

Fiber optics in power transmission and distribution

Solutions overview

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Power transmission and distribution: Sound fiber optic solutions as an enabling technology

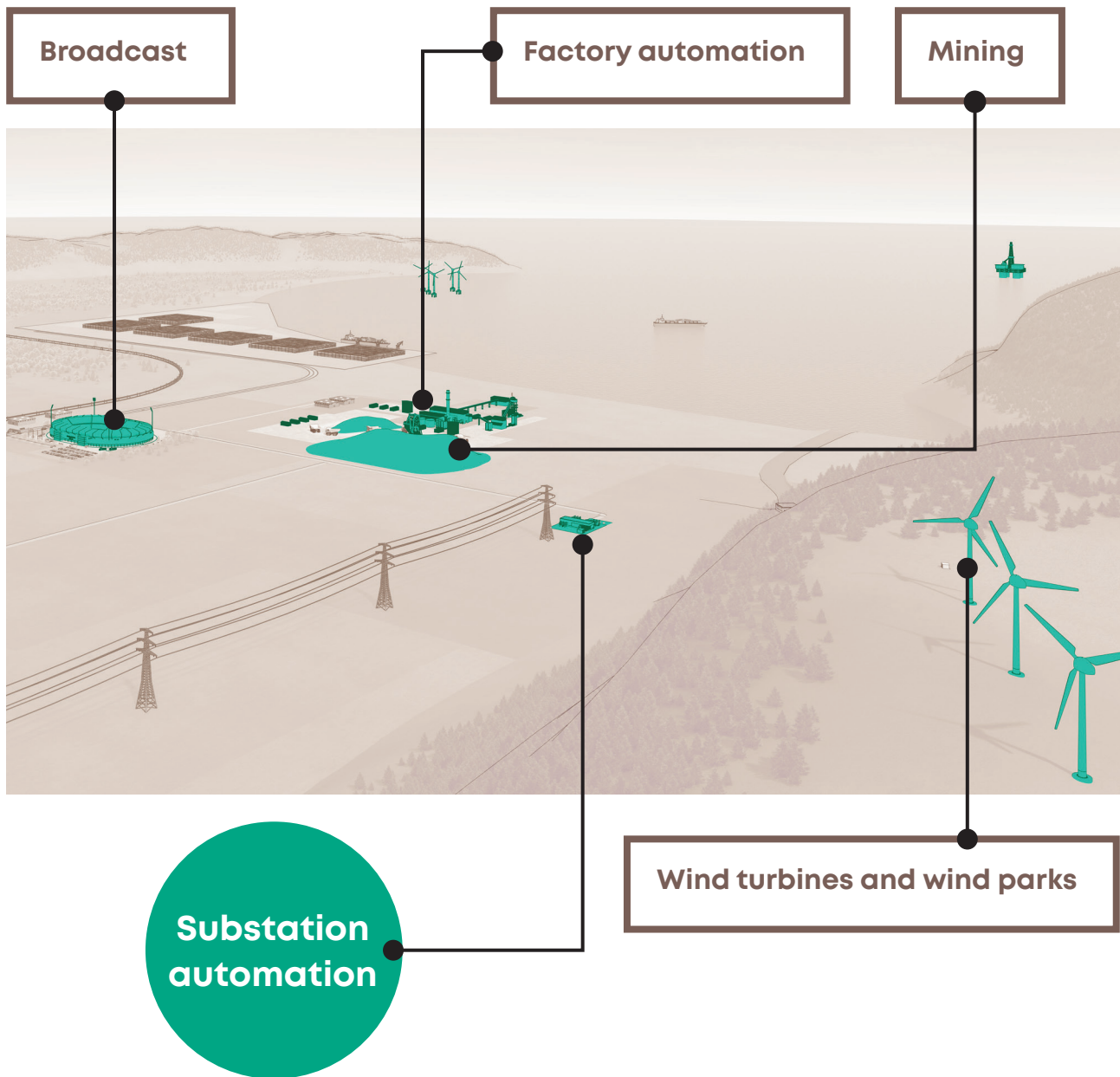
As the energy revolution towards renewable energies has been rigidly engrained in national policies of many industrialised nations, data connectivity turns out to be a key enabling ingredient.

Delocalised energy generation and power sources located remotely from metropolitan areas require a re-think of electricity grid management. Stability of the network under volatile supply due to cyclic solar and inconsistent wind contributions is a prime objective of utilities serving residential and industrial customers alike.

To live up to this new reality, substations are digitalizing such as to ensure high availability and efficient asset utilization across the grid. Fiber optic communication networks provide the required bandwidth and, equally important, the intrinsic immunity to electromagnetic interference. Without fiber optics, the sophistication and sturdiness of energy grids fit for renewables would not be attainable.

HUBER+SUHNER has been providing fiber optics solutions into the global power transmission & distribution market for many years, following the contemporary market needs throughout. Our approach is to provide end-to-end solutions comprising specialized cables, rugged connectors and clever fiber distribution hubs. Our ability to customize and build-to-order using a comprehensive, yet flexible component toolbox lets utilities and OEMs profit from ease of installation, longevity and perfect application fit.

Industrial applications



Rack-mounted patch fields

Products overview

Transitioning from indoor to outdoor environments is a recurring theme. Our Rack-mounted patch fields interface with our outdoor-compatible 12- and 24-core Q-ODC push-pull connectors. The patch panel can be equipped with conventional FO connectors to translate and distribute data streams into the indoor environment.

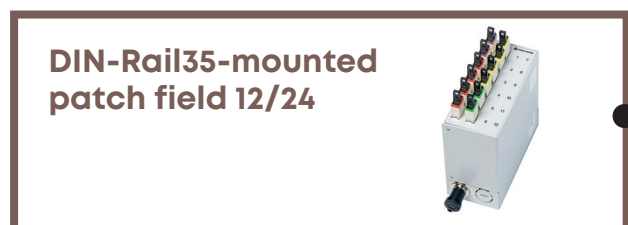
Standard rack width is 19" and module height 1U (one height unit).

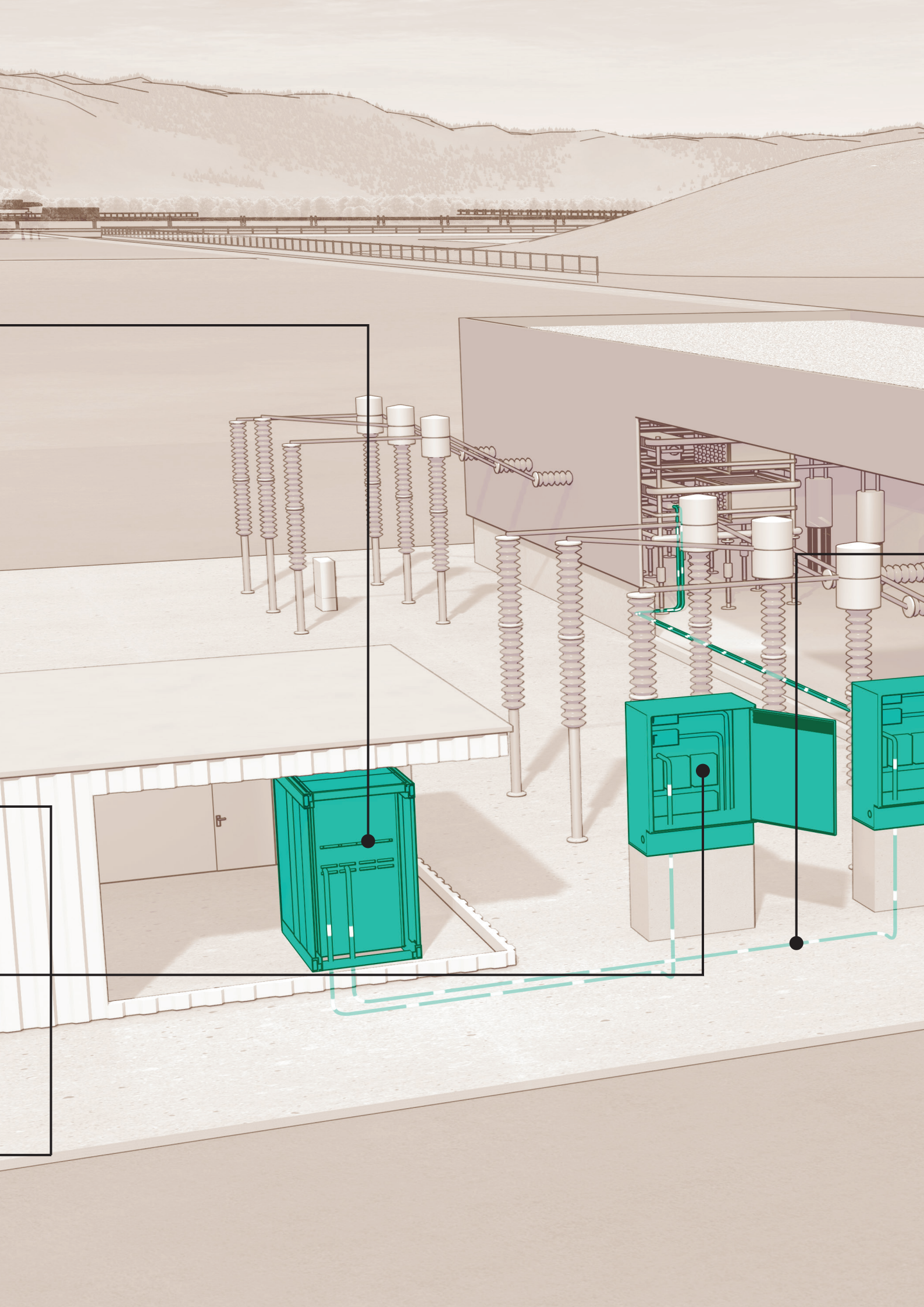


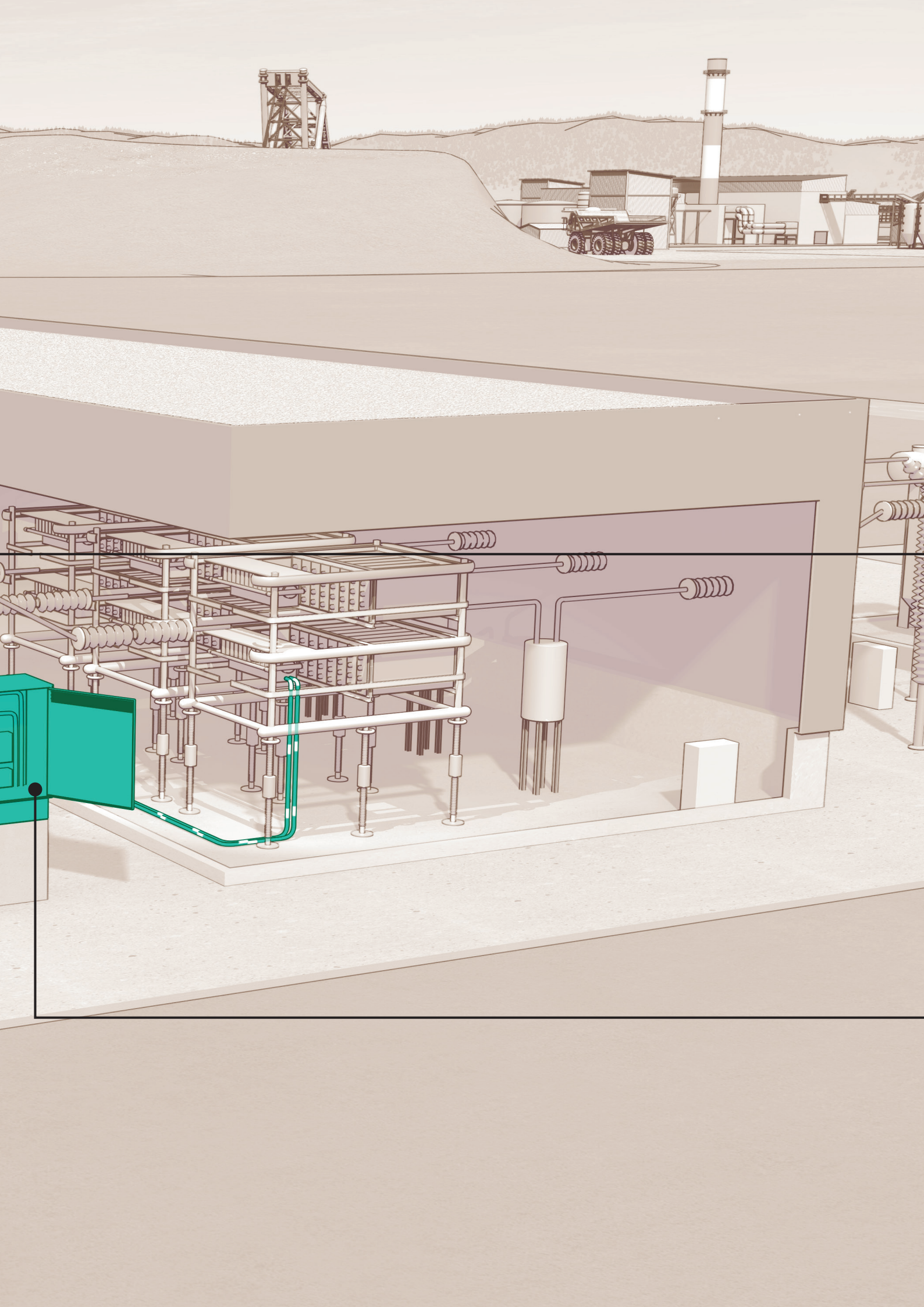
DIN-Rail35-mounted patch fields

Products overview

When linking outdoor appliances such as circuit breakers, VTs or monitoring equipment, DIN-mounted patch fields are a favored solution. They form the connectivity hub that funnels individual data streams from single or dual core patch cables into multicore outdoor cables. Either our 12/24-core Q-ODC connector creates an easily disconnectable transition from patch box to outdoor cable, or a gland feeds directly to the integrated splice trays. Typically placed within cabinets, the patch boxes are easily mounted and exchanged. The overall solution is completely modular and pre-configured to the application needs.







Cables and connectors

Products overview

Fiber optic cables

HUBER+SUHNER has a solid track-record in equipping conventional substations and HVDC converter stations. Our cable offering spans double-jacket cables for indoor-outdoor transitions, armored cables, high-voltage compatible cables and mobile cables for temporary links. Loose-tube cables have proven to be especially suitable for outdoor solutions, covering broad temperature ranges, small bending radii and high mechanical strength. Our electron-beam cross-linked jacket material RADOX provides unmatched rigidity against outdoor conditions. Moreover, we offer a full portfolio of indoor cables for patching within control rooms and associated data centers meeting all fire requirements.



Connectors

Our solutions come as pre-terminated assemblies, ready for rapid, worryless installation. Next to broad coverage of conventional connectors, our Q-ODC connector provides extra customer value: with a single push the IP68 connector links 12 or 24 cores at once. Our Q-ODC-2 Mini in turn provides similar robustness but at a minimum form factor, enabling high packing densities to be reached in the outdoors.



Additional information

Catalogue

Fiber optic solutions for industrial applications



Catalogue

Fiber optic cables



Flyer

Harsh environment connectors



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