

UNDERSTANDING EN16005

Automatic doors are a type of machine, and all machines must comply with the European Machinery Directive. This is intended to ensure installations are not a risk to users.

EN16005 is a harmonised standard under the Machinery Directive. CDVI advises that all DIGIWAY door automation installations must comply with EN16005 regulations.

The regulations cover a range of different factors that must be considered when evaluating a site for the installation of an automated door.

These factors include (but are not limited to): safety signage, emergency provisions, safety barriers, and sensors to reduce the risks associated with automated doors.

PLEASE NOTE:

This document is not intended as a complete guide to complying with EN16005 regulations.

All installers wishing to install automatic doors in compliance with EN16005 should attend an official course. Courses are available through the Automatic Door Installation Association (ADIA) or the Automatic Door Suppliers Association (ADSA).

ADIA
The Automatic Door Installation Association

 **ADSA**
AUTOMATIC DOOR SUPPLIERS ASSOCIATION

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The level of safety provisions required to comply with EN16005 should be determined using a comprehensive risk assessment carried out by a trained installer.

One of the range of safety measures available is microwave sensors that detect people in danger zones.

This is an indication of how sensors can be installed to protect portions of the door zone in environments posing different levels of risk to users.

GENERAL RULE:

When a large proportion of users are elderly, infirm, disabled, or young children, any contact between the doorset and the user is unacceptable.

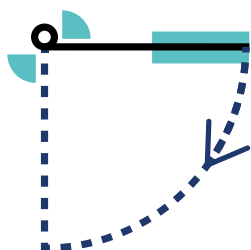
TOLERATED RISK

Contact with the door is **tolerated**

HIGH RISK

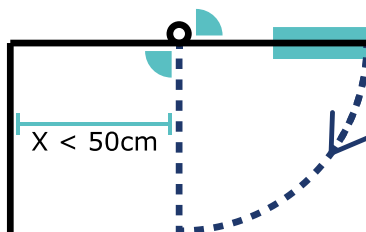
Contact with the door is **forbidden**

LOW ENERGY



We recommend that all installations include safety sensors, whether doors are low energy or not.

PARTIAL SAFETY



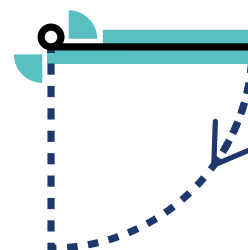
The leading edge must be partially secured according to the annexe G + hinge.

EXCEPTIONS:

- If the door opens onto the traffic area
- If the distance **X** to a wall or obstacle is **<50cm**

In these cases, apply the **FULL SAFETY** measures.

FULL SAFETY



The whole width of the door and hinge must be secured.

- In a high risk area, no contact with the door is allowed
- **This applies equally for low energy doors**

It is always better to over-engineer when it comes to health and safety. If in doubt, apply **PARTIAL SAFETY** measures.

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SITUATION:	FULL SAFETY	PARTIAL SAFETY
Majority of elderly/disabled people or children	✓	✗
Contact between a person and the door is unacceptable	✓	✗
Door opens on traffic area	✓	✗
Safety distance between hinge and wall $\leq 50\text{cm}$	✓	✗
First 80° of door opening takes less than 3 sec	✓	✓
First 80° of door closing takes less than 3 sec	✓	✓
Last 10° of door closing takes less than 1.5 sec	✓	✓
The force of the door when moving $> 67\text{N}$	✓	✓
Minority of elderly/disabled people and children, person-door contact is allowed, and first 80° of door opening takes more than 3 seconds	✓	✓
Protection of the hinge area	✓	✓

RECOMMENDED SENSORS



DW-4SAFE
Infrared sensor

+ **DWS-FG** fingerguard



DW-FLATSCAN
Laser sensor

+ **DWS-FG** fingerguard



DW-FLATSCAN3D
Laser sensor with built-in hinge protection



DW-4SAFE
Infrared sensor

+ **DWS-FG** fingerguard



DW-FLATSCAN
Laser sensor



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