

Interpretation of the Ecodesign Regulation – Stand-by

The Ecodesign Regulation (EU) 2023/826 specifies requirements for the energy consumption of electrical and electronic household and office appliances in off-mode and standby mode (standby).

In the regulation of 17.04.2023, “motor-operated building components” and thus also power operated (automatic) doors were included in the scope of application for the first time (Annex II, 6).

The term “motor-operated building component” means a device used in buildings for opening or comfort, excluding ventilation devices, which can be moved and/or rotated by power from the supply network. The motorized building component comprises an electric motor or actuator and a control unit and is controlled by the end user by means of one or more wired controls and/or wireless controls via a network or automatically with sensors (Annex I, 21).

The regulation defines various states of a product and specifies requirements:

Off mode indicates a state in which the device is connected to the power supply but does not provide any function or only provides the following:

- a) Indication of the off mode;
- b) Functions to ensure electromagnetic compatibility in accordance with Directive 2014/30/EU.

Standby mode (Standby) - indicates a state in which the appliance is connected to the mains supply, is dependent on the power supply from the mains supply in order to function as intended and provides only one or more of the following functions for an unlimited period of time:

- a) Reactivation function;
- b) Reactivation function together with only an indication that the reactivation function is active;
- c) Information- or status display.

Active mode - indicates a state in which the device is connected to the mains supply and at least one of the main functions is activated.

This association guideline is intended to consider and explain the implementation of the Ecodesign Regulation for power-operated (automatic) doors.

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The „active operation” of power-operated (automatic) doors is any state in which the door fulfills its (safe) main function(s), e.g. the automated movement of people in one or two directions (opening and closing).

The most common operating modes of different manufacturers in which a door is in active operation are:

- Automatic mode
- Store closing / One-way mode
- Partly open mode

In addition to opening pulse generators, safety devices are usually also in operation during active operation which detect the presence of obstacles (person(s)) and prevent the movement of the door from posing a risk to the obstacle (person(s)) as long as the obstacle (person(s)) is located within the detection range of the door.

These sensors and safety devices must remain functional at all times to ensure a fast reaction (when an obstacle is detected) or safe movement (of the door), which are among the basic functions of these products.

Safety devices on the door have the task of ensuring that no door movement is started unless a successful function check has been carried out first. This function check usually only takes a few milliseconds when the door is in active operation. However, if the door were put into a “stand-by” or “idle” state, in which the power supply or the function of the safety devices is reduced or switched off, a significantly longer period of time (up to 30 seconds depending on the function and equipment of the door) would be required for a function check.

There is a risk that a person will approach the door during this period and collide with the door because the function check has not been completed and the door is not yet ready for operation. The product functions would then no longer be fulfilled.

In addition, there are other operating modes that can also be seen as active operation, although the door remains motionless (in the open or closed position), e.g:

- Continuous open mode
- Night setting („Off”) mode

Main and safety functions are also active in these operating modes to ensure the operation expected by the user. These include internal functions such as position determination, battery charging and safety and status monitoring, detection of a fire door leaf in the open position.

There are also additional requirements for motor-operated (automatic) doors in escape and rescue routes. Based on European standards (e.g. EN 16005) and relevant building regulations, it is required that the door opens even if there is a fault or the power supply fails. These products are therefore equipped with an additional battery to ensure a

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continuous power supply. In this case, if the door is set to a “stand-by” or “idle” mode, the battery would discharge, preventing the door from returning to a safe operating mode. Safe operation is not possible with a discharged battery or is only possible again when the battery is recharged.

As a result, the following applies to power operated (automatic) doors:

- 1. Only the active operating mode applies to power operated (automatic) doors. This is the mode in which the door fulfills its (safe) function.**
- 2. A “stand-by” mode, “off” mode *, as described in Regulation (EU) 2023/826, is not compatible with the intended use of power operated (automatic) doors.**

* Please note that the term “off” used in the industry to date (e.g. for night mode) does not technically correspond to the term “off” in accordance with Regulation (EU) 2023/826.

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25. Juni 2024

Directive No. 29



Editorial change: 25.06.2024

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