



EPC systems conform the new generation of bidirectional DC/DC Converters. EPCs (Epic Power Converters) are suitable for a huge number of applications ranging from industrial ones to applications in the field of renewable energies.

EPC

BIDIRECTIONAL DC/DC CONVERTERS



by  epic power

ADVANTAGES

- » **Ultra-high efficiency**, achieved with silicon carbide transistor technology.
- » **Scalable** with easy parallellization.
- » **Galvanic isolation**.
- » **Maintains the DC link voltage** in the absence of main supply.
- » **Soft pre-charge of the DC link**. Suitable to switch ON and OFF the drive as many times as required in order to save energy and life expectancy of the inverter.
- » **Automatic change of power flow** to stabilize either input or output voltage without stopping voltage regulation.
- » **CAN communication** available to implement voltage or current control and transmit relevant measurements of operation parameters (voltage, power, current, temperatures, etc.).
- » **Customized versions** available upon request.

What is it?

Bidirectional high-efficient DC/DC power converters. With a wide range of voltage levels in both sides, **the EPCs are capable to manage power in both directions.**

As a typical application the low side voltage can be connected to batteries or ultra-capacitors to feed any drive (VWF) directly through the DC link.

This allows the system to **continue in operation in case of lack of mains supply**. It also allows for off-grid applications where there is no three-phase mains available or for example in automatic warehouses when the platforms are moving off-grid.





Supply any Drive from batteries.

- » Enables off-grid applications.
- » System continues in operation **even in case of blackout.**

Energy Recovery System.

- » With lift platforms, elevators, cranes, the system can be used to **recover automatically the braking energy** storing the energy in batteries, ultracapacitors, hydrogen cells, etc. Later this energy can be returned to the system and reused.

Ships co-powered with batteries.

- » **An EPC can be the key connection** between any energy storage system and the drive.
- » In order to reduce the consumption / emissions in the movements in port (according to environmental regulations) or simply to make a boat hybrid.

Reduce peak power consumption.

- » **EPCs can provide peak power consumption** during short intervals in some applications in order to reduce the maximum peak contracted with the energy company.

Easy use of renewable sources of energy.

- » **Different supply sources** (solar, wind, etc.) can be connected to have several generation sources.

BIDIRECTIONAL DC/DC CONVERTERS

- » Enabling new functionalities:
 - » Supplying any motor drive from batteries.
 - » Using renewable sources of energy.
 - » Keeping system energized in case of blackout.
 - » Save and store energy, save money.



INDUSTRIAL TRACTION



SMART GRIDS



NAUTICAL



AUTOMOTIVE



Range of products and technical information



	EPC-2k2-324	EPC-2k2-624	EPC-3k5-648	EPC-5k5-648	EPC-4k8-6125
Low side: Input / Output Voltage	21 - 29 Vdc	21 - 29 Vdc	42 - 58 Vdc	42 - 58 Vdc	110 - 165 Vdc
High side: Input / Output Voltage	330 Vdc (up to 450 Vdc)	600 Vdc (up to 800 Vdc)	600 Vdc (up to 800 Vdc)	600 Vdc (up to 800 Vdc)	600 Vdc (up to 800 Vdc)
Nominal power	2.2 kW	2.2 kW	3.5 kW	5.5 kW	4.8 kW
Maximum Power	2.6 kW	2.6 kW	4.2 kW	6.5 kW	4.8 kW
Scalability	Up to your requirements (parallelizable)				
Efficiency	> 98%				

ABOUT US

Designing, developing and manufacturing very efficient high power converters since 2009.

epic power is a key power electronics partner for energy efficiency and energy storage solutions:

- » Flexible systems
- » Customized designs
- » Experienced engineering support

CUSTOM DESIGNS UNDER REQUEST



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