



# DEHN protects.

Dynamic voltage restorer  
from Condensator Dominit GmbH

## Customer



Condensator Dominit GmbH

## Project overview

### Sector

Power supply technology

### Application

Dynamic voltage restorer for  
keeping the grid voltage at  
the desired target value

### Hardware

DEHNventil®  
DEHNpatch

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## Condensator Dominit GmbH

Condensator Dominit specialises in power supply quality, grid quality, energy efficiency and reactive power compensation. Until just a few years ago, Condensator Dominit belonged to the ABB group. Since a management buy-in, the company is now an independent and globally active medium-sized company based in Brilon (Germany).

Modern electrotechnical loads such as frequency converters, switch-mode power supplies or modern machines and installations in general are the recipients as well as the victims of grid pollution. Condensator Dominit offers an innovative portfolio of products and solutions for conventional impacts on the power supply quality such as harmonics, flickers, commutating dips or resonances.

## Challenge

Until recently, one of the biggest problems of power supply quality was still unsolved. Short voltage dips occur in the power supply system due to thunderstorms, excavation work, harvesters placed in the wrong place, bird droppings and many other impacts which neither the consumer nor the utility has control over. The typical duration of such voltage dips is far below one second, the depth of such voltage dips is less than 30 %. This means that in general more than 70 % of the nominal voltage is still available. Due to the fact that many frequency converters as well as mechanical contactors and relays are no longer fully operational or at least enter an undefined state in case of a residual voltage of less than 85 %, apparently harmless voltage dips already lead to production downtimes and material damage.

## Solution

Condensator Dominit uses a series transformer in connection with adequate power electronics for its active voltage restorer which exactly maintains the output voltage at 400 V with minimal loss while maintaining the short-circuit power (independent of the load and the supply voltage). Consequently, the loads of the customer are protected from both voltage dips and grid-side overvoltage. To additionally protect these loads from voltage dips caused by external switching operations or lightning effects, Condensator Dominit GmbH decided to use modular DEHNventil® combined arresters for protecting power supply systems and DEHNpatch arresters for protecting telecommunication and data networks. This allows Condensator Dominit to provide complete all-round protection for its end customers' installations.



## Benefits of the DEHN solution

- ➔ Maximum system availability
- ➔ Laboratory-tested protective effect for power supply systems and information & communication systems
- ➔ Floating remote signalling contact for continuous operational monitoring (DEHNventil FM)
- ➔ Optimal technical support for all persons involved