bidirectional
DC/DC converters

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Features

- Isolated
- Highly efficient
- MPPT
- Works with supercapacitors
- Soft DC bus precharge
- Battery SoC and SoH estimator
- Fast dynamics
- Wide voltage range
- Power scalable

	Isolated	Nominal Power (max) [kW]	Low side Voltage [Vdc]	Nominal Low side Current (max) [A]	High side Voltage [Vdc]	Nominal High side Current max[A]
EPC 3k5 648i	✓	3,5 (4,2max)	40-59	80 (115 max)	510-830	6 (8,2 max)
EPC 5k5 648i	✓	5,5 (7,2max)	40-59	125 (180 max)	510-830	10 (12 max)
EPC 2k2 348i	✓	2,2 (2,6max)	38-59	50 (76 max)	280-400	7 (9,3 max)
EPC 2k2 624i	✓	2,2 (2,6max)	20-29	80 (100 max)	510-830	4 (5 max)
EPC 2k2 324i	✓	2,2 (2,6max)	20-29	80 (100 max)	290-450	6 (7,5 max)
EPC 1k1 612i	✓	1,1 (1,3max)	10-14,5	100 (140 max)	510-830	2 (2,5 max)
EPC 2k2 612i	✓	2,2 (2,6max)	10-14,5	200 (280 max)	510-830	4 (5 max)
EPC 1k1 312i	✓	1,1 (1,3max)	10-14,5	100 (140 max)	290-450	3,5 (4,5 max)
EPC 2k2 312i	✓	2,2 (2,6max)	10-14,5	200 (280 max)	290-450	7(9max)
EPC 4k8 6125i	✓	4,8	110-165	45	430-830	9
EPC 8k 8380i	✓	8(10max)	320-600	21 (33 max)	650-800	11(16max)
EPC 40A 835ni	✗	29,6	35-740	40	90-830	40
EPC 80A 835ni	✗	59,2	35-740	80	90-830	80

CUSTOM DESIGN UPON REQUEST

Applications

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Off-grid hydrogen generation

Off-grid solar panel powered solution to feed hydrogen fuel cells through isolated DC/DC converters. Each converter provides MPPT per solar string to achieve highest possible efficiency.

Intralogistics - AGVs (battery powered)

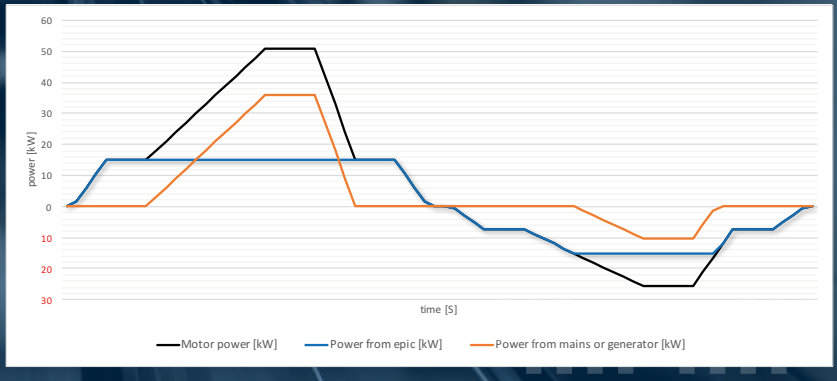
Reduction in size, cost and weight in battery powered industrial vehicles through DC/DC converters. DC motors are removed in favour of AC more standard and smaller solutions.

AGVs (Automated Guided Vehicles) powered by electric energy from batteries have traditionally used low voltage DC motors to operate. Due to the low voltage of the batteries, the current needed by the motor (to provide a specific power) increases and as such, a bulkier, heavier and more expensive machine is needed.

Elevators and Cranes

Electronic counterweight and peak shaving can be provided by a bidirectional DC/DC converter-based solution working with batteries and/or supercapacitors.

Both industrial elevators and cranes can consume high power from the grid or diesel generators when lifting material. In contrast, they generate and, in most cases, lose energy as heat when lowering the same material. Better performance can be achieved from the use of power electronics and storage.



AGVs & shuttles (supercapacitor powered)

Bidirectional DC/DC converters applied to shuttles allow energy consumption from supercapacitors and charge from the grid with only one component. Electrified monorails become unnecessary in warehouses.

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