Appendix No: 1

Panic & emergency exit devices
FOREWORD

This Appendix offers technical solutions according to table 8.1 in the European Guide Line "Panic & Emergency devices"

These technical solutions apply for exit doors, not sliding doors, both with and without a fire separating function, which shall normally be locked from the outside and/or provide the means of controlling the passage of persons from the inside/outside.

This Appendix has been compiled by Guidelines Commission and adopted by all fire protection associations in the Confederation of Fire Protection Associations Europe.

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1.1 **DOOR N 1, Single fire door**

**Fittings on the inside**
- Emergency exit device
- Door closer. Can be fitted with electromechanical hold-open device

**Functions on the inside**
- The exit handle, operated with one hand, secures exit
- Option of authorised passage via a key

**Fitting on the outside**
- Lever handle

**Functions on the outside**
- Lever handle secures return
- Option of authorised passage via a key

**Extra lock**
- When intruder protection locking is needed, this can be connected to the function essential for the activity
1.2 **DOOR N 2, Single door, not a fire door**

**Fittings on the inside**
- Emergency exit button
- Door holder magnet/electromechanical door bolt with standby power
- Door closer. Can be fitted with electromechanical hold-open device

**Functions on the inside**
- Exit via emergency exit button
- Option of authorised passage via key switch
- Option of automatic unlocking via fire alarm. (Not as the only function)

**Fittings on the outside**
- Pull handle
- Pulse generator, e.g. card reader

**Functions on the outside**
- Return via pull handle after exit or activation of fire alarm
- Option of authorised passage via pulse generator
- Option of automatic unlocking via fire alarm. (Not as the only function)

**Extra lock**
- When intruder protection locking is needed, this can be connected to the function essential for the activity
1.3 **DOOR N 3, Single door with/without fire separating function depending on choice of electric striking plate**

**Fittings on the inside**

Emergency exit device  
Electric striking plate  
Pulse generator, e.g. card reader  
Door closer

**Functions on the inside**

The exit handle, operated with one hand, secures exit  
Option of authorised passage via pulse generator/key  
Option of automatic unlocking via fire alarm, with fire separating function retained depending on choice of electric striking plate. (Not as the only function)

**Fittings on the outside**

Lever handle  
Pulse generator, e.g. card reader

**Functions on the outside**

Lever handle secures return  
Option of authorised passage via pulse generator/key  
Option of automatic unlocking via fire alarm, with fire separating function retained depending on choice of electric striking plate. (Not as the only function)

**Extra lock**

When intruder protection locking is needed, this can be connected to the function essential for the activity
1.4 **DOOR N 4, Single fire door**

**Fittings on the inside**
Emergency exit device, as push pad
Door closer. Can be fitted with electromechanical hold-open device

**Functions on the inside**
The push pad, operated with one hand, secures exit
Option of authorised passage via a key

**Fitting on the outside**
Option 1: See figure. Plain outside face
Option 2: Cylinder + pull handle

**Functions on the outside**
Option 1: See figure. No return
Option 2: No return but authorised passage via key

**Extra lock**
When intruder protection locking is needed, this shall be connected to the function essential for the activity
1.5 **DOOR N 5, Single door with/without fire separating function depending on choice of electric striking plate**

**Fittings on the inside**
- Emergency exit device as push pad
- Electric striking plate
- Pulse generator, e.g. card reader
- Door closer

**Functions on the inside**
- The push pad, operated with one hand, secures exit
- Option of authorised passage via pulse generator/key
- Option of automatic unlocking via fire alarm, with fire separating function retained depending on choice of electric striking plate. (Not as the only function)

**Fittings on the outside**
- Lever handle
- Pulse generator, e.g. card reader

**Functions on the outside**
- No return but authorised passage via pulse generator/key
- Option of automatic unlocking via fire alarm, with fire separating function retained depending on choice of electric striking plate

**Extra lock**
- When intruder protection locking is needed, this can be connected to the function essential for the activity
1.6 DOOR P 1, Single fire door

Fittings on the inside
Panic bolt
Door closer. Can be fitted with electromechanical hold-open device

Functions on the inside
Panic bolt secures exit.
Option of authorised passage via key

Fitting on the outside
Lever handle

Functions on the outside
Lever handle secures return
Option of authorised passage via key

Extra lock
When intruder protection locking is needed, this shall be connected to the function essential for the activity
1.7 **DOOR P 2, Single fire door**

**Fittings on the inside**
- Panic bolt
- Door closer. Can be fitted with electromechanical hold-open device

**Functions on the inside**
- Panic bolt secures exit
- Option of authorised passage via key

**Fittings on the outside**
- Option 1: See figure. Plain outside face
- Option 2: Cylinder + pull handle

**Functions on the outside**
- Option 1: See figure. No return
- Option 2: No return but authorised passage via key

**Extra lock**
When intruder protection locking is needed, this shall be connected to the function essential for the activity
1.8  **DOOR P 3, Single fire door**

**Fittings on the inside**
- Panic bolt with micro switch
- Door holder magnet/electromechanical door bolt
- Door closer. Can be fitted with electromechanical hold-open device

**Functions on the inside**
- Panic bolt secures exit
- Micro switch secures opening of door holder magnet/electromechanical door bolt
- Option of automatic unlocking via fire alarm, with fire separating function retained. (Not as the only function)

**Fittings on the outside**
- Option 1: Lever handle
- Option 2: See figure. Lever handle + pulse generator, e.g. card reader

**Functions on the outside**
- Option 1: Lever handle secures exit
- Option 2: See figure. Lever handle secures return
- Option of authorised passage via pulse generator/key
- Option of automatic unlocking via fire alarm, with fire separating function retained. (Not as the only function)

**Extra lock**
When intruder protection locking is needed, this shall be connected to the function essential for the activity
1.9 DOOR P 4, Single door with/without fire separating function depending on choice of electric striking plate

Fittings on the inside
Panic bolt
Electric striking plate
Pulse generator, e.g. card reader
Door closer

Functions on the inside
Panic bolt secures exit
Option of authorised passage via pulse generator
Option of automatic unlocking via fire alarm, with fire separating function retained depending on choice of electric striking plate. (Not as the only function)

Fittings on the outside
Lever handle
Pulse generator, e.g. card reader

Functions on the outside
Lever handle secures return
Option of authorised passage via pulse generator
Option of automatic unlocking via fire alarm, with fire separating function retained depending on choice of electric striking plate. (Not as the only function)

Extra lock
When intruder protection locking is needed, this shall be connected to the function essential for the activity
1.10  **DOOR P 5, Single fire door**

**Fittings on the inside**  
Panic bolt with electrical opening  
Pulse generator, e.g. card reader  
Door closer. Can be fitted with electromechanical hold-open device

**Functions on the inside**  
Panic bolt secures exit  
Option of authorised passage via pulse generator

**Fittings on the outside**  
Pull handle  
Pulse generator, e.g. card reader

**Functions on the outside**  
No return  
Option of authorised passage via pulse generator

**Extra lock**  
When intruder protection locking is needed, this shall be connected to the function essential for the activity

**Note**  
The panic bolt shall not be electrically held open. It shall be electrically open only at the time of passage
1.11 **DOOR P 6, Single fire door**

**Fittings on the inside**
- Panic bolt with electrical opening and micro switch
- Door holder magnet/electromechanical door bolt
- Pulse generator, e.g. card reader
- Door closer. Can be fitted with electromechanical hold-open device

**Functions on the inside**
- Panic bolt secures exit
- Micro switch secures opening of door holder magnet/electromechanical door bolt
- Option of authorised passage via pulse generator
- Option of automatic unlocking via fire alarm, with fire separating function retained. (Not as the only function)

**Fittings on the outside**
- Lever handle
- Pulse generator, e.g. card reader

**Functions on the outside**
- Lever handle secures return
- Option of authorised passage via pulse generator
- Option of automatic unlocking via fire alarm, with fire separating function retained. (Not as the only function)

**Extra lock**
When intruder protection locking is needed, this shall be connected to the function essential for the activity

**Note**
The panic bolt shall not be electrically held open. It shall be electrically open only at the time of passage
Can be fitted with door automatics
1.12 **DOOR NP 1, Pair of fire doors**

**Fittings on the inside**
- Emergency exit devices, active leaf
- Automatic flush bolts, inactive leaf
- Inactive leaf fitted with tailpiece for the door coordinator function

**Functions on the inside**
- Exit handle, operated with one hand, secures exit via active leaf
- Option of authorised passage via key

**Fittings on the outside**
- Lever handle
- Door closer with coordinator. Can be fitted with electromechanical hold-open device

**Functions on the outside**
- Lever handle secures return
- Option of authorised passage via key
- Door closer with coordinator closes the leaves in the right order

**Extra lock**
When intruder protection locking is needed, this shall be connected to the function essential for the activity

**Note**
The inactive leaf shall not form part of the escape route
1.13  DOOR NP 2, Pair of doors with no fire separating function

Fittings on the inside
Emergency exit button
Option 1: See figure. Rebated doors fitted with door holder magnet/electromechanical door bolt with standby power
Inactive leaf fitted with tailpiece for the door coordinator function

Option 2: Not rebated doors fitted with double door holder magnets/electromechanical door bolts with standby power

Functions on the inside
Exit via emergency exit button
Option of authorised passage via key switch
Option of automatic unlocking via fire alarm. (Not as the only function)

Fittings on the outside
Pull handle
Pulse generator, e.g. card reader
Option 1: See figure. Rebated doors fitted with door closer and coordinator
Can be fitted with electromechanical hold-open device

Option 2: Not rebated doors fitted with door closer. Coordinator not required. Can be fitted with electromechanical hold-open device

Functions on the outside
Return via pull handle after exit or activation of fire alarm
Option of authorised passage via pulse generator
Option of automatic unlocking via fire alarm. (Not as the only function)
Door closer with coordinator closes the leaves in the right order

Extra lock
When intruder protection locking is needed, this shall be connected to the function essential for the activity

Option 1 of 2
1.14 DOOR NP 3, Pair of doors with/without fire separating function depending on choice of electric striking plate

Fittings on the inside
- Emergency exit device
- Electric striking plate in inactive leaf
- Pulse generator, e.g. card reader
- Automatic flush bolts in inactive leaf
- Inactive leaf fitted with tailpiece for the door coordinator function

Functions on the inside
- Exit handle secures exit via active leaf
- Option of authorised passage via pulse generator/key
- Option of automatic unlocking via fire alarm, with fire separating function retained, depending on choice of electric striking plate. (Not as the only function)

Fittings on the outside
- Lever handle
- Pulse generator, e.g. card reader
- Door closer with coordinator

Functions on the outside
- Lever handle secures return
- Option of authorised passage via pulse generator/key
- Door closer with coordinator closes the leaves in the right order
- Option of automatic unlocking via fire alarm, with fire separating function retained, depending on choice of electric striking plate. (Not as the only function)

Extra lock
- When intruder protection locking is needed, this shall be connected to the function essential for the activity

Note
- Inactive leaf shall not form part of the escape route
1.15 DOOR NP 4, Pair of fire doors

Fittings on the inside
Emergency exit devices, as push pad
Automatic flush bolts, inactive leaf
Inactive leaf fitted with tailpiece for the door coordinator function

Functions on the inside
Push pad secures exit via active leaf
Option of authorised passage via key

Fittings on the outside
Option 1: See figure. Plain outside face
Door closer with coordinator. Can be fitted with electromechanical hold-open device
Option 2: Cylinder + pull handle
Door closer with coordinator. Can be fitted with electromechanical hold-open device

Functions on the outside
Option 1: See figure. No return
Door closer with coordinator closes the leaves in the right order
Option 2: No return but authorised passage via key
Door closer with coordinator closes the leaves in the right order

Extra lock
When intruder protection locking is needed, this shall be connected to the function essential for the activity

Note
Inactive leaf shall not form part of the escape route
1.16  DOOR NP 5, Pair of doors with/ without fire separating function depending on choice of electric striking plate

Fittings on the inside
Emergency exit device. as push pad
Electric striking plate in inactive leaf
Pulse generator, e.g. card reader
Automatic flush bolts in inactive leaf
Inactive leaf fitted with tailpiece for the door coordinator function

Functions on the inside
The push pad secures exit via active leaf
Option of authorised passage via pulse generator/key
Option of automatic unlocking via fire alarm, with fire separating function retained, depending on choice of electric striking plate. (Not as the only function)

Fittings on the outside
Pull handle
Pulse generator, e.g. card reader
Door closer with coordinator

Functions on the outside
No return but authorised passage via pulse generator/key
Door closer with coordinator closes the leaves in the right order
Option of automatic unlocking via fire alarm, with fire separating function retained depending on choice of electric striking plate. (Not as the only function)

Extra lock
When intruder protection locking is needed, this can be connected to the function essential for the activity

Note
Inactive leaf shall not form part of the escape route
1.17  DOOR PP 1, Pair of fire doors

Fittings on the inside
Panic bolts
Inactive leaf fitted with tailpiece for the door coordinator function

Functions on the inside
Panic bolt secures exit
Option of authorised passage via key

Fittings on the outside
Lever handle
Door closer with coordinator. Can be fitted with electromechanical hold-open device

Functions on the outside
No return
Option of authorised passage via key
Door closer with coordinator closes the leaves in the right order

Extra lock
When intruder protection locking is needed, this shall be connected to the function essential for the activity

Note
Where the inactive leaf forms part of the escape route, its width shall not be less than 500 mm.
1.18DOOR PP 2, Pair of fire doors

Fittings on the inside
Panic bolts
Inactive leaf fitted with tailpiece for the door coordinator function

Functions on the inside
Panic bolt secures exit
Option of authorised passage via key

Fittings on the outside
Door closer with coordinator. Can be fitted with electromechanical hold-open device
Option 1: See figure. Plain outside face
Option 2: Cylinder + pull handle

Functions on the outside
Door closer with coordinator closes the leaves in the right order
Option 1: See figure. No return
Option 2: No return but authorised passage via key

Extra lock
When intruder protection locking is needed, this shall be connected to the function essential for the activity

Note
Where the inactive leaf forms part of the escape route, its width shall not be less than 500 mm.
1.19  DOOR PP 3, Pair of fire doors

Fittings on the inside
Panic bolts with micro switches
Door holder magnet/electromechanical door bolt in active leaf
Inactive leaf fitted with tailpiece for the door coordinator function

Functions on the inside
Panic bolts secure exit
Micro switches secure opening of door holder magnet/electromechanical door bolt
Option of automatic unlocking via fire alarm, with fire separating function retained, depending on choice of electric striking plate. (Not as the only function)

Fittings on the outside
Door closer with coordinator. Can be fitted with electromechanical hold-open device
Option 1: Lever handle
Option 2: See figure. Lever handle + pulse generator, e.g. card reader

Functions on the outside
Door closer with coordinator closes the leaves in the right order
Option 1: Lever handle secures return
Option 2: See figure. Lever handle secures return
Option of authorised passage via pulse generator/key
Option of automatic unlocking via fire alarm, with fire separating function retained. (Not as the only function)

Extra lock
When intruder protection locking is needed, this shall be connected to the function essential for the activity

Note
Where the inactive leaf forms part of the escape route, its width shall not be less than 500 mm
1.20  DOOR PP 4, Pair of doors with/without fire separating function depending on choice of electric striking plate

**Fittings on the inside**
- Panic bolts with micro switches
- Electric striking plate in inactive leaf
- Pulse generator, e.g. card reader
- Inactive leaf fitted with tailpiece for the door coordinator function

**Functions on the inside**
- Panic bolts secure exit
- Option of authorised passage via pulse generator
- Option of automatic unlocking via fire alarm, with fire separating function retained, depending on choice of electric striking plate. (Not as the only function)

**Fittings on the outside**
- Lever handle
- Pulse generator, e.g. card reader
- Door closer with coordinator

**Functions on the outside**
- Lever handle secures return. (Depending on choice of electric striking plate)
- Option of authorised passage via pulse generator
- Option of automatic unlocking via fire alarm, with fire separating function retained, depending on choice of electric striking plate. (Not as the only function)
- Door closer with coordinator closes the leaves in the right order

**Extra lock**
When intruder protection locking is needed, this shall be connected to the function essential for the activity

**Note**
Where the inactive leaf forms part of the escape route, its width shall not be less than 500 mm.
1.21 DOOR PP 5, Pair of fire doors

Fittings on the inside
Panic bolts with electrical opening
Pulse generator, e.g. card reader
Inactive leaf fitted with tailpiece for the door coordinator function

Functions on the inside
Panic bolts secure exit
Option of authorised passage via pulse generator

Fittings on the outside
Pull handle
Pulse generator, e.g. card reader
Door closer with coordinator. Can be fitted with electromechanical hold-open device

Functions on the outside
No return
Option of authorised passage via pulse generator
Door closer with coordinator closes the leaves in the right order

Extra lock
When intruder protection locking is needed, this shall be connected to the function essential for the activity

Note
Where the inactive leaf forms part of the escape route, its width shall not be less than 500 mm. Panic bolt shall not be electrically held open. It shall be electrically open only at the time of passage
1.22 DOOR PP 6, Pair of fire doors

Fittings on the inside
Panic bolts with electrical opening and micro switches
Door holder magnet/electromechanical door bolt in active leaf
Pulse generator, e.g. card reader
Inactive leaf fitted with tailpiece for the door coordinator function

Functions on the inside
Panic bolts secure exit
Micro switch secures opening of door holder magnet/electromechanical door bolt
Option of authorised passage via pulse generator
Option of automatic unlocking via fire alarm, with fire separating function retained, depending on choice of electric striking plate. (Not as the only function)

Fittings on the outside
Lever handle
Pulse generator, e.g. card reader
Door closer with coordinator. Can be fitted with electromechanical hold-open device

Functions on the outside
Lever handle secures return
Option of authorised passage via pulse generator
Door closer with coordinator closes the leaves in the right order
Option of automatic unlocking via fire alarm, with fire separating function retained. (Not as the only function)

Extra lock
When intruder protection locking is needed, this shall be connected to the function essential for the activity

Note
Where the inactive leaf forms part of the escape route, its width shall not be less than 500 mm. Panic bolt shall not be electrically held open. It shall be electrically open only at the time of passage.
Can be fitted with door automatics
EXAMPLES OF CONTROL ROUTINES
Regular control should be carried out by the usufructuary, but an effort should be made to perform the control together with the property owner as often as possible. The aim of this is to become familiar with the building and to form an overall idea of the total security of escape, and to achieve a good dialogue with the property owner.

In order that control of the technical installation may be carried out in a satisfactory manner, the following checklist should be used in checking doors in, and to, an escape route.

How often controls should be carried out depends on the hazard situation and the general wear and tear in the building and premises. Control of escape facilities should be made every day.

2.1 Control routines
For all doors in and to escape routes, regardless of whether they have, or have not, a fire compartment separating function, the following are to be checked.

Function
- Check that the door can be easily opened without a key, code or card, and that it can be opened at least 90°
- Check that nothing is blocking the escape route
- Check that the force needed to open the door does not exceed 130 N (ca 13 kgf)
- Check that return into the premises is possible where so required

Maintenance
- When the door is opened, make a visual inspection of hinges, locks, handle, door frame, the attachment of glazed panels if any, any other damage, marking, the function of the door handle, etc

For a door with a fire compartment separating function, the following is also to be checked

Gastightness
- Check that the door is undamaged and closes so that there are no gaps, not even along the doorstep of a door opening into an escape route in a stairway
- Check that any intumescent strips that are fitted along the door are undamaged

Lock case
- A lock case with only a cylinder lock must not be fitted with a hold-open device
- Check the engagement of the spring bolt with the striking plate
  - Door of fire resistance class E/El 30 - 7 mm
  - Door of fire resistance class E/El 60 - 10 mm
Door closer
- Open door ca 10 cm and let it go. Check that the door closes completely and that the spring bolt engages with the striking plate
- Check if there are any oil leaks
- Check for damage to the arm system that affects the door holder function
- Check the fixing of the door closer housing and the fixings of the arms
- NOTE that split-arm system or hold-open arms are not recommended for doors at fire compartment boundaries

Electromechanical hold-open device
- Break the current, e.g. with the test button
- Check that the door closes completely and that the spring bolt engages with the striking plate
- Check that it is released in the event of power failure

Extra lock, additional lock
- When intruder protection locking is used, check that the essential function is activated via the micro circuit breaker of the extra lock

Automatic flush bolt for double doors
- Check that the flush bolt moves easily in the striking plate
- Pull the handle and check that the doors do not open
- Check the fixing of the flush bolt and striking plate

Coordinator for double doors
- Check that the “correct” door closes first
- Check the fixing

Tailpiece for double doors
- Check fixing and function

Guidance marking
- Assess whether the sign is fully visible from appropriate points in the premises
- Check that the sign is in place and that it is functioning, i.e. it is undamaged, illuminated, not concealed
- Check the emergency power supply, if any. This can be done on fluorescent signs with their own backup battery. Press the button on the light fitting or unscrew the fuse that supplies the light fitting, and check the emergency light