



SASensor[®] MLV Secondary Substation Automation

SASensor[®]

Today's electric networks require a vision on substation automation solutions

One of the future challenges that grid operators have to overcome in their network is the upcoming penetration of distributed intermitting energy resources and a significant change in the demand behaviour.

The challenges are the increasing needs for a reliable, sustainable and affordable distribution network. Within this context there is focus on the manageability of the grid. Insight in the performance of the networks and deployment of preventive and recovery measures for managing outages are key to a successful business.

Smart way of implementing

Vision on lifetime management of the ICT solutions in the grid is of major importance for a successful business case.

SASensor MLV is a scalable and flexible solution to digitize secondary substations. With SASensor MLV you receive full online insight in your medium/low voltage network. Insight in the grid allows you to take the right measures for adequate grid operation and planning. SASensor delivers remote control, fault indication, fault recording, detection of voltage peaks (by intermittent renewables), advanced measurements and many more.

The benefits of investing in substation automation in the distribution grid



Full grid insight

- power quality
- voltage management
- metering
- network losses



Customer minutes lost optimization

- fault localization
- disturbance indication
- remote switching
- self-healing



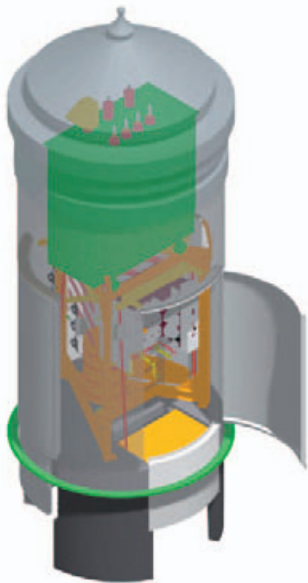
Asset management

- loading conditions for grid planning
- equipment health prediction
- online partial discharge localization



Business process optimization

- labour efficiency
- technology lifetime management
- employee deployment
- knowledge management



Medium to low voltage secondary substation of Alliander (by Alfen) in Amsterdam

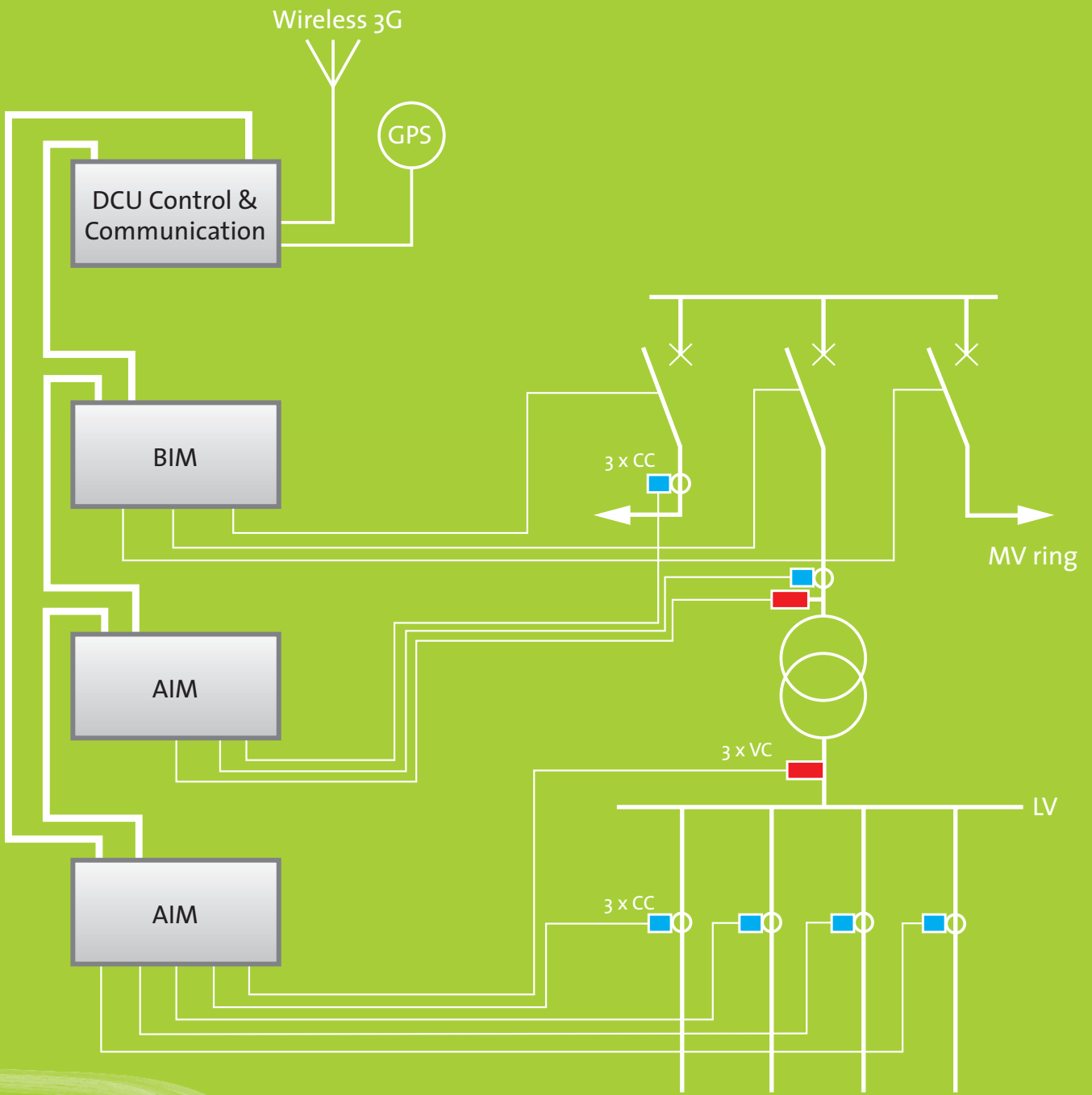
Is your grid automation ready to meet sustainability objectives?

Does your automation supply full insight in grid behaviour?

What does your organisation do to improve grid reliability?

SASensor®





SASensor[®] MLV brings intelligence into your grid!

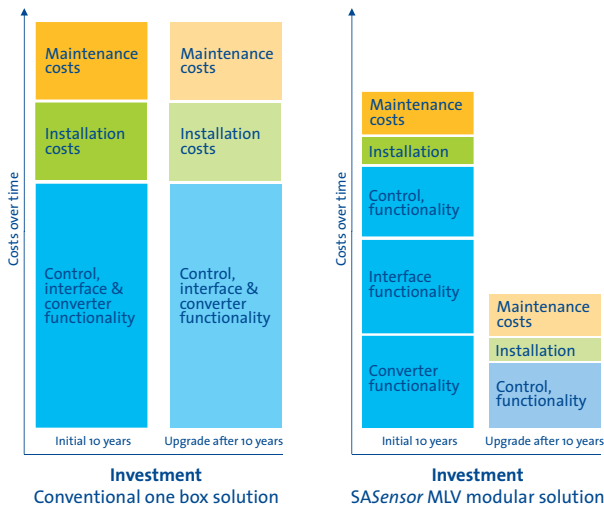
SASensor MLV device architecture

The SASensor solution consists of a proven double separation between:

1. physical devices (hardware) and functionality (software)
2. fast ageing components (computers) and the long unalterable interface with the primary process (interface modules/signal converters)

This double separation within the system architecture makes it possible to independently adapt installations to the ever-increasing demands of the grid, simply by software upgrades and/or computer performance improvements. The value of present investment is guaranteed for decades.

Total cost of ownership secondary substation automation



The architecture in SASensor MLV shows a three-layer segmentation to optimize the lifetime management:

1. Process signal conversion to a uniform analog signal (Signal Converters)
2. Digitization of the uniform analog signals (Interface Modules)
3. Computer(s), external and internal communication facilities (Control Units)

User friendliness

SASensor MLV is a modular system that is easy to install. Complete preconfiguration in the office saves time on site. All connections are with ready to use cables and connectors, robust and with color coding to guide the installation engineer. The converters for current and voltage are clip-on easy mountable to the isolated conductor leads. Indication LED's of all devices show the correct installation and functioning immediately.

Modularity

The modularity of the SASensor architecture guarantees a long term and smooth migration with upcoming smart grid technologies. The strong focus on total cost of ownership optimization and functional flexibility leads to the modular concept of SASensor MLV.



SASensor® a complete solution that offers you:

Directional fault indication or protection

The fault indicator function is the basis for fast recovery of disturbances in distribution networks. If the secondary substation is equipped with circuit breakers the function can act as overcurrent protection as well.

Local and remote control

Local control and monitoring of the system is based on open technology of the user-friendly web-based user interface. Remote control is implemented with standard telecontrol protocols, like IEC60870-5-101, DNP3 or the IP based IEC60870-5-104.

Alarm and event handling

Substation event and alarm handling is an integral part of SASensor. Disk storage enables post mortem analysis and system performance insight.

Power Quality monitoring

Power quality monitoring gives you full insight in the voltage characteristics of the grid. Based on this statistical information you can take adequate measures for optimizing the grid performance.

Self-diagnostics

SASensor constantly monitors itself with a system health check. As soon as exceptions are detected you will be informed immediately.

Measurements & Metering

Three phase measurements or even neutral if required gives an online view on all currents, voltages and all derived power related units. All measurements are derived from the high frequency sampled interface modules. All possible power system fundamentals can be calculated in the application software, like active and reactive power, phase angles but also harmonics of the currents.

The calibration of the interface modules for analogue measurements gives the opportunity to perform very accurate energy measurements within SASensor (better than class 0.2s).

Communication and security

SASensor supports a variety of communication media and protocols to be able to connect with remote control centers, other vendor devices, etc. The 'open' IP based communication requires the highest level of security. Security and user authorization are a built-in part of the software to guarantee a safe and reliable operation of the system. Embedded version and change management tools for software and configuration data provides grip on the variable part of the system.

Scalability

Threading of SASensor MLV devices with the Power Over Ethernet connections brings any size of system in range. Extensions at a later stage are simple and fast.

IEC61850

SASensor is a flexible 'physical device' covering a large set of 'logical devices' that integrates smoothly with compatible devices.



Locamation

Locamation recognized that the present environmental developments (Europe 2020, distributed generation, electric vehicles, increasing energy demand, ageing network technology, retiring technical engineers) create several future challenges for grid operators. Within this background Locamation develops innovative substation automation solutions, ready to face future demands.

For the latest product information visit:

www.locamation.com

Interested?

Contact us for more information. We are pleased to inform you about *SASensor* and prove all advantages for you in a pilot installation. Install *SASensor* 'piggy-back' to a current installation and experience all features and advantages without any risk.



Locamation B.V.

Beitelstraat 2
7556 NB Hengelo (Ov)
The Netherlands

T: +31 (0)74 255 2190
F: +31 (0)74 255 2191
E: info@locamation.nl
I: www.locamation.com

Sales Support

E: sales@locamation.nl

