

Liebert® UtilitySure

Industrial Rectifier - Battery Charger
From 1 to 22kW - 1ph or 3-ph input



Liebert® UtilitySure

Configured to order with industrial options. Pre-defined blocks for shorter lead time.

BENEFITS

- **High availability of power:**
 - Hot-swappable to reduce the MTTR (Mean Time to Repair)
 - Various redundancy levels - N+1 or 2(N+1) - to improve load continuity
- **High electrical performances:**
 - Wide input voltage tolerance to comply with the worst utility conditions
 - High input power factor, low THDi rejection and low inrush current to save installation and operation costs
 - High efficiency to lower power consumption
- **Industrial flexibility:**
 - Fit-for-purpose battery selection (Lead Acid or Nickel-Cadmium)
 - Scalability to meet the evolving load changes
 - Pre-configured options to suit industrial applications

APPLICATIONS

- Power Transmission and Distribution substations
- Power Generation plants
- Rail transportation infrastructures
- Chemical industries
- Water and Wastewater industries
- Continuous process industries

The Liebert UtilitySure is an industrial rectifier - battery charger offering the latest switch-mode technology and bringing compactness and high reliability.

The Liebert® UtilitySure is designed to meet the most demanding schedules of industrial projects. It includes a wide choice of ratings and a selection of industrialized and preconfigured options to allow the product to be quickly configured and delivered.



Flexibility for a wide scope of industrial requirements

The Liebert® UtilitySure is available from 10 to 250 A (in a single cabinet) in single phase or threephase input configurations. It offers a wide range of output voltages, from 24Vdc to 220 Vdc. The Liebert® UtilitySure features a wide input voltage tolerance, which makes the system compatible with the harshest industrial power grids. It also features a microprocessor control which offers exceptional stability and allows adaptability for different application needs. To further improve load availability and process reliability, the Liebert® UtilitySure is able to operate in dual parallel configurations. This configuration can be achieved either to double the output power available (up to 22kW) or to achieve 2(N+1) redundant system configuration.



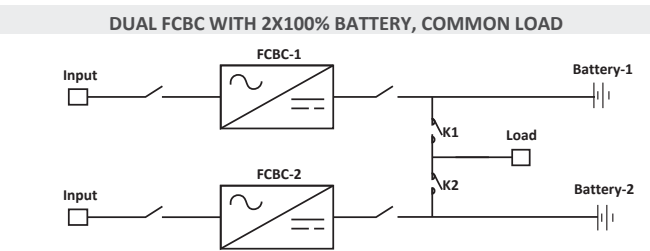
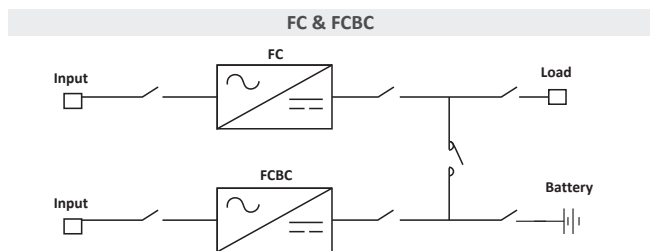
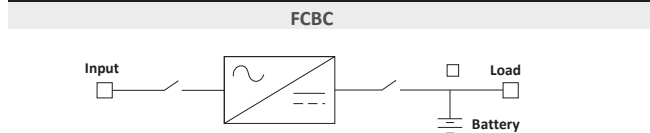
POWER RANGE				
Rating	24Vdc	48Vdc	110Vdc	220Vdc
Rating with single-phase input	75	50		
	150	100		
	225	150		
		200		
		250		
Rating with three-phase input			40	20
			80	40
			120	60
			160	80
			200	100

The above-mentioned ratings are for systems in one cabinet only. Higher ratings can be achieved by duplicating the cabinet.

OPTIONS	
Rectifier	Coupling diode (for dual systems configurations) Dropping diode (max 3 Contactors, 7 steps) s
Battery	External battery circuit protection (circuit breaker) Battery Low Voltage Disconnection (LVD) Battery earth fault detection Temperature sensor for battery charge compensation Battery monitoring system (Lead acid block or cell, max 24 measures) Batteries inside charger cabinet (on shelves or drawers) *
Load	1 pole Feeder Circuit Breaker 2 pole Feeder Circuit Breaker
Mechanical	External ingress protection up to IP42* Space heater Halogen-free cables as per IEC60332-3 Special frame painting and special keylock Special feet height (200mm or 300mm)

STANDARDS	
Compliance	IEC 60950 - IEC 61000-6-2 - IEC 61000-6-4 IEC 60146-1-1 - IEC 60439-1
Compliance	CEM 2004/108/CE Basse tension (DBT) 2006/95/CE

CONFIGURATIONS



TECHNICAL DATA

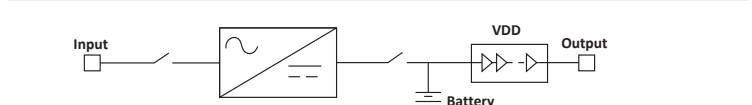
Input		
Model	UtilitySure	UtilitySure
	(Single-phase)	(Three-phase)
Input voltage (other on request)	230 Vac (220, 240)	400 Vac (380, 415)
Input voltage range	230Vac ±20%	400Vac ±20%
Power factor	0.98 to 0.99	0.92 to 0.99
Frequency range	From 45 to 65 Hz	
Output		
	Available rating 10 to 250 A in one single cabinet (see table above)	
Nominal DC voltage	24, 48, 110, 220 VDC	
Static regulation	±0.5 %	
Voltage ripple	< 0,5 % rms (in float, battery disconnected)	
Charging characteristic	IU according to DIN41773	

Battery	
Type	Lead Acid or Nickel Cadmium, vented or recombination
Autonomy	From few minutes to several hours, as required

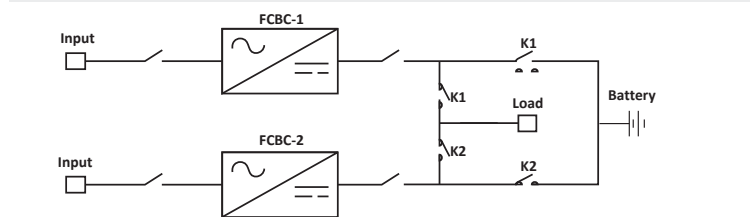
General Data	
Rectifier efficiency	Up to 92.5 % (according to model)
Operating temperature	From 0 to 40 °C (without derating) **
Storage temperature	From -20 °C to +70 °C (battery excluded)
Relative humidity	<95 % non-condensing at 20 °C
Operating altitude	1000 m (without system derating)
Cooling	forced
External Ingress	Up to IP 42
Internal IP with door open	IP 20
Mechanical	Internal lighting / Lifting eyes
Noise	<60 dB
Frame colour	RAL 7035 (Standard)
Dimensions (Upto 100A)	H 160 mm x W 600 mm x D 600 mm
(Above 100A)	H 2000 mm x W 600 mm x D 600 mm
Communication	Modbus RTU (RS232 or RS485 2 wires)

*Limitations apply according to the rating and the required options, please consult us

FCBC WITH VOLTAGE DROPPING DIODES



DUAL FCBC WITH 1X100% BATTERY, COMMON LOAD



DUAL FCBC WITH 2X100% BATTERY, DUAL LOAD WITH BUS-COPLER

