MADE IN ITALY



AC & DC UPS

Heavy-duty solutions for critical applications

Oil & Gas

Utilities

Industrian

Data Center

LEVER®
power solutions
since 1973

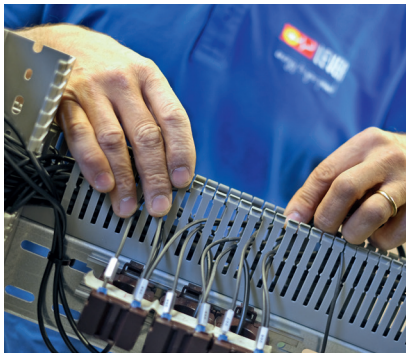
energy to your power!

Who we are:

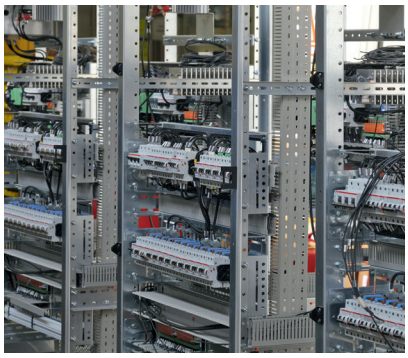
LEVER is a global leader in power solution technologies for critical applications, i.e. Oil & Gas, Utilities and Industrial. Based in Verona, Italy, the Company was founded in 1973 and nowadays operates worldwide, with focus on Europe, Middle East, Russia, Africa and South America. We offer a complete range of solutions, covering various electrical applications in different areas of business:

- DC Chargers/DC UPS, output current from 5 A to 2500 A with 24, 48, 110, 125, 220 Vdc output voltage
- Customized AC UPS, mainly for Oil & Gas applications, input 3Ph, output power from 5 to 600 kVA
- AC and DC distribution boards
- BMS, battery monitoring system
- NiCd and Lead Acid battery
- Battery steel racks and battery cabinets
- ATEX/Ex explosion-proof battery disjunction box
- Engineering, Testing & Commissioning and After Sales Service

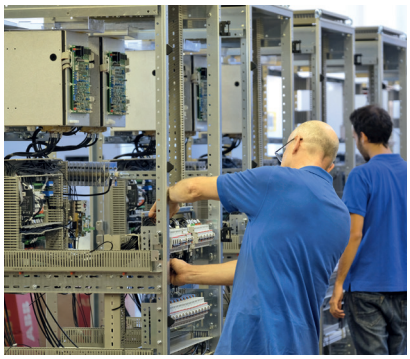
LEVER's success has been driven by a strong focus on research and development: the Company maintains its research center in Verona and has been continuously investing in R&D.
The result is a long track record of innovation. Many of the technologies that underlie our modern society, from industrial AC UPS to DC rectifiers battery chargers, were engineered and commercialized by LEVER. Today, LEVER stands as one of the main manufacturers of industrial AC UPS and DC Chargers, recognized by some of the most important EPCs and End Users all over the World.



Innovation & Experience



Production



Custom-made solutions

LEVER world presence



>30% GRADUATES

>5% OF ANNUAL REVENUES IN R&D

>3000m² BUILDING AREA

100% MADE IN ITALY

ITALIAN ENGINEERING AND MANUFACTURING

PRODUCTS APPROVED BY THE MOST REPUTED END-USERS IN EUROPE AND MIDDLE EAST

Project-Oriented organization for EPC contractors

In LEVER, during the order execution, each internal process is monitored to ensure either that the final product will be exactly as agreed with the Customer, as well as the deadline given by the customer is respected. We pay a lot of efforts to ensure the documents availability at any time of the process, per specific needs of the job or of the Client. All the activities are made following a Project Plan, agreed with the Customer. Documents for approval, Manufacturing clearance, Factory Acceptance Test (FAT), Delivery, Testing & Commissioning, Site Acceptance Test (SAT), drawings as built and final book are usually managed by LEVER.



R&D – Engineering and Technical Department



FAT, Start-up & Commissioning



Training center

After Sales Service

LEVER service maintenance engineering

Our Service team is composed by experts and skilled engineers, trained to provide a high level technical support and very efficient after-sales service. LEVER's Service team supports Clients with:

- direct contact with LEVER Service organisation. Service personnel is always available and ready to provide advices and assistance regarding systems installation and maintenance
- fast on-site interventions, guaranteed by using advanced technologies and the professionalism of our Service personnel and Authorised Assistance Centers. LEVER Service guarantees that all the spare parts are original, tested and will come on time.
- offshore interventions: our personnel attended International Maritime Organization STCW/95 training courses and this enables us to work on offshore platforms.
- full assistance during the systems installation, start-up and commissioning, including on-site personnel training. Technical Service engineers can also verify site's safety and suitability.
- maintenance contracts, to minimise the risks and costs connected with UPS breakdowns. Several types of maintenance contracts are available, going from periodic inspections to comprehensive cover, including labour and materials.
- technical training courses, provided to the Client and to the Authorised Assistance Centre technicians, at the LEVER Training Centre.

Environment Safety and Quality

LEVER's solutions and services are designed according to the Client's requirements and centred around improving reliability and increasing industrial productivity, while lowering environmental impact. We are 100% committed into minimizing environmental impact of our technologies and products, transferring this expertise also to our Clients and Suppliers and, at the same time, we aim to ensure that our manufacturing processes are safe and energy-efficient. Some of LEVER's efforts toward a cleaner world consists in reducing the use of energy and raw materials, phasing out hazardous materials, designing eco-efficient products and enhancing Suppliers' performance. LEVER ensures all manufacturing facilities and processes are **certificated ISO 9001:2015, ISO 14001:2015, ISO 45001:2018** international Standards on the management of quality, environment, health and safety risks.







HIGH FREQUENCY SWITCH MODE RECTIFIER

LEAD ACID BATTERIES OR NICD OUTPUT VOLTAGE 24, 48, 110, 125, 220VDC AND CURRENT FROM 15A A 3000A

MIR

HEAVY-DUTY MODULAR INDUSTRIAL RECTIFIER



The MIR model is the LEVER rectifier able to guarantee the maximum in the most demanding industrial environments with the modular **N + 1 solution**

- MIR rectifier supply the loads in DC and at the same time keeps the batteries correctly charged, guaranteeing full continuity of service
- MIR uses power modules which, when suitably configured, generate high power systems and N + 1 solutions
- The batteries are permanently connected in parallel to the DC loads, thus making the system highly reactive to impulse loads such as motors, medium / high voltage switchgears as coils, etc.
- **MIR modular technology is full Hot-swappable**



SCR THYRISTORS INDUSTRIAL RECTIFIER

OUTPUT VOLTAGE 24-48-110-125-220 VDC, OUTPUT CURRENT 10 A - 3000 A

SME

HEAVY-DUTY INDUSTRIAL DC UPS/ DC BATTERY CHARGER



Applications:

- Oil & Gas onshore and offshore
- Refineries and petrochemical plants
- Utilities & Power Generation
- Transportations
- Water desalination and treatment
- Energy stations for SCADA Remote Terminal Units
- All the industrial and process control applications

Performances, flexibility and top reliability for critical applications

SME model is LEVER DC UPS/DC Charger designed to ensure the maximum power availability in the industrial environments requiring top performances.
The core of SME is the thyristors-based 6-pulse or 12-pulse total controlled rectifier bridge, which ensures a stable output DC voltage.
It can be supplied in a single or redundant configuration, with change-over system designed as per Client's Technical Specifications.
Furthermore, the system is highly customizable, from the alarms to the LED signalizations and threshold levels, and it can be enhanced by the addition of many engineering options and accessories (e.g. blocking diode, drop cells, analog measurements, special cabinet IP protection degree, etc.)
The SME DC Charger complies with IEC 60146-1-1 and IEC 62040 Standards, including the recent IEC 62040-5-3, and it has been accordingly type-tested.

Technical Features

- Output voltage: 24, 48, 110, 125, 220 Vdc
- Output current from 10 A to 3000 A
- Input voltage: 3Ph 400 – 440 – 480 Vac
- Clean and stable output DC voltage with voltage ripple <1% RMS
- Rectifier thyristor SCR-based, 6 or 12-pulse total controlled bridge
- Provided with input isolation transformer
- Three programmable levels of charge: floating, boost and commissioning charge
- Protection degree closed door up to IP65
- Equipped with a 4.3" HMI display, featuring an accurate overview of the system status, alarms, measurements and allowing settings adjustments
- Wide range of communication interfaces: Ethernet, Modbus, Profibus, dry contact SPDT board
- Compatibility with lead acid VRLA, AGM, Gel and NiCd batteries and SMC batteries
- Back up time: as required, from few minutes to several hours



CUSTOM INDUSTRIAL AC UPS

OUTPUT POWER 5 KVA - 600 KVA, INPUT 3PH, OUTPUT 3PH OR 1PH - DCBUS 110V-220-360 VDC

DPS

ONLINE HEAVY-DUTY INDUSTRIAL DIGITAL AC UPS SYSTEM



Applications:

- Oil & Gas onshore and offshore
- Refineries and petrochemical plants
- Utilities & Power Generation
- Transportations
- Water desalination and treatment
- All the industrial and process control applications

High flexibility and maximum industrial reliability

DPS model is LEVER digital online AC UPS, specifically designed to power critical loads which require high quality of AC voltage waveform and the maximum reliability in harsh environmental conditions.
Fully digital technology-based with double microprocessor control, LEVER DPS is fully custom-made, with a wide range of options to comply with Client's Technical Specifications and it can be supplied in dual redundant configuration.
DPS features two main operating modes: "On-Line", where the inverter unit is in operation and supplies power to the loads, and "Line-Interactive", where the output voltage is supplied by the emergency mains through the bypass to increase the efficiency of the system.
DPS is classified VFI-SS-111, it complies with IEC 62040 Standards and it has been accordingly type-tested by CESI SpA, Italy.

Technical Features

- Output power from 5 to 600 kVA
- Input voltage: 3Ph 400 – 440 – 480 Vac
- Output voltage: 1Ph 115 – 230 Vac, 3Ph 400 – 440 – 480 Vac
- Pure sinewave output AC voltage with THDv < 1%
- Clean and stable battery DC voltage, with voltage ripple <1% RMS
- Rectifier thyristor SCR-based, 6 or 12-pulse total controlled bridge
- IGBT-based full bridge technology inverter unit
- Thyristor SCR-based static bypass switch, < 2 ms transfer time
- Equipped with a manual switch for maintenance without disconnecting the load
- Provided with output isolation transformers
- Three programmable levels of charge: floating, boost and commissioning charge
- Equipped with a 4.3" HMI display, featuring an accurate overview of the system status, alarms, measurements and allowing system settings adjustments
- Wide range of communication interfaces: Ethernet, Modbus, dry contact SPDT board
- Compatibility with lead acid VRLA, AGM, Gel, NiCd and SMC batteries
- Back up time: as required, from few minutes to several hours



HEAVY DUTY MODULAR UPS

10 - 1200 KVA

EMS

MODULAR INDUSTRIAL AC UPS



- **Modular Industrial AC UPS** design
- **N+1 redundancy** with hot-swappable power modules
- **Common bypass** configuration
- **High efficiency:** greater than 96%
- **Silicon Carbide (SiC)** power semiconductor technology
- **Heavy-duty design** for demanding industrial applications
- **Fast maintenance:** MTTR of 5 minutes
- **Standard communication interfaces** included
- **Input and output power transformers** available as optional features
- **Emergency power line** with automatic voltage regulation (AVR) and an isolation power transformer, available as optional features

Continuity, reliability and energy efficiency in one modular solution

The Heavy Duty Modular (PWD) is a three-phase, online double-conversion uninterruptible power supply (UPS) featuring a modular architecture and supporting redundant configurations to ensure high levels of power continuity and quality

With a power range from **10 to 1200 kVA**, it incorporates specially designed components and transformerless technology, achieving efficiency levels of up to **96%** while delivering high power density within a compact footprint

Designed to maximize system availability and simplify maintenance, the PWD features a modular architecture with **hot-swappable power modules,** enabling module replacement without interrupting the protected load, provided the system configuration and operating procedures allow it. This design simplifies system management, facilitates spare parts availability and helps reduce service intervention times

The Heavy Duty Modular (PWD) is the ideal solution for critical applications where operational continuity, energy efficiency, ease of maintenance and rapid service response are essential.

BATTERY CIRCUIT BREAKERS

BATTERY
DISJUNCTION BOX

Battery circuit breakers for safe and hazardous area.



CUSTOM INDUSTRIAL DISTRIBUTION BOARDS

LOW VOLTAGE
DISTRIBUTION BOARDS



BATTERY MONITORING SYSTEM

FALCON
BMS

Based on its experience and high technological know-how, LEVER has engineered FALCON, a versatile equipment allowing to monitor the main functional parameters of industrial battery.
FALCON provides a valuable support for the preventive maintenance operations and for the immediate identification of failures.

- Easy installation
- Accurate measurements of battery voltages, currents and temperatures
- Provided with a display and dry contact SPDT board
- It can be installated inside a battery cabinet or on wall (for batteries on rack)
- Alarms recording included
- Compatibility with lead acid VRLA, AGM, Gel and NiCd batteries
- It can be integrated to all LEVER AC UPS, DC Chargers and DC/AC inverters

Main Recent Project

PROJECT	COUNTRY	APPLICATION	AC UPS	DC UPS	INVERTER
Hail & Ghasha	UAE	Energy (O&G)	✓		
Bu Hasa oil field	UAE	Energy (O&G)	✓		
Asab oil field	UAE	Energy (O&G)	✓		
Poolbeg 299MW Open Cycle Gas Turbine (OCGT)	IRELAND	Public Service	✓		
Manufacturing Facility ALAT	SAUDI ARABIA	Railway	✓		
Data Center KIZAD and ICAD	UAE	Public Service		✓	
Kima Anna	EGYPT	Petrolchemical	✓	✓	
Mobile substations	SAUDI ARABIA	Utilities & Power Plant		✓	
NGHP – Green Hydrogen Element (GHE) NEOM	SAUDI ARABIA	Utilities & Power Plant		✓	
OETC 13/2025	OMAN	Utilities & Power Plant		✓	
PLN Sengkang Upgrade 4	INDONESIA	Utilities & Power Plant		✓	
SOL-NEOCIS	ITALY	Energy (O&G)		✓	
Electrical Substations Trolleybus	ITALY	Public Service		✓	
Kashagan Field Development	KAZAKHSTAN	Energy (O&G)	✓	✓	
SF5 Debottlenecking	ITALY	Industry	✓	✓	
Dahshour Compression Station Unit No 5&6	EGYPT	Energy (O&G)	✓	✓	
Datacenter Campus	ITALY	Industry		✓	✓
H2 Green Steel field	SWEDEN	Industry		✓	
CAN/AN Prilling Tower Emission Abatement	ITALY	Industry	✓		
BEDP MECHANICAL RECYCLING	ITALY	Utilities & Power Plant	✓	✓	
Bada Reservoir, Day Tank Magna	SAUDI ARABIA	Utilities & Power Plant	✓		
New Coegeneration Plant (GT-6) Unit U-7000	GREECE	Energy (O&G)	✓	✓	
SSE Cold Ironing Sicilia Orientale	ITALY	Industry		✓	✓
Jurassic off plot modifications KOC	KUWAIT	Energy (O&G)		✓	
Alba	PORTUGAL	Energy (O&G)	✓	✓	
HATTA Pumped production Site	UAE	Utilities & Power Plant	✓		
Central Electrica Engie	PERU'	Utilities & Power Plant		✓	✓
Eni Sannazzaro de' Burgondi	ITALY	Energy (O&G)		✓	

PROJECT	COUNTRY	APPLICATION	AC UPS	DC UPS	INVERTER
Battery chargers for plant TRANSGRID	AUSTRALIA	Utilities & Power Plant		✓	
C.T. E. "Alessandro Volata" Montalto di Castro (VT)	ITALY	Utilities & Power Plant	✓	✓	✓
Neste Rotterdam Site Development	NETHERLANDS	Cogeneration	✓	✓	
Baleine Phase 1 Surf	IVORY COAST	Energy (O&G)	✓		
Dahshour Compression Station Unit No 5&6	EGYPT	Energy (O&G)	✓	✓	
New Naphtha Complex Project - 076971C	GREECE	Energy (O&G)	✓	✓	
Butterfly Project UPS ITB 090	GERMANY	Industry	✓	✓	
Project N15907 - Water Transmission Scheme from Taweelah to Ajban	UAE	Utilities & Power Plant	✓	✓	
DC Charger for KOC Substation at Gathering Centre-15	KUWAIT	Energy (O&G)		✓	
Al-Ahdab oil field to Al-Zubaydia power station project	IRAQ	Energy (O&G)	✓		
ENI Bolgiano MV Substations	ITALY	Energy (O&G)		✓	
Emergency systems for Eni Porto Torres I Solar Power Plant	ITALY	Energy (O&G)	✓	✓	
Rolling Mill Plant Ukraine	UKRAINE	Steel Plant		✓	
UPS for Cape Town Airport I	SOUTH AFRICA	Airport	✓		
Antirio, Petalas, Aloina and Molikeio substations	GREECE	Utilities & Power Plant		✓	
Tempa Rossa Project	ITALY	Energy (O&G)	✓		
Rectifiers for Savona Port	ITALY	Port		✓	
MEW Shadadiya 400/132 kV and 132/11 kV Substation	KUWAIT	Utilities & Power Plant		✓	
Industrial UPS and rectifiers for Airport of Jakarta	INDONESIA	Airport	✓	✓	
Geothermal plant Cerro Pabellon project	CHILE	Utilities & Power Plant		✓	✓
Zadco Temporary AC industrial system	UAE	Energy (O&G)	✓		
ENI Clara NW offshore platform	ITALY	Energy (O&G)	✓	✓	
HVDC interconnection Montenegro-Italy	ITALY MONTENEGRO	Utilities & Power Plant	✓	✓	✓

PROJECT	COUNTRY	APPLICATION	AC UPS	DC UPS	INVERTER
Odidi Node project	NIGERIA	Energy (O&G)	✓		
Hyosung Sonelgaz Algeria Project	ALGERIA	Utilities & Power Plant		✓	
Khor Al Zubair Project	IRAQ	Energy (O&G)	✓		
Rectifiers for Vietnam Navy	VIETNAM	Military		✓	
Industrial Ac Ups For North Sea Tolmount Offshore Platform	UNITED KINGDOM	Energy (O&G)	✓		
Project Maida And Selargius Substations	ITALY	Utilities & Power Plant		✓	✓
Project Tuba Depot Iraq	IRAQ	Energy (O&G)	✓		
Dpc Industrial Ii And Dahariz Projects	OMAN	Utilities & Power Plant		✓	
Project Abu Dhabi Umm Al Nar Power And Desalination Plant	UAE	Utilities & Power Plant		✓	
Emergency System For The Offshore Platform In North Field Bravo	QATAR	Energy (O&G)	✓	✓	
Ac Ups For Taranto Refinery	ITALY	Energy (O&G)	✓		
Project Abu Dhabi Al Taweelah Desalination Plant	UAE	Utilities & Power Plant		✓	
Dc Chargers For Scada Remote Terminal Units In The Burgan Oil Field	KUWAIT	Energy (O&G)		✓	
Hvdc Interconnection Italy And France Piossasco Substation	ITALY	Utilities & Power Plant		✓	✓
Emergency Systems For Petrochemical Plant In Ferrara (Italy)	ITALY	Energy (O&G)	✓	✓	
Dc Chargers For The Barakah Nuclear Power Plant	UAE	Utilities & Power Plant		✓	
Dc Chargers For 132/11Kv Substations In Dubai	UAE	Utilities & Power Plant		✓	
Project Val D'agri (Pz) Oil Field	ITALY	Energy (O&G)	✓	✓	
Dc Chargers For Saudi Electrical Substations	KSA	Utilities & Power Plant		✓	
Emergency Systems For Burgas Refinery	BULGARY	Energy (O&G)	✓	✓	

power solutions
since 1973

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The data and photos in the document are purely indicative for commercial purposes

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