CZECH BATTERY ENERGY STORAGE

ENERGY UNDER CONTROL

- Protection against micro-outages
- Peak shaving (reducing demand peaks)
- Storage of energy from PV systems
- Energy cost savings through smart control
- Backup power source
- Power balancing services

WHO WE ARE

Based in Otrokovice, we are a purely Czech company specializing in the development and manufacture of battery energy storage systems and other components for photovoltaic (PV) power plants.

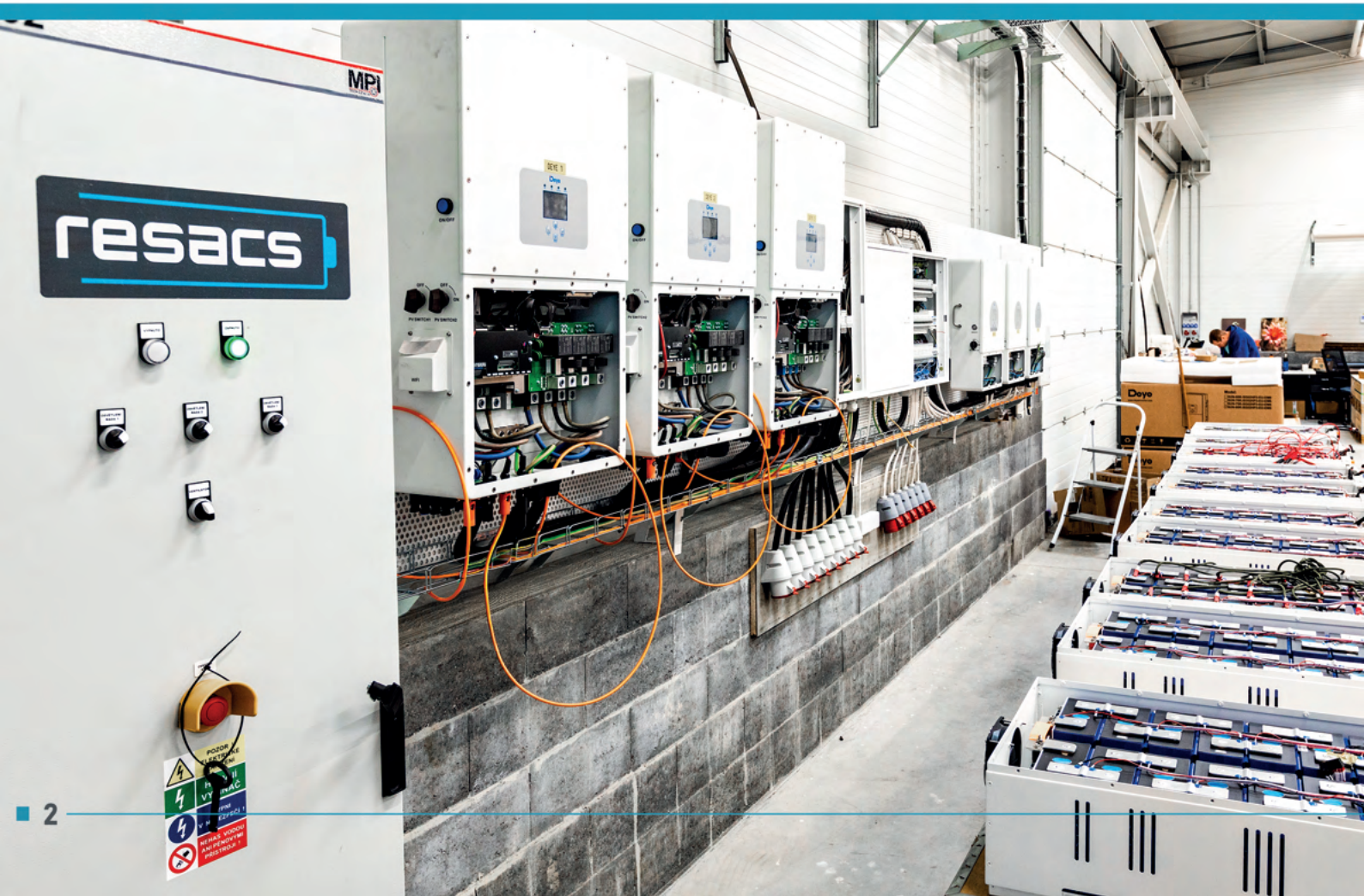
Our greatest asset is an amazing team of top technicians with extensive knowledge and experience. Each team member will be more than happy to advise you on selecting the best solution for you, as well as providing expert advice on its installation.

As a Czech manufacturer, we provide comprehensive consulting, administrative, installation, and service solutions across Central Europe. Remote monitoring 24/7 is standard. We prioritize safety in every respect, which is why we store all of our customer data on our own servers securely located within the EU.

Our primary focus has always been the safety of our products. We are continuously improving our technical solutions, craftsmanship, and design. Every year we introduce a new product line and further innovations. We are really proud of our smart system control — an in-house AI-based software solution which allows our battery energy storage systems to optimize energy flows.

We want all systems that incorporate our batteries to operate flawlessly. To achieve this, we provide regular free training for all our implementation partners as an integral part of working with Resacs.

Resacs offers battery energy storage systems suitable for family homes, apartment buildings, companies, municipalities and energy providers. Installations are possible both indoors and outdoors.



Ultimate safety

- Temperature monitoring — if a battery operates outside of the recommended range (5 to 30 °C), the customer is automatically notified.
- Thermal fuse on every cell connection — a new feature where the system automatically limits battery performance (current) at 60 °C, ensuring safe and continuous operation without a complete shutdown.
- Fire suppression at 90 °C — if the temperature reaches 90 °C, the system releases an extinguishing agent into the enclosure to displace oxygen and cool the battery.
- Optional lithium gas detection — available in cooperation with Honeywell.
- Outdoor units — can be monitored by CCTV and connected to a central monitoring station (ARC).

Czech company = guarantee of quality service

- Service support across Central Europe.
- Remote monitoring 24/7.
- All customer data is stored on our own servers within the EU.
- Warranty and post-warranty service.
- Detailed annual remote check of battery energy storage system parameters as part of the service package.
- Immediate online system diagnostics.
- Possibility to replace individual components, including cells.
- All spare parts always held in stock.

Smart battery = cost savings

- AI-based software can control multiple energy sources and appliances to optimize electricity costs.
- Trading on the SPOT market using sophisticated mathematical algorithms.
- Longer battery life thanks to the Energy Management System (EMS), which ensures ideal operating conditions for the cells.

HOME BATTERIES FOR PHOTOVOLTAIC POWER PLANTS

Resacs battery modules (12 to 17.5 kWh) are designed as low voltage (LV) solutions at 51.2 V, making them suitable for both family houses and apartment buildings.

- Flexible intercell connectors allow for the replacement of individual cells.
- The home battery includes smart control, saving costs on additional control devices. The Rebox Slave unit, when installed in a distribution board, can control up to 4 inputs and outputs.
- Every battery is tested before shipment.
- Four levels of protection ensure maximum safety.
- Czech company = guarantee of quality service.
- Online monitoring enables oversight of the home PV system operation and remote analytics.
- High-quality A-grade cells with a guaranteed cycle count of 8,000 allow Resacs batteries to achieve a service life of 15 to 20 years.

Designation	NX3	ZX3	WX3	GX3	JX3	H-GX3	H-JX3
Maximum capacity (kWh)	12	15	17,5	75	87,5	75	87,5
Recommended usable capacity	80%	80%	80%	80%	80%	80%	80%
Maximumcharging/discharging current (A)	115	140	150	700	750	140	150
Maximum peak current (A)	200	200	200	1000	1000	200	200
Guaranteed capacity after 10 years				min. 60 % *			
Guaranteed cycle count	6000	6000	8000	6000	8000	6000	8000
Standard voltage (nominal) (V)	48 (51,2)			240 (256)			
Recommended SOC range				20 – 100 %			
Operating temperature				10 °C – 25 °C			
Storage temperature				0 °C – 45 °C			
Relative humidity for operation and storage				30–70%			
Weight (kg)	95	105	105	750	750	700	700

* based on the nominal capacity of the used battery cell type

INDOOR BATTERY ENERGY STORAGE SYSTEMS

Our battery systems in both low-voltage and high-voltage configurations deliver reliability, high performance, and long service life for businesses. Thanks to easy scalability, multi-level protection, and remote monitoring, they represent a smart solution for cost reduction and energy stability.

Elimination of outages and micro-outages

Thanks to the fast inverter response time, there is no disruption to the operation of electronic equipment (computers, CNC machines, production lines).

Storing PV energy

The ability to delay the consumption of energy produced from PV for a later time when it is needed.

Peak shaving

(PEAK SHAVING) balances sudden load spikes. This results in cost savings by reducing the reserved power capacity.

AI-based smart control

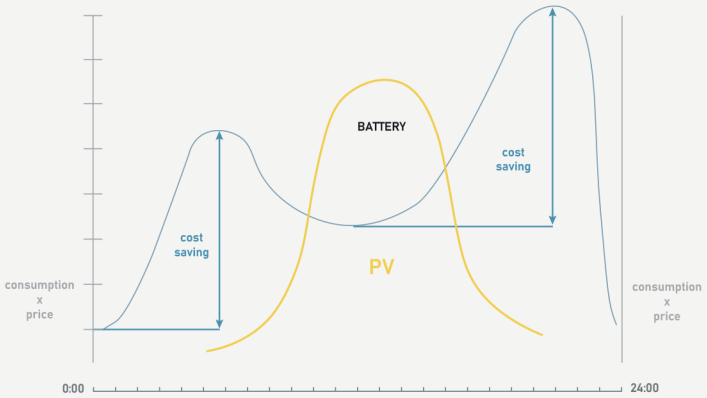
Manages energy flows based on consumption, PV production, SPOT prices, and forecasts.

AC Coupling

Supports connection of existing grid-tied PV inverters and Deye hybrid inverters. Allows connecting a battery with an inverter to any grid-tied PV inverter.

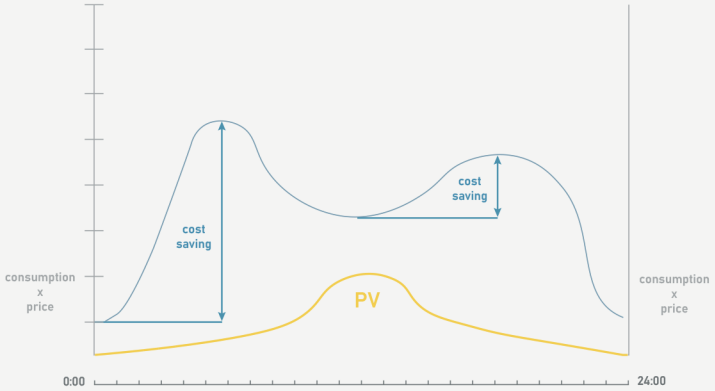
Thanks to top-quality cells with a guaranteed cycle count of 8,000, Resacs batteries achieve a service life of 15 to 20 years.

Summer



Thanks to smart control, Resacs battery energy storage systems save on electricity costs in two ways. First, when storing electricity produced by your PV for later use. Second, when utilizing price differences throughout the day.

Winter



Although PV doesn't produce much energy in winter, the battery can still generate profit. Smart control helps you reduce costs all year round.

Typical power & capacity configurations

- 30 kW + 75 kWh
- 50 kW + 122,5 kWh
- 50 kW + 150 kWh
- 80 kW + 175 kWh
- 100 kW + 240 kWh

OUTDOOR BATTERY ENERGY STORAGE SYSTEMS

Our high-capacity battery energy storage systems are an ideal solution for local distribution networks, industrial sites, charging stations, and renewable energy plants. They reduce energy costs, enable self-consumption of stored energy, eliminate micro-outages, and limit power peaks. They also provide support and stabilization services for the transmission grid.

Systems include inverters, battery modules in rack cabinets, an LV distribution board with an optional transfer switch, air conditioning, fire suppression systems, IP cameras, and an EMS control and monitoring system.

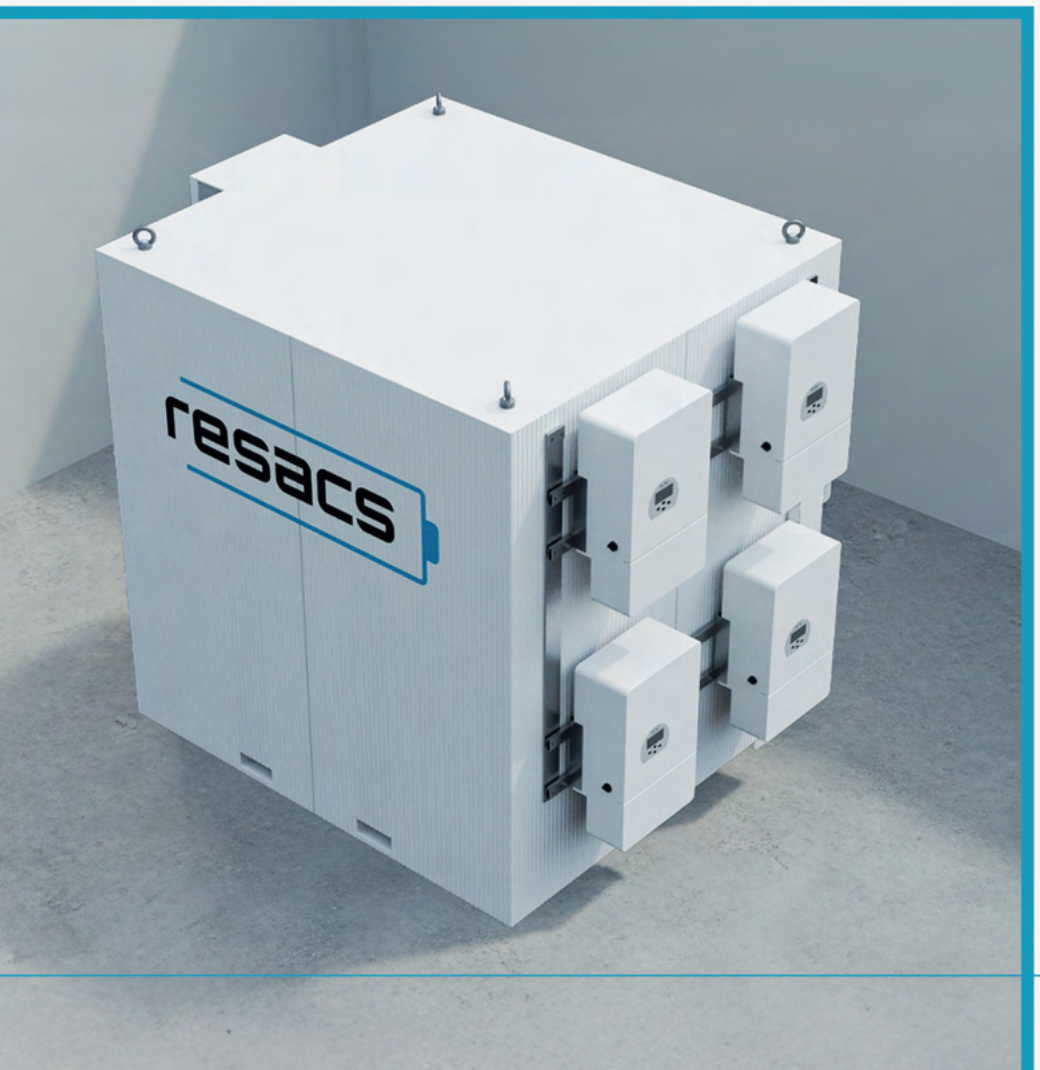
Common uses of containerized storage

- **Self-consumption, surplus management, and shifting PV production in time**
  The ability to delay the consumption of energy produced from PV for a later time when it is needed.
- **Backup**
  Provides the ability to back up a portion of or the entire site's consumption so that in the event of a power outage, the backed-up portion continues to be powered from batteries.
- **Elimination of outages and micro-outages**
  Thanks to the fast inverter response time (from approx. 4 ms).
- **AC Coupling**
  Supports the connection of existing grid-tied PV inverters and Deye hybrid inverters. Allows connecting a battery with an inverter to any grid-tied PV inverter.
- **Peak shaving**
  Balances sudden load spikes, reduces the maximum drawn power, and results in cost savings, especially in energy-intensive operations such as large production sites.
- **SPOT trading with AI-based smart control**
  Involves selling surplus energy to a trader or buying electricity at low spot prices that vary throughout the day based on supply and demand.

Unique features

- Outdoor inverter placement and 100 mm thermal insulation reduce internal heating/cooling consumption.
- 30-minute fire resistance simplifies the permitting process within the fire safety solution (FPD).
- Standard air conditioning enables accessible, trouble-free service.
- Modular expandability for easy power and capacity increase.
- The distribution board is part of the system, which reduces installation costs.
- 24/7 monitoring — voltage, internal resistance, and temperature monitoring at the cell level. CCTV and the option to connect to a security service.
- Autonomous fire suppression system with no need for periodic inspection.
- Optional Honeywell lithium vapor detection system.

Thanks to top-quality cells with a guaranteed cycle count of 8,000, Resacs batteries achieve a service life of 15 to 20 years.



Common configurations

- 50 kW + 120 kWh
- 100 kW + 240 kWh
- 160 kW + 360 kWh
- 200 kW + 480 kWh
- 240 kW + 540 kWh
- 320 kW + 672 kWh

HOW A BATTERY STORAGE DELIVERY PROCEEDS

1 Analysis

We map your operation, energy consumption, and business goals in detail to determine the most effective solution and the best cost savings.

2 Solution design

Based on the gathered data, we prepare a technical design tailored to your site and provide a transparent price offer.

3 Project documentation

We supply all documentation required for legal permits and approvals, saving you from complex administration.

4 Implementation (delivery)

After your approval, we proceed to the manufacture and delivery of the battery energy storage system — exactly according to the agreed parameters.

5 Commissioning and testing

Complete installation, connection, and thorough testing to ensure the system is fully ready for operation without the risk of outages.

6 Grid connection

We handle all formalities and technical steps required for a successful grid connection.

7 Remote supervision

After startup, we continuously monitor the system, optimize its performance, and promptly address any deviations.

8 Service for the lifetime

Full warranty and post-warranty support — your investment is protected for the entire lifetime of the battery energy storage system.

DIRECTENERGY

9 Electricity supply from Direct Energy

Direct Energy offers the most advantageous tariff: SPOT + 190 CZK/MWh (sale) and SPOT - 250 CZK/MWh (buyback).

10 Energy flow optimization with smart control

Predictive modelling of consumer usage patterns, spot electricity price trends, and onsite power generation (typically PV, cogeneration, etc.). Thanks to smart control, users save 8–15% on electricity costs.

Battery safety features

1 Automatic maintenance-free fire suppression

- Activates at 90 °C.
- Releases extinguishing agent and prevents fire spread.

2 Resettable thermal safety fuse on every cell connection

- Monitors the temperature of each individual cell.
- Automatically limits battery current at 60 °C.

3 Flexible cell connectors

- High resistance to shocks (e.g., during transport).
- Allows for easy replacement of individual cells.
- Accommodates cell volume changes during charging/discharging.

4 Battery Management System (BMS)

- Ensures reliable operation and long life of the battery energy storage system.
- Actively balances cells for higher performance and safety.
- Monitors key parameters and evaluates operational data.

Proprietary EMS

- Smart battery control.
- SPOT market trading using AI.
- Remote monitoring and diagnostics 24/7/365.
- Data stored on our own secure servers in the EU.

Preferred compatible inverters for Resacs LV batteries

Deye solis victron energy BLUE POWER

Other compatible inverters

PYLONTECH GOODWE GROWATT SRNE

SMA TBB POWER MUST MEGAREVO invt

TYPICAL BATTERY USE CASES

PV without a battery makes no sense

The primary role of a battery energy storage system is to store energy surplus (especially PV) for later use.

Spot trading

Utilizing electricity price differences throughout the day.

Micro-outages and backup

Resacs systems can cover micro-outages and act as temporary backup; hybrid inverters respond in under 10 ms, preventing interruptions to computers and sensitive industrial machines.

Peak Shaving

Cover demand peaks with stored energy to reduce power charges.

E-mobility

Improve EV charging comfort at sites with limited grid capacity; charge vehicles when PV is not producing.

Grid stabilization

An undoubted advantage of battery storage is a very fast response for power balancing services, both positive and negative.

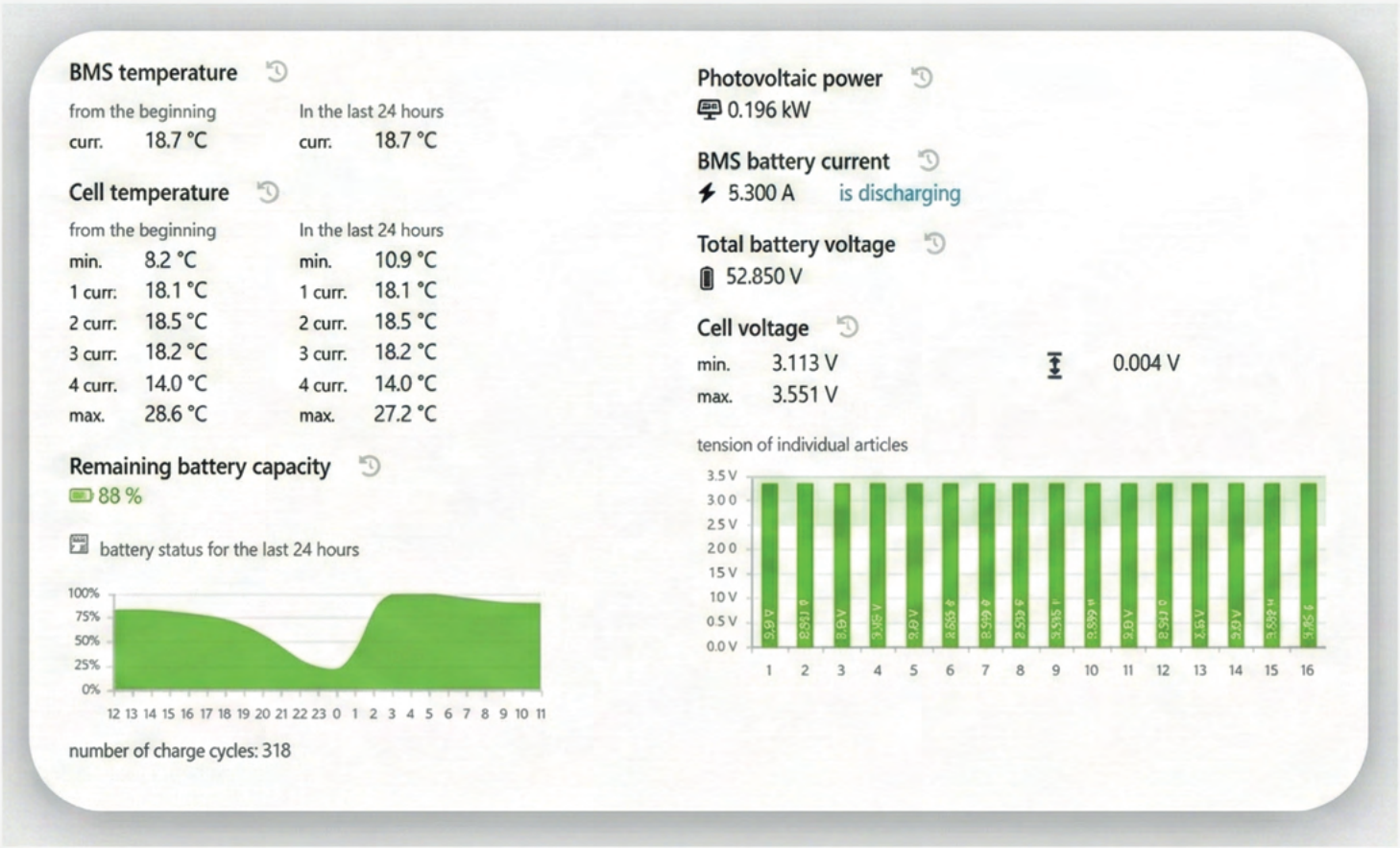
The brain of Resacs batteries

The brain of Resacs batteries is the EMS (Energy Management System) control unit with our unique software.

Our EMS actively controls the battery energy storage system, and selected inverter types with open communication protocols (e.g., DEYE, Solis, Sinexcel).

The Rebox unit provides monitoring down to individual cell level, enabling a 24/7 premium service and diagnostics.

Rebox also offers additional functions without the need for additional hardware and can integrate with higher level systems (e.g., Energo Machine, Direct Energy, dispatch control).



Thanks to the EMS system, the Resacs battery monitors the status of individual cells to prevent excessive wear.

Alcadrain s.r.o.

The installation at the Alcadrain s.r.o. production facility in Břeclav includes the delivery of a containerized battery energy storage system using a 500 kW Sinexcel inverter and a total system capacity of 1,080 kWh. The solution is integrated into the facility's energy system via the iRebox EMS, which optimizes energy flow between the PV plant, the battery, and the consumption point in real time. The system stores PV surplus and allows for its controlled use during periods of higher energy prices. The battery also enables the leveling of demand peaks (peak-shaving), which reduces the maximum quarter-hourly load and associated distribution fees. The system supports trading on the spot market; based on price signals and operational parameters, economically managed charging and discharging of the battery can be performed. The result is a robust solution for reducing electricity costs and efficient energy management in industrial operations.

Volvo Truck Center (Slovakia)

Volvo Group Slovakia, s.r.o. uses four 150 kWh blocks (600 kWh total) and a power section of 4 x 72 kW (288 kW total) at its facilities. The battery energy storage system primarily serves to store PV surpluses, optimize energy for self-consumption, and ensure uninterrupted operation during micro-outages and grid failures. Safety features keep the operation under control and provide transparent real-time diagnostics. The result is a reliable solution that reduces energy costs, stabilizes power supply, and effectively utilizes every generated kilowatt-hour.

Jiří Bláha Bakery and Confectionery

The implementation for this operation in Liberec utilizes a battery energy storage system with a capacity of 700 kWh and a power output of 200 kW, designed for the stable operation of energy-intensive production. The control system stores surpluses from the solar power plant in real time and plans economic charging/discharging according to spot market prices. Thanks to the fast power section, the battery energy storage system reliably eliminates micro-outages and grid failures (UPS function) so that lines and technology run without interruption. The system provides remote supervision and permanent transparent diagnostics. The result is a reliable, efficient solution that maximizes the use of own electricity, reduces costs, and protects production continuity.

Bernhardt Fashion CZ, s.r.o.

The implementation for Bernhardt Fashion represents an indoor battery energy storage system with 400 kW power and 768 kWh capacity installed in Prostějov. The solution is fully integrated with photovoltaics supplied by EQUANS Services a.s. The intelligent EMS from Direct Energy stores surpluses from PV in real time, shifts energy usage over time, and thus maximizes self-consumption. The system simultaneously provides an operational backup during power outages and, thanks to the connection to spot market price signals, automatically plans charging and discharging to achieve optimal economic results. The result is a stable, efficient, and clearly managed energy infrastructure for industrial operation.

CONTACT

Regular training

Want to know more about Resacs batteries? Join our regular free training sessions.

Learn about:

- Correct design of PV systems and battery energy storage systems with a focus on smart control.
- Experience using low-voltage hybrid inverters (Deye, Victron, Solis, etc.).
- System safety focusing on battery energy storage systems.
- Remote monitoring for battery energy storage system service.
- Advantages of Czech batteries with Czech service and EU-stored data.

Register here

Sales

Tel: **+420 773 305 498**

Email: obchod@resacs.cz

nám. 3. května 1569,
765 02 Otrokovice
Mon-Fri: 7:00 - 12:00, 13:00 - 15:30

OBCHODNĚ-TECHNICKÝ KONZULTANT	TELEFON	E-MAIL
Radim Burkot	+420 776 193 156	radim.burkot@resacs.cz
Jan Lesák	+420 775 221 763	jan.lesak@resacs.cz
David Potůček	+420 777 852 810	david.potucek@resacs.cz
Jan Holčák	+420 774 439 095	jan.holcak@resacs.cz
Dušan Gamčík	+421 905 239 141	dusan.gamcik@resacs.cz
Radoslav Nedorost	+421 905 894 202	radoslav.nedorost@resacs.cz
Rastislav Klempa	+421 911 766 033	rastislav.klempa@resacs.cz

Production & Warehouse

Objízdná 1980, 765 02 Otrokovice

Headquarters

Resacs s.r.o., tř. Osvobození 175, 765 02 Otrokovice

IČO: 09306480, DIČ: CZ09306480
File Reference: C 118361, registered with the Regional Court in Brno

Customer Support

Tel: **+420 608 905 500**

Email: servis@resacs.cz

Mon-Fri: 7:00 - 12:00, 13:00 - 15:30

International presence

Deutschland

Tel: **+49 151 158 707 16**

Email: sales@resacs.de

Web: www.resacs.de

Polska

Tel: **+48 601 145 190**

Email: sales@resacs.pl

Web: www.resacs.pl

Österreich

Tel: **+43 650 951 8892**

Email: sales@resacs.at

Web: www.resacs.at