

Capacitive system for public transport



EN | Product information

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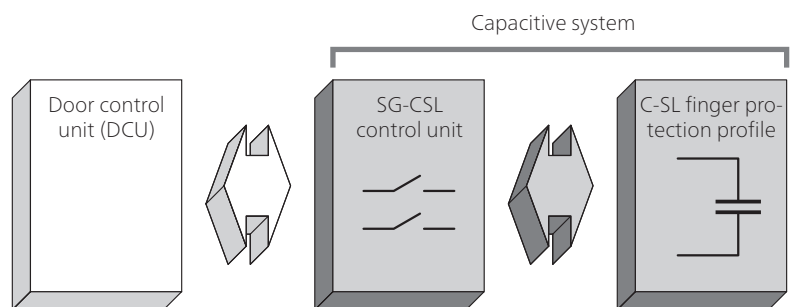
Website: www.mayser.com

Area of application

The capacitive (non-touch detection) system is the ideal supplement to drag detection on automatic bus and train doors. Directly integrated into the main closing edge of the door panel, the sensor is fully contactless and provides pre-emptive obstacle detection and collision protection. The non-touch system is weather-resistant, meaning that its function cannot be impaired by rain, snow, light or dust.

The principle

When an object approaches the sensor, it causes a change in the electrical field. In this way, the system recognises a passenger long before they come into contact with the door or can get trapped by it. The capacitive system evaluates this information and transmits it to the door control unit.

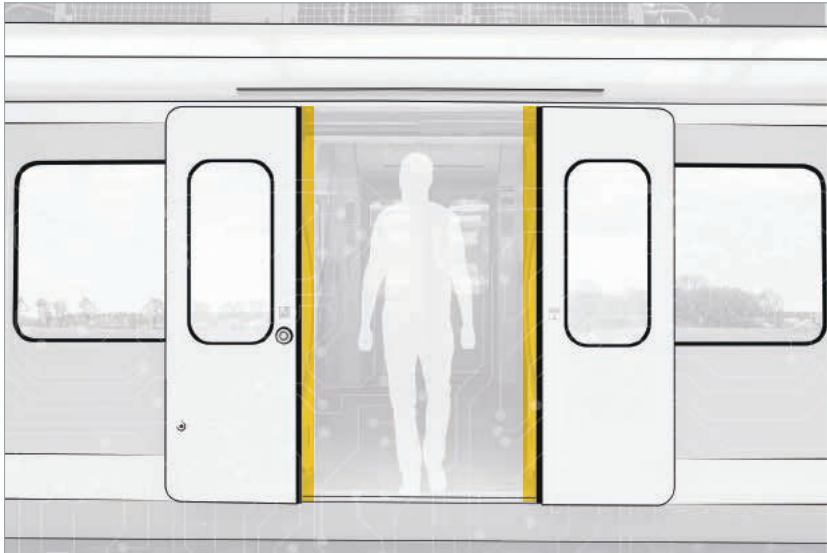


Examples

Possible areas of application: wherever a danger is posed by doors that close automatically. Typical examples are plug sliding doors, outward swinging doors or inward swinging doors.

Function

The sensor system is constantly surrounded by a defined electrical field. When an object enters the field, the latter undergoes a change. The system detects this change in capacitance and instructs the door control unit to stop the movement of the door.

**Object outside**

electrical field:
Movement of door is not affected.

**Object inside**

electrical field:
Signal sent to door control unit –
movement of door is stopped.

To ensure that the capacitive system functions smoothly within its environment, the door surroundings have to be taught in or defined during commissioning.

Technical data

SG-CSL 102 control unit

Testing basis	
EN 45545-2, EN 45545-5, EN 50121-3-2, EN 50124, EN 50125-1, EN 50153, EN 50155	
Electrical operating conditions	
Nominal voltage	DC 24 V PELV
Voltage tolerance	-30 % to +25 %
Nominal current	< 150 mA
Power consumption	< 5 W
Times	
Reaction time	< 30 ms
Restart time	< 15 s
Outputs	
Semiconductor output	OUT
Switching voltage (max.)	$U_s - 0.7 \text{ V}$
Switching current (max.)	100 mA
Mechanical operating conditions	
IEC 60529: degree of protection	IP65
Ambient temperature	-40 to +70 °C
Dimensions (W × H × D)	116 × 83 × 55 mm
Total weight	370 g

Capacitive sensor

Testing basis	
EN 45545-2, EN 45545-5, EN 50121-3-2, EN 50124, EN 50125-1, EN 50153, EN 50155	
Mechanical operating conditions	
IEC 60529: degree of protection	IP65
Ambient temperature	-40 to +70 °C
Length (max.)	2.5 m
Weight per m	102 g/m

At a glance

- Impervious to rain, snow, light, dust and much more
- Obstacle detection and collision protection for passengers
- Non-touch obstacle detection (EN 14752)
- No negative impact on cycle times
- Tamper-proof
- Integrated directly into the door system