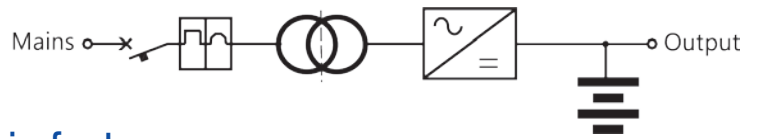


RDC



Main features:

- Clean and stable output DC current with ripple voltage peak-peak value <1%
- Redundant fan system with temperature and air flow control.
- 5 automatic charging modes.
- Manual charging mode.
- 4 adjustable voltage levels (the rectifier can operate as a power supply at the rated voltage or as a battery charger.
- Adjustable times and alarm thresholds.
- Temperature compensation programmable on the charging voltage to prolong the battery life.
- Digital microprocessor control (DSP + PLD).
- Full optical isolation on all the logic and interface cards.
- Low input harmonic distortion with the twelve-phase bridge and the optional input filter.
- Certified to withstand the harshest environment conditions.
- Efficiency exceeding 90% (low-frequency transformer included).
- Modbus communication interface through RS232 or RS485 port.
- Ethernet connectivity.
- Optional FALCON battery monitoring system.
- "H class" input isolation transformer.

Power supply systems for industrial applications:

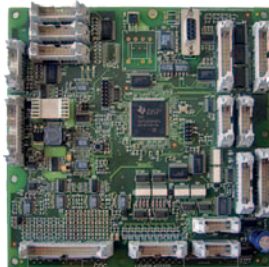
RDC, the LEVER battery charging rectifier, is an energy converter for industrial use designed to ensure a constant power supply in association with the batteries.

Using different types of connections and operating criteria, and building on the experience gained in the last 40 years, LEVER SRL can fulfil any request while ensuring a high system efficiency.

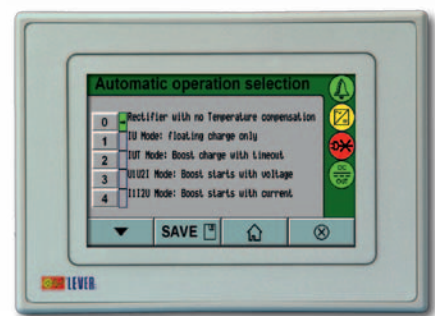
The series of rectifiers and battery chargers for industrial use is based on total control 6- or 12-pulse thyristor bridges. We can supply a wide range of systems with voltage output from 24 V DC to 220 V DC and current output up to 2000 A. The equipment is installed inside stand-alone, self-supporting cabinets.

The frame and the panels are made of steel. The protection degree is IP 20 (up to IP42 upon request) and IP 20 when the panels are open; access to the equipment is from the front.

The equipment is designed, manufactured and tested in compliance with the applicable IEC regulations.



DSP board
with Modbus
communications



The graphical display allows to choose between 4 different charging modes:

- Rectifier only
- Equalised charging with temperature compensation
- Quick charging activation
- Manual and battery forming charging

The voltage curves are compliant with the DIN 41773 standard, for an optimum charge allowing to extend the battery life.

Parallel solution to increase efficiency and yield

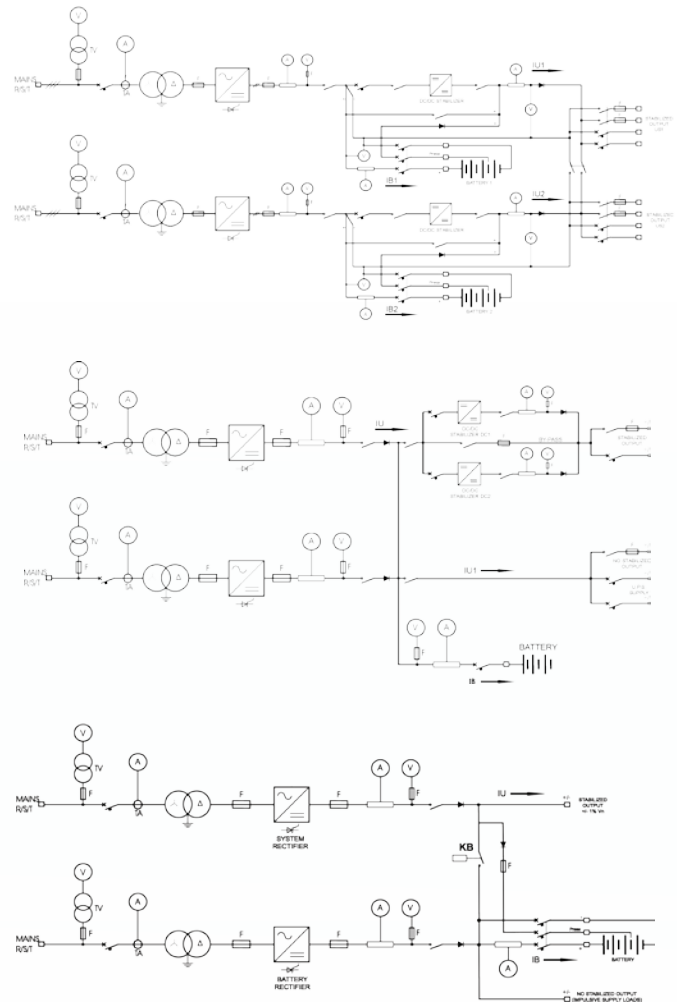
Lever has designed a wide range of parallel solutions to increase the general system MTBF until making it virtually infinite. Thanks to a CAN BUS communication card, in fact, the different rectifiers divide the load into equal shares, and manage a complex function exchange system.

Redundant single-branch rectifier with redundant DC/DC converters

The single-branch redundancy allows to keep the load and the battery powered by two parallel digital rectifiers, that by dividing the currents reduce the strain of each rectifier. The load, requiring a voltage level lower than that of the batteries, is powered through a redundant DC/DC converter.

In case of failure, the other rectifier will take on the whole load.

Sample customised solution based on technical specifications.



Model	Output Voltage	Output Current
RDC 24/60	24 Vdc	60 A
RDC 24/80		80 A
RDC 24/100		100 A
RDC 24/120		120 A
RDC 24/150		150 A
RDC 24/200		200 A
RDC 24/250		250 A
RDC 24/300		300 A
RDC 24/400		400 A
RDC 24/500		500 A
RDC 24/600		600 A
RDC 24/800		800 A
RDC 24/1000		1000 A
RDC 24/1500		1500 A
RDC 24/2000		2000 A
RDC 48/60		48 Vdc
RDC 48/80	80 A	
RDC 48/100	100 A	
RDC 48/120	120 A	
RDC 48/150	150 A	
RDC 48/200	200 A	
RDC 48/250	250 A	
RDC 48/300	300 A	
RDC 48/400	400 A	
RDC 48/500	500 A	
RDC 48/600	600 A	
RDC 48/800	800 A	
RDC 48/1000	1000 A	
RDC 48/1500	1500 A	
RDC 48/2000	2000 A	

Model	Output Voltage	Output Current
RDC 110/60	110Vdc (Opt.125Vdc)	60 A
RDC 110/80		80 A
RDC 110/100		100 A
RDC 110/120		120 A
RDC 110/150		150 A
RDC 110/200		200 A
RDC 110/250		250 A
RDC 110/300		300 A
RDC 110/400		400 A
RDC 110/500		500 A
RDC 110/600		600 A
RDC 110/800		800 A
RDC 110/1000		1000 A
RDC 110/1500		1500 A
RDC 110/2000		2000 A
RDC 220/60		220 Vdc
RDC 220/80	80 A	
RDC 220/100	100 A	
RDC 220/120	120 A	
RDC 220/150	150 A	
RDC 220/200	200 A	
RDC 220/250	250 A	
RDC 220/300	300 A	
RDC 220/400	400 A	
RDC 220/500	500 A	
RDC 220/600	600 A	
RDC 220/800	800 A	
RDC 220/1000	1000 A	
RDC 220/1500	1500 A	
RDC 220/2000	2000 A	

TECHNICAL CHARACTERISTICS

ELECTRIC PARAMETERS

Input frequency	50/60 Hz
Frequency range	±10%
Input voltage	400 Vac 3PH
Input voltage range	±10%
Input THD	< 30%
Output voltage	4 levels (power supply only, charge level 1,2,3)
“Soft” start	included
Temperature compensation	included
Ripple	< 1%

COMMUNICATIONS

Remote signalling	SPDT Contacts
Communication	RS485

ENVIRONMENT

Cabinet Cooling	Natural
Operating conditions	-5/+50°C, 93% Humidity (<i>without condensation</i>)
Noise	53 to 58 dB depending on size

MECHANICAL

Metal frame thickness	2.5mm
Metal door thickness	2mm
Frame surface	galvanised steel
Protection degree with closed panels	IP20
Protection degree with open panels	IP20
External colour	RAL 7035
Cable entry	from the base, from the roof or from the side

Main optional components

- Additional RFI filters
- Additional THD filters
- 12-pulse bridge
- Battery monitoring unit
- DC/DC stabiliser/dropper diode
- Special colours
- Special protection degree
- Output distribution board