

Silver-plated copper electrical contacts

The major difference between the busbar trunking systems available on the market is the quality of the electrical contacts.

At all points in the installation, Canalis offers the reliability that is essential for the safe use and high performance of busbar trunking systems:

- connections between the system elements via the junction blocks,
- connections to the tap-off units via the outlet connectors.

The total length of the Canalis devices installed is equal to twice the distance around the world.



High-performance electrical contacts:

10x

less resistive than
tin-plated copper

5x

less resistive than
nickel-plated copper

Schneider Electric, the market leader in busbar trunking systems, is backed by almost sixty years of experience (Canalis has been on the market since 1954).

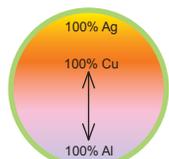
Schneider Electric has developed and industrialised the best technology to guarantee the quality required for its busbar trunking systems: bimetal silver-plated copper contact.

The bimetal contact, for perfect balance between the lightness of the aluminium (for the conductors) and the excellent conductivity of the copper (for the connections).

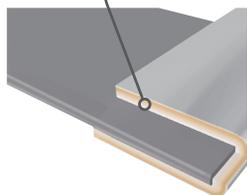
50% Al

100% Cu

For equivalent performance, aluminium is 50% lighter than copper.

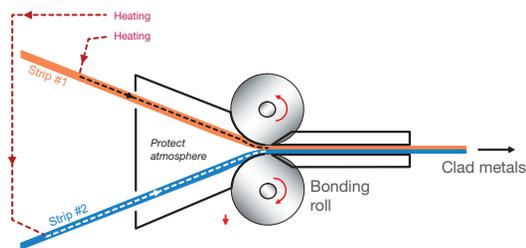


Silver Contact Surface
 Silver-Copper transition Zone
 Copper Conducting Zone
 Copper-Aluminum Molecular Fusion Zone
 Aluminum Conducting Zone
 Aluminum Contact Surface



"Silver-plated copper" technology

Schneider Electric has applied molecular fusion to combine copper and aluminium. This combination is obtained by a special high-pressure process.

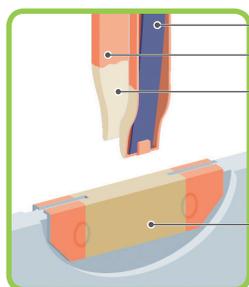


Bimetal clad bonding process

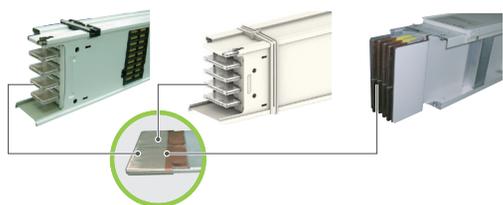
The bimetal contacts consist of an outer silver-plated copper contact surface and an inner aluminium surface that can be welded to the aluminium conductors on the busbar trunking.

The bimetal contacts are positioned at each connection, either between two busbar trunking elements or at the connections to the tap-off units.

The silver-plated copper provides excellent electrical performance and low contact resistance. The electrical contacts are always silver on silver. The quality and reliability of the contacts are therefore guaranteed at every connection point.



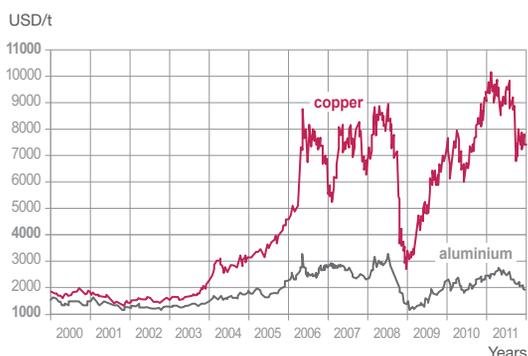
Spring of clamps
 Copper
 Silver-plated copper
 Laminated Aluminium / Silver-plated Copper



Choose a high-performance...

The lightness of aluminium is no longer in doubt. It allows easy handling of the busbar trunking, thus reducing installation times and the risk of accidents.

The busbar trunking is less heavy on the support structures, which can be lightened. Consequently, the overall costs of projects are reduced.



Price comparison between aluminium and copper (USD/t)
 London Metal Exchange

... attractively priced material

Aluminium is one of the most plentiful metals on earth. Its market price is more stable than that of copper, a material that is becoming scarce. Capital budgets can therefore easily be planned and are more reliable.

In addition, aluminium is the most recycled metal. For example, the recycling rate of aluminium in the building sectors is 90%.

Canalis therefore plays an important part in environmental protection.

With Canalis, Schneider Electric combines the respective advantages of copper and aluminium for the benefit of the best busbar trunking systems:

- > perfect electrical contacts via silver-plated copper/aluminium contacts
- > lightness and cost effectiveness due to the use of aluminium.



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