
Switchmode rectifier type

Type UP 610 3-phase



- Two level charging
- Excellent load and line regulation
- High efficiency
- Power factor PF 0.99
- Small dimensions
- Fully equipped with micro controller alarm
- Display of output power
- Display of earth resistance
- Suits all types of batteries, Shorter recharge time.
- Increased battery lifetime.
- Low energy consumption.
- Sine wave input.
- Easy to install.
- Perfect system control.
- Utilization overview.
- Easy fault localization of earth failure.

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Rectifier with sine wave input. Microprocessor controlled and two charging voltage levels

The rectifier type UP610 is primary switched, with two charging voltage levels, float rate charge and high rate charge. This implies that UP610 fits perfectly for alkaline (NiCd) batteries, but can of course be utilised for systems with stationary lead acid batteries, either open or recombining (valve) types. UP610 is delivered fully equipped including a micro-processor controlled alarm.

Applications

The two level charging capability of UP610 makes it especially suitable for applications where short recharging times are needed, and in battery systems that requires a very long time to get fully charged on float level charging. UP610 is also suitable for applications where high demands are needed for battery and system surveillance.

Technical description

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 short circuit 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 UP610 has obtained a very low ripple voltage (0.05% RMS), low acoustic noise and low weight. The front panel includes all user facilities such as main switch, voltmeter terminals, digital volt- and amperemeter, control push buttons and alarm LEDs.

Alarm functions

The electronic alarm board is microcomputer based and contains the following standard alarms:

- Mains power failure
- Charger failure, temp sensor failure
- Battery circuit failure
- Charging level over/under voltage limit
- Low battery voltage
- High battery voltage
- Ground fault +
- Ground fault -
- A-alarm
- B-alarm
- Sum-alarm

Reset and LED-test are included. All alarms can easily be inhibited with push buttons 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.

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Cabinet

The rectifier is designed for indoor wall mounting. 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 cabinet has 7 inlet holes for cables, all directed downwards.

Protection

The rectifier is short circuit proof, and the output is fused by a 2-pole fuse.

Product program

Type	Voltage	Current	Primary fuse	Dimensions (mm)			Weight (kg)
				W	H	D	
UP 610-24/140	24V	140A	16A 3-phase	430	700	365	36
UP 610-24/175	24V	175A	16A 3-phase	430	700	365	38
UP 610-24/200	24V	200A	16A 3-phase	430	700	365	40
UP 610-48/60	48V	60A	16A 3-phase	430	700	365	36
UP 610-48/70	48V	70A	16A 3-phase	430	700	365	36
UP 610-48/80	48V	80A	16A 3-phase	430	700	365	38
UP 610-48/100	48V	100A	16A 3-phase	430	700	365	40
UP 610-48/120	48V	120A	20A 3-phase	430	1250	365	76
UP 610-48/140	48V	140A	20A 3-phase	430	1250	365	78
UP 610-48/150	48V	150A	20A 3-phase	430	1250	365	80
UP 610-110/30	110V	30A	16A 3-phase	430	700	365	36
UP 610-110/37.5	110V	37.5A	16A 3-phase	430	700	365	38
UP 610-110/45	110V	45A	16A 3-phase	430	700	365	40
UP 610-110/50	110V	50A	20A 3-phase	430	1250	365	76
UP 610-110/60	110V	60A	20A 3-phase	430	1250	365	78
UP 610-110/67	110V	67A	20A 3-phase	430	1250	365	80
UP 610-220/15	220V	15A	16A 3-phase	430	700	365	38
UP 610-220/20	220V	20A	16A 3-phase	430	700	365	40
UP 610-220/25	220V	25A	20A 3-phase	430	1250	365	76
UP 610-220/30	220V	30A	20A 3-phase	430	1250	365	78
UP 610-220/33	220V	33A	20A 3-phase	430	1250	365	80

Technical specification

AC input voltage	400/230V \pm 15%, 3-phase 47-63Hz
Emission	According to EN 50081-1 and EN 50 081-2 (1993)
Power factor PF	Better than 0.99
Cos phi	Better than 0.99
Immunity	According to EN 50 082-1 and EN 50 082-2 (1993)
DC output voltage	Nominal 24V, 48V, 110V and 220V
EMC	According to EN 61000-3-2
Load and line regulation	Better than \pm 0.05%
RFI / EMI	According to EN 55022B and CISPER 22 B
Output current limit	102% of nominal current
Constant voltage	I/U according to DIN 41773
Harmonized standard	According to EN 60742 and EN 60950
Efficiency	Better than 85%
Ripple	Better than 0.05% RMS
Cabinet	IP 40, all small types are wall mounted

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Options

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

