

# STÄUBLI

## Stäubli Launches EvoTrak Family

### New Light Rail Vehicle Modular Connectors for Safer Travel

Whenever high currents need to be safely transmitted via an electrical connection, Stäubli Electrical Connectors has provided pioneering solutions for the global railway industry.

The Swiss company's modular connectors are designed to last the life of a train. Recently, Stäubli launched the new EvoTrak product family with leading-edge products for light rail vehicles. Alexandre Lagrange talks about the reasons for this significant step in the company's history.

**Question: Your most popular solution in the railway industry has been the MPC (Modular Power Connector). Will the launch of the new EvoTrak family result in any changes in your proven product portfolio?**

**Alexandre Lagrange:** Historically, our focus was on the market for larger railway vehicles. Our tried-and-tested product portfolio of modular, robust connectors is field-proven.

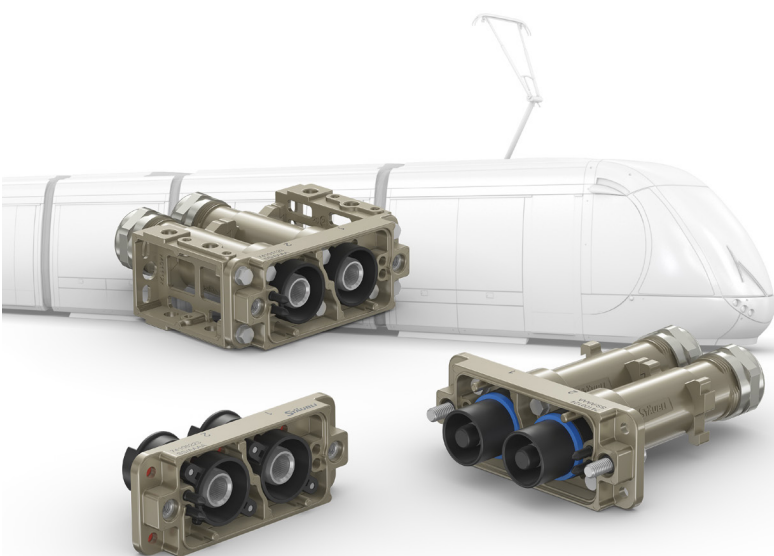
The MPC is ideal for connecting power equipment in rolling stock such as high-speed trains, regional trains or locomotives. Stäubli is very

close to the market and has seen an increasing demand for reliable power connections for light rail vehicles (LRVs). Before developing a new product, we sit down with operators and train manufacturers to learn more about their needs. The insights we gathered helped us understand the actual technical requirements. Based on these market requirements, our engineers set to work and designed a connector system dedicated to medium-power rail vehicles, the EvoTrak lite.

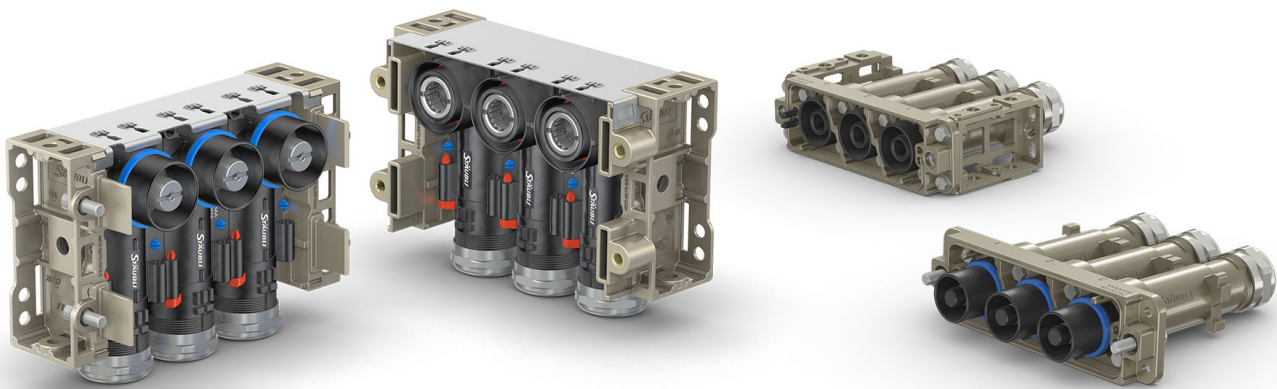
For better visibility of our extended portfolio, Stäubli decided to create a new product family, the EvoTrak family. Our latest medium-power product range is called EvoTrak lite. The existing MPC range is now called EvoTrak MPC.

**Q: With the new EvoTrak lite you launched an interesting solution for the LRV segment. What is unique about this connector range?**

**AL:** The innovative EvoTrak lite is ideal for medium-power, up to 1500V, applications. Compared to the EvoTrak MPC, this new range EvoTrak lite will be perfect for lower cable cross-sections of up to 70mm<sup>2</sup>. In addition, this connector



*EvoTrak lite by Stäubli Electrical Connectors is a modular metal connector perfectly designed to meet the size constraints of light rail vehicles and the demanding requirements of the rolling stock market*



The Stäubli EvoTrak product family offers a consistent product portfolio for the entire traction chain for all types of rolling stock with the well-known, field-tested EvoTrak MPC (formerly MPC) and EvoTrak lite

type fulfils the IP2X standard, especially when talking about battery applications.

**Q: Can you give us more details on the innovative PMM features and EMC management?**

**AL:** Stäubli is the first supplier in the market to develop this type of connector with metallic modules and pole segregation. This is key because the new generation of motors with permanent magnet technology uses current return to reduce consumption. In case of a short circuit somewhere along the traction line, the worst case is a fire on the train and the converter being destroyed. With the EvoTrak lite and its segregated poles, a short circuit is directly sent to earth via the car body connection throughout the period needed until the train stops, thereby avoiding the arcing continuing. The result is safely earthed system protection along the traction chain. Therefore, in the event of a short circuit no further current is sent back to the converter. Our connector acts like a fuse. It protects the overhead line and prevents major damage to the power converter.

The innovative EMC management is a great relief for the operator. On trains, the quantity of signal and data wires increases a lot to allow more and more communication between all onboard systems and between trains and the external environment (predictive maintenance, ERTMS, etc).

Power cables used with our connectors integrate a metallic braid to manage the electromagnetic field around them and to prevent them from interacting with the signal cables. To be effective, this protection must be in place along the entire power chain, including our connectors. With EvoTrak lite, we propose a patented solution for a shielded cable application that permits an easy and secure cable braid connection compared to the standard market solutions.

**Q: Stäubli products are tested according to the highest requirements. What are the standards? Can you give us a more detailed insight?**

**AL:** Both the operator and

passengers benefit from highly reliable products. Certified products according to the highest standards such as EN 50467, EN 61373, or EN 45545 are part of the answer. Our connectors are tested according to criteria such as reliability and robustness. Stäubli is internally equipped with a test laboratory specifically for railway applications.

We are proud to report that the IRIS certification ISO TS 22163 has recently been renewed at our Railway Competence Center in Hésingue, France.

**Q: How will the EvoTrak family develop in the future?**

**AL:** Being a global industry partner for more than 30 years, Stäubli Electrical Connectors is always in close contact with its customers. Stäubli is a supplier of both standard and customised connector solutions. We also offer end-to-end solutions for the entire traction chain. Our modular EvoTrak family is therefore bound to grow. Several exciting future products are planned to extend the power connectors portfolio.



Alexandre Lagrange, Product Manager Railway at Stäubli Electrical Connectors presenting the new EvoTrak lite at InnoTrans 2022 in Berlin

Thank you for the interview, Mr. Lagrange.

Alexandre Lagrange is Railway Product Manager for Stäubli Electrical Connectors with more

than 12 years of experience in the railway connectors industry. Connect with him on [LinkedIn](#), for a more in-depth exchange.

Click [here](#) to watch our video.

Click or scan the QR code to find out more about Stäubli



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RAILWAY MODULAR CONNECTORS

EvoTrak – the real modularity

FAST MOVING TECHNOLOGY

**STÄUBLI**

**EvoTrak family**

The same connection philosophy for your entire traction chain, thanks to the **compact and flexible modular** solutions of the EvoTrak family. Exactly **configurable to your needs** from 1 to 4 poles, straight or/ and angled part to connect on straight part or panel receptacle. EvoTrak **meets all current standards** and is **tested beyond railway requirements**. Proven reliability for everyone who wants to play it safe.

**EvoTrak MPC** - Modular power connector

with several options available (strain relief for dynamic cables, connection assistance option and a lot more), you decide which options you need – 100 % flexible.

**EvoTrak lite** - Modular metal connector

perfectly **adapted to the size constraints of light rail vehicles**. EvoTrak lite offers unbeatable combinations of functions in the smallest space, with **EMC option** for shielded cables, poles separation/ segregation for **Permanent Magnet Motors**, IP2X and a lot more.

Your expert in railway connection solutions since more than 30 years.

[www.staubli.com](http://www.staubli.com)

