

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-ZE-12007-01-06 according to DIN EN ISO/IEC 17065:2013

Valid from: 07.02.2019

Date of issue: 07.02.2019

Holder of certificate:

TÜV NORD CERT GmbH
Langemarckstraße 20, 45141 Essen

Certifications of products, processes and services in the fields:

Functional safety according to the following certification schemes for compliant objects, components, devices, systems and applications including functional safety management of:

- **Machines**
- **Elevator systems, escalators and moving walkways**
- **Automotive applications**
- **Power plant control**
- **Process technology , control systems**

Within the accreditation areas marked with *, the certification body is permitted - without the prior information and consent of DAkkS - to apply the certification schemes / requirement documents with different issue statuses. The certification body keeps a current list of all documents in the accreditation area.

Certification Scheme for Functional Safety:

P10-VA-01 2018-09	Certification of Functional Safety (Organization, Systems, Components, Investment Goods)
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Abbreviations used: see last page

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The aforementioned certification program applies to logic-units for safety-functions for use in the following components, devices, systems and equipment:

- Automated manufacturing systems
- Non-contact protective devices
- Variable speed electrical drives and drive systems
- Electrical measuring, control and laboratory equipment
- Electro mechanics, pneumatic and hydraulic actuators, valves
- Escalators and moving walkways
- Radio control systems
- Industrial control systems
- Integrated circuits (IC's)
- Components for secure communication, communication protocols
- Control technology for systems with safety significance in power plants
- Machines (mobile and stationary)
- Transducers and transmitters of the safety control technology
- Relays with positively driven contacts
- Sensors, sensor systems, transmitters for safety-relevant functions
- Safety components / Logic units to ensure safety functions, logic units for safety functions and guards
- Safety related software (Embedded, Application, Configuration)
- Software tools
- Programmable logic controllers and configurable controllers
- Control for power operated doors / gates
- Road vehicles and other vehicles
- Building automation systems
- Tractors and machinery for agriculture and forestry

The evaluations, assessments and certifications are based on the following basic standards of functional safety

Basic standards of functional safety: *

IEC 61508-1 2010-04	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 1: General requirements
EN 61508-1 2010-05	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 1: General requirements
DIN EN 61508-1 2011-02	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 1: General requirements

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IEC 61508-2 2010-04	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 2: Requirements for electrical/electronic/programmable electronic safety-related systems
EN 61508-2 2010-05	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 2: Requirements for electrical/electronic/programmable electronic safety-related systems
DIN EN 61508-2 2011-02	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 2: Requirements for electrical/electronic/programmable electronic safety-related systems
IEC 61508-3 2010-04	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 3: Software requirements
EN 61508-3 2010-05	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 3: Software requirements
DIN EN 61508-3 2011-02	Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 3: Software requirements
ISO 13849-1 2015-12	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design
EN ISO 13849-1 2015-12	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design
DIN EN ISO 13849-1 2016-06	Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design
ISO 13849-2 2012-10	Safety of machinery - Safety-related parts of control systems - Part 2: Validation
EN ISO 13849-2 2012-10	Safety of machinery - Safety-related parts of control systems - Part 2: Validation

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DIN EN ISO 13849-2 2013-02	Safety of machinery - Safety-related parts of control systems - Part 2: Validation
IEC 62061+A1 2012-11 + A2:2015	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems
EN 62061 2005+A1: 2013 + A2:2015	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems
DIN EN 62061 2017-10	Safety of machinery - Functional safety of safety-related electrical, electronic and programmable electronic control systems
ISO 26262-1 2011-11	Road vehicles - Functional safety - Part 1: Vocabulary
ISO 26262-2 2011-11	Road vehicles - Functional safety - Part 2: Management of functional safety
ISO 26262-3 2011-11	Road vehicles - Functional safety - Part 3: Concept phase
ISO 26262-4 2011-11	Road vehicles - Functional safety - Part 4: Product development: system level
ISO 26262-5 2011-11	Road vehicles - Functional safety - Part 5: Product development: hardware level
ISO 26262-6 2011-11	Road vehicles - Functional safety - Part 6: Product development: software level
ISO 26262-7 2011-11	Road vehicles - Functional safety - Part 7: Production and operation
ISO 26262-8 2011-11	Road vehicles - Functional safety - Part 8: Supporting processes

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ISO 26262-9 2011-11	Road vehicles - Functional safety - Part 9: ASIL-oriented and safety-oriented analyses
IEC 61800-5-2 2016-04	Adjustable speed electrical power drive systems. Part 5-2: Functional safety requirements
EN 61800-5-2 2017-04	Adjustable speed electrical power drive systems. Part 5-2: Functional safety requirements
DIN EN 61800-5-2 2017-11	Adjustable speed electrical power drive systems. Part 5-2: Functional safety requirements
IEC 61511-1 2016-02	Functional safety - Safety instrumented systems for the process industry sector - Part 1: Framework, definitions, system, hardware and software requirements
EN 61511-1 2017-11	Functional safety - Safety instrumented systems for the process industry sector - Part 1: Framework, definitions, system, hardware and software requirements
DIN EN 61511-1 2012-10	Functional safety - Safety instrumented systems for the process industry sector - Part 1: Framework, definitions, system, hardware and software requirements
IEC 61511-2 2016-07	Functional safety - Safety instrumented systems for the process industry sector - Part 2: Guidelines for the application of IEC 61511-1
EN 61511-2 2017-04	Functional safety - Safety instrumented systems for the process industry sector - Part 2: Guidelines for the application of IEC 61511-1
DIN EN 61511-2 2013-01	Functional safety - Safety instrumented systems for the process industry sector - Part 2: Guidelines for the application of IEC 61511-1
IEC 61511-3 2016-07	Functional safety - Safety instrumented systems for the process industry sector - Part 3: Guidance for the determination of the required safety integrity levels
EN 61511-3 2017-04	Functional safety - Safety instrumented systems for the process industry sector - Part 3: Guidance for the determination of the required safety integrity levels

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DIN EN 61511-3 2013-01	Functional safety - Safety instrumented systems for the process industry sector - Part 3: Guidance for the determination of the required safety integrity levels
DIN EN 50495 2010-10	Safety devices required for the safe functioning of equipment with respect to explosion risks
IEC 61784-3 2016-05	Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General rules and profile definitions
EN 61784-3 2016-08	Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General rules and profile definitions
DIN EN 61784-3 2017-09	Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General rules and profile definitions
IEC 62682 2014-10	Management of alarms systems for the process industries
EN 62682 2015-01	Management of alarms systems for the process industries
DIN EN 62682 2016-02	Management of alarms systems for the process industries

Abbreviations used:

CEI	Central European Initiative
DIN	Deutsches Institut für Normung e. V.
ENTSO	European Network of Transmission System Operators for Electricity
IEC	International Electrotechnical Commission
ISO	Internationale Organisation für Normung
P10VA01	Procedure of TÜV NORD CERT GmbH
VDE	Verband der Elektrotechnik Elektronik Informationstechnik e.V.

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