

## Translation

## Test Report

Document number: (2400/463/17-1) – Wsp dated 26/06/2017

Customer: Schneider Electric Industries SAS  
35 rue Joseph Monier  
92500 Rueil-Malmaison, France

Order date: 03/02/2017

Order ref.: Mr Barocci / Mr Becker / Mr Hawinkels

Order received: 03/02/2017

Subject of the order: Testing of busbar trunking systems of type “KR...” with copper conductor rails (system “KRC...”) or aluminium conductor rails (system “KRA...”) and a cladding of “PROMATECT-200” fire protection boards (t = 20 mm) when exposed to fire from outside along the standard temperature-time curve (STTC) in accordance with DIN 4102-02:1977-09 for the functional integrity assessment in accordance with DIN 4102-12:1998-11

Test basis: DIN 4102-12:1998-11

Samples received: Week 03, 2017

Sampling: The testing laboratory does not have any information indicating official sampling

Test material marking: Yes

Test date: 09/02/2017

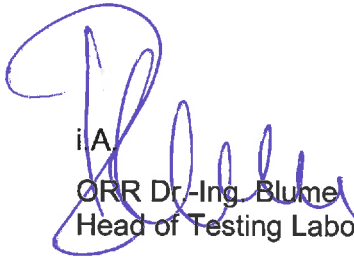
This test report consists of 10 pages, including the cover sheet, and 33 annexes.




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Test report no. (2400/463/17-1)-Wsp, dated 26/06/2017, serves as the basis for applying for a general building authority test certificate.

This document is the translated version of test report no. 2400/463/17-1 – Wsp dated 26/06/2017. The legally binding text is the aforementioned German test report.

  
i.A.  
ORR Dr.-Ing. Blume  
Head of Testing Laboratory



  
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Dipl.-Ing. Wierspecker  
Engineer/Official in Charge

Braunschweig, 26/06/2017

For a list of annexes, see next page

and six furnace elements (T7 to T12) were positioned at a distance of 10 cm below the upper level of the test specimens.

The furnace pressure was set such that there was a static positive pressure in the furnace from the 5<sup>th</sup> minute of at least  $10 \pm 2$  Pa at a distance of  $s \cong 100$  mm from the lower position of the ducts during the fire test.

## 5 Test results and observations

The temperatures inside the furnace and the observations made during the fire test are provided in the fire test records.

## 6 Summary of test results and conclusions

### 6.1 Summary of test results

The order required testing of eight busbar trunking systems on 09/02/2017 of type “KR...” with copper conductor rails (system “KRC...”) or aluminium conductor rails (system “KRA...”) and a four-sided cladding of “PROMATECT-200” fire protection boards as horizontal “ducts” when exposed to fire from outside along the standard temperature-time curve (STTC) in accordance with DIN 4102-02:1977-09 for the functional integrity assessment in accordance with DIN 4102-12:1998-11.

A functional loss of the busbar trunking systems was determined on the basis of the tripping of the 3A fuses.

On the tested busbar trunking systems of type “KR...” with copper conductor rails (system “KRC...”) or aluminium conductor rails (system “KRA...”) (see Table 1) no short circuit event occurred from the beginning of the fire exposure to the end of the fire test after 122 minutes on the systems of items K1 to K3 and K5 to K7, and the current passage was still present after 122 minutes. At item K4, the current flow was no longer present after 98 minutes, and at item K8, a short circuit occurred after 118 minutes.

### 6.2 Conclusions

For the development of a general building authority test certificate and on the basis of the achieved test results, it can be recommended to classify the four-sided ducts with busbar trunking systems of type “KRC...” or “KRA...” with copper or aluminium conductor rails listed in Table 1 as functional integrity class “E 30”, “E 60” or “E 90” in accordance with DIN 4102-12:1998-11. The conductor rails can either be positioned horizontally or vertically.