Occupancy Detection in Real Time

**DILAX Seat Management optimizes cycle times and increases travel comfort**

At rush hour, passengers push to the doors to find a seat. Long boarding and alighting times are increasingly becoming a problem. The rising volume of traffic in public transport requires optimized planning with shorter cycle times and efficient management of passenger flows. The DILAX occupancy detection system enables dynamic monitoring of the occupancy status of all seats and provides the information in real time. As a solution provider for public transport, DILAX has the perfect system for every scenario.

Guiding passengers to free seats has been a huge challenge up until now. Passengers often do not see and use free seats that are, for example, hidden by obstacles, far away from the entry and exit areas or in the upper deck of a double-decker coach. The innovative DILAX approach not only detects the current seat occupancy of every single seat, it also provides the information in real time. The current status of every seat can be displayed in the entry area of the vehicle, in advance at the stop, or on a smartphone app.

**Greater Efficiency - Greater Customer Satisfaction**

Shorter boarding times are not just an economic factor; they also add to the passengers’ comfort level and a positive travel experience, thus increasing customer satisfaction and creating broader acceptance of public transport.

By combining the current seat occupancy with further data from other systems, the DILAX seat occupancy detection system can be used in an even more efficient way. For example, if data on seat occupancy and reservations are linked intelligently, unclaimed seat reservations can be deleted and re-offered for sale.

**At a Glance**

- Integration in the existing Ethernet infrastructure in the vehicle
- Managing the occupancy status and data transmission to the on-board computer
- Web-based service via Ethernet
- Easy combination with other DILAX system solutions
- Combined analysis of occupancy and passenger counting data with DILAX Citisense
- Transmission of the occupancy status to third party systems (e.g., passenger information systems)
**Wireless Data Transmission – Minimal Installation Effort**

DILAX occupancy sensors can be easily integrated into existing seats. No complicated wiring is necessary thanks to wireless data communication between the sensor and the occupancy control unit (OCU) and power supply via long-lasting batteries, minimizing installation effort.

The positioning of DILAX occupancy sensors is not limited to direct integration into the seat cushion. The area between the cushion and the suspension layer or the seat suspension also provides various options to position sensors in a maintenance-friendly way and to reliably detect seat occupancy.

**DILAX Occupancy Sensors: the Benefits**

DILAX offers individual solutions with various sensor technologies.

- Suitable sensors for all common passenger seats
- Individual consulting
- Easy and unobtrusive integration
- Wireless data transfer between sensor and control unit
- Optional power supply via long-lasting battery
- The systems meet all established norms; DILAX is IRIS and ISO 9001 certified

**Customized Solutions for Every Scenario**

The DILAX seat occupancy detection system offers a great level of customizability. It is highly flexible and can be easily integrated in the existing vehicle infrastructure. Depending on our customers’ requirements and conditions, we offer various sensor models for occupancy detection as well as the necessary interfaces for display systems.

With our wide selection of different sensor models that can be adapted to existing passenger seats if necessary, we provide sensor solutions for different seating concepts and all standard passenger seat models. We assess all mounting conditions individually in advance, choose the matching sensor and provide a customized system.

**DILAX Citisense – Data Management & Predictive Analytics**

DILAX Citisense is a new generation of software that enables transport companies and transport planners to manage, aggregate and evaluate a variety of data. Complex algorithms recognize and analyze relationships between data from heterogeneous sources. Thanks to DILAX Citisense, critical traffic events are detected early on, allowing for correct decisions in mobility planning – turning data into knowledge. Role-based dashboards provide individual information at a glance. The software is modular and can be customized to clients’ needs.