

**Test report on the type approved
SmartGuard 600 Controller 1752-L24BBBE
regarding recalculation of PFD_{AV} / PFH**

Report-No.: 968/EZ 339.01/09

Date: 2009-11-12

Pages: 3

Test objects: SmartGuard 600 Controller
1752-L24BBBE

Client: Rockwell Automation Inc.
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Mayfield Heights, OH 44124-6118
United States of America

Manufacturer: OMRON TAKEO Co., Ltd.
11000 Koaza-Kobaru
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843-0002 Takeo-shi, Saga-ken
Japan

Order-No./Date: 5500002727 dated 2009-10-28
email dated on 2009-09-30

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

TÜV-Offer-No./Date: 968/399/09 dated 2009-09-30

TÜV-Order-No./Date: 10298577 dated 2009-11-02

Inspectors: Dipl.-Ing. Gernot Klaes

Test location: see Test Institute

The test results are exclusively related to the test samples.

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1. Scope

In this report the review results of the recalculated safety parameter PFD_{AV} / PFH of the type approved SmartGuard 600 Controller 1752-L24BBBE shall be documented.

2. Standards forming the basis for the requirements

- [S1] EN ISO 13849-1:2008 Safety of machinery - Safety related parts of control systems, part 1: General principles for design
- [S2] EN ISO 13849-2:2008 Safety of machinery - Safety related parts of control systems, part 2: Validation
- [S3] IEC 61508 part 1-7: 12/98 - 05/00 Functional safety of electrical/electronic/programmable electronic safety-related systems
- [S4] EN 954-1:1996 (ISO 13849-1:1999) Safety of machinery, Safety related parts of control systems, Part 1: General principles of design
- [S5] IEC 61131-2:2007 - Programmable Controllers
- [S6] EN 60204-1:2006 - Safety of machinery - Electrical equipment of machines
- [S7] EN 61000-6-2:2005 Generic Standards; Immunity for industrial environments
- [S8] EN 61000-6-4:2007 Generic standards; Emission standard for industrial environments
- [S9] EN ISO 13850:2008 Safety of machinery - Emergency stop Principles for design
- [S10] NFPA 79:2007 Electrical Standard for Industrial Machinery
- [S11] ANSI/RIA R15.06-1999 American National Standard for Industrial Robots and Robot Systems - Safety Requirements
- [S12] ANSI B11.19-2003 American National Standard for Machine Tools - Performance Criteria for Safeguarding

3. Identification of the device under test

No test sample was required.

3.1 Previous test report

- [T1] 968/EZ 339.00/09, dated 2009-01-16: Statement for Issuing a Co-Certificate

4. Safety related parameters PFD_{AV} / PFH

The client has recalculated the safety related parameters based on a proof-test-Interval (PTI) of 20 years.

The PFD_{AV} and PFH results are summarized in the following table:

Model	PFH 20 years PTI	PFD_{AV} 20 years PTI
1752-L24BBBE	$3,9 \times 10^{-10} \text{ h}^{-1}$	$3,4 \times 10^{-5}$

As the results of the review, the calculations carried out by the client are accepted by the Test Institute. They supplement the values defined in the previous test reports.

5 Summary

The further results of the type approval stated in the Report-No.: 968/EZ 339.00/09 are still valid. The SmartGuard 600 Controller 1752-L24BBBE complies with the requirements of the relevant standards (Cat. 4 / PL e acc. to EN ISO 13849-1, SIL CL 3 acc. to IEC 61508) and can be used in applications up to Cat. 4 / PL e acc. to EN ISO 13849-1 and SIL 3 acc. to IEC 61508.

The instructions of the associated Installation and Operating Manual shall be considered.

Since only the safety related parameters PFD_{AV} and PFH are recalculated, a reissuing of the certificate and its licence certificate is not necessary.

Cologne, 2009-11-12
TIS/ASI/Kst. 968 kg-nie

Report released after review:
Date: 2009-11-12

The inspector



Dipl.-Ing. Gernot Klaes



Dipl.-Ing. Stephan Häb

According to the test results documented in this report and the shown conformity to the relevant and applied standards respectively to their protection goals it is confirmed, that the certificate with the no. 968/EZ 339.00/09 dated 2009-01-16 remains further valid.

Köln, 2009-11-12
TIS/ASI/Kst. 968 hä-nie

Certification body



Dipl.-Ing. Stephan Häb