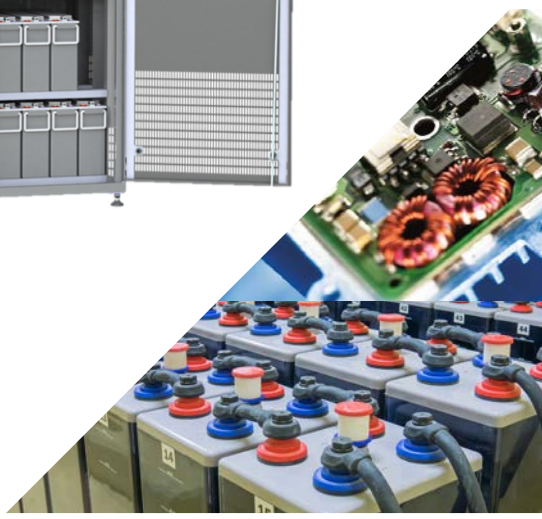
Enedo
RESHAPING ELECTRICITY



OPUS POWER SYSTEMS – ENERGY, INDUSTRY AND RAIL

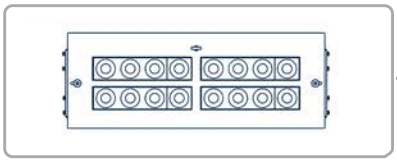
Robust and Reliable Fan-free DC and AC Power
50 Years of Industry Expertise

We shape electricity and provide secured supply for the needs of increasingly sensitive and vulnerable systems. Our job is to keep your system up and running and make your electricity better – more reliable, secure, energy-efficient – and just right to fit its purpose. Enedo standard and custom power solutions for utility, industry and rail applications offer you value throughout the whole life cycle and beyond. Robust and reliable fan-free design and modular architecture ensures the lowest total cost of ownership (TCO) across the 15-20 year expected life span for industrial backup power systems.

BEYOND THE STANDARD

System Engineering Solutions

Load Distribution Panels

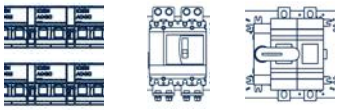


IP21 cabinet roof

Options:
Blocking Diode
Voltage Dropping Diode
A+B parallel supply

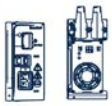
Battery LVD
Load LVD

2 x MCB + MCCB = OS125

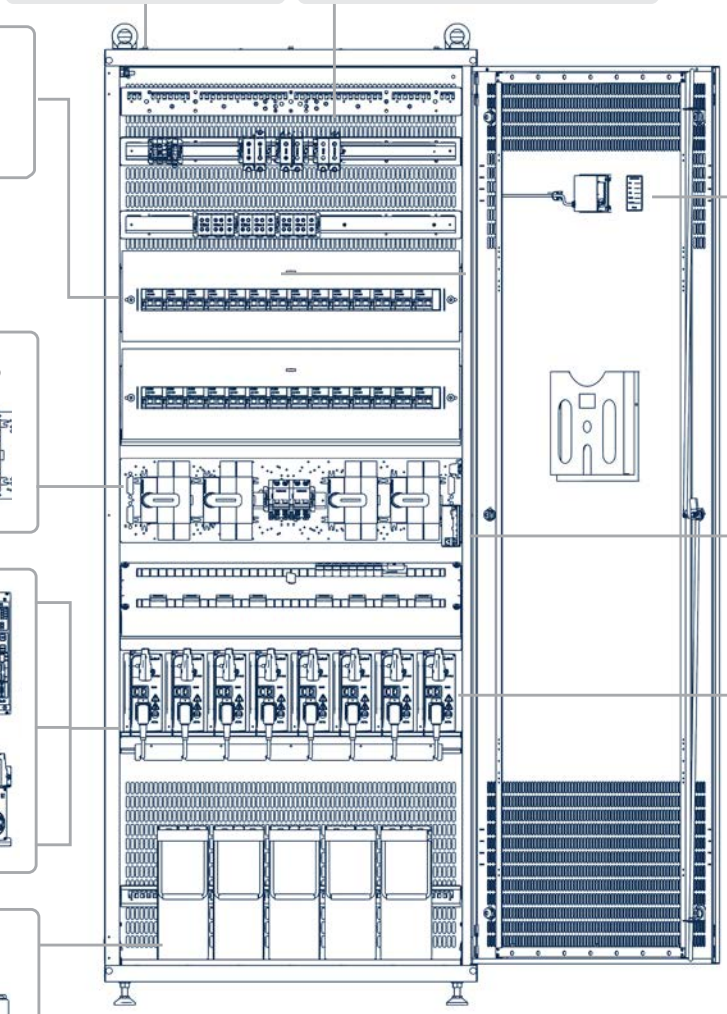


DAC60000 Inverters

DC/DC Converters



Batteries



UIF, display

VIDI Controller & Aux Controllers

MHE rectifiers

Options:
Battery testing
Battery life time diagnostics
Battery Block voltage monitoring

For nearly 50 years, Enedo has been the standard for providing power system solutions to customers around the world and to keep the critical processes up and running with the 100% confidence for the uninterruptible power supply. On top of highly configurable standard systems Enedo System engineering team has the capability to understand the exact needs of backup power application and provide the optimal solution with expertise of several decades. Enedo's engineering expertise with modern 3D layout design tools and modern circuit diagram design tools offers professional, fast and cost efficient approach to make optimal application specific design even for project of 1 power system cabinet.

Cabinet solution

OPUS HE OC2066
Cabinet Power System

Designed to meet the demands of critical infrastructure applications, Enedo OPUS HE Cabinet Power System is fully configurable and scalable, featuring up to 97% efficiency with fully-customised battery connections and a fan-free, natural convection cooling system.

Benefits:

- Up to 97% efficiency
- Eco-friendly fan-free cooling system
- Configurable battery connections, Switch-fuse, MCB or MCCB protected
- N+1 redundancy design

Applications

- Critical infrastructure
- Transmission substations
- Distribution substations
- Railway signaling and substations
- Process industries
- Telecommunications

Heavy-duty industrial cabinets

OPUS HE OC2066 cabinet power systems are modular backup power systems that offer free configuration of battery shelves, selection of load distribution fuse panels, and freedom to select the best fitting battery protection device. Their robust and fan-free design and modular architecture ensure the lowest TCO across the 15-20-year expected life span for industrial backup power systems.

97% efficiency

The OPUS HE series products offer unrivaled efficiency of 97% for minimal environmental impact. Systems have been designed and optimized for critical infrastructure applications such as transmission and distribution substations, process industries, and railway communications.

Modular advantage

Thanks to configurable features OPUS HE cabinets can be further built as double A+B systems without any custom design efforts. Customer has full freedom to install batteries inside the cabinet or configure battery fuses for external battery banks.

Wall solution

OPUS HE WMC Wall Charger

WMC is compact, easy to install small and light weigh wall charger including one MHE rectifier. Charger includes full functionality of VIDI controller system monitoring and management. Systems have configurable A+B double system connection and battery testing and monitoring features.

OPUS HE OC0864 Wall Cabinet Power System

OPUS HE OC0864 Cabinet is modular wall or floor mountable power system including configurable features like choice of 1-3pcs of battery MCBs or battery Switch Fuse/NH00/NH01, configurable load distribution and inverters & DC/DC converter options. Both Systems have configurable A+B double system connection and battery testing and monitoring features.

Benefits:

- Easy installation
- Eco-friendly fan-free cooling system
- N+1 redundancy design
- Configurable load distribution

OPUS INV OC0864 Wall Cabinet Inverter System

Robust and reliable convection-cooled, Enedo OPUS Inverter Systems offer modular DC to AC power conversion solutions with N+1 redundant configuration for the critical infrastructure applications. With full load distribution configurability and VIDI-controlled monitoring options, this 6 kVA cabinet system has space for up to 5pcs of 24VDC – 220VDC inverter modules, static bypass and manual bypass.

Space-saving efficiency

OPUS HE Wall Power Systems save footprint in electrical rooms and are ideal solutions for modernization projects, where old Thyristor Chargers (SCR – Silicon Controlled Rectifiers) are replaced with modern modular high-efficiency technology.

Maintenance-friendly

Together with Wall chargers, the station's main battery bank can be installed to a separate open battery stand below the wall charger. Open and maintenance-friendly battery installation of long life-time batteries and reliable fan-free & modular chargers offer best possible TCO (Total Cost of Ownership) of the backup.

Long autonomy

OPUS Modular inverter systems provide reliable and redundant AC supply for critical loads converted from the station's main battery bank with long autonomy (no extra battery needed like in UPS systems). Inverter systems can be integrated into DC power systems or provided as a separate cabinet.

Rack Systems

OPUS HE Bulk Rack

The innovatively-designed, Enedo OPUS HE Bulk Rack has been developed with local cabinet system builders in mind. Pre-fitted with ready-to-attach cable connections and parameter settings, the bulk rack provides substantial value to customers' budgets and your own bottom line by reducing customisation, design and manufacturing expenses. OPUS HE is the ultimate back-up power solution and features N+1 redundancy configuration, fan-free convection cooling and benefits a range of industries in critical infrastructure applications.

Benefits:
- Up to 97% efficiency
- Innovative air flow plate cooling design
- Eco-friendly fan-free cooling system
- Power 12kW, master-slave up to 100kW

OPUS HE 7U DC Power Systems

OPUS HE 12U DC Power Systems

As a universal back-up power solution for critical infrastructure applications in a range of industries, the all-new Enedo OPUS HE 7U and OPUS HE 12U Power Systems offer fan-free convection cooling with N+1 redundancy configuration.

Benefits:
- Up to 97% efficiency
- Eco-friendly fan-free cooling system
- Expandable 5-module rack up to 10 kW
- N+1 redundancy design

Reliable by design

Enedo's MHE 2kW high-efficiency rectifiers and racks are designed and optimized for critical power applications where reliability is always criterion number one. Thanks to the robust and reliable fan-free design, high-efficiency, and modular architecture, the OPUS HE modular racks are designed to last.

Customize to fit your needs

While OPUS HE Bulk rack parts are manufactured in Enedo's production line, local builders can add to final cabinet system all market or geography-specific features. Thanks to master-slave rack alternative the same system architecture can cover power rating from 1.5kW up to 100kW.

Ready-to-go solutions

OPUS HE 7U and 12U Racks are complete power systems including battery fuses, load distribution, modular rectifiers, and controller. Racks can be installed inside a system cabinet or mounted to a wall. For multi-voltage applications also inverters or DC/DC converters can be added to the rack.

Modules

MHE High-Efficiency Rectifiers for DC Power Systems

Robust, reliable and convection cooled, Enedo MHE Rectifier offer modular power systems with n+1 redundancy for the critical infrastructure applications.MHE is the key power conversion module in OPUS HE power systems with 97% efficiency.

Benefits:

- Up to 97% efficiency
- Eco-friendly fan-free cooling system
- Flexible design with front-facing cabling set-up
- 2000 watts of output power
- Voltages 24VDC - 220VDC

VIDI Controller, Intelligent control system

Controller is the brains of power system. VIDI controller together with auxiliar controllers are powerful tool to set ideal parameters and monitoring architecture for critical OPUS HE backup power systems. True redundancy principle of OPUS power systems applies also for the controller, which means that controller can be changed or updated without any power break in the system. Controller has intelligent and easy to use local interface and web access to monitor the system behaviour and plan the controlled maintenance process during the expected 15-20 year life time of the power system.

DAC60000 Inverters and Bypass units

Fully modular and compatible with all Enedo DC power systems, Enedo inverters apply the latest technology and offer fault-tolerant performance when you need it most. Lightweight and compact, they provide the peace-of mind you need, when long life and battery service are required.

EDC 750W DC/DC Converters

Enedo EDC DC/DC converters are modular DC to DC power conversion solutions with N+1 redundant configuration for the critical infrastructure applications. Modular Converter system is ideal solution to provide secured secondary DC voltages converted from the station main battery system voltage. EDC converters can be supplied from any nominal battery system 48-220VDC and all nominal outputs from 12VDC up to 125VDC are available.

FINLAND
Enedo Oyj (HD)
Martinkyläntie 43
01720 Vantaa
Finland

+358 9 478 466
info@enedopower.com

Enedo Finland Oy
Martinkyläntie 43
01720 Vantaa,
Finland

+358 9 478 466
info@enedopower.com

ITALY
Enedo SpA
Via Ancona 59
60027 Osimo (AN),
Italy

+39 071 721 461
info@enedopower.com

USA
Enedo Inc.
66 Ford Road, Suite 213B
07834 Denville – NJ,
United States

+973 957 0055
info@enedopower.com

TUNISIA
Enedo Sarl
36, Rue 8601 Z.I.
2035 Charguia,
Tunisia

+216 71 770 386
info@enedopower.com

www.enedopower.com