



AN EXPERT OVERVIEW OF THE EXISTING SURGE PROTECTION SYSTEM

High-level Expert Assessment of Surge Protection System

At a glance

Transient overvoltages that exceed the insulation withstand capability of power system equipment can result in severe damage and unplanned outages. You can protect your assets from costly failures and downtime with our High-Level Expert Surge Protection Assessment program. Metal-oxide surge arresters provide effective protection for high- and medium-voltage networks against overvoltages caused by lightning events or switching operations. Our high-level assessment evaluates whether surge arresters are correctly selected, dimensioned, and strategically installed with respect to system parameters such as operating voltage and earthing arrangement - ensuring reliable asset protection and efficient, secure operation.

Operators and engineering professionals responsible for high- and medium-voltage networks who aim to ensure adequate surge protection and optimize surge arrester positioning and dimensioning under system-specific conditions can use this service.

Scope*

- Review single-line diagrams, arrester data sheets, and available input data
- Verify, if arresters are installed at critical positions
- Check rated and continuous voltages against grid conditions (system voltage and earthing)
- Assess need for detailed studies on protective levels or special positions (e.g. generator transformers, inductive switching elements, motors)

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Your benefits

Our High-Level Expert Surge Protection Assessment program provides:

- **Risk Reduction:**

Identify gaps, incorrectly dimensioned surge arresters, or missing surge protection at critical locations before transient overvoltage lead to impermissible high insulation stress, equipment damage, or production outages.

- **Technical Requirement & System fit:**

Verify that installed surge arresters (U_r / U_c) are correctly rated for the actual system voltage and earthing arrangement, ensuring suitability under current grid operating conditions.

Deliverables:

Surge Protection Overview Report (1–2 pages) with findings and recommendations.

Duration and costs

For high-voltage systems: one assessment covers one switchgear. For medium-voltage systems: one assessment covers up to five switchgears with a maximum of 10 feeders each.

Duration: approx. 4 weeks

Price: EUR 5.000

Are you interested?

Contact us:

[Contact PTI Consulting](#)

** This service does not replace a detailed insulation coordination study and therefore, it is intended to provide an overview of the existing arrester configuration. No simulations or detailed calculations are performed.*

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For further information, please use our [contact form](#).

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