

# Test Report

## No. 20150907/01

1. issue

**Client:** AP Sensing GmbH  
Herrenberger Str. 130  
D-71034 Böblingen

**Manufacturer:** AP Sensing GmbH  
Herrenberger Str. 130  
D-71034 Böblingen

**Order of:** 11 May 2015

**Incoming Date :** 11 May 2015

**Content of Order:** Tests on electric and optical fibre cables under fire conditions - Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame according to IEC 60332-1-2: 2004

**Test material:** AP Sensing S2002A/Steel  
colour: black, diameter: 3.8 mm

**Sampling:** MPA Dresden GmbH was not involved in any selection or sampling procedure.



This test report contains 3 pages.

In case of doubt the German version of test report no. 20150907/01 is valid. 09<sup>th</sup> July 2015

Publications of test report also in the form of extracts and references to tests for advertising need in every case the written agreement of the test institute. Every page of these test report is stamped with the official seal of the test institute.

## 1 Kind of Test

Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame according to IEC 60332-1-2:2004.

## 2 Description of Test Sample

The cable: AP Sensing S2002A/Steel, colour: black, diameter: 3.8 mm, cable imprint: AP Sensing S2002A/Steel BRUGG 671942 EN 54-22 group III VdS/UL listed, was delivered by the client to the MPA Dresden GmbH.

## 3 Test procedure

One test sample of the cable with a length of 600 mm was produced by employees of the test institute. The test sample was straightened and conditioned at a relative humidity of  $(50 \pm 20)\%$  at  $(23 \pm 5)^\circ\text{C}$  for not less than 16 h.

The test sample was attached in the test chamber according to IEC 60332-1-1:2004 and burned with a flame. The test sample was located in accordance with IEC 60332-1-2:2004. The applying of the flame corresponded to aforementioned standard. The temperature inside the test chamber was  $25^\circ\text{C}$  at the beginning of the test. The test rig stands in a testing hall so that external wind speed can be neglected. All other requirements of the above mentioned test standard was fulfilled. The test flame was applied for 60 seconds. The test was carried out at 03<sup>rd</sup> July 2015.

## 4 Evaluation

After the flame application time the burner was turned off. The burning has ceased after a time of 56 seconds after the completion of the test flame period. Afterwards the test sample was taken from the test rig. There were damages at the test sample.

The extent from the lower edge of the top support to the onset of the damage has reached a distance of 398 mm. The recommended minimum of 50 mm as described in Annex A of IEC 60332-1-2:2004 was surpassed.

The maximum damage downwards measured from the lower edge of the top support was 490 mm. The recommended limit of 540 mm according Annex A of IEC 60332-1-2:2004 was not exceeded.

## 5 Test Results

The cable: AP Sensing S2002A, colour: black, diameter: 3.8 mm, has passed the test according to IEC 60332-1-2:2004.

## 6 Special Comments

This test report is only valid for the described cable (see clause 2). A sample was taken.

Freiberg, 09<sup>th</sup> July 2015

  
Dr.-Ing. Meißner  
Qualified Engineer  
Laboratory manager



  
Kuckenburg  
examiner, fire protection

Appendix: pictures of test





fig 1.: test rig IEC 60332-1-2



fig 2.: test rig probe in detail

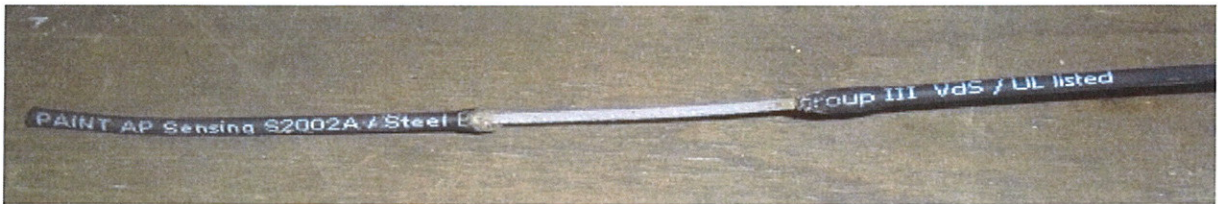


fig 3.: probe after test front view



fig 4.: probe after test rear view

