

THE PERFORMANCE BATTERY

CEL:3050



Carbocap Technology

A strong technology

The term Carbocap Technology describes the CO₂ reduction by the storage system. The advantages cited above make the technology particularly sustainable due to its long service life. CO₂ emission (informally carbon) is capped, hence the name Carbocap Technology.

FEATURES

- ✓ Safe:
 - non-combustible*
 - non-flammable*
- ✓ Sustainable
- ✓ Wide temperature range (-30 °C to +50 °C)
- ✓ High C-rate
- ✓ Cycle stability – multiple cycles a day are possible
- ✓ 20,000 cycles

*) In accordance with UL-1973

Safety

In a Carbocap storage system the lithium ions cannot react with the electrode, even in the event of mechanical damage – this means that thermal runaway is not possible. Carbocap is a safe technology, which is neither combustible nor flammable.

Storage technologies compared

	Carbocap Technology	Lithium-ion battery	Salt water battery	Lead-acid battery
System service life	●	●	●	◐
Maintenance-free	●	●	●	◐
Partial charge state	●	●	●	○
Temperature range	●	◐	◐	○
Safety	●	◐	●	◐
Sustainability	◐	◐	●	○
Recyclability	○	○	●	◐
Energy density	●	●	◐	◐
Power	●	●	◐	◐
Through-life costs	●	◐	◐	○

Legend: ● Very good ◐ Medium ○ Low

Overview

CEL-3050 product features at a glance

- ✓ Ready-to-connect indoor electricity power storage with Carbocap Technology
- ✓ Wide temperature range from -30 °C to +50 °C
- ✓ Efficient power storage
- ✓ Scalable from 6 to 20 kWh
- ✓ High-quality EMS incl. pooling with Vigos and/or GREENROCK storage systems



ADVANTAGES

- ✓ Ready-to-connect complete system with Carbocap Technology
- ✓ Mains parallel operation, emergency power, island operation and black-start capable
- ✓ High charging and discharging capacity
- ✓ Up to 20,000 cycles
- ✓ Temperature range from -30 °C to +50 °C
- ✓ 10-year warranty
- ✓ Non-flammable*
- ✓ Non-explosive*
- ✓ Sustainable

*) In accordance with UL-1973

Advantages for our certified partner companies:

- ✓ One contact person and solutions for various areas of application
- ✓ Broad product portfolio from a single source
- ✓ Installation and connection are based on the proven BlueSky Energy storage systems
- ✓ Short familiarisation period due to already established cooperation
- ✓ Safety and sustainability are important to us.
- ✓ Carbocap Technology scores well here.

System sizes

A lot of power in a little space

Single-phase	6 kWh	8 kWh	10 kWh	12 kWh	14 kWh	16 kWh	18 kWh	20 kWh
Discharge power	2.4 kW	2.4 kW						
C-rate Discharge	0.40	0.30						
Discharge power	4.0 kW	4.0 kW	4.0 kW	4.0 kW	4.0 kW	4.0 kW	4.0 kW	4.0 kW
C-rate Discharge	0.67	0.50	0.40	0.33	0.29	0.25	0.22	0.20

DC coupling for off-grid operation and black start to 4 kW possible.

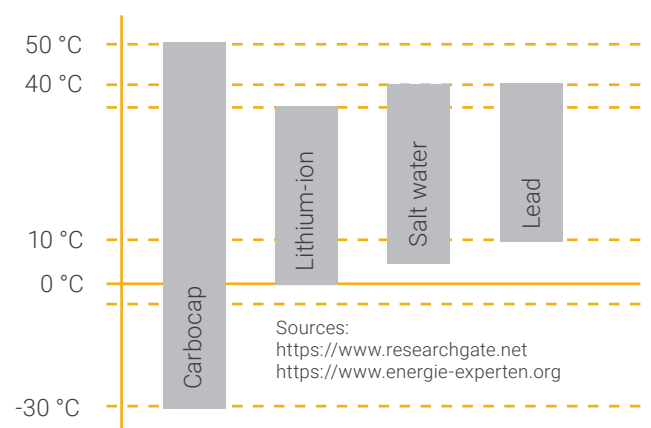
Three-phase	6 kWh	8 kWh	10 kWh	12 kWh	14 kWh	16 kWh	18 kWh	20 kWh
Discharge power	7.2 kW	7.2 kW	7.2 kW	7.2 kW	7.2 kW	7.2 kW	7.2 kW	7.2 kW
C-rate Discharge	1.20	0.90	0.72	0.60	0.51	0.45	0.40	0.36
Discharge power		12 kW	12 kW	12 kW	12 kW	12 kW	12 kW	12 kW
C-rate Discharge		1.50	1.20	1.0	0.86	0.75	0.60	0.60

DC coupling for off-grid operation and black start to 12 kW possible.



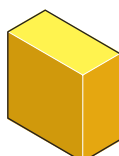
Interior view Cel-3050 10 kWh three-phase

Wide temperature range

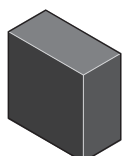


Dimensions

Connection box: TBH
45 x 90 x 90 cm

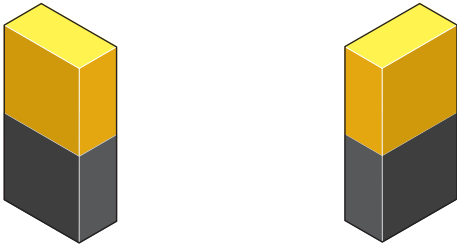


Battery unit:
45 x 90 x 90 cm

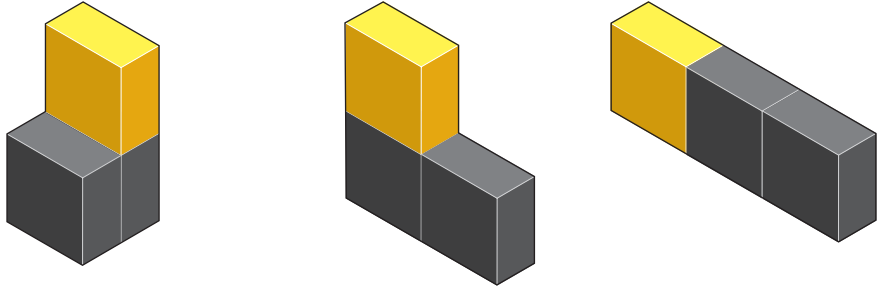


Installation options

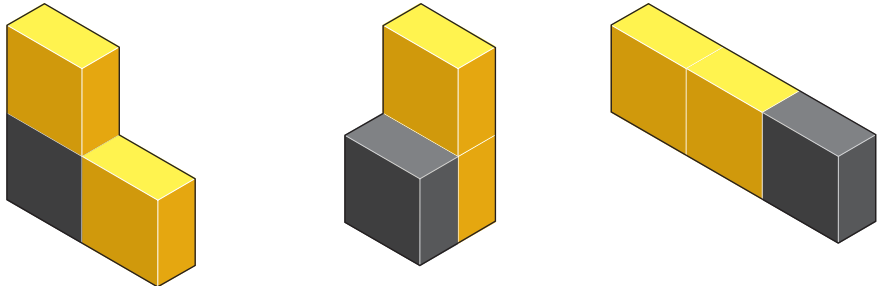
Single-phase:
 1 connection box
 (1 inverter)
 6 kWh – 10 kWh



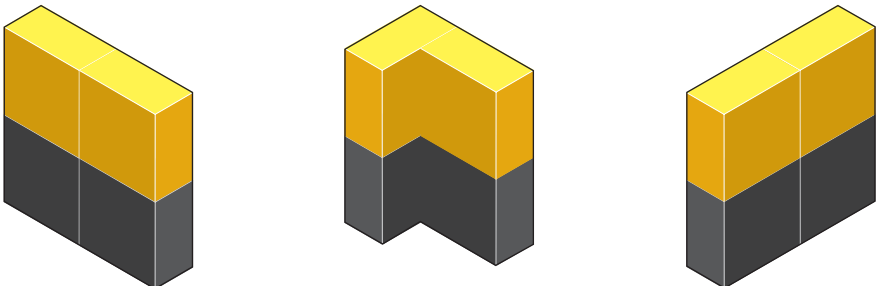
Single-phase:
 1 connection box
 (1 inverter)
 12 kWh – 20 kWh



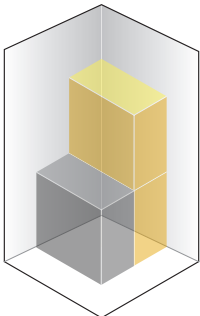
Three-phase:
 2 connection boxes
 (3 inverters)
 6 kWh – 10 kWh three-phase



Three-phase:
 2 connection boxes
 (3 inverters)
 12 kWh – 20 kWh three-phase



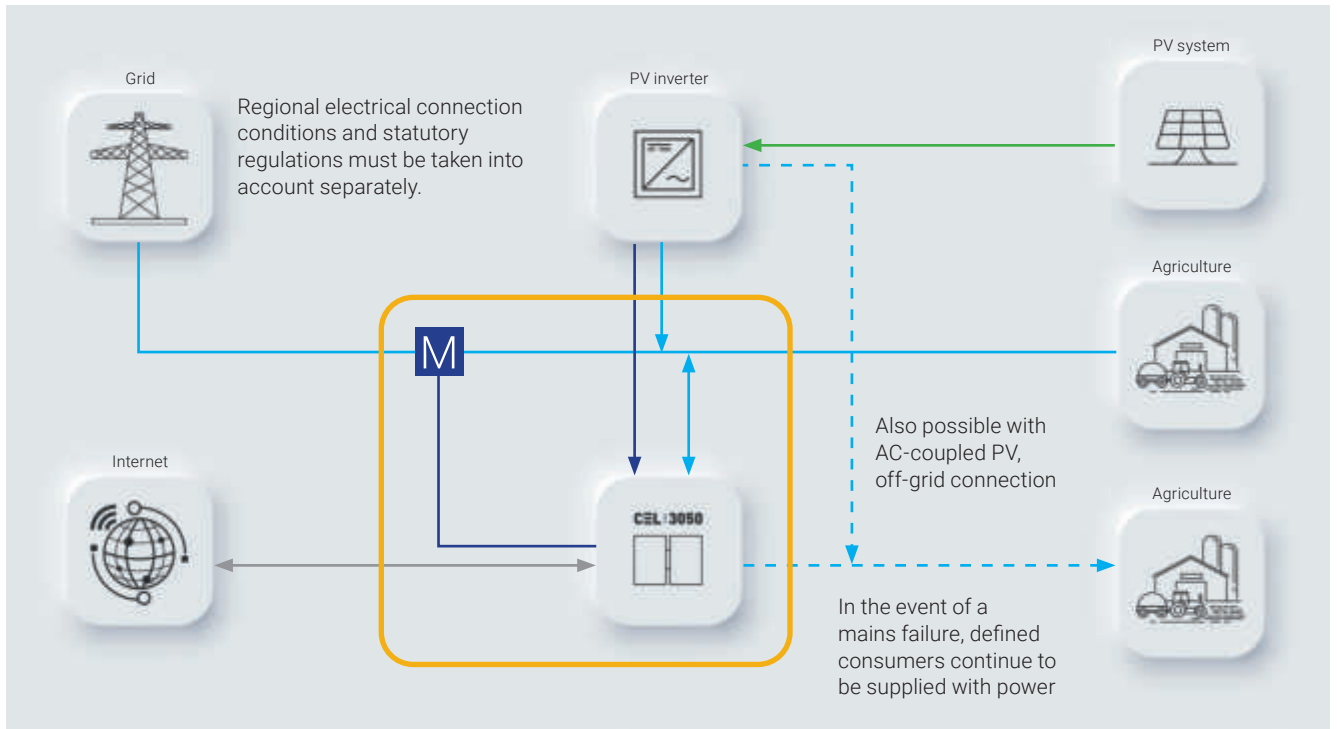
Housing components are supplied for corner installation.
 Example Figure



Schematic diagrams

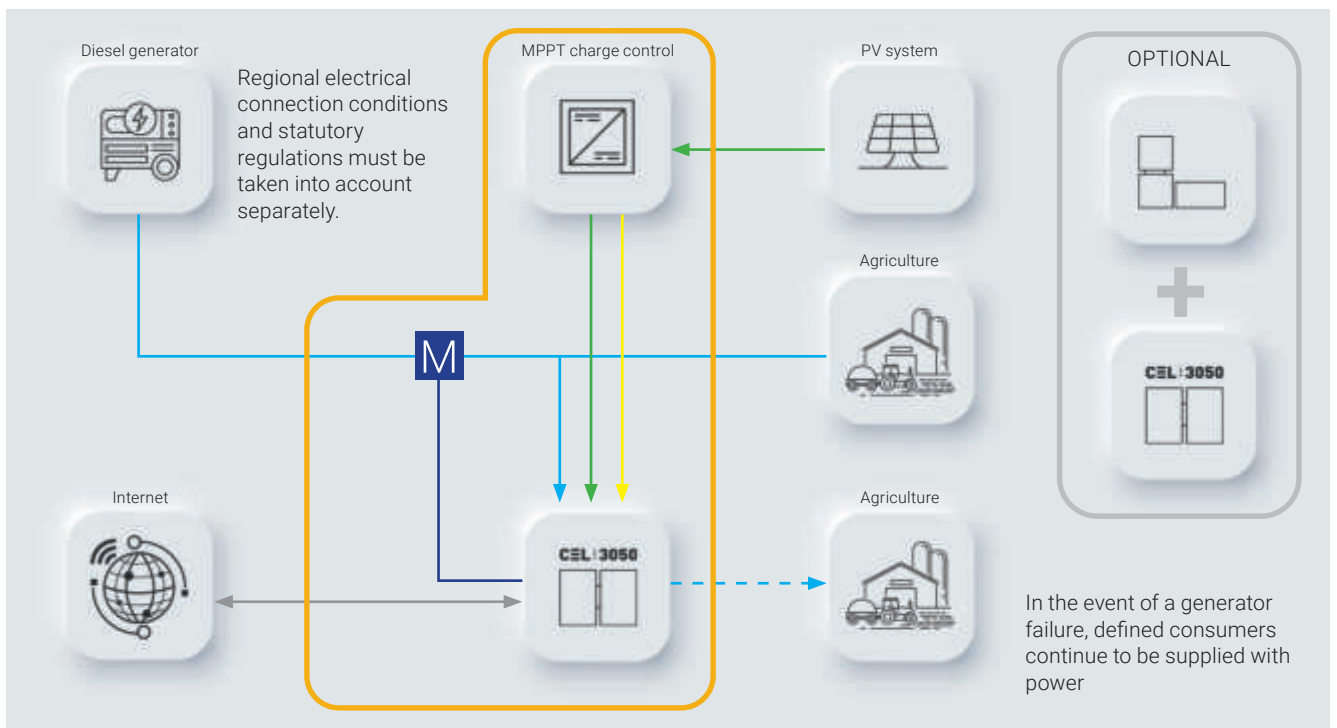
System circuit diagrams

Connection options: AC-coupled self-consumption optimisation



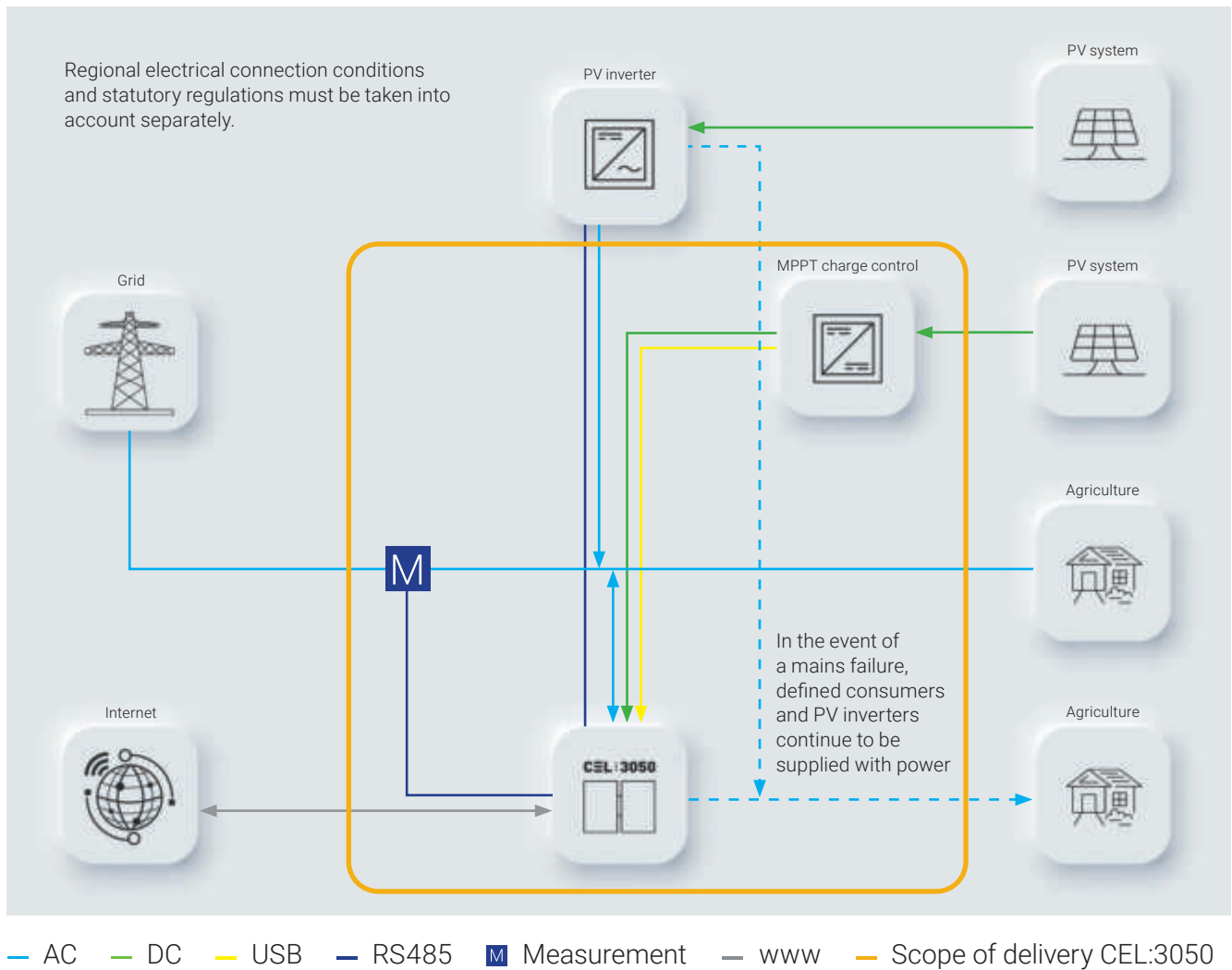
— AC — DC — RS485 **M** Measurement — www — Scope of delivery CEL:3050

Connection options: DC-coupled island mode with generator



— AC — DC — USB — RS485 **M** Measurement — www — Scope of delivery CEL:3050

Connection options: AC + DC coupled self-consumption optimisation



Peak load capping using the example of agriculture

Dairy farming is carried out on this farm in Austria. In the morning at 5.00 a.m. load peaks occur due to the simultaneous start of milking, feeding and manure removal systems. After undergoing modernisation, new and larger systems are now being used on the farm, and these require more power. This early in the morning, the PV modules facing east only provide support in the months of June to August. Cel-3050 covers the load peaks from the storage. The farmer can choose a favourable grid tariff despite peaks. He saves the costs of expanding the grid supply and stays with his household tariff.





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Contact:

Stamp / business card

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