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Authorized and notified according
to Article 29 of the Regulation (EU)
No 305/2011 of the European
Parliament and of the Council of 9
March 2011

MEMBER OF EOTA



European Technical Assessment ETA-21/0879 of 2023/03/24

General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the
construction product:

f-tronic fire sealing box type bs134

Product family to which the
above construction product
belongs:

Fire Sealing Boxes for Fire Sealing of Electrical
Installations.

Manufacturer:

f-tronic GmbH
Zum Gerlen 21-25
DE-66131 Saarbrücken
Telephone: 0049 6893 9483-0
www.f-tronic.com

Manufacturing plant:

f-tronic GmbH
Zum Gerlen 21-25
DE-66131 Saarbrücken

This European Technical
Assessment contains:

13 pages including 2 annexes which form an integral
part of the document

This European Technical
Assessment is issued in
accordance with Regulation
(EU) No 305/2011, on the
basis of:

EAD 350454-00-1104 – Fire Stopping and Fire Sealing
Products - Penetration Seals.

This version replaces:

The ETA with the same number, issued on 2023-02-16

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of product

The f-tronic type bs134 is a fire sealing box for closing electrical installation apertures in fire resistant partition walls and ceilings. They consist primarily of parts made from polyphenylene (PP) and intumescent materials. The reactive component will seal cracks and openings in case of fire.

The f-tronic fire sealing box type bs134 with covers are classified in accordance with the procedure described in EN 13501-2. They are installed in openings in fire classified walls made from light weight partition structures.

Detailed specifications for identification and performance criteria relevant for fire safety with regard to the construction products are given in Annex 1 and 2.

2 Specification of the intended use(s) in accordance with the applicable European Assessment Document (hereinafter EAD)

The construction product f-tronic fire sealing box type bs134 is intended for use as components with a fire protection effect in walls made from light weight partition structures that are subject to requirements related to fire protection, shaft wall constructions with 90 mm thickness or Lignotrend ceiling/roof elements Their fire-resistant capability prevents heat transmission and fire spreading in the event of fire.

Within the scope of this ETA, the fire resistance was demonstrated for cables. The f-tronic fire sealing box type bs134 for fire sealing of electrical installations used to seal off openings in fire resistant walls, which are penetrated by cable and flexible electrical installation pipes, and serves to preserve the walls' fire resistance in the area of the penetrations.

Table 1 – components of the verified penetration seals

Product type	Trade name
Fire Sealing Box	bs 134 and D134 lid

Detailed information and data on the verified penetration seals are given in Annexes 1 and 2.

The performances given in Section 3 exclusively relate to this f-tronic bs134 fire sealing box (e.g., with respect to the design and arrangement of the components of the penetration seals and the type and position of the services).

The verification and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of at least 10 years.

The indications given on the working life cannot be interpreted as a guarantee given by the manufacturer but are to be regarded only as a means for choosing the right product in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment.

Characteristic	Assessment of characteristic
3.2 Safety in case of fire (BWR 2)	
Reaction to fire	The f-tronic fire sealing box type bs134 and D134 lid is classified as Euroclass E in accordance with EN 13501-1.
Resistance to fire	The f-tronic fire sealing box type bs134 used for fire sealing of electrical installations as described in annex 1 and 2 is classified as described in annex 2 in accordance with EN 13501-2
3.3 Hygiene, health and the environment (BWR 3)	
Air permeability	No performance assessed
Water permeability	No performance assessed
Content, emission and/or release of dangerous substances*	The product does not contain/release dangerous substances.
3.4 Safety and accessibility in use (BWR 4)	
Mechanical resistance and stability	No performance assessed
Resistance to impact/movement	No performance assessed
Adhesion	No performance assessed
Durability	Use category Z ₂
3.5 Protection against noise (BWR 5)	
Airborne sound insulation	No performance assessed
3.6 Energy economy and heat retention (BWR 6)	
Thermal properties	No performance assessed
Water vapour permeability	No performance assessed

See additional information in section 3.9 -3.10

*In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g., transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.9 Methods of verification

The characteristic values of the joint sealing system are based on the EAD 350454-00-1104.

3.10 General aspects related to the fitness for use of the product.

The verification of durability is part of testing the essential characteristics. f-tronic fire sealing box type bs134 may be used in end-use applications according to the provisions for use category Z₂ (intended for uses in internal conditions with humidity lower than 85 % RH excluding temperatures below 0°C, without exposure to rain or UV) without expecting significant changes of the characteristics relevant for fire protection.

The European Technical Assessment is issued for the product based on agreed data/information, deposited with ETA-Danmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to ETA-Danmark before the changes are introduced. ETA-Danmark will decide if such changes affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

f-tronic cavity wall sockets are manufactured in accordance with the provisions of this European Technical Assessment using the manufacturing processes as identified in the inspection of the plant by the notified inspection body and laid down in the technical documentation.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base.

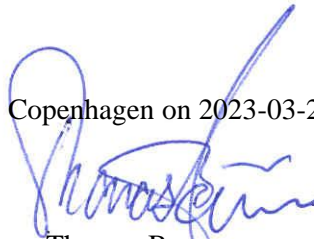
4.1 AVCP system

According to the decision 1999/454/EC of the European Commission, as amended by 2001/596/EC, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 1.

5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD.

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking.

Issued in Copenhagen on 2023-03-24 by



Thomas Bruun
Managing Director, ETA-Danmark

Annex 1

Product details and definitions

Product details of the f-tronic fire sealing box type bs134:

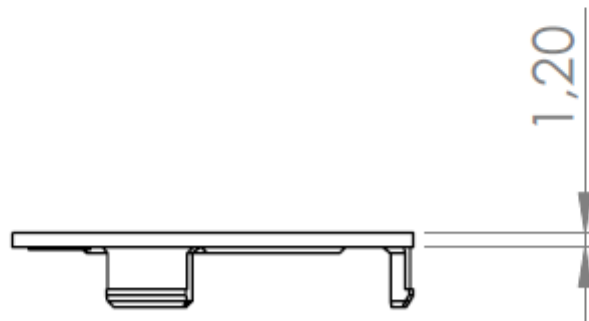
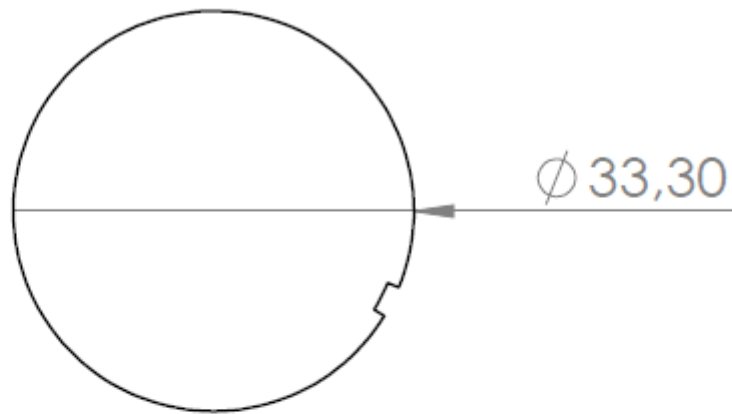
Property	Parameter	Method
Material	Polyphenylene (PP)	
Dimensions	bs134= Ø35 [mm] depth = 55 [mm] D134 lid = Ø33,3[mm] depth =1,2 [mm]	
Weight	bs134=14 g (± 3 g) D134 lid =1,1 g (± 2 g)	

Performance of the Intumescent material:

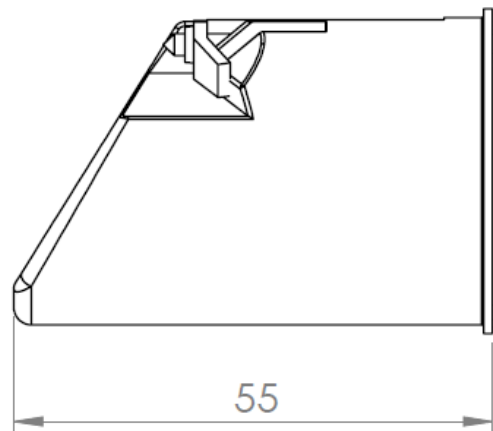
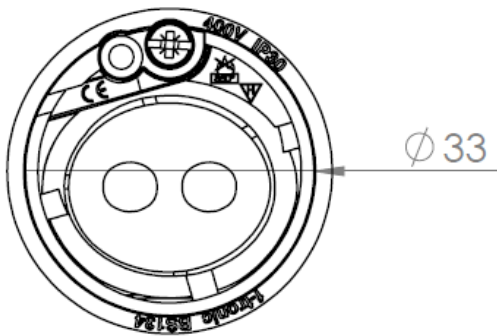
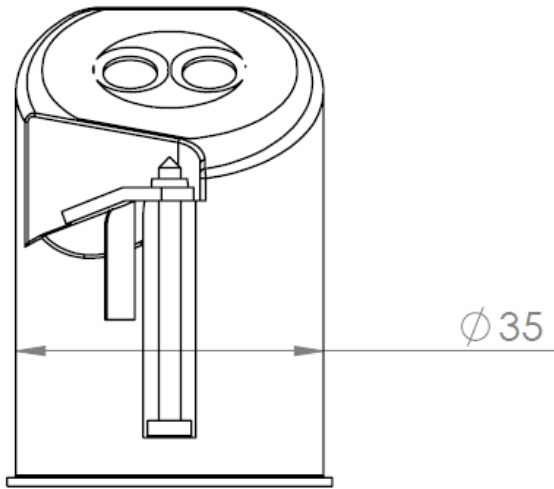
Manufacturer	Description	
Rolf Kuhn GmbH Jägersgrund 10 57339 Erndtebrück Germany	Kerafix Flexpan 200 NG-A , characteristics for the product documented in ETA-15/0719	
Property	Parameter	Method
Density	1270 [kg/m ³] ± 10%	
Thickness of strips	1,0 – 3,0 [mm] tolerance +/- 10% nominal thickness	TR 024, clause 1.2.2.1
Expansion ratio	22,0 – 37,0 for nominal thickness 1,0 [mm]	TR 024, clause 1.2.11 (At 450 [°C] for 30 min with a top load)
Expansion pressure	≥ 0,80 [N/mm ²] for nominal thickness 1,5 [mm]	TR 024, clause 1.2.12 (Method I at 300 [°C])
Reaction to fire	Euro Class E	EN 13501-1

f-tronic fire sealing box type bs134 and accessory components, used as part of a penetration seal for cables, dimensions wall installation - section view.

f-tronic D134- Lid



f-tronic bs134 – Fire Sealing box



Annex 2

Description of the installations for the confirmation of fire resistance

The below in Lignotrend **ceiling/roof elements** are classified according to the following combinations of performance parameters and classes, whichever is applicable.

Resistance to fire classification EI 30/EI 60:

Type	Inductions	Filling of limestone chippings in the cavity
2x bs134	M25 tube + 2x 3x1.52 / 2x5x2.52	without
bs134	2x 3x1.52	without
bs134	With lid and M25 pipe	without
bs134	With M25	without
bs134	With lid and M25 tube + 2x 3x1.52	with
bs134	With lid and M25 pipe	with
bs134	With M25 tube and 2x 3x1.52	with
2x bs134	M25 tube + 2x 3x1.52 / 2x5x2.52	with

In suspended ceiling of 40 mm thickness featuring CD profiles with planking of two 20 mm gypsum plaster fire protection boards according to EN 520 that are covered with mineral wool of 40 mm / 100 kg/m³.

Resistance to fire classification EI 60/EI 90:

Type	Inductions	Filling of limestone chippings in the cavity
bs134	With lid and M25 tube + 2x 3x1.52	With

The classification is declared under the following conditions	
Field of application	<p>The results of the fire test shall apply directly to similar versions which were subjected to one or more of the following changes, taking into account the test times achieved:</p> <ul style="list-style-type: none"> • Test results are applicable only to the orientation in which the penetration sealing systems have been tested (ceiling). • Ceiling structures with a higher number of layers or thicker ceilings are permitted. • The cavity wall boxes bs134 require relief millings with a maximum diameter of 55 mm and a minimum thickness of 32 mm. • All common cables of cable groups A1, A2, A3 and NYM cables are covered for type bs134, however, only up to a maximum diameter of 14.4 mm. • EIP = electrical installation pipes up to a diameter of 25 mm are permitted in bs134.
Field of application - suspended ceiling	<ul style="list-style-type: none"> • The test results are applicable only to the orientation for which the fire-retarding barrier systems were tested (corresponds to installation in a light dividing wall with thickness at least 100 mm or 125 mm wall thickness correspond to the wall socket chosen) • The largest designated fire-retardant barrier to be incorporated into the supporting construction is the largest envisaged penetration seal that is tested. Which correspond to a vertical 5-fold opposite arrangement (6.3.6. according to EN 1366-3:2009). • Conventional cables from cable group A1, A2 and A3 with a maximal diameter up to Ø14,4 mm • Electrical installation tubes with an outer diameter of 25 mm

In 135 mm thick timber stud wall, built with 60 x 80 mm wooden beams, with 15mm OSB/3 and 12,5 mm gypsum plasterboard planking on both sides according to EN520 and internal flexible woodfibre insulation with a thickness of 80mm, density: 50 kg/m² according to DIN 4108-10 in accordance of the procedure set out in EN 13501-2:2016.

Resistance to fire classification EI 60/EI 60:

Type	Inductions	Woodfibre insulation DIN 4108-10
bs134	With lid and M25 tube + 2x 3x 1,5 ²	With

The classification is declared under the following conditions	
Field of application	<p>The results of the fire test shall apply directly to similar versions which were subjected to one or more of the following changes, taking into account the test times achieved:</p> <ul style="list-style-type: none"> • Test results are applicable only to the orientation in which the penetration sealing systems have been tested (wall). • Wall structures with a higher number of layers and thicker walls are permitted. • Mineral wool is permitted. • All common cables of cable groups A1, A2, A3 and NYM cables are covered for type bs134, however, only up to a maximum diameter of 14,4 mm. • EIP= electrical installation pipes up to a diameter of 25mm are permitted in bs134. • Metal stud frame is permitted.
Field of application	<p>The test results are applicable only to the orientation for which the fire-wall retarding barrier were tested (corresponds to installation in a thick timber stud wall with a thickness of 135 mm.)</p> <ul style="list-style-type: none"> • The largest designated fire-retardant barrier to be incorporated into the supporting construction is the largest envisaged penetration seal that is tested. Which corresponds to a vertical 5-fold opposite arrangement (6.3.6. According to EN 1366-3:2009). • Conventional cables from cable group A1, A2 and A3 with a maximal diameter up to 14,4 mm. • Electrical installation tubes with an outer diameter of 25 mm. • Wall structures with a higher number of layers and thicker walls are permitted. • Mineral wool is permitted. • Metal stud frame is permitted.

The below in:

Partition wall with 100 mm thickness, designed with CW50 metal profiles in double-sided planking from two layers of 12.5 mm thick plasterboard fire protection boards DF according to EN 520 and optionally internal Rockwool

Partition wall with 125 mm thickness, designed with CW75 metal profiles in double-sided planking from two layers of 12.5 mm thick plasterboard fire protection boards DF according to EN 520 and optionally internal Rockwool

Shaft wall with 90 mm thickness, designed with CW50 metal profiles in one-sided planking from two layers each 20 mm thick plasterboard fire protection boards DF according to EN 520 and internal Rockwool are classified according to the following combinations of performance parameters and classes, whichever is applicable.

Resistance to fire Classification	Type	Inductions	Device	Installation
EI 90	bs134	2x 3x1.52	Lid	Cold side
EI 90	bs134	2x 5x1.52	Lid	Cold side
EI 90	bs134	1x EIR x 25 mm	Lid	Cold side
EI 90	bs134	1x EIR x 25 mm	Lid	Cold side
EI 90	bs134	1x EIR x 25 mm	Lid	Cold side
EI 90	bs134	2x 3x1.52	Lid	Warm side
EI 90	bs134	2x 3x1.52	Lid	Warm side
EI 90	bs134	2x 3x1.52	Lid	Cold side
EI 90	bs134	2x 3x1.52	Lid	Cold side
EI 90	bs134	1x EIR x 25 mm	Lid	Cold side
EI 90	bs134	2x 3x1.52	Lid	Cold side
EI 90	bs134	1x EIR x 25 mm	Lid	Warm side
EI 90	bs134	1x EIR x 25 mm	Lid	Warm side
EI 90	bs134	2x 3x1.52	Lid	Cold side
EI 90	bs134	2x 3x1.52	Lid	Warm side
EI 90	bs134	2x 3x1.52	Lid	Cold side
EI 90	bs134	2x 3x1.52	Lid	Warm side
EI 90	bs134	1x EIR x 25 mm	Lid	Cold side
EI 90	bs134	1x EIR x 25 mm	Lid	Warm side
E 90 EI 60	bs134	2x 3x1.52	Lid	Cold side
E 90 EI 60	bs134	2x 3x1.52	Lid	Warm side
EI 90	bs134	2x 3x1.52	Lid	Cold side
EI 90	bs134	2x 3x1.52	Lid	Warm side
E 90 EI 60	bs134	2x 3x1.52	Lid	Cold side
E 90 EI 60	bs134	2x 3x1.52	Lid	Warm side

The classification is declared under the following conditions

Field of application
(Chapter 4.3
classification
report)

The results of the fire test shall apply directly to similar versions which were subjected to one or more of the following changes, taking into account the test times achieved:

- Test results are applicable only to the orientation in which the penetration sealing systems have been tested (corresponds to the installation in a wall with a minimum thickness of 100/125 mm and are shaft wall with 2x 20mm GKF in an arrangement of max. 5 units, both horizontally and vertically)
- All common cables of cable group A1, A2, A3 and NYM are covered, however, only up to a maximum diameter of Ø 14.4 mm.
- (EIR = flexible electrical installation pipes) Protective hoses are permitted.