Product knowledge compact: Overview HVDC solutions

For many years, the RITZ Group has been developing and supplying customized products for applications in HVDC (high-voltage direct current) projects. These systems, in conjunction with the EMVI 7xx electronic module, ensure reliable and precise current measurement in direct current transmission systems. The following text provides a clear classification of the devices according to their intended use and product group.

Illustration 2 OLVDC

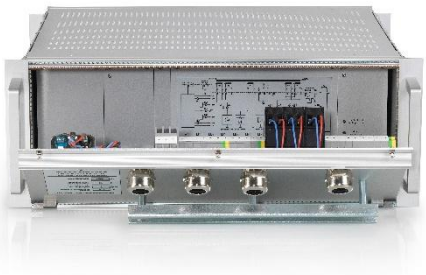

Illustration 1 EMVI 7xx

HVDC projects can generally be divided into two categories: greenfield projects (new construction) and retrofit projects (modernization of existing systems). Depending on this classification, different product solutions are used for the respective application.

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In greenfield projects, OLVDC, LGSOE, and GSOFE devices are typically installed via fully insulated insulators or bushings. In this configuration, they can be used regardless of voltage, as there are no high-voltage restrictions.

If fully insulated conductors are not available, OMVDC devices designed for operating voltages (Um) from 12 kV to 72.5 kV are used instead. These can be installed freestanding both outdoors and inside the station.

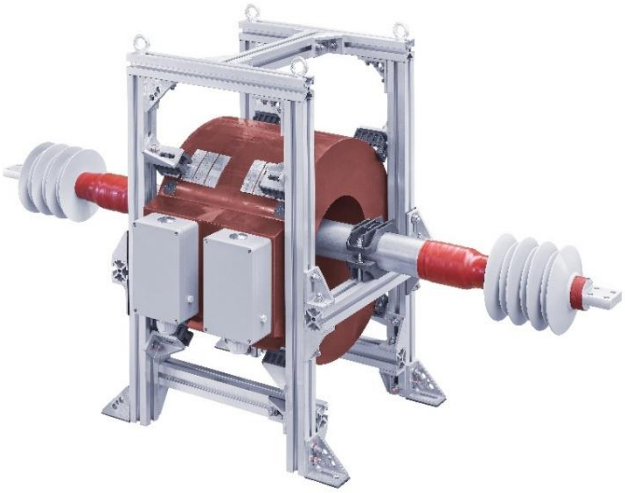

Illustration 3 OMVDC

For retrofit projects, the RITZ Group offers customized OMVDC transformers as solutions, primarily used to replace older oil-insulated transformers. They not only enable the modernization of existing infrastructure but also contribute to the long-term reduction of maintenance effort and operating costs, as OMVDC devices are generally maintenance-free, unlike their oil-insulated predecessors.

The devices are mounted on brackets whose height matches that of the original transformers. This allows for easy replacement without modifying the existing system structure. Each OMVDC is customized to the specific requirements of each application.

For further information about our HVDC products, please contact our sales team.

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