

First successful commissioning of GTB12 plugs (M12 plugs with bayonet lock) in Albula's new ALVA articulated trains of RHB

On occasion of the UNESCO World Heritage Days on June 11th and 12th 2016, the new train of Rhätische Bahn (RhB) was launched in Thusis. Before an audience of guests, the local RhB Administrative Board President, Stefan Engler, and RhB Director, Renato Fasciati, welcomed the youngest "child" to the RhB fleet and launched it under the name of "Alvra" (Rhaeto-Romanian for Albula).

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GIMOTA INC develops and produces connecting solutions for industrial and harsh environments. She is one of the leading providers of industrial traction connectors.



New Alvra articulated trains RHB

THIS MEANS:

→ The selected plastics meet the highest of standards of the railway industry for flame resistance



Switch solution with bayonet coupling

► The Alvra articulated trains will be gradually transitioned into operations starting in late 2016. It is expected that all six of the Alvra articulated trains will be in scheduled service by the end of 2017. The new GIMOTA M12 plug connectors with GTB12 bayonet lock also played a part in this.

Operating safety is a very high priority today for any railway operator. This is why it comes as no surprise that railway operators are not happy with the common industrial M12 plug connectors great volumes of which are already used today in railway technology.

M12 connector bayonet version



The train operator wanted to provide reliable Ethernet connectivity within its entire rolling stock fleet to ensure uninterrupted operation of the PIS application. Usually, railway equipment suppliers depend on M12 connectors to provide the critical connectivity between cables and equipment.

One frequently cited drawback of these industrial M12 plug connectors, however, is their contact connection with conductors/strands. These are often offered as soldered versions, screwed versions or with insulation displacement connection (IDC) for field termination. According to experience, crimped contact connections make for the best results in terms of durability and vibrations.

The correct screw connection of the plugs where available space is tight is also considered to be problematic in many cases. Bayonet couplings compared to screw-connected plugs are much simpler, more safely lockable and they offer the greatest possible vibration resistance by virtue of a form-fit, defined clicking-in of the bayonet lock.

Because of this, bayonet M12 couplings developed by Gimota AG were used for this project, based on the M12 plug connection technology proven in industrial use and the standard EN 61076-2-101, and according to the draft standard IEC 61076-2-011. Compatibility is assured as this connector technology also allows connection with screw-type M12 connectors.

- The components used are resilient and tested for the strong occurring vibrations in railway traffic
- 360° shielding in an electromagnetically charged environment for reliable transmission of all signals
- All products are tested for temperature shocks; these must not affect the electrical functions of products in any way

RHB is the first railway operator to recognise the manifold advantages of the GTB12 series and therefore relies on using the same in the complete, modern passenger information system of the new Alvra articulated trains. ◀