KOSTALize

your power

KOSTAL DC/DC Converter

More than E²MS –
Your specialist for complex customer requirements

KOSTAL Electronic Solutions is your partner for control and power electronics – made in Germany. Benefit from established development, quality and production technologies from the KOSTAL Group, with over 110 years of experience.

The KOSTAL DC/DC converter ensures high levels of energy efficiency, is environmentally friendly and can be used in a wide range of applications, including yours.

Efficient and environmentally friendly: The KOSTAL DC/DC converter's high level of efficiency minimises energy losses, ensuring sustainable energy conversion.

Versatile: The DC/DC converter from KOSTAL enables the use of various devices and systems that require different voltage levels, covering a diverse range of applications.

Reliable and consistent: The KOSTAL DC/DC converter is able to keep the output voltage stable if there are changes in the input voltage or the load, ensuring a reliable and consistent power supply.

Wide range of features

- Scalability of 1-5 devices / 2.1 kW - 10.5 kW
- Compatible with all battery systems < 60 V
- Can be integrated into 19" systems
- Wide input voltage range from 10 V to 30 V
- Efficiency of up to 97.5%
- Standardised cold plate
- Simple integration in customer system
- Converter topology: Boost converter

- Communication via RS-485 and CAN (optional)
- Preset default parameters
- Simple, individual parameterisation
- Rapid commissioning
- Battery reverse polarity protection and spark-free terminal connection
- Thermal monitoring and performance regulation
- Synchronised parallel operation of multiple converters

The KOSTAL DC/DC converter's cooling elements can be specified according to individual customer requirements.

Technical data

Possible application in fuel cell systems

GAS → FUEL CELL → KOSTAL DC/DC Converter → BATTERY → CONSUMER

	KOSTAL DC/DC Converter	
Electrical data	Maximum fuel cell power	2.1 kW
	Input voltage range [V_{DC}]	10 - 30*
	Input current range [A_{DC}]	0 - 70
	Output voltage range [V_{DC}]	18 - 60*
	Peak efficiency level (FC 30 V, 48 V bat)	97.5 %
Functions	Circuit structure	Synchronous converter/boost converter (due to the converter topology, the voltage at the input must always be lower than at the output)
	Protective function	Fuel cell undervoltage, battery over/undervoltage, fuel cell overcurrent, battery overcurrent, reverse current detection, power limitation, thermal monitoring and power regulation, spark-free terminal connection, battery reverse polarity protection (if battery voltage + stack voltage < 80 V)
	Functions	Fuel cell current ramp, synchronised parallel operation, automatic master/slave detection, update capability via bootloader, autonomous operation via digital IO, complete configurability with parameterisation tool
Mech. data	Dimensions L x W x H	290 x 150 x 45 mm
	Weight including cold plate	2 kg
	Protection class	IP 00
Environmental conditions	Ambient temperature [°C]	-20 (without condensation) 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 and DIN EN 61000-6-4 Observe the dependency on the customer application
	Altitude of the installation location	Up to 5000 m
	Relative air humidity	≤ 95 %, condensation not permitted

		RS-485	CAN	Hardware enable/ hardware deep sleep
Interfaces	Bit rate [kBit/s] (default setting, others possible)	115.2	100	-
	Voltage level Communication cables	TTL (0-5 V)	TTL (0-5 V)	Proprietary
	Communication protocol	Proprietary	Proprietary	High/low
	Dielectric strength [V DC]	1500	1500	1500
	Software tools	EEPROM parameterisation, RS-485 setpoint setting, bootloader host software	EEPROM parameterisation, RS-485 setpoint setting, bootloader host software	-

*The voltage range can be extended on request.

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www.kostal-electronic-solutions.com