

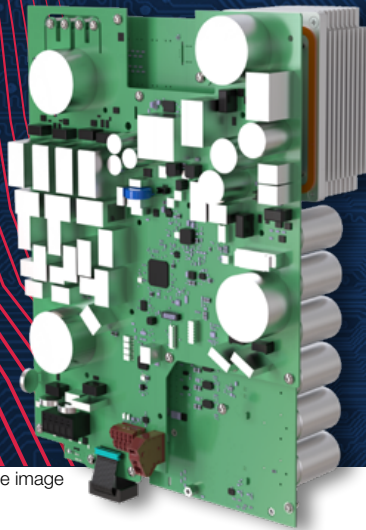
## PRE-DEVELOPMENT PROJECT

Be a lead customer or tester and design the HV DC/DC Dual Active Bridge together with us.

KOSTAL

KOSTAL<sup>ize</sup>

your power



Example image

## KOSTAL DC/DC Converter HV Dual Active Bridge (5.5 kW)

### More than E<sup>2</sup>MS -

### Your specialist for complex customer requirements

KOSTAL Electronic Solutions is your partner for control and power electronics - made in Germany. Benefit from the established development, quality and production technologies of the KOSTAL Group with over 110 years of experience. Discover our broad product portfolio for power electronics. In addition to on-board chargers and wallboxes for electromobility and inverters for PV systems, we also offer high-performance DC/DC converters for fuel cell applications.

The KOSTAL HV DC/DC Dual Active Bridge is the perfect solution for complex fuel cell application systems. Together with our inverter, KOSTAL PLENTICORE G3, it offers three different connection options in one piece of hardware (LV-/HV battery emulation, PV emulation), is modular and scalable. The DC/DC converter can be easily integrated into 19-inch rack systems and is therefore perfect for trailer, container or control cabinet solutions. Discover the numerous possibilities and let us find your customised solution together.

#### Green Power by KOSTAL

KOSTAL is actively shaping the energy revolution with products such as wallboxes and on-board chargers, PV inverters and DC/DC converters for hydrogen.

#### Maximum compatibility

The KOSTAL DC/DC converter is ideally suited for applications in trailer, container or control cabinets and 19-inch rack systems.

#### Solar meets Hydrogen

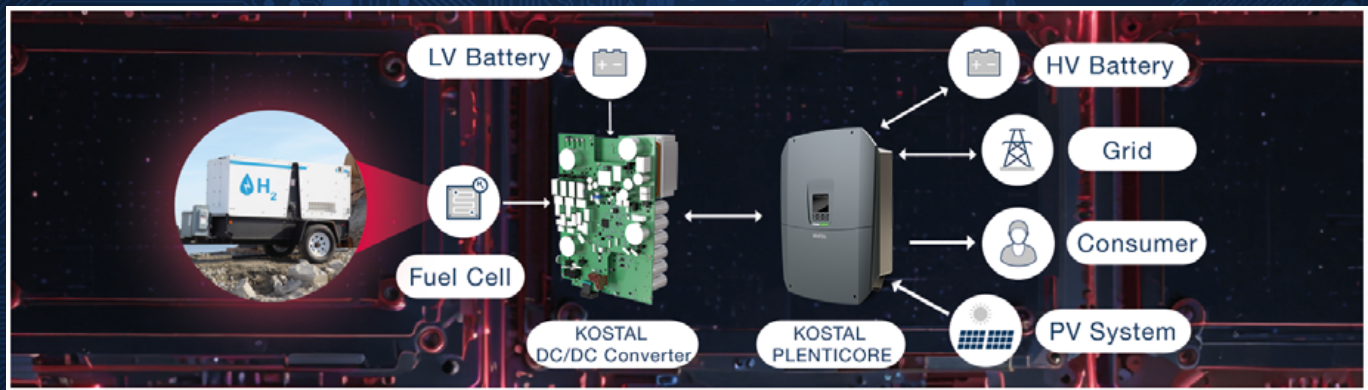
Expansion of PV systems with innovative DC/DC converters for the connection between the hydrogen line and the fuel cell system..

### Large selection of features

- ⊕ Converter topology: Dual Active Bridge
- ⊕ Powered by KOSTAL: E-Mobility, PV, Hydrogen
- ⊕ Inverter extension with H<sub>2</sub> connection
- ⊕ Three different connection options in the fuel cell system
- ⊕ Synchronised parallel operation of several converters
- ⊕ Scalability from 1 to 4 devices (5.5 to 22 kW)
- ⊕ Thermal monitoring and power regulation
- ⊕ Suitable for trailer and container solutions
- ⊕ Preset standard parameters
- ⊕ Simple integration into customer system
- ⊕ Can be integrated into 19-inch control cabinets
- ⊕ Simple, individual configuration
- ⊕ Fast commissioning
- ⊕ Compatible with all LV and HV battery systems

The heat sink of the KOSTAL DC/DC Converter can be specified according to individual customer requirements.

## Technical data



**KOSTAL DC/DC Converter HV Dual Active Bridge**

System data	Nominal power	5.5 kW
	Input voltage range [ $V_{DC}$ ]	48 - 120
	Input current range [ $A_{DC}$ ]	0 - 120
	Output voltage range [ $V_{DC}$ ]	200 - 650
	Output current range [ $A_{DC}$ ]	0 - 30
	Peak efficiency (fuel cell 30 V, 48 V Bat)	TBD
	Topology	Dual Active Bridge
	Scalable modules	1 to 4 (5.5 to 22 kW)
	Cooling	Can be integrated into application systems with air cooling and water cooling
	Galvanic isolation	Yes
Functions	Fuel cell power ramp	Yes
	Synchronised parallel operation of several converters	Yes
	Automatic master / slave detection	Yes
	Update via bootloader	Yes
	Autonomous operation via digital IO	Yes
	Fully configurable via a dedicated parameterization tool	Yes
	Compatible with all LV battery systems < 60 V	Yes
Protective functions	Compatible with all HV battery systems > 200 V	Yes
	Fuel cell: undervoltage, overcurrent	Yes
	Battery: overvoltage/undervoltage, overcurrent	Yes
	Reverse current detection	Yes
	Power limitation	Yes
Ambient conditions	Thermal monitoring and power control	Yes
	Ambient temperature [°C]	-20 to +60
	Storage temperature [°C]	-40 to +80
	EMC	Prepared for DIN EN 61000-6-1, DIN EN 61000-6-2, DIN EN 61000-6-3, DIN EN 61000-6-4 Note dependence on customer application.
	Installation height	Up to 2,000m
	Relative humidity	Up to 95% - condensation not permitted
Misc.	Mechanics, communication, additional (protective) functions	TBD
	Project type	Pre-development project
	Availability	Q2, 2025 (prototype)

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