
Switchmode rectifier Type LEIF with PFC

Rectifier / DC-UPS

with or without batteries · with or without alarm



Usage

The rectifier is specially designed for charging and maintenance charging of lead acid batteries.

A battery can easily be added inside the rectifier to make a complete unit.

Applications

The rectifier type LEIF is primary designed for alarm applications, but suits most industrial purpose that needs continuous power or as a back-up power unit.

Technology

The charger is primary switched with high frequency (100kHz) which gives good load and line regulation, small dimensions high efficiency and low weight.

Internal batteries

A battery can easily be added to the unit. Suitable batteries are valve regulated 12V 7Ah types, with a typical lifetime of 5 years.

Design

The charger LEIF is designed for indoor wall mounting. The cabinet has 2 downward directed inlet holes for cables. The charger is built in a metal case and is lacquered in a gray color.

Fuses

The charger is short circuit proof and is protected by fuses. The battery has 2 fuses one in each branch. The battery fuses protects the battery and load. The fuses are of Autofuse type.

Switchmode rectifier

Type LEIF with PFC

Benefits for the user

- | | |
|--------------------------------------|--------------------------------------|
| ■ Complete unit | - every thing ready in one unit. |
| ■ Easy installation | - ready, only cable in / out. |
| ■ Tested in factory | - saves time and money. |
| ■ Small dimensions | - easy to install. |
| ■ Excellent load and line regulation | - increased lifetime of the battery. |
| ■ High efficiency | - low energy consumption. |
| ■ Low noise level | - almost totally silent. |
| ■ Powerfaktor PF 0.99 | - sine wave input. |

Product program

Made for fixed installation, input 230VAC 1-phase 50 or 60Hz and output 12V, 24V, 48V or 110V DC

Art-no	Order code	Voltage Volt	Current Rec. linefuse		Rom for batteries	Dim. i mm			Weight with and without batt.	
			Amp	Amp		W	H	D	kg	kg
E52 431 00	LEIF 12/2.5	12V	2.5A	6A	1pcs.	265	155	80	2,2	6
E52 431 02	LEIF 12/5	12V	5A	6A	1-2 pcs.	300	315	80	4,4	7
E52 431 04	LEIF 12/10	12V	10A	6A	1-2 pcs.	300	315	80	4,4	12
E52 431 06	LEIF 12/20	12V	20A	6A	-	435	370	150	8	-
E52 431 10	LEIF 24/1.25	24V	1.25A	6A	2 pcs.	300	315	80	4,2	10
E52 431 12	LEIF 24/2.5	24V	2.5A	6A	2 pcs.	300	315	80	4,2	11
E52 431 14	LEIF 24/5	24V	5A	6A	2 pcs.	300	315	80	4,4	12
E52 431 16	LEIF 24/10	24V	10A	6A	-	435	370	150	8	-
E52 431 18	LEIF 24/15	24V	15A	6A	-	435	370	150	9	-
E52 431 20	LEIF 24/20	24V	20A	6A	-	435	370	150	10	-
E52 431 22	LEIF 24/35	24V	35A	10A	-	435	370	150	10	-
E52 431 30	LEIF 48/2.5	48V	2.5A	6A	-	435	370	150	10	-
E52 431 32	LEIF 48/5	48V	5A	6A	-	435	370	150	10	-
E52 431 34	LEIF 48/10	48V	10A	6A	-	435	370	150	10	-
E52 431 36	LEIF 48/15	48V	15A	10A	-	435	370	150	10	-
E52 431 40	LEIF 110/2.5	110V	2.5A	6A	-	435	370	150	10	-
E52 431 42	LEIF 110/5	110V	5A	6A	-	435	370	150	10	-
E52 431 44	LEIF 110/7.5	110V	7.5A	10A	-	435	370	150	10	-
E52 431 90	Battery case	12-48V	16A		1-4pcs	310	315	80	2	-

Switchmode rectifier

Type LEIF with PFC

Product program charger with alarm

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 charger has a green OK LED and a red sum-alarm LED on the front panel. Alarm that goes away are automatically reset. Sum-alarm is signaled by one relay with potential free changeover contact.

Art-no	Order code	Voltage Volt	Current Rec. linefuse		Rom for batteries	Dim. i mm			Weight with and without batt.	
			Amp	Amp		W	H	D	kg	kg
E52 431 03	LEIF 12/5L	12V	5A	6A	1-2 pcs.	335	315	80	4,6	7
E52 431 05	LEIF 12/10L	12V	10A	6A	1-2 pcs.	335	315	80	4,6	12
E52 431 07	LEIF 12/20L	12V	20A	6A	-	335	315	80	4,6	-
E52 431 13	LEIF 24/2,5L	24V	2,5A	6A	2 pcs.	335	315	80	4,4	11
E52 431 15	LEIF 24/5L	24V	5A	6A	2 pcs.	335	315	80	4,6	12
E52 431 17	LEIF 24/10L	24V	10A	6A	-	435	370	150	9	-
E52 431 19	LEIF 24/15L	24V	15A	6A	-	435	370	150	10	-
E52 431 21	LEIF 24/20L	24V	20A	6A	-	435	370	150	11	-
E52 431 23	LEIF 24/35L	24V	35A	10A	-	435	370	150	11	-
E52 431 90	Battery case	12-48V 16A		-	-	310	315	80	2	-

Typical maximal load currents and backup time for different units:
(Max 15A battery fuse)

Battery	5 min	10min	30 min	1 hour	2 hour	3 hour	5 hour	10 hour	24 hour
7Ah	5A	5A	5A	3.9A	2.3A	1.6A	1.1A	0.6A	0.2A
2x7Ah	10A	10A	10A	7.8A	4.6A	3.2A	2.2A	1.2A	0.4A

Technical specification

Rectifier:	
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, 48V or 110V DC
Load and line regulation	Better than $\pm 0.5\%$ before output fuses
Output current limit	102% of nominal current
Constant voltage	I/U according to DIN 41773
Efficiency	Better than 85%
Ripple	Better than 0.05% RMS
Emission	According to EN 50 081-1 and EN 50 081-2
Immunity	According to EN 50 082-1 and EN 50 082-2
EMC	According to EN 61000-3-2
RFI / EMI	According to EN 55022 B and CISPER 22 B
Harmoniserad standard	According to EN 60742 and EN 60950
Cabinet	IP 20

Switchmode rectifier

Type LEIF with PFC

Battery

Battery capacity	7Ah, 1 x 12V or 2 x 12V
Battery fuse	fuse in positive and negative branch

Extra battery case

Battery	12V batteries 6.5-7Ah
Battery size	65x151x94 mm
Number of batteries	1-4 pcs.
Output voltage	12V, 24V or 48V
Battery fuse	16A 2-pole
Dimensions	300x315x80 mm (WxHxD)



Rectifier type LEIF 12/2.5 complete with battery.

