

# Solution Overview & System Components

## Solution Overview and Basic Benefits

This solution provides all necessary means for equipping your distribution grid to have all relevant data always centrally available for monitoring as well as for basic data analysis. All instrument settings together with their measurements, alarms or PQ data can now always be available at the tip of your fingers. The solution can assure some crucial advantages in your grid such as:

- system protection improvements,
- more reliable operation,
- faster responses to failures,
- better maintenance,
- control over power consumption and losses within the network,
- historic data for better planning,
- power quality improvement,
- better control over the installed equipment...

## System Components

### Measuring equipment:

- compatible with all ISKRA instruments
- supports third party instruments with MODBUS interface
- periodic monitoring of up to 128 measurement with 1 to 60 minute resolution
- up to 32 programmable alarms
- input/output digital or analog module option
- power quality anomalies and reports according to EN50160
- all instruments support MODBUS (serial or TCP/IP)

### Communication equipment:

- the solution can take advantage of all existing communication infrastructure to minimize costs (LAN, cellular network, serial network, WiMAX, ...)
- locations can be fitted with GPRS/UMTS/HSPA modems featuring a global roaming VPN option. This will make remote instruments directly accessible through a particular modem IP from anywhere.

### Software:

- **MiQEN 2.1 configuration studio SW**
  - setting up instruments locally or remotely
  - particular device local or remote monitoring of historic values for measurements, alarms and PQ data
  - particular device local or remote basic data analysis
- **MiSMART system SW**
  - 3-tier web based system infrastructure for complete system data & operation monitoring
  - centralized database where all configured instrument data is available
  - can be installed on a company local server or in the cloud
  - complete system monitoring statistical evaluation of historic measurements, alarms and PQ data within the Data Monitor module
  - system settings are done through the Configuration Tool module
  - multiple data export capabilities for further data processing in other systems (PQDIF, Excel)

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## Distributed Smart Grid Data Monitoring Solution

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