

Automation, Software and Information Technology

**Test report on the inspection of the
safety-related automation devices
HIMA H41q: H41q-MS, H41q-HS, H41q-HRS
HIMA H51q: H51q-MS, H51q-HS, H51q-HRS
of the manufacturer HIMA Paul Hildebrandt GmbH + Co. KG**

**Report-No.: 968/EZ 129.15/08
Date: 2008-10-31**

This report is the English translation of the original German report

**Test report on the inspection
of the safety-related automation devices
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**Number of pages
(excluding appendices):** 5

Object(s) subject to testing: HIMA H41q: H41q-MS, H41q-HS, H41q-HRS
HIMA H51q: H51q-MS, H51q-HS, H51q-HRS

Customer/Manufacturer: HIMA Paul Hildebrandt GmbH + Co. KG
Albert-Bassermann-Straße 28
68782 Brühl
Germany

Order No./Date: Framework agreement between HIMA and TÜV
dated 2004-09-02

Test Institute: TÜV Rheinland Industrie Service GmbH
Automation, Software and Information Technology
Am Grauen Stein
51105 Köln
Germany

TÜV Offer No./Date: Proposal for the framework agreement between HIMA
and TÜV dated 2002-10

TÜV Order No./Date: 10015410 dated 2008-07-01

Inspectors: Dipl.-Ing. (FH) Oliver Busa

Test location: See Test Institute

Test duration: October 2008

The test results are exclusively related to the test samples.

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1 Scope

The purpose of this supplementary testing is to determine if the safety-related automation devices H41q/H51q in their various versions also meet the requirements of the new editions of EN 230:2005, NFPA 85 and NFPA 86:2007.

2 Standards forming the basis for the requirements

2.1 Standards

Application standards

- [1] EN 230:2005
Automatic Burner Control Systems for Oil Burners
- [2] EN 298:2003
Automatic Gas Burner Control Systems for Gas Burners and Gas Burning Appliances
- [3] NFPA 85:2007
Boiler and Combustion Systems Hazards Code
- [4] NFPA 86:2007
Standard for Ovens and Furnaces

Previous reports

- [R1] Test Report-No.:968/EZ 129.00/02 dated 2002-05-24, TÜV Rheinland
- [R2] Test Report-No.: 968/EZ 129.01/03 dated 2003-09-10, TÜV Rheinland
- [R3] Test Report-No.: 968/EZ 129.06/05 dated 2005-08-02, TÜV Rheinland Group

TÜV Documentation

- [P1] Review Protocol H41q/H51q NFPA 85:2007 dated 2008-10-29, TÜV Rheinland Group
- [P2] Review Protocol H41q/H51q NFPA 86:2007 dated 2008-10-29, TÜV Rheinland Group

Manufacturer's Documentation

- [D1] Safety Manual H41q/ H41qc and H51q, HI 800 013 FEA

3 Identification of the test object

The test objects were the safety-related automation devices H41q-MS, H41q-HS, H41q-HRS, H51q-MS, H51q-HS, H51q-HRS manufactured by HIMA Paul Hildebrandt GmbH + Co. KG. These devices were certified in [R1] to [R3] in accordance with the test standards listed in the respective reports.

4 Tests and test results

4.1 General

The measuring and test equipment, which has been used by the TÜV Rheinland Group in the tests described in the following, is subject to regular inspection and calibration. Only devices with valid calibration have been used. The devices used in the various tests are recorded in the inspector's documentation.

All considerations concerning uncertainty of the measurements, so far applicable, are stated in the inspector's documentation, too.

In cases where tests have been executed in an external test lab or in the test lab of the manufacturer and where the results of these tests have been used within the here documented approval, this has occurred after a positive assessment of the external test lab and the achieved test results in detail according to the Quality Management procedure QMA 3.310.05.

4.2 Analysis of the new requirements to the test object

The test object was analyzed with respect to the changed or amended requirements of the standards as specified in Section 2.

The new requirements on protection against environmental influences integrated in the new edition of EN 230 [1] correspond to those of EN 298:2003. Additional requirements to complex electronics were also based on those of EN 298.

The test institute used check lists [P1, P2] to verify the requirements of the revised NFPA standards [3], [4].

Result

The environmental tests in accordance with EN 230 [1] were performed as defined in EN 298 [2] and passed as documented in [R3]. The additional requirements to complex electronics are also met since they were taken into account during the test in accordance with EN 298 [2] as specified in [R1].

The revised product-specific requirements to the test objects from [1], [3] and [4] are met.

No additional requirements resulted from the standards used in [R1], [R2] and [R3].

5 Summary

The performed analyses have demonstrated that the safety automation devices H41q-MS, H41q-HS, H41q-HRS, H51q-MS, H51q-HS, H51q-HRS of HIMA Paul Hildebrandt GmbH + Co. KG meet the requirements of the revised standards.

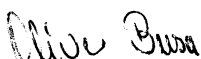
The results as described in test reports [R1], [R2] and [R3] remain valid.

The requirements and boundary conditions specified in the Safety Manual [D1] and in the application specific standards to be used must be taken into account when engineering, implementing and starting up the systems.

The currently valid hardware and software versions of the certified modules should be retrieved from the release list. The list is released together by the manufacturer and the Test Institute.

Cologne, 2008-10-31
TIS/ASI/Kst. 968 bu-nie

The expert



Dipl.-Ing. (FH) Oliver Busa