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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-15/0598 of 2023/02/16

### 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 cavity wall sockets

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: +49 6893 9483-0  
[www.f-tronic.com](http://www.f-tronic.com)

Manufacturing plant:

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

This European Technical  
Assessment contains:

14 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 2016-10-26

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 cavity wall sockets are cable penetration seals for fire sealing of electrical installations. They consist primarily of parts made from thermoplastic polyphenylene sulphide (PPS) and intumescent materials. The cavity wall sockets are made with covers.

The f-tronic cavity wall sockets, named "bs 115, bs 117, bs 118 and bs 112", by f-tronic GmbH are products for closing electrical installation apertures in fire resistant partitioning walls, comprising special basic thermoplastic bodies and intumescent inlays. The reactive component will seal cracks and openings in case of fire.

The main difference between the bs 115 socket and the bs 117 appliance connection socket is the installation depth, of 45 mm and 55 mm respectively. The bs 118 appliance connection socket is a dual version of the bs 117.

f-tronic bs 115, bs 117 and bs 118 are the actual wall sockets and bs 112 is the cover.

The f-tronic cavity wall sockets with covers are classified in accordance with the procedure described in EN 13501-2:2007 +A1:2009. 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 cavity wall socket 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. 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 cavity wall sockets are fire sealing boxes for fire sealing of electrical installations used to seal off openings in fire resistant walls, which are penetrated by cables 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 Boxes	f-tronic cavity wall sockets named: bs 115 bs 117 bs 118 and bs 112 cover

The construction product f-tronic cavity wall socket is intended for use as a component with a fire protection effect in building elements, assembled systems or constructions that are subject to requirements related to fire protection. Their reactive effect prevents heat transmission and fire spreading in the event of fire.

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 cavity wall sockets (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 provisions made in this European Technical Assessment are based on an assumed intended working life of the f-tronic cavity wall sockets of 10 years, provided the manufacturers conditions laid down in the manufacturers data sheet for the packaging, transport, storage, installation, use, maintenance and repair are met.

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
<b>3.2 Safety in case of fire (BWR 2)</b>	
Reaction to fire	The f-tronic cavity wall sockets “bs 115; bs 117; bs 118 and bs 112 cover” are classified as <b>Euroclass E</b> in accordance with EN 13501-1.  The ROKU® Strip is classified as <b>Euroclass E</b> in accordance with EN 13501-1.
Resistance to fire	The f-tronic cavity wall sockets used for fire sealing of electrical installations as described in annex 1 and 2 in light partitioning flexible wall total thickness 100 mm or 125 mm is classified as <b>described in annex 2</b> in accordance with EN 13501-2
<b>3.3 Hygiene, health and the environment (BWR 3)</b>	
Air permeability	
Water permeability	
Content, emission and/or release of dangerous substances*	The product ROKU strip <b>does not contain or release any dangerous substances</b> according to ETA-10/0117.
<b>3.4 Hygiene, health and the environment (BWR 4)</b>	
Mechanical resistance and stability	No performance assessed
Resistance to impact/movement	No performance assessed
Adhesion	No performance assessed
Durability	<b>Use category Z<sub>2</sub></b>
<b>3.5 Protection against noise (BWR5)</b>	
Airborne sound insulation	No performance assessed
<b>3.6 Energy economy and heat retention (BWR6)</b>	
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 cavity wall sockets may be used in end-use applications according to the provisions for use category Z<sub>2</sub> (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 2023-02-16 by



Thomas Bruun  
Managing Director, ETA-Danmark

**Annex 1**  
**Product details and definitions**

Product and performance of the f-tronic cavity wall sockets and accessory components:

Product and performance of the cavity wall sockets named "bs 115, bs 117, bs 118 and bs 112 cover", by f-tronic GmbH:

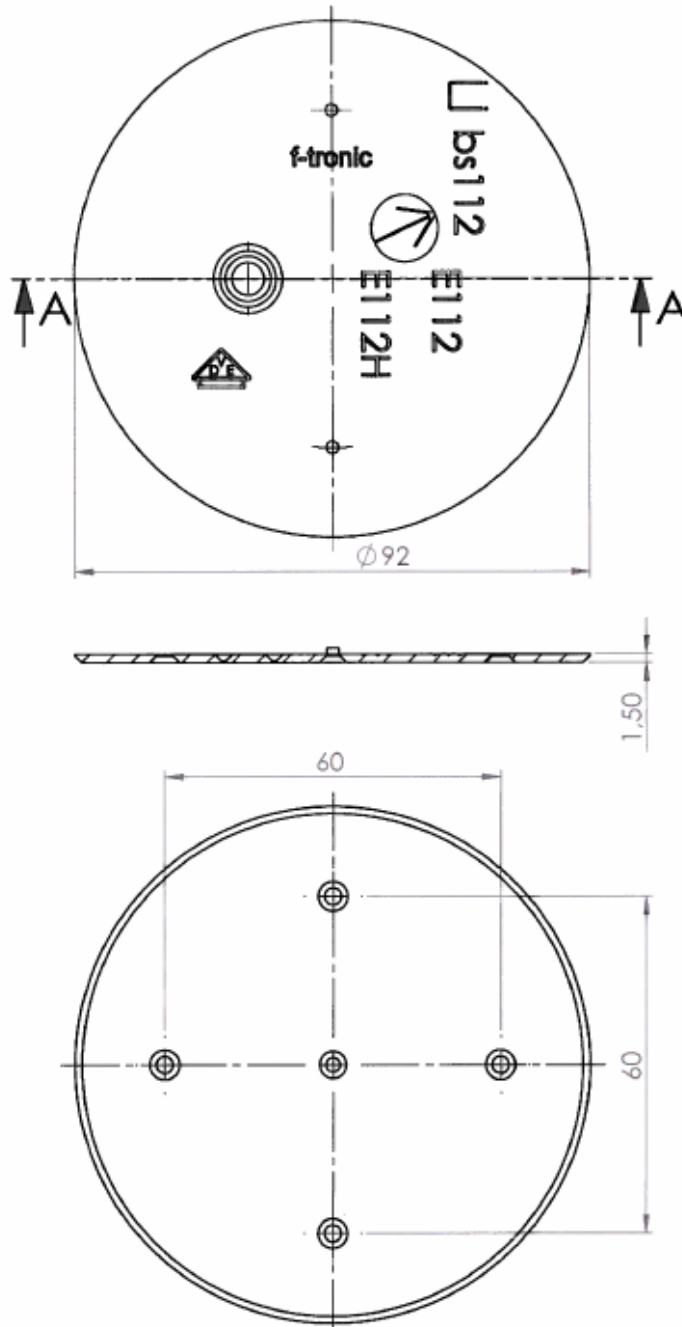
Property	Parameter	Method
Material	Thermoplastic polyphenylene sulfide (PPS)	
Dimensions	bs115= Ø74 [mm] depth =45 [mm] bs117= Ø74 [mm] depth =55 [mm] bs118= Ø74 x142 [mm]depth =55 [mm] bs112cover = Ø92[mm] depth =1,5 [mm]	
Weight	bs115=76 g (± 4 g) bs117= 86g (± 4 g) bs118=183 g (± 5 g) bs112 cover =16 g (± 2 g)	
Reaction to fire	Euro Class E	EN 13501-1

Performance of the Intumescent material:

Manufacturer	Description	
Rolf Kuhn GmbH Jägersgrund 10 57339 Erndtebrück Germany	ROKU® Strip, characteristics for the product documented in ETA-10/0117	
Property	Parameter	Method
Density	1200 [kg/m <sup>3</sup> ] ± 10%	
Thickness of strips	1,0 – 8,0 [mm] tolerance +/- 10% nominal thickness	TR 024, clause 3.1.2
Expansion ratio	18,0 – 38,0 for nominal thickness 1,5 [mm]	TR 024, clause 3.1.11 (Method 1 at 550 [°C] for 30 min with a top load)
Expansion pressure	≥ 0,80 [N/mm <sup>2</sup> ] for nominal thickness 1,5 [mm]	TR 024, clause 3.1.12 (Method 4 at 300 [°C])
Reaction to fire	Euro Class E	EN 13501-1

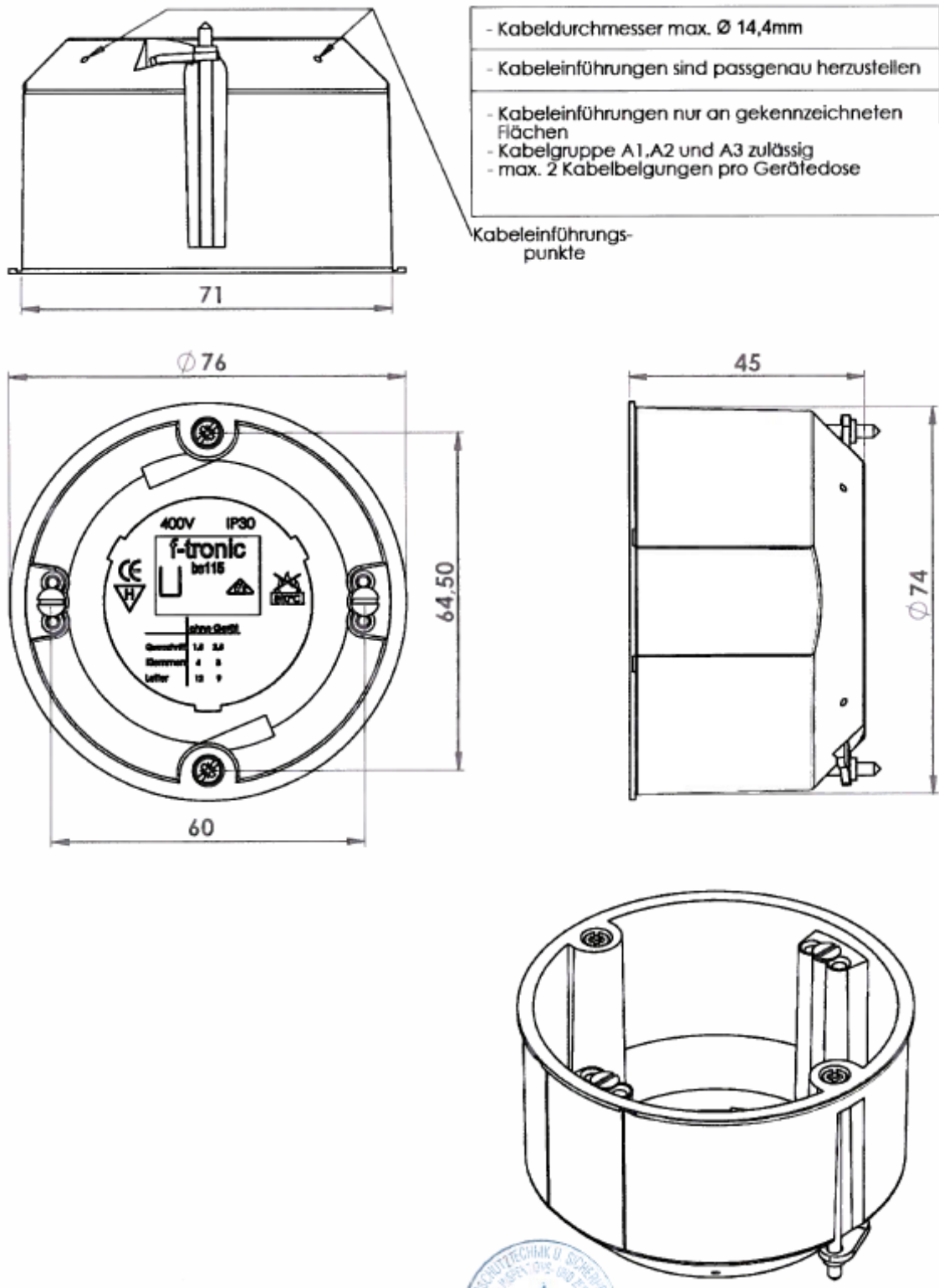
**f-tronic cavity wall sockets and accessory components, used as part of a penetration seal for cables, dimensions wall installation - section view.**

**f-tronic bs112 - Cover**

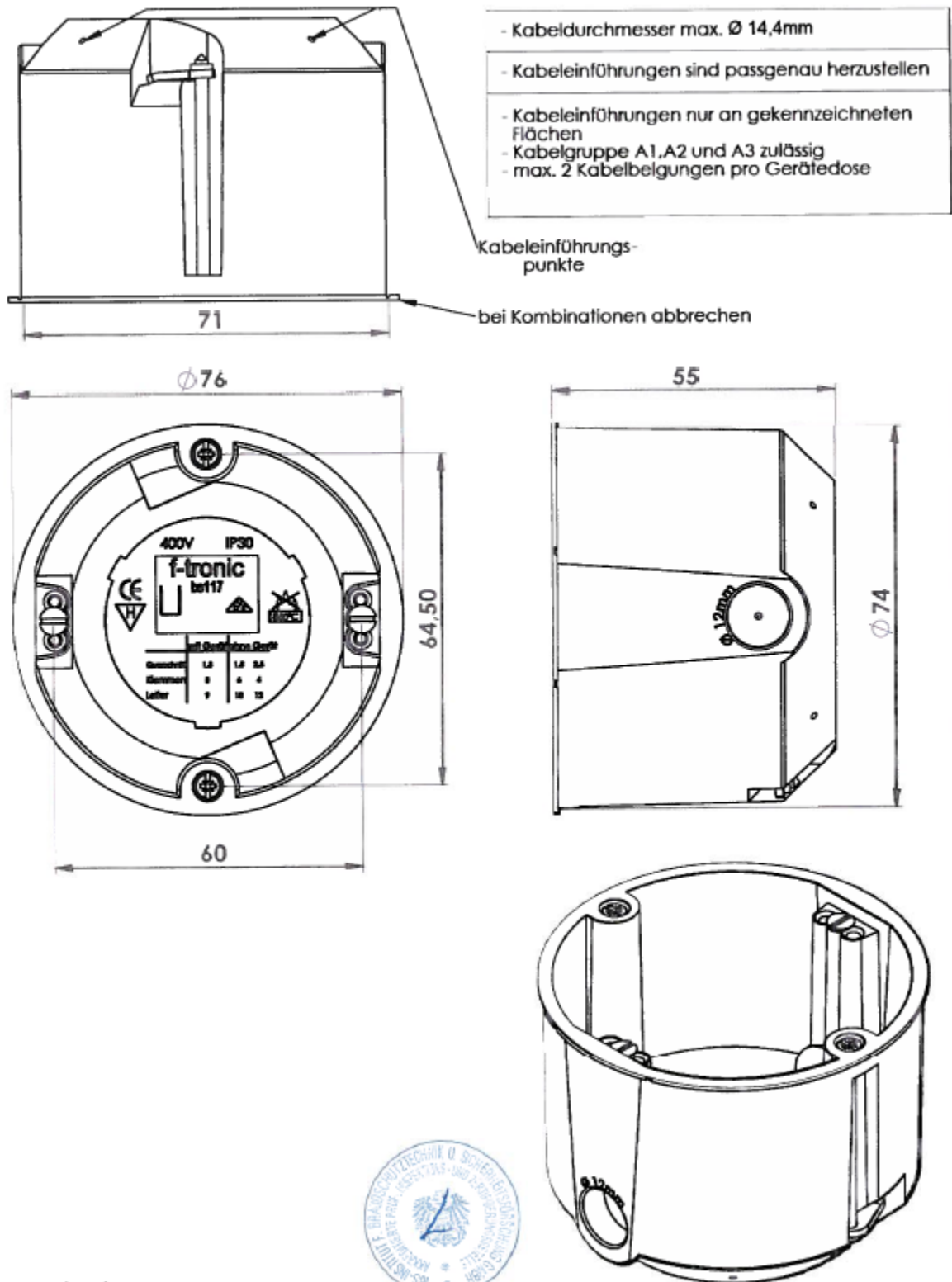




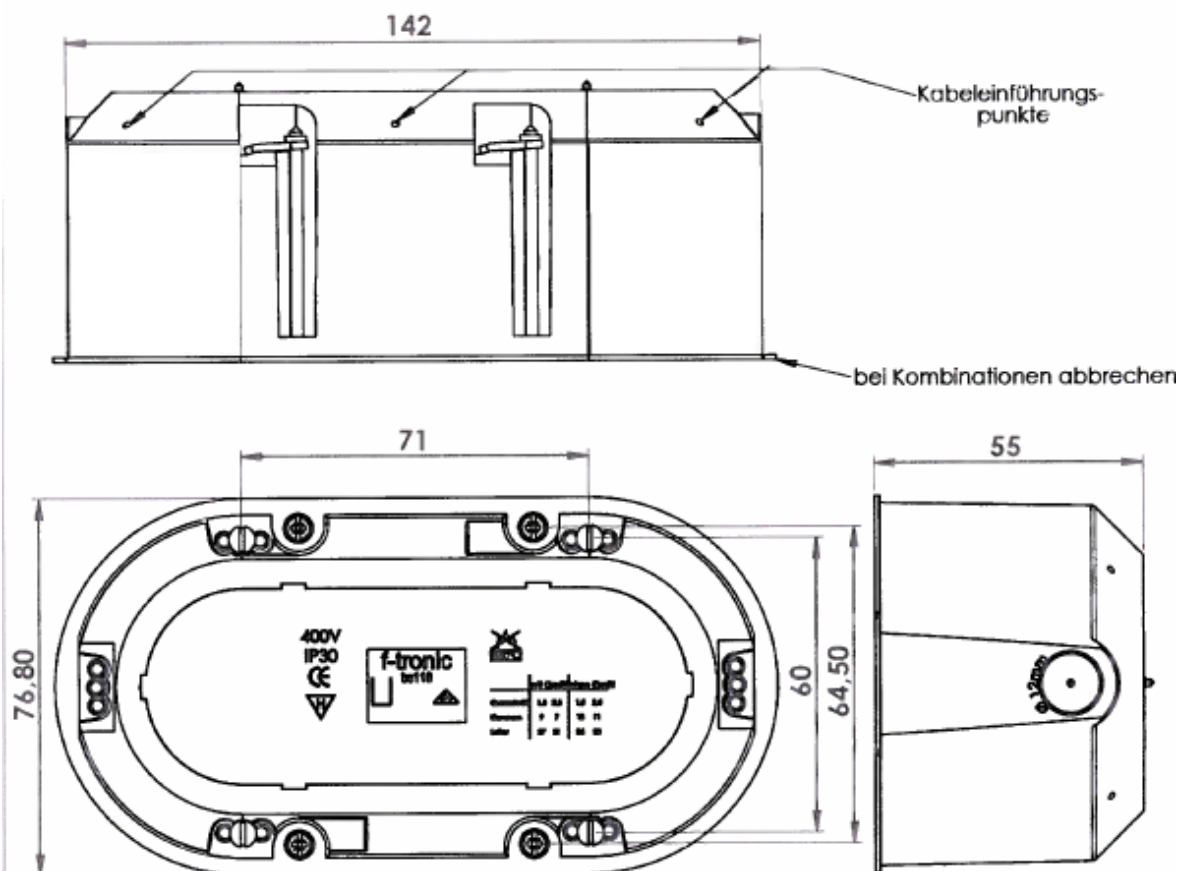
## f-tronic bs115 – wall socket



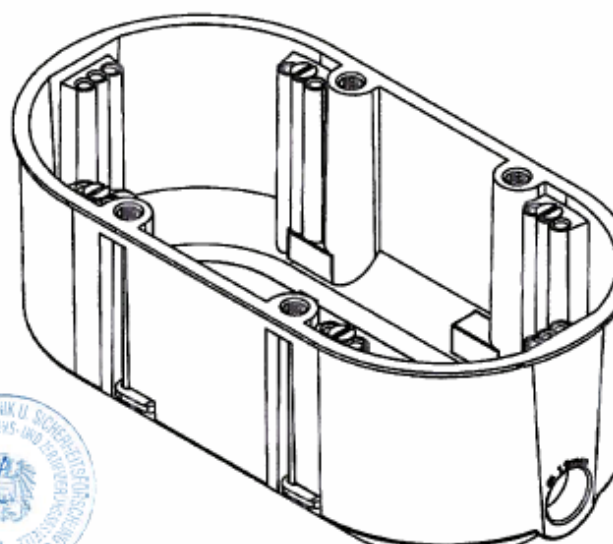
### f-tronic bs117 – wall socket



### f-tronic bs118 – wall socket



- |   |
|---|
| - Kabeldurchmesser max. $\varnothing$ 14,4mm        |
| - Kabeleinführungen sind passgenau herzustellen     |
| - Kabeleinführungen nur an gekennzeichneten Flächen |
| - Kabelgruppe A1,A2 und A3 zulässig                 |
| - max. 2 Kabelbelagungen pro Gerätedose             |



### **Type of installations**

The f-tronic cavity wall sockets and accessory components named "bs 115, bs 117, bs 118 and bs 112", by f-tronic GmbH may be used in:

#### **Light partitioning flexible wall total thickness 100 [mm] or 125 [mm]**

- Flexible walls with a metal stud substructure comprising CW 50 or CW 75 studs.
- Wall construction with lining made from min. 2 layers on both sides of 12,5 [mm] fire protection plasterboards according to EN 520 Type DF.
- Mineral wool insulation 40 mm thick with fire behavior class A1 according to EN 13501-1, specific weight 40 kg/m<sup>3</sup>.
- Wall thickness 100 [mm] or 125 [mm]
- The walls shall be classified according to EN 13501-2 corresponding to the required fire resistance period.

And for bs117:

- 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/m<sup>3</sup>.

**Annex 2**  
**Description of the installations for the confirmation of fire resistance**

The below applies to seals in 100 mm or 125 mm thick walls made from light weight partition structures.

**Classification EI 90 / E90**

Type of installation	Description
Fire retardant barrier	<p><b><u>The f-tronic cavity wall socket "bs 115" by f-tronic GmbH</u></b></p> <ul style="list-style-type: none"> <li>• Has been tested with cables from cable group A1, A2 and A3 with a maximal diameter up to Ø14,4 mm</li> <li>• Has been tested in light dividing wall with thickness of 100 mm. The test has been conducted with switch, socket, spring cover for one sided installation and just opposite vertical arranged installations. The result is applicable from the cold side and the fire side.</li> <li>• Maximum two cable groups per cavity wall socket</li> </ul> <p><b><u>The f-tronic cavity wall socket "bs 117" with socket on fire side by f-tronic GmbH</u></b></p> <ul style="list-style-type: none"> <li>• Cable group A1, A2 and A3 with a maximal diameter up to Ø14,4 mm</li> <li>• Has been tested in light dividing wall with thickness of 100 mm. The test has been conducted with switch, socket, spring cover for one sided installation. The result is applicable from the cold side and the fire side.</li> <li>• Has been tested in light dividing wall with thickness of 125 mm. The test has been conducted with switch, socket, spring cover just opposite vertical arranged installations.</li> <li>• Has been tested in light dividing wall with thickness of 125 mm. The test has been conducted with socket just opposite vertical arranged installations with 2 * 20 mm electrical installation tubes (outer diameter)</li> <li>• Has been tested in light dividing wall with thickness of 125 mm. The test has been conducted with socket just opposite vertical arranged installations with 4 * 20 mm electrical installation tubes (outer diameter)</li> <li>• Has been tested in light dividing wall with thickness of 125 mm. The test has been conducted with socket just opposite vertical arranged installations with 4 * cable A2/A3 with a maximal diameter Ø11,6 mm.</li> </ul> <p><b><u>The f-tronic cavity wall socket "bs 118" with fire socket on fire side, by f-tronic GmbH</u></b></p> <ul style="list-style-type: none"> <li>• Cable group A1, A2 and A3 with a maximal diameter up to Ø14,4 mm</li> <li>• Has been tested in light dividing wall with thickness of 100 mm. The test has been conducted with switch and socket for one sided installation. The result is applicable from the cold side and the fire side.</li> <li>• Has been tested in light dividing wall with thickness of 125 mm. The test has been conducted with switch, socket, spring cover just opposite vertical arranged installations.</li> <li>• Has been tested in light dividing wall with thickness of 125 mm. The test has been conducted with socket just opposite vertical arranged installations with 4 * cable A2/A3 with a maximal diameter Ø11,6 mm.</li> </ul>

The classification is declared under the following conditions	
Field of application	<ul style="list-style-type: none"> <li>• 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)</li> <li>• 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).</li> <li>• Conventional cables from cable group A1, A2 and A3 with a maximal diameter up to Ø14,4 mm</li> <li>• Empty conduits are not permitted.</li> <li>• Electrical installation tubes with an outer diameter of 20 mm</li> </ul>

**Annex 2**  
**Description of the installations for the confirmation of fire resistance**

The below applies to seals 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/m<sup>3</sup>.

**Classification EI 60 / EI90**

Type of installation	Description
Fire retardant barrier	<p><b><u>The f-tronic cavity wall socket "bs 117" with socket on fire side by f-tronic GmbH</u></b></p> <ul style="list-style-type: none"> <li>All standard cables of cable groups A1, A2, A3 and NYM are applicable, however, limited to a maximum diameter of Ø 14.4 mm.</li> </ul>

The classification is declared under the following conditions	
Field of application	<ul style="list-style-type: none"> <li>Test results are only applicable to the orientation in which the penetration seal systems were tested (suspended floor with at least 2 x 20 mm gypsum plaster fire protection boards according to EN 520 and applied insulation, mineral wool with a thickness of 40 mm and a density of 100 kg/m<sup>3</sup>).</li> <li>All standard cables of cable groups A1, A2, A3 and NYM are applicable, however, limited to a maximum diameter of Ø 14.4 mm.</li> <li>(EIP = electrical installation pipes, flexible) protective hoses are admissible.</li> </ul>