

## Deutsche Akkreditierungsstelle GmbH

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von EA, ILAC und IAF zur gegenseitigen Anerkennung

# Akkreditierung



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**CTC advanced GmbH**

**Untertürkheimer Straße 6-10, 66117 Saarbrücken**

die Kompetenz nach DIN EN ISO/IEC 17025:2018 besitzt, Prüfungen in folgenden Bereichen durchzuführen:

**Elektromagnetische Verträglichkeit (EMV), Elektrotechnik (SEB)**

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 09.06.2020 mit der Akkreditierungsnummer D-PL-12076-01. Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 41 Seiten.

Registrierungsnummer der Urkunde: **D-PL-12076-01-01**

Frankfurt am Main, 09.06.2020



Im Auftrag Dipl.-Ing. (FH) Ralf Egner  
Abteilungsleiter

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# Deutsche Akkreditierungsstelle GmbH

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Es darf nicht der Anschein erweckt werden, dass sich die Akkreditierung auch auf Bereiche erstreckt, die über den durch die DAkkS bestätigten Akkreditierungsbereich hinausgehen.

Die Akkreditierung erfolgte gemäß des Gesetzes über die Akkreditierungsstelle (AkkStelleG) sowie der Verordnung (EG) Nr. 765/2008 des Europäischen Parlaments und des Rates über die Vorschriften für die Akkreditierung und Marktüberwachung im Zusammenhang mit der Vermarktung von Produkten.

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Der aktuelle Stand der Mitgliedschaft kann folgenden Webseiten entnommen werden:

EA: [www.european-accreditation.org](http://www.european-accreditation.org)

ILAC: [www.ilac.org](http://www.ilac.org)

IAF: [www.iaf.nu](http://www.iaf.nu)

# Deutsche Akkreditierungsstelle GmbH

## Anlage zur Akkreditierungsurkunde D-PL-12076-01-01 nach DIN EN ISO/IEC 17025:2018

**Gültig ab: 09.06.2020**

Ausstellungsdatum: 10.07.2020

Urkundeninhaber:

**CTC advanced GmbH**  
**Untertürkheimer Straße 6-10, 66117 Saarbrücken**

Prüfungen in den Bereichen:

**Elektromagnetische Verträglichkeit (EMV), Elektrotechnik (SEB)**

Prüfungen in den Bereichen:

**Seiten**

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Das Prüflaboratorium verfügt über eine aktuelle Liste aller Prüfverfahren im flexiblen Akkreditierungsbereich.

Die mit \*\* gekennzeichneten Akkreditierungsbereiche unterliegen nicht der Flexibilisierung.

## D Elektromagnetische Verträglichkeit (EMV)

| Fachbereich                                | Norm oder Prüfverfahren (Ausgabestand)                                           | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                                           | Prüfbereich /Einschränkung |
|--------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>D.1 Grundnormen / Basic Standards *</b> |                                                                                  |                                                                                                                                                                                                                                  |                            |
| EMV                                        | EN IEC 61000-3-2:2019<br>IEC 61000-3-2:2018                                      | Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current $\leq 16$ A per phase)                                                                                  |                            |
| EMV                                        | EN 61000-3-3:2013<br>IEC 61000-3-3:2013 + A1:2017                                | ... -- Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current $\leq 16$ A per phase and not subject to conditional connection |                            |
| EMV                                        | EN 61000-4-2:2009<br>IEC 61000-4-2:2008                                          | ... -- Part 4-2: Testing and measurement techniques – electrostatic discharge immunity test                                                                                                                                      |                            |
| EMV                                        | EN 61000-4-3: 2006 + A1:2008 + A2:2010<br>IEC 61000-4-3:2006 + A1:2007 + A2:2010 | ... -- Part 4-3: Testing and measurement techniques – radiated, radio frequency, electromagnetic field immunity test                                                                                                             |                            |
| EMV                                        | EN 61000-4-4:2012<br>IEC 61000-4-4:2012                                          | ... -- Part 4-4: Testing and measurement techniques – electrical fast transient/burst immunity test                                                                                                                              |                            |

| Fachbereich                                      | Norm oder Prüfverfahren (Ausgabestand)                                                | Titel der Norm oder des Prüfverfahrens                                                                                        | Prüfbereich /Einschränkung |
|--------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV                                              | EN 61000-4-5:2014 + A1:2017<br>IEC 61000-4-5:2014 + A1:2017                           | ... -- Part 4-5: Testing and measurement techniques – surge immunity test                                                     |                            |
| EMV                                              | EN 61000-4-6:2014<br>IEC 61000-4-6:2013                                               | ... -- Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields   |                            |
| EMV                                              | EN 61000-4-8:2010<br>IEC 61000-4-8:2009                                               | ... -- Part 4-8: Testing and measurement techniques – power frequency magnetic field immunity test                            |                            |
| EMV                                              | EN 61000-4-9:2016<br>IEC 61000-4-9:2016                                               | ... -- Part 4-9: Testing and measurement techniques – pulse magnetic field immunity test                                      |                            |
| EMV                                              | EN 61000-4-11:2004<br>IEC 61000-4-11:2020                                             | ... -- Part 4-11: Testing and measurement techniques – voltage dips, short interruptions and voltage variations immunity test |                            |
| <b>D.2 Fachgrundnormen / Generic Standards *</b> |                                                                                       |                                                                                                                               |                            |
| EMV                                              | EN IEC 61000-6-1:2019<br>IEC 61000-6-1:2016                                           | ... -- Part 6-1: Generic standards – Immunity for residential, commercial and light-industrial environments                   |                            |
| EMV                                              | EN IEC 61000-6-2:2019<br>IEC 61000-6-2:2016                                           | ... -- Part 6-2: Generic standards - Immunity for industrial environments                                                     |                            |
| EMV                                              | EN 61000-6-3: 2007 + A1:2011<br>IEC 61000-6-3 2006 + A1:2010<br>AS/NZS 61000.6.3:2012 | ... -- Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments          |                            |

| Fachbereich                                    | Norm oder Prüfverfahren (Ausgabestand)                                         | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                            | Prüfbereich /Einschränkung |
|------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV                                            | EN 61000-6-4:<br>2007 + A1:2011<br>IEC 61000-6-4:2018<br>AS/NZS 61000.6.4:2007 | ... -- Part 6-4: Generic standards - Emission standard for industrial environments                                                                                                                                |                            |
| <b>D.3 Produktnormen / Product Standards *</b> |                                                                                |                                                                                                                                                                                                                   |                            |
| EMV                                            | EN 13241-1:2003+A2:2016                                                        | Tore- Produktnorm – Teil 1: Produkte ohne Feuer- und Rauchschutzeigenschaften;                                                                                                                                    |                            |
| EMV                                            | EN 50065-1:2011                                                                | Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz -Part 1 : General requirements, frequency bands and Electromagnetic disturbances                                     |                            |
| EMV                                            | DIN EN 50121-3-2: 2016-01                                                      | Bahnanwendungen - Elektromagnetische Verträglichkeit - Teil 3-2: Bahnfahrzeuge - Geräte; Deutsche Fassung EN 50121-3-2:2006                                                                                       |                            |
| EMV                                            | EN 50121-4:2016                                                                | Railway applications – Electromagnetic compatibility (EMC) –Part 4: Emission and immunity of signalling and telecommunications apparatus                                                                          |                            |
| EMV                                            | EN 50130-4: 2011+A1:2014                                                       | Alarm Systems -Part 4: Electromagnetic compatibility - Product family Standard: Immunity requirements for components of fire, intruder and social alarm Systems                                                   |                            |
| EMV                                            | EN 50293:2012                                                                  | Electromagnetic compatibility – Road traffic signal systems – Product standard                                                                                                                                    |                            |
| EMV                                            | EN 50412-2-1:2005<br>VDE 0808-121:2006-04                                      | Power line communication apparatus and systems used in low-voltage installations in the frequency range 1,6 MHz to 30 MHz -- Part 2-1: Residential, commercial and industrial environment - Immunity requirements |                            |
| EMV                                            | DIN EN 50561-1: 2014-08                                                        | Power line communication apparatus used in low-voltage installations - Radio disturbance characteristics -                                                                                                        |                            |

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|-------------|-------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV         | EN 55011:2016<br>+A1:2017<br>IEC/CISPR 11<br>2015 + A1:2016 +<br>A2:2019                  | Industrial, scientific and medical (ISM) radio frequency equipment - Radio disturbances characteristic - Limits and methods of measurement.                                                  |                            |
| EMV         | EN 55014-1:2016<br>IEC/CISPR 14-1: 2016<br>AS/NZS CISPR 14.1:2013                         | Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus -Part 1 : Emission                                                               |                            |
| EMV         | EN 55014-2:2015<br>IEC/CISPR 14-2:2015                                                    | ... -Part 2: Immunity - Product family Standard                                                                                                                                              |                            |
| EMV         | EN 55022:2010<br>IEC/CISPR 22<br>2008, modifiziert<br>AS/NZS CISPR 22:<br>2009/Amdt :2010 | Information technology equipment –Radio disturbance characteristics - Limits and methods of measurement                                                                                      |                            |
| EMV         | EN 55024:2010+<br>A1:2015<br>IEC/CISPR 24:2010+<br>Cor.:2011+A1:2015                      | Information technology equipment -Immunity characteristics - Limits and methods of measurement                                                                                               |                            |
| EMV         | DIN EN 55032:2016-02                                                                      | Elektromagnetische Verträglichkeit von Multimediageräten und -einrichtungen - Anforderungen an die Störaussendung (CISPR 32:2012+ Cor. 1:2012 + Cor. 2:2012); Deutsche Fassung EN 55032:2012 |                            |
| EMV         | DIN EN 55035: 2018-04<br>EN 55035:2017                                                    | Elektromagnetische Verträglichkeit von Multimediageräten – Anforderungen zur Störfestigkeit (CISPR 35:2016, modifiziert)                                                                     |                            |
| EMV         | EN 55103-1:2009 +<br>A1:2012                                                              | Electromagnetic compatibility - Product family Standard for audio, video, audio-visual and entertainment lighting control apparatus for Professional use -Part 1 : Emission                  |                            |
| EMV         | EN 55103-2:2009                                                                           | ... -Part 2: Immunity                                                                                                                                                                        |                            |

Ausstellungsdatum: 10.07.2020

Gültig ab: 09.06.2020

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>  | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                               | <b>Prüfbereich /Einschränkung</b> |
|--------------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| EMV                | EN 60669-2-1:2004/A1:2009                      | Switches for household and similar fixed electrical installations -- Part 2-1: Particular requirements - Electronic switches                                                                |                                   |
| EMV                | EN 60669-2-2:2006<br>IEC 60669-2-2:2006        | ... -Part 2: Particular requirements -Section 2: Electromagnetic remote-control Switches (RCS)                                                                                              |                                   |
| EMV                | EN 60669-2-3:2006<br>IEC 60669-2-3:2006        | ... -- Part 2-3: Particular requirements - Time-delay switches (TDS)                                                                                                                        |                                   |
| EMV                | EN 60945:2002<br>IEC 60945<br>4th edition:2002 | Maritime navigation and radio communication equipment and Systems - General requirements - Methods of testing and required test results                                                     | only EMC                          |
| EMV                | EN IEC 61800-3:2018<br>IEC 61800-3: 2017       | Adjustable speed electrical power drive Systems --Part 3: EMC requirements and specific test methods                                                                                        |                                   |
| EMV                | EN IEC 61204-3:2018<br>IEC 61204-3:2016        | Stromversorgungsgeräte für Niederspannung mit Gleichstromausgang                                                                                                                            |                                   |
| EMV                | DIN EN 61326-1: 2013-07                        | Titel (deutsch): Elektrische Mess-, Steuer-, Regel- und Laborgeräte - EMV-Anforderungen - Teil 1: Allgemeine Anforderungen (IEC 61326-1:2012); Deutsche Fassung EN 61326-1:2013             |                                   |
| EMV                | EN 300 386<br>V2.1.1 :2016-07                  | Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunications network equipment Electromagnetic Compatibility (EMC) requirements                                       |                                   |
| EMV                | EN 301 843-1<br>V2.2.1:2017-11                 | Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for marine radio equipment and services; Part 1: Common technical requirements |                                   |
| EMV                | EN 301 843-2<br>V2.2.1:2017-11                 | ... Part 2: Specific conditions for radiotelephone transmitters and receivers                                                                                                               |                                   |

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                                                                                                                                                | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV         | EN 301 843-4<br>V2.2.1:2017-11         | ... Part 4: Specific conditions for Narrow-Band Direct-Printing (NBDP) NAVTEX receivers                                                                                               |                            |
| EMV         | ETSI EN 301 489-1<br>V2.2.3:2019-11    | Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 1 : Common technical requirements |                            |
| EMV         | ETSI EN 301 489-2<br>V2.1.1:2019-04    | ... Part 2: Specific conditions for radio paging equipment                                                                                                                            |                            |
| EMV         | ETSI EN 301 489-3<br>V2.1.1:2019-03    | ... Part 3: Specific conditions for Short Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz                                                                      |                            |
| EMV         | ETSI EN 301 489-4<br>V3.2.1:2019-04    | ... Part 4: Specific conditions for fixed radio links and ancillary equipment and services                                                                                            |                            |
| EMV         | ETSI EN 301 489-5<br>V2.2.1:2019-04    | ... Part 5: Specific conditions for Private land Mobil Radio (PMR) and ancillary equipment (speech and non-speech)                                                                    |                            |
| EMV         | ETSI EN 301 489-6<br>V2.2.1:2019-04    | ... Part 6: Specific conditions for Digital Enhanced Cordless Telecommunications (DECT) equipment                                                                                     |                            |
| EMV         | EN 301 489-7<br>V1.3.1:2005-11         | ... Part 7: Specific conditions for mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS)                              |                            |
| EMV         | EN 301 489-8<br>V1.2.1:2002-08         | ... Part 8: Specific conditions for GSM base stations                                                                                                                                 |                            |
| EMV         | ETSI EN 301 489-9<br>V2.1.1:2019-04    | ... Part 9: Specific conditions for wireless microphones, similar Radio Frequency (RF) audio link equipment, cordless audio and in-ear monitoring devices                             |                            |

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|-------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV         | EN 301 489-10<br>V1.3.1:2002-08        | ...; Part 10: Specific conditions for First (CT1 and CT1+) and Second Generation (CT2) Cordless Telephone equipment                                                                                    |                            |
| EMV         | EN 301 489-11<br>V1.3.1:2006-05        | ... Part 11: Specific conditions for terrestrial sound broadcasting service transmitters                                                                                                               |                            |
| EMV         | EN 301 489-12<br>V3.1.1:2019-04        | ... Part 12: Specific conditions for Very Small Aperture Terminal, Satellite Interactive Earth Stations operated in the frequency ranges between 4 GHz and 30 GHz in the Fixed Satellite Service (FSS) |                            |
| EMV         | EN 301 489-13<br>V1.2.1:2002-08        | ...; Part 13: Specific conditions for Citizens' Band (CB) radio and ancillary equipment (speech and non-speech)                                                                                        |                            |
| EMV         | EN 301 489-14<br>V1.2.1:2003-05        | ... Part 14: Specific conditions for analogue and digital terrestrial TV broadcasting service transmitter"                                                                                             |                            |
| EMV         | ETSI EN 301 489-15<br>V2.2.1:2019-04   | ...; Part 15: Specific conditions for commercially available amateur radio equipment                                                                                                                   |                            |
| EMV         | EN 301 489-16<br>V1.2.1:2002-08        | ...; Part 16: Specific conditions for analogue cellular radio communications equipment, mobile and portable                                                                                            |                            |
| EMV         | ETSI EN 301 489-17<br>V3.1.1:2017-02   | ...; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment                                                                                  |                            |
| EMV         | ETSI EN 301 489-19<br>V2.1.1:2019-04   | ...; Part 19: Specific conditions for Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications                                                           |                            |
| EMV         | ETSI EN 301 489-20<br>V2.1.1:2019-04   | ...; Part 20: Specific conditions for Mobile Earth Stations (MES) used in the Mobile Satellite Services (MSS)                                                                                          |                            |

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| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                                        | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV         | EN 301 489-22<br>V1.3.1:2003-11        | ...; Part 22: Specific conditions for ground based VHF aeronautical mobile and fixed radio equipment                                                                                                                          |                            |
| EMV         | EN 301 489-23<br>V1.5.1:2011-07        | ...; Part 23: Specific conditions for IMT-2000 CDMA Direct Spread (UTRA) Base Station (BS) radio, repeater and ancillary equipment                                                                                            |                            |
| EMV         | EN 301 489-24<br>V1.5.1:2010-10        | ...; Part 24: Specific conditions for IMT-2000 CDMA Direct Spread (UTRA) for Mobile and portable (UE) radio and ancillary equipment                                                                                           |                            |
| EMV         | EN 301 489-25<br>V2.3.2:2005-07        | ...; Part 25: Specific conditions for IMT-2000 CDMA Multi-carrier Mobile Stations and ancillary equipment                                                                                                                     |                            |
| EMV         | EN 301 489-26<br>V2.3.2:2005-07        | ...; Part 26: Specific conditions for IMT-2000 CDMA Multi-carrier Base Stations and ancillary equipment                                                                                                                       |                            |
| EMV         | ETSI EN 301 489-27<br>V2.2.1:2019-04   | ...; Part 27: Specific conditions for Ultra Low Power Active Medical Implants (ULP-AMI) and related peripheral devices (ULP-AMI-P)                                                                                            |                            |
| EMV         | EN 301 489-28<br>V1.1.1:2004-09        | ...; Part 28: Specific conditions for wireless digital video links                                                                                                                                                            |                            |
| EMV         | ETSI EN 301 489-31<br>V2.2.1:2019-04   | ...; Part 31: Specific conditions for equipment in the 9 to 315 kHz band for Ultra Low Power Active Medical Implants (ULP-AMI) and related peripheral devices (ULP-AMI-P)                                                     |                            |
| EMV         | ETSI EN 301 489-33<br>V2.2.1:2019-04   | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 33: Specific conditions for Ultra Wide Band (UWB) communication devices |                            |

| Fachbereich                             | Norm oder Prüfverfahren (Ausgabestand)       | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                                                                                                                                                                                       | Prüfbereich /Einschränkung |
|-----------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV                                     | ETSI EN 301 489-34<br>V2.1.1:2019-04         | Electromagnetic compatibility and Radio spectrum Matters (ERM) - Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 34: Specific conditions for External Power Supply (EPS) for mobile phones                                                                                                                                              |                            |
| EMV                                     | ETSI EN 301 489-50<br>V2.2.1:2019-04         | Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 50: Specific conditions for Cellular Communication Base Station (BS), repeater and ancillary equipment                                                                                                                   |                            |
| EMV                                     | ETSI EN 301 489-51<br>V2.1.1:2019-04         | Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 51: Specific conditions for Automotive, Ground based Vehicles and Surveillance Radar Devices using 24,05 GHz to 24,25 GHz, 24,05 GHz to 24,5 GHz, 76 GHz to 77 GHz and 77 GHz to 81 GHz; Harmonised Standard covering the essential requirements of article 3.1b of Directive 2014/53/EU |                            |
| EMV                                     | Draft ETSI EN 301 489-52<br>V1.1.0 (2016-11) | Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication Mobile and portable (UE) radio and ancillary equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU                                                                             |                            |
| <b>D.4 Hearing Aids Compatibility *</b> |                                              |                                                                                                                                                                                                                                                                                                                                                                              |                            |
|                                         | IEEE C63.19:2019<br>IEEE C63.19:2011         | Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids                                                                                                                                                                                                                                                                              |                            |

**E Produktsicherheit \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand)                                                                                                                                                                                                   | Titel der Norm oder des Prüfverfahrens                                                                                                               | Prüfbereich /Einschränkung |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| SEB         | EN 60065: 2015<br>EN 60065:2011<br>2002/A1/A2/A11/A12/AC<br>VDE 0860: 2015<br>IEC 60065: 2014<br>IEC 60065 : 2011<br>UL 60065: 2015 UL 60065: 2003<br>CAN/CSA-C22.2 NO. 60065: 2016<br>AS/NZS 60065: 2012/A1: 2015<br>AS/NZS 60065: 2018 | Audio-, Video- und ähnliche elektronische Geräte - Sicherheitsanforderungen<br>(Audio, Video and Similar Electronic Apparatus – Safety Requirements) |                            |
| SEB         | EN 60086-4: 2015<br>IEC 60086-4: 2014<br>IEC 60086-4: 2019                                                                                                                                                                               | Primary batteries - Part 4: Safety of lithium batteries                                                                                              |                            |
| SEB         | EN 60086-5: 2016<br>EN 60086-5: 2011<br>IEC 60086-5: 2016<br>IEC 60086-5: 2011                                                                                                                                                           | Primary batteries - Part 5: Safety of batteries with aqueous electrolyte                                                                             |                            |
| SEB         | EN 60215: 1989/A1/A2<br>VDE 0866: 1993/A1/A2<br>IEC 60215: 1987/A1/A2<br>IEC 60215: 2016                                                                                                                                                 | Sicherheitsbestimmung für Funksender<br>(Safety requirements for radio transmitting equipment)                                                       |                            |
| SEB         | EN 60335-1: 2012/A11: 2014<br>IEC 60335-1: 2010/<br>Corr.1:2010/Corr. 2:2011/<br>A1:2013/A2:2016                                                                                                                                         | Household and similar electrical appliances – Safety – Part 1: General requirements                                                                  |                            |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                                                                                                                 | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                            | <b>Prüfbereich /Einschränkung</b> |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN 60335-2-29: 2019<br>EN 60335-2-29: 2004/<br>A2:2010<br>E EN 60335-2-29: 2015<br>IEC 60335-2-29:<br>2016/A1:2019<br>IEC 60335-2-29:<br>2002/A1:2004/A2:2009 | - Teil 2-29: Besondere Anforderungen für<br>Batterieladegeräte<br>(-Part 2-29: Particular requirements for<br>battery chargers)          |                                   |
| SEB                | EN 60335-2-95: 2019<br>EN60335-2-95: 2016<br>IEC60335-2-95: 2011/<br>A1:2015 / A2:2017                                                                        | - Part 2-95: Particular requirements for<br>drives for vertically moving garage doors for<br>residential use                             |                                   |
| SEB                | EN60335-2-97: 2010<br>EN 60335-2-97:2017<br>IEC60335-2-97:2016/A1:2019<br>IEC60335-2-97: 2002/<br>A1:2004/A2:2008                                             | - Part 2-97: Particular requirements for<br>drives for rolling shutters, awnings, blinds<br>and similar equipment                        |                                   |
| SEB                | EN 60669-1: 2019<br>EN 60669-1: 2009<br>IEC 60669-1:2017<br>IEC 60669-1:1998/A1:1999<br>/A2:2006                                                              | Switches for household and similar fixed-<br>electrical installations - Part 1: General<br>requirements                                  |                                   |
| SEB                | EN 60669-2-1: 2010<br>IEC 60669-2-1: 2002/<br>A1:2008 /A2:2015                                                                                                | - Part 2-1: Particular requirements -<br>Electronic switches                                                                             |                                   |
| SEB                | EN 60695-11-5: 2017<br>EN 60695-11-5:2005<br>IEC 60695-11-5: 2016<br>IEC 60695-11-5:2004                                                                      | Fire hazard testing - Part 11-5: Test flames -<br>Needle-flame test method - Apparatus,<br>confirmatory test arrangement and<br>guidance |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                                                 | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                     | <b>Prüfbereich /Einschränkung</b> |
|--------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN 60695-2-10: 2014<br>E EN IEC 60695-2-10: 2019<br>IEC 60 695-2-10: 2013                     | Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure                                                                    |                                   |
| SEB                | EN 60695-2-11:2014<br>E EN IEC 60695-2-11: 2019<br>EN 60695-11-5:2005<br>IEC 60695-2-11: 2014 | Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products                                                              |                                   |
| SEB                | EN 60695-2-12:2011/A1<br>E EN IEC 60695-2-12: 2019<br>IEC 60695-2-12: 2010/A1                 | Part 2-12: Glowing/hot-wire based test methods – Glow-wire flammability test method for materials                                                                 |                                   |
| SEB                | EN 60695-11-10:2014<br>IEC 60695-11-10: 2013                                                  | Part 11-10: Test flames – 50 W horizontal and vertical flame test methods                                                                                         |                                   |
| SEB                | EN 60695-11-20: 2015/AC<br>IEC 60 695-11-20: 2015/C1                                          | Part 11-20: Test flames – 500 W flame test methods                                                                                                                |                                   |
| SEB                | EN 60730-1: 2016<br>EN 60730-1: 2012<br>IEC 60730-1: 2013/A1                                  | Automatic electrical controls for household and similar use - Part 1: General requirements                                                                        |                                   |
| SEB                | EN 60730-2-2: 2006<br>IEC 60730-2-2: 2001/A1                                                  | Automatic electrical controls for household and similar use - Part 2-2: Particular requirements for thermal motor protectors                                      |                                   |
| SEB                | EN 60730-2-3: 2008<br>IEC 60730-2-3: 2006                                                     | Automatic electrical controls for household and similar use - Part 2-3: Particular requirements for thermal protectors for ballasts for tubular fluorescent lamps |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                                                  | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                         | <b>Prüfbereich /Einschränkung</b> |
|--------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN 60730-2-4: 2008<br>IEC 60730-2-4: 2006                                                      | Automatic electrical controls for household and similar use - Part 2-4: Particular requirements for thermal motor protectors for motor-compressors of hermetic and semi-hermetic type |                                   |
| SEB                | EN 60730-2-6: 2016<br>EN 60730-2-6: 2009<br>IEC 60730-2-6: 2015/A1:2019                        | Automatic electrical controls for household and similar use - Part 2-6: Particular requirements for automatic electrical pressure sensing controls including mechanical requirements  |                                   |
| SEB                | EN 60730-2-7: 2011<br>E EN60730-2-7: 2014<br>IEC 60730-2-7: 2015                               | Automatic electrical controls for household and similar use - Part 2-7: Particular requirements for timers and time switches                                                          |                                   |
| SEB                | EN 60730-2-8: 2004<br>E EN 60730-2-8: 2018<br>IEC 60730-2-8: 2018<br>IEC 60730-2-8: 2000/A1/A2 | Automatic electrical controls for household and similar use - Part 2-8: Particular requirements for electrically operated water valves, including mechanical requirements             |                                   |
| SEB                | EN IEC 60730-2-9:2020<br>EN 60730-2-9: 2011<br>IEC 60730-2-9: 2015 / A1:2018                   | Automatic electrical controls for household and similar use - Part 2-9: Particular requirements for temperature sensing controls                                                      |                                   |
| SEB                | EN 60730-2-10: 2008<br>IEC 60730-2-10: 2006                                                    | Automatic electrical controls for household and similar use - Part 2-10: Particular requirements for motor-starting relays                                                            |                                   |
| SEB                | EN 60730-2-11: 2008<br>IEC 60730-2-11: 2019<br>IEC 60730-2-11: 2006                            | Automatic electrical controls for household and similar use - Part 2-11: Particular requirements for energy regulators                                                                |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                                                           | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                   | <b>Prüfbereich /Einschränkung</b> |
|--------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN IEC 60730-2-12: 2019<br>EN 60730-2-12: 2006<br>IEC 60730-2-12: 2015                                  | Automatic electrical controls for household and similar use - Part 2-12: Particular requirements for electrically operated door locks                                           |                                   |
| SEB                | EN IEC 60730-2-13: 2018/AC<br>EN 60730-2-13: 2008<br>IEC 60730-2-13: 2017<br>IEC 60730-2-13: 2006       | Automatic electrical controls for household and similar use - Part 2-13: Particular requirements for humidity sensing controls                                                  |                                   |
| SEB                | EN IEC 60730-2-14: 2019<br>EN 60730-2-14: 2009<br>IEC 60730-2-14: 2017/A1<br>IEC 60730-2-14: 1995/A1/A2 | Automatic electrical controls for household and similar use - Part 2-14: Particular requirements for electric actuators                                                         |                                   |
| SEB                | EN IEC 60730-2-15: 2020<br>EN 60730-2-15: 2011<br>IEC 60730-2-15: 2017<br>IEC 60730-2-15: 2008          | Automatic electrical controls for household and similar use - Part 2-15: Particular requirements for automatic electrical air flow, water flow and water level sensing controls |                                   |
| SEB                | EN 60730-2-19: 2009<br>IEC 60730-2-19: 1997/A1/A2                                                       | Automatic electrical controls for household and similar use - Part 2-19: Particular requirements for electrically operated oil valves, including mechanical requirements        |                                   |
| SEB                | EN 60825-1: 2015<br>IEC 60825-1: 2014                                                                   | Safety of laser products - Part 1: Equipment classification and requirements                                                                                                    |                                   |
| SEB                | EN 60825-2: 2011<br>E EN IEC 60825-2:2019<br>IEC 60825-2: 2004/A1/A2                                    | Safety of laser products - Part 2: Safety of optical fibre communication systems (OFCS)                                                                                         |                                   |

Ausstellungsdatum: 10.07.2020

**Gültig ab: 09.06.2020**

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b> | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                           | <b>Prüfbereich /Einschränkung</b> |
|--------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | IEC 60 884-1:2002 /A1/A2                      | Plugs and socket-outlets for household and similar purposes –Part 1: General requirements                                               |                                   |
| SEB                | VDE 0620-1: 2016<br>E VDE 0620-1: 2019        | Stecker und Steckdosen für den Hausgebrauch und ähnliche Anwendungen – Teil 1: Allgemeine Anforderungen an ortsfeste Steckdosen         |                                   |
| SEB                | VDE 0620-2-1: 2016<br>E VDE 0620-2-1:2019     | Stecker und Steckdosen für den Hausgebrauch und ähnliche Anwendungen – Teil 2-1: Allgemeine Anforderungen an Stecker und Kupplungsdosen |                                   |
| SEB                | BS 1363-1: 2016/A1                            | 13 A plugs, socket-outlets, adaptors and connection units. Specification for rewirable and non-rewirable 13 A fused plugs               |                                   |
| SEB                | BS 1363-2: 2016/A1                            | 13 A plugs, socket-outlets, adaptors and connection units. Specification for 13 A switched and unswitched socket-outlet                 |                                   |
| SEB                | BS 1363-3: 2016/A1                            | 13 A plugs, socket-outlets, adaptors and connection units. Specification for adaptors                                                   |                                   |
| SEB                | AS/NZS 3112: 2017                             | Approval and Test specification – Plugs and socket-outlets                                                                              |                                   |
| SEB                | NF C61-314: 2017<br>NF C61-314:2008/A1:2010   | Plugs and socket-outlets for household and similar purposes – 6A/250V and 16A/250V                                                      |                                   |
| SEB                | SEV 1011: 2009                                | Stecker und Steckdosen für den Hausgebrauch und ähnliche Zwecke                                                                         |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                                                                                                                                                                                       | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                                                                                                                                                                                                                          | <b>Prüfbereich /Einschränkung</b> |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | SEV-1011/A1:2012                                                                                                                                                                                                                    | Stecker und Steckdosen für den Hausgebrauch und ähnliche Zwecke – A1: Abzweig- und Zwischenstecker, Verlängerungskabel, Steckdosenleisten sowie Reise- und Fixadapter                                                                                                                                                                                                                  |                                   |
| SEB                | EN 50075: 1990<br>VDE 0620-101:1992                                                                                                                                                                                                 | Steckvorrichtungen bis 400 V 25 A<br>Flache, nichtwiederanschließbare zweipolige Stecker, 2,5 A 250 V, mit Leitung, die für die Verbindung von Klasse-II-Geräten für Haushalt und ähnliche Zwecke<br>(Plugs and socket-outlets up to 400 V 25 A; Flat non-wirable two pole plugs, 2,5 A 250 V, with cord, for the connection of class-II-equipment for household and similar purposes) |                                   |
| SEB                | EN 60 950-1: 2014<br>VDE 0805-1: 2014<br>IEC 60950-1: 2005/A1/A2<br>UL 60950-1: 2007<br>CAN/CSA-C22.2 NO. 60950-1-07: R2016<br>CAN/CSA-C22.2 NO. 60950-1A-07: R2016<br>CAN/CSA-C22.2 NO. 60950-1B-07: R2016<br>AS/NZS 60950.1: 2015 | Einrichtungen der Informationstechnik – Sicherheit, Teil 1: Allgemeine Anforderungen<br>(Information Technology Equipment – Safety – Part1: General requirements)                                                                                                                                                                                                                      |                                   |
| SEB                | EN 60950-21: 2003<br>VDE 0805-21: 2003<br>IEC 60950-21: 2002                                                                                                                                                                        | Information technology equipment – Safety – Part 21: Remote power feeding                                                                                                                                                                                                                                                                                                              |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                                                    | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                                                         | <b>Prüfbereich /Einschränkung</b> |
|--------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN 60950-22: 2017<br>EN 60950-22: 2006/AC<br>VDE 0805-22: 2006<br>IEC 60950-22: 2016             | Information technology equipment – Safety – Part 22: Equipment to be installed outdoors                                                                                                                               |                                   |
| SEB                | EN 61010-1:2010/A1/AC<br>EN 61010-1: 2011<br>IEC 61010-1: 2010/ A1:2016                          | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements                                                                                               |                                   |
| SEB                | EN 61010-2-010: 2014<br>E EN 61010-2-010: 2018<br>IEC 61010-2-010: 2019<br>IEC 61010-2-010: 2014 | Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-010: Particular requirements for laboratory equipment for the heating of materials                                 |                                   |
| SEB                | EN 61010-2-020: 2017<br>EN 61010-2-020: 2007<br>IEC 61010-2-020: 2016<br>IEC 61010-2-020: 2006   | Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-020: Particular requirements for laboratory centrifuges                                                            |                                   |
| SEB                | EN 61010-2-030: 2011<br>EN 61010-2-030: 2015<br>IEC 61010-2-030: 2017<br>IEC 61010-2-030: 2010   | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-030: Particular requirements for testing and measuring circuits                                                     |                                   |
| SEB                | EN 61010-2-032:2012<br>E EN 61010-2-032: 2018<br>IEC 61010-2-032: 2019<br>IEC 61010-2-032: 2012  | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-032: Particular requirements for hand-held and hand manipulated current sensors for electrical test and measurement |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren<br/>(Ausgabestand)</b>                                                | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                                                        | <b>Prüfbereich<br/>/Einschränkung</b> |
|--------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| SEB                | EN 61010-2-040: 2015<br>IEC 61010-2-040: 2015                                                    | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-040: Particular requirements for sterilizers and washer-disinfectors used to treat medical materials               |                                       |
| SEB                | EN 61010-2-051: 2015<br>E EN 61010-2-051: 2018<br>IEC 61010-2-051: 2018<br>IEC 61010-2-051: 2015 | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-051: Particular requirements for laboratory equipment for mixing and stirring                                      |                                       |
| SEB                | EN 61010-2-061: 2016<br>E EN 61010-2-061: 2018<br>IEC 61010-2-061: 2018<br>IEC 61010-2-061: 2015 | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-061: Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization           |                                       |
| SEB                | EN 61010-2-081: 2015<br>E EN 61010-2-081: 2018<br>IEC 61010-2-081: 2018<br>IEC 61010-2-081: 2015 | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-081: Particular requirements for automatic and semi-automatic laboratory equipment for analysis and other purposes |                                       |
| SEB                | EN 61010-2-101: 2017<br>EN 61010-2-101: 2003<br>IEC 61010-2-101: 2018<br>IEC 61010-2-101: 2015   | Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-101: Particular requirements for in vitro diagnostic (IVD) medical equipment                                      |                                       |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                                                           | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                                                                           | <b>Prüfbereich /Einschränkung</b> |
|--------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN 61010-2-201: 2013/AC<br>IEC 61010-2-201: 2017<br>IEC 61010-2-201: 2013                               | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-201: Particular requirements for control equipment                                                                                    |                                   |
| SEB                | EN 61010-031: 2016<br>IEC 61010-031: 2015/A1                                                            | Safety requirements for electrical equipment for measurement, control and laboratory use - Part 031: Safety requirements for hand-held probe assemblies for electrical measurement and test                                             |                                   |
| SEB                | EN 61058-1: 2017<br>EN 61058-1: 2002/A2:2008<br>IEC 61058-1:2016<br>IEC 61058-1:2000<br>/A1:2001/A2:200 | Switches for appliances - Part 1: General requirements                                                                                                                                                                                  |                                   |
| SEB                | EN 61058-2-4:2005<br>E EN 61058-2-4: 2017<br>IEC 61058-2-4: 2018<br>IEC 61058-2-4:1995 /A1:2003         | Switches for appliances - Part 2-4: Particular requirements for independently mounted switches                                                                                                                                          |                                   |
| SEB                | EN 61558-1: 2006/A1: 2009<br>IEC61558-1: 2017<br>IEC 61558-1: 2005/A1: 2009                             | Safety of power transformers, power supplies, reactors and similar products - Part 1: General requirements and tests                                                                                                                    |                                   |
| SEB                | EN 61558-2-1: 2007<br>IEC 61558-2-1: 2007                                                               | Safety of power transformers, power supplies, reactors and similar products - Part 2-1: Particular requirements and tests for separating transformers and power supplies incorporating separating transformers for general applications |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b> | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                                                                                                 | <b>Prüfbereich /Einschränkung</b> |
|--------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN 61558-2-2: 2007<br>IEC 61558-2-2: 2007     | Safety of power transformers, power supplies, reactors and similar products - Part 2-2: Particular requirements and tests for control transformers and power supplies incorporating control transformers                                                      |                                   |
| SEB                | EN 61558-2-3: 2011<br>IEC 61558-2-3: 2010     | Safety of transformers, reactors, power supply units and combinations thereof - Part 2-3: Particular requirements and tests for ignition transformers for gas and oil burners                                                                                 |                                   |
| SEB                | EN 61558-2-4: 2009<br>IEC 61558-2-4: 2009     | Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1100 V - Part 2-4: Particular requirements and tests for isolating transformers and power supply units incorporating isolating transformers               |                                   |
| SEB                | EN 61558-2-5: 2011<br>IEC 61558-2-5: 2010     | Safety of transformers, reactors, power supply units and combinations thereof - Part 2-5: Particular requirements and tests for transformer for shavers, power supply units for shavers and shaver supply units                                               |                                   |
| SEB                | EN 61558-2-6: 2010<br>IEC 61558-2-6: 2009     | Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1100 V - Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b> | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                                                                                  | <b>Prüfbereich /Einschränkung</b> |
|--------------------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN 61558-2-7: 2008<br>IEC 61558-2-7: 2007     | Safety of power transformers, power supplies, reactors and similar products - Part 2-7: Particular requirements and tests for transformers and power supplies for toys                                                                         |                                   |
| SEB                | EN 61558-2-8: 2011<br>IEC 61558-2-8: 2010     | Safety of transformers, reactors, power supply units and combinations thereof - Part 2-8: Particular requirements and tests for transformers and power supply units for bells and chimes                                                       |                                   |
| SEB                | EN 61558-2-9: 2011<br>IEC 61558-2-9: 2010     | Safety of transformers, reactors, power supply units and combinations thereof - Part 2-9: Particular requirements and tests for transformers and power supply units for class III handlamps for tungsten filament lamps                        |                                   |
| SEB                | EN 61558-2-13: 2009<br>IEC 61558-2-13: 2009   | Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1100 V - Part 2-13: Particular requirements and tests for auto transformers and power supply units incorporating auto transformers         |                                   |
| SEB                | EN 61558-2-14: 2013<br>IEC 61558-2-14: 2012   | Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1100 V - Part 2-14: Particular requirements and tests for variable transformers and power supply units incorporating variable transformers |                                   |
| SEB                | EN 61558-2-15: 2012<br>IEC 61558-2-15: 2011   | Safety of transformers, reactors, power supply units and combinations thereof - Part 2-15: Particular requirements and tests for isolating transformers for the supply of medical locations                                                    |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                                              | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                                                                                    | <b>Prüfbereich /Einschränkung</b> |
|--------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN 61558-2-16:2010/ A1<br>IEC 61558-2-16: 2009/A1                                          | Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1100 V - Part 2-16: Particular requirements and tests for switch mode power supply units and transformers for switch mode power supply units |                                   |
| SEB                | EN 61558-2-19: 2001<br>IEC 61558-2-19: 2000                                                | Safety of power transformers, power supply units and similar devices - Part 2-19: Particular requirements for perturbation attenuation transformers                                                                                              |                                   |
| SEB                | EN 61558-2-20: 2011<br>IEC 61558-2-20: 2010                                                | Safety of transformers, reactors, power supply units and combinations thereof - Part 2-20: Particular requirements and tests for small reactors                                                                                                  |                                   |
| SEB                | EN 61558-2-23: 2011<br>IEC 61558-2-23: 2010                                                | Safety of transformers, reactors, power supply units and combinations thereof - Part 2-23: Particular requirements and tests for transformers and power supply units for construction sites                                                      |                                   |
| SEB                | EN 62133: 2013<br>IEC 62133: 2012                                                          | Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications                                   |                                   |
| SEB                | EN 62281: 2017<br>E EN 62281: 2018<br>EN 62281: 2013<br>IEC 62281: 2019<br>IEC 62281: 2016 | Safety of primary and secondary lithium cells and batteries during transport                                                                                                                                                                     |                                   |

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| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                                                                                                                                                           | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                                                                           | <b>Prüfbereich /Einschränkung</b> |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| SEB                | EN 62368-1: 2014/AC: 2015<br>E EN 62368-1: 2017<br>VDE 0868-1:2016<br>IEC 62368-1:2014/cor. 2015, Ed. 2<br>IEC 62368-1: 2018<br>UL 62368-1: 2014<br>CAN/CSA-C22.2 NO. 62368-1-14<br>AS/NZS 62368.1:2018 | Audio/video, information and communication technology equipment<br>Safety – Requirements                                                                                                                                                |                                   |
| SEB                | EN 62133-1: 2017<br>IEC 62133-1: 2017                                                                                                                                                                   | Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable application – Part 1: Nickel systems  |                                   |
| Battery/<br>Safety | EN 62133-2: 2017<br>IEC 62133-2: 2017                                                                                                                                                                   | Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable application – Part 2: Lithium systems |                                   |
| Battery/<br>Safety | IEEE 1725: 2013                                                                                                                                                                                         | Rechargeable batteries for cellular telephones                                                                                                                                                                                          |                                   |
| Battery/<br>Safety | IEEE 1625: 2014                                                                                                                                                                                         | Rechargeable batteries for multi-cell mobile computing devices                                                                                                                                                                          |                                   |
| Battery/<br>Safety | UN ST-SG-AC10-11 cl. 38.3<br>Revision 6                                                                                                                                                                 | Recommendations on the TRANSPORT OF DANGEROUS GOODS Manual of Tests and Criteria<br><br>ST-SG-AC10-11 Section 38.3 Lithium metal and lithium ion batteries                                                                              |                                   |
| Battery/<br>Safety | VDE-AR-E 2510-50                                                                                                                                                                                        | Stationäre Energiespeichersysteme mit Lithium-Batterien - Sicherheitsanforderungen                                                                                                                                                      |                                   |

Ausstellungsdatum: 10.07.2020

**Gültig ab: 09.06.2020**

**Anlage zur Akkreditierungsurkunde D-PL-12076-01-01**

| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b> | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                        | <b>Prüfbereich /Einschränkung</b> |
|--------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Battery/<br>Safety | EN 62619: 2017<br>IEC 62619: 2017             | Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications |                                   |
| Battery/<br>Safety | UL 1642: 2012                                 | Lithium Batteries                                                                                                                                                                    |                                   |
| Battery/<br>Safety | UL 2054: 2004                                 | Household and commercial batteries                                                                                                                                                   |                                   |

**Anlage zur Akkreditierungsurkunde D-PL-12076-01-01**

|                                   |                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                |  |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Battery/<br>Safety                | DIN EN 50604-1:2017                                                                                                                | Lithium-Sekundärbatterien für Anwendungen in leichten Elektrofahrzeugen -<br>Teil 1: Allgemeine Sicherheitsanforderungen und Prüfverfahren;<br>Deutsche Fassung EN 50604-1 :2016<br><br>Secondary lithium batteries for light EV (electric vehicle) applications -<br>Part 1: General safety requirements and test methods;<br>German version EN 50604-1 :2016 |  |
| <b>Nicht Flexibler Bereich **</b> |                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                |  |
| Battery/<br>Safety                | Battery System program<br>Revision 2.5: 2013                                                                                       | CTIA Certification Requirements for Battery System Compliance to IEEE 1725                                                                                                                                                                                                                                                                                     |  |
| Safety                            | E EN62368-3: 2015<br>IEC 62368-3: 2017                                                                                             | Audio/Video, information and communication technology equipment –<br>Part 3: Safety aspect for DC power transfer through communication cables and ports                                                                                                                                                                                                        |  |
| Battery/<br>Safety                | Regelung 6. Anhang: 1 – Part 2; 3; 4 (4A – 4B); 5; 6 (Part 1 – Part 3); 8 (Appendix, 8A - 8I); 9 (9A - 9B) der<br><br>UN ECE-R 136 | Regelung Nr. 136 der Wirtschaftskommission der Vereinten Nationen für Europa (UN/ECE) – Einheitliche Bedingungen für die Genehmigung der Fahrzeuge der Kategorie L hinsichtlich der besonderen Anforderungen an den Elektroantrieb                                                                                                                             |  |

**F SAR / EMF \***

**SAR/ EMF\***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                                                                                                                            | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| SAR/EMF     | EN 50360:2017                          | Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz – 3 GHz) |                            |

Ausstellungsdatum: 10.07.2020

**Gültig ab: 09.06.2020**

**SAR/ EMF\***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand)  | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                                                                                                                                            | Prüfbereich /Einschränkung |
|-------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| SAR/EMF     | EN 50364:2018                           | Limitation of human exposure to electromagnetic field from devices operating in the frequency range 0 Hz to 10 GHz, used in Electronic Article Surveillance (EAS), Radio Frequency Identification (RFID) and similar applications                                                                                                 |                            |
| SAR/EMF     | EN 50383:2010                           | Basic standard for the calculation and measurement of electromagnetic field strength and SAR related to human exposure from radio base stations and fixed terminal stations for wireless telecommunication system (110 MHz – 40 GHz)                                                                                              |                            |
| SAR/EMF     | EN 50385:2017                           | Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to the general exposure to radio frequency electromagnetic fields (110 MHz – 40 GHz)                                         |                            |
| SAR/EMF     | EN 50413:2009<br>+A1:2013<br>VDE 0848-1 | Basic standard on measurement and calculation procedures for human exposure to electric, magnetic and electromagnetic fields (0 Hz - 300 GHz)<br><br>In combination with: 26. BImSchV, 26. Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes (Verordnung über elektromagnetische Felder), Bekanntmachung 14.08.2013 |                            |
| SAR/EMF     | EN 50566:2017                           | Product standard to demonstrate compliance of radio frequency fields from handheld and body-mounted wireless communication devices used by the general public (30 MHz - 6 GHz)                                                                                                                                                    |                            |

**SAR/ EMF\***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                                                                                                                                                        | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| SAR/EMF     | EN 62 209-1:2016<br>IEC 62209-1:2016   | Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)                    |                            |
| SAR/EMF     | EN 62 209-2:2010<br>IEC 62209-2:2019   | ... – Part 2: Procedure to determine the specific absorption rate (SAR) in the head and body for 30 MHz to 6 GHz hand-held and body-mounted devices used in close proximity to the body                                                                                                                                                       |                            |
| SAR/EMF     | EN 62 311:2008<br>IEC 62 311:2019      | Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz – 300 GHz)                                                                                                                                                                                                          |                            |
| SAR/EMF     | DIN EN 62369-1: 2010-03                | Evaluation of human exposure to electromagnetic fields from short range devices (SRDs) in various applications over the frequency range 0 GHz to 300 GHz - Part 1: Fields produced by devices used for electronic article surveillance, radio frequency identification and similar systems (IEC 62369-1:2008); German version EN 62369-1:2009 |                            |
| SAR/EMF     | EN 62 479:2010<br>IEC 62 479:2010      | Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)                                                                                                                                                             |                            |
| SAR/EMF     | IEEE C95.1-2019                        | IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz                                                                                                                                                                                                                    |                            |

**SAR/ EMF\***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                                                                                                                                      | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| SAR/EMF     | IEEE C95.3-2002                        | IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave                                                            |                            |
| SAR/EMF     | IEEE 1528-2013                         | Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques |                            |
| SAR/EMF     | EMR 2003                               | Radio Communications (Electromagnetic Radiation – Human Exposure) Standard 2003                                                                                             |                            |
| SAR/EMF     | ARPANSA RPS No.3 - 2002                | Radiation Protection Standard for Maximum Exposure Levels to Radiofrequency Fields – 3 kHz to 300 GHz                                                                       |                            |
| SAR/EMF     | EN 50663:2017                          | Generic standard for assessment of low power electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (10 MHz - 300 GHz)       |                            |
| SAR/EMF     | EN 50665:2017                          | Generic standard for assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)                   |                            |
| SAR/EMF     | AS/NZS 2772.2:2016                     | Radiofrequency fields: Principles and methods of measurement and computation – 3 kHz to 300 GHz                                                                             |                            |

**G Umwelt**

*Umwelt \**

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand)      | Titel der Norm oder des Prüfverfahrens                                                                                                  | Prüfbereich /Einschränkung |
|-------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Umwelt      | EN 60945: 2003<br>IEC 60945: 2002           | Maritime navigation and radio communication equipment and Systems – General requirements – Methods of testing and required test results |                            |
| Umwelt      | EN 60068-2-1: 2008<br>IEC 60068-2-1: 2007   | Environmental testing – Part 2-1: Tests – Test A: Cold                                                                                  |                            |
| Umwelt      | EN 60068-2-2: 2008<br>IEC 60068-2-2: 2007   | Environmental testing – Part 2-2: Tests – Test B: Dry heat                                                                              |                            |
| Umwelt      | EN 60068-2-6: 2008<br>IEC 60068-2-6: 2007   | Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)                                                               |                            |
| Umwelt      | EN 60068-2-11: 2000<br>IEC 60068-2-11: 1981 | Environmental testing – Part 2-11: Tests – Test Ka: Salt mist                                                                           |                            |
| Umwelt      | EN 60068-2-14: 2010<br>IEC 60068-2-14: 2009 | Environmental testing – Part 2-14: Tests – Test N: Change of temperature                                                                |                            |
| Umwelt      | EN 60068-2-27: 2010<br>IEC 60068-2-27: 2008 | Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock                                                                  |                            |

**Umwelt \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand)      | Titel der Norm oder des Prüfverfahrens                                                                                          | Prüfbereich /Einschränkung |
|-------------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Umwelt      | EN 60068-2-30: 2006<br>IEC 60068-2-30: 2005 | Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)                                       |                            |
| Umwelt      | EN 60068-2-38: 2010<br>IEC 60068-2-38: 2009 | Environmental testing – Part 2-38: Tests – Test Z/AD: Composite temperature/humidity cyclic test                                |                            |
| Umwelt      | EN 60068-2-47: 2006<br>IEC 60068-2-47: 2005 | Environmental testing – Part 2-47: Tests - Mounting of specimens for vibration, impact and similar dynamic tests                |                            |
| Umwelt      | EN 60068-2-48: 2000<br>IEC 60068-2-48: 1982 | Environmental testing – Part 2: Tests; guidance on the application of the tests of IEC 60068 to simulate the effects of storage |                            |
| Umwelt      | EN 60068-2-52: 2017<br>IEC 60068-2-52: 2018 | Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic                                                           |                            |
| Umwelt      | EN 60068-2-64: 2018<br>IEC 60068-2-64: 2018 | Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance                                    |                            |
| Umwelt      | EN 60068-2-78: 2014<br>IEC 60068-2-78: 2012 | Environmental testing - Part 2-78: Tests; Test Cab: Damp heat, steady state                                                     |                            |

**Umwelt \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                       | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|--------------------------------------------------------------|----------------------------|
| Umwelt      | EN ISO 9227: 2012<br>DIN 9227: 2012    | Corrosion tests in artificial atmospheres – Salt spray tests |                            |
| Umwelt      | ASTM B 117:2018                        | Standard Practice for Operating Salt Spray (Fog) Apparatus   |                            |

**H Smart Card Technology**

**H2 RF Schnittstelle für ID-Dokumente (e-Passport) \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand)           | Titel der Norm oder des Prüfverfahrens                                                                                                                         | Prüfbereich /Einschränkung |
|-------------|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
|             | BSI TR-03105 Part 2, Edition 3 (2016-11-04)      | Test Plan for Official Electronic ID Documents with Secure Contactless Integrated Circuit                                                                      |                            |
|             | BSI TR-03105 Part 4, Edition 3 (2016-11-04)      | Test Plan for ICAO-compliant Proximity Coupling Devices (PCD) on Layers 1-4                                                                                    |                            |
|             | ISO/IEC 18745-2:2016, First edition (2016-08-15) | Information technology – Test methods for machine readable travel documents (MRTD) and associated devices – Part 2: Test methods for the contactless interface |                            |
|             | CEN/TS 16794-2:2017, Second edition (July 2017)  | Public transport – Communication between contactless readers and fare media – Part 2: Test plan for ISO/IEC 14443                                              |                            |
|             | ISO/IEC 10373-6:2016, Third edition (2016-07-15) | Identification cards – Test methods – Part 6: Proximity cards                                                                                                  |                            |
|             | BSI TR-03150 Part 1, v1.0 (2018-02-27)           | Plan for Testing of Contactless Media for Conformance with CEN/TS 16794:2017                                                                                   |                            |

**H2 RF Schnittstelle für ID-Dokumente (e-Passport) \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                                         | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|--------------------------------------------------------------------------------|----------------------------|
|             | BSI TR-03150 Part 2, v1.0 (2018-02-27) | Plan for Testing of Contactless Readers for Conformance with CEN/TS 16794:2017 |                            |

**I Bluetooth®**
**I Bluetooth® \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens             | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|----------------------------------------------------|----------------------------|
| Bluetooth   | Low energy RF PHY                      | RF-PHY.TS/4.0/4.1/4.2                              |                            |
| Bluetooth   | RF Specification                       | Specification 2.1/2.1+EDR/3.0/3.0 + HS/4.0/4.1/4.2 |                            |
| Bluetooth   | Profile Specification                  | PTS 6.4.0                                          |                            |

**K Automotive**
**Automotive \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                                                                                                                          | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV         | ISO 11452-2<br>2nd edition:2004        | Road vehicles – Component test methods for electrical disturbances from narrowband radiated electromagnetic energy – Part 2: Absorber-lined shielded enclosure. |                            |

**Automotive \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand)         | Titel der Norm oder des Prüfverfahrens                                                                                                                     | Prüfbereich /Einschränkung |
|-------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV         | ISO 11452-4<br>3rd edition:2005<br>Corr.1:2009 | Road vehicles – Component test methods for electrical disturbances from narrowband radiated electromagnetic energy – Part 4: Bulk current injection (BCI). |                            |
| EMV         | ISO 11452-4<br>4th edition:2011                | Road vehicles – Component test methods for electrical disturbances from narrowband radiated electromagnetic energy – Part 4: Harness excitation methods    |                            |
| EMV         | ISO 11452-5<br>2nd edition:2002                | Road vehicles – Component test methods for electrical disturbances from narrowband radiated electromagnetic energy – Part 5: Stripline.                    |                            |
| EMV         | ISO 11452-8<br>2nd edition:2015                | Road vehicles – Component test methods for electrical disturbances from narrowband radiated electromagnetic energy – Part 8: Immunity to magnetic fields   |                            |
| EMV         | ISO 11452-9<br>1st edition:2012                | Road vehicles - Component test methods for electrical disturbances from narrowband radiated Electromagnetic energy - Part 9: Portable Transmitters         |                            |
| EMV         | ISO 16750-2<br>4th edition:2012                | Road vehicles – Environmental conditions and testing for electrical and electronic equipment - Part 2: Electrical loads                                    |                            |
| EMV         | ISO 10605<br>2008/<br>Amd.1:2014               | Road vehicles – Electrical disturbances from electrostatic discharges.                                                                                     |                            |

**Automotive \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand)                          | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                                                    | Prüfbereich /Einschränkung |
|-------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV         | ISO 7637-1<br>1st edition:1990<br>DIN 40 839-1:1992             | Road vehicles – Electrical disturbance by conduction and coupling – Part 1: Passenger cars and light commercial vehicles with nominal 12-V supply voltage – Electrical transient conduction along supply lines only.                      |                            |
| EMV         | ISO 7637-2<br>1st edition:1990<br>DIN 40 839-1:1992             | Road vehicles – Electrical disturbance by conduction and coupling – Part 2: Commercial vehicles with nominal 24-V supply voltage – Electrical transient conduction along supply lines only.                                               |                            |
| EMV         | ISO 7637-2<br>2nd edition:2004<br>Amd1:2008<br>3rd edition:2011 | Road vehicles – Electrical disturbance from conduction and coupling – Part 2: Electrical transient conduction along supply lines only.                                                                                                    |                            |
| EMV         | ISO 7637-3<br>1st edition:1995                                  | Road vehicles – Electrical disturbance by conduction and coupling – Part 3: Vehicles with nominal 12-V or 24-V supply voltage – Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines. |                            |
| EMV         | ISO 7637-3<br>2nd edition:2007                                  | Road vehicles – Electrical disturbance from conduction and coupling – Part 3: Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines                                                    |                            |

**Automotive \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand)                                                                           | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                                                                               | Prüfbereich /Einschränkung |
|-------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| EMV         | ISO 14982<br>1st edition:1998<br>EN ISO 14982:2009                                                               | Agricultural and forestry machinery – Electromagnetic compatibility – Test methods and acceptance criteria                                                                                                                                                           |                            |
| EMV         | EN 12895:2015<br>DIN EN 12895:                                                                                   | Industrial trucks – Electromagnetic compatibility                                                                                                                                                                                                                    |                            |
| EMV         | EN 13309:2010<br>DIN EN 13309:2010                                                                               | Construction machinery - Electromagnetic compatibility of machines with internal electrical power supply                                                                                                                                                             |                            |
| EMV         | EN 50498:2010<br>DIN EN 50498:2011                                                                               | Electromagnetic compatibility (EMC) - Product family standard for aftermarket electronic equipment in vehicles; German version EN 50498:2010                                                                                                                         |                            |
| EMV         | EN 55012 2007 /A1:2009<br>DIN EN 55012:2010<br>IEC/CISPR 12<br>6th edition:2007/ A1:2009<br>AS/NZS CISPR 12:2009 | Vehicles, boats and internal combustion engine driven devices – Radio disturbance characteristics – Limits and methods of measurement for the protection of receivers except those installed in the vehicle/boat/device itself or in adjacent vehicles/boats/devices |                            |
| EMV         | EN 55025:2008<br>DIN EN 55025:2009<br>IEC/CISPR 25<br>3rd edition:2008                                           | Radio disturbance characteristics for the protection of receivers used on board vehicles, boats and on devices – Limits and methods of measurement                                                                                                                   |                            |
| EMV         | ISO 13766<br>2nd edition:2006                                                                                    | Earth-moving machinery – Electromagnetic compatibility                                                                                                                                                                                                               |                            |

**Automotive \***

| Fachbereich                       | Norm oder Prüfverfahren (Ausgabestand)                                                                                                                             | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                             | Prüfbereich /Einschränkung            |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| EMV                               | UN ECE-R 10, Rev.4 Supplement 2                                                                                                                                    | Regelung Nr. 10– Einheitliche Bedingungen für die Genehmigung der Fahrzeuge hinsichtlich der elektromagnetischen Verträglichkeit<br>Anhang 7, 8, 9, 10                                                             |                                       |
| EMV                               | UN ECE-R 10, Rev.5                                                                                                                                                 | Regelung Nr. 10– Einheitliche Bedingungen für die Genehmigung der Fahrzeuge hinsichtlich der elektromagnetischen Verträglichkeit<br>Anhang 7, 8, 9, 10, 17, 18, 19, 20, 21, 22                                     | Anhang 17 u. 18:<br>nur ≤16 A / Phase |
| EMV/<br>Battery                   | Regelung 6. Anhang 1 – Part 2; 3; 4 (4A – 4B); 5; 6 (Part 1 – Part 3); 8 (Appendix, 8A - 8I); 9 (9A - 9B) der<br><br>UN ECE-R 100 Rev. 2<br>Änd.01, Änd.02, Änd.03 | Regelung Nr. 100 der Wirtschaftskommission der Vereinten Nationen für Europa (UN/ECE) – Einheitliche Bedingungen für die Genehmigung der Fahrzeuge hinsichtlich der besonderen Anforderungen an den Elektroantrieb |                                       |
| <b>nicht Flexibler Bereich **</b> |                                                                                                                                                                    |                                                                                                                                                                                                                    |                                       |
| EMV                               | Übersetzung der KN41: 2016-12                                                                                                                                      | Car and internal combustion engine driven equipment electromagnetic compatibility test method                                                                                                                      |                                       |

**O Akustik**

**Akustik \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand)                                                     | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                                                                        | Prüfbereich /Einschränkung |
|-------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Akustik     | EN 50332-1<br>DIN EN 50332-1:2014                                                          | Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for "one package equipment";                               |                            |
| Akustik     | DIN EN 50332-2:2014                                                                        | Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Matching of sets with headphones if either or both are offered separately |                            |
| Akustik     | EN 60118-0: 1993<br>+A1:1994<br>DIN EN 60118-0:1994<br>IEC 60118-0:2015                    | Hörgeräte; Teil 0: Messung der elektroakustischen Eigenschaften                                                                                                                                                                                               |                            |
| Akustik     | EN 60118-1:1999<br>DIN EN 60118-1:1995+A1:1998<br>IEC 60118-1:1995+A1:1998                 | Hörgeräte - Teil 1: Hörgeräte mit Induktionsspuleneingang                                                                                                                                                                                                     |                            |
| Akustik     | EN 60118-2:1995<br>+A2:1997<br>DIN EN 60118-2:1998<br>IEC 60118-2:1983+A1:1993<br>+A2:1997 | Hörgeräte - Teil 2: Hörgeräte mit automatischer Verstärkungsregelung                                                                                                                                                                                          |                            |
| Akustik     | EN 60118-6:1999<br>DIN EN 60118-6:2000<br>IEC 60118-6:1999                                 | Hörgeräte - Teil 6: Eigenschaften elektrischer Eingänge von Hörgeräten                                                                                                                                                                                        |                            |

**Anlage zur Akkreditierungsurkunde D-PL-12076-01-01**

**Akustik \***

| <b>Fachbereich</b> | <b>Norm oder Prüfverfahren (Ausgabestand)</b>                 | <b>Titel der Norm oder des Prüfverfahrens</b>                                                                                                                                                  | <b>Prüfbereich /Einschränkung</b> |
|--------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Akustik            | EN 60118-7:2005<br>DIN EN 60118-7:2006<br>IEC 60118-7:2005    | Akustik - Hörgeräte - Teil 7: Messung der Übertragungseigenschaften von Hörgeräten zum Zwecke der Qualitätssicherung in der Herstellung, Versorgung und Lieferung                              |                                   |
| Akustik            | DIN EN 60118-9:2019-03 - Entwurf                              | Elektroakustik – Hörgeräte – Teil 9: Verfahren zur Messung der Übertragungseigenschaften von Knochenleitungshörgeräten (IEC 29/989/CDV:2018); Deutsche und Englische Fassung prEN 60118-9:2018 |                                   |
| Akustik            | IEC 60118-9:1985                                              | Hearing aids - Part 9: Methods of measurement of characteristics of hearing aids with bone vibrator output                                                                                     |                                   |
| Akustik            | EN 60118-13:2011<br>DIN EN 60118-13:2012<br>IEC 60118-13:2016 | Akustik - Hörgeräte - Teil 13: Elektromagnetische Verträglichkeit (EMV)                                                                                                                        |                                   |
| Akustik            | NSH 7.0<br>7th edition, 2007-03-01                            | Hearing Aids, requirements and guidelines                                                                                                                                                      |                                   |
| Akustik            | ETSI EG 202 518<br>V1.4.1: 2014-01                            | Speech Processing, Transmission and Quality Aspects (STQ); Acoustic Output of Terminal Equipment; Maximum Levels and Test Methodology for Various Applications                                 |                                   |
| Akustik            | ETSI EN 300 175-8<br>V2.6.1: 2015-07                          | Radio Equipment and Systems (RES); Digital European Cordless Telecommunication (DECT); Common Interface (CI); Part 8: Speech coding and transmission                                           |                                   |

**Akustik \***

| Fachbereich | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                                                                                                                         | Prüfbereich /Einschränkung |
|-------------|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Akustik     | 3GPP TS 26.131<br>V13.1.0: 2016-01     | 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Terminal acoustic characteristics for telephony; Requirements   |                            |
| Akustik     | 3GPP TS 26.132<br>V13.1.0: 2016-01     | 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Speech and video telephony terminal acoustic test specification |                            |
| Akustik     | IEEE C63.19:2011                       | Methods of Measurement of Compatibility between Wireless Communication Devices and Hearing Aids                                                                |                            |
| Akustik     | CS-03 Part V<br>Issue 09:2015-10       | Compliance Specification for Terminal Equipment, Terminal Systems, Network Protection Devices, Connection Arrangements and Hearing Aids Compatibility          |                            |
| Akustik     | 47 CFR Part<br>68.316:2016-03          | Hearing aid compatibility: Technical requirements.                                                                                                             | Medizin                    |
| Akustik     | 47 CFR Part<br>68.317:2016-03          | Hearing aid compatibility volume control: technical standards                                                                                                  |                            |
| Akustik     | AS/ACIF S040:2001                      | Requirements for Customer Equipment for use with Standard Telephone Service – Features for special needs of persons with disabilities                          |                            |
| Akustik     | AS/CA S004:2013                        | Voice performance requirements for Customer Equipment                                                                                                          |                            |

**Akustik \***

| Fachbereich                       | Norm oder Prüfverfahren (Ausgabestand) | Titel der Norm oder des Prüfverfahrens                                                                                                                                                                      | Prüfbereich /Einschränkung |
|-----------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Akustik                           | EN 60118-15:2012<br>IEC 60118-15:2012  | Electroacoustics - Hearing aids - Part 15: Methods for characterising signal processing in hearing aids with a speech-like signal                                                                           |                            |
| Akustik                           | ANSI/ASA S3.22-2014                    | Specification of Hearing Aid Characteristics                                                                                                                                                                |                            |
| <b>Nicht Flexibler Bereich **</b> |                                        |                                                                                                                                                                                                             |                            |
| Akustik                           | TBR 10<br>Third Edition: 1999-07       | Digital European Cordless Telecommunications (DECT); Telephony applications                                                                                                                                 |                            |
| Akustik                           | TBR 38:1998-05                         | Attachment requirements for a terminal equipment incorporating an analogue handset function capable of supporting the justified case Service when connected to the analogue interface of the PSTN in Europe |                            |