

Delphi Terminals with L-shaped Crimp Wings

Delphi Terminals with L-shaped Crimp Wings are specifically designed for use with small gauge wiring, including 0.13 mm². The patented (EP 1 993 171 A1) terminals with L-shaped crimp wings enable miniaturization and also automated assembly processes and can be used with both sealed and unsealed applications.

The specialized crimp wing design provides separation/disconnection of electrical and mechanical functions of the crimp to optimize the slow motion performance.

- **Mechanical area** provides low compaction rates for high pullout forces
- **Electrical area** provides optimal electrical properties for high compaction with a standard crimp tool

The L-shaped crimp technology can be applied to several material stock thicknesses.

► Benefits

- Enable miniaturization and automated assembly processes
- Unique L-shaped crimp design allows
 - Use of a wide range of terminal material thicknesses
 - Increased tensile strength range
 - Superior crimp monitoring capability
- Mechanical and electrical functionality are disconnected and can be adjusted independently to their optimal crimp heights (compaction rates)
- Excellent mechanical and electrical functionality
 - High compaction rate of the wire material for superior electrical performance
 - Low compaction rate of the wire material for superior mechanical performance
- Proven, reliable terminal interfaces provide crimp integrity
- Fully robust crimps show no resistance increase during slow motion bending tests
- Conventional crimp process is not impacted, since adjustments are incorporated into the terminal design
- Can be used with several cable insulations
 - PVC (polyvinyl chloride)
 - PP (polypropylene)

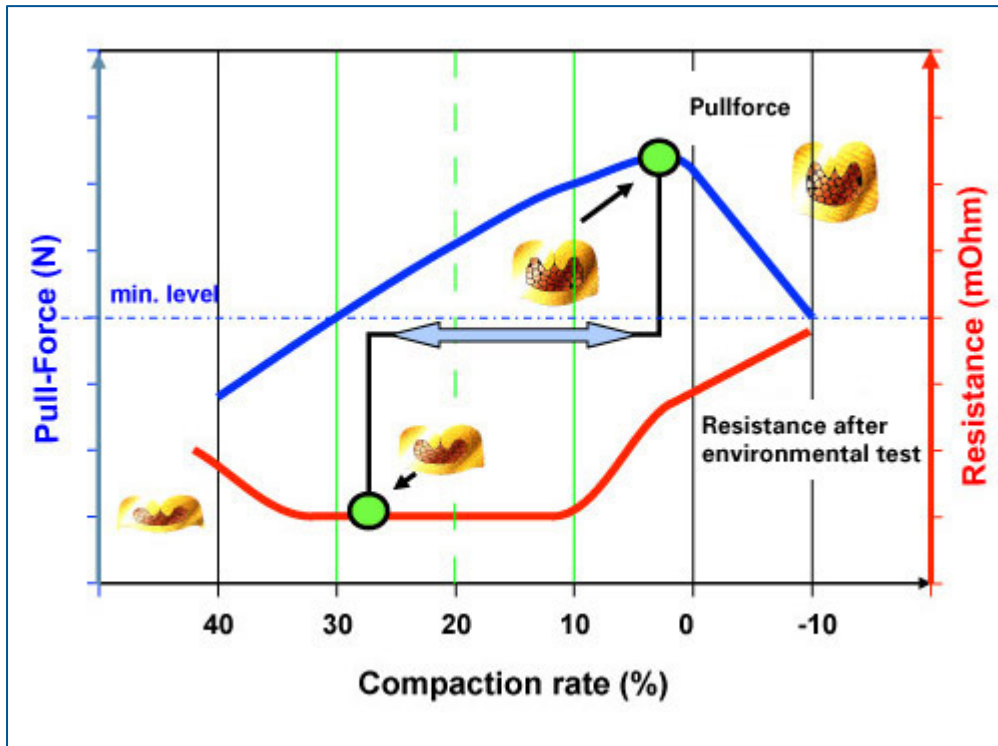


CTS (Compact Terminal Systems) 1.5 mm terminal with L-shaped crimp wings



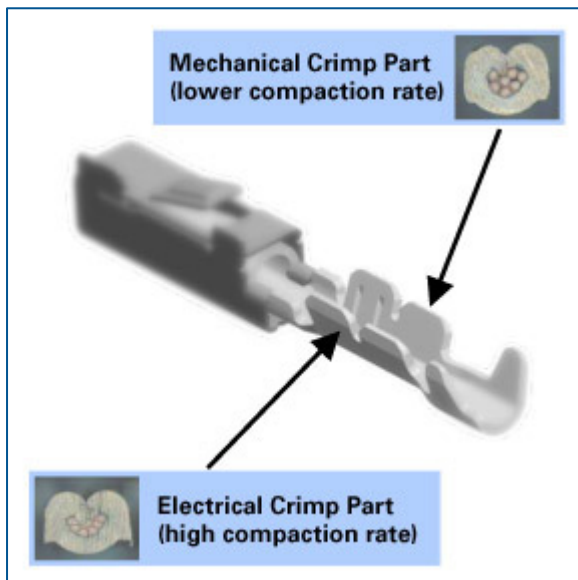
MTS (Micro Terminal Systems) 0.64 [0.63] mm terminal with L-shaped crimp wings

► **How the Mechanical/Electrical Disconnection Works**



The mechanical and electrical functionality are disconnected and can be adjusted individually/independently to their optimal crimp heights (compaction rates).

The existing conventional crimp process is not impacted because the adjustment is fully integrated in the part design.

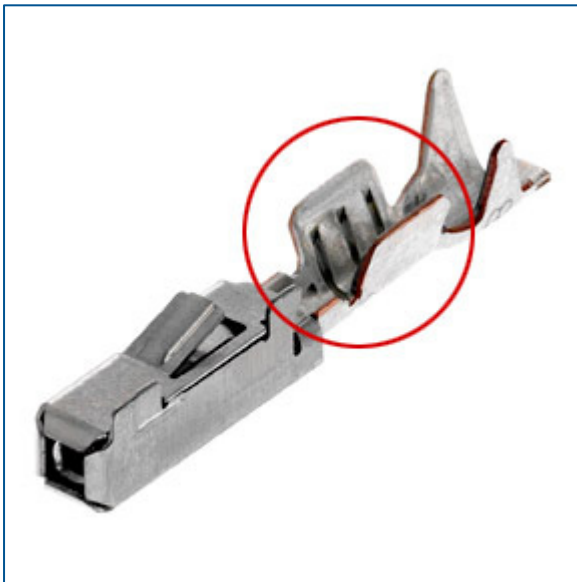


▶ **Typical Applications**

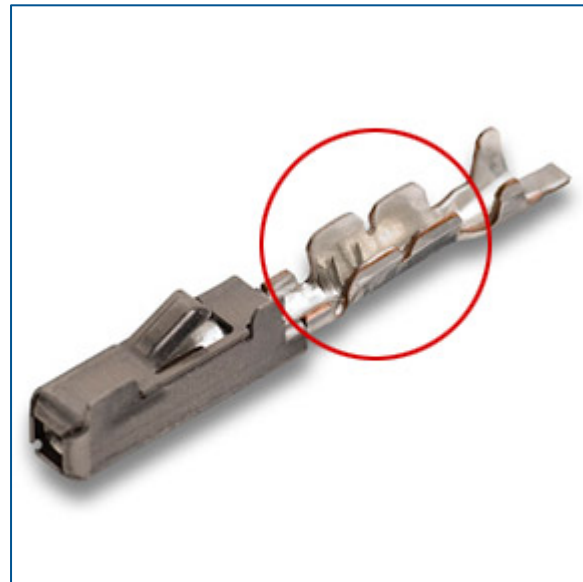
Delphi Terminals with L-shaped Crimp Wings are designed for use with automotive wiring. They are suited for both sealed and unsealed applications.

A wide range of terminal thicknesses can be accommodated (0.15 mm to 0.40 mm), especially those needed for small gauge wiring applications such as 0.13mm².

▶ **Standard vs. L-shaped Crimp Design**



Standard crimp design



L-shaped crimp design

▶ **The Delphi Advantage**

Delphi offers a complete range of technologies to support miniaturization. Delphi is one of the world's leading automotive suppliers of advanced terminals, sealing, wiring and cable products. An expert in managing the complex connections and durability issues associated with thinner cable and corresponding small terminals, Delphi's deep understanding of terminals, wiring and cable and the company's vast research and development capabilities have enabled continuing innovation.

Delphi is a source for high value solutions and our expertise is built into every product. Delphi has a thorough understanding of markets around the world and a global network of resources. Delphi relies on its global capabilities, consistent processes, and extensive testing to develop and manufacture a comprehensive offering of terminals, sealing, wiring and cable products. The result is that Delphi provides customers with robust, reliable products and world-class quality.