

MAYSER®
Polymer Electric

**Safety Systems for
Buses and Trains.
Get on safely.
Get off safely.**

- optimal passenger protection
- customized design
- monitored for function
- maintenance-free
- weatherproof

More safety for your passengers function Safety Systems

We have all been there. Short intervals. General confusion. Jostling passengers during peak hours. In the last second someone tries to get on the bus or train. One foot on the step, one arm already inside. Automatic door movements in such cases can quickly lead to danger situations for persons and objects. Mature safety systems - such as Mayser Safety Edges that are monitored for function, for example - avert the danger using simple means. It is enough to touch the Edge for a signal from the controls to bring the closing movement to an automatic halt. Within a fraction of a second.

The monitored-for-function electric Safety Edges, Step Sensors and Swivel Step Protection Systems, Mini Edges and components for wheelchair lifts and ramps from Mayser offer high-quality and efficient Safety Systems that are made to suit bus and train requirements. Safety anywhere automatic movements have to be brought to a halt. In local public transport and in holiday traffic.

The material used, the design and the function of the Mayser Safety Systems fulfil the highest of standards. They are the result of many years of practical experience and continuous development work. To protect passengers. Made to suit.

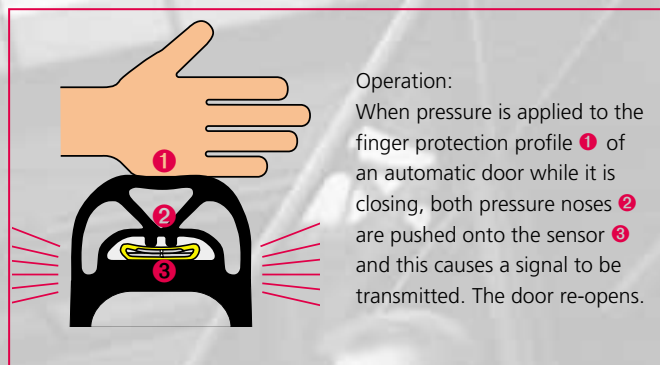
Anti Drag Safety system: 30 mm can be all-decisive.

Local public transport, the guarantee for stress- and hectic-free travel, has been in the headlines quite a lot recently due to accidents that happened while people were getting on and off trains/buses. Even though the doors were actually protected. The problem: in accordance with current legislation, only objects larger than 30 mm have to be detected. The solution: the Mayser Anti Drag Safety system (ADS). This is the detection of very thin objects with closed doors. Engineers at Mayser have succeeded in developing a safety system that can detect objects 5 mm in size, dynamically even objects 1 mm in size! This case arises for instance, when an item of clothing such as a jacket gets caught in the doors. When the wearer pulls at the jacket to free it from the doors, the Anti Drag system, which is extremely sensitive, reacts immediately. The Mayser ADS system is especially effective when it comes to offering the passengers much more safety in underground and commuter trains. Platforms are generally monitored by cameras, but the train driver is not informed if small objects such as jacket sleeves or handbags get caught. The highly sensitive ADS system, with improved profile geometry, immediately sends a signal to the evaluation electronics. The danger is averted.

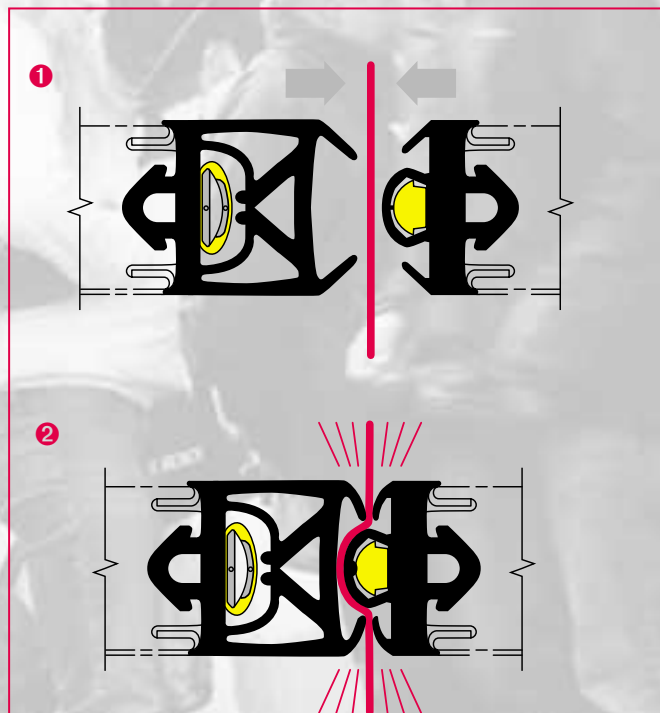
Convincing advantages:

- reliable function, independent of changes in temperature
- temperature range: -35 °C to +70 °C
- weatherproof
- profile shape designed to suit the individual environmental requirements
- self-monitoring
- electric connection can be adapted to suit vehicle system

Door reversal initialization



ADS system initialization Anti Drag Safety



Passengers using monitored-for-

s from Mayser.

High-quality, efficient Safety Systems – adapted to suit the individual vehicle environmental requirements

We see the improvement in passenger safety, both in local public transport and in holiday traffic, as one of our most important tasks. Be it in a comfortable coach, a modern municipal bus or functional commuter train, underground or tram, passenger safety has to be ensured on entering the vehicle. It is indeed here – on automatic doors and steps – that the danger of being injured is quite high. It is the task of the Mayser Safety Systems to protect the passenger from these danger areas, Safe, reliable and economical – that is what we expect. There are as many possibilities as there is demand and the Mayser solutions are always such that the individual vehicles are taken into consideration and the Safety System is made to suit the individual requirements.

Mayser Safety Edges

- pressure sensitive (tactile) anti trap protection systems for automatic doors. If pressure is applied to the finger protection profiles while an automatic door is closing, a signal is transmitted. Evaluation electronics recognize the danger situation and the door opens.

- Specially developed **Miniature Safety Edges** are ideal for use in coaches. The name says it all: the tactile sensor is mini in size and can thus be integrated with the bus design to fit really well.

Mayser Safety Steps

Alongside Safety Edges, Safety Steps are a further important element when it comes to passenger safety. They are especially suitable for making plane surfaces safe. On application of pressure a switch signal interrupts the automatic closing movement.

Safely and reliably. The signal can be used either as a control command for safety functions or, alternatively as a counting impulse. Safety Steps come in many different shapes and sizes and can be used for regular steps, fold-away or swivel steps and wheelchair ramps and lifts.



Decisive arguments that speak for the use of Mayser Safety Systems

in rail applications. No matter what vehicle: commuter trains, underground trains or trams:

- reliable Anti Drag Safety system
- shakeproof and impervious to vibration
- weatherproof
- highly sensitive, even at extreme temperatures
- high interference immunity due to low impedance
- constant switching behaviour

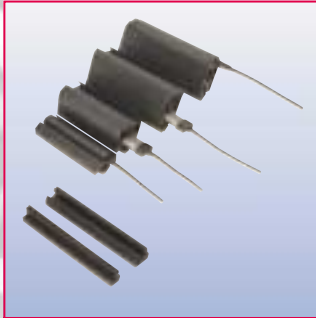


When it comes to applications in road safety, in town and country buses or in coaches, Mayser has Safety Systems to offer that are made to suit individual requirements. These systems have many advantages.

- high efficiency due to minimal installation costs
- step sensors with dual function: control command or counting impulse. The sensors can thus also be used for counting passengers.
- impervious to fluctuations in air pressure or temperature.
- PVC-free
- vehicle steps made safe using corrosion-proof contact materials with a non-slip surface

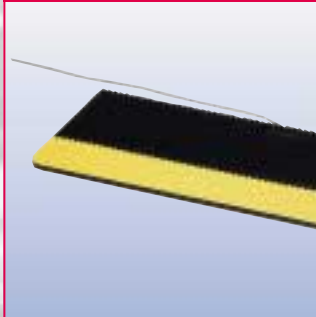


At a glance: Mayser Safety Systems for buses and trains



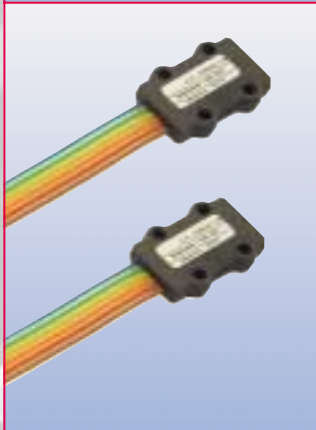
Mayser Safety Edges

- Finger protection profiles for doors
- Sensitive area for wheelchair ramps and power steps
- Protection for power baggage storage doors
- Anti Drag Safety
- Mini Safety Edges



Mayser Sensor Steps

- Protection for wheelchair ramps and lifts, fold-away, sliding and swivel steps
- Entrance steps made safe
- Safety component or counting impulse generator



Mayser Control Units

Modular Control Units for evaluating electric signals. Mayser can offer a suitable, self-monitoring Control Unit for all Safety Systems and any category. The Control Units fulfil the requirements of the 72/245/EEC directive for road traffic and/or the applicable standards for trains.

The name Mayser stands for safety. Thanks to many years of experience in tactile sensors we can now say that our know-how, when it comes to safety systems, is immense. We regard the opening up of new fields of application as one of our most important tasks. So that we can also serve you in the future as a competent partner in all questions regarding safety technology for buses and trains.



Safe wireless transmission system

For retrofitting underground or sub-urban trains with the Anti Drag Safety system in conjunction with a transponder. Talk to our bus and train experts. They would be delighted to be of assistance.

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