GNB
INDUSTRIAL POWER
A Division of Exide Technologies

Constant voltage charger

Type UP 610

»We store the world's energy«

Network

Type UP 610

Constant voltage charger

Switchmode rectifier that fulfil new standards

> **New technique**
- sine wave input (PFC)

> **New princip**
- fully equipped

> **New technlogy**
- easy to use

> **High rate charging**
- fits with all type of stationary batteries

> **Complete program**

The constant voltage rectifier is primary switched, and is delivered fully equipped including a microprocessor controlled alarm.
The charger type UP 610 is specially designed for charging and maintenance charging of lead acid batteries of the open vented or valve regulated type and NiCd- batteries. Switch over to boost charge can be activated on front. Boost charge has adjustable time. Automatic battery circuit test once every twenty four hour.

The rectifier is primary switched with high frequency, 160 kHz, which gives high efficiency > 85%, excellent load and line regulation, small dimensions and low weight.

Exact charging is achieved by the very fast regulation. The rectifier is equipped with terminals for connection of remote sense wires which compensate for voltage drop over the battery wiring.A break or a shortcircuit of the remote sense has no effect on the regulation. The rectifier is prepared for external temperature compensation. Through a specific care and attention, the constant voltage rectifier type UP 610 has obtained a very low ripple voltage (0,05% RMS), low acoustic noice and low weight.

The rectifier is designed for indoor wall mounting. The cabinet has 7 inlet holes for cables, all directed downwards. The rectifier is built in a metal case with a hinged front door. The front door has the hinge on the right side and the unit is lacquered in a grey colour. The front panel includes all user facilities such as main switch, voltmeter terminals, digital volt and amperemeter, control push buttens and alarm LED‘s.

The electronic alarm board is microcomputer based and contains the following standard alarms: Mains power failure, Charger failure, Battery circuit failure, Supply voltage over/under voltage limit,Low battery voltage, High battery voltage, Ground error + and -, A-alarm, B-alarm, Sum-alarm, Reset and LED-test. All alarms can easily be inhibited with push buttens on the front. A, B and Sum-alarm has separate relays with changeover contacts. The time delay of A and B-alarm is a programmable standard feature.
The rectifier is short circuit proof, and the battery output is fused by a 2-pole fuse.

Benefits for the user

> Excellent load and line regulation	- increased lifetime of the battery
> High efficiency	- low power consumption
> Powerfaktor PF 0,99	- sine wave input
> Small dimensions	- easy to install
> Fully equipped	- easy to use
> Display of output power	- utilization overvien
> Display of earth resistance	- easy fault localization of earth failure

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Product program UP 610

Made for parmanent installation, input 230V1-phase and output 12V, 24V, 48V, 110V or 220VDC.

Order code	Voltage	Current	Primary fuse	Dimensions			Weight
				W	H	D	kg
UP 610-12/5	12V	5A	6A 1-phase	430	410	175	11
UP 610-12/10	12V	10A	6A 1-phase	430	410	175	11
UP 610-12/20	12V	20A	6A 2-phase	430	410	175	11
UP 610-12/35	12V	35A	10A 1-phase	430	410	175	11
UP 610-24/2,5	24V	2,5A	6A 1-phase	430	410	175	11
UP 610-24/5	24V	5A	6A 1-phase	430	410	175	11
UP 610-24/10	24V	10A	6A 1-phase	430	410	175	11
UP 610-24/15	24V	15A	6A 1-phase	430	410	175	11
UP 610-24/20	24V	20A	6A 1-phase	430	410	175	11
UP 610-24/35	24V	35A	10A 1-phase	430	410	175	11
UP 610-24/40	24V	40A	10A 1-phase	430	410	270	15
UP 610-24/60	24V	60A	16A 1-phase	430	410	270	15
UP 610-24/70	24V	70A	16A 1-phase	430	410	270	15
UP 610-24/80	24V	80A	16A 1-phase	430	410	270	15
UP 610-24/100	24V	100A	20A 1-phase	430	410	365	19
UP 610-24/120	24V	120A	25A 1-phase	430	410	365	19
UP 610-48/2,5	48V	2,5A	6A 1-phase	430	410	175	11
UP 610-48/5	48V	5A	6A 1-phase	430	410	175	11
UP 610-48/10	48V	10A	6A 1-phase	430	410	175	11
UP 610-48/15	48V	15A	10A 1-phase	430	410	175	11
UP 610-48/20	48V	20A	10A 1-phase	430	410	270	15
UP 610-48/30	48V	30A	16A 1-phase	430	410	270	15
UP 610-48/50	48V	50A	20A 1-phase	430	410	365	19
UP 610-48/60	48V	60A	25A 1-phase	430	410	365	19
UP 610-60/2	60V	2A	6A 1-phase	430	410	175	11
UP 610-60/4	60V	4A	6A 1-phase	430	410	175	11
UP 610-60/8	60V	8A	6A 1-phase	430	410	175	11
UP 610-60/12	60V	12A	10A 1-phase	430	410	175	11
UP 610-60/16	60V	16A	10A 1-phase	430	410	175	15
UP 610-60/24	60V	24A	16A 1-phase	430	410	270	15
UP 610-60/40	60V	40A	20A 1-phase	430	410	365	19
UP 610-110/2,5	110V	2,5A	6A 1-phase	430	410	175	11
UP 610-110/5	110V	5A	6A 1-phase	430	410	175	11
UP 610-110/7,5	110V	7,5A	10A 1-phase	430	410	175	11
UP 610-110/10	110V	10A	10A 1-phase	430	410	270	15
UP 610-110/15	110V	15A	16A 1-phase	430	410	270	15
UP 610-110/20	110V	20A	20A 1-phase	430	410	365	19
UP 610-110/22,5	110V	22,5A	20A 1-phase	430	410	365	19
UP 610-110/30	110V	30A	25A 1-phase	430	410	365	19
UP 610-220/2,5	220V	2,5A	6A 1-phase	430	420	175	11
UP 610-220/3,75	220V	3,75A	6A 1-phase	430	410	175	11
UP 610-220/5	220V	5A	10A 1-phase	430	410	270	15
UP 610-220/7,5	220V	7,5A	16A 1-phase	430	410	270	15
UP 610-220/10	220V	10A	20A 1-phase	430	410	365	19

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Option

Sensor for temperature compensation type TG
Separate alarm relay card type SL
Battery room fan control

Technical specification

AC input voltage	230V+15% -15% 1-phase 47-63Hz.
Powerfactor PF	Better than 0,99
Cos phi	Better than 0,99
DC output voltage	Nominal 12V, 24V, 48V, 110V and 220V
Load and line regulation	Better than +/- 0,05 %
Output current limit	102% of nominal current
Constant voltage	I/U according to DIN 41773
Efficiency	Better than 85%
Rippel	Better than 0,05% RMS
Emission	According to EN 50 081-1 and EN 50 081-2 (1993)
Immunity	According to EN 50 082-1 and EN 50 082-2 (1993)
EMC	According to EN 61000-3-2
RFI / EMI	According to EN 55022 B and CISPER 22 B
Harmonized standard	According to EN 60742 and EN 60950
Cabinet	IP 40, all types are wall mounted

Front panel (standard)

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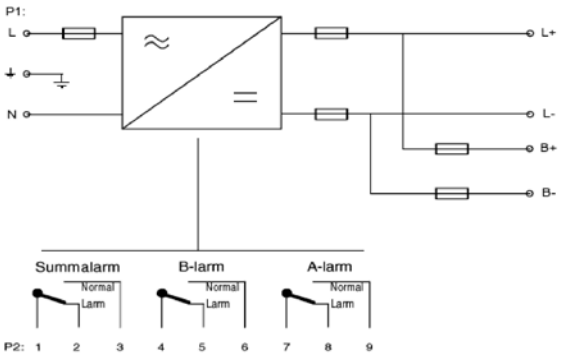
Standard Alarms

Following alarms are included as standard:

Mains power failure	A-alarm	Sum-alarm
Charger failure	Single relay with programmable	Relay with potential free
Battery circuit failure	time delay and potential free	
Floating voltage failure, over & under	contacts	contacts
High battery voltage		
Low battery voltage	B-alarm	Other information
Ground fault +	Single relay with programmable	All alarms can easily be inhibited
Ground fault -	time delay and potential free	
Reset and LED-test	contacts	



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Exide Technologies, der har aktiviteter i mere end 80 lande og over 120 års erfaring, er en af verdens største virksomheder inden for produktion og genanvendelse af blysyrebatterier. Virksomheden udvikler avancerede energilagringsløsninger til både automobilbranchen og industrien generelt. Førende producenter af biler, lastbiler og gaffeltrucks har endvidere valgt Exide Technologies som deres OEM-leverandør. Exide leverer også etablerede og velkendte varemærker til eftermarkedet.

Exide Transportation producerer batterier til både lette køretøjer og erhvervskøretøjer samt til landbrugssektoren, marinsektoren og fritidssektoren. Industrial-markedet, der hører under divisionen **GNB Industrial Power**, omfatter effektive energilagringsløsninger til Motive Power-applikationer som f.eks. gaffeltrucks, rengøringsmaskiner og andre elektriske køretøjer, der anvendes i industrien, samt Network Power-applikationer som f.eks. telekommunikationssystemer, vedvarende energianlæg og UPS-anlæg.

Exides ingeniører og teknikere har altid været helt i front, når det gælder udvikling af nye teknologiske løsninger. Exides ISO-/TS-certificerede fabrikker er en garanti for, at produkterne er fremstillet så effektivt som muligt, og at de opfylder de højeste kvalitetskrav samtidig med, at de belaster miljøet mindst muligt.

Exides store salgs- og distributionsnetværk står for kvalitetsservice og levering til aftalt tid. Virksomhedens topmoderne genvindingsanlæg sikrer, at batterierne genanvendes, og yder dermed et positivt bidrag til miljøet. Exide tilbyder også diverse ydelser, tilbehør og energirådgivning.

- Batterifabrikker
- Genvindingsanlæg
- Distributionscentre
- Europæisk hovedkontor
- Salgskontorer

Alle batterifabrikker er certificeret i henhold til ISO 9001
Alle startbatterifabrikker er certificeret i henhold til ISO/TS 16949
Alle batterifabrikker er certificeret i henhold til ISO 14001

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