

## Emergency lighting – a European comparison

### Definition of emergency lighting

The relevant standards define emergency lighting as lighting that is activated as a result of a malfunction in the general artificial lighting. The following systems may be used as replacement power supplies: single batteries, group batteries, central batteries, generating sets or a specially protected mains power supply.

Emergency lighting covers *safety lighting* and *standby lighting*

*Safety lighting* covers the following:

- Safety lighting for escape routes
- Anti-panic lighting and
- Safety lighting for hazardous workplaces

*Standby lighting* is the part of emergency lighting that takes over the task of general lighting for a limited period of time on a substitution basis so that normal operation can continue.

**Requirements to be met by emergency lighting – a European comparison**

A direct comparison of the national requirements in different countries shows a number of clear differences. The following table shows the applications for which emergency lighting is prescribed in the various countries.

	Belgium/Luxembourg	Denmark	Germany	England	Finland	France
Old people's homes	> 10 persons	> 1000 m <sup>2</sup>	No general regulations / requirements from building authorities	> 5 persons All floors and cellars	New buildings: mandatory / Old buildings: Required by fire and rescue service	> 1 person or > 20 employees
Workplaces	> 10 persons	No information	> 2000 m <sup>2</sup> +Rooms without daylight: > 30 m <sup>2</sup> : Escape route marking / > 100 m <sup>2</sup> : mandatory	> 20 employees	New buildings: mandatory / Old buildings: Required by fire and rescue service	> 20 persons
Overnight accommodation	mandatory	> 1000 m <sup>2</sup>	> 60 beds	> 5 persons All floors and cellars	mandatory	> 1 person or > 20 employees
Offices and administrative buildings	> 10 persons	> 1000 m <sup>2</sup>	> 2000 m <sup>2</sup> + Rooms above 22 m (see also workplaces)	> 20 employees	New buildings: mandatory / Old buildings: Required by fire and rescue service	> 100 m <sup>2</sup> or > 20 persons
Shopping centres	mandatory	> 1000 m <sup>2</sup>	> 2000 m <sup>2</sup>	> 280 m <sup>2</sup> and 20 employees	mandatory	> 100 m <sup>2</sup> or > 20 persons
Garages			Enclosed > 1000 m <sup>2</sup>			
Restaurants	> 10 persons	> 150 persons	> 400 seats	mandatory	New buildings: mandatory / Old buildings: Required by fire and rescue service	> 100 m <sup>2</sup> or > 20 persons
Cinemas	mandatory	mandatory	> 100 persons	mandatory	mandatory	> 100 m <sup>2</sup> or > 20 persons
Theatres	mandatory	mandatory	> 100 persons	mandatory	New buildings: mandatory / Old buildings: Required by fire and rescue service	> 100 m <sup>2</sup> or > 20 persons
Churches	No general regulations / requirements from building authorities	> 150 persons	No requirement	New buildings > 5 employees	mandatory	> 300 persons
Hospitals	mandatory	mandatory	mandatory	mandatory	mandatory	> 20 employees
Public buildings	> 10 persons	> 150 persons	> 200 persons	> 20 employees	New buildings: mandatory / Old buildings: Required by fire and rescue service	> 100 m <sup>2</sup> or > 20 persons
Schools	> 10 persons	> 150 persons	Escape routes + rooms without daylight	mandatory	New buildings: mandatory / Old buildings: Required by fire and rescue service	> 100 m <sup>2</sup> or > 20 persons
Tunnels / underground railways	No general regulations/requirements from building authorities	mandatory	No general regulations/requirements from building authorities	No general regulations/requirements from building authorities	mandatory	> 20 employees
Department stores and shops	mandatory	> 1000 m <sup>2</sup>	> 2000 m <sup>2</sup>	> 280 m <sup>2</sup> and 20 employees	mandatory	> 100 m <sup>2</sup> or > 20 persons
Marquees / temporary structures	mandatory	> 150 persons	> 200 persons	> 50 persons		> 60 persons or > 20 employees

	Italy	Norway	Netherlands	Austria	Portugal	Spain	Sweden
Old people's homes	mandatory	mandatory	mandatory	No general regulations / requirements from building authorities	No regulations	mandatory	mandatory
Workplaces	mandatory	Hazardous workplaces	> 100 persons	> 2000 m <sup>2</sup> + Rooms without daylight: > 30 m <sup>2</sup> : Escape route marking / > 100 m <sup>2</sup> : mandatory	All escape routes / all emergency exits / areas prone to panic / special buildings	> 50 persons	mandatory
Overnight accommodation	> 25 persons	mandatory	mandatory	> 60 beds	mandatory for more than 2 floors and 50 rooms	mandatory	mandatory
Offices and administrative buildings	mandatory	Safety category 5 or 6: mandatory / category 1 to 4: as requested	> 1000 m <sup>2</sup> + all floors	> 2000 m <sup>2</sup> + Rooms above 22 m (see also workplaces)	All escape routes / all emergency exits / areas prone to panic	> 50 persons	mandatory
Shopping centres	> 400 m <sup>2</sup>	mandatory	> 500 m <sup>2</sup> + > 7.50 m <sup>2</sup> / person	> 2000 m <sup>2</sup>	Ground floor > 300 m <sup>2</sup> / upper floors > 250 m <sup>2</sup>	mandatory	mandatory
Garages							
Restaurants	mandatory	mandatory	> 250 m <sup>2</sup> + > 1.25 m <sup>2</sup> / person	> 400 seats	Ground floor > 300 m <sup>2</sup> / upper floors > 250 m <sup>2</sup>	mandatory	mandatory
Cinemas	> 100 persons	mandatory	mandatory	> 100 persons	Ground floor > 300 m <sup>2</sup> / upper floors > 250 m <sup>2</sup>	mandatory	mandatory
Theatres	> 100 persons	mandatory	mandatory	> 100 persons	Ground floor > 300 m <sup>2</sup> / upper floors > 250 m <sup>2</sup>	mandatory	mandatory
Churches	mandatory	mandatory / except for historic churches	> 100 m <sup>2</sup>	No requirement	No requirements	mandatory	mandatory
Hospitals	> 25 pers.	mandatory	mandatory	different requirements	as for workplaces	mandatory	
Public buildings	mandatory	Safety category 5 or 6: mandatory / category 1 to 4: as requested	> 250 m <sup>2</sup> + > 1.25 m <sup>2</sup> / person	No requirement	All escape routes / all emergency exits / areas prone to panic	> 50 persons	mandatory
Schools	mandatory	mandatory	mandatory	> 3000 m <sup>2</sup>	All escape routes / all emergency exits / areas prone to panic	> 50 persons	mandatory
Tunnels / underground railways	mandatory	mandatory in all public underground railway tunnels	No requirement	No general regulations/requirements from building authorities	All escape routes / all emergency exits / areas prone to panic	> 100 persons	No General regulations/requirements from building authorities
Department stores and shops	mandatory	mandatory	> 500 m <sup>2</sup> + > 7.50 m <sup>2</sup> / person	> 2000 m <sup>2</sup>	Ground floor > 300 m <sup>2</sup> / upper floors > 250 m <sup>2</sup>	> 50 persons	
Marquees / temporary structures	mandatory	mandatory for exhibitions	No requirements	> 1000 persons	No requirements	> 100 persons	mandatory