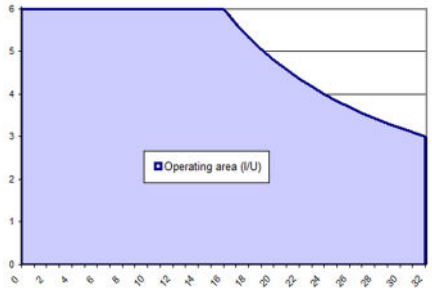



## Specifications

### Voltage
- Floating outputs : on 4 mm safety terminals.
- Automatic constant voltage operation.
- Adjustable from 0 to 32,00 Volts (0 to ±10 mV) ; resolution : 10 mV.
- Setting accuracy : 0,03% + 10 mV.
- Regulation : < 20 mV for a load change from 10 to 90%.
  < 1 mV for a ±10% line change.
- Ripple : < 1,5 mV rms including :
  < 5 mV peak to peak of noise (BP 20 MHz)
  < 10 mV peak to peak of switching spikes
- Internal resistance : < 4 mΩ.
- Display : 4 digits on graphic LCD.
- Accuracy measurement : 0,06% + 10 mV.

### Current
- Automatic constant current operation.
- Adjustable from 0 to 6,000 Amps ; resolution : 2 mA.
- Setting accuracy : 0,03% + 2 mA.
- Pmax : 96 W ; Imax : 6 A from 0 to 16V then decreasing to 3 A ; 32 V
- Regulation : < 1 mA for a load charge from 10 to 90%.
  < 1 mA for a ±10% line charge.
- Ondulation : < 1 mA peak to peak or 0.4 mA rms.
- Display : 4 digits on graphic LCD.
- Accuracy measurement : 0,06% + 2 mA.




### Protections
- Against short-circuits, by current regulation.
- Against overtemperature by thermal circuit-breaker.
- Against overcurrent on main input, by internal fuses.

### Various and functions
- Dispaly : Graphic LCD 128 x 64 pixels with white backlight.
  Visualization of all parameters (CV, CC, RMT, ...)
- Memories : 16 including 15 configurable.
- OVP/OCP : Against overvoltage and overcurrent, adjustable from 0 to maxi.
- Functions : 6 available on U or I
  (Arbitrary, square, rising and falling periodically ramp, rise or fall time single shot).
  Time adjustement from 100 ms to 50 mn.
- Standby : output, enable / disabled and standby of the power supply.

### Interfaces
- USB, as a standard, insulated of the output (150 VDC max).
- LabVIEW™'s drivers as a standard.

## Other specifications
- Safety : Class I, enhanced safety between mains input and outputs
  Complies with EN 61010-1, CAT II. Output Safety Extra Low Voltage (SELV)
- CEM : Complies with EN 61326-1 and EN 55011.
- Input voltage : 220 - 240 Volts ±10%, 50/60Hz.
- Mains input : Socket CE14 with C13, 2 poles + earth cable removable
- Power consumption : 126 W maxi.
- Efficiency : > 78% of the maxi powerful.
- Operating temperature : +5 to +40 °C.
- Coefficient of temperature /°C : 0.01% for the voltage ; 0,05% for the current.
- Voltage on the earth : 150 VDC Max.
- Presentation : Front-panel with sensitiv keypad, rear-panel with handle and cord storage area, metallic case with epoxy finish.

# ADJUSTABLE POWER SUPPLY

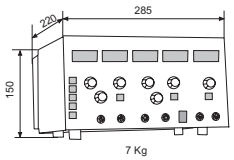
## EAN CODE : 3760244880048

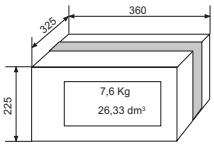
TRIPLE **AL 936N**


**EASY :** Direct digital display of voltage and current, even in the series or parallel mode.
**SURE :** Automatic disconnection each time the master and slave channel configuration is changed.
**COMPLETE :** Third channel with fixed or variable position and voltage or current display.
**EFFECTIVE :** Idc adjustment independent of load.
**QUIET :** Silent temperature-controlled fan cooling.

## 200 WATTS

| | |
|---|---|
| 2 x 0 - 30 V | 0 - 3 A or |
| 1 x ± 0 - 30 V | 0 - 3 A or |
| 1 x 0 - 60 V | 0 - 3 A or |
| 1 x 0 - 30 V | 0 - 6 A + |
| 1 x 2 - 5,5 V | 3 A or |
| 1 x 5,5 - 15 V | 1 A |




## Specifications

| CHANNELS | MASTER AND SLAVE | | | | AUXILIARY | |
|---|---|---|---|---|---|---|
| Configuration | Independent | Tracking | Series | Parallel | Variable | Variable |
| Output voltage | 2x 0 - 30 V | ± 0 - 30 V | 0 - 60 V | 0 - 30 V | 2-5,5 V | 5,5-15 V |
| Minimum voltage | ± 10 mV | ± 10 mV | ± 20 mV | ± 10 mV | < 2 V | - |
| Ripple (mV rms) | 1 mV | 1 mV | 1 mV | 1 mV | 1 mV | 1 mV |
| Load regulation from 0 to 100% | 12 mV | 12 mV | 50 mV | 24 mV | 12 mV | 10 mV |
| Line regulation from -6 to +7% | 5 mV | 5 mV | 5 mV | 5 mV | 5 mV | 1 mV |
| Internal resistance | 4 mΩ | 4 mΩ | 16 mΩ | 4 mΩ | 4 mΩ | 4 mΩ |
| Resp. for 10 to 90% load change | 30 µs | 30 µs | 30 µs | 30 µs | 100 µs | 60 µs |
| Display resolution | 100 mV | 100 mV | 100 mV | 100 mV | 10 mV | 100 mV |
| Display | 14 mm 3 digit LED digital voltmeter | | | | | |
| Output current | 2x 0 - 3 A | ± 0 - 3 A | 0 - 3 A | 0 - 6 A | 3 A | 1 A |
| Minimum current | 10 mA | 10 mA | 10 mA | 20 mA | - | - |
| Ripple (mA rms) | 1 mA | 1 mA | 1 mA | 4 mA | - | - |
| Load regulation from 0 to 100% | 2 mA | 2 mA | 4 mA | 8 mA | - | - |
| Line regulation from -6 to +7% | 1 mA | 1 mA | 1 mA | 5 mA | - | - |
| Display resolution | 10 mA | 10 mA | 10 mA | 10 mA | 10 mA | 10 mA |
| Display | 14 mm 3 digit LED digital ammeter | | | | | |

### Power supplies A and B (master and slave)

- The Standby mode disconnects the output terminals. It is automatic upon a change of mode.
- The Idc push-button shorts the output in the standby mode. It is used for setting Imax.
- Indicators : green LED for voltage regulation
  red LED for current regulation.
- Display : automatic display switching depending on selected configuration.

### AUXILIARY power supply

- The Display button switches the display between voltage and current.
- The voltage is continuously adjustable from 2 to 15 V. The max current goes from 3 A to 1 A after 5,5 V.

### Protection

- Short circuit protection, by current regulation.
- Overtemperature protection, by temperature-controlled fan, thermal circuit-breaker and relay.
- Transformer primary overcurrent protection, by fuse.

## Other specifications

- Safety : Class I, enhanced safety between mains input and outputs. Complies with EN 61010-1, overvoltage category II, pollution degree 2. Toroidal transformer, class II, complies with EN 61558-2-4.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Input voltage : 230 V ±10%, 50/60 Hz.
- Mains input : Socket C14 with C13 removable cable (2 poles + earth).
- Power consumption : 410 VA.
- Dielectric strength : 2300 V between input, output and chassis.
- Outputs : safety terminals (VDE 0110 standard and BG certified), and safety inverted earth terminal.
- Presentation : screen-printed polycarbonate front panel, metalcase, epoxy finish.

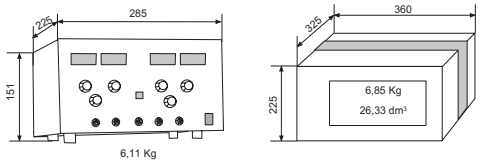
## EAN CODE : 3760244880031

DOUBLE **ALR3003D**

**PRATICAL :** Digital display of voltage and current.
**EASY :** Automatic mode select button : separate, tracking and series.
**PRECISE :** Fine voltage adjustment.
**QUIET :** Silent temperature-controlled fan cooling.


## 180 WATTS

| | |
|---|---|
| 2 x 0 - 30 V | 0 - 3 A or |
| 1 x ± 0 - 30 V | 0 - 3 A or |
| 1 x 0 - 60 V | 0 - 3 A or |
| 1 x 0 - 30 V | 0 - 6 A* |




## Specifications

| CHANNELS | MASTER AND SLAVE | | |
|---|---|---|---|
| | Independent | Tracking | Series |
| Output Voltage | 2 x 0 - 30 V | ± 0 - 30 V | 0 - 60 V |
| Minimum Voltage | ± 10 mV | ± 10 mV | ± 20 mV |
| Ripple (mV rms.) | 1 mV | 1 mV | 1 mV |
| Load regulation from 0 to 100% | 12 mV | 12 mV | 50 mV |
| Line regulation from -6 to +7% | 5 mV | 5 mV | 5 mV |
| Internal resistance | 4 mΩ | 4 mΩ | 16 mΩ |
| Resp. for 10 to 90% load charge | 30 µs | 30 µs | 30 µs |
| Dispaly resolution | 100 mV | 100 mV | 100 mV |
| Display | 14 mm 3 digit LED Voltmeter | | |
| Output current | 2 x 0 - 3 A | ± 0 - 3 A | 0 - 3 A |
| Minimum current | 10 mA | 10 mA | 10 mA |
| Ripple (mA rms.) | 1 mA | 1 mA | 1 mA |
| Load regulation from 0 to 100% | 2 mA | 2 mA | 4 mA |
| Line regulation from -6 to +7% | 1 mA | 1 mA | 1 mA |
| Dispaly resolution | 10 mA | 10 mA | 10 mA |
| Display | 14 mm 3 digis LED Ammeter | | |

### Power Supplies A and B (master and slave)

- The "Tracking/Series" mode internally connects the - terminals of the master and + terminals of the slave (mid point). All adjustments are made from the slave power supply.
- The parallel mode* (external connection) provides up to 6 amperes.
- Indicators : green LED for voltage regulation
  red LED for current regulation.
- Display of voltage and current on 14 mm 3 digit red LED displays.

### Protection

- Short circuit protection, by current regulation.
- Overtemperature protection, by temperature-controlled fan, thermal circuit-breaker and relay.
- Transformer primary overcurrent protection, by fuse.

## Other specifications

- Safety : Class I, enhanced safety between mains input and outputs. Complies with EN 61010-1, overvoltage category II, pollution degree 2. Toroidal isolation transformer, class II, complies with EN 61558-2-4.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Input voltage : 230 V ±10%, 50/60 Hz.
- Mains input : Socket C14 with C13 removable cable (2 poles + earth).
- Power consumption : 400 VA.
- Dielectric strength : 2300 V between input, output and chassis.
- Outputs : safety sockets and safety inverted earth socket.
- Presentation : screen-printed polycarbonate front panel, meta case, epoxy finish.

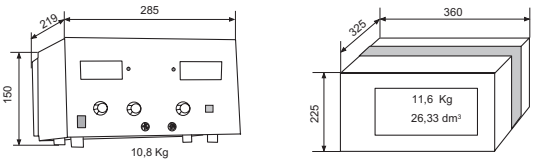
# ADJUSTABLE POWER SUPPLY

## EAN CODE : 3760244880024

SIMPLE **AL 924A**

**PRACTICAL :** Digital display of voltage and current.
**PRECISE :** Coarse and fine voltage adjustment.
- Adjustable current from 0 to 10 A or 0 to 1 A .
**USEFUL :** Automatic constant voltage or current operation.
**PROTECTED :** Short circuit protection.


**300 WATTS**
0 - 30 V 0 - 10 A




## Specifications

### Voltage
- Floating outputs on 4 mm safety terminals.
- Automatic constant voltage operation.
- Adjustable from 0 to 30 V (0 to + or -5 mV) with fine adjustment (about 2 Volts).
- Regulation : < 40 mV for a load variation from 0 to 100%.
  < 25 mV for a 10% line variation.
- Ripple : < 3 mV peak to peak or 1 mV rms.
- Internal resistance: < 4 mΩ.
- Indicator : green LED for voltage regulation.
- Display : 14 mm 3 digit LED digital voltmeter.
- Resolution : 100 mV.

### Current
- Automatic constant current operation.
- Two selectable current ranges : 10 A or 1 A.
- Adjustable from 0 to 10 A or from 0 to 1 A, depending on the selected range.
- Regulation : < 10 mA for a 10% line charge.
  < 20 mA for a load change from 0 to 100%.
- Ripple : < 10 mA peak to peak or 3,5 mA rms.
- Indicators : red LED for current regulation.
- Display : 14 mm 3 digit LED digital ammeter.
- Resolution : 10 mA on 1A range, 100 mA on 10 A range

### Protection
- Short circuit protection, by current regulation.
- Overtemperature protection, by fan, by thermal circuit-breaker and by relay on the transformer.
- Transformer primary overcurrent protection, by fuse.

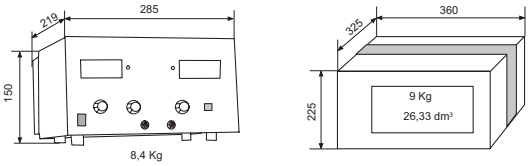
## Other specifications

- Safety : Class I, enhanced safety between mains input and outputs. Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Input voltage : 230 V ±10%, 50/60 Hz.
- Mains input : Socket C14 with C13 removable cable (2 poles + earth).
- Power consumption : 620 VA.
- Dielectric strength : 2300 V from input to output, 1350 V from input to chassis.
- Outputs : safety terminals (VDE 0110 standard and BG certified), and safety inverted earth terminal.
- Presentation : screen-printed polycarbonate front panel, metal case, epoxy finish.

EAN CODE : 3760244880017

SIMPLE **AL 781NX**

**PRACTICAL :** Digital display of voltage and current.
**PRECISE :** Coarse and fine voltage adjustment.
- Adjustable current from 0 to 5A or 0 to 1A .
**USEFUL :** Automatic constant voltage or current operation.
**PROTECTED :** Short circuit protection.


**150 WATTS**
0 - 30 V 0 - 5 A

## Specifications

### Voltage
- Floating outputs on 4 mm safety terminals.
- Automatic constant voltage operation.
- Adjustable from 0 to 30 V (0 to + or -5 mV) with fine adjustment (about 2,5 Volts).
- Regulation : < 20 mV for a load variation from 0 to 100%.
  < 15 mV for a 10% line variation.
- Ripple : < 3 mV peak to peak or 1 mV rms.
- Internal resistance : < 4 mΩ.
- Indicators : green LED for voltage regulation.
- Display : 14 mm 3 digit LED digital voltmeter.
- Resolution : 100 mV.

### Current
- Automatic constant current operation.
- Two selectable current ranges : 5 A or 1 A.
- Adjustable from 0 to 5 A or from 0 to 1 A, depending on the selected range.
- Regulation : < 10 mA for a 10% line charge.
  < 15 mA for a load change from 0 to 100%.
- Ripple : < 6 mA peak to peak or 2,1 mA rms.
- Indicators : red LED for current regulation.
- Display : 14 mm 3 digit LED digital ammeter.
- Resolution : 10 mA.

### Protection
- Short circuit protection, by current regulation.
- Overtemperature protection, by thermal circuit-breaker and by relay on the transformer.
- Transformer primary overcurrent protection, by fuse.

## Other specifications

- Safety : Class I, enhanced safety between mains input and outputs. Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Input voltage : 230 V ±10%, 50/60 Hz.
- Mains input : Socket C14 with C13 removable cable (2 poles + earth).
- Power consumption : 315 VA.
- Dielectric strength : 2300 V from input to output, 1350 V from input to chassis.
- Outputs : safety terminals (VDE 0110 standard and BG certified), and safety inverted earth terminal.
- Presentation : screen-printed polycarbonate front panel, metal case, epoxy finish.

EAN CODE : 3760244880000

SIMPLE **ALR3003**

**PRACTICAL** : Digital display of voltage and current.
- Cord housing.

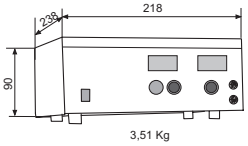
**PRECISE :** Coarse and fine voltage adjustment.

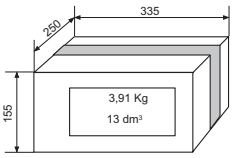
**USEFUL :** Automatic constant voltage or current operation.

**PROTECTED :** Short-circuit protection.

**QUIET :** Controlled fan cooling.


## 90 WATTS
0 - 30 V  0 - 3 A




## Specifications

### Voltage
- Floating outputs on 4 mm safety sockets.
- Automatic constant voltage operation.
- Adjustable from 0 to 30 Volts (0 to ± 10 mV) with fine adjustment (about 2 Volts).
- Regulation : < 12 mV for a load variation from 0 to 100%.
  < 5 mV for a line variation of 10%.
- Ripple : < 3 mV peak to peak or 1 mV rms.
- Internal resistance : < 4 mΩ.
- Display : 14 mm 3 digits LED digital voltmeter.
- Resolution : 100 mV

### Current
- Automatic constant current operation.
- Adjustable from 0 to 3 Amps.
- Regulation : < 1 mA for a line charge of 10 %.
  < 2 mA for a load charge from 0 to 100%.
- Ripple : < 1 mA rms.
- Display : 14 mm 3 digits LED digital ammeter.
- Resolution : 10 mA

### Protections
- Short-circuit protection by current regulation.
- Overtemperature protection by temperature-controlled fan, relay and thermal circuit-breaker.
- Transformer primary and secondary overcurrent protection by fuse.

## Other specifications

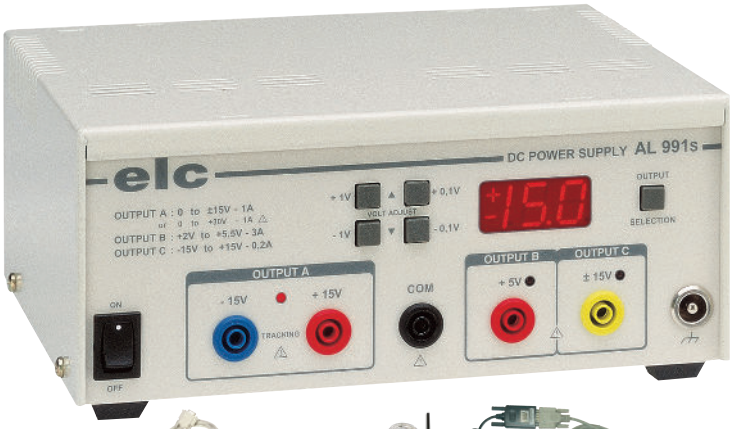
- Safety : Class II, Safety Extra Low Voltage (SELV) outputs with insulation enhanced transformer. Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Protection level : IP 21.
- Input voltage : 230 V ±10%, 50 / 60 Hz.
- Main input : Cord with 2 poles immovable.
- Power consumption : 176 VA max.
- Dielectric strength : 3000 V between the input and the output.
- Presentation : screen-printed polycarbonate front panel, metal case with cord housing, epoxy finish.

EAN CODE : 3760244880055

TRIPLE + INTERFACES

# AL 991S

**COMPLETE :** Three outputs available simultaneously.
**PRATICAL :** Digital voltage display.
**USEFUL :** Setting memory.
**COMPATIBLE :** RS232, (USB or LAN)* and LabVIEW™ interfaces.
**PROTECTED :** Short circuit protection.



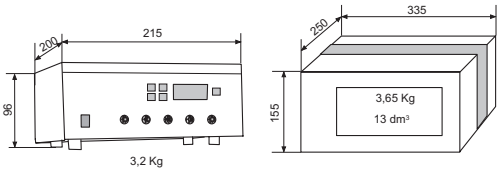

*OPTIONS : RSETHER RSWIFI USBRS232

## 48 WATTS

## RS232 + (USB OR LAN)* LabVIEW™

| | |
|---|---|
| 0 to ± 15 V | 1 A |
| or 0 to 30 V | 1 A |
| and 2 to 5,5 V | 3 A |
| and -15 to +15 V | 0,2 A |

LabVIEW™




## Specifications

### Voltage

- Floating outputs on 4 mm safety sockets.
- Three outputs available simultaneously :
  - Power supply A : adjustable from 0 to ±15 Volts balanced. or 0 to 30 V with the -15 V terminal as reference.
  - Power supply B: adjustable from +2 to +5,5 Volts.
  - Power supply C: adjustable from -15 to +15 Volts.
- Voltage adjustment : push-button selection of output A, B or C. Voltage incremented and decremented by four push-buttons : -1 V ; +1 V ; -0,1 V ; +0,1 V
  Automatic storage of the three voltage settings.
- Regulation : < 20 mV for a load variation from 0 to 100%. < 10 mV for a 10% line variation.
- Ripple : < 3 mV peak to peak or 1 mV rms.
- Indicators : Three red LEDs showing the selected output for display and adjustment.
- Display : 14 mm 3 digit LED digital voltmeter for the three outputs.
- Resolution : 100 mV.

### Currents

- Max I : 1 A on output A.
  3 A to 5,5 Volts and 1,5 A to 2 Volts on output B.
  0,2 A on output C.
- Display : Current limiting on one output causes the display to blink ; it shows : "Ic.A", "Ic.b", "Ic.C" or "+Ic ", depending on the overloaded output(s).

### Protection

- Short circuit protection, by current limit.
- Transformer primary overcurrent protection, by fuse.
- Chassis ground output on 4 mm inverted safety socket.

### Interface

- RS-232 link, 9-way male SUB-D plug.
- *USB option: Kit includes an adaptator null modem und RS232 cable.
- *ETHERNET option : WIFI / RS232 / RS485 / RS422 adapter kit to ETHERNET.

### Software

- LG991S for Windows95* or +
- LG991S LV and base VI under LabVIEW™**

Softwares are available for download on website www.elc.fr
(*is a registered trademark of Microsoft Co.)
(** (*is a registered trademark of National Instruments.)

## Other specifications

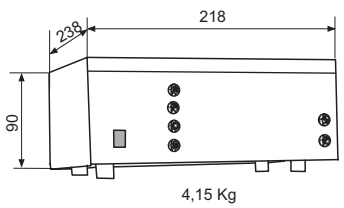
- Safety : Class I, enhanced safety between mains input and outputs. Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Input voltage : 230 V ±10%, 50/60 Hz.
- Mains input : Socket C14 with C13 removable cable (2 poles + earth).
- Power consumption : 100 VA max.
- Dielectric strength : 2300 V from input to output, 1350 V from input to chassis.
- Presentation : screen-printed polycarbonate front panel, metal case, epoxy finish.

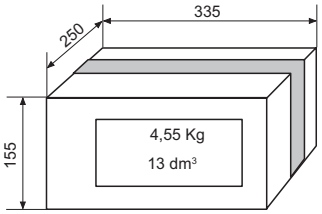
EAN CODE : 3760244880130

DOUBLE AC/DC **ALR3002M**

**COMPLETE :** DC and AC voltages available simultaneously.
**POWERFUL :** Current generator.
**PRACTICAL:** No common reference.
- Cord housing.
**PROTECTED** : The DC output is protected by current regulation.
- The AC outputs are protected by auto reset thermal circuit-breakers.


## 120 WATTS
0 - 5, 6, 12 or 30 V
0 - 25 mA, 250 mA or 2,5 A DC
and 6 or 12 or 24V 5 A AC




## Specifications

### DC outputs
- Floating outputs on 4 mm safety sockets.
- Automatic constant voltage operation.
- Four choices of voltage ranges with adjustement by trimer from 0 to max : 0 to 5 V, 0 to 6 V, 0 to 12 V or 0 to 30 V.
- Regulation : < 10 mV for a load variation from 0 to 100%.
  < 5 mV for a line variation from -6 +7%.
- Ripple : < 3 mV peak to peak or 1 mV rms.
- Internal resistance : < 5 mΩ.
- Display : 14 mm 3 digits LED digital voltmeter.
- Resolution : 10 mV for 5 and 6 V and 100 mV for 12 and 30 V.

### Current
- Automatic constant current operation.
- Three choices of current ranges with adjustement by trimer from 0 to max : 0 to 25 mA ; 0 to 250 mA ; 0 to 2,5 Amps.
- Regulation : < 2 % for a load change from 0 to 100%.
- Ripple : < 1 mA rms.
- Display : 14mm 3 digits LED digital ammeter.
- Resolution : 100 µA on 25 mA range,
  1 mA on 250 mA range,
  10 mA on 2,5 A range.

### Protections
- Short circuit protections by current regulation.
- Overtemperature protection by transformer secondary switching relay and thermal circuit-breakers.
- Transformer primary overcurrent protections by fuse.

### AC outputs
- Floating outputs on 4 mm safety sockets.
- Three outputs with common point.
- Voltages : 6 Volts, 12 Volts and 24 Volts.
- No-load voltage 5% maximum above rated voltage.

### Current
- Max I : 5 Amps on 6,12, or 24 V.

### Protections
- Secondary overcurrent protection by auto-reset thermal circuit-breakers.

### Precautions
- The AC and DC circuits can be used simultaneously but with a max power of 120 W.

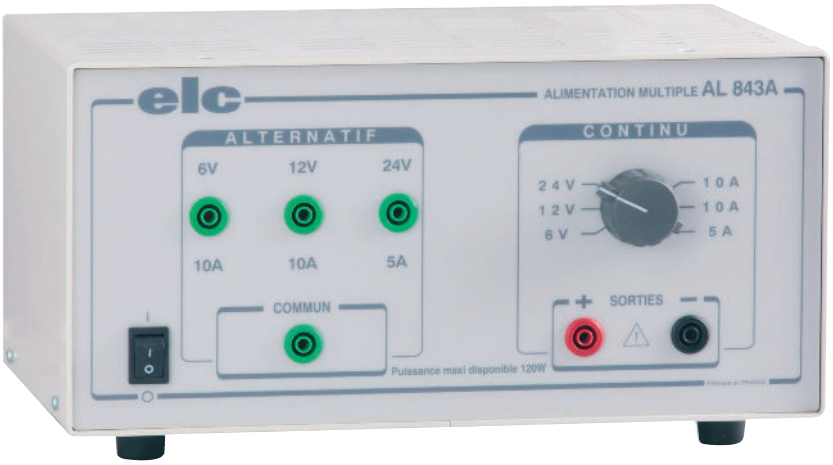
## Other specifications

- Safety : Class II, Safety Extra Low Voltage (SELV) outputs with insulation enhanced transformer.
  Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Protection level : IP 21.
- Protection : Transformer primary overcurrent protection, by fuse.
- Input voltage : 230 V ±10%, 50/60 Hz.
- Main input : 2 poles cable immovable.
- Power consumption : 250 VA max.
- Dielectric strength : 3000 V from input to output.
- Presentation : screen-printed polycarbonate front panel, metal case with cord housing, epoxy finish.

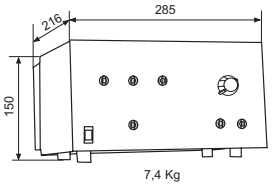
EAN CODE : 3760244880123

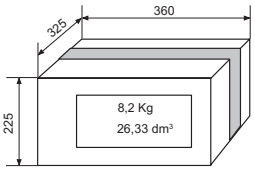
DOUBLE AC/DC AL 843A

**COMPLETE :** DC and AC voltages available simultaneously.
**PRACTICAL :** No common reference.
**PROTECTED :** The DC output is protected by fold-back current limiting. The AC outputs are protected by auto-reset thermal circuit-breakers.




## 120 WATTS
6 or 12 V 10 A
or 24 V 5 A
DC and AC




## Specifications

### DC outputs
- Floating outputs on 4 mm safety sockets.
- Three switchable outputs : 6 V, 12 V or 24 V.
- Accuracy : ± 1%
- Regulation : < 40 mV at 6 and 12 V outputs for a load variation from 0 to 100%.
  < 20 mV at 24 V output for a load variation from 0 to 100%.
- Ripple : < 5 mV peak to peak or 1,8 mV rms.
- Internal resistance : < 4 mΩ.

### Current
- Max I : 10 A at 6 or 12 V output.
  5 A at 24 V output.

### Protection
- Short circuit protection by fold-back current limit, allowing continuous short circuit without overheating.

### AC outputs
- Floating outputs on 4 mm safety sockets.
- Three outputs with common point.
- Voltages : 6 Volts, 12 Volts and 24 Volts ± 10%.
- No-load voltage 5% maximum.

### Current
- Max I : 10 A at 6 and 12 V outputs.
  5 A at 24 V output.

### Protection
- Secondary overcurrent protection by auto-reset thermal circuit-breakers.

### Precautions
- The AC and DC circuits can be used simultaneously but with a max power of 120 W.

## Other specifications

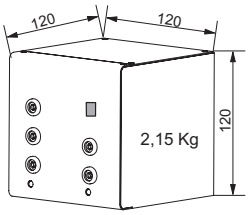
- Safety : Class I, enhanced safety between mains input and outputs. Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Transformer primary overcurrent protection, by fuse.
- Input voltage : 230 V ±10%, 50/60 Hz.
- Mains input : Socket C14 with C13 removable cable (2 poles + earth).
- Power consumption : 250 VA max.
- Dielectric strength : 3700 V from input to output, 2200 V from input to chassis.
- Presentation : screen-printed polycarbonate front panel, metal case, epoxy finish.

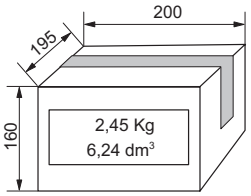
EAN CODE : 3760244880109

DOUBLE AC/DC AM061205

**COMPLETE :** DC and AC voltages available simultaneously.
**PRACTICAL :** No common reference.
- AC and DC power-on indicators.
**PROTECTED :** The DC output is protected by current regulation.
- The AC outputs are protected by auto-reset thermal circuit-breakers.


## 120 WATTS
6 or 12 V 5 A
DC and AC




## Specifications

### DC outputs
- Floating outputs on 4 mm safety sockets.
- Two switchable outputs : 6 Volts or 12 Volts.
- Accuracy : ± 1%
- Regulation : < 20 mV for a load variation from 0 to 100%.
  < 5 mV for a 10% line variation.
- Ripple : < 3 mV rms including :
  <3 mV peak to peak of the signal at 100 kHz
  <4 mV peak to peak of the signal at 100 Hz
  <12 mV peak to peak of switching peak
- Hold up time : 25 ms at half load and 12 ms at full load (190 V line input).
- Indicator : green power-on LED indicator.

### Current
- Max I : 5 A at 6 or 12 V output.
- Idc : 5,5 A.

### Protection
- Short circuit protection by current limiting,
- Overcurrent protection on source by fuse on main input

### AC outputs
- Floating outputs on 4 mm safety sockets.
- Two outputs with common point.
- Voltages : 6 Volts and 12 Volts + or - 5%.
- No-load voltage 10% maximum.
- Indicator: green power-on LED indicator.

### Current
- Max I : 5 A at 6 V or 12 V output.

### Protection
- Short circuit and overcurrent protection by auto-reset thermal circuit-breakers.

### Precautions
- Power supply max. power is of 120 Watts
- The AC and DC circuits can be used simultaneously.

## Other specifications

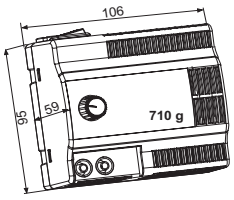
- Safety : Class II (double insulation), Safety Extra Low Voltage (SELV) outputs.
  Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Input voltage : 230 V ±10%, 50/60 Hz.
- Mains input : C8 socket with CEI320 C7 removable cable (2 poles double insulation).
- Power consumption : 145 VA max.
- Protection : against overcurrent at the input by fuse
- Protection level : IP 30
- Dielectric strength : 3000V between input to output.
- Presentation : Metal case with epoxy finish

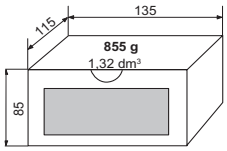
EAN CODE : 3760244880093

UNIVERSAL AL 841C

**UNIVERSAL** : Choice of six voltages.
**PRACTICAL :** ON/OFF switch.
- Power-on indicator.
**PROTECTED** : Short circuit protection.
**RESISTANT TO SHOCK :** Polycarbonate case


## 12 WATTS
3 / 4,5 / 6 / 7,5 / 9 or 12 V
1 A




## Specifications

### Voltage
- Floating outputs on 4 mm safety sockets.
- Output voltage : 3 V or 4,5 V or 6 V or 7,5 V or 9 V or 12 V selectable
- Accuracy : ± 4%.
- Regulation : < 20 mV for a load variation from 0 to 100%.
  < 15 mV for a 10% line variation.
- Ripple : 5 mV peak to peak or 1,8 mV rms.
- Internal resistance : < 20 mΩ.

### Current
- The max current is constant and independent of the selected output.
- Max I : 1 A.

### Indicator
- Green power-on LED indicator.

### Protection
- Short circuit protection, by current limit.
- Transformer primary overcurrent protection, by fuse.

## Other specifications
- Safety : Class II (double insulation), Safety Extra Low Voltage (SELV) outputs with insulation enhanced transformer. Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Input voltage : 230 V ±10%, 50/60 Hz.
- Mains input : C8 socket with CEI320 C7 removable cable (2 poles double insulation).
- ON/OFF control : toggle switch.
- Power consumption : 30 VA max.
- Dielectric strength : 3000 Vac from input to output.
- Presentation : Polycarbonate case screen-printed.

EAN CODE :3760244880079

±15 V or 12 V or 24 V

# ALF1501D


**PRATICAL :** ON/OFF switch.
- Power-on indicator.
- 30 W available on the positive output alone.

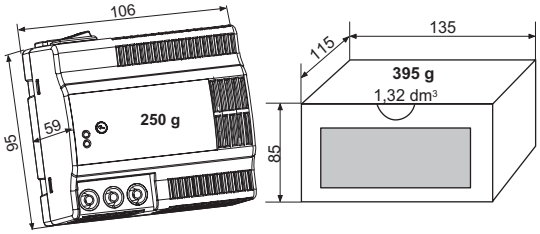
**PRECISE :** Output ripple < 3 mV rms.
- Output voltage adjustable from ±10 to ±15 V.

**PROTECTED :** against Short circuit.

**RESISTANT TO SHOCK**

## 30 WATTS

| | |
|---|---|
| +/- 10 to 15 V | 1 A |
| or 12 V | 2,5 A |
| or 24 V | 1 A |




## Specifications

- Balanced-output power supply with common 0 V.
- Floating outputs on 4-mm safety sockets.
- Ajustable output voltages : from ±10 to ±15 V

### +15V output
- Regulation : < 15 mV for a load variation from 0 to 100%.
  < 2 mV for a line variation from -10 to +10%.
- Ripple : < 3 mV rms including :
  < 3 mV peak to peak of switching signal
  < 8 mV peak to peak of the signal at 100Hz
  < 10 mV peak to peak of switching spikes

### -15V output
- Regulation : < 10 mV for a load charge from 0 to 100%.
  < 2 mV for a line variation from -10 to +10%.
- Ripple : < 3 mV rms including
  : < 2 mV peak to peak of switching signal
  < 4 mV peak to peak of the signal at 100Hz
  < 15 mV peak to peak of switching spikes

### 24V Output (Adjustable from 20 to 30V)
Available between output + and -
- Regulation : < 15 mV for a load charge from 0 to 100%.
  < 2 mV for a line variation from -10 to +10%.
- Ondulation : < 5 mV rms including:
  < 3 mV peak to peak of the switching signal
  < 12 mV peak to peak of the signal at 100Hz
  < 30 mV peak to peak of switching spikes

### Indicators
- 2 Green +15 V and -15 V power-on LED indicator.

### Current +15V (alone)
- I max : 3 A at 10 V
  2,5 A at 12 V
  2 A at 15 V

### Current -15V (alone)
- I max : 1,1 A in short-circuit condition
  1 A from 10 to 15 V

### Current 24V (Adjustable from 20 to 30V)
I max : 1 A from 20 to 30 V

### Power
- Max output power : 30 W.
- I max ±15 V : 1 A

### Protections
- Against short-circuits by current limit and disjunction.
- Against overcurrent on source by fuse.

## Other specifications

- Safety : Class II, Safety Extra Low Voltage (SELV)
  Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Protection level : IP30.
- Operating temperature : 5 to 40 °C
- Input voltage : 190 to 264 V, 50/60 Hz.
- Mains input : C8 socket with CEI320 C7 removable cable (2 poles double insulation).
- Power consumption : 40 W max.
- ON/OFF control : toggle switch
- Dielectric strength : 3000 V between input to output.
- Presentation : polycarbonate case screenprinted.

EAN CODE :3760244880086

± 15 V or 12 V or 24 V

# ALF1502D


**PRATICAL :** ON/OFF switch.
- Power-on indicator.
- 60 W available on the positive output alone.

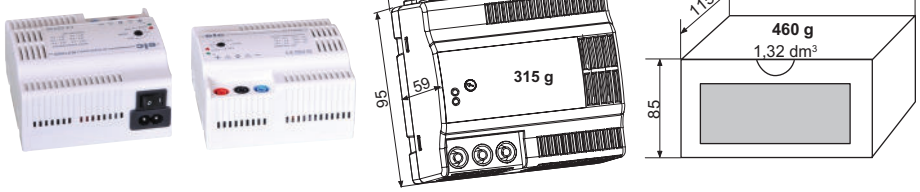
**PRECISE :** Output ripple < 3 mV rms.
- Output voltage adjustable from ±10 to ±15 V.

**PROTECTED :** against Short circuit.

**RESISTANT TO SHOCK**

## 60 WATTS

| | |
|---|---|
| +/- 10 to 15 V | 2 A |
| or 12 V | 5 A |
| or 24 V | 2 A |




## Specifications

- Balanced-output power supply with common 0V.
- Floating outputs on 4-mm safety sockets.
- Ajustable output voltages : from ±10 to ±15V.

### +15 V output
- Regulation : < 15 mV for a load variation from 0 to 100%.
  < 2 mV for a line variation from -10 to +10%.
- Ripple : < 3 mV rms including :
  < 3 mV peak to peak of switching signal
  < 5 mV peak to peak of the signal at 100 Hz
  < 15 mV peak to peak of switching spikes

### -15 V output
- Regulation : < 30 mV for a load variation from 0 to 100%.
  < 2 mV for a line variation from -10 to +10%.
- Ripple : < 3 mV rms including
  : < 4 mV peak to peak of switching signal
  < 4 mV peak to peak of the signal at 100 Hz
  < 15 mV peak to peak of switching spikes

### 24 V Output (Adjustable from 20 to 30V)
Available between output + and -
- Regulation : < 15 mV for a load variation from 0 to 100%.
  < 2 mV for a line variation from -10 to +10%.
- Ondulation : < 3 mV rms including:
  < 5 mV peak to peak of the switching signal
  < 8 mV peak to peak of the signal at 100 Hz
  < 25 mV peak to peak of switching spikes

### Indicators
- Green power-on LED indicator.
- Overheat or overcurent red LED "status" indicator.

### Current +15 V (alone)
- I max : 5,5 A on the short-circuit
  5 A from 10 to 12 V
  4 A at 15 V

### Current -15 V (alone)
- I max : 2,1 A in short-circuit condition
  2 A from 10 to 15 V

### Current 24 V (Adjustable from 20 to 30 V)
I max : 2,1 A at the short circuit
2 A from 20 to 30 V

### Power
- Max output power : 60 W.
- I max ±15 V : 2 A

### Protections
- Against short-circuits by current limit.
- Against overcurrent on source by fuse.
- Overtemperature protection by thermal circuit-breaker

## Other specifications

- Safety : Class II, Safety Extra Low Voltage (SELV)
  Complies with EN 61010-1, overvoltage category II, pollution degree 2.
- EMC : Complies with EN 61326-1, performance criteria B, and EN 55011, ISM Group I, Class B.
- Protection level : IP30.
- Operating temperature : 5 to 40 °C
- Input voltage : 190 to 264 V, 50/60 Hz.
- Mains input : C8 socket with CEI320 C7 removable cable (2 poles double insulation).
- Power consumption : 78 W max.
- ON/OFF control : toggle switch
- Dielectric strength : 3000 V between input to output.
- Presentation : polycarbonate case screenprinted.