

P R E S S R E L E A S E

Safety first with autonomous driving – thanks to intelligent switching systems from Eberspaecher

- **Separation and connection of electrical system sections up to ASIL Level D**
- **Intelligent semiconductor switch for autonomous driving from stages 3 to 5**
- **System consisting of highly integrated battery and electrical system circuit breakers for fully automated vehicles**

Esslingen / Landau, 11 October 2017 – Eberspaecher shapes tomorrow’s mobility:
The automotive supplier provides intelligent switching systems for safe separation and connection of the complex on-board circuits in autonomous vehicles. The electronics experts from Eberspaecher Controls Landau have developed the Autonomous Driving Safety Switch for 12 volt on-board circuits with at least two energy sources. In fully automated vehicles, the Battery and Boardnet Safety Module provides for intelligent distribution of current and ensures a reliable power supply for safety-relevant components.

Control devices, sensors, actuators: The more autonomous a vehicle is, the larger the number of electrical components – and the more complex the architecture of the electrical system. The vehicles of the future will not only have several energy sources, but also several different electrical system sections. New products from Eberspaecher Controls Landau ensure that these sub-circuits can be safely connected with each other and separated from each other. General Manager Dr Massimo Venturi emphasizes: “With our intelligent switching systems we focus on our core area of competence, namely fast and reliable separation of electrical circuits, and develop it to address the needs of tomorrow’s mobility.” Recently, the first vehicles complying with automation level 3 of the SAE (SAE J3016 standard) have entered series production. In such vehicles, the driver is required to

act in certain situations, but does not have to monitor the system continuously. This is made possible with Eberspaecher's **Autonomous Driving Safety Switch (ADSS)**. The bidirectional circuit breaker is used in 12 volt electrical systems with at least two sources of energy for level 3 or 4 autonomous driving – up to 20-fold depending on the number of safety-relevant consumers. If voltage surges or sags occur, the switch separates the two sections of the electrical system so that safety-relevant functions such as braking and electrical steering assistance are secured. It has an integrated overcurrent detection feature, and depending on what the customer requires it is supplied as an ASIL Level B or ASIL Level D device. The latter covers the highest safety requirements for development, testing, documentation and functionality.

Completely safe – even without a driver

Eberspaecher also has the right solution for fully automated vehicles with high-voltage/low-voltage on-board circuits: the **Battery and Boardnet Safety Module (BBSM)**. It is designed for compliance with the future SAE Level 5 requirements. Here, no human intervention and therefore no driver is required. BBSM provides a solution for intelligent power distribution and reliable provision of power to safety-relevant components in fully redundant electrical systems. Within a maximum of 100 microseconds after a fault state occurs, the system separates the high-voltage DC/DC converter from the 12 volt circuit section. In addition to the lithium battery, this includes safety-relevant consumers such as actuators and sensors as well as the central control unit. BBSM consists of several battery and electrical system circuit disconnectors and an ASIL D classified combination of a microcontroller and system basis chip. One of the module's plus points: The electronics specialists develop the complex control software individually for each customer. With Eberspaecher products, both automobile manufacturers and car owners will be on the safe side for the mobility of tomorrow.

Captions:

- *Completely safe autonomous driving thanks to switching systems from Eberspaecher.*
- *Eberspaecher Autonomous Driving Safety Switch – an intelligent semiconductor switch for autonomous driving from levels 3 to 5.*

Media Contact:

Anja Kaufer
Director Public Relations Eberspächer Group
Phone: +49 711 939-0250
press@eberspaecher.com

About Eberspaecher:

The Eberspaecher Group is one of the world's leading system developers and suppliers of exhaust technology, vehicle heaters and bus air conditioning systems. Eberspaecher is also a professional innovation partner for the automotive industry in air conditioning of special-purpose vehicles and in automotive electronics. Customers include almost all European and North American, and increasingly more Asian manufacturers of passenger cars and commercial vehicles. In 2016, the internationally positioned group, with more than 9,000 employees, posted sales of over 4.3 billion Euros.

Public Relations Eberspächer Group
Eberspächer Climate Control Systems GmbH & Co. KG
Eberspächerstrasse 24
73730 Esslingen / GERMANY

Phone +49 711 939-0250
Fax +49 711 939-0642
press@eberspaecher.com
www.eberspaecher.com