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# Constant voltage charger

## Type UP 310



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### New Constant voltage charger in miniature format

The charger is primary switched with high frequency, 40 kHz, which gives high efficiency > 85%, excellent load and line regulation, small dimensions and low weight. The charger is protected by two fuses and the battery connections are also protected by two fuses. The unit is equipped with alarm and is delivered fully equipped.

The charger type UP 310 is specially designed for operating together with lead acid batteries, open or valve regulated batteries.

Through a specific care and attention, the charger obtained a very low ripple level 0,05%.

On the front panel there is an exact digital volt- and amperemeter, which with the aid of a push button can either show output voltage or output current. On the front door there is also an illuminated main switch and terminals for connecting a voltmeter.

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A new type of operation indication “Normal” has been introduced. This green LED shows that no alarms exist and that normal operation status exists.

The electronic alarm board contains the following standard alarms:

Mains power failure, Charger failure, and two voltage level alarms, that either can be configured as Charge level over/under voltage limit or as Low battery voltage and High battery voltage. The alarm levels are easily adjusted and the level can be shown on the digital display.

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### Standard Alarms

Sum-alarm that is indicated by a red LED. Alarm that goes away are automatically reset and the red alarm LED are extinguished.

Sum-alarm has one relay with potential free changeover contact.

The charger is designed for indoor wall mounting. The charger is built in a metal case with an easily removable front. The unit is lacquered in a beige colour.

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### Benefits for the user

- Very good load and line regulation      increased lifetime of the battery.
- High efficiency      low energy consumption.
- Low noise level      almost totally silent.
- Small dimensions      easy to install.
- Sum-alarm      easy to use.

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### Product program

Made for fixed installation, input: 230V 1-phase, and output: 12 , 24 or 48V DC.

Order code	Voltage	Current	Primary fuse	Cabinet size	Weight kg
UP 310-12/5	12V	5A	6A	LH 1	7
UP 310-12/10	12V	10A	6A	LH 1	7
UP 310-12/20	12V	20A	6A	LH 2	10
UP 310-24/2,5	24V	2,5A	6A	LH 1	7
UP 310-24/5	24V	5A	6A	LH 1	7
UP 310-24/10	24V	10A	6A	LH 2	10
UP 310-24/15	24V	15A	6A	LH 2	11
UP 310-24/20	24V	20A	6A	LH 2	11
UP 310-24/35	24V	35A	10A	LH 2	11
UP 310-48/2,5	48V	2,5A	6A	LH 2	10
UP 310-48/5	48V	5A	6A	LH 2	11
UP 310-48/10	48V	10A	6A	LH 2	11
UP 310-48/15	48V	15A	10A	LH 2	11

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Cabinet dimensions:	LH 1	330 x 315 x 120 mm ( W x H x D)
	LH 2	430 x 370 x 150 mm

### Technical specification

#### Charger:

AC input voltage	230V +15% -15%, 1-phase 47-63Hz
Powerfactor	Better than 0,99
Cos fi	Better than 0,99
DC output voltage	Nominal 12V, 24V or 48V DC
Load and line regulation	Better than $\pm 0,05\%$
Output current limit	100-105% of nominal current
Constant voltage	I/U according to DIN 41773
Efficiency	Better than 85%
Ripple	Less than 0,05% RMS
Emission	Enl. EN 50 081-1 and EN 50 081-2 (1993)
Immunity	Enl. EN 50 082-1 and EN 50 082-2 (1993)
Harmony	Enl. EN 61000-3-2
Harmony standard	Enl. EN 60742 and EN 60950
RFI / EMI	According to EN 55022 B and CISPER 22 B
Cabinet	IP 20 wall
	IP 40 wall

#### Accessories:

Cabinet for additional batteries - please request.

#### Standard Alarms:

- Mains power failure
- Charger failure
- High / Low battery voltage or
- Floating voltage failure

#### Sum-alarm

- relay with potential free changeover contact.

