



## *Safety Upgrade for Door Systems*



### **RAIL VEHICLE SYSTEMS**

APPLICATIONS: HIGH-SPEED TRAINS, LIGHT RAIL VEHICLES,  
METROS, REGIONAL AND COMMUTER TRAINS



**RAILSERVICES**  
always on track

## ENHANCING THE SAFETY OF PASSENGER DOORS



### PREVENTING INCIDENTS OR ACCIDENTS WITH AUTOMATIC DOOR SYSTEMS

- Risks need to be minimised
- Essential to maintain high safety and service levels
- Passengers have varied and sometimes special requirements
- Expectations of passengers have risen, even on older trains
- Incidents create disruption and attract negative publicity

The use of the IFE "Anti Drag System" enhances passenger safety levels by detecting even small obstacles between the train door leaves and then prevents the train from moving off or even stopping the train if it is already in motion.



**IFE RAILSERVICES** can install this system, designed especially for retrofit application, as part of its complete service portfolio which includes vehicle and component upgrades, reengineering and overhaul.

**RAILSERVICES SUPPORT** can also include both materials and logistics management.

- Engineering
- Materials delivery
- Installation of systems
- Commissioning and testing of systems

### RETRO FIT APPLICATIONS

- Wiener Linien – Transport Authority of Vienna, Austria
- BVG – Transport Authority of Berlin, Germany
- DB – German Railways
- GTT – Transport Authority of Turin, Italy
- HEAG – Transport Authority of Darmstadt, Germany
- RNV – Rhein Neckar Transport Association, Germany
- VGF – Transport Authority of Frankfurt/Main, Germany
- STIB – Transport Authority of Brussels, Belgium
- SJ – Swedish State Railways

## TECHNICAL DATA

### VALID STANDARDS FOR OBSTACLE DETECTION, SAFETY AND CLOSING DOORS

EN 14752	VDV 111	TSI PRM
<ul style="list-style-type: none"> <li>■ Close Warning (audio/visual)</li> <li>■ Obstruction Detection, Sensibility (30x60)</li> <li>■ Closing Forces (maximum / effective)</li> <li>■ Pull-Out Forces of Obstacle (10x50) unless this object is detected</li> </ul>	<ul style="list-style-type: none"> <li>■ Static Detection of trapped obstacle (5x30)</li> <li>■ Alternatively Dynamic detection, if Static Detection not feasible (150 N Pulling Force, 45° Angle)</li> </ul>	<ul style="list-style-type: none"> <li>■ Arrangement of Door Control Elements (Pushbutton and Emergency Devices)</li> <li>■ Arrangement of Door Closing Warning (inside and outside)</li> <li>■ Design of Door Control Elements for Handicapped (blind) Persons</li> </ul>

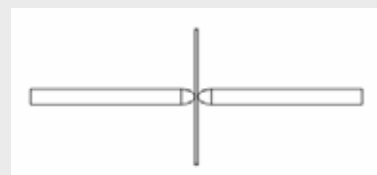
**THE MAIN OBJECTIVE IS TO DETECT EVEN SMALL OBSTACLES** as soon as possible, stop the train from moving off and even if the train is in motion, to stop it if any obstacle comes between the door leaves.

### THE SYSTEM OFFERS BOTH STATIC AND DYNAMIC DETECTION.

#### STATIC DETECTION

The door leaves are equipped with a special leading edge rubber which includes a tape switch.

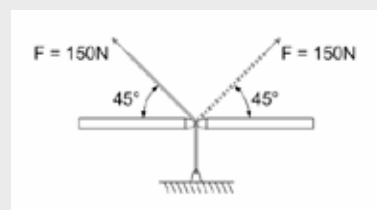
If the system detects obstruction when the door is closing it prevents the train from moving off through creating a broken contact in the interlock loop.



#### DYNAMIC DETECTION

The special leading edge rubber which includes a tape switch also offers dynamic detection.

The system remains active when the doors are closed and if they are opened/ interrupted for any reason the interlock loop in the system is broken and the train is brought to a safe stop.



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shape of track

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