

GIMOTA customised products and special cable outlets

Solutions according to your standards

Suitable for
railways



The connectors available on the market do not always cover a customer's area of application or catalogue of requirements. For example, high currents or an unusual number of contacts cannot be covered by a standard connector. A special installation situation due to unusual space conditions can also present an unexpected challenge. All this can make it necessary to develop a customised product solution.

For more than 60 years, GIMOTA AG has been dealing with railway-specific connectors, applications and solutions. So it is understandable that the focus is on solutions suitable for the railway. In many projects, existing industrial products were adapted and improved to meet the demands of the railway market. The TRAC data connectors, the M12 connectors with bayonet lock or the high-quality 360° shield connection are now used in many applications in rail transport.

Many customers worldwide have already benefited from the extensive know-how in application development and the wide-ranging experience with connector systems in the railway market. Gimota's application engineers work closely with customers for a better understanding of their requirements and specific operational tasks. Assessments of specific application requirements on site lead to a solution approach from which a suitable product proposal results. In the end, the customer receives a product that meets his technical as well as assembly and installation requirements.



ADVANTAGES

- Suitable for railway applications
- Optimally adapted to the application and installation situation
- Small quantities series are possible
- Optional conductive surfaces EMC
- Various backshells also with shield connection



PROPERTIES

- Conductivity according to MIL 1344A/3007 $\leq 0.5\text{m}\Omega$
- Operating temperature -60°C to $+200^\circ\text{C}$
- EN 45545-2 R22, R23 / HL1, HL2, HL3
- EN 60529 Protection class up to IP69 DIN
- EN 61373 Cat.2



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www.gimota.com



Reliable connectors for safe connections, for the 1.5 million passengers of the S-Bahn Berlin

The analysis on site quickly showed that the existing connection solution of a third-party manufacturer in the cable distribution box was responsible for the increased power failures in the trains. Water and pollution were able to penetrate the old, industry-standard connections, which led to short circuits between the individual railcars.



The challenge in this project was to replace an existing application with a higher quality solution while using as much as possible of the old installation. During the analysis, it became clear quickly that water was running through the existing cables and protective conduits into the cable distribution box and could therefore get into the inside of the connector. On the one hand, the existing system wiring and cable protection had to be retained, and on the other hand, the longitudinal tightness of the connection had to be guaranteed.

This was not possible with a standard solution because the space available was very limited. Gimota developed a “sliding backshell” that could be slid back over the cable protection solution, ensuring the necessary space for rewiring. In addition, the rear part of the receptacles were filled with a sealing compound certified according to EN45545-2 to achieve additional safety.

Project: Class 480 S-Bahn Berlin

At high speed through the desert with the help of fully rubberised connectors for silicone cables

A train travelling at high speed through the desert presents the manufacturer with unexpected challenges. Connectors under the train, are almost sandblasted by the swirling sand. To counteract this, Gimota has provided the sensor connectors, which are already widely used worldwide, with a



special rubber coating. This dampens the impacting grain of sand and thus guarantees long-lasting protection of the connector outer shell even under the toughest conditions. These connectors, like all Gimota connectors, are characterised by their ease of assembly.

Project: High Speed Train Mecca-Medina Talgo 350

Cable outlet for two shielded cables with integrated corrugated tube adapter

No matter what the weather is like or whether the railway tracks are straight: Passengers expect their train to run on time and be reliable. The electrical connections between the outside and inside world are particularly challenged. Connectors are an important interface between these worlds. They transmit the signals that mean safety and comfort.



Electromagnetic interference is an additional complicating factor, which is why shielded cables are used for safety-relevant connections since a long time. But what to do with two shielded cables with different cable diameters coming from different places to a cut-off connector and the connection also has to be leak-proof? Conventional connectors are not made for this. However, the tight space conditions rule out several connectors next to each other. For this purpose, Gimota has developed a cable outlet with integrated corrugated conduit adapter for two shielded cables.

Project: TWINDEXX, Bombardier Transportation

High-performance power supply connectors for safe working in the depot

Depot connectors must ensure the reliable transmission of power and signals and that at high voltages. They are individually designed and manufactured to meet the project-specific needs of the customer. Depot connectors ensure the power supply of the train in the depot when the pantographs are de-energised.



The GIMOTA depot connectors are designed for this. They are equipped with auxiliary contacts – these close the circuit beforehand when the connector is removed and open it after the connector is plugged in. Where human safety and health depend on the reliability of the technology, Gimota depot connectors are the first choice.

Project: TRAXX RU F120 MS, Bombardier Transportation