ZOPF RACK 314

ersetzt / replaces

SEG / Woodward 310, 311, 313 RAC

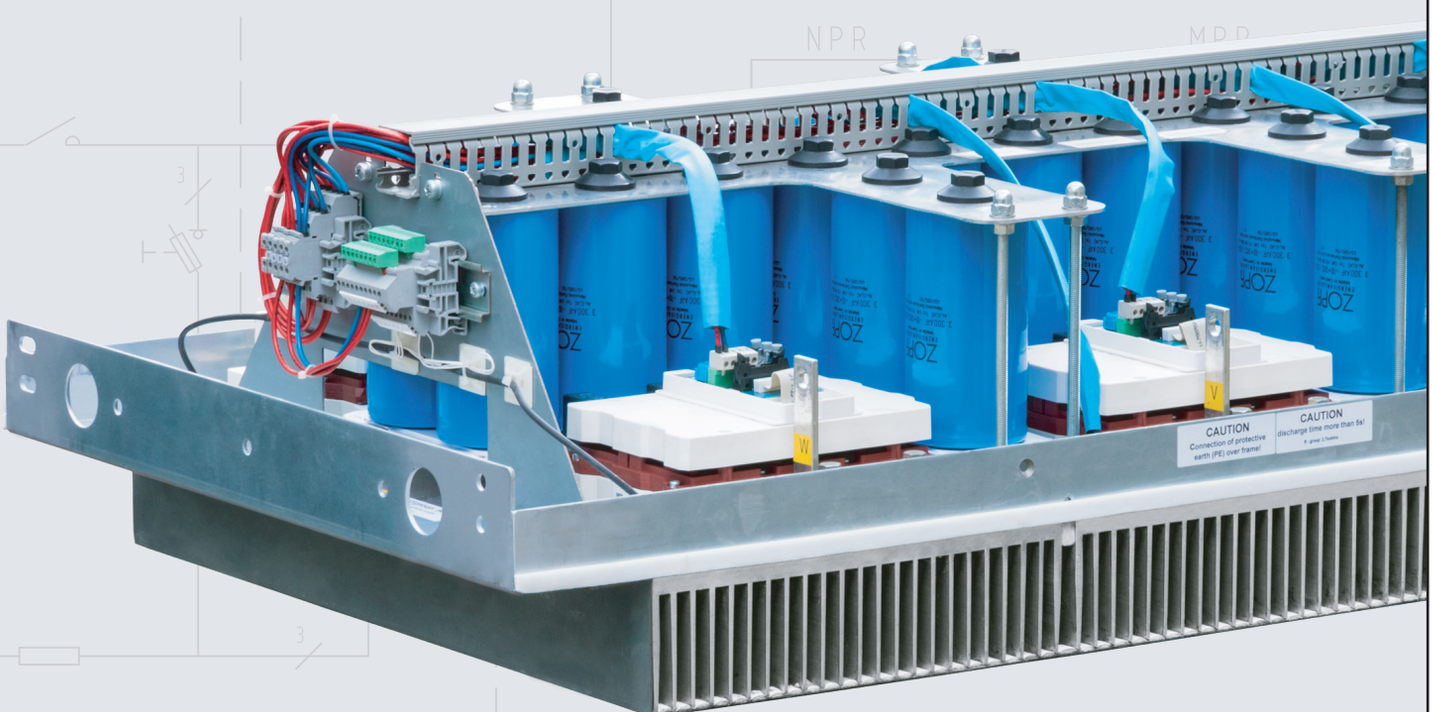
ZOPF GmbH ENERGIEANLAGEN

Leistung

- neu gefertigtes Leistungmodul
- einsetzbar in Woodward Umrichtern
- neueste SkiiP 3 V3 IGBT-Generation
- unabhängig von Vf-Gruppen
- luft- und wassergekühlte Version
- keine Umbauten am Umrichter erforderlich
- kein Upgrade der Anlagensteuerung erforderlich
- keine Schulung der Techniker erforderlich
- 24 Monate Gewährleistung

Performance

- new manufactured power module
- applicable for Woodward converter
- latest Skiip 3 V3 IGBT generation
- independent of Vf groups
- air and liquid cooled version
- no modification of the converter necessary
- no upgrade of the control system necessary
- no training of the technicians necessary
- 24 months warranty



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Firma
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Herrn Hannes Rißka
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Abstract[1]

"Opinion on customer questions on compatibility of different SKiiP generations in SEMIKRON RACs for wind turbines

Dear Mr. Rißka,
Thank you for your inquiries from 26.04.2017, which I would like to answer below:

Is the current carrying capacity of the SKiiP3 V3 comparable to the SKiiP3 V2 and its predecessors?
How does SKiiP3 outperform SKiiP2 in terms of performance capabilities?
Is the heat dissipation of the SKiiP3 V3 comparable to the SKiiP3 V2 and its predecessors?
Compared to the older SKiiP2 with IGBT2 chips, all SKiiP3 IGBT chips of the IGBT3 generation contain significantly lower losses. The higher current densities that are possible in the SKiiP3, allow it, depending on the application, to also replace SKiiP2 with SKiiP3 with smaller dimensions, such as: SKiiP792GB170 through SKiiP1013GB172.

Compared to SKiiP2, the semiconductor losses and chip temperatures of a power unit with SKiiP3 are lower at each operating point under the same cooling conditions. This means the ampacity of the semiconductors alone is higher by comparison.

The SKiiP3 V3 have the same chips and thermal properties as SKiiP3 V1 (with VF-groups) and SKiiP3 V2 (without VF-groups). Thus, the semiconductor losses, current carrying capacity and chip temperatures are the same.

What is the exact development regarding to the IGBT driver and how were old weaknesses has been eliminated?
Compared to the SKiiP3 V2, the SKiiP3 V3 has introduced a package of measures to increase the robustness and to comply with the directive 2002/95 / EC RoHs.

Is a compatibility of the SKiiP3 V3 compared with the SKiiP3 V2 and the predecessor models in this application expectable and therefore also of ZOPF RAC314 and SEG / Woodward RAC313, 311, 310?

The SKiiP3 V3 is compatible with the SKiiP3 V2 in terms of interfaces, losses, switching behavior and driver current consumption. Compared to the SKiiP2 SKiiP3 has a slightly higher drive current consumption. By using a more modern IGBT generation in all SKiiP3, their losses are significantly lower than those of the SKiiP2. With the same output power and the same cooling, this leads to lower temperatures of the semiconductor chips, resulting in a comparatively longer service life."

[1] The abstract is translated from german into english.
The original version is available online http://www.zopf-energie.de /