



CITEL

CTC-TECHNOLOGY

The next level in surge protection

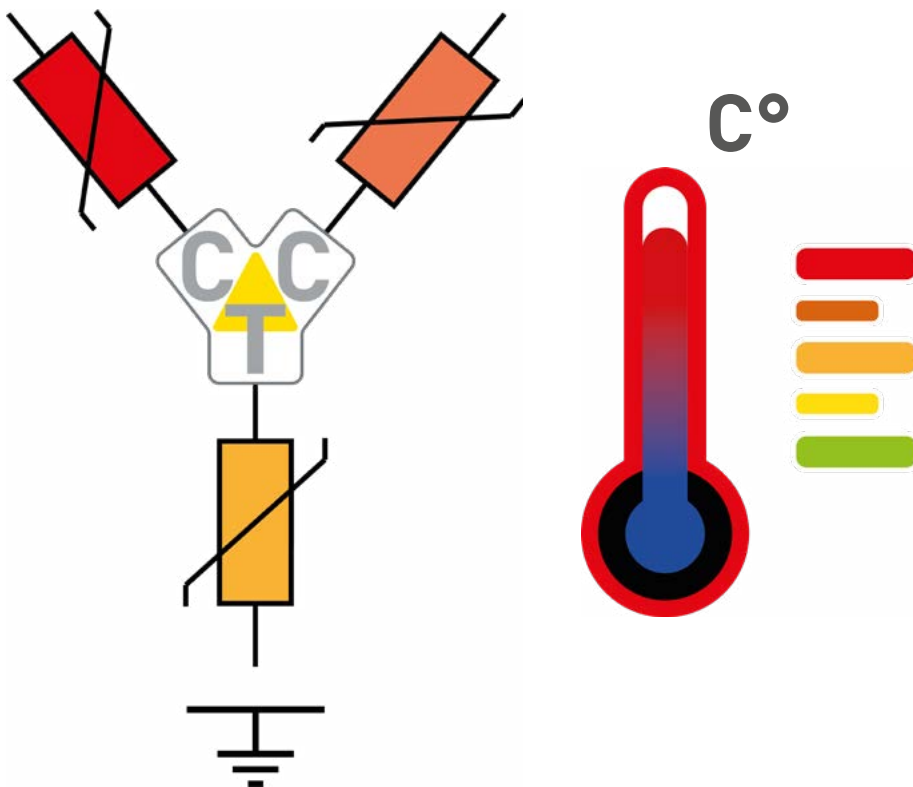


„Thermal“ – More efficient use of Joule-heat for more safety

The innovative disconnection device of the CTC technology is thermosensitive. Due to its identically short conductor lengths compared to conventional circuits, the heat generated in each MOV during a dissipation process (Joule heat) reaches the disconnecter faster.

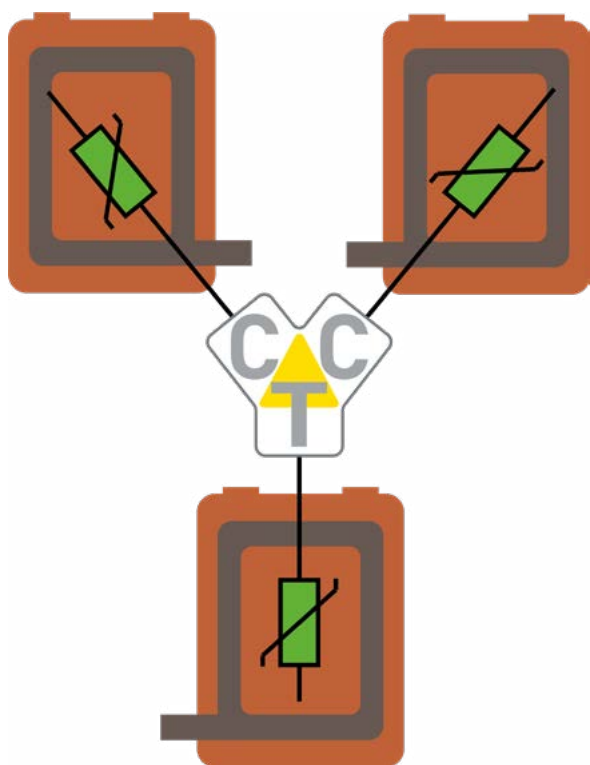
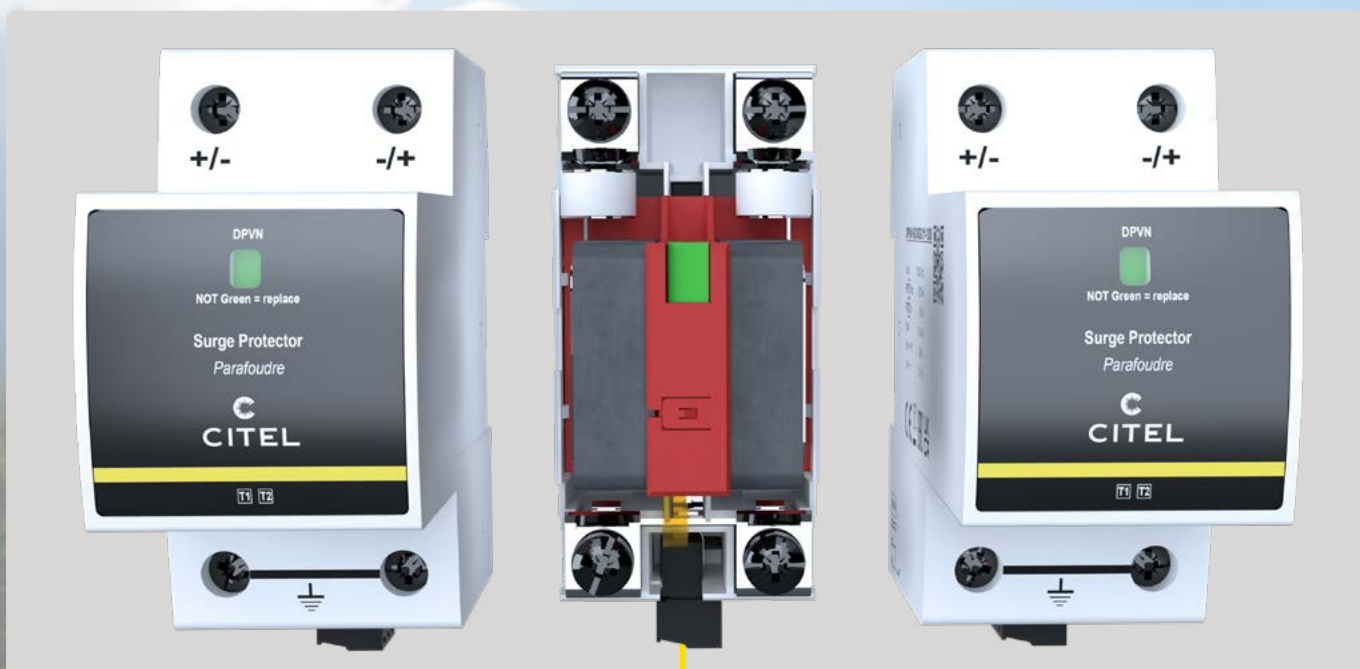
Furthermore, the connection of all MOVs to a single cut-off point allows the Joule heat of all installed MOVs to act simultaneously on the single heat point of the solo disconnection device.

As a result in case of overstress or end-of-life scenario, the envelope temperature of the SPD remains low during safety disconnection. The heat is concentrated in the CTC itself and the SPD therefore disconnects from the mains much faster in the event of an overload. This means a significant increase in safety.



CTC - CENTRAL THERMAL CONTROL

THE NEXT LEVEL SURGE PROTECTION



„Central“ - The central position of the disconnection device

The innovative CTC technology uses several MOVs, but only one disconnection device. This solo disconnection is spatially positioned within the centre of the installed MOVs.

Compared to conservatively constructed SPDs with multiple MOVs, each MOV is no longer connected to a separate disconnection device, but all MOVs in the SPD are connected to the same disconnection.

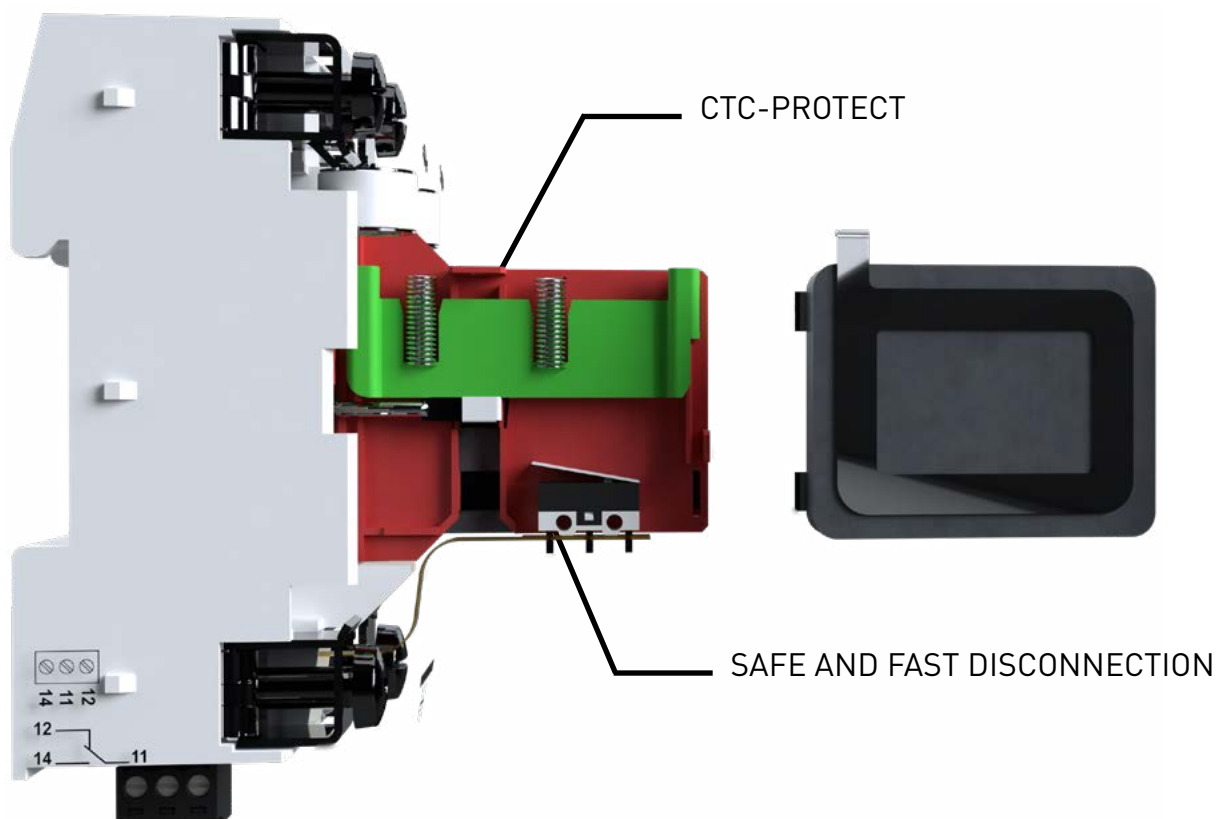
This arrangement results in a significantly more compact design of the SPD: With only 2.5 divisions (45 mm), the DPVN is about one centimeter slimmer than SPDs with comparable protective capacity.

Furthermore, the distances and conductor lengths between the disconnection device and all MOVs are identical.

„Control“ – All-pole disconnection with dual mechanism

The innovative CTC technology does not only disconnect faster, but also safer and more reliable.

- **Minimisation of the short-circuit risk:**
As soon as the remaining protective capacity of an MOV is so low that safe operation can no longer be guaranteed, the CTC-Technology disconnects the entire SPD from the grid at all poles. This ensures that the system operator replaces all MOVs and that no pre-stressed MOVs remain in use unnoticed. The danger of a MOV short-circuit is thus averted and safe system operation is restored.
- **More safety through double separation:**
In SPDs with the new patented CTC-Technology, the poles are additionally insulated from each other by an insulating safety barrier in case of tripping. Arcs cannot penetrate this partition. In this way, the conventional spring-based distance separation is decisively improved.
- **Double separation = double safety.**



BENEFITS OF THE CTC-TECHNOLOGY



The innovative and patented CTC-Technology (Central Thermal Control) is an entirely new designed disconnection technology.

It is safer, faster, and more compact than previous disconnections. Its cutting-edge technology has been rewarded with numerous patents for CITEL. It counters the weaknesses of previous disconnection devices primarily through:

- Its thermo-sensitive solo separation point, which is spatially centrally placed in the SPD
- The additional insulating safety barrier integrated into the isolating device for more reliable separation of the poles in the event of separation.

This game-changing technology brings a number of benefits for you:

- Space saving due to more compact design
- Short conductor lengths between MOV and cut-off device
- Fast triggering of the cut-off by cumulative heat impact of all MOVs on one heat point
- Additional insulation barrier for even safer pole separation
- All-pole disconnection in case of tripping
- No risk of varistor short circuits
- Much lower temperature of the SPD envelope during disconnection providing more safety
- For the user or side by side electrical devices.

YOUR EXPERT IN SURGE PROTECTION

Since 1937, CITEL has been protecting equipment around the world from transient overvoltages caused by switching operations and lightning strikes. With a deep understanding of international and national standards and regulations, as well as continuous investment in research and development, CITEL manufactures and distributes millions of protection devices every year.

CITEL develops all critical protection solutions in-house. Our teams around the world take pride in helping to provide the market with a comprehensive range of surge protection products with our unique customer-focused service and quality.

UNIQUE like each of our customers. Unique, like our strategic vision, financial independence, international technical cooperation and strong individual commitment.

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