

## PV Fact Sheet

### 08 | Benefits of a string monitoring device

This fact sheet focuses on photovoltaic installations in solar parks worldwide. One essential part of such an installation is the PV combiner box. These boxes are used to combine several strings and to protect against overvoltage and feature many more functions.

#### Which issues can be detected if a string monitoring device is used?

The string monitoring system is a useful tool for detecting and preventing problems in a PV system, which can improve its performance and reduce maintenance and repair costs. It achieves this by being able to detect a wide variety of problems that can occur in the strings:

- Shading issues: shading on one or more solar panels can significantly reduce system performance, which can be detected by the string monitoring system.
- Wear problems: solar panels and system components can wear out over time, which can affect their performance and efficiency. The string monitoring system can detect these problems and provide information on the condition of the system components.
- Connection problems: Missing or loose connections can reduce system efficiency and lead to failures. The string monitoring system can detect connection problems and alert the operator to potential problems.
- Temperature problems: Excessive heat can damage system components and reduce system life. The string monitoring system can measure the temperature of system components and alert the operator if certain thresholds are exceeded.
- Production problems: Problems in the PV system can reduce energy production, which can be detected and corrected by string monitoring.

The implementation of a string monitoring system in a PV system can provide significant benefits by detecting and troubleshooting problems in a well-timed way, leading to improved efficiency, longer lifetime, and reduced maintenance costs. In addition, it allows continuous tracking of power generation, which facilitates the identification of areas for improvement and optimization of overall system performance, these points make a string monitoring an essential tool for any PV plant.