

Press release, 4 June 2012

KACO new energy at the Intersolar Europe 2012

Under the motto 'Planet of Power' the German inverter manufacturer from Neckarsulm will present its most recent innovations at the solar technology meeting to be held in Munich from 13 to 15 June

KACO new energy GmbH is continuing its strategy of curbing project costs for PV systems with its extended product range to be presented at this year's Intersolar Europe. With a rated AC power of 15 kVA the new Powador 18.0 TL3 is based on the topology of the Powador 14.0 TL3 and has a correspondingly higher power density. Powador 48.0 TL3 Park, 60.0 TL3 and 72.0 TL3 Park are derived from the Powador 39.0 TL3 platform and also supply more output in watt per kilogram. In future, KACO new energy will also supply three-phase devices in the power range under 10 kilowatts. The next step in the development of the XP central inverters is the production of devices with 500 and 550 kVA AC rated power that will be suitable for use outdoors.



With a rated power of 15 kVA, the **Powador 18.0 TL3** complements the Powador 10.0 TL3 to 14.0 TL3 inverters and yields an extraordinary power density of 375 watts per kilogram. The device allows PV plants composed of small, highly efficient units with a total of several hundred kilowatts to be planned. The compact design, low weight of only 40 kg, and DC solar connectors ensure simple and cost-effective installation. The Powador 18.0 TL3 is equipped with two separate MPP trackers for both symmetrical and asymmetrical loads: each tracker is capable of picking up virtually the full AC power on its own therefore fulfilling the requirements normally expected of more complex system designs, such as full configuration of an east/west-facing roof. The MPP trackers can also be connected in parallel. The device features a nominal input voltage range of 420 to 800 V. Starting from 250 V the device will connect to the grid and even continue grid-feeding operation at 200 V. This allows the Powador 18.0 TL3 to achieve high solar yields from comparably small areas, such as dormers or carport roofs, and remain operational for longer periods.



With the **Powador 48.0 TL3 Park, 60.0 TL3 and 72.0 TL3 Park** KACO new energy has begun to encroach upon the higher power classes of the TL3 series. 40 and 60 kVA rated AC power and 480 V output voltages make both Park versions particularly suitable for connection to an external transformer and decentralised large-scale PV plants.

The Powador 60.0 TL3 with a rated AC power of 49.9 kVA is suitable for commercial installations such as factory roofs. With a design similar to the Powador 39.0 TL3 these new inverters supply very high power density, a peak efficiency of 98 percent and

European efficiency of 97.8 percent.

This allows a high degree of flexibility when designing your PV system. The units employ three separate MPP trackers that can handle both symmetrical and asymmetrical loads and allow optimum adjustment. Each tracker is capable of processing 20 kW; the Powador 72.0 TL3 Park can process 30 kW. This enables them to fulfil the normal requirements of more complex designs associated with the inhomogeneous installation of the photovoltaic generator. Three MPP trackers are also able to compensate mismatches between modules, such as those resulting from temperature differences and uneven irradiation.



Our product preview also encompasses the three-phase inverters **Powador 6.0 TL3, 7.8 TL3 and 9.0 TL3** with the respective rated AC outputs of 5 kVA, 6.5 kVA and 7.5 kVA.

All inverters in the TL3 series are fitted with an integrated data logger with web server, a graphical display showing operating data and a USB port for installing firmware updates. The yield data can be downloaded for evaluation from the web server or via USB. The integrated data logger can also be connected directly to the Powador web Internet portal for the professional evaluation and visualisation of inverter data.



The **Powador XP500-HV TL outdoor** and **Powador XP500-HV TL outdoor** are the new transformerless central inverters from the Powador XP series. The protection class IP54 makes them suitable for outdoor use. Subject to the project-specific requirements they can also provide an alternative to the KACO new energy central inverter stations. The units achieve a peak efficiency of 98.5 percent and a very high European efficiency of 98.2 percent due to constant high-efficiency over the entire power

range. They are recommended for PV generators up to 600 kW and 660 kW.



The **Powador-gridsave** is an energy storage and management system. By storing solar energy during the day and making it available for later use it closes the time-gap between power generation and power consumption. The system combines battery, control unit and solar inverter in a compact system and can be used in new and existing PV plants or to extend an existing system. In the event of a power failure the control unit (Energy Management System) switches over to stand-alone operation (island mode) and isolates the building's electrical supply from the public grid: the PV plant and the Powador-gridsave then function as a source of energy, which directly supplies consumers and/or charges the batteries.



The **Powador-protect** is a measuring and control instrument that fulfils both the German VDE-AR-N 4105 requirements for grid and plant protection for PV plants feeding into the low voltage grid, as well as the power control requirements of the 2012 German Renewable Energy Act (EEG 2012).

Powador-protect continuously measures all relevant grid parameters, as required by VDE-AR-N 4105. If a limit value is exceeded the device enables external coupling switches to shut down the PV plant, a universal function of all common inverter types. However, in combination with Powador inverters of the TL3, TR3 and 00 series, the Powador-protect will also activate the units' internal coupling switches. The firmware version required for this functionality can be found in the documentation of the respective product. In accordance with the EEG, Powador-protect also allows the remote controlled shutdown of PV systems above 30 kW DC output. Until now this was done via a separate device,

which transmitted the appropriate command signal from a ripple control receiver to the inverter. As an alternative means of limiting power for systems up to 30 kW, the EEG names the default limit of 70% of the installed DC output. Compared to this, the Powador-protect is a preferable way of achieving cost-effective, demand-driven power reduction.

The full version of our automatic system design program **Powador PV-pilot** will be ready in time for the Intersolar Europe. As a result of valuable insights gained during the beta phase, the program is now even more user-friendly and simpler to operate.

Comprehensive geo-data provides the most accurate and site-specific yield prognosis of all comparable tools currently available.

The program addresses professionals and newcomers alike: on the basis of just two entries – the site, and the type and number of modules - the Quick Mode will instantly return a precise forecast of your potential yield. The Expert Mode leaves nothing to be desired and allows you to adapt the automatic dimensioning functions to your individual needs at a later date. The Classic Mode is available for those who want to design their own PV systems. The program features an expandable database with more than 7,000 module types and can calculate personal consumption, as well as take the cos phi into account.

KACO new energy can be found at the Intersolar Europe in **hall 3, stand 310**. Further information and details of fringe events are available at www.planet-of-power.de

About KACO new energy:

KACO new energy is one of the world's largest manufacturers of grid-tie inverters for feeding solar energy. KACO offers a comprehensive range of inverters for PV systems for everything from single-family homes to multi-megawatt solar farms. The company is based in Neckarsulm, Germany and has been producing inverters with a cumulative capacity exceeding four gigawatts since 1999. KACO new energy was the first company in the photovoltaic industry to manufacture inverters (the Powador model) using completely CO₂-neutral production methods. In addition to grid-tie and battery-based solar inverters, the company also supplies inverters for combined heat and power plants and concentrator modules, as well as energy storage systems for solar power plants.

Images are available at Solar Consulting GmbH.

Press information is also available online at www.kaco-newenergy.de.

KACO new energy GmbH
Andreas Schlumberger
Marketing Director
Carl-Zeiss-Str. 1
74172 Neckarsulm, Germany
Phone +49 (0)7132 38 180
pr@kaco-newenergy.de
www.kaco-newenergy.de

Solar Consulting GmbH
Sabine Lübke
Solar Info Center
79110 Freiburg, Germany
Phone +49 (0)761 38 09 68-26
luebke@solar-consulting.de
www.solar-consulting.de