

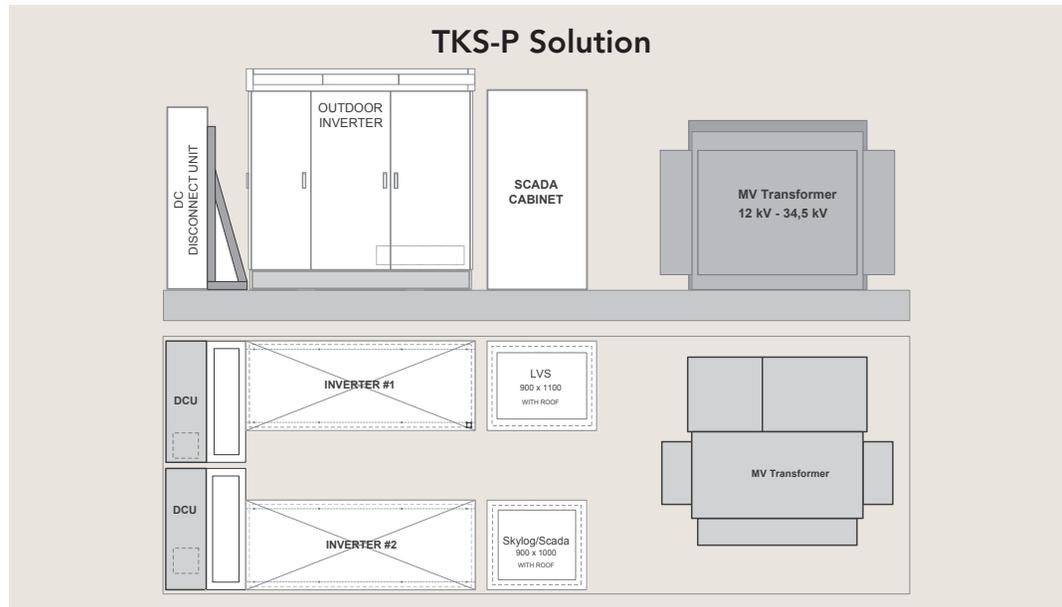


TKS-P

TURNKEY SOLUTION PLATFORM
FOR UTILITY-SCALE PV PROJECTS

THE SINGLE
SOURCE
SOLUTION
FOR

SMOOTH PV POWER PLANT OPERATIONS



For decades, customers in the most demanding industrial sectors, from oil, gas and petrochemicals to power generation and utilities, have turned to AEG Power Solutions for reliable applications. Now, customers in the renewable energy field can benefit from the same AEG expertise and quality. The solar inverter product line launched in 2009 spearheads the AEG Power Solutions expansion into global renewable energy markets.

Building on its proven track record in supplying utilities and grid operators with reliable, fully-compliant solutions, the AEG Power Solutions' Protect PV solar inverters provide superior availability and efficiency for utility-size PV megawatt installations. The innovative FPGA circuits ensure the flexible, precise and

rapid control needed to meet virtually all national grid standards.

The TKS-P is a turnkey system, designed for utility-scale PV megawatt power plants. It is connected to the PV array on one side, to the transfer station on the other side, and can be put into operation immediately. The TKS-P is delivered to the installation site fully equipped and tested.

It is engineered for maximum Return on Investment, offering reduced project engineering costs, high reliability and system efficiencies above 98 percent. The robust, outdoor ready design ensures it is suitable for harsh environments, and makes the TKS-P the preferred choice for large scale projects in North America.

The TKS-P solution offers two design possibilities:

1: Open skid with two Protect PV outdoor inverters and communications equipment as well as an integrated outdoor MV transformer and switchgear.

2: A walk-in metal shelter contains two Protect PV indoor inverters, communications equipment and external AC disconnects. The shelter is built on a skid with an MV transformer, and switchgear.

Both solutions are available with advanced combiner boxes in the PV array field. The core units are fully integrated via communication and monitoring components to ensure smooth PV power plant operations.

KEY ELEMENTS OF THE TKS-P



Key elements

- Two indoor or outdoor solar inverters or other possible combinations
- Cubicle communication & monitoring
- Transformer
- Switchgear
- Auxiliary
- Skid

Implementation with partners

- Consultants
- EPC
- AEG PS subsidiaries

Monitoring and Supervision

Skytron's PVGuard software has been developed for operation, maintenance, and control of large PV power plants. The high performance IPC in the skylog data logger saves high resolution data

over several years, allowing the operator to compare and optimize operating parameters over the lifetime of the plant. Additionally, performance comparisons can be made between various plants and individual components. In the PVGuard system, faults become apparent to the plant manager at an early stage. The system documents these faults so that maintenance, repair and warranty work can be completed and verified.

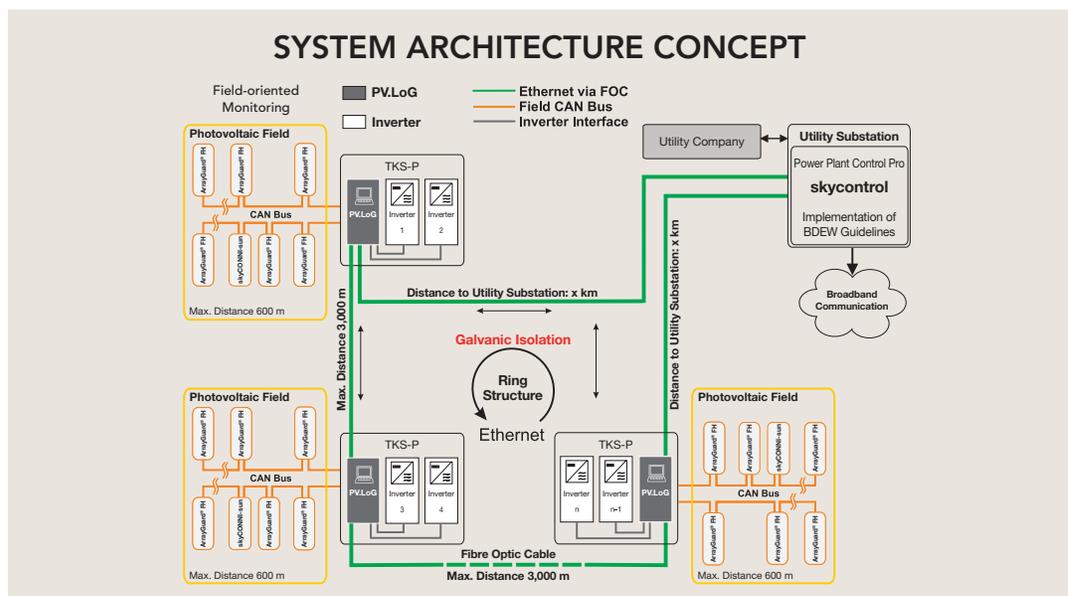
Overview – Front End

Each plant monitored in PVGuard has an Overview screen that shows the most important and informative data of the PV power plant. This page can also be customized, for example by adding company information and plant information. The overview shows all of

the devices installed in the plant in a comprehensive plant representation. And the operator can drill down into the specifics of each component.

Combiner Box

The Arrayguard FH combiner box from skytron merges the individual strings and are the central point for monitoring the DC conditions of the plant. The Arrayguard FH combiner boxes are not installed on the TKS skid, but are key components. The string DC statistics is collected and forwarded to the skylog data logger, along with the performance and data from the inverters. The combination of CAN-bus enabled string monitoring, skylog data loggers, and PVGuard monitoring system insures that your PV plant will maintain high energy yields in the long run.





Rely on the experts to reduce failure costs and increase system availability

Because AEG Power Solutions is a world-class system provider, you can rely on a global network of 22 service centers supported by over 150 field engineers around the world.

From power solution selection to process installation and commissioning, the work of our certified experts exceeds your expectations. Their excellent service helps you achieve the lowest operating cost for your mission-critical power solution. A global service team renowned for its short response time and troubleshooting efficiency ensures the reliability of your installed power solution.

About AEG Power Solutions

AEG Power Solutions Group is a global provider of power electronics systems and solutions for all industrial power requirements offering one of the most comprehensive product and service portfolios in the area of power conversion and power control.

Two complementary operating business segments, Renewable Energy Solutions (RES) and Energy Efficiency Solutions (EES) serve customers worldwide. The RES product and service portfolio consists of systems and solutions for solar power plants, such as solar inverters, monitoring and control systems as well as power controllers for

a wide range of industrial applications such as polysilicon, energy storage, sapphire and glass. The EES product and service portfolio includes high-performance uninterruptible power supplies (UPSs), industrial chargers, and DC systems and converters.

Thanks to its distinctive expertise bridging both AC and DC power technologies and spanning the worlds of both conventional and renewable energy, the company creates innovative solutions for smart grids.

For further information
please refer to our website:

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