

Rail Surge Protection

CONNECT AND PROTECT

Exposure and risk posed by adverse electrical conditions is unavoidable



nVent ERICO Surge Protection Devices (SPD) deliver **maximum protection** and railways **minimize the cost** to protect critical assets



WHY NVENT ERICO IS THE PREMIER RAIL SURGE PROTECTION PROVIDER:

- An **Established Rail Industry Supplier** offering a comprehensive surge protection product line, with many devices specifically designed for rail. nVent ERICO also serves many other industries, including surge protection for telecom, and other industries that align with next-generation rail technologies.
- **Comprehensive SPD Portfolio Covers Every Type of Application and Network Area**, including surge protection for equipment power, data and signal line protection, and signaling equipment inputs and outputs (I/Os). Network areas include bungalows and wayside equipment, rail facilities and classification yards, as well as onboard systems.
- **Innovative Designs, Modern Features and Proprietary Technology** are the basis for the balanced approach to surge protection that nVent ERICO delivers, protecting against both sudden, momentary transients as well as long-term exposure to Temporary Over Voltages (TOVs).
- Recognized for **Superior Performance**, nVent ERICO RAIL SPDs typically feature best in class max surge ratings as well as compliance with key industry standards (AREMA, IEC, UL, etc.) confirmed through in-house and 3rd party testing.



What is the cost of inadequate surge protection?

Comprehensive surge protection is a requirement for railways but not all devices can protect against rare or complex electrical events that can be especially damaging. In addition, not all devices meet key industry standards that promote proper functionality in a diverse range of operating conditions. An SPD that doesn't perform adequately can be very expensive for railways, which can include replacing expensive equipment as well as the costs associated with downtime and maintenance. nVent ERICO offers a range of maximum performance SPDs which helps railways avoid the unwanted costs of inadequate protection.

TRUSTED RAILWAY ELECTRICAL PROTECTION FOR OVER 100 YEARS

Founded as the Electric Railway Improvement Company in 1903, nVent ERICO understands the unique and unavoidable exposure to adverse electrical conditions. Over many years serving the railway industry, nVent ERICO has developed a line of surge protection devices that bring a balanced approach to surge suppression that protects in the rare, extreme event as well as over the long-term.

This versatility is well suited for the complex railway environment, making nVent ERICO the premier choice in rail when it comes to protecting mission critical assets.

Protection for Equipment Power Signal and Data Lines, and Equipment for Inputs and Outputs

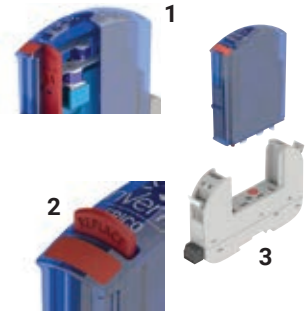
1. Rail Transient Barrier Next Generation for data and signal line protection
2. LAN Series Power Over Ethernet and Cat6 protection
3. DIN Rail Power Surge Protector for equipment power protection



Robust, Feature Rich Solutions: nVent ERICO RTBN

The nVent ERICO SPDs include many features that modern railways have come to expect.

1. Thermal disconnect for safe end of life performance
2. Visual flag indicated the need for replacement
3. Plug-in / detachable module for easy replacement



NVENT ERICO TD TECHNOLOGY

What happens when two types of damaging surge events happen at the same time? For example, nearby power-lines induce a Temporary Over Voltage (TOV) condition threatening equipment, followed by a lightning strike. Most surge protection devices can protect one or the other. Power protection SPDs with proprietary **nVent ERICO TD Technology** that can differentiate TOVs from transient over-voltages to quickly adjust clamping levels to ensure ongoing protection when multiple electrical events happen in quick succession.

TSF Series

EPD Series

DT1 Series

Power Protection SPDs with nVent ERICO TD Technology

Active TD Technology

TD Technology Solution

nVent ERICO TD Technology has two clamping levels (1) above peak protection and (2) clamping lower level over-voltages. The patented Quick Switch will sense the type of event and engage the proper clamping. The ability to adjust clamping levels is important because repetitive clamping at peak levels can cause the device to rapidly heat up and ultimately fail.

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