

HIGH VOLTAGE PRODUCTS

Externally Gapped Line Arrester – EGLA for 765 kV Effective Protection for Ultra-High Voltage Networks



The EGLA 765 kV increases the availability of Ultra-High Voltage (UHV) electricity networks by providing efficient and reliable protection against disruptions caused by lightning strike and switching overvoltage events.

Surge arresters are the primary protection against atmospheric and switching overvoltages. Hitachi ABB Power Grids offers a complete range of surge arresters for high and medium voltage applications and comprises of AC and DC solutions up to 1,200 kV. The portfolio includes porcelain housed, silicone housed and SF₆-insulated high voltage surge arresters. Our surge arresters have been installed all over the world in all types of climates. The designs are type tested according to IEC 60099-4, ANSI / IEEE C62.11, and also are able to comply with most customer's specific standards.

Hitachi ABB Power Grids PEXLINK concept using Non-Gapped Line Surge Arresters (NGLA) has long been the customer choice for protection and performance improvements of their transmission lines. With the launch of the 765 kV Externally Gapped Line Arrester (EGLA), the PEXLINK concept is now expanded to also include a reliable and yet cost-effective EGLA solution for 765 kV Ultra-High Voltage (UHV) transmission networks. Designed for applications at 765 kV, this line surge arrester provides efficient and reliable protection against overvoltages caused by both lightning strikes and switching overvoltages – a unique feature for an EGLA.

The EGLA for 765 kV is built on the vast experience of our PEXLINK concept using well-proven and robust installation hardware, whilst keeping the installation time and effort to a minimum. A central part of the development approach has been to enable a universal solution that ensures a compact and adaptable design; suitable for installation on numerous types of transmission tower configurations with minimal adjustments needed. In addition, to provide a safe and easy detection of an overloaded surge arrester, the 765 kV EGLA design incorporates an automatic disconnection and visual indication mechanism to facilitate identification of surge arrester replacement and ensure full performance of the transmission line at all times.

Features and Benefits

- **Switching control** – provide switching control functionality in a similar way to NGLA, a unique feature for an EGLA
- **Full disconnection with integrated replacement indication** – achieve full insulation withstand for the transmission line in case of a fault and provide a visual indication of the need to replace an overloaded EGLA
- **No need for specific type testing** – independently use the EGLA on various tower configurations without the need to re-perform type testing
- **Short implementation time** – implementation time can be minimized due to no requirement for specific type testing
- **Quick and easy installation** – outage time of critical transmission lines can be kept to a minimum as the installation process only requires standard tools and most of the build can be prepared in advance at ground level
- **Easy asset replacement management** – the universal design of the EGLA enable ease of managing spare stock and performing replacement of failed units
- **Robust installation hardware** – from our experience with PEXLINK NGLA and through extensive testing far beyond the standard requirements, the longevity of the solution with minimal risk of interruption and outages is assured

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Technical data

Specification	Value
Applied Standard	IEC 60099-8
Maximum System Voltage	800 kVrms
Rated Voltage of EGLA	$800/\sqrt{3}$ kVrms
Classifying Current	10 kApeak
Classification of EGLA	Class X3
Discharge Current Withstand Strength, 4/10 μ s	100 kApeak
Short-Circuit Capability, 0.2 s	65 kArms
