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designated according to Article 29 of the Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment, www.eota.eu)

European Technical Assessment

ETA 18/0926
of 12/12/2018

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: **UL International (UK) Ltd**

Trade name of the construction product Knauf FPG plate - fire protection graphite plate

Product family to which the construction product belongs Fire Stopping and Sealing Product:
 • Penetration Seals

Manufacturer Knauf Sp. z o.o.
 ul. Światowa 25
 02-229 Warsaw
 Poland

Manufacturing plant(s) A/003

This European Technical Assessment contains 21 pages including 1 Annex which forms an integral part of this assessment.

This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of EAD 350454-00-1104, September 2017.

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I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

- 1) Knauf FPG plate - fire protection graphite plate is a preformed, self-adhesive intumescent sheet used to reinstate the fire resistance performance of wall constructions where they have been provided with apertures for the penetration of cables into socket boxes, on both sides or one side of the wall.
- 2) The Knauf FPG plate - fire protection graphite plate is supplied pre-cut to size with a peel off strip to one face to protect the adhesive layer. The Knauf FPG plate - fire protection graphite plate is installed by removing the peelable strip and placing the pad to the back face, within the socket box .
- 3) The applicant has submitted a written declaration that Knauf FPG plate - fire protection graphite plate does not contain substances which have to be classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No 1272/2008 and listed in the "Indicative list on dangerous substances" of the EGDS - taking into account the installation conditions of the construction product and the release scenarios resulting from there.

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.

2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 350454-00-1104

Detailed information and data is given in Annex A.

- 1) The intended use of Knauf FPG plate - fire protection graphite plate is to reinstate the fire resistance performance of flexible wall constructions where they are penetrated by cables in socket boxes.
- 2) The specific elements of construction that the system Knauf FPG plate - fire protection graphite plate may be used to provide a penetration seal in, are as follows:

- a. Flexible walls: The wall must have a minimum thickness of 75 mm and comprise steel studs lined on both faces with minimum 1 layer of 12.5 mm thick board.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

- 3) The System Knauf FPG plate - fire protection graphite plate may be used to provide a penetration seal with cables in socket boxes (for details see Annex A).
- 4) The system Knauf FPG plate - fire protection graphite plate may be used to seal apertures in the separating element up to 140 mm wide by 83 mm high (aperture containing socket box). The aperture around the socket box should be as tightly fitting as possible and gaps filled with plaster filler.
- 5) The provisions made in this European Technical Assessment are based on an assumed working life of the Knauf FPG plate - fire protection graphite plate of 50 years, provided that the conditions laid down in the product datasheet for the packaging/transport/ storage/installation/use/repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer,

but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

- 6) Type Z₂: Intended for uses in internal conditions with humidity lower than 85 % RH excluding temperatures below 0°C, without exposure to rain or UV.

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

Product-type: Intumescent sheet		Intended use: Penetration Seal
Assessment method	Essential characteristic	Product performance
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	No performance determined
EN 13501-2	Resistance to fire	Annex A
BWR 3 Hygiene, health and environment		
EN 1026	Air permeability	No performance determined
EAD 350454-00-1104, Annex C	Water permeability	No performance determined
Declaration of manufacturer & EN 16516	Content, emission and/or release of dangerous substances	Declaration of manufacturer
BWR 4 Safety in use		
EOTA TR 001:2003	Mechanical resistance and stability	No performance determined
EOTA TR 001:2003	Resistance to impact/movement	No performance determined
EOTA TR 001:2003	Adhesion	No performance determined
EAD 350454-00-1104, Clause 2.2.9	Durability	Z ₂
BWR 5 Protection against noise		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	No performance determined
BWR 6 Energy economy and heat retention		
EN 12664, EN 12667, EN 12939, EN ISO 8990, EN ISO 6946, EN ISO 14683, EN ISO 10211, EN ISO 10456	Thermal properties	No performance determined
EN ISO 12572, EN 12086, EN ISO 10456	Water vapour permeability	No performance determined

4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE

According to the decision 1999/454/EC – Commission Decision of date 22nd June 1999 on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards fire stopping, fire sealing and fire protective products, published in the Official Journal of the European Union (OJEU) L178/52 of 14/07/1999, see <http://eur-lex.europa.eu/JOIndex.do> of the European Commission¹, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table(s) applies (apply).

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Fire stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	Any	1

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

Tasks of the manufacturer:

Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this European technical Assessment.

The manufacturer may only use initial / raw / constituent materials stated in the technical documentation of this European Technical Assessment.

The factory production control shall be in accordance with the Control Plan of 17/06/2016 relating to the European technical assessment ETA 18/0926 issued on 12/12/2018 which is part of the technical documentation of this European technical approval. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at UL International (UK) Ltd.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

¹ Official Journal of the European Communities L178/52 of 14/7/1999

Other tasks of the manufacturer

Additional information

The manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:

(a) Technical data sheet:

- Field of application:
- Building elements for which the penetration seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.
- Limits in size, minimum thickness etc. of the penetration seal
- Construction of the penetration seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.
- Services which the penetration seal is suitable, type and properties of the services like material, diameter, thickness etc. in case of pipes including insulation materials; necessary/allowed supports/fixings (e.g. cable trays)

(b) Installation instruction:

- Steps to be followed
- Procedure in case of retrofitting
- Stipulations on maintenance, repair and replacement

6 Issued on:

12th December 2018

Report by:



D. Yates
Project Engineer
Building and Life Safety Technologies

Reviewed by:



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Staff Engineer
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For and on behalf of UL International (UK) Ltd.

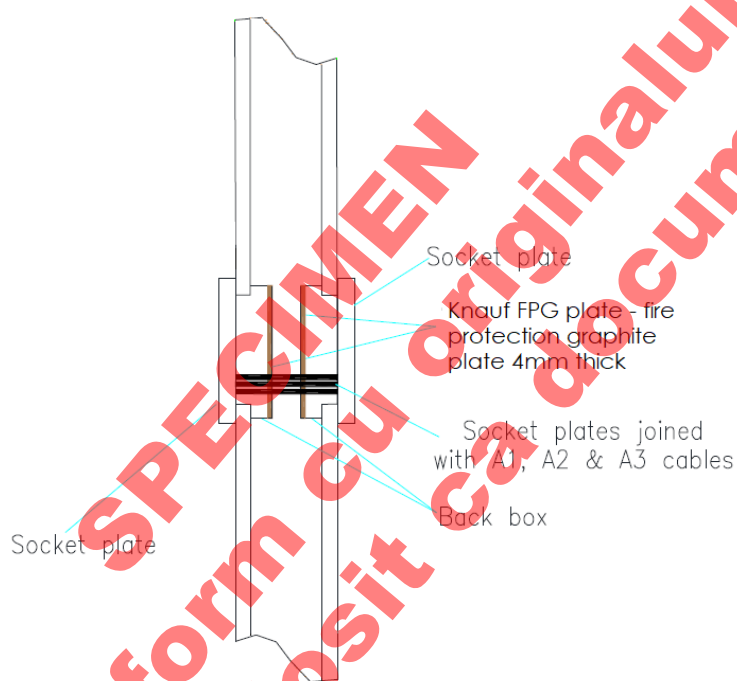
ANNEX A – Resistance to Fire Classification – Knauf FPG plate - fire protection graphite plate

A.1 Flexible wall constructions with wall thickness of minimum 75 mm

A.1.1 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket boxes back to back.

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



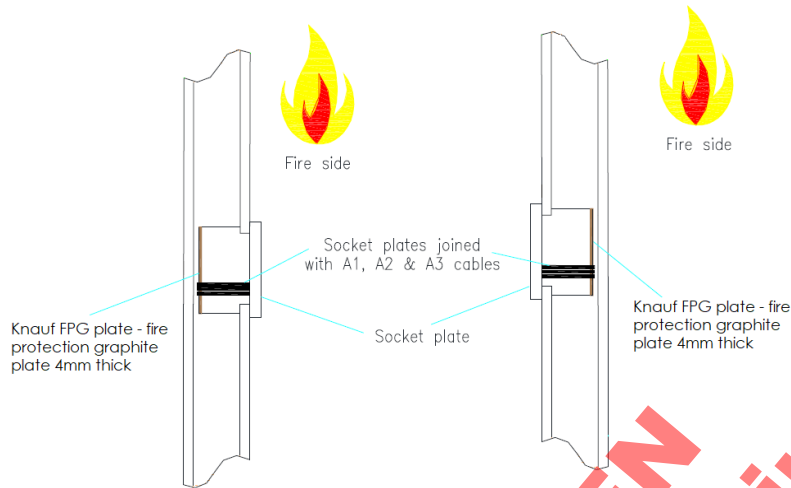
A.1.1.1 Double side penetration seal with cables in socket boxes

Services	Socket box	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	UK standard double socket box, 145mm wide x 85mm high x 35mm deep, each with up to 25mm hole cut to accept the cables	110mm wide x 60mm high x 4mm thick, fitted lining the back of the back box	Back to back – 1 fitted to each face	134 wide x 73 High	EI 30

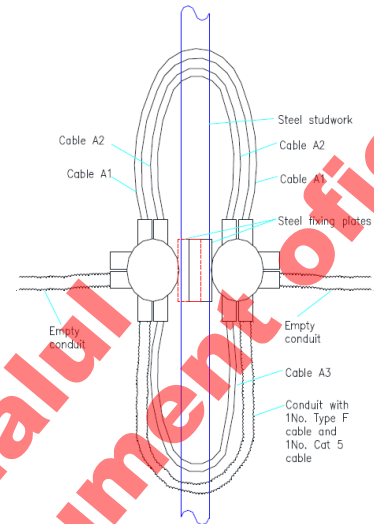
A.1.2 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket boxes side by side, with one fitted each face.

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



Construction details:



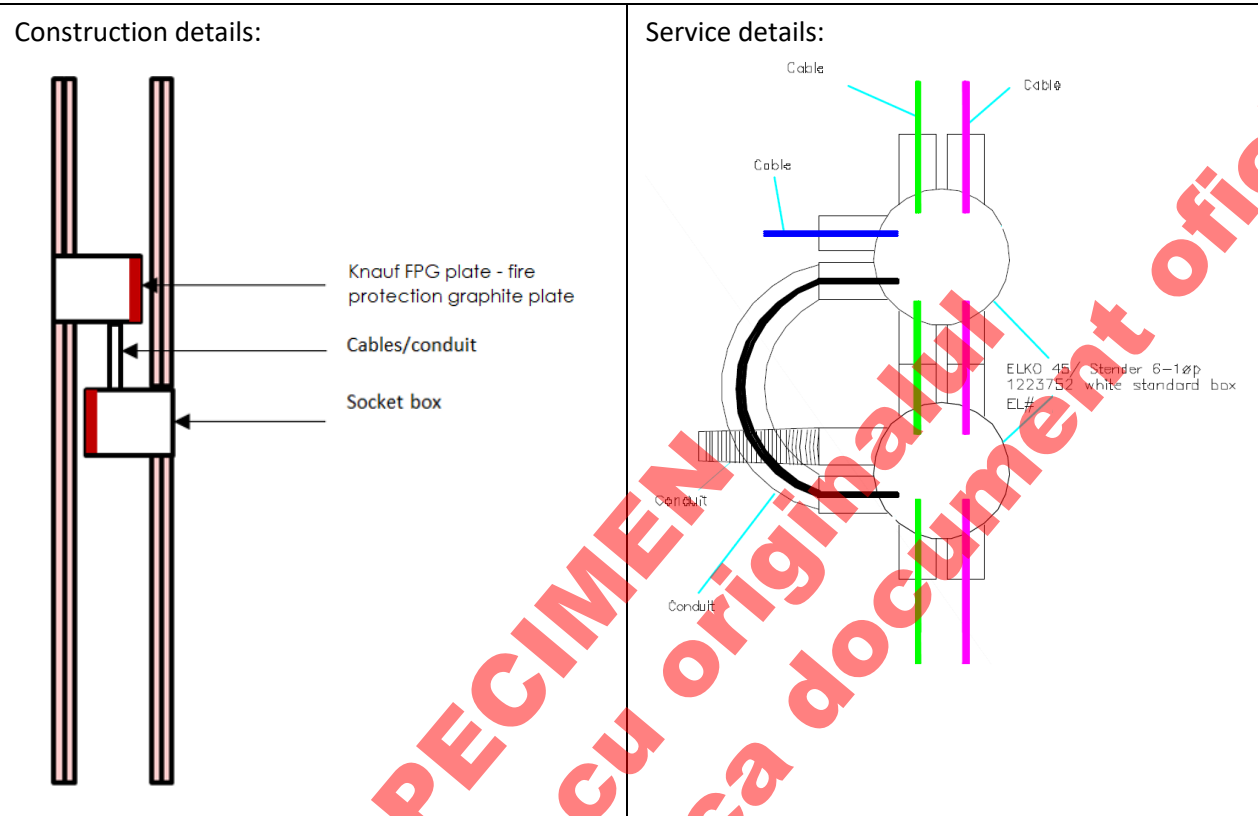
A.1.2.1 Double side penetration seal with cables in socket boxes

Services	Socket box	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter Plastic conduits with or without cables	Elko 3012 S57/100 1223789 red standard box	45mm wide x 45mm high x 4mm thick, fitted lining the back of the socket box	Adjacent each side of stud – 1 fitted to each face	74mm Ø	E 60, EI 45

A.2 Flexible wall constructions with wall thickness of minimum 100 mm

A.2.1 Cable penetration seal with 3.8 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.



A.2.1.1 Double side penetration seal with cables in socket boxes

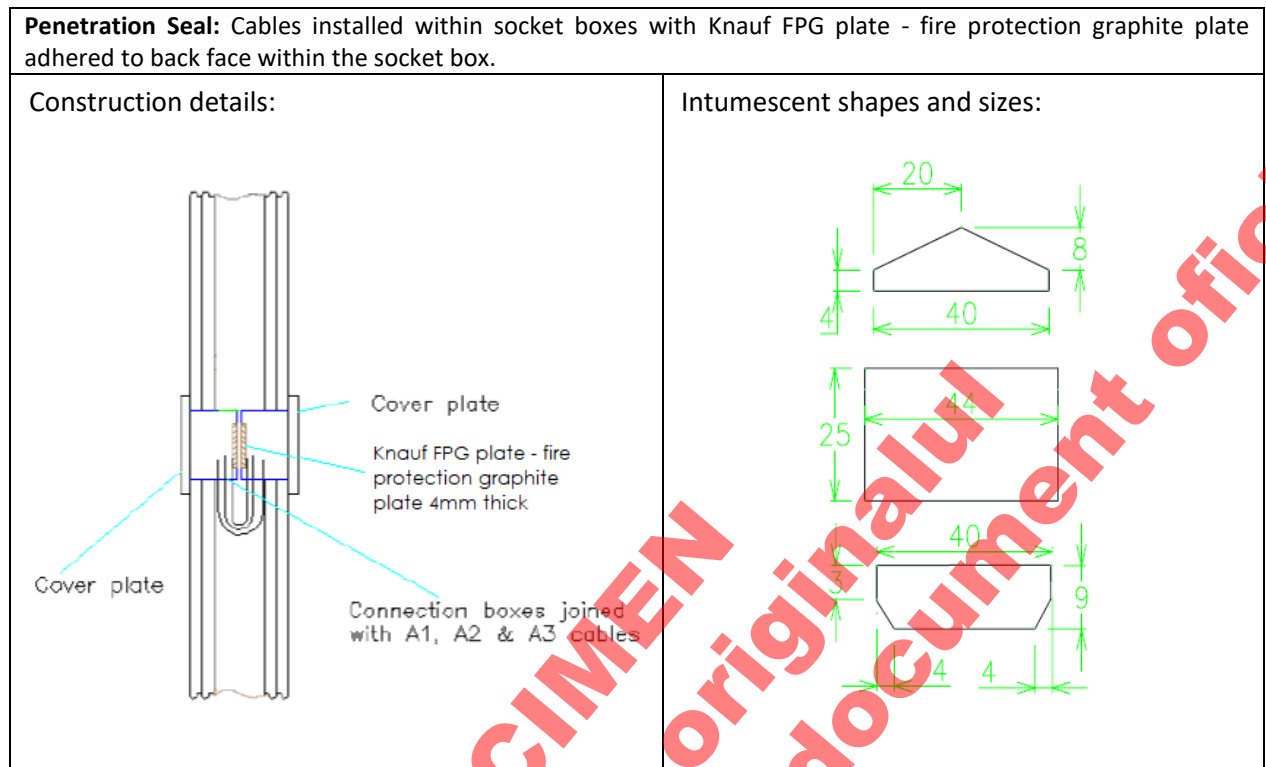
Services	Socket box*	Knauf FPG plate - fire protection graphite plate mm	Aperture mm	Classification
Cables up to 14 mm diameter	ELKO 45/ Stender 6-1øp 1223752 white standard box EL #	59 Ø x 3.8	73-74 Ø [^]	EI 60
Plastic conduit 22 mm diameter, with or without cables	Or ELKO 3012 S57/100 1223789 #	46 x 46 x 3.8		

*Fixed directly to studs or with steel plate between studs.

[^]Aperture shall be as tightly fitting as possible and infilled with building plaster.

A.3 Flexible wall constructions with wall thickness of minimum 100 mm

A.3.1 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket boxes back to back



A.3.1.1 Double side penetration seal with cables in socket boxes

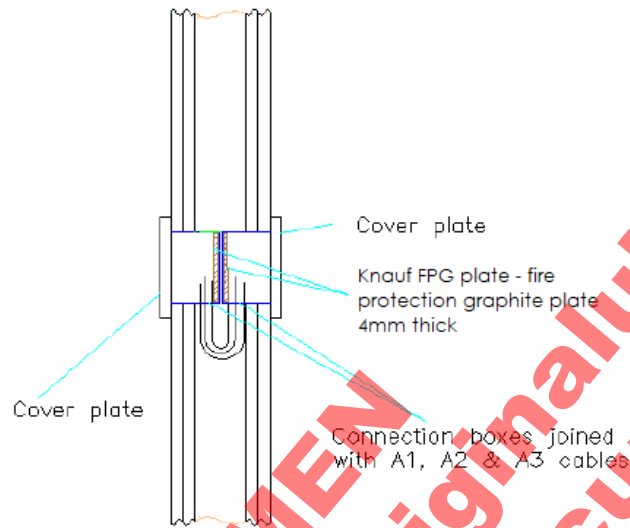
Services	Socket box [^]	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric Ref. IMT 36316 connection box, 100mm Ø cover plate with 70mm Ø x 48mm deep back box	3no. Knauf FPG plate - fire protection graphite plate, each fitted lining the back of the socket box	Back to back – 1 fitted to each face, fixed to the stud	70mm Ø	E 90, EI 60

[^]Fixed to studs with steel plate

A.3.2 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket boxes back to back

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



A.3.2.1 Double side penetration seal with cables in socket boxes

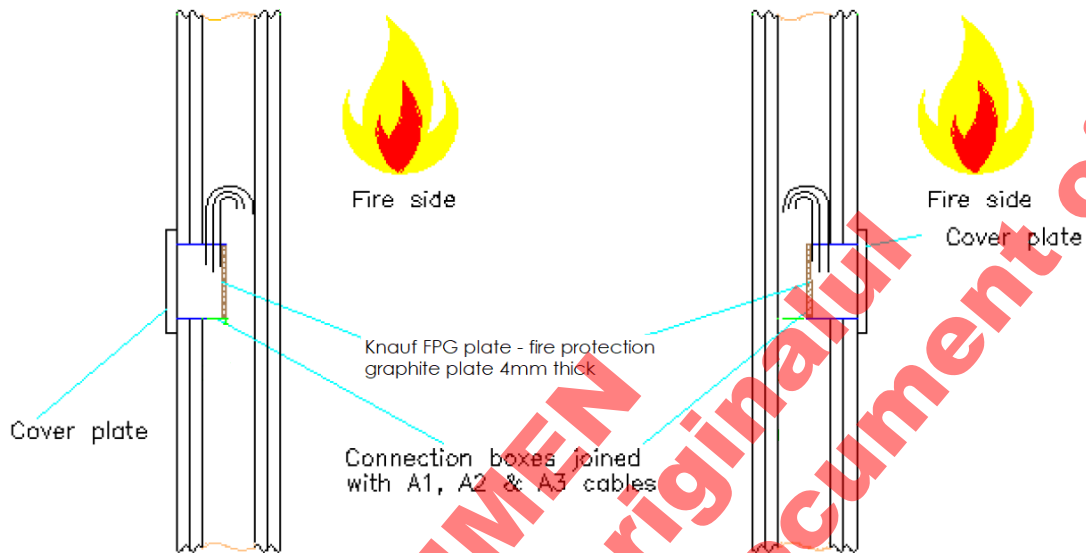
Services	Socket box [^]	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Rutab 8 connection/junction box, 100mm Ø cover plate with 80mm Ø x 47mm deep back box	57mm wide by 74mm high, fitted lining the back of the back box	Back to back – 1 fitted to each face	80mm Ø	EI 90
	Schneider Electric IMT 36190 connection box, 100mm Ø cover plate with 52mm Ø x 44mm deep back box	30mm wide by 30mm high, fitted lining the back of the back box		52mm Ø	EI 120
	Schneider Electric TED26 IMT 36263 connection box, with 83mm Ø x 47mm deep back box	66mm wide by 52mm high, fitted lining the back of the back box		83mm Ø	EI 90
	Schneider Electric TED A26 IMT 36256 connection box, with 72mm Ø x 37mm deep back box	46mm wide by 46mm high, fitted lining the back of the back box		72mm Ø	EI 90
	Elko 4038 1225422 connection box, with 50mm Ø x 40mm deep back box	30mm wide by 30mm high, fitted lining the back of the back box		50mm Ø	EI 90

[^]Fixed to studs with steel plate

A.3.3 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket boxes side by side of stud

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



A.3.3.1 Double side penetration seal with cables in socket boxes

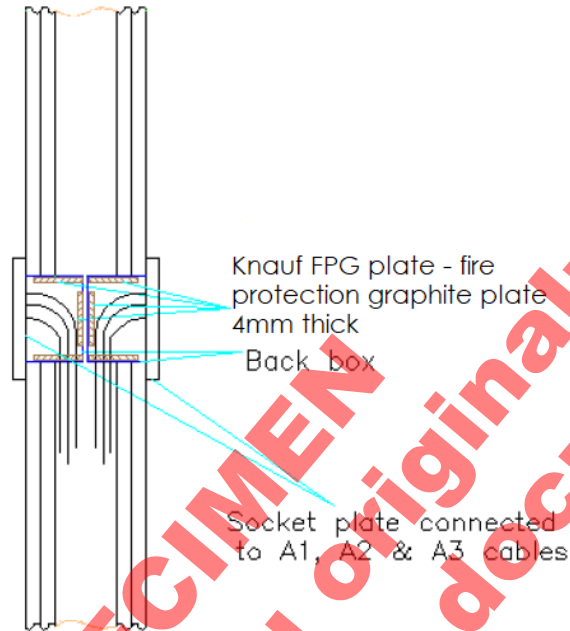
Services	Socket box [^]	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	ABB AU60.1 Ref. 2TKA001744G1/122008 connection box, 100mm Ø cover plate with 70mm Ø x 55mm deep back box	44mm wide x 44mm high x 4mm thick, fitted lining the back of the socket box	Adjacent each side of stud – 1 fitted to each face	70mm Ø	EI 60

[^]Fixed to studs with steel plate

A.3.4 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face and socket walls within the socket box.

Construction details:



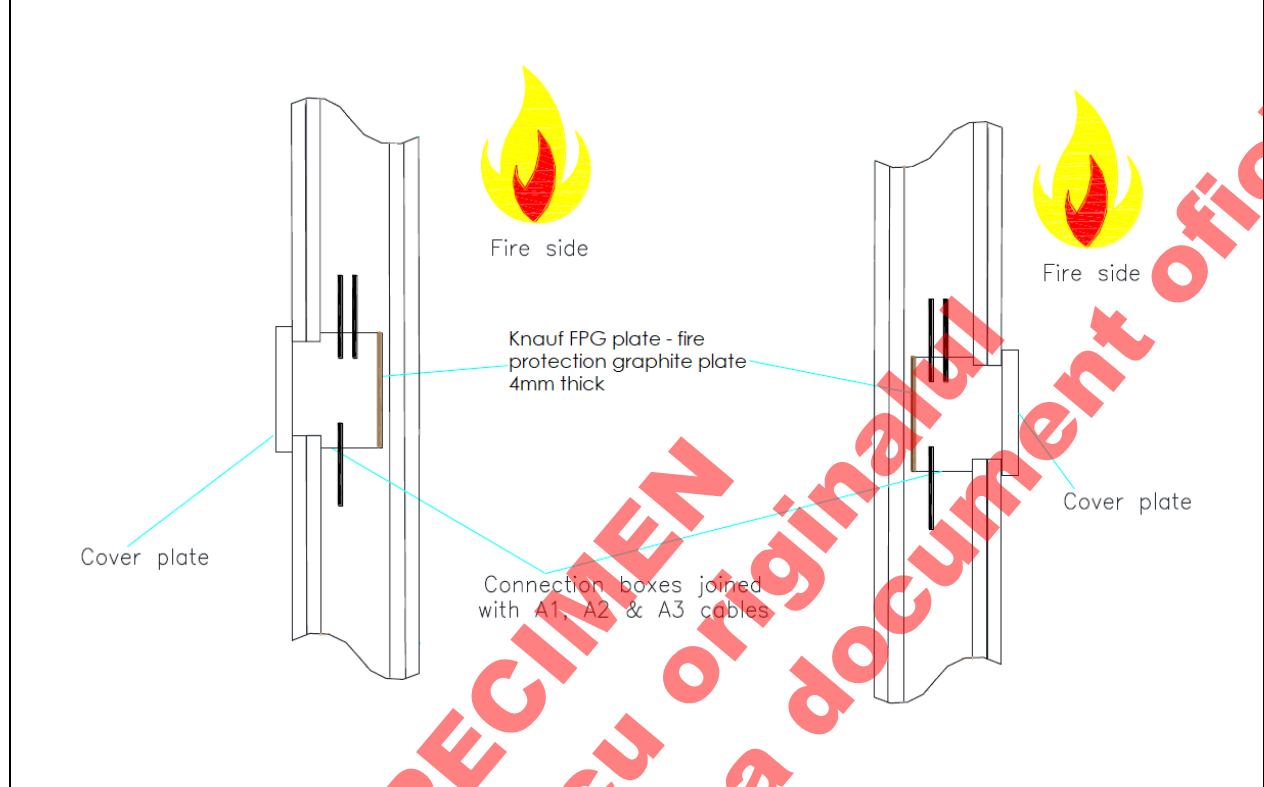
A.3.4.1 Double side penetration seal with cables in socket boxes

Services	Socket box	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Fuga Forfrådåse 1M socket ref: 504DA020	4no. 25 mm x 15 mm fitted on socket walls and 1no. 25 mm x 7 mm fitted lining the back of the socket	Back to back – 1 fitted to each face	52mm Ø	EI 120
	Fuga Air Forfrådåse 1M socket ref: 504D30100	4no. 25 mm x 15 mm fitted on socket walls and 1no. 20 mm x 20 mm fitted lining the back of the socket			EI 90

A.3.5 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



A.3.5.1 Double side penetration seal with cables in socket boxes

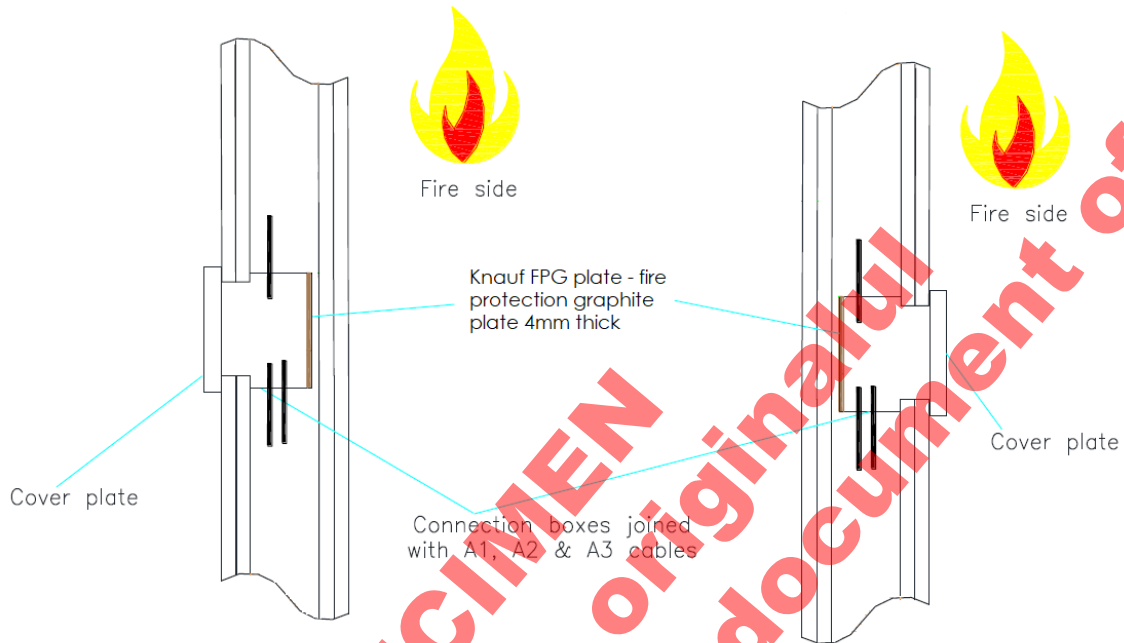
Services	Socket box [^]	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric IMT 36193 connection box, 70mm wide x 70mm high x 70mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	Adjacent each side of stud – 1 fitted to each face	70mm Ø	EI 45
	Schneider Electric IMT 36200 connection box, 70mm wide x 70mm high x 70mm deep				EI 60
	Schneider Electric IMT 36356 connection box, 70mm wide x 70mm high x 58mm deep				EI 60

[^]Fixed to studs with steel plate

A.3.6 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



A.3.6.1 Double side penetration seal with cables in socket boxes

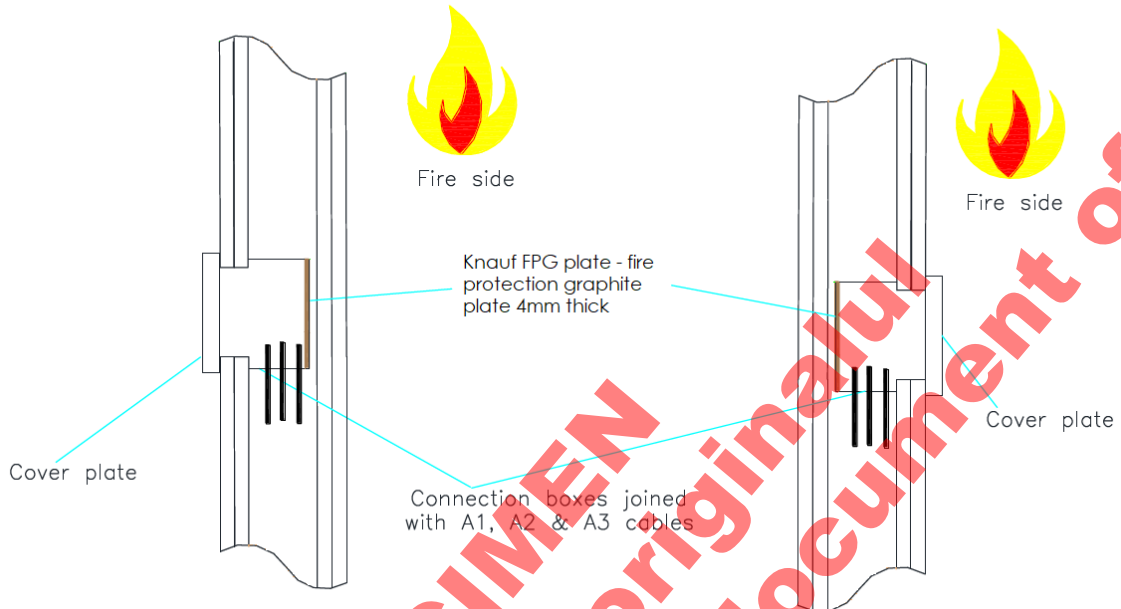
Services	Socket box [^]	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric IMT 36192 connection box, 70mm wide x 70mm high x 58mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	Adjacent each side of stud – 1 fitted to each face	70mm Ø	EI 60
	Schneider Electric IMT 36205 connection box, 70mm wide x 140mm high x 57mm deep	2no. 55mm wide x 45mm high, (1no. piece fitted either side of separator, lining the back of the inside of the socket box)		140mm x 70mm (with rounded edges)	EI 60
	Elko 3011 connection box, 70mm wide x 140mm high x 57mm deep				EI 60

[^]Fixed to studs with steel plate

A.3.7 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered within the socket box.

Construction details:



A.3.7.1 Double side penetration seal with cables in socket boxes

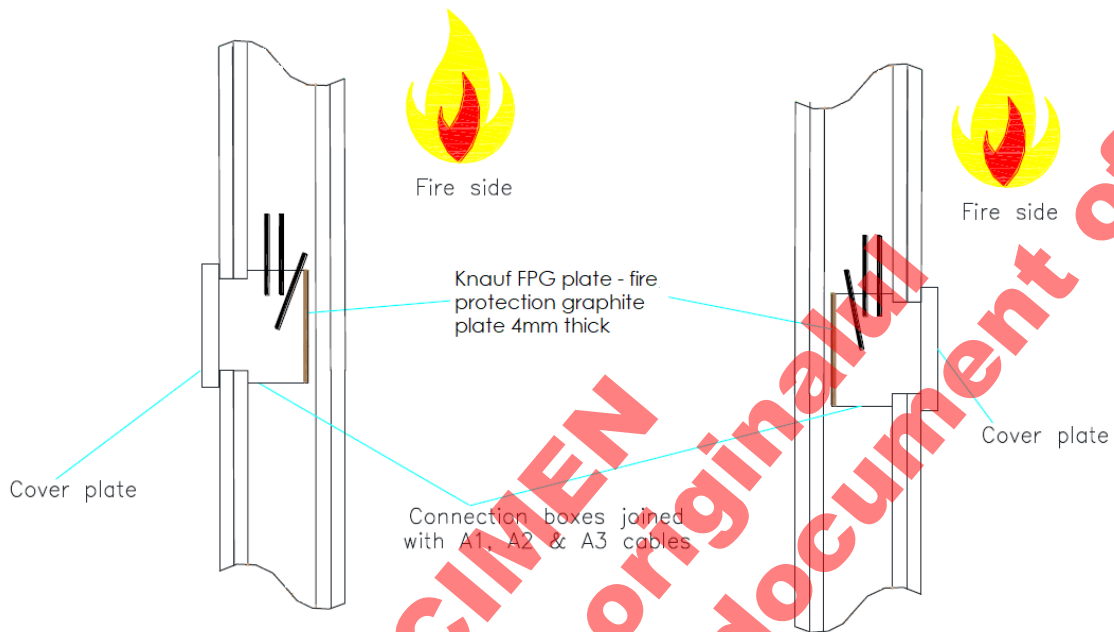
Services	Socket box	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric 55/94 2 IØp connection box, 70mm wide x 140mm high x 57mm deep [^]	2no. 55mm wide x 45mm high, (1no. piece fitted either side of separator, lining the back of the inside of the socket box)	Adjacent each side of stud – 1 fitted to each face	140mm x 70mm (with rounded edges)	EI 60
	Schneider Electric IMT 36030 connection box, 80mm wide x 144mm high x 55mm deep	8no. 20mm wide x 35mm high pieces, lining the back and sides of the inside of the socket box	Adjacent – one fitted on each face - surface mounted on plasterboard	140mm x 75mm (with rounded edges)	EI 30
	Elko 4545 connection box, 80mm wide x 144mm high x 55mm deep				EI 45

[^]Fixed to studs with steel plate

A.3.8 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



A.3.8.1 Double side penetration seal with cables in socket boxes

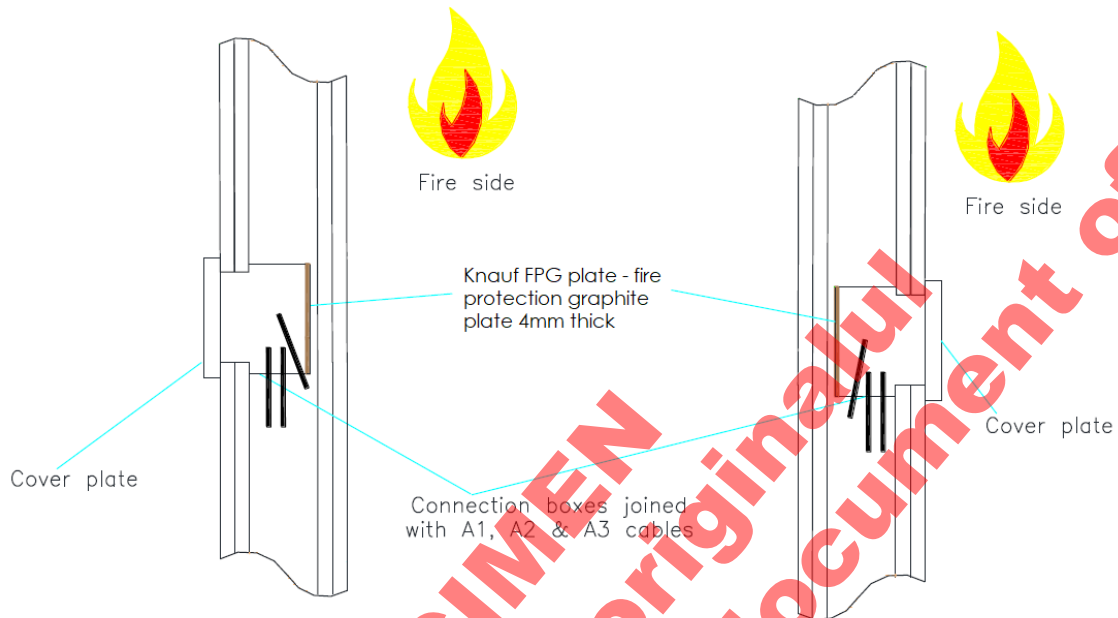
Services	Socket box [^]	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Elko 4040 connection box, 70mm wide x 70mm high x 70mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	Adjacent each side of stud – 1 fitted to each face	70mm Ø	EI 60

[^]Fixed to studs with steel plate

A.3.9 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



A.3.9.1 Double side penetration seal with cables in socket boxes

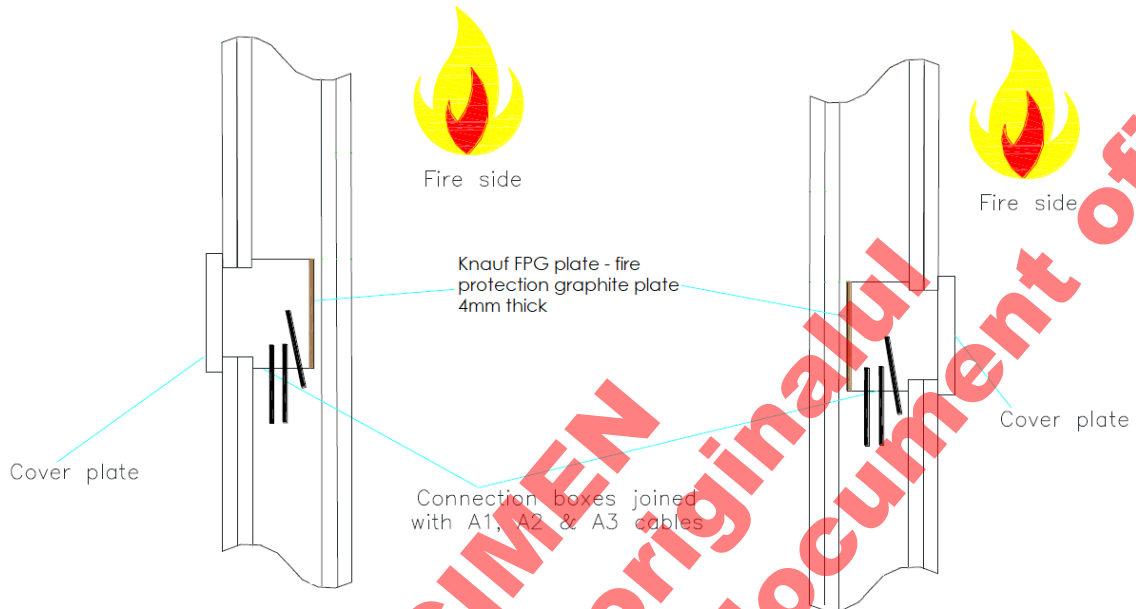
Services	Socket box [^]	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric IMT 36029 connection box, 70mm wide x 90mm high x 57mm deep	44mm wide x 60mm high, fitted lining the back of the inside of the socket box	Adjacent each side of stud – 1 fitted to each face	91mm x 71mm (with rounded edges)	EI 60
Cables up to 14mm diameter	Schneider Electric IMT 36006 connection box, 70mm wide x 70mm high x 70mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	Adjacent each side of stud – 1 fitted to each face	70mm Ø	EI 60

[^]Fixed to studs with steel plate

A.3.10 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



A.3.10.1 Double side penetration seal with cables in socket boxes

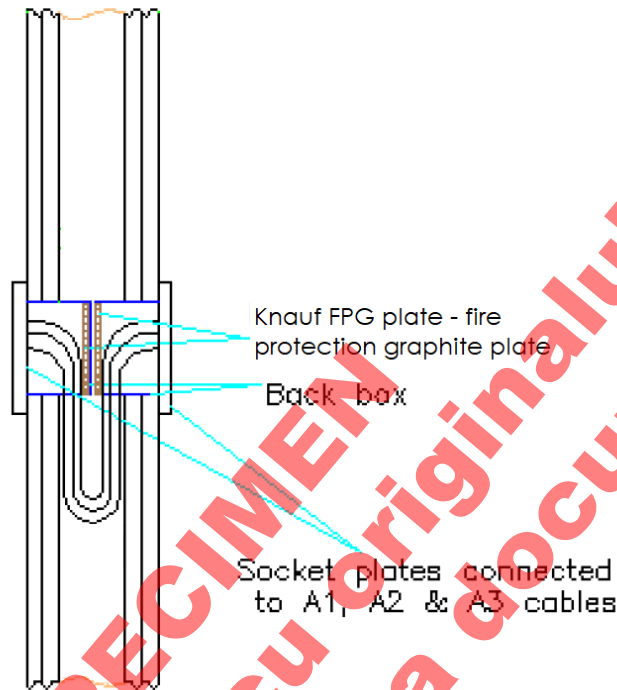
Services	Socket box [^]	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric IMT 36016 connection box, 70mm wide x 70mm high x 58mm deep	45mm wide x 45mm high, fitted lining the back of the inside of the socket box	Adjacent each side of stud – 1 fitted to each face	70mm Ø	EI 60
Cables up to 14mm diameter	Elko 4045 connection box, 70mm wide x 90mm high x 57mm deep	45mm wide x 60mm high, fitted lining the back of the inside of the socket box	Adjacent each side of stud – 1 fitted to each face	91mm x 71mm (with rounded edges)	EI 60

[^]Fixed to studs with steel plate

A.3.11 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face within the socket box.

Construction details:



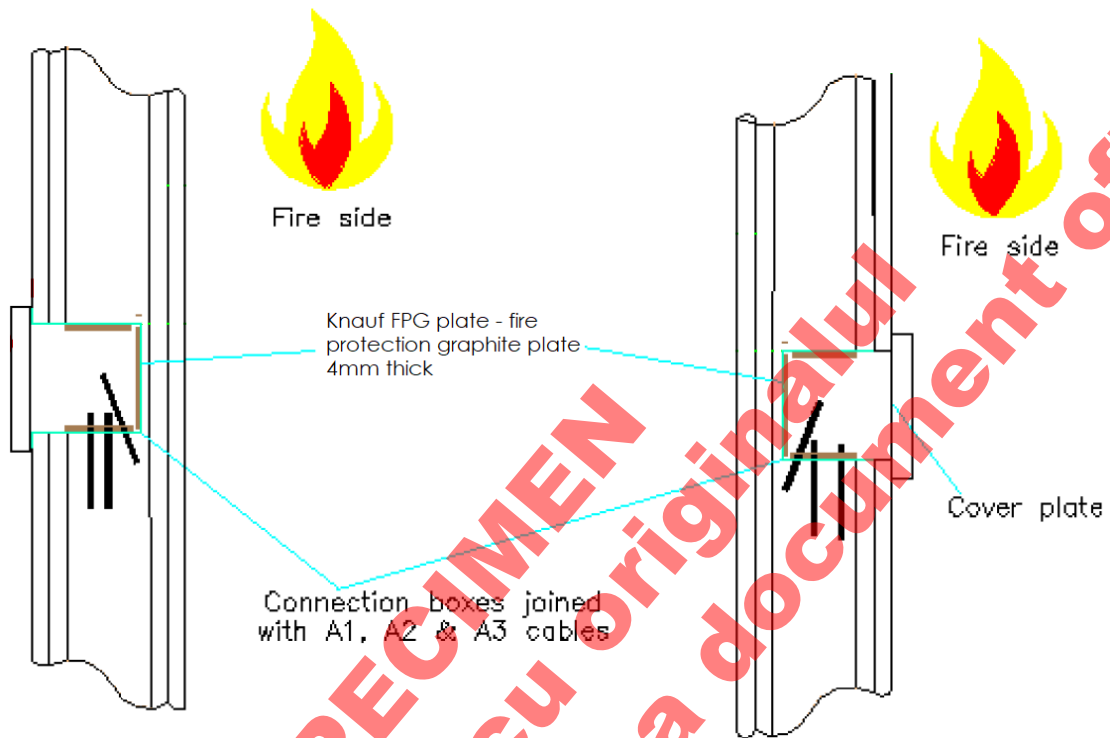
A.3.11.1 Double side penetration seal with cables in socket boxes

Services	Socket box	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Rutab 3 connections junction box "Article No. 1426102"	65mm Ø with 10mm trimmed off 2no. parallel edges	Back to back – 1 fitted to each face	75mm Ø	E 120, EI 90

A.3.12 Cable penetration seal with 4.0 mm thick Knauf FPG plate - fire protection graphite plate in socket box

Penetration Seal: Cables installed within socket boxes with Knauf FPG plate - fire protection graphite plate adhered to back face and socket walls within the socket box.

Construction details:



A.3.12.1 Double side penetration seal with cables in socket boxes

Services	Socket box	Knauf FPG plate - fire protection graphite plate	Position	Aperture mm	Classification
Cables up to 14mm diameter	Schneider Electric 60/46 connection box, no. 1223281, 70mm wide x 70mm high x 65mm deep	5 no. 20mm wide x 50mm high pieces, lining the back and sides of the inside of the socket box	1 fitted to each face (side by side), mounted in the plasterboard - 0mm between each socket	71mm x 71mm	E 90, EI 45