

Expert opinion

No. 20181663

1st official copy

Customer: Günther Spelsberg GmbH + Co. KG
Im Gewerbepark 1
58579 Schalksmühle

Product designation: Type "WKE 405 LSA" fire protection junction box
by Günther Spelsberg GmbH + Co. KG

Remit: Expert opinion on the fire protection characteristics of the junction
boxes "WKE 405 LSA" in respect of guarantee of the functional
integrity of cable systems in the event of fire

Validity: 2023-12-18

This expert opinion comprises 3 pages of text and 1 appendix.

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1 General

Günther Spelsberg GmbH + Co. KG instructed MPA Dresden GmbH to issue an expert opinion to evaluate the fire protection characteristics of the type WKE 405 LSA junction box in cable systems which guarantee functional integrity for a period of over 30 minutes in the event of fire.

2 Basis for the expert opinion

- [1] Product information "Junction box WKE 405 LSA" by Günther Spelsberg GmbH + Co. KG;
- [2] Test report no. 20180714 by MPA Dresden GmbH dated 2018-09-12;

3 Description of the type WKE 405 LSA junction boxes

The type WKE 405 LSA junction boxes are deployed in cable systems in which multi-core functional integrity cables (max. core diameter of 0.8 mm, JE-H(St)H4x2x0.8) are connected together.

The Duroplast junction box has the following dimensions: length 200 mm x width 200 mm and height 110 mm.

The type WKE 405 LSA junction boxes consist fundamentally of a housing with cover, the ceramic terminal strip, cable entries, retaining /fastening plates and a seal located between housing and cover.

The construction of the WKE 405 LSA junction boxes and the positions of the above listed components are shown in Appendix 1. Further descriptions and details are set out in the MPA Dresden GmbH test report 20180714 dated 2018-09-12 [2].

The junction boxes are mounted on solid walls using building authority approved fasteners.

The incoming /outgoing functional integrity cables (Dätwyler, JE-H(St)H4x2x0.8) are to be fastened to the wall with cable clamps at a distance of max. 100 mm from the junction box.

4 Evaluation

With the fire test [2] on the junction boxes of the type series WKE 405 LSA, which comply with the description in section 3 and Appendix 1, it was verified that the functional integrity of individual, horizontally laid multi-core functional integrity cables which constitute a part of a cable system with functional integrity (minimum duration of functional integrity 30 minutes) also in special operating conditions in accordance with DIN EN 61439-1:2012-06¹, Section 7.2 (in this case firing of the cable system as per the time-temperature curve in accordance with DIN EN 1363-1) over a period of up to 30 minutes was confidently given.

5 Summarised evaluation

If junction boxes of the type series WKE 405 LSA which are constructed as described in section 3 are deployed in electrical cable systems with a verified functional integrity of at least 30 minutes in the event of fire then it can be assumed with a high level of probability that in the event of fire the functional integrity of the cable systems is also further given over a period of at least 30 minutes (special operating conditions in accordance with DIN EN 61439-1:2012-06², Section 7.2).

¹ DIN EN 61439-1:2012-06

Low-voltage switchgear and control gear assemblies - Part 1: General rules (IEC 61439-1:2011);
German edition EN 61439-1:2011

² DIN EN 61439-1:2012-06

Low-voltage switchgear and control gear assemblies - Part 1: General rules (IEC 61439-1:2011);
German edition EN 61439-1:2011



6 Special notes

The expert opinion no. 20181663 dated 2018-12-19 does not constitute a general building authority verification of usability in the sense of the State Building Code.

The expert opinion no. 20181663 dated 2018-12-19 is valid solely for the building products and installation situation as described in section 3.

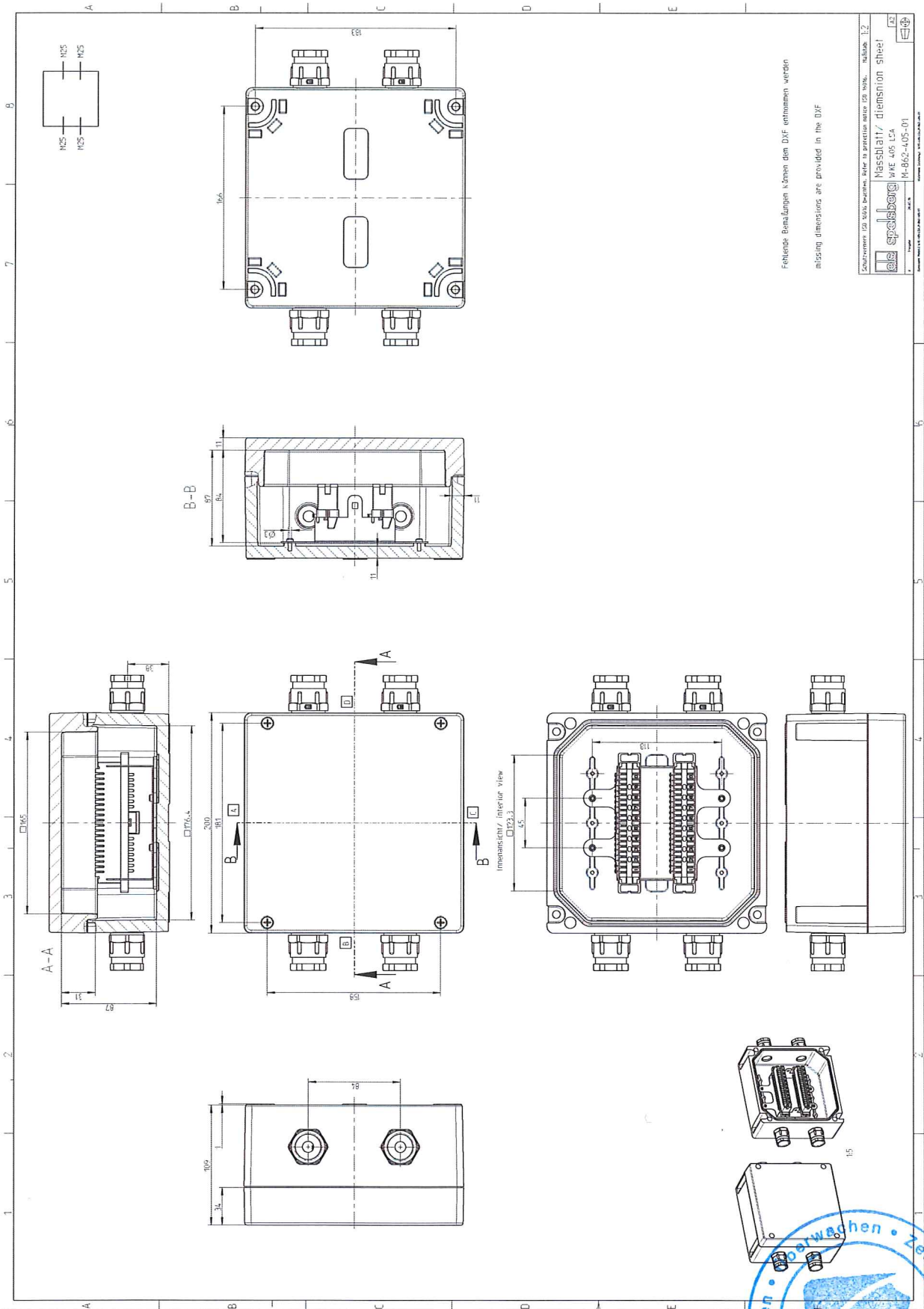
The validity of the expert opinion no. 20181663 expires on the **2023-12-18** and can thereafter be extended upon application.

Freiberg, 2018-12-19


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Fehlende Bemessungen können dem DZF entnommen werden
 missing dimensions are provided in the DZF

Zeichnung: 02_305_Bohrloch_Nachtr. in protection罩 für WKE 405 LSA - Maßstab 1:2
 MPA Dresden GmbH
 WKE 405 LSA
 M-B62-405-01
 1:2

Fig. 1: WKE 405 LSA

