

SIEMENS

SENTRON 3NA COM NH SERIES FUSE

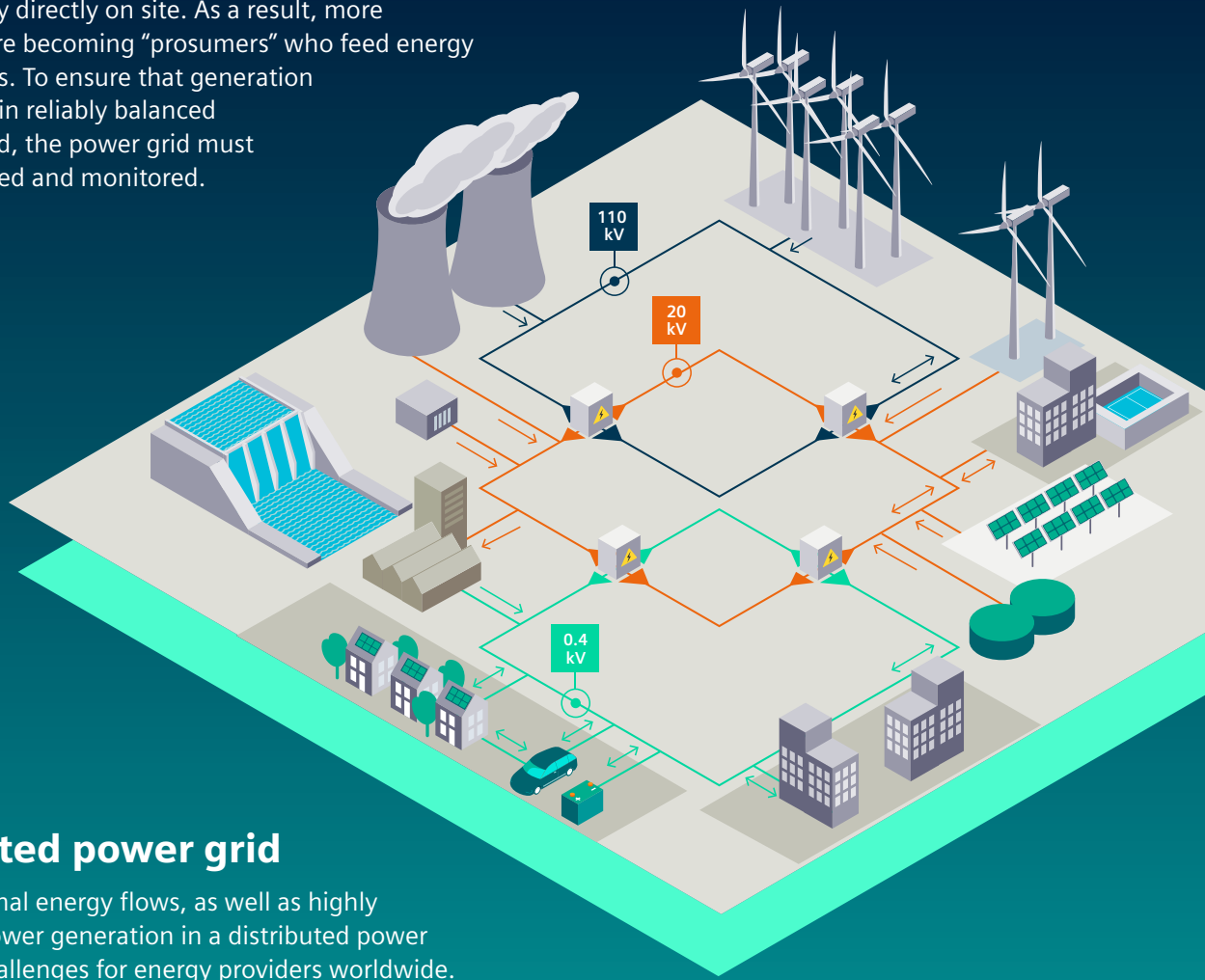
Transparent energy flows

The easy retrofit solution: Clear overview of grid activities and current direction with the SENTRON 3NA COM measuring and communication-capable NH series fuses



More power generators. More feed-in. More intelligence.

Power supply has undergone fundamental changes: decentralized feed-in is now standard. Large solar parks, countless small photovoltaic systems as well as wind turbines and biogas plants generate a significant portion of the electricity directly on site. As a result, more and more consumers are becoming “prosumers” who feed energy into the grid themselves. To ensure that generation and consumption remain reliably balanced and in line with demand, the power grid must be intelligently controlled and monitored.

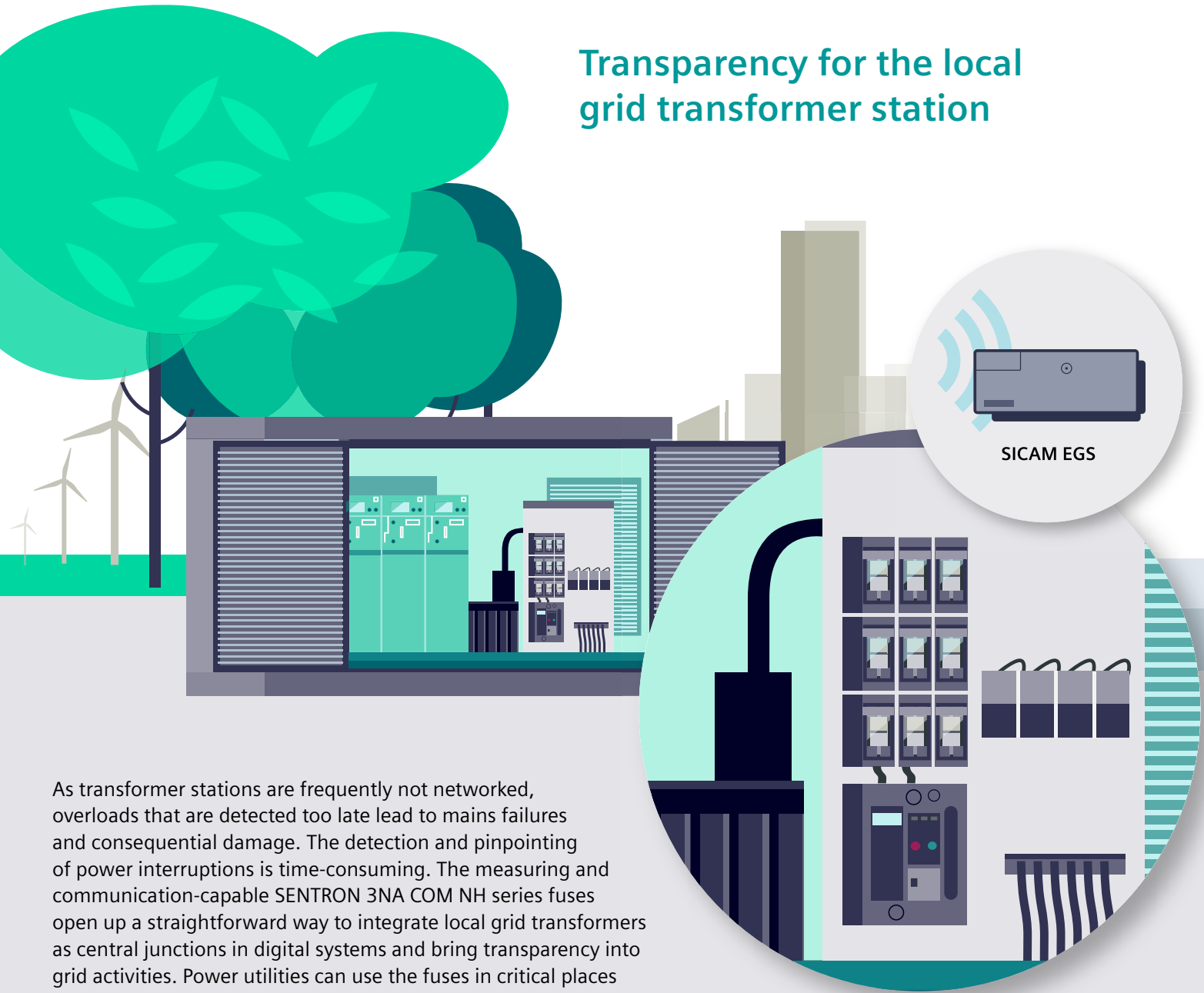


Distributed power grid

Multi-directional energy flows, as well as highly fluctuating power generation in a distributed power grid create challenges for energy providers worldwide. Electricity demand is also subject to strong fluctuation.

More and more large, private consumers, as well as e-car charging stations, for example, make it more difficult to estimate demand.

Transparency for the local grid transformer station

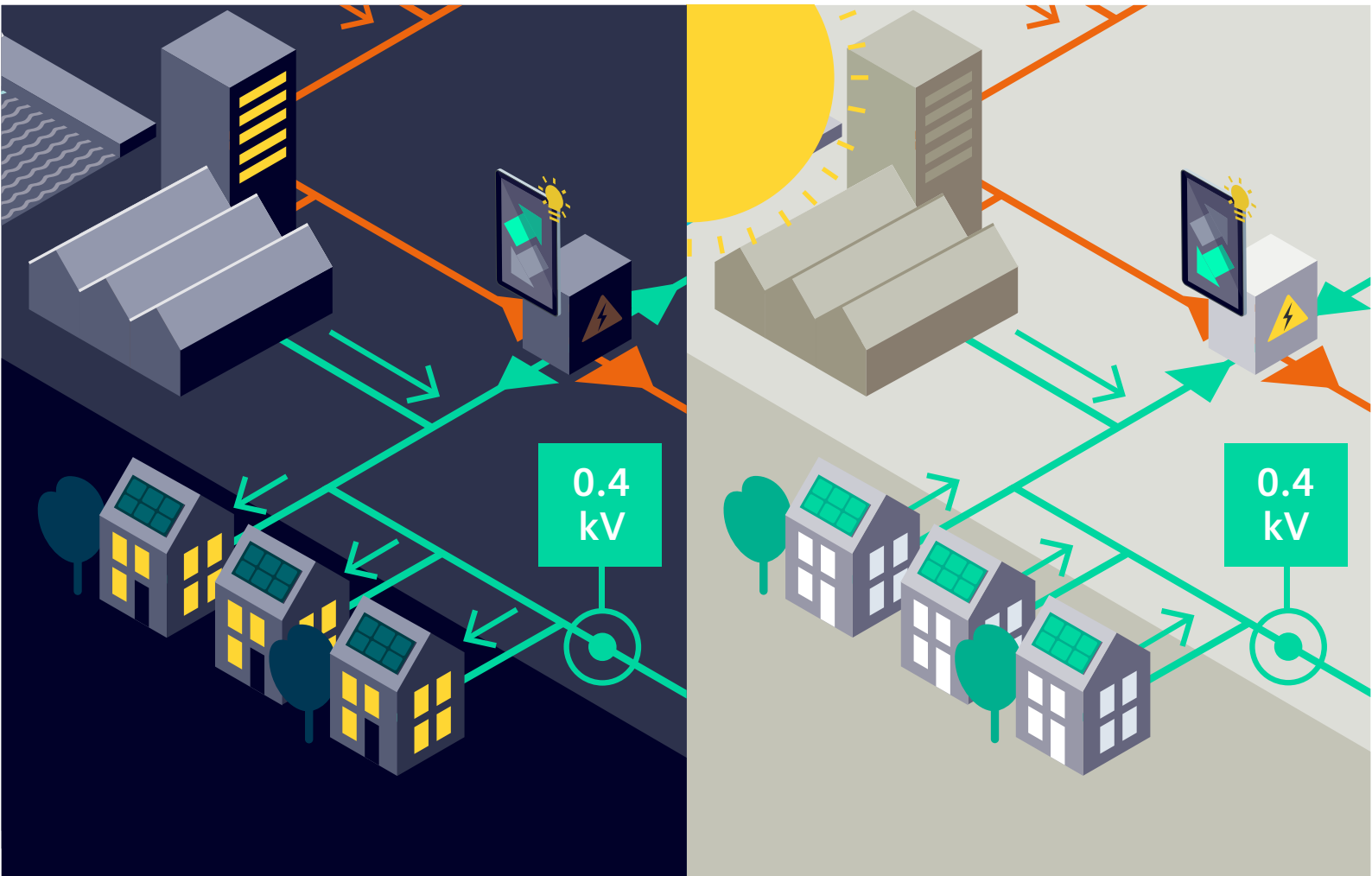


As transformer stations are frequently not networked, overloads that are detected too late lead to mains failures and consequential damage. The detection and pinpointing of power interruptions is time-consuming. The measuring and communication-capable SENTRON 3NA COM NH series fuses open up a straightforward way to integrate local grid transformers as central junctions in digital systems and bring transparency into grid activities. Power utilities can use the fuses in critical places in local grid transformer stations to monitor the downstream grid. Power outages are remedied significantly more quickly and repair costs are lowered.

Intelligent current direction detection

Feed-in from the transformer station to the local grid – or feed-back from one of the many prosumers to the local grid? The current direction detection of the SENTRON 3NA COM measuring and communication-capable NH series fuse enable bottlenecks or overloads to be detected earlier and faults to be located and diagnosed

more quickly and accurately. This means that measures can be initiated immediately and implemented cost-effectively. Ideal for a more stable grid frequency and shorter downtimes. The measurement data also supports grid planning and load distribution optimization.



Easy retrofit

The SENTRON 3NA COM measuring and communication-capable NH series fuses have the same dimensions as conventional LV HRC fuses. For the retrofit, they can easily be used in the fuse bases and safety switching devices of existing 400 V power distribution systems.

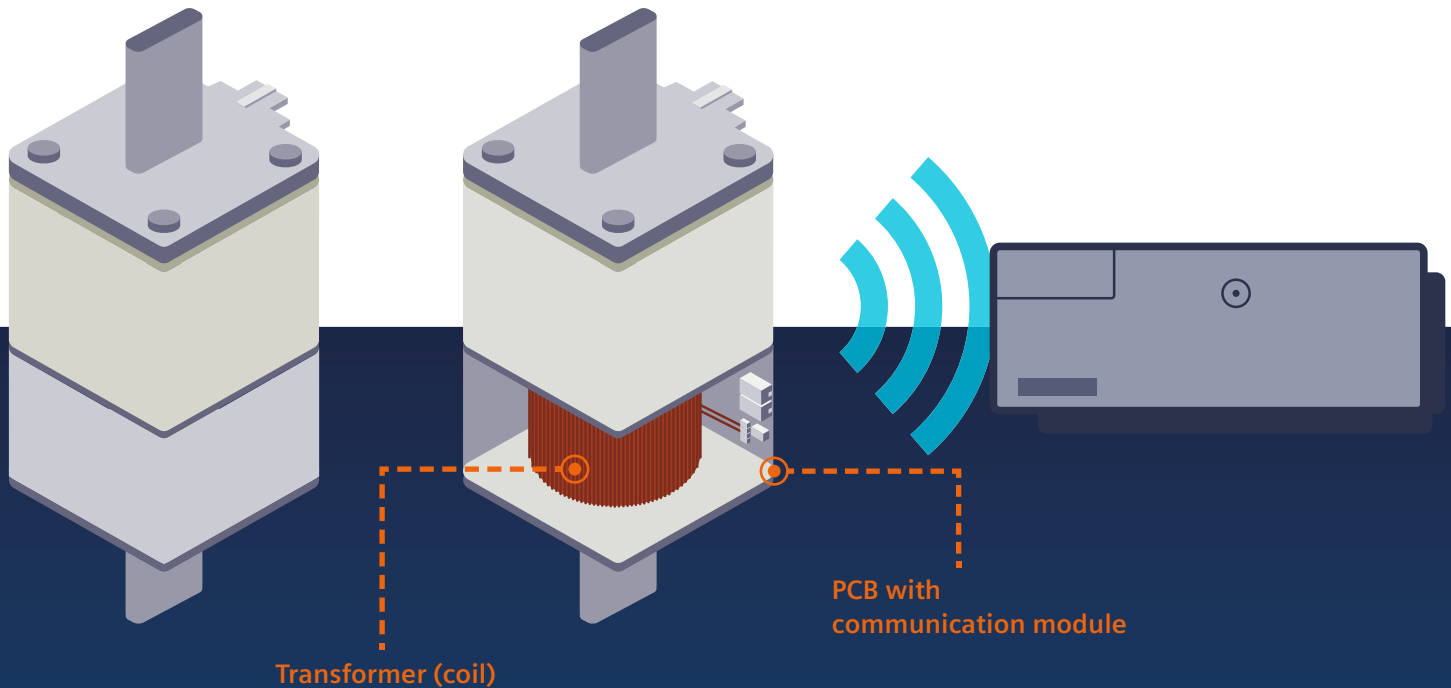
Thanks to wireless communication, no additional wiring is needed for data transfer. Installing the SICAM EGS grid sensor as a central interface for receiving, processing and forwarding data at any location in the transformer station is all that is necessary.



Sustainable and robust design

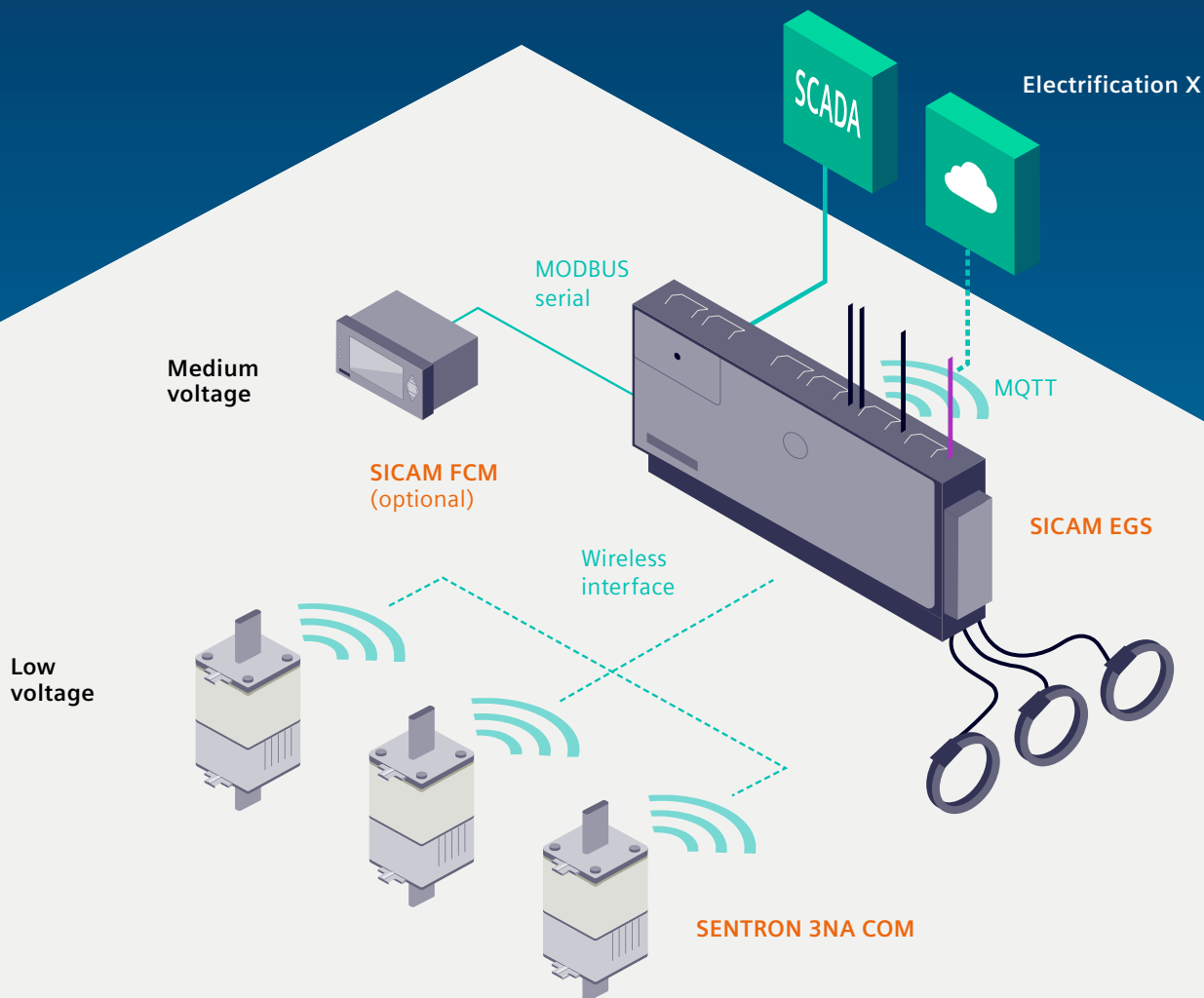
The SENTRON 3NA COM measuring and communication-capable NH series fuses consist of a fuse component and a communication module. The fuse component, like conventional LV HRC fuses, trips in case of short circuit and overload. The communication module contains an integrated current transformer, which measures current. The data is processed on an adjacent printed circuit board

and sent wirelessly to the SICAM EGS grid sensor via a transmitter. Both components are easily plugged together, so that after tripping, only the fuse needs to be changed, whereas the communication module can be reused. That keeps a lid on costs and contributes to sustainable handling of electronic components.



Powerful interface for digitalization

In combination with the intelligent SICAM EGS grid sensor, SENTRON 3NA COM measuring and communication-capable NH series fuses connect the low-voltage power distribution seamlessly with higher-level digital systems. SICAM EGS processes the data of up to 48 fuses. The integrated antenna allows the grid sensor to send data to the secure Electrification X visualization software, where you can monitor your transformer stations directly and analyze all measured values clearly. Alternatively, the data can also be transmitted from the grid sensor to SCADA systems. By the way, straightforward parameterization and commissioning of the fuses are ensured via the SENTRON Powerconfig mobile app, using a smart phone or tablet.



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