

Series BOS 01 750W / 1500W

Use in dual-voltage passenger car / truck electrical systems 2)
Safety-relevant regenerator topology 1)
Short-circuit proof, overload-protected, no-load proof
Vin lower than, same as, or higher than Vout
Vin range: (10 - 16)V 27Vdyn.

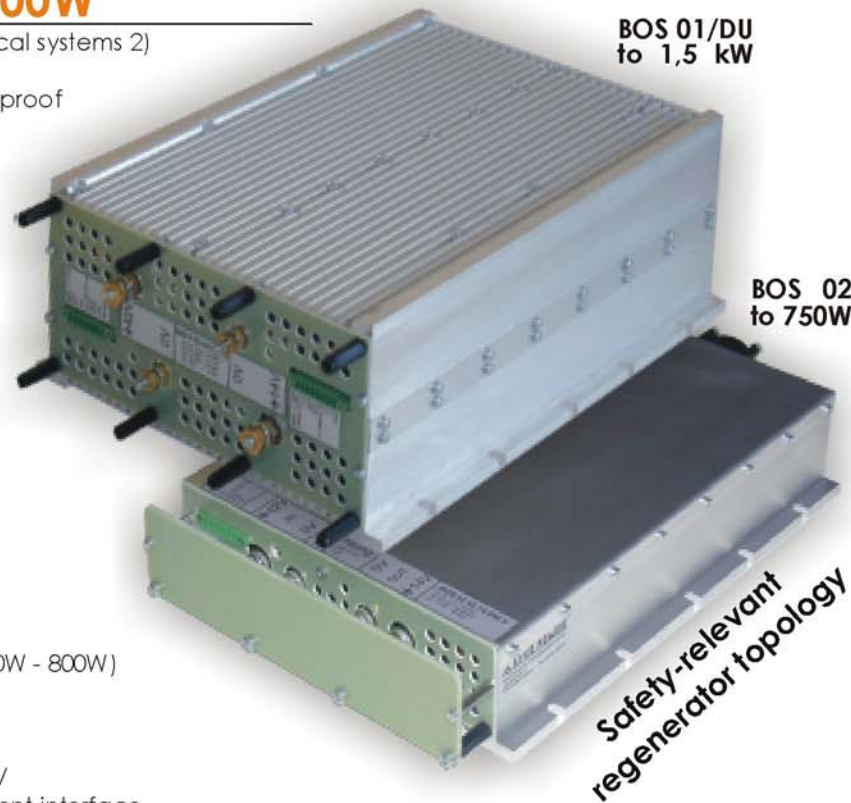
(16.8 - 34)V 50V/50ms 70V/2ms
(30 - 48)V (20 - 60V) dyn.
Vout: 42V/24V/12V fixed voltage
(30 - 48)V / (20 - 32)V / (10 - 16)V variable
Isolated set point selection Vout
Isolated actual value return Vout/Iout
VG 96916 T5, DIN ISO 7637 T 1/3
EFT / surge immunity: EN 61000-4-4/5
Battery charging/electrical system power supply

Also dual unidirectional:
600 W step-up converter, 750 W step-down
converter in a single unit

Customer-specific development at short notice

Available on request:

Step-down converter topology with 600 Watt (500W - 800W)
Current cascading with synchronous rectification
Design as small as possible, for chassis mounting
Efficiency 95% / no forced cooling
Active energy return flow inhibitor from 14V to 42V
300 µA closed circuit current / battery management interface



Field regulators

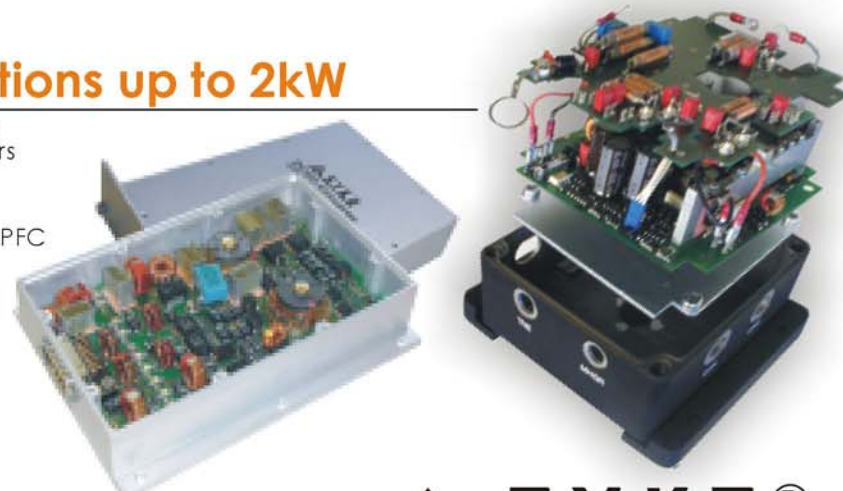


Series ERG 02 500W / 700W

For operating separately excited asynchronous machines in diesel-electric engines, for driving large inductors 3) in a field regulator coil
Safety-relevant regenerator topology
variable constant voltage or constant current
Efficiency up to 96%
Isolated set point selection
Isolated actual value return
Short-circuit proof, overload-protected, no-load proof
Vin range: (16.8 - 34)V 14.4V dyn.
(20 - 50)V 16V dyn.
(67 - 154)V 55V dyn.
Output current: 0A - max.10A / Output voltage: 0V - max.100V
EFT / surge immunity: EN 61000-4-4/5
RFI suppression: EN 55022.B

Customer-specific solutions up to 2kW

For low-voltage and high-voltage applications
DC/DC converters, AC/DC universal converters
Emergency start-up equipment,
single-phase and three-phase inverters
High-voltage DC and AC input, AC input with PFC



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System solutions

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Measurement instrumentation



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Utility vehicles



Buses

Automotive

equipment

DC/DC converters, 2 W up to 2 kW

Safety-relevant system solutions for on-board vehicle electrical systems:
passenger cars / trucks / special-purpose vehicles

14V / 24V / 28V / 42V

NEW: Vin-range (8 - 60)V

For special electrical systems: dual-voltage on-board electrical systems
fuel cells / diesel-electric engines / high-energy capacitors

42V-14V / 42V-28V / 450V / 2500V

DC/DC converters and regenerators for measuring, battery charging, and on-board vehicle electrical systems

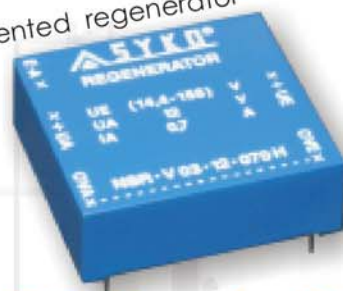
Without isolation

With isolation

Series MSR.V / NSR.V up to 15 W

Safety-relevant regenerator topology 1)
PCB module, potted
Short-circuit proof, overload-protected, no-load proof, unipolar
Vin lower than, same as, or higher than Vout
Vin range: (6 - 38)V / (9 - 85)V / (14.4 - 158)V
Vout: 5.1V up to 24V
PCB module (40 x 40) mm² MSR.V / (48 x 51) mm² NSR.V

Patented regenerator



Series GSR.V up to 20 W

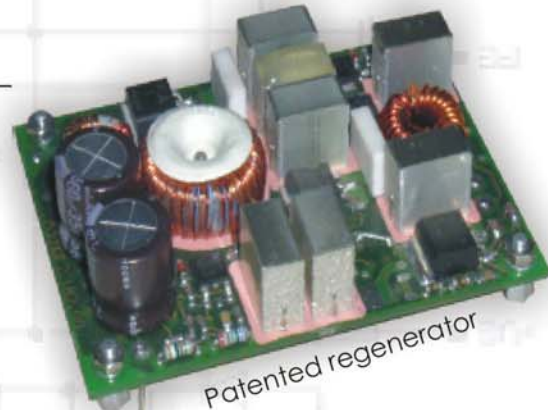
Safety-relevant regenerator topology 1)
PCB module, without potting compound
Short-circuit proof, overload-protected, no-load proof, unipolar
Guarantee of function for cold diesel start
Warm-up at Vin = 4V
Vin lower than, same as, or higher than Vout: (4 - 38)V or (9 - 85)V
Vout: 5.1V up to 24V



Patented regenerator

Series PSR.V up to 40 W

Safety-relevant regenerator topology 1)
Non-encapsulated PCB module
Short-circuit proof, overload-protected, no-load proof
Unipolar, BER option: adjustable Vout (0V - max Vout)
Vin lower than, same as, or higher than Vout
Vin range: (8 - 36)V 50V/50ms 70V/2ms
(13.5 - 52)V surge-proof
(19 - 85) 110V dyn.
VG 96916 T5, DIN ISO 7637 T 1/3



Patented regenerator

Series LSV.V/MSV.V 60/80 W

Safety-relevant regenerator topology 1)
Car adapter / laptop power supply
Short-circuit proof, overload-protected, no-load proof
Unipolar, featuring: adjustable Vout
Vin lower than, same as, or higher than Vout
Vin range: (6 - 34)V 50V/50ms 70V/2ms
(9.0 - 60)V [nom. 12V/24V/42V]
VG 96916 T5, DIN ISO 7637 T 1/3
EFT / surge immunity: EN 61000-4-4/5



Patented regenerator
Excellent RFI suppression
In cabinet or open

NEW: Vin-range (9 - 60)V

Series LSR.V / ESR.V up to 120 Watt

Efficiency up to 95% through current cascading/optional: regulated parallel operation
Safety-relevant regenerator topology 1)
19" slide-in module, 3HE/6TE or chassis mounting
Front end power supply for peripheral DC/DC converters
Short-circuit proof, overload-protected, no-load proof
Unipolar, operating temperature range: -40/+85°C
Vin lower than, same as, or higher than Vout
Vin range: (6 - 34)V load dump
(10 - 48)V (9 - 60)V dyn.
VG 96916 T5, DIN ISO 7637 T 1/3
EFT / surge immunity: EN 61000-4-4/5
Series DC 01 with UPS

NEW:
Series ESR.V as
car adapter up to 120W



NEW: Vin-range (6 - 60)V

Efficiency up to 95% through
current cascading/
optional regulated
parallel operation



NEW: Vin-range (8 - 72)V

Series MCB up to 30 W

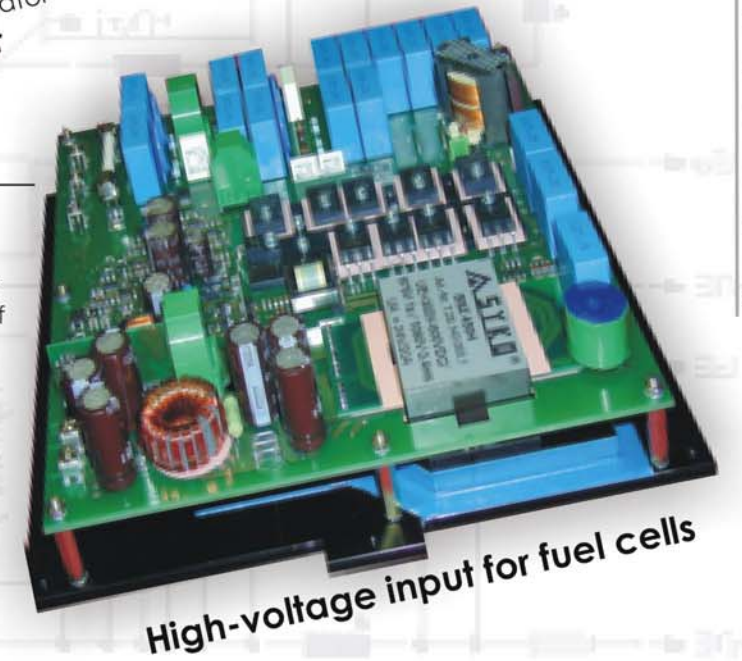
Regenerator topology with isolation 1)
PCB module, without potting compound
Short-circuit proof, overload-protected, no-load proof
Four independent, isolated outputs
Vin range: (16 - 48)V (13 - 80)V
(9 - 36)V 50V/50ms 70V/2ms
Vout: 5.1V / +15V / -15V / 24V
VG 96916 T5, DIN ISO 7637 T 1/3



Patented isolated regenerator
also as car adapter

Series BSZ 450 up to 500 W

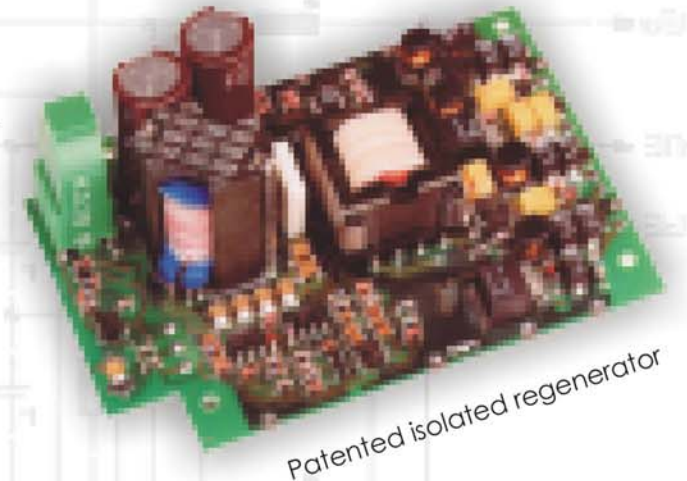
DC/DC converters with isolation
For operating high-voltage batteries and fuel cells under extreme temperature conditions through ideal heat dissipation and planar transformer
Short-circuit proof, overload-protected, no-load proof
Vin range: (230 - 450)V
(300 - 600)V 675V/1s 1080V/0.4ms
Vout: 42V/24V/12V
VG 96916 T5, DIN ISO 7637 T 1/3
EFT / surge immunity: EN 61000-4-4/5



High-voltage input for fuel cells

Series SRI.E/Z/D up to 30 W

DC/DC converter with isolation
PCB module, without potting compound
Short-circuit proof, overload-protected, no-load proof
Uni-, bi-, tripolar
Functionally independent outputs
Operating temperature range: -40/+85°C
Vin range: (8 - 34)V 50V/100ms
(13.5 - 52)V 110V/10ms
(10 - 48)V (8 - 60)V dyn.
incl. long-term transients, VG 96916, DIN ISO 7637
RFI suppression: EN 55022 A



Patented isolated regenerator

Series LSV.P up to 50 W

Regenerator topology with isolation 1)
Open design or as car adapter (same as LSV.V)
Short-circuit proof, overload-protected, no-load proof
Vin range: (8 - 34)V 50V/50ms 70V/2ms
(9 - 60)V [nom. 12V/24V/42V]
VG 96916 T5, DIN ISO 7637 T 1/3
EFT / surge immunity: EN 61000-4-4/5

1) SYKO patented regenerator / safety-relevant topology (US Pat. Nr. 5,991,166 & 6,094,366 / German Pat. Nr. 195 15 210 & 195 05 417), registration of a dual-voltage on-board electrical system
The advantage of the regenerator is its safety-relevant topology; in case of fault, punch-through from the primary side to the secondary side (and vice-versa) is prevented. In the case of two energy sources (battery) on the primary and secondary sides, this topology also prevents static punch-through. The topology can step up and step down without isolation. The input voltage can be lower than, the same as, or higher than the regulated, short-circuit proof output voltage. 2) Utility model filed 3) Patent filed