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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-18/0628 of 04/09/2018

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 protection sockets, BS2000, BS2700,
BS3500, BS3700 & BS112

Product family to which the
above construction product
belongs:

Fire Sealing Boxes for Fire Sealing of Electrical
Installations.

Manufacturer:

f-tronic GmbH
Winfried Fohs GmbH
Zum Gerlen 21-25
D-66131 Saarbrücken
www.f-tronic.com

Manufacturing plant:

f-tronic, Winfried Fohs GmbH
D-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:

European Assessment Document (EAD) of "Fire
Stopping and Fire Sealing Products", 350454-00-1104,
September 2017: "Penetration Seals"

This version replaces:

-

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II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of product and intended use

Technical description of the product

The f-tronic fire protection sockets are fire sealing boxes for fire sealing of electrical installations. They consist primarily of parts made from thermoplastic polyphenylene (PP) and thermoplastic elastomers (TPE50) materials. Fire protection sockets are made with covers of PPS Black. The BS112 cover is made by thermoplastic polyphenylene sulfide (PPS)

The f-tronic fire protection sockets, named "BS2000, BS2700, BS3500, BS3700 & BS112", 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.

f-tronic BS2000, BS2700, BS3500 & BS3700 are the actual wall sockets and BS 112 is the cover.

The f-tronic fire protection sockets with covers are classified in accordance with the procedure described in EN 13501-2 +A1. 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.

Specification of the intended use in accordance with the applicable European Assessment Document

The construction product f-tronic fire protection sockets are 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 fire protection 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 penetrations.

Table 1 – components of the verified penetration seals

Product type	Trade name
Fire Sealing Boxes	f-tronic fire protection sockets named: BS 2000 BS 2700 BS 3500 BS3700 Cover: BS 112

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 fire protection 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 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 for f-tronic fire protection sockets.

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 protection sockets “BS2000, BS2700, BS3500, BS3700 & BS112” in thickness minimum 2,4 mm are classified as Euroclass E in accordance with EN 13501-1.
Resistance to fire	The ROKU® strip are classified as Euroclass E in accordance with EN 13501-1. The f-tronic fire protection 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 described in annex 2 in accordance with EN 13501-2
3.3 Hygiene, health and the environment (BWR 3)	
Influence on air quality	The product does not contain/release dangerous substances specified in TR 034, dated October 2015 according to ETA-15/0719.
3.7 Sustainable use of natural resources (BWR 7)	
	No Performance Assessed

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 General aspects

The verification of durability is part of testing the essential characteristics. f-tronic fire protection sockets 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.

4 Assessment and verification of constancy of performance (AVCP)

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.

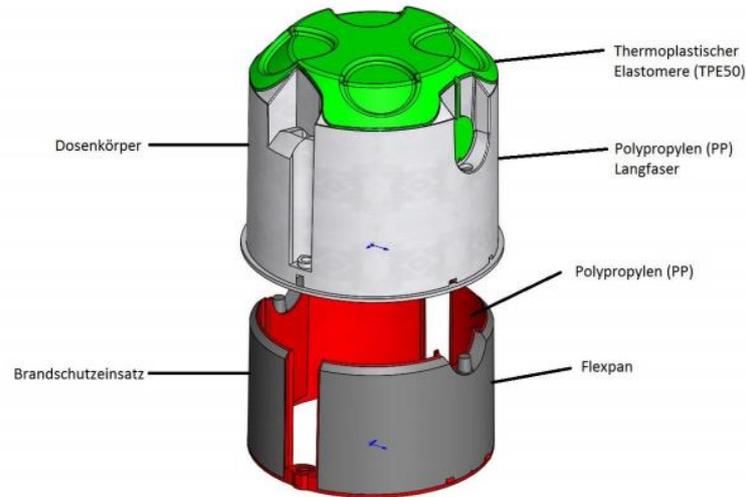
Issued in Copenhagen on 2018-09-04 by



Thomas Bruun
Managing Director, ETA-Danmark

Annex 1 Product details and definitions

Product and performance of the f-tronic fire protection sockets and accessory components:



Kerafix Flexpan 200 NG-A-Granulat from the manufacturer Rolf Kuhn GmbH is described in ETA 15/0719 issued by ETA-Danmark A/S, dated 2015-12-02.

Product and performance of the fire protection sockets named "BS2000, BS2700, BS3500, BS3700 & BS112", by f-tronic GmbH:

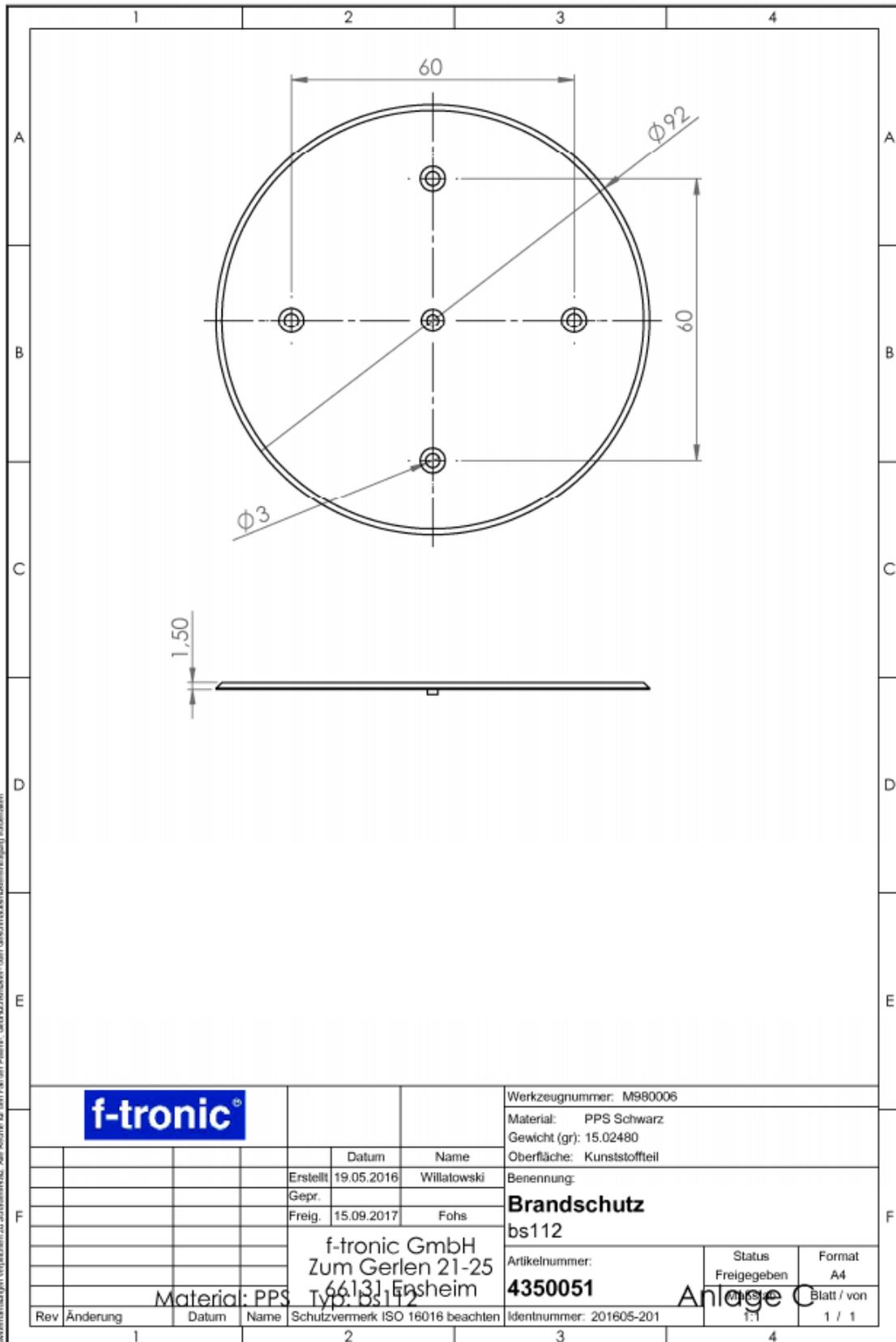
Property	Parameter	Method
Dimensions	BS2000 = Ø 68 [mm] depth = 50 mm BS2700 = Ø 68 [mm] depth = 50 mm BS3500 = Ø 68 [mm] depth = 62 mm BS3700 = Ø 68 [mm] depth = 62 mm BS 112 cover = Ø 92 [mm] depth = 1,5 mm	
Melting point	Minimum 280°C	EN 13162
Weight	BS2000 48 g (± 5 g) BS2700 49 g (± 5 g) BS3500 55 g (± 5 g) BS3700 55 g (± 5 g) BS 112 cover = 16g (± 2 g)	
Reaction to fire	Euro Class E	EN 13501-1

Performance of the Intumescent material:

Manufacturer	Description	
Rolf Kuhn GmbH Jägersgrund 10 D-57338 Erndtebrück	Kerafix Flexpan 200 NG-A-Granulat, characteristics for the product documented in ETA 15/0719	
Property	Parameter	Method
Density	1200 [kg/m ³]	
Thickness of strips	1,0-8,0 [mm] tolerance ± 10% nominal thickness	TR024 clause 3.1.2
Expansion ratio	18,0 – 38,0 for nominal thickness 1,5 [mm]	TR024 clause 3.1.11 (Method 1 at 550 [°C] for 30 min with a top load)
Expansion pressure	≥ 00,08 [N/mm ²] for nominal thickness 1,5 [mm]	TR024 clause 3.1.12 (Method 4 at 300 [°C])
Reaction to fire	Euro Class E	EN 13501-1

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

f-tronic BS112 - Cover



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Werkzeugnummer: M980006

Material: PPS Schwarz

Gewicht (gr): 15.02480

Oberfläche: Kunststoffteil

Benennung:

**Brandschutz
bs112**

Artikelnummer:

4350051

Status
Freigegeben

Format
A4

Blatt / von

1 / 1

f-tronic GmbH
Zum Gerlen 21-25
66131 Esenheim

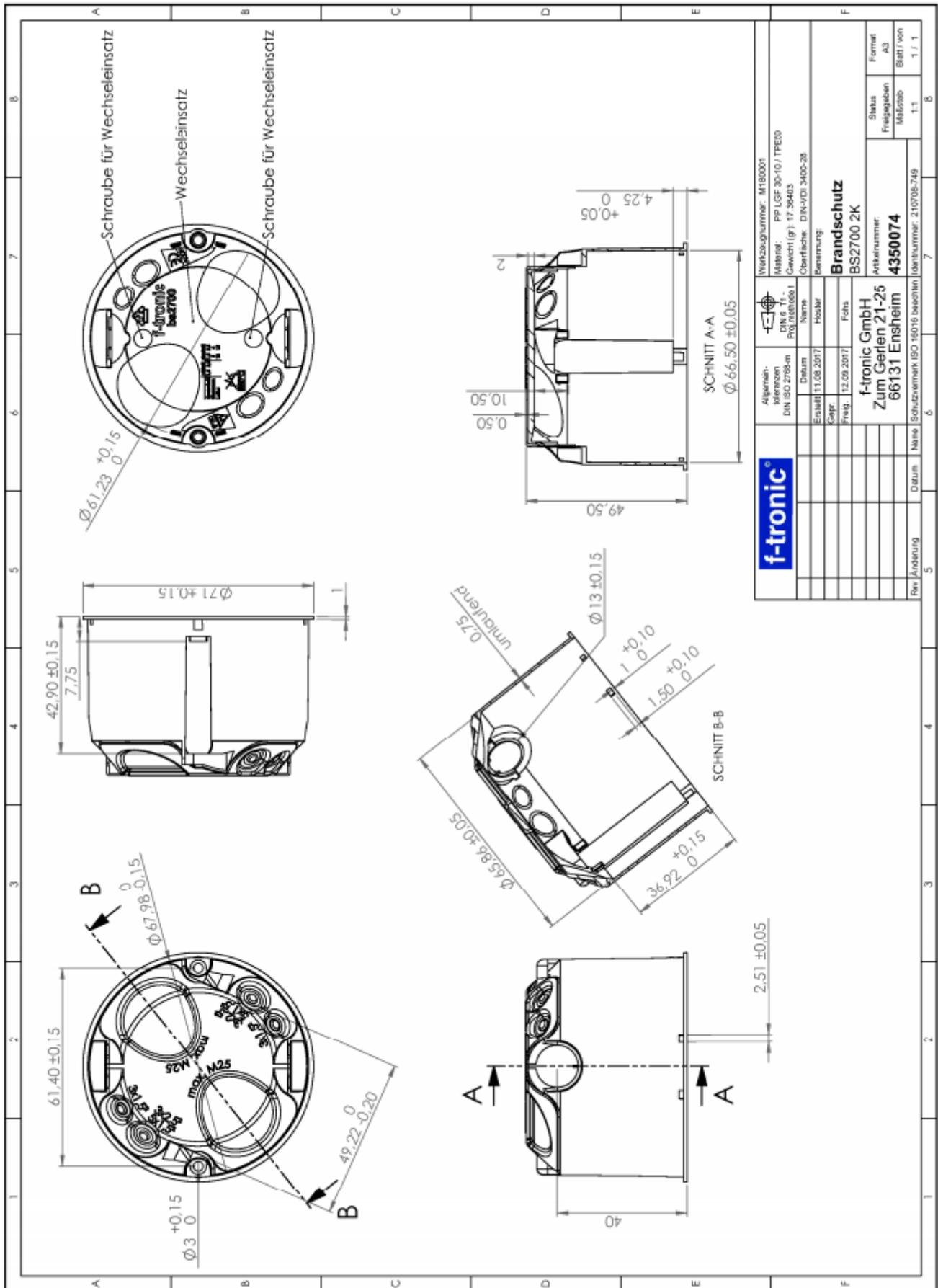
Material: PPS Typ: bs112

Identnummer: 201605-201

Anlage C

Rev	Änderung	Datum	Name	Schutzvermerk ISO 18016 beachten	Identnummer: 201605-201	Status Freigegeben	Format A4
1					3	1:1	1 / 1

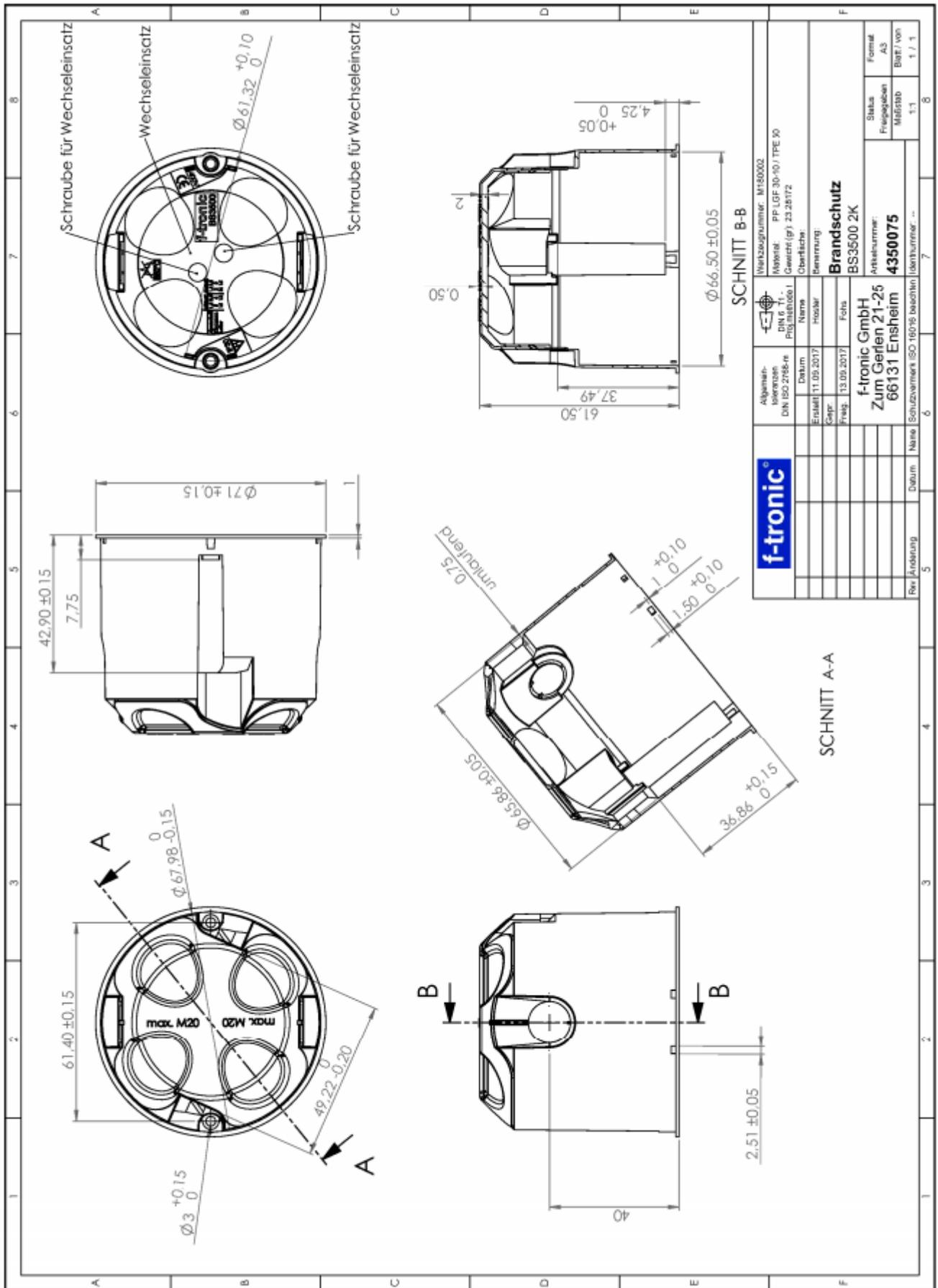
f-tronic BS2700 – wall socket



f-tronic		Allgemeine Normen DIN ISO 2708em Prog. Methode I	Werkzeugsnummer: M180001 Material: PP LGF 30-10 / TPE60 Gewicht (g): 17.36403 Oberfläche: DIN-VDI 3400-28 Benennung:	Status Freigegeben Maßstab 1:1	Blatt / von 1 / 1
		Datum Erstellt 11.08.2017 Gepr. 12.09.2017	Name Hoskar Folts	Brandenschutz BS2700 2K	Artikelnummer: 4350074
Datum Datum	Name Name	Schutzmarkt ISO 16016 beachten	Seriennummer: 210706-749		

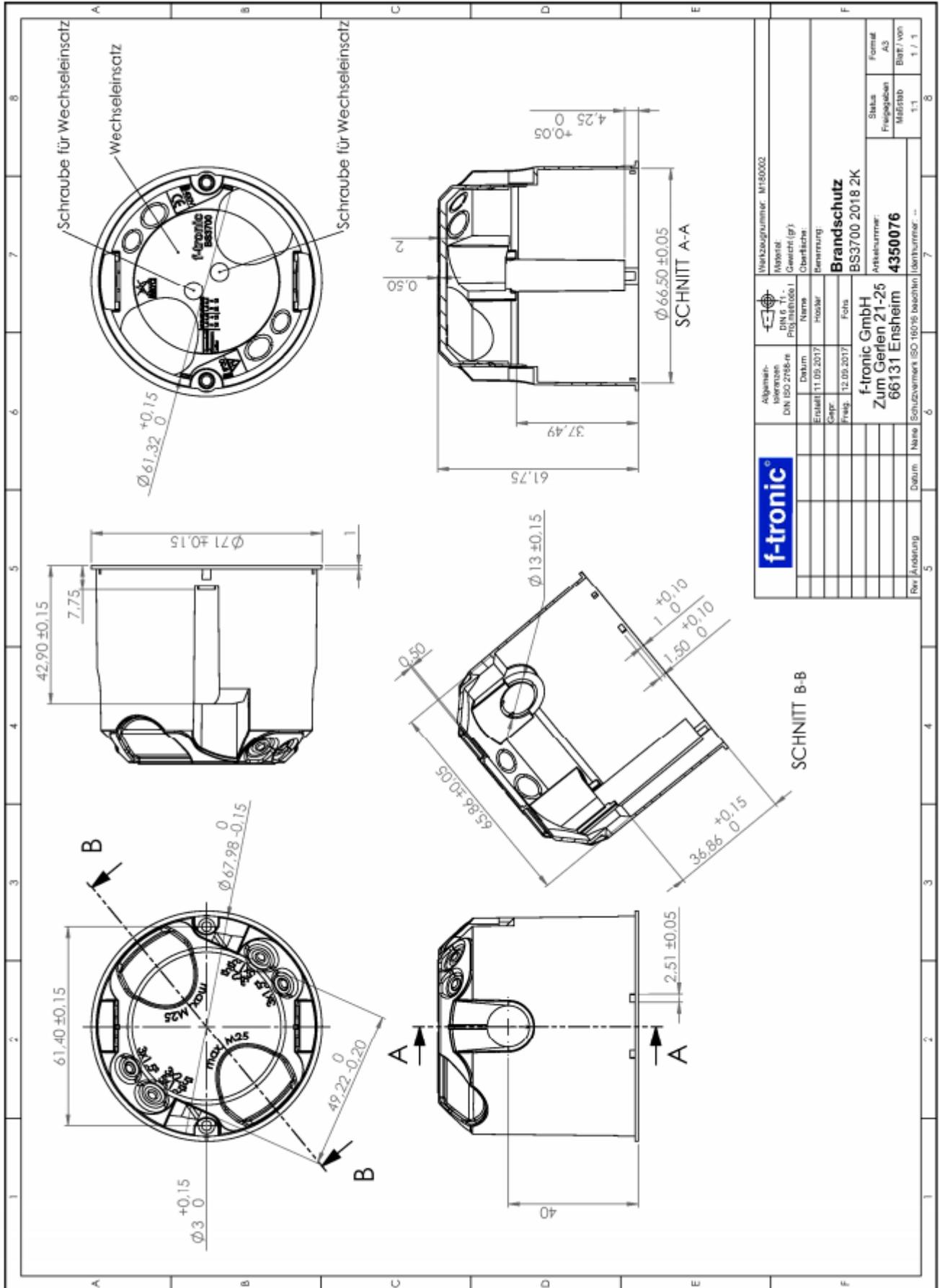
Alle Maße sind in mm angegeben. Die Maße sind für die Fertigung und Montage der Bauteile zu verwenden. Die Maße sind für die Fertigung und Montage der Bauteile zu verwenden. Die Maße sind für die Fertigung und Montage der Bauteile zu verwenden.

f-tronic BS3500 – wall socket



f-tronic		Algemein- toleranz DN ISO 2768-m	DIN 6 T1 - P03 201006.1	Werkzeugnummer: M150002	Material: PP LGF 30-10 / TPE 90
		Erstellt: 11.05.2017	Gezeichnet: (pf) 23.2872	Charakter: (pf) 23.2872	
		Freig. 13.05.2017	Name: Brandschutz		Benennung: BS3500 2K
		Datum: 13.05.2017		Firma: f-tronic GmbH	
		Capr: Zum Gerlen 21-25		Arbeitsnummer: 4350075	
		Name: 66131 Enstheim		Status: Freigegeben	
		Datum: ...		Mitarbeiter: A3	
		Name: Schutzvermerk ISO 15076 beachten		Blatt/von: 1 / 1	
		Rev. Änderung		Formel: 1 / 1	

f-tronic BS3700 – wall socket



f-tronic	Algemein- normen DIN ISO 2768-r	Material PRO 3300061	Werkzeugnummer: M150002
	Erstellt: 11.09.2017 Gepr.: 12.09.2017	Name Hosler	Charakter: Oberfläche
	Datum	Benennung	
	Formal	Arbeitsnummer	
		BS3700 2018 2K	
		f-tronic GmbH	
		Zum Gerlen 21-25	
		66131 Enshelm	
		4350076	
Rev. Änderung	Datum	Name	Status
			Freigegeben
			Mitglied
			1.1
			1 / 1

Type of walls

The f-tronic fire protection sockets and accessory components named "BS2000, BS2700, BS3500, BS3700 & BS112", by f-tronic GmbH may be used in:

Light partitioning flexible wall, standard supporting construction according to EN 1363-1, total thickness 100 mm or 125 mm

- Flexible walls with a metal stud substructure according to EN 14195 with a stud depth of 50 mm or 75 mm or with a timber battens with a batten depth of 50 mm or 75 mm.
- Wall construction with double-sided GKF cladding with a panel thickness of 12,5 mm according to EN 520.
- Mineral fibre insulation, according to EN 13162, 40 mm thick with fire behavior class A1 according to EN 13501-1, specific weight 40 kg/m³.
- Wall thickness 100 mm or 125 mm
- The walls shall be classified according to EN 13501-2 corresponding to the required fire resistance period.
- In timber walls, no part of the bulkhead can be closer than 100 mm to a timber member. The gap between the bulkhead and the batten shall be closed and at least 100 mm Class A1 or A2 insulation according to EN 13501-1 is placed in the gap between the bulkhead and the batten.

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

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

Classification EI 120 / E120

Type of installation	Description
Fire retardant barrier	<p><u>The f-tronic fire protection socket "BS2000" by f-tronic GmbH</u></p> <ul style="list-style-type: none"> • Has been tested with cables from cable group A1, A2 and A3 with a maximal diameter up to Ø14,4 mm. • Has been tested in light dividing wall with a thickness of 100 and 125 mm • Test set-up requested a build in situation in the partition wall with a diameter of 68 mm and a depth of 49,5 mm. • In some cavity wall boxes, the mineral fibre insulation material was removed 100 mm around the cavity wall box(es) in accordance with EN 1366,3 point 7.2.2.1.2 to provide evidence of installation in a non-insulated supporting construction. <p><u>The f-tronic fire protection socket "BS2700" with socket on fire side by f-tronic GmbH</u></p> <ul style="list-style-type: none"> • Has been tested with cables from cable group A1, A2 and A3 with a maximal diameter up to Ø14,4 mm. • Has been tested in light dividing wall with a thickness of 100 and 125 mm • Test set-up requested a build in situation in the partition wall with a diameter of 68 mm and a depth of 49,5 mm. • In some cavity wall boxes, the mineral fibre insulation material was removed 100 mm around the cavity wall box(es) in accordance with EN 1366,3 point 7.2.2.1.2 to provide evidence of installation in a non-insulated supporting construction. <p><u>The f-tronic fire protection sockets "BS3500" with fire socket on fire side, by f-tronic GmbH</u></p> <ul style="list-style-type: none"> • Has been tested with cables from cable group A1, A2 and A3 with a maximal diameter up to Ø14,4 mm. • Has been tested in light dividing wall with a thickness of 100 and 125 mm • Test set-up requested a build in situation in the partition wall with a diameter of 68 mm and a depth of 61,5 mm. • In some cavity wall boxes, the mineral fibre insulation material was removed 100 mm around the cavity wall box(es) in accordance with EN 1366,3 point 7.2.2.1.2 to provide evidence of installation in a non-insulated supporting construction. • Maximum two cable groups per fire protection socket <p><u>The f-tronic fire protection sockets "BS3700" with fire socket on fire side, by f-tronic GmbH</u></p> <ul style="list-style-type: none"> • Has been tested with cables from cable group A1, A2 and A3 with a maximal diameter up to Ø14,4 mm. • Has been tested in light dividing wall with a thickness of 100 and 125 mm • Test set-up requested a build in situation in the partition wall with a diameter of 68 mm and a depth of 61,5 mm. • In some cavity wall boxes, the mineral fibre insulation material was removed 100 mm around the cavity wall box(es) in accordance with EN 1366,3 point 7.2.2.1.2 to provide evidence of installation in a non-insulated supporting construction.

The classification is declared under the following conditions:

Field of application based on EN 1366-3 (Chapter 4.4 classification report No. 17-003777-PR06 dated 2018-05-14 from IFT Rosenheim)	<ul style="list-style-type: none"> • The test results can only be applied to the orientation in which the hollow wall boxes were tested, (corresponds to installation in a light partition wall with a minimum thickness of 100 mm or 125 mm). • The largest intended arrangement of cavity wall boxes must be tested to obtain the maximum area of application, which corresponds to a 5-fold vertically opposite arrangement. (6.3.6 according to EN 1366-3:2009). • All conventional cables of cable group A1, A2 and A3 are covered, but with a diameter of 14.4 mm max. • Empty piping is allowed.
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