

Amphenol Automotive

Amphenol-Tuchel Electronics GmbH

Rev 3: 08.2025

SAFETY PORTFOLIO

AIRBAG



Advanced Protection, Proven Reliability

Amphenol-Tuchel Electronics GmbH • August-Haeusser-Str. 10 • 74080 Heilbronn • Germany

GLOBAL INNOVATION

Pioneering connector technologies for the evolving mobility landscape.

Amphenol-Tuchel Electronics GmbH operates across three strategic locations, employing over 750 professionals worldwide.

We specialize in innovative, customizable connector solutions tailored to the demands of the electric vehicle market. Our product portfolio focus is on three key families:

- **Safety systems and airbag connectors**
- **High-power and high-voltage components**
- **Stamping contact terminals**

As the inventors of the first connector for airbag and belt tensioner modules, we have set industry standards, continuously refining and innovating our airbag connector technologies.

ENGINEERED WORLDWIDE. TRUSTED EVERYWHERE.

A global network built for performance, precision, and scalability.

At **Amphenol-Tuchel Electronics GmbH**, we're committed to delivering integrated, high-performance solutions for today's complex vehicle systems. From wiring harnesses for safety-critical modules to scalable electrical architectures, we design for reliability and functional safety.

Our certified production sites in **Heilbronn/Germany**, **El Fahs/Tunisia** and **Monterrey/Mexico** feature advanced technologies and follow **ISO 14001**, **IATF 16949** standards, ensuring consistent quality and agile global support.



INNOVATIVE SAFETY CONNECTOR SOLUTIONS

15 milliseconds – might save a life.

Our connector and retainer systems are engineered for optimal performance in safety-critical applications. With advanced ferrite technology and robust CPA locking designs, our products support efficient deployment of airbag systems, meet global standards, and ensure reliability across a wide range of environments.



PRODUCT CATEGORIES

Airbag Connectors



1. AK2 ferrite 90°



2. AK2 ferrite 180°



3. AK2+® ferrite 90°



4. ABX-5® ferrite 90°



5. ABX-5® ferrite 180°



6. ABX-5® 90° 'short'

Retainer Systems



1. AK2 Retainer



2. AK2+® Retainer



3. ABX-5® Retainer

AIRBAG CONNECTORS

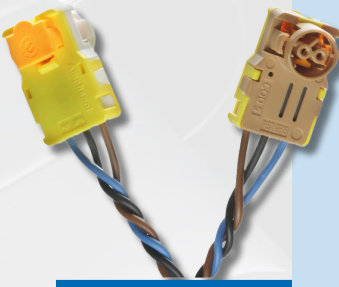


1. AK2 ferrite 90°

The Amphenol **AK2 ferrite 90°** squib connector offers a scoop-proof, kojiri-safe interface design, giving 3 mechanical codings, robust CPA lock and RFI/EMI protection by ferrite core. It features a gold-plated O-type contact system using welding technology to connect two different sizes and various types of wire. Operating temperature range is -40°C up to +90°C.

2. AK2 ferrite 180°

The Amphenol **AK2 ferrite 180°** squib connector offers a scoop-proof, kojiri-safe interface design, giving 3 mechanical codings, robust CPA lock and RFI/EMI protection by ferrite core. It features a gold-plated O-type contact system using welding technology to connect two different sizes and various types of wire. Operating temperature range is -40°C up to +90°C.



3. AK2+® ferrite 90°

The Amphenol **AK2+ ferrite 90°** squib connector offers a scoop-proof, kojiri-safe interface design with integrated ESD protection, giving 2 mechanical codings, robust CPA lock and RFI/EMI protection by ferrite core. It features a gold-plated O-type signal contact system and a tin plated ESD ground contact using welding technology to connect two different sizes and various types of wire. Operating temperature range is -40°C up to +90°C.

4. ABX-5® ferrite 90°

The Amphenol **ABX-5 ferrite 90°** squib connector offers a scoop-proof, kojiri-safe interface design, giving 4 mechanical codings acc. ISO 19072-5, integrated electric CPA lock monitoring and RFI/EMI protection by ferrite core. It features a gold-plated O-type contact system using welding technology to connect two different sizes and various types of wire. Operating temperature range is -40°C up to +90°C.



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5. ABX-5® ferrite 180°

The Amphenol **ABX-5 ferrite 180°** squib connector offers a scoop-proof, kojiri-safe interface design, giving 4 mechanical codings acc. ISO 19072-5, integrated electric CPA lock monitoring and RFI/EMI protection by ferrite core. It features a gold-plated O-type contact system using welding technology to connect two different sizes and various types of wire. Operating temperature range is -40°C up to +90°C.

4. ABX-5® 90° 'short'

The ultra compact Amphenol **ABX-5 90° 'short'** squib connector offers a scoop-proof, kojiri-safe interface design giving 4 mechanical codings acc. ISO 19072-5 (but no electric CPA lock monitoring, no ferrite). It features a gold-plated O-type contact system using welding technology to connect two different sizes and various types of wire. Operating temperature range is -40°C up to +120°C.



Coming Soon

6. ABX-5® Springlock

We are excited to soon expand our product range with the addition of the "ABX-5 Springlock". This solution introduces a connector system that uses a spring-based locking mechanism. It ensures that any incorrect mating is immediately noticeable due to the connector's spring-back action, effectively preventing false or incomplete connections.

RETAINER SYSTEMS

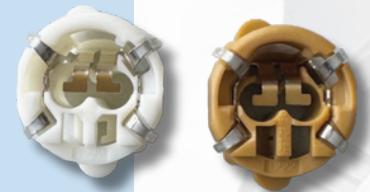


1. AK2 Retainer

The Amphenol **AK2 Retainer** fits into Ø11mm ignitors, features a gold-plated shorting bar for both contact pins and gives 3 different mechanical codings (black, green, yellow). It ensures reliable performance at an operating temperature range from -40°C up to +90°C.

2. AK2+® Retainer

The Amphenol **AK2+® Retainer** fits into Ø11mm ignitors, features a gold-plated shorting bar for both contact pins, a tin-plated ground contact for ESD and gives 2 different mechanical codings (white, brown). It ensures reliable performance at an operating temperature range from -40°C up to +90°C.



3. ABX-5 ® Retainer

The Amphenol **ABX-5 Retainer** fits into Ø11mm ignitors. It has no build in shorting bar and gives 4 different mechanical codings acc. ISO 19072-5 (pink, purple, grey, green). It ensures reliable performance at an operating temperature range from -40°C up to +90°C.



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FOR THE MOMENT THAT MATTERS

Our **safety components** are designed with precision, ensuring consistent performance in the most demanding environments.



We embrace the same values across our other product groups. Be sure to check out our High Power & High Voltage systems as well!

CONTACT US

Get in touch to explore how our products can support your next project.



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